

ROYAL AUSTRALIAN INSTITUTE OF ARCHITECTS
NEW SOUTH WALES CHAPTER

A REPORT TO THE MINISTER FOR LOCAL GOVERNMENT
ON THE CURRENTLY PROPOSED AMENDMENTS TO CLAUSE
45 OF THE CITY OF SYDNEY PLANNING SCHEME ORDINANCE.

In the course of preparation of this report a number of views have been sought. The Chapter would like to thank the City Council for data on the average plot ratios likely to be achieved under the proposed code (Appendix 1) and Messrs. P. Webber and R. Connors for graphic material mainly illustrating present conditions in the City (Figs. 2-5). The Authors and the Chapter wish to make it clear that this information can only be taken as indicative.

The Chapter has had discussions with the Building Owners and Managers Association and supports their views on the proposed code.

INTRODUCTION

The Chapter has, over recent years, taken considerable interest in the question of the City's planning and building regulations. Our principal concern at the present time is the lack of evidence that the research and consultation has taken place which should precede the drafting of significant planning legislation. This concern was expressed in the Chapter's Report on city regulations in November, 1964, and subsequently in letters to the State Planning Authority in 1967 and 1968.

A system "offering bonus floor space for open sites and greater pedestrian areas" was tentatively suggested by the Chapter for discussion in its 1964 report. It appears that the Commissioner appointed to consider the city code accepted this as a thoroughly worked out system, and it formed the literal basis for the code exhibited by the City Council in 1967. This was never the Chapter's intention - as was stated in its letter to the State Planning Authority in February 1968. Early in 1968 the Commissioner ruled on certain ambiguities of drafting in the code as it was exhibited. The effect of these rulings was to radically amend the code, to the extent that the quantum of building achievable was significantly increased. This even further removed its intention from that of the Chapter.

The presently proposed code, which is the subject of this report, is radically different again. It was not the subject of any discussion prior to its appearance and there has not been available for examination a clear statement of the objectives related to it.

However, in discussion with officers of the State Planning Authority since its announcement it became apparent that the following objectives were considered:

- 1 to maintain a proper balance between the city's day-time population and the capacity of the transport routes and systems into the County Centre by restricting the density of development.
- 2 to provide better pedestrian and vehicular circulation within the Central Business District
- 3 to improve the urban environment

Although site consolidation has also been stated as an aim, it is assumed that it is only seen as a means of achieving these more basic aims, since site consolidation is not always desirable as an end in itself.

If these are the basic objectives of the proposed regulations, it is the opinion of the NSW Chapter that the regulations are unlikely to achieve the objectives and, further, that unfortunate effects may result from their implementation.

These effects may include:

- * the imposition of unsuitable requirements on developments in areas which do not consist primarily of commercial office buildings
- * the ill considered development of many sites, for which hasty development applications were approved by the City Council while the new regulations were being exhibited: with the consequent effect on the building industry of an artificial peak in city developments
- * the provision of setbacks and arcades of dubious value in some locations and the failure to provide them in locations where they are needed
- * the encouragement of one physical form of development over the whole city area, when variety would be of greater commercial and environmental value
- * unjust discrimination against owners of small sites which, because of their location, cannot be amalgamated with other sites
- * the unnecessary destruction of many buildings
- * dispersal of the office core within the County Centre which would result in increasing pedestrian movement within it and to transport nodes.

There follows a brief examination of the objectives which it is assumed the State Planning Authority aims to achieve.

CONTROL OF DAY-TIME POPULATION

The proposed code has been examined to see what effect it might have on restricting the working population of the County Centre in the foreseeable future. This working population must enter and leave the County Centre by the limited number of routes illustrated on the diagrammatic map below (Fig. 1)

Within the County Centre

- the present average plot ratio is in the order of 4.5:1 - including large areas of low worker-intensity uses, e.g. wholesale and warehouse areas
- the present Central Business District working population is in the order of 240, 000 people
- this population appears to stretch present transportation facilities almost to their utmost

The proposed code enables an average plot ratio in the order of 9:1 to 10:1 to be achieved. This is an estimate produced as the result of a City Council Study (see Appendix 1). The proposed code would therefore appear to permit the working population of the Central Business District to reach at least 480, 000 people, possibly even more.

The State Planning Authority's prediction of Central Business District work force reads as follows: "If the population of the Sydney region doubles over the next thirty years, if the Central Business District retains the current proportions of the regional work force (about 21%) and if the current trend for concentration remains unchecked, then employment at the centre may rise to a level of nearly half a million.* It appears that the regulations as proposed, will allow the increase in the working population which the Authority forecasts, and will not achieve the objective of reducing the density sufficiently to solve the transport problem.// The proposal does not differentiate between the existing areas of use, (in broad terms, commercial, retail, wholesale, etc.), each of which has different requirements and to each of which it would be possible to apply a different floor area ratio with varying bonus provisions. Thus it will tend to spread the increased population over the whole area.

