

The Broomielaw:
Mixed-Use Development
in Glasgow, Scotland

A dissertation and urban design proposal submitted by
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to The Mackintosh School of Architecture, Glasgow University,
as part of the examination for the degree of
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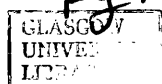
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**An overview of the methods of determining the form of
the new development.** 154

The specifics of the Broomielaw are addressed and proposals are presented in diagrams, notes and three-dimensional computer models.

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Information about the site is covered in chapter II. The section on existing conditions consists of perspective drawings to be compared with the proposal in the ensuing section.

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The intent of the drawings is to describe the massing and the layout of the buildings in the Broomielaw and at the riverfront.

Preface

The aim of this urban design project is to understand and manage the growth of a part of Glasgow. Successful plans for growth must recognise the economic and social aspects of a city in addition to providing a design framework for the form of the city. Principles for sound growth will be applied to the Broomielaw area of Glasgow's city centre since it is the next office expansion area. Three design proposals for the Broomielaw by local and national architects will be evaluated as will the policies of the City of Glasgow Department of Planning. The effect of the Planning Department's policies on the form of the Broomielaw is demonstrated by these three proposals. Alternative policies will be proposed in this document and an urban design proposal that complies with the principles of these new policies will be created to demonstrate the intended nature of new construction in the Broomielaw.

The city's health, as a whole, is an important focus of the proposal. Issues of urban form, architecture, economics, planning policy and the distribution of uses in the area of growth will be evaluated and regulated according to the effect on the health of the city. Cities sometimes grow to enormous size and become unmanageable, but a large city is not inherently inferior to a small one. A large city should be substantially superior to a small one because of the principle of economies of scale: a group of people gathered in a city will enjoy convenient employment opportunities, competitive prices and cultural and social institutions that people who live in towns can not afford. A large city should provide more of these benefits than a small one, but this can only happen if growth, however slow or fast, is managed and directed to continually improve and strengthen the city. In this respect, a larger city is a better city.

A city grows only if people find it an appealing place to live and work. The aim of urban design is to provide these attractions. If city growth does not include an attractive environment, then the growth will be short-lived. It is important to guard against short-sighted growth plans in the Broomielaw so that the city will not become less attractive in its new form than it is now. An area of a city without the qualities

and attractions that one expects to find is a definite liability to the city and is a deterrent to growth. Growth should not be encouraged for growth's sake; it should be encouraged because it is aimed at providing its citizens with a better life. A better life may include convenient shopping, public transportation, hospitals, schools, neighbours, entertainment, or employment opportunities. A city can provide something for everyone.

The outline of the investigation:

The ideal city:

Identify the best qualities to be found in any city.

Lively streets and the convenience of shops, entertainment and services are the foundations of great cities. Special buildings like theatres as well as common buildings like offices should be distributed evenly throughout the city to ensure that each district of the city maintains a high standard. The most interesting and beautiful cities also have districts of unique and identifiable forms or patterns.

Identify the area or areas preferred (by the free market) for growth.

Buildings should not be constructed if no demand for them exists. Such buildings will remain empty until that demand exists; new buildings do not create a demand. Buildings built for any other reason than as a response to a demand will be a burden to the public or private owner. The free market, not the local government, must decide on the area for development. The example of London's Docklands shows that construction for other motives (to beautify derelict land, to attempt to boost a local economy) may have disastrous consequences.

Identify the goals for the development.

The goals shall take into account the site character and conditions and the role the district will play in the fabric of the city.

Form a strategy that will accomplish the goals.

The strategy will be based on the economic conditions, the proposed uses of the district and the urban form potential of the site.

Identify the types, locations and dimensions for urban spaces in the district.

The types of urban spaces will depend on the density of development, the types of tenants in the area, important connections with the rest of the city and the pace of development.

Implement guidelines to foster development that follows the intent of the design.

These regulations should be strict enough to ensure that the spirit of the design will be captured in the development, but not so strict as to stifle variety in the buildings. At this scale, architectural regulations should be kept to a minimum. Regulations should not seek to determine the form of the architecture where it does not significantly affect the quality of the urban spaces and should not seek to determine architectural style. Within the regulations, flexibility and creativity are encouraged.

A lively atmosphere and carefully considered urban form are the most influential factors affecting future growth. A vibrant and interesting city is a successful city and people will choose to live and work in that type of city. This success will nurture growth. A mixed-use development that provides life for the public spaces in the Broomielaw will contribute to the well-being of Glasgow. An even better contribution which the Broomielaw can make to the city is incorporating the river into its centre. Past development near the river has shown that this task is not simple. The river remains outside the city centre; the north bank is the city centre border. The successful incorporation of the River Clyde will depend on the manner in which new growth occurs, not simply on the existence of more buildings near the river. A successful and inviting river environment will effectively move the city centre boundary southward and provide a new attraction for residents, workers and visitors that is not in the over-endowed core of city centre.

After the best qualities of a city are identified, measures will be taken to ensure that the Broomielaw will have these qualities. In addition to making sure that the types of buildings for the new service-oriented economy will be accounted for, the Broomielaw and the Clyde will be appraised and a design to strengthen the connection between them will be proposed. The Broomielaw district, including the river, will be conceived to make the best use of the site in relation to the city of Glasgow. The intent is create a framework of form and a framework of functions that will yield a city that *improves* as it grows.

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List of Abbreviations

Building Design Partnership, Architects	BDP
City of Glasgow District Council Planning Department	Planning Department
Director of Planning, City of Glasgow District Council Planning Department	Director of Planning
'Glasgow Central Area Local Plan'	'Local Plan'
Kohn Pedersen Fox, Architects	KPF

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Introduction

The Broomielaw district of Glasgow has been the venue for several schemes by architects and developers over the past several years. The area consists of two distinct halves. The eastern section is composed of a mixture of old and new buildings and offers opportunities for incremental development on piecemeal sites; the western half, about twenty acres altogether, contains few buildings that are in good condition and worth preserving. This land can be considered open and continuous. The Broomielaw is one of the earliest developed sites in the city, and now that available building sites in the city centre have become scarce, it is again the subject of proposals for public and private development.

This site and this city are attractive because of the contact and interaction with a wide range of elements. An emerging city image, pedestrian and automobile traffic patterns, the range of urban spaces, the historical depth of buildings, conservation requirements and the connections between old and new parts of a city can be pursued here. The timing of the regeneration of Glasgow and the cross-over from an industrial economy to a service economy highlights the way a city handles upheaval. The aim for Glasgow is to identify the best qualities of a city and incorporate them into the most favourable site for development, taking into account the local conditions and the area's relation to the whole city.

New buildings that have been proposed for the city centre of Glasgow over the years have been evaluated, case-by-case, on the merits of each building, whether it be the size of the building, the public amenities accompanying it, the location, the architectural style or the revenue potential for the city. These are the wrong principles by which to judge a scheme. In these cases the architect has had to hope that what he or she believed as the important factors in an urban scheme were also the qualities that the Planning Department and relevant public agencies were using as criteria for judging. The process has been indiscriminate. The Scottish Development Agency, the Glasgow Development Agency, The Royal Fine Arts Commission for Scotland, the Planning Department and the general public have rejected proposals for

the Broomielaw for one reason or another. An architect should be able to produce an acceptable proposal, since that is his professional duty, but in the end the agencies that must approve a scheme only have themselves to blame if a published guideline does not exist and the scheme does not meet expectations. Besides, architects do not always know best. The publication of guidelines for the development of an area is not enough; the guidelines must also be sensible. The cycle of proposals and rejection is wasteful of time and money and according to this tradition, the cycle may be never-ending. Obviously, an accepted proposal that conforms to a set of flawed principles will necessarily be flawed. Since no clear policy of the important issues for the development of the Broomielaw area exists, each new proposal is undirected. The adoption of a strategic plan that includes the area's role regarding the rest of the city as well as concerns for the most advantageous use of land, conservation policies, public spaces and city image will eliminate a substantial amount of conflict during the approval process. Richard Rogers makes a similar appeal in A New London;

"[The] goal [of planning boards] would be to take the holistic view of the city laid down in broad strokes by the metropolitan strategic body and to foster the balanced, ecologically sustainable and culturally vital communities that we so desperately need. ...

The great advantage of this system would be that much argument could be avoided... because the major constraints... would be laid out as part of the planning framework at the outset of the design process."¹

The most important issues would take precedence over questions of style and personal taste, and it might become routine to consult local authorities to resolve ambiguities, or to serve as expert advisers before designs begin. The architectural style of buildings in the city does not rank as an important factor; buildings of any style in the Broomielaw designed as integral units of the city would be far better than a collection of insular contemporary buildings. Rogers continues,

"Finally, an additional advantage of this system would be that issues of architectural style would take a back seat to more relevant

¹ Richard Rogers, Mark Fisher, A New London, (London: Penguin Books, Ltd., 1992), p.xxxiv.

questions, such as the size of the scheme, the type of activity it would enclose, its provision of public amenity."²

Local government officials should take it upon themselves as the guardians of the urban environment to be experts on cities and to draft policies for growth that will guide the non-experts or ones preoccupied with self-interest issues into producing schemes that genuinely enhance the city environment. The local officials also should understand the reasons that a property developer would want to build in Glasgow, what environment is conducive to new construction, and what buildings the general public want in the city centre. The real question concerns what each party stands to gain from new building endeavours. The challenge, then, is to satisfy all the groups' desires without sacrificing one group's interests for another. One of the aims of this document is to collect ideas and information that are uncoordinated, arriving at a framework for solutions that will satisfy all interested parties and improve the city.

The general framework for city-wide development can be applied specifically to the Broomielaw to demonstrate the soundness of sensitive development guidelines for Glasgow and to further indicate that each area of the city must have a growth plan that responds to its particular location, topography, history and built environment. Each neighbourhood in the city centre should have this type of site-specific strategy. Public officials (the top of the power structure) who fund or approve any changes to Glasgow's environment must have an awareness of urban issues and the expertise to find solutions. The idea that the people with the most power should also be the wisest may sound sentimental, but the alternative of unbridled freedom for architects and developers can be disastrous. Freedom to make mistakes and freedom from responsibility are simply not desirable when one is building something as consequential as a city. The government can make it easy for new development to occur, but the government should not promote unsound development. In London's Docklands, developers relied on the government's leadership and expertise. They believed that the government knew best and these developers decided to associate

² Richard Rogers, Mark Fisher, A New London, p.xxxv.

with the London Docklands Development Corporation based on this fact. The enormous financial incentives that the government offered in the Enterprise Zone essentially cajoled developers into a pattern of unsound development.

Cities in Scotland, England and the United States provide some examples of successes and failures to illustrate what is achievable in Glasgow. This document will chronicle the factors important to the success of a city, analyse Glasgow and proposals for the Broomielaw in light of these factors and propose a framework for development in the Broomielaw.

Chapter II: The Broomielaw Special Project Area

The History of the Broomielaw

The emergence and growth of the Broomielaw depended on the shipping trade. The area is on the north bank of the River Clyde a few hundred metres downstream from the earliest town settlement that was to become the Royal Burgh of Glasgow in 1175 A.D.³ Settlers chose this area because it offered the first available fording point that the river offered upstream from the Atlantic Ocean. Since the most downstream fording point is also the most upstream point on the river deep enough for small boats, the area became a landing point. This area on the north bank was known as the Broomielaw, which means meadow of broombushes, as early as the 1300s and must have had small-craft commercial traffic at that time.⁴ A ford was removed in the sixteenth century and a modest port was in place by the mid-seventeenth century. The area consisted of some simple houses at the fringe of Glasgow; Grahamston and Finnieston were villages where Central Station and the Kingston Bridge now stand. The quay was rebuilt in 1772 and enlarged in 1792; by this time the area was bustling with the activity of overseas clipper ships.⁵ (Plate 1) The primary access points to this area were from the Argyle Road, now known as Argyle Street, which is the present northern boundary of the area.

The first of many economic booms for the town was the sugar and rum trade with the colonies in the Americas in the 1600s. From the 1700s on into the next century, tea and grain were primary imports. Mills and warehouses that were originally constructed to store these commodities remain in the Broomielaw. Houses and open land were quickly giving way to warehouses, which in turn were becoming

³ John F. Riddell, Clyde Navigation. A History of the Development and Deepening of the River Clyde, (Edinburgh: John Donald Publishers, Ltd., 1979), p.7.

⁴ Charles McKean, David Walker, Frank Walker, Central Glasgow. An Illustrated Architectural Guide, ([Edinburgh]: Mainstream Publications, Ltd., 1989), p.49.

⁵ Elizabeth Williamson, Anne Riches, Malcolm Higgs, The Buildings of Scotland: Glasgow, (London: Penguin Books, 1990), p.256.

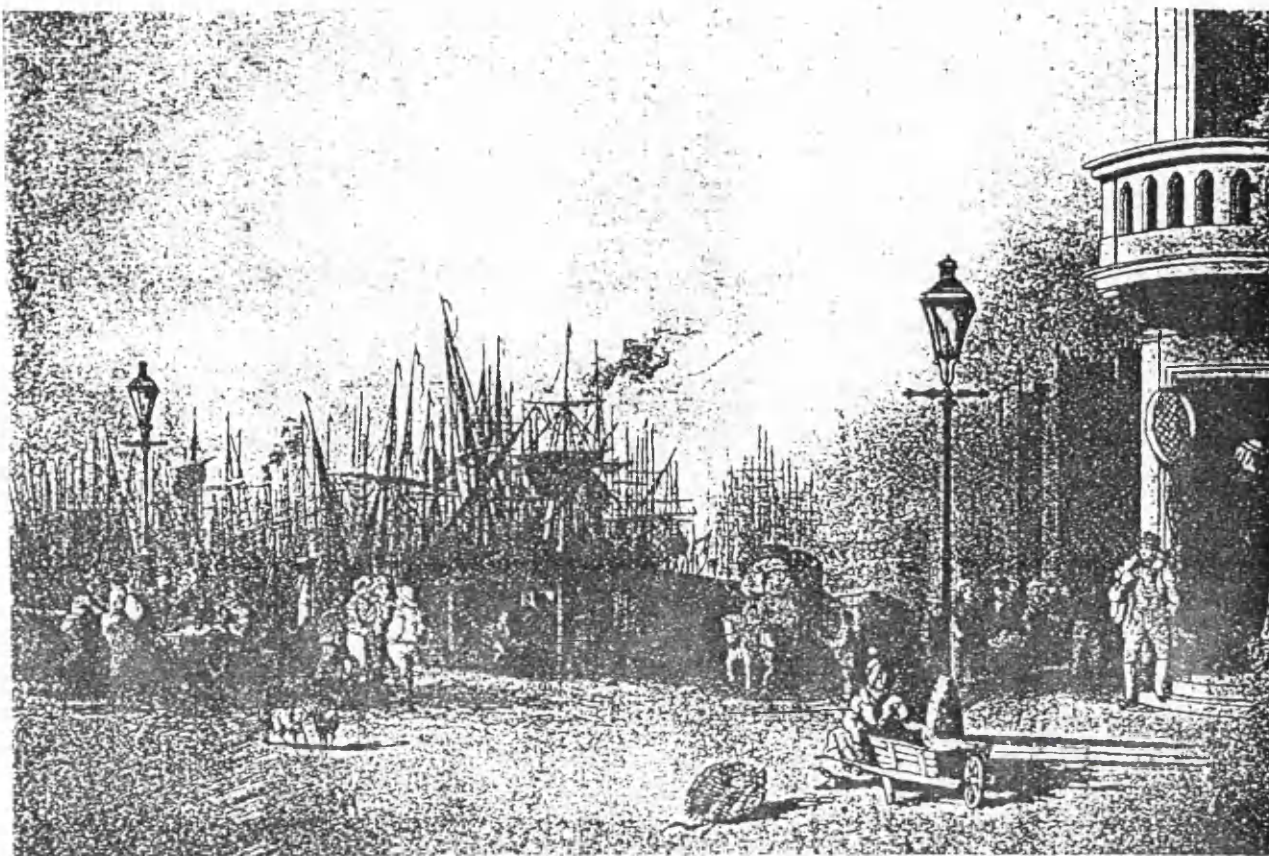


Plate 1. The Broomielaw quay c.1840. Cargo vessels.

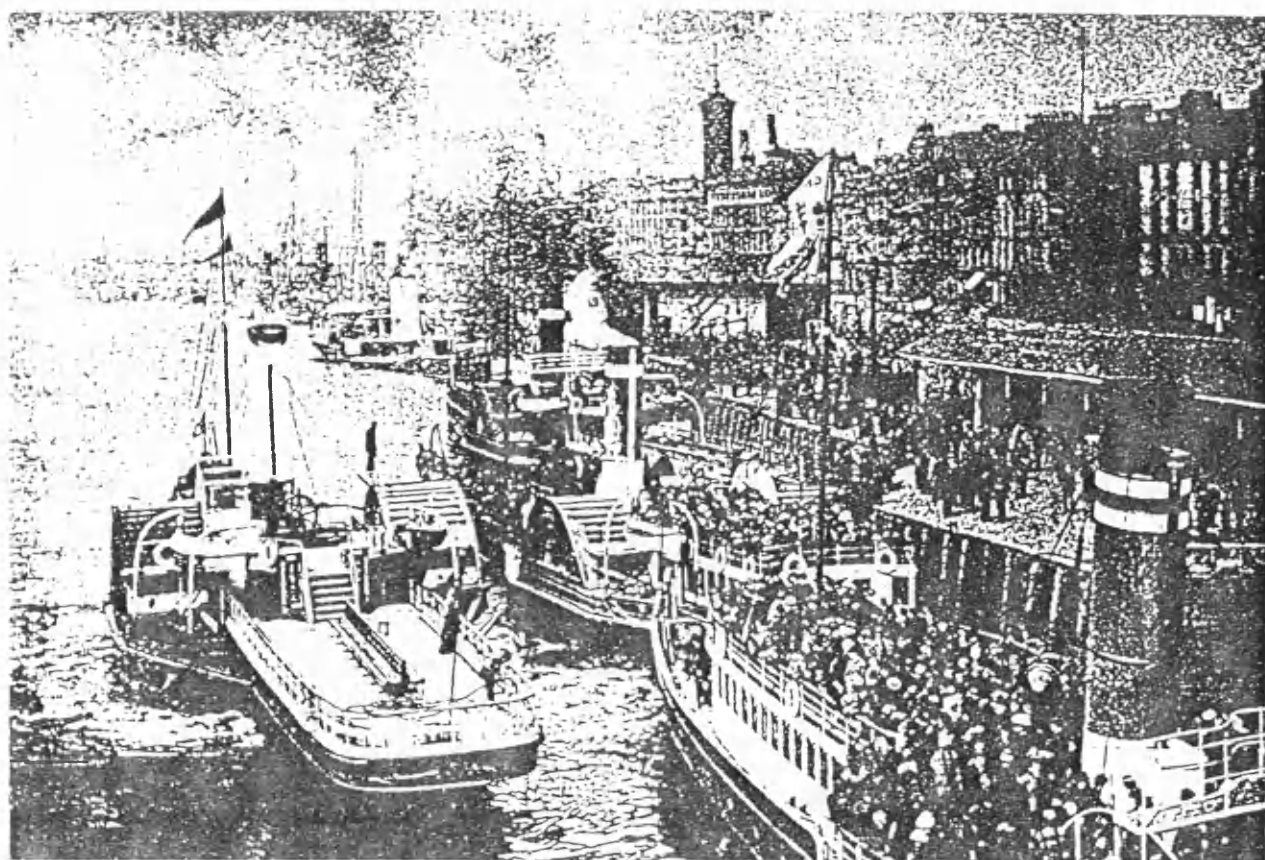


Plate 2. The Broomielaw quay in 1896. Passenger steamship service.

ever larger. These long warehouses were laid out perpendicular to the quay to facilitate the moving of cargo. Streets were not planned as much as they simply appeared between rows of warehouses.⁶ Later in the 1800s tobacco was the main imported commodity and Glasgow imported around 60% of the tobacco distributed throughout Europe. Whisky and cotton also were stored in large quantities here.

Many additions to the warehouses were constructed as trade increased and commodities changed. These additions were often vertical, as ground space was becoming scarce. James Watt Street, the last street and one of the few streets actually planned, was laid out in 1847 by John Stephen and connects with the street pattern to the north.⁷ All streets were roughly perpendicular to the quay and connected to the main distributor road, Argyle Street. Given the incremental nature of development, not all of the streets are parallel. By the beginning of this century these streets were generally built-up along their entire length from the quay to Argyle Street without any street interruptions in the east-west direction except for a few free-standing grain mills in the west end. Some of the Broomielaw still reflects this distinctive building pattern (Figure 1).

The huge and distinguished stone warehouses, merchants' offices and the extravagant Clyde Port Authority Building that remain attest the fortunes made in the clipper trade. Nearly everything built in the area was related to shipping; seamen's chapels and hotels, warehouses, rice and flour mills, tenements and offices related to the shipping trade have all been here. Jamaica Street and Virginia Street east of the Broomielaw were named to proclaim the sources of the city's wealth. By the 1940s the dominance of standardised freight containers had allowed cargo ships to become too large to travel as far upriver as the Broomielaw. This and the rise of other forms of transportation ended the city centre shipping trade and led to the close of the quay in 1947.⁸ Passenger service from the city centre continued for a time (Plate 2), but

⁶ Elizabeth Williamson, et al, The Buildings of Scotland: Glasgow, p.257.

⁷ Elizabeth Williamson, et al, The Buildings of Scotland: Glasgow, p. 258.

⁸ Elizabeth Williamson, et al, The Buildings of Scotland: Glasgow, p.256.



Figure 1. Comparative plans of Glasgow and the Broomielaw.

pleasure trips are now rare. Light industry and equipment stores have taken over some of the most easily adapted buildings.

The form of the Broomielaw at the height of its activity was of long continuous street blocks from the waterfront to Argyle Street. Some buildings were quite tall (20 metres) because the proximity of warehouse space close to the quay was more important than allowing large amounts of daylight into the buildings. The area was largely a storage and processing centre and did not encroach upon the less dense and more residential town to the north and east.

The Current Condition of the Broomielaw

Since the need or desire to redevelop the Broomielaw has not existed until the last few years, many of what are regarded as historic and significant buildings were spared the wholesale demolition that characterised the frenzy to modernise in the 1960s. Much of the city centre (inside the motorway ring) has been renovated or rebuilt and the Broomielaw, a riverfront area, is the next logical site for development (Figure 2). The eastern area is a mixture of some recent buildings and ones from the 1800s onward. There are unbuilt sites, but not as many as in the west end of the Broomielaw, owing to its proximity to the fully developed city centre and the adjacent Central Station. The central and western portions of the site can be regarded as open land, since insignificant and dilapidated buildings clutter the area. Storage buildings, car hire lots, unoccupied low rise buildings and a petrol station comprise the majority of the area. The three-building office complex known as Atlantic Quay has recently been completed and nearly all of its top quality office space has been leased. Kentigern House, over 100,000 total square feet in size, was completed a few years ago and is owner-occupied by the Ministry of Defence.

Broomielaw Street on the riverfront and Argyle Street form the southern and northern boundaries, respectively, and carry a large amount of traffic to and from the city centre daily. The Kingston motorway bridge and Central Station are imposing

boundaries at the western and eastern edges of the site (Figure 3). Anderston bus station is adjacent to the site on the north side of Argyle Street and the Anderston railway station (local trains) is near Argyle Street at the Kingston bridge. Private and public transportation routes virtually surround the site which is relatively flat and stands at the foot of the hilly northern districts.



Figure 2. The location of the Broomielaw in the city.

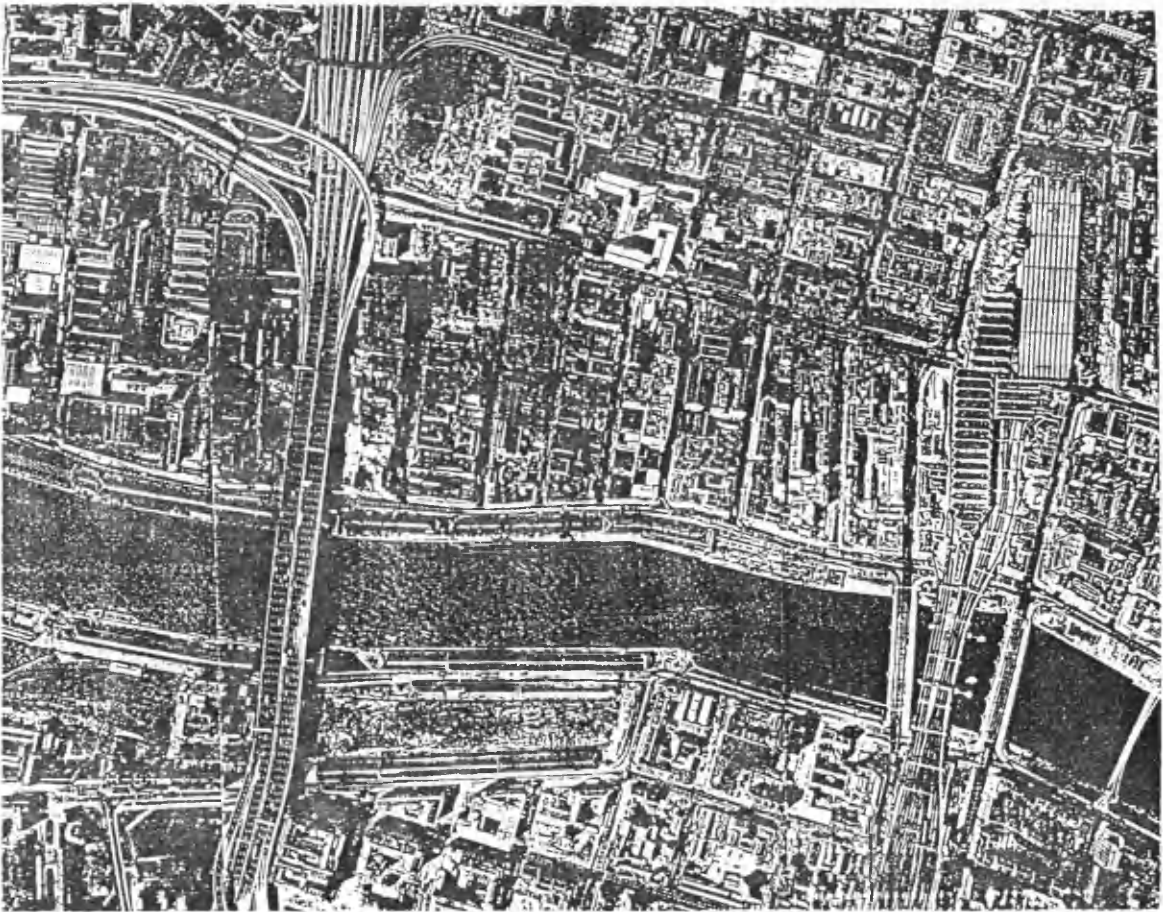


Figure 3. Aerial Photograph of the Broomielaw. Note the Kingston motorway bridge to the west and the Central Station railway bridge to the east.

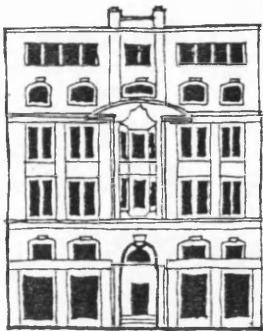
Figure 4 Significant 19th Century buildings (existing) in the Broomielaw.⁹

No.	Street	Use	Date/Additions	Architect
11	Oswald		c.1844 1902 1909	J. Craig J. Craig
16	Robertson	Clyde Port Authority	1882-1886 1905-1908	J.J. Burnett J.J. Burnett
49-63	Robertson	"Buck & Hickman"	1869-1870	Spence*
71-75	Robertson	merchant offices	1899-1900	J.A. Campbell
34	Robertson Lane		c. 1800 1815	
13-15	York	office, warehouse "Henry Afrikas"	1892-1893 1901	W.F. McGibbon
23	York	warehouse "Queen's Tea Store"	1843	Scott, Stephen and Gale
65-73	York	warehouse	c. 1848	
27-59	James Watt	grain warehouse later, tobacco	1854 c. 1870 1910-1912 1932	John Baird John Baird Robert Thompson Clarke, Bell and Craigie
44-54	James Watt	grain warehouse	c. 1861	Thomas Mann*
68-72	James Watt		1848 1881	John Stephen
82	James Watt Brown	grain warehouse Glasgow Seamen's Institute	1864 1926	R.A. Bryden and Robertson
39	Brown Washington	Seamen's Chapel Crown Flour Mills	c. 1860 c. 1848 1862	
	Washington	Washington Flour Mills	c. 1849 1937	R. Ewan
27	Washington	Anderston Rice Mills	c. 1825 1845 1865	
30-46	Washington	whisky warehouse	1896 1906-1907	A.V. Gardner H.E. Clifford
	Washington	school	1890	H.E. Clifford

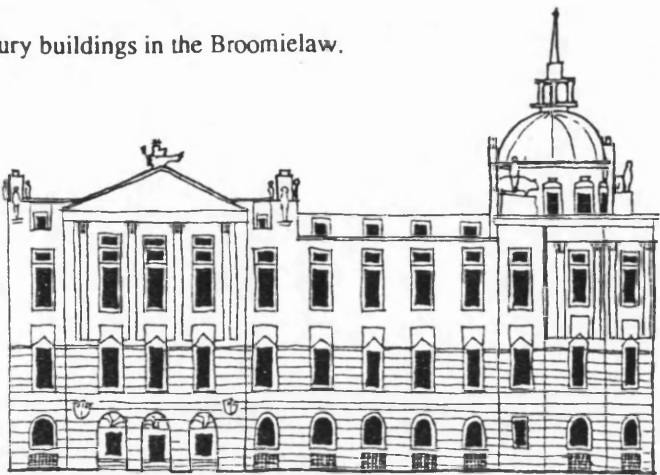
* The identity of the architect is unconfirmed.

⁹ Elizabeth Williamson, et al, The Buildings of Scotland: Glasgow, p.258-259.

Figure 5. Significant nineteenth century buildings in the Broomielaw.



71-75 Robertson Street



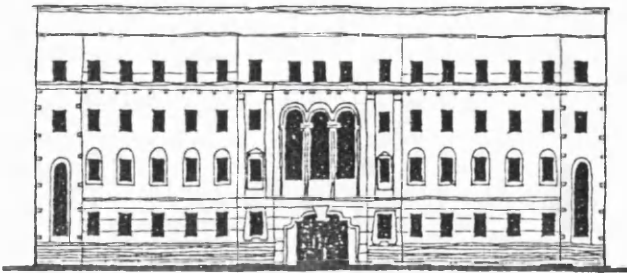
16 Robertson Street, Clyde Port Authority



65-89 York Street



13-15 York Street



23 York Street

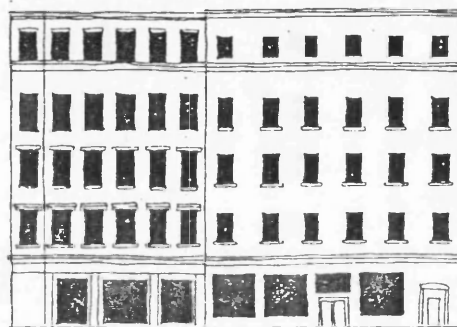


9 James Watt Street

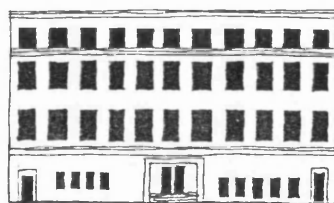
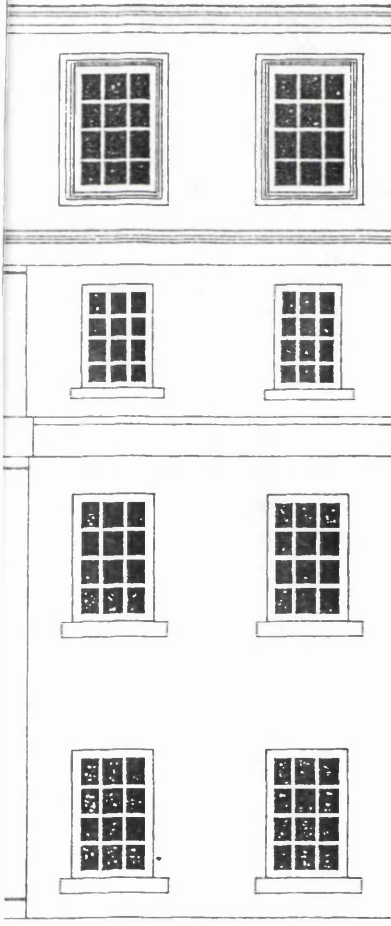
Figure 6. Significant nineteenth century buildings in the Broomielaw.



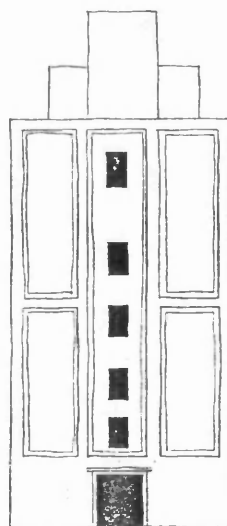
68-82 James Watt Street



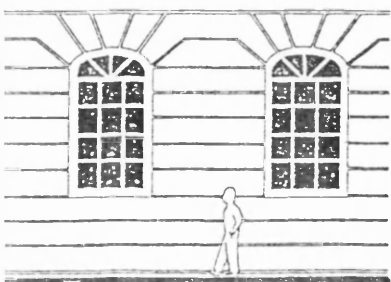
84-88 James Watt Street



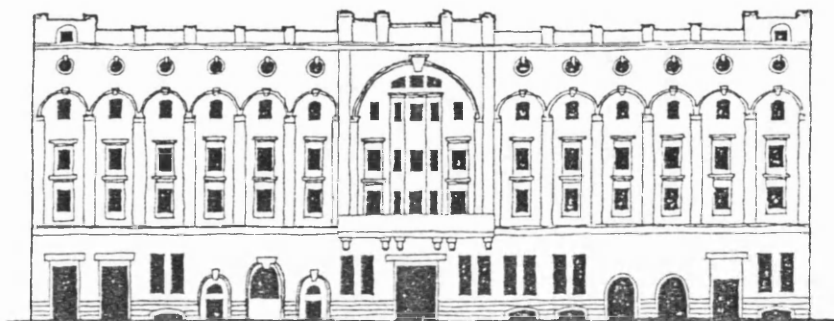
47 York Street



Washington Street,
Crown Flour Mill



68 James Watt Street (detail)



30-46 Washington Street

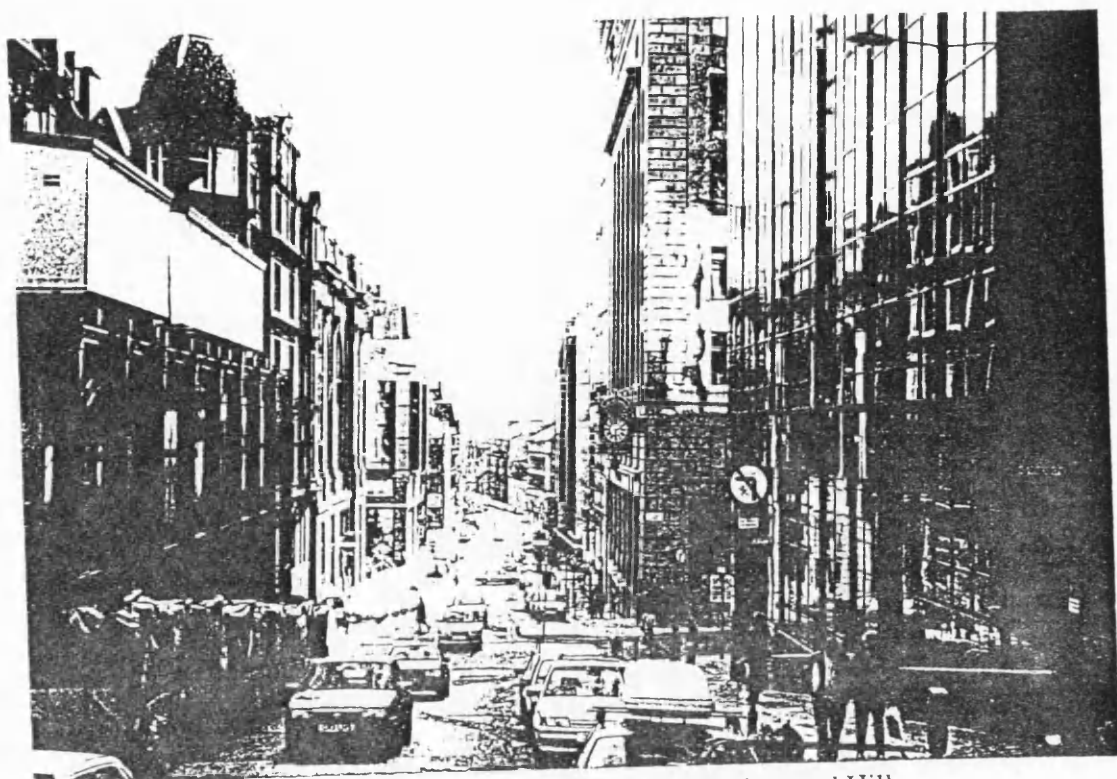


Plate 3. West Campbell Street: view south from Blythwood Hill.



Plate 4. Pitt Street: view south from Blythwood Hill.



Plate 5. Blythswood Street: view south from Blythswood Hill.



Plate 6. Broomielaw Road at James Watt Street, facing west.



Plate 7. Argyle Street at James Watt Street, facing east.



Plate 8. Argyle Street at James Watt Street, facing west.



Plate 9. James Watt Street, facing south.



Plate 10. James Watt Street, facing south across the river.

Chapter III: The Nature of Cities

City Life

Glasgow is a linear city that follows the banks of the River Clyde, the original source of the city's fortunes. The density of development along the river has declined with derelict pockets and gaps along its banks. The overall plan of the greater Glasgow area should focus on regenerating the innermost areas near the city centre - the heart of the city - as each new building would greatly benefit from the vigour of the city and the city itself would contain no "weak links" (Figures 7-9). Filling the closest gaps first would enhance the quality of life for the people who live and work there, create more meaningful urban spaces, enhance the vitality that is synonymous with city life, and reduce the cost of infrastructure. Even if the city were to stop growing, the central area developed in this way would be in the strongest position to remain successful. Glasgow's central population is declining because people are moving to the fringes of the city (Figure 10).¹⁰ Naturally this brings an economic hardship on the city to provide basic services. Large road projects do not fulfil the purpose of relieving traffic congestion. New roads only encourage people not to live in the city.

The solution in the broadest sense is to avoid spreading money thinly around the city's perimeter in the form of road infrastructure and small interventions that are unable to plug huge gaps, and to concentrate people and their workplaces in the best and strongest part of the city even if it means abandoning plans for further development in outlying areas. Council housing towers at the fringe of the city can be abandoned in favour of moving residents to the place that is desirable but inconvenient to reach - the city centre. The towers are currently seen as poor accommodation for housing, but the architecture of the towers is only a contributory factor. The real problem is the isolation from the city. Resources spread too thinly will not achieve the successes realisable in an intricately connected city. The plan

¹⁰ J.H. Rae, 'Glasgow Central Area Local Plan', (Glasgow, Department of Planning, 1990), p.2.

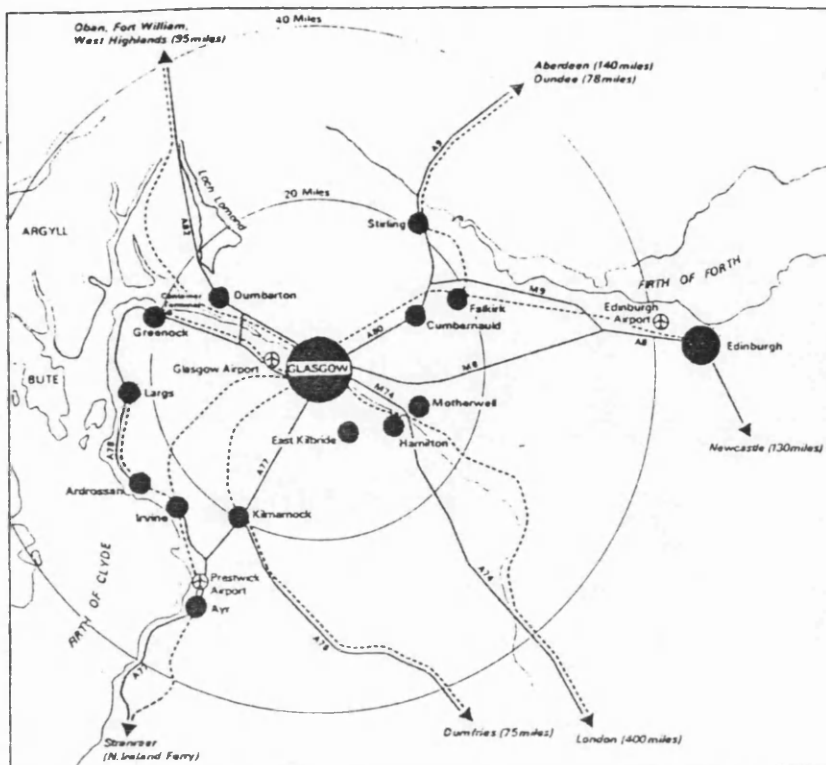


Figure 7. The greater Glasgow area. (The west of Scotland)

DISTRICT PLAN 1984

City of Glasgow
District Council

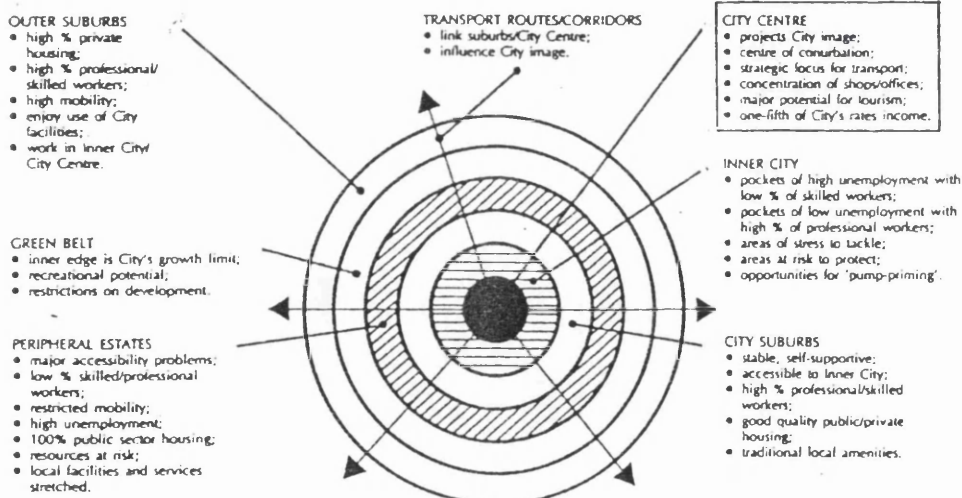


Figure 8. Diagram of the Glasgow's centre, greenbelt and periphery.

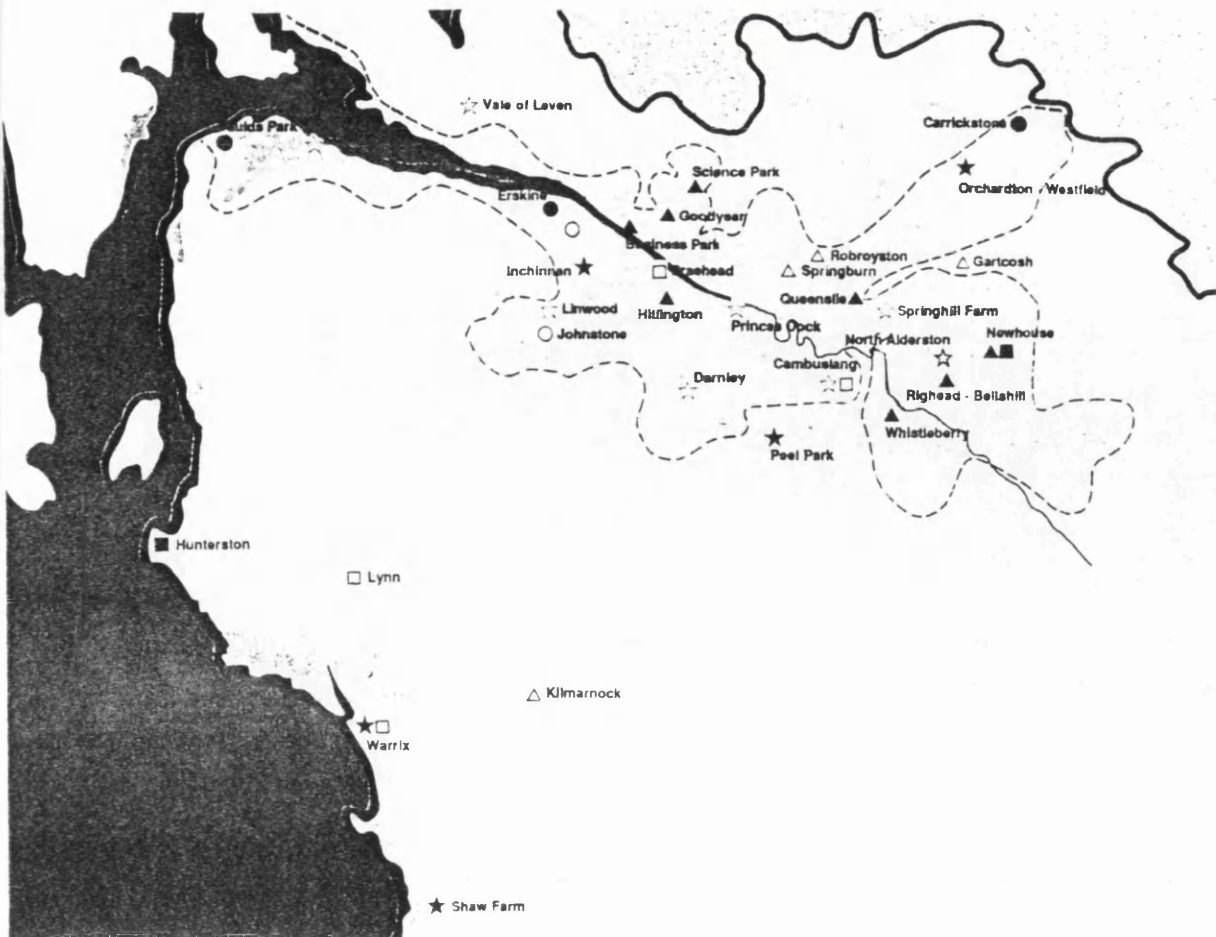


Figure 9. Greater Glasgow and Strathclyde Region.

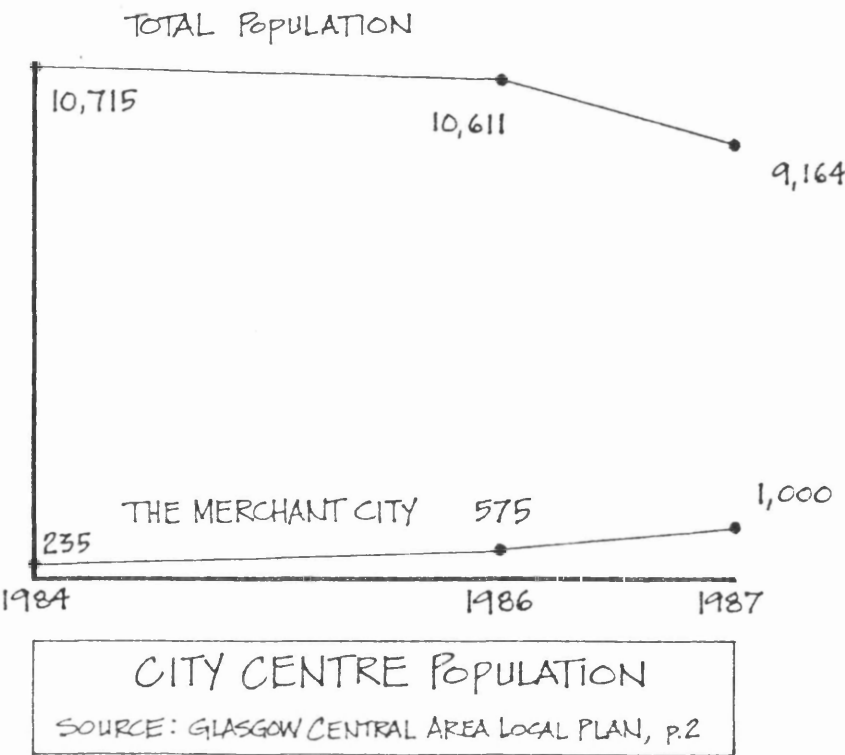


Figure 10. Glasgow city centre Population.

should be to stitch together the heart of the city and to keep adding patchworks of development to the city as they are needed.

The recent construction in the Docklands area of London does not have this connection to the strong heart of the city (Figures 11-13). Docklands is a huge development sited too far from the city centre. Transportation links to the city are poor; Docklands is a willow planted on a hilltop instead of along a riverbank where willows grow naturally. At this distance it needs the amenities that make a city self sufficient. Libraries, schools, gymnasiums, museums, shops and markets make the density of a city tolerable. Amenities are the attractions of cities. Even though Docklands is large enough to be a city, it is not a city. It is a group of buildings built close together but without the real qualities of a city; it is a suburb masquerading as a city. People who want a real city's amenities are simply going to live *in* London. Those people desiring suburban life are going to choose a much less dense place to live where they can enjoy more space or more natural surroundings. These developments on the Isle of Dogs and at Canary Wharf were not planned with urban goals in mind and the developers were not aware of the necessary ingredients of which cities are made. Cities were never founded for the purpose of renting floor space. The goal in Docklands was not the creation of an environment where people wanted to be. The goal was to construct buildings, believing that somehow the presence of buildings makes a city. Financial incentives were given to induce a money-grabbing (or money-borrowing) free-for-all. Short-term profits were the real goals for the developers and the result is a collection of buildings conceived with little regard for the spaces between them. Rogers concluded,

"With no strategic planning guidelines, the concept of balanced development was all but ignored in favour of policies geared to facilitate fast, financially attractive exploitation of the area."¹¹

¹¹ Richard Rogers, Mark Fisher, A New London, p.xxvi.

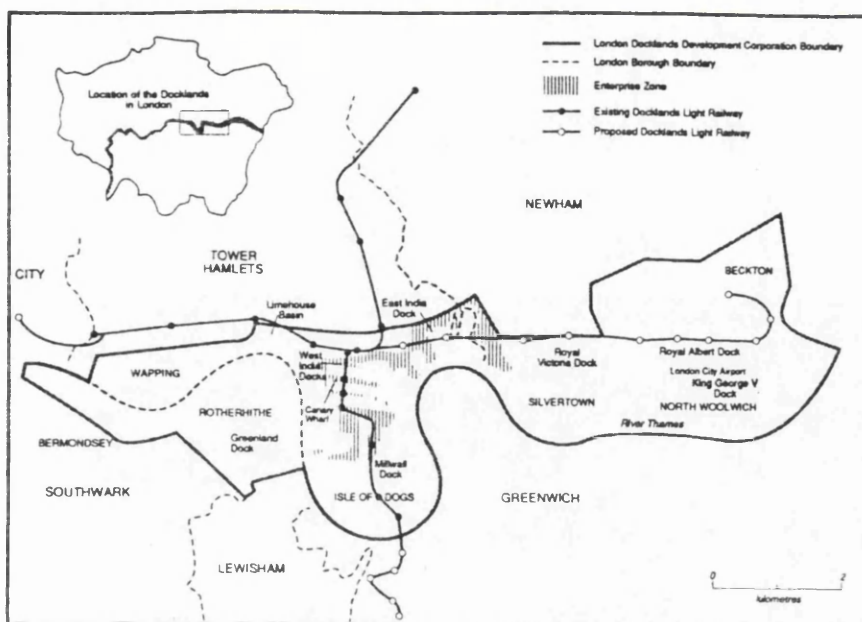


Figure 11. Map of the London Docklands development on the Thames.



Figure 12. The London Docklands. Canary Wharf tower by Cesar Pelli.

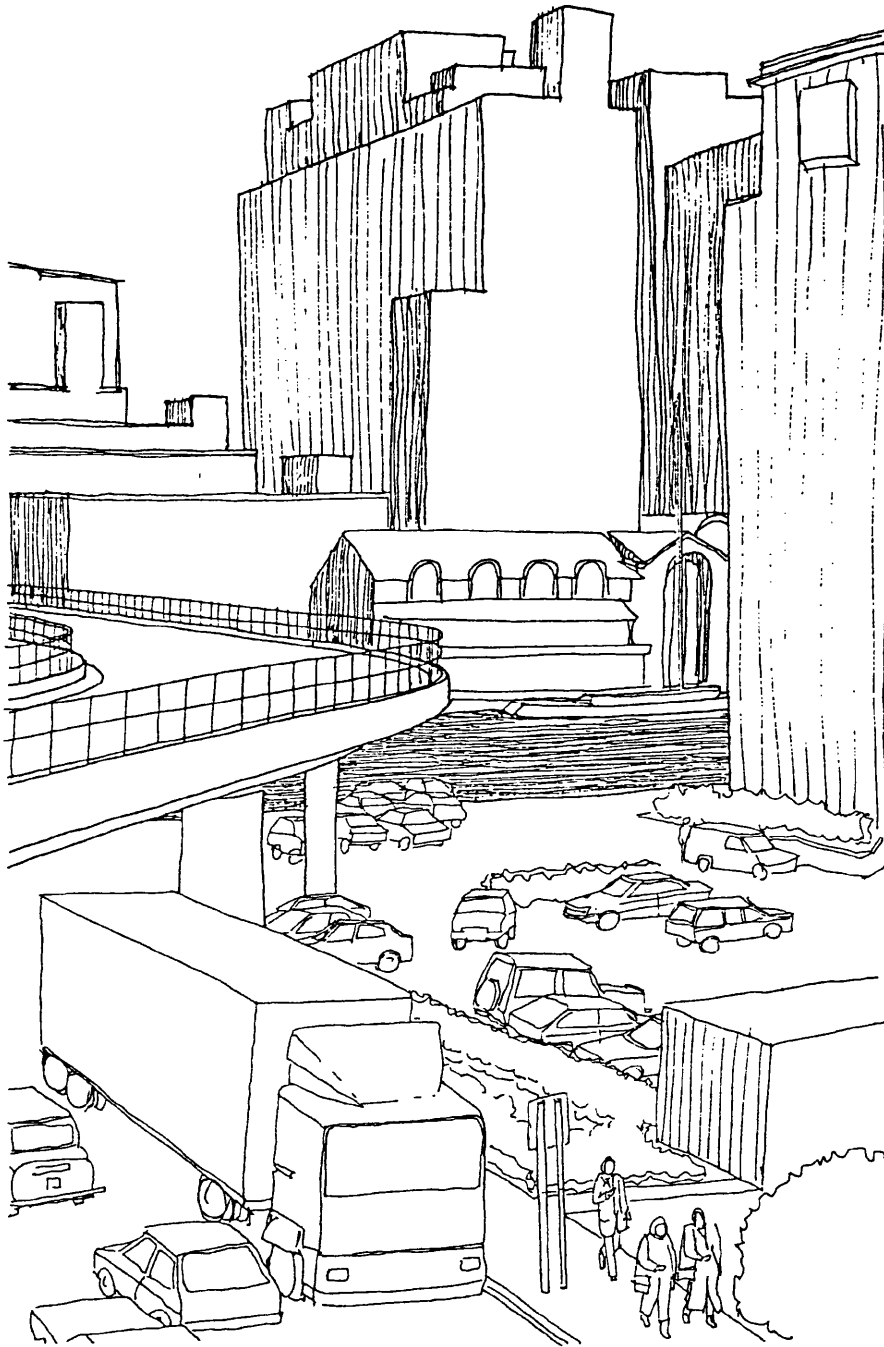


Figure 13. Riverside development in the Docklands.

The Enterprise Zone scheme encouraged those who had the least regard for civic responsibility and the least amount of knowledge of urban design to create the rules by which they played.

The magic that exists in the best cities is in the mixture of uses in any small geographical area. It would not be beneficial to concentrate new construction in the city centre of Glasgow if it were to be divided by use into zones. Zones created exclusively for one use, even if for only a few blocks, would operate on the same level as the current suburban development. Housing estates, office parks and shopping malls each shun other activities and thus require people to move great distances to go to work, school or shops. A city district that is all residential, for example, acts as a barrier to traffic even if this traffic is pedestrian traffic. To get to a shopping area or place of work one may have to traverse a residential district. If the distance is great enough, one may need an automobile. The whole point of cities is that things should be convenient, and the natural tendency of a city is to provide amenities conveniently. Shops need residents and temporary customers (office workers) to be viable, office workers benefit from available shops and restaurants during the day and for after work errands, residents need some shops that are convenient; all parts of a city work together in this way to provide lively, interesting and safe streets during the times when people are out for a specific purpose as well as the times they are simply relaxing or socialising. The implementation of functional zoning does not allow a city to function properly.

A city can be described simply as a place that provides choice and variety both in consumer goods and public spaces. The premise of a city is not one of tall buildings, transportation hubs, rejection of the countryside or the creation of zones of specific activities. The diversity found in the best districts can provide amusement and convenience that is inherent when a broad choice is at one's doorstep. Even the rarer attractions like libraries or performance halls that are not as convenient as local

shops are still considerably more convenient to the city dweller than the suburban dweller. Discovering and enjoying all the attractions, shops and galleries that are desirably close at hand is a primary feature and a primary attraction in neighbourhoods of great cities. Planners, politicians and developers are not always aware of this and sometimes cities are unnaturally transformed by the actions and policies of these groups.

The genesis of cities lies in the fact that people want to live and work close together so that as a group they might afford the amenities that would be unattainable without the group support. Cities grew (historically) without the benefit of planning commissions. Why do these groups typically take over control of something that is in the main working well and alter the natural course of the city? It might be argued that planning commissions are needed to defend against the destructive nature of speculative development or to protect the interests of the underprivileged citizens. They should carry out this role, but in some cases it seems that less damage would be done without a governing body. Cities grew on their own terms and High streets in Scottish cities were fine long before departments of planning were chartered. What is needed are city planners enlightened enough to understand that the most valuable assets of a city are variety and convenience within small areas, and that these planners will care for a city in a way that fosters growth according to these concepts.

Some strong unnatural forces may be found in any city. One is the dominance of the commuter automobile (it is *invited*) and another is the speculative developer ready to exploit the city for his financial gains. These are forces that directly affect the built form of cities. A certain amount of vehicular traffic is necessary for a city to function, but above all a city needs to serve its constituents who pay the taxes and work together to make it a better place for themselves and anyone who will join them. It is not, by anyone's imagination, made to be a wonderful place so that others (including commuters) who have not contributed financially or physically can reap

the rewards of the city dwellers' labour. If someone likes a city he may very well move there and strengthen it unless, of course, a red carpet in the form of a motorway with a place to park at the end of it is unfurled for him.

City Form

A beautiful and interesting city is made up of a mixture of primary civic buildings, monuments and unique venues that are worth an occasional journey, and an underlying matrix of shops, businesses, flats, streets and squares that are part of peoples' everyday routines. This background or matrix element of a city is made up of the conveniences that a city can offer while the cathedrals, opera houses, libraries and museums stand for much more than anything routine, and thus often become symbols of a city. The Architecture of the City is Aldo Rossi's view of monuments and matrices and the relationship between them. Symbols of a city are images that the citizens keep for themselves and are images that are projected to the outside world.

Paris has always had a great deal of these powerful monuments: the Musée de Louvre (Figure 14), the Arc de Triomphe, the Tour Eiffel, the Cathedral de Notre Dame and the Jardin de Tuileries are only the most renowned. The local and national leaders have recognised their value and in the last few years Paris has increased the number of its monuments by the addition of the Pompidou Centre, the Pyramid de Louvre, the Grande Arche de la Défence (Figure 15), the Opéra de la Bastille and the science centre and park at La Villette. Obviously these major civic amenities were not treated as just a few more buildings.

Barcelona, too, has been building modest local monuments throughout the city in the form of parks. The images of special open spaces in a crowded array of buildings can be effective monuments in the densely developed city (Figure 16). Of course, for these parks to be meaningful each must be unique and sensitively designed, which they are. The success of the scheme is that they were not

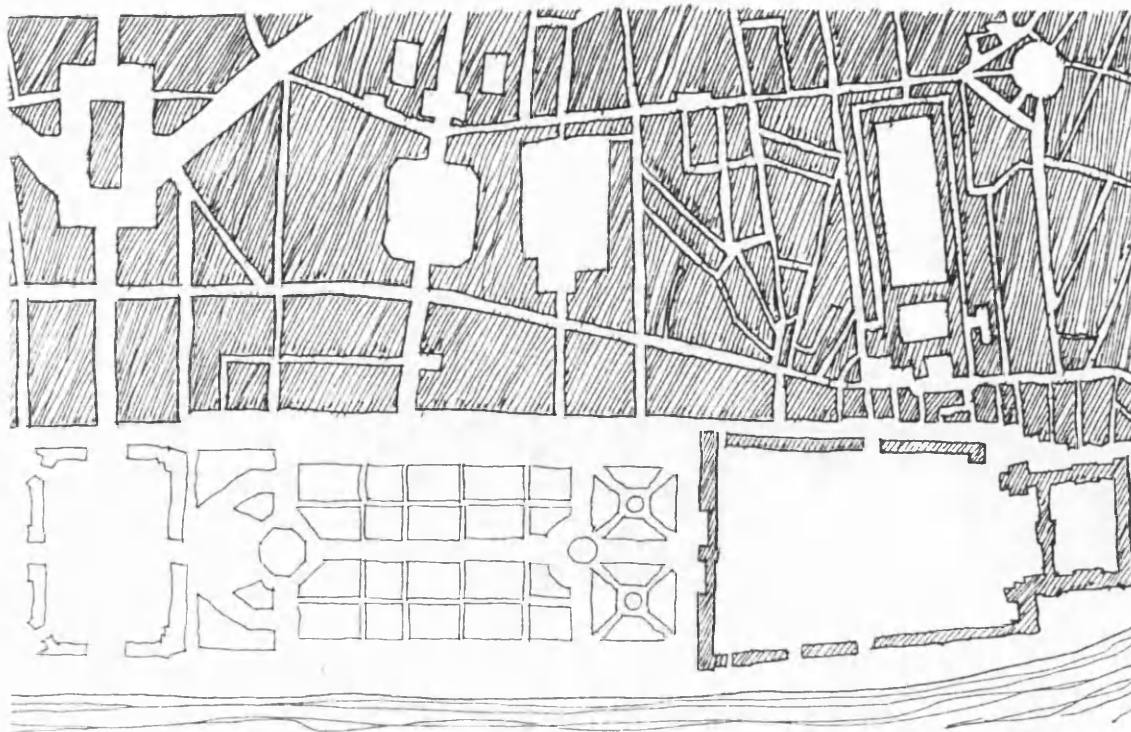


Figure 14. Paris. The Louvre Palace and the surrounding city fabric c.1900.

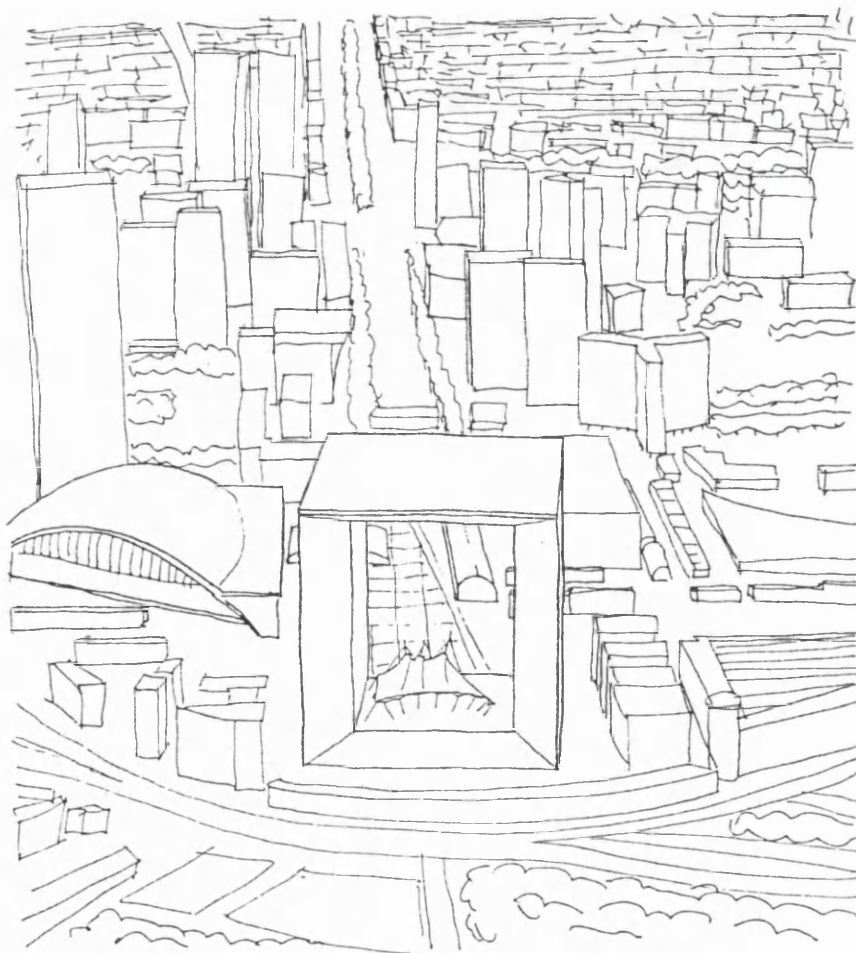


Figure 15. Paris. The Grande Arche de la Défense in its monumental setting. 1991.

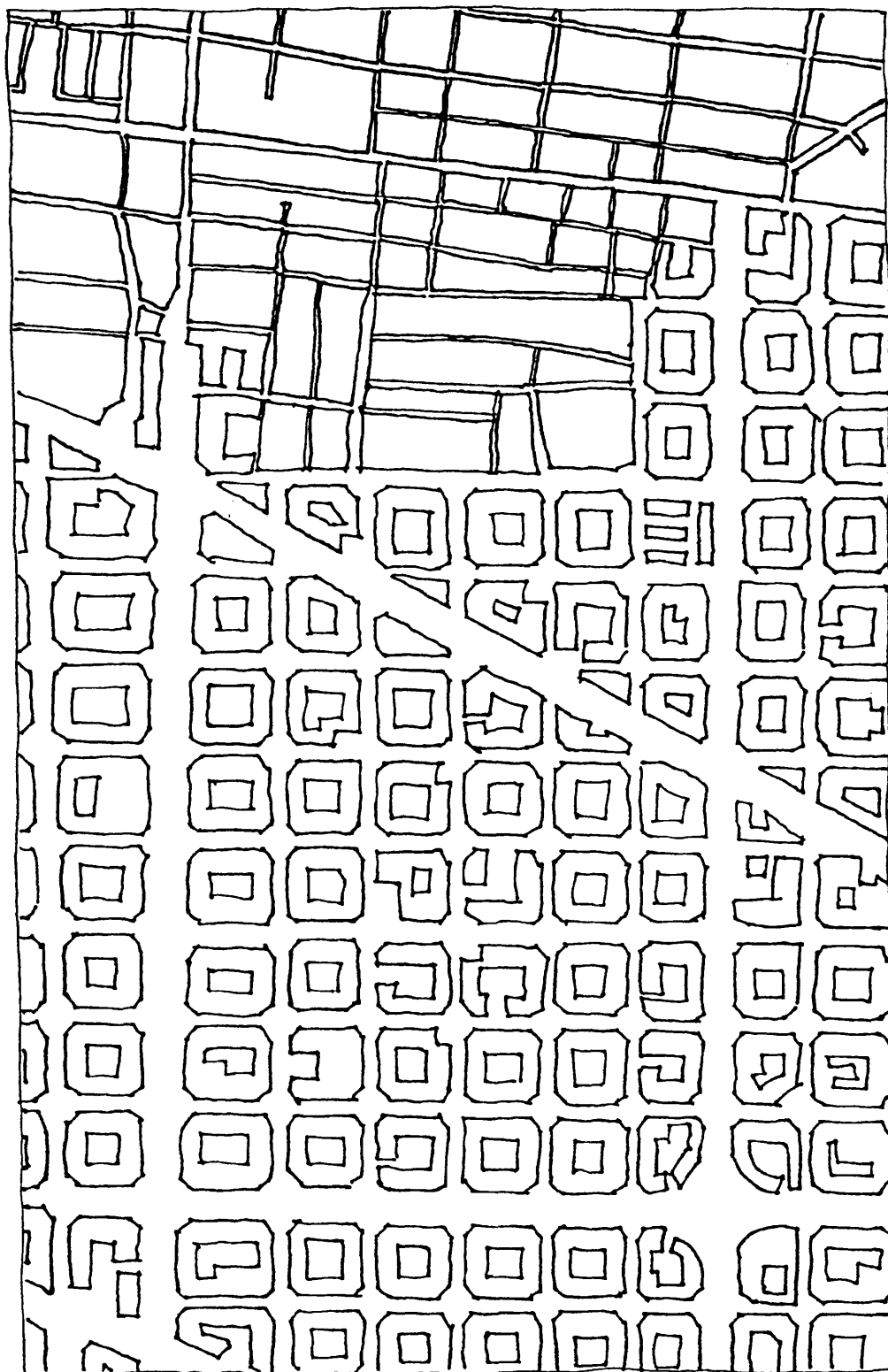


Figure 16. Barcelona. Plan of an unrelenting street grid. Demolition of some of the huge octagonal blocks in order to make boulevards provides the only variety.

masterplanned by one governing body and therefore do not bear the trademark stamp of bureaucracy. Local groups and a collaborative team of architects, landscape architects and artists produced over one hundred and forty parks in seven years that range from shaded groves, to open plazas, to swimming pools, to redesigned streets.¹²

The International Building Exhibition of 1987 in Berlin is an example of a massive renewal project intended to reconstitute the matrix element of the city. While the exhibition's weakness was that it focused solely on residential accommodation (part of, but not all of what constitutes the background fabric of a city), it is noteworthy that the administrators had clearly defined ambitions for the nature of the housing units and an awareness of the role that the matrix plays in the form of the city. It was a chance to clear out poor quality housing deep in the interior of pre-war Berlin blocks and to repair some parts that were destroyed by bombing. Neighbourhoods were completed with gap site projects and the matrix was reformed throughout different areas of the city (Figure 17). As in Barcelona, projects were unique and responded quite specifically to the site context and history. The plan drafted by the Senate for Building regarded "the city as a constant, the building as a variable".¹³

The quality of the neighbourhoods was undoubtedly improved, but an underlying problem was with the balance of the monumental and routine areas. The Kulturforum constructed from the 1960s to 1980s is an aggregation of important city-wide amenities (Figure 18). A national museum, national library and two distinct performance halls, one for chamber music and one for symphony orchestras, were grouped at the edge of the huge central park. The opportunity to help create identities for different districts and potential growth centres was lost by consolidating these

¹² Peter Rowe, The Prince of Wales Prize in Urban Design. Urban Public Spaces in Barcelona. (Cambridge, Mass.: Harvard University Graduate School of Design, 1991), p.8.

¹³ Geoffrey Broadbent, Emerging Concepts in Urban Space Design. (London: Van Nostrand Reinhold (International), 1990), p.297.

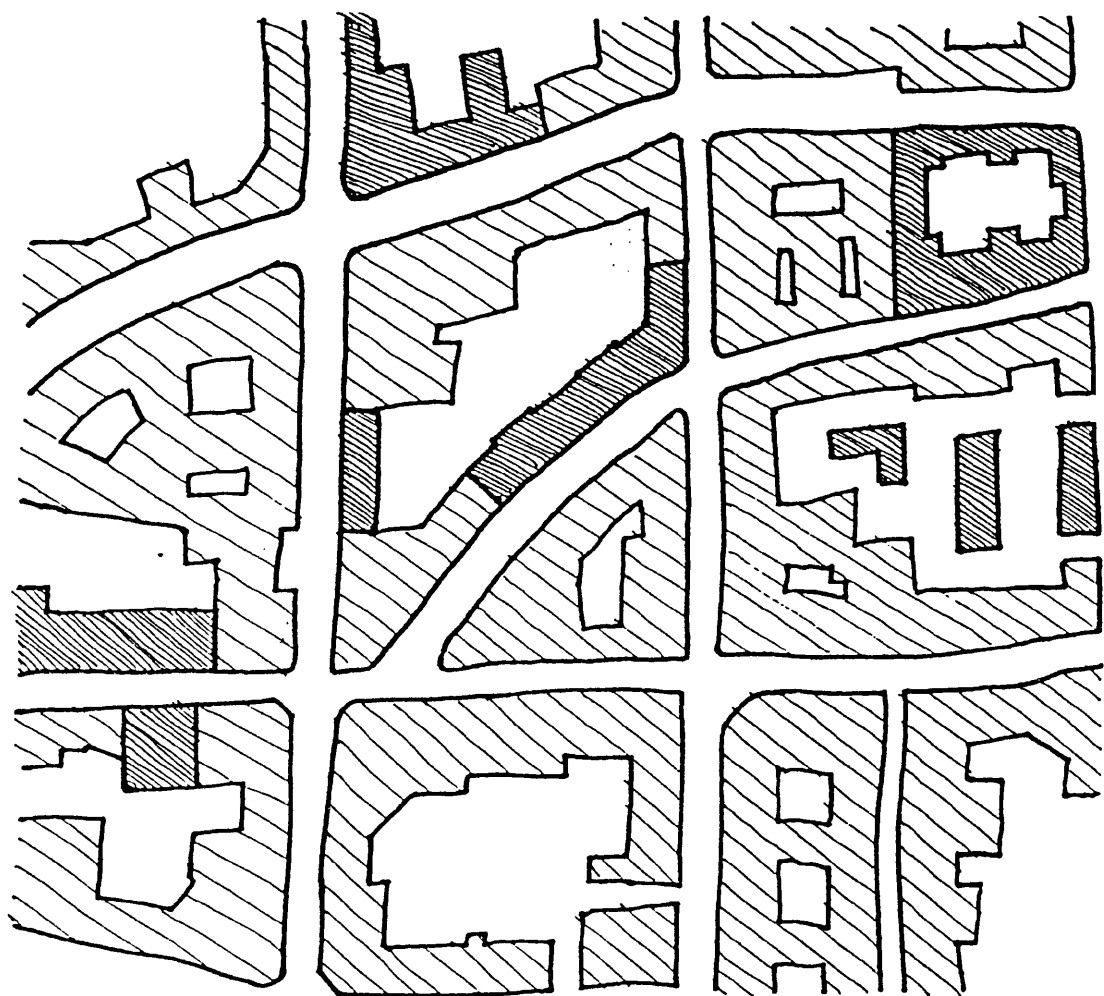


Figure 17. Berlin. Reconstituted fabric of the inner city residential areas.

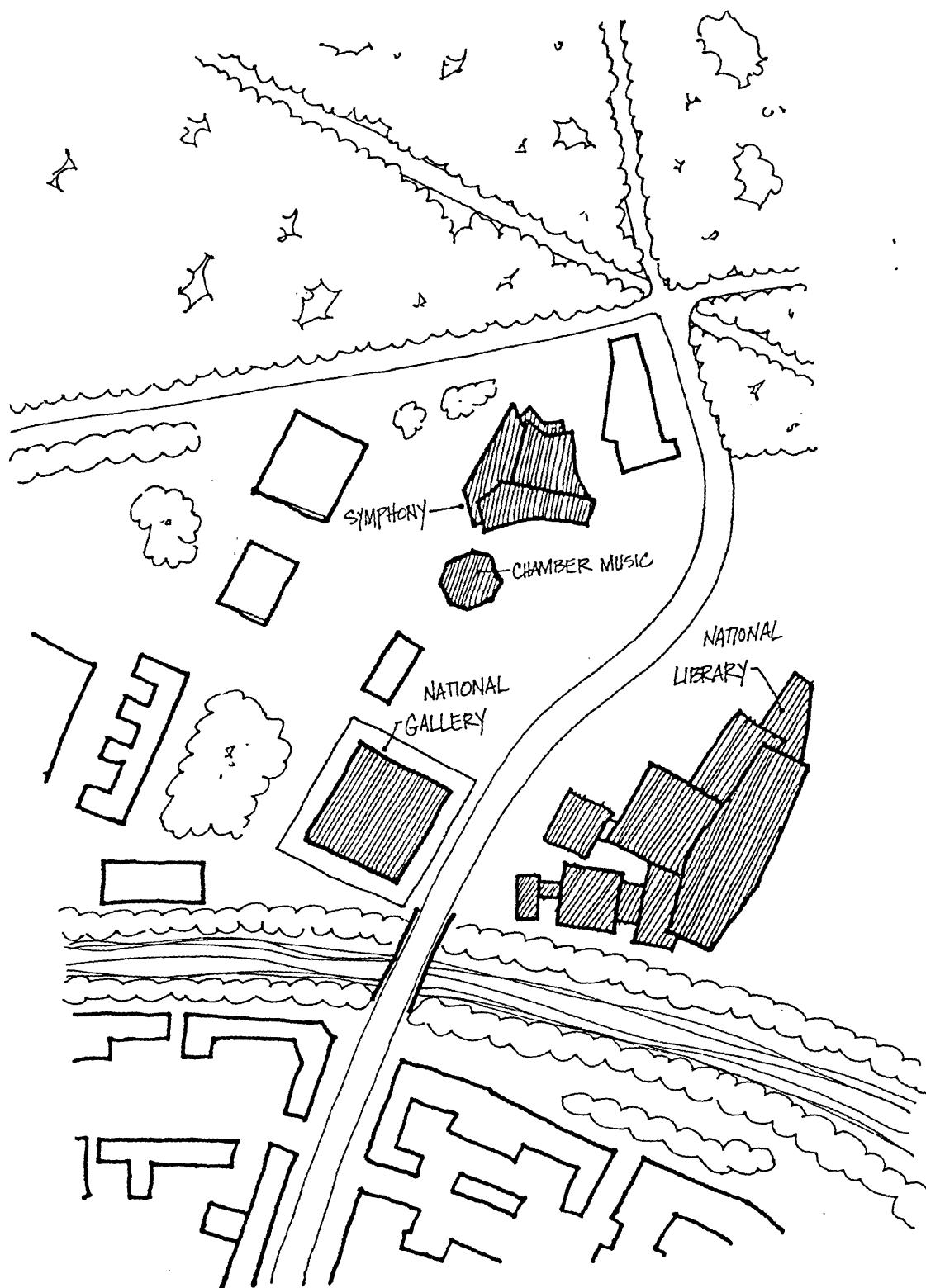


Figure 18. Berlin. The cluster of attractions in the Kulturforum.

functions. It is unlikely that anyone would go to two performances in one evening or even to combine visits to any of these in one excursion. Lincoln Centre for the Performing Arts in Manhattan, New York City, is another combination of attractions that no one would use in one outing. Christopher Alexander points out, "centralising these places robs the city as a whole of several centres of night life."¹⁴ These monuments are recognisable images, but neighbourhoods would benefit from a distribution of monuments since performance halls are often symbols of pride for a city and its people. Geoffrey Broadbent suggests that Berlin's central park might be urbanised similar to Perez D'Arce's proposal for Chandigarh.¹⁵ Leon Krier proposed a re-urbanisation of the Washington, D.C. central mall along a similar strategy.¹⁶ In both proposals, isolated monuments were surrounded by lesser buildings of all types in order to provide a suitable matrix setting. In cases like Atlanta, Houston and Dallas in the United States the use of monuments as visual markers is taken to the extreme. In some areas of these cities, each building is conceived as a monument. The profusion of bold towers without any of the background fabric of a city is baffling to anyone trying to form a mental concept of the city. The form only becomes recognisable from a distance outside the city. The skyline view is relevant only for postcards.

Houston is a remarkable city in that it has almost no regulations for city centre development and because it has almost no urban space except space for the automobile (Figures 19, 20). Buildings have been constructed without regard for other buildings or for creating places for people between buildings. Houston's very high percentage of automobile commuters (86% of the workforce)¹⁷ drive into town

¹⁴ Christopher Alexander, et al., A Pattern Language. Towns, Buildings, Construction, (New York: Oxford University Press, 1977), p.181.

¹⁵ Geoffrey Broadbent, Emerging Concepts in Urban Space Design, p.296.

¹⁶ Leon Krier, Lecture at the Mackintosh School of Architecture, December 6, 1991.

¹⁷ Kenneth Halpern, Downtown USA: Urban Design in Nine American Cities, (London: The Architectural Press, 1978), p.123.

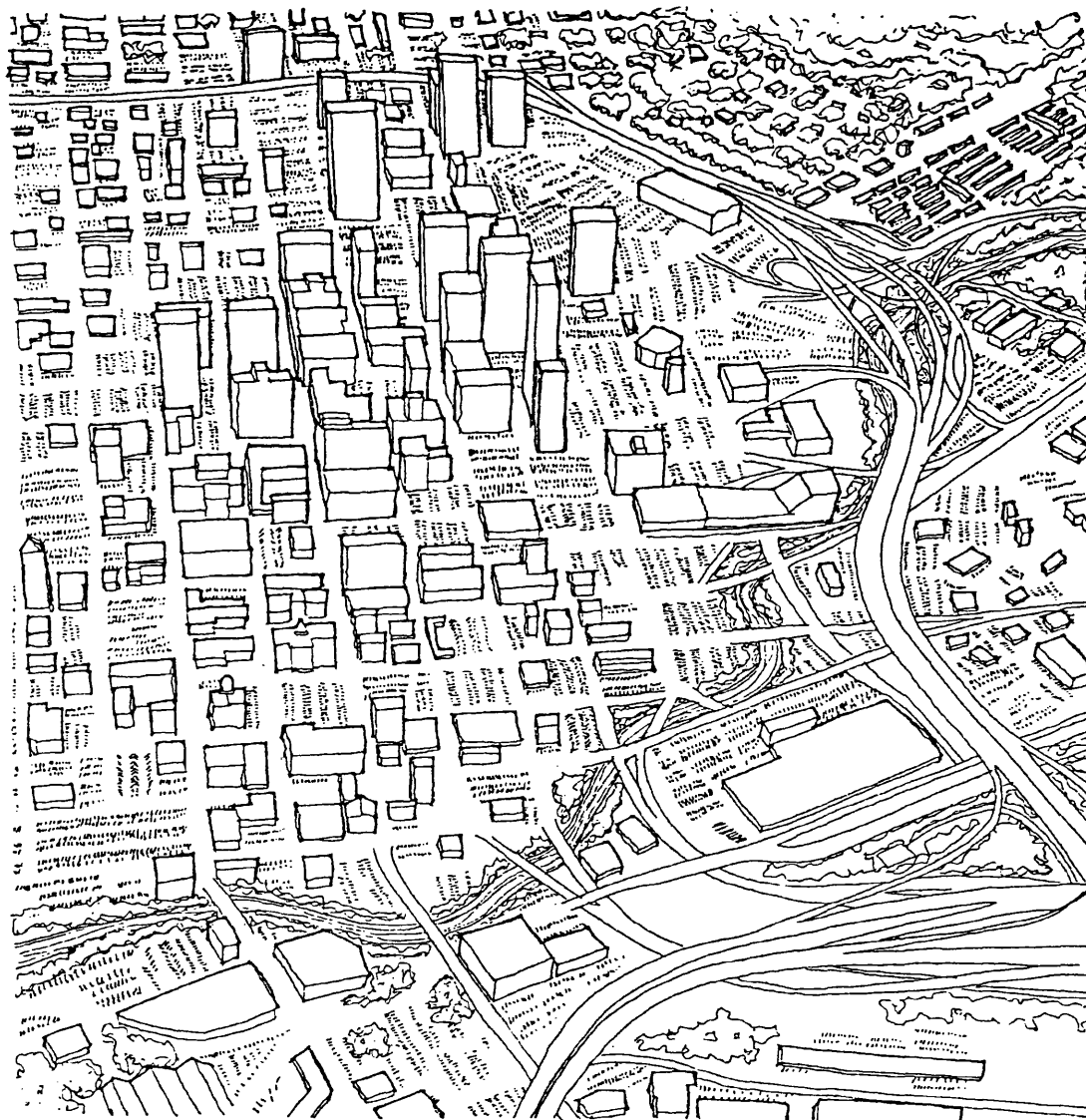


Figure 19. Aerial view of Houston, Texas. Towers and car parks.

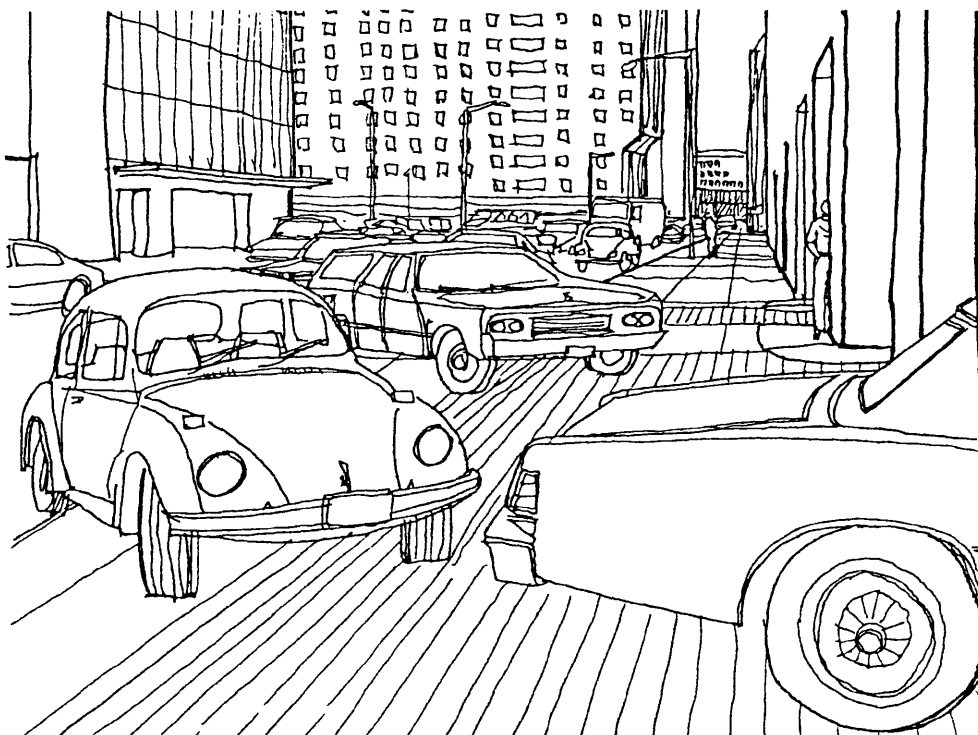


Figure 20. Houston's automobile-dominated streets.

and into a car park at grade or below the building. Here the cars stay for the remainder of the work day; the people stay inside the buildings for the remainder of the work day. It is not because of the weather. There are plenty of hot cities throughout the world with people on the streets. There simply is nothing attractive about the street scene to draw people out. Sometimes office workers venture outside to have lunch, but shopping is something done at a shopping mall or underground (a very unlikely place to find people). Some office developers were smart enough to realise that some financial success could come from underground shops, but not smart enough to consider street level shops. On the ground the automobile rules; the public spaces are car parks, the ground levels of buildings contain nothing but lift lobbies and nobody would ever have a reason to stroll along the streets as a leisure activity. Houston is barely classifiable as a city at all. It has cultural institutions, libraries, museums and the like, but it is essentially a place for people to drive to, work in relative isolation for eight hours, and then drive home. A city should bring people together for excitement and variety and leisure and convenience. This city, like London's Docklands, is an example of a grouping of buildings that is not much more than a grouping of buildings. Exploitative developers may have made an assault on London with the Docklands schemes, but in Houston they were apparently present at the beginning.

In most American cities and increasingly in European ones the automobile has become the victor over pedestrians in battles for space. Car parks are seen as essential; people parks are not. Traffic patterns for automobiles always take precedence over traffic patterns for humans and the private automobile is even above public transportation in the hierarchy of transportation. It seems important for people to be able to park directly in front of their flat or office, but it is not seen as necessary to have a place for a person to sit and relax. Pedestrians are nearly always inconvenienced by the car, so the balance should be weighted toward the pedestrian in

future developments in Glasgow. A city is traditionally, and properly so, a place for people, but suburban automobile owners are often subsidised at the expense of the city citizen.

Out-of-town commuters' shopping habits and the location of their homes may financially support another jurisdiction outside the city. Motorways and secondary roads are built, sometimes destroying special parts of town, so that the commuter can have easy access to the centre of a city. On top of this, the automobile is given priority in the city centre and is allowed to be parked where a resident of the city should expect to have public space for leisure. Some personal transportation and goods deliveries are, of course, vital to the workings of a city, but vehicle traffic has replaced the people places that were strong points of the city environment. One way to correct this error is to convert patches of land, however small, back to the domain of people as suggested by Jane Jacobs, Christopher Alexander and Leon Krier.

People who find Paris enchanting believe it to be so not because of the art in the Louvre so much as the art around it: the gardens, the riverwalks, the promenades and the vistas. Cafés are popular not for the food served but for the ambience of the life on the sidewalks and the plazas - the public urban space. The quality of these spaces for people should be ranked above convenience for the automobile at the top of the hierarchy because the primary goal of city spaces is not that of automobile access. Nor is the value of a city square based on its revenue potential if developed. The lures of a city are its streetlife, its density and the balance of its public and private spaces.

The densification of a city by the construction of new buildings cannot in itself attract new residents to a city; it can only respond to a demand. Even so, new growth must contain the qualities that make the city attractive if a healthy city is to remain healthy and popular. Two or three poorly conceived buildings might not ruin a district if the surrounding habitat remains intact, but ten or twelve probably will

because that which was desirable will have been destroyed. In cases of sweeping redevelopment like the Docklands, an appropriate urban habitat must be *consciously* created at the beginning. To guard against the "false city" developments of Docklands or Houston, Glasgow must develop its most promising area first because just *any* place that happens to be derelict is not necessarily a good candidate for renewal. The Broomielaw is a promising area and it should be given the best characteristics of a city: convenience, variety and ambience that make up the good life that the residents can expect from the economies of scale in Glasgow. Any area under consideration needs a site-specific framework for construction drafted by those who know the essential components of a city to guard against the destructive tendencies from those who do not know. Roadway engineers and property developers are notorious as being among those who do not understand or do not care.

City Orientation

To understand the balance between order and variety in the visual scene of the city it is useful to study some Scottish towns in terms of the characteristics of streets and the organisation of the network of streets. Examples range from small to large, planned and unplanned;

Inveraray	(Plate 11)
Cumbernauld New Town	(Plate 12)
Glasgow Old Town (the Merchant City)	(Plate 13)
Glasgow New Town (the present Blythswood office core)	(Plate 14)
Edinburgh Old Town	(Plate 15)
Edinburgh New Town	(Plate 16)

The existence of relevant visual markers throughout a town or a city is the most fundamental tool for navigating through a city. They help determine a persons' position and direction in a city. Tourists and residents alike rely more successfully on visual rather than street-name orientation based on views to distant and unique

elements in their surroundings. In The Image of the City, Kevin Lynch states that people form a personal map of an area based on landmarks, paths, edges and nodes of activity. The physical images may be monuments, buildings, hills, parks or open views to sky or countryside, but orientation in the city is based on this very large scale system. Each locality will have plenty of clues and signs for more specific information, but this amount of nearby information never obscures the larger system. A mental map of special places helps to guide anyone throughout a city, especially when travelling on uncommon routes when destinations can be envisioned in reference to known landmarks.

The orientation properties of streets include the views that are available from that street regardless of whether a visible monument is located on the particular street in question (Figure 21). The type of street that offers the fewest clues to a person with regard to his position on the street can be described as "one dimensional". None of the buildings on either side of the street can be considered landmarks and no landmarks in the greater area are in view. The one dimension of the street is the distance travelled by a person. The only way that person can know his location on the street is to remember the direction and distance travelled from the place he entered the street. These banal streets are not particularly common, but they are sometimes found in large housing projects, shopping malls and New Towns. A "two dimensional" street has qualities that either distinguish one side of the street from the other or has a landmark at least at one end to establish a sense of direction. A combination of directional landmarks and notable markers along the street form the "three dimensional" street and allows someone to know direction and distance along the street. Having a variety of buildings on a street does not guarantee that any particular one will stand out from the patchwork. What is needed is a bolder landmark to give distinction to the street. A successful network of streets relies heavily on the clarity and relative order of the layout and for the specific streets to

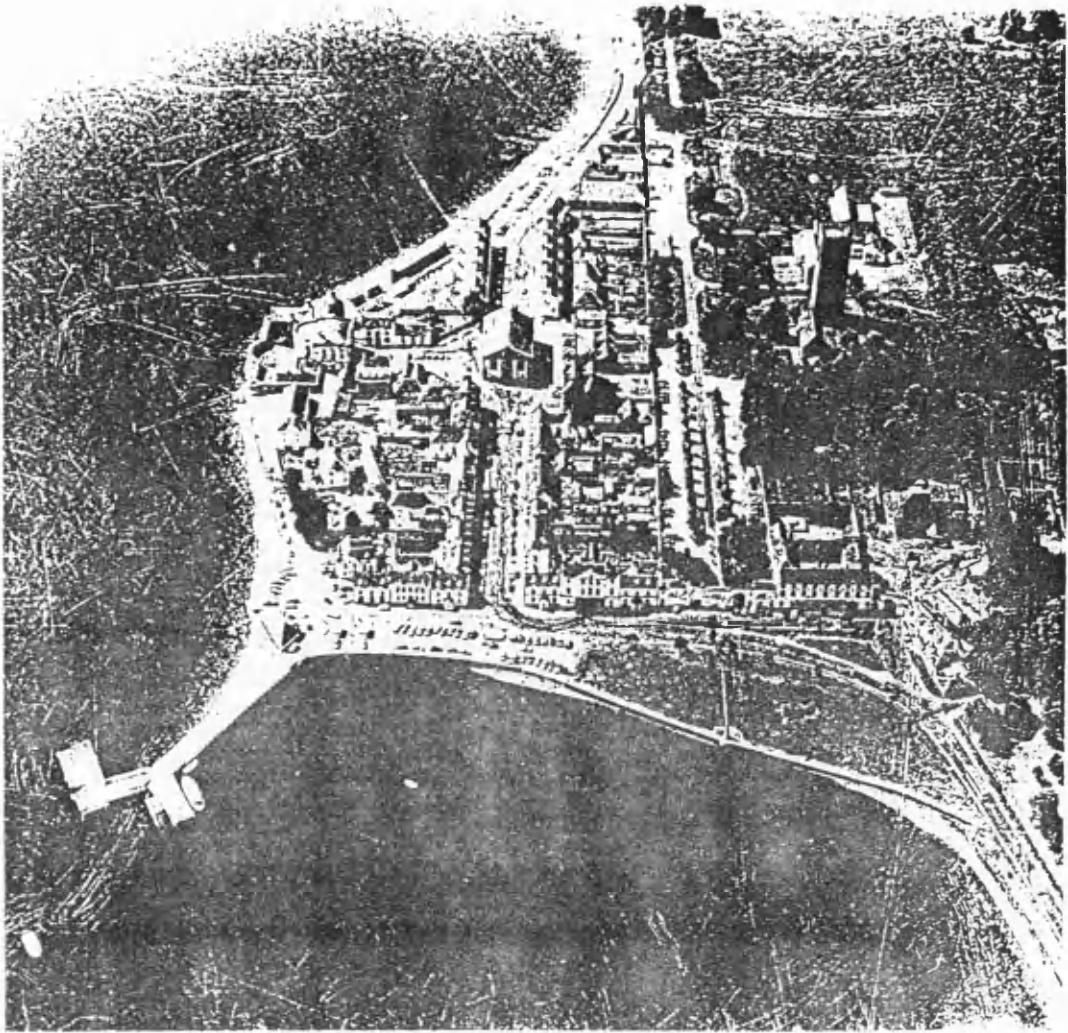


Plate 11. Aerial view of Inveraray from the east.



Plate 12. The main shopping street of Cumbernauld New Town.

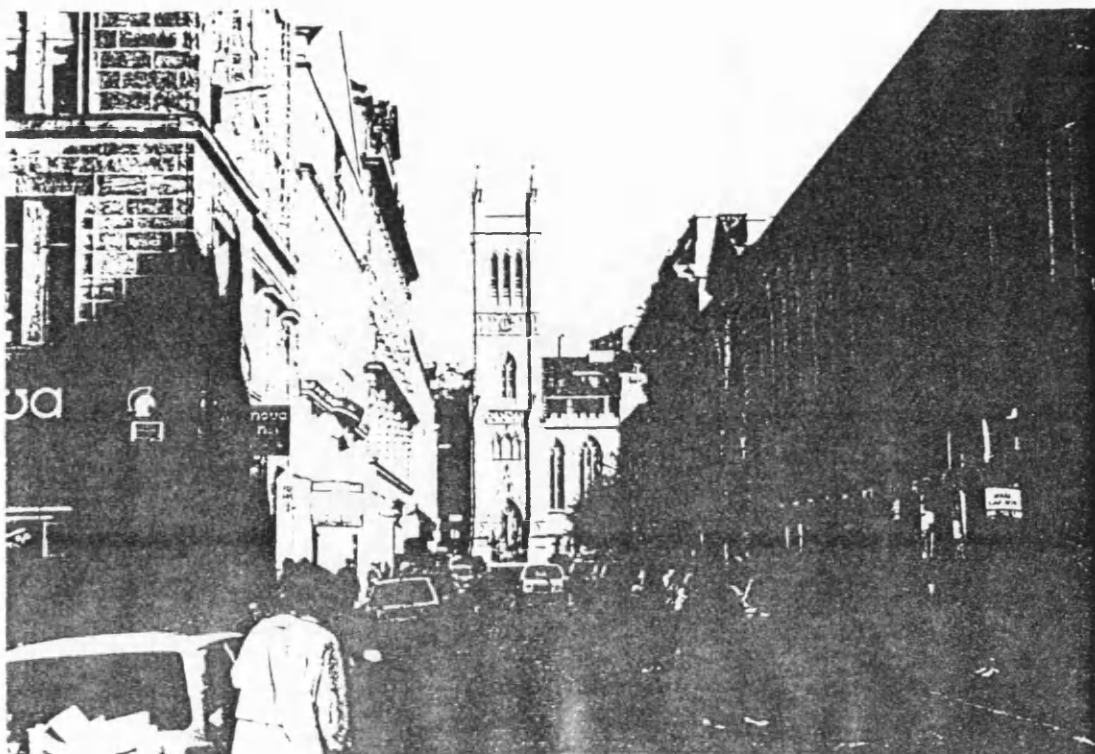


Plate 13. Glasgow Old Town. Street punctuation; a building closes the vista.

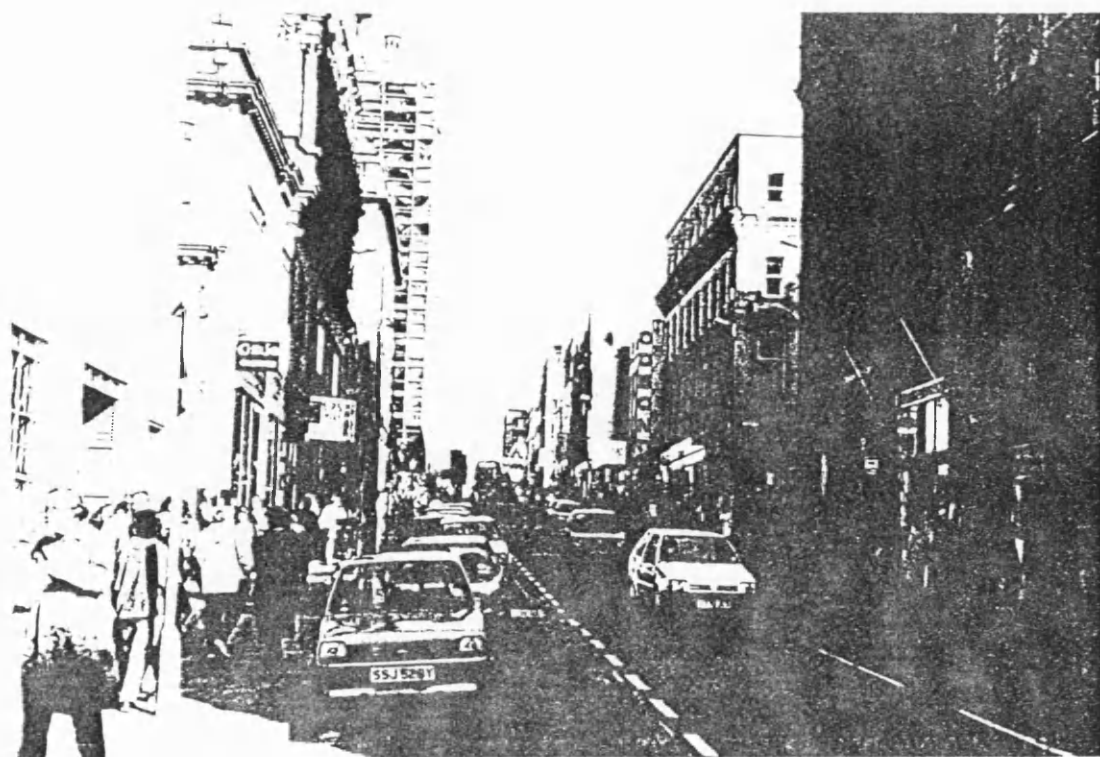


Plate 14. Glasgow New Town. Monotonous blocks; the streets are similar in both directions.

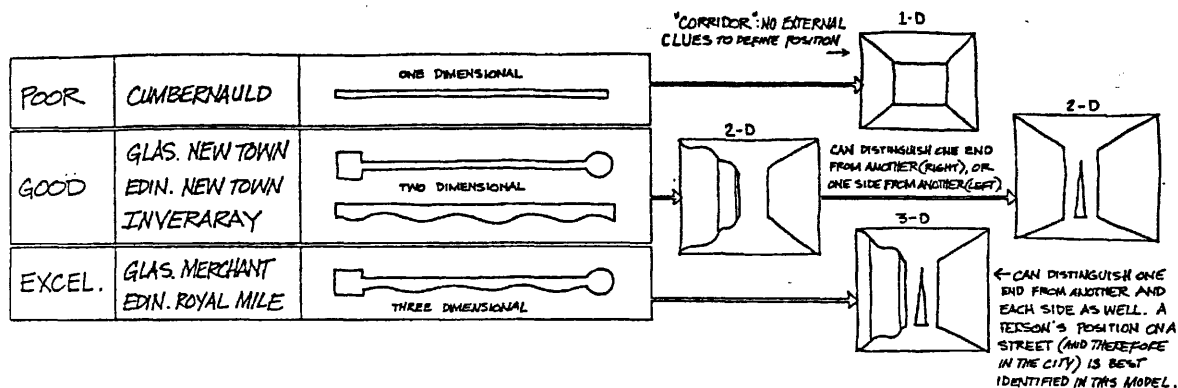


Plate 15. Edinburgh Old Town. Special buildings and views from the ridge mark distances along the High Street.

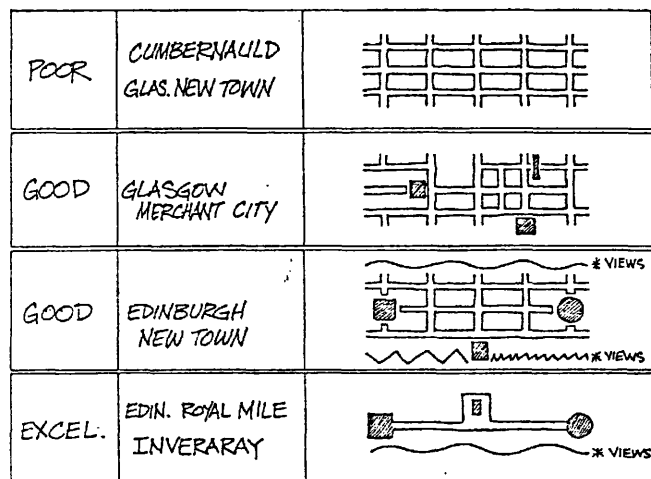


Plate 16. Edinburgh New Town. The street grid is regular; distant views aid in orientation.

STREETS



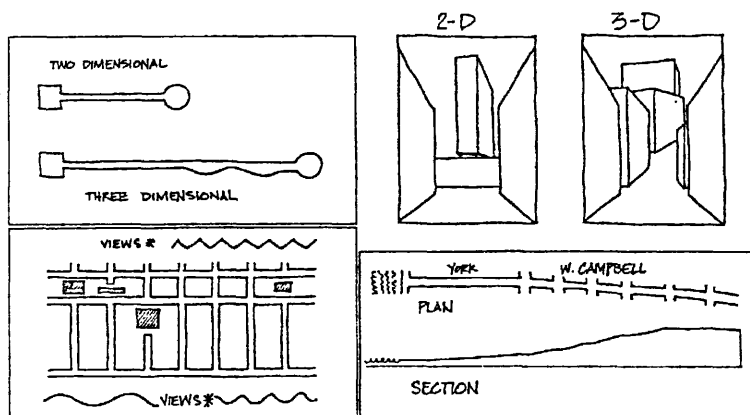
ORGANISATION



NOTES:

CUMBERNAULD NEW TOWN RECEIVES THE LOWEST RATINGS BECAUSE IT COMBINES THE WORST OF BOTH CATEGORIES. THE ROYAL MILE IS BEST SYSTEM FOR ORIENTATION BECAUSE OF THE STEEP INCLINE AND THE SIGNIFICANT VIEWS. IT IS ESSENTIALLY ONE STREET, LIKE INVERARAY, AND THE LESSON IS NOT EASILY APPLIED ELSEWHERE. THE ROYAL MILE IS MUCH LONGER THAN THE MAIN STREET IN INVERARAY BUT IS AS SUCCESSFUL BECAUSE OF THE MANY UNIQUE MONUMENTS ALONG IT AND THE FINE VIEWS FROM IT THAT HELP TO INDICATE POSITION ON THE STREET.