IMPROVED CIRCULATION FOR PEDESTRIANS AND VEHICLES WITHIN THE CENTRAL BUSINESS DISTRICT

It is necessary to examine each of the main land use zones within the Central Business District at present, and then to examine the use to which the proposed regulations could be put in each area to achieve the desired end of better circulation.

The main retail area

It is in this area that pedestrian congestion is at its most serious (see Fig. 2). It is also the area in which the greatest number of "Through-Block Arcades" exists (see Fig. 3). Plot ratios are lower than in the commercial office building section of the city (see Fig. 4). The buildings

* Sydney Region Outline Plan

in this area, department stores, small shops and cinemas, are all heavy traffic generators (see Fig. 5).

The developer's main objective in this area of the city is to obtain floor space at or near ground level with a maximum frontage to pedestrian flow. As it is not a prime location for offices, many levels above ground are not of importance to him. Developers have and will strive of their own accord to provide "Through-Block Arcades" but will resist setbacks along street frontages (perhaps the most pressing need). Under these circumstances it is highly probable that the developer will accept a plot ratio of 6 or 7:1 in order to retain his ground level space. The bonuses, therefore, not being of interest to him are most unlikely to encourage him to set back at street frontages. A far more effective means of obtaining this desired end would be to impose, where required, set back controls at ground level which would create street level arcades and relieve congestion (we understand this system is at present used in Melbourne), or to apply a different basic plot ratio and bonuses for retail buildings or in the retail areas.

The commercial office building area

In regard to ground floor space the situation in the area roughly between Circular Quay and Martin Place is almost the reverse - ground floor space is not as significant to the developer. Provided that net floor areas are not too small, his interest is in obtaining high level window frontage. There has been, in recent years, a marked tendency for developers to set their buildings back, to form towers, to provide spaces at street level, etc. Currently proposed developments do this to an even greater extent. There have been many site amalgamations. Current plot ratio and setback regulations encourage this, but do not make it mandatory. Pedestrian throughways are already in existence, Australia Square, the Wentworth Hotel, Kindersley House, Norwich Union, to name a few, and more are proposed. It is therefore very doubtful if this trend requires reinforcement of the almost mandatory nature proposed in the new code. In general, with the exception of a few special areas, such as the bottom of Hunter Street, which require particular treatment, pedestrian congestion in this area is not serious (see Fig. 2).

The problem of the vehicular traffic generated in this area of the city is not serious and the elimination of through traffic by the construction of city by-passes will probably reduce volumes to an acceptable limit. Any increase in traffic capacity of these streets will, anyhow, only result in more traffic. There does not, therefore, appear, except in a few chosen locations, to be a need for comprehensive redevelopment or setbacks within this area of the city, to achieve better circulation.

The Wholesaling Areas

The proposed code, which is essentially directed at producing office towers of low site coverage on large sites, will in no way be appropriate for redevelopment which might continue existing land uses. Further,

if these areas are to retain their present land use, the increase in the pedestrian space, which the proposed code seeks to obtain, will not be required. There is, however, a need for comprehensive developments in some of these areas, particularly to the west of York Street and George Street, south of the Town Hall, and as have been recently proposed by the State Planning Authority in Woolloomooloo, but the bonuses which might be appropriate should be different from those in the proposed code. For example, the provision of large scale parking stations within multi-purpose buildings can well be encouraged by bonuses applying to this area only.

THE URBAN ENVIRONMENT

A number of preliminary studies have been carried out to determine the likely physical effects of the proposed code.

The City Council has examined 48 development applications received since 11 April 1969. Under the present code they received an average of 11.2:1. Without redesign and under the proposed code, they would have received 7.2:1. With buildings redesigned with setbacks, arcades, colonnades, etc. to take maximum advantage of the proposed code on sites that were theoretically consolidated to a maximum probable size, an average plot ratio between 9:1 and 10:1 was achieved (see Appendix 1).

A mathematical study (see Appendix 2) assessing the likely effects on sites of various sizes, illustrates several points. Firstly, that the variation of the effects on sites between (1) the code initially proposed in 1967, (2) its subsequent interpretation by the Commissioner and (3) the presently proposed code are extraordinarily large and it is doubted whether the implications of these were appreciated by their authors. Secondly, that the effect of the presently proposed code on small sites will be very severe, and site amalgamation will in fact become essential to the economic viability of a redevelopment scheme. (It should be further noted that it will not be possible for some small sites to be amalgamated, because of existing developments). While in a great many instances this might be desirable, the interest and diversity of the urban scene lies in the contrast between buildings of various ages and sizes. To hasten, unnecessarily, the destruction of old structures in the city, or even buildings of the immediate pre or post war periods, would seem very undesirable. It is also uneconomic, particularly in relation to the overall demands of the community, in a building industry which is already strained. The great size of a new building, while undoubtedly assisting the large scale developer to increase his profits, is not necessarily in itself of benefit to the city. There are areas where the amalgamation of building sites can be of great benefit to the city, but there are many others where the existing pattern of subdivision and land ownership is responsible for a diversity of activity and visual character, the preservation of which should be encouraged, not destroyed. Thirdly, the resultant development will all tend to have the same form (of which Australia Square could be described as typical). This form is often suitable for office building, but not necessarily for buildings primarily acknowledged for retail, wholesale, or other uses, activities which should probably be encouraged by

city planning ordinances. Further, however desirable Australia Square might be, in its present context, it must be appreciated that much of its contribution to the urban scene lies in its contrast with surrounding development. The space, which is Australia Square, is partially formed by surrounding buildings rising from conventional street alignments. This space would lose the particular value that it now has if similar developments were to occur on adjacent sites. It will also become exposed to very undesirable wind.

It is not appropriate to argue the virtues of environments consisting of towers surrounded by open space as opposed to those formed by the traditional street, except to point out that a code applicable to a wide area should not attempt to force upon the city either one or the other form of environment. This characteristic of the proposed code is perhaps the worst of the positive effects it will have. In order to make economic use of his land, the developer will be forced to setback from the street alignment which, in many cases, will destroy the very thing that is giving the street its particular urban character. On the other hand, however, a setback which contributes to the creation of a significant punctuation to the street pattern can be of immense value to the city. It is essential however that such setbacks be either planned or considered on their merits in the light of stated policy objectives, and not be allowed to happen at random.

CONCLUSIONS

We believe that the foregoing discussion has indicated how a code applying uniformly over the central core of Sydney without due recognition of particular function or location, is highly unlikely to solve any problems, further, that the particular code proposed will have undesirable side effects.

It should also be pointed out that no consideration has been given to the city's setback code at the same time as plot ratios have been decided upon. This is an extraordinary omission.

It is the Chapter's view that the proposed plot ratios are arbitrary and ill-conceived, that any meaningful system of plot ratios cannot be produced without a great deal of research being carried out. Plot ratios are a tool for achieving certain ends. Unless they form part of a comprehensive policy related to the movement of people and goods and are related to clearly stated environmental goals for the various sections of the city, they will not bring about significant improvement. The City Council, together with the State Planning Authority, must be required to produce coherent policies for the City. Until such policies are produced any plot ratio code can only be an interim stop-gap measure.

It is only after the necessary research has been carried out that a meaningful plot ratio system might be produced, wherein (a) different building types (i.e. retail, commercial, wholesale, residential) have different plot ratios and bonuses, commensurate with their traffic generating characteristics, (b) combined uses can be added with their respective

*as amended after discussion
with SPA. November 1969.*

7

bonuses to the benefit of both the developer and the city, (c) certain areas of the city can have particular plot ratios and bonuses to, where necessary, bring about a variety of benefits to the city such as -

- new traffic routes
- parking stations
- open space
- shopping and restaurant facilities in working areas
- additional pedestrian circulation
- connections to rapid transit etc.

Such systems have been adopted in overseas cities such as Montreal and San Francisco.

The Chapter considers that it cannot support the present proposals as a permanent code for the City of Sydney. However, it is prepared to support them in an amended form as an interim code on the following conditions:

1. That it is clearly stated that it is an interim code for a period of not more than two years.
2. That the objectives of the code are clearly stated. As has been pointed out in this report the Chapter, nevertheless, considers that the code, by itself, will not achieve the aims which the Chapter understands led to the proposal, in particular the alleviation of the further overloading of existing pedestrian and vehicle traffic facilities.
3. That it is recognised that the only way to achieve the objectives is by comprehensive planning which will determine where pedestrian routes and open spaces are to go and will make positive proposals rather than impose negative restrictions.
4. That the proposals will take into account a wide variety of benefits for the city, to include the retention of buildings of architectural and historic value.
5. That small sites should not be unduly penalised by the adoption of measures which only suit large amalgamations of sites.
6. That planning of the kind which is necessary, must commence immediately and be carried out as quickly as possible, so that the unsatisfactory interim code may be replaced.

The Chapter will welcome further opportunities to discuss any proposals which are made.

bonuses to the benefit of both the developer and the city, (c) certain areas of the city can have particular plot ratios and bonuses to, where necessary, bring about a variety of benefits to the city such as -

- new traffic routes
- parking stations
- open space
- shopping and restaurant facilities in working areas
- additional pedestrian circulation
- connections to rapid transit etc.

Such systems have been adopted in overseas cities such as Montreal and San Francisco.

It is the Chapter's view that the wisest interim code would be the present 10:1, 12:1 code. While not achieving many of the objectives, which a more detailed and comprehensive code could, the present code is less likely to produce the unfortunate side effects discussed above. Secondly, the sharp reduction of the permissible basic plot ratio envisaged in the proposed code has caused a very large a number of development applications to be received and approved by the City Council. If this code is introduced a large number of these hastily conceived projects may well be built, thereby determining the form of much of the city for a considerable time. The continued use of the existing code, until the necessary research has been carried out, will allow reconsideration of many of these schemes and may well avoid some undesirable developments.

APPENDIX 1

The City Council carried out a study on 48 development applications received since 11 April 1969.