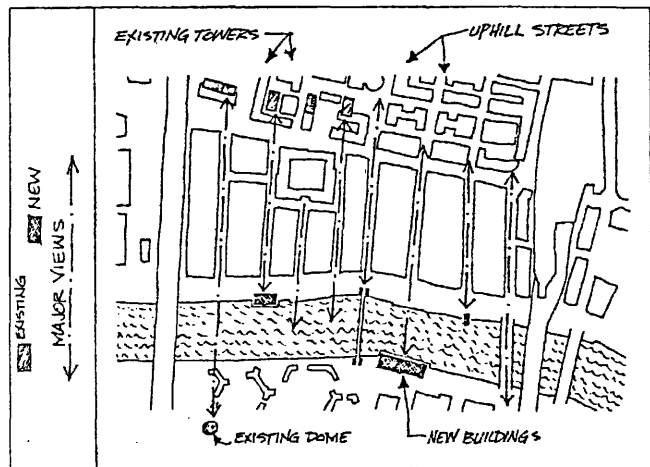
STREETS



NOTES:

THE SECOND AND THIRD "DIMENSIONS" ARE WAYS OF IDENTIFYING ONE'S LOCATION ON A STREET THAT IS VERY LONG. HELPFUL CLUES CAN BE LANDMARK BUILDINGS ON A STREET, SUBTLE CHANGES IN DIRECTION OR WIDTH OF A STREET, CHANGES IN GRADIENT, OR MEMORABLE VIEWS TO THE SURROUNDING TOWN OR COUNTRYSIDE.

OPPORTUNITIES



THE "STREETS" IN THE BROOMIELAW THAT ARE TERMINATED ON THE NORTH END BY BUILDINGS DO NOT NEED AN ELABORATE SYSTEM OF VISUAL MARKERS. ACCORDINGLY, A VERY SHORT STREET IN THE "GOOD/2-D" CATEGORY FUNCTIONS AS WELL AS A STREET IN THE "EXCELLENT/3-D" CATEGORY.

THE FEW TOWERING BUILDINGS, THE HILL OF BLYTHSWOOD SQUARE AND THE KINK IN THE STREET PATTERN AT ARGYLE STREET GIVE THE LONGER STREETS A "THREE DIMENSIONAL" QUALITY.

Figure 21. Diagrams of means of orientation in a city. Six examples in Scotland.

have their own landmark properties within this network. The landmarks of the wider city need to be in sight from time to time.

Public Spaces

Public space in an urban setting can be divided into three categories: streets, large parks and squares (small parks). A street sometimes functions as a square and often transcends the function of a mere transportation corridor to become a place for local activities, meetings or simply a place to relax. Regulations or strong building traditions may be the underlying ordering principles of the street. Large parks are designated as escapes from the hard world of the pavements. They are a place of recreation and relaxation. There seems to be no confusion about the role of large parks in the minds of planners or landscape architects. The result is that large parks that are designed turn out well, as do parks that retain a bit of nature. The square usually falls somewhere between the street and the park. It may be covered or open, paved or landscaped, large or small. The local square acts as a temporary relief from buildings and traffic, or as a place to rest or play. Since the intended use of a square is an elusive concept, squares are typically the poorest public spaces.

The problem is that these squares are seen as an end in themselves and since there are so many possible uses, it is believed they will invite use all the time regardless of the design. They are always regarded as welcome additions to the city wherever they are located because they will be so wanted that they become destinations. A large park for a city does function as a destination. People set out specifically for the park to spend the afternoon, a couple of hours, or just to take a stroll. Getting away from the park's perimeter (the city) is the main attraction of a large park. The Botanical Gardens, Kelvingrove park and the Green are just this type of park. The square, however, is defined by and reliant on its perimeter to give it meaning and purpose. The form of the buildings and the uses within them both are

vital to the success of the square. Squares are seldom a destination for people; usually they are forums for the activities along the perimeter to spill over the sidewalk. Large parks are, by their nature, so large that perimeter activity is not close enough to provide safety for people in the centre during off-peak hours and may be a poor place to let children play unsupervised.¹⁸ In the square, parents often allow children unsupervised play because it is usually not far from home and the amount of activity around the edges provides a degree of safety. Lively mixed-use streets along the perimeter make for a lively mixed-use square. Streets and squares are different forms of the same idea. A square is most successful when it acts as a relief for the crush of the crowds in a lively district where people are already there for other reasons, and should be thought of as a secondary feature to street life. It is not a primary cog in the genesis of a neighbourhood and not even the glue that holds a neighbourhood together. Jane Jacobs asserts, "neighbourhood parks fail to substitute in any way for plentiful city diversity" in The Death and Life of Great American Cities.¹⁹ The environment of Kelvingrove Park is grass and trees and water, but the environment of George Square is *people*. Designers of squares must be aware of this distinction because a sparsely populated square is much worse than a crowded one, and a good street is better than a mediocre square. An unused square is both unnecessary and unsafe and one might as well let the developers have it as a building site. Jane Jacobs reveals,

"Conventionally, neighbourhood parks or park-like open spaces are considered boons conferred on the deprived populations of cities. Let us turn this thought around, and consider city parks deprived places that need the boon of life and appreciation conferred on *them*."²⁰

¹⁸ Jane Jacobs, The Death and Life of Great American Cities, The Failure of Town Planning, (Middlesex, England: Penguin Books, Ltd., 1962), p.88. Jacobs contrasts an unsupervised playground with a supervised street.

¹⁹ Jane Jacobs, The Death and Life of Great American Cities, p.111.

²⁰ Jane Jacobs, The Death and Life of Great American Cities, p.99.

Blythswood Square (Figure 22) can not hold a neighbourhood together either, but it can be more welcoming during the hours of the day (12:00 p.m. to 2:00 p.m.) when there are people to use it. Streams of people move around the square at midday, but the square is an inconvenience since it is fenced along its whole perimeter with only one gate for entry (Plate 17). Nobody can take the short route through the square and few people want to make the effort to enter a sparsely populated area. The thick foliage at the perimeter does not create a peaceful zone; it creates an isolated zone. The public location of the square among businesses would suggest that it be an open park. The mature trees along the perimeter of the park provide an adequate definition of the environment without the dense shrubs that are also there. If it is preferable to keep this park privately owned for reasons of traditional ownership, then the undergrowth and chain-mesh fence should be replaced with a proper iron railing to allow the passers-by the visual relief of the park. A view to the centre with benches along wide sidewalks on the outside of the fence would be the next-best thing to access of the space.²¹ Before and after work hours the square is closed and locked, presumably so it is safe to walk past at night. Regardless of the beauty of the area there is no constituency to use the square; if publicly owned it is too remote from activity and if privately owned (by the building owners) the population leaves after the work day.

The proper nature of a city as a centre for activity depends upon the success of the mixture of uses; the success of a city's form relies largely on the contrast between the regular and the unique (the matrix and the monuments). Monuments derive their importance largely from the fact that there is much more matrix than the amount of monuments, making the monuments seem even more special. Too many monuments, important buildings and parks in an area take up the land that is needed for the

²¹ Jane Jacobs, *The Death and Life of Great American Cities*, p.117. Jacobs describes small private parks in San Francisco that, while not accessible, are a source of pleasure for passers-by.

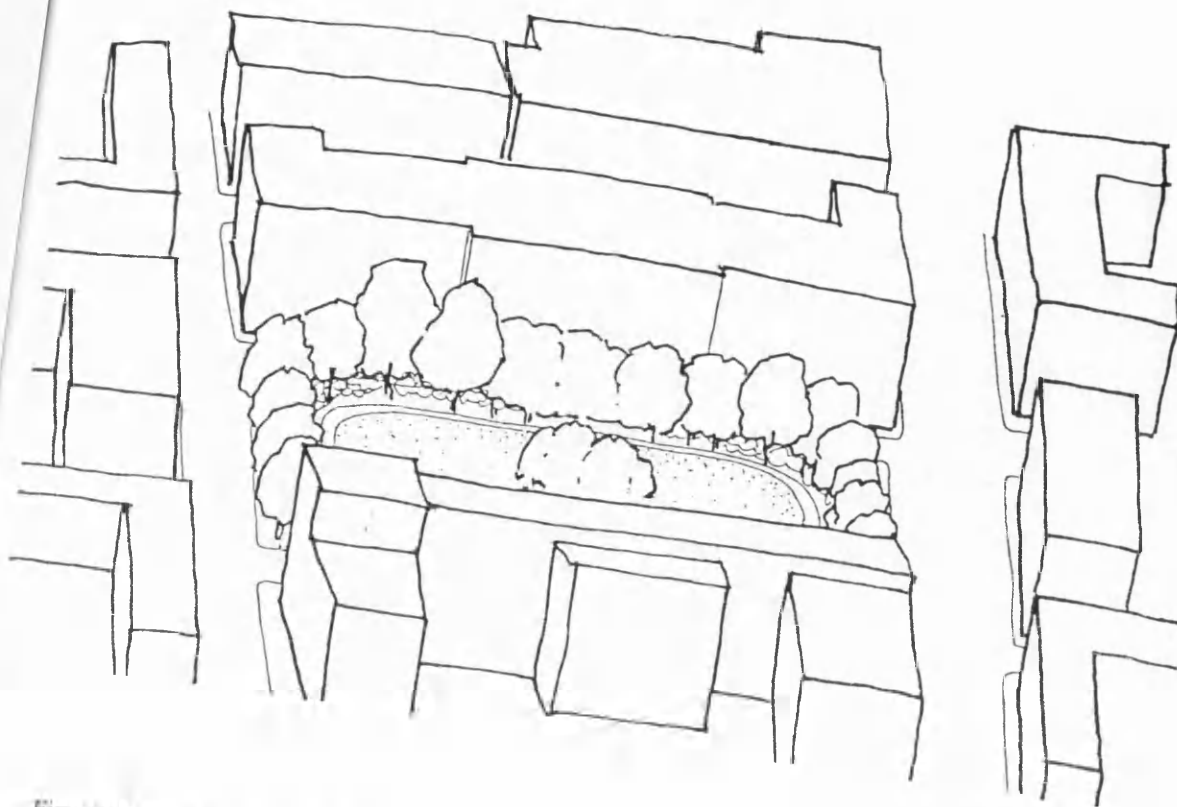


Figure 22. Aerial view of Blythswood Square, Glasgow.

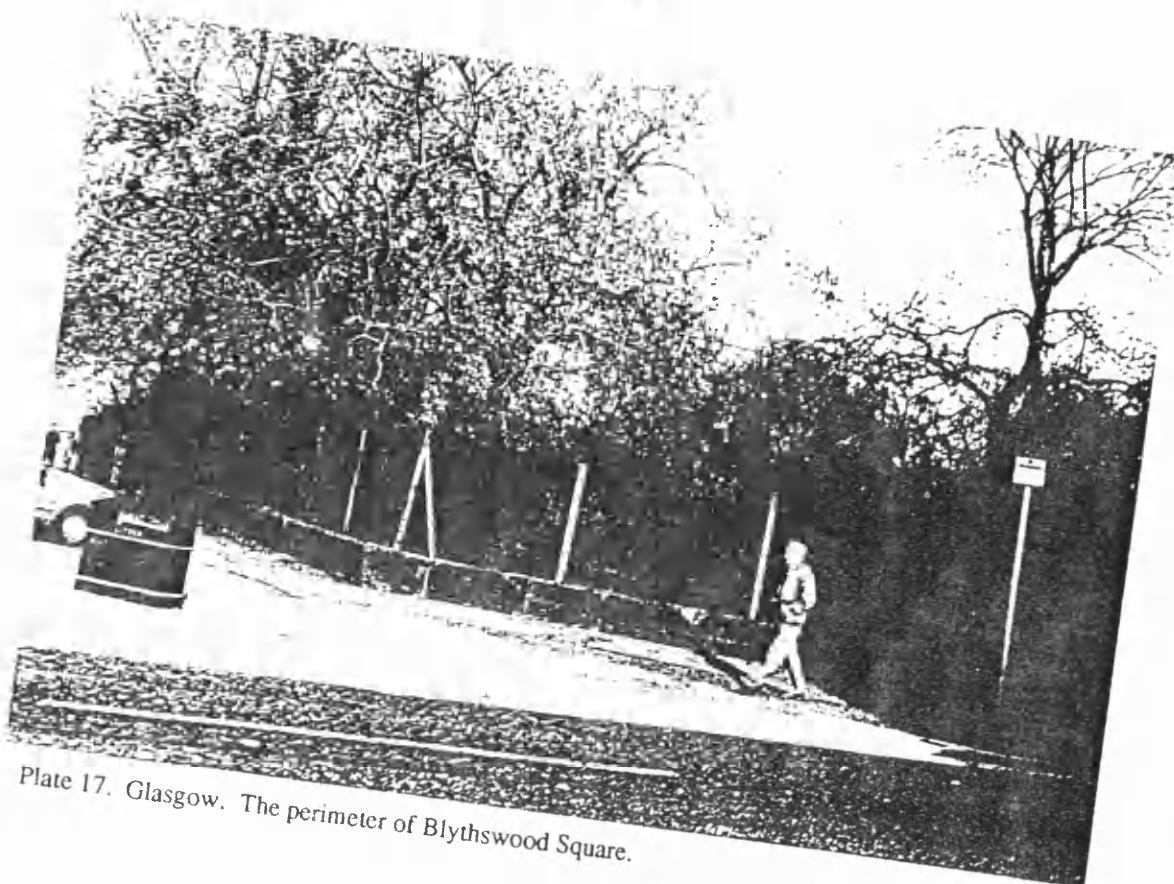


Plate 17. Glasgow. The perimeter of Blythswood Square.

supporting roles that other buildings fill, both as space defining elements and activity supporters. The success of any urban space is linked with the success of its perimeter and the quality of the enclosure, as described by Gordon Cullen in Townscape and by Rob and Leon Krier in their many writings. On the smallest scale, a street is an urban space and can be successful if it is embraced by buildings along either side. The physical essence of the Broomielaw or any other area is the quality of the enclosed spaces. Parks, squares, lanes, streets and avenues can be defined differently spatially, but the logic of organisation and the acknowledgement that every building is an important element of the environment will determine if the space will be perceived as rich and cohesive.

The distant image of the skyline of a city is an overrated image. It is fine for a postcard or for projecting an image to the outside world, but if a person on the street feels trapped between a car park and a loading dock, the ground plane fails as an environment (Figures 23, 24). The activity on the ground and views from the ground are the first consideration. Designers are concerned with a person's perception of an area (not a car's perception or a bird's perception of an area) and must truly make the comfort and pleasure of pedestrians the goal of the design. This is not simply laying out a sidewalk from one point to another; it is catering to their comfort with defined and active spaces and places to relax. It also involves providing variety in the things that they see and touch, and giving them light and trees and benches and the little things that remind people that they belong there (Figure 25). Isolated towers and multi-level monstrosities with the activities encased inside are oppressive, unapproachable and confusing, but mostly they assert that people do not belong near them. It is how we approach and enter a building or space that forms a large part of our perception of the place. The way we feel when we stand beside a building, the small perceptions at ground level, and the ease with which we can find our way

around can make us comfortable or uncomfortable; pleased or irritated. A dramatic roof on a twenty-storey building does not amount to much to a person less than two blocks away. Similarly, a blank wall of the finest marble at ground level can ruin the image of a building (Figures 26-29). Buildings should not be designed with the effect on the skyline as the main goal. The purpose of a street is not to allow automobile traffic to pass from one point to another, although that is one use. A city street is a place just as much as a square or public auditorium are places.

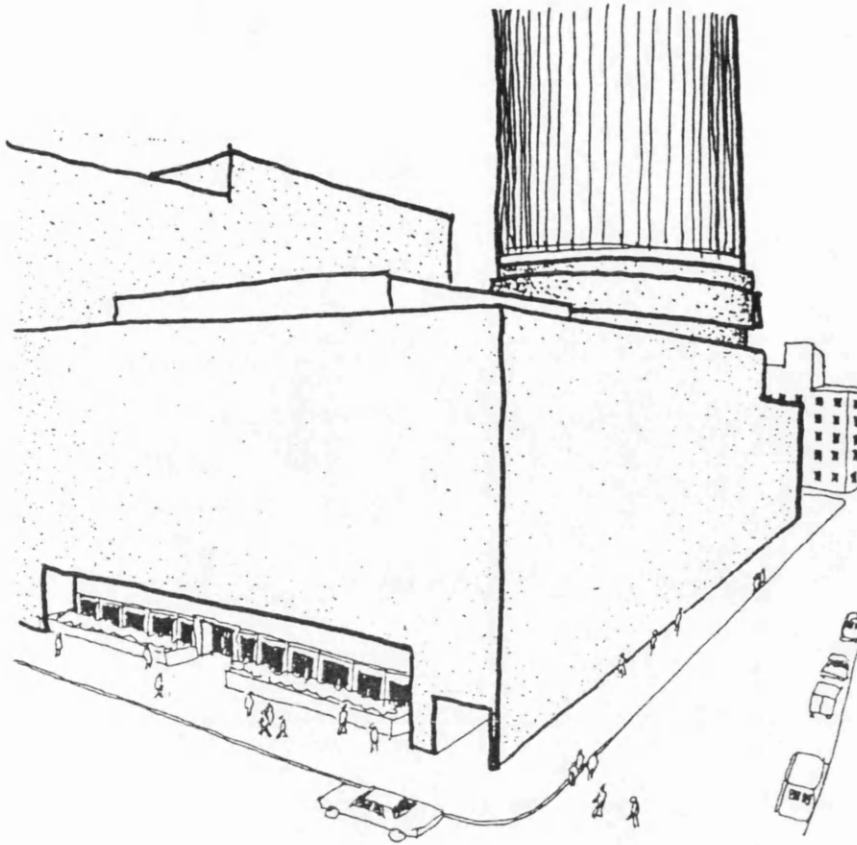


Figure 23. Atlanta, Georgia. View of inhospitable street environment for pedestrians.

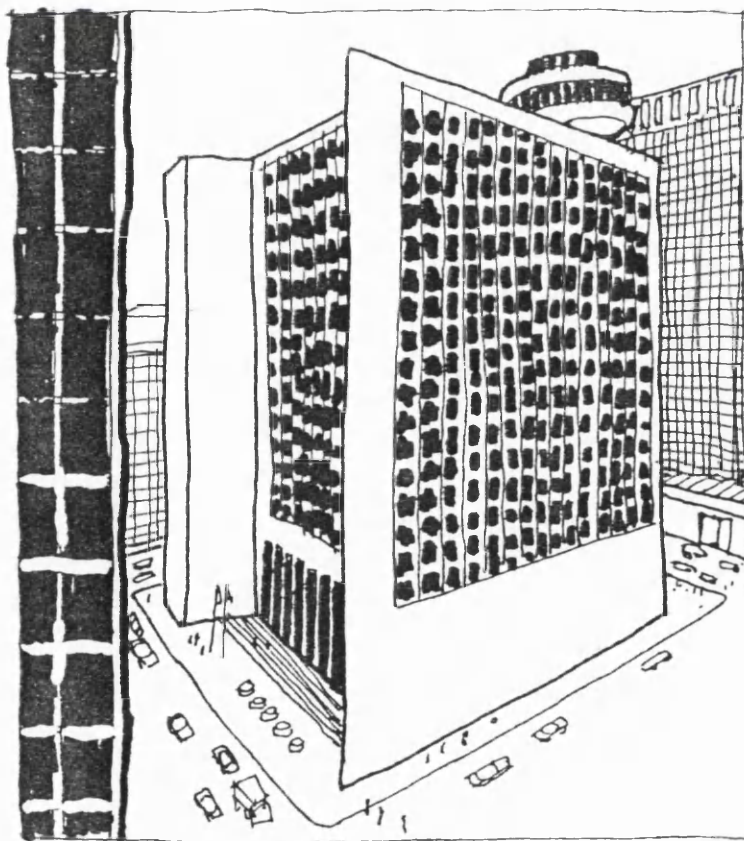


Figure 24. Atlanta, Georgia. View of inhospitable street environment for pedestrians.



Figure 25. A well-used pedestrian lane in Paris.

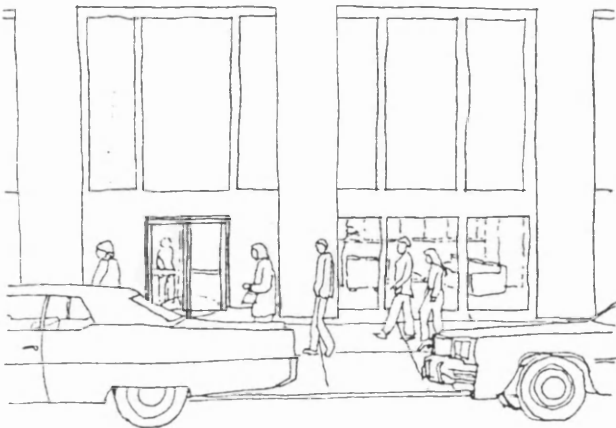
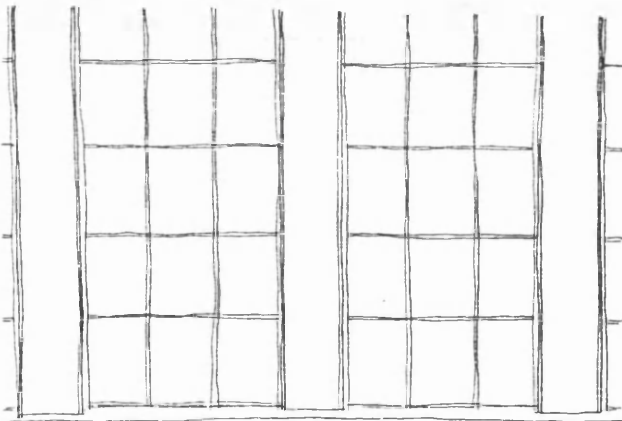


Figure 26. Chicago, Illinois. View of a large and lifeless ground-floor bank lobby.

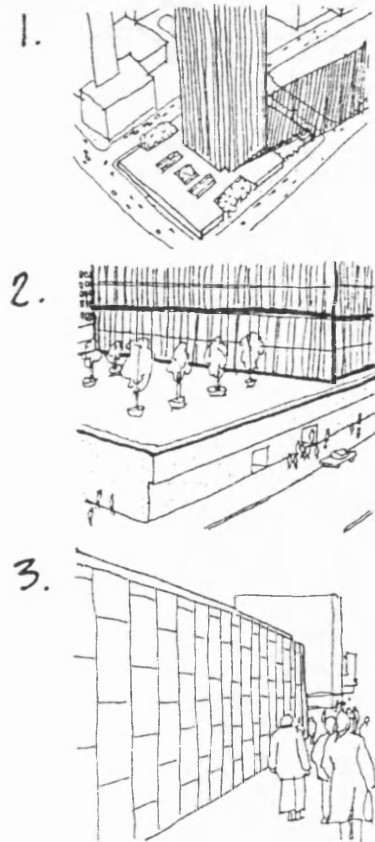


Figure 27. Chicago, Illinois. Series of three views of a tower and its unwelcoming plaza.

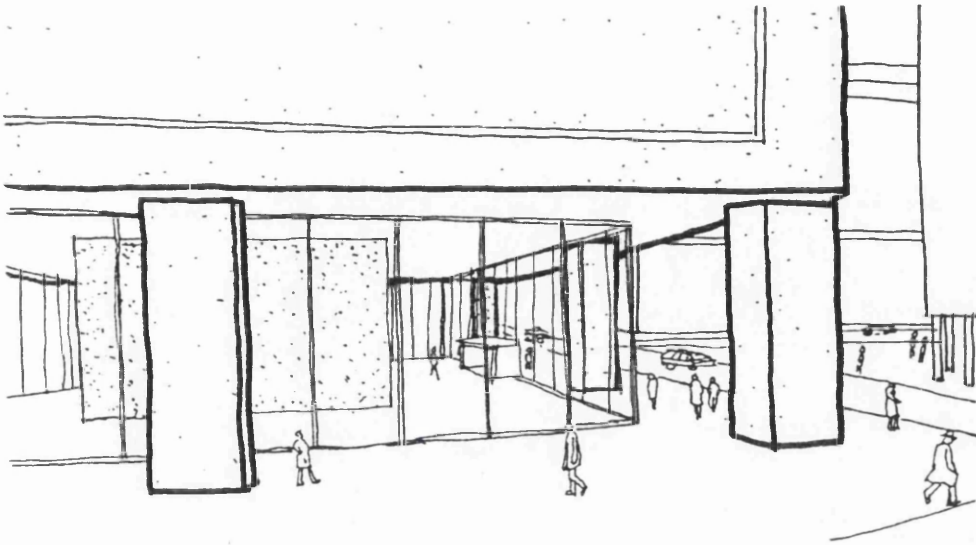


Figure 28. Chicago, Illinois. An inactive full-floor office building lobby.

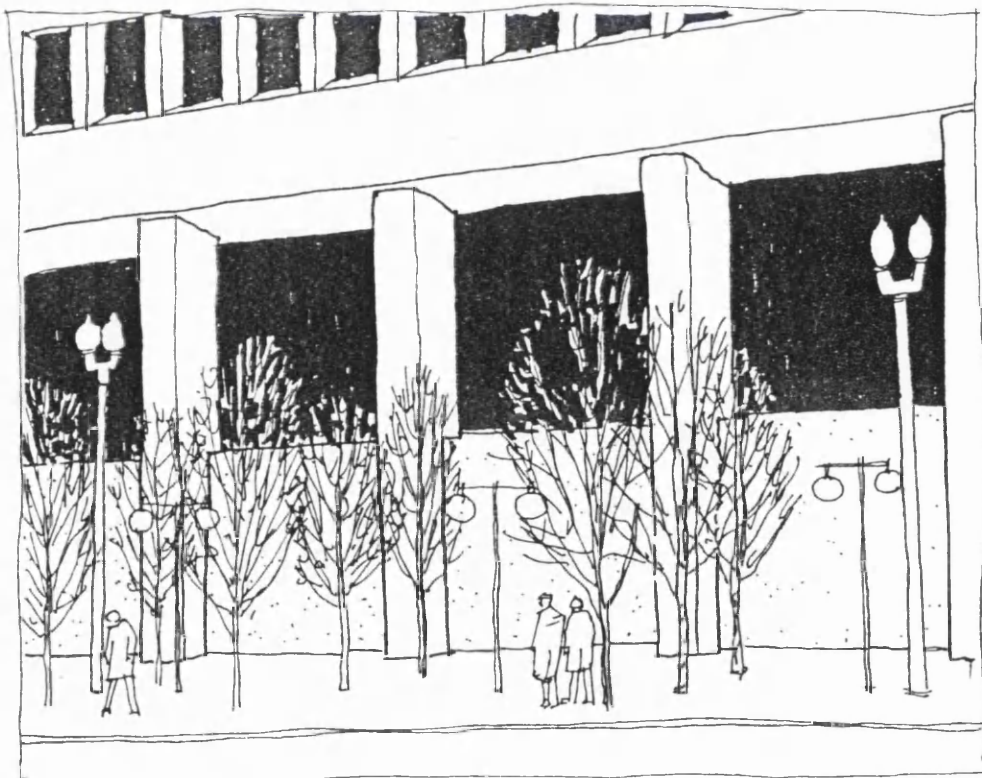


Figure 29. Washington, D.C. A large government building with a continuous blank façade on Pennsylvania Avenue, the ceremonial boulevard of the city.

Chapter IV: Destructive Forces

Vehicles

Delivery lorry access is no doubt essential to the life of the city, so reasonably convenient access to delivery sites or refuse collection sites should not be denied. The problem with automobiles is not that they are parked on the street or use the street *per se*, but that there is such a glut of them that they prevail over pedestrians' rights and command the spaces between buildings (Figures 30, 31). This can be in the form of difficult street crossings due to the volume and speed of vehicles or in the form of very narrow sidewalks that allow more parking spaces or travel lanes for autos. Not everyone who lives or works on a street needs to have his car parked directly in front of his building. These areas belong to people actively using that space. In most parts of Manhattan, for example, private automobiles can only be described as a liability. Traffic is very congested and space for parking is scarce; but primary drawbacks are license fees, taxes, insurance and garage fees that are a waste of money for something that is not necessary. If private cars were necessary in Manhattan, then people could not live there. The very fact that they do live there demonstrates that cars are not essential.

Some inhabitants of the Broomielaw will have cars, especially since the rest of the city is geared toward the automobile. A provision for underground car parks or multi-storey structures above ground is sensible if they are intended to meet the requirements of the Broomielaw inhabitants. The streets should be left for the more active vehicle uses and not for automobile storage. This would allow for narrow streets and wide sidewalks. Sidewalks are routinely narrowed by decree, so the Broomielaw sidewalks should be made wide by decree. They will need to be wide enough to handle the bustle of activity, the benches and possibly the trees that will be there. Traffic studies by the Strathclyde Regional Council Roads Department



Figure 30. Paris. A tree-lined boulevard c.1900.



Figure 31. Paris. A street mainly for automobile passage.

(Chapter V, Transportation) reveal small amounts of traffic currently traversing the site. New development in Broomielaw should not encourage through-traffic by constructing wide streets. In any part of the city centre it would be desirable to have fewer private automobiles but it will not happen without government action. Some city streets could be narrowed or restricted to public transportation to discourage space-wasting commuter traffic, and in areas like the Broomielaw the streets should be made narrow and residents' and workers' car parks should not be on the street. The street should be for visitors and deliveries. It probably is not necessary to construct a large pedestrian precinct no matter how successful shops and the general street scene might be, because there should always be a balance between pedestrian activity and the necessary vehicle activity that supports it. Generously sized sidewalks are important prerequisites to a quality street life.

Developers

Speculative property developers want to find the most financially successful type of building and build whole clusters of them (Figure 32). What they do not realise is that the environment that is the most lucrative or desirable is an environment of variety and mixture. Too much of anything destroys the desirable habitat of mixture. The developer might not fall bankrupt following his instincts in such a manner, but a colleague will because one development will be the burden that finally destroys the popularity of the area. The district will be bankrupt of vitality. The wisdom of a planning department is necessary to ensure that this does not happen. The mixture of uses is essential for providing an interesting and safe place to be even after business hours. One should be able to walk to a cinema in the evening as comfortably as he walks to a shop in midday. Jane Jacobs has arrived at guidelines to make streets safe:



GOOD.



BETTER?

Figure 32. The exploitative nature of speculative development. Developers do not always recognize why an area is attractive and financially successful.

"First, there must be a clear demarcation between what is public space and what is private space.

Second, there must be eyes upon the street, eyes belonging to those we might call the natural proprietors of the street.

And third, the sidewalk must have users on it fairly continuously, both to add to the number of effective eyes on the street and to induce the people in buildings along the street to watch the sidewalks in sufficient numbers."²²

The mixture of uses within a block or even within one building also allows everything in a city to be just that much more compact, and leisure attractions become ever closer to the home. Yet developers typically resist diversity as being too complicated. Shops on the ground level below flats is a typical example of having two things in essentially one place at the same time and is quite compact. A more unusual example is having two activities in the same place at different times. A school playground may be used by different groups during the day, and a student union may be a dance hall at night. Every dual-use building helps to compact the city. In Granada, Spain, a secluded square functions as a local park in the evening and a car park during the day. The majority of the square is paved (with quality materials) but it contains several mature deciduous trees as well. In the cooler evening hours tables and chairs replace the cars on the paved areas and small pavilions serve food and drinks to adults while children play. The scene is very peaceful and civilised and it is only by noticing the staggered curbs that its other use is identified. Sometimes dual uses are fortunate accidents, but one thing is sure: an unyielding row of modern office buildings designed for one use only can not accommodate any other uses at any time.

Zoning

Zoning strangles the city. Except for the removal of noisy or polluting industries, zoning by areas of use, however orderly and tidy the concept may be,

²² Jane Jacobs, *The Death and Life of Great American Cities*, p.44.

destroys the very environment of variety that a city must have. The modern movement in architecture and in town planning did not respond to what people wanted. Instead, it outlined a policy of how people should live. Grand statements and bold ideas were fit into a concise package and distributed throughout the design profession.²³ City planners adopted city-wide zoning policies and architects even took the concept of city-wide zoning and applied it to individual buildings. Roof restaurants and roof play areas were zoned at the top, an open ground plane was zoned at the bottom and the whole structure was zoned away from other buildings. Conceptually, these modern settlements should first be moved from the countryside and placed in the city. Then they should be turned upside-down to place the former top floor activities where they can be reached by more people (Figure 33). In the case of Le Corbusier's Unité d' Habitation, the building's "shopping street" would have to be moved from the middle floor to the appropriate level of the *real* street. His zoned shopping areas within a building (far from ground level) is as damaging as today's city-wide zoning policies. The modernist idea of zoning was an artistic exercise only and was not based on anything more logical or rational than fine art. The difference is that fine art can be ignored but architecture may be a burden for a very long time.

Leon Krier describes zoned areas as voids that do not contribute to the necessary vitality of a city:

"A true place is by nature complex, hierarchical, polyfunctional, individual, and multiform. A functional zone instead is by nature simplex, nonhierarchical, and uniform, without identity and individuality. A true nonplace is not more than the sum of its parts."²⁴

²³ Jane Jacobs, The Death and Life of Great American Cities, p.33. "It said everything in a flash, like a good advertisement. This vision and its bold symbolism have been all but irresistible to planners..."

²⁴ Alex Krieger, ed., Towns and Town Making Principles: Andreas Duany and Elizabeth Plater-Zyberk, (Cambridge, Mass.: Harvard University Graduate School of Design, 1991), p.118.

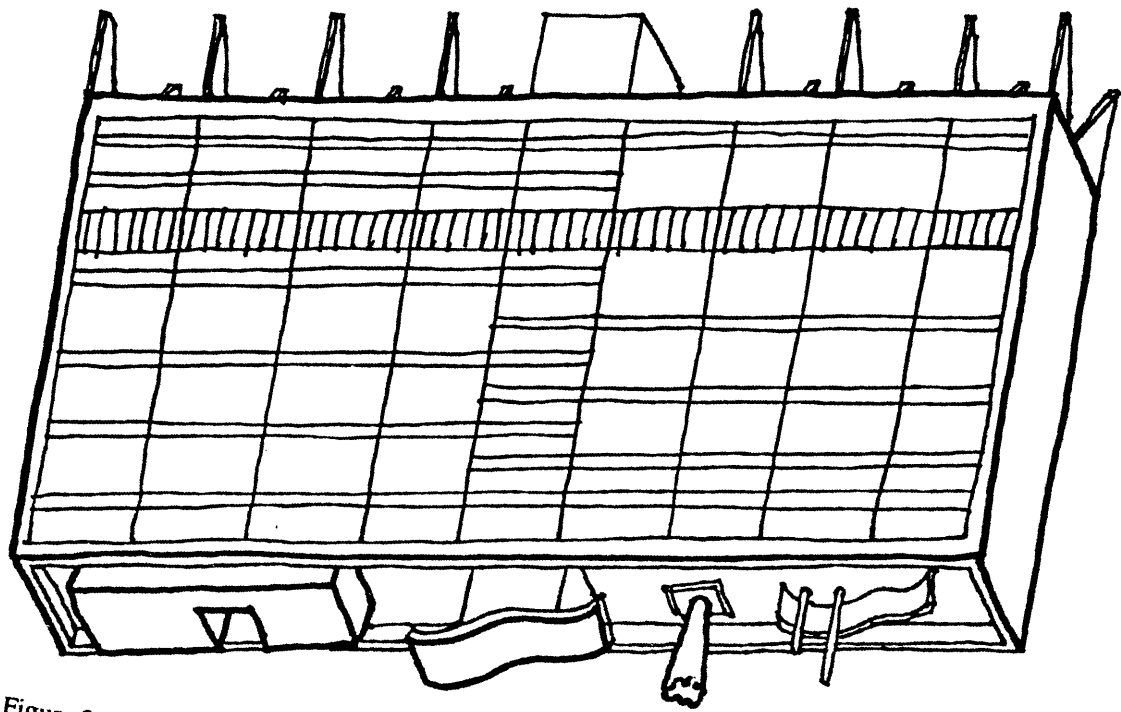


Figure 33. Le Corbusier's Unite d'Habitation could be improved if the meeting places were located at the street level, the area commonly used by all residents.

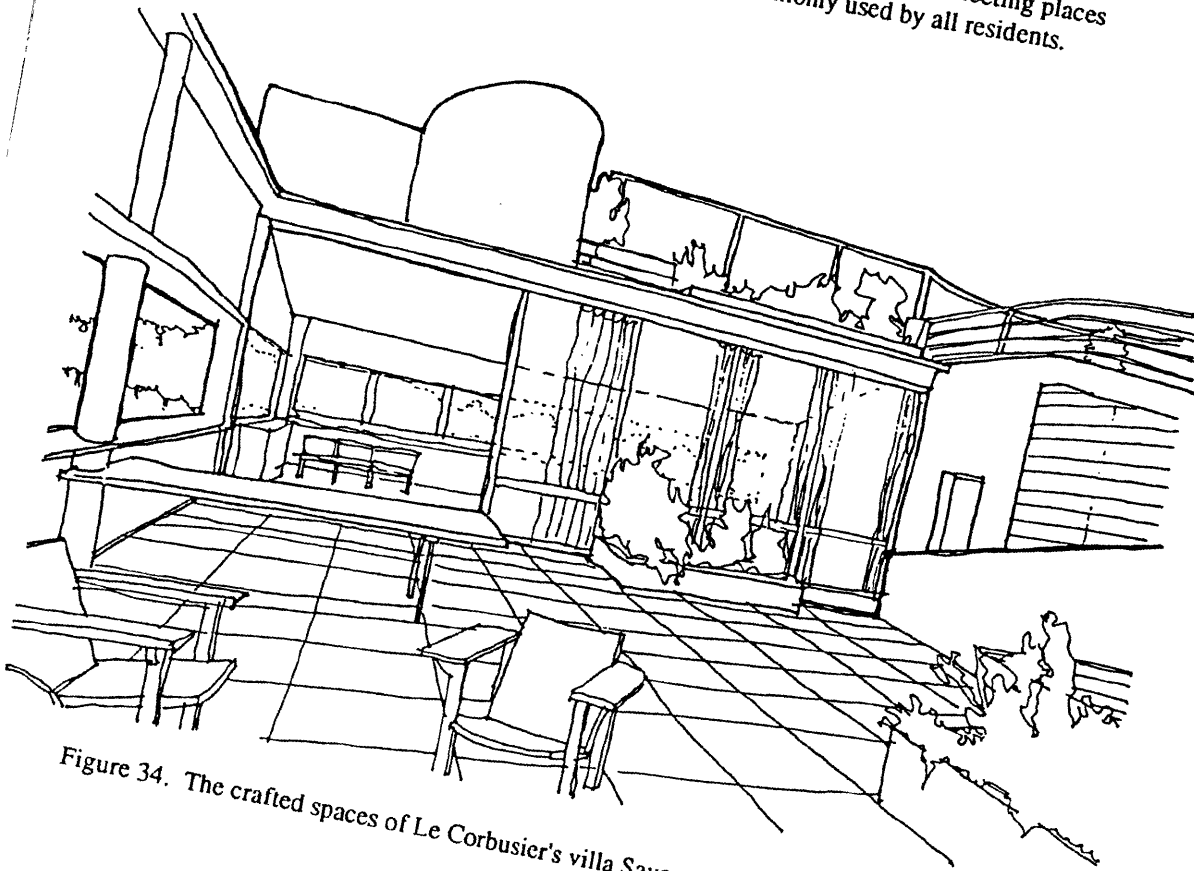


Figure 34. The crafted spaces of Le Corbusier's villa Savoye.

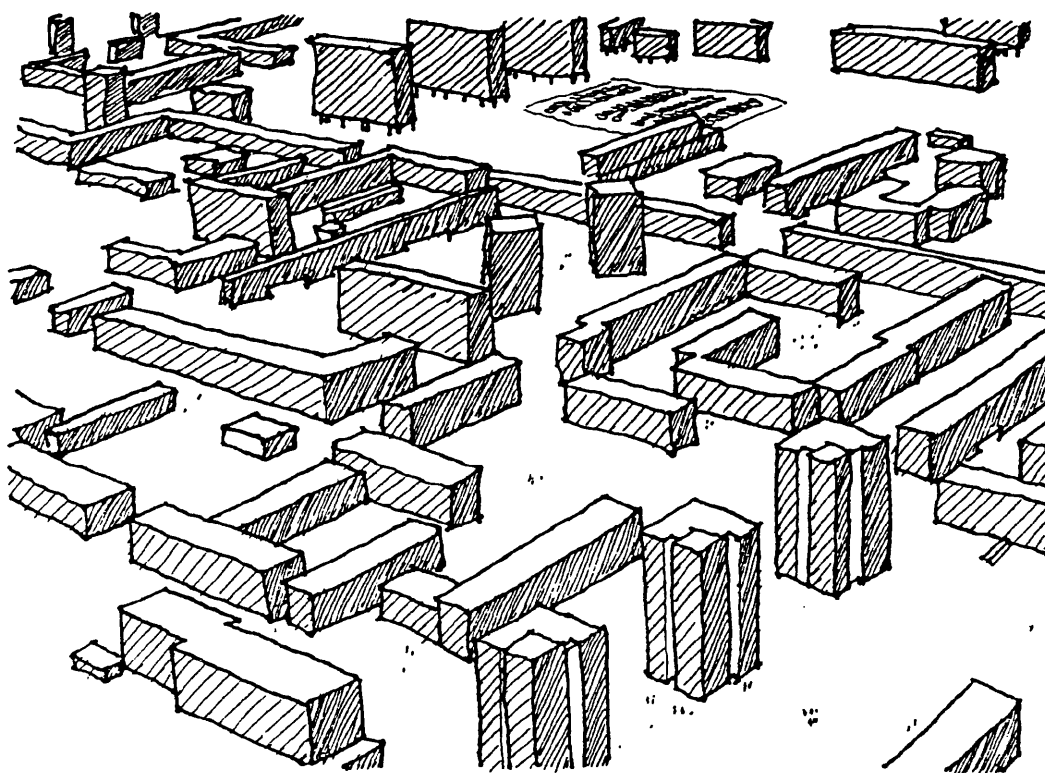


Figure 35. A housing project. A product of the modern movement in architecture.

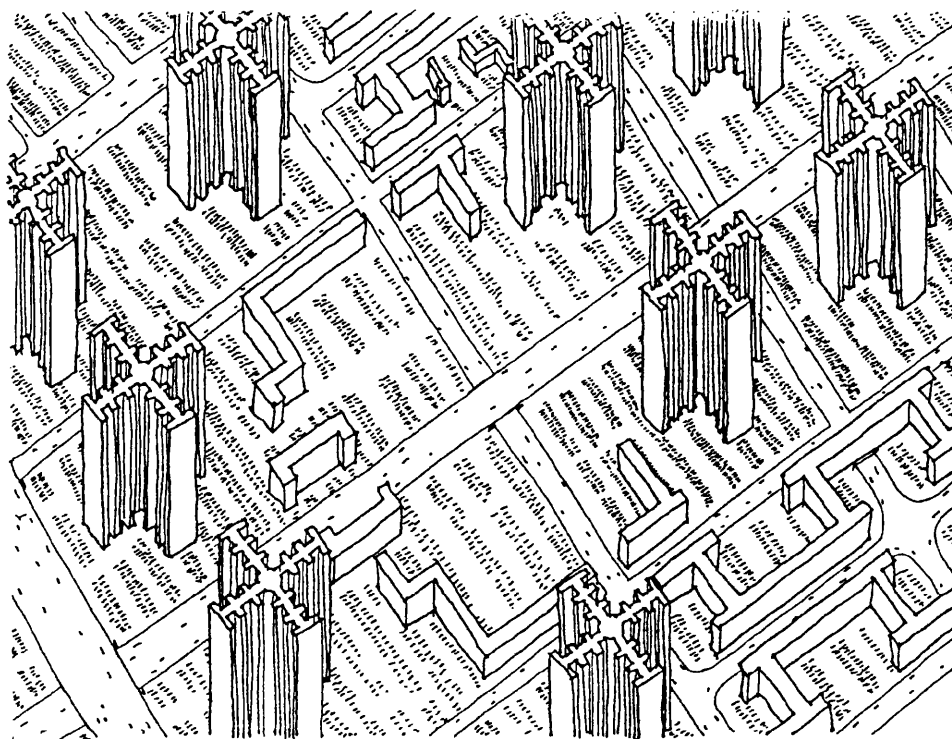


Figure 36. Aerial view of Le Corbusier's unexecuted Plan Voisin housing scheme, with automobiles added. (See Figure 19: Houston, Texas, for comparison.)

Modern zoning restricted variety of use; the repetitive cubicles of modern housing restricted variety of form. The problem was not with the use of modern materials or flat roofs or white paint; the problem was that variety was eliminated in favour of very many of one thing. To illustrate this point we only have to look at Le Corbusier's Villa Savoye (Figure 34). It was built of the same materials as the Unité d' Habitation and is raised above the ground and has flat planes, but instead of being a grouping of identical cubes, the spaces are varied and crafted to suit the purposes of each room. Space was carefully manipulated in this villa but was standardised in the Unité projects in Marseilles and Berlin. His villa belongs as much to the craft movement as to the modern movement.

The preference for complexity over simplicity and variety over monotony that Robert Venturi speaks of in Complexity and Contradiction in Architecture could also be applied to the urban design concept of functional zoning. The industrial revolution did not cause the average city dwellers to lose their sensibilities. They still valued street life, variety, the economies of scale and neighbourliness, but it made no difference because the people who designed and built buildings were too entrapped by the preachings of Le Corbusier to notice (Figure 35). Le Corbusier invented something with his Plan Voisin scheme, but it was not a city (Figure 36).²⁵ Activity happens on the street where people congregate; they meet, shop, stroll or socialise and children play, at least in communities where neighbours are known and outdoor spaces are identifiable as urban "rooms". Modernists should have adhered to revolutions in technology like mechanical ventilation and electric lifts. Even though a growing number of architects are aware of these shortcomings of the Modern movement, the planning community seems to continue to embrace these ideas.

²⁵ Jane Jacobs, The Death and Life of Great American Cities, p.356. "[Le Corbusier's] vision of skyscrapers in the park degenerates in real life into skyscrapers in parking lots."

Glasgow itself holds the answers in the form of examples. The New Town area around Blythswood Square is the office core of the city and as such is a lifeless zone most of the time. It is an uncharming collection of buildings without people. This was not a natural occurrence - it was made an office zone by decree. The Merchant City is one area that has battled back against this decree of single-use zones (Figure 37). With a clear understanding of the things that are important in a city and with the financial clout to side-step some restrictions, the teams of architects and developers have created a few outstanding blocks in the centre of the city. Even though it is on a small scale, the Merchant City is made up of the best qualities that can be found in any city (Figure 38). The success has come as a surprise to the governing agencies and maybe, too, to Glaswegians who have forgotten that it was the mix of uses and proper treatment of urban spaces that made the old Merchant City successful. It probably was not much of a surprise to the architects and developers because they simply followed the rules for a proper city environment. Zoning for an office use, for example, is intended to enhance the city's revenues by increasing land prices and forcing office tenants to lease in these expensive premises. A mixed city centre is not simply an interesting idea. If the best qualities of a city are unprofitable, how can the rise of cities be explained? Superficially, it seems more profitable to build only the building type that raises the most tax revenue for the city, but other uses beside the most profitable are profitable in their own right, and sometimes other areas of use outside the zone may continue to play a small part in making the zoned environment marginally attractive. That is why even an office zone in the city centre is more attractive than an office park outside the city. Zoning cuts the root network, but by the time the tree dies enough time may have passed that the cause and effect relationship is not perceived.

Neighbourhoods are not based on the concept of accommodation for one group at a specific time, as in a residential zone or an office zone. In a

neighbourhood one can find many of the routine products and services as well as unusual establishments such as the occasional cinema or school. The nearest library may not be in the neighbourhood, but there is a reasonable balance of attractions and they are all more convenient to city residents than to commuters. In functional terms, a neighbourhood is as big as each resident chooses. A zone is defined on a map, but a neighbourhood can be defined differently by different people. It may be defined by a physical barrier, geographical differences, recognisable faces or the distance a person feels is comfortable to walk to shops or to a park. Above all it is the place people call "home". From an urban design standpoint it does not have to have a dimensional limit as long as it is interwoven with the rest of the city. A neighbourhood does have to have a certain number of people in it as an administrative district to handle problems as they arise in the community.²⁶ This definition of a neighbourhood is political; the urban designer's definition of a neighbourhood is an area with enough people at different times of day to support a wide range of enterprises and accommodation.

²⁶ Jane Jacobs, The Death and Life of Great American Cities, p.122.

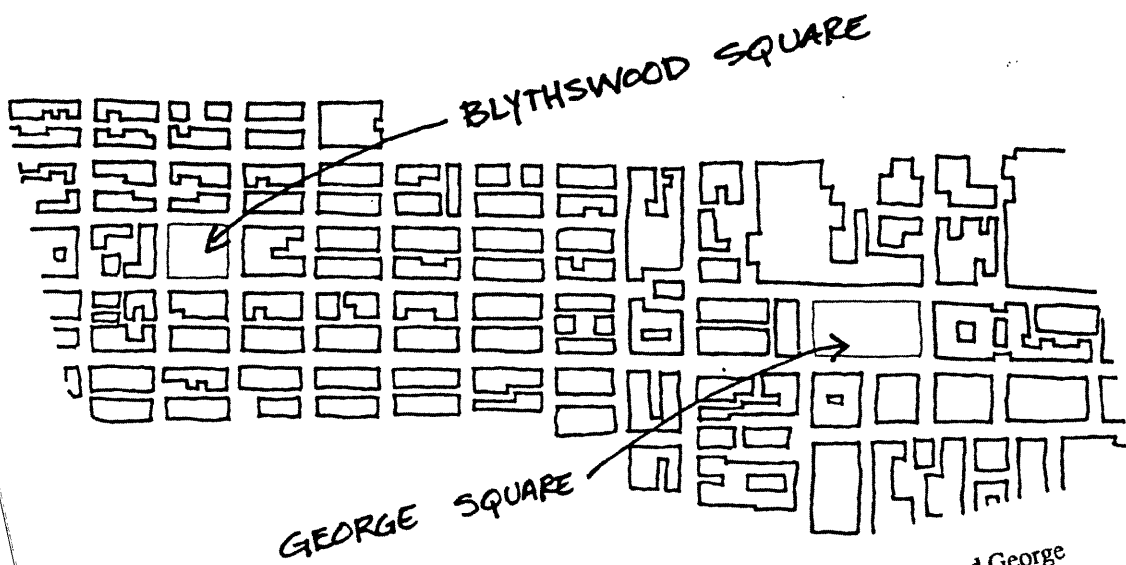


Figure 37. Map of Glasgow city centre including Blythswood Square and George Square.

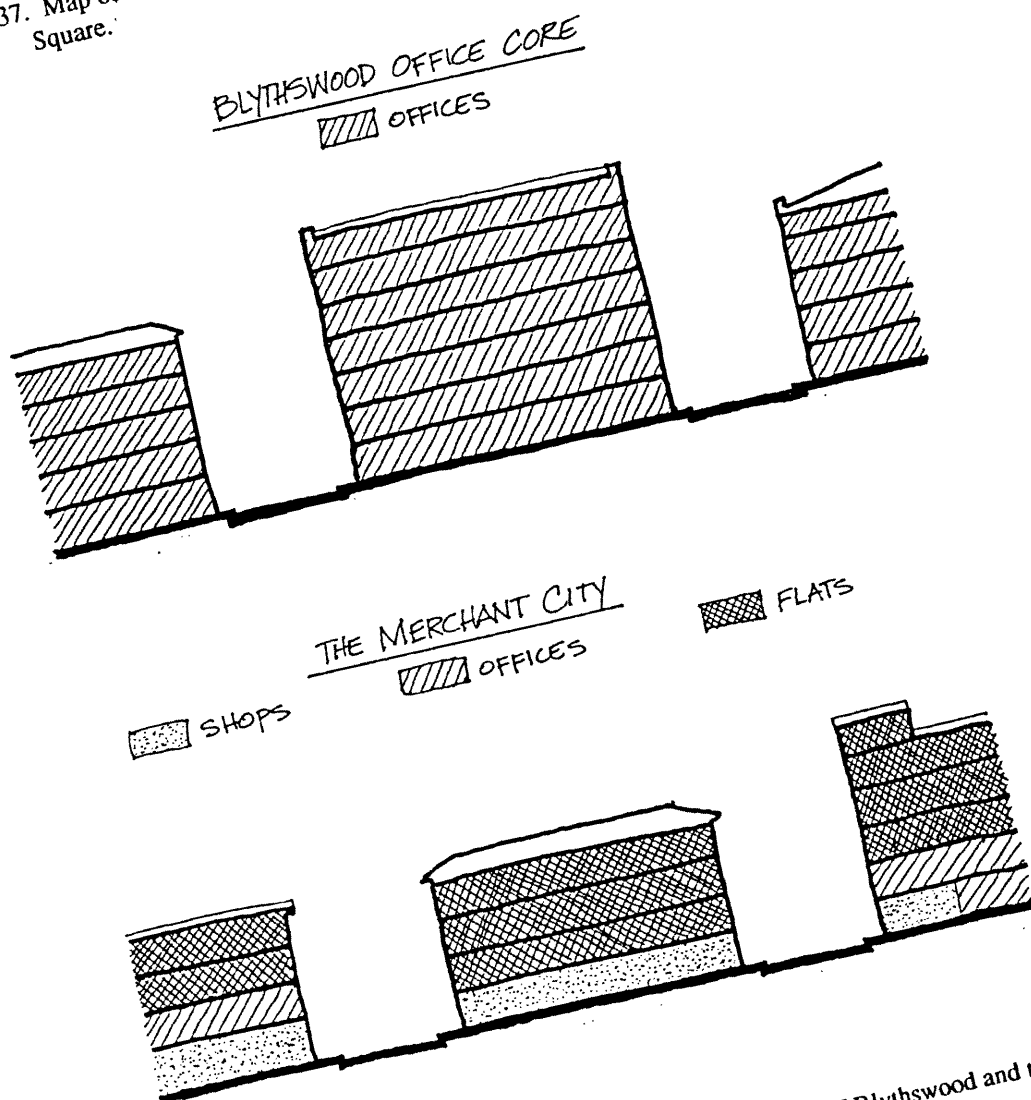


Figure 38. The contrast between tenants in the office zone of Blythswood and the Merchant City.

Chapter V: Glasgow and the Broomielaw

Economic Foundations of Glasgow

Glasgow is continuing the change from an industrial to a service-oriented economy. Industrial buildings are usually large and injurious to the fabric of a city centre, even if they are the source of wealth. The buildings in the Broomielaw are much more suitable than factories for re-use and, although the shipping trade has ceased, the buildings constructed for their use will make a fine contribution to today's post-industrial city. The new hallmark of Glasgow is the quality of its service industry and of its tourist industry. It is no longer contemptible for tourism to be targeted as a major industry. Richard Rogers plainly acknowledges, "The race in Europe is for pre-eminence not only as a cultural capital but as a financial one as well."²⁷

Throughout the last one hundred years or so, changes in city form have followed revolutions in transportation, be it for better or for worse. Transportation in this sense includes electric lifts, automobiles and facsimile machines. A service business does not rely solely on the local population any longer; the new transportation of fibre optic cables and satellite switching stations give companies a much larger potential client base. For some corporations the price of land and prestigious office location is as important as being within close reach all of its clients. Multinational firms have headquarters spread all over the world and one region of the world is not as likely to be known for one service or one commodity as it used to be. This holds true within Glasgow as well. A telephone call can accomplish what formerly required a face-to-face discussion. There is no need to have a city divided by areas of use anymore (bankers, stock traders, shoe makers...); if this grouping of

²⁷ Richard Rogers, Mark Fisher, A New London, p.xiv.

like interests becomes extreme (modern functional zoning) a city of fragments develops. They are heartless fragments. Glasgow operates under this formula.

With the aim of increasing the amount of foreign investment in the city, the City Fathers have been packaging Glasgow to be lucrative to people with money to invest. Land is available in convenient parcels and areas are zoned for one use only, thereby (apparently) minimising the capital risks for a developer. Office buildings are currently the best value-for-money buildings for developers and the City Fathers have been willing enough to designate plenty of city centre space for offices, and only offices. The understanding is that whatever is best land use for the developer is also the best land use for the city in terms of tax revenue. Nowhere in this equation does the spirit of the city or the potential environment for its inhabitants appear, because in someone's eyes the purpose of cities is to make money. A world-class image may be needed to attract investment, but that image can consist of hospitality, charm, and variety along with purely financial enticements. Krier makes a criticism of the state of cities in the United States that can apply to Scotland as well.

"If the U.S. is to survive as more than a symbol of democracy, it will have to engage in a nation-wide program of community building. This is not a choice but a necessity because the catastrophic growth of poverty and urban slums cannot be relieved by ever-expanding public welfare organisations and private charities; it must be relieved by the state looking after those who have no ability to fit this crude logic of corporate capitalism."²⁸

The auctioning-off of Glasgow's city centre to the highest bidder is no way to create a suitable environment for people to live their lives. Krier does not believe that architecture can be the salvation of the people like the early Modernists did, rather he believes in providing an atmosphere, a community environment, where people can manage their own lives and find the things that are necessary and

²⁸ Alex Krieger, ed., Towns and Town Making Principles, p.119.

desirable for the good life close at hand. The Modernists' isolated-tower cities never allowed the individual to have this control.

Other strategies focus on improving Glasgow's prominence as a leisure and tourism destination and as a local shopping centre. While the idea is laudable, the clustered shops and attractions only enhance a small portion of the city (Figure 39). A tourist will find the attractions wherever they are in the city centre (after all, that is why he came), but placing attractions anywhere does not guarantee that the immediate vicinity will be improved by them or that it is good for the local population. The reverse of this scenario - the careful placement of attractions within the city - accommodates both parties. The tourists will still find the attractions. The restoration and stone-cleaning of the city's buildings have positively affected both the residents and tourists. Theatres, a concert hall, galleries, museums hotels and a conference centre are among the attractions for tourists and natives in the region that various public agencies have funded to bring life back to the inner city. The approach to become a finance and tourism centre is timely; the method of approaching the goal is not the most successful strategy. The zoning system will eventually make Glasgow city centre as unattractive to businesses as other cities are, and the clustering of city centre tourist sites will not help the whole centre realise its potential (Figure 40).

Glasgow Planning Department's City Centre Policies

The latest 'Glasgow Central Area Local Plan' published by the Planning Department in November, 1990 briefly recounts the history of the city centre redevelopment schemes and the aims, objectives and the methods of approach the planners are using to continue the revitalisation of the city. A brief survey with extracts from that document follows [with emphasis added]. The Proposals Map referred to is Figure 41.

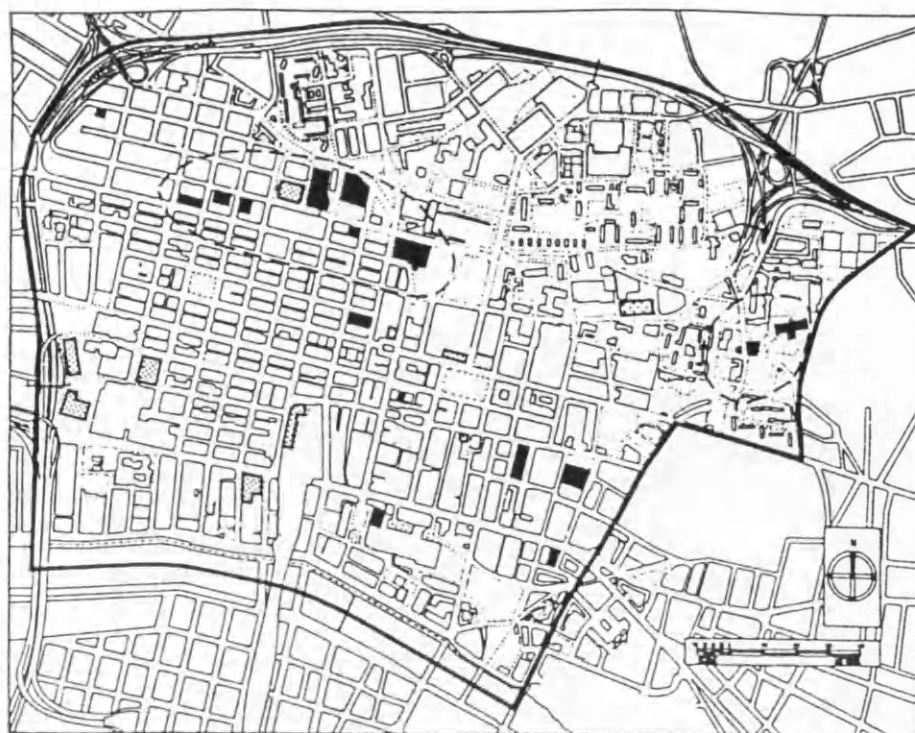


Figure 39. The cluster of leisure and tourism facilities in the city centre. (Sauchiehall Street.)

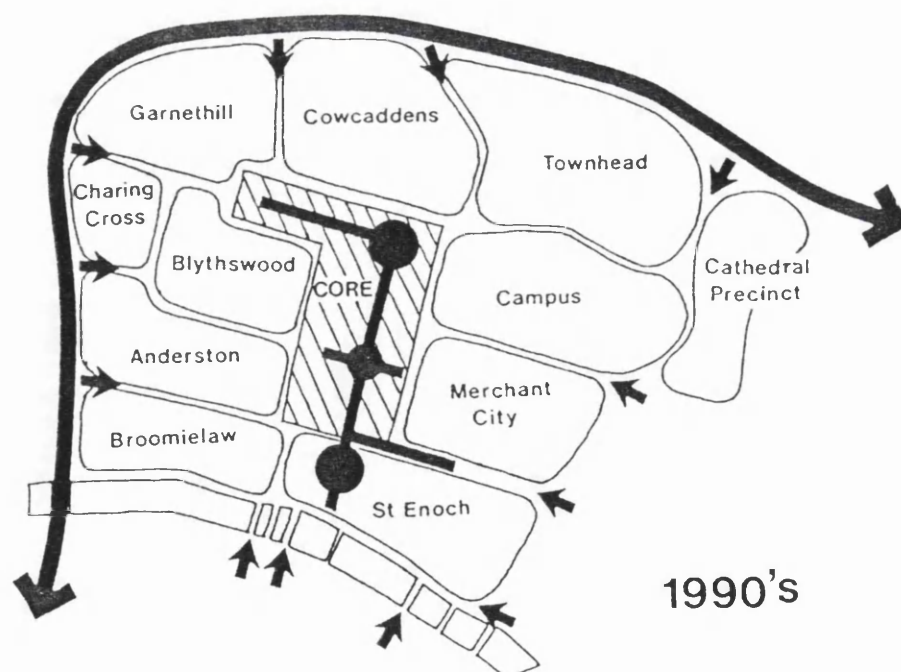


Figure 40. The central core of activity. (Buchanan Street shopping core.)

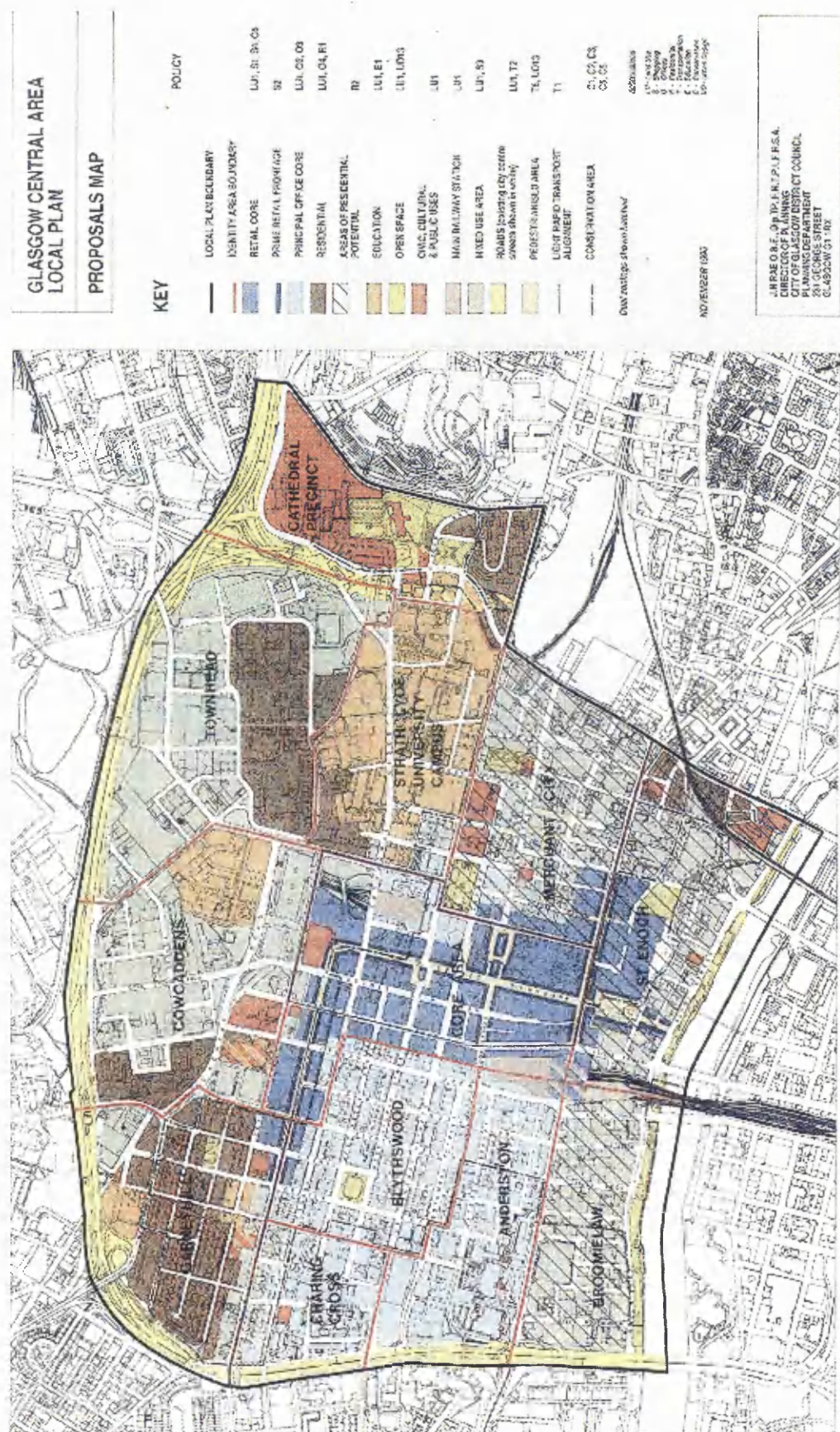


Figure 41. The Planning Department's Proposals Map.

The foundation of the Department of Planning:

"The first Statutory Development Plan for Glasgow in 1951 used a 'zoning' system to designate most of the City Centre for commercial and light-industrial uses, and a Plot Ratio Control on new non-residential development of 3.5:1 was introduced in 1955."

"...the first draft versions of the Central Area Local Plan, in the early 1980's, introduced the concept of four Special Project Areas at the Cathedral Precinct, Merchant City, St. Enoch's and the Broomielaw."²⁹

Objectives:

"1. To achieve an appropriate balance between the development of the city centre as the major *commercial and business* centre, and the conservation and enhancement of the quality of its environment.

2. To provide an equally high level of accessibility to the city centre for all of its existing and potential users.

[Author's note: public transportation and automobile commuting are encouraged]

3. To promote and encourage new housing in the city centre as part of the creation of a desirable mix of activities in the area.

[Author's note: Housing has been zoned to stand alone where possible.]

4. To maintain, promote and encourage the provision of further leisure, cultural and visitor facilities in the city centre.

5. To identify and promote the development opportunities in the city centre and to ensure they are fully realised."³⁰

Approach:

"The intention... is to have a plan which sets out a vision for the future, but which is flexible enough to be able to take advantage of opportunities as they arise. While being flexible, the plan will also provide a clear and concise framework for *property investment and development control*."

²⁹ J.H. Rae, 'Glasgow Central Area Local Plan', p.3-4.

³⁰ J.H. Rae, 'Glasgow Central Area Local Plan', p.3.

Strategy:

- "1. A continued and renewed emphasis on the development of the core, including the achievement of the highest possible quality of environment.
2. The expansion of other development opportunities in the areas around the core, each with its own unique identity and *functional base*.

Approach:

"Glasgow City Centre means different things to different people; some come to shop, some to work, others come on business or for entertainment, and for some it is where they live. The main purpose of this plan is to maintain and improve the balance between these *often conflicting needs* while creating a City Centre that is economically sound, respects its own history, is easy to get to and is a safe and pleasant place."

"There are... areas where no single land use predominates, but where a mix of uses exists in *relative harmony*... areas of predominant land use have been identified on the Proposals Map which accompanies this plan. This is not intended to be a rigid 'Zoning Map', it simply attempts to indicate the land use character of an area in order that proposed developments *do not conflict with existing uses and activities*."

"...where a specific land use predominates, as identified in the 'Proposals Map', any new development proposal *will be required to be compatible with that use*. In mixed use areas, as identified in the 'Proposals Map', any new development proposal will be required to take into account the balance of uses in the area and any potential impact the proposal may have on these individual uses or the nature of the balance between them."³¹

Business Centre:

"Office policy 2 ...There will be a presumption in favour of office related uses at ground floor and basement level, other uses may be considered subject to shopping and conservation policies and the effect on the *office function of the area*."

"Office policy 4 There will be a general presumption against the introduction of new office uses into established housing areas, as defined in [the zoning map], unless serving a *local need and compatible with residential amenity*."³²

³¹ J.H. Rae, 'Glasgow Central Area Local Plan', p.3-5.

³² J.H. Rae, 'Glasgow Central Area Local Plan', p.7.

Leisure and Tourism:

"The central area will continue to be promoted as a tourist centre and the main focus of leisure and cultural activity in west central Scotland, and continued development and investment in such facilities will be encouraged."

"In order that the central area's full leisure and tourism potential can be realised, three pre-requisites first must be achieved:

1. A sufficiently positive and attractive image.
2. A concentration of attractions and facilities.
3. An adequate range of overnight accommodation."³³

Residential Centre:

"For certain sectors of the population, the central area is an attractive place to live, principally because of its convenience for employment, education, shopping and leisure, but also because it can provide a residential environment and quality of life which appeals to some people."

"It must be recognised that the central area has a particular function and character which cannot provide the quality of life normally associated with suburban, or even inner city, residential areas. A balance has to be struck between residential amenity and the special nature of the City Centre. ... Nevertheless, City Centre residents should be able to expect the highest standards of residential amenity possible within the constraints of a City Centre location."

"Those areas designated as residential... will continue primarily in housing use. Proposals for ancillary uses may be acceptable provided they are compatible with residential amenity."³⁴

The city has been transformed from a depleted city into a bustling one in the last two decades. The last surge of the industrial economy was during the second world war when huge numbers of warships were built and repaired. The economic base did not decline gradually; it disappeared almost immediately. The changeover to the service economy might have been late in coming to Glasgow but it is here now. The end of the industrial era left huge areas of wasteland and any plan for revitalisation of the city needed to include an effective system of public transportation

³³ J.H. Rae, 'Glasgow Central Area Local Plan', p.8.

³⁴ J.H. Rae, 'Glasgow Central Area Local Plan', p.9.

links and reasons to use the city centre. It made sense to resurrect the city; it could be saved as a symbol of pride for Strathclyde Region and the citizens' heritage and it has always been an important urban environment in Scotland. It made financial sense as well: transportation systems built to serve the city centre were already in place, city services (roads, sewers, electricity...) were also present and over 2.2 million people, a steady number in the region, lived within reach of the city centre. Over a period of many years, a massive programme of stone-cleaning of the soot-covered buildings in the city centre has had a remarkable effect on the image of the city as have the new cultural institutions and festivals.

Strangely, some of the success of the city can be attributed to zoning - a special kind of zoning. The catastrophic economic decline left the population so spread out that the city centre did not have enough people to sustain it as it was. The Planning Department's idea was to restrict any retail or office growth in the outlying areas in favour of the city centre and focus on the refurbishment of existing properties there. This would make the best use of the infrastructure and ensure that the city did not collapse completely. This method of zoning was a regional one, not a city centre one, and that is the reason it succeeded. Economic decline and the conversion from an industrial to a service economy is a natural stage of cities, but the swiftness of this decline made the upheaval especially rare. The city might have been abandoned for good, but the buildings were still standing and it would be a great waste to allow new centres to materialise at the expense of the city centre of Glasgow. It was fortunate that most of the industrial properties were located along the river and not in the city centre, which saved the fabric of the city centre from devastation. However, service businesses take up less space than industrial estates so there was much space left vacant around the centre of town. The new businesses that did appear logically congregated in the city centre, the original point of strength; this also happened to be the zone later defined for them. There were some unnatural events contributing to the

decline of the city as well, such as automobile space erasing space for people. Having offices and shops in the city centre again was the necessary cornerstone of the rebuilding effort. Unfortunately, these shops and offices were sorted into zones within the city centre in the traditional zoning manner.

The suffocating effect on city life is just becoming apparent. The Glasgow central area is small compared to other centres that are hubs of millions of people and the adverse effects will become more obvious as the city grows, allowing valuable time to elapse before the problem is unmanageable. As long as a person can traverse a zone in a few minutes, the gradual erosion of Glasgow's quality will not be readily noticed. The affliction is further camouflaged by the concurrence of the implementation of the zoning system and the mandate for shops in the city centre. The resulting lively and well-used shopping core may be wrongly interpreted as a city centre zoning success. The real success is that of the city over the suburb. At the beginning, the shops and businesses would have grouped together naturally and the new enterprises would have grown around them in a natural manner distributing themselves rather evenly. The stores in the shopping core now would not leave the city centre for the suburbs for any reason because they would be less profitable in such a setting. They would, however, also be profitable if they were spread out more evenly in the city centre. The restriction of suburban growth was an enlightened idea for shops and offices (why not housing, too?) but the present office core is lifeless after hours. The shopping core, while open more hours, closes down just as thoroughly and becomes as quiet as any zone in the evening. The three-street wide central shopping core (West Nile, Buchanan and Queen streets) is seen as the leading justification of the zoning system, but the core contains some significant irregularities.

The retail core on the Planning Department's Proposals Map (Figure 41) is rendered in one colour as is the office core, but above nearly all ground level shops

are offices, hotels, restaurants or more shops. The streets contain a little of everything - a mixture - although weighted in favour of shops. There are not any residences here, which leaves the zone largely vacant after office hours. The streets on either side of Buchanan Street have not fulfilled the intended shopping-only concept. They contain many pubs and restaurants and provide a little life that sometimes trickles down Buchanan Street in the evenings. What is left is not really a retail zone (though it is intended to be) because this thin area is only one block wide and therefore could not truly be seen as a barrier to any activity wishing to cross it. Possibly the one time anyone would ever want an area with only one use would be for an occasional all-day shopping excursion. In this regard the retail core functions effectively. It is not ruinous to the city in its present state, but the retail core zoning scheme should be abandoned. Additional retail use should be prohibited within the current retail core.

The office core is in worse condition. Typically the buildings are exclusively for offices and the core has grown to the size where it cannot be crossed in a few seconds as can the retail core. Still, to some people it may not yet be large enough to expose the problem. Commuters, especially, probably do not know the atmosphere in the city centre in the evening. One of the Planning Department's reports states that the city should grow,

"through implosion, forming a compact city that comes alive. Beyond that nothing matters, nor will it ever matter if Glasgow's centre does not capture the imagination."³⁵

Clearly this cannot happen if residents are absent and the majority of the centre is an inanimate business district. The *mixture* of uses is the key to a compact city. An office is sometimes a person's destination, but an office *zone* never is. The

³⁵ Gordon Cullen, 'Improving the Environment', *The Potential of Glasgow City Centre* [unpublished report, also known as *The McKinsey/ Cullen Report*] (Glasgow: the Scottish Development Agency, 1984), p.35.

likelihood that the offices on either side of a building will be relevant to that offices' business is extremely low. Telephones and facsimile machines can be used for most transactions anyway. There is no choice now, but one day the choice for Glasgow will be between offices in office districts and offices in dynamic districts.

The shopping core presently is not particularly damaging to the city, so it should not dissolve on its own or be dissolved by the planners when the city is directed toward a proper balance. It does have one special appeal: it contains the equivalent of a couple of major suburban shopping centres carefully inserted in the city without the side effect of being surrounded by car parks. Under normal conditions even a robust street might not need to be completely pedestrianised, but in the retail core pedestrianisation is necessary to accommodate the massive number of people who use these three streets - Sauchiehall Street, Buchanan Street and Argyle Street. The number of people on these streets is artificially high because of the zoning policies. That several department store chains have large retail stores on *both* Sauchiehall Street and Argyle Street (just a few hundred metres apart) is a testament to the artificial constraints. Even if zoning were abandoned now, these stores in the core would have nothing to fear from competitors because comparison shopping is the only activity that citizens would ever welcome in a cluster, and because huge numbers of citizens from outside the city pour into the city centre by rail and by bus to have the most convenient shopping in Strathclyde. Large or small shops allowed outside the core would not challenge this district. The smaller shops would undoubtedly provide a service the current core cannot fulfil in its isolation from residences. The value of competition would keep the core attractive to regional shoppers.

The office core presents a much clearer case against the use of zoning. The area of Blythswood Square at the heart of the business district can be fairly compared with the Merchant City, a mixed-use area. Both are in Glasgow, they have roughly

the same density of people, and they are equidistant from the heart of the city activity, Buchanan Street. Any significant biases are thus eliminated. The Blythswood area is zoned for office use only and contributes nothing to the city after office hours (Figure 38). The architects and developers of the few blocks in the Merchant City have been able to bypass the zoning rules and have proved the sceptics wrong with financially successful and sensitive projects. The Planning Department evidently believe this to be an aberration and is at loss to explain its financial success.

It is also ironic that even the finest site, the finest architecture and the finest landscaping combined can not compare to the mixed use developments in the Merchant City in terms of attractiveness. The Georgian buildings that form the perimeter of Blythswood Square are of the finest quality stonework and designed in the classical style. The well-manicured lawn, flower beds and mature trees in the square are the most lush vegetation in the vicinity. Very few city centre squares exist, yet the potential value of this park is squandered by lack of use. This square and its surroundings should be modified to make the square truly public.

George Square receives complaints from designers who would have it redesigned to make the spaces more intimate. It might be improved, but now it is certainly used and appreciated beyond the regular office hours because there is a mix of uses around the square. Even the little court in the Italian Centre in the Merchant City receives a good amount of foot traffic because of the shops and the residences. A pure office district of the finest architecture coupled with a well-groomed park cannot rival a partially paved square and an untidy mixture of uses. Cesar Pelli's refined office tower in the Canary Wharf development in London's Docklands (Figure 12) does not attract users either, for the same reason. A similar tower by Pelli is very successful in Manhattan because it is surrounded by the activity and vitality of the city right at its base.

The office zone presents a larger repair problem than the shopping core, but not as much of a problem as it might because it contains older buildings that are more suitable for alternative uses than modern office buildings. The conversion to flats, for example, from a modern office building would be exceedingly difficult because of the deep interior spaces of the floor plates and the central nature of existing mechanical systems and circulation routes. Some of the older buildings are well suited for modification because the floors are not very deep and many of these office buildings in the city centre were built as residences. The zoning system has created artificially high (and unhealthy) land values. The restrictions on the available land has lead to the same price increases that are advanced under any monopoly. The ancillary effect is that residential tenants can not afford the rents obtainable from buildings under this scheme, so residents are also *financially* barred from the office core by the zoning policies. The Planning Department's 'Local Plan' offers a clue to the solution:

"The whole of the central area must be considered as being suitable for office uses in principle, subject to a more sophisticated method of distinguishing between different types of floorspace... and targeting these into specific areas of the City Centre. This will prevent potentially damaging internal competition between the established core and the new office expansion areas."³⁶

The use of the phrase "potentially damaging internal competition" is a concealed validation that the release of zoning restrictions would allow the city to regulate itself and return to a more natural distribution of uses. Zoning regulations prohibit the natural distribution that is needed. Competition would drive business district land values down and businesses would disperse more evenly across the city centre. Neighbourhoods would become more compact, traffic congestion would ease and other uses would inherit the old office buildings because they would be affordable again. In this way, the buildings that form Blythswood Square might once

³⁶ J.H. Rae, 'Glasgow Central Area Local Plan', p.7.

again be affordable to families (a group that could finally make use of the park). The underlying message from the Planning Department is the city must keep revenues high, whatever the means. The zoning policy is based on the premise that revenues are the essence of a city.

The Proposals Map [Zoning Map] for the city centre contains more than three types of zones (Figure 41). Office, retail and residential zones are represented but there are zones classified as "mixed" as well. The Broomielaw is one such zone. Does this exhibit new and enlightened thinking by the Planning Department? Most likely not. It would appear that either they conducted an *ex post facto* survey of the areas and found no clear and predominating use, or they found tenants that were too entrenched to be easily removed. The mixed-use zone seems to be a record of what is already present in the areas that the city would like to develop rather than reflecting a reasoned plan for the future of the areas. It can hardly be thought of as being an expression of encouragement for the Broomielaw, since that would entail realising that these types of mixed-use areas are desirable. Townhead, mainly residential, is also a candidate for mixed use, not because it contains historic buildings unsuitable for office use (as in the Broomielaw), but because the high-rise blocks of flats are the perfect environment for high-rise blocks of offices. This is a zone of building form. After the widely acknowledged error of the building of anti-social high-rise dwelling units and the hesitation to allow more tower blocks for any use in the city centre, why would the department draw up a policy to allow more tall buildings in the city centre? There could only be revenue potential as a motive. What city dweller would rather see more towers among patches of blighted and vacant land instead of moderately-sized buildings that could completely cover that land and make connections to the fabric of neighbourhoods? The hesitation to build towers in the heart of the city is no doubt due to the fear that very large buildings will overpower the existing Victorian centre. The 'Local Plan' states,

"At its peak in Victorian Times, Glasgow was the second City of the Empire and, as a result has inherited a wealth of architectural and urban design quality such that it now has the reputation of being one of the finest surviving examples of a 'Victorian City'. This dual legacy of fine historic buildings and former commercial greatness is now recognised, respected and held-up as a zenith which the city seeks to achieve once again."³⁷

[Author's note: The evaluation of the Planning Department's policies in this document is based on information obtained from lectures and interviews with staff of the Planning Department in the spring of 1992 and from the latest version (November 1990) of the 'Local Plan'. In November, 1992, it was learned that the Planning Department will likely introduce a policy against tall buildings anywhere in the city centre in the next update of the 'Local Plan'. This proposed modification is the result of a study of the city centre floorspace capacity. Moderate-density development that is projected in the study is based on the same 3.5 : 1 plot ratio restriction that is currently in effect, but rarely enforced, in Glasgow. The whole of the city centre inside the motorway ring has a capacity of thirty eight million square feet of accommodation in addition to the buildings that exist now. Twenty million square feet of this total figure is contained in the projections for the office core of Blythswood and the Broomielaw. The take-up of office space in the last few years has averaged less than one million square feet per year.]³⁸

The 'Local Plan' contains an acknowledgement of areas where "a mix of uses exists in relative harmony", and declares that the Proposals Map is needed "so that proposed developments do not conflict with existing uses and activities." The Planning Department make a further distinction between "mixed use" and "mixed use with housing potential" on the Proposals Map. This highlights that they are merely observing the area instead of directing it. The areas of housing potential are so designated because many of the buildings are of historical interest but are very small and not appropriate for uses other than housing. It also reinforces their reluctance to believe that anyone would want to live in a city unless his flat had a view of a river or

³⁷ J.H. Rae, 'Glasgow Central Area Local Plan', p.1.

³⁸ Stuart Leighton, Interview at the Planning Department, November 5, 1992.

of a cathedral. They must believe that everyone prefers the suburbs to the city. Most people prefer the suburbs under the current direction that the Planning Department are pursuing for the city centre. Suburbs are not ruining the city, but preferential treatment of suburbanites is. Glasgow's city centre is becoming an anti-city. Pride of neighbourhood, a satisfying quality of life and neighbourliness can be found in central neighbourhoods of great cities; they are not suburban ideas.

Instead of having a pristine office zone in Broomielaw, it appears that the Planning Department begrudgingly acknowledge that there will be some problematic "mixed use" areas in the Broomielaw. The real meaning of "mixed use" is not a dozen offices and one apparel shop. The number of residences should not be based on convertibility of existing buildings because the minimum number of flats possible will not be attractive to prospective tenants. Offices in a zone seem to sell quickly and smoothly; residences in a zone do not. It is not an indicator of a weak market for housing in the city. The reason is potential residents are far more selective about environment and atmosphere because they will live in it twenty-four hours a day. Provide them the quality environment of variety (far more important than a flamboyant building) and they will choose to live there. The Italian Centre is successful not because it reminds people of Italy, but because it is in the heart of the activity of the city. The housing at the site of the Glasgow Garden Festival (Festival Park) is not largely vacant because people do not care for the river, grass and trees, but because it is anchorless and banished from the city centre. The first flats for the Merchant City were subsidised by local government along with the claim that they could never be successful on the free market. [The city needed any kind of tenant to occupy these listed buildings to keep them from decay.] Later developments were pre-let before construction was completed and were leased at higher rates; Festival Park still struggles. Do the authorities, the developers and the architects know why?

Development Opportunities

Broomielaw's status as the next step of city centre development is derived from its location adjacent to the existing city centre (shops, offices and transportation networks), the availability of underdeveloped land and the attractiveness of the river. The available sites for new construction are desirable to speculative office developers because new office buildings need large floor plates and unobtrusive structures and services. The river is seen as an especially keen draw for potential residents. A branch of the shopping core extends into the site along Argyle Street and may be strengthened to attract shoppers into the Broomielaw if so desired. The success of the area regarding a mixture of activities seems very likely and easily attainable from a market demand perspective. Market research for the Broomielaw gives insight to the types of offices, shops and flats that can be expected in the new development.

It is important for an urban designer to have an understanding of the state of the economy of a city as a whole and to be informed on the types, sizes and qualities of buildings that are demanded by the market. Just as an architect must be well versed in site planning to be able to design a building on a site, an urban designer must be familiar with the economic fundamentals of speculative building. An urban plan that will not tolerate the types of buildings that the market demands is a useless urban plan. An economic overview of the rate and type of growth in a city is vital information to an urban designer.

Office Accommodation

The Glasgow business sector can be expected to grow because of its favourable market position with regard to the rest of Britain. Office rents are

competitive with other British and European cities (Figure 42).³⁹ Local and multinational firms already regard Glasgow as a suitable place to locate a business or a branch office, and it has become known as a financial services centre. The average wage in Glasgow is approximately twenty per cent lower than in the south-east of England and the turnover rate for employees is only one quarter that of the greater London area.⁴⁰ The relatively small centre of Glasgow is provided quick access by the motorway system and travel times are less than other cities of its calibre. These factors make Glasgow an attractive location for businesses.

Chesterton Chartered Surveyors have found that as of May, 1990 only 6.1% of office space in the city centre was available for let.⁴¹ In general, the spaces were of small size and poor standard and were deemed unsuitable for large firms. Less than 12% of this 785,000 square feet was in sizes of 10,000 square feet or more, a size they regard as suitable for firms that the city wants to attract. This data included the more than 1,000,000 net square feet that was completed in the twelve month period prior to the survey.⁴² This demonstrates that the office accommodation market is still healthy, and the space that remains unlet can be attributed to inferior accommodation, not a glut of new buildings (Figure 43). In this latest survey, take-up of office space remained high with 92% of the new space leased or committed.⁴³

The varying quality of office space in Glasgow has been categorised into three groups by Richard Ellis Chartered Surveyors. Class "A" office units are not generally less than 6,000 square feet per floor, are capable of accepting the latest electronic equipment and have a high standard of entrance hall and shared spaces. Class "B" accommodation includes some of these qualities, but generally not the unobstructed

³⁹ Richard Ellis Chartered Surveyors, World Rental Levels: Offices, (Great Britain: Richard Ellis, 1991), p.52.

⁴⁰ Chesterton Chartered Surveyors, Glasgow Business Space Review 1990, (Glasgow: Chesterton Research, 1990), p. 7.

⁴¹ Chesterton Chartered Surveyors, Glasgow Business Space Review 1990, p.37.

⁴² Chesterton Chartered Surveyors, Glasgow Business Space Review 1990, p.10.

⁴³ Chesterton Chartered Surveyors, Glasgow Business Space Review 1990, p.10.

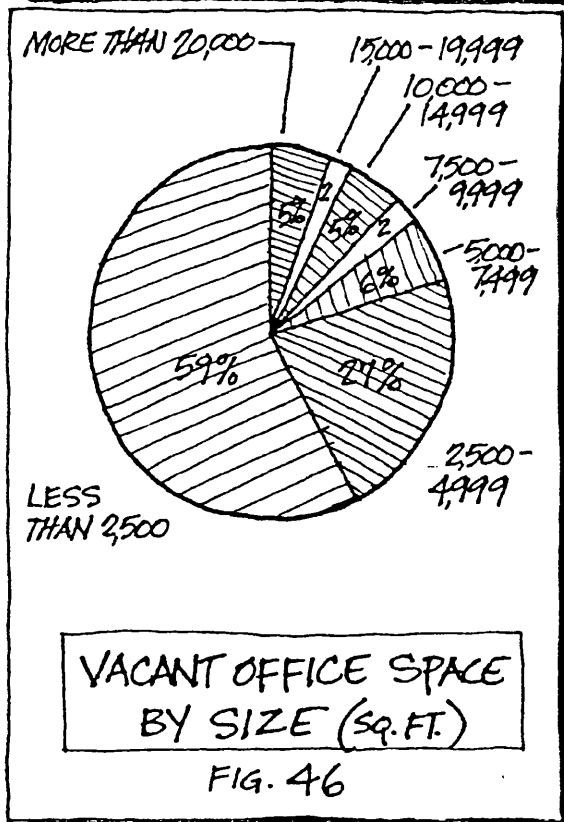
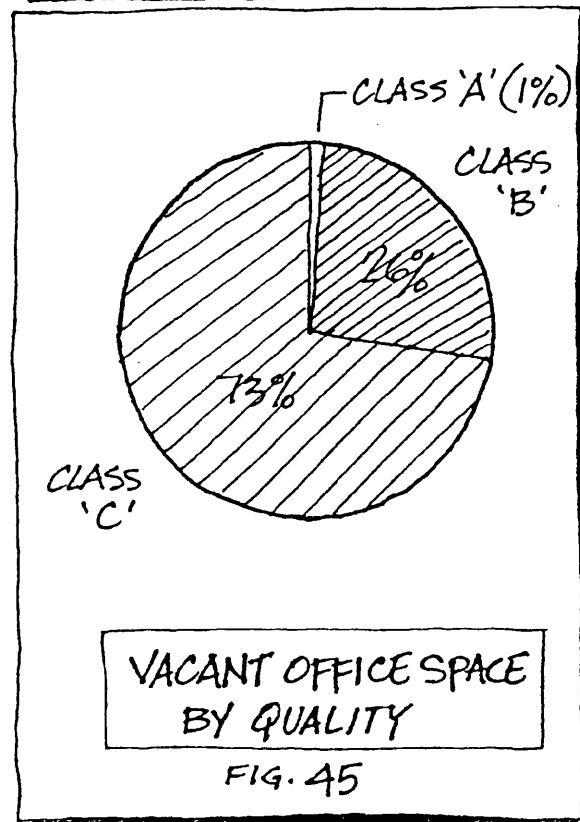
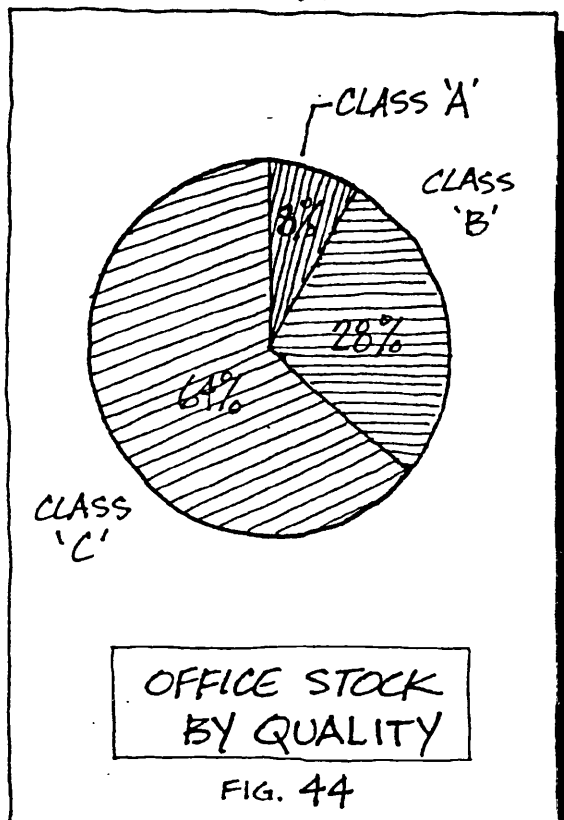
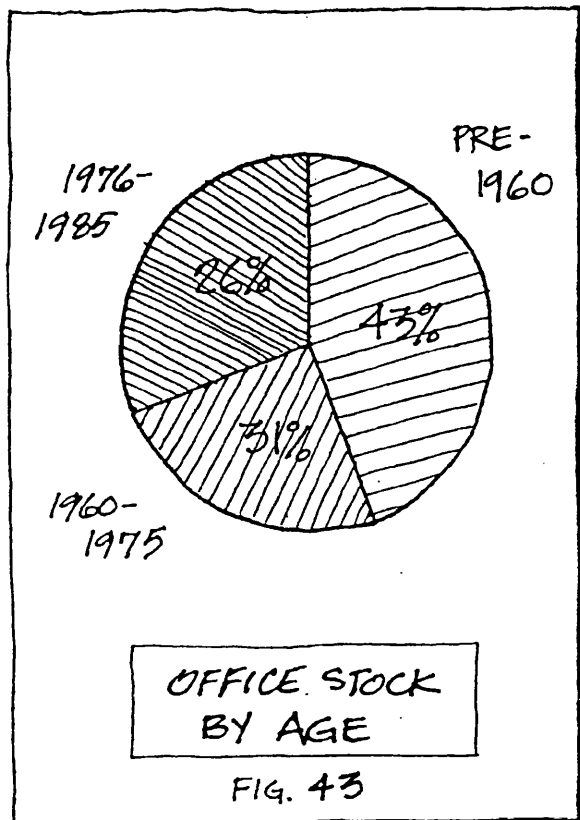
OFFICE RENT COMPARISONS

CITY	JUNE, 1991 RENT (EQUIV. IN POUNDS PER SQ. FT./YR.)	TOTAL COST (INCL. TAXES, CHARGES, ETC.)	EXCHANGE RATE TO \$ (14 JUNE 91)
TOKYO	£ 127.20	£ 137.35	¥ 231
LONDON - WEST END	62.50	90.70	—
LONDON - CITY	45.00	74.16	—
PARIS	47.10	53.12	FF 997
HONG KONG	45.46	51.14	HK\$ 12.57
SINGAPORE	35.99	46.32	S\$ 2.93
MADRID	36.25	42.00	Pts. 183
FRANKFURT	36.76	40.60	DM 2.94
* MILAN	35.01	39.91	Lit. 2187
NEW YOR- MIDTOWN	26.68	38.11	US\$ 1.64
BARCELONA	30.03	34.75	Pts. 183
LISBON	31.93	34.06	Esc. 259
SYDNEY	24.08	32.56	A\$ 2.17
STOCKHOLM	22.92	28.93	SEK 10.60
MANCHESTER	21.00	28.46	—
GLASGOW	17.50	28.35	—
WASHINGTON	18.44	27.76	US\$ 1.64
SAO PAULO	22.84	27.11	CR\$ 483.20
BERLIN	24.51	26.79	DM 2.94
NEW YORK - DOWNTOWN	13.34	24.39	US\$ 1.64
CHICAGO	14.06	24.10	US\$ 1.64
TORONTO	13.63	23.70	C\$ 1.88
MELBOURNE	16.70	22.58	A\$ 2.17
PERTH	15.82	21.09	A\$ 2.17
LOS ANGELES	13.59	20.94	US\$ 1.64
BANGKOK	18.07	20.94	BAHT. 41.53
BRUSSELS	15.83	19.47	BF 60.45
VIENNA	16.24	18.95	AS 20.6
SAN FRANCISCO	9.07	18.40	US\$ 1.64
ISTANBUL	16.99	18.12	US\$ 1.64
AMSTERDAM	12.37	14.22	DFL 3.31

* EDINBURGH: RENT APPROXIMATELY THAT OF MILAN
NOT INCLUDED IN THIS STUDY

Figure 42. Rents in major cities worldwide.

GLASGOW OFFICE STOCK : 7.1 m sq. ft.



floor space, and class "C" space meets few, if any, of these types of standards.⁴⁴ At the time of the last survey by Richard Ellis in 1986, the city centre contained only 8% class "A" office space (Figure 44).⁴⁵ The top quality office space built since then has rarely remained on the market for more than six months even during times when the amount constructed per year remained high (Figures 45, 46).⁴⁶ New businesses from outside the area and businesses upgrading their accommodation from a few blocks away were filling the new space. This new office space that is so quickly leased occupies only a small percentage of the total take-up and has a large growth potential, so the builders of new offices in the Broomielaw can be expected to build only top quality, modern office buildings to capitalise on the strong demand for these offices. The prospect of new office buildings usually entices developers to invest in a city because that is usually the most profitable building type. Even if there is enough demand for the Broomielaw to be devoted one hundred per cent to offices, new construction should be balanced by other uses. If the market demands more buildings after the Broomielaw is complete, then another area of the city centre can be developed in a similar manner. It does not matter if office construction leads the development as long as other uses are included as well.

Muirheads Chartered Quantity Surveyors undertook a study of the parameters of top quality office space and arrived at their ideal dimensions for new office space in the Broomielaw.⁴⁷

Depth of Plan,		
Speculative Building:	13.5 m - 16.2 m	(44 ft - 52 ft)
Corporate Headquarters:	45.0 m	(140 ft)
Floor to Floor Height:	3.9 m	(13 ft)

⁴⁴ Richard Ellis Chartered Surveyors, Central Glasgow, A Business and Office Profile, (Great Britain: Richard Ellis, 1986), p.14.

⁴⁵ Richard Ellis Chartered Surveyors, Central Glasgow, A Business and Office Profile, p. 6.

⁴⁶ Chesterton, Glasgow Business Space Review 1990, p.37.

⁴⁷ Muirheads Chartered Quantity Surveyors, (unpublished report to client, Shearwater Developers, for the Broomielaw Proposal [1988]), Courtesy of the Glasgow Development Agency.

Floor to Ceiling Height:	2.7 m	(9 ft)
Structural Bays:	8.1 m	(26 ft)

(Efficient for parking and modular furniture)

Using the minimum desirable floor areas from Richard Ellis (6,000 sf) and Chesterton (10,000 sf) and the suggested floor depth for speculative offices from Muirheads' research, we can arrive at an idea of the types of office floor space that will be built in the Broomielaw.

[Net Area in sf = Suggested Depth X Width]

Speculative

6,000 sf = 44' X 136'

or

6,000 sf = 53' X 113'

10,000 sf = 44' X 227'

or

10,000 sf = 52' X 188'

Corporate

It is unreasonable to apply this formula, since corporate headquarters are generally quite large and often occupy entire buildings. It is worth noting the suggested depth of 140 feet.

Retail Establishments

An informal visual survey of the three-street shopping core reveals a district that is quite fully developed. The only stores originally allowed on the principal streets were the "high quality" stores such as department stores, clothing boutiques, and gift shops. Fast food restaurants, pubs and other lower profile tenants were prohibited. Currently, most of the restaurants and bargain stores can be found along the side streets of the shopping core. The Broomielaw should have a range of shops, pubs and restaurants, but the density and volume of these enterprises will not rival the situation on Buchanan Street. Groups of shops should not be discouraged altogether; a court or arcade or small grouping of shops modelled after Prince's Square on

Buchanan Street could find a place in the Broomielaw without upsetting the balance of uses. A balance of uses is not a particularly fragile entity, and uses do not have to be spread evenly and democratically over an area to be effective. Small speciality shops have been identified as the main type of tenant that the developers wish to have in the Broomielaw. These shops are intended to give any new development a distinctive and sophisticated image. This type of shop would do better than large department stores because of the profusion of major stores in the shopping core. If the Clyde is developed as a tourist attraction, then the type of shop catering to visitors might become prevalent. Small artist's studios or galleries would be welcomed here, as anywhere. The hope is that studio space would be less expensive and more easily converted in the Broomielaw than around the retail core area.

The target consumer population for the Broomielaw is 232,000 people in Strathclyde Region. The anticipated tourist population, foreign and domestic, is 1,564,000 visitors per year.⁴⁸ The city centre already has the status of a regional shopping centre.

Flats in the City

The cleaning and restoration of buildings together with the construction of major civic buildings has created a market for housing in the city that did not exist just a few years ago. The city centre had been an unfashionable place to live and land was either not available or not affordable.⁴⁹ The new housing market revolves around the affluent and mobile citizens: single professional people and first-time home buyers. Studies show that older citizens who are purchasing or renting their second

⁴⁸ The Retail Group, (unpublished report to client, Shearwater Developers, for the Broomielaw Proposal [1988]), Courtesy of the Glasgow Development Agency.

⁴⁹ Bernard Thorpe, (unpublished report to client, Shearwater Developers, for the Broomielaw Proposal [1988]), Courtesy of the Glasgow Development Agency.

or third flat usually select one within two miles of their former one.⁵⁰ A few years ago, building contractors were not building any flats that could be regarded as luxury flats, but recent projects in the city centre that included high quality flats have done well. Market competition for flats in the Broomielaw would come primarily from Lancefield Quay, The Waterfront, the existing flats in east Broomielaw and flats on Clyde Street; a total of 470 flats. Additional competition will come from the Italian Centre, Ingram Square and Festival Park housing projects.⁵¹

Bernard Thorpe and Partners Chartered Surveyors in a report prepared for The Holmes Partnership, Architects, expects that any riverfront flats in the Broomielaw would be larger and of higher quality than other flats on the site and would not be aimed at first-time home buyers. The report suggests the following breakdown for housing on the site [1988 figures]:⁵²

<u>Riverfront Sites</u>	<u>North Broomielaw Sites</u>
1BR 750 sf £55-60,000	1BR 550 sf £35,000
2BR 950 sf £75-80,000	2BR 625 sf £45,000
3BR 1150 sf £100,000	3BR 700 sf £60,000

TOTAL: 750-1,000 Flats

Luxury flats, in this sense, seem to be defined by large floor plans, expensive materials and direct views to the river. Any urban flat should be defined differently than a suburban one, however. Urban housing needs nearby outdoor spaces that are identifiable as belonging to the homeowner, among others. Reliable public transportation and secure car parking space somewhere nearby is essential in the Broomielaw, as is a degree of individuality in the flat. An anonymous flat in a high-rise building is not what most people would choose if given a choice. Oscar Newman describes the need for neighbourly contact, identifiable territory, and active and

⁵⁰ Bernard Thorpe, (unpublished report to client, Shearwater Developers)

⁵¹ Bernard Thorpe, (unpublished report to client, Shearwater Developers)

⁵² Bernard Thorpe, (unpublished report to client, Shearwater Developers)

accessible streets in Defensible Space. Vast unyielding blocks of repetitive flats dilute the visual variety of a street and diminish the connection a person feels toward his flat and his neighbourhood. The more finite and unique a group of flats is, the better. Low-rise buildings of this sort give a human quality to the dwellings and strengthens the connection between the private interior of a flat and the exterior territory that accompanies the home. Isolation of a dwelling unit is caused mostly by height above the street and ground distance from centres of activity. Any flat, luxury or standard, must have nearby activity as one of its primary amenities. In Glasgow, a luxury flat is one in an active area; it is not necessarily large or made of expensive materials. By this measure, the environment of the new development could make all the flats desirable flats. Some may be very well appointed or have magnificent views, some may be small and far from the river, but none should be isolated. The prestige of a riverfront flat can not offset deficiencies in the level of activity or the proximity to shops and transportation. In many cities, a flat in a vibrant district is prized over a flat with a river view.

There may or may not be a market for inexpensive or sheltered housing in the area. The main point will be to have people in this new district; the intention is not to approach social or political topics concerning the mix of people in an area. Sheltered or low-rent housing would work perfectly fine here and is encouraged to be part of the Broomielaw fabric, but since the study for the Broomielaw has definitely identified a market for luxury flats, we can expect to find a substantial amount of this type constructed.

Transportation

Creating a pedestrian-oriented city will be a costly and prolonged venture but it can be achieved if the will exists. The narrowing of sidewalks to allow more autos,

massive road projects and intrusive freeway clearances are likewise expensive and lengthy processes. A better (and less expensive) solution would be to create pleasant cities to attract residents instead of exiling them and building roads for them. It does not cost any more to build a city well than to build a city poorly. The 'Local Plan' reveals that the city is currently in a fairly advantageous position but is unwilling to capitalise on it;

"As a City, Glasgow has a low car ownership and is very dependant on public transportation, but this has to be balanced against the needs of certain private car owners who must use their cars to journey to the City Centre if business and commercial functions of the area are to be maximised."⁵³

Of course, some people will need to drive to the city, but future development should not promote the use of private automobiles. There are some enlightened policies presented as the transportation strategy for Glasgow is described further in the 'Local Plan'. The authorities advocate a balanced approach, where the use of public transportation is encouraged and private automobiles are restrained in favour of allocating roads to traffic essential to the business and commercial interests of the city centre. This is precisely the strategy that Glasgow needs, and we find this clear thinking is attributed to Strathclyde Regional Council and Strathclyde Passenger Transport Executive. They state the legitimate needs of short-term parking for business and retail needs will take priority over commuter parking. The plan discourages commuters by not permitting parking where it will preclude early development of a site or will harm the visual character of an area. Parking will also not be permitted on temporarily vacant sites or on sites remote from the intended user.⁵⁴ These are some aspects of a very aggressive and slightly unorthodox approach to championing space for people.