Under the existing regulations these applications received an average of 11.2:1

As the buildings were designed when submitted - under the new regulations they would have received an average of 7.1:1

If redesigned to take maximum advantage of the new code, setting back to provide plazas, etc. and amalgamating sites wherever possible they would have received in office areas (when space near the ground level is less valuable to the developer) an average of 9:1

In regard to the 2:1 bonus for sites over 60,000 sq. ft. only one development would have qualified: four developments could possibly have acquired sites to achieve site areas over 60,000 sq. ft.: 43 developments could never have reached a site size of 60,000 sq. ft.

Within the sample, developments ranged in gross area from 34,000 sq. ft. to 338,000 sq. ft.

A numerical summary follows which shows the plot ratios which buildings submitted under the existing and the new codes: as received and as theoretically redesigned.

Plot Ratio	6.1 - 7	7.1 - 8	8.1 - 9	9.1 - 10	10.1 - 11	11.1 - 12
Existing Code			1	7	11	29
New Code (as submitted)	31	10	5	1		1
New Code (redesigned)			8	36		4

APPENDIX 2

1.	SITE AREA - 4,000 SQ. FT.	Nett accommodation expressed as a % of quantity allowed under existing code.
1	EXISTING CODE	
	(P.R. 10 : 1 - No bonuses)	
	GROSS AREA = 4,000 x 10	
	= 40,000 SQ. FT.	
	NETT AREA = 28,800 SQ. FT. (72% of gross)	100%
2	CODE AS EXHIBITED IN 1967	
	(P.R. 6 : 1 - Allowable area is nett)	
	NETT AREA = 4,000 x 6	
	= 24,000 SQ. FT.	83.4%
3	CODE AS EXHIBITED IN 1967 AND INTERPRETED BY THE COMMISSIONER IN 1968	
	(P.R. 6 : 1 - Allowable nett)	
	NETT AREA = 24,000 SQ. FT.	83.4%
4	CODE AS PROPOSED APRIL 1969	
	(P.R. 6 : 1 - Based on gross, no bonuses)	
	GROSS AREA = 24,000 SQ. FT.	
	NETT AREA = 17,300 SQ. FT. (72% of gross)	63.5%

2. SITE AREA - 8,000 SQ.FT.

1 EXISTING CODE

(P.R. 11:1 - Bonus 1:1 for colonnade)

GROSS AREA = 88,000 SQ.FT.

NETT AREA = 63,360 SQ.FT. (72% of gross) 100%

2 CODE AS EXHIBITED IN 1967

(P.R. 6:1 - NETT AREA

Bonus 1 x public area 1/10 site area)

NETT AREA = 48,000 SQ.FT.

+ 800 SQ.FT. BONUS

48,800 SQ.FT. 77%

3 CODE AS EXHIBITED AND INTERPRETED
BY THE COMMISSIONER IN 1968

(P.R. 6:1 - NETT AREA

Bonus 1:1 for colonnade

Bonus 1:1 for plaza)

8:1

NETT AREA = 8 x 8,000

= 64,000 SQ.FT.

101%

4 CODE AS PROPOSED APRIL 1969

(P.R. 6:1 GROSS AREA

-Bonus 4 x public space 1/4 site)

GROSS AREA = 48,000 + 8,000

= 56,000 SQ.FT.

NETT AREA = 40,300 SQ.FT. (72% OF GROSS) 63.5%

(FINAL P.R. = 7:1)

3. SITE AREA - 16,000 SQ. FT.

1 EXISTING CODE

(P.R. 12:1 - Bonuses for public space 1/4 site area)

GROSS AREA	=	192,000 SQ. FT.	
NETT AREA	=	138,240 SQ. FT.	100%

2 CODE AS EXHIBITED 1967

(P.R. 6:1 - NETT AREA

Bonus 5 x Area of plaza (1/8 of site) = 10,000

Bonus 2 x Area of colonnade (1/8 site area) = 4,000)

NETT AREA	=	96,000 + 10,000 + 4,000	
	=	110,000 SQ. FT.	79.5%

3 CODE AS EXHIBITED AND INTERPRETED
BY THE COMMISSIONER IN 1968

(P.R. 6:1 - NETT AREA

Bonus 4:1 plaza

Bonus $\frac{1:1}{11:1}$ colonnade)

NETT AREA	=	176,000 SQ. FT.	124%
-----------	---	-----------------	------

4 CODE AS PROPOSED APRIL 1969

(P.R. 6:1

Bonus 4 x public area of 1/2 site)

GROSS AREA	=	96,000 + 32,000
	=	128,000 SQ. FT.

NETT AREA	=	93,000 SQ. FT.	67.5%
-----------	---	----------------	-------

(FINAL P.R. = 7:1)

4. SITE AREA - 32,000 SQ. FT.

1 EXISTING CODE
(P. R. 12:1 - Bonuses for public space)

GROSS AREA = 384,000 SQ. FT.

NETT AREA = 276,500 SQ. FT.