⁵³ J.H. Rae, 'Glasgow Central Area Local Plan', p.10.

⁵⁴ J.H. Rae, 'Glasgow Central Area Local Plan', p.11.

In an effort to ensure that pedestrian movement and facilities are improved, short streets, lanes and squares are targeted to be improved by the removal of traffic and parked cars. This list of areas includes the north side of Nelson Mandela Place, Royal Exchange Square, Dixon Street, part of Gordon Street, and the area around the former Sheriff Court House.⁵⁵

Strathclyde Regional Council Roads Department traffic studies show Broomielaw Road is a busy thoroughfare carrying approximately 11,000 cars to and from the city centre daily (Figure 47). The streets in the Broomielaw do not carry much traffic currently. Oswald and York streets handle most of this north-south traffic. Schemes for the Broomielaw that would block some of these roads have been approved by the Strathclyde Regional Council Roads Department; it seems that the number of existing streets is more than necessary for the area and that narrower streets (and wider sidewalks) should be promoted. Rail and bus stations are at the perimeter of the site. Anderston bus station is the destination for many commuter buses although only about 25% of riders actually remain on the buses until they reach the station.⁵⁶ Consequently there is little pedestrian traffic around the site.

⁵⁵ J.H. Rae, 'Glasgow Central Area Local Plan', p.11.

⁵⁶ Colin Buchanan and Partners, (unpublished report to client, Shearwater Developers, for the Broomielaw Proposal [1988]), Courtesy of the Glasgow Development Agency.

EXISTING TRAFFIC FLOWS
 AM PEAK (0800 - 0900)
 UNITS: VEHICLES PER HOUR

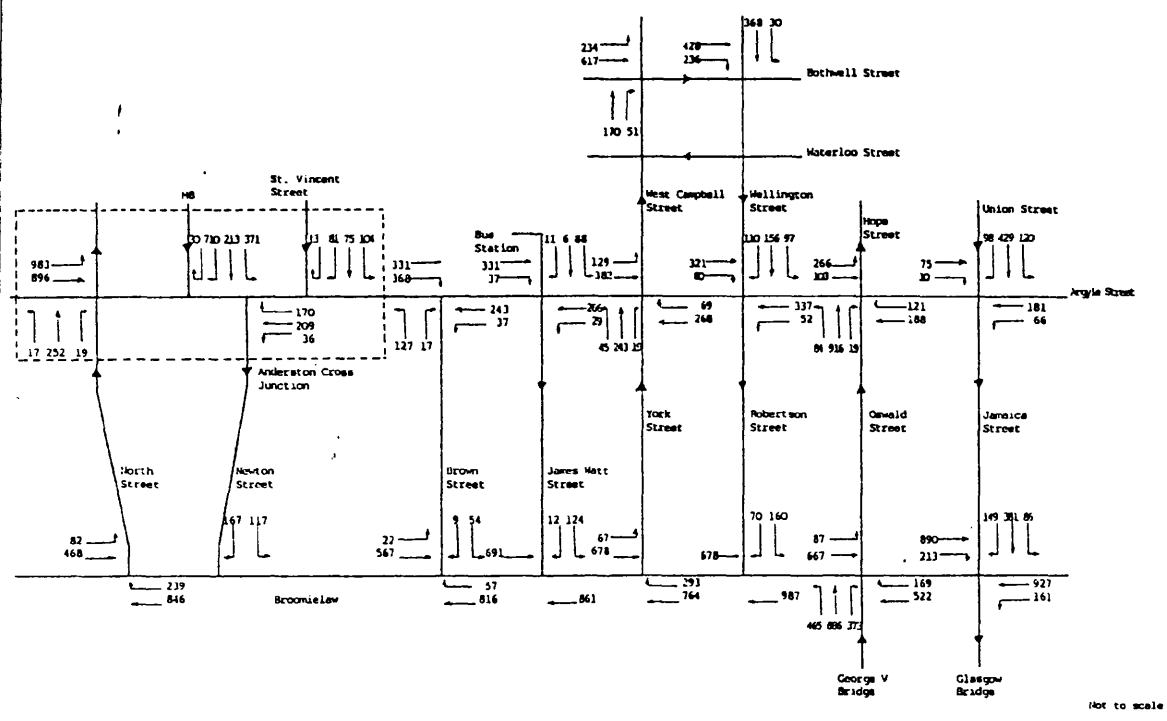


Figure 47. Existing traffic flows in the Broomielaw at the morning peak.

Reclaiming The River

In order for new growth or new construction to avoid stagnating like the developments in Docklands, it must be anchored to a healthy area. The Broomielaw is most attractive because of its physical proximity to the best part of the city. Existing shops, businesses and transportation virtually ensure that the Broomielaw will be a desirable neighbourhood. The likelihood of growth south of the river is very low because the Clyde is seen as a barrier rather than an asset to the city centre. An alternative view is to imagine the river is not a barrier but the lack of bridges is a barrier. No authority would allow a seven or eight block wide section of the city centre to be closed to pedestrians and vehicles, but this is allowed at the river. The potential of the riverfront for all users of the city justifies unblocking the river area. To avoid lame bridges that allow people to get to both banks but do not entice them to do so, the authorities need to commission high-profile attractions for the river. The river is currently lost and it, too, needs an anchor. The solution is to establish at the riverside leisure or cultural facilities that attract many people. The distance from one bank of the river to the other is incomparable with the distance across a street, so the anchors on both banks need to be substantial, even major. An anchor on each bank coupled with a thriving Broomielaw district can bring back glory to the river, which is worth attempting because the river is a unique element in the city structure. Pedestrian bridges located at one or, preferably, two locations will not only link the banks but will facilitate cross-traffic from beyond the banks. A national aquarium and a museum of the Clyde shipping and shipbuilding would be prominent enough, domestically and abroad, to maintain the steady population around the river that will allow neighbouring shops and restaurants to thrive and in turn provide life at the waterfront outside regular hours. An aquarium and a museum of Clyde shipping and shipbuilding are two of the several attractions that the Scottish Development Agency, the Glasgow Development Agency and other authorities are considering for Glasgow.

There has also been mention of a folk museum and an emigration museum and the forthcoming National Gallery of Art definitely will be constructed in either Glasgow or Edinburgh. It is unnecessary to place all the best envisioned cultural or leisure facilities in the Broomielaw to ensure that it will not fail as a neighbourhood; that would be at the expense of the rest of the city, and besides, the Broomielaw will be successful on its own merits. However, any attempt to capture the river environment as a part of the city centre needs a major population boost and no timid gestures. The two facilities proposed have the strength to stand on their own as generators of activity and are entirely appropriate to the banks of the Clyde. A first-rate aquarium is expected to draw visitors from near and far and such an attraction often is the focus of a day out with the family. Boats, docks, seafood restaurants and all features associated with the waterfront theme would be very welcomed here.

Waterfront developments in Boston, Massachusetts, and Baltimore, Maryland have been financially successful because special environments have been created. These special environments were directly connected with the city centre, which made them accessible. The Quincy Market in Boston is a renovation of harbour front warehouses built between 1824 and 1826. The four-building complex provides office, retail and restaurant accommodation. The developers for the project, The Rouse Company, state that the costs of renovations were approximately thirty per cent higher than new construction, but that the rents attainable are three hundred percent of other rents in the area. Twelve million people per year visit the market with around half of the visitors coming from outside the city.⁵⁷ The Rouse Company also developed the second phase of the Baltimore inner harbour (the first phase was the construction of the Baltimore National Aquarium). The retail and restaurant pavilions cost twenty million dollars to construct, but earned forty two million dollars in

⁵⁷ Barry Maitland, Shopping Malls. Planning and Design, (London: Construction Press, 1985), p.68. Reference from Robert Campbell, 'Evaluation: Boston's "Upper of Urbanity"', AIA Journal, June 1981, pp.24-31.

revenue in the first year. Eighteen million people visited the development in that first year according to James Rouse.⁵⁸

The proposed Glasgow aquarium should be located on the south bank of the river for the following reasons:

1. The required services and parking facilities will be very large. The Broomielaw does not offer the depth of buildable land at the river front that Tradeston (the south bank) offers. Roads near the bank in Tradeston are not through-roads, are underused and are easily reroutable.

2. The aquarium will probably be the strongest draw of the waterfront. The city centre is the densest area of the town and the residents and workers could easily make the trip across the river. Tourists arriving on the south bank will naturally make their way across to the city centre. The whole riverfront would benefit by having as many people as possible on both banks and crossing over routinely.

3. The aquarium would create a place that may trigger development along the south bank, further strengthening the river environment. The lack of listed buildings or a central conservation area in the immediate area would allow for flexible road schemes and flexible architectural schemes. Alternately, if central Glasgow were to cease growing, the aquarium is the best venture for holding the south bank in the city centre.

The aquarium would have car parks and large service yards, but Tradeston currently has no hope of rejuvenating itself or joining the city centre without bold steps taken. Any new south bank development would be directly attributable to the

⁵⁸ Barry Maitland, Shopping Malls. Planning and Design, p.81. Reference from an interview with James Rouse, Time, August 24, 1981, p.42.

aquarium's location there. It might be argued that the aquarium could be located anywhere along the fringe of the city centre and would become an anchor for development and provide the same landmark quality at that site. It would fulfil this role, but the other areas are essentially undifferentiated. The unique element, the river, lies between Tradeston and the Broomielaw. There may never be such an opportune time to incorporate part of the Clyde into the city centre again. The city centre north of the Clyde could not absorb such a facility in an advantageous position.

The river is under-appreciated because the quality of the immediate surroundings is poor (it does not have anything to maintain a person's interest) and because it is isolated by the unpleasant nature of the approach streets. This is not a problem unique to Glasgow. River environments in other cities offer some insights to how this problem might be handled (Figures 48-53). The motorway bridge at the west end of the Broomielaw creates another poor environment; it repels activity along its length. The very short stretch of the Clyde that runs through the city can be made into a special event in the course of the river. Now that development is imminent for the area, shortcomings can be addressed and solved with aggressive solutions. A wide view to the river from along its banks or from a building is fine, but the Clyde would be at its best if an intimate setting were defined. Both an unobstructed view and an intimate setting at the river's edge are desirable, but the riverside setting is the more important of the two because that setting determines whether people will actually approach the river, and stay. However the new Broomielaw is developed, not everyone will be able to see the river without approaching it, so it makes sense to create a reason to visit the river. The cool and rainy climate of Scotland also suggests that plenty of indoor activities should be provided at the river side.

A major barrier to growth is the motorway because it is perceived as ugly and unwelcoming, and because it physically disrupts the continuity of the ground-plane connections. Perhaps it would be unwise to construct towering or bulky buildings in

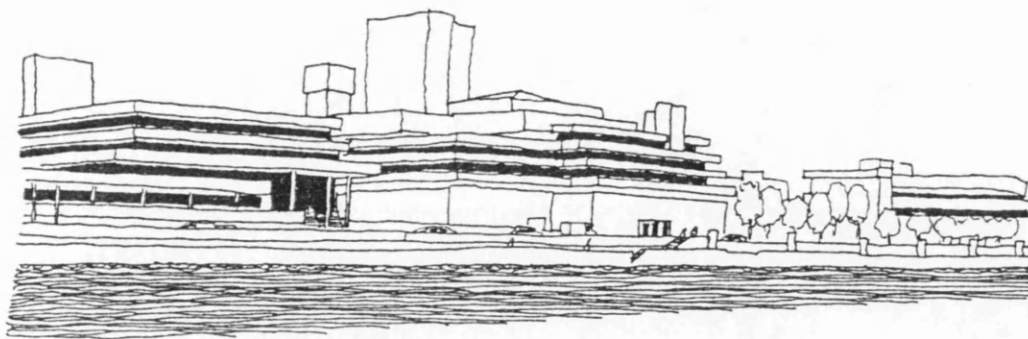


Figure 48. London. The River Thames: a motorway separating the river from the city.

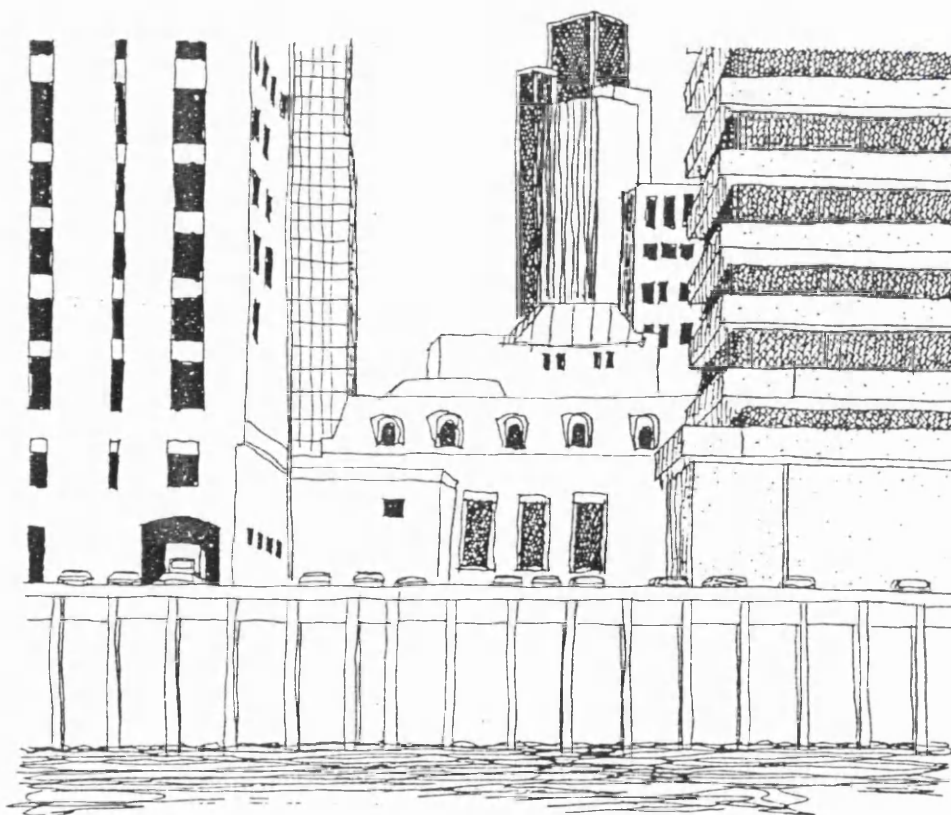


Figure 49. London. The River Thames: car parks and service entries at the riverside.

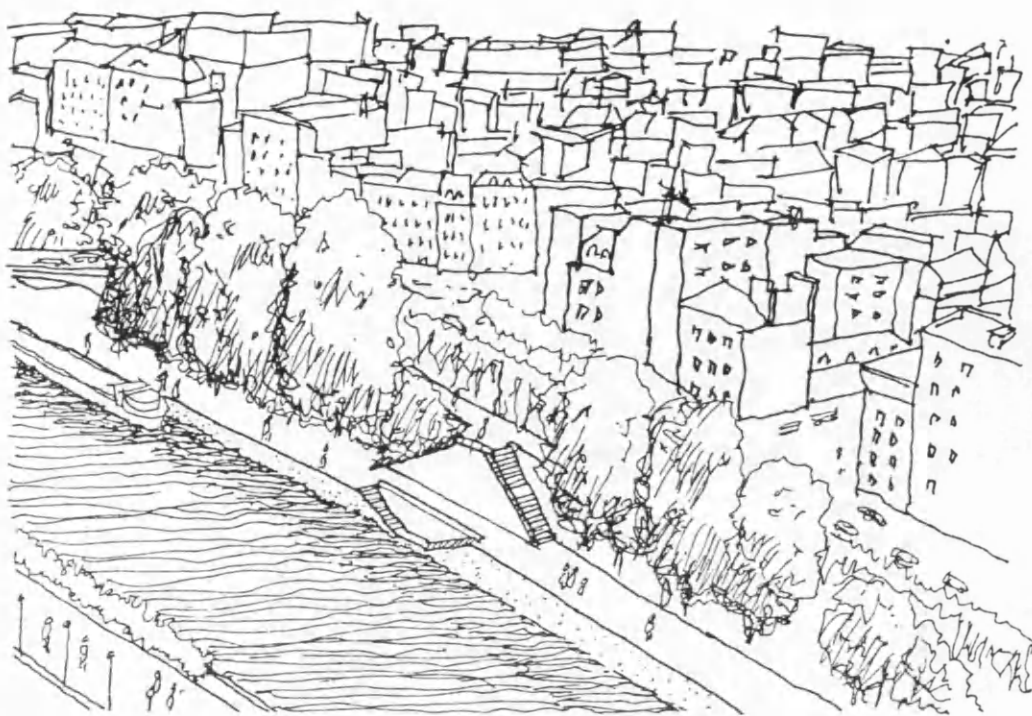


Figure 50. Paris. The River Seine: a tree-lined promenade.

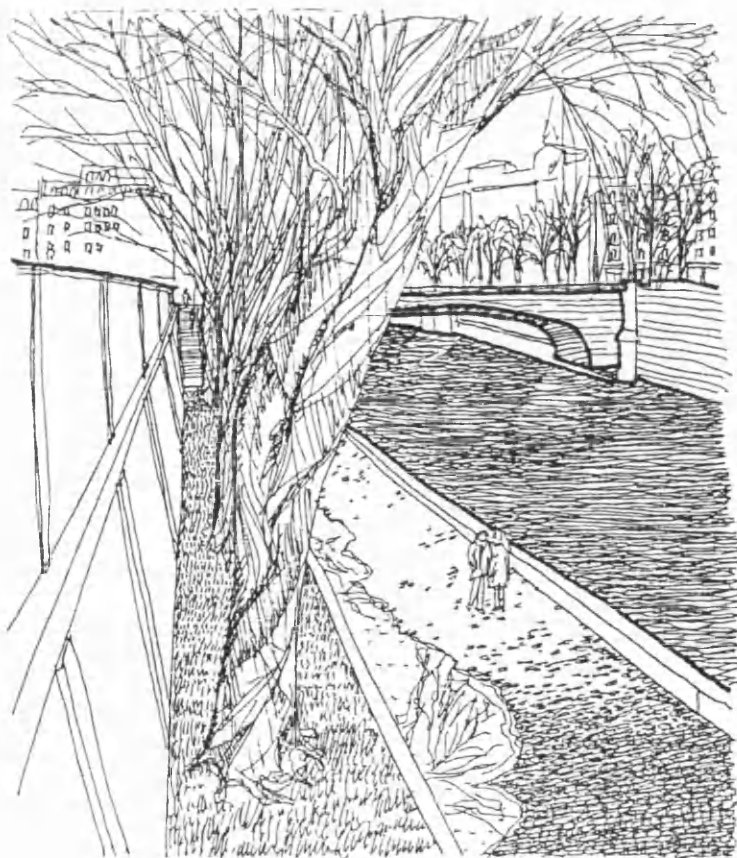


Figure 51. Paris. The River Seine: a tree-lined promenade below the street level.



Figure 52. London. The River Thames: a tree-lined promenade and stone embankment.

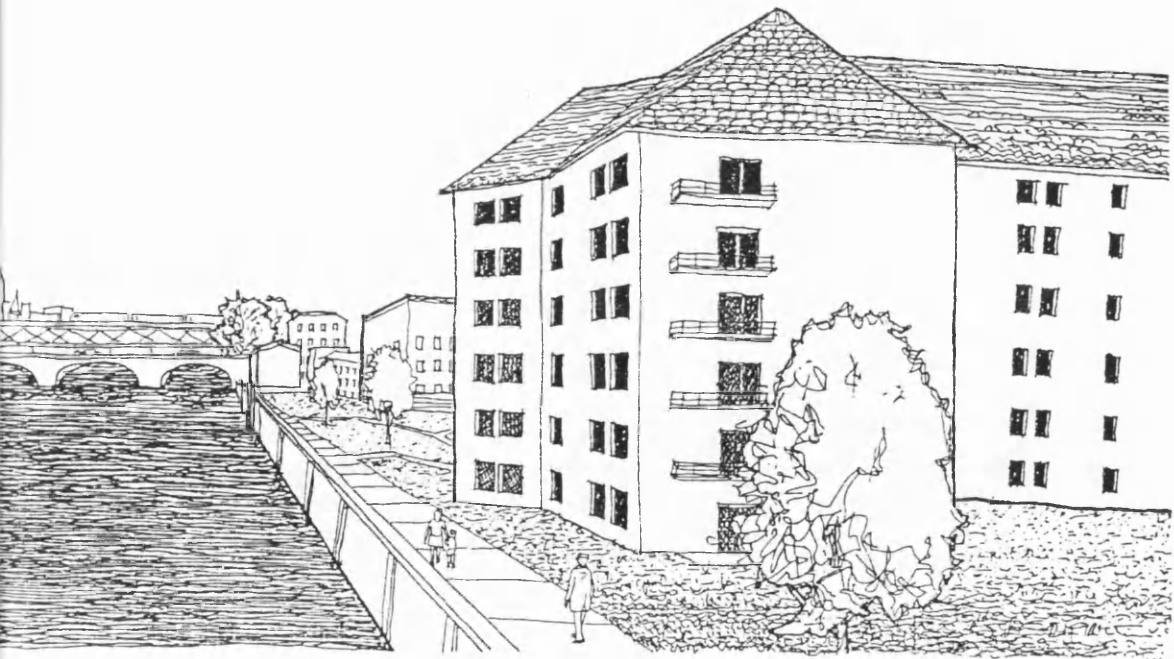


Figure 53. Glasgow. The River Clyde: Housing in Tradeston (the south bank) offers no definition or activity to the riverfront.

the city centre conservation district, but buildings as tall as the Kingston bridge would provide a buffer at the motorway to block the noise from the traffic and the sight of the wasteland underneath. There are a few buildings currently performing this function and the largest of them, the Crown Flour Mill and the red stone bonded warehouse (number 30-46 Washington Street) are fine buildings, actively used, and worth retaining. Regardless of the eventual form of the other streets, this street could have tall buildings on the western side. Victorian buildings in the city centre are often tall and have high plot ratios although the general impression is that none of them tower above the street. A pedestrian bridge attached to or suspended from the Kingston bridge with good access and proper lighting and approaches is one way of improving the image of the motorway bridge while making a needed connection to the south bank of the river. The attractions at the river and the new pedestrian bridges are mutually supportive and should be built concurrently.

Another pedestrian bridge is needed in the middle of the new waterfront as well because the distance from the Kingston bridge to the George V Bridge is considerable. A significant number of people would see the centre of both banks as remote. The pedestrian connection at the Kingston bridge would need to be high enough to allow boats of moderate size to pass below, while the central bridge may be made with a low clearance. Either one or both of these might have a draw-bridge feature, allowing the bridge to be close to the water. This would grant occasional boat access to the few hundred metres upriver that are now seldom used, but might become well used if the surroundings are improved. The north-south connection could even be made with small water taxis for commuters and tourists alike. The Planning Department currently envisions some sort of connection in the middle of the Broomielaw waterfront.⁵⁹ The major attractions, piers, restaurants, boats and shops would create paths of activity along both banks and two new connections would truly

⁵⁹ J. H. Rae, 'Local Plan', Opportunities Sheet 11 (unnumbered addendum)

add a new dimension to the river by avoiding any dead-end promenades along the quays between the Green and the Kingston Bridge. A floating restaurant called *Renfrew Ferry* and the small sight-seeing boat, *Neptune's Lady*, are currently moored at Tradeston. The once common summer river tours may again be popularised when activity returns to the river. The steamer *Waverly* is docked at a quiet location west of the Kingston Bridge, a few hundred metres from the Broomielaw.

There are all sorts of waterfront environments: oceans, harbours, beaches, lochs and rivers, and a range of primary uses for them including regional tourism, sunbathing, embarking on ocean liners, shopping and dining. As cities revitalise, they are increasingly making use of their waterfront locations as destinations for shopping, dining and as venues for major tourist attractions. Rogers believes, "Glasgow and Birmingham... have put themselves back on the road to vitality, largely because they were among the first British cities to capitalise on the importance of culture in the post-industrial city."⁶⁰ Beaches in warm climates and cruise ship ports usually do well without the support of nearby facilities, but the Clyde will be best used as a showcase of the river's role in the heritage of the city as well as an alternative scene for dining, strolling and shopping. Attractions at the waterfront are not always enough to draw people across an unwelcoming zone. The Broomielaw, the river's immediate mainstay, must be relatively close to the river, of exemplary visual character and of buoyant activity level. The connection of the riverfront developments to a supportive city is essential (Figure 54-59).

The Role of the Broomielaw

The Broomielaw does not necessarily need a major visual monument as it is close to the city centre and the major civic buildings and squares of the city are easily accessible. Even so, an even spread of monuments is useful in ensuring that a city is

⁶⁰ Richard Rogers, Mark Fisher, *A New London*, p.xv.

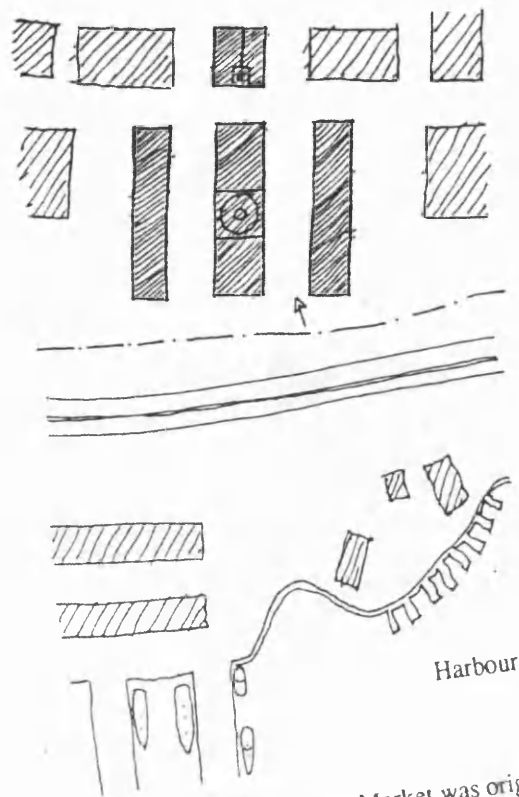


Figure 54. Boston, Massachusetts. The Quincy Market was originally warehouses for the harbour traffic. Subsequent landfill has distanced them from the waterfront.

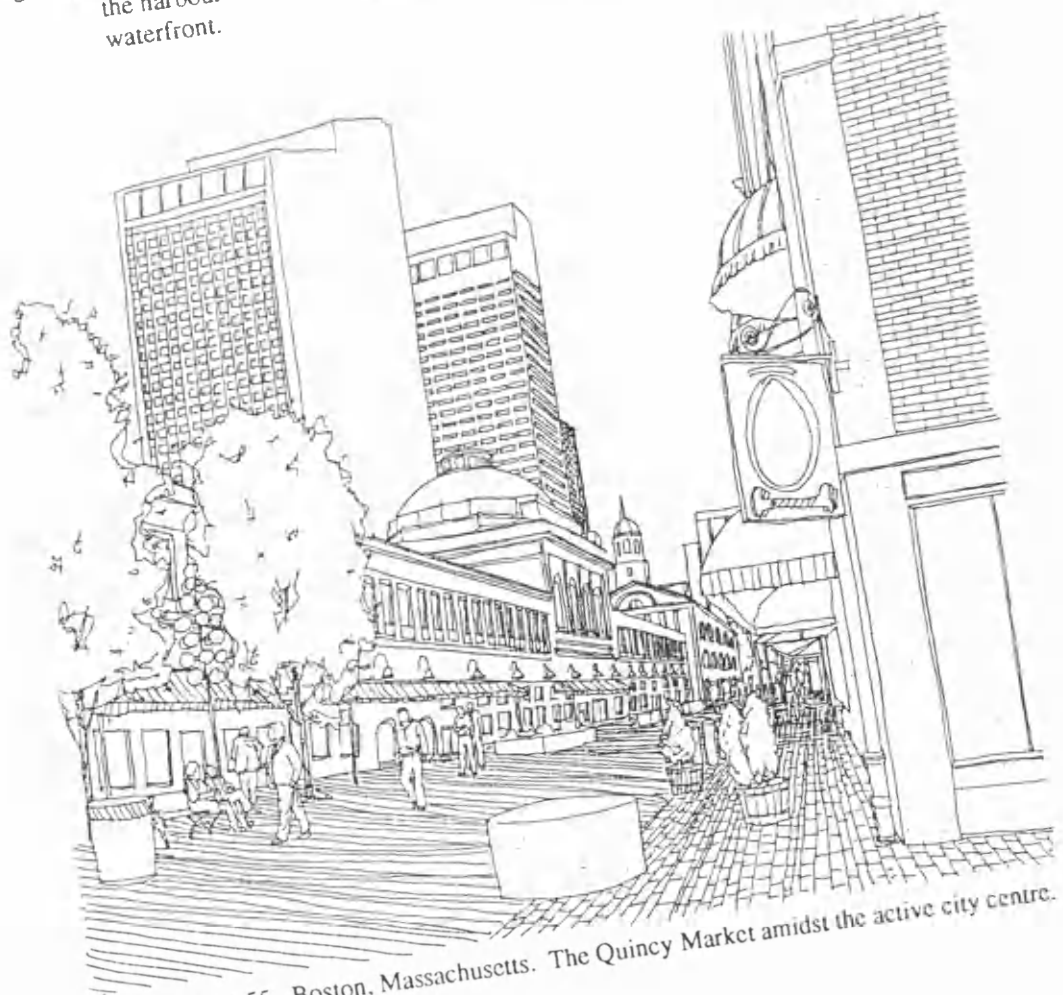


Figure 55. Boston, Massachusetts. The Quincy Market amidst the active city centre.

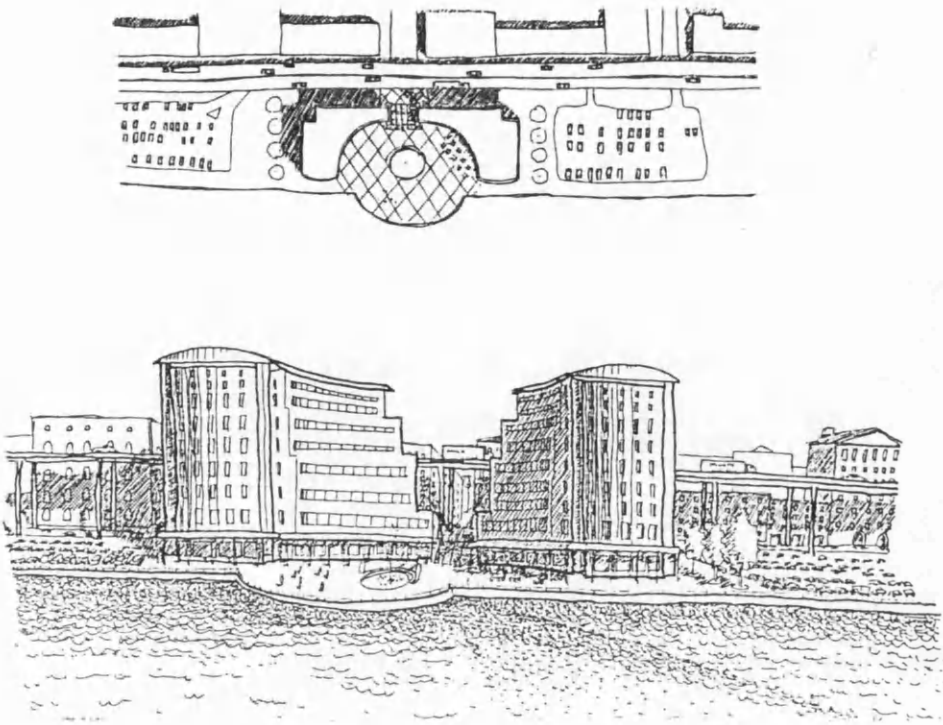


Figure 56. Washington, D.C. Harbourplace is a development isolated by car parks and a two-level motorway.



Figure 57. New York City. The South Street Seaport against the backdrop of the Financial District.

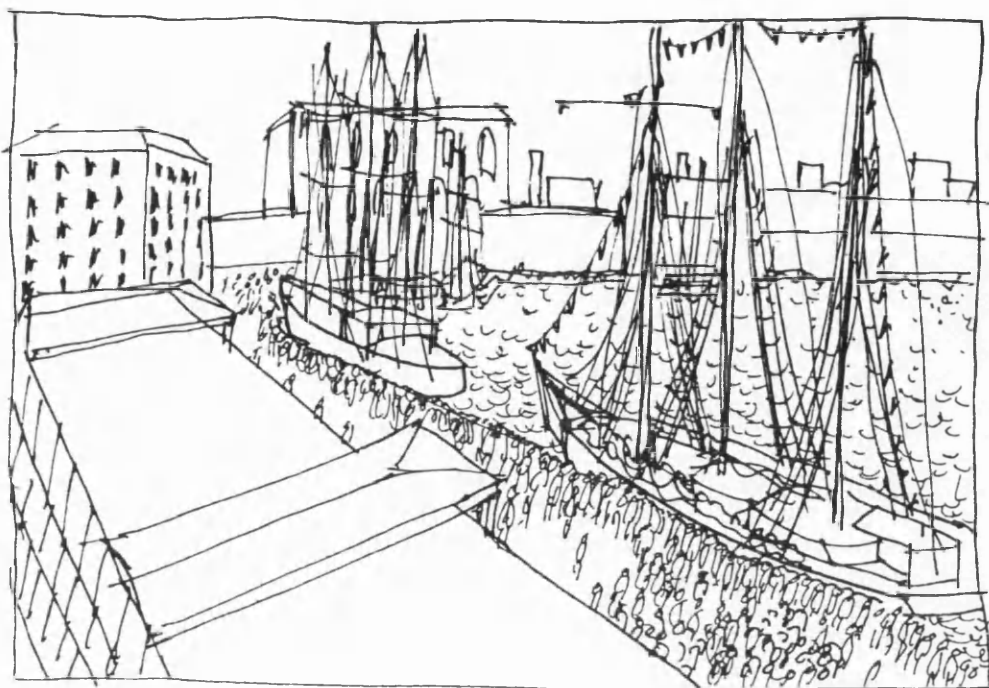


Figure 58. Baltimore, Maryland. The inner harbour.

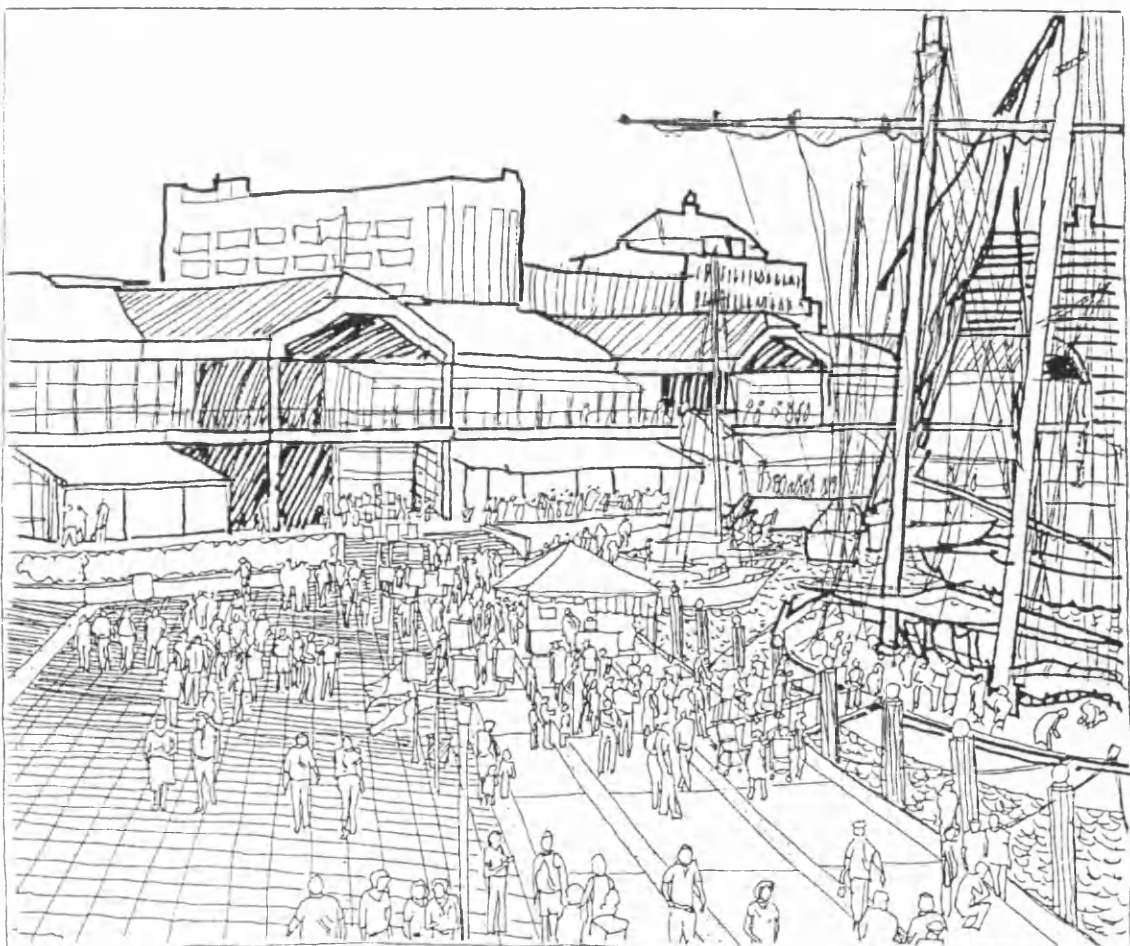


Figure 59. Baltimore, Maryland. The pavilions were the first structures built after the nearby Baltimore National Aquarium was completed.

balanced into identifiable regions and that possible large centres of activity are not grouped. Clustering squanders the power of each monument to generate growth. The Broomielaw already has a strong identity based on its history and geographical location at the river side. The River Clyde is the Broomielaw's monument and the Broomielaw's park. The river side attractions proposed, while monuments in themselves, are also best used here not only for reasons previously given, but also because of the scarcity of leisure and tourist facilities south of Sauchiehall Street. The attraction of the area will be the riverfront, but the vehicle for moving people to the river from the city centre will be the character and activity of the Broomielaw itself. The river is easily reached now, of course, but the path to it is barren and unpleasant. The new Broomielaw will make even a brief trip to the river a pleasure. This modern-era Broomielaw will serve to move people between the city centre and the river, much as the old Broomielaw moved cargo between the river and the city centre.

Since Broomielaw will play a supporting role to the destinations at the north and south, re-establishing the continuous walls of buildings on both sides of the streets will heighten the contrast between the city and the river and the anticipation of the panoramic views. Street vistas in the Broomielaw might be to pavilions, trees, Tradeston on the far bank, or to the angled, uphill streets to the north. The angled streets and hilltop views are a present advantage because the vistas will be varied. A second advantage is the streets in the Broomielaw have not been divided into the gridiron pattern of the office zone to the north. If the street façades in this area are broken by many setbacks or cross streets then some of this drama will be lost and the blocks would be the same as any other blocks in the area. Listed building must have an appropriate setting if they are to be retained at all in the Broomielaw.

The streets in the Broomielaw were characterised by long horizontal buildings of essentially one façade - the street façade. The proper setting for Listed buildings

includes having a parallel façade across the street. The street grid is unique and should be saved simply for that reason. Also, the unusually long street grid and the proper setting for these historic buildings are inseparable. There is no place like the Broomielaw in Glasgow or anywhere in Scotland. Enough of the buildings remain to justify the completion of the streets to recapture the unique qualities of the Broomielaw. It will not be a reconstruction or a replica of the former area; it will be contemporary construction for modern needs, but intended and organised to re-establish the proper setting for the historic buildings and to establish an atmosphere as powerful as the former atmosphere of this unique place, regardless of the existence of Listed buildings. The retention of the best older buildings in the Broomielaw would help bring a richness of variety to the streets. These buildings can lend distinctiveness to streets that can surely benefit from their character.

Squares, where desirable and practical, can be located behind the street façades and screened on the streetfront, allowing the long block façades to remain powerful. Courts or lanes will connect through to adjacent blocks where practical and will be used as places to play, shop, socialise or relax. Residents here, as anywhere in the city, can count on the vitality of the city as the alternative to suburban size lots. Residents still need their private space but they can claim the use of these courts and the nearby streets and the riverfront as part of their domain. A secure building entrance and neighbours' watchful presence replace fences and hedges as the means of secluding the residents from people who are discovering the area. One of the features of great cities is the feeling of adventure people have when they explore revealing or unique areas. The unexpected and the novel do have a place in the city, and so do drama and revelation. Safety, comfort, variety and activity make for a welcoming urban district.

The construction in the Broomielaw, although large in area and supervised by the Scottish Development Agency, Glasgow Action and the Planning Department can

not be treated as a New Town proposal. The most significant feature of a New Town is the nearly total control of all aspects of the project. A New Town Development Agency typically owns the land and has control over the design and construction of the properties. The problem associated with creating a thorough and rigorously pursued design at once is providing all the nuances and subtleties found on treasured city streets. On a city-wide scale these nuances are usually not designed; they appear spontaneously over time. To simplify the daunting task of creating a New Town, designers tend to eliminate unique or inefficient buildings or roads and simplify physical and visual connections. Similar activities are usually grouped and complexity (where the nuances are) is streamlined. Lost are the variety of connections between different parts of town and the variety and richness of form that characterises the natural growth of the towns that the designers intended to emulate or improve upon. Conformity reigns; the larger projects that need considerable variety are the most streamlined. Some New Towns' rigid frameworks of zones, structural systems and material regulations dull the senses of the citizens.

Instead of rigid regulations of building types (a flat, an office, a shop... multiply as necessary) one should make the framework of environments and activities the foremost rules of design. The most effective method of safeguarding an area from appearing designed by one person is, obviously enough, to allow as many architects as possible to design distinct buildings. This would help to keep any New Town, or the Broomielaw, from suffering from heavy-handedness and the lowest-common-denominator nature of committee design.

Rob Krier created a masterplan for the construction of eight housing units in Berlin for the 1987 International Building Exhibition. The relationships between the buildings were firm. The spaces between buildings were given the most attention by Krier, and other architects were invited to design the individual buildings. The resulting Rauchstrasse Villas are a cohesive group of spirited buildings.

Building Design Partnership's three office buildings in Phase One of Glasgow and Oriental's development seem interchangeable. If Building Design Partnership (hereafter referred to as BDP) were to be the architects for future phases, just how many of these buildings would they replicate in the interests of visual order and savings based on volume discounts? The buildings share a common structural system, materials, vocabulary of construction, floor to floor heights, structural bays, and window fenestration.

A degree of clarity is necessary in the Broomielaw scheme as is a certain measure of obviousness, but the imperfections, the broken rules, the omissions or custom alterations to the urban scene bring delight to the necessary sense of security and awareness of location in the neighbourhood. The city form should never approach a wild jumble of visual confusion, and confusion should never be misinterpreted as vitality.

Chapter VI: Recent Proposals for the Broomielaw

Building Design Partnership

The Scottish Development Agency commissioned a study from The Holmes Partnership in 1986 to identify the best sites for development along the central Glasgow riverfront. The study named the Broomielaw the best area for development.⁶¹

Glasgow and Oriental Developers accumulated a substantial amount of land in eastern Broomielaw in the 1980s and commissioned Building Design Partnership to create a masterplan, completed in 1987, for a retail and office development (Figures 60-62). The scheme focuses on a central core of speciality shops surrounded by speculative office accommodation. This core is a huge block of buildings consisting of a large covered square with the retail features on the lower levels and the office towers around the perimeter. The complex is located at the intersection of two new pedestrian paths.

The height and bulk of the dramatically sloped structure ensure that this project will become a known place in the city. The density of office space around the glazed square will bring people to the square during business hours, but the concentration of people will be at the expense of any other developments proposed. No advantage is taken of the unusual street layout of the Broomielaw; the distinctive pattern is destroyed by siting the square in the middle of York Street. York Street is realigned to match West Campbell Street to the north. The pedestrianised York Street runs through the square and continues via a bridge across the river. The intention for this axis to visually connect Blythswood to the river and Tradeston is unrealisable because the new complex, sited on the axis, absolutely blocks the visual connection

⁶¹ The Holmes Partnership, 'The Broomielaw: A Development Strategy and Urban Plan Proposal', 1988, p. 2.

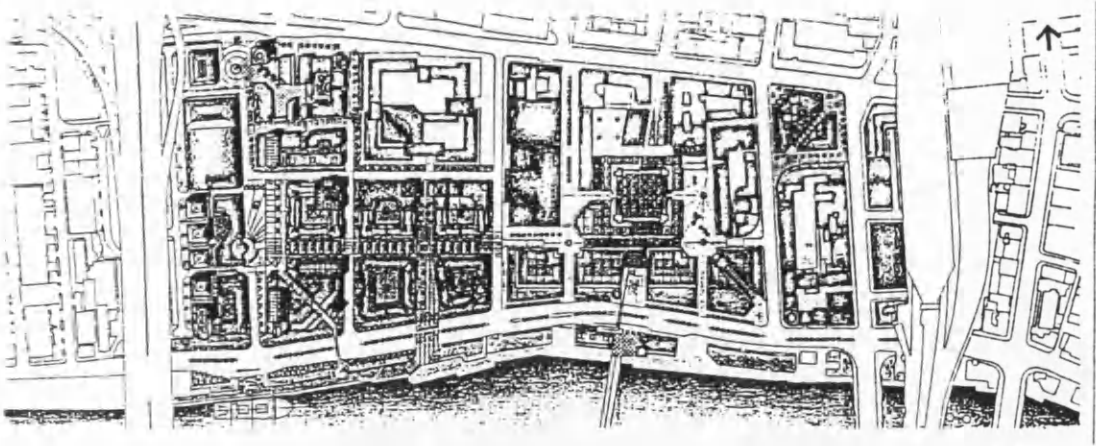


Figure 60. The Broomielaw. Building Design Partnership's proposed development around a glazed square, and the subsequent urban plan proposed by The Holmes Partnership.

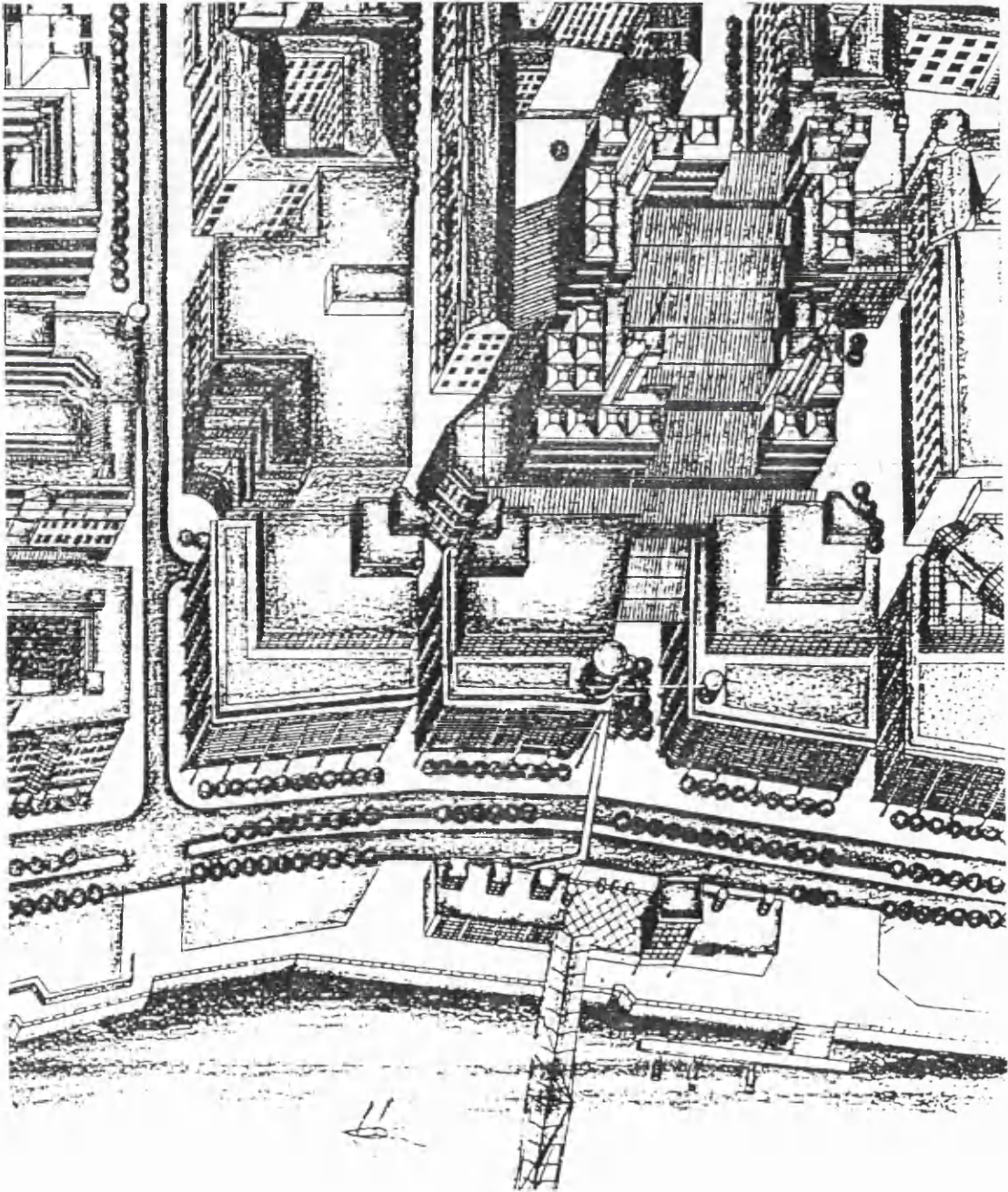


Figure 61. The Broomielaw. The proposed glazed square by Building Design Partnership.

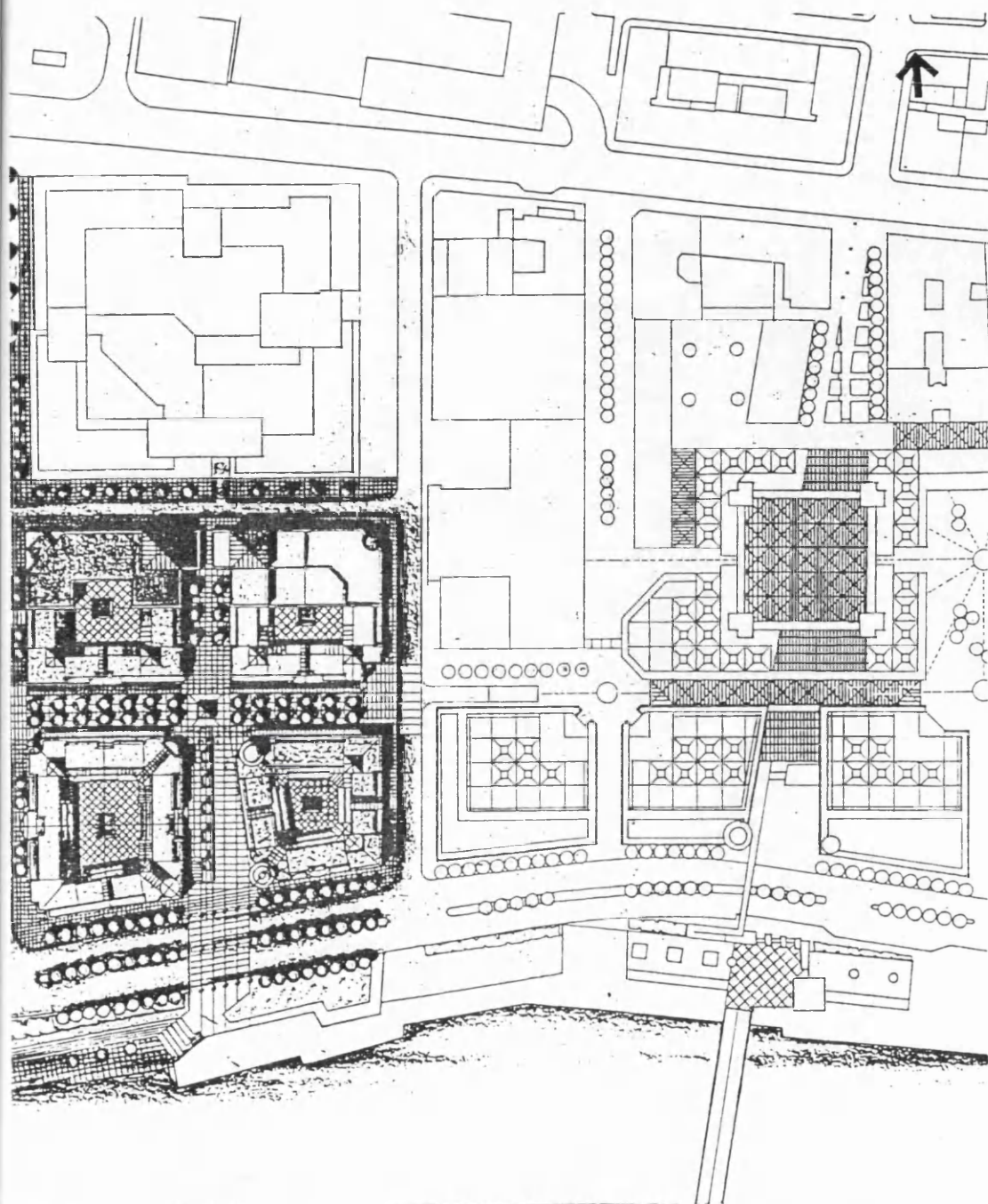


Figure 62. The Broomielaw. The proposed glazed square by Building Design Partnership.

between Argyle Street and the river. The remnants of York Street on either side of the development are too short and the buildings are too scattered to present an identifiable axis. The new square instead acts as an endpoint, a destination, rather than an element supporting the axis. This axis, apparent in the site plan, would hardly be relevant or noticeable to a pedestrian on the ground; paving patterns are not a successful alternative to buildings for defining spaces and creating axes. There simply are not many instances where it is necessary to build a building in the middle of a street and in this case the architects have changed the original street in an attempt to justify the building's existence there. The designer's ego seems to be the directing force behind such an attention-seeking complex. At best, the available land is used just for stacking offices without regard to the character of spaces around the complex or the role a complex of this size may play in the urban form of the district.

Listed buildings are retained, but without regard to the context in which they were built. The warehouses have essentially one façade. The sides are blank walls that are (or were) butted without gaps and the rear façades were concealed in the centre of the blocks. The special setting of the parallel façades on opposite sides of the street has been ruined by permitting gaps and by the introduction of irregular forms. The ends of Listed buildings are exposed and the buildings are left to stand alone as oddities. The new cluster is obviously meant to be noticed, but the disregard for the value of historic buildings and their environment is unacceptable. Connection to the existing fabric is ignored as if it is scheduled for demolition. The Listed buildings should be employed as contributors to the fabric of the area. It is apparent that they are retained only because the Planning Department forbade demolition.

The erosion of the streets also affects the quality of the outdoor squares. The free-floating buildings, old and new, create uncontained and undefined spaces. These spaces may be traversed by shoppers or workers but are not places themselves and are barren at their perimeters. If the setting of the internal square is so delightful, why

are three more squares included on the outside of the building? The area is saturated with undefined squares and streets; the only public space given design attention is the indoor one. A critic for Building Design makes an unlikely comparison with George Square,

"A central square has been created (glazed and enclosed, designed by BDP for Glasgow and Oriental Developments) which orders lesser functions around it just as George square does in the city centre."⁶²

All squares order functions around them. If the writer means the best frontages are on the square and the remainder of the area suffers from uncoordinated spaces, he is right concerning the glazed square, and wrong concerning George Square. The streets around George square are very cohesive.

The first phase of construction has been completed. The three-building Atlantic Quay office complex in the south-east corner of the site was also designed by the Building Design Partnership. To give prominence to the Clyde Port Authority Building, it was reasoned that the main cornices of the new buildings should not be higher than the cornice of the Clyde Port Authority Building. The mass of these large buildings compared with the slenderness of the Clyde Building and delicacy of the dome makes this guideline inappropriate. The nature of Robertson street is not correlated with consistent building heights. The buildings that remain have rectangular façades and blank common walls because each building fits into a slot on the street. Existing buildings are of different heights and many had additional floors added years later, but they always faced across the street and maintained the solid wall at ground level. The buildings of Atlantic Quay face different directions, do not maintain the solid façade at ground level and the bulky setbacks on upper levels are by no means concealed from view. The second building completed (the most northerly) faces south and steps down to the two-storey Listed building beside it.

⁶² Brian Edwards, 'Glasgow Winner', *Building Design*, June 16, 1989, [p.37].

This is a sincere but misplaced gesture. The continuity of the block ends with the gap between the two Atlantic Quay buildings. The continuity of buildings in the same plane is the proper context for these conservation area buildings. Ziggurat setbacks that erode the street-plane while nearly matching the height of an older building at one point is not the best solution. The third building, on York Street, defies any building connections on any side.

Each of the three buildings stands alone. Free standing building-blocks are not unusual, but these buildings are almost identical. If Building Design Partnership had continued as architects for Glasgow and Oriental more clones may have been built. The regular Blythswood grid at least has a variety of full or half-block buildings.

The architects for the masterplan have made an effort to create a built symbol for the Broomielaw, but they have declined to introduce any activity along the riverfront or acknowledge that the whole area will need to be a link between the river and the city centre. If they choose not to attempt to create a riverfront environment, that is valid, but the crippled attempt on York Street to make that connection leaves the intention ambiguous.

The Holmes Partnership

The Holmes Partnership's site selection study was completed in 1986. The scheme by BDP for Glasgow and Oriental was presented in 1987. After Glasgow and Oriental completed their scheme, the Scottish Development Agency asked The Holmes Partnership to develop a strategy for the development of all of the Broomielaw. This strategy also included providing an Urban Plan for west Broomielaw. The masterplan was completed in 1988 (Figures 63-68).

The strategy outlined in the proposal recommended targeting the west end of the site for residences at the waterfront, providing an east-west pedestrian route

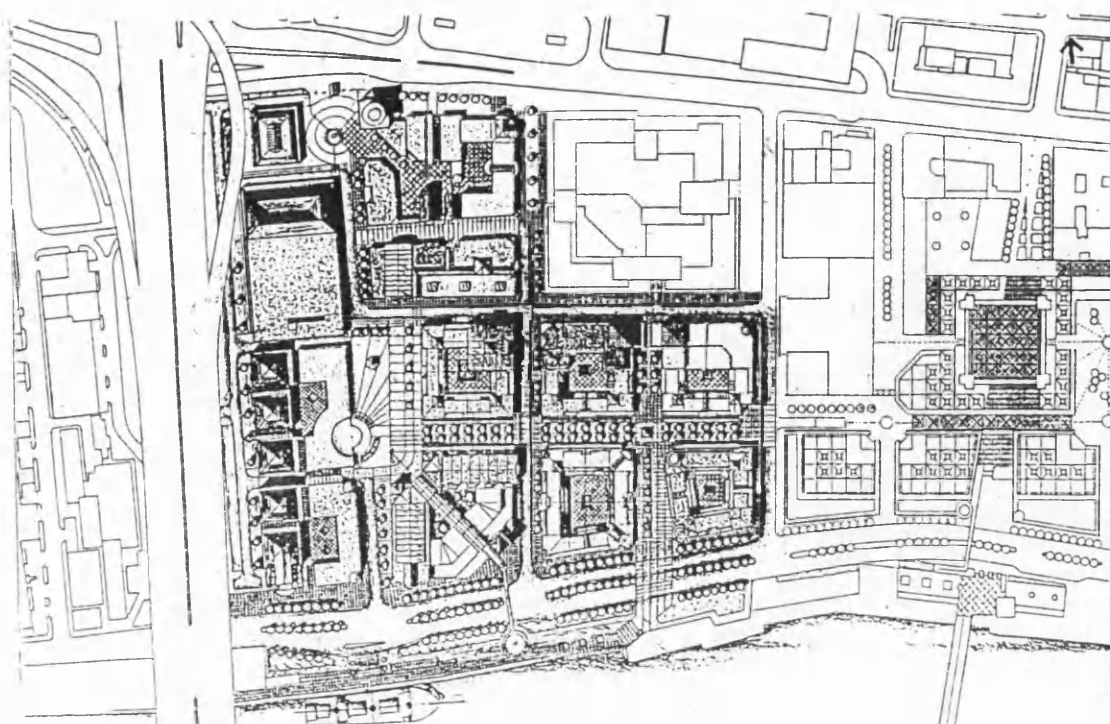


Figure 63. The Broomielaw. Detail of The Holmes Partnership's proposed urban plan.

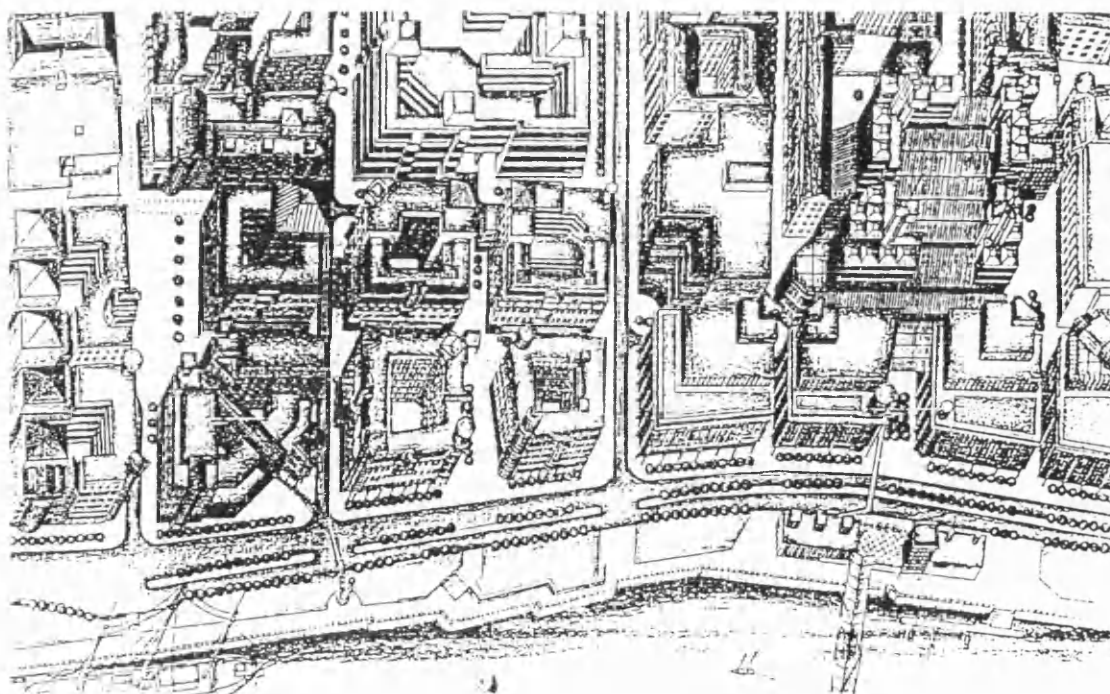


Figure 64. The Broomielaw. The main square and the subsequent urban plan.



Figure 65. The Broomielaw. Washington Square.



Figure 66. The Broomielaw. Arts Square.

The Holmes Partnership.



Figure 67. The Broomielaw. Carrick Court.



Figure 68. The Broomielaw. The riverfront, facing west.

throughout the whole area, and encouraging land assembly. The main points of the strategy were:

- 1) Incorporating Building Design Partnership's proposed commercial square into the entire masterplan.
- 2) Including a major leisure attraction at the riverfront.
- 3) Construction of "prestige housing" at the riverfront.
- 4) Providing a mixture of speciality retail shops.
- 5) Retaining Listed buildings

The grid pattern of the streets in Anderston and Blythswood has been replicated in Broomielaw. From the start, the character and the setting of the Listed buildings is compromised, and new buildings are likely to very similar to buildings in the New Town. To make matters worse, the architects favour a consistent building shape and "unified roof forms" on all new buildings. These new buildings west of the BDP square also have two-storey colonnades at the ground and setbacks on the upper floors. Without exception they are nearly identical; uniformity is the architects' stated intention.⁶³ The ubiquitous colonnades do not make enclosed, cohesive streets and the recessed upper floors do not contribute to the definition of the street. Glasgow streets are quite satisfactory without setback floors on four to six-storey buildings. Light and views are not unobstructed elsewhere in the city because of planar walls. The Holmes Partnership's efforts to minimise bulk, as stated in the masterplan proposal, would have one believe that towers and other buildings of metropolitan scale were being proposed by The Holmes Partnership. The buildings proposed are in the five to six storey range. The New Town has many buildings taller than six stories but very few problems with building height. A city is composed of buildings, it makes no sense to try to disguise this fact. The result of colonnades and setbacks is buildings that are closer to individual spheres than defining volumes. The enclosures for the streets are weak; spheres do not define spaces. However, the architects made a

⁶³ The Holmes Partnership, *The Broomielaw: A Development Strategy and Urban Plan Proposal*, 1988, p.12.

point of stressing "perimeter-block development" that would give legibility to the plan. Building-blocks, especially in plan, are discreet forms and therefore legible, but the whole is illegible due to the repetition of buildings and streets. Some clues, street patterns, building alignments, or variety of urban spaces and vistas is necessary in any development of this size. Not only do the buildings not meet the street crisply, they do not even meet the street with sufficient frontage. Part of the success of the old parts of the city is that streets are enclosed and defined by solid walls. Parapets, turrets and gables in the wall plane add punctuation to the building façades. A strict street grid is superfluous if the buildings do not contribute something to it. Here, perimeter-block development seems to mean making a court in the centre of each block, not the enclosure of streets.

The urban space in this masterplan is largely residual space. The streets are broad and uncontained and the squares are conceived simply as wide points on the streets. Every space seems to be half-street and half-square. The amount of people using this area would never approach the amount of people using the shopping core; anyone on these streets will be adrift. The number of paving patterns suggests many different uses for these street-squares but no single use is clear; one is no different or better than another. It does not matter because there would never be a congregation of people to support activity in the squares. The sheer area of external space is too high, and no real public place is defined. The architects have looked at a poor model (the buildings proposed to surround the BDP scheme) and have replicated them excessively.

The Holmes Partnership know that a major activity centre needs to be built at the waterfront if the river is to be included in the city centre. A national aquarium as suggested by the Scottish Development Agency on the north bank would generate activity and a pedestrian bridge would allow the south bank population to easily reach the city centre. This is a valid concept for reusing the north bank, but if the whole

river is to be introduced into the city centre, the south bank should be the main point of activity. They may believe that the city centre will never grow after the Broomielaw development is completed. If so, a one bank, one attraction river that they propose makes sense. Alternately, if some of the enormous fringe population of Glasgow were to find the new city centre an inviting place to live and work, the south bank may be an attractive area for development after the Broomielaw is completed. This would be more likely to happen if the south bank is given attention at this time.

The new urban plan for western Broomielaw is so democratic it has no spirit and nothing to distinguish the Broomielaw blocks from any of the other blocks in the area. The conformity of the size and shape of these buildings coupled with the generic waterfront plaza proposed will prevent any place from being unique. It is all the same - and boring.

Kohn Pedersen Fox

Glasgow and Oriental replaced Building Design Partnership with Kohn Pedersen Fox, Architects of London (hereafter referred to as KPF) after the completion of Phase 1 (Atlantic Quay). This second scheme commissioned by Glasgow and Oriental (Figures 69-71) is intended to be a commercial and business centre with only 8% of the gross area being residential. A sixteen-storey tower (86 metres, 260 feet) at the centre of the scheme provides office accommodation and retail uses in unspecified proportions near the ground and around a court adjacent to the tower. The total amount of office and retail space is 1,246,000 square feet.⁶⁴ The tower creates an identity for the area and together with an unusual street pattern creates a system of orientation for eastern Broomielaw. The streets are varied (in plan form) around the tower and the views from the streets are unique from any side of the tower.

⁶⁴ Planning Department, 'Report to Subcommittee on Development Control', June 13, 1990, [pp.2-5].

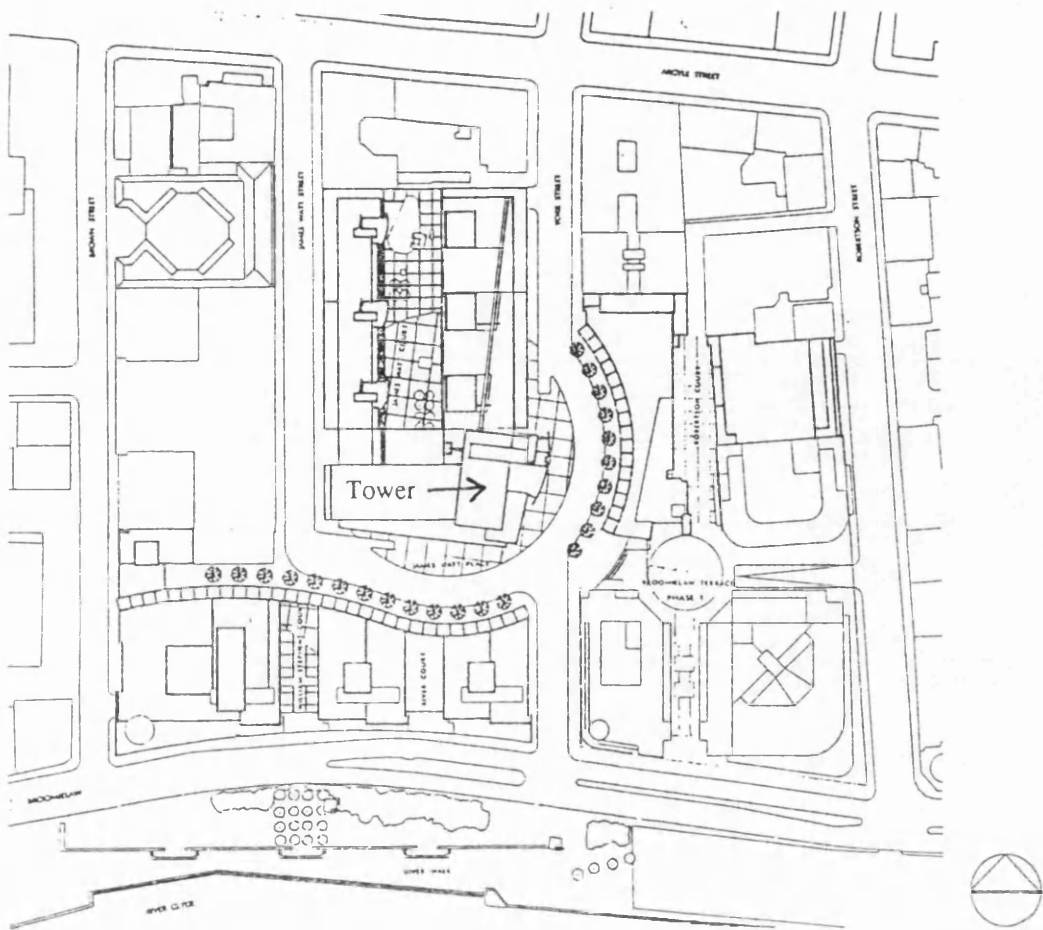


Figure 69. The Broomielaw. The development proposed by Kohn Pedersen Fox at the same location as the square proposed by Building Design Partnership.

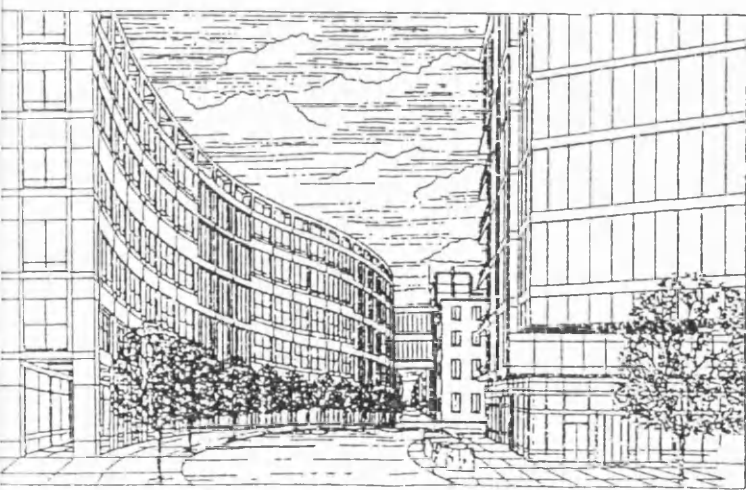


Figure 70. The Broomielaw. The proposed crescent south of the tower, facing west.

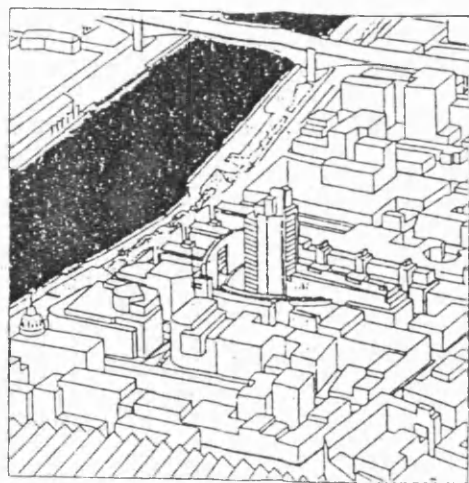


Figure 71. The Broomielaw. Aerial view of the Kohn Pedersen Fox scheme.

A questionable aspect of the plan is the appropriateness of a tower and a new street grid in the Broomielaw. Regardless of the tower, the development is very dense with an average plot ratio of 6.8 : 1 that ranges from 4.04 : 1 to 9.41 : 1. The buildings are from around 31 to 42 metres (100 to 135 feet) high with a 86 metre (260 foot) tower. If this amount of floorspace is truly in demand, it would be preferable to spread it more evenly throughout the whole of the project area instead of having an undeveloped parcel next to an intensely developed one. The west end of the project area may not be developed for some time, if ever, due to the intensity of the KPF scheme in the east. The riverfront will not greatly benefit from half of a Broomielaw scheme. A judicious distribution of buildings across the special project area would complete the environment sooner, and there are plenty of other sites for growth around the city centre if the Broomielaw is filled and city growth continues. This is not Singapore; land is plentiful. The real blame for the high density of this scheme falls on the developers in this case. Glasgow and Oriental own land in the western half of the Broomielaw, so the schemes by BDP and KPF are intended to exploit that land and ignore the larger issue of the character of the whole area. Unfortunately, most of the Listed buildings and intact street fabric are also in the east end and are lost in the land exploitation of the east end. The planning department, however, still has authority to reject it because of the density alone, regardless of land accumulation, but are unwilling to do so. [See **Case Study: The approval Process and the KPF Scheme**, immediately following this section.]

The glazed square proposed by BDP and the tower proposed by KPF are conceived with self-serving pomp and destroy the finest streets and buildings in an effort to become idols of the Broomielaw. The KPF tower does not block the whole street, but the architects could not resist a pretentious projection into the street. The unique street grid is discarded and a free-form curve replaces York Street to further emphasise the tower. A tall building does not in itself create a special civic space and

the curve around it does not provide cohesive street fabric any better than a straight street might. The nearly total commercial nature of the area would leave it barren after business hours. The tower and curve relate to one another, but this composition is a gesture appropriate for a "greenfield" site where no reason exists to do anything in particular. A powerful image and clear circulation system are welcome anywhere, but this image and this circulation system are vulgar in the context of the listed buildings and existing fabric.

The streets are contained by the buildings, though, and except for the gratuitous curves and the tower the buildings do create positive spaces on James Watt, York and Robertson streets. James Watt Court and Robertson Court are also complete and defined spaces. William Stephens Court and River Court to the south are not positive or defined spaces and have only offices surrounding them. These courts are more like large light wells or wide passageways in character. People can be brought into the heart of the project through these lanes or courts, but the river environment can not be carried across the four-lane Broomielaw Road, no matter how wide the passageways are.

Responding to objections from the Scottish Development Agency, the Royal Fine Arts Commission for Scotland and the Planning Department about the high density and the inappropriateness of the tower, KPF removed the portion of the tower taller than the neighbouring buildings. The building alignment (jutting into the street) and the curved streets around it remain in the modified proposal. Without the tower, these gestures are senseless - like a pedestal without a statue. The only success was the dramatic relationship between the tower and the curve. The revised scheme is heartless and the clear orientation system has disappeared.

The buildings along Broomielaw Street form a firm edge to help enclose the river, although no use is suggested for the river. Instead, the intention is to draw people from the city centre to the new tower, the most southerly destination in the

Broomielaw. They have chosen to ignore the river and make the Broomielaw the southern border of the city centre.

Figure 72 Comparison of BDP, The Holmes Partnership and KPF schemes:

Architects		Developers	
Building Design Partnership		Glasgow and Oriental	
Speciality Retail	80,000 sf	8.2 %	
Office	790,000 sf	80.6 %	
Light Industrial	NA	0 %	
Residential	110,000 sf	11.3 %	
Flats	80,000 sf		
Hotel	30,000 sf		
TOTAL:	980,000 sf		
The Holmes Partnership		Scottish Development Agency	
Speciality Retail	35,000 sf	3.4 %	
Office	480,000 sf	46 %	
Light Industrial	100,000 sf	9.7 %	
Residential		40 %	
Flats	385,000 sf		
Hotel	30,000 sf		
TOTAL:	1,030,000 sf		
Kohn Pedersen Fox		Glasgow and Oriental	
Office and			
Speciality Retail	1,246,000 sf	88.1 %	
Light Industrial	NA	0 %	
Residential	169,000 sf	6.6 %	
Flats	75,000 sf		
Hotel	94,000 sf		
	30,000 sf net (est.)		
TOTAL:	1,415,000 sf		

Case Study: The Approval Process and the KPF Scheme

In the Broomielaw some developers break rules and are denied outline planning permission. Some developers are told after substantial work has been completed by architects (usually a formal presentation) that they have broken implied rules they may have been unaware of. Sometimes rules are broken, but schemes are not rejected on this basis. How is an architect or developer to know where he stands before a presentation? How can committees or local action groups be sure that their concerns will not be disregarded by the Planning Department - the co-ordinators of these groups? Nobody really knows what to expect from the planning process.

Glasgow and Oriental and Kohn Pedersen Fox began with this information as their guide:

3.5 : 1 Plot Ratio maximum.

30% of area to be residential.

Retain Listed buildings wherever possible.

The diagrams of city-wide aspirations in "Improving the Environment" from the Planning Department (Figure 73).

Commercial and residential daylighting standards were provided.

The Scottish Development Agency, the Royal Fine Arts Commission for Scotland, and the Listed Buildings Commission provided no other framework for development. Even though the KPF scheme broke most of the few rules imposed, the Planning Department believed that these violations were not grounds for rejecting the scheme. Specific agencies commented on the changes necessary for the scheme to meet approval, sometimes nearly contradicting each other. The BDP covered square and the KPF scheme are indefinitely on hold because no one can decide what changes will ensure approval. The Planning Department compiled comments on the KPF scheme from the various agencies and sent them to the Subcommittee on

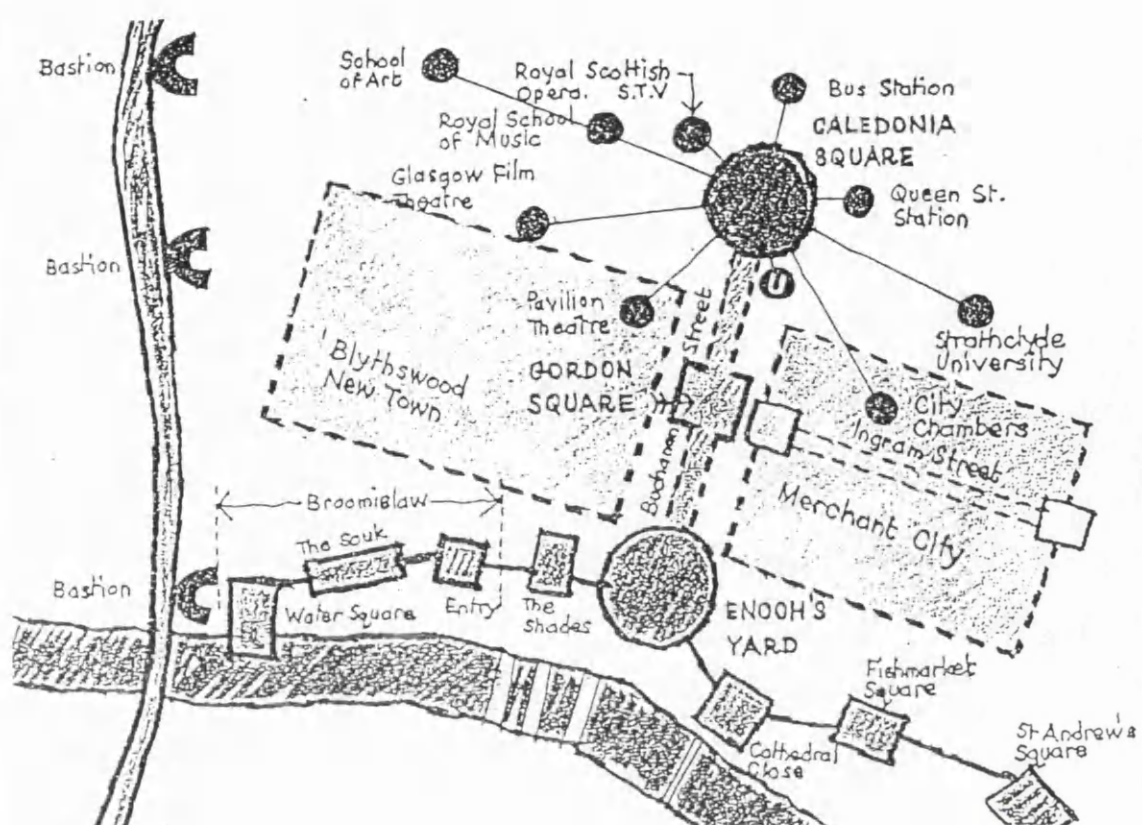


Figure 73. The Planning Department's goals for the growth of the city centre.

Development Control. In the 'Planning Department Report to Sub-Committee on Development Control', the large amount of after-the-fact information given to architects and developers is apparent.⁶⁵ This type of approval process can lead to a stalemate.

Comparison of Phase One and Phase Two of Glasgow & Oriental's projects.⁶⁶

BDP phase one, completed: 338,677 g.s.f./ 59 flats

KPF proposal: 1,246,104 g.s.f/ 13.65% residential (including hotel)
Plot Ratio 6.87 : 1

[The following extracts are taken from the Report to Sub-Committee on Development Control, pages two through five.]

Strathclyde Regional Council Department of Physical Planning "anticipate that these proposals will reinforce the Structure Plan's office strategy of continuing to strengthen the Central Area of Glasgow as the regional office focus." Contrast this with comments by the Scottish Development Department Historic Buildings and Monuments Directorate objections that, "the development should contain a stronger residential component." Similarly, the Planning Department states that "retention of the three Listed façades in James Watt Street and York Street is welcomed since it will retain the most impressive frontages within the site and provide continuity between the old and the new character of the Broomielaw." However, the Secretary of State "would appear to lend his support to this view but only in respect of one of the façades - 23 York Street - and has passed no comment on any other aspect of the development." Strathclyde Regional Council Roads Department has no objections to the scheme as long as the pedestrian court at James Watt Street can be reopened to traffic if necessary in the future, but the Planning Department (even though they approve of the crescent) object to the tower building projection in York Street. The

⁶⁵ Planning Department, 'Report to Subcommittee on Development Control', [pp. 2-5].

⁶⁶ Planning Department, 'Report to Subcommittee on Development Control', [pp. 2-5]

Planning Department believe the Broomielaw "usefully serves as an outlet for the development pressures currently being experienced in the Victorian office core". It is obviously too late to reconcile this thought with the interests of the many groups who would want to save the Listed buildings in the Broomielaw from being sacrificed for the good of the Victorian office core. Nobody will be satisfied unless together these groups form some goals and regulations to be presented to an architect before design begins.

The Planning Department continues to ignore incongruencies; "Subject, therefore, to the amount of floor space and the balance between office and residential being agreed, the principle of these uses is acceptable." Who is going to be agreeing on this balance? KPF and the Planning Department? Strathclyde Regional Council Department of Physical Planning and the Scottish Development Department Historic Buildings and Monuments Directorate?

The commentary continues,

"The committee should be aware that the applicant is seeking consent for a scale and a massing of buildings which will provide not more than 1,246,104 SF gross floorspace when all are built. If such a figure is now approved [outline planning permission] then the applicant will expect... the Council to support Listed building application for the demolitions now proposed..."

It seems that Glasgow and Oriental have broken too many rules and have only themselves to blame. Or did they take a large gamble that almost paid off? In concluding, the Planning Department states,

"The Committee should set against this the potential for the city that this scheme represents. Estimates of the number of direct jobs that this scheme could create vary, although 2000 is not an unrealistic estimate. The overall level of investment is calculated at £300 million (inclusive of the £70 million Phase 1) making this the largest inner city construction project outside of London. ... It is considered, therefore, that the principle of what is being proposed can be favourably recommended provided the applicant is aware through conditions, for example, that the Council will only accept the floorspace figure proposed if the shape, form and scale of

development can ensure that there are no residential daylight failures and that the relationship of the retained facades to their new build neighbours is properly worked out. On the face of it, the high plot ratio and building scale may well be acceptable if these qualifications can be achieved."

Of course everything can not be resolved as it is. The reason the scheme is so massive, for example, is that it *does not* meet the appropriate guidelines for Listed buildings and daylighting, and it never will in this form. It does no good for the Director of Planning to imply that if the project could be huge and beautiful and create jobs and respect the historic area and please everyone, then he would recommend it. Who would not? Glasgow and Oriental have persuaded the Director of Planning to disregard the urban design shortcomings of the proposal in favour of economic dividends even though the money invested and the jobs created would be the same regardless of the form of the project. Fortunately, strong voices that remain have halted the project.

The Planning Department should be building coalitions of like interests to draft policies that would promote acceptable proposals. With a proper framework, an investor with very little money may purchase one lot and construct one building while wealthy investors might take a dozen sites. The Planning Department could allow them to purchase as many sites as they pleased and could recommend that the developers follow the regulations to avoid delays or rejections because the Scottish Civic Trust, Royal Fine Arts Commission for Scotland, Listed Building Commission, and other bodies will have already approved this principle of development. The Planning Department would be brokers and advisors for development in the same way a theatre manager might suggest the best seats available to a person at the box office. To a theatre manager it does not matter if ten different people purchase tickets on a row of seats or a group of ten purchase those seats. The seats will all be sold and the seats will all remain fixed in the best arrangement. In the city, the prospect of a huge investment causes the "managers" to lose their sensibilities and

allow architects to rearrange the city at their whim and to the detriment of the citizens. If the developer is wealthy enough, the impropriety will not be challenged.

Chapter VII: Main Features of the Broomielaw Development

Piecemeal Development

Each block of the development will fit into the overall scheme for the Broomielaw and the waterfront, so regulations will be based mainly on street level conditions of buildings and the character of the streets. Instead of hoping that buildings will be combined to create positive spaces, the spaces will be defined first. Apart from that, the idea is to allow overall *nonconformity* of uses and individual building forms. Between-block passages and courts will be suggested in masterplan form so that short-sightedness by members of individual project teams might be avoided. The redesign of the river area, if not the pavilions or buildings to be located there, should be outlined with a more specific masterplan because continuity and good circulation routes are vital here. Listed buildings should be saved whenever possible not just because they are survivors from another era, but because they add colour and, after all, the Broomielaw Special Project Area is not for selling undistinguished floor space. It is for promoting variety, drama and history.

Regulations are needed for architects' individual buildings to relate to the immediate environment and fulfil the goals for the area. Modern buildings are not necessarily bad and will not necessarily ruin the fabric of the city, but it is true that if no rules are imposed on architects and developers, the result may be very impersonal buildings and alien spaces. Developers have a tendency to ignore the urban potential of a site and simply provide buildings as cheaply as possible; architects often dedicate themselves solely to the specific building designed. Large out-of-town firms are the worst offenders because they are usually unfamiliar with the city and generally produce generic buildings for any site. The Broomielaw is *special*, not ordinary. Architects and developers with the understanding of the issues outlined will not see

these regulations as obstacles. Freedom from restrictions and freedom from responsibility are not desirable when dealing with the form of our cities.

The regulations will allow large land assembly but will curtail the wealthiest investors from creating whatever pleases them. Plot ratio regulations will be senseless here because they are appropriate in areas where towers are allowed or where urban space is of no concern. A plot ratio restriction would allow a developer to purchase the whole of the Broomielaw and construct all the permissible accommodation in one central tower. A height limit for buildings with the requirement of continuous street frontage will keep development from becoming very dense. Under these regulations, a small development and a large development will contribute to the streets in the same manner toward one goal. A specified percentage of uses (office, retail and residential) will provide a livelier atmosphere than a single-use zone and it will allow some developments to have interior courts for residents. These regulations should produce projects of varying bulk and use and allow for a large degree of variation in the interiors of blocks.

Some people still do not see the Broomielaw in the proper perspective. The president of the Royal Incorporation of Architects in Scotland, John Spencely, said of The Holmes Partnership's Masterplan:

"Piecemeal development does not work. Planning which recognises economic priorities and reconciles them with social needs is the only way forward. On all counts, planning and execution, explanation and presentation, this is a superb piece of work."⁶⁷

The reason he liked the masterplan had nothing to do with the fact that it was, or was not, to be developed in piecemeal fashion. The masterplan drawing depicted the completed form. He must have liked the fact that things were very orderly and repetitive, and he seems to have interpreted these characteristics as being

⁶⁷ Anonymous, 'Holmes Win Scotland's Top Design Accolade', *Build and Design Professional*, date unknown, p.31. From a brochure from The Holmes Partnership.

the opposite of piecemeal development. In fact, the strategy for the Broomielaw is piecemeal development, according to the architects themselves.⁶⁸ Also, piecemeal and comprehensive development can be equally disappointing if neither has a framework for new construction. Of course one can not allow developers to proffer their money and arrange buildings as they please, but that is not the definition of piecemeal development; that is *uncontrolled* development. Mr. Spencely also has the priority of economics over social responsibility reversed.

Richard Jaques, an architecture critic, writing about the same scheme said,

"With these basic aims [of the urban plan], therefore, it is hoped to avoid the pitfalls of piecemeal development that have plagued London's Docklands and to provide a cohesive urban environment."⁶⁹

He does not grasp the idea of piecemeal development any more than does the president of the Royal Incorporation of Architects in Scotland. The problems in London were not caused by having more than one developer. They were caused by the London Docklands Development Corporation's lack of guidelines for the relationships between any two developer's projects. The reporter implies that the Docklands would be fine if one developer owned the whole of the Isle of Dogs and made every building regular. Mr. Jaques continues:

"Whether [a cohesive] environment will result from these worthy aims is very much in the hands of the designers for the individual areas..."⁷⁰

The most disturbing thought is that he believes the architectural quality of individual buildings will determine the area's success. Success depends on the quality of the urban guidelines. Here we should not rely on the chance that all the

⁶⁸ The Holmes Partnership, 'The Broomielaw: A Development Strategy and Urban Plan Proposal', p.1.

⁶⁹ Richard Jaques, 'Chance to Make Broomielaw Bloom Again', The Scotsman, Monday, July 3, 1989, [p.9].

⁷⁰ Richard Jaques, 'Chance to Make Broomielaw Bloom Again', [p.9].

architects will make a good choice. Incremental development has been successful in Edinburgh and Glasgow; the comprehensive development of New Towns like Cumbernauld have been less successful.

The Street Grid and the Townscape Potential of the Broomielaw

The Glasgow New Town street grid was extended west from the Merchant City in 1792 to cover Blythswood Hill and was later extended south to Argyle Street by James Gillespie Graham in the 1820s.⁷¹ The Broomielaw grid is the only variant in the area and gives necessary relief to the monotony of the central grid. Brian Edwards, writing for Building Design, overlooks the Broomielaw grid's value; "The Masterplan keeps alive the characteristic urban blocks of the Glasgow grid without mindless repetition."⁷² He also notes that the planners intend to trust architects and developers with the conservation district. He continues, "Here in Glasgow the free market will hopefully be tempered by a respect for tradition and local value."⁷³ The free market does not often champion tradition and local value. These comments reinforce the need to guide development by stronger means than suggestions. They also reveal that people instinctively believe the free market should not be restrained. Allowing total freedom, while hoping for sensitive design, is different from having regulations for good design only in the predictability of the outcome.

The Broomielaw will be a resurrection of the former character of the area, not the reconstruction of the former buildings. It is important to accept the principles of the era, though, to properly unify significant old buildings and to capture the spirit of

⁷¹ Elizabeth Williamson, Anne Riches, Malcolm Higgs, The Buildings of Scotland: Glasgow (London: Penguin Books, 1990), p.40.

⁷² Brian Edwards, 'Glasgow winner', Building Design, June 16, 1989, 36-37 [p.36].

⁷³ Brian Edwards, 'Glasgow Winner', [p.37].

the Broomielaw. The regulations will define the characteristics of the streets without restricting architects' freedom of expression. Some rules will not be typical, but reinforcing the solid building walls of James Watt Street, for example, will necessitate some unusual guidelines that were in use when the original warehouses were constructed. These regulations will not encourage historical reproductions, but they will be structured around the idea that streets are urban spaces and that people must occupy these spaces. Streets should not be residual urban spaces. Leon Krier lists his principles for the reconstruction of cities in the preface to Counterprojects.⁷⁴

A city can only be reconstructed in the form of streets, squares and urban quarters.

These quarters must integrate all functions of urban life in areas not to exceed 35 hectares and 15,000 inhabitants.

The streets and squares must present a familiar character.

Their dimensions and proportions must be those of the best and most beautiful pre-industrial cities.

Simplicity must be the goal of urban topography, however complex.

The city must be articulated into public and domestic spaces, monuments and urban fabric, squares and streets, classical architecture and vernacular building. And in that hierarchy.

The views from Blythswood Hill to the south are dramatic. It is rare in cities for one to have sweeping views of the countryside. From Blythswood Square at the top of the hill and from points between the square and the Broomielaw, views extend to spires and domes on the south side and to the rolling hills beyond. The foreground of these views is the Broomielaw. The land here is nearly flat and the buildings are low enough not to block the special distant views. The warehouse district is, even from a distance, obviously something unique in the city. Tall buildings or a re-aligned street grid would destroy the best qualities of the Broomielaw.

⁷⁴ Leon Krier and Maurice Culot, Counterprojects, (Brussels: Archives d' Architecture Moderne, 1980), [p.6.]

Architecture that is Responsible to the City

The need to express the spirit of our age has been used defensively by architects as a means to rid themselves of the shackles of responsibility and the awareness of urban environments. This spirit is associated with expressing available technology in buildings, but technology and high-tech are not synonymous. They are quite opposite. Richard Rogers' Lloyd's Insurance Building in London is made of expensive, mainly custom-made materials. The structural members and exterior cladding and fittings are finely crafted and far more expensive than standardised components. Luxurious materials can make a building beautiful, but they do not make it high-tech; the result is high-craft. The high-tech part of the building is the flexibility of plan configurations made possible by efficient structural systems, circulation systems and other building services such as communication cable networks and mechanical ventilation. A truer expression of high-tech construction may be found in warehouses, suburban superstores or industrial buildings where the efficient and inexpensive materials and construction systems are exposed to view. Similarly, computer hardware is constantly becoming more affordable and compact, and is a valid example of emerging technology and the spirit of our age. The computer housing or case may be beautiful, but it is not to be confused with the real technology inside.

Modern or contemporary buildings can be both inventive and have human quality at street level, even though architects usually do not want any interference with their "personal statement". Architects are encouraged to design buildings as unique objects to be viewed apart from the city fabric. Consideration is given for the proper positioning and organisation of a building on a "greenfield" site, so why not on an urban one as well? An architect must know that a city is not a collection of suburban buildings. Leon Krier chooses to illustrate his urban ideas with classical architecture. It is not because columns or pediments are necessary to the city, but

because these buildings were always built to have a human scale and an approachability; something that has been overlooked for some time in our cities. Krier is "not interested in planning or construction methods which tomorrow will be revolutionised by innovations in production or marketing", or in ideas that are "consumable like industrial gadgets."⁷⁵ The Broomielaw will be composed of all sorts of buildings that are approachable and will make valuable contributions to the urban scene.

The free market does not address city-wide design issues. Market forces do not usually produce a favourable city form or an adequate mixture of uses. The urban plan for the Broomielaw is intended to guide architects and developers in creating a successful district in form and use. The form of streets and the requirement of streetfront retail uses are two regulations that should promote a coherent development. The free market is, however, very conscious of the quality and marketability of individual buildings. Architectural restrictions for the individual buildings is therefore unnecessary. Local and national safety codes and published local ordinances (such as residential daylight standards) are all that is needed to maintain architectural standards. The market is equally successful at providing varied shops, flats, courts and building depths. Developers know what people want and what will sell, since they will have done some research before beginning construction. Regulations are not intended to deny architects the opportunity to express themselves as they choose as long as the building acknowledges its location in a city and the special circumstances that accompany urban sites.

The Distribution of Cultural Attractions Throughout the City

The Structure Plan for Strathclyde Region is a comprehensive document outlining policies for natural resource use, tourism, shopping, leisure facilities and

⁷⁵ Leon Krier and Maurice Culot, Counterprojects, [p.6.]

traffic. A plan at this level of government is needed so that Local Plans will be co-ordinated and mutually supporting and that allocation of resources can be distributed fairly. The Structure Plan is approved by the Secretary of State for Scotland. The 'Glasgow Central Area Local Plan', as every Local Plan, must conform to the policies of the Structure Plan for Strathclyde Region. Aspects of the Structure Plan germane to development in the Broomielaw include:⁷⁶

(p.107) Listed Building retention

(p.130) Industrial Archaeology Locations of regional significance include:

James Watt Street warehouses

Anderston Grain Mill, Washington Street

Central Station

(p.88) Areas deficient in Urban Sport and Recreation Facilities include:

Gorbals/Oatlands (south of the Clyde including Tradeston)

The Structure Plan policy on historic properties (pp.104-105) states that there shall be a presumption against development which has an adverse impact on heritage resources of industrial archaeology of regional significance, Listed buildings and conservation areas. The Broomielaw encompasses all of these. The 'Local Plan' by the Planning Department is quite strict in its supplementary policy concerning the treatment of these areas [p.13 of the Local Plan].

"Every effort will be made to retain listed buildings both within and outwith the Conservation Area. The practicality of retention will also however, be taken into account, such that an opportunity will be given to prove the merits of redevelopment as opposed to retention. The onus of proof will be on the applicant and evidence of economic or structural obsolescence will be required. ...

Because the area's character is formed by more than just the constituent buildings, the streets and spaces between the buildings also require to be given equal emphasis."

⁷⁶ Strathclyde Department of Physical Planning, 'Strathclyde Structure Plan Written Statement. The Consolidated Structure Plan: Orchestrating the Players', Corrected Edition 1991 [3rd. Edition]. [Glasgow]: Strathclyde Regional Council, 1991.

The Structure Plan also recommends to the Scottish Development Agency that Greenock have a Museum of Shipping (p.104).

Local Government should dedicate themselves to providing attractions throughout the city. Since special attractions are large investments for the city, region or nation, they should be built where they can be most beneficial. The building of attractions in depressed areas of Glasgow or Strathclyde is a worthy endeavour. Reintroducing the River Clyde into the city centre is also a worthy endeavour. Whether a needed major attraction on the riverbank will be a newly created attraction or one that is currently contemplated for another city or district is a question for agencies like the Scottish Development Agency to address. Any investment in the Broomielaw or Tradeston areas of Glasgow would most likely rank as one of the strongest facilities in terms of revenue and image-making in the region.

The Value of Design Controls

Urban design controls in Manhattan have evolved into elaborate and specific regulations for individual areas. Builders are allowed to build more floor space than the usual floor area ratio allowance if public bonuses are incorporated into the project. These bonuses include plazas, through-block concourses, shopping galleries, underground station refurbishment and sidewalk widening. The optional bonuses for an area are ranked in value and a developer may choose a combination of bonuses to reach a quota that allows him to build more floorspace in his building. Bonuses in the Theatre District of Manhattan include providing a public theatre; covered walkways between buildings are encouraged in the Financial District. Each area has been surveyed to determine appropriate guidelines. Similarly, some streets have setback regulations at certain heights of the street elevation and some do not, and projects on Fifth Avenue, for example, may not have plazas on the avenue frontage

across from Central Park. These regulations are valuable because developers usually choose to provide the bonuses and maximise investment in land. Kenneth Halpern describes the value of bonus incentives to the population of New York in Downtown USA using an example of a project that included a covered walkway connection, sidewalk widening, a shopping arcade and an enclosed plaza in exchange for more floor area;

"The completed building contains urban design features the average developer would neither have contemplated providing in this project himself, nor, in all likelihood, permitted his architect to include in his design, even assuming that the architect had the knowledge and foresight to understand the need for such urban design elements and would elect to do them if he were not so mandated."⁷⁷

There does not have to be a shortage of land before city amenities will appear; Houston and Washington, D.C. are cities that do not allow larger buildings in exchange for bonuses, but developers in both cities routinely provide plazas, galleries and shopping arcades in order to make their developments more attractive to tenants.⁷⁸ Certainly, retail enterprises generally bring a larger financial return to developers than office space, so amenities (optional or mandatory) are not hardships on developers. Developers sometimes just need a little imaginative guidance. Cities are composed of buildings. Each building must play its part in the fabric and activity of the city; each building has an obligation to interact responsibly with other buildings to provide amenities and cohesive streetscapes. The Planning Department currently intends for the Broomielaw to be predominately offices, but the requirement of other uses as well is still in the developers' interest. Flats and shops are money-makers, too, and impact the area in many other tangible ways. The reason that certain amenities will be mandated in this development is because they are vital to the city. Nothing less is good enough for Glasgow or the Broomielaw.

⁷⁷ Kenneth Halpern, Downtown USA: Urban Design in Nine American Cities, (London: The Architectural Press, 1978), p.59.

⁷⁸ Kenneth Halpern, Downtown USA, p.123 (Houston), p.143 (Washington).

Andres Duany and Elizabeth Plater-Zyberk have made extensive and precise "codes" for small town development. The specifics, like Manhattan's regulations, are not applicable to Glasgow, but many of the concepts are. Plot divisions, street and sidewalk widths, build-to lines, minimum street frontages, height restrictions and in some cases, materials and construction systems are defined in written and diagrammed regulations. The homes, shops and businesses in the towns follow the codes but the monumental buildings like town halls, churches or schools do not. These buildings are intended to be unique and special.

Some design regulations for Fifth Avenue in New York include prohibiting more than 15% of ground floor space being allocated to banks, airline ticket offices and the like, because they add nothing to the street life. Also, office building lobbies and entrances must be located on a side street fifty feet or more from the avenue so the avenue can be devoted to commercial enterprises. Plazas, if included in the design in exchange for additional floor area, must be at least fifty feet from the avenue frontage.⁷⁹

In Manhattan, plaza design is not left to the whim of the architect anymore. The barren and ill conceived plazas used for bonuses have forced the Urban Design Department to draft plaza design guidelines.⁸⁰ These include:

- Maximum proportion of 3:1 for plazas to disallow thin "strip" plazas.
- No grouping of plazas for two buildings; this erodes the street enclosure.
- Mandatory seating: some fixed, some movable.
- Minimum number and size of trees. (planted, not potted)
- A choice of acceptable paving materials is furnished. (i.e. no concrete walks)
- The squares must have 50% retail frontage. (i.e. no banks, travel agents, etc.)

⁷⁹ Kenneth Halpern, Downtown USA, p.35.

⁸⁰ Kenneth Halpern, Downtown USA, pp.71-72.

The detailed urban regulations in Manhattan demonstrate that elaborate rules can promote successful and varied architectural solutions. Rules that may seem obtrusive at first are truly necessary for the well being of the city, and do not inhibit the creativity of the architect.

The actual regulations and optional bonuses can not be applied to Glasgow. The Urban Design Department in Manhattan can impose very strict rules of the form and use of buildings because sites across the rivers in New Jersey or Brooklyn are no substitute for Manhattan sites. Manhattan has physical boundaries and a powerful image that make building sites precious. Attempts to impose stringent regulations on new developments in Glasgow would drive speculative developers to competing cities like Birmingham and Manchester. Mixed-use development with ground level activity will be required in order to sustain the quality of the city centre. Unregulated growth will not capture the river or make good use of the Broomielaw location. The Planning Department should settle for no growth instead of shoddy growth if no other choice is available. Shoddy growth will be fruitless and damaging to the city.

Chapter VIII: Summary

Aspirations for Glasgow and the Broomielaw.

The purpose of cities is to provide opportunities for employment, a variety of leisure activities, and homes with convenient access to everyday needs. Cities sometimes must endure cycles of growth and decline, and the population of Glasgow has been declining since the end of the industrial age. The city, until recently, did not present attractive employment opportunities. The first step to making Glasgow a desirable place to live and work was by far the hardest, but Glaswegians have taken that step of embracing and adapting to the new service economy.

In the post-industrial society people show a remarkable tendency to move from city to city to find employment or the ideal home. Glasgow is a remote city, but the mobility of the population in the United Kingdom and elsewhere in Europe means that Glasgow may rise again even though the original reasons for the city's growth are probably gone forever. Now that Glasgow has transformed its economic base it can fairly compete with its sister cities for investment and for inhabitants on equal terms. It can win this competition by simply being, socially and physically, a more attractive city.

If, as Glasgow grows outward, the current zoning regulations are not abandoned the city centre will cease to be an attractive place to live and work. The zoning policy will stifle any growth as soon as the city centre becomes obviously different (and superior) in form and function from the areas of new growth. Substantial growth like that which is expected in the Broomielaw will highlight deficiencies in the new parts of the city. Under a zoning system, the most desirable urban location is in the geographical centre of Glasgow where all the zones meet and all the cultural institutions are located. At present, the city centre is so compact that this geographical centre is essentially the whole of the city centre. As future

developments increase the distance from the perimeter of the city to the heart of the city (Buchanan Street), the desirability of living or working in these areas will decrease. There will be a time soon when the distance to the active centre of Glasgow will be intolerable to prospective tenants. If the zoning system is maintained, the only way the city centre can grow will be vertically, since everyone will want to live and work in the only good area of the city - the geographical centre. This type of city has a bell-shaped profile that mirrors the bid price curve, or indifference curve, that economists use to illustrate thresholds of what people will accept. In this case, the threshold is a measure of travel distance versus cost of accommodation. Glasgow has a zoning policy that inhibits lateral growth and a ban on tall buildings in the city centre that inhibits vertical growth; Glasgow has a policy *against* growth.