100%

2. CODE AS EXHIBITED 1967

(P. R. 6:1 - on Nett Area

Bonus 6 x Area of Pedestrian Link

(say 15 x 200') = 18,000

Bonus 5 x Open Space

(say 200' x 50') = 50,000

Bonus 2 x Pedestrian Covered Area

(say 3000') = 6,000)

NETT AREA = 192,000 + 18,000 + 50,000 + 6,000

= 266,000 SQ. FT.

96.2%

3 CODE AS EXHIBITED AND INTERPRETED
BY THE COMMISSIONER IN 1968

(P. R. 6:1 on Nett Area

Bonuses either 6:1 for through link

5:1 for pedestrian plaza or pedestrian

covered circulation would reach max. 12:1)

NETT AREA = 384,000

138%

4 CODE AS PROPOSED APRIL 1969

(P. R. 6:1 on Gross Area

Bonus 4 x public area of 3/4 of site

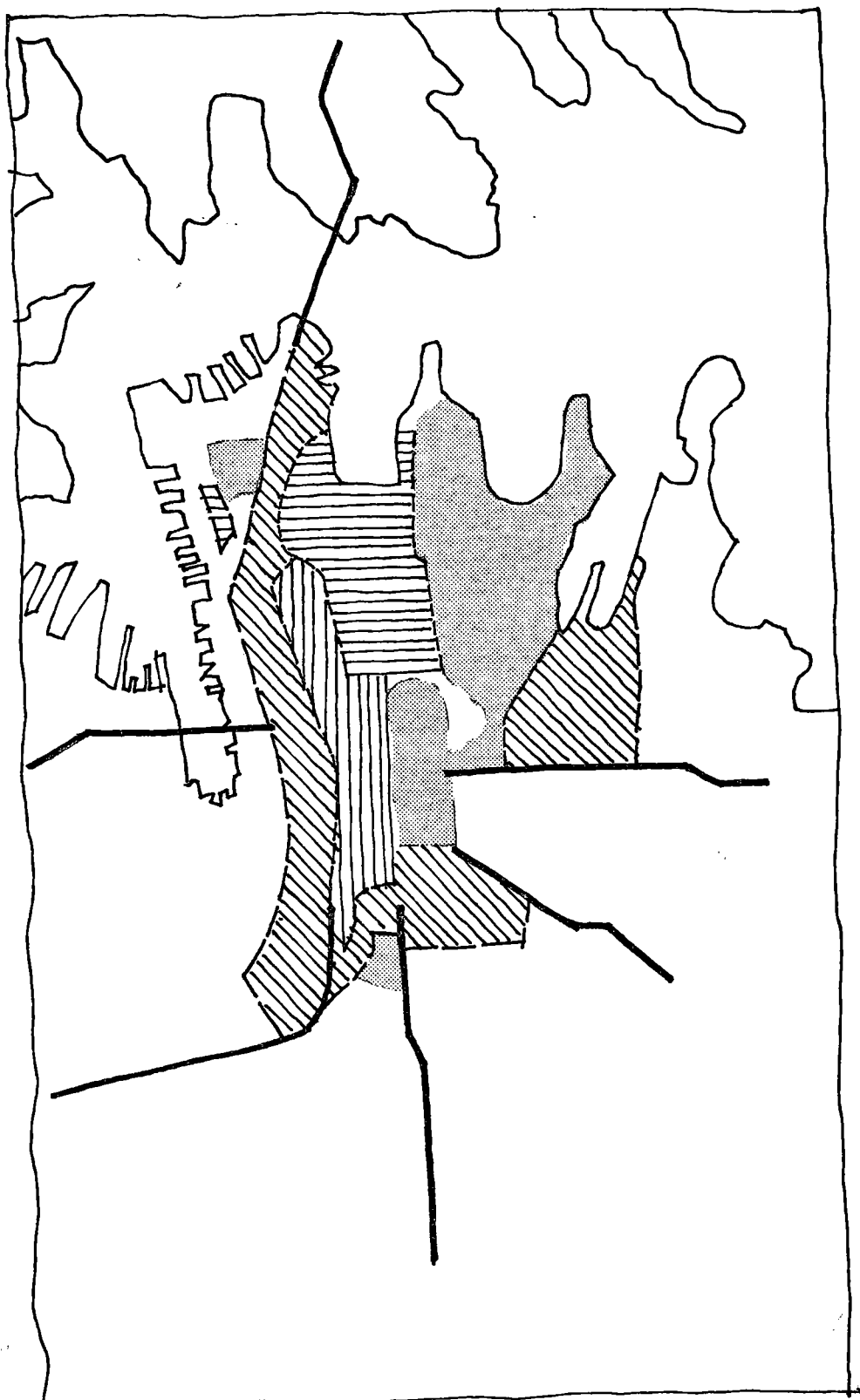
= 4 x 24,000)

GROSS AREA = 192,000 + 96,000

= 288,000 SQ. FT.

NETT AREA = 208,000 SQ. FT.