Tall buildings would cause congestion in the streets, overload city services and cause land values to fluctuate dramatically. None of these effects are welcomed. Unrestricted vertical growth in the city centre would indeed ruin a special and unique Victorian legacy. Therefore the sensible manner for Glasgow to expand is laterally. The Victorian city centre is a very large part of Glasgow's identity; it is an advantage to the city in competing with other cities and is worth saving. Any growth should include the features that make the geographical centre attractive. The goal is to have a larger city centre instead of a city centre with subsidiary districts like the Broomielaw attached.

As long as growth is managed and as long as services and transportation are adequate, the only factor limiting the number of people in the city centre is the quality of life found throughout the city. The city must spread its favours evenly and it must remain diverse. Glasgow has transformed its identity and Glasgow is being noticed. The small size of the city centre is a favourable asset; the zoning policy has not ruined the city, yet.

Growth is only desired if it can improve a city; long-term growth is a tangible measure that more people are finding a better life. That is the purpose of every city.

The way to ensure that this will happen is by making a city that is beautiful and providing the quality of life (social atmosphere) that people want. The urban design strategy in the Broomielaw is based on these aims.

The Overview of Development in the Broomielaw.

1. Glasgow has more parkland per member of the population than any city in Europe. Post-industrial Glasgow is very compact only in the city centre. That small area of strength should be the focus of any new development.
2. A stronger incentive for people to live and work in Glasgow can be created by the success of the Broomielaw project. The existing poor connections to the rest of the city can be turned into urban events or gateways that will enhance the likelihood of growth at these points.
3. The most attractive feature of the Broomielaw is its connection to the heart of the city. The second most attractive feature is the existence of the River Clyde.
4. The expanding city centre can encompass the river and reintroduce it into the city. This can be accomplished by locating activity centres on both banks of the Clyde and increasing the activity between the two banks with the addition of new pedestrian bridges. The Broomielaw will not thrive until the river is incorporated and the connection between the city centre and the river is substantially complete. The Broomielaw is this connection.
5. The city is growing at a tentative rate. A high-density urban plan should be avoided because this type of growth would retard the pace of site coverage and river enclosure; moderate density development will cover the Broomielaw faster than will patches of high density development. The density and bulk of the proposed development must present a profitable prospect to speculative developers. The urban plan is designed to accommodate the types of buildings that the market demands. Recently constructed buildings in the Broomielaw and other areas of Glasgow demonstrate that the type of development proposed is acceptable to tenants and developers. The timely assimilation of the river into the city would be an enhancement to Glasgow's consistently improving image.

6. The moderate density of the site will not support a major metropolitan plaza or similar feature in addition to the new riverwalks. An underused metropolitan plaza is a liability in terms of atmosphere and safety, so one will not be included in this proposal.
7. The city centre grid has been replicated beyond its usefulness even though the topography of the city has allowed some parts of this monotonous grid to remain unique. The street grid is potentially a very powerful element in a city's form and a grid different from the Blythswood grid would establish an area of a different character. The unique Broomielaw grid still exists, it just lacks appropriate buildings to compliment it and to create another visually powerful district in the city. The Broomielaw streets will be designed to be passageways from the city centre to the river and Tradeston.
8. The Broomielaw needs at least one major attraction to generate activity at the water's edge. This anchor will spur development in Tradeston. If this anticipated Tradeston growth never occurs, then the major public attraction constructed there is the surest method of maintaining a population at the riverside.
9. The Broomielaw should be successful if it acknowledges its past, accepts modern buildings, and is planned to have a high level of activity. The liveliness will be based on a mixture of uses and the concentration of public activities on the ground-level.
10. The Streets that have a sizeable amount of historic fabric intact should be completed in a manner complimentary to the Listed buildings and the Outstanding Conservation Area. The environment of the warehouses of 'regional industrial archaeology significance' must consist of solid, planar façades that are parallel to the street and butted at the end walls. The Listed grain mill on the western portion of the site has always been a free-standing building and occupies the centre of a block. New buildings may be built around it. Oswald, Robertson, James Watt, York and Washington streets will have the strictest regulations for development because of the presence of significant buildings. The most liberal restrictions will be allocated to streets without historically significant buildings.
11. In all cases the purpose is to create the *minimum* restrictions necessary to promote the special Broomielaw environment because a variety of architectural expressions and building types is desired. The Broomielaw should be recognisable as a place with an atmosphere all its own. Apart from this overall identity, each street should have some elements of flavour.
12. The streets will be the main urban spaces of the Broomielaw. Streetfronts are intended to be mainly solid walls that will provide enclosures for the spaces. Courts and lanes may be created in the interiors of blocks and may connect to

the street if they provide a screened opening to maintain the long street façade. The nature of the interior courts will vary according to the uses of the buildings forming them. Slim towers will be permissible in the few locations where a large interior court is possible. They will act as signals to passers-by that additional spaces are behind the street façades of buildings.

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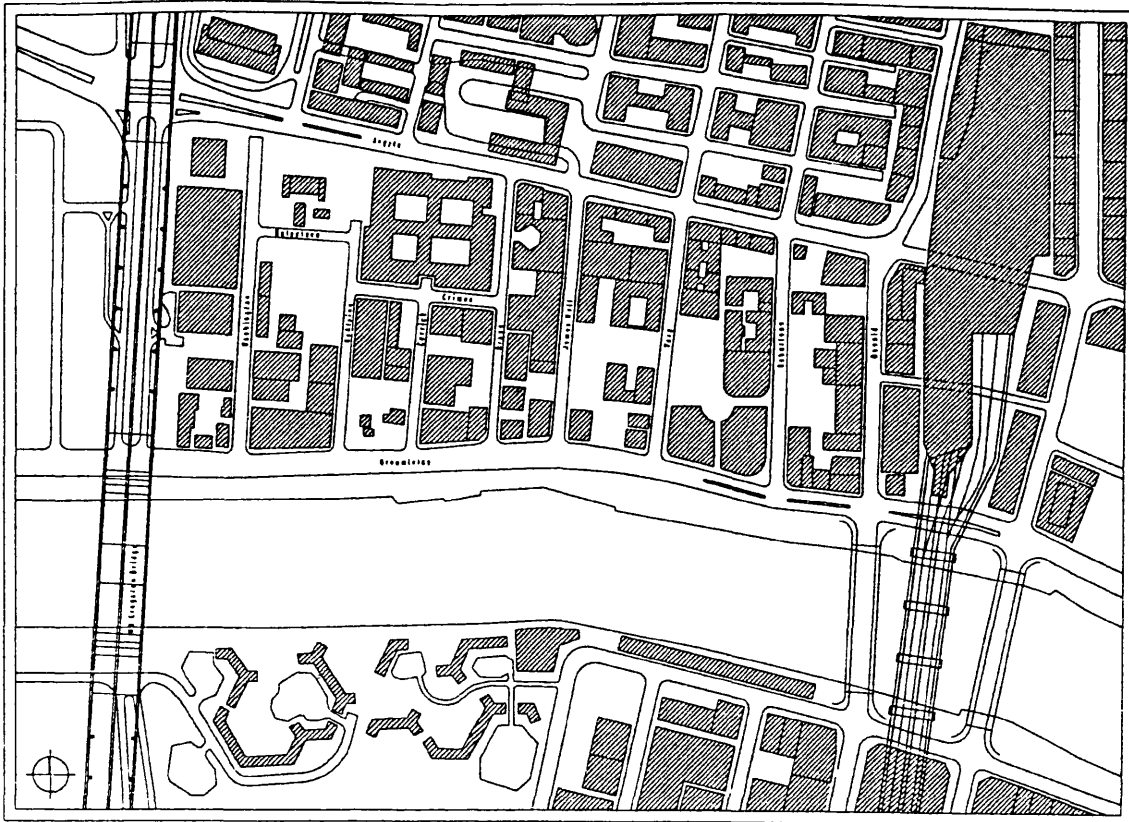
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The Broomielaw Design.

Site Overview.

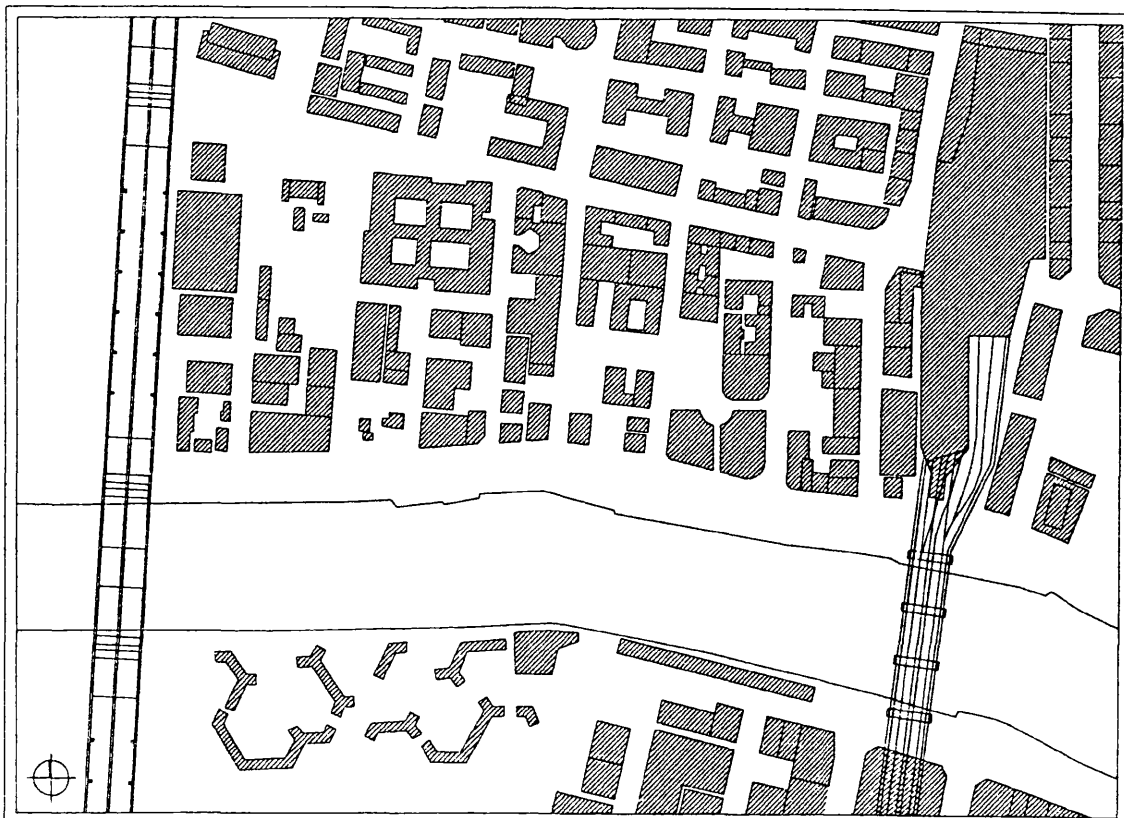


Broomielaw

0 METERS 100 200

Existing Conditions

EXISTING BUILDINGS



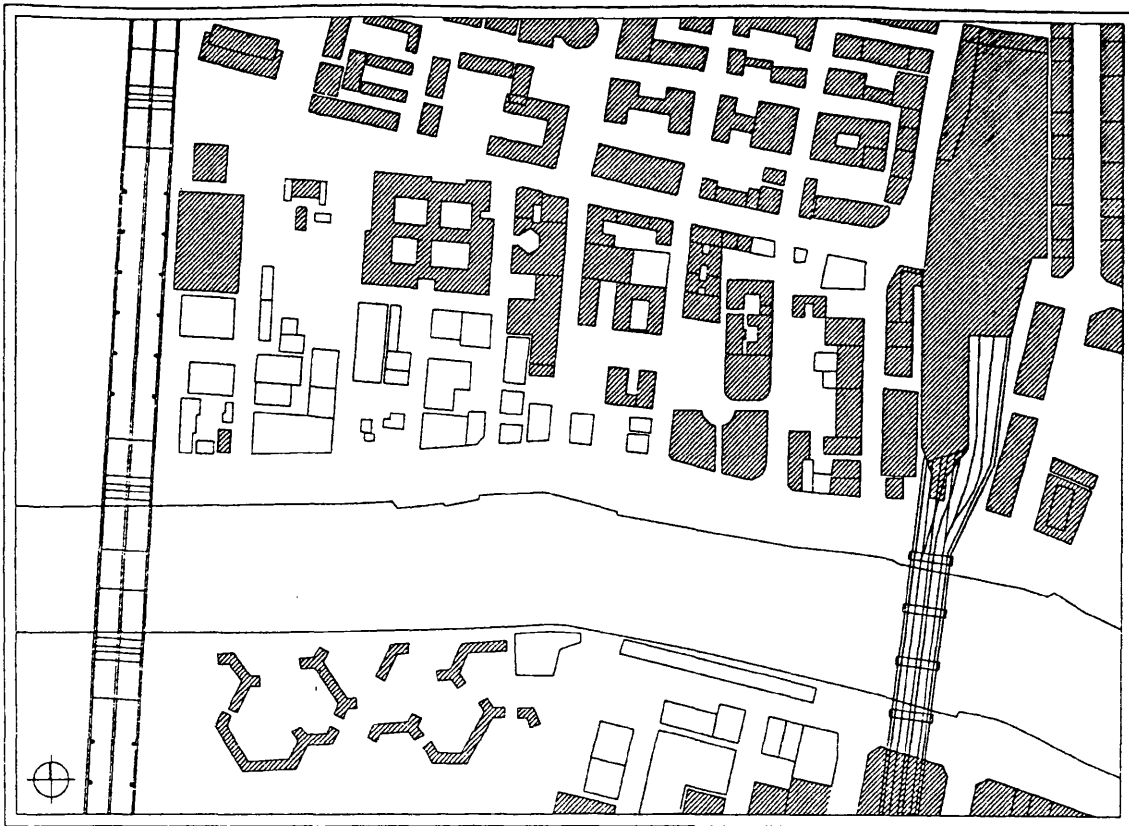
Broomielaw

0 METERS 100 200

Existing Conditions

Figure/Ground Study

EXISTING BUILDINGS





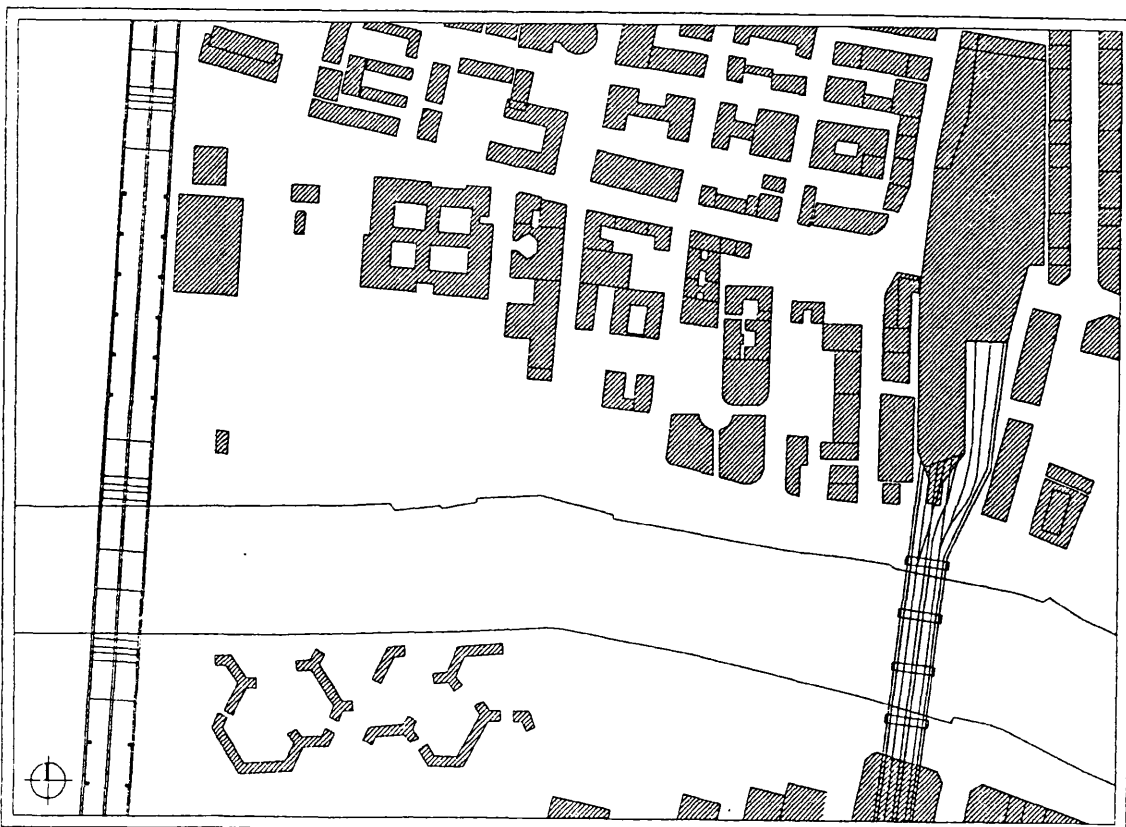
Broomielaw

0 METERS 100 200

Demolition Plan

Figure/Ground Study

 TO BE RETAINED
 TO BE DEMOLISHED



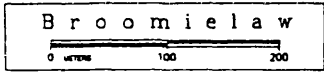
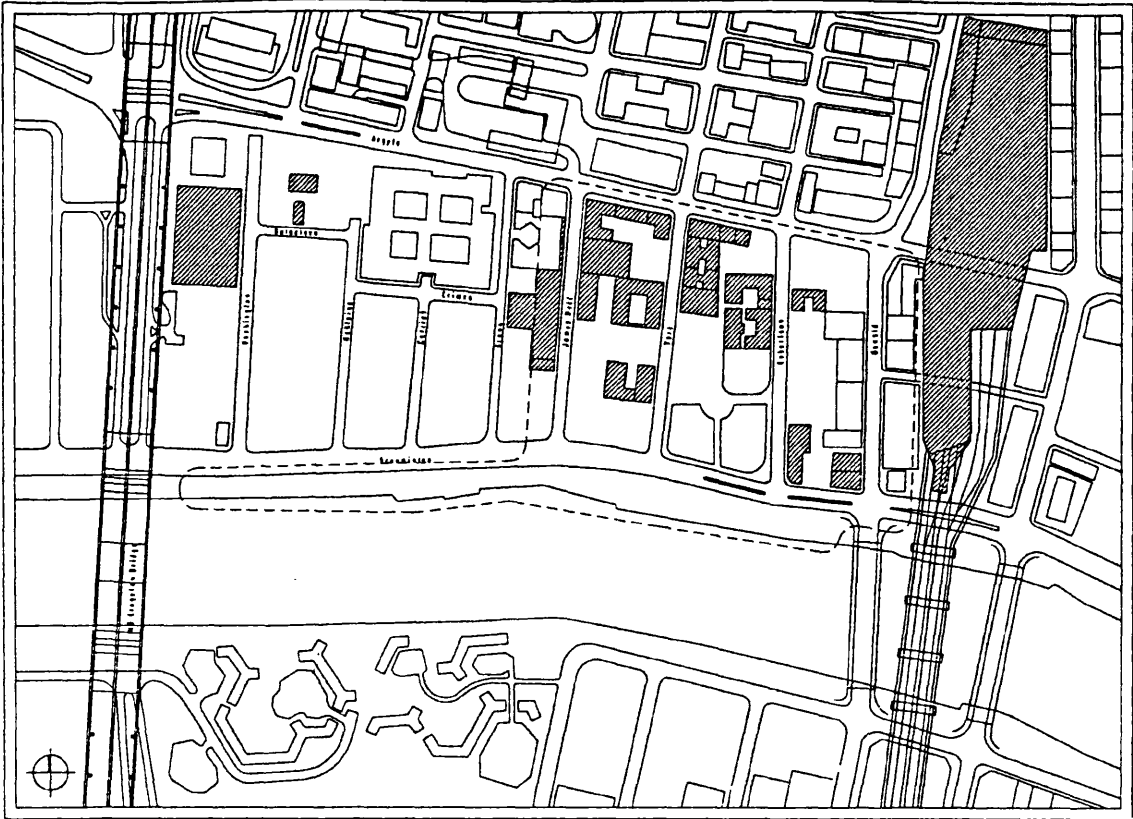
Broomielaw

0 METERS 100 200

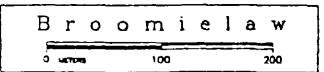
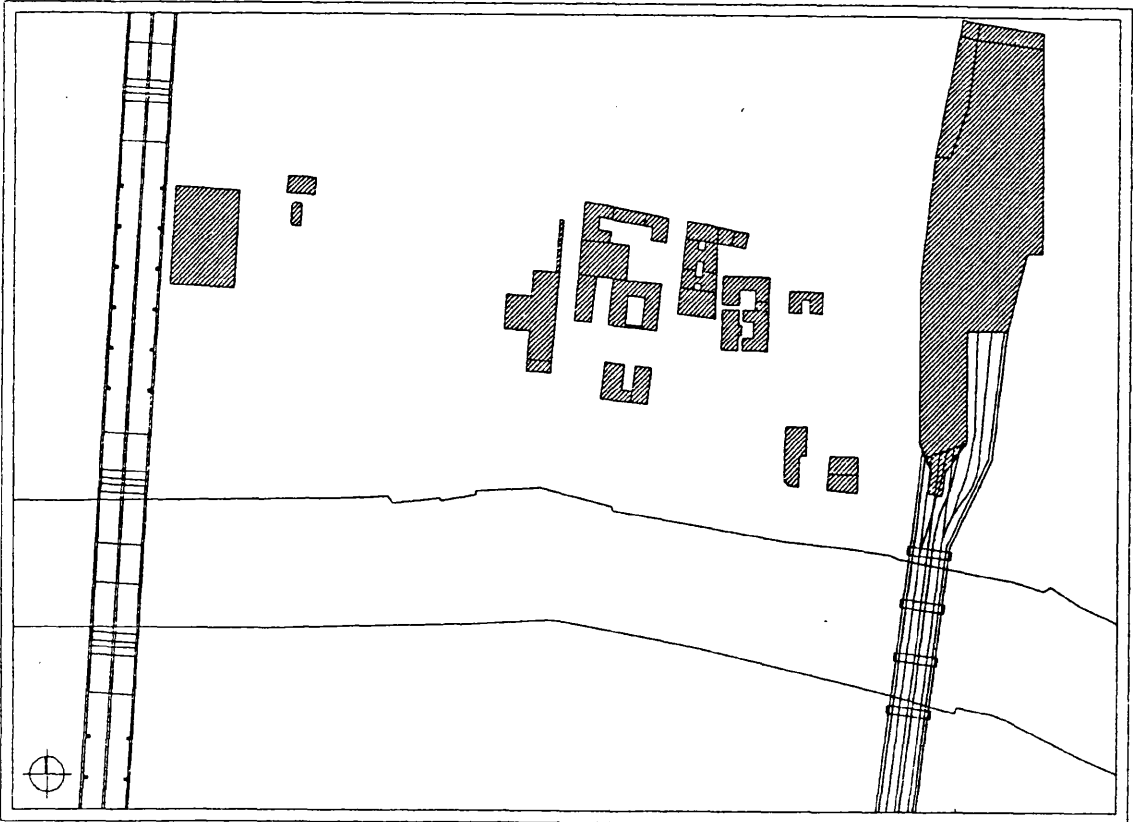
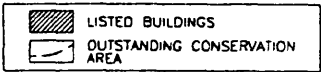
Buildings To Remain

Figure/Ground Study

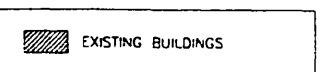
 EXISTING BUILDINGS



Listed Buildings



Listed Buildings
Figure/Ground Study





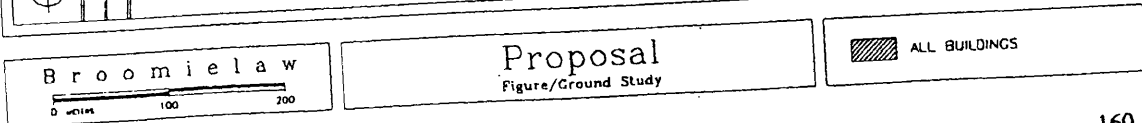
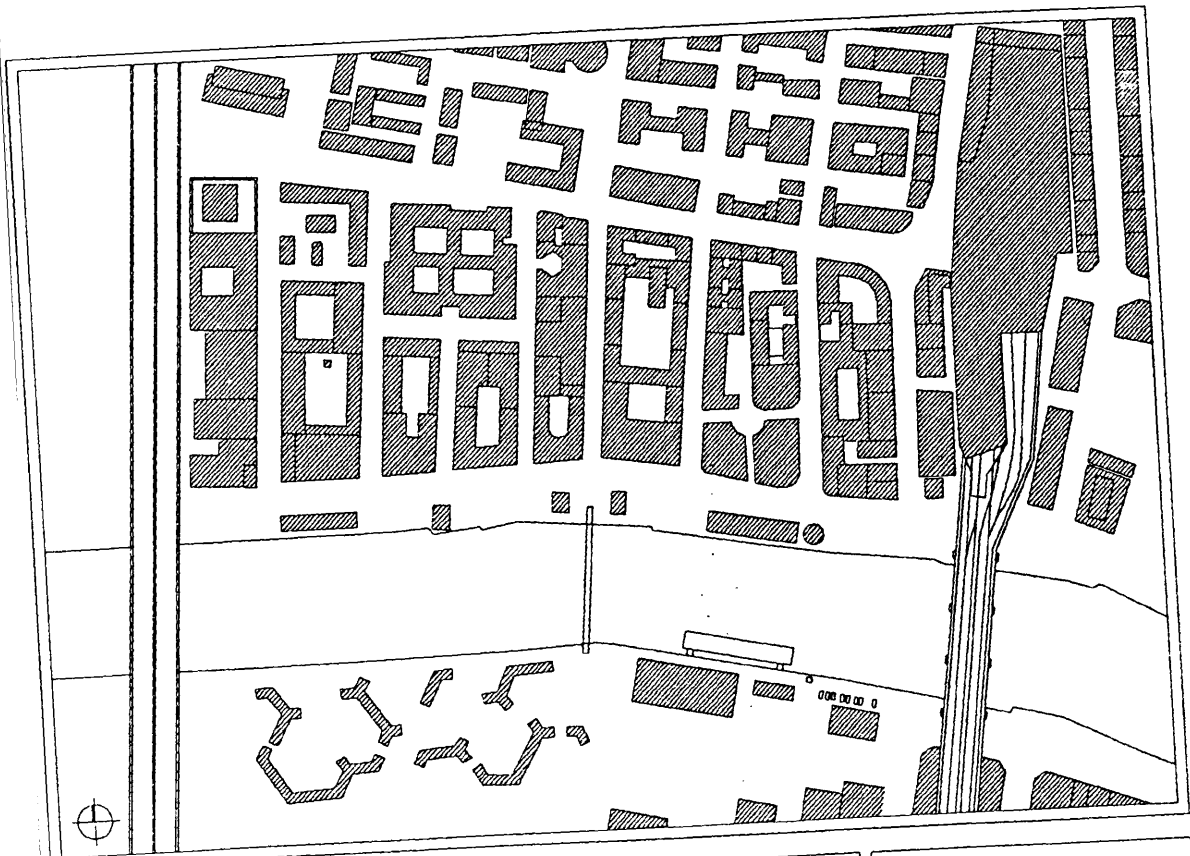
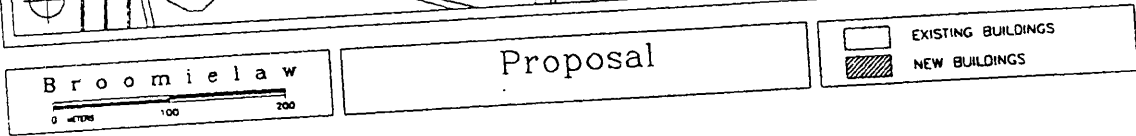
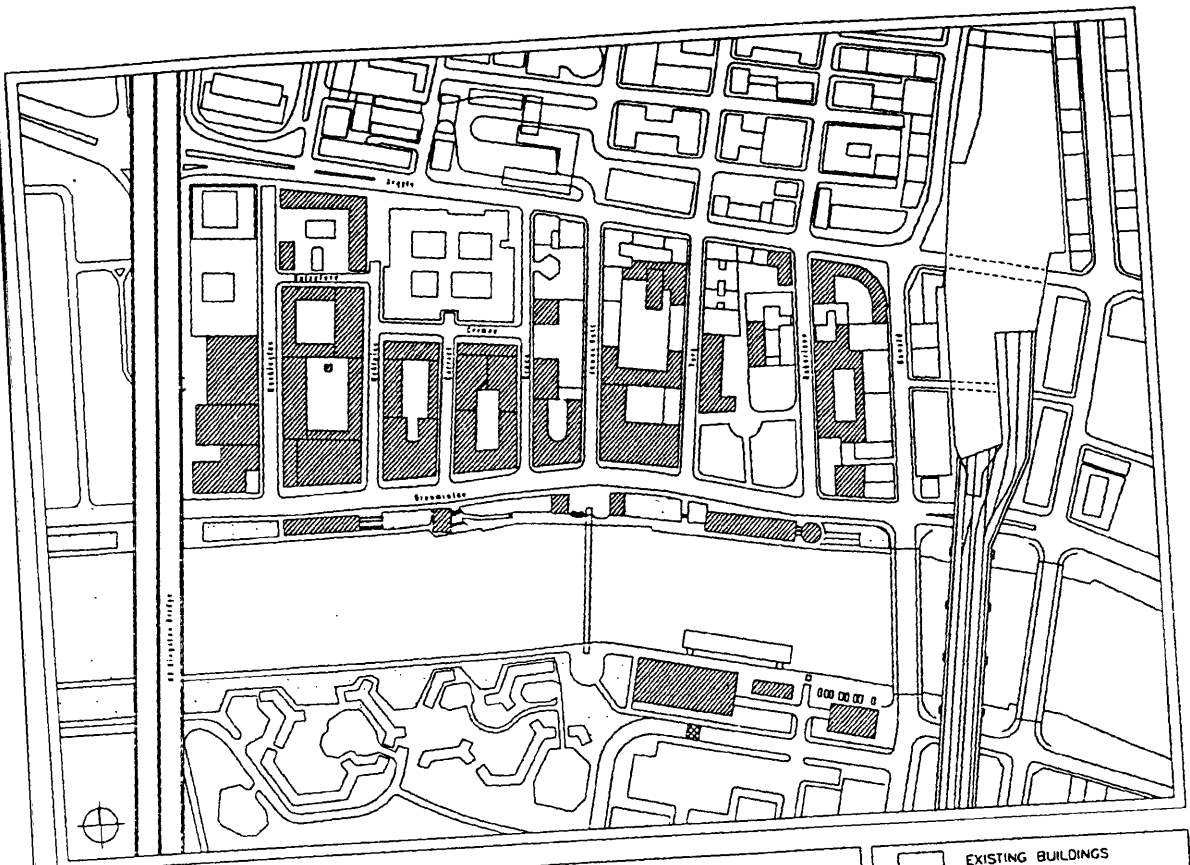
Broomielaw

0 100 200 METERS

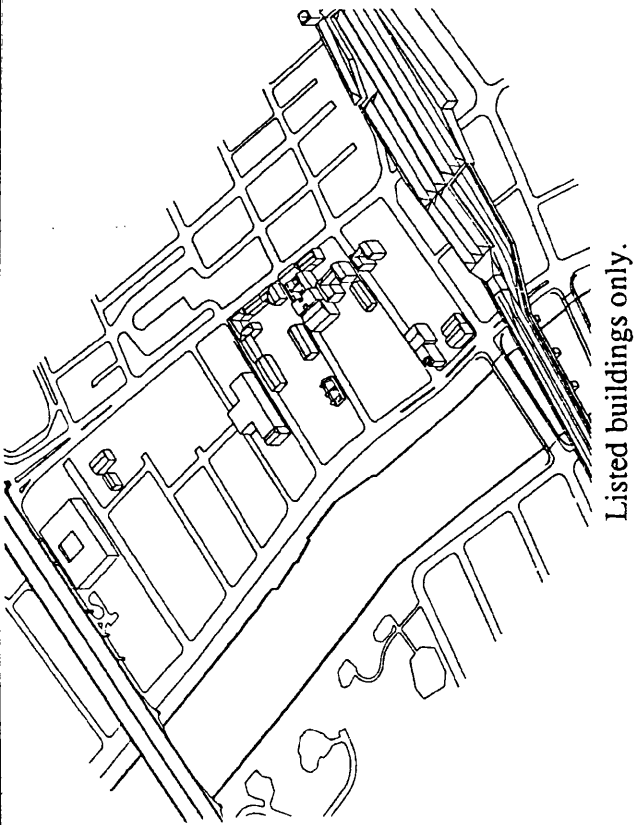
Listed Buildings By Conservation Grade

LISTED BUILDINGS

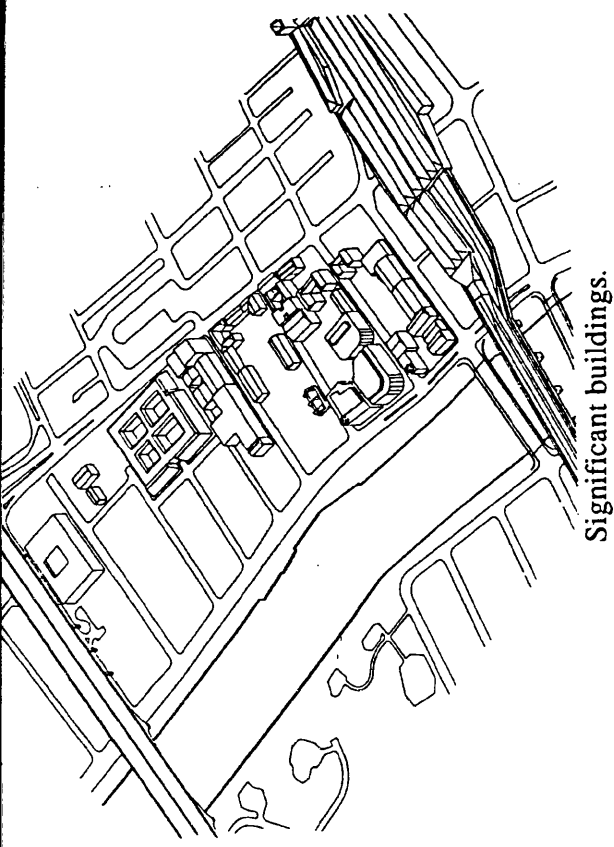
(A) (B) (C) CONSERVATION GRADES



The remainder of the document is landscape format.

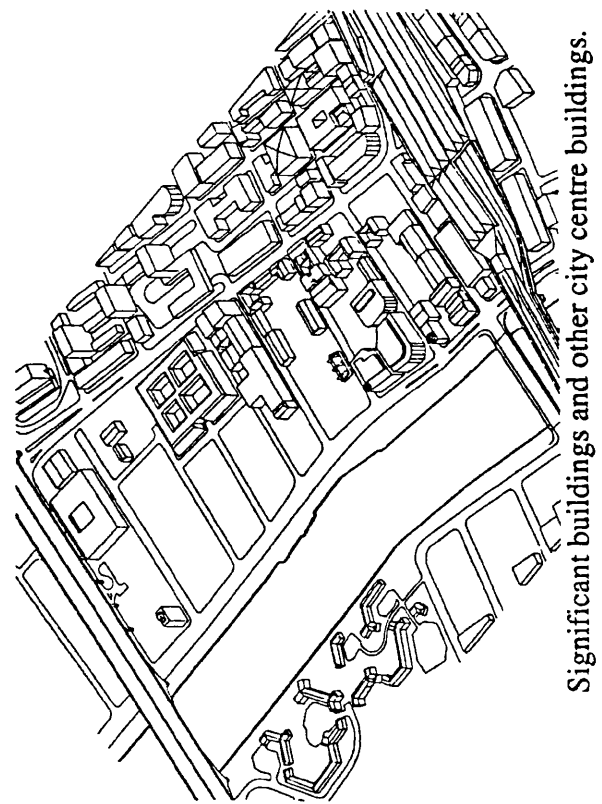


Listed buildings only.

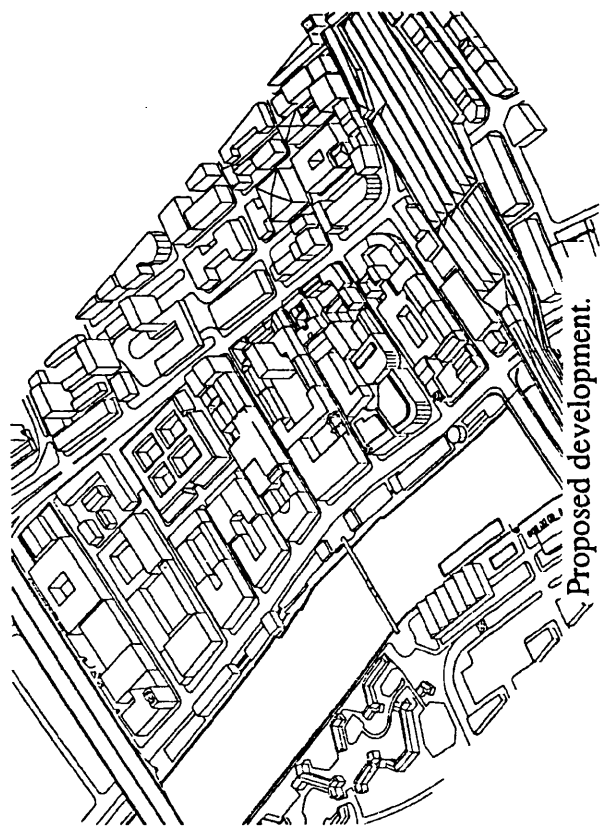


Significant buildings.

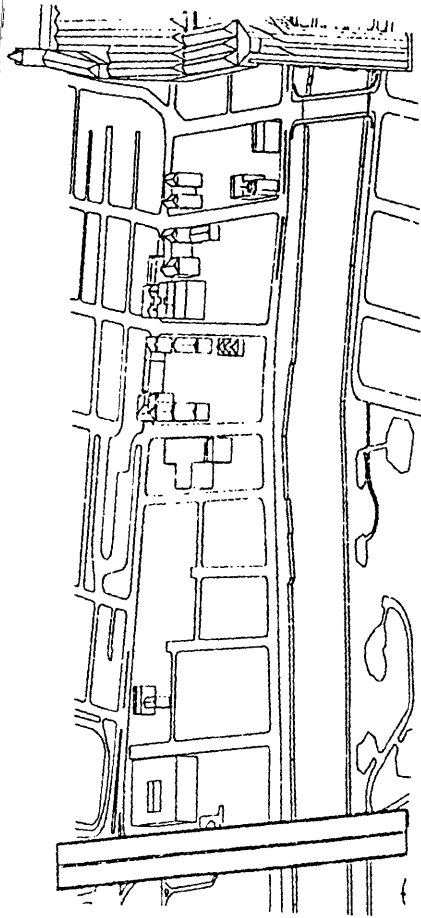
Site viewed from the south-east.



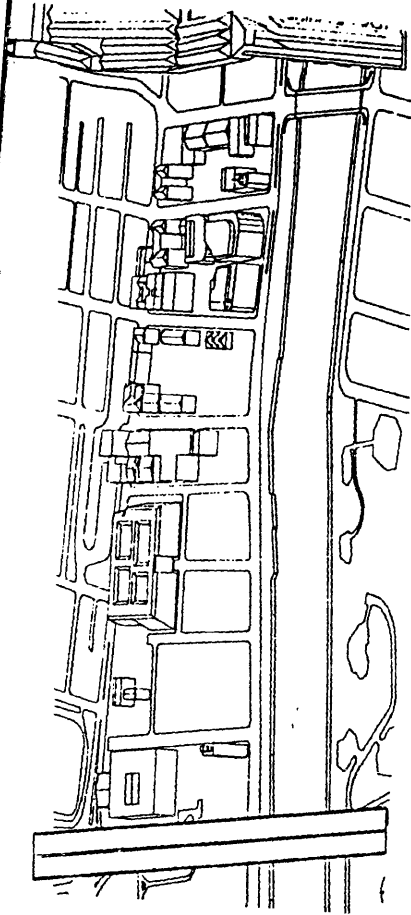
Significant buildings and other city centre buildings.



Proposed development.

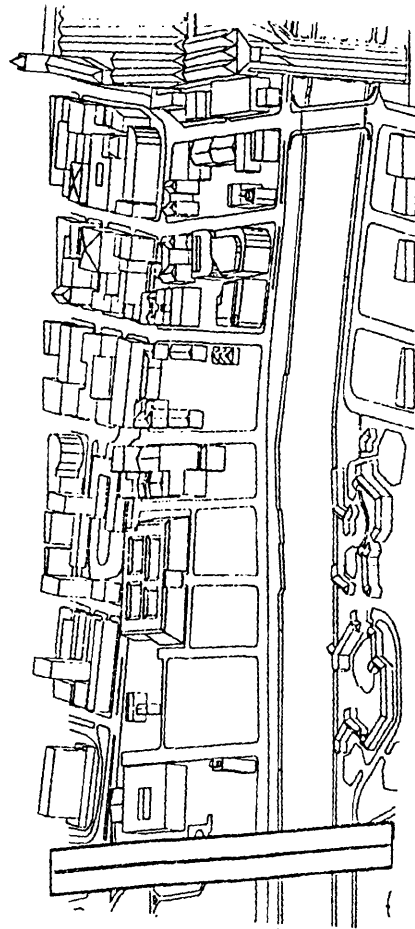


Listed buildings only.

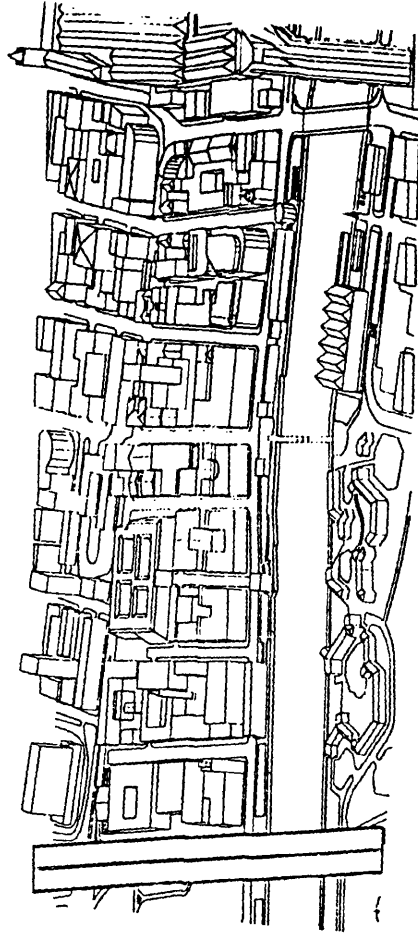


Significant buildings.

Site viewed from the south.



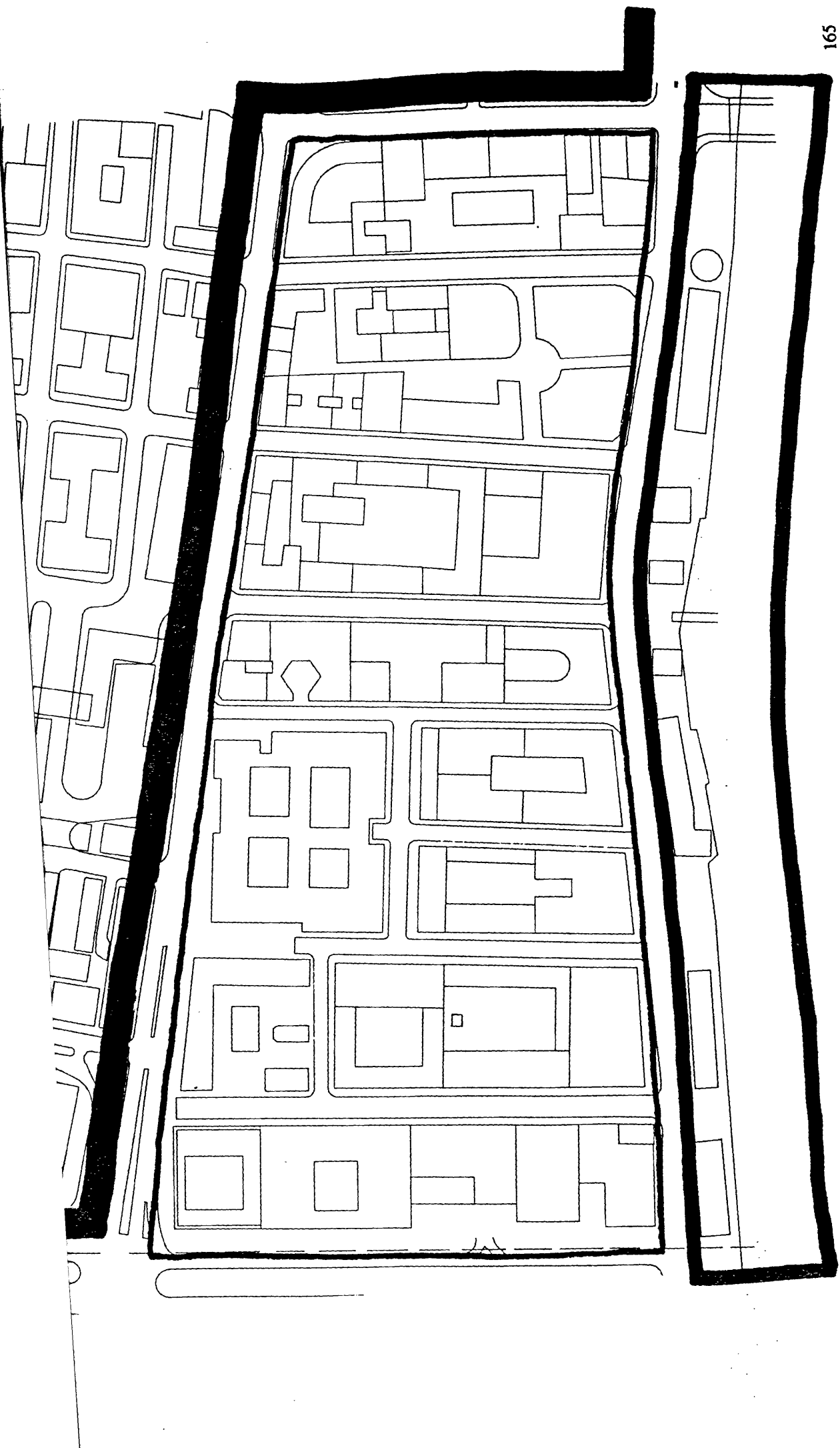
Significant buildings and other city centre buildings.



Proposed development.



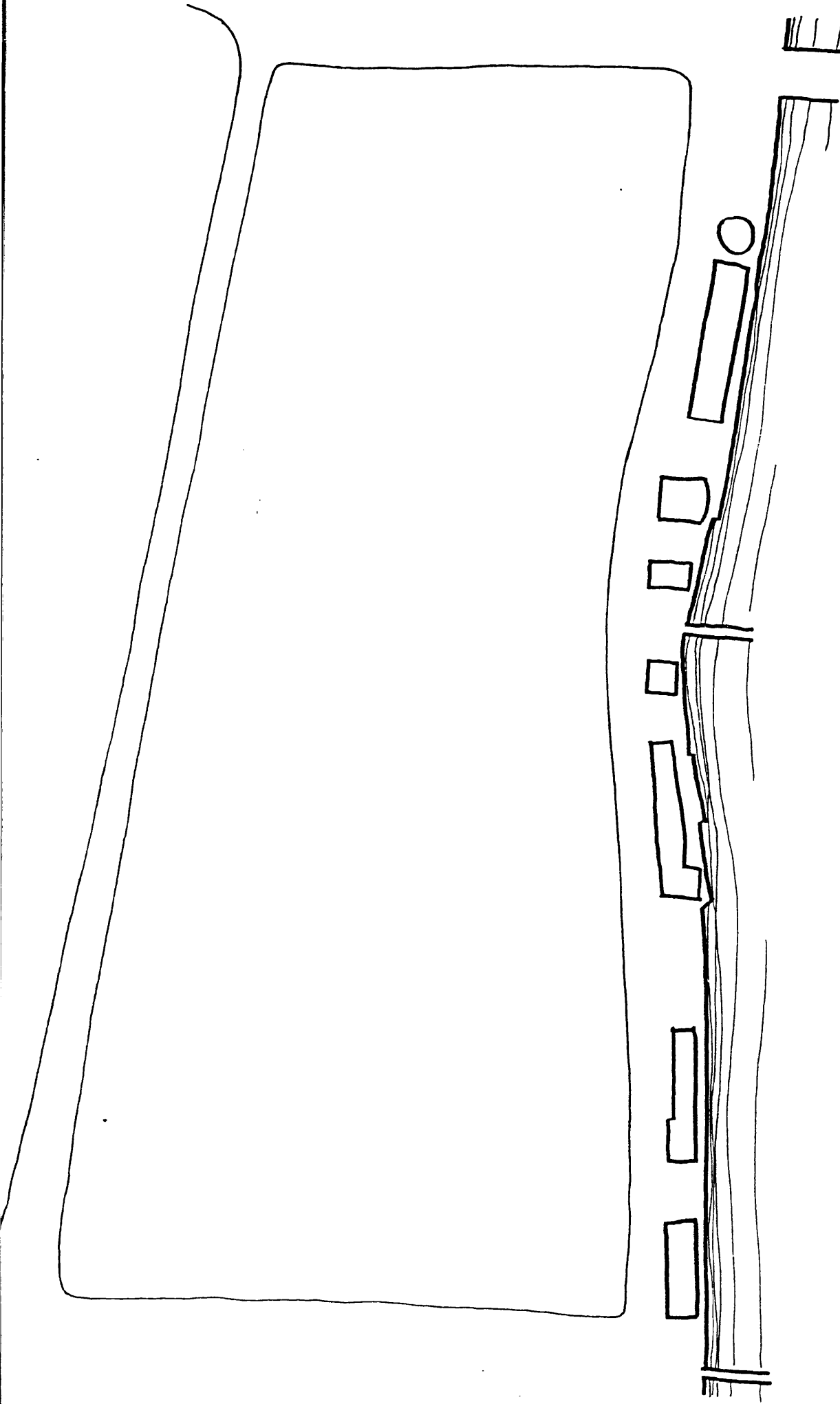
Hierarchy of public spaces.

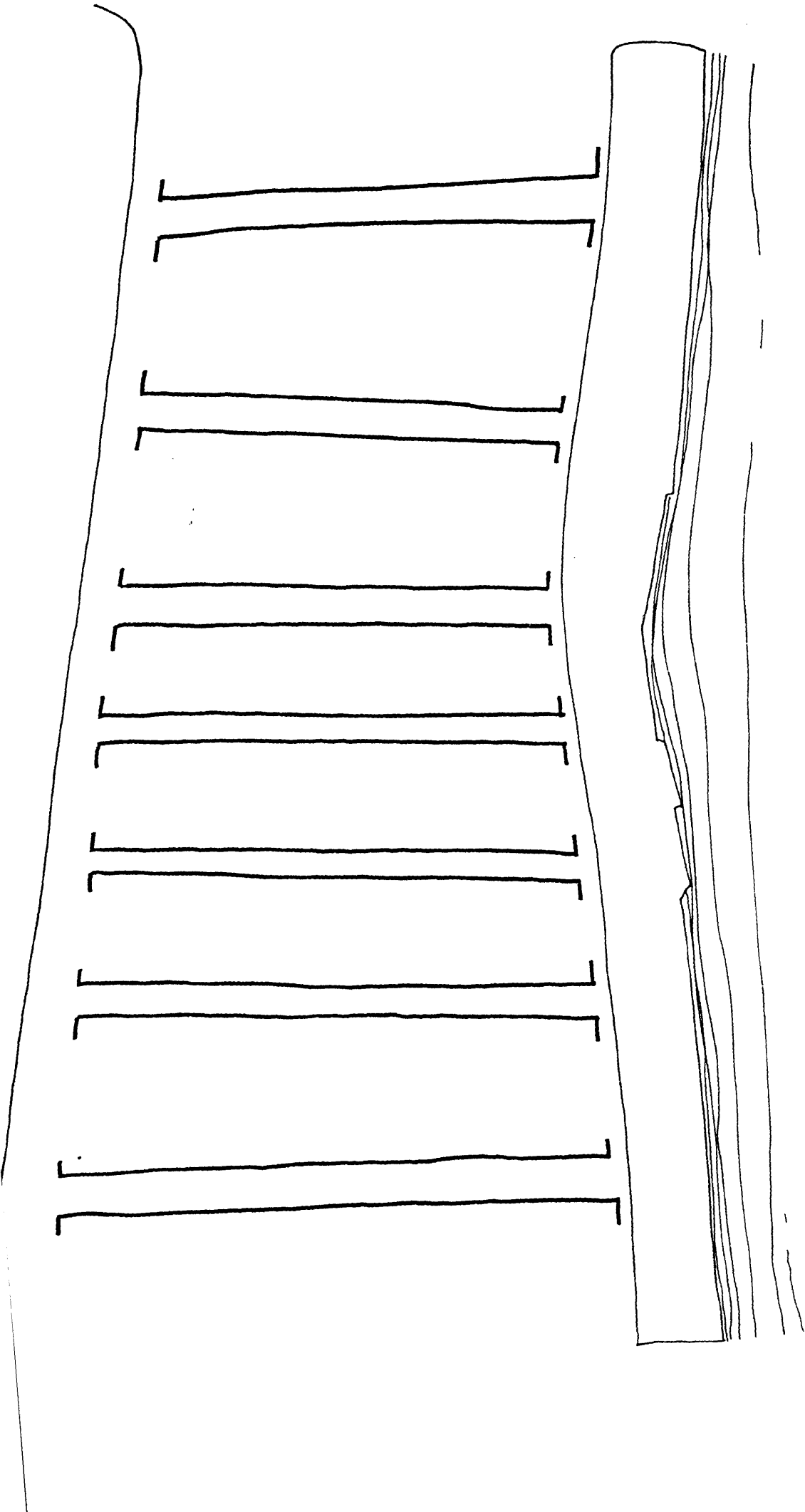


Parti diagram.

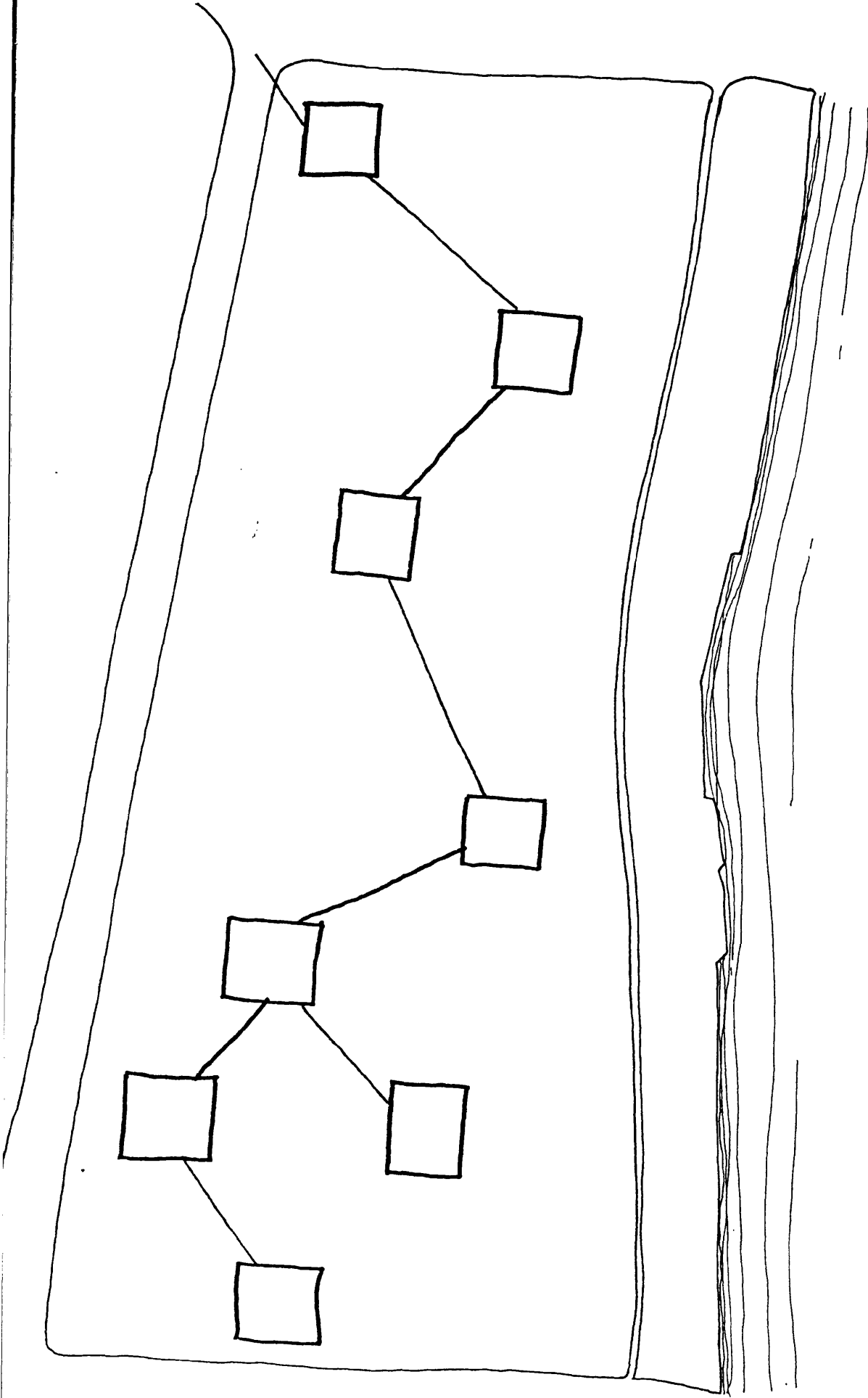
Investigations.

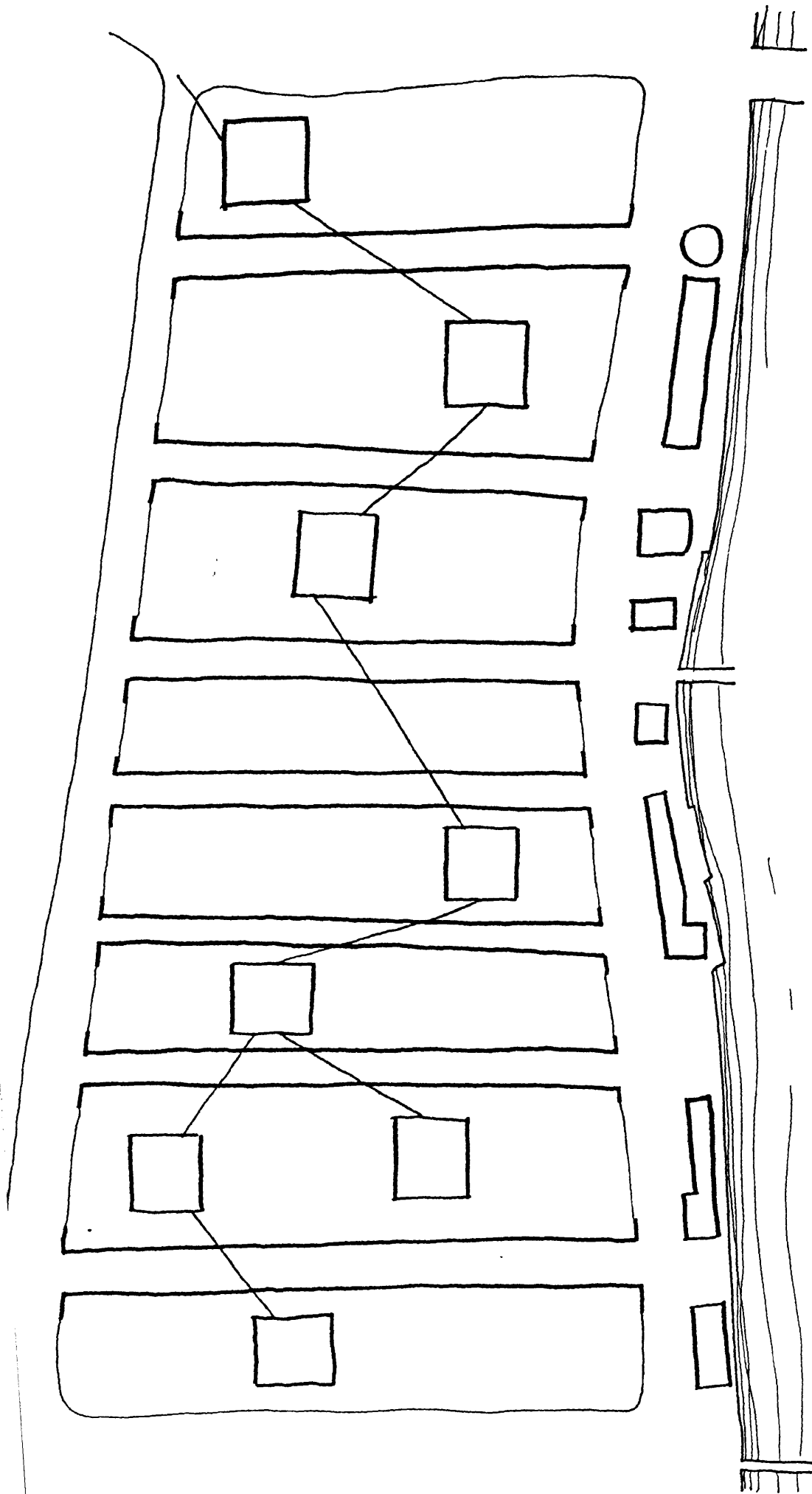
The river, the streets and the courts.



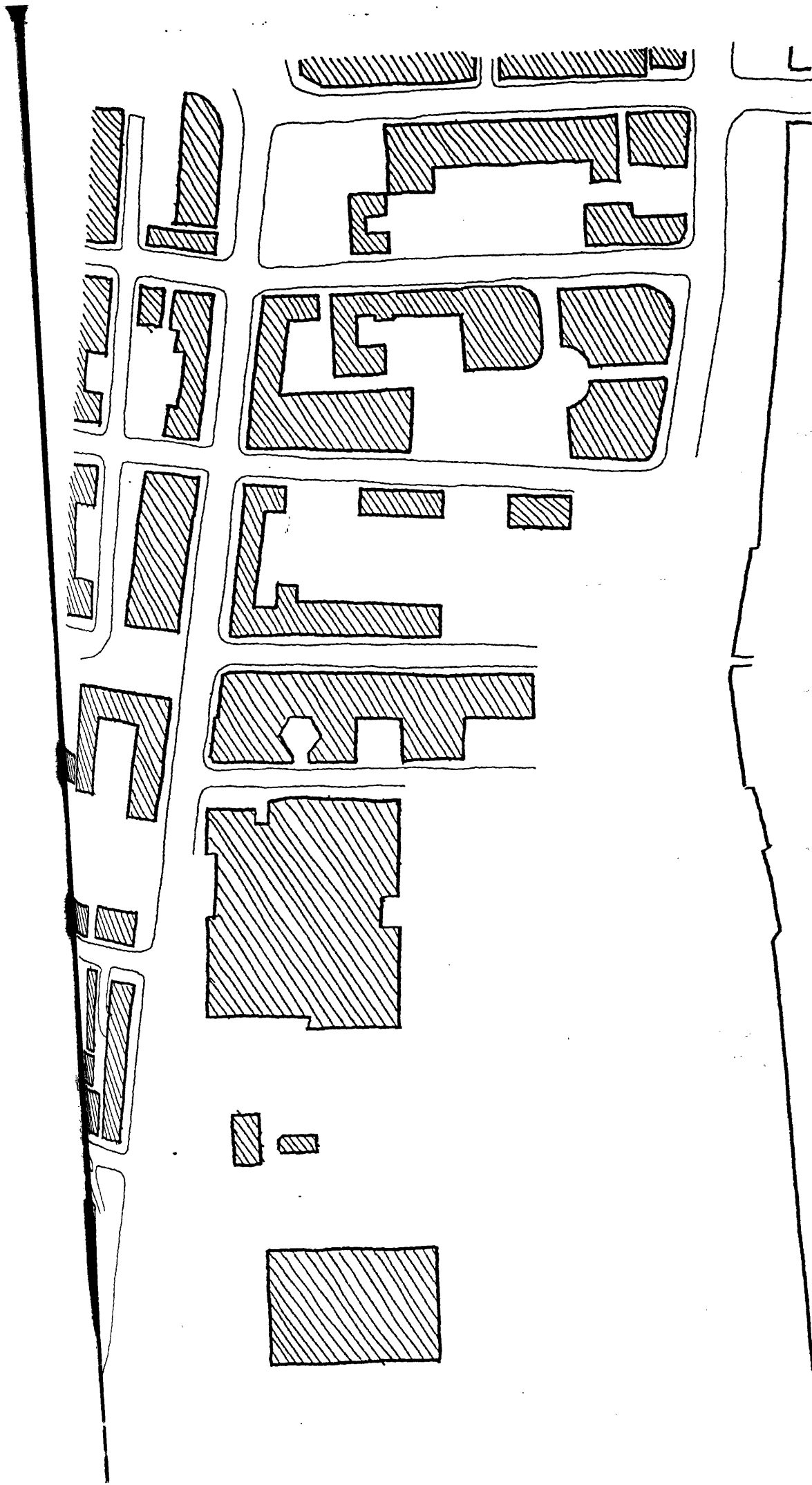


Components: the streets.

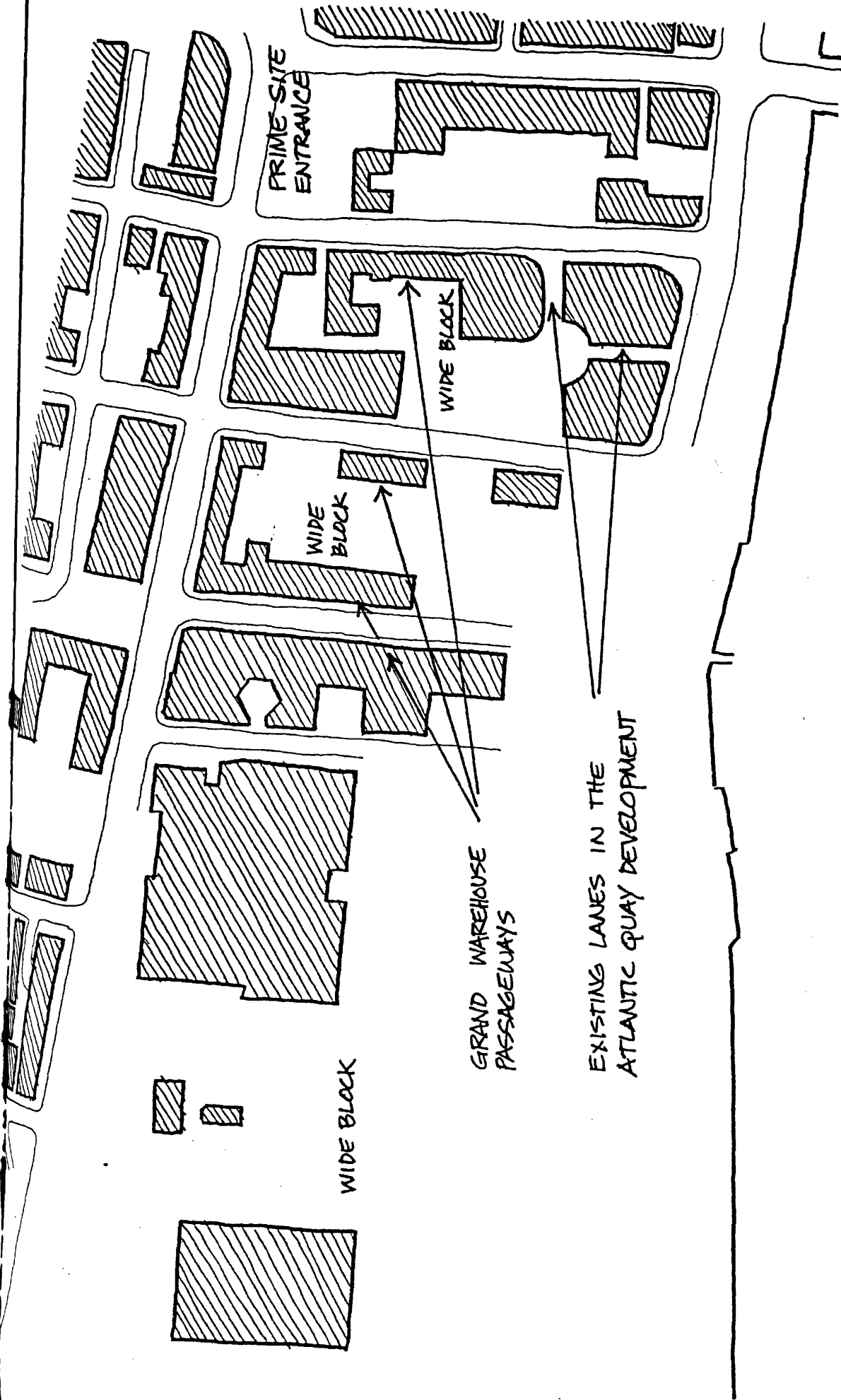


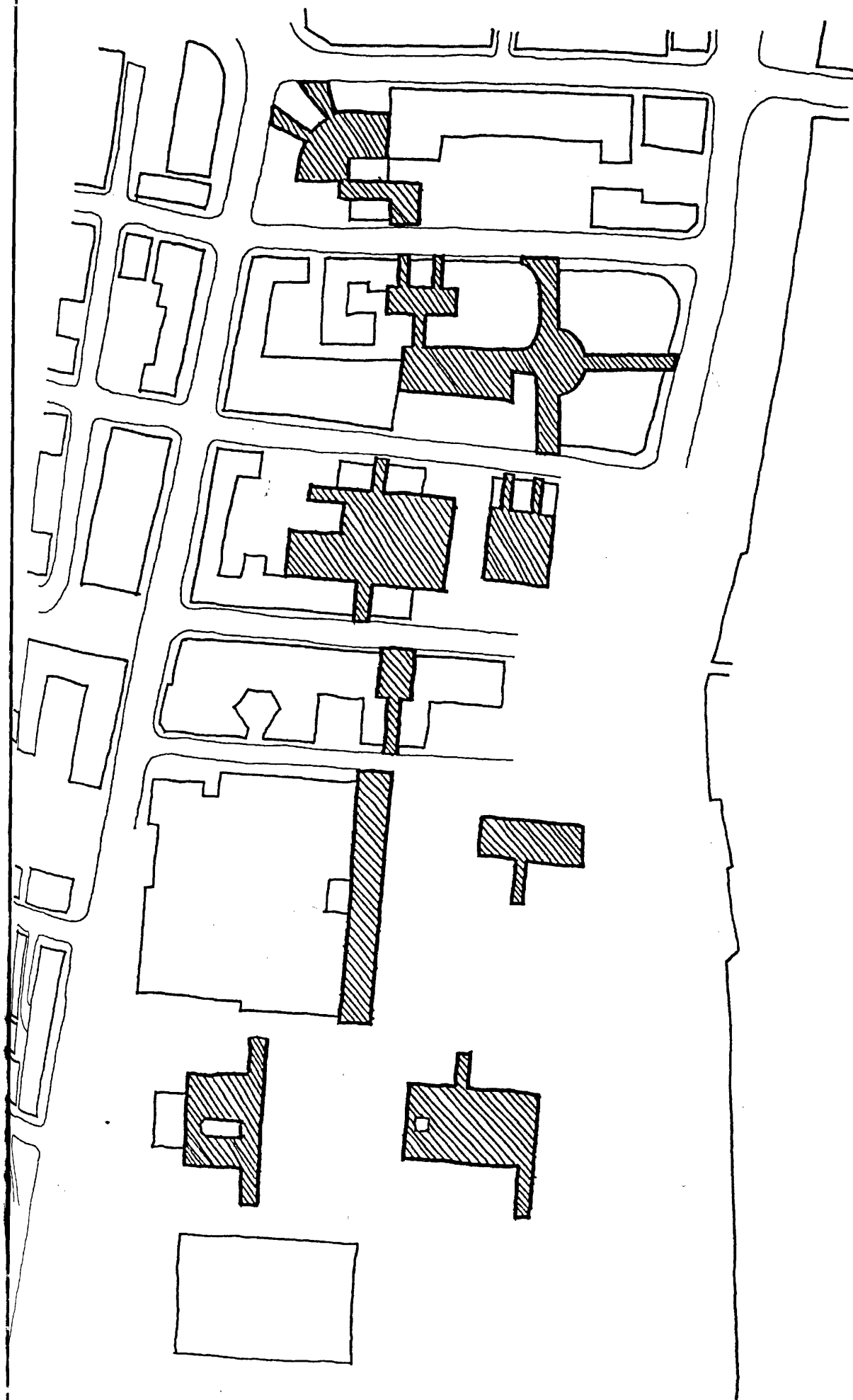


Components: composite diagram.

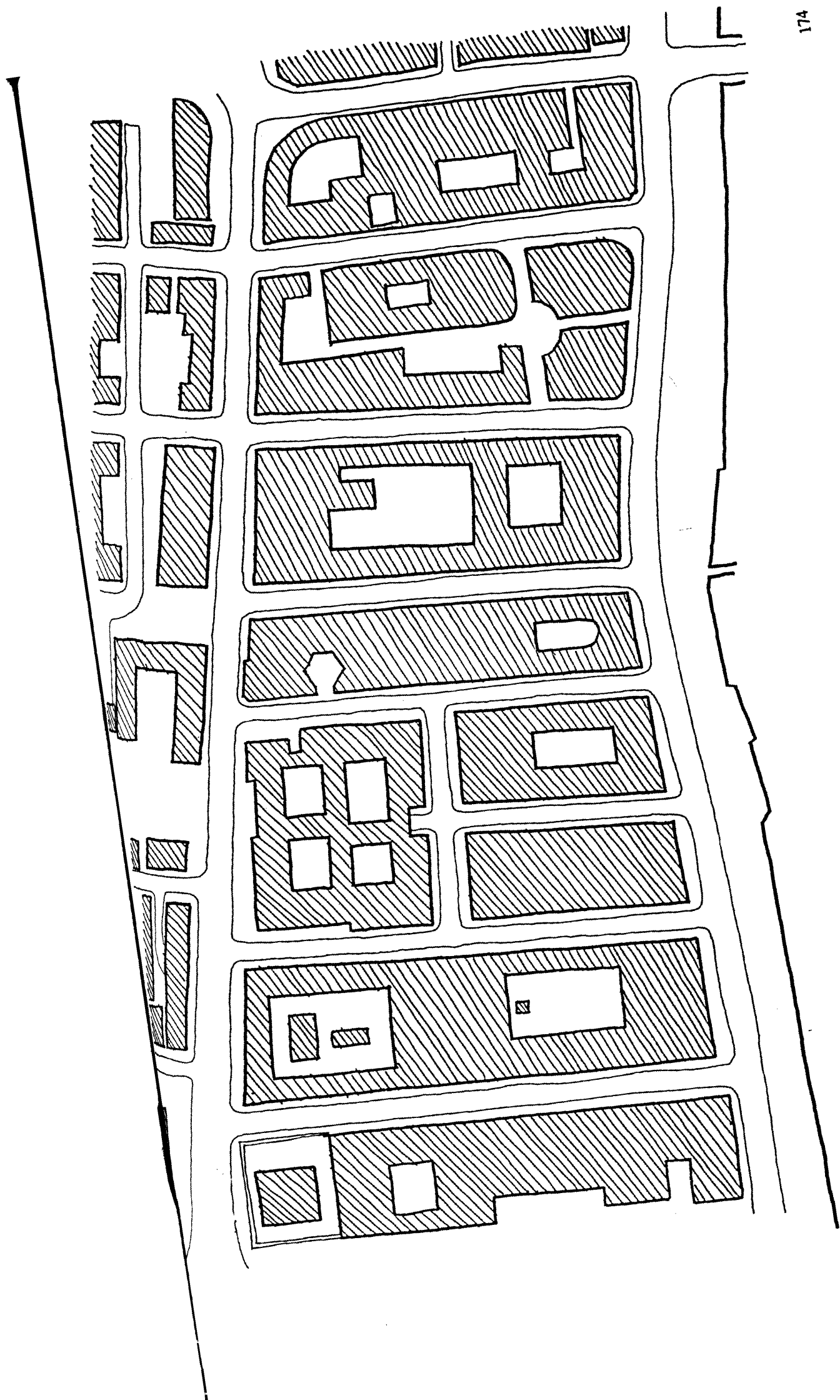


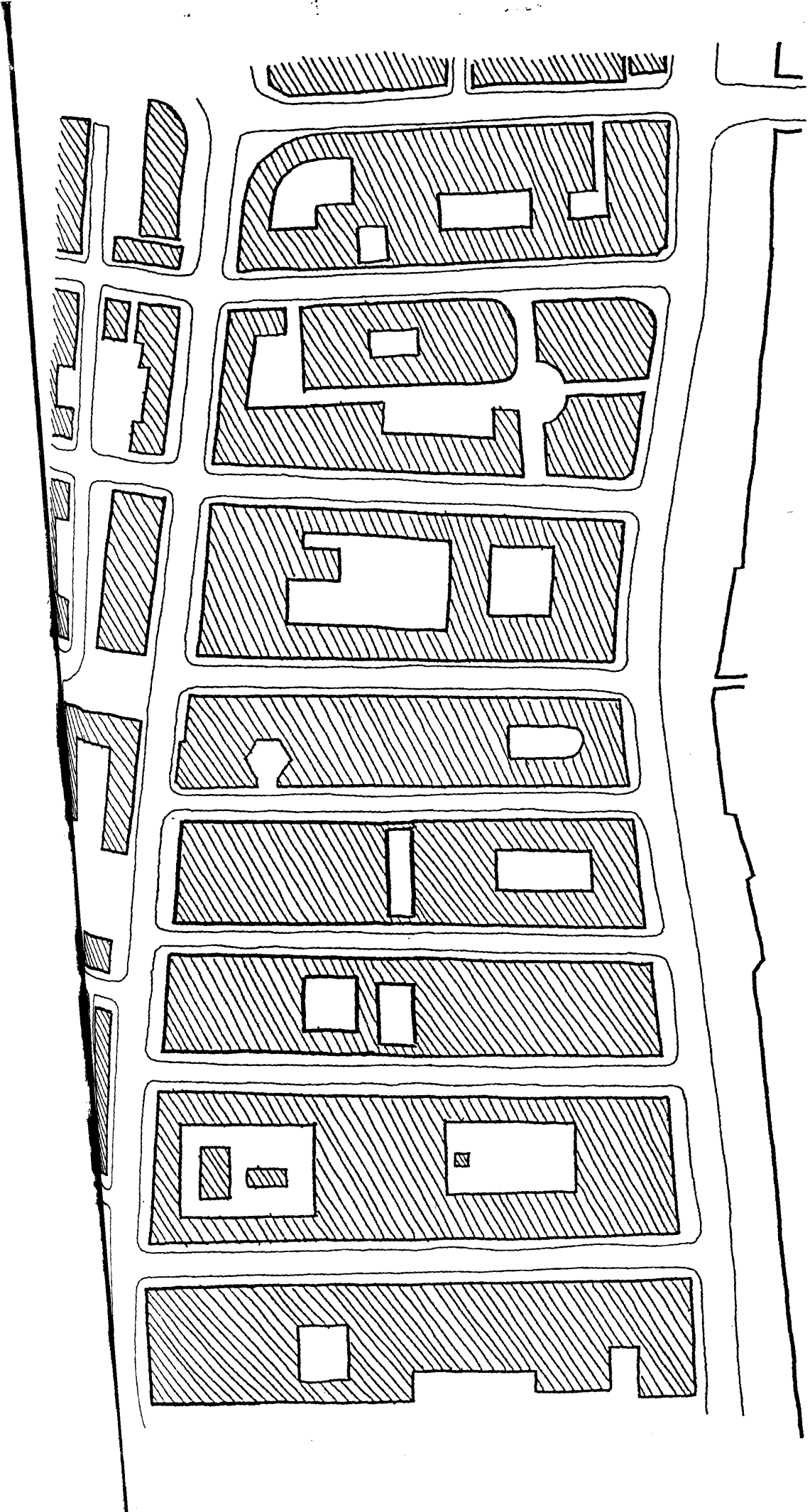
Significant buildings.





Proposed courtyards.



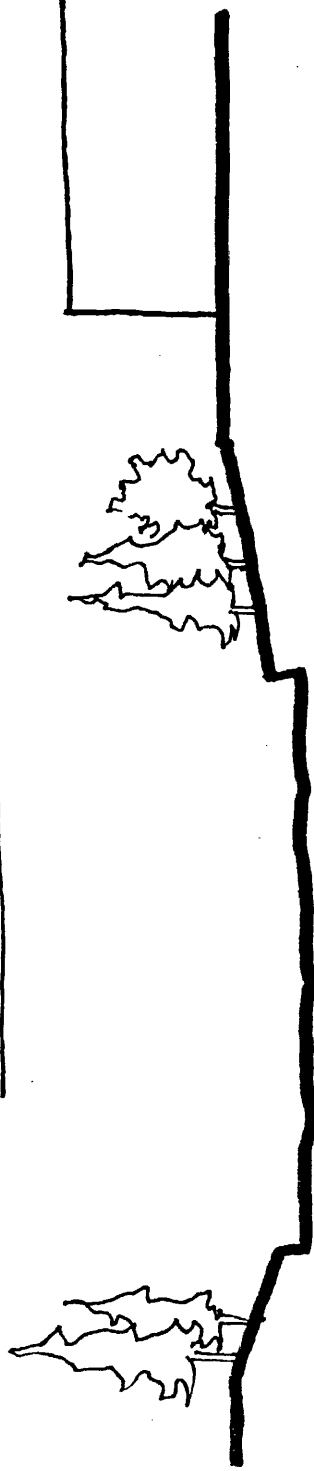


Proposed development, long-term.

POSSIBLE RIVER ENVIRONMENTS

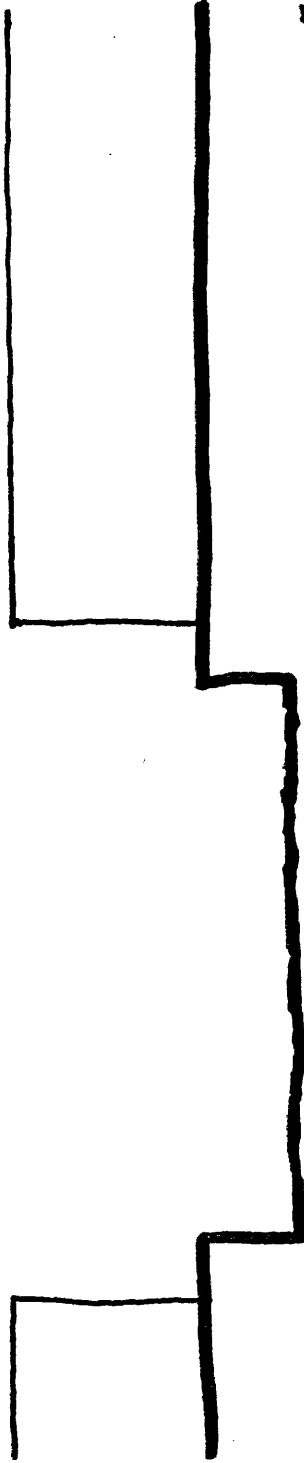
1. PARK SETTING:

THE RIVER KELVIN (NEARBY) IS IN A FINE PARK SETTING THE WHOLE OF THE CLYDE IS IN AN OPEN SETTING. THIS IS A CHANCE FOR AN URBAN SETTING. A RIVER-WALK WITHOUT SHELTER WOULD RARELY BE PLEASANT.



2. URBAN - BUILT TO THE EDGE:

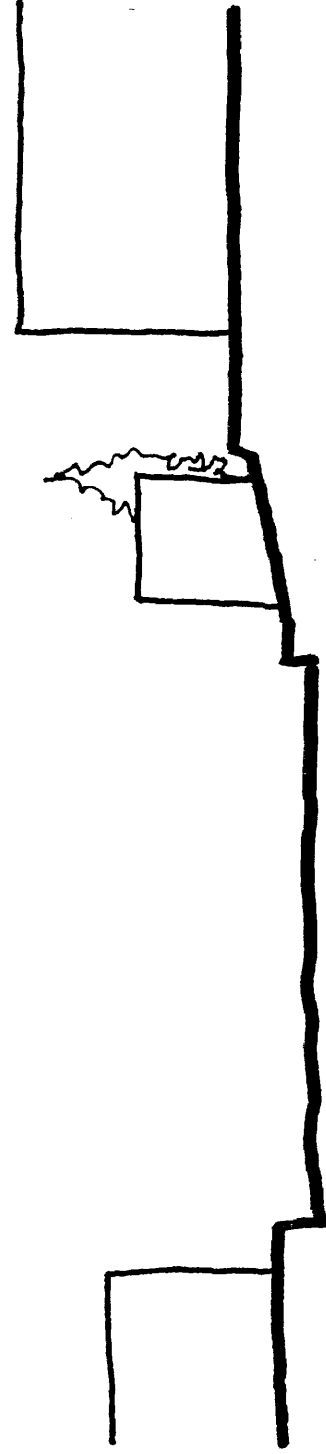
THE BROOMFIELD BLOCKS WOULD BE EXTREMELY LONG. STREET VISTAS WOULD BE ESSENTIALLY THE SAME, RESTRICTED FIELD OF VISION.



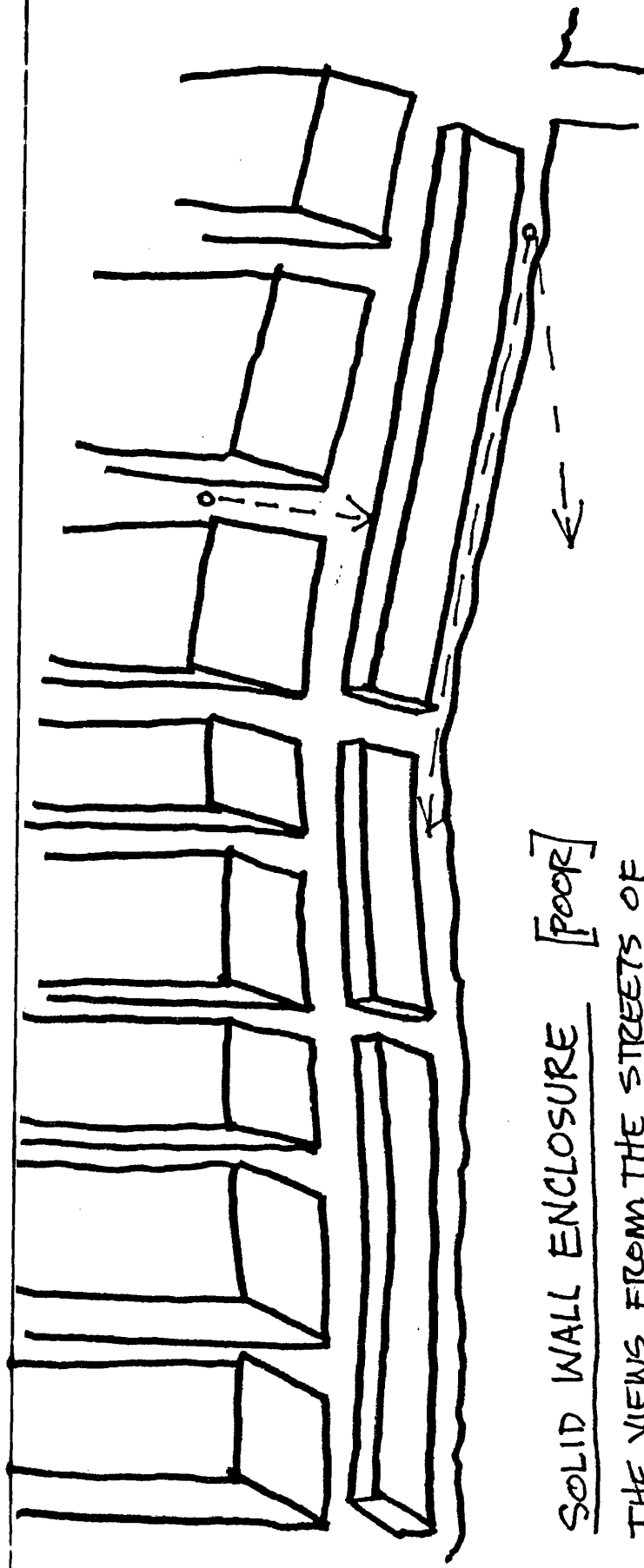
SELECTED

3. URBAN - A LINE OF PAVILIONS AT THE EDGE:

MOSTLY FREE-STANDING BUILDINGS, WITH SOME MATURE TREES SAVED. STREET VISTAS ARE VARIED. ANOTHER (LINEAR) ENVIRONMENT IS CREATED. (LONG BLOCKS VS. FREE-STANDING BUILDINGS)



Possible river environment.

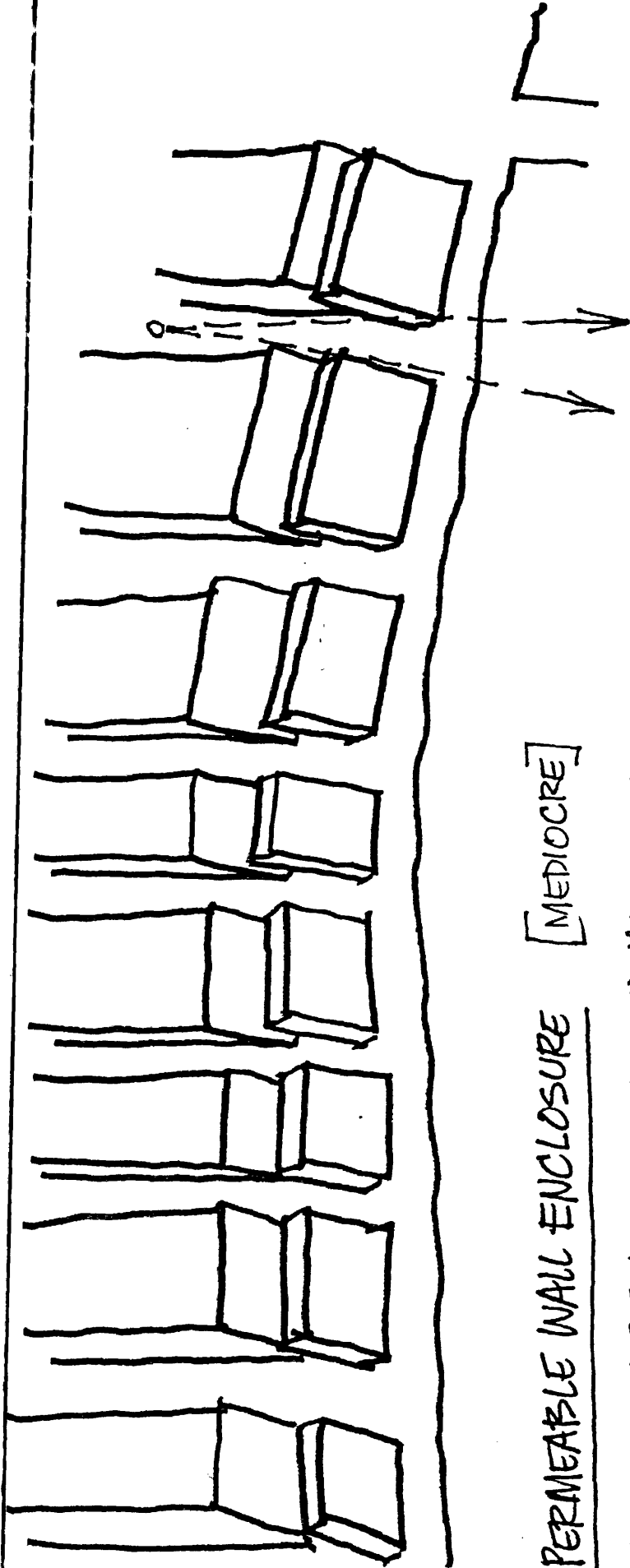


SOLID WALL ENCLOSURE [poor]

THE VIEWS FROM THE STREETS OF THE BROOKMILLAW ARE BLOCKED. THE MEANING AND POWER OF THE LONG BLOCKS ARE LOST - THE STREETS SEEM LONG AND OPPRESSIVE.

THE SOLID WALL OF BUILDINGS BY THE RIVER SEPARATES (TOO FORCEFULLY) THE RIVER FROM THE BROOKMILLAW.

RIVERWALK OPTIONS

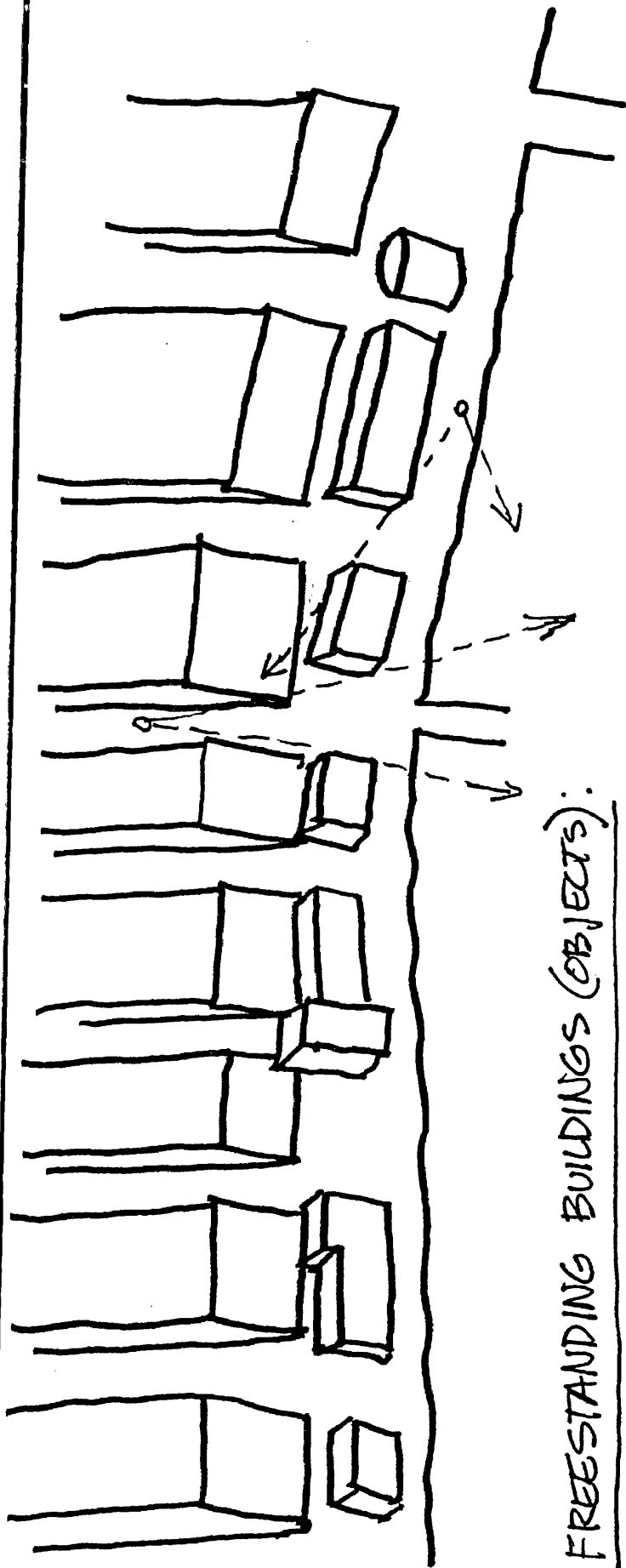


PERMEABLE WALL ENCLOSURE [MEDIocre]

THE APERTURE BETWEEN BUILDINGS STILL
RESTRICTS VIEWS TO NARROW SLOTS.

PART OF WHAT MAKES THE BROOMFIELD SPECIAL
IS THE VISUAL CONNECTION BETWEEN THE NORTH-
SOUTH STREETS AND THE RIVER'S OPENNESS.
IN THIS SCHEME THE STREETS ARE DEPRIVED
OF THEIR POTENTIAL FOR DRAMA. THE LONG STREETS
NEED TO "DELIVER" THE RIVER ENVIRONMENT.

RIVERWALK OPTIONS



FREESTANDING BUILDINGS (OBJECTS):

[BEST]

THE ASSORTED BUILDINGS IN THIS SCHEME PROVIDE AN ENVIRONMENT THAT CONTRASTS WITH THE LONG STREETS. THE RIVER IS CLEARLY CONNECTED TO THE BROOMFIELD, AND THE RELATIONSHIP BETWEEN THE RIVER AND THE PERPENDICULAR STREETS IS MOST OBVIOUS IN THIS SCHEME.

RIVERWALK OPTIONS

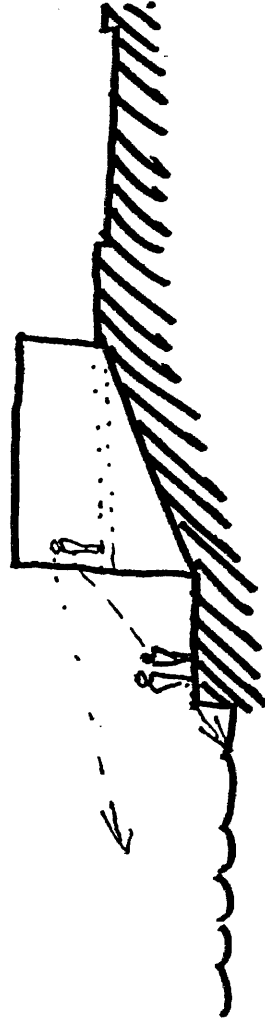
WALKWAY AND PAVILION PLACEMENT

IF THE WALKWAY WERE BUILT LEVEL WITH THE CLYDE STREET PEDESTRIAN CROSSING, THE RIVER WOULD BE ABOUT FOUR METRES BELOW THE WALK.

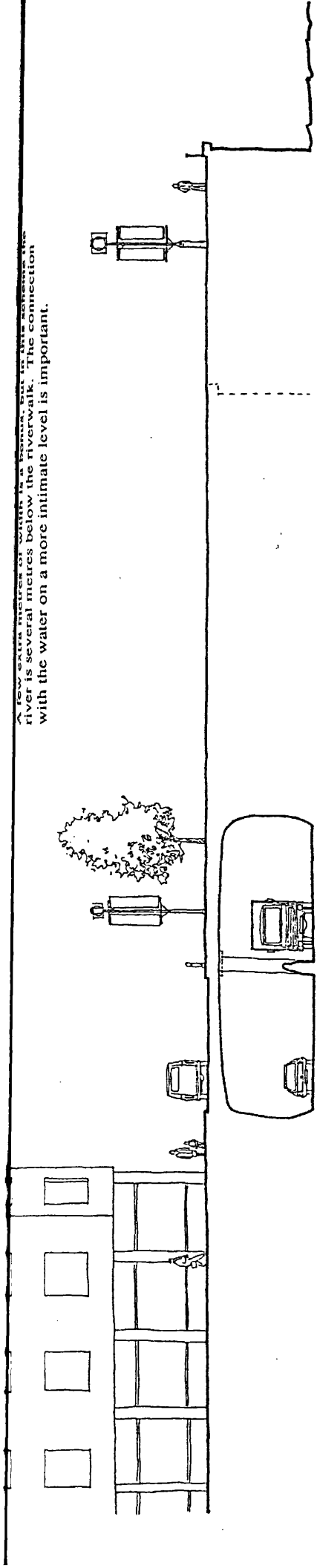


A WALK THAT IS CLOSER TO THE WATER LEVEL IS MORE ENJOYABLE. THE SLOPE OF THE SECTION CAN HELP TO REDUCE TRAFFIC NOISE ON THE PROMENADE.

TO KEEP THE WALKWAY ACTIVE AND INTERESTING, IT WILL HELP TO BUILD THE PAVILION'S QUITE CLOSE TO THE WATER'S EDGE. THIS WAY, PEDESTRIANS WILL NOT BE LOST ON A HUGE WALKWAY AND SHOP AND RESTAURANT PATRONS WILL HAVE A GOOD VIEW OF THE WATER.



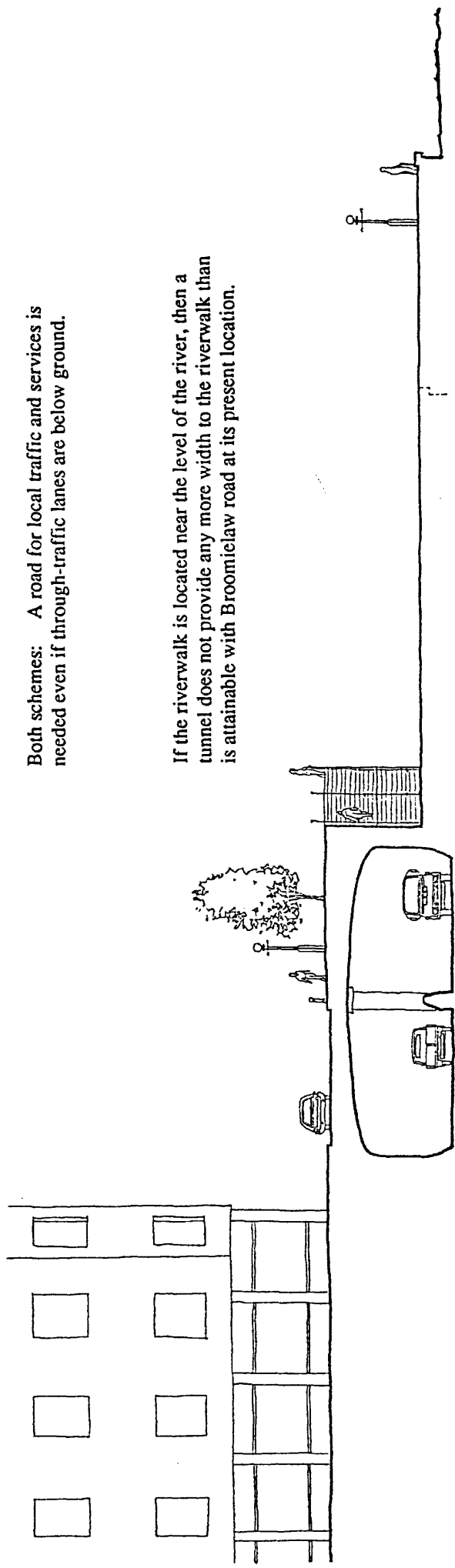
WHEN THE WEATHER IS NOT PERFECT, THE VIEWS FROM THE PAVILION'S ARE MORE IMPORTANT THAN VIEWS FROM A WIDE WALKWAY



A few extra metres of width is a bonus, but in this scheme the river is several metres below the riverwalk. The connection with the water on a more intimate level is important.

Section.

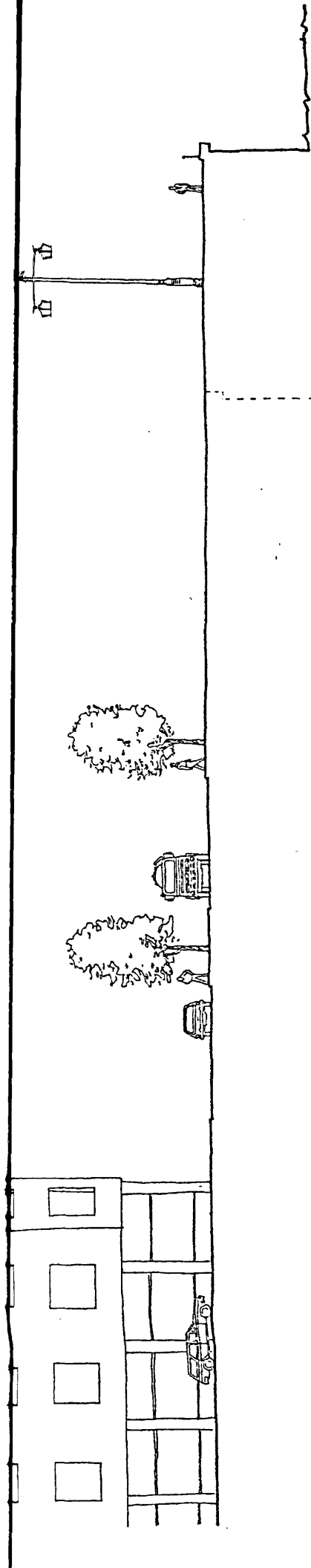
Both schemes: A road for local traffic and services is needed even if through-traffic lanes are below ground.



If the riverwalk is located near the level of the river, then a tunnel does not provide any more width to the riverwalk than is attainable with Broomielaw road at its present location.