75%



SYDNEY COUNTY CENTRE
PRINCIPAL ACCESS ROADS AND
MAJOR FUNCTIONAL AREAS

- ==== OFFICE AREA
- ||||| RETAIL AREA
- \\\\\\\\ WHOLESALE AND MIXED

fig 1

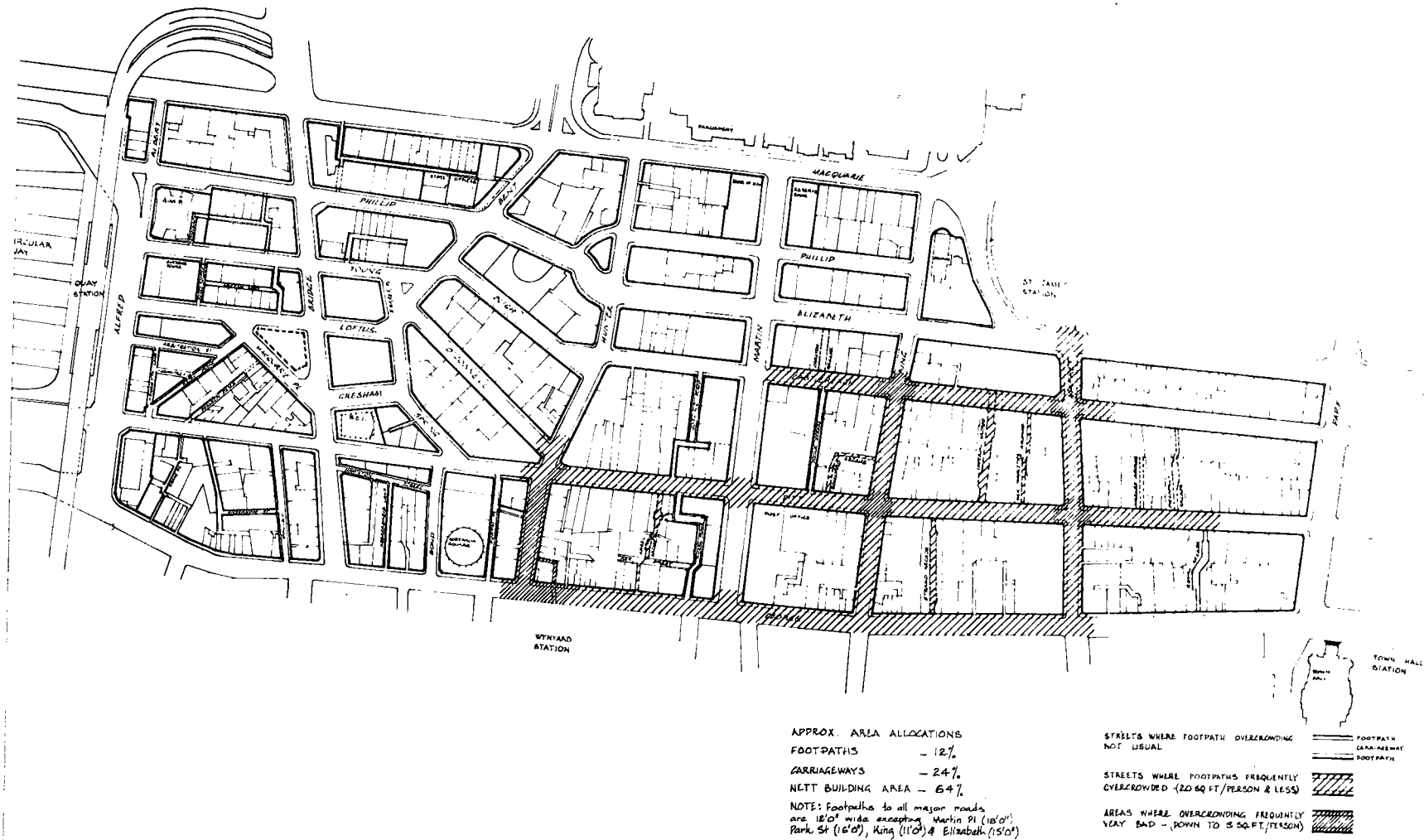
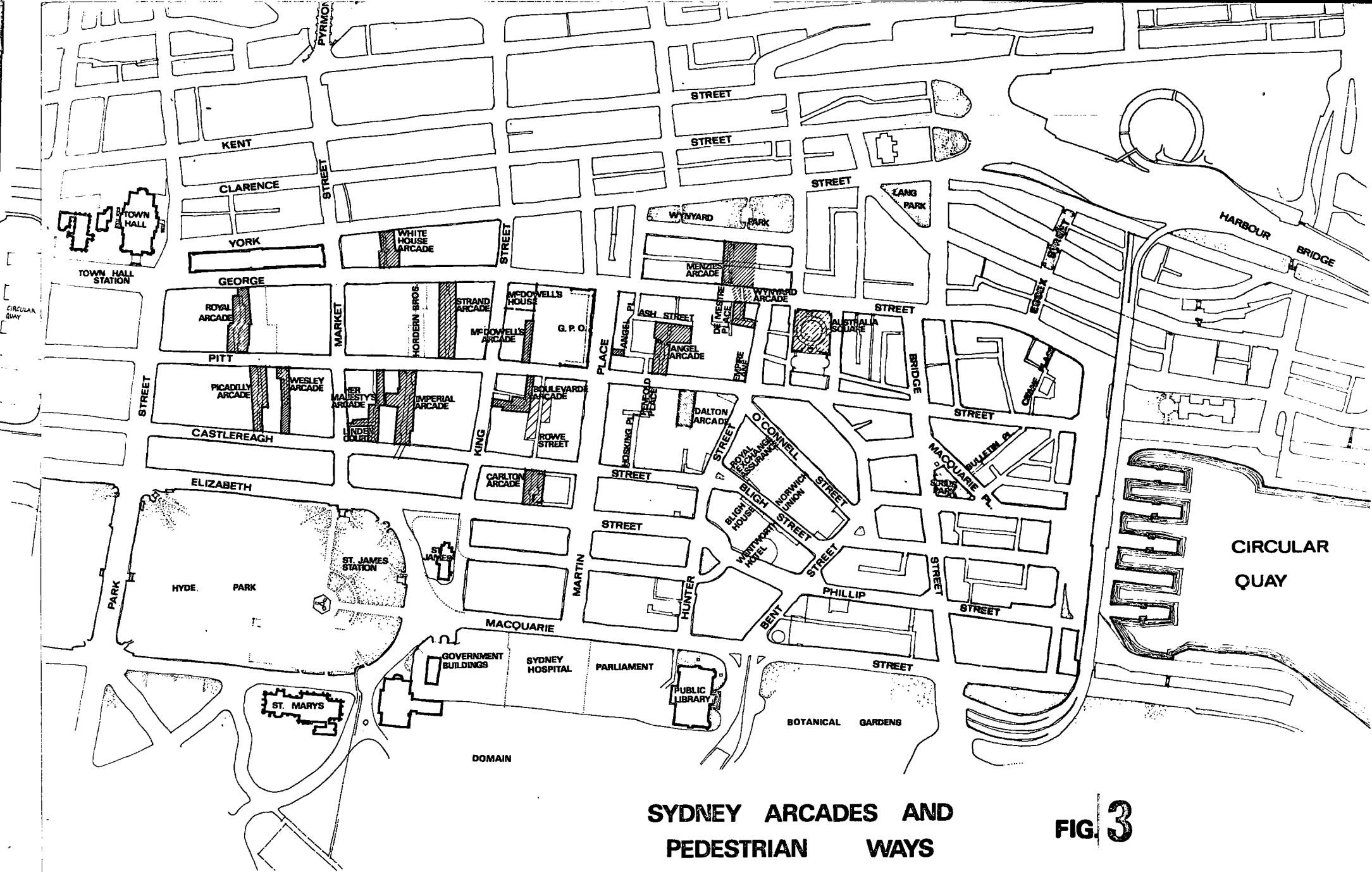
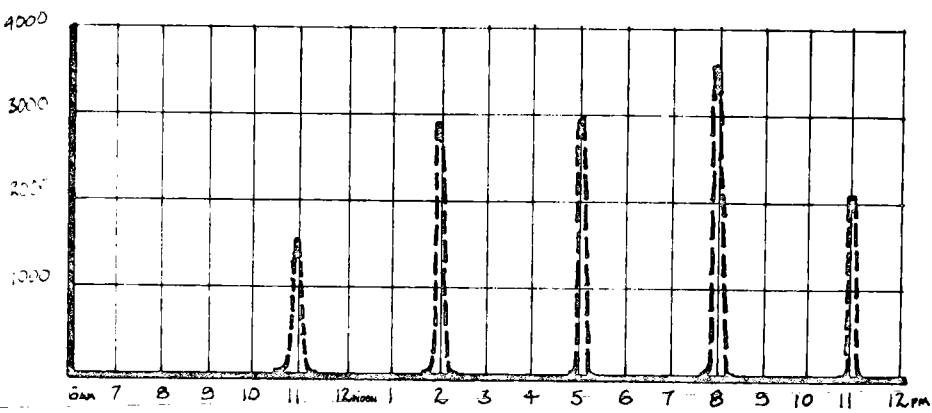