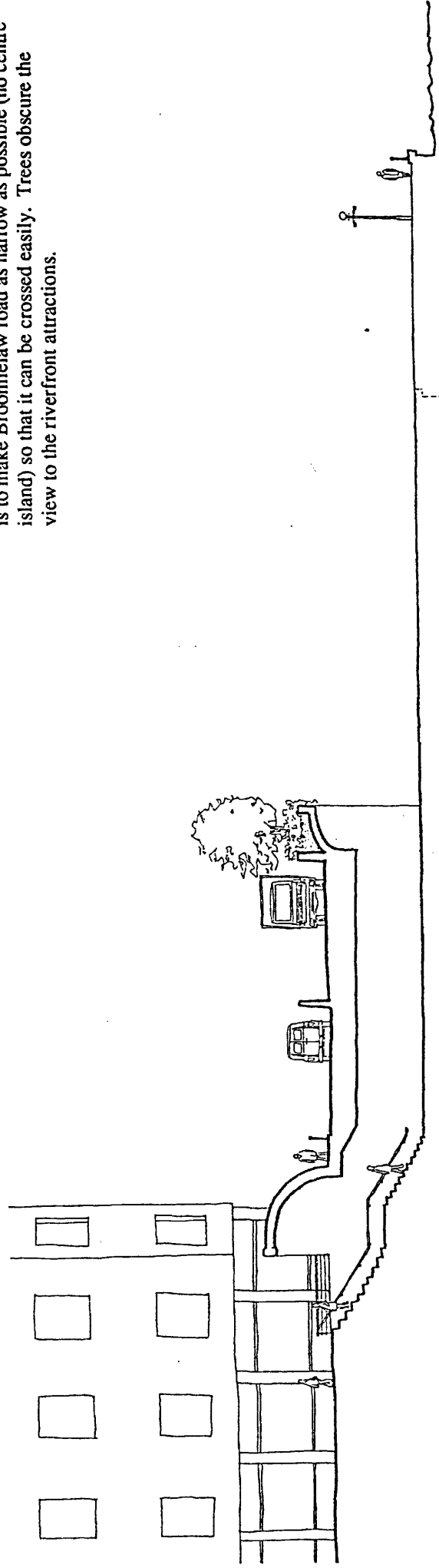
Section.

Riverwalk studies: through traffic below ground.



Section.

The widening of Broomielaw road to make it a tree-lined boulevard uses valuable river bank space. The best solution is to make Broomielaw road as narrow as possible (no centre island) so that it can be crossed easily. Trees obscure the view to the riverfront attractions.



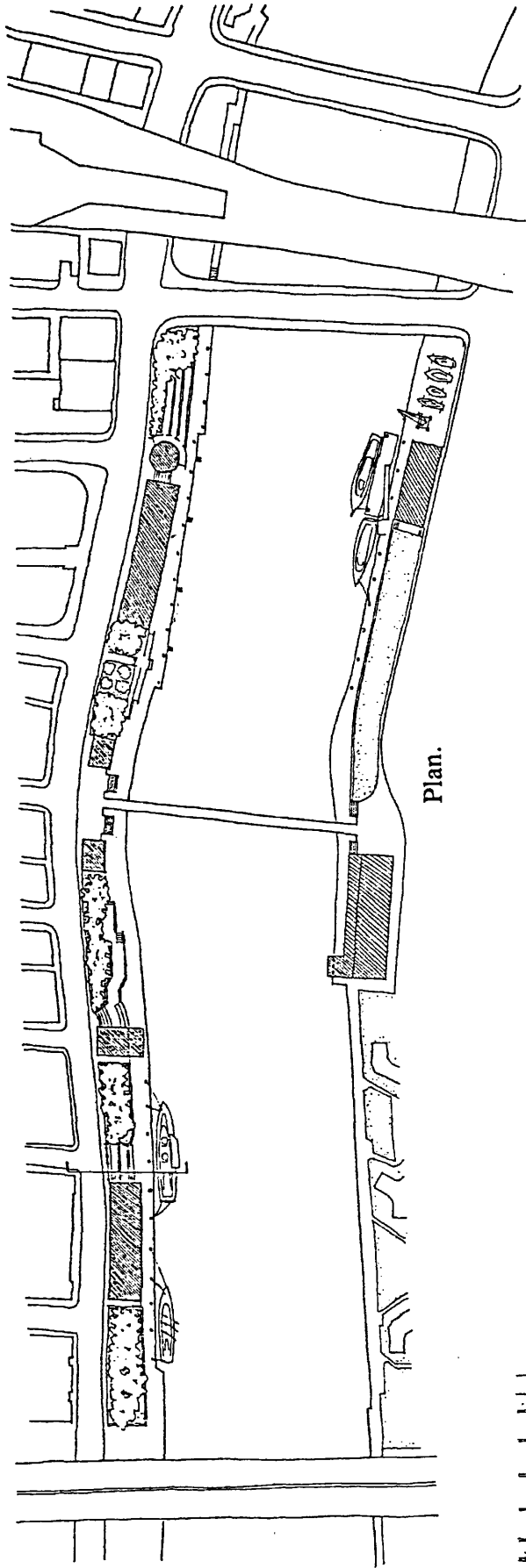
Section.

Tunnels for pedestrians are often dismal. A tunnel that is constructed as part of a building will be permitted if it is enclosed, secure, well-lighted, etc. After hours, when it is closed, pedestrians will cross the road at grade.

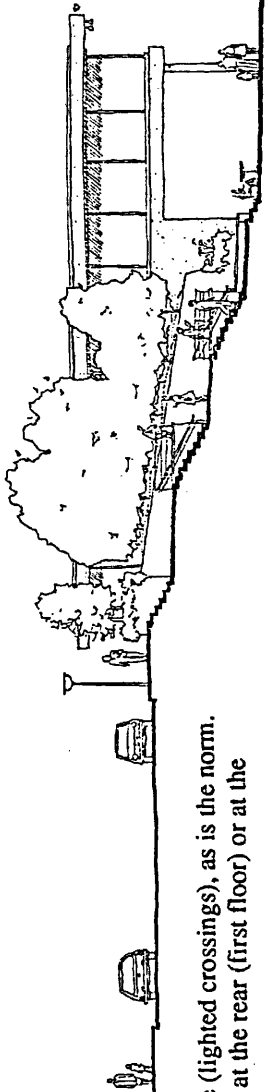
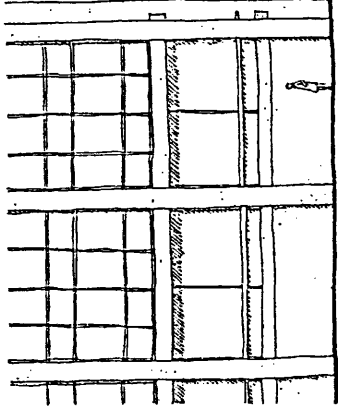
Riverwalk studies: through traffic at present level.



Elevation.

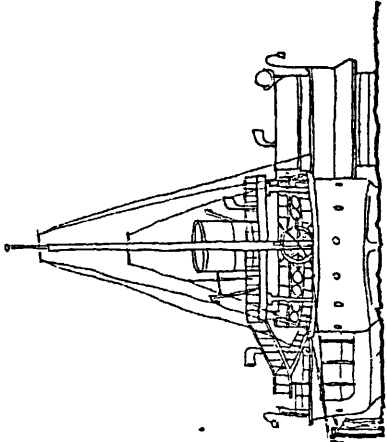


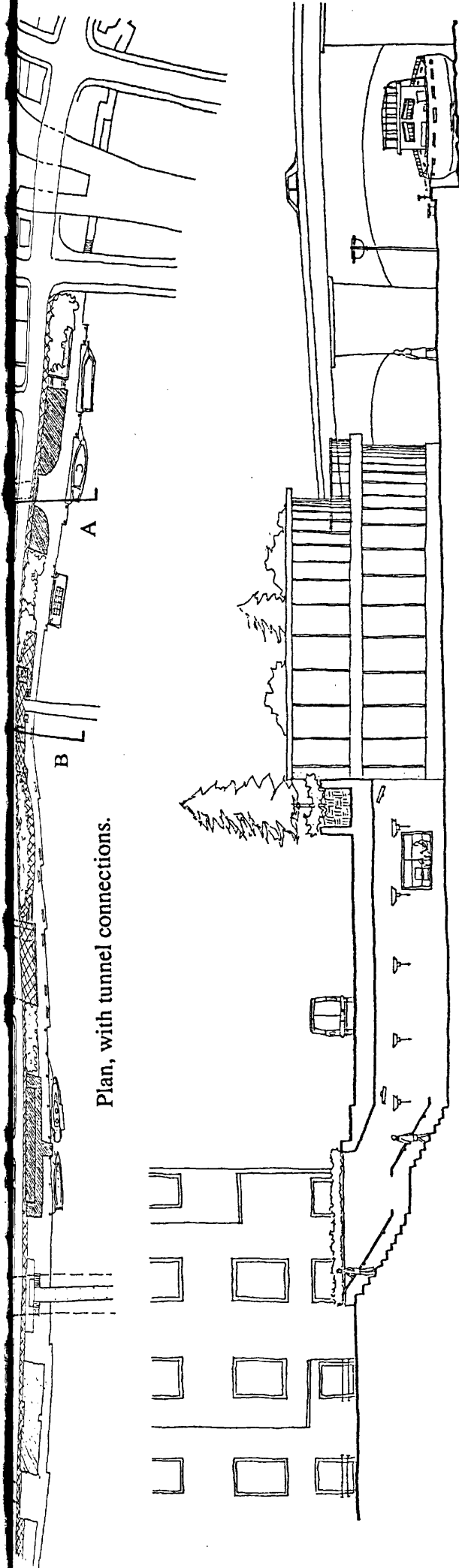
Plan.



Pedestrians cross at grade (lighted crossings), as is the norm.
 Pavilions may be entered at the rear (first floor) or at the river side (ground floor).

Section.

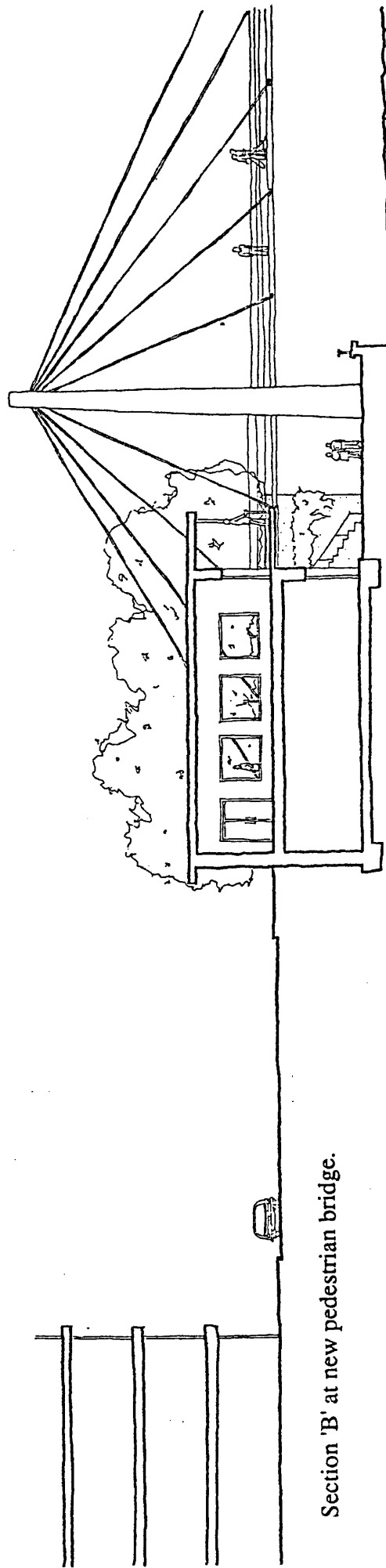




Plan, with tunnel connections.

Section 'A' at Atlantic Quay offices, tunnel connection.

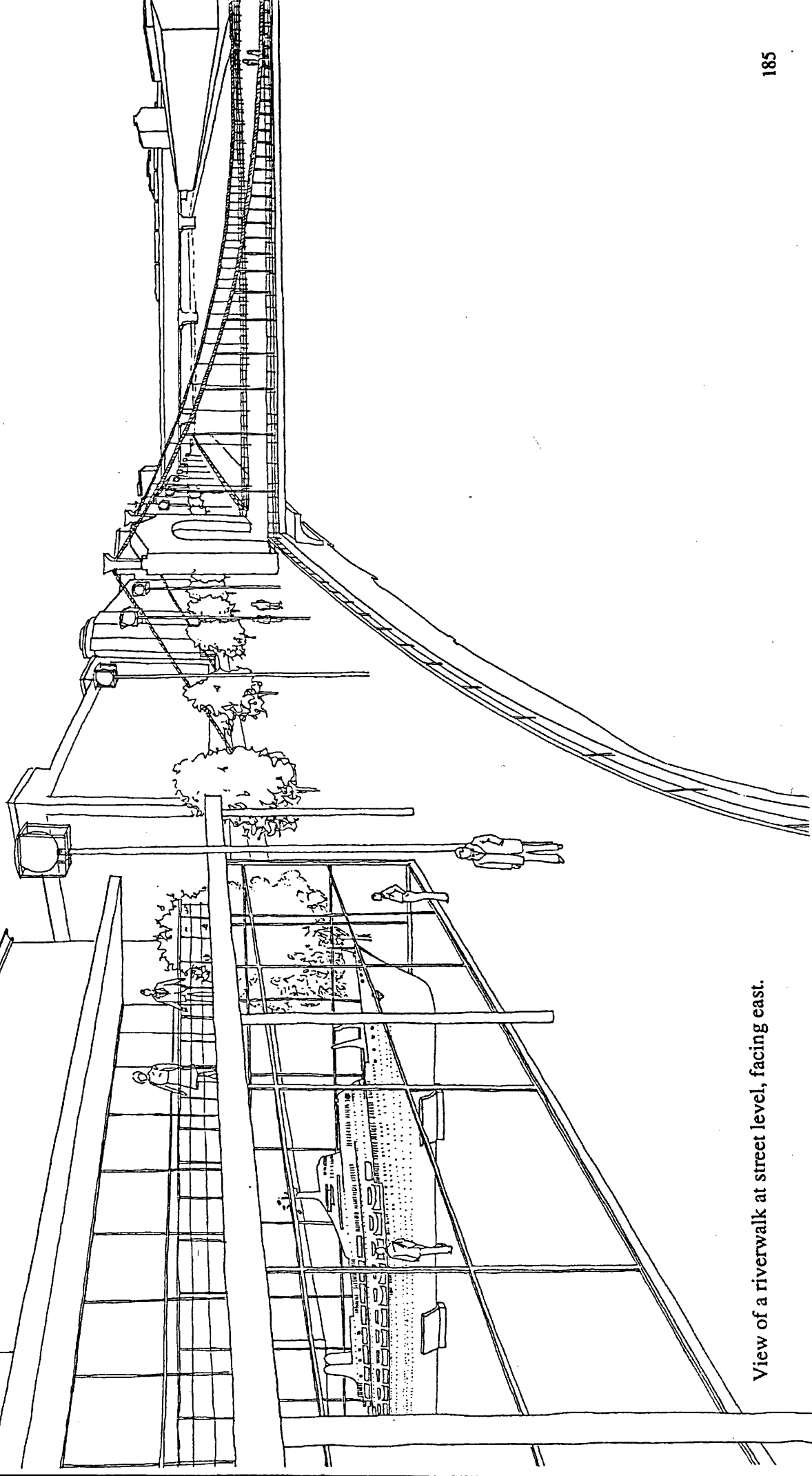
The owners of Atlantic Quay currently employ a security guard. He or she works in a booth with video monitors. The guard could be relocated to the edge of the tunnel or actually on the riverwalk.



Section 'B' at new pedestrian bridge.

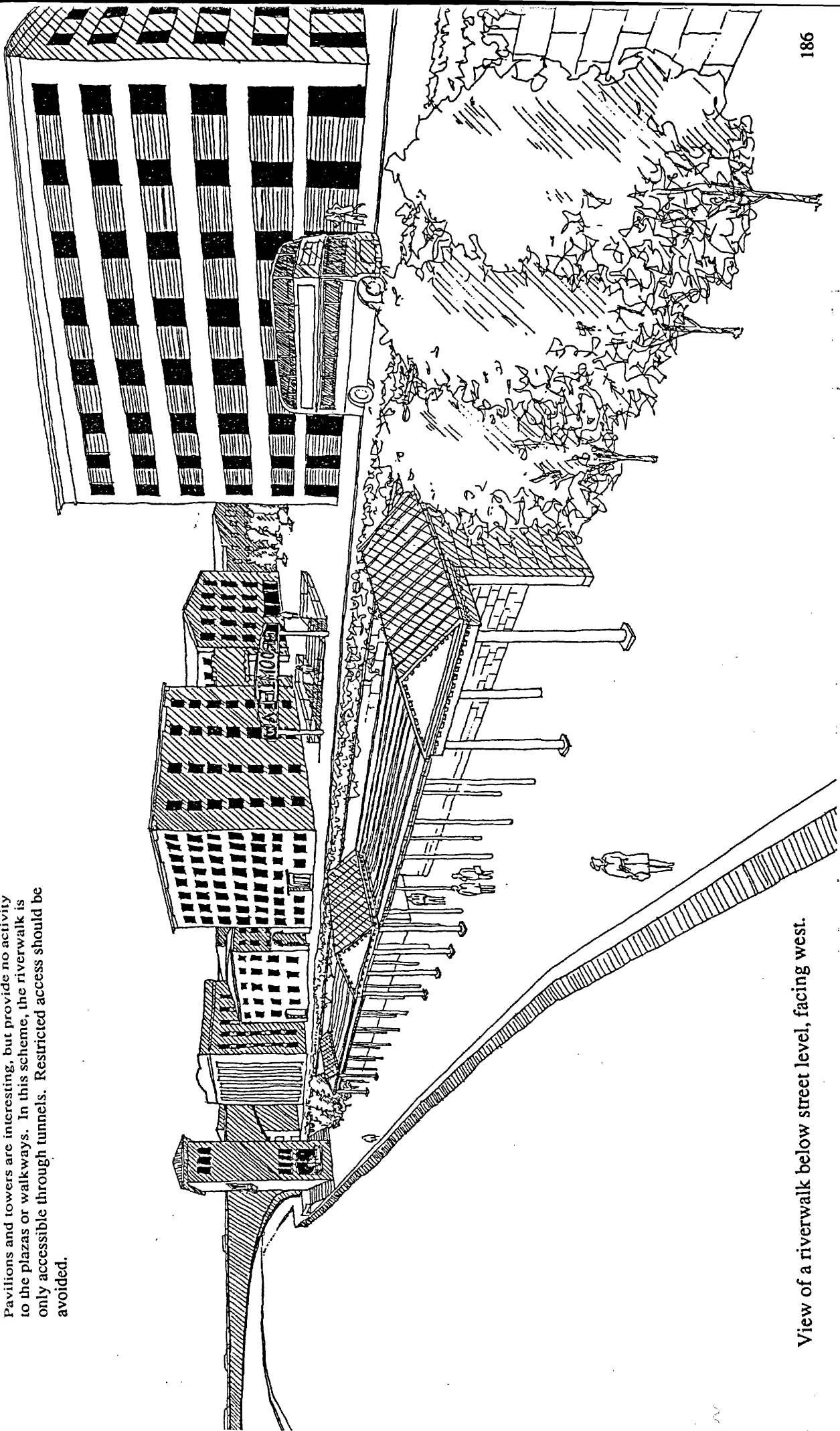
Riverwalk study.

A broad plaza: needs more buildings to define the riverwalk and encourage people to visit and stay.

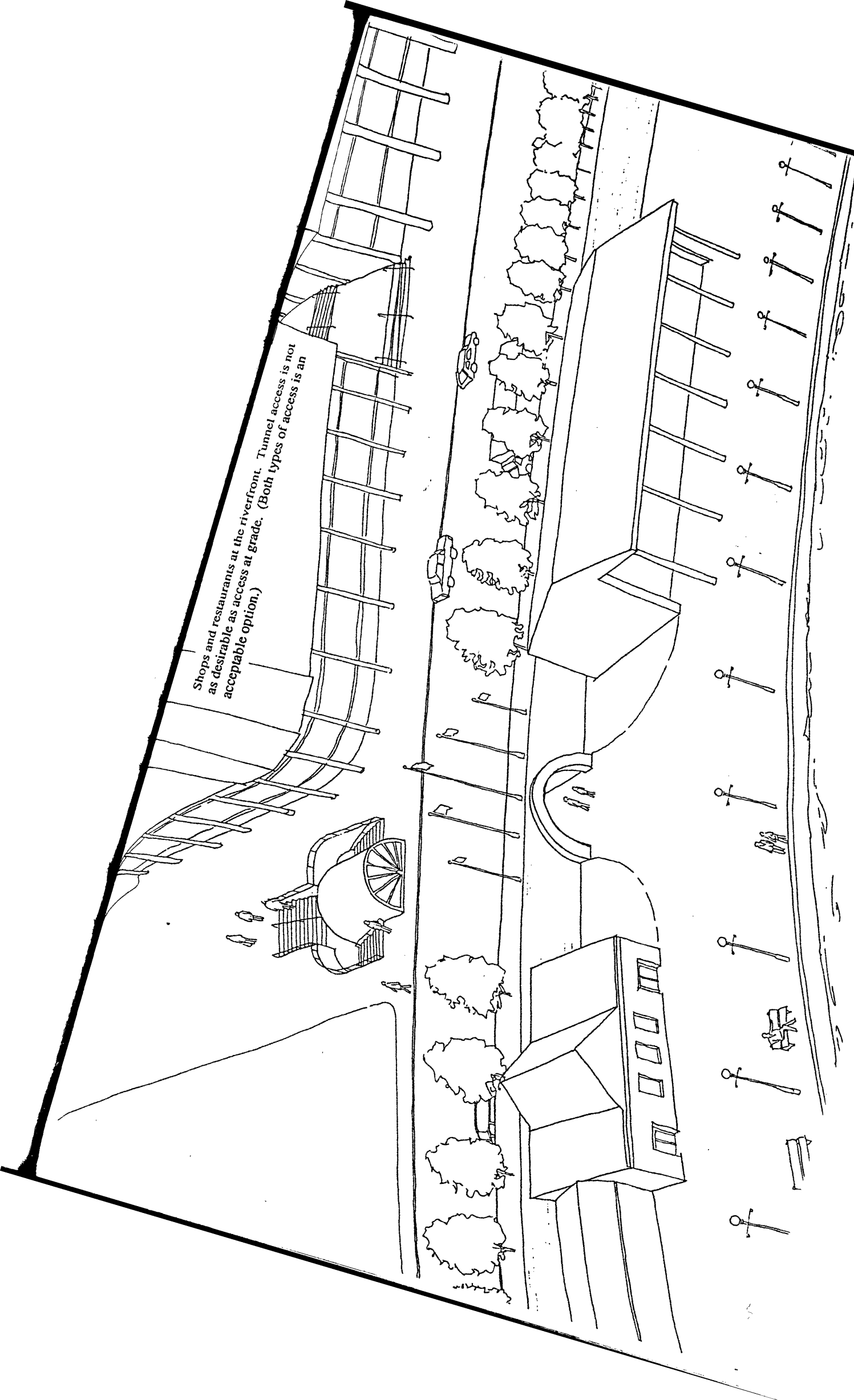


View of a riverwalk at street level, facing east.

Pavilions and towers are interesting, but provide no activity to the plazas or walkways. In this scheme, the riverwalk is only accessible through tunnels. Restricted access should be avoided.

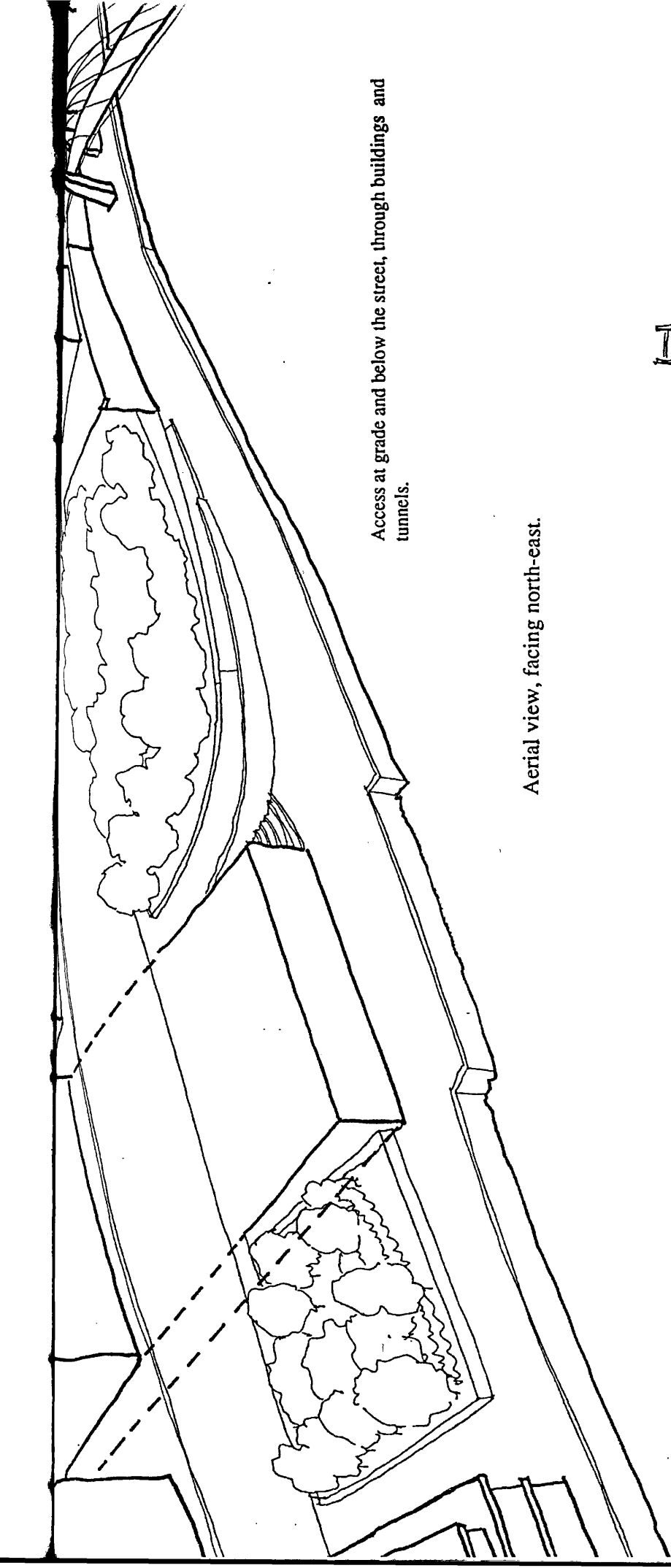


View of a riverwalk below street level, facing west.



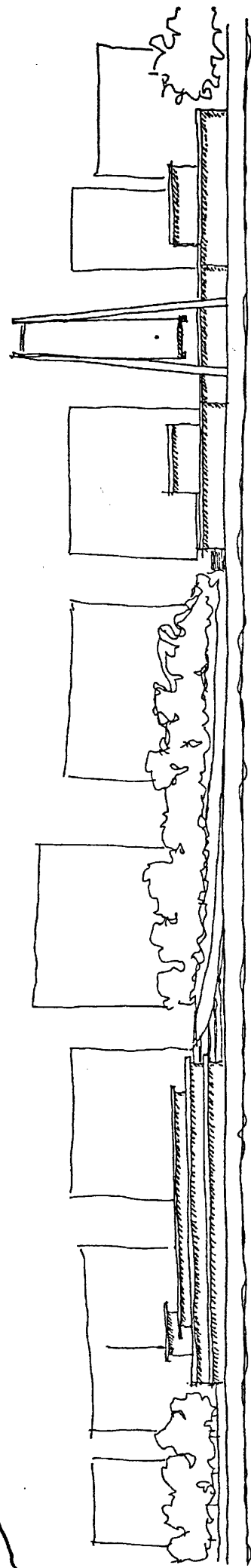
Shops and restaurants at the riverfront. Tunnel access is not as desirable as access at grade. (Both types of access is an acceptable option.)

View of a riverwalk only accessible by tunnel, facing north-east.



Access at grade and below the street, through buildings and tunnels.

Aerial view, facing north-east.

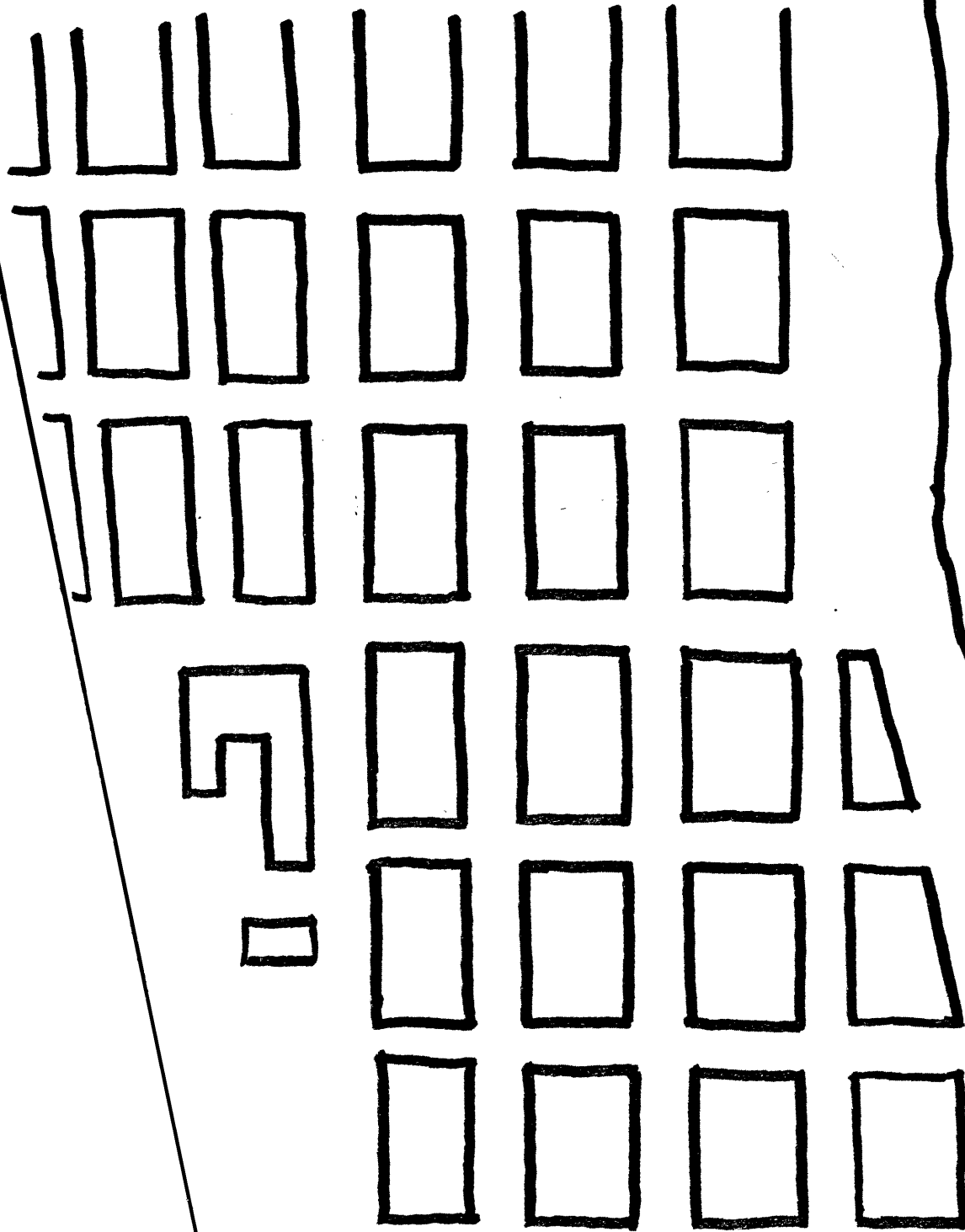


Elevation, facing north.

Views of a riverwalk accessible at grade or by tunnel.

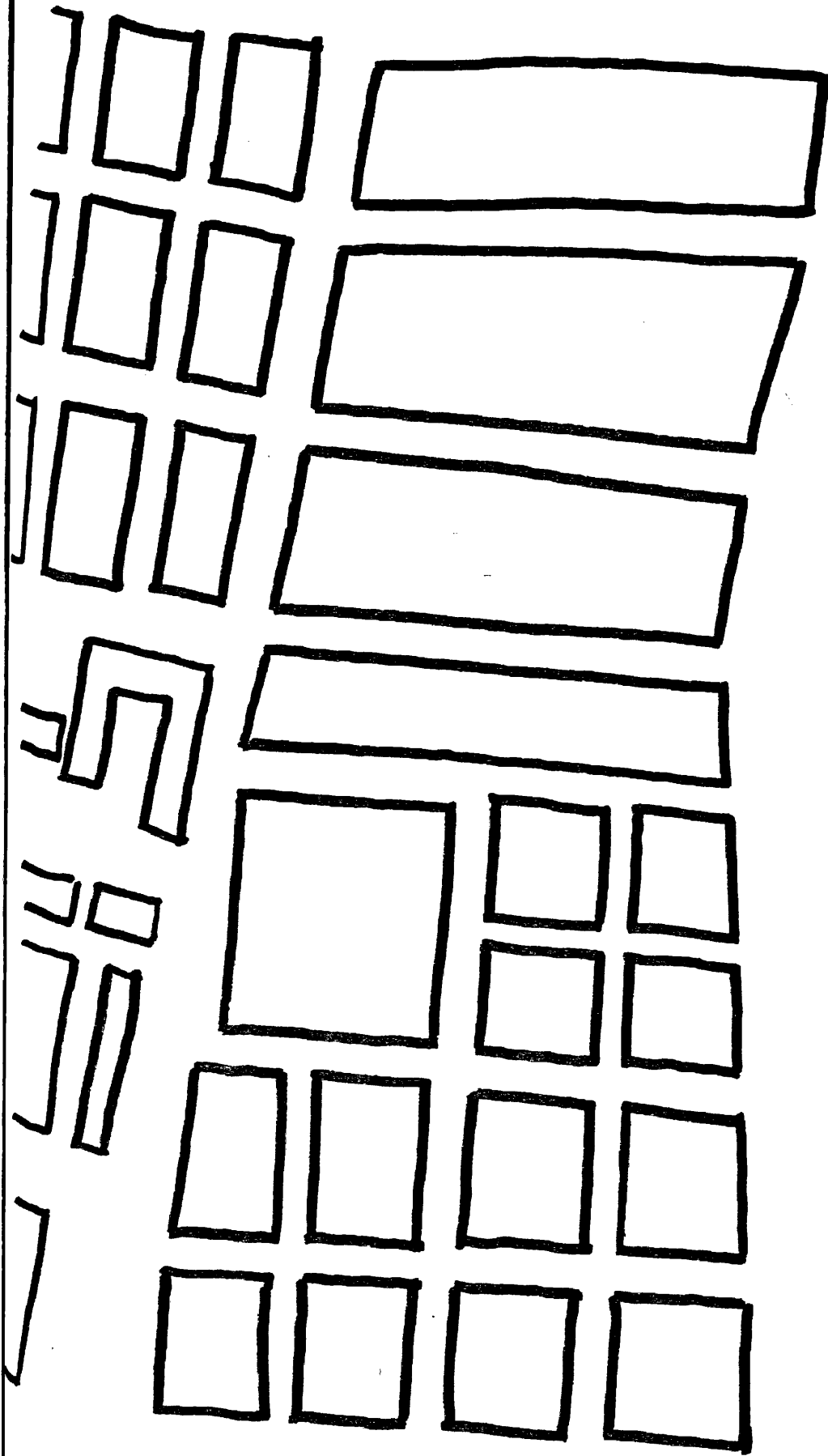


STREET GRID STUDY: RANDOM
THE CONNECTIONS BETWEEN THE RIVER AND BLYTHSWOOD
STREETS ARE TEDIOUS AND CONFUSING. DEAD-END
STIPLE ACTIVITY.



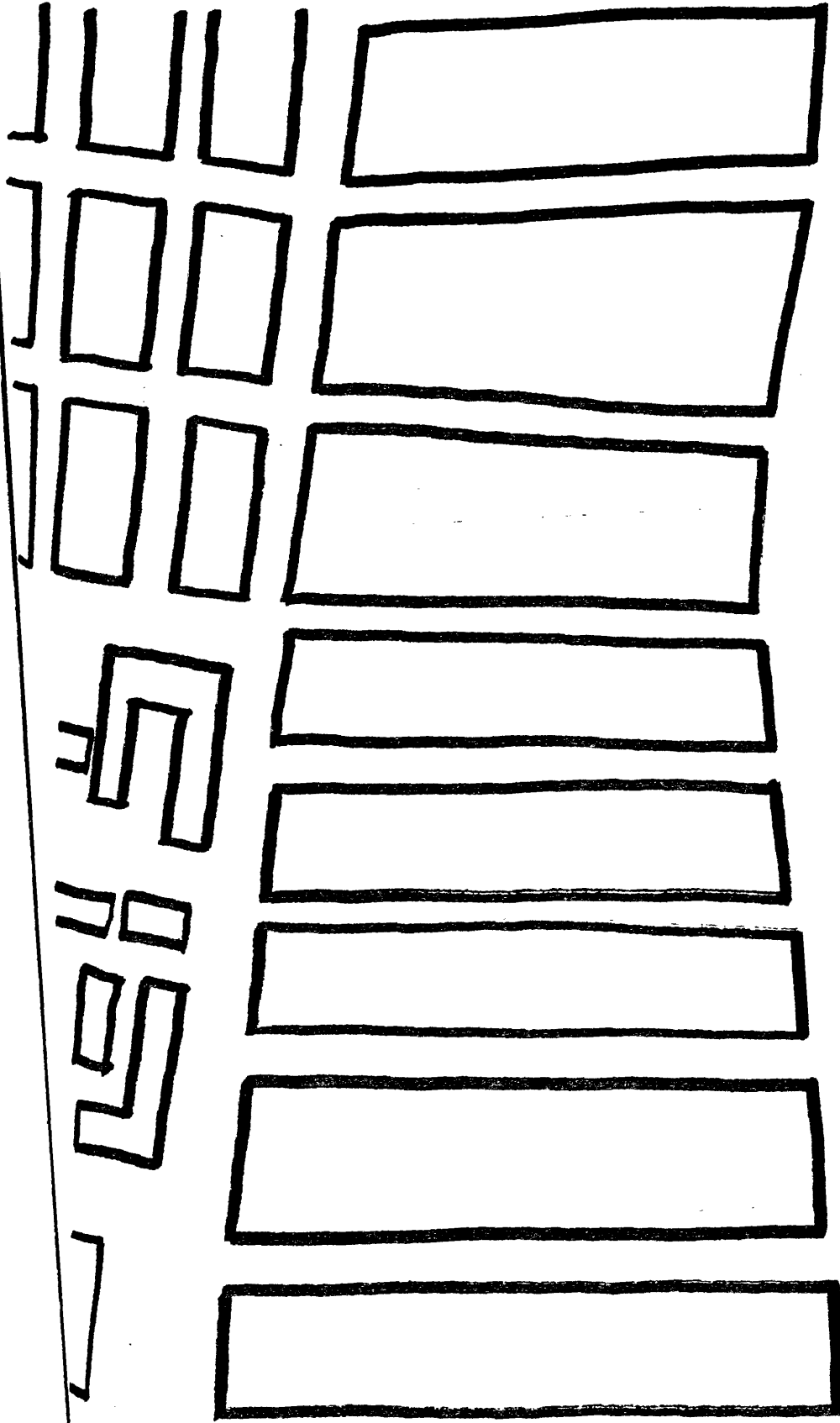
STREET GRID STUDY: BLYTHSWOOD GRID
CONTINUED

CIRCULATION ROUTES ARE GOOD, BUT ORIENTATION BECOMES DIFFICULT
IF THE BLYTHSWOOD GRID IS CONTINUED. A PLAN WITH THIS MUCH TOTAL
PERIMETER SHOULD BE VERY DENSE TO SUSTAIN ACTIVITY ON THE STREETS.



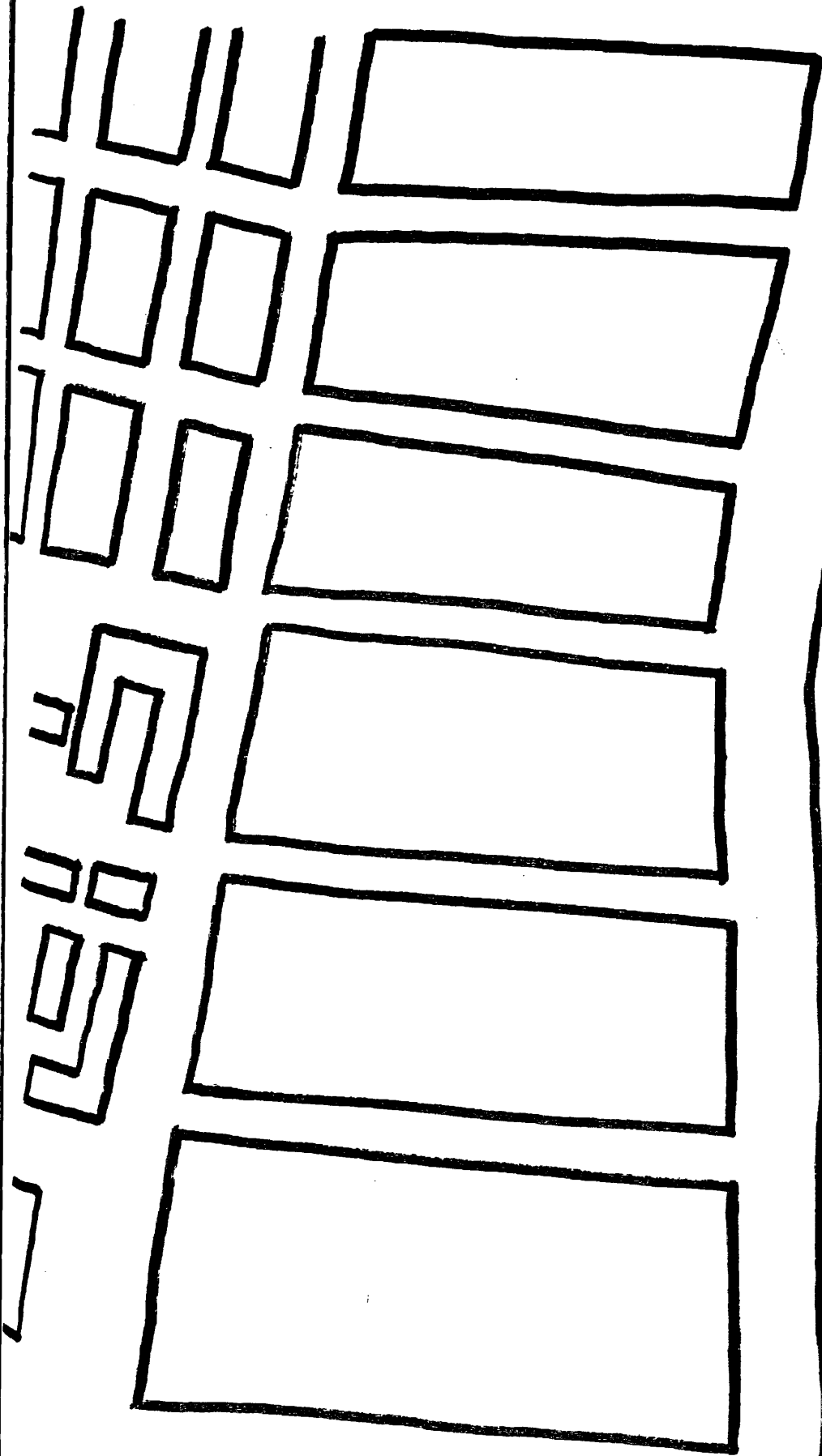
STREET GRID STUDY: HISTORIC EAST BROOMFIELD
PRESERVED, WEST IS GRIDIRON

THE EAST END SERVES A USEFUL PURPOSE: TO BE A CONDUIT BETWEEN
THE RIVER AND BLYTHSWOOD. THE WEST END HAS THE SAME PROBLEMS
AS THE PREVIOUS GRIDIRON SCHEME.



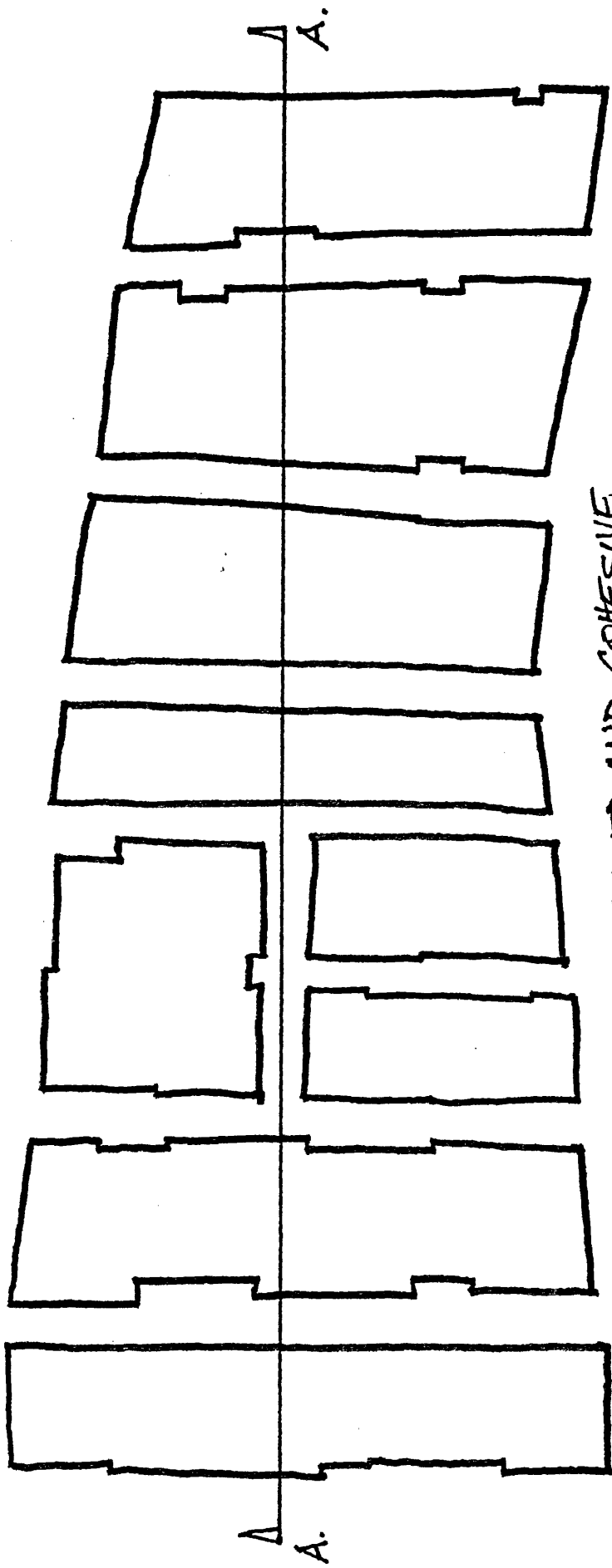
STREET GRID STUDY: LONG BLOCKS
(2 EXISTING EAST-WEST STREETS REMOVED)

THIS LAYOUT UNIFIES THE WHOLE OF THE BROOMFIELD AVE BETWEEN THE
BARRIERS OF THE KINGSTON BRIDGE AND CENTRAL STATION.



STREET GRID STUDY: WIDE, LONG BLOCKS

AT THIS POINT, THE BLOCKS ARE SO DEEP THAT SERVICING THE BLOCKS BECOMES A BURDEN ON THE STREETS. DOUBLE-WIDTH STREETS WOULD ALLEVIATE THE PROBLEM, BUT WOULD POSE DIFFICULTIES TO PEDESTRIANS CROSSING THE STREETS. THE OPTION OF TOTALLY OPEN INTERIOR BLOCKS WOULD PRESENT TOO MANY UNUSED SPACES.

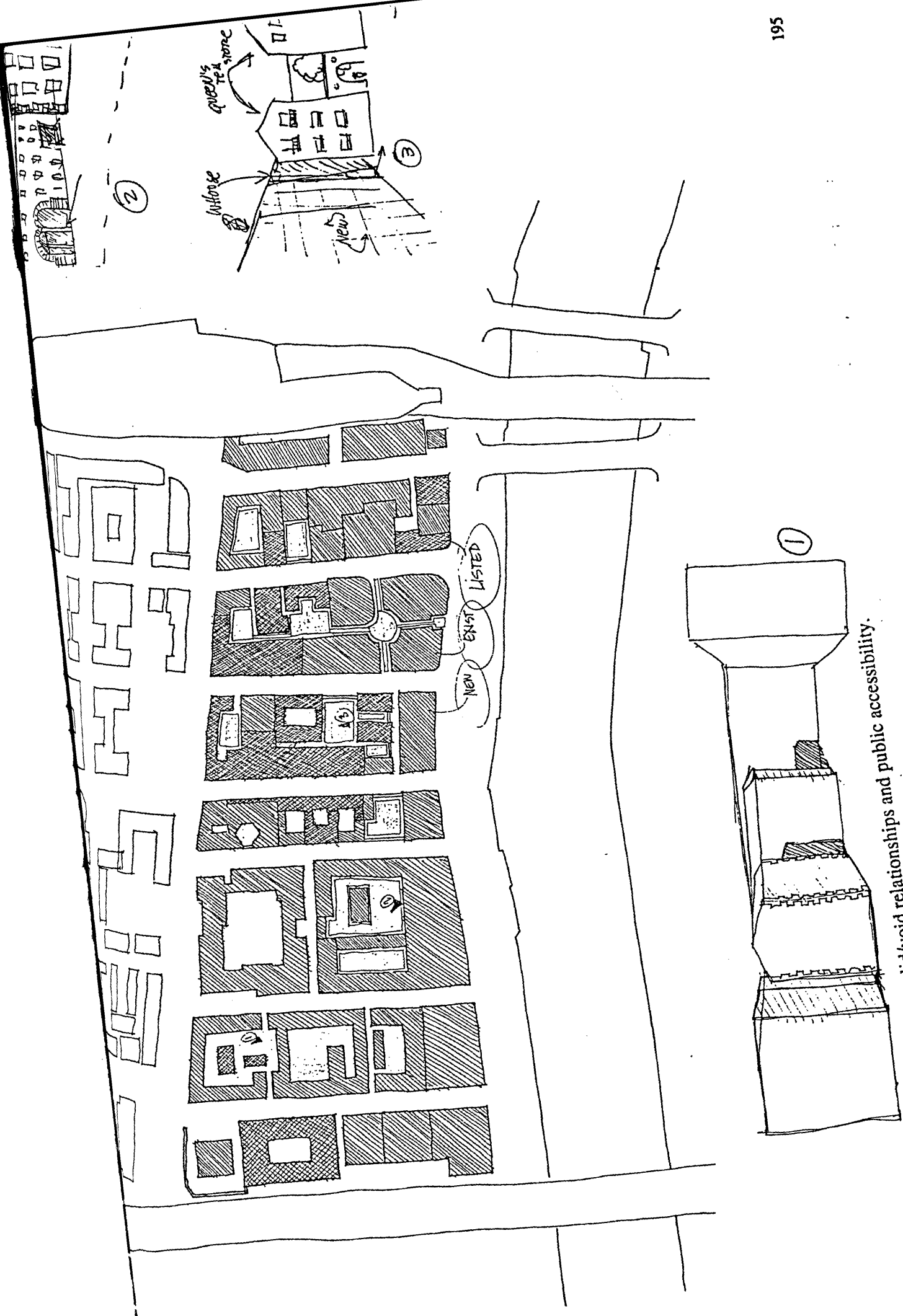


STREETS CAN BE VARIED AND COHESIVE.

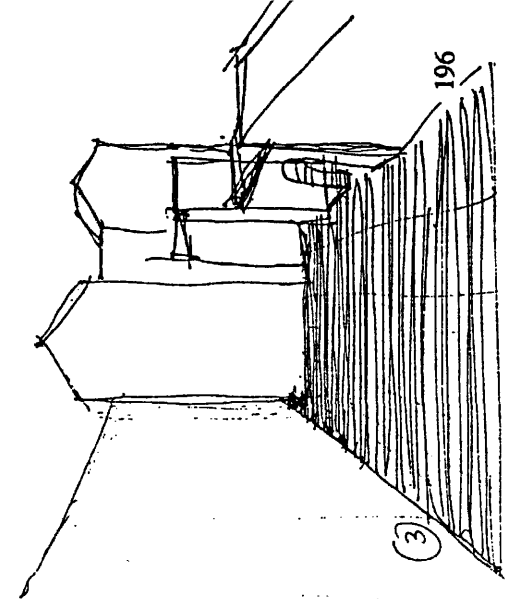
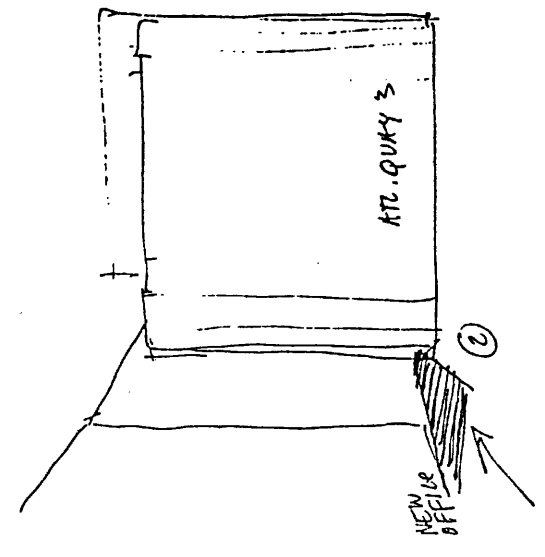
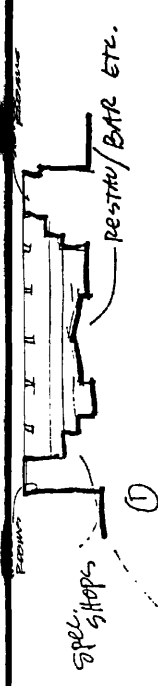


SECTION A.

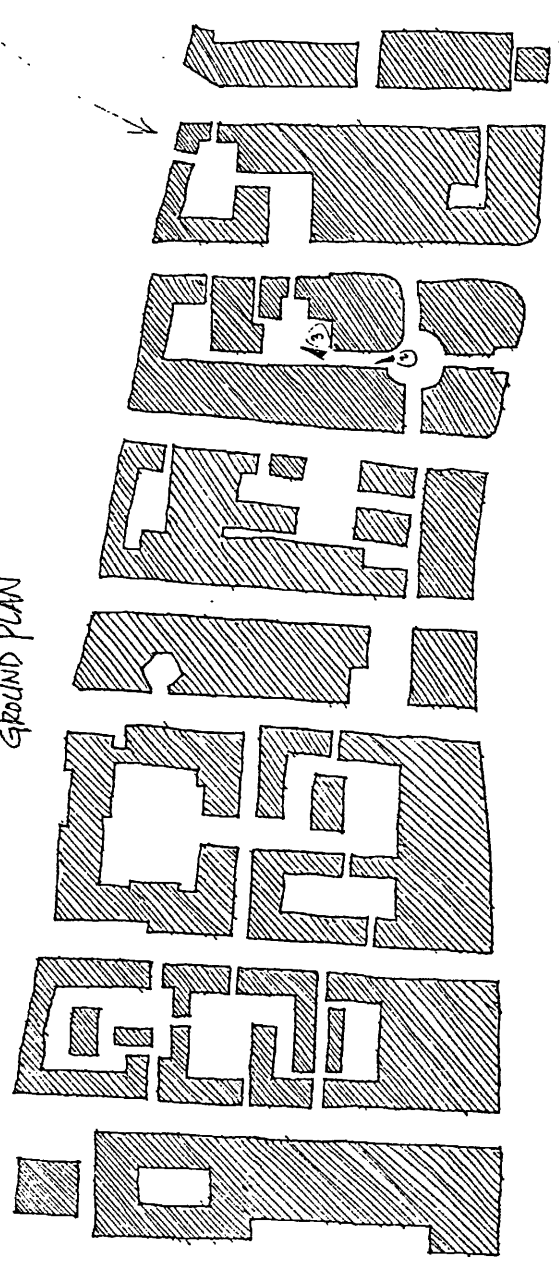
A COHESIVE DISTRICT: COMPLIMENTARY STREETS AND COURTS



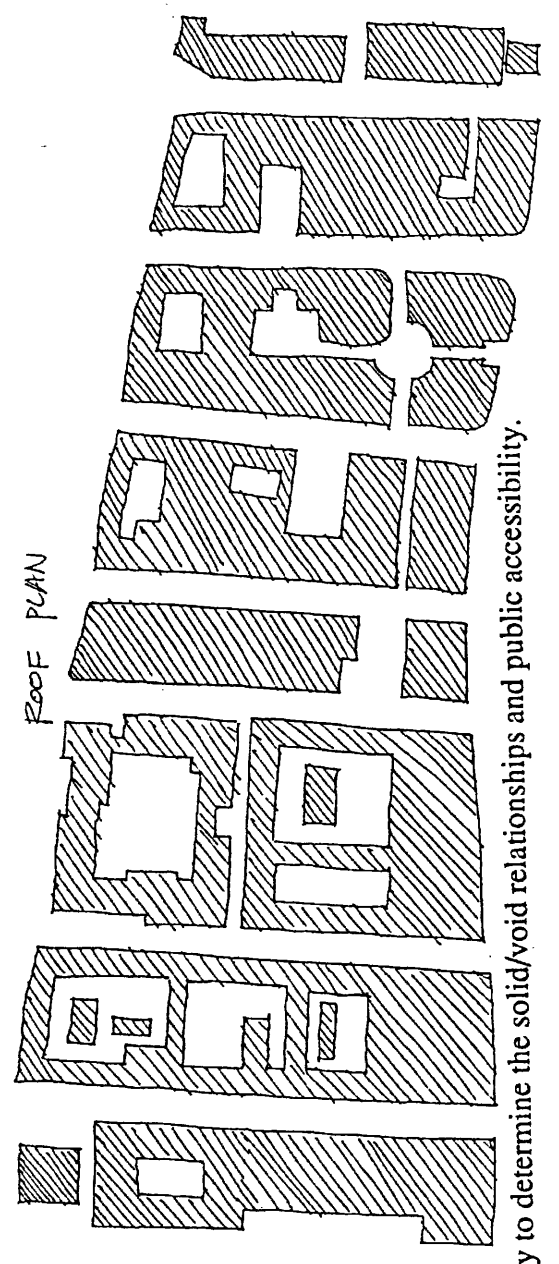
Plan study to determine the solid/void relationships and public accessibility.



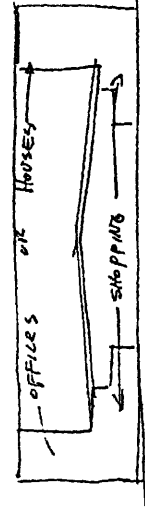
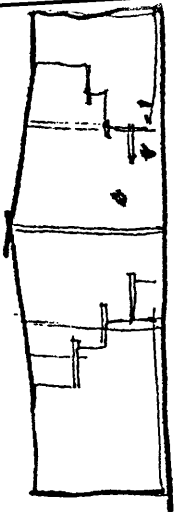
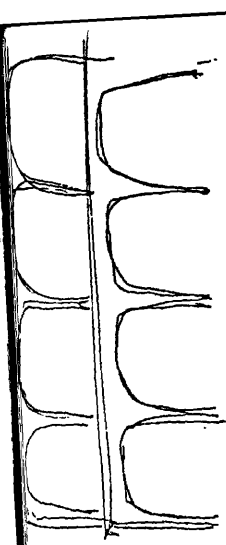
GROUND PLAN



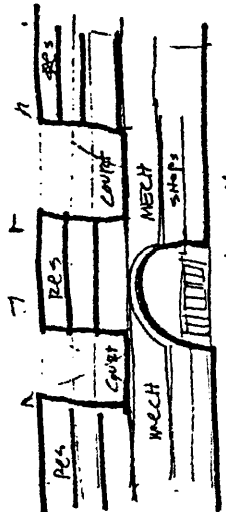
ROOF PLAN



Plan study to determine the solid/void relationships and public accessibility.



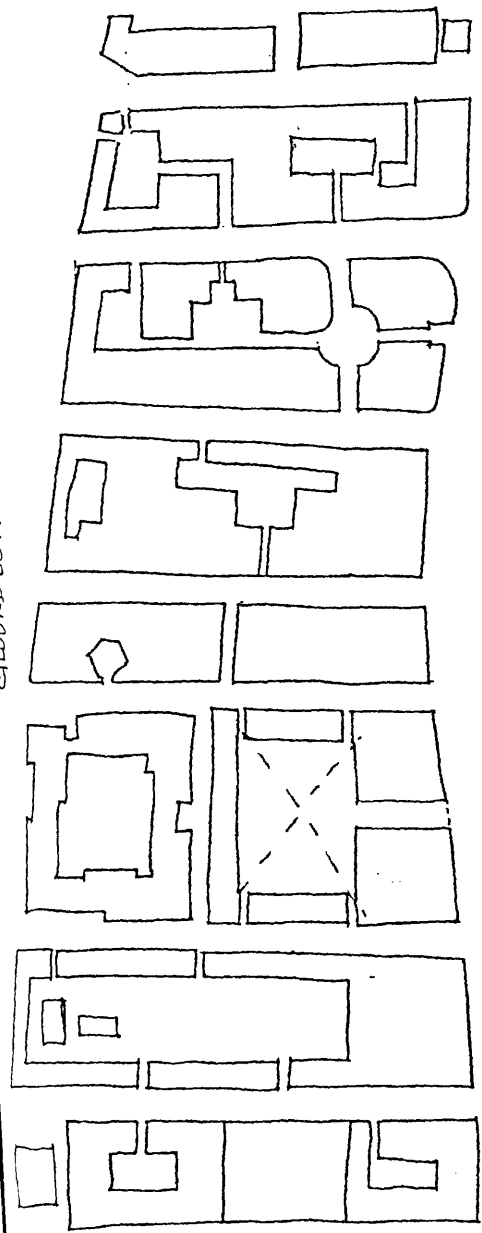
①



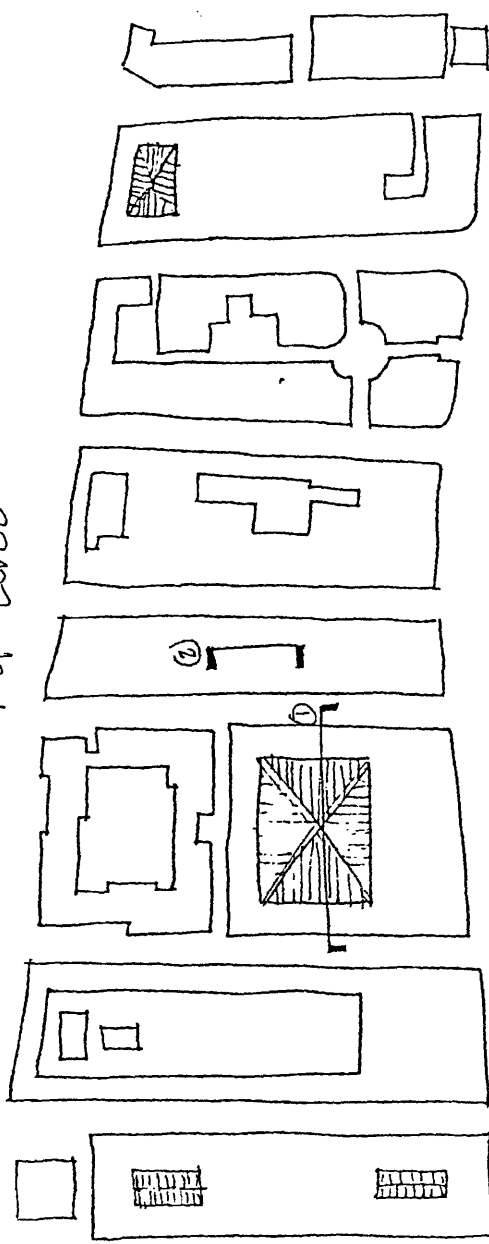
SECTION THROUGH
TO BAKLO WAREHOUSE

②

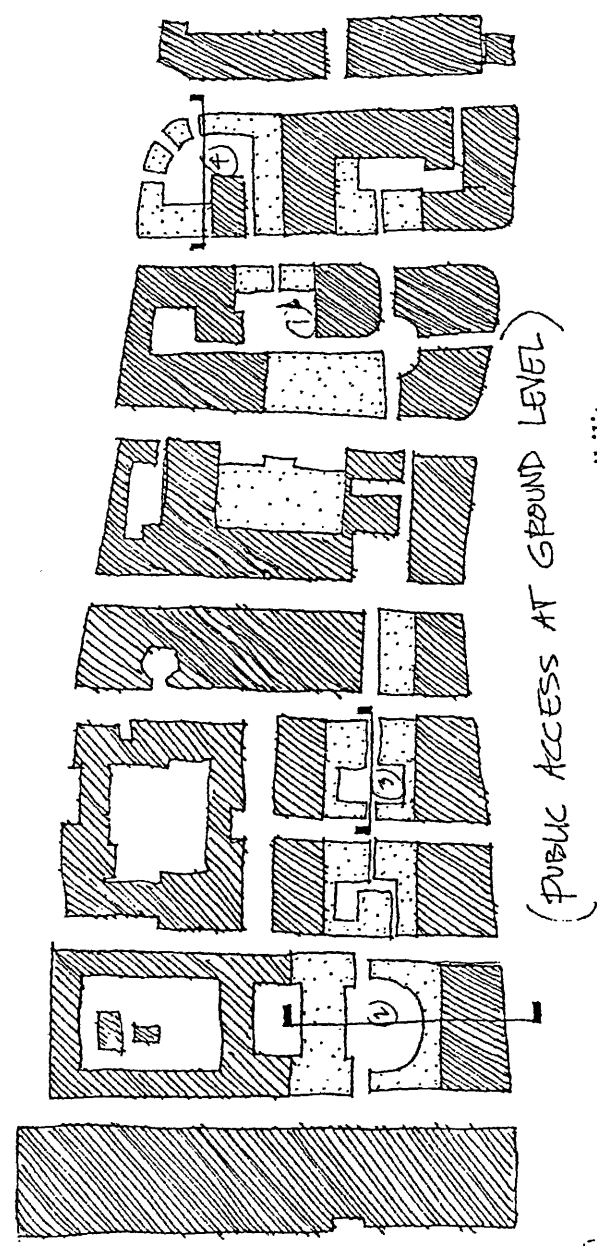
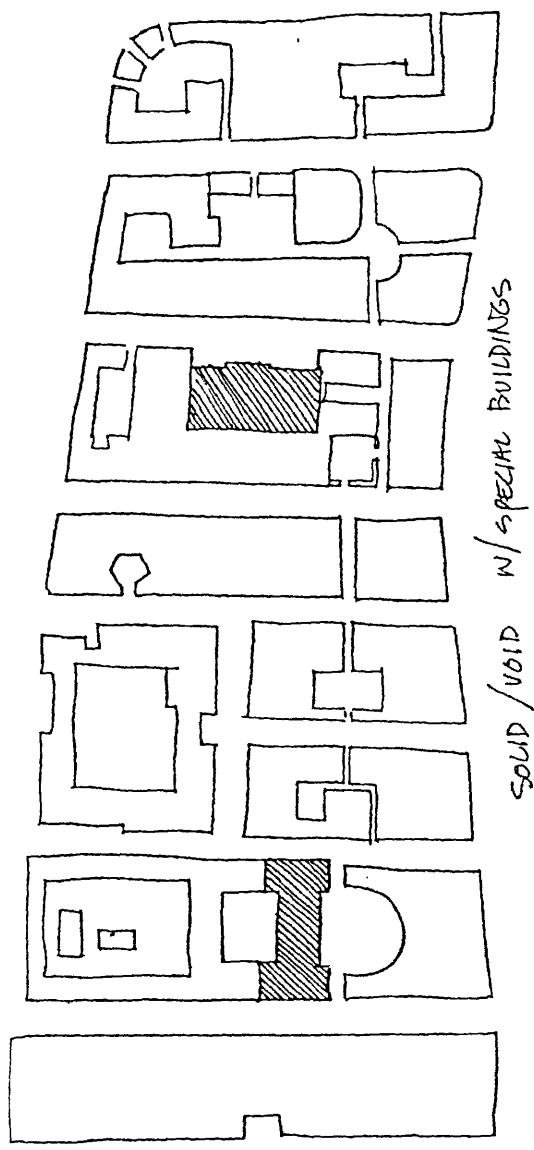
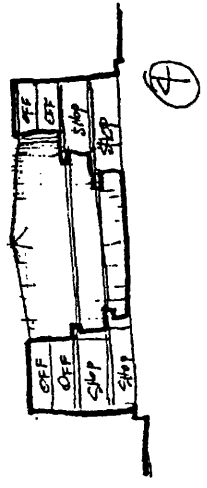
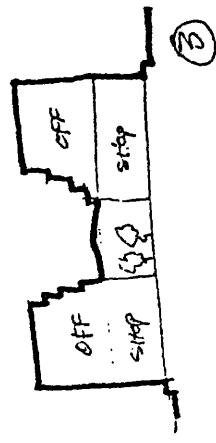
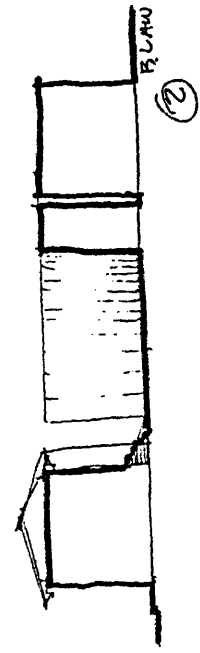
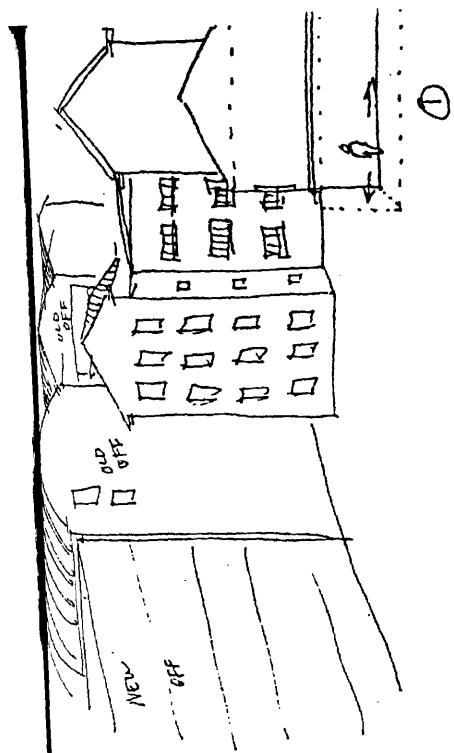
GROUND LEVEL



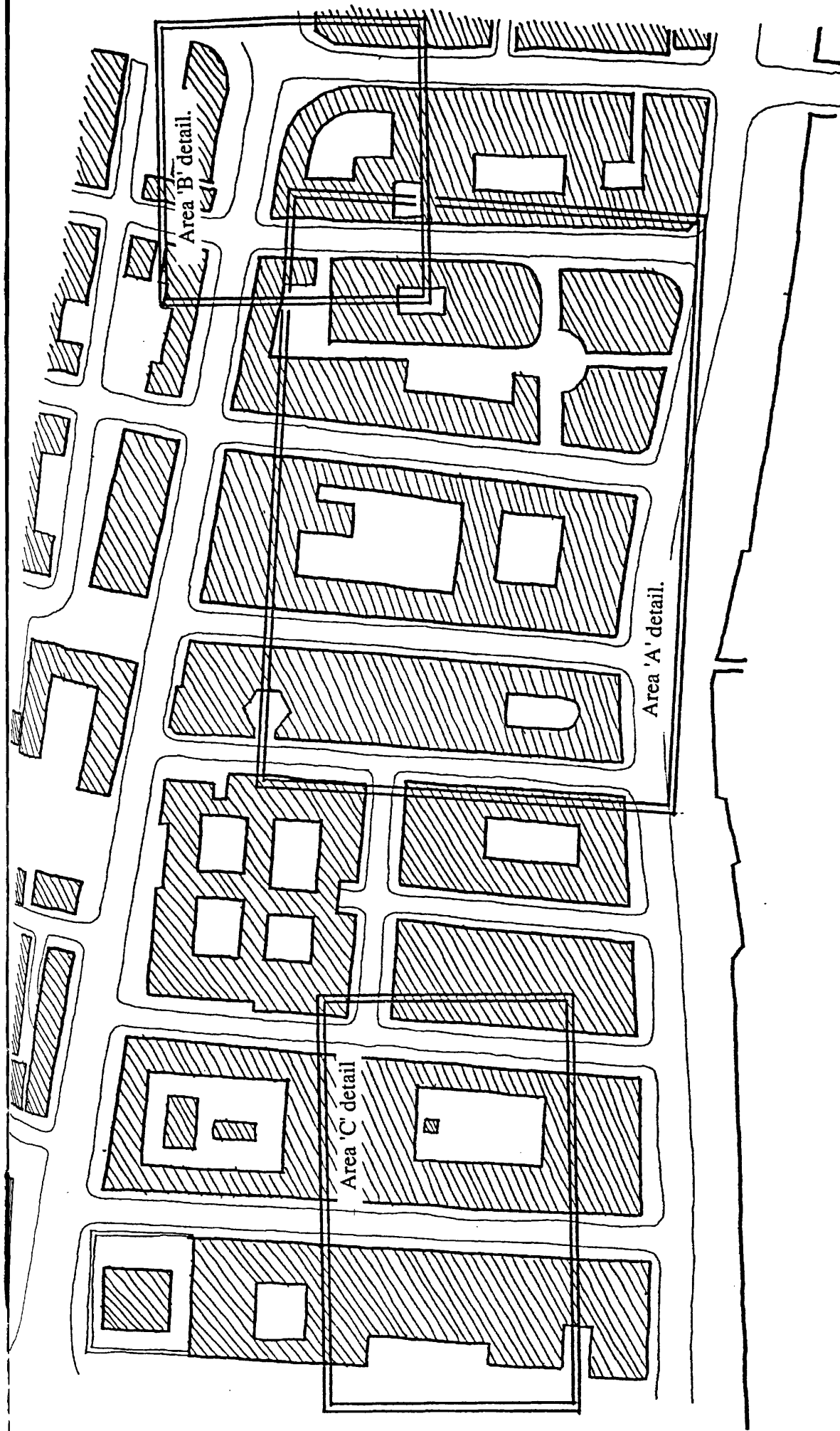
ROOF LEVEL



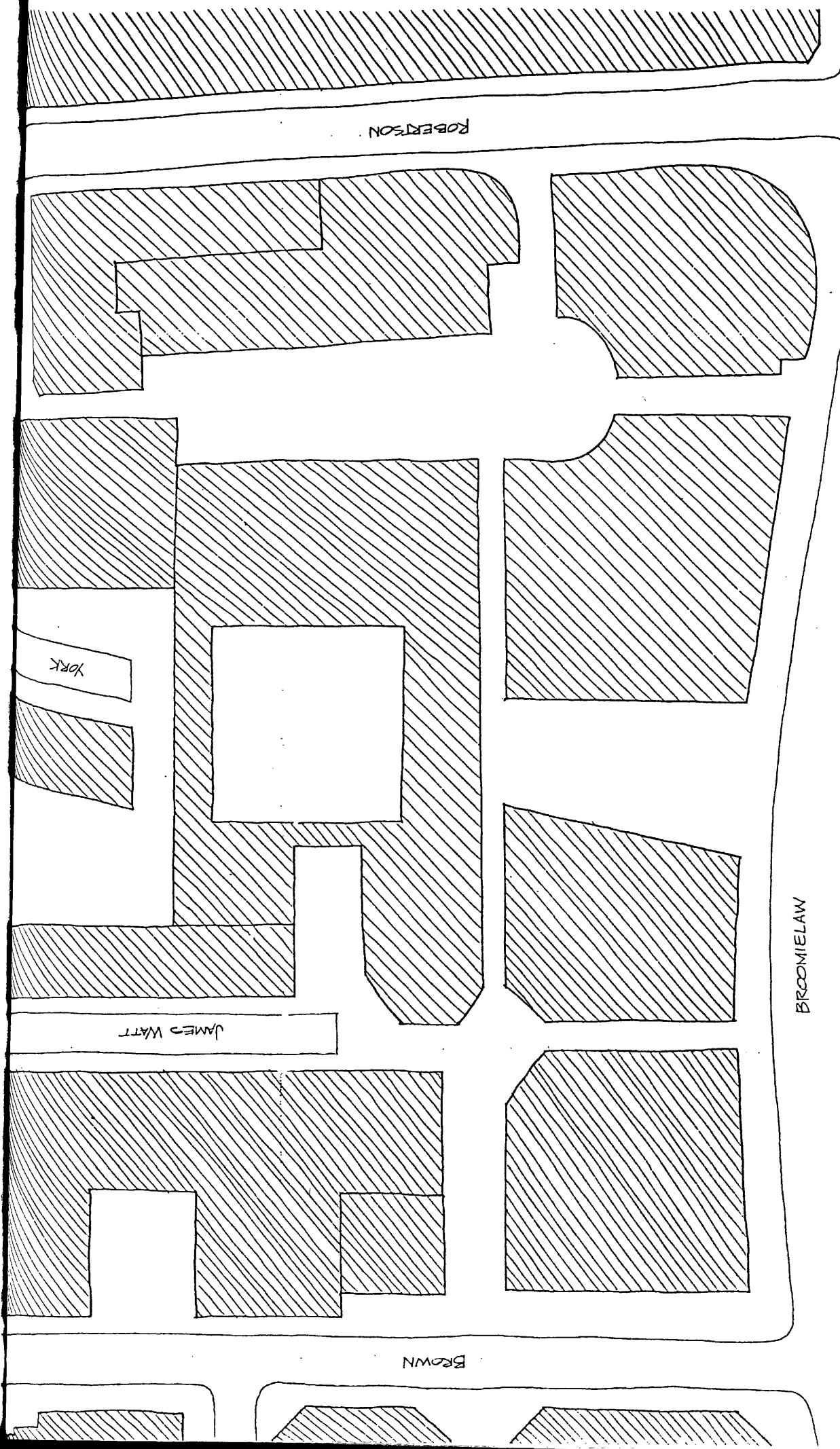
Plan study to determine the solid/void relationships and public accessibility.



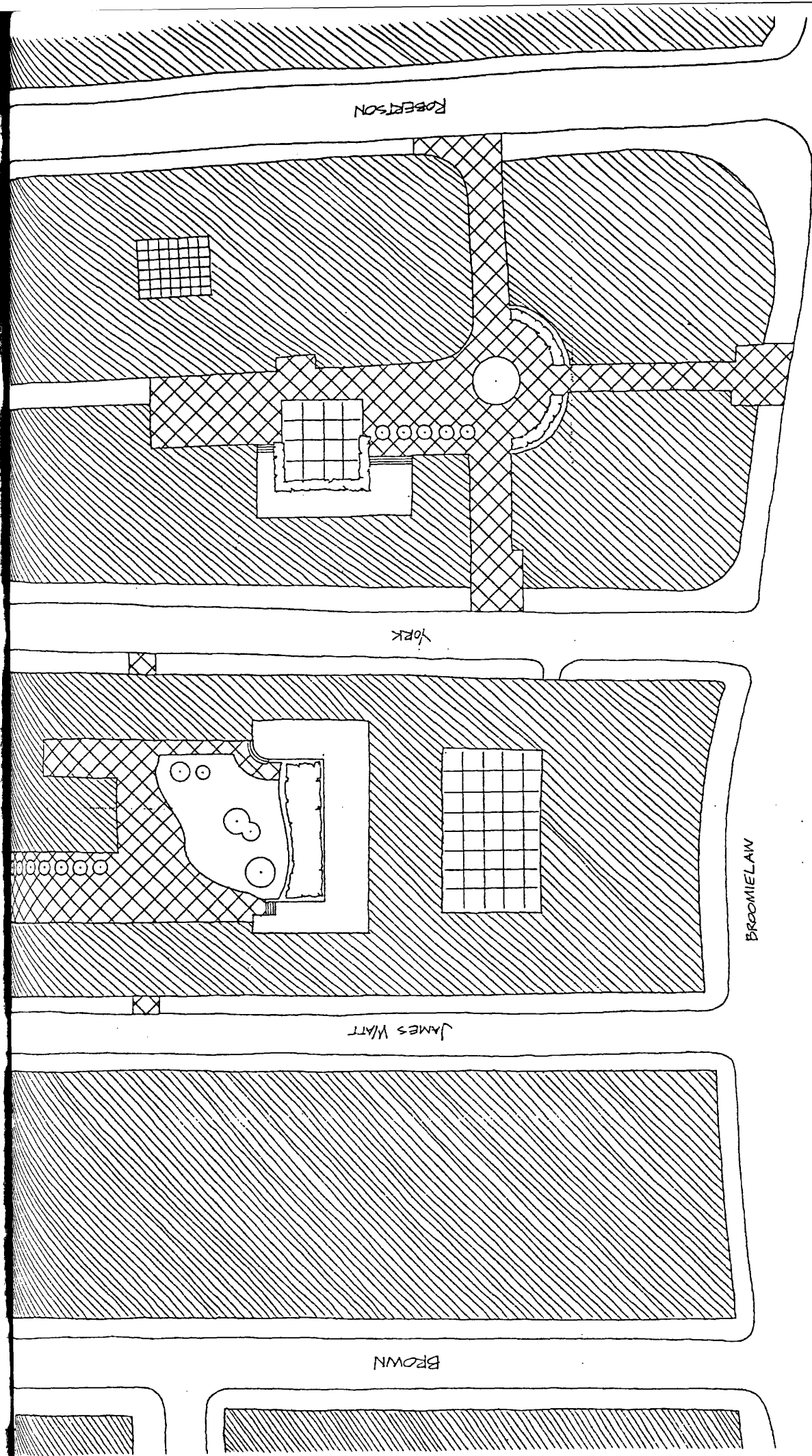
Plan study to determine the solid/void relationships and public accessibility.



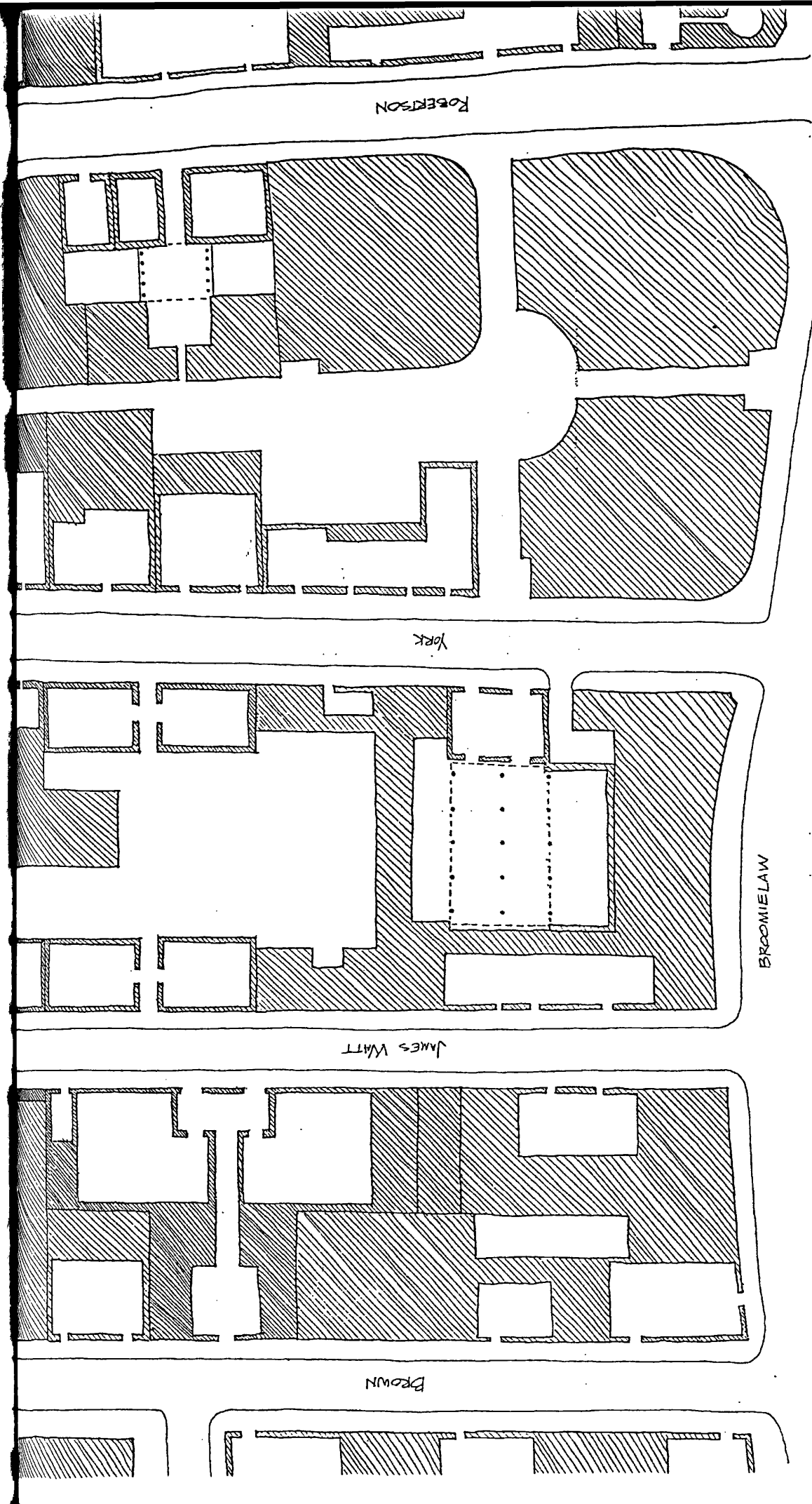
Figure/ground study of the entire district, proposed.



Figure/ground study of area 'A', the Building Design Partnership proposal.



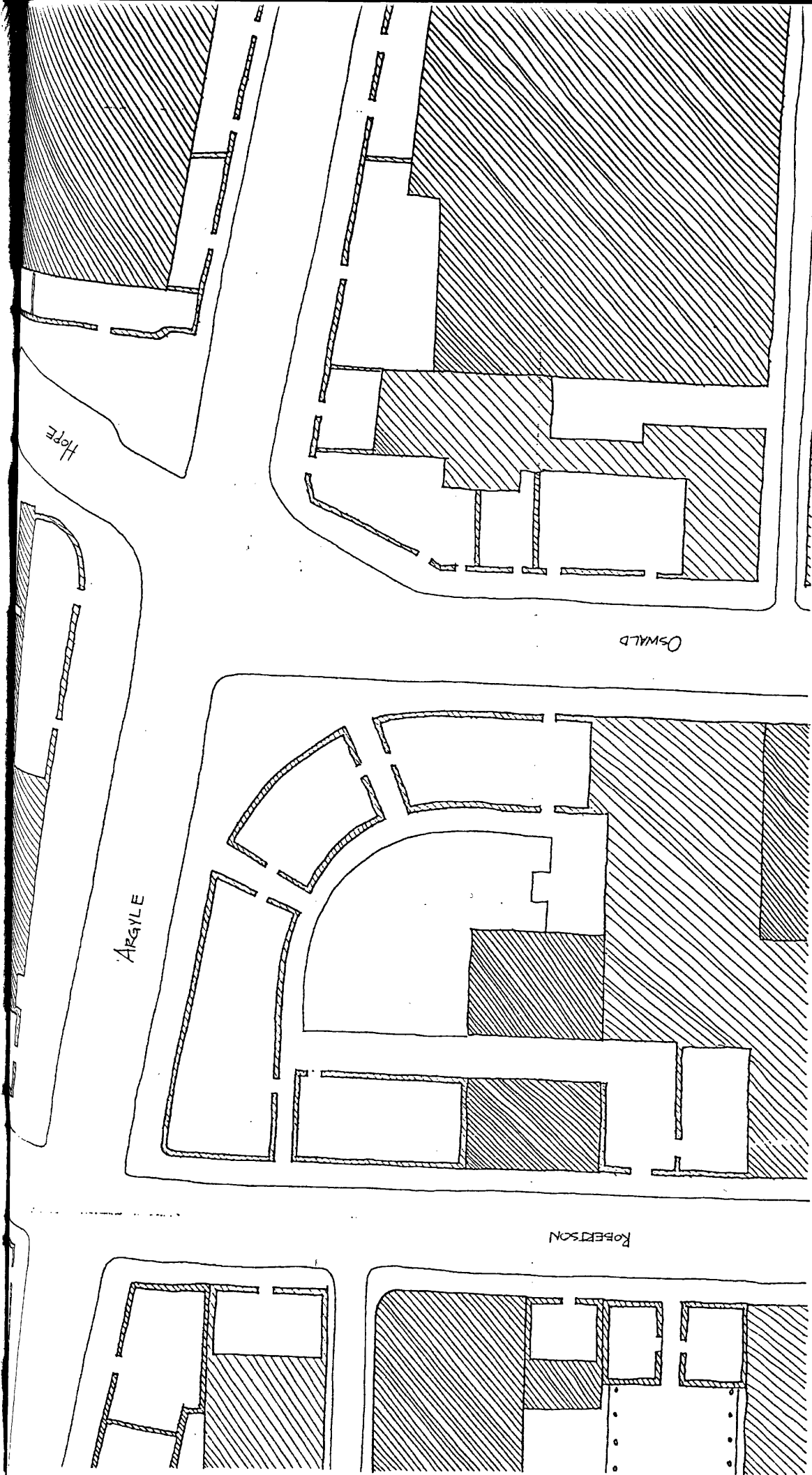
Figure/ground study of area 'A', proposed.



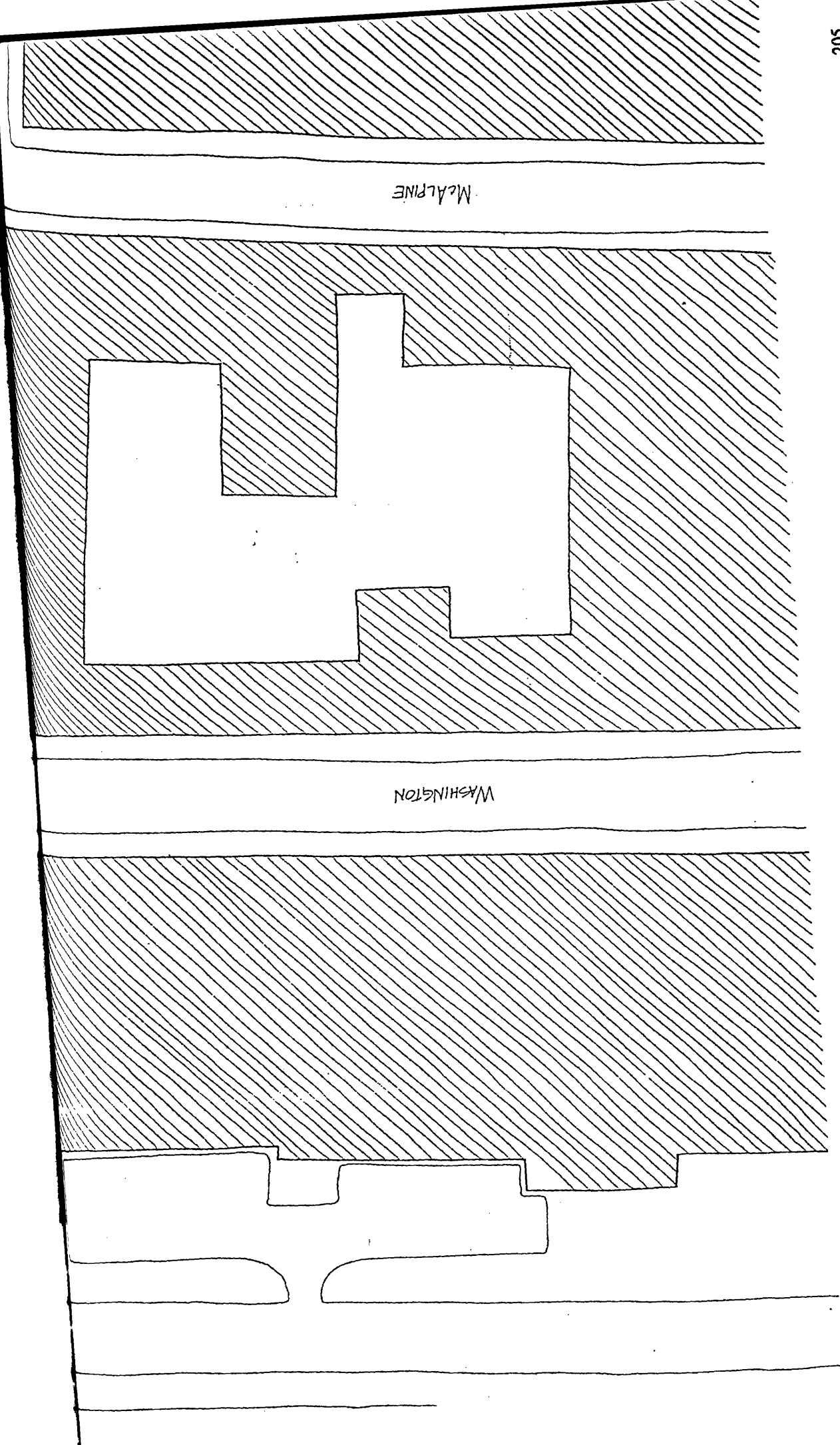
Nolli plan study of area 'A', proposed.



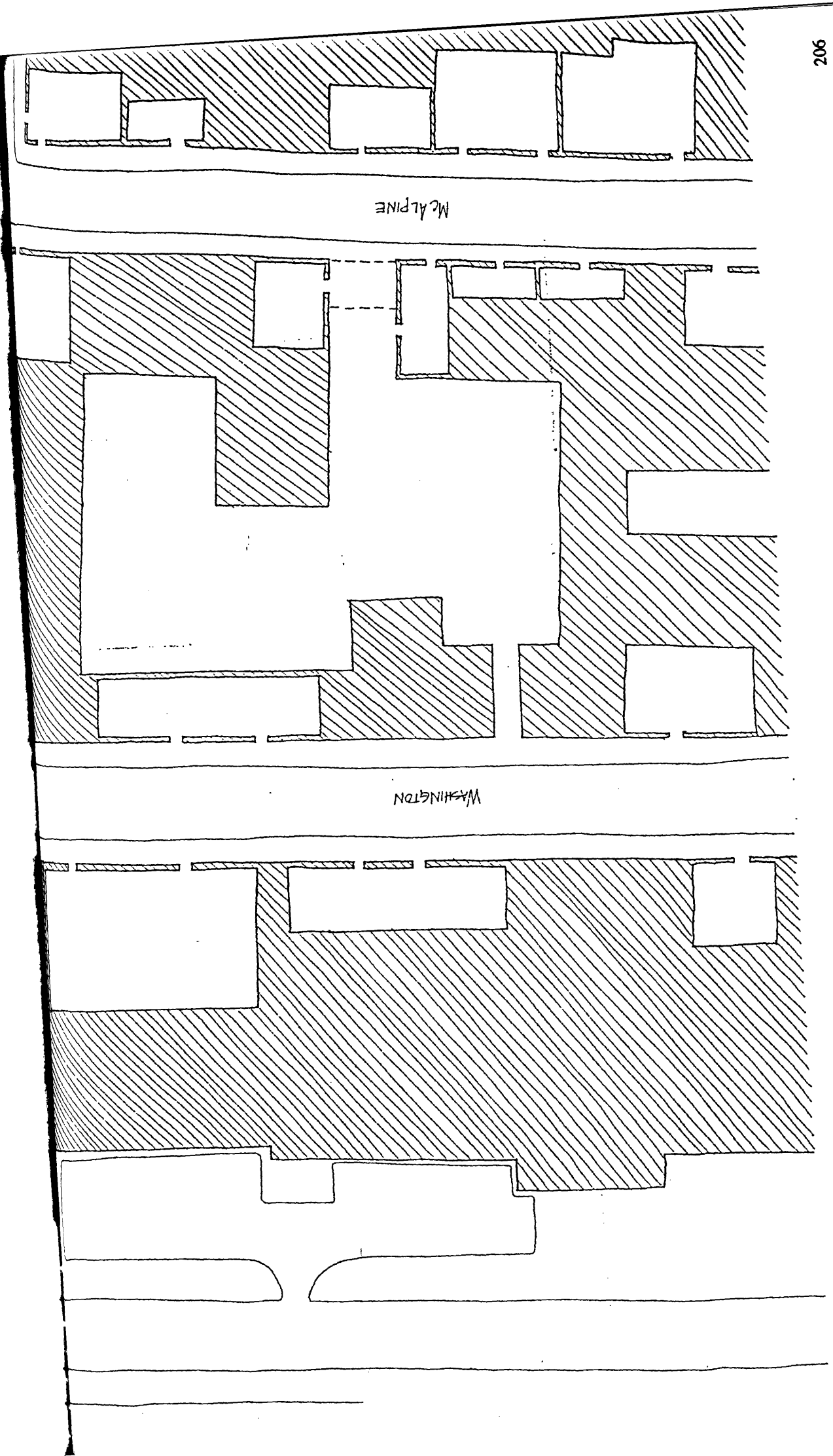
Figure/ground study of area 'B', proposed.



Nolli plan study of area 'B', proposed.



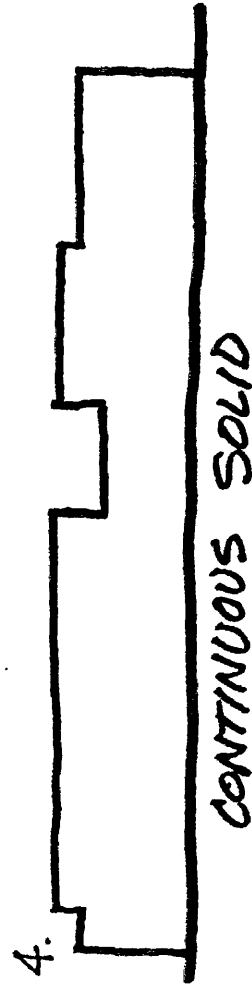
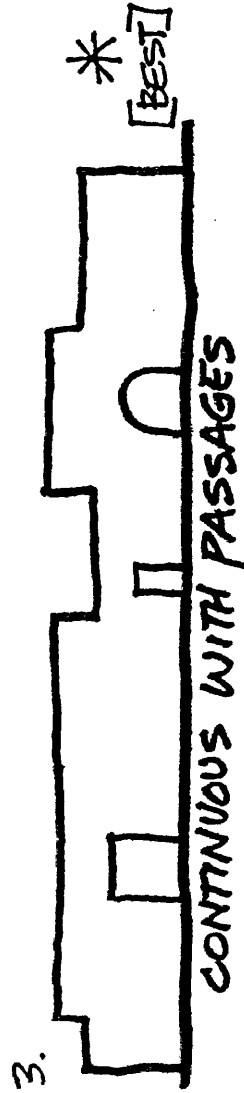
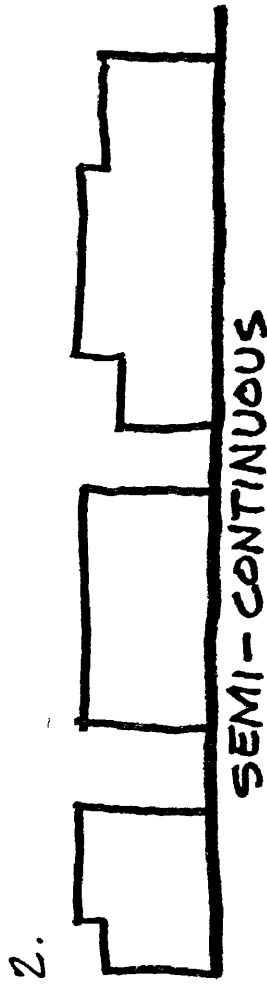
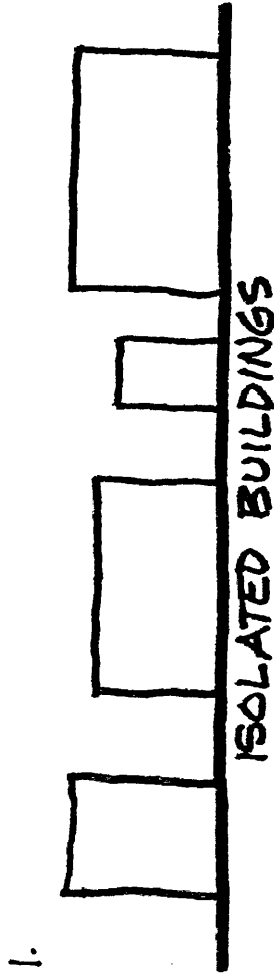
Figure/ground study of area 'C', proposed.



Nolli plan study of area 'C', proposed.

STREET ELEVATION TYPES:

NOTES:

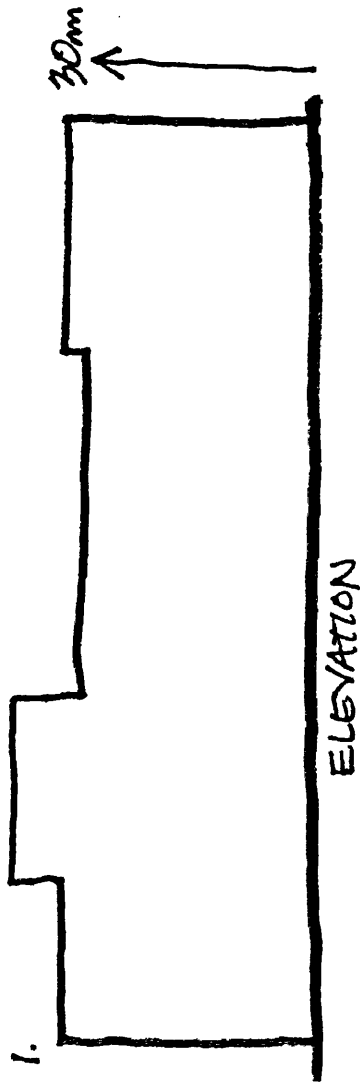


1. THERE IS NO POINT IN MAINTAINING LONG STREET GRIDS IF THE BUILDINGS ARE NOT RELATED TO IT. THERE ARE ESSENTIALLY THREE PERPENDICULAR STREETS IN THIS MODEL.

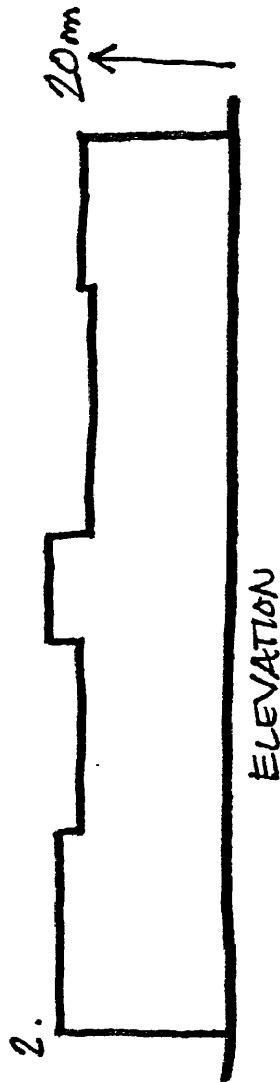
2. IN THIS MODEL, THE LONG NORTH-SOUTH STREET (SHOWN IN THE ELEVATION) IS PARTIALLY FORMED. THE BUILDINGS ARE NOT YET WORKING IN UNISON TO ENCLOSE THE STREET.

3. HERE, THE STREET IS BOTH DEFINED AND ENCLOSED. THROUGH-PASSAGES PROVIDE NEEDED CIRCULATION ROUTES WITHOUT DESTROYING THE CHARACTER OF THE STREET.

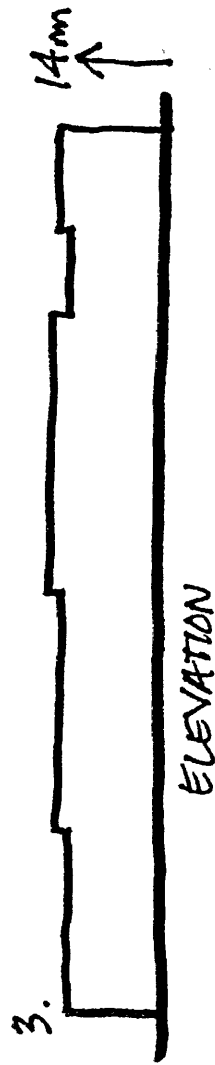
4. THE UNIFIED STREET IS A POWERFUL IMAGE, BUT THE LACK OF CLEAR SECONDARY ROUTES IS A MAJOR LIABILITY TO THE ACTIVITY OF THE AREA AND THE PERCEPTION OF THE LONG STREETS.



1. VERY TALL BUILDINGS DEFINE THE STREET WELL. AT THIS HEIGHT, DAYLIGHTING THE STREETS AND COURTYARDS IS A MAJOR PROBLEM. GROWTH OF THE BROOKLYN WOULD BE SLOW AT THIS DENSITY (I.E. THE RIVER CONNECTION TO THE CITY WOULD BE DELAYED BY YEARS) THERE IS ALSO THE POINT AT WHICH BUILDINGS BLOCK VIEWS FROM BLYTHSWOOD HILL.



2. MODERATE DENSITY ALLOWS THE BROOKLYN STREETS TO REMAIN "HORIZONTAL". AT THIS HEIGHT, THE STREETS HAVE A DEFINITE 'NORTH-SOUTH' DIRECTION, AND ENOUGH LIGHT ENTERS THE STREET TO KEEP THEM FROM BEING DARK AND GLOOMY AT STREET LEVEL.



3. THE POPULATION IN AN AREA OF THIS DENSITY WILL BE DETRIMENTAL TO THE ACTIVITY LEVEL OF THE AREA. THE LOW FINANCIAL RETURNS FOR THIS DENSITY WOULD NOT ATTRACT MUCH SPECULATIVE DEVELOPMENT

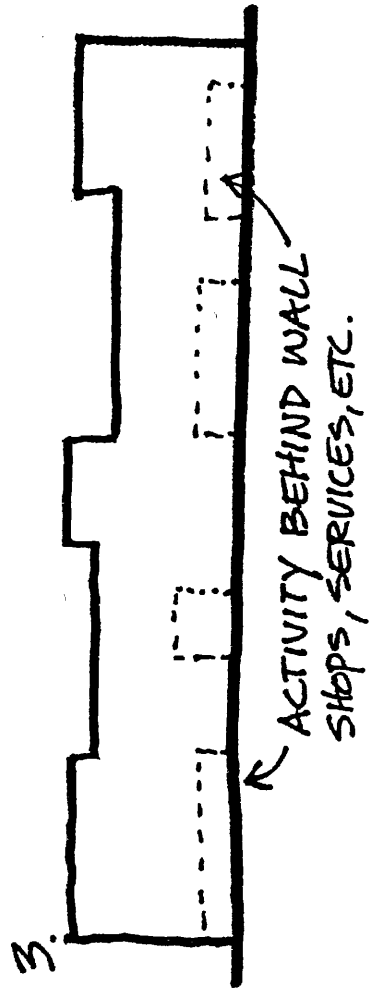
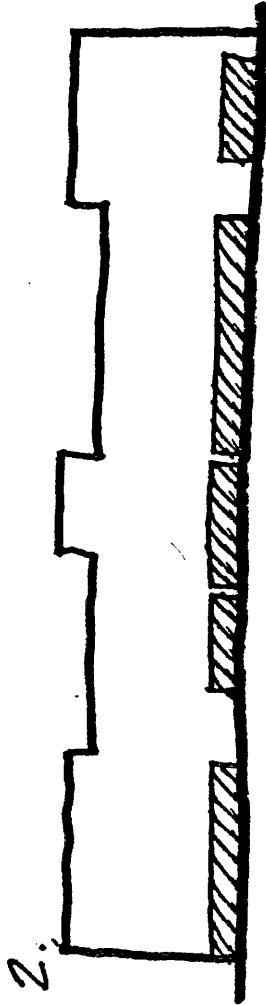
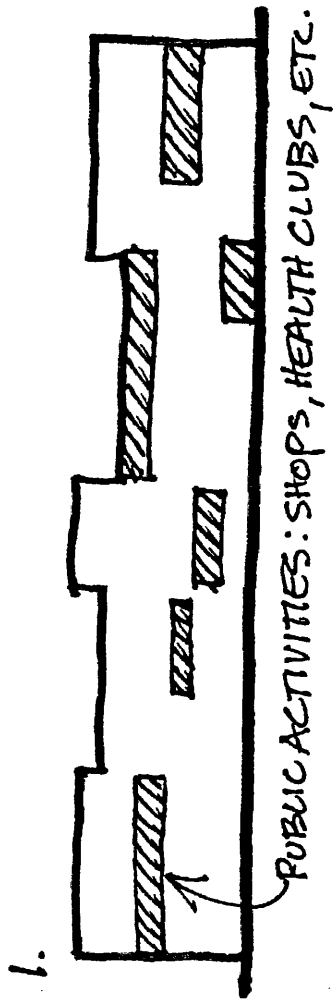
ACTIVITY AREAS; ELEVATIONS

NOTES:

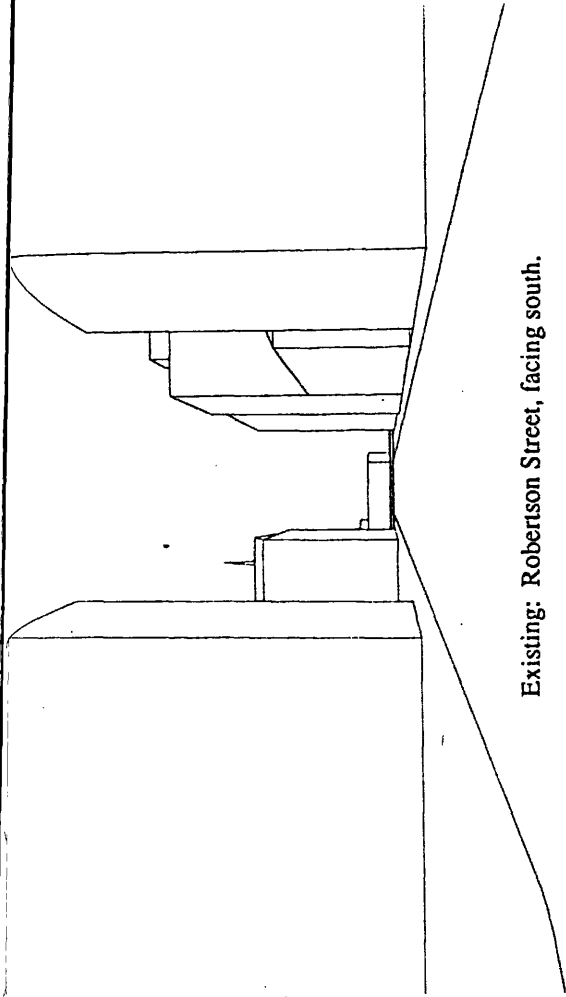
1. IF SHOPS AND OTHER ACTIVITIES ARE SCATTERED ON MANY LEVELS, SOME WILL BE INACCESSIBLE AND OVERLOOKED. PEOPLE WILL HAVE TO RETURN TO THE STREET IN ORDER TO SET OUT TO FIND ANOTHER SHOP. THE STREETS WILL BE DREARY. IF PEOPLE MUST USE THE STREETS TO MOVE AROUND, THE SHOPS SHOULD BE THERE, ON THE STREET

2. SHOPS AT STREET LEVEL WILL NOT BE OVERLOOKED (OUT OF SIGHT, OUT OF MIND). ALSO, SHOPS AT GROUND LEVEL ADD COLOUR AND ACTIVITY TO THE STREET, MAKING IT A PLEASANT PLACE EVEN FOR PEOPLE WHO ARE SIMPLY PASSING BY.

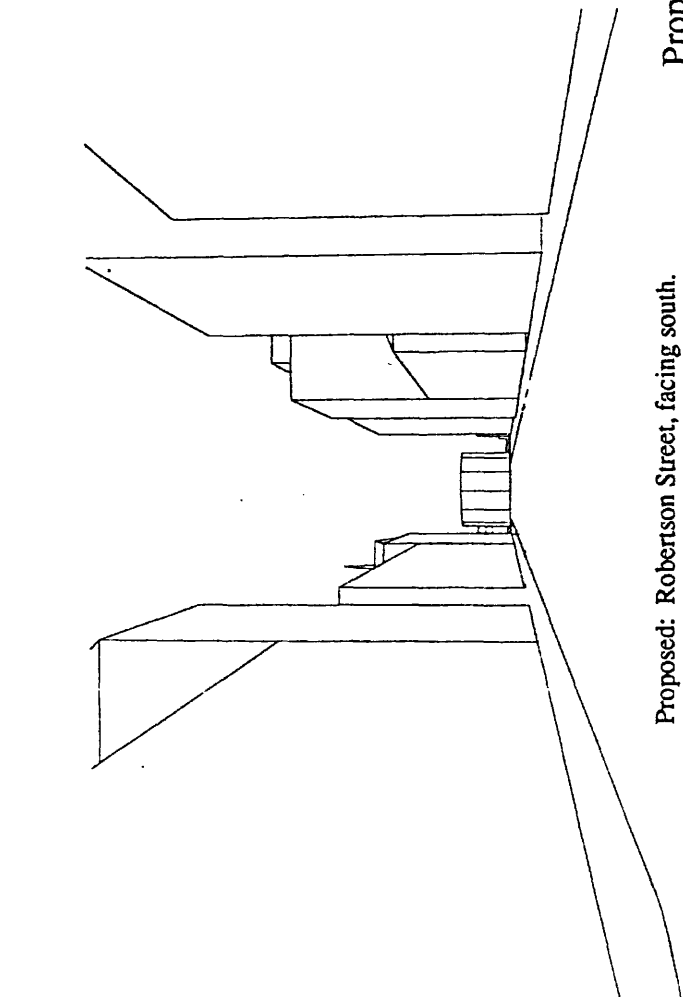
3. ACTIVITIES BEHIND THE STREET-FRONT ARE LIKELY TO BE USED IF SUBSTANTIAL ACTIVITY ALREADY EXISTS ON THE STREETFRONT. STREETS WOULD BE LIFELESS WITHOUT PRIMARY ACTIVITY. (SIMILAR TO #1, ABOVE)



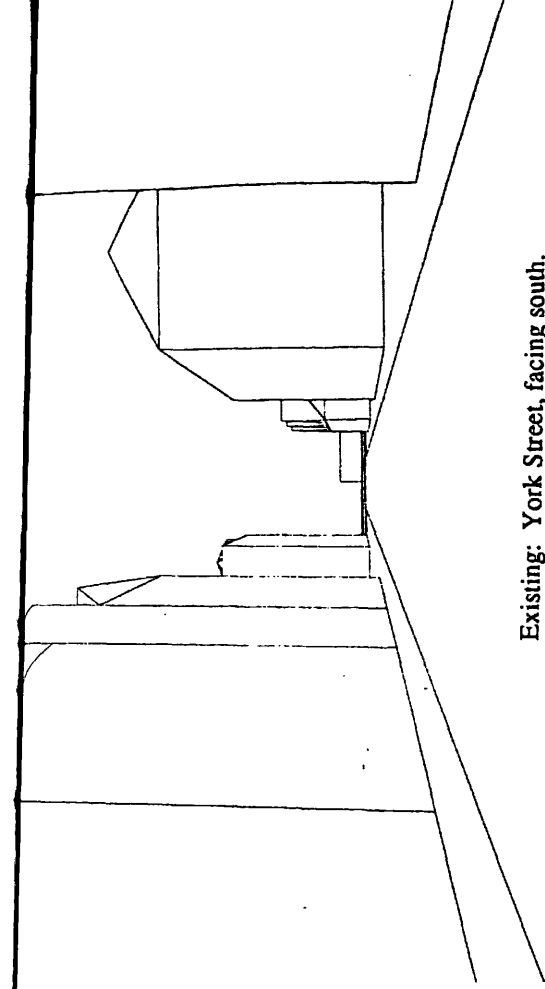
Street study.



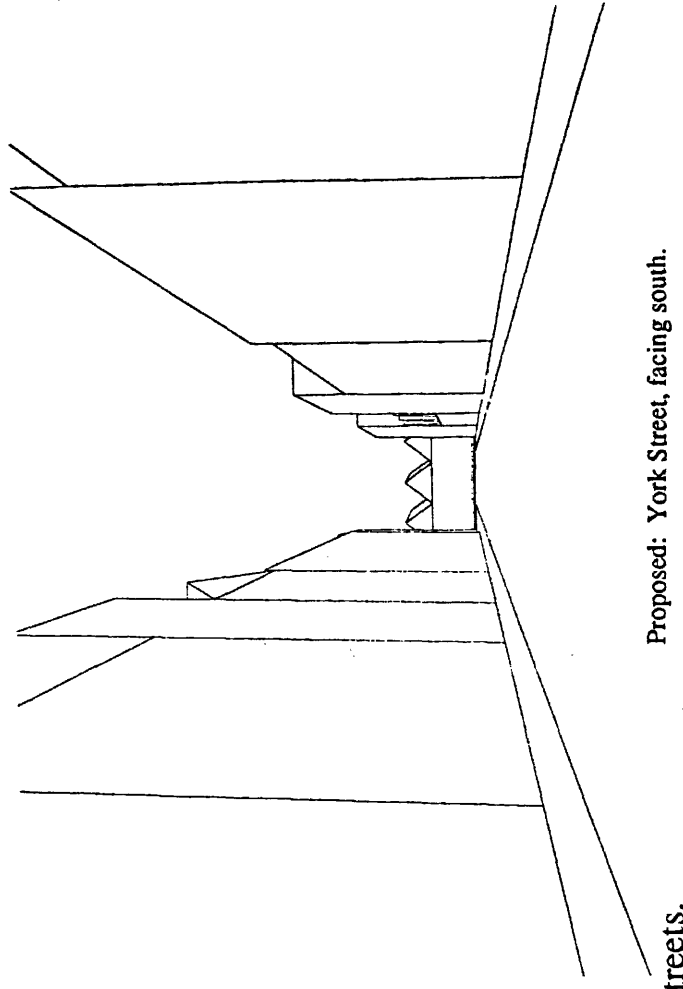
Existing: Robertson Street, facing south.



Proposed: Robertson Street, facing south.

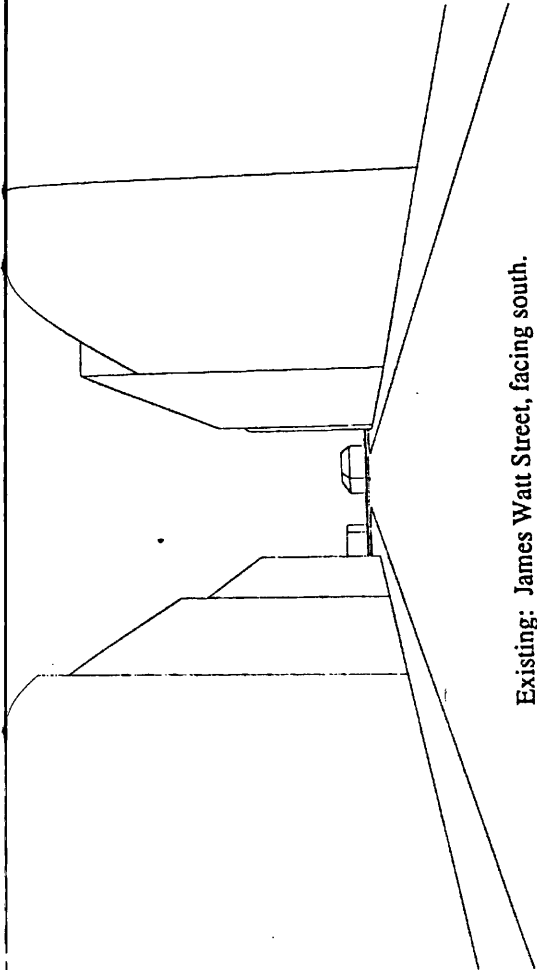


Existing: York Street, facing south.

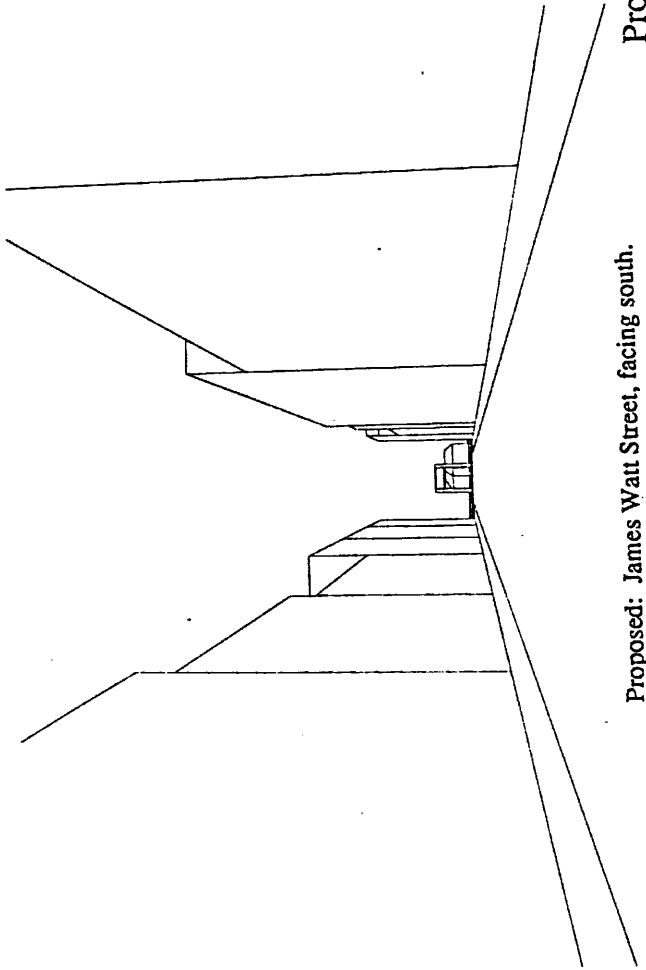


Proposed: York Street, facing south.

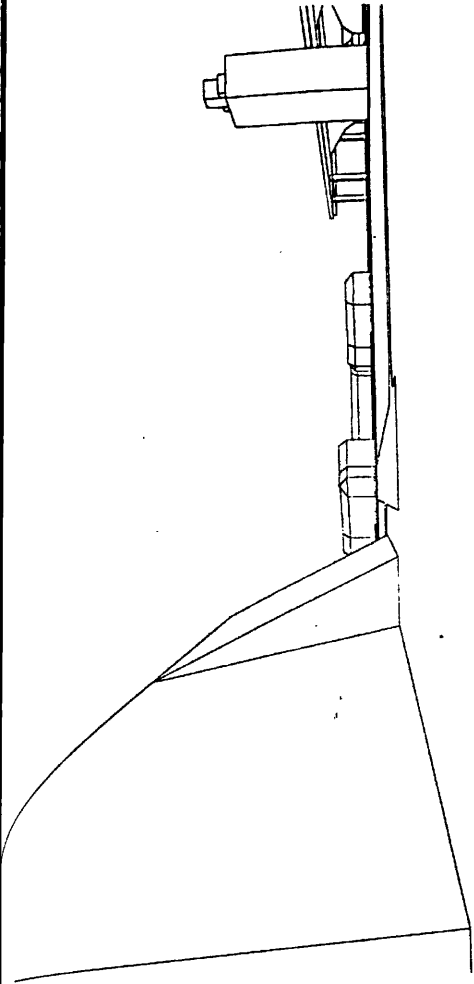
Proposed Streets.



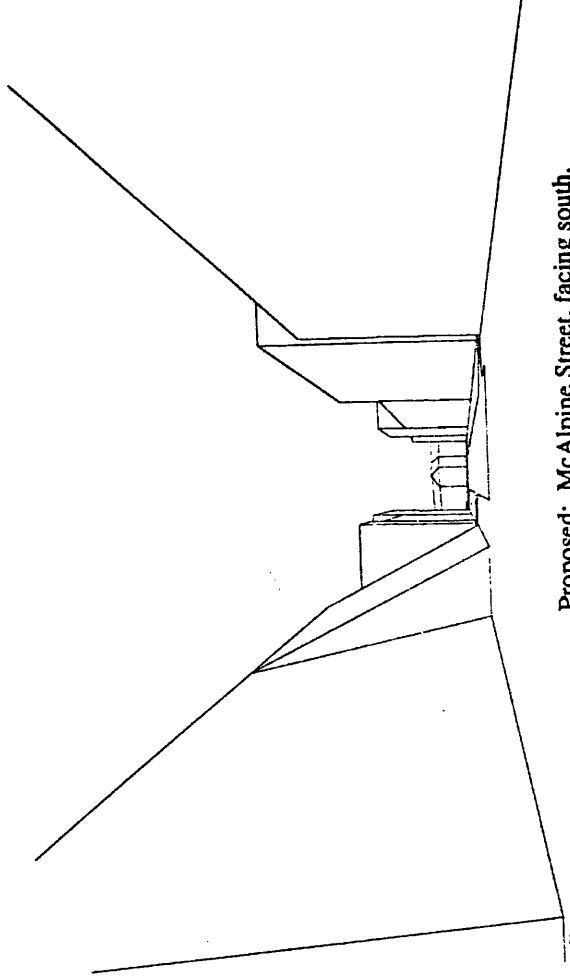
Existing: James Watt Street, facing south.



Proposed: James Watt Street, facing south.

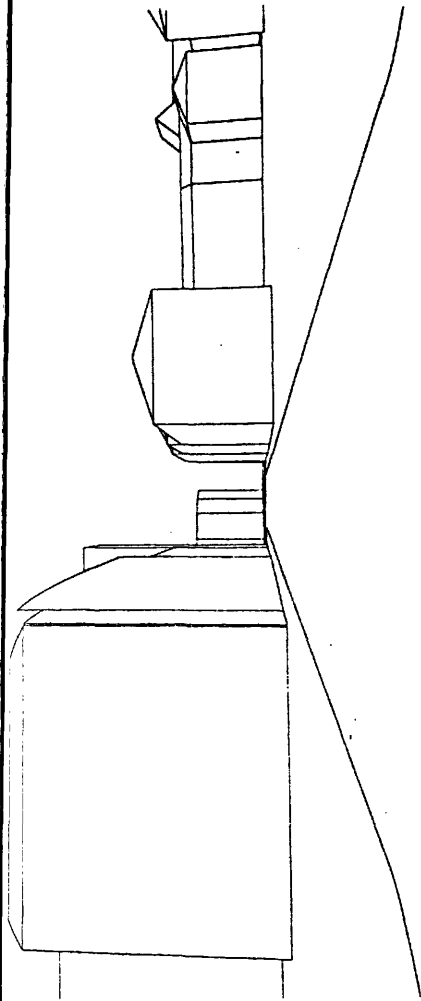


Existing: McAlpine Street, facing south.

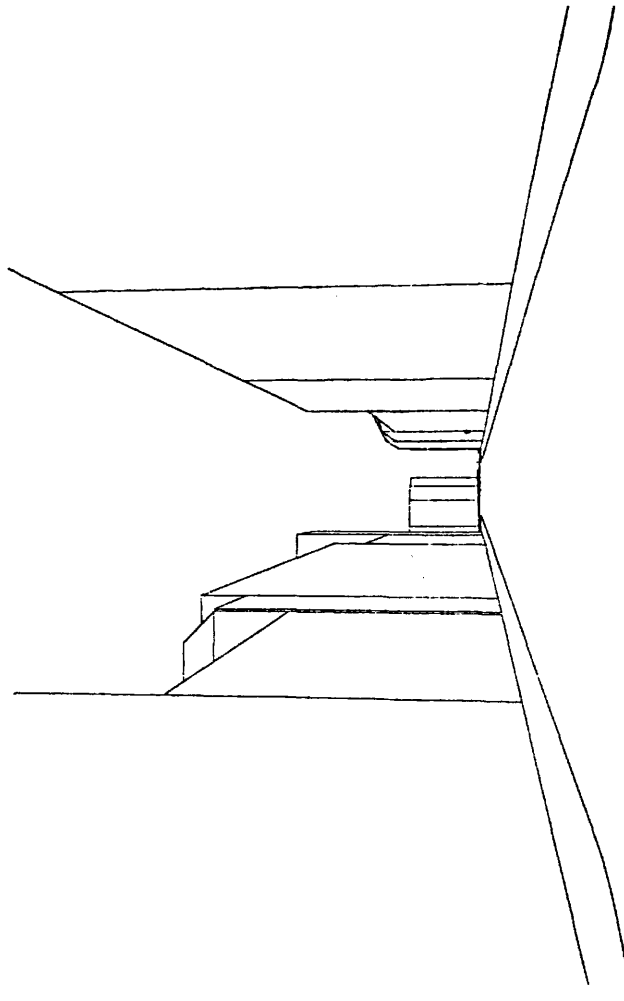


Proposed: McAlpine Street, facing south.

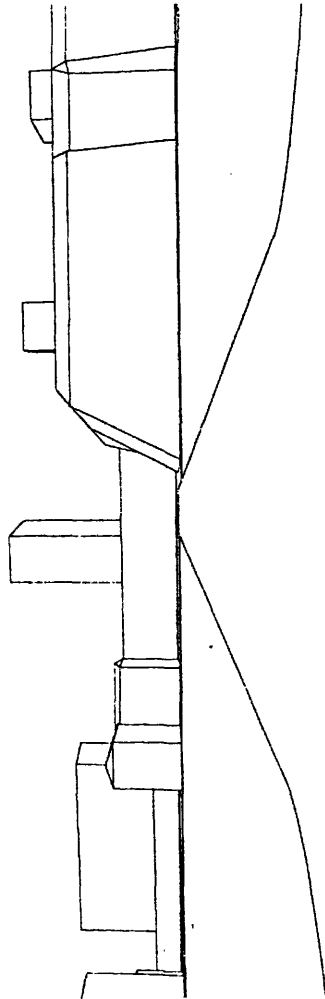
Proposed Streets.



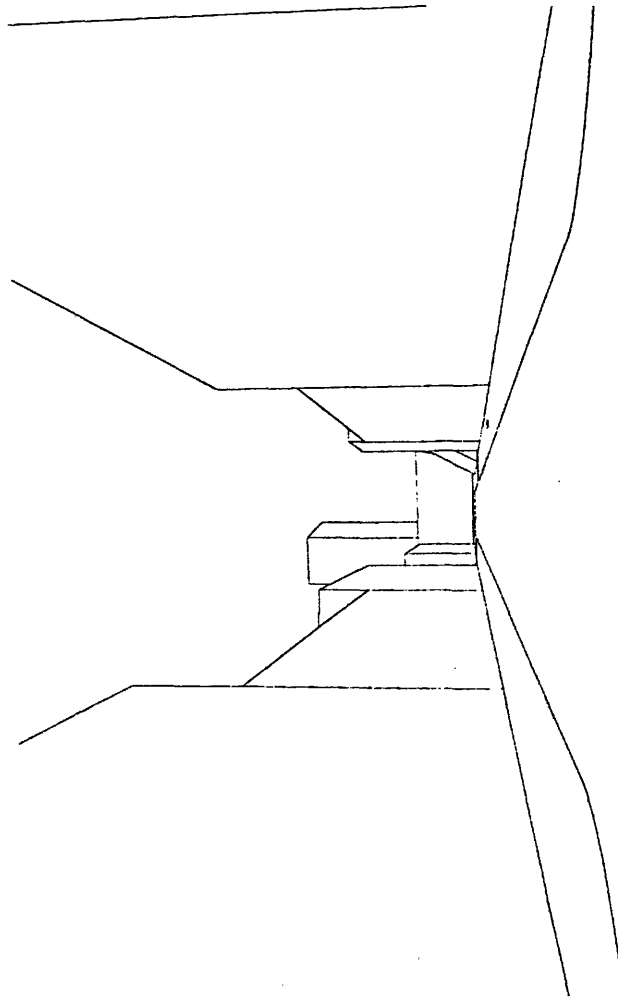
Existing: James Watt Street, facing north.



Proposed: James Watt Street, facing north.

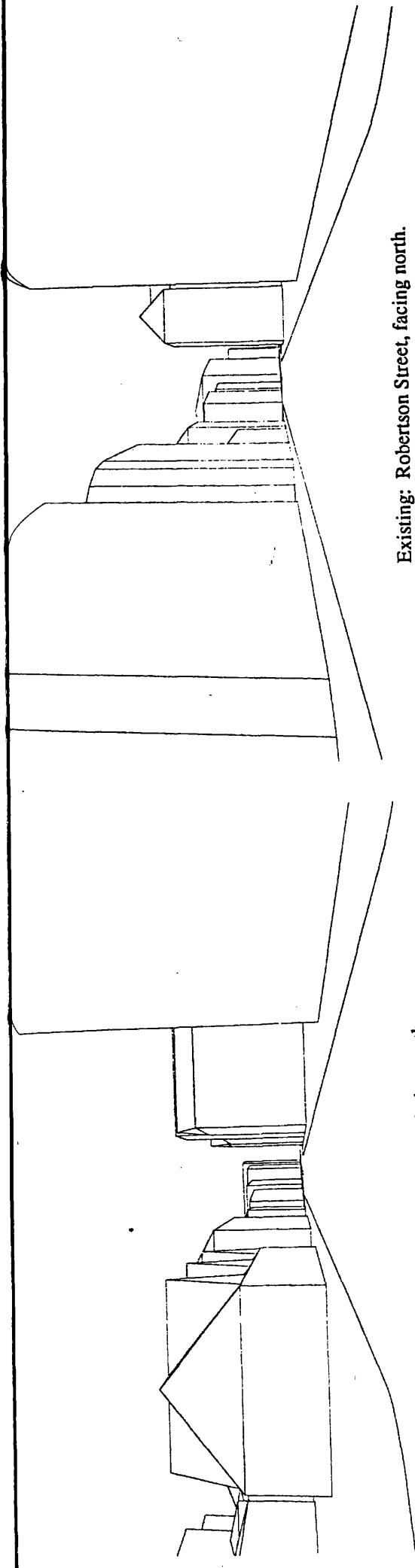


Existing: McAlpine Street, facing north.

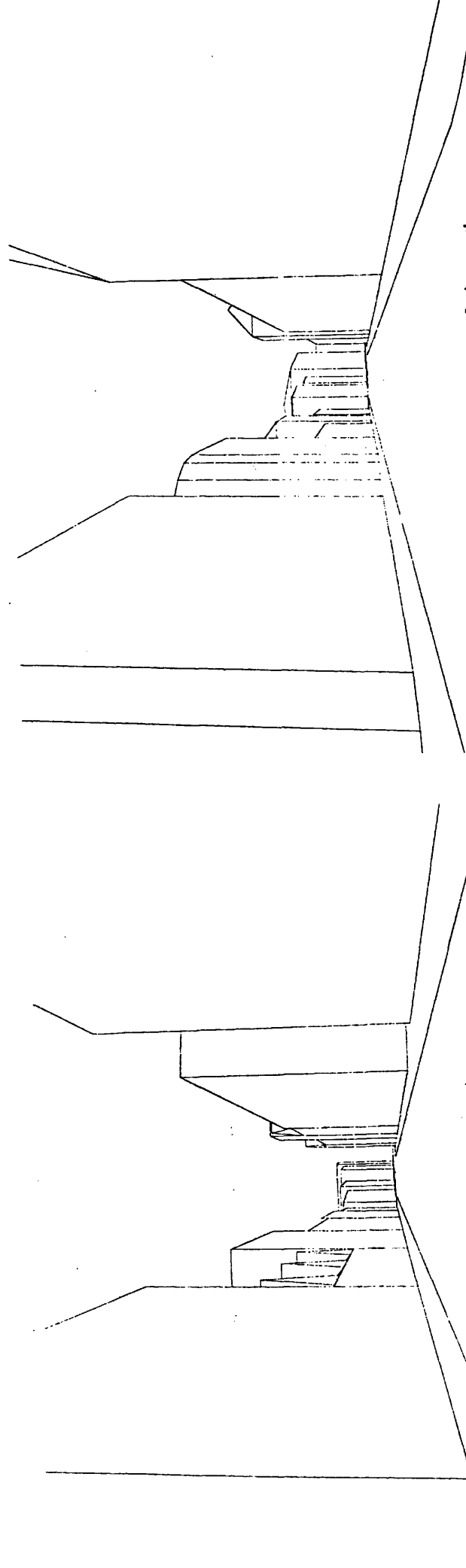


Proposed: McAlpine Street, facing north.

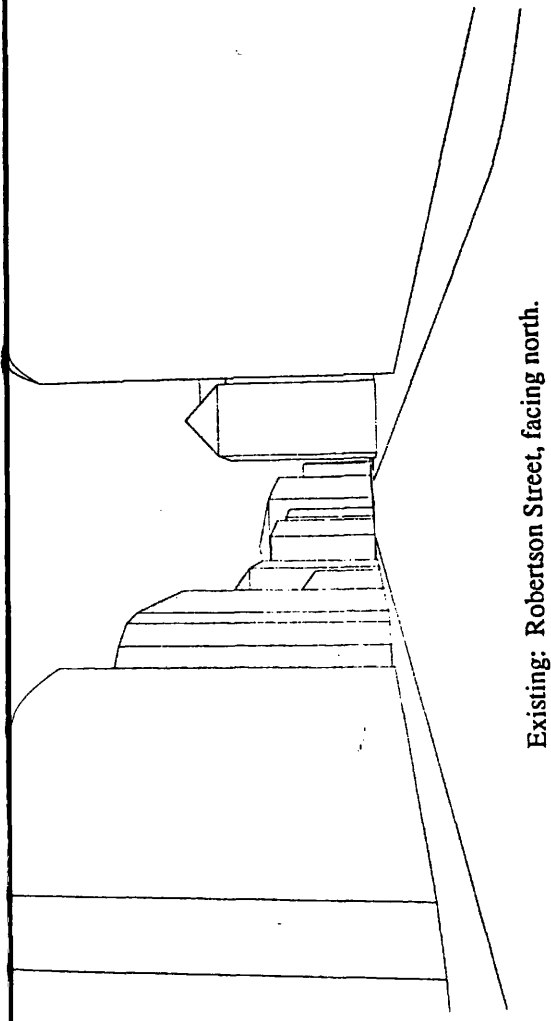
Proposed Streets.



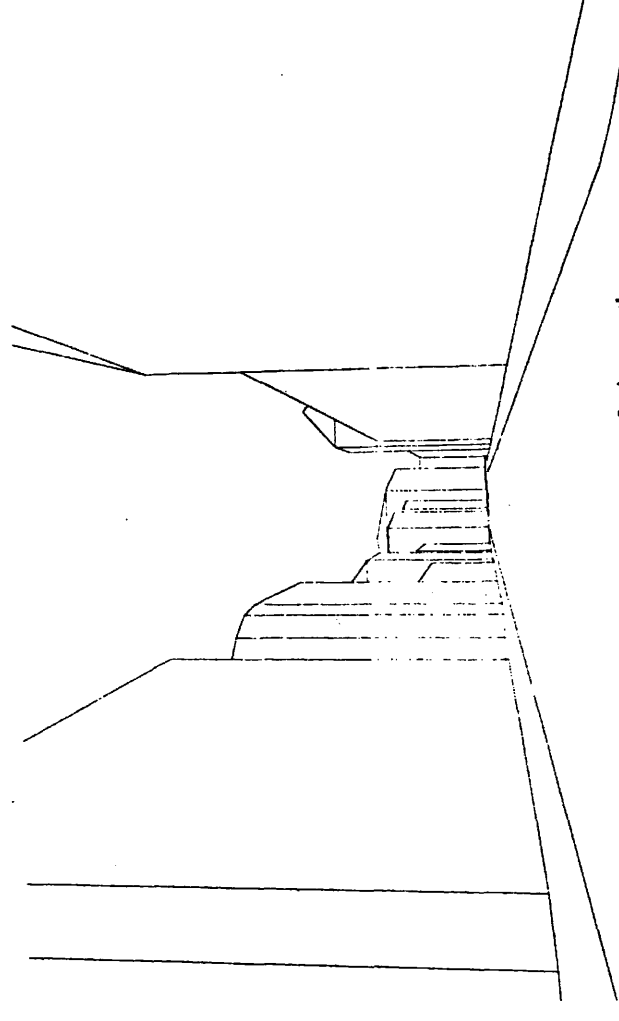
Existing: York Street, facing north.



Proposed: York Street, facing north.



Existing: Robertson Street, facing north.

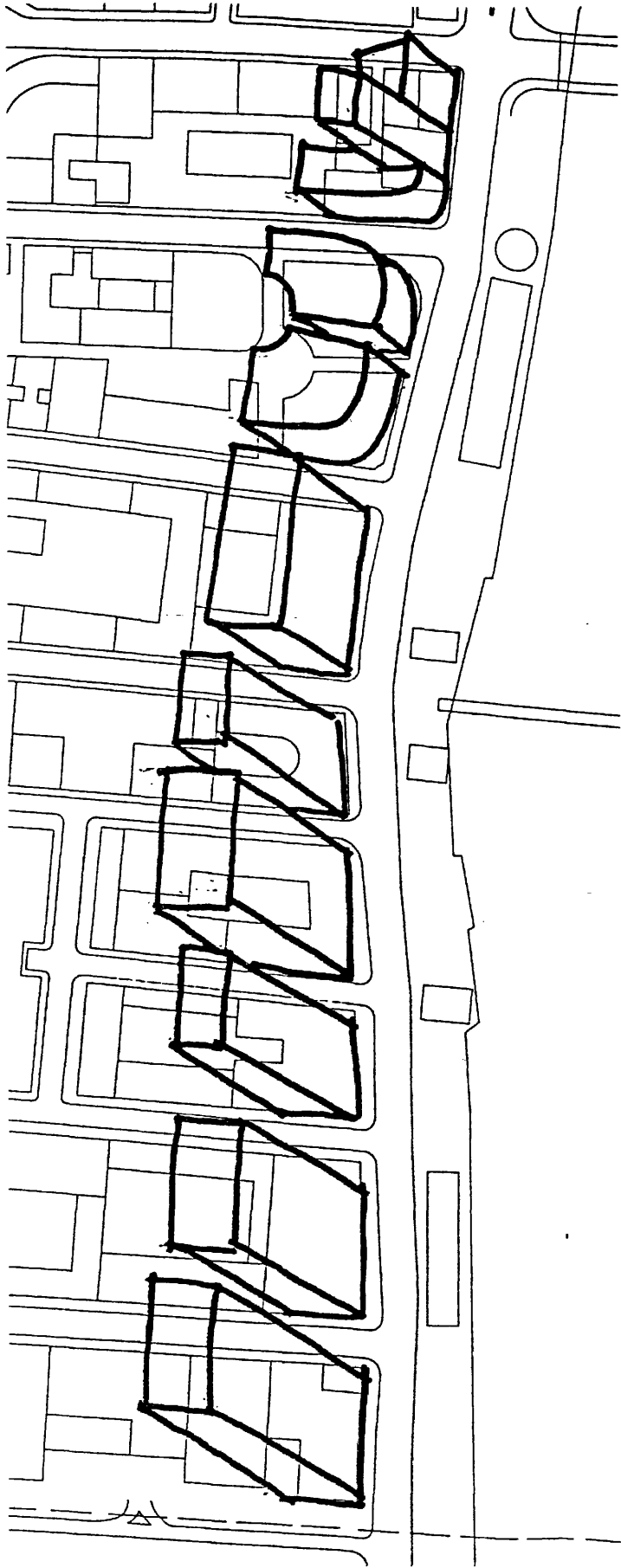


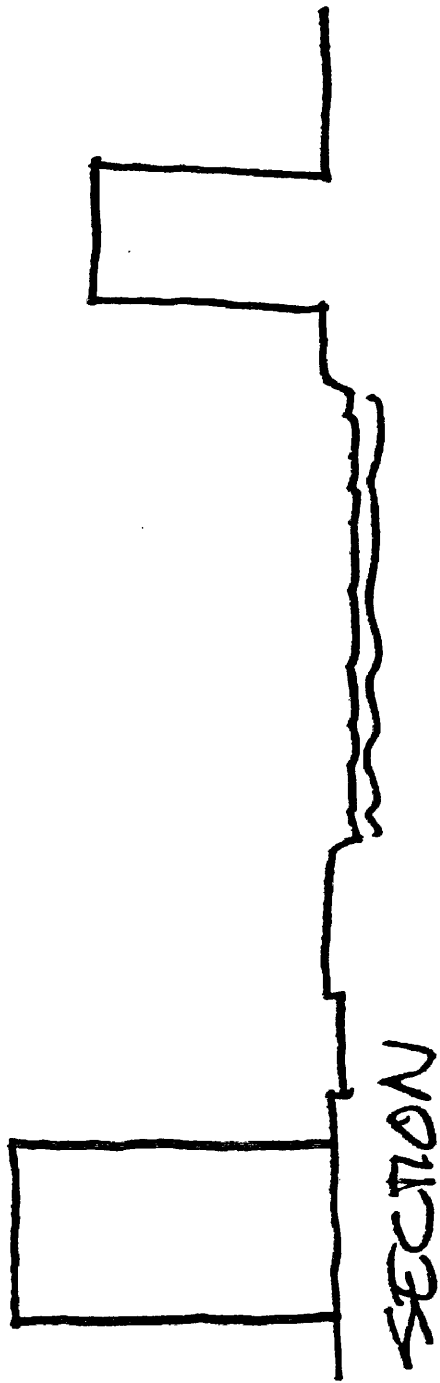
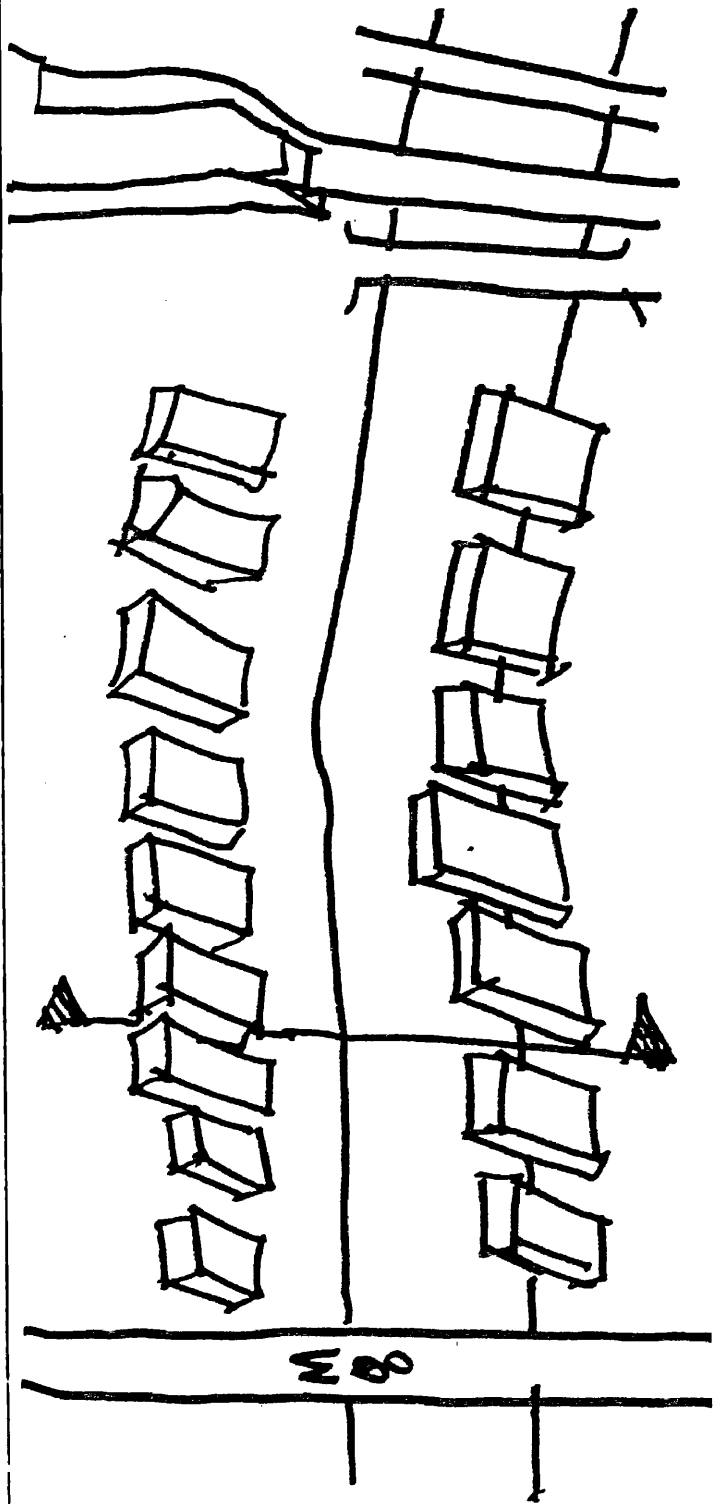
Proposed: Robertson Street, facing north.

Proposed Streets.

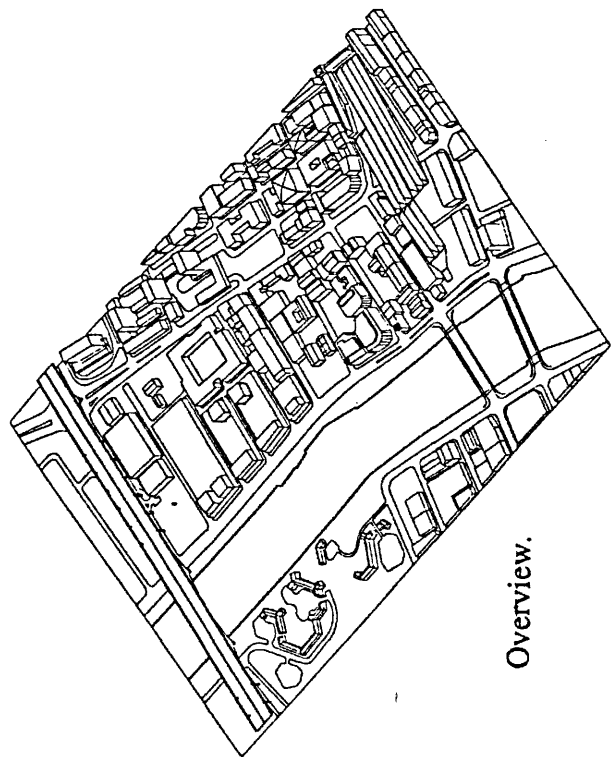
Q: CAN TALL BUILDINGS BE USED TO CREATE AN ENCLOSURE TO THE RIVER? HOW TALL WOULD THEY HAVE TO BE (ON BOTH BANKS)?

A: A MODERATE DENSITY MUST BE MAINTAINED. TO BE TALL ENOUGH TO MAKE A DIFFERENCE, THEY WOULD CONSUME TOO MUCH FLOORSPACE.

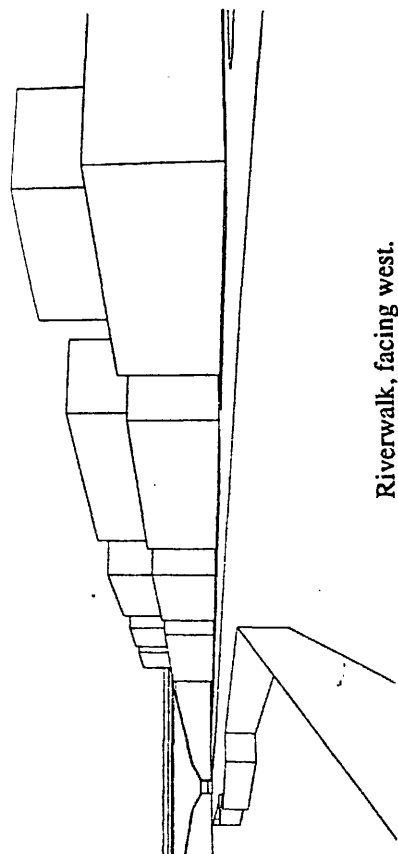




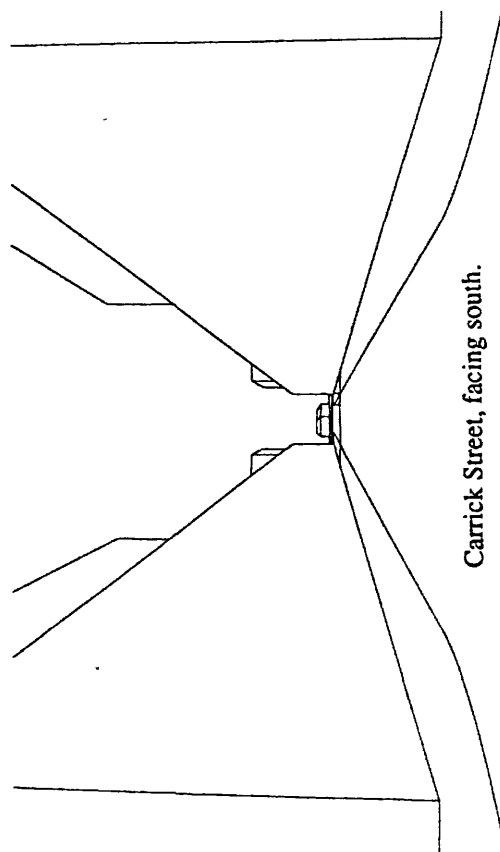
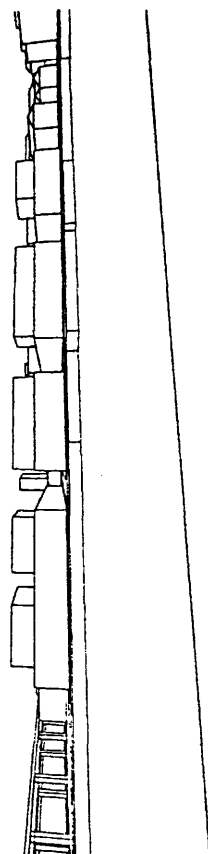
SECTION



Overview.

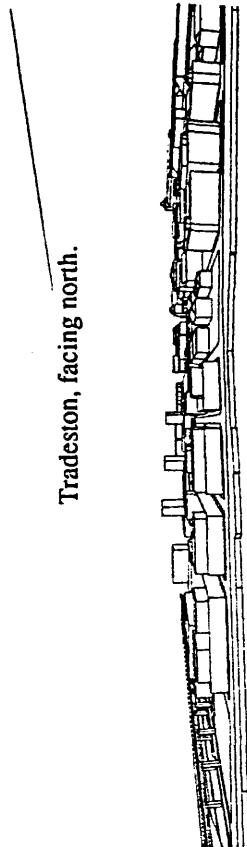


Riverwalk, facing west.

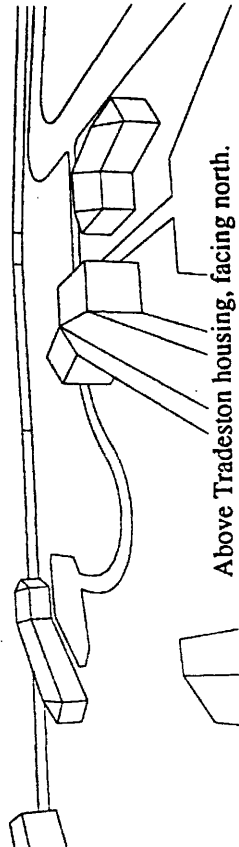


Carrick Street, facing south.

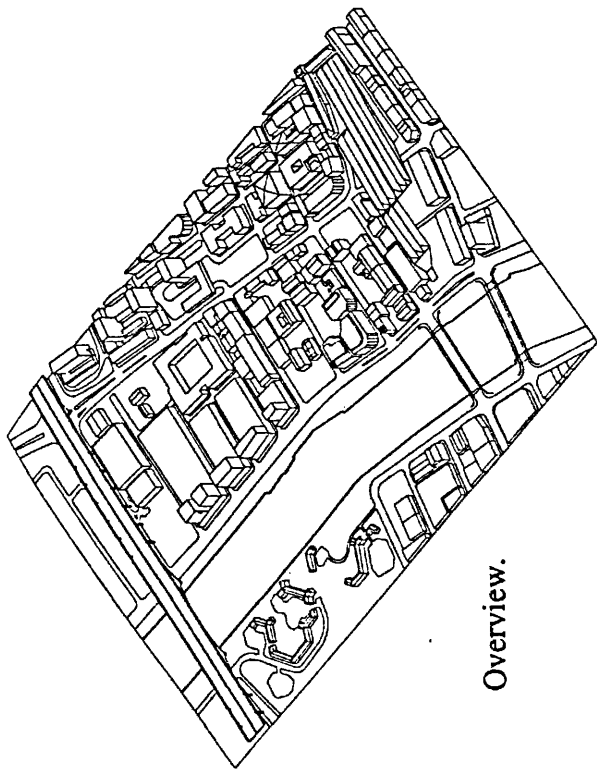
End-of Street Study. 17 metre buildings with 36 metre end towers.



Tradeston, facing north.

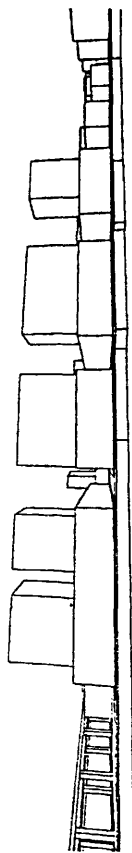
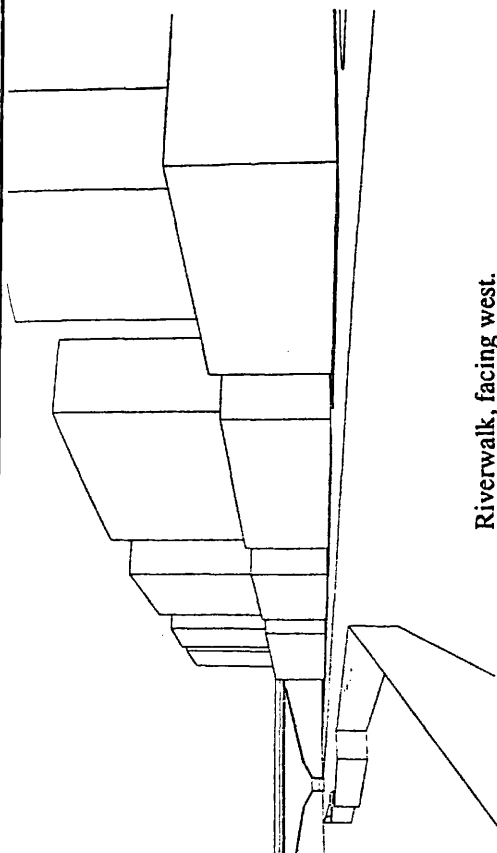


Above Tradeston housing, facing north.

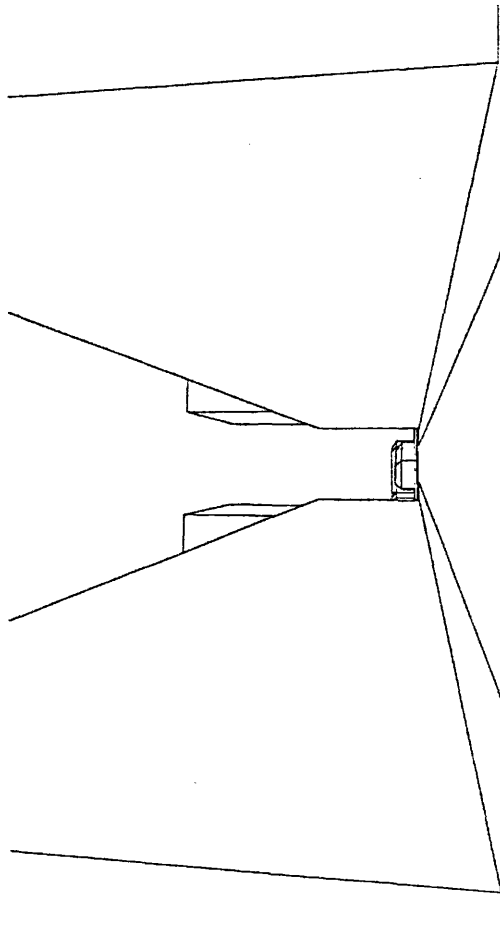


Overview.

Riverwalk, facing west.

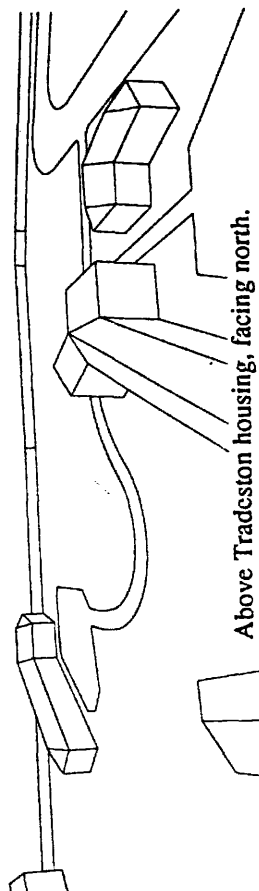
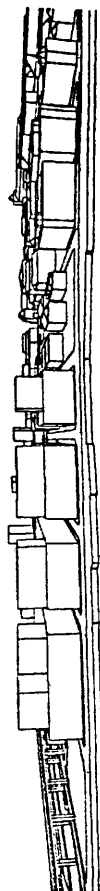


Tradeston, facing north.

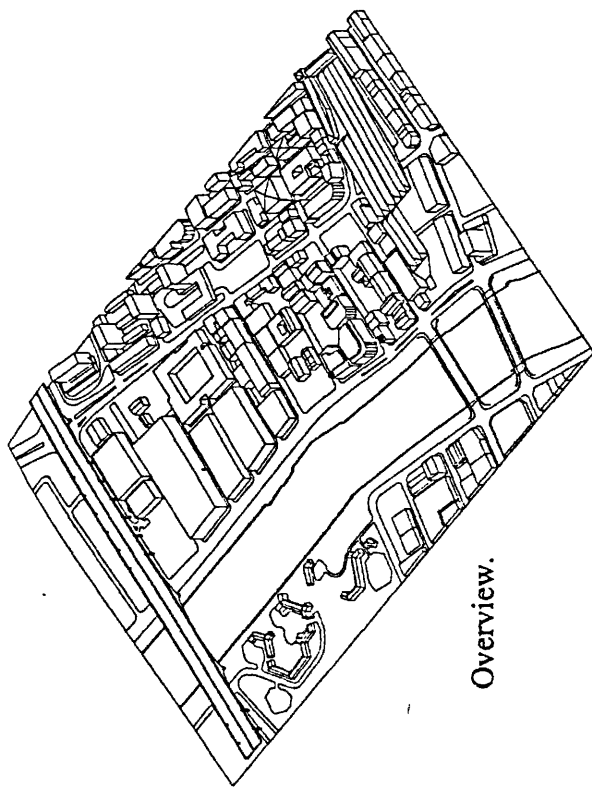


Carrick Street, facing south.

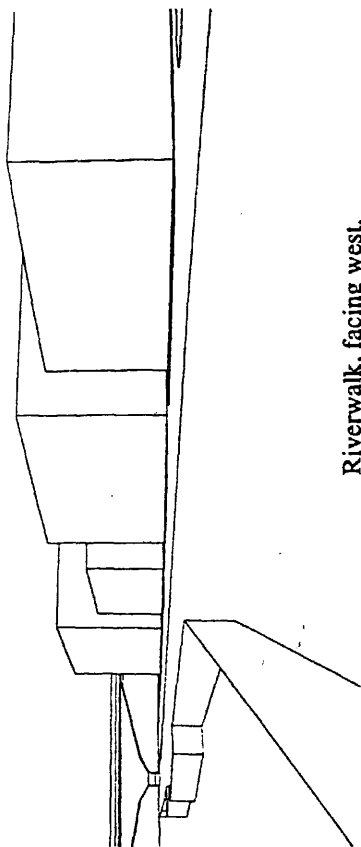
End-of Street Study. 24 metre buildings with 45 metre end towers.



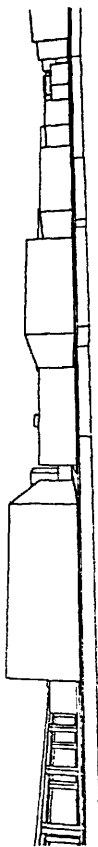
Above Tradeston housing, facing north.



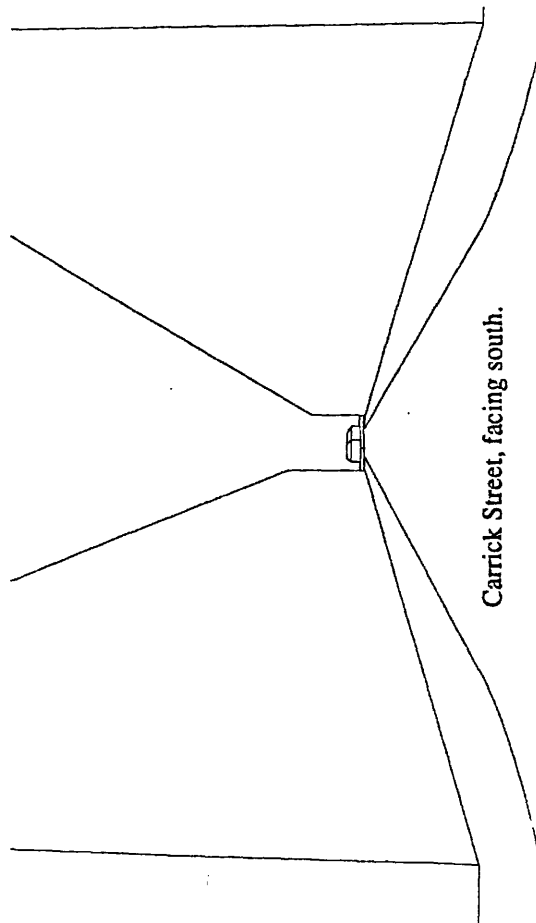
Overview.



Riverwalk, facing west.

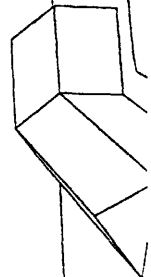
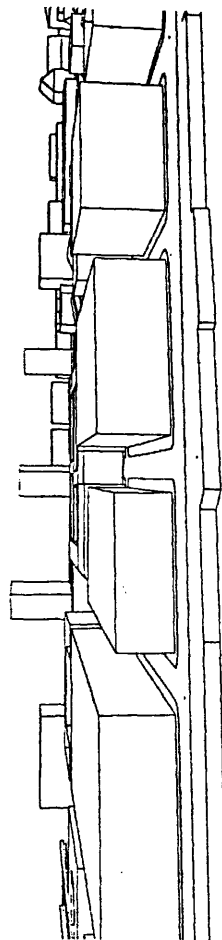


Tradeston, facing north.

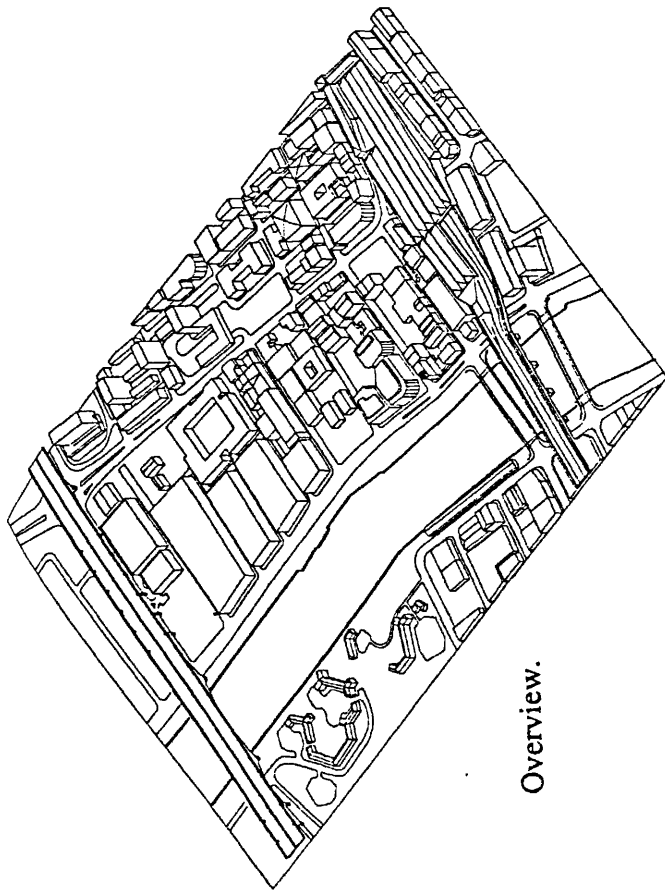


Carrick Street, facing south.

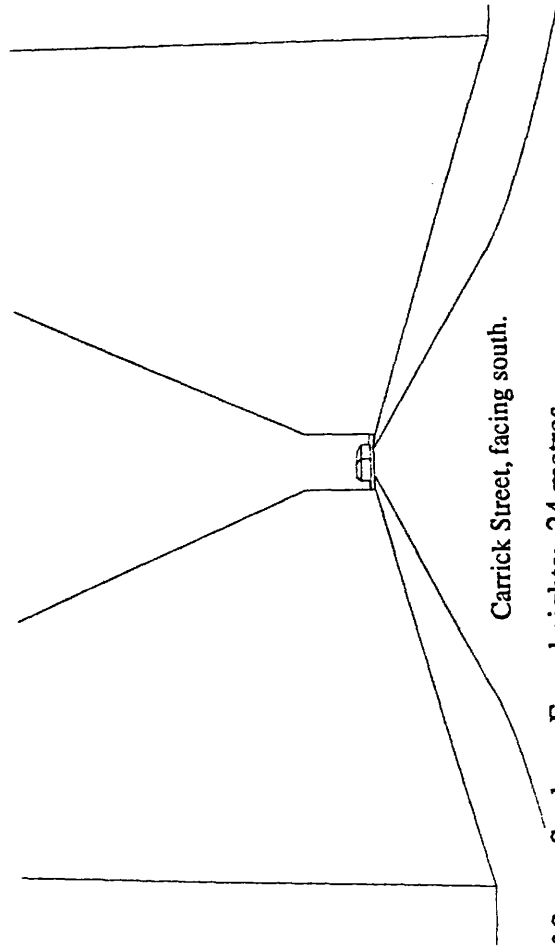
End-of Street Study. Varied heights: 14 - 24 metres.



Above Tradeston housing, facing north.

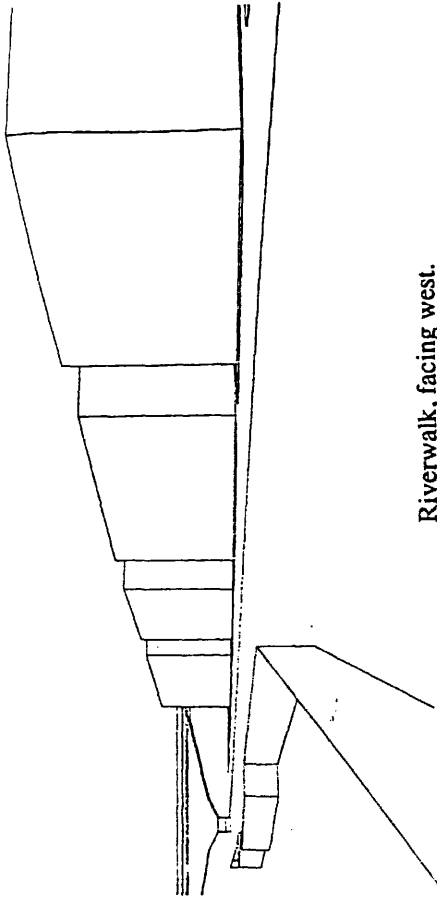


Overview.

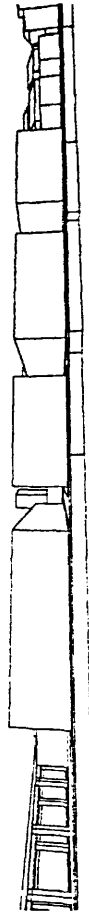


Carrick Street, facing south.

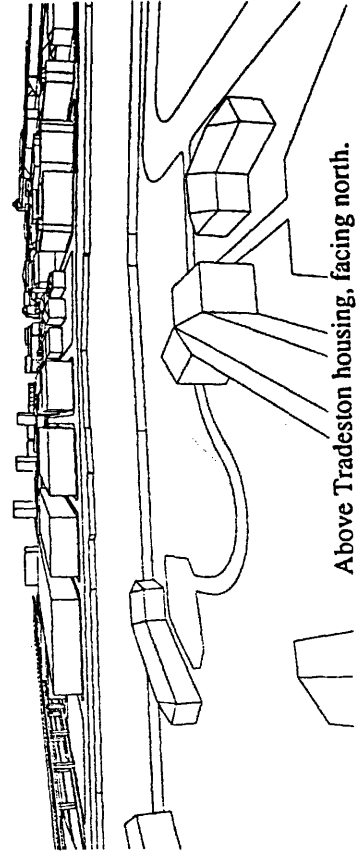
End-of Street Study. Even heights: 24 metres.



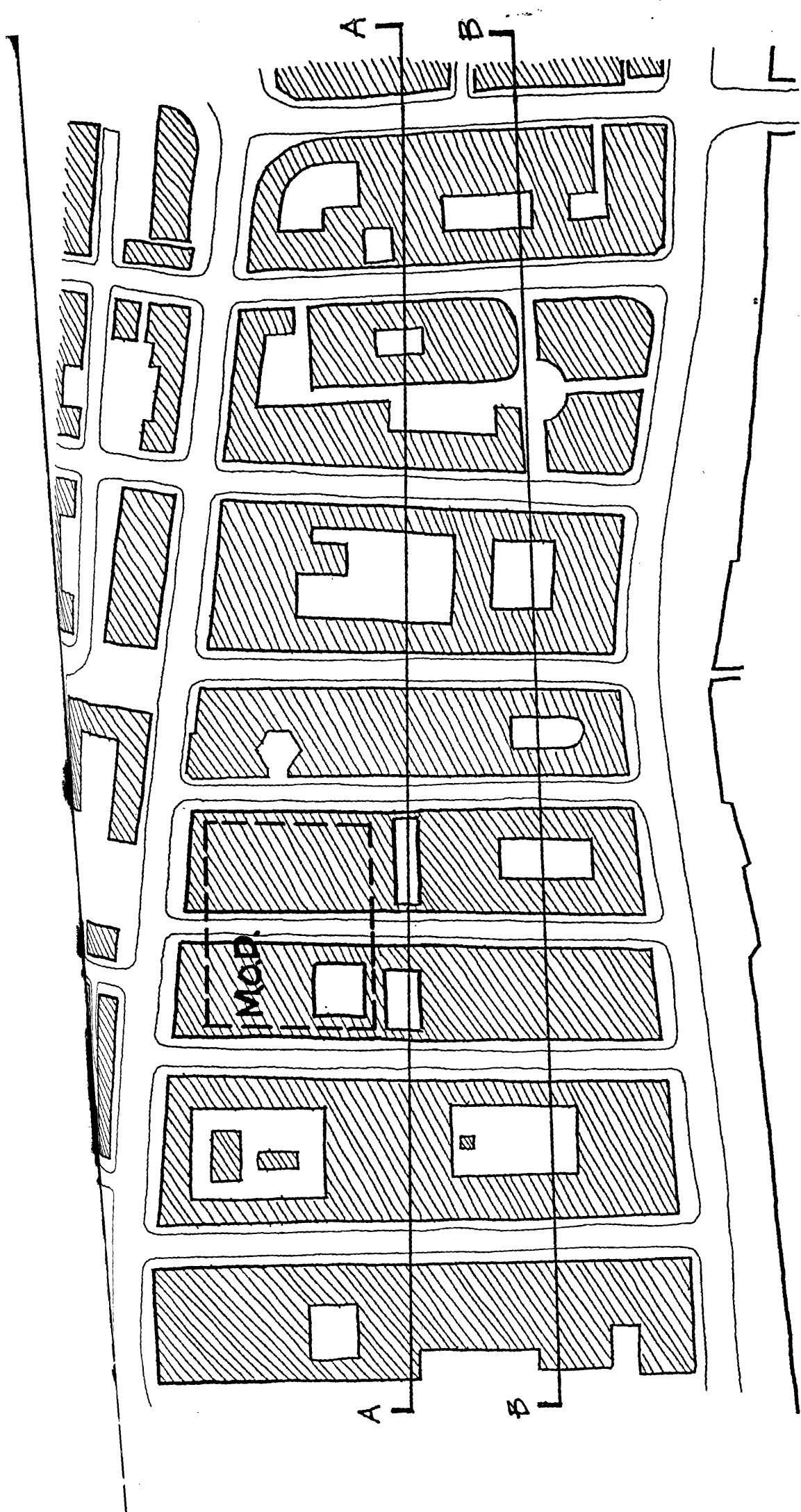
Riverwalk, facing west.

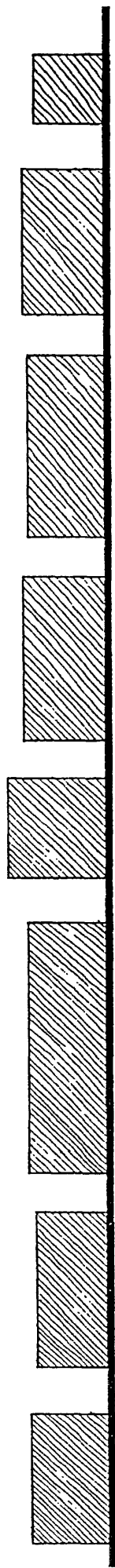


Tradeston, facing north.

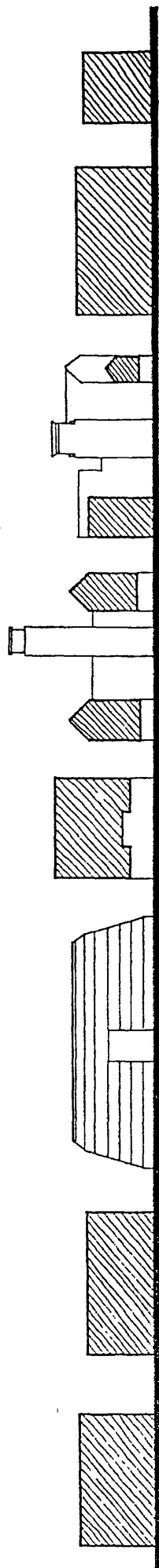


Above Tradeston housing, facing north.

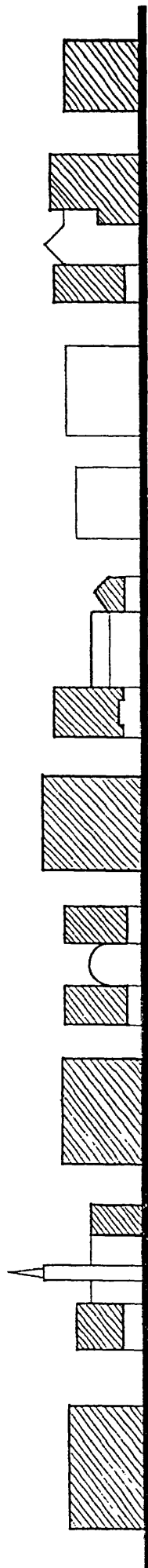




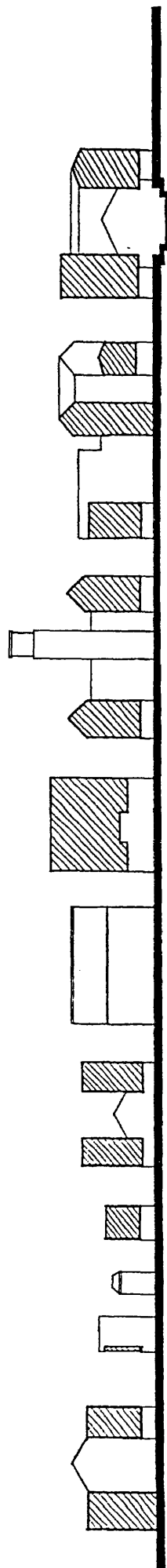
The first impression of the Broomielaw.



Section 'A'.

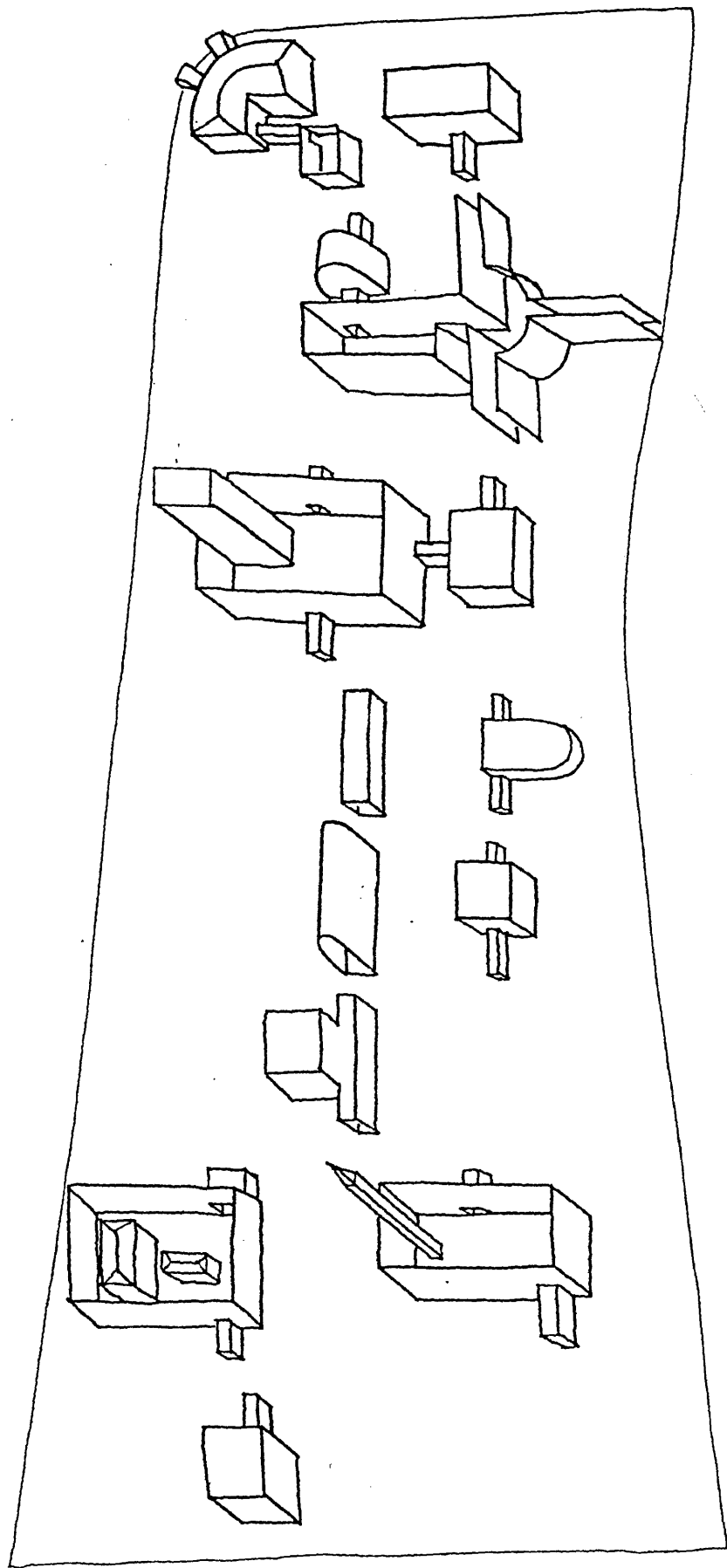


Section 'B'.

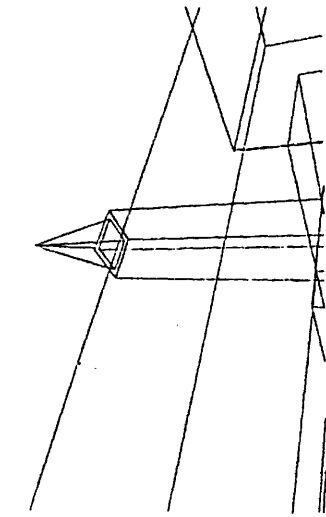


Court study: sections.

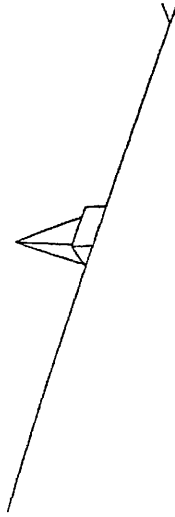
A staggered section through courts and passages.



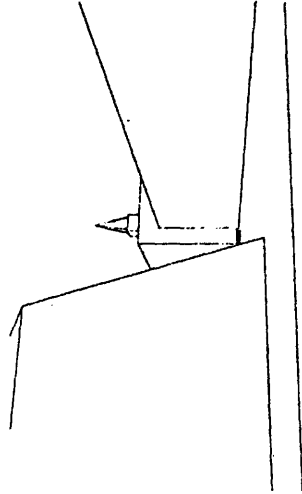
Court study: lanes, passageways and courts.



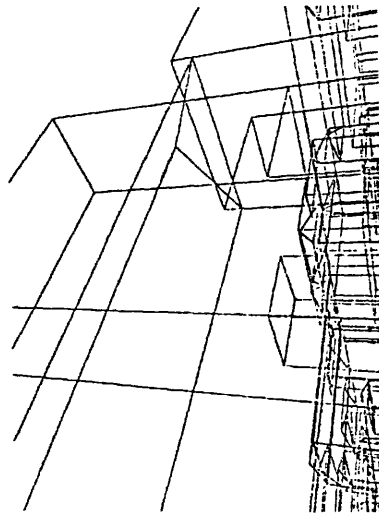
"Transparent" view from the street.



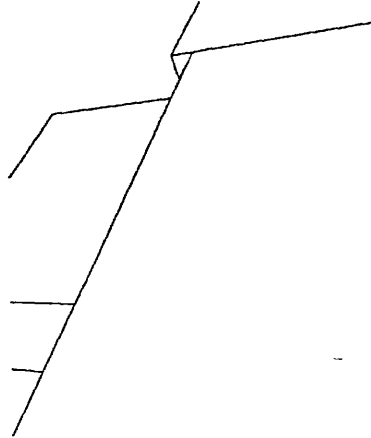
Actual view.



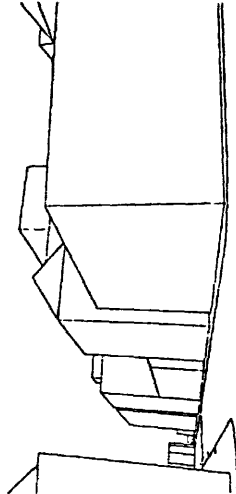
A glimpse from Argyle Street.



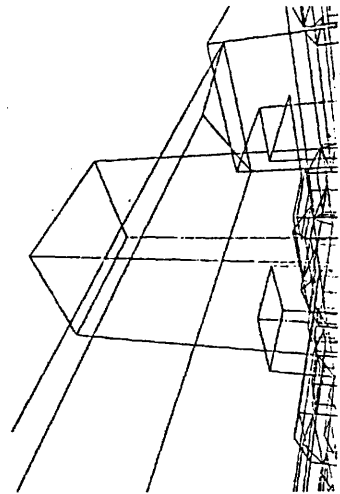
"Transparent" view from the street.



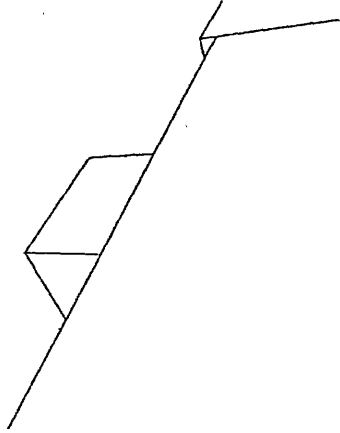
Actual view.



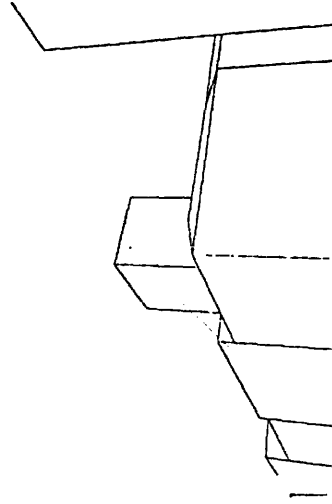
A glimpse from Argyle Street.



"Transparent" view from the street.

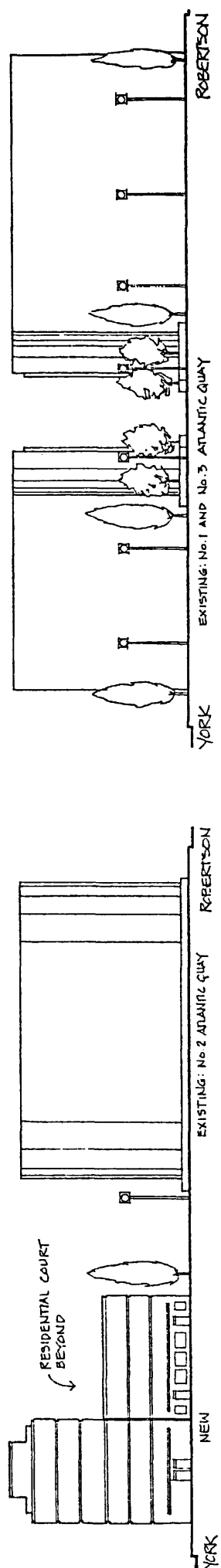


Actual view.



A glimpse from Argyle Street.

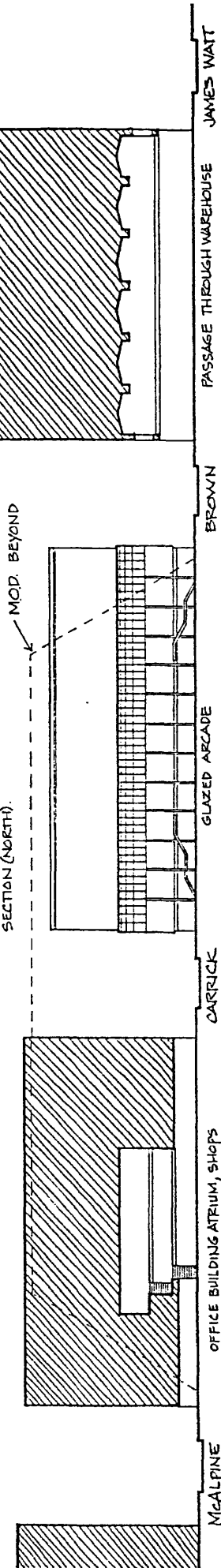
Small towers (just visible from the street) can be used to mark the major courts.



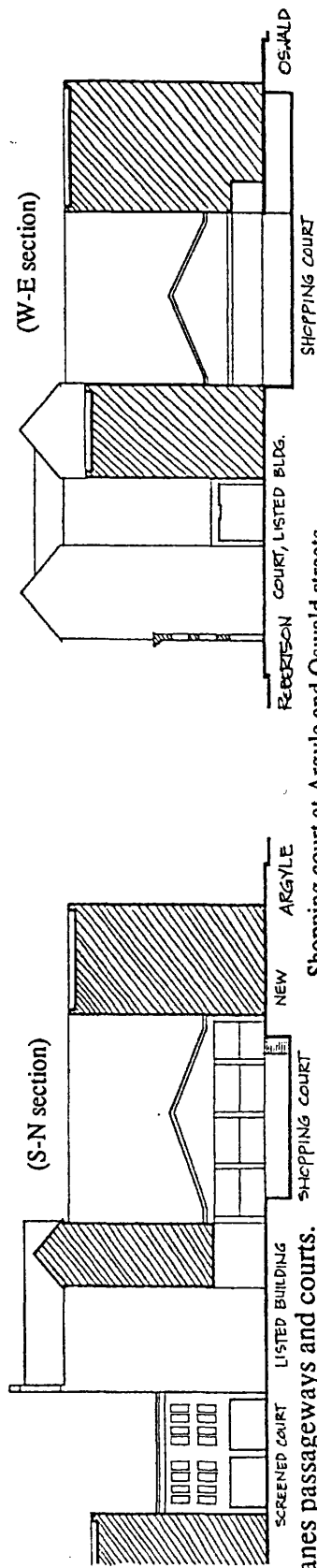
Lane at Atlantic Quay, facing north.

Lane at Atlantic Quay, facing south.

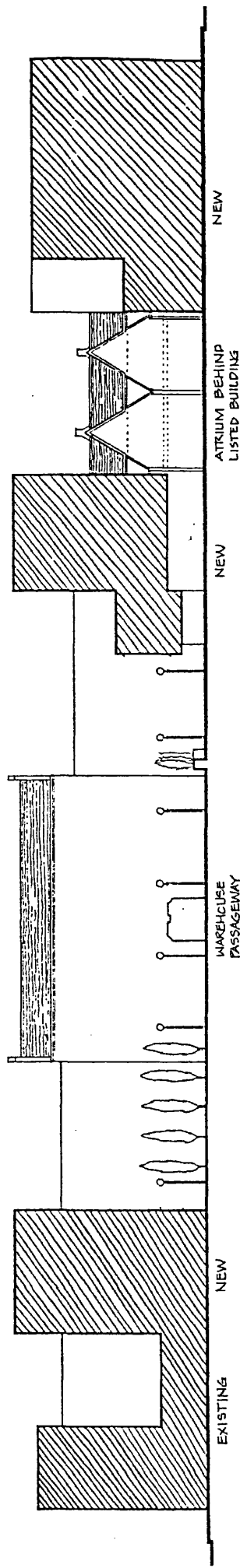
WHEN THE MINISTRY OF DEFENCE IS DEMOLISHED, THE PRESENT CRIMEA STREET WILL BECOME A PEDESTRIAN WAY. THE BLOCKS WILL BE CONTINUED BEYOND THIS SECTION (NORTH).



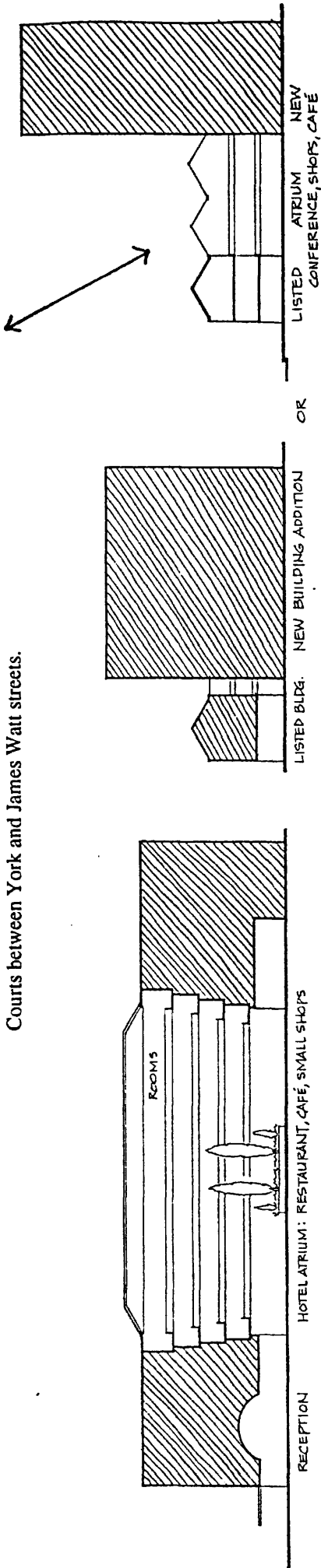
Passageways between McAlpine Street and James Watt Street.



Court study: lanes passageways and courts. Shopping court at Argyle and Oswald streets.

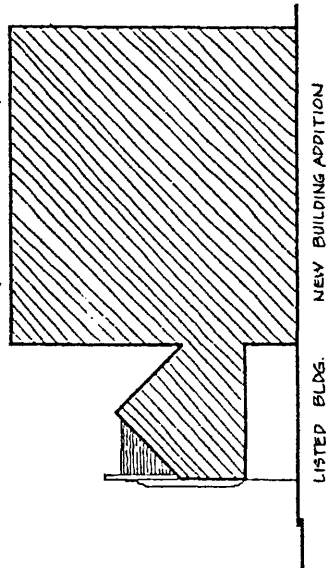


Courts between York and James Watt streets.

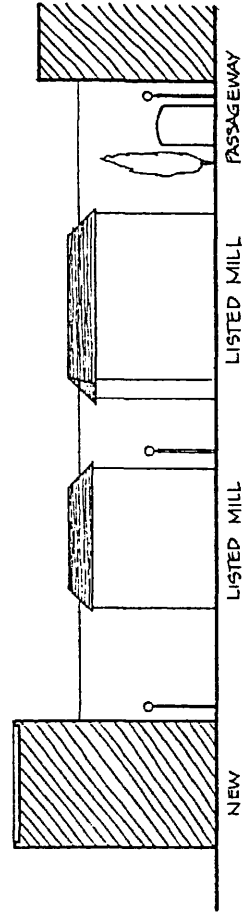


An hotel at Robertson Street. (N-S section)

(Robertson Street)

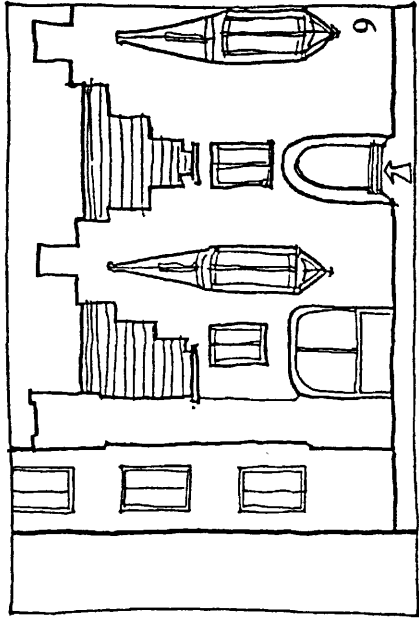
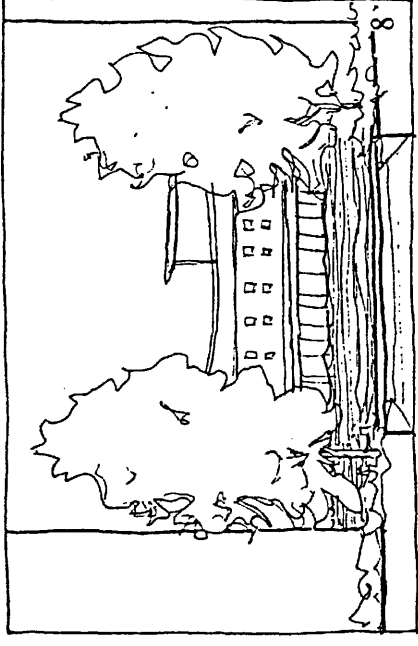
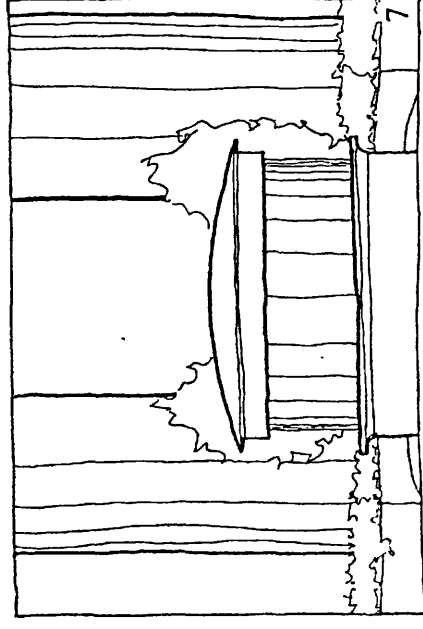
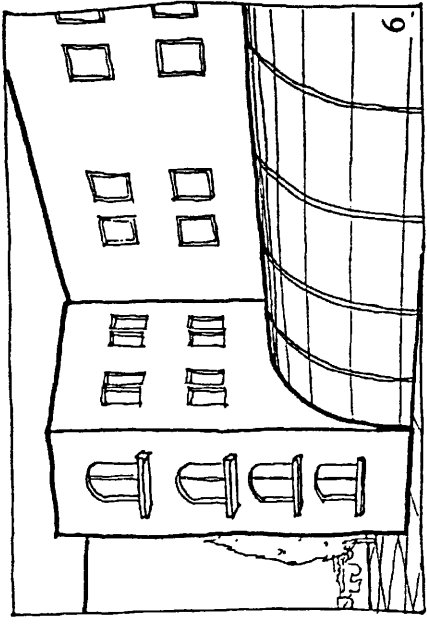
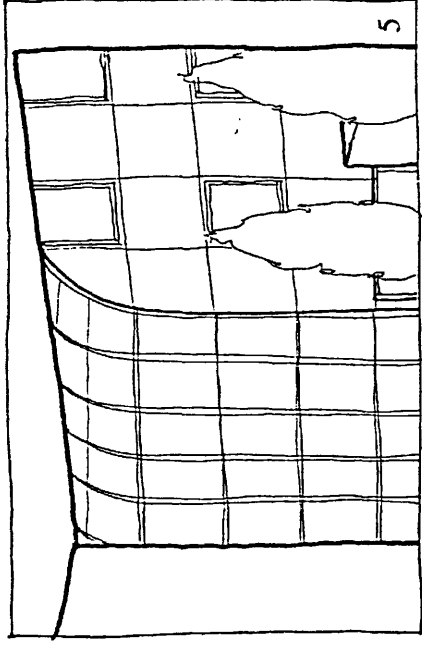
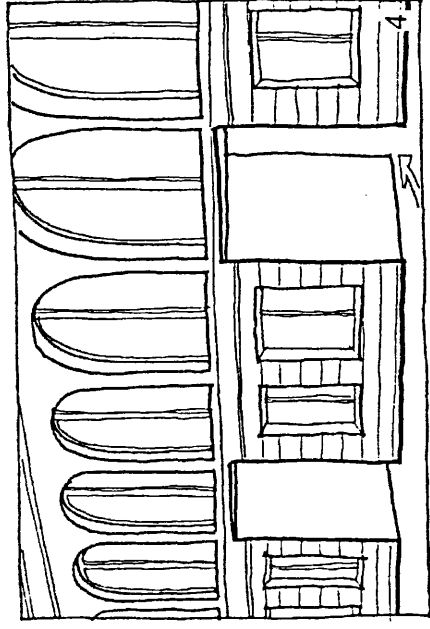
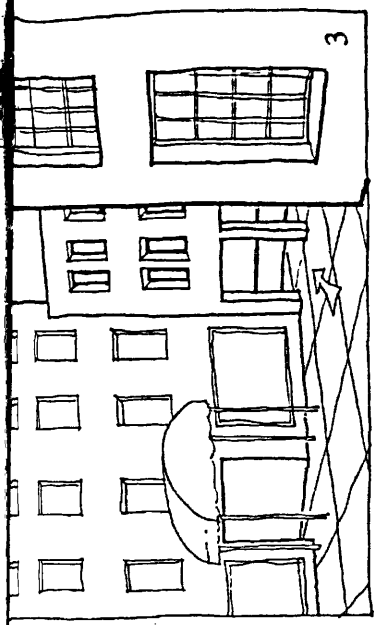
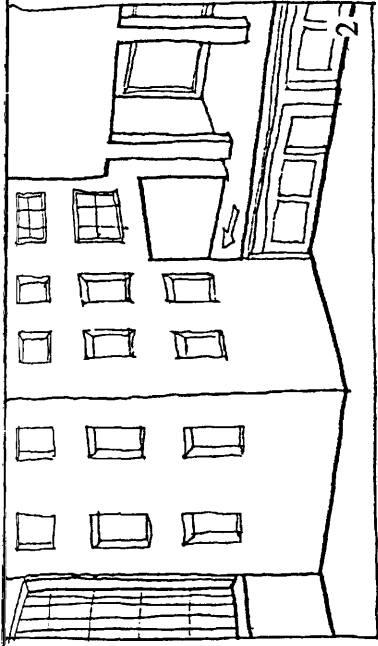
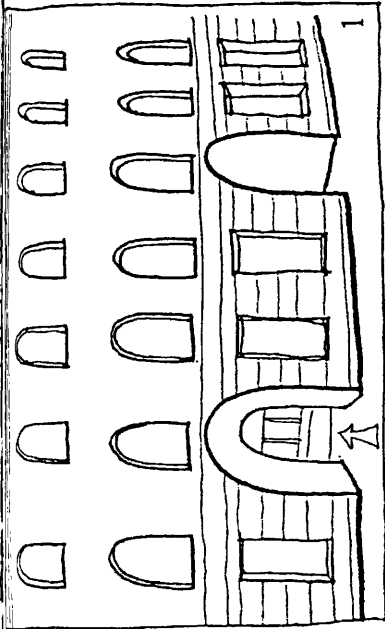


Court study: lanes passageways and courts.

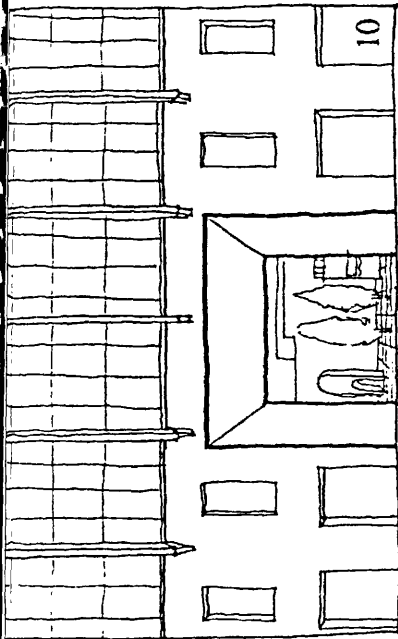


The Listed mills in a residential court. (Washington Street)

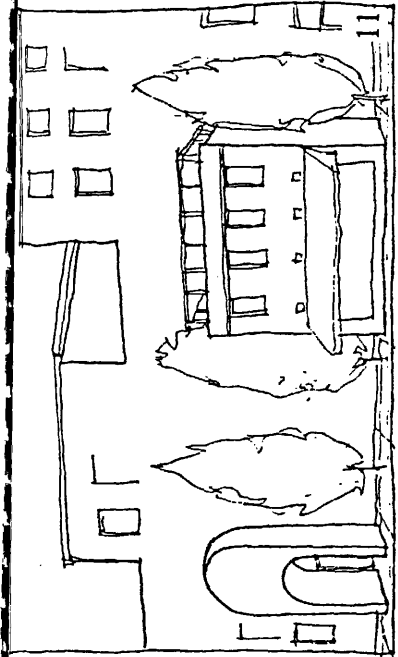
New buildings behind small historic buildings.
(York Street)



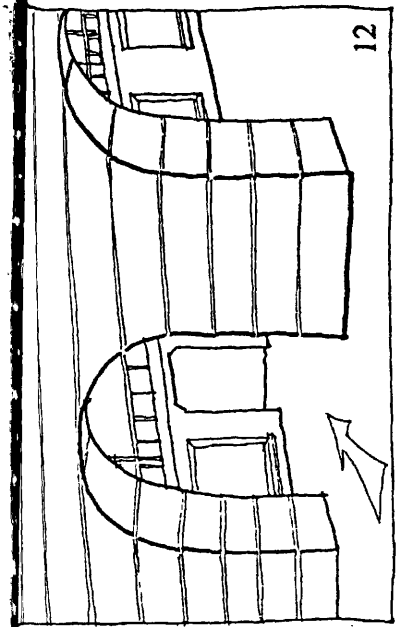
Court study.



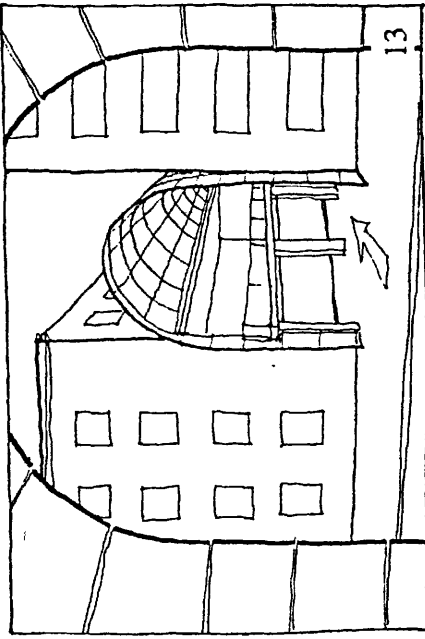
10



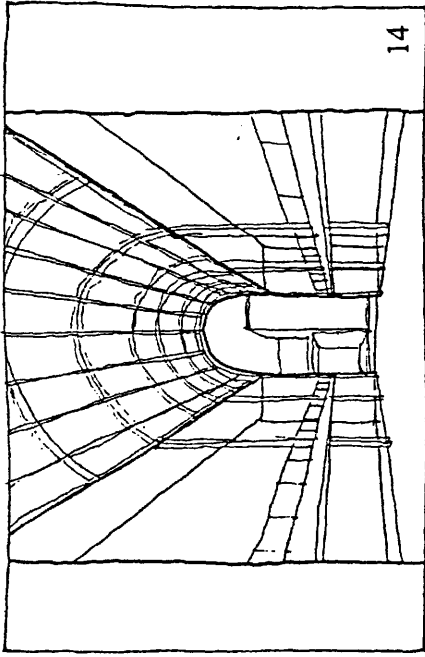
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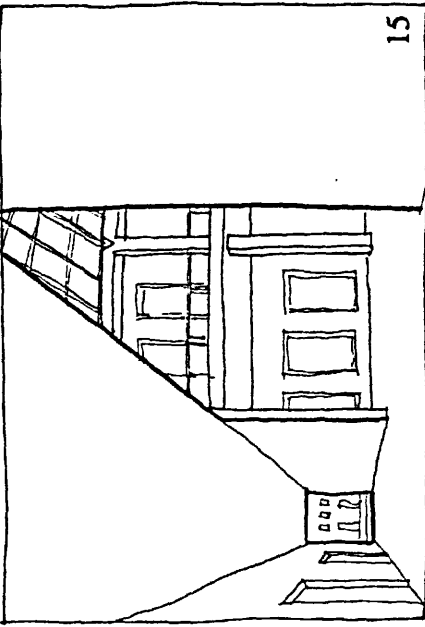
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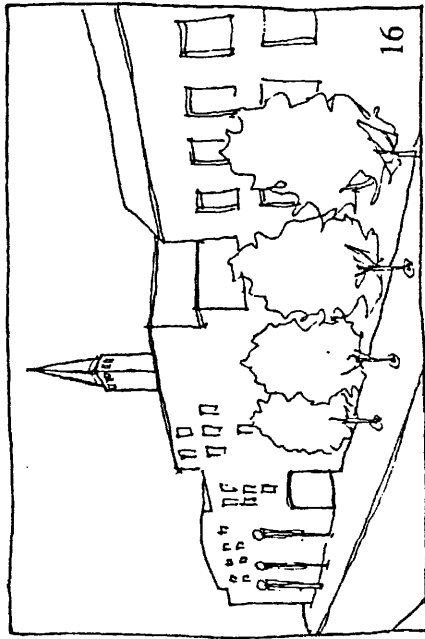
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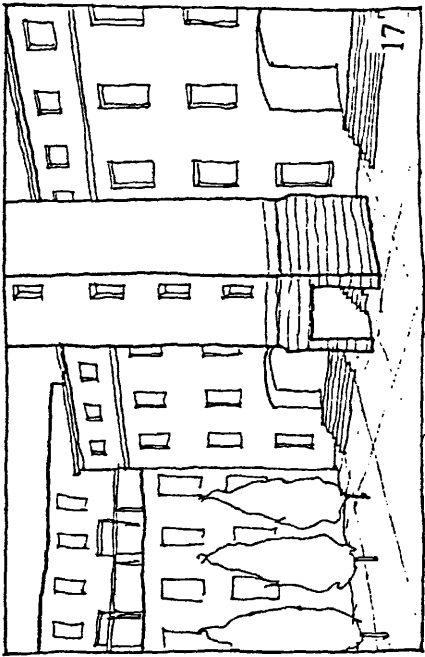
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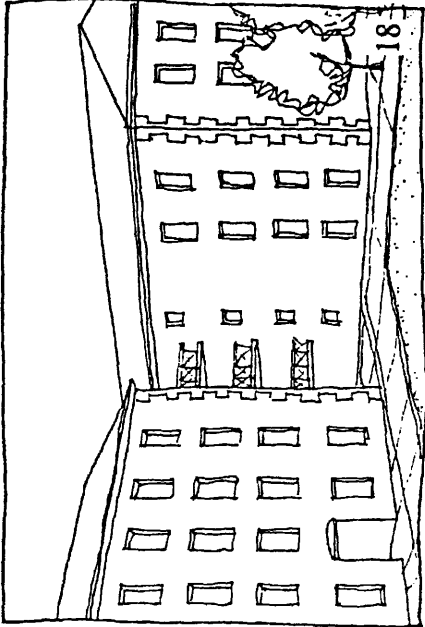
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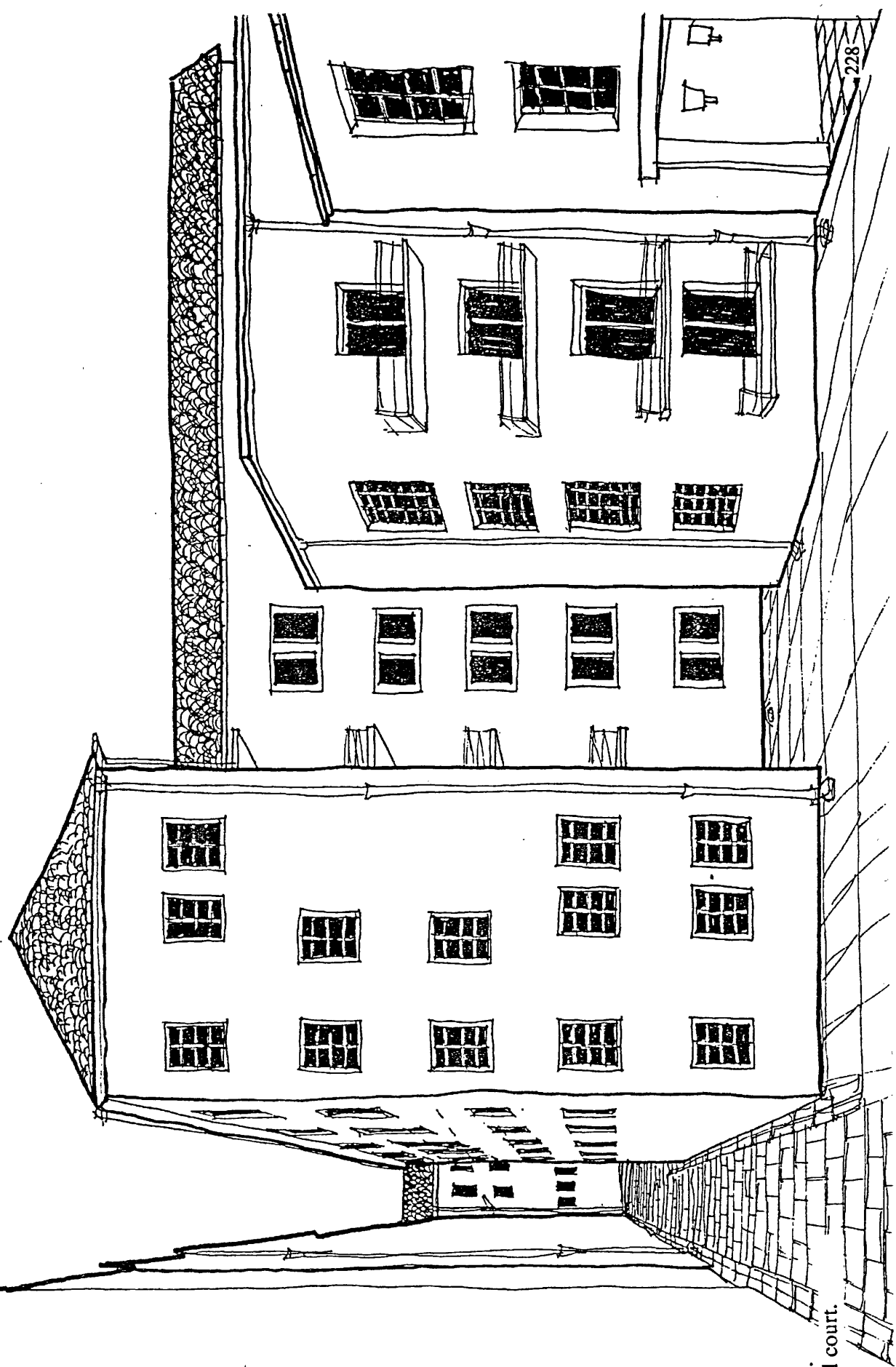
16



17



18



Court study.
A residential court.