figure 2
PEDESTRIAN CIRCULATION AREAS



**SYDNEY ARCADES AND
PEDESTRIAN
WAYS**

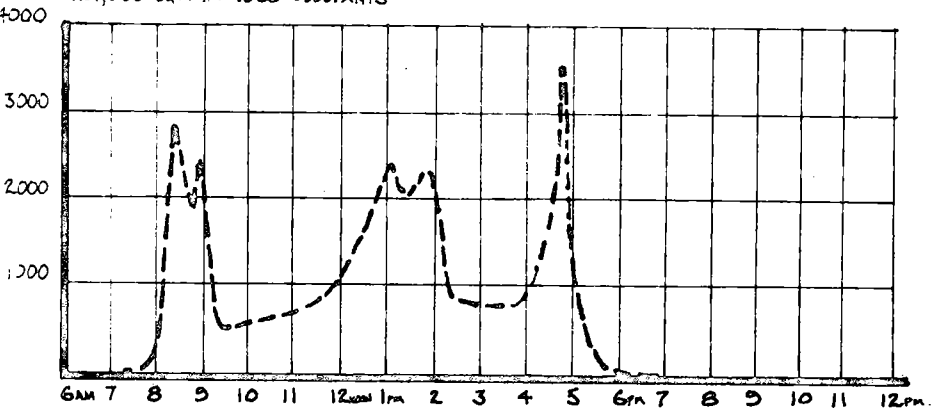
FIG. 3



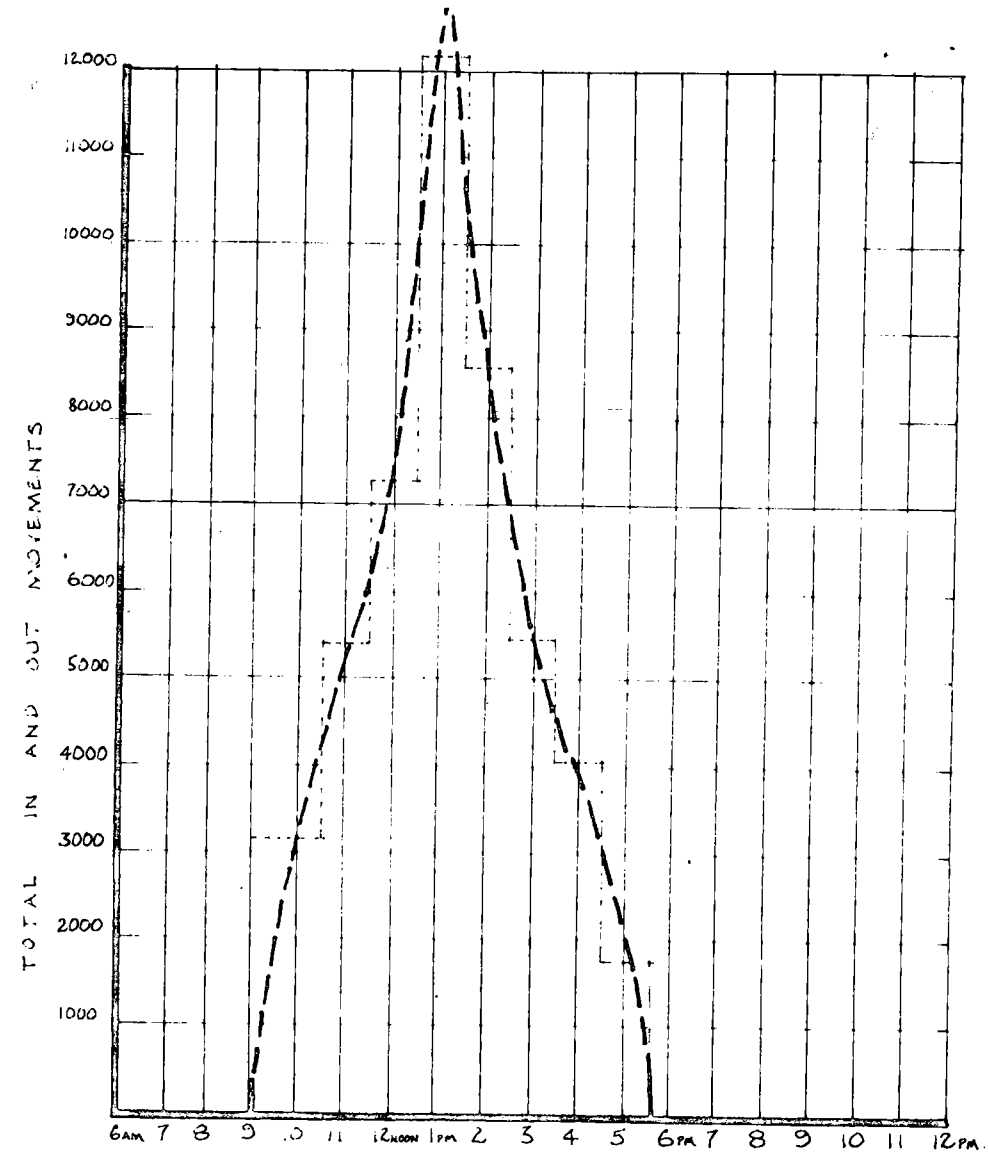
CINEMA
2100 SEATS: ASSUMED 2/3 CAPACITY AT 11AM, 2PM, 5PM; FULL HOUSE AT 8PM.



APARTMENTS
424,000 SQ. FT.: 1060 OCCUPANTS



OFFICE BLOCK
424,000 SQ. FT.: 2100 OCCUPANTS



DEPARTMENT STORE
424,000 SQ. FT.: 23,240 SHOPPERS IN DAY.

CURVES INDICATE EQUIVALENT HOURLY VOLUME AT ANY TIME.

figure 5
traffic generation by building type