THE PREVIOUS DIAGRAMMATIC INVESTIGATIONS ESTABLISH THE FOLLOWING GUIDELINES FOR DEVELOPMENT. THE INTENT IS TO ESTABLISH THE CHARACTER OF THE AREA, THE FORM OF THE STREETS AND THE VIEWS (FROM THE STREETS) IN THE NORTH AND SOUTH DIRECTIONS.

- LONG, CONTINUOUS BLOCKS IN THE NORTH - SOUTH DIRECTION.

- PASSAGEWAYS AND COURTS BETWEEN THESE STREETS.

- BUILDINGS SHALL PRESENT A CONTINUOUS FAÇADE TO THE STREET (3 STOREYS TALL, MINIMUM)

- RETAIL ESTABLISHMENTS, RESTAURANTS, ETC. MUST OCCUPY THE STREET-SIDE GROUND LEVEL OF BUILDINGS.

- THE SIZE AND LOCATION OF PASSAGEWAYS AND MAJOR COURTS WILL BE STIPULATED IN A MASTERPLAN TO ENSURE THAT THE BEST OPPORTUNITIES (OR VERY IMPORTANT CONNECTIONS) WILL NOT BE MISSED. THE DESIGN OF THESE COURTS AND LANES (AND ANY OTHERS PROPOSED) WILL BE LEFT TO INDIVIDUAL ARCHITECTS.

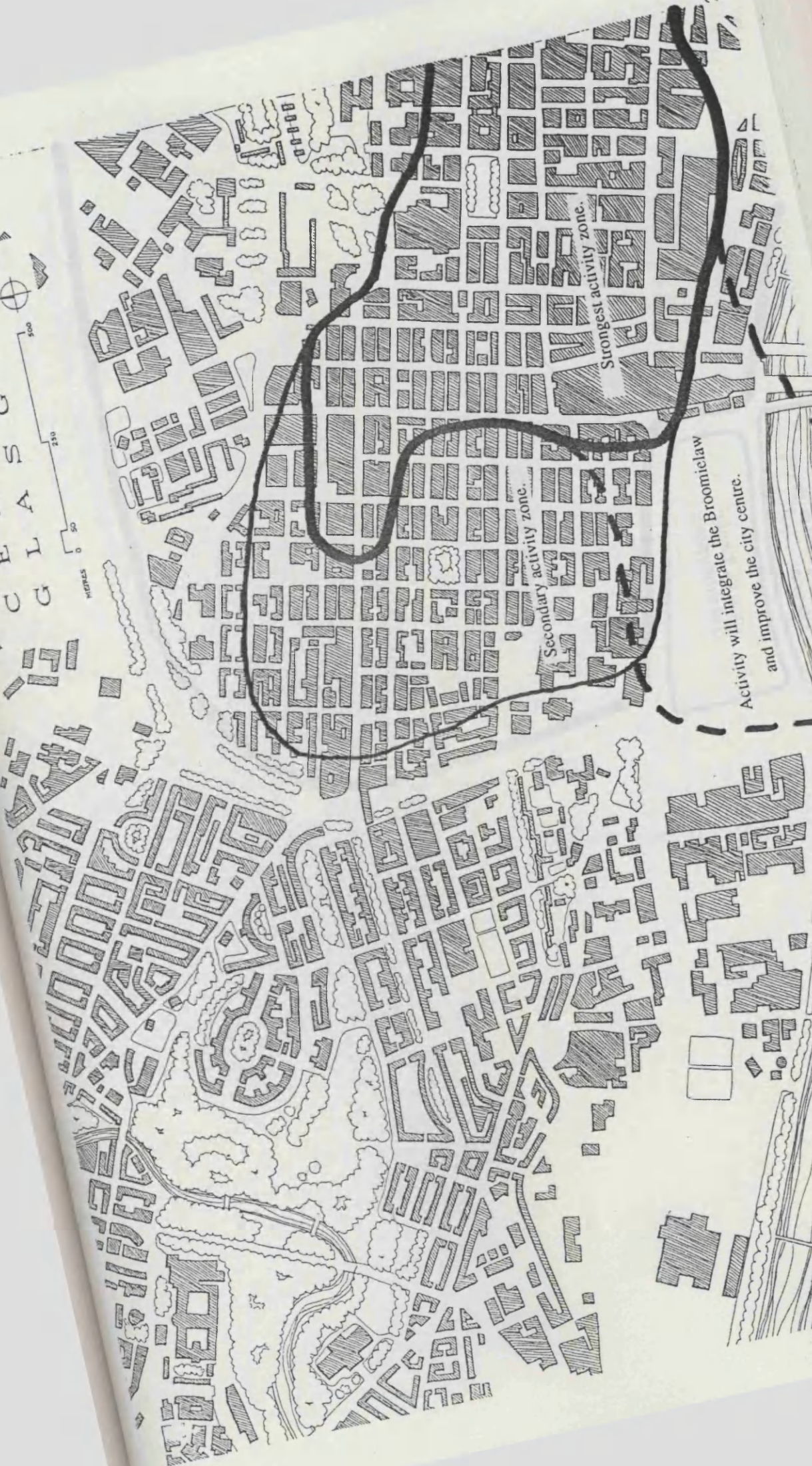
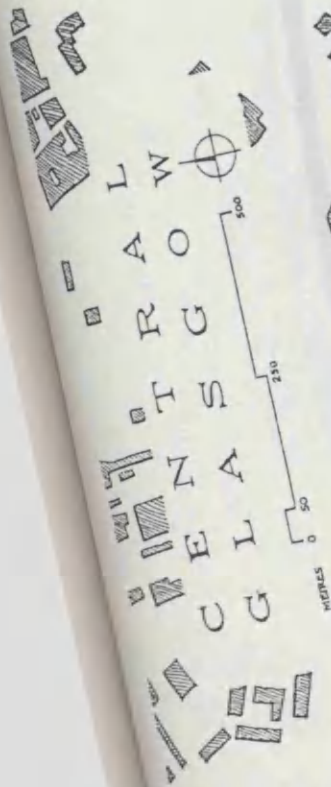
City Overview.

The Broomielaw can serve itself *and* serve the city.

1. As the Broomielaw grows, buildings should cover the area as quickly as possible in order to surround and capture the river. This growth will be of reasonable density, not simply low density.
2. This type of growth will not support a metropolitan square. Buchanan Street and George Square, for example, have an advantage over the Broomielaw and the rest of the city because the core is zoned for retail use. This degree of concentration of people in one area is neither possible or desirable in the Broomielaw.
3. The Broomielaw should have a unique form, or pattern, like those that are meaningful in other parts of the city. The existing streets, historic buildings and the presence of the river establish this form.
4. Interior-block courts and functions will add and element of surprise to the area. The long blocks in the Broomielaw need mid-block passages to facilitate pedestrian movement.

Bonus Floorspace Will Not Be Offered to Developers.

1. Tall buildings are not acceptable in the Broomielaw. It is important to maintain moderate-density development and the views from Blythswood Hill over the Broomielaw. The perceived horizontal nature of the streets and the existing adequate amounts of sunlight on those streets should be retained.
2. The study of Glasgow and other cities has shown that developers will add amenities to improve the marketability of their projects under standardised design regulations.
3. An aim is to avoid subjective approval on a case-by-case basis and to an avoid undirected "hit or miss" approval process. The Kohn Pedersen Fox scheme demonstrates that developers may be unsure about the bonuses they will be granted in exchange for a certain amenity. Design rules are more easily circumvented when many subsidiary rules and loopholes are present.
4. The completion of the Broomielaw will be a blessing, not a tragedy, for the city and for developers. Land is not scarce. The Broomielaw will not be a single-use zone, so additional development will not be any further from the active city.
5. High density development (with the requisite high demand) can bear strict development regulations. The Broomielaw (moderate density) may only be able to bear the regulations for shop fronts at ground level. The regulations for diversity and for street-level activities have the greatest effect on the success of a district.



Activity will integrate the Broomielaw
and improve the city centre.

Improving the city centre, not merely expanding it.

LEGEND
L W
A O
R G
T S
N A
E L
C G

0 50 100 150 200

NOTES



The city centre.

The Broomielaw:
room for growth.

The river:
potential asset to the city.



Expansion of the city centre.



Proposed

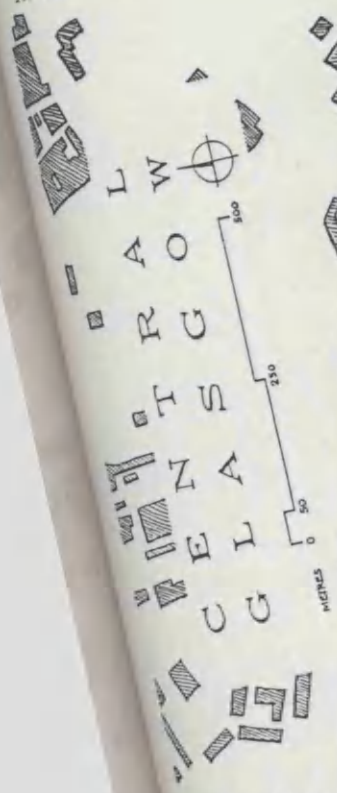
part of the city centre.

The Broomielaw (completed)

LEGEND
0 50 100 200
METRES
THE DROOMIELAW PROPOSAL
N
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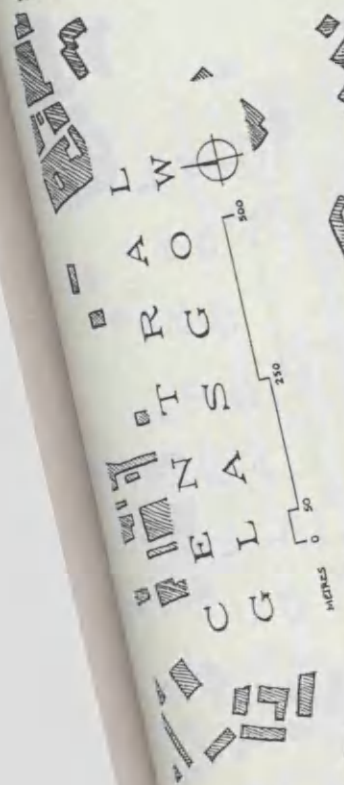


Identifiable neighbourhoods.

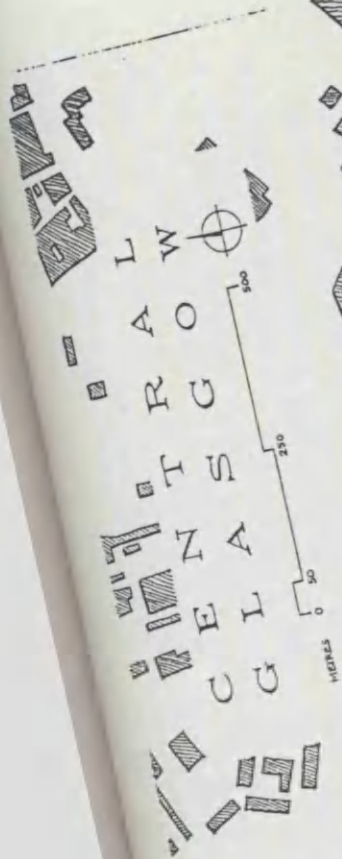


Proposed.

Major activity centres.



Urban spaces.



Proposed.

Major Activity centres and urban spaces.

Broomielaw Overview.

The Character of the Broomielaw.

Significant aspects.

1. The streets are perpendicular to the river, with open-ended vistas to the north and south.
2. The streets from the quay to Argyle Street are uninterrupted by perpendicular streets. The streets are composed of nearly continuous rows of buildings. Façades are aligned and the ends of buildings are butted.
3. Secondary buildings in the middle of the blocks are accessed from passages through the street-front buildings.
4. Each street, and the entire district, has a north-south directionality and a horizontal feel.

Minor aspects.

1. Building façades are nearly planar.
2. Primary façades are stone. Brick is used elsewhere.
3. Stonework is usually more elaborate on the lower levels.
4. Windows are regular in shape and are usually vertical rectangles. The windows are spaced on a regular grid.
5. Façades are generally between 17% and 25% glazed.
6. Cargo doors and windows at ground level are often extremely large.
7. Small and large buildings have been built side-by-side.

Reasons why the "Old Broomielaw" was built as it was:

1. Streets perpendicular to the quay are best for moving cargo from the river to the site.
2. Space near the river was very valuable, so east-west streets were not introduced.
3. Natural light was not as important for the many warehouses as it was for buildings elsewhere in the city. Small rectangular blocks and broad streets prevail elsewhere. The Broomielaw streets are comparatively narrow, given the amount of traffic that they once supported.

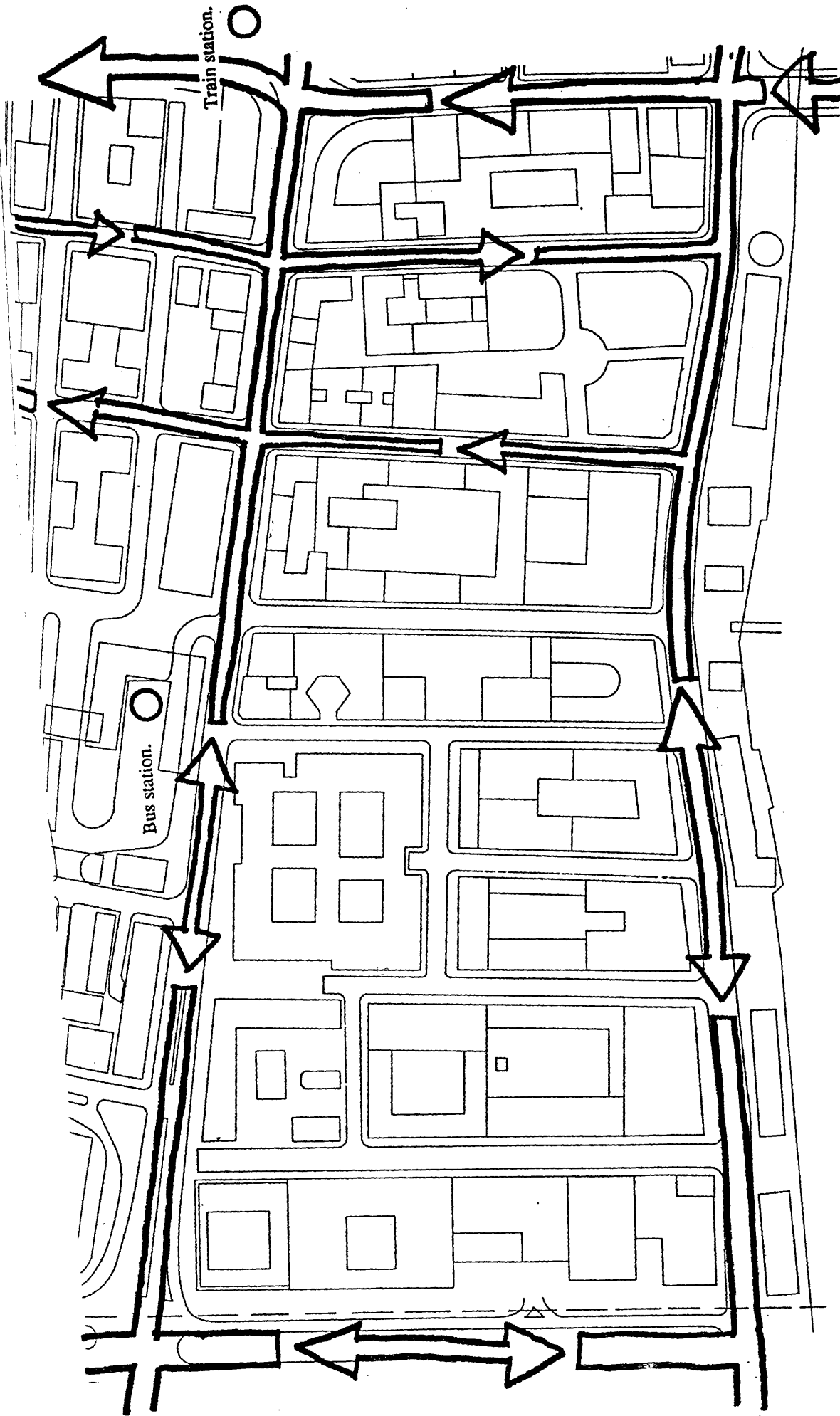
The "New Broomielaw" is similar to the old, but the reasons are different:

(On a few streets, Listed buildings and the corresponding environment should be preserved.)

1. The former fabric happens to have an excellent visual potential with regard to the river and the rest of the city.
2. Former buildings were made as tall as possible given the technology of construction and vertical transportation systems of the time. New buildings will be of moderate height in light of current technology. The appropriate density of development and the desire for continuous street façades are the governing factors.
3. The street life of the new development will be enhanced if the total block-perimeter of the site is limited.
4. Some buildings were originally constructed in the interiors of the blocks to save space. New construction will include interior-block buildings, courts and shopping arcades for interest and a surprise effect.

Old: The river gave the Broomielaw its form.

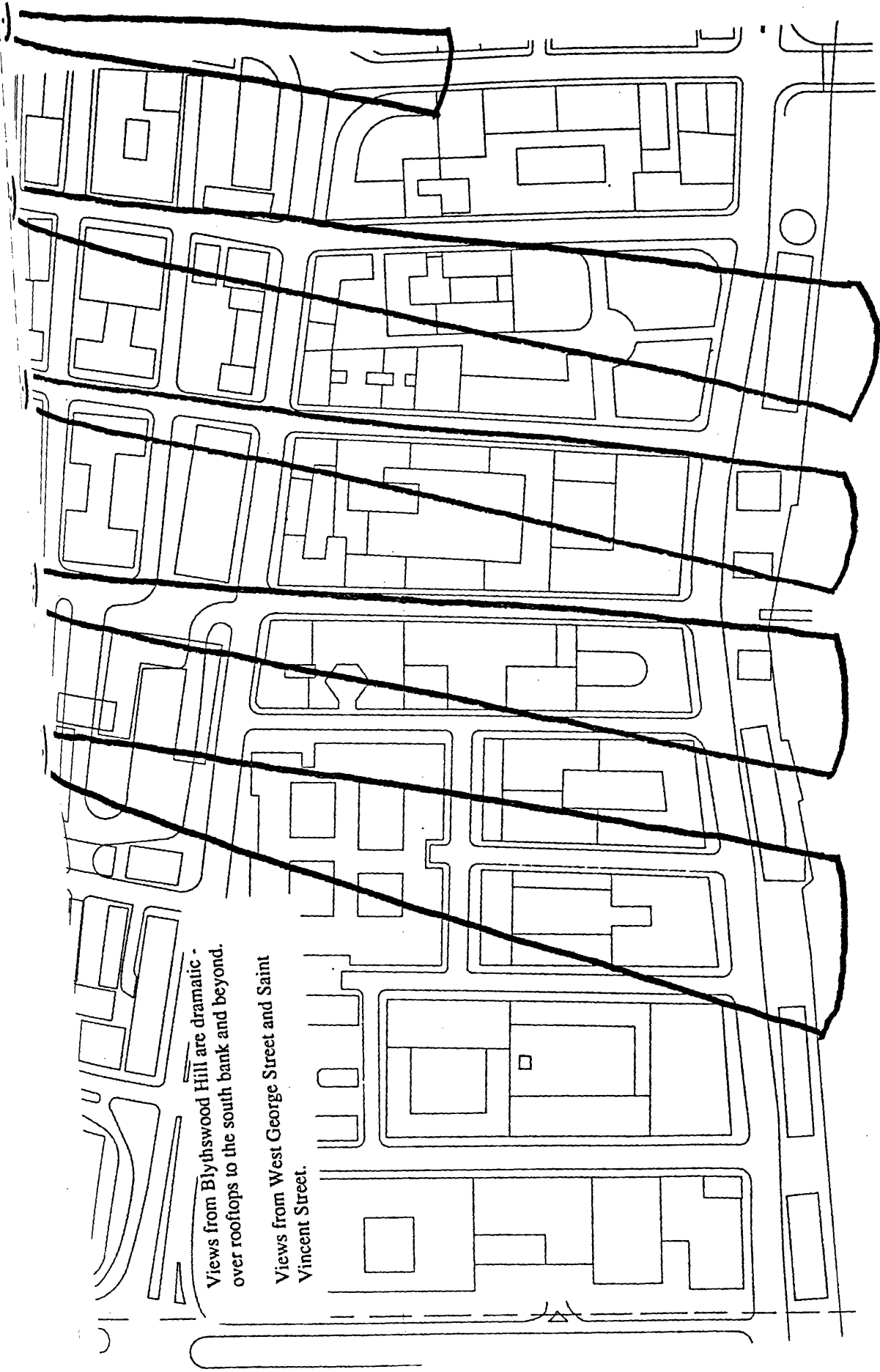
New: Activity and the enclosure of the river will reintroduce the river into the city.



Major traffic routes.



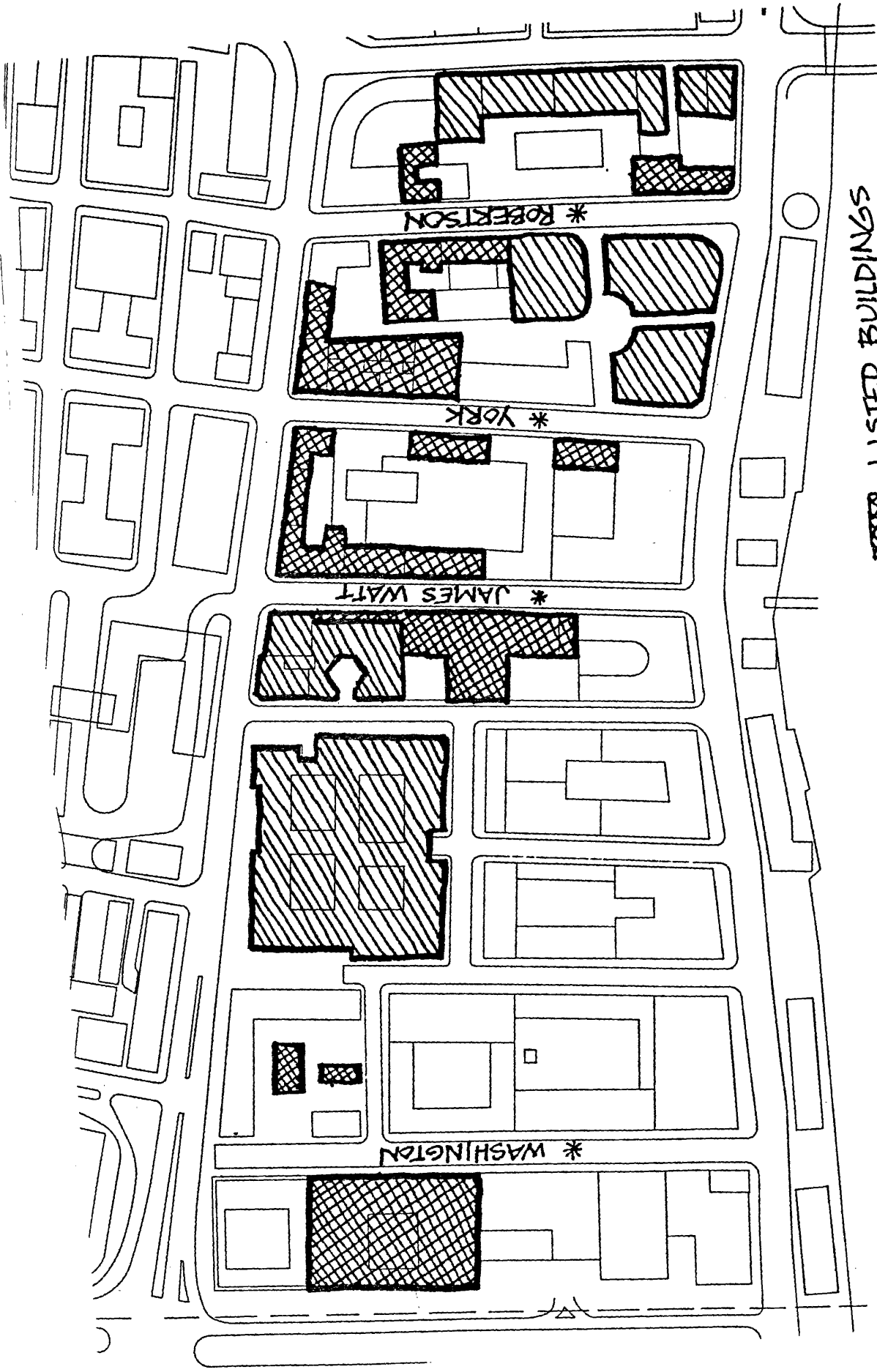
Existing pedestrian routes.



Views from Blythwood Hill are dramatic -
over rooftops to the south bank and beyond.

Views from West George Street and Saint
Vincent Street.

Views.



- LISTED BUILDINGS
- SIGNIFICANT EXISTING BUILDINGS

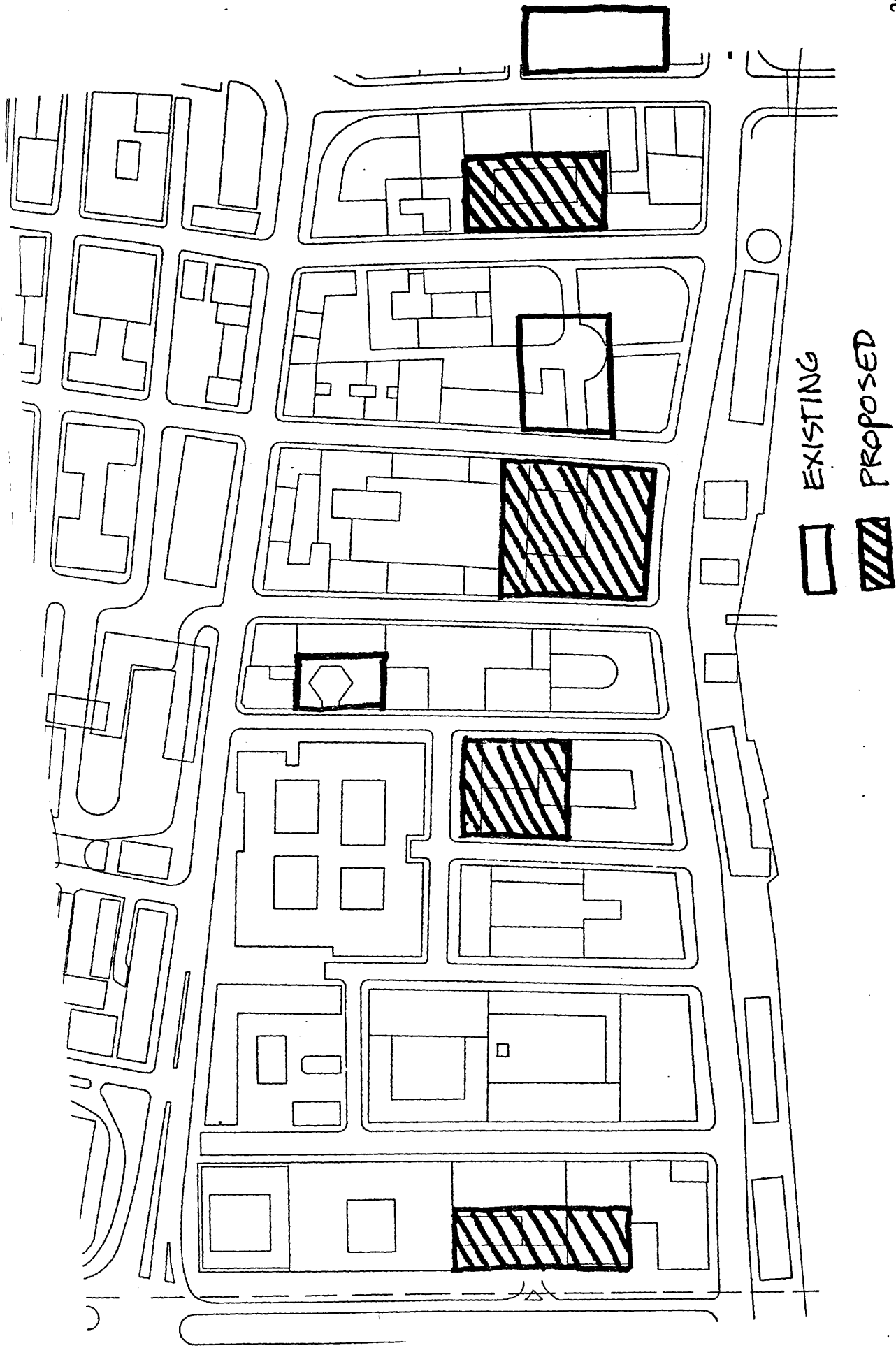
Streets that should not be moved.

Block Area ÷ Perimeter = Area-Perimeter Ratio

More street activity is preferred up to the point where congestion occurs. The Blythwood street grid provides much more perimeter than is necessary for servicing; it was designed at a time when fresh air and natural light were the important criteria.

Amount of area "drained" by each street.
(Magnitude of potential street activity)
Statistical (ratio) and graphic comparisons.

Comparison of the concentration of walkway activity.
Blythwood v. the Broomielaw.



New parking areas.



Proposed pedestrian routes.

Attractions and major aids to development in the Broomielaw.

1. The adjacency of the Broomielaw to the city centre.
2. The potential of the riverfront environment.
3. The adjacency of Central Station.
4. The adjacency of Anderston bus station.
5. Existing automobile traffic arteries:
Argyle Street
Broomielaw Road
the M8 motorway
the George V Bridge (Oswald Street)

Major impediments to a successful Broomielaw.

1. The number of places where pedestrians can cross the river is insufficient.
2. The riverwalk is not pleasant. The area is unused and is not part of the city.
3. Current city centre zoning regulations do not lead to the construction of vibrant and active districts.
4. The Kingston Bridge from Broomielaw Road to Argyle Street presents problems of noise and visual scale.
5. Recent proposals for the Broomielaw have been conceived without regard to the city or to the whole Broomielaw district. They are random and self-centred in nature.

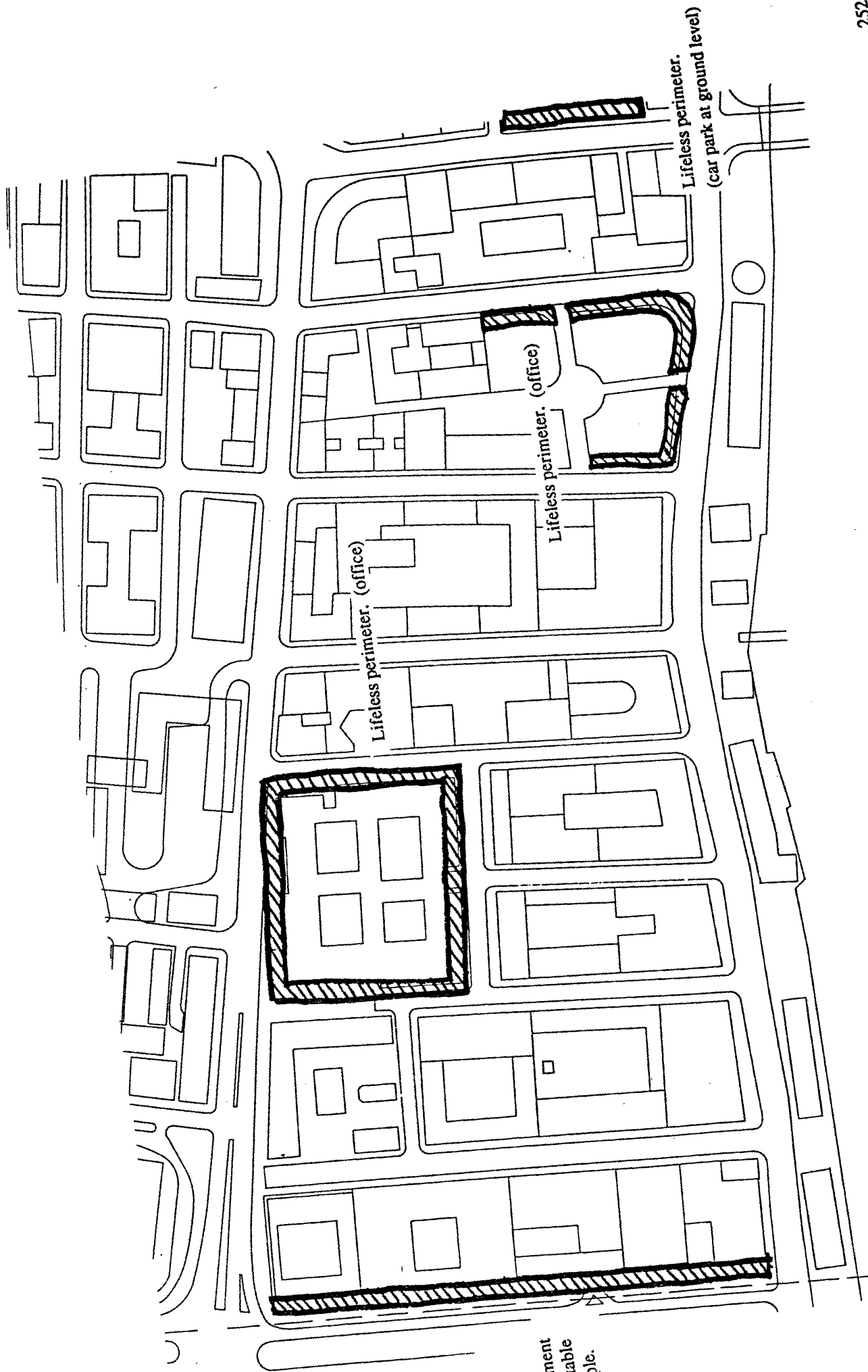
Minor impediments to a successful Broomielaw.

1. The Ministry of Defence building is very large and provides no street-level activity.
2. Connections to the rest of the city are poor, both functionally and aesthetically.

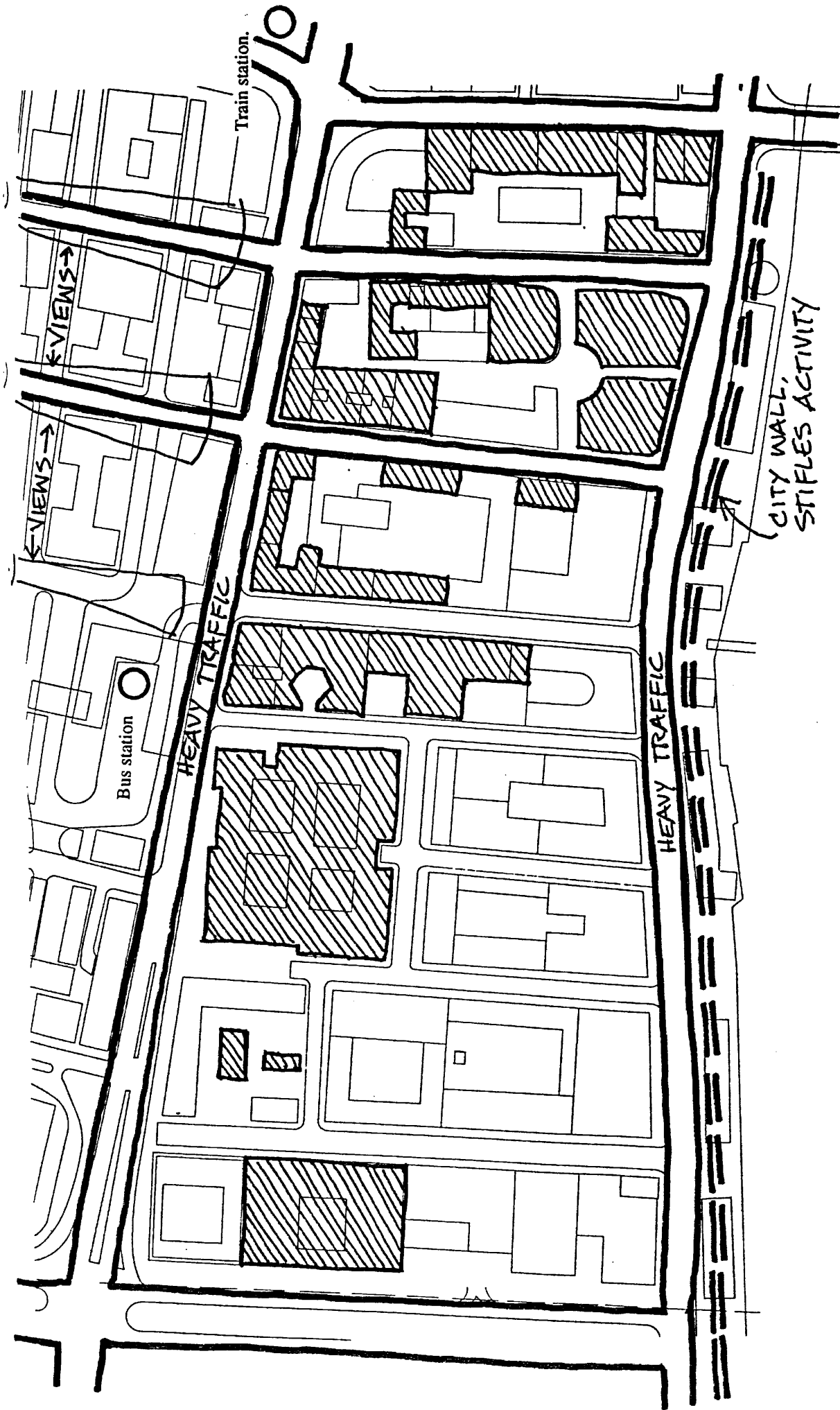
Urban design measures:

- A. Enlivening the river environment and providing connections between the north and south banks.
- B. Improving the connection between the Broomielaw and Blythswood Hill.

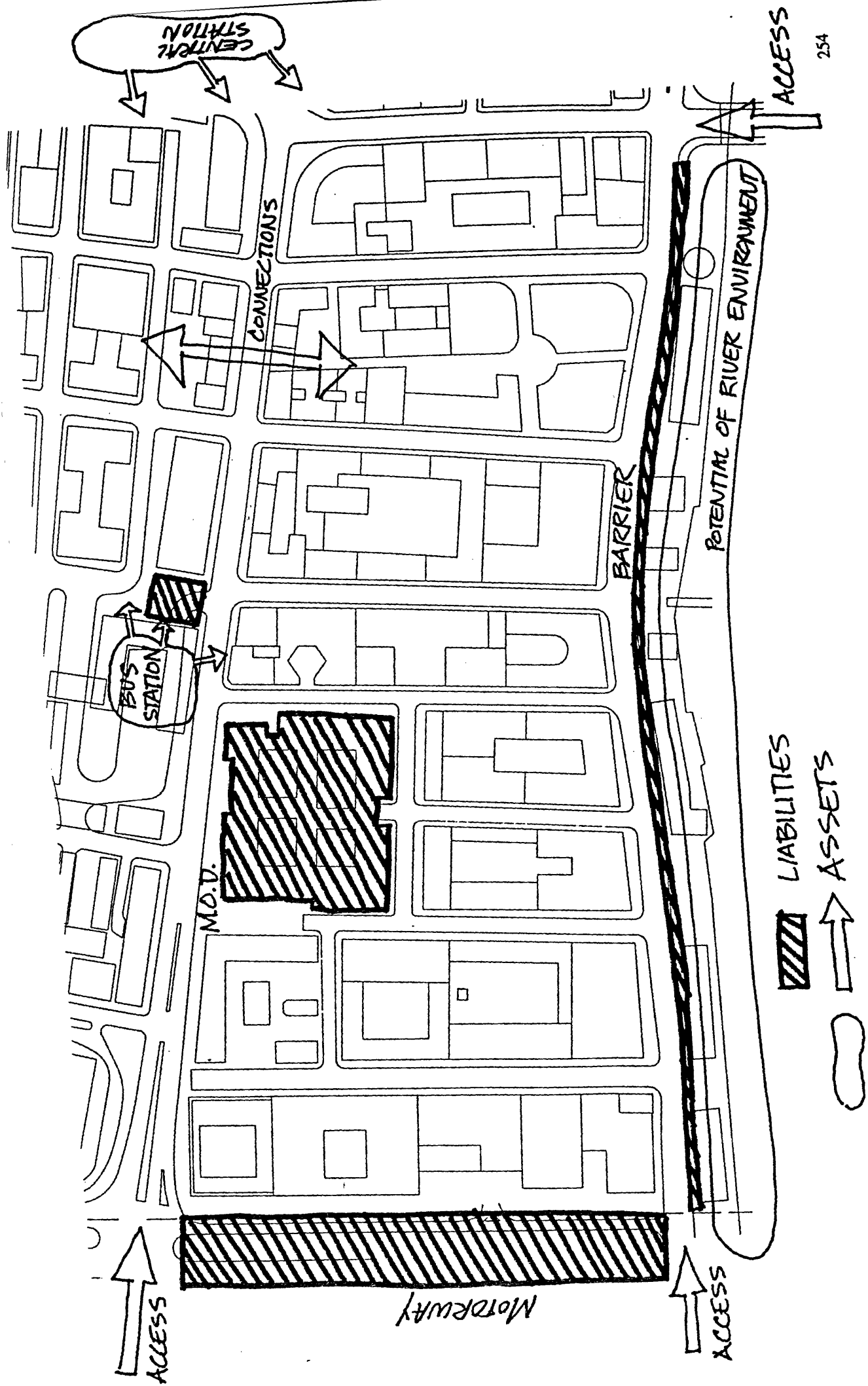
Environment
is unsuitable
for people.



Special site conditions.



Composite plan: existing conditions.



Addressing the Impediments

Zoning: Provide a mixture of uses.

FROM THE PLANNING DEPARTMENT:

ZONES WERE CREATED BASED ON A SURVEY OF EXISTING CONDITIONS
(IT IS NOT BASED ON WHAT IS BEST)

THE LATEST OFFICE SPACE ESTIMATES:

14.5 MILLION S.F. TOTAL

2.5 MILLION S.F. VACANT (17%)

PLOT RATIO OF 3.5:1 IS ROUTINELY IGNORED: RATIOS OF 4:1 UP TO 8:1

CITY CENTRE EMPLOYMENT ESTIMATES: OFFICE: 50-55,000 RETAIL: 20,000

CITY CENTRE RESIDENTIAL ESTIMATES: GARNETHILL, MAINLY RESIDENTIAL, IS

HOME TO ABOUT 2,500 PEOPLE. THE MERCHANT CITY HAS 1,400 TO 1,600
RESIDENTS.

PROPOSED DISTRIBUTION / MIXTURE

A TARGET POPULATION OF 1,700 TO 2,000 RESIDENTS IS BASED ON A SURVEY OF THE SIZE AND DENSITY OF GARNETHILL AND THE MERCHANT CITY. THE TOTAL SQUARE FOOTAGE OF THE BROOMFIELD (1.2 MILLION S.F.) IS BASED ON AN EVALUATION OF THE BUILDING DESIGN PARTNERSHIP, THE HOLMES PARTNERSHIP AND KEHN PEDERSEN FOX SCHEMES. (FIGURE 72, P.122)

THE SCHEME BY THE HOLMES PARTNERSHIP MOST CLOSELY MATCHES THE DENSITY OF THE SCHEME PROPOSED IN THIS DOCUMENT. THE TOTAL OF THP'S PROPOSAL (WEST OF THE BDP SQUARE) IS 1 MILLION S.F.

TO FIND THE RESIDENTIAL % OF THIS SCHEME, THE AVERAGE SIZE OF A TWO BEDROOM FLAT (700 S.F.) IS USED. (SEE P. 87)

TO ESTABLISH THE RANGE:

1,700 RESIDENTS \div 2.5 RES/FLAT = 680 FLATS	....	\times 700 SF/FLAT = 476,000 SF	RESIDENTIAL
1,700 RESIDENTS \div 3.0 RES/FLAT = 566 FLATS	....	\times 700 SF/FLAT	396,000 SF RESIDENTIAL
2,000 RESIDENTS \div 2.5 RES/FLAT = 800 FLATS	....	\times 700 SF/FLAT	560,000 SF RESIDENTIAL
2,000 RESIDENTS \div 3.0 RES/FLAT = 666 FLATS	....	\times 700 SF/FLAT	466,200 SF RESIDENTIAL

RANGE 396,000 SF TO 560,000 SF

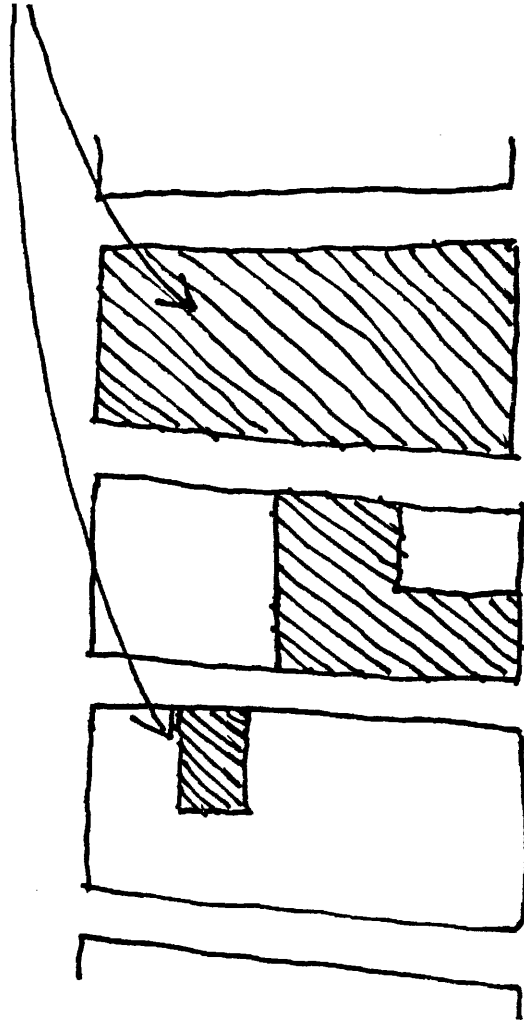
OF THE 1.2 MILLION SF TOTAL

33% TO 46% RESIDENTIAL

MEDIAN: 39% RESIDENTIAL
TARGET

Addressing the Impediments (continued)

Random Projects: Form public spaces and establish the guidelines required to ensure the reality will be similar to the vision. If everything is designed by one person, the result will be stale and boring. The Building Design Partnership and Kohn Pedersen Fox schemes were executed without a vision for the Broomielaw.

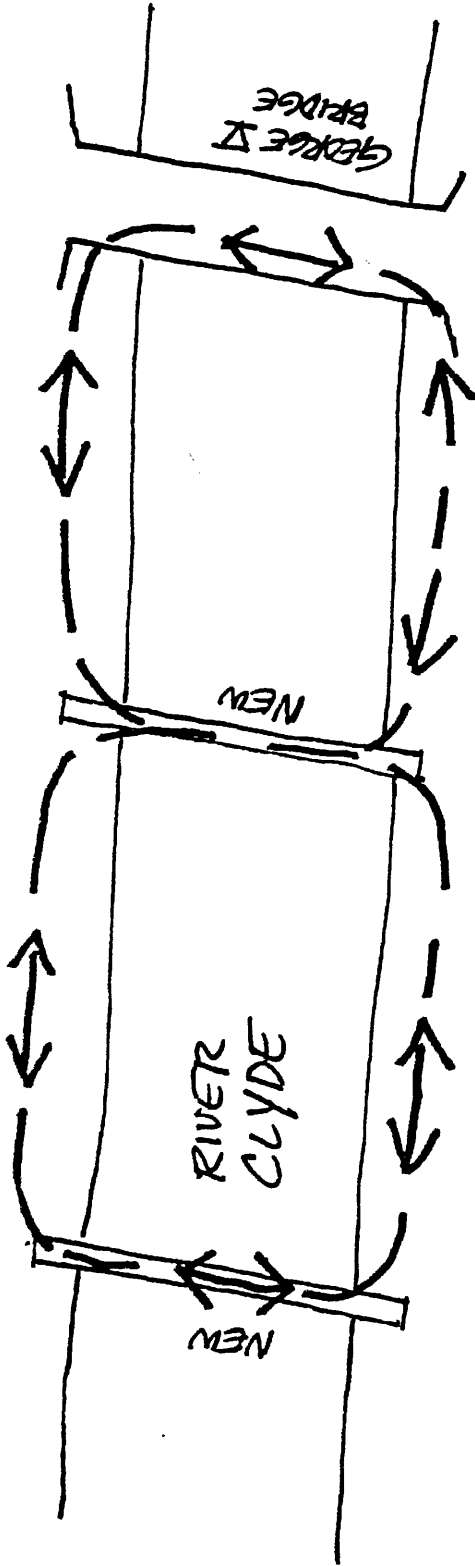


The new rules will allow a builder to purchase a small parcel of land or a huge parcel. Together, all projects will fulfil the intended nature of the Broomielaw. Co-operation between building, not competition, is the motivation for the rules.

Addressing the Impediments (continued)

The unused river: The addition of major local and tourist attractions near the river will invite the population necessary to sustain secondary riverfront enterprises like shops and restaurants. Attractions should be on both banks of the river. Activity around the river depends upon pedestrian links between the two river banks.

Avoid excessive distances between cross-river links and avoid dead-end promenades.

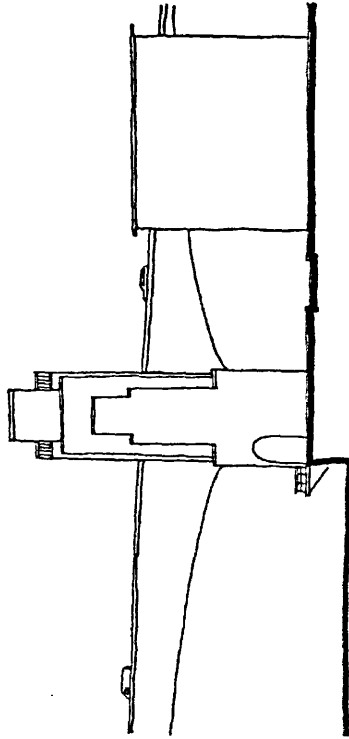
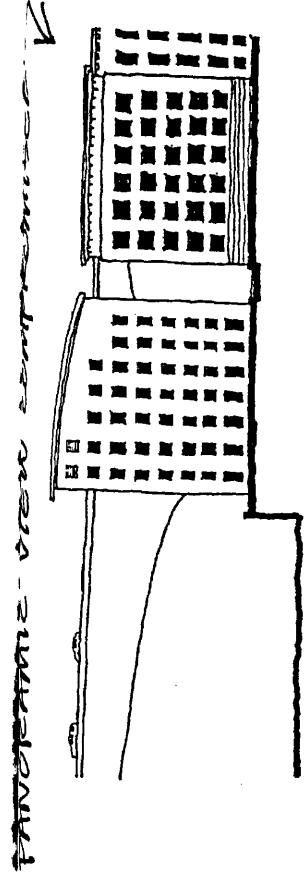


Addressing the Impediments (continued)

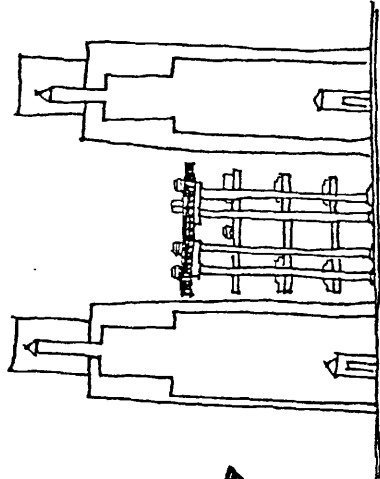
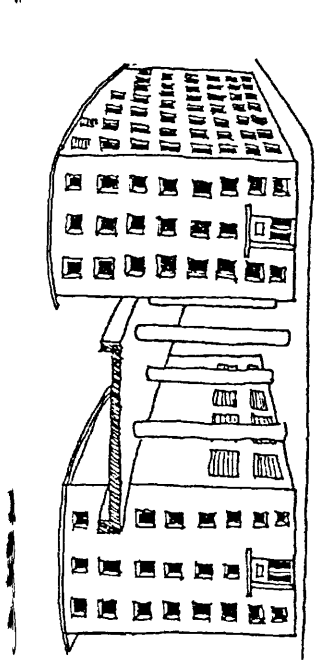
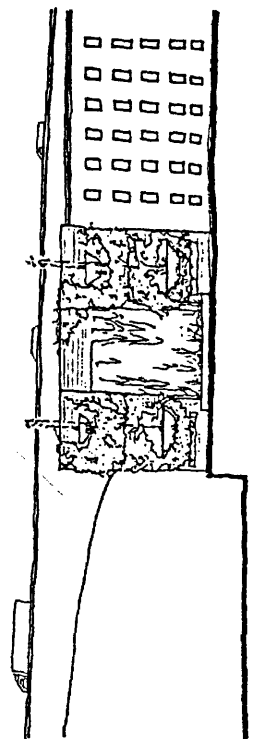
The motorway overpass: The best method of overcoming the noise and blight problems of the motorway is to bracket the overpass with buildings.

Buildings should be as close to it as practical, leaving Argyle Street and Broomielaw Road unobstructed for existing traffic. Completely blocking the motorway from view would entail blocking vital city connections at Argyle Street and Broomielaw Road.

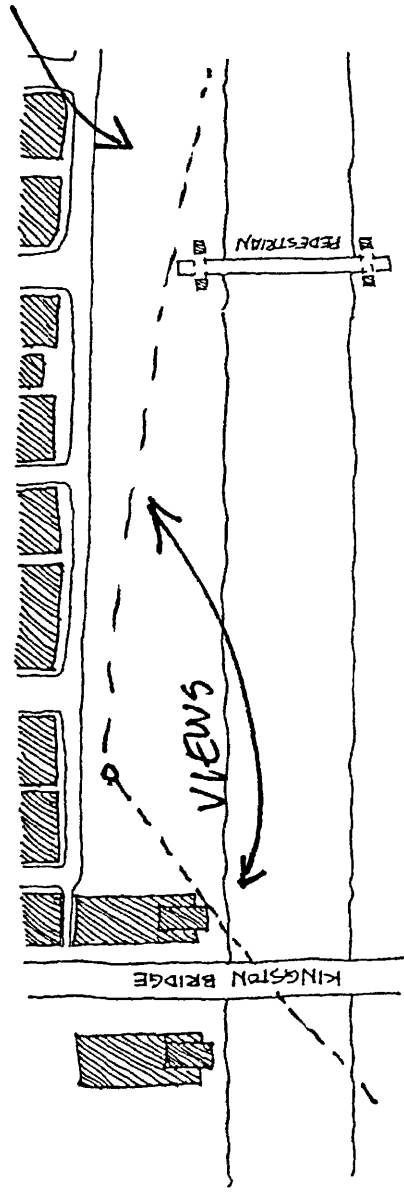
Building massive or very tall buildings in order to make the motorway appear smaller only trades one scale problem for another.

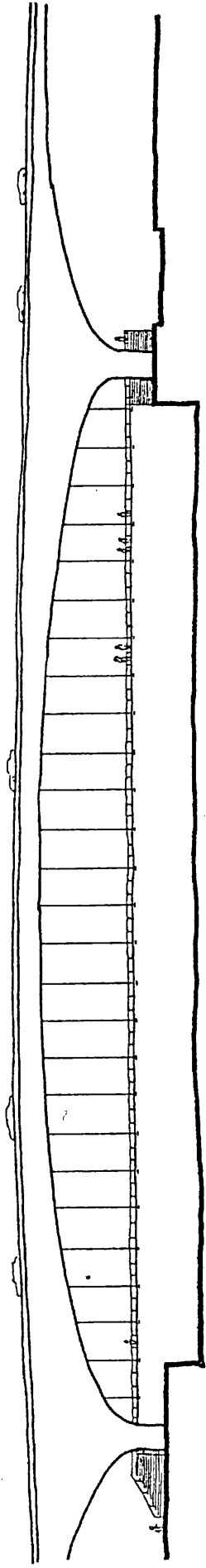


ROADS CUT OFF, PANORAMA
RESTRICTED

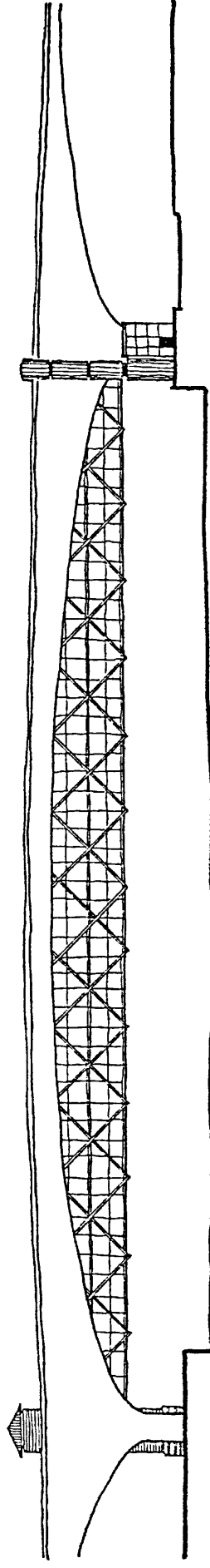


NEW SCENE
PROBLEMS

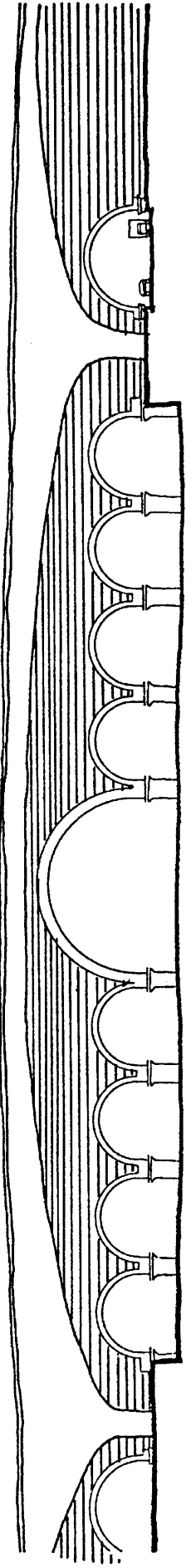




Pedestrian suspension bridge.



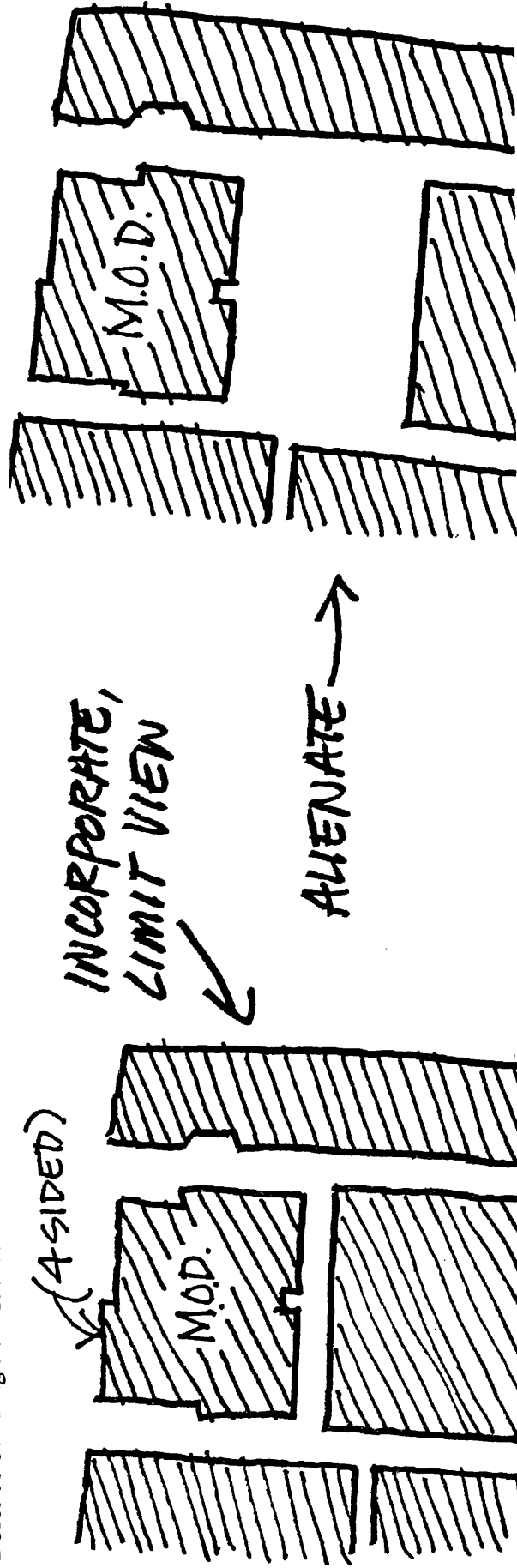
Offices or restaurants.



Options for improving the Kingston bridge. Stone arches employed to improve the scale of the bridge.

Addressing the Impediments (continued)

The Ministry of Defence building: The most effective method of reacting to this building is to build close to it and attempt to incorporate this unusual building (huge and impenetrable) into the Broomielaw. This way, views will be of only one portion of the building at a time. A plaza is not merited in the Broomielaw and, in any case, a plaza for this building would only further alienate it. The service entrance to the Ministry of Defence building is on the south side. New buildings to the south should be constructed with a view to the future, when the pattern of north-south streets with minor courts and lanes can be continued where the Ministry of Defence building now stands.



Addressing the Impediments (continued)

Connections to the rest of the city: A continuous procession from Blythwood Square to Tradeston is possible.

Connections at many streets are needed, but the characteristics of Blythwood Street and James Watt Street provide the substance for a ceremonial connection through the centre of the Broomielaw.

Ingredients of the processional route:

Blythwood Square is a hilltop square.

Blythwood Street dead-ends at the bus station.

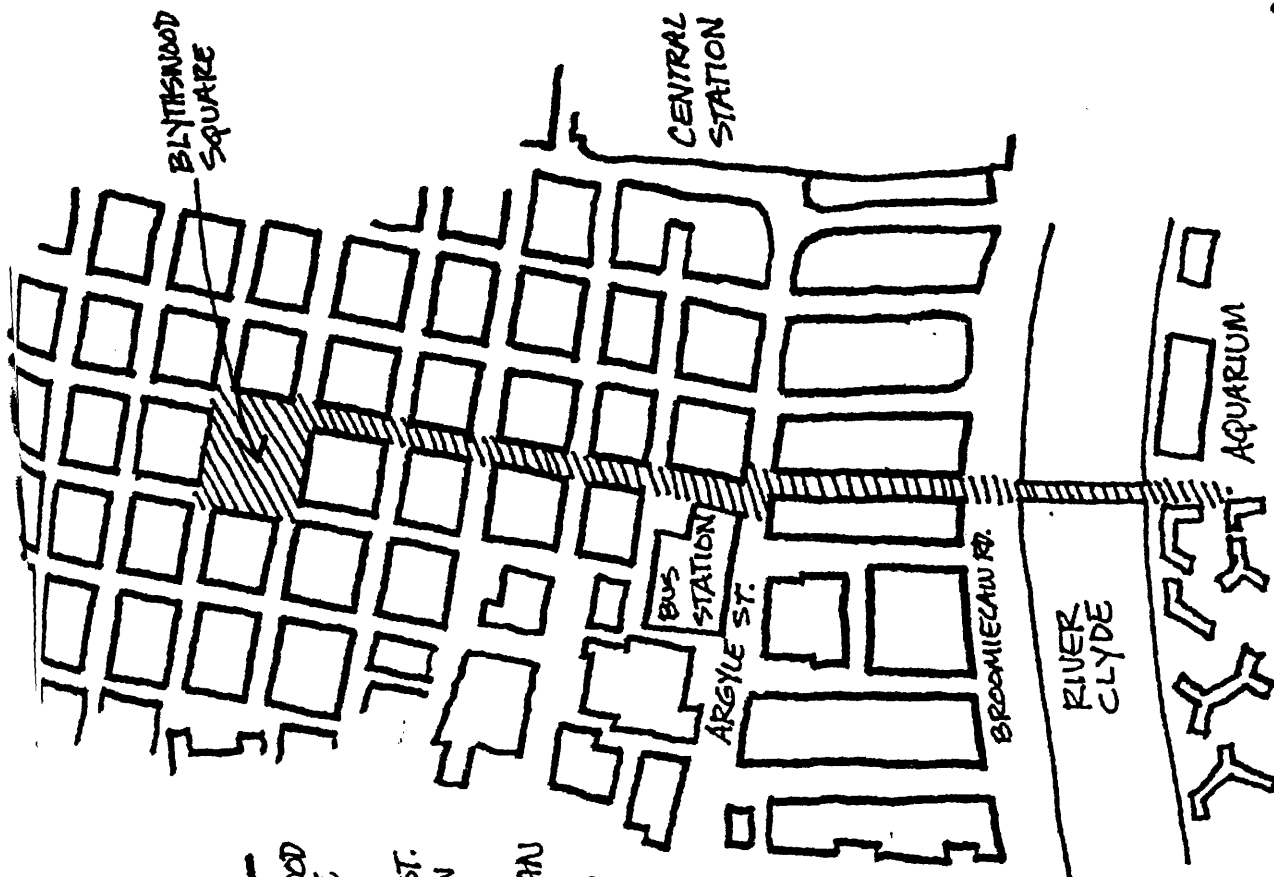
The bus station is a potential "fountain" of people.

A pedestrian bridge over the river is most useful about halfway between the George V Bridge and the proposed pedestrian bridge under the Kingston Bridge. James Watt Street, which dead-ends at Blythwood Street, is this halfway point.

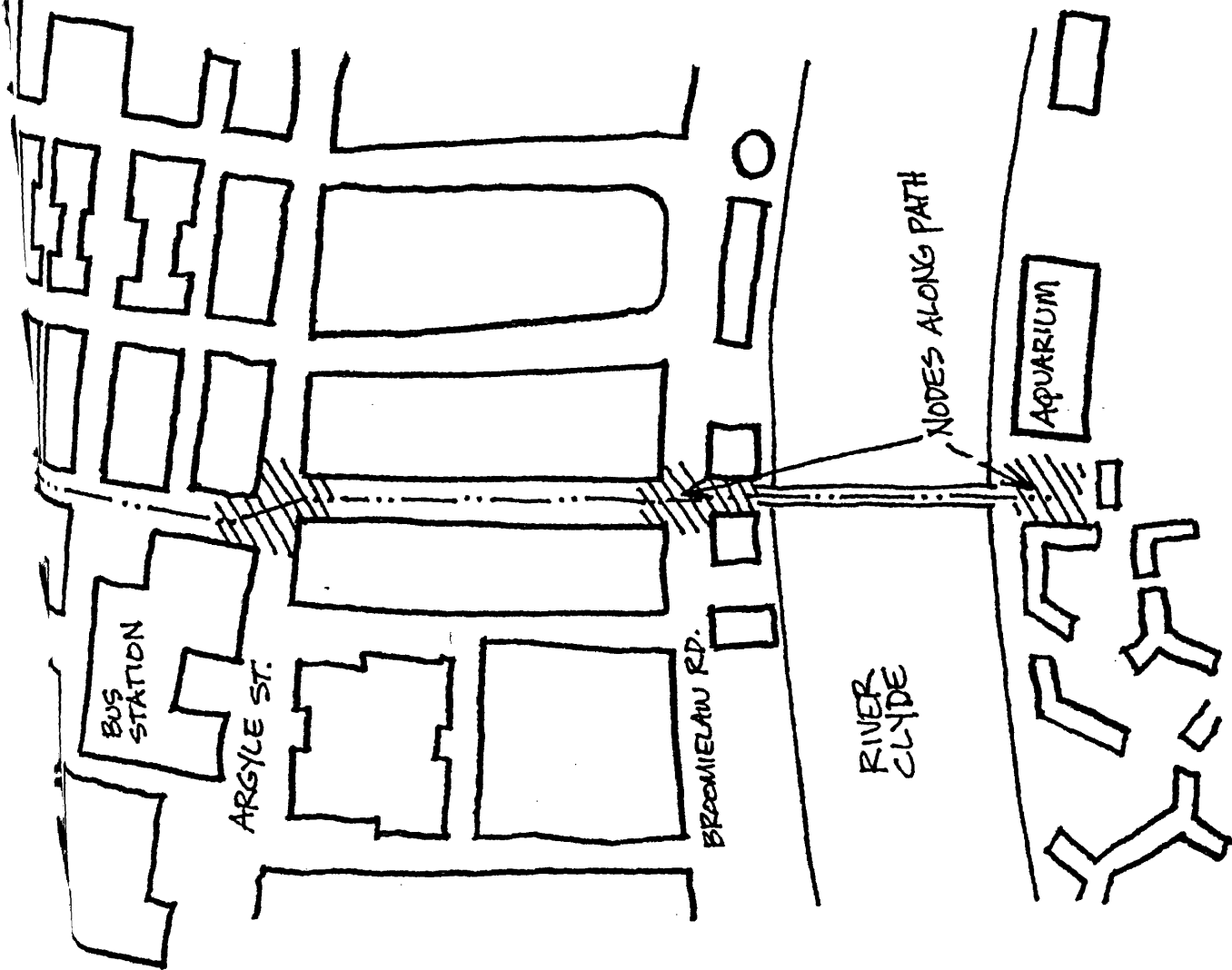
The Route: Blythwood Square to the bus station, to the pedestrian bridge, and continuing to the aquarium.

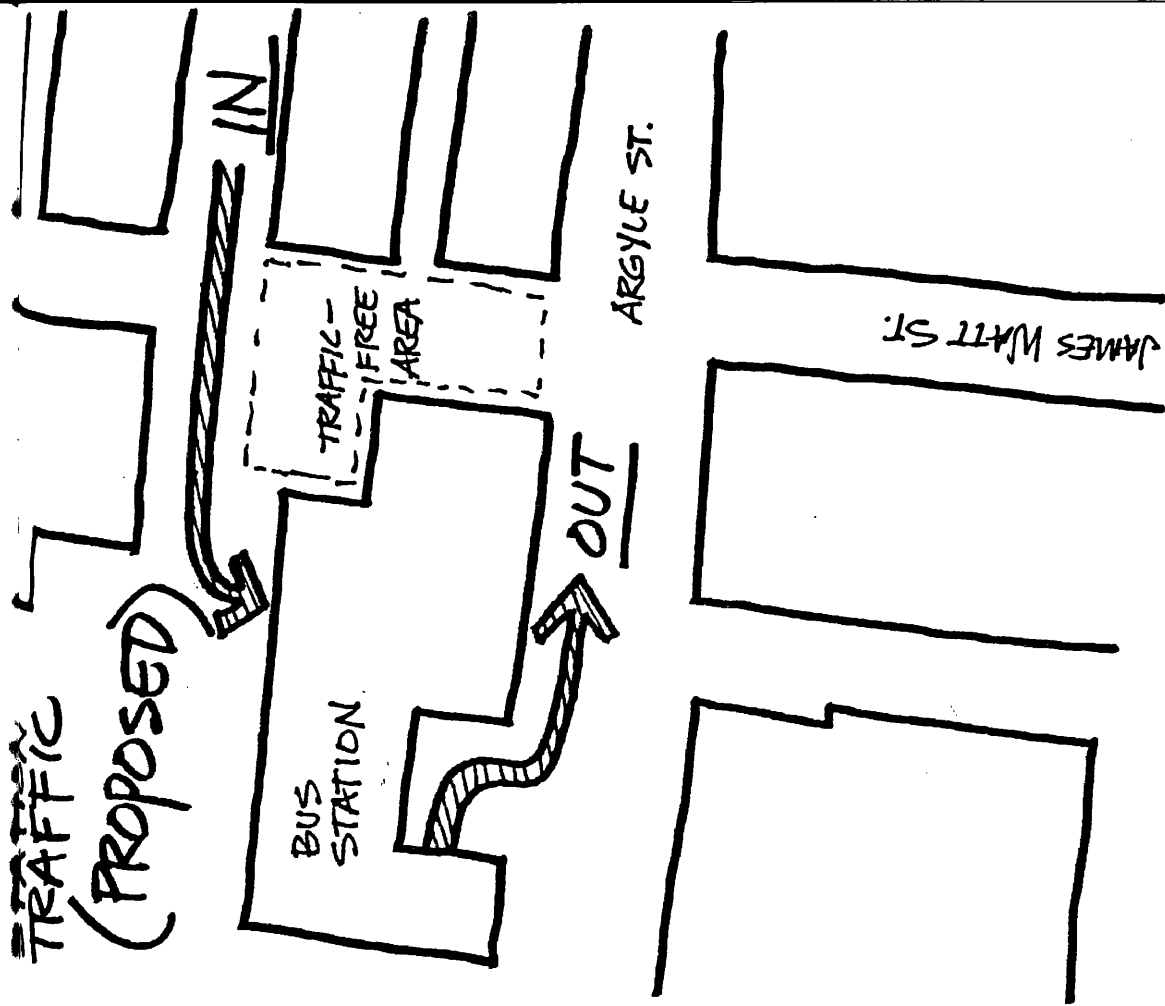
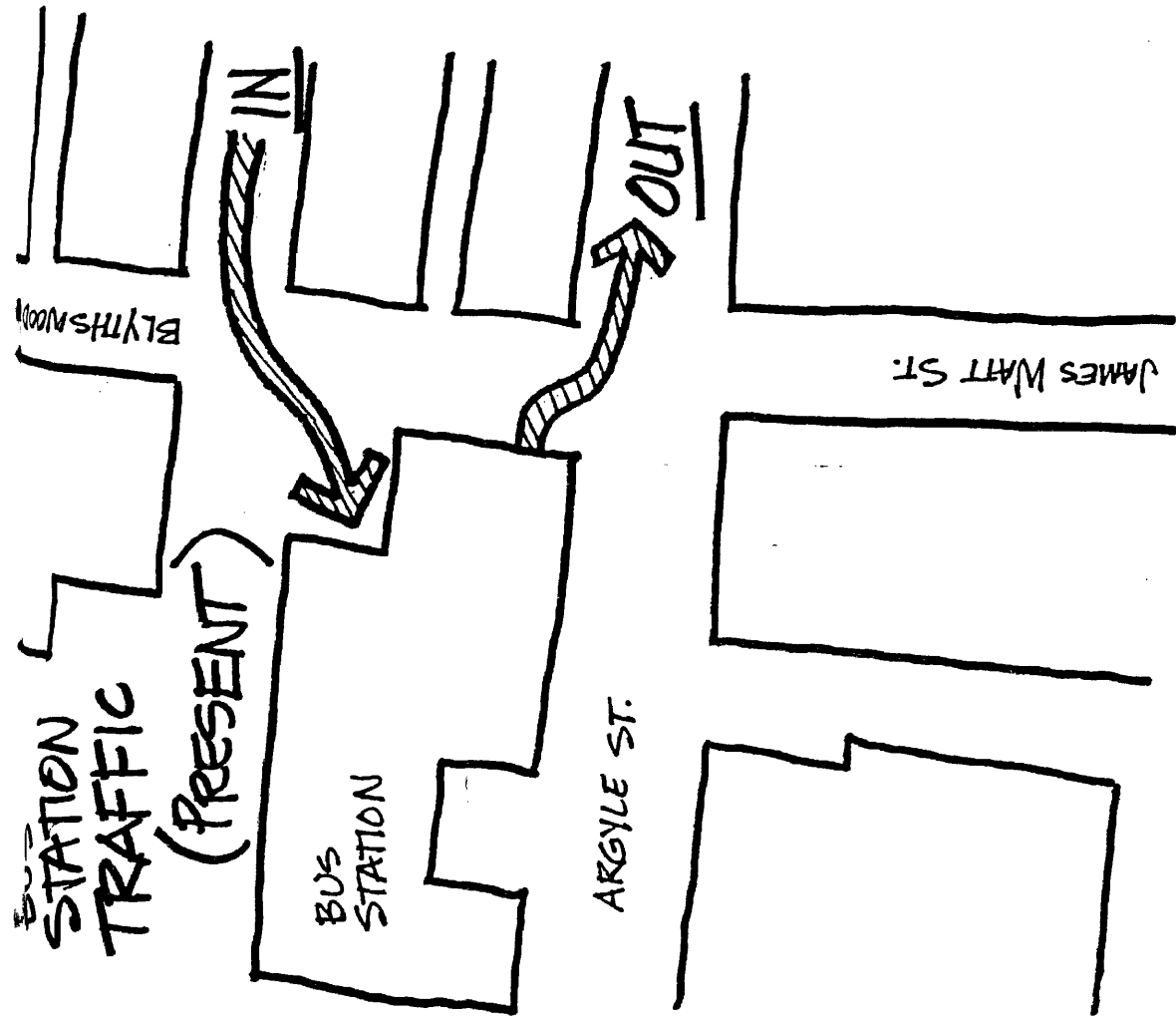
Blythwood and James Watt streets have little traffic and can be easily partially or totally pedestrianised. The volume of pedestrians may be low, but the centre of the street is the best for viewing the unfolding procession.

The node at the bus station is cluttered, filled with hedges and trees and blocks the continuous and slowly revealing views of the Broomielaw and Blythwood Hill. The obvious distinction between grids and topography is blotted by this interruption. The path should be cleared. The fabric of buildings on either side of Argyle Street makes the transition between districts clear. An architectural solution (or anything blocking the views) would either fail to be more powerful than the demarcation that Argyle Street provides or would simply diminish the clarity of the shift of grids at Argyle Street.



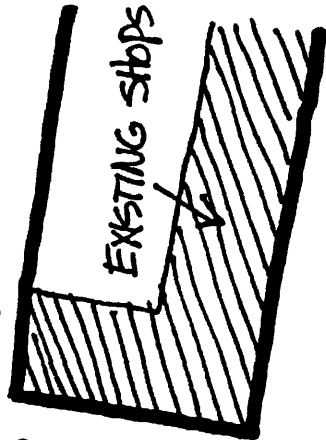
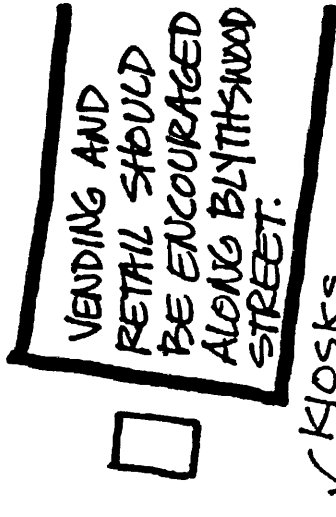
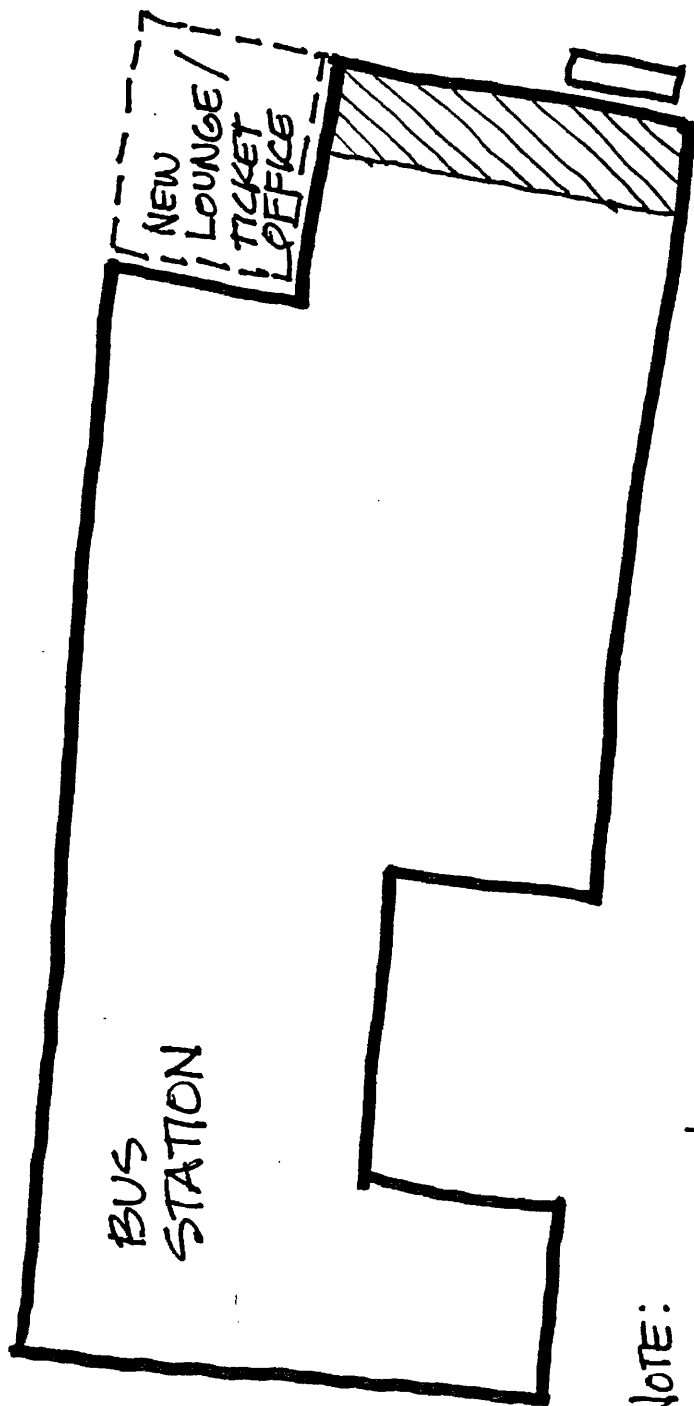
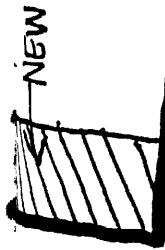
PATH
 BLYTHSWOOD SQUARE
 ↓
 ARGYLE ST. JUNCTION
 ↓
 PEDESTRIAN BRIDGE JUNCTION
 ↓
 SOUTH BANK





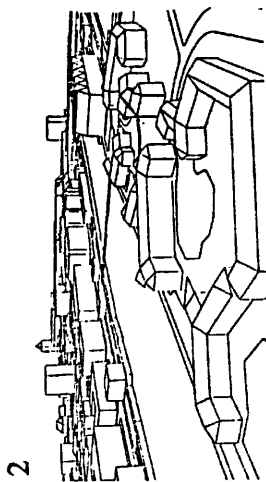
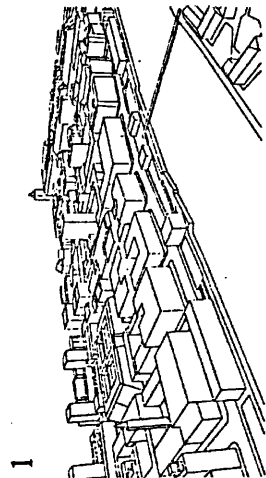
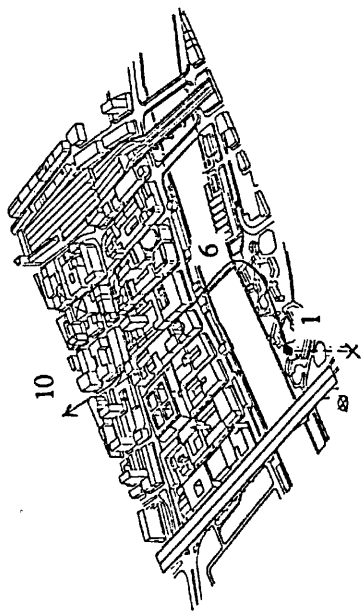
PROPOSED ALTERATIONS TO BUS STATION TRAFFIC.

PROPOSED ALTERATIONS TO BUS
STATION AND BLYTHSWOOD STREET.

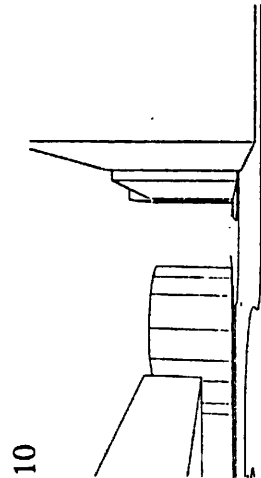
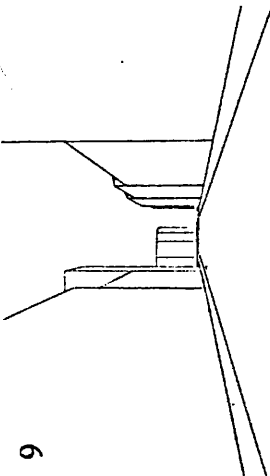
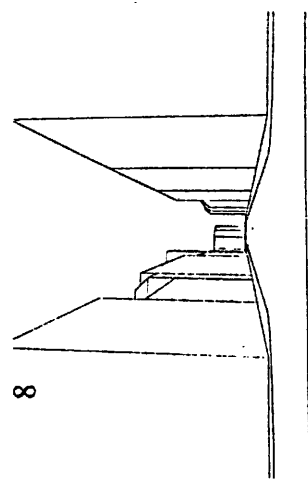
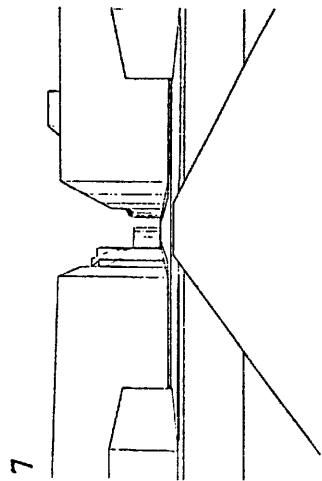
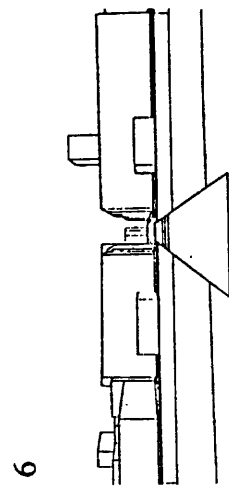
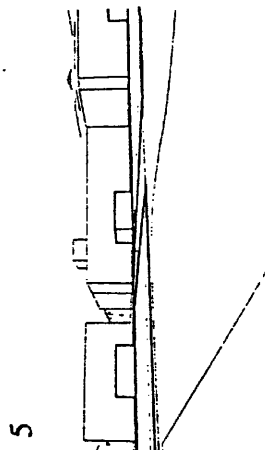
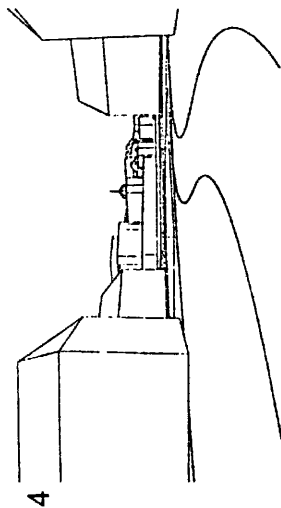
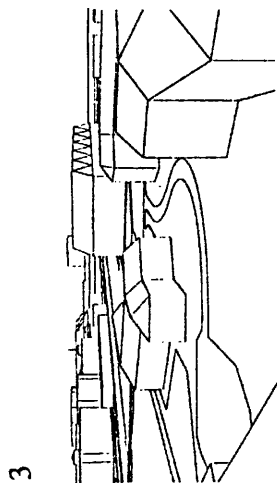


ARGYLE ST.

NOTE:
NEWSAGENTS' SHOPS, FRUIT STANDS,
ETC., THAT ARE CURRENTLY UNDER THE
MEGASTRUCTURE CAN BE INSTALLED
JUST OUTSIDE (OR AT THE EDGES) OF THE
STATION. HERE THEY WILL STILL BE
ACCESSIBLE TO BUS RIDERS, AND
AVAILABLE TO OTHERS AS WELL. TOILETS
ARE REMOTE. A NEW LOUNGE / WAITING AREA
IS NEEDED.



Overview from south-west.



Route from Tradeston to Blythwood.

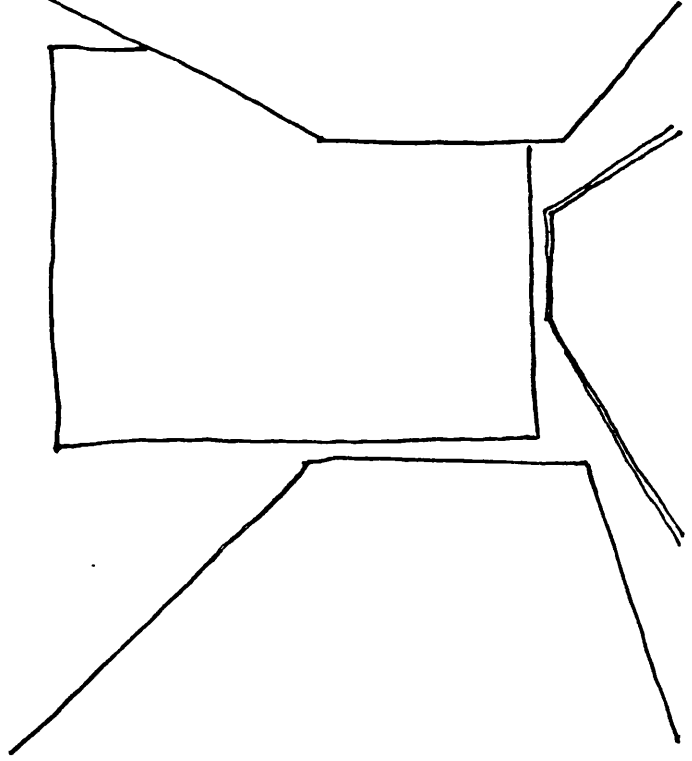
Study of Regulations and their effect on the form of the Broomielaw.

Goal: To arrive at rules that will produce the desired form for the Broomielaw. Any additional rules will only serve to stifle variety in the buildings.

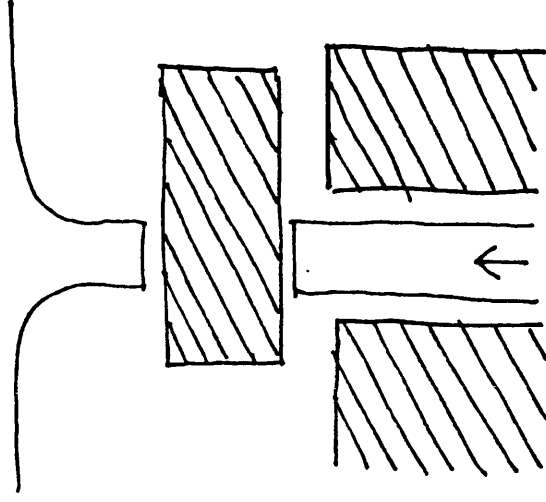
Method: Test regulations to find the worst possible development scenario. Prior Broomielaw proposals show that the urban form elements of designs will be poor if design regulations allow poor proposals.

REGULATIONS: NONE

VIEW



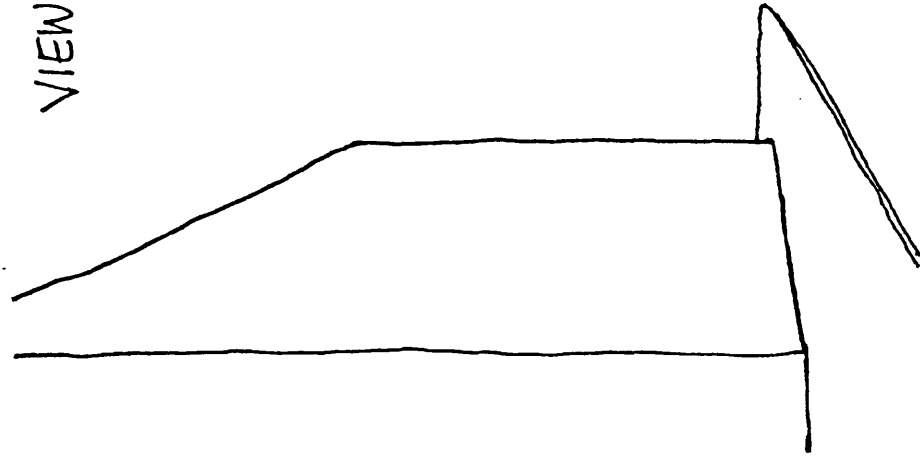
PLAN



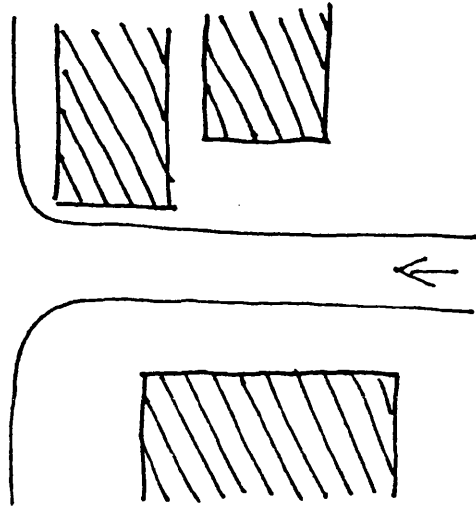
BUILDINGS IN THE STREET
(KPF, BDP) URBAN SPACES IS
"LEFT OVER".

REGULATIONS: PLOT RATIO

VIEW



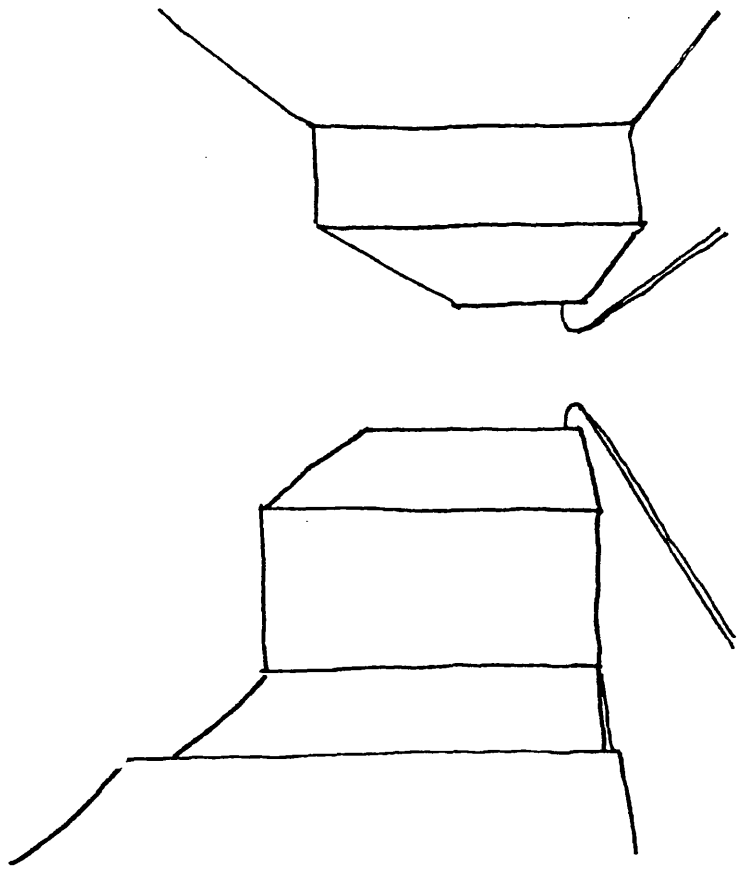
PLAN



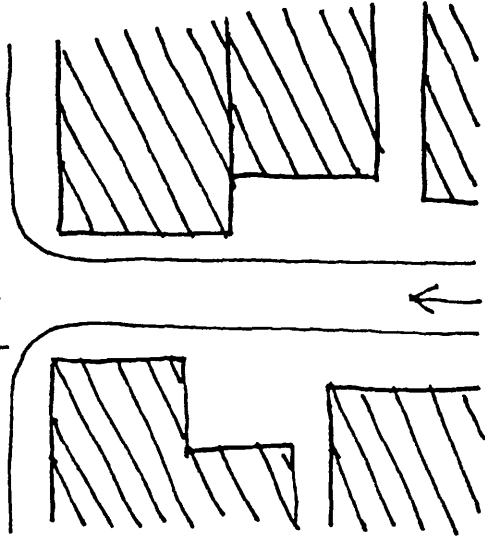
LAND IS ASSEMBLED AND
FLOOR AREA IS GROUPED
IN A FEW BUILDINGS.

REGULATIONS: HEIGHT

VIEW

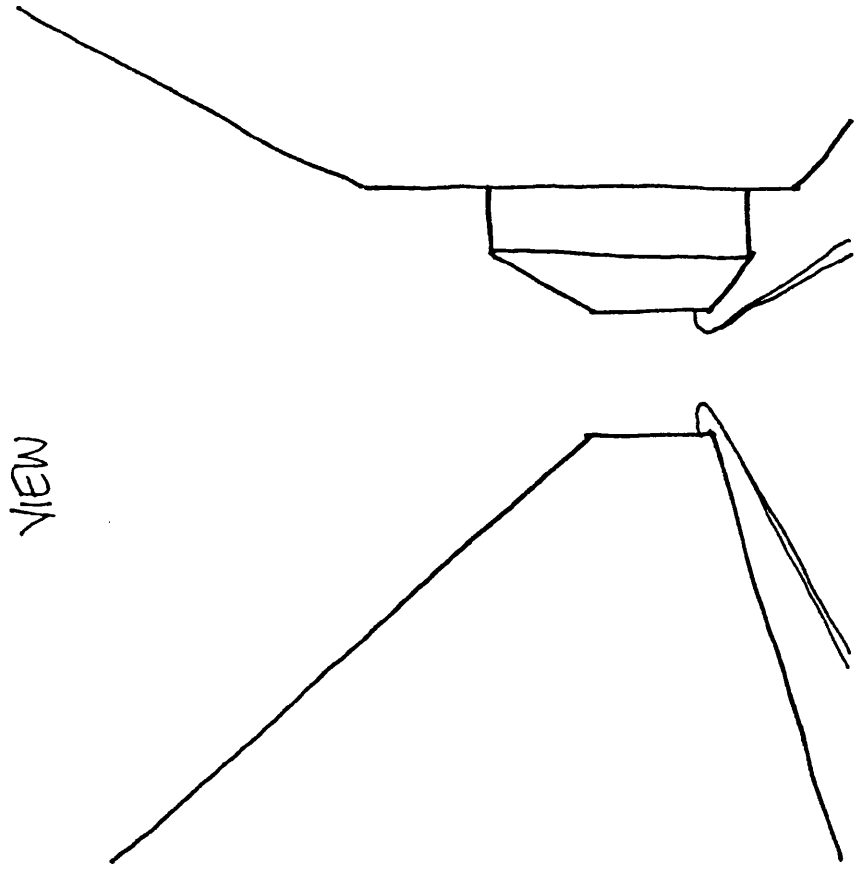
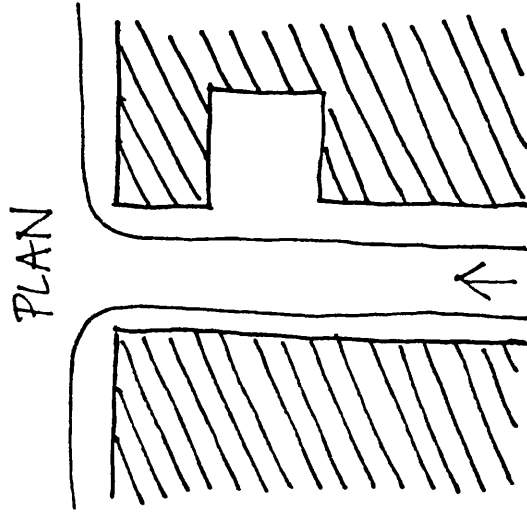


PLAN



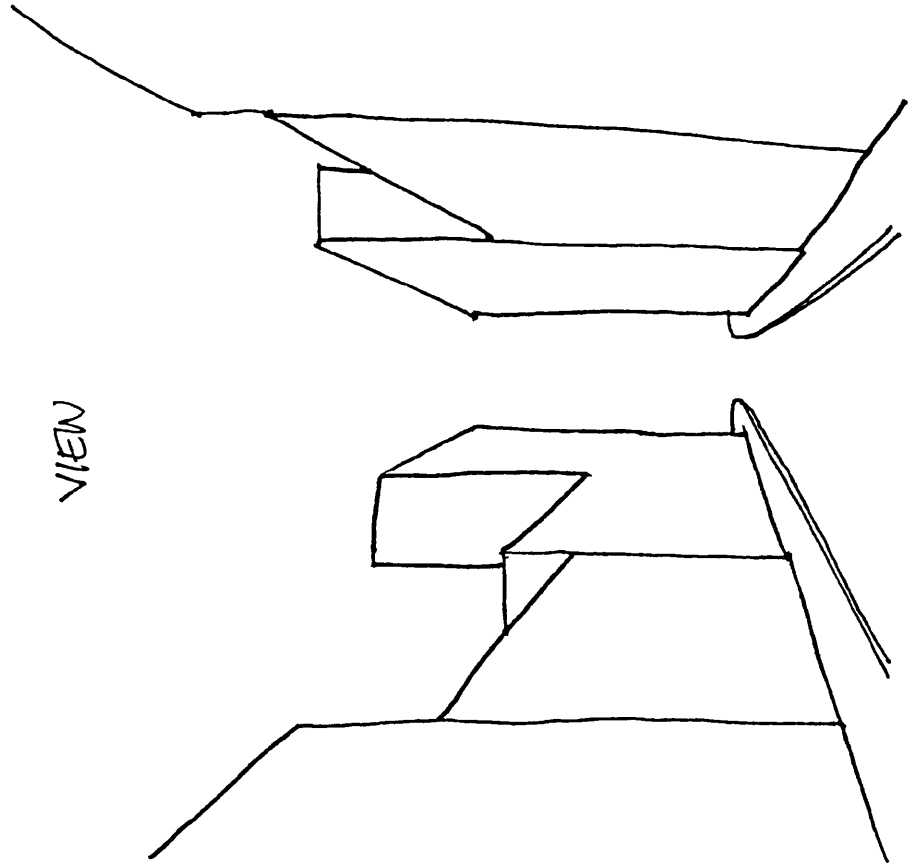
NO GUIDANCE FOR URBAN
SPACE DEFINITION

REGULATIONS: HEIGHT LIMIT AND ALL URBAN SPACES PRE-ALLOCATED.
(MASTERPLAN INCLUDES LOCATION AND SHAPE OF ALL SPACES)



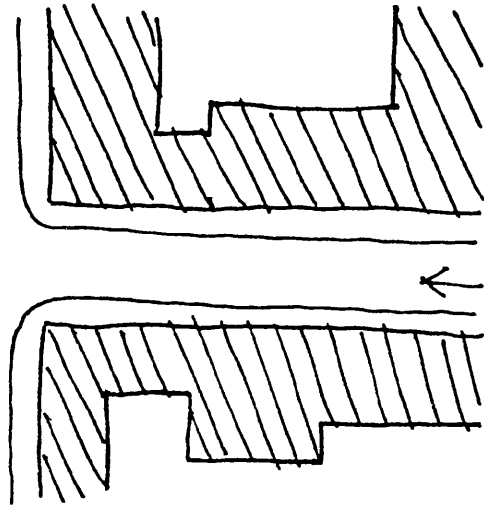
A SMALL SQUARE LIKE THIS ONE
WOULD BE BETTER DEFINED ON
ALL SIDES (INTERIOR OF BLOCK).
ALSO, ONE URBAN DESIGNER MAY
CREATE SIMILAR SPACES, BUT SEVERAL
DESIGNERS WILL NOT. (ARCHITECTS)

REGULATIONS: PLOT RATIO WITH STREET FRONTAGE REQUIRED
(VARIETY IS APPEALING, BUT HERE IT IS AT THE EXPENSE OF THE
UNIQUE STREET CHARACTER)



VIEW

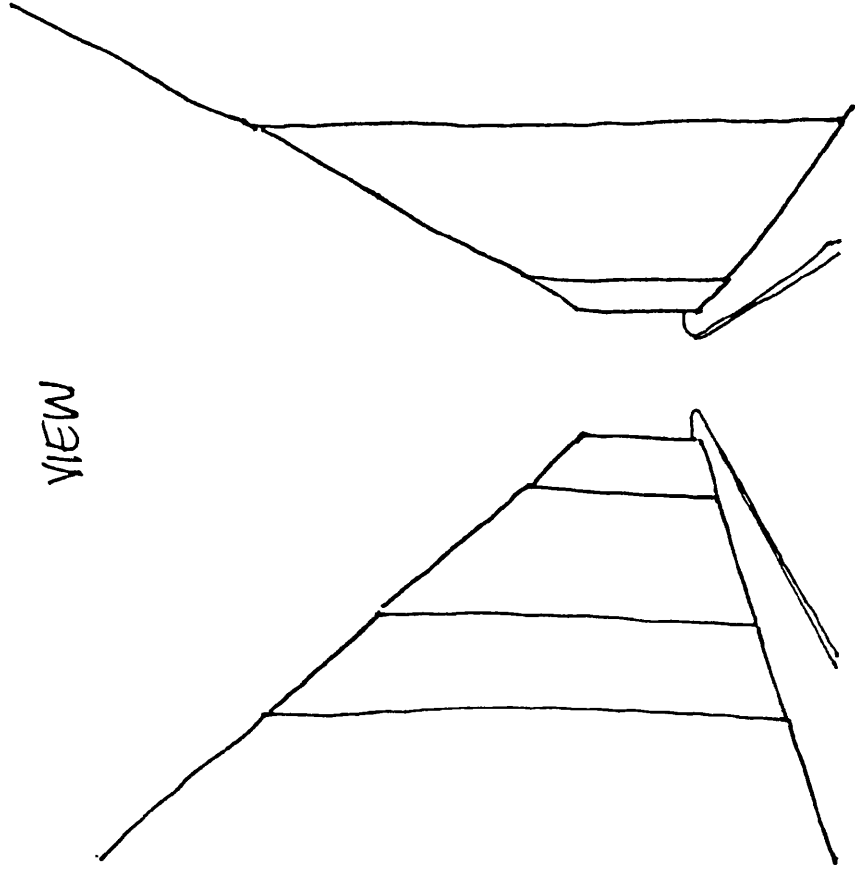
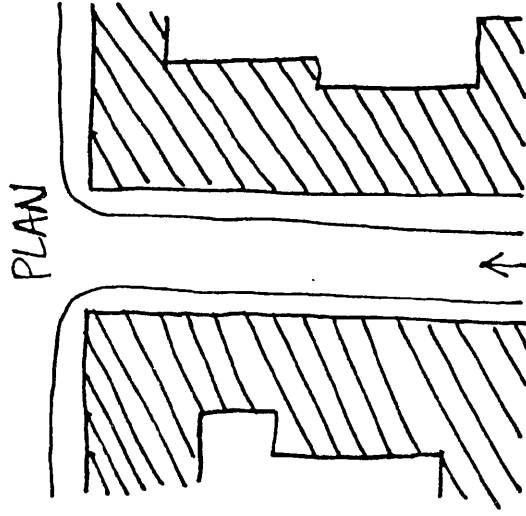
PLAN



TOWERS COMPETE FOR PROMINENCE
AND ERODE THE "GRAIN" AND
DRAMA OF LONG BLOCKS. THE
STREET IS NOT UNIQUE TO GLASGOW.
NARROW STREETS AND COURTS WOULD
RECEIVE LITTLE SUNLIGHT.

REGULATIONS: HEIGHT LIMIT WITH STREET FRONT REQUIREMENT

*THIS WAS CHOSEN. VARIETY IN COURTS BALANCES THE PLAIN STREETFRONTS.
(A MEASURE OF HORIZONTALITY AND DIRECTIONALITY IS NEEDED IN THE BROOMFIELD LAW.)

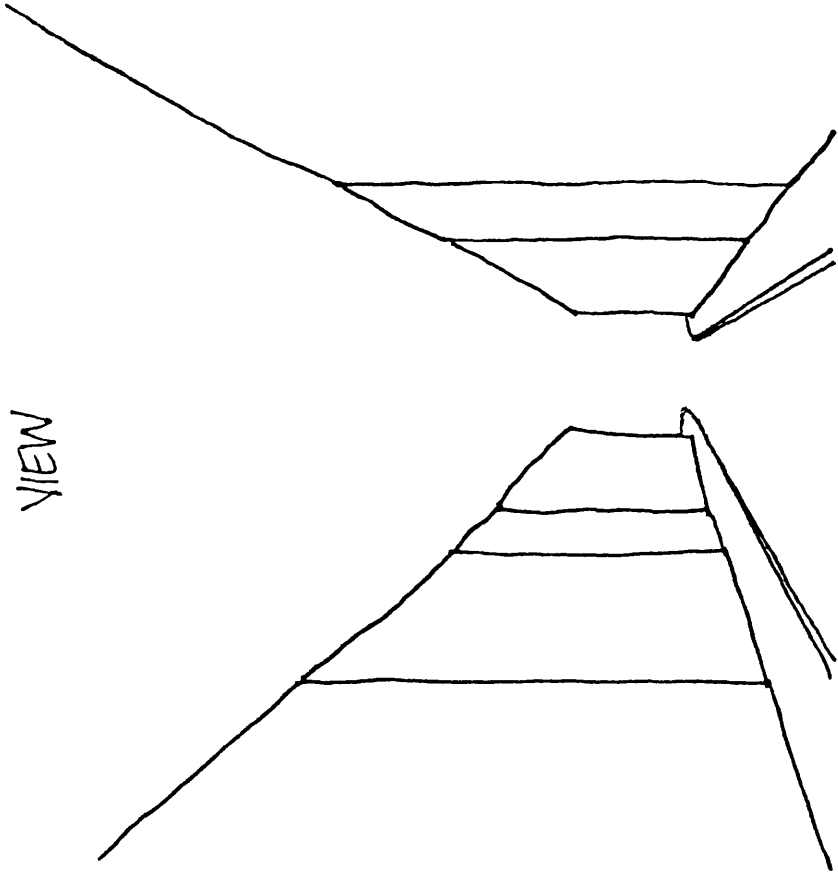


THE FIXED PERCENTAGE OF USES
THROUGHOUT THE BROOMFIELD LAW WILL
AUTOMATICALLY PRODUCE A VARIETY
OF BACKCOURTS (RESIDENTIAL COURTS,
FOR EXAMPLE). THIS VARIETY HOLDS
TRUE FOR ALL REGULATION STUDIES.

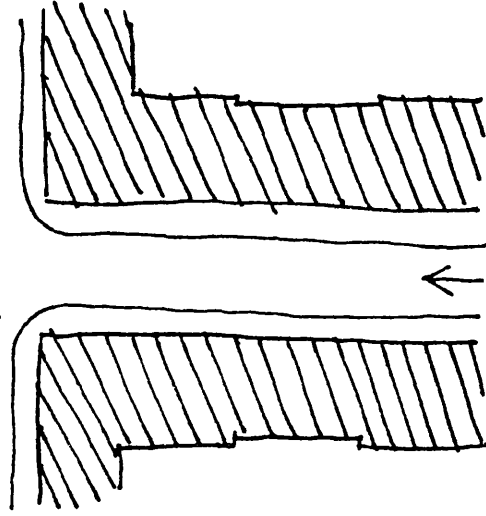
REGULATIONS: PLOT RATIO, STREET FRONTAGE, HEIGHT

(ESSENTIALLY THE SAME AS STREET FRONTAGE AND HEIGHT ONLY, BUT WITH A FURTHER LEVEL OF RESTRICTIONS. ALSO, COURTS VERY SIMILAR.)

VIEW

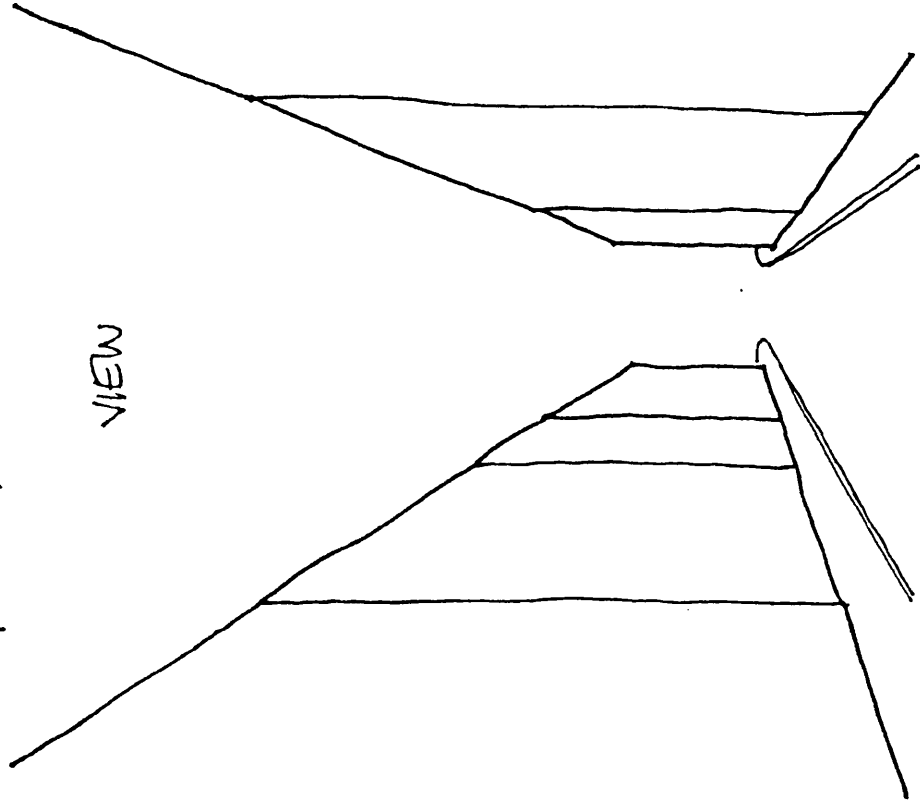


PLAN



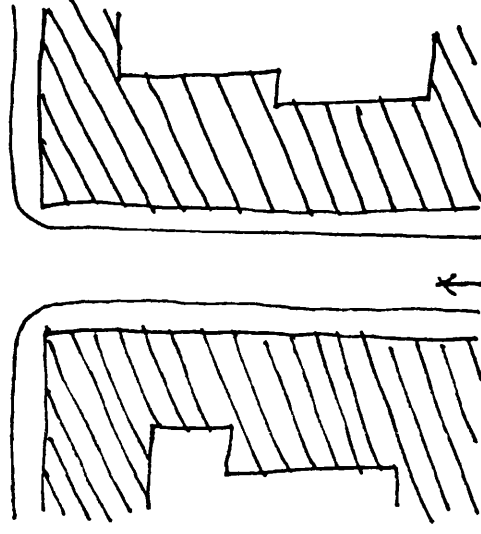
THE EXTRA PLOT RATIO REGULATION
REDUCES THE FLEXIBILITY OF THE
DESIGN OR USE OF THE INTERIOR OF
THE BLOCK. THE SAME CONDITION
WOULD APPLY TO EVERY DEVELOPMENT.
WHO CAN PREDICT THE POSSIBLE USES
AND FIND ONE ENCOMPASSING PLOT RATIO?

REGULATIONS: HEIGHT RESTRICTION, STREETFRONT REQUIREMENT + AMENITY BONUS HEIGHT. (IN THIS AND ALL OTHER CASES THE BUILDINGS BECOME UNIFORMLY TALLER. DAYLIGHTING AND DENSITY PROBLEMS ARISE.)



VIEW

PLAN



SHOPS AND OTHER ACTIVITIES AT STREET LEVEL ARE NECESSARY AND ALREADY A REQUIREMENT. THIS DENSITY CAN SUPPORT SHOPS BUT NOT MAJOR CITY "BONUSES" THAT ARE HARSHIPS ON BUILDING OWNERS. THE FREE MARKET PROVIDES NON-HARDSHIP BONUSES ALREADY.

Diagrams of Permissible Development.

The Components of a Good Street.

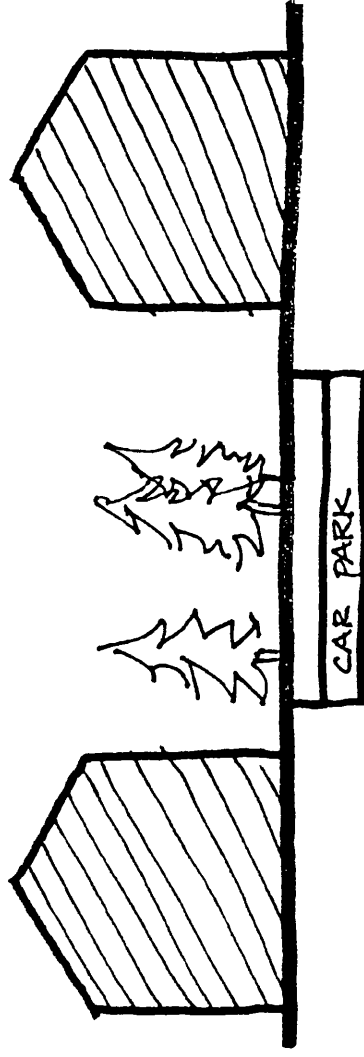
1. Activities concentrated on one level: the ground plane.
Shops and public facilities are most accessible on the ground and concentrating them there will make the street an inviting place. Window displays are interesting to passers-by.
2. Safety (surveillance) is increased if activity on the street does not cease at the end of the business day.
3. A mixed-use street allows for a concentrated city because convenience is maximised.
4. A street, or several streets, can be part of the recognisable and inviting area that people are proud to call "home".
5. Varied vistas and clear orientation clues make a place interesting and navigable.
6. Streets need a provision for service vehicles. The shops that provide vitality need to be easily serviced.

SECTIONS

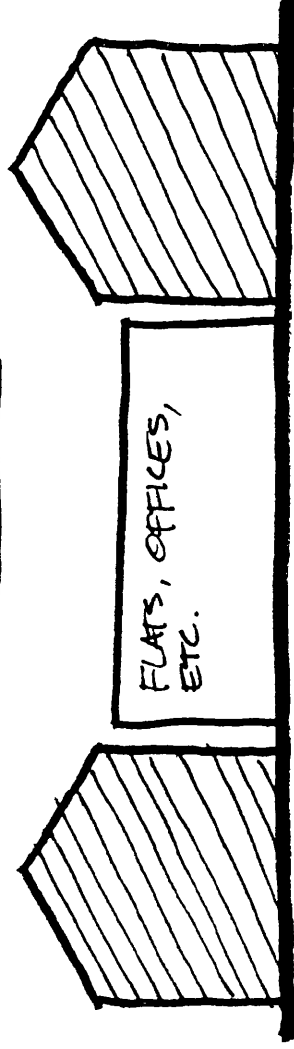
CONDITION "A", TWO LISTED BUILDINGS:



EXISTING



UNDERGROUND PARKING,
LANDSCAPED COURT.

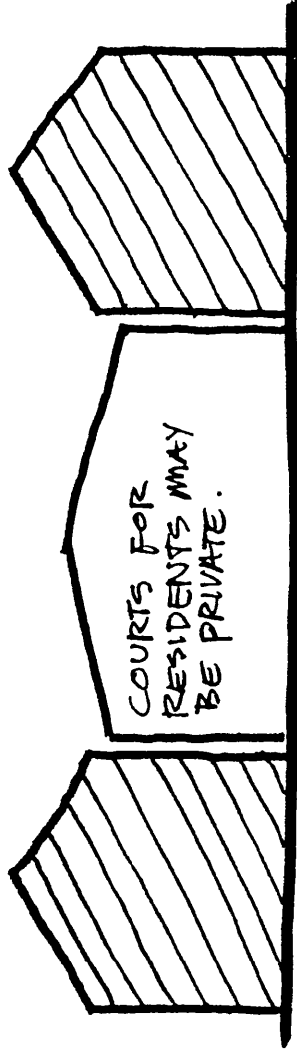


NEW BUILDING ADDED.
ACCESSED THROUGH THE
STREETFRONT BUILDING.

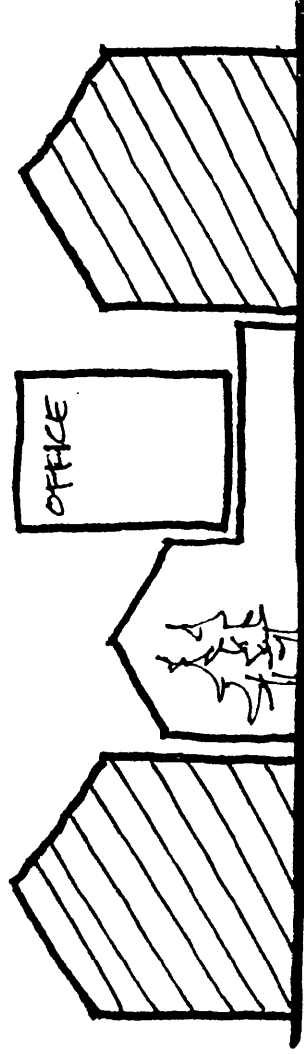
DIAGRAMS OF PERMISSIBLE DEVELOPMENT

SECTIONS

CONDITION "A", CONTINUED



AN ENCLOSED COURT OR
SHOPPING GALLERIA.



A COMBINATION OF COURTS
AND BUILDINGS



A COMBINATION OF COURTS
AND BUILDINGS.

DIAGRAMS OF PERMISSIBLE DEVELOPMENT

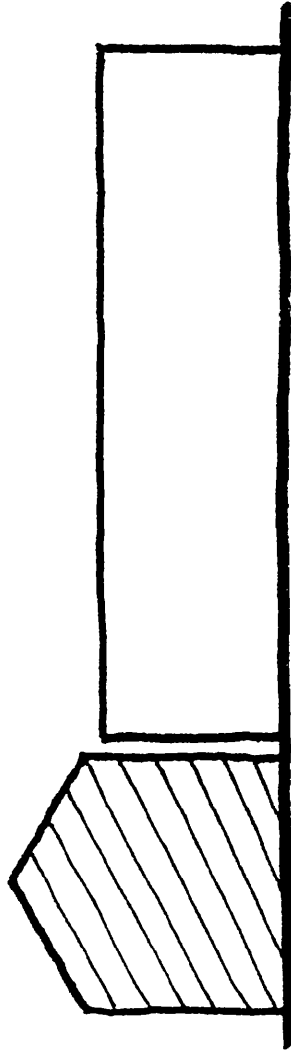
SECTIONS

CONDITION "B", ONE LISTED BUILDING.

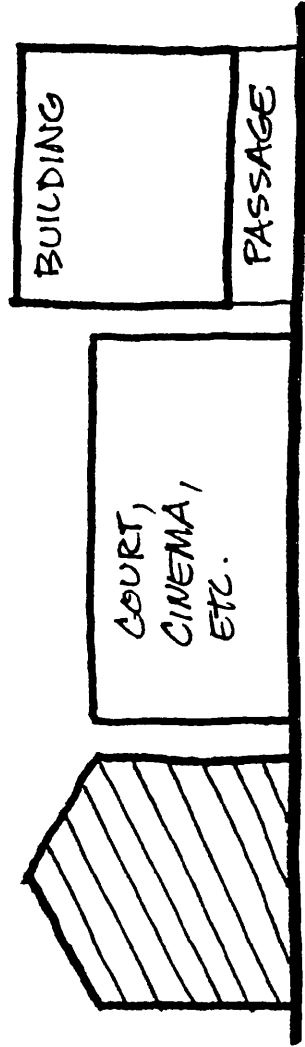


EXISTING.

A FULL-DEPTH BUILDING ADDED.



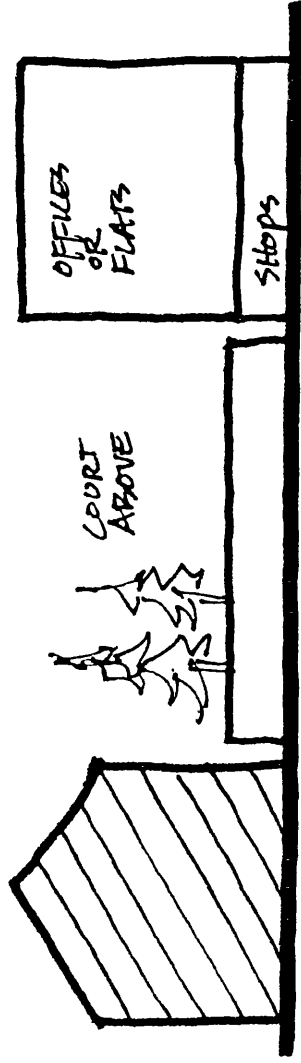
NEW BUILDING WITH A COURT IN MID-BLOCK



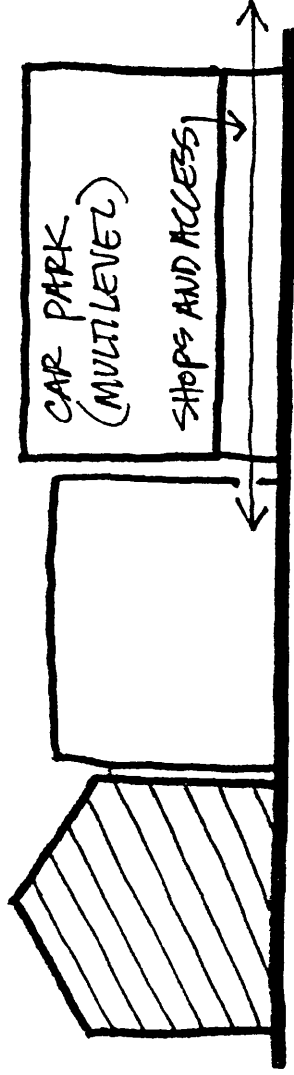
DIAGRAMS OF PERMISSIBLE DEVELOPMENT

SECTIONS

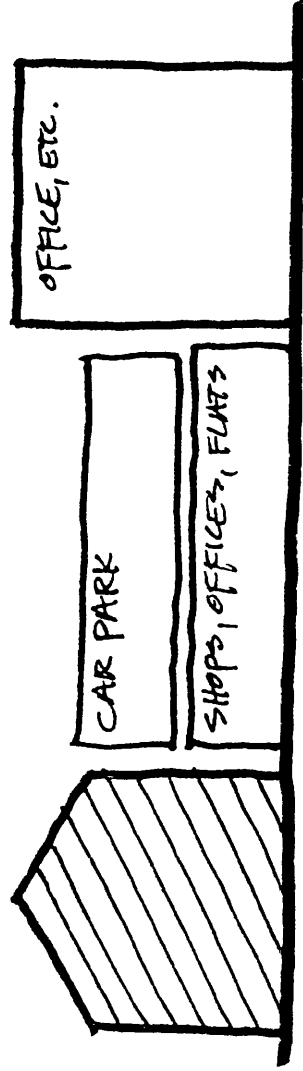
CONDITION "B", CONTINUED



RAISED CENTRE COURT.
ONLY PRIVATE COURT FOR
RESIDENTS' USE MAY BE
ABOVE THE GROUND PLANE
OF PUBLIC ACTIVITY AND ACCESS.



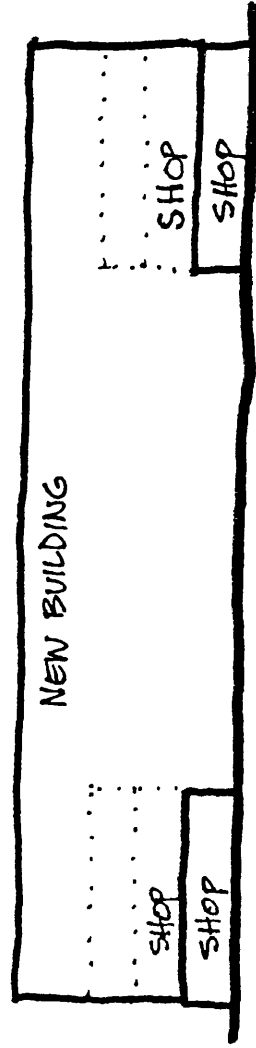
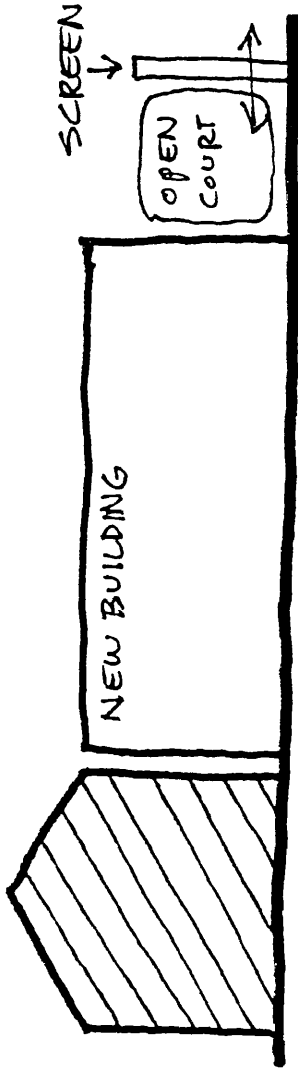
CAR PARKS AT STREET.
CAR PARKS ARE NEEDED, BUT
THE GROUND LEVEL MUST BE
COMPOSED OF SHOPS OR OTHER
ACTIVITIES.



CAR PARKS IN COURTS.
CAR PARKS MAY BE BELOW
GRADE OR ABOVE BUILDINGS,
BUT CAR PARKS MAY NOT BE
THE ONLY USE IN A COURT.

DIAGRAMS OF PERMISSIBLE DEVELOPMENT

SECTIONS



CONDITION "B" CONTINUED

WHERE AN INTERIOR COURT IS IMPRACTICAL, IT MAY BE LOCATED ON THE STREET FRONT.

1. IT MUST INCLUDE A SCREEN TO MAINTAIN THE STREET FAÇADE
2. IT MUST NOT FACE A SIMILAR COURT ACROSS THE STREET.
3. NO MORE THAN ONE SUCH COURT ALLOWED PER STREET FAÇADE.

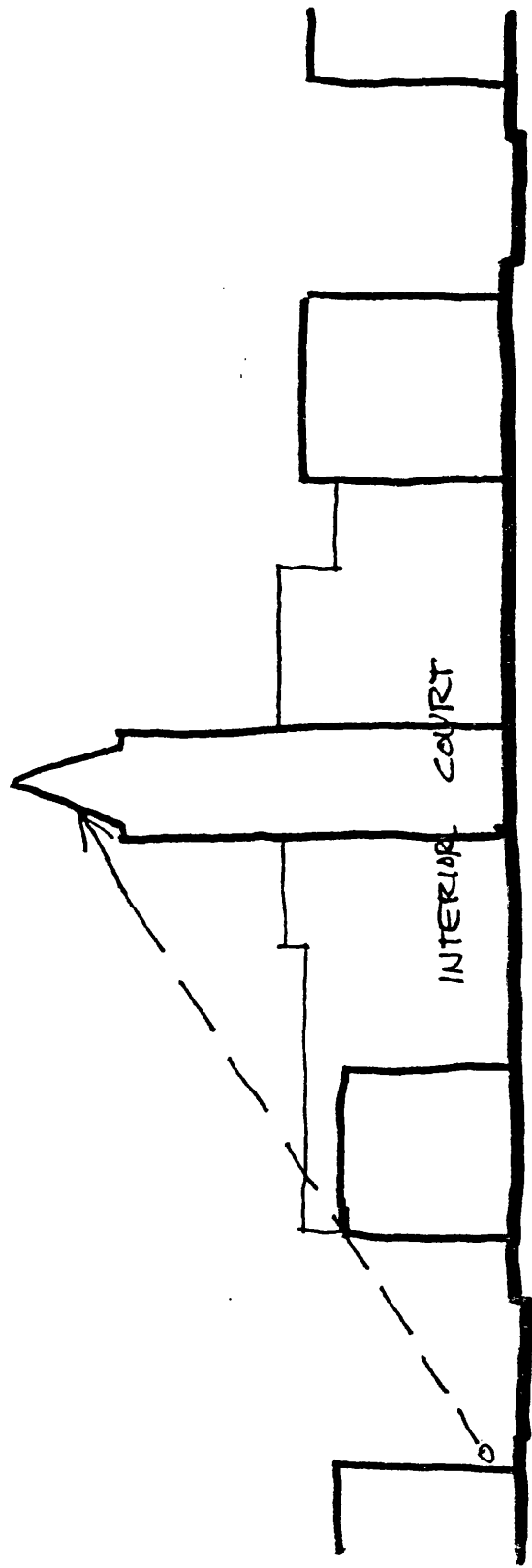
CONDITION "C", NO BUILDINGS PRESENT.

MOST CONDITIONS THE SAME AS FOR CONDITION "B", EXCEPT:

IF THE BLOCK IS LEFT OPEN, IT MUST BE THE SCALE OF A LANE, NOT A METROPOLITAN SQUARE.

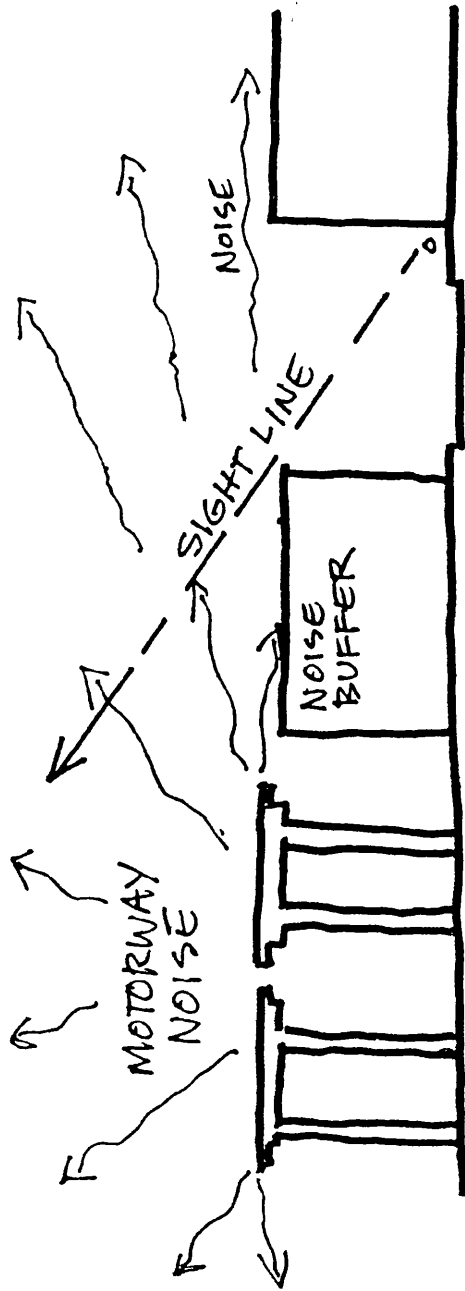
FULL-BLOCK DEVELOPMENT MUST INCLUDE SHOPS AT STREET LEVEL.

DIAGRAMS OF PERMISSIBLE DEVELOPMENT



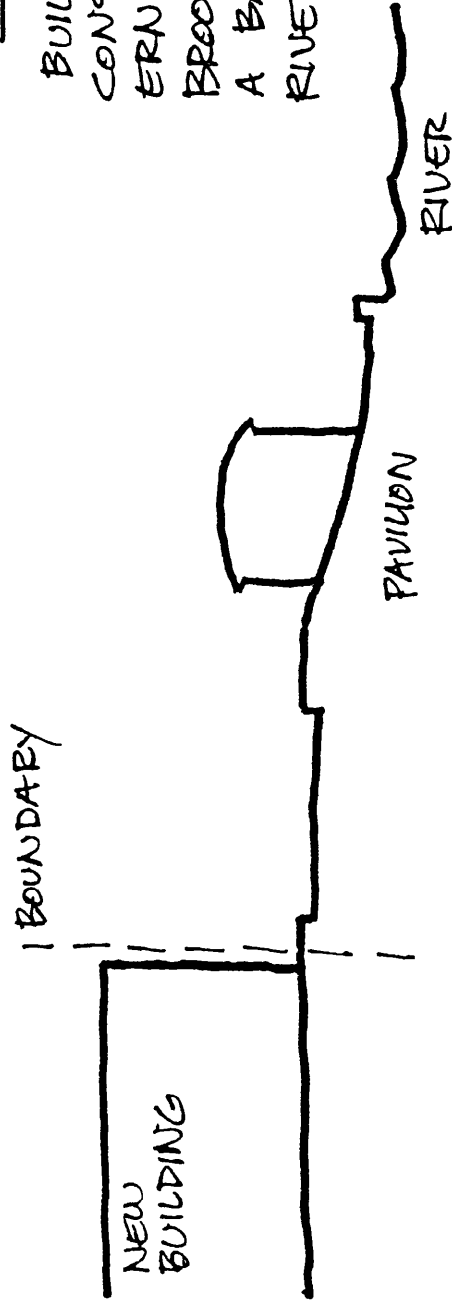
CONDITION AT WIDE BLOCK WITH COURT
IN MIDDLE. A CAMPANILE MAY BE
USED TO SIGNAL PUBLIC SPACE
IN THE INTERIOR OF A BLOCK.
IT SHOULD BE JUST TALL ENOUGH TO
BE SEEN FROM NEARBY

SPECIAL CONDITIONS



CONDITION AT MOTORWAY

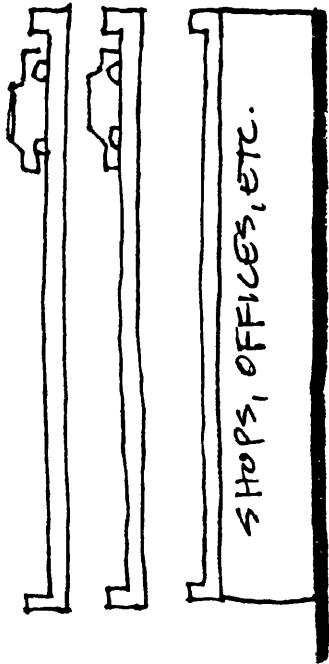
BUILDINGS ON WASHINGTON STREET MUST BE TALLENGTH TO BLOCK VIEWS TO THE MOTORWAY AND SOUND FROM THE MOTORWAY.



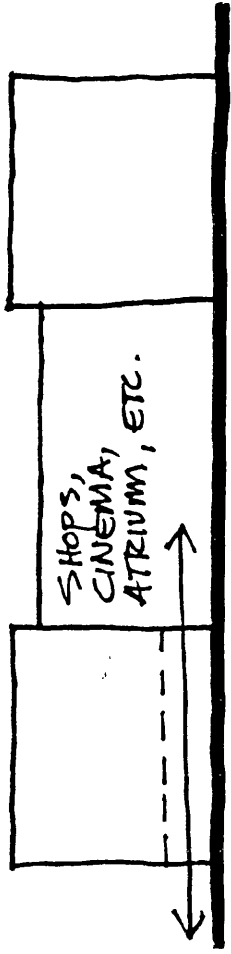
CONDITION AT THE RIVER

BUILDINGS SHOULD BE CONSTRUCTED TO THE SOUTHERN BOUNDARY OF THE BROOMFIELD TO PROVIDE A BACKDROP TO THE RIVERSIDE PAVILIONS.

SPECIAL CONDITIONS

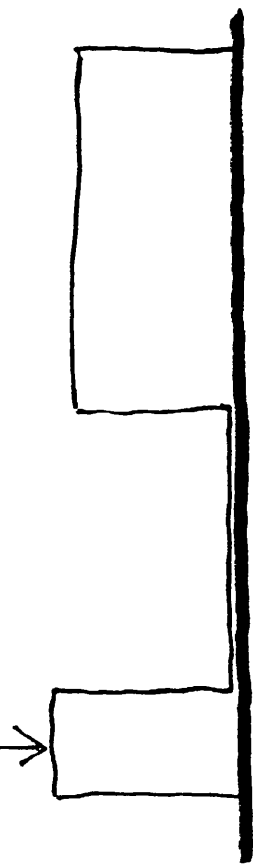


MULTI STOREY CAR PARKS

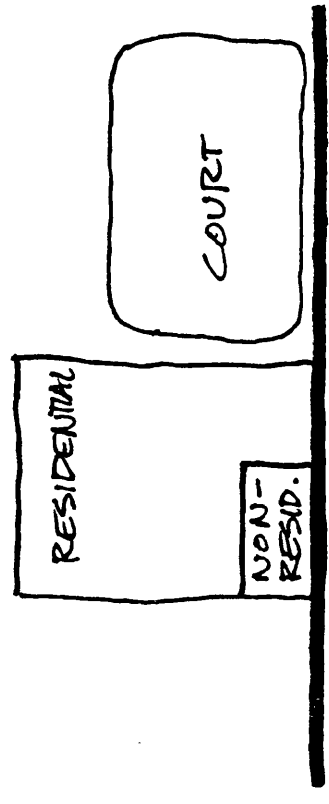


PASSAGEWAY TO FUNCTIONS
IN MID-BLOCK.

RESIDENTIAL UNITS WITH A COURT
IF COURT IS PUBLIC: GROUND LEVEL
IF PRIVATE: ANY LEVEL.



THE RESIDENTIAL DOMAIN

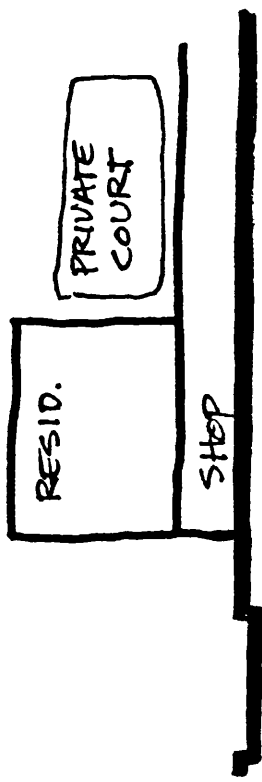
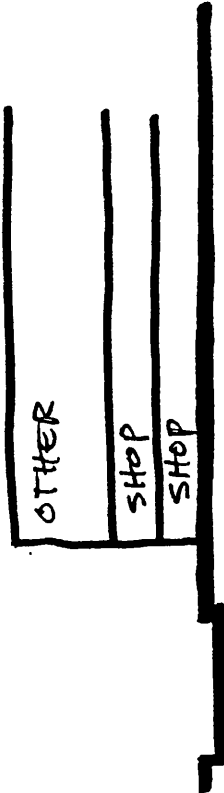
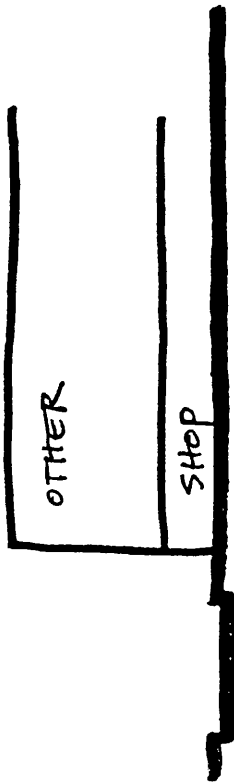


STREET

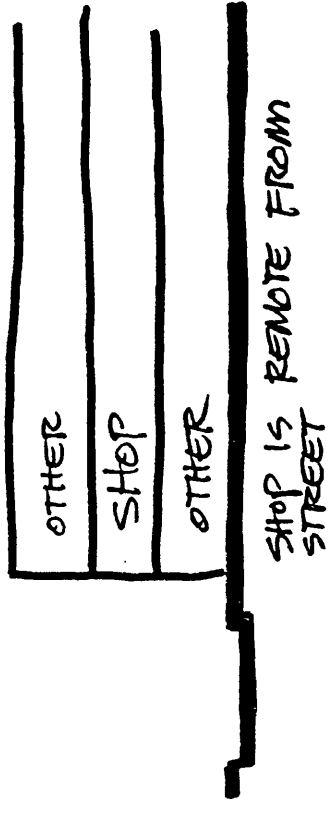
THE RESIDENTIAL DOMAIN

SPECIAL CONDITIONS

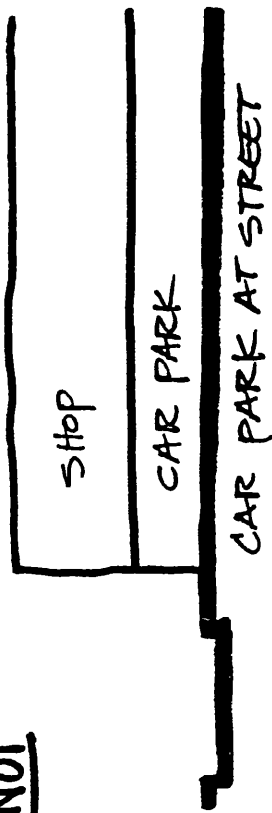
ACCEPTABLE



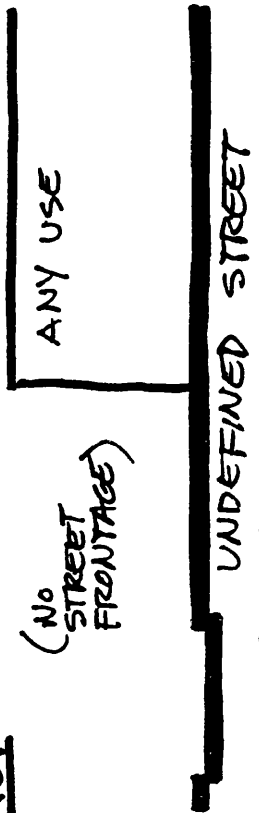
NOT ACCEPTABLE



NOT



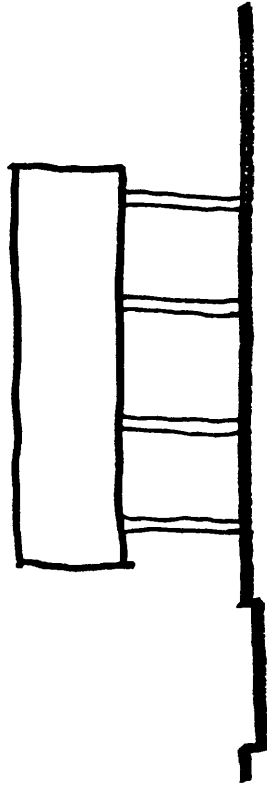
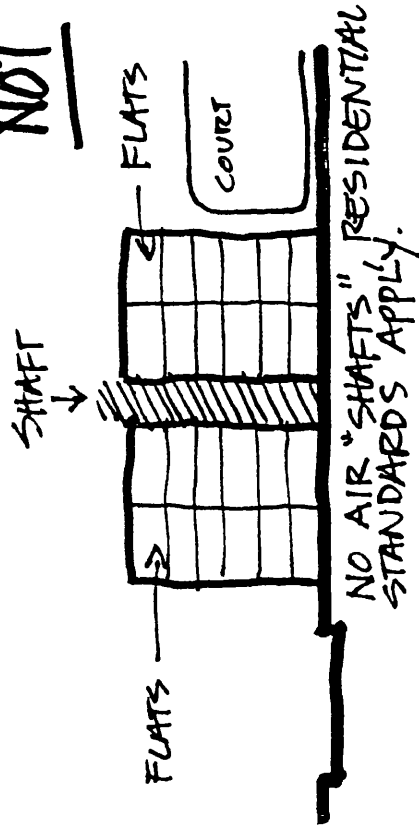
NOT



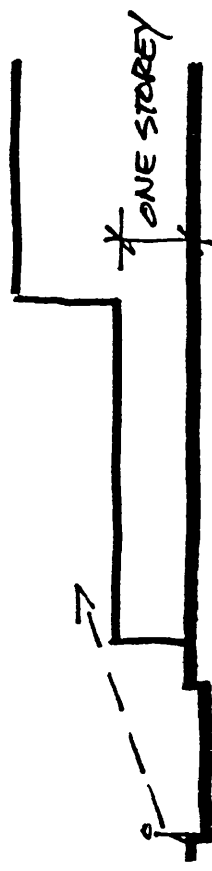
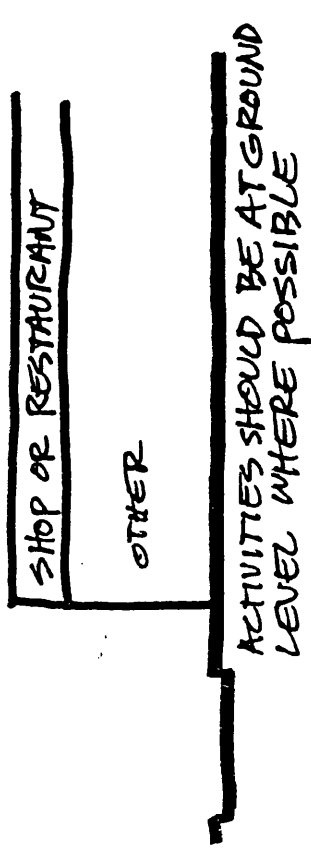
DIAGRAMS OF PERMISSIBLE DEVELOPMENT

NOT

ACCEPTABLE

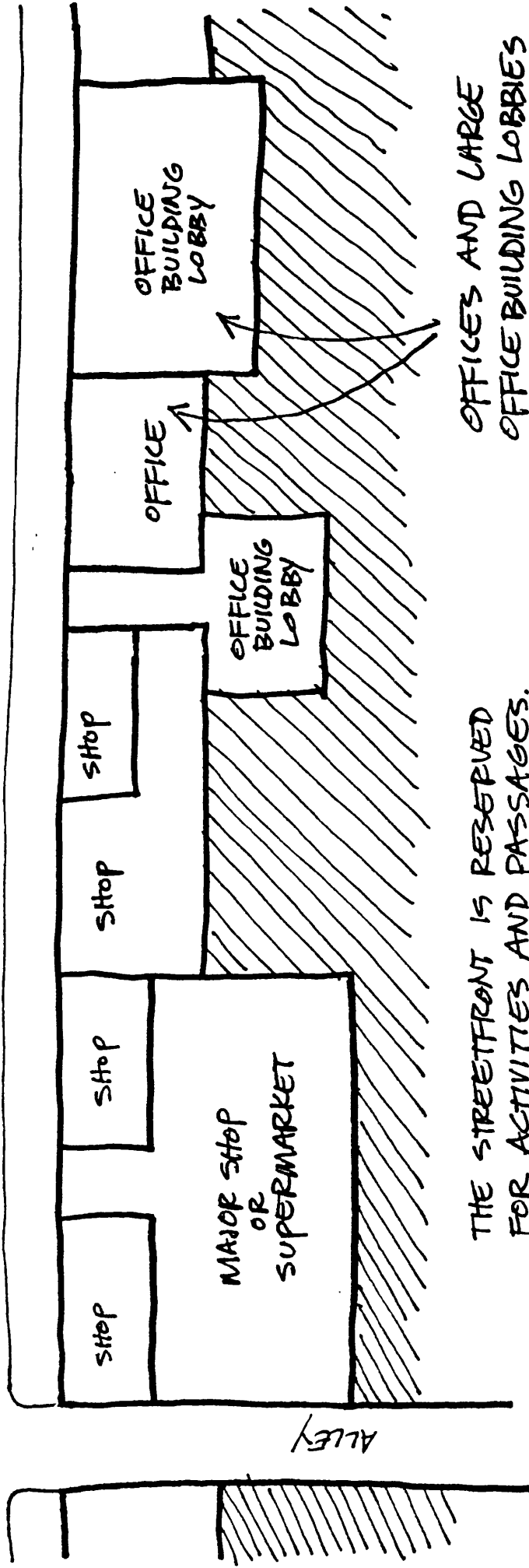


NO PILOTS, UNLESS
THE AREA UNDERNEATH
IS ENCLOSED AS PART OF
THE BUILDING OR COURT.



STREET FAÇADE SHOULD BE
3 STORIES (12m) TALL TO
ENCLOSE THE STREET.

PLAN OF PUBLIC SPACE

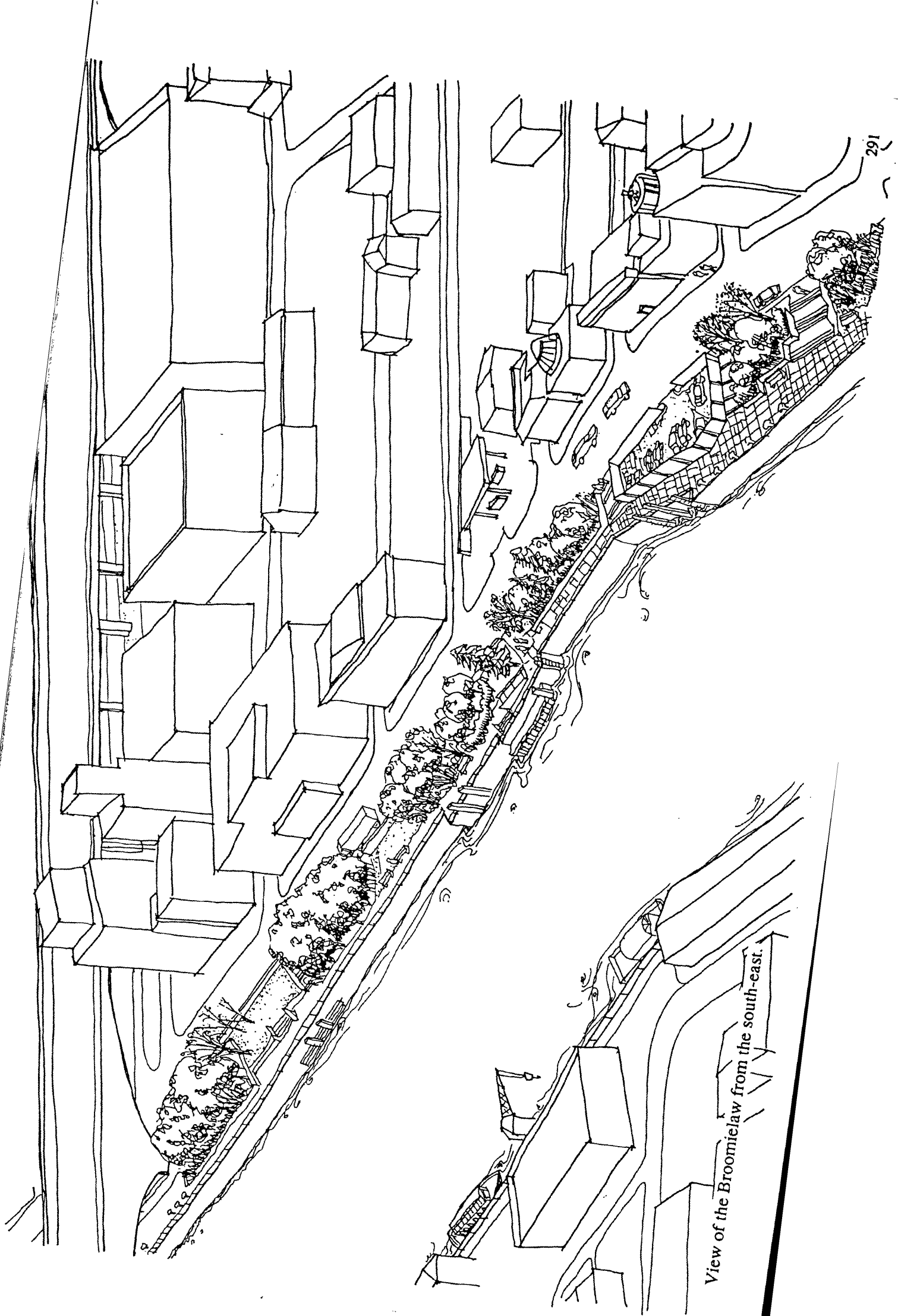


OFFICES AND LARGE
OFFICE BUILDING LOBBIES
SHOULD NOT BE AT
THE STREETFRONT.

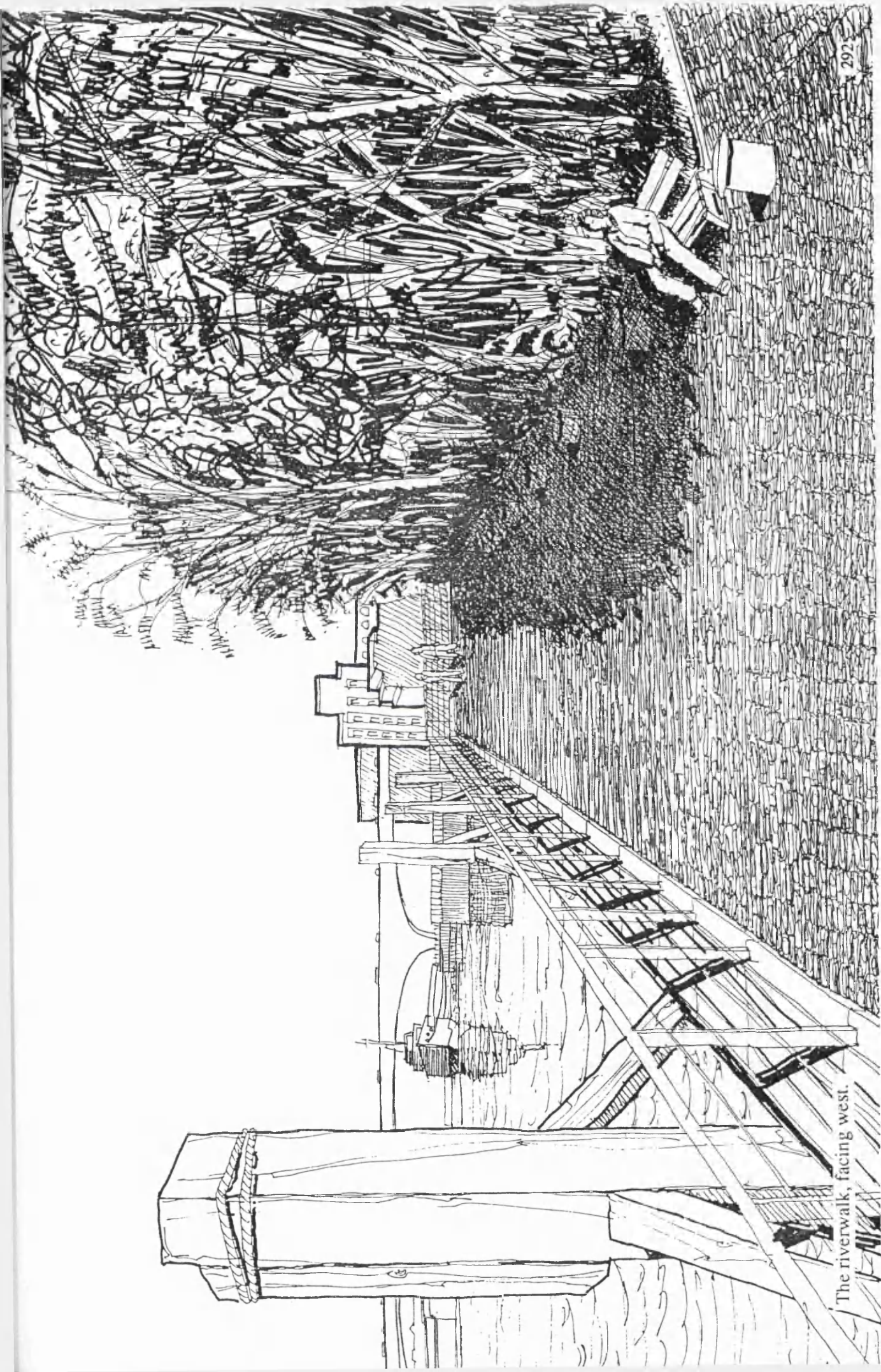
THE STREETFRONT IS RESERVED
FOR ACTIVITIES AND PASSAGES.
CERTAIN SHOPS, SUCH AS A MAJOR
SUPERMARKET, MAY REQUIRE
A SERVICE ALLEY. THESE SHOPS
WOULD BE BEST ON WASHINGTON STREET, BY THE MOTORWAY.

DIAGRAMS OF PERMISSIBLE DEVELOPMENT

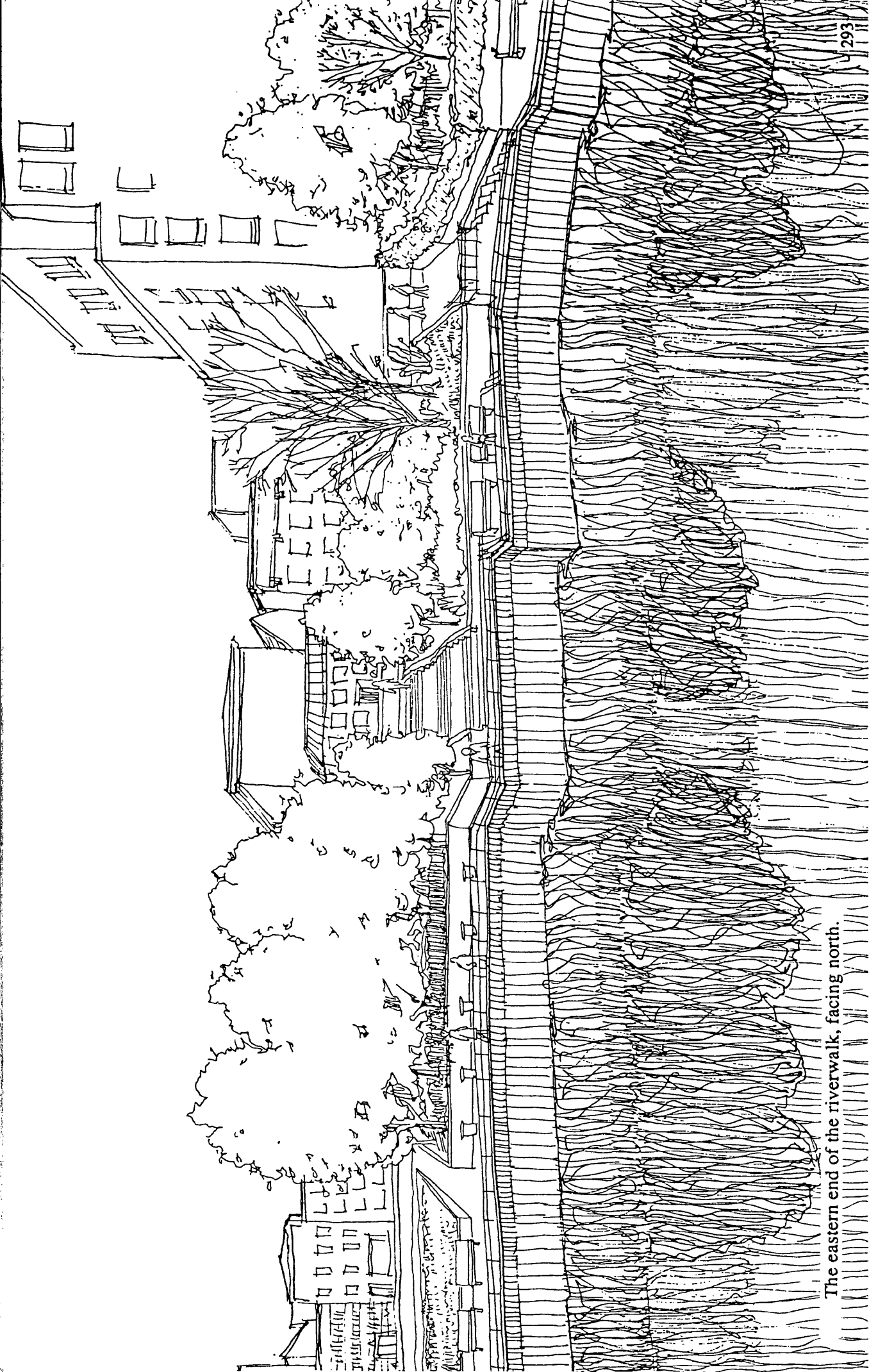
Existing Conditions.



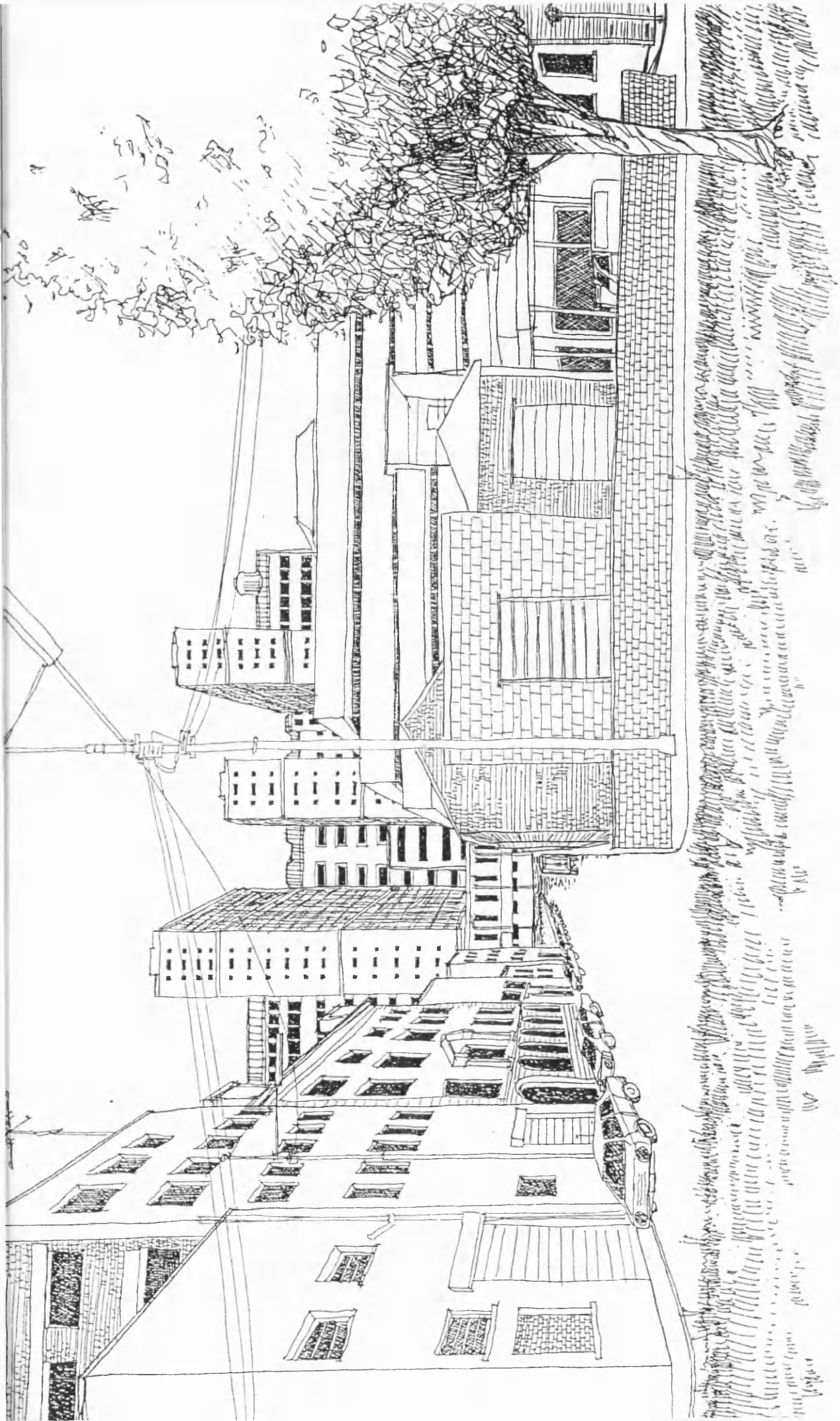
View of the Broomielaw from the south-east.



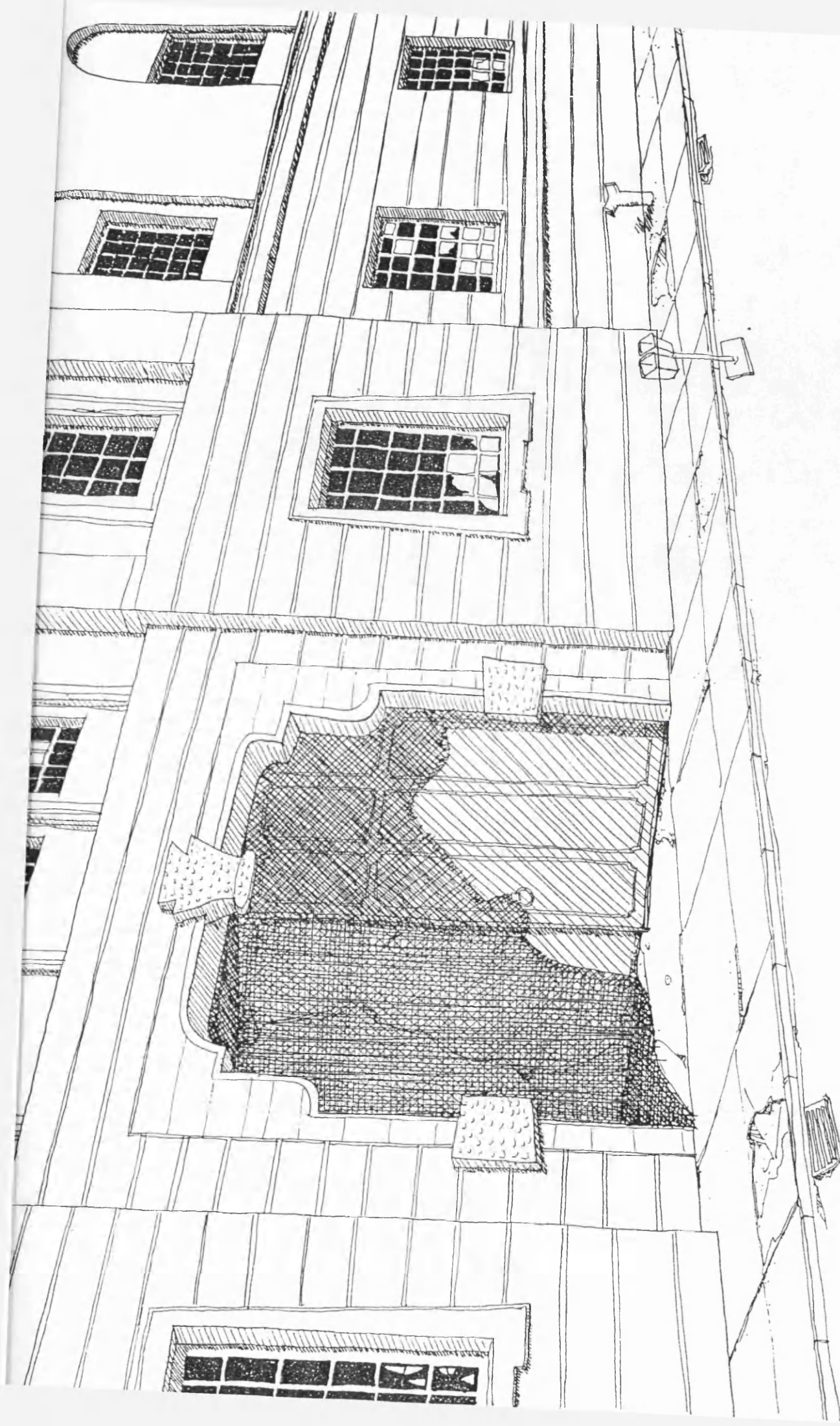
The riverwalk, facing west.



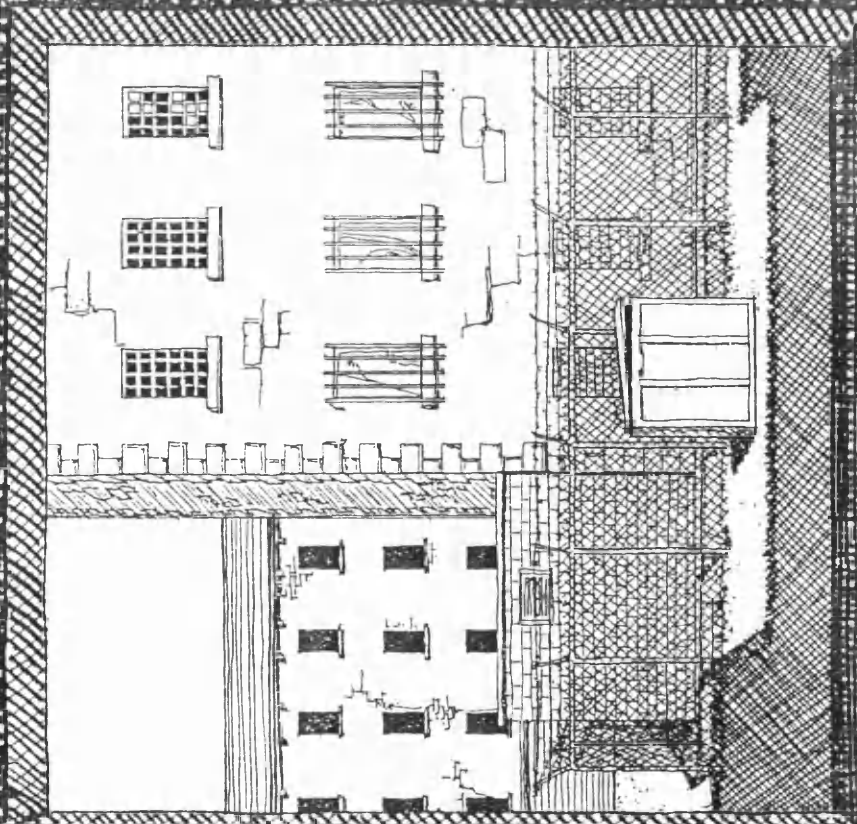
The eastern end of the riverwalk, facing north.



McAlpine Street viewed from the riverwalk, facing north.

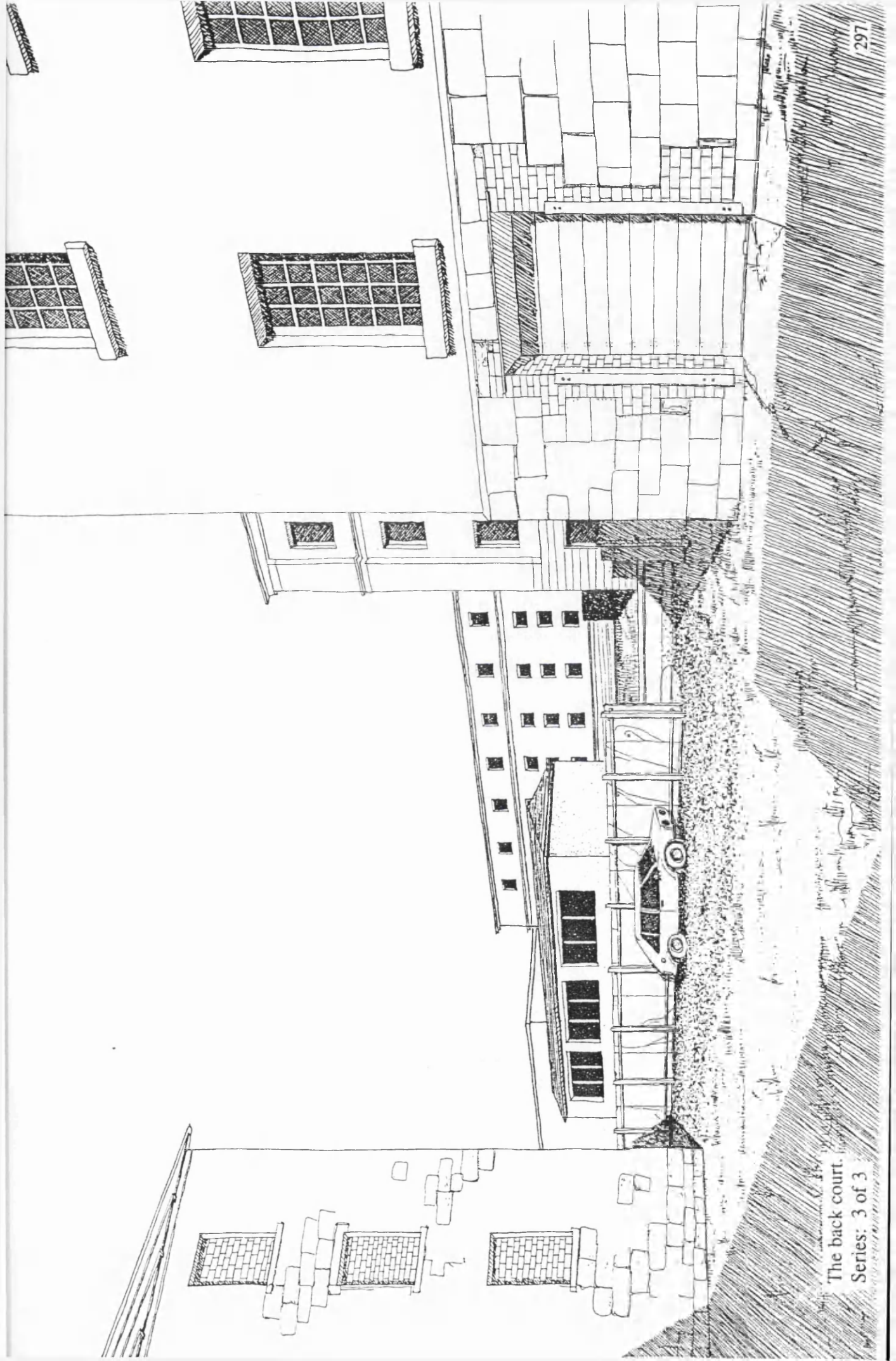


A warehouse, No. 23 York Street.
Series: 1 of 3

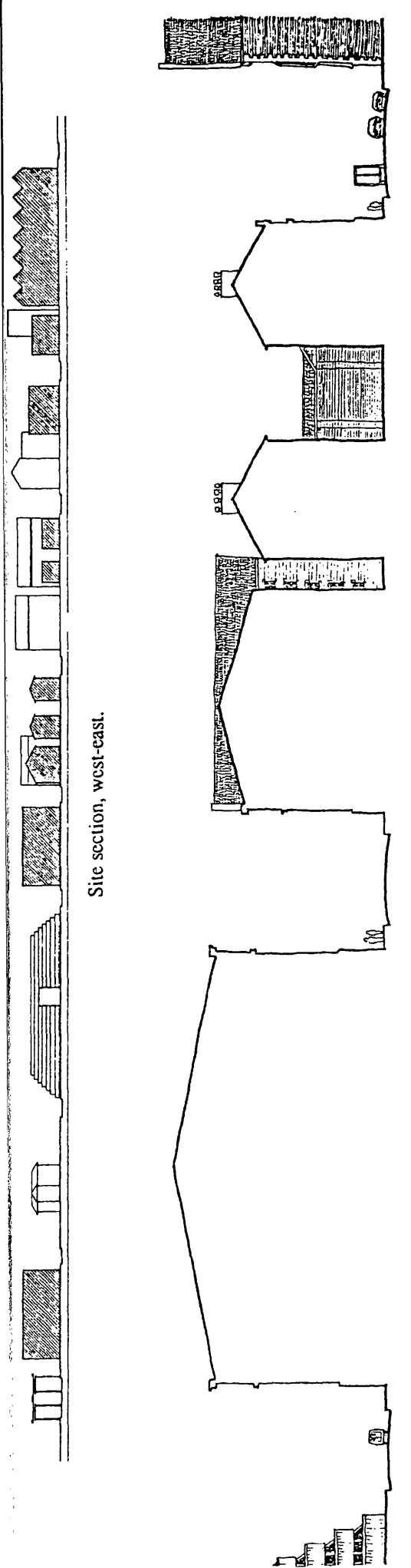


The passage through the warehouse.

Series: 2 of 3

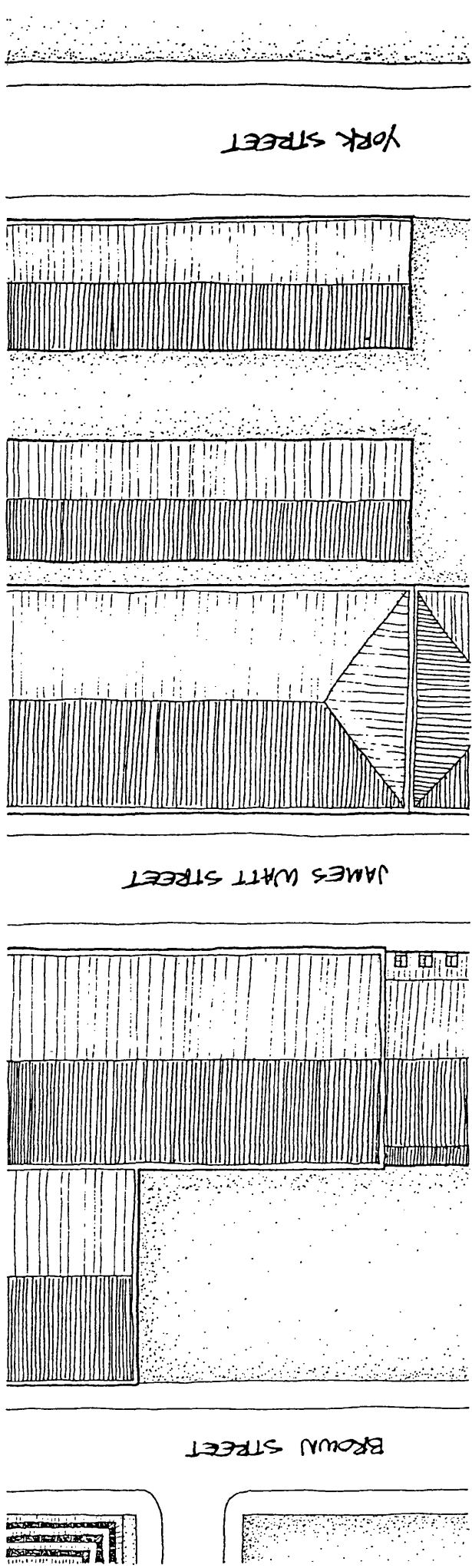


The back court.
Series: 3 of 3



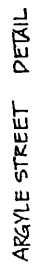
Site section, west-east.

Section detail.



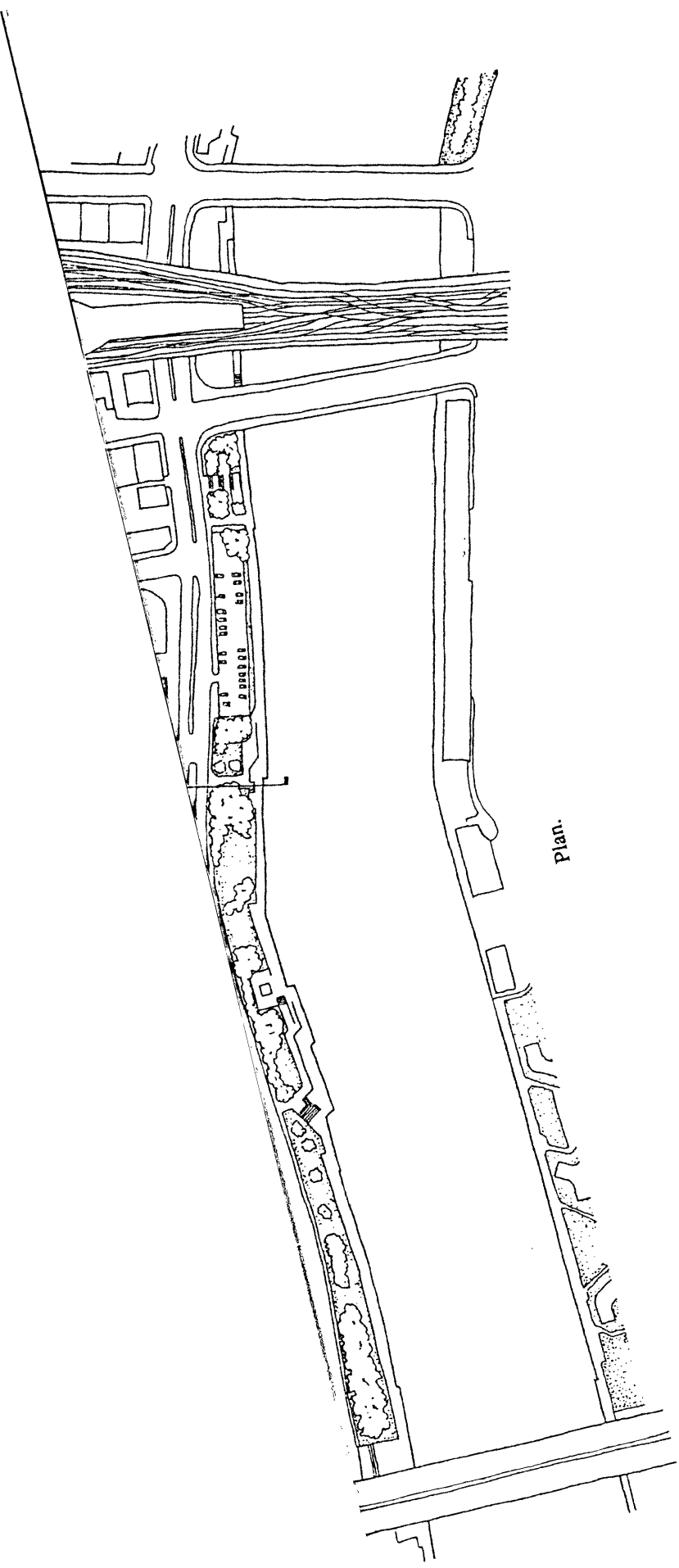
Plan Detail.

A group of warehouses.

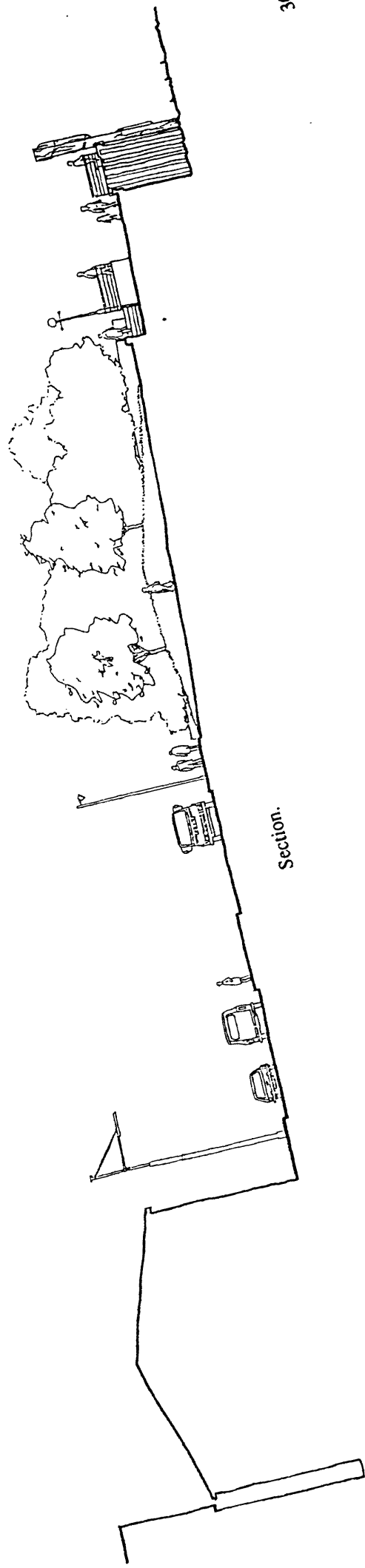


JAMES WATT

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Plan.



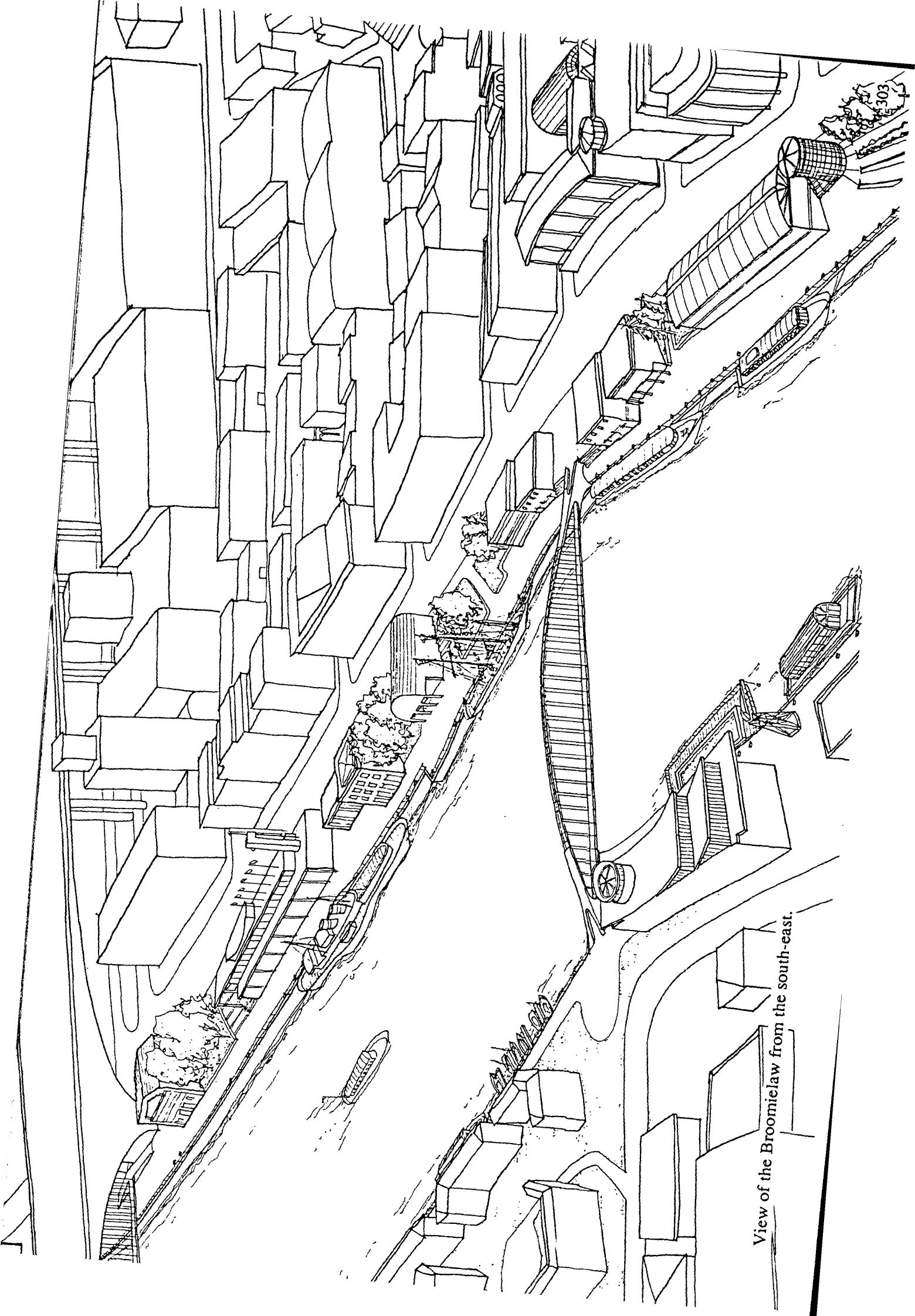
Section.

The existing riverwalk.

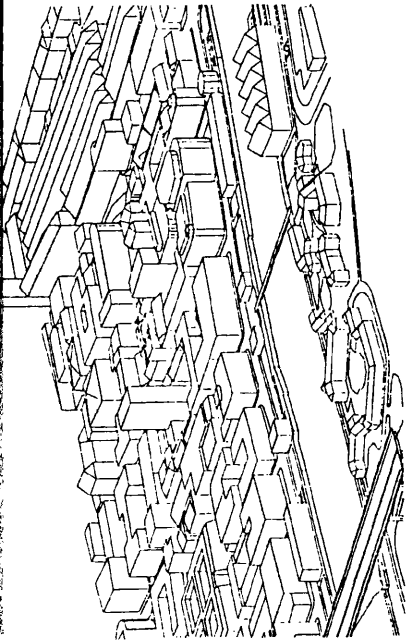
The Proposal.



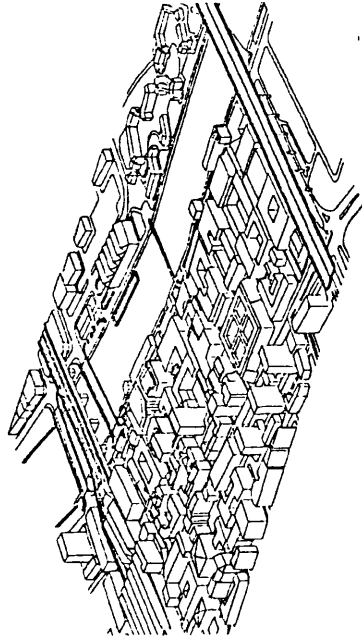
Map of the proposed development.



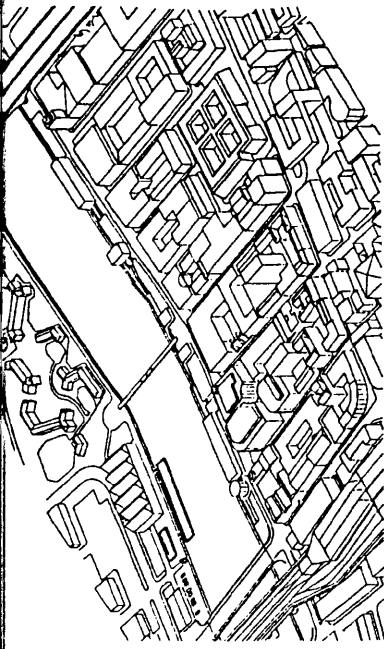
View of the Broomielaw from the south-east.



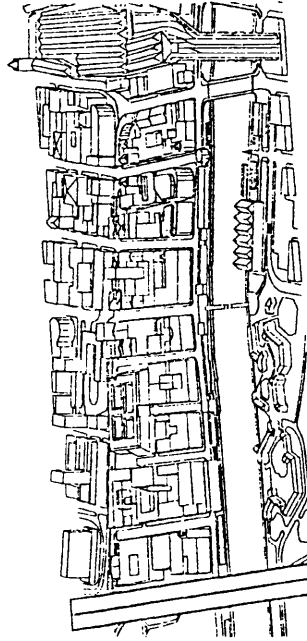
From south-west.



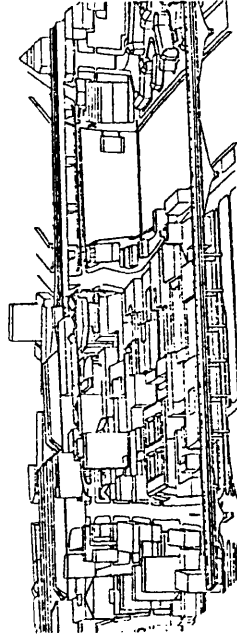
north-east



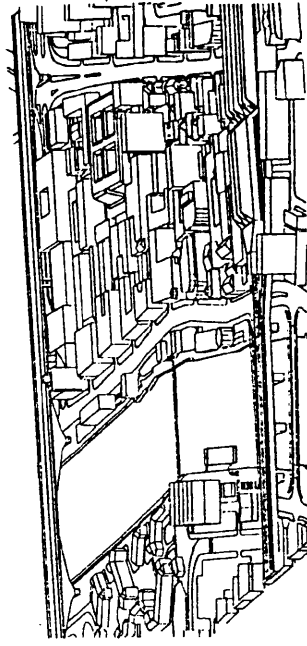
north-west



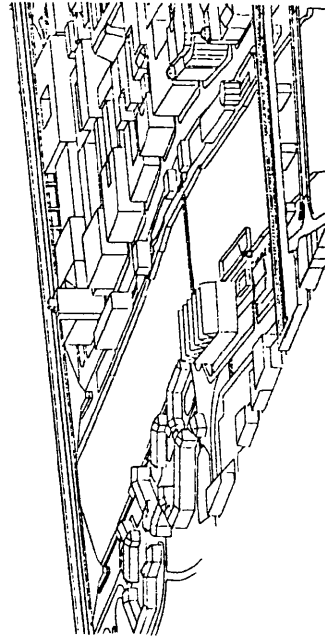
south



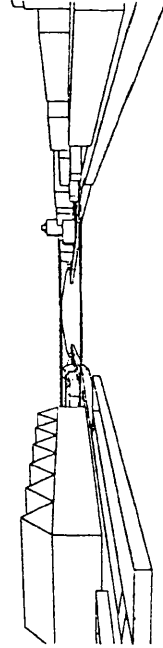
west



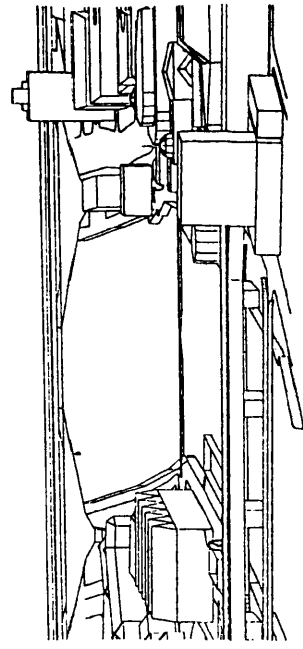
east



south-east

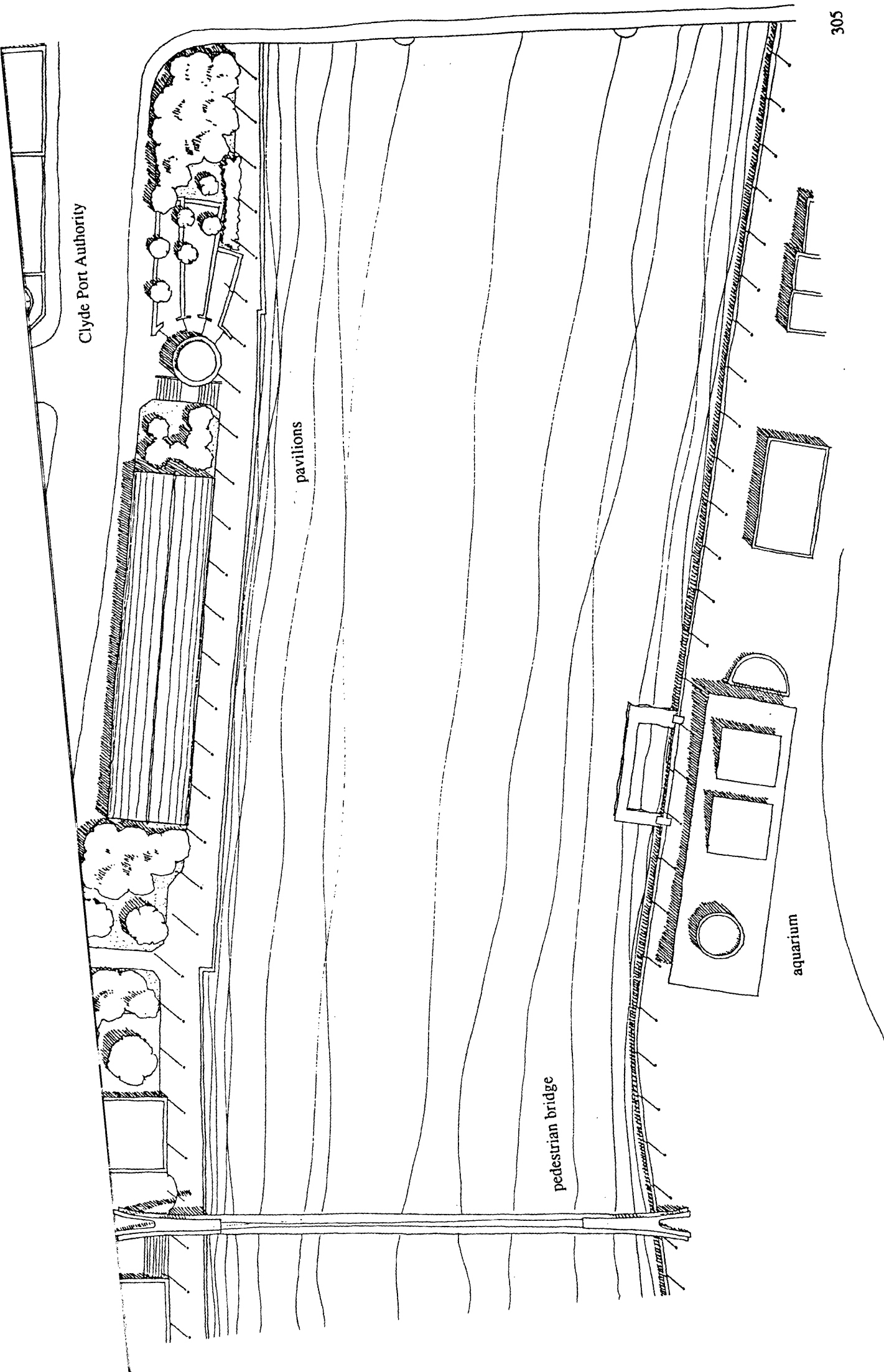


east (from river)

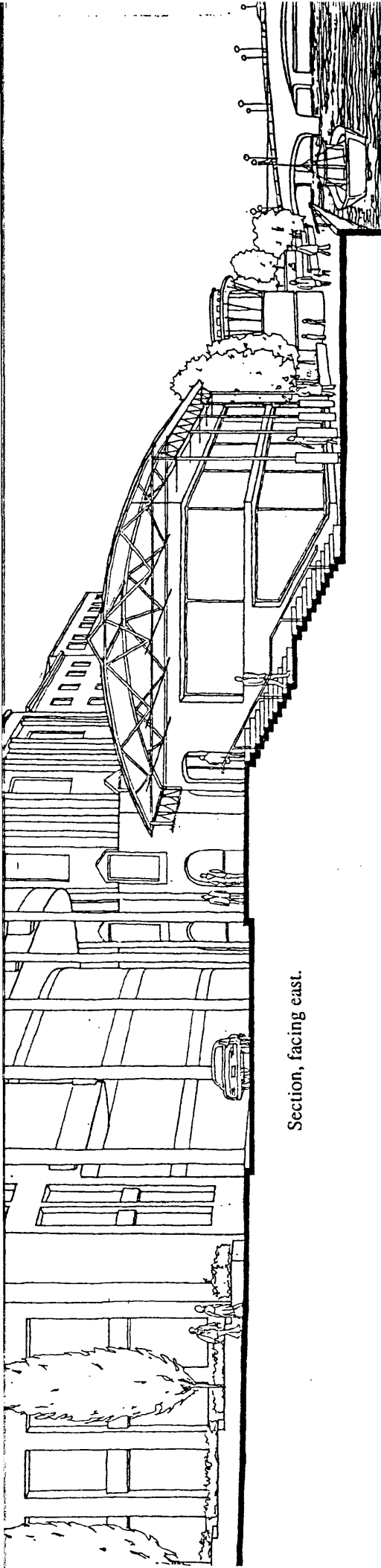


east

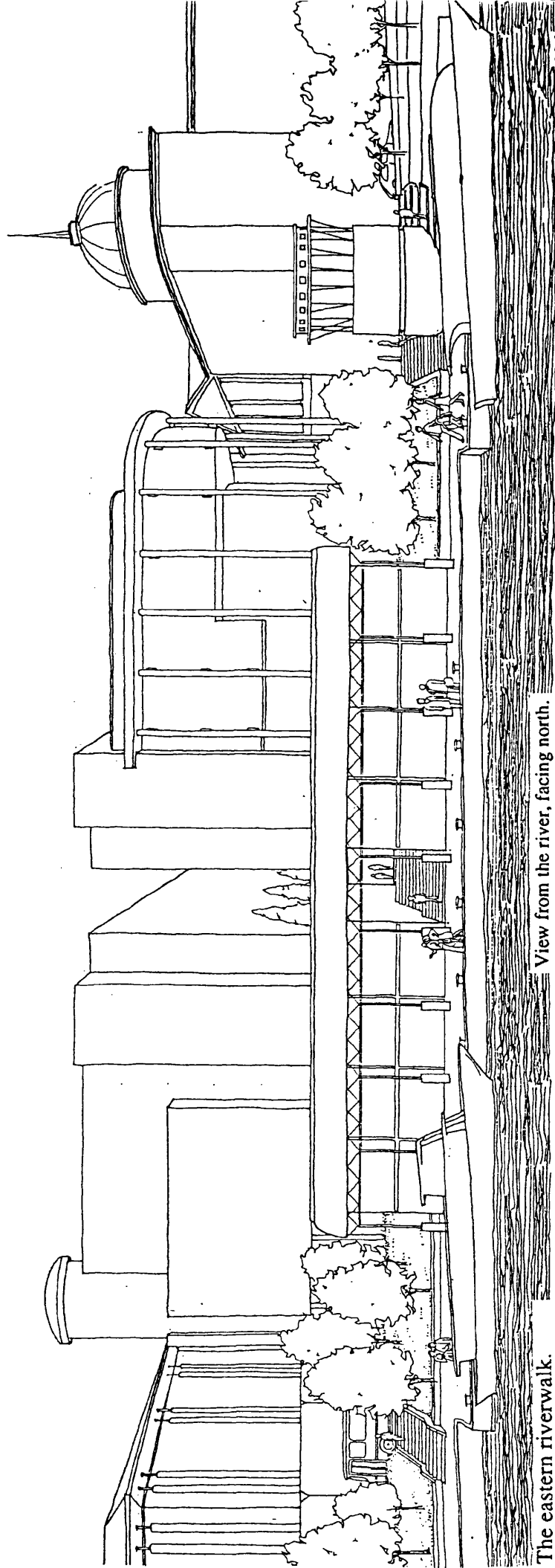
Views of the proposal.



The eastern half of the Broomielaw.

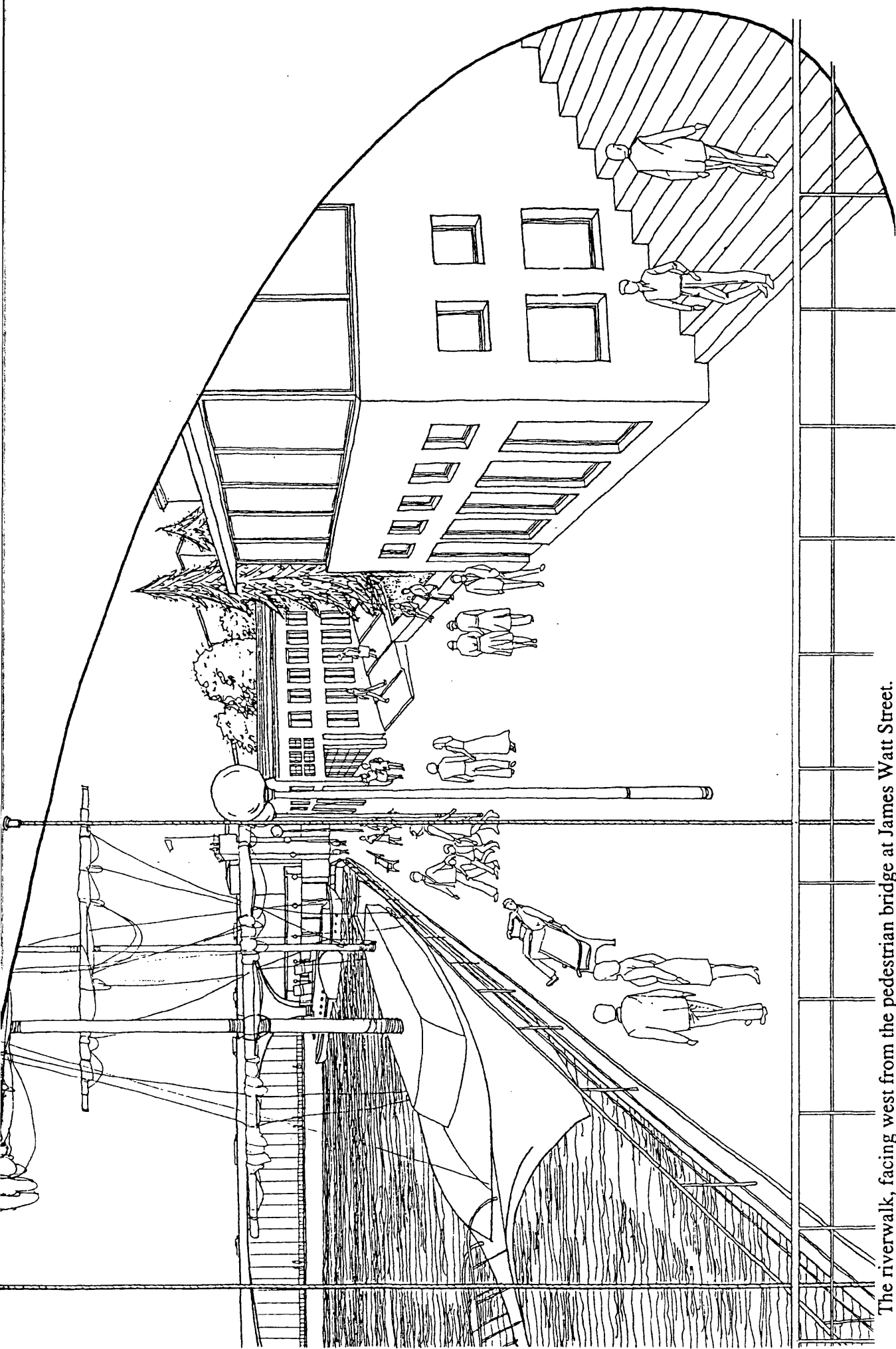


Section, facing east.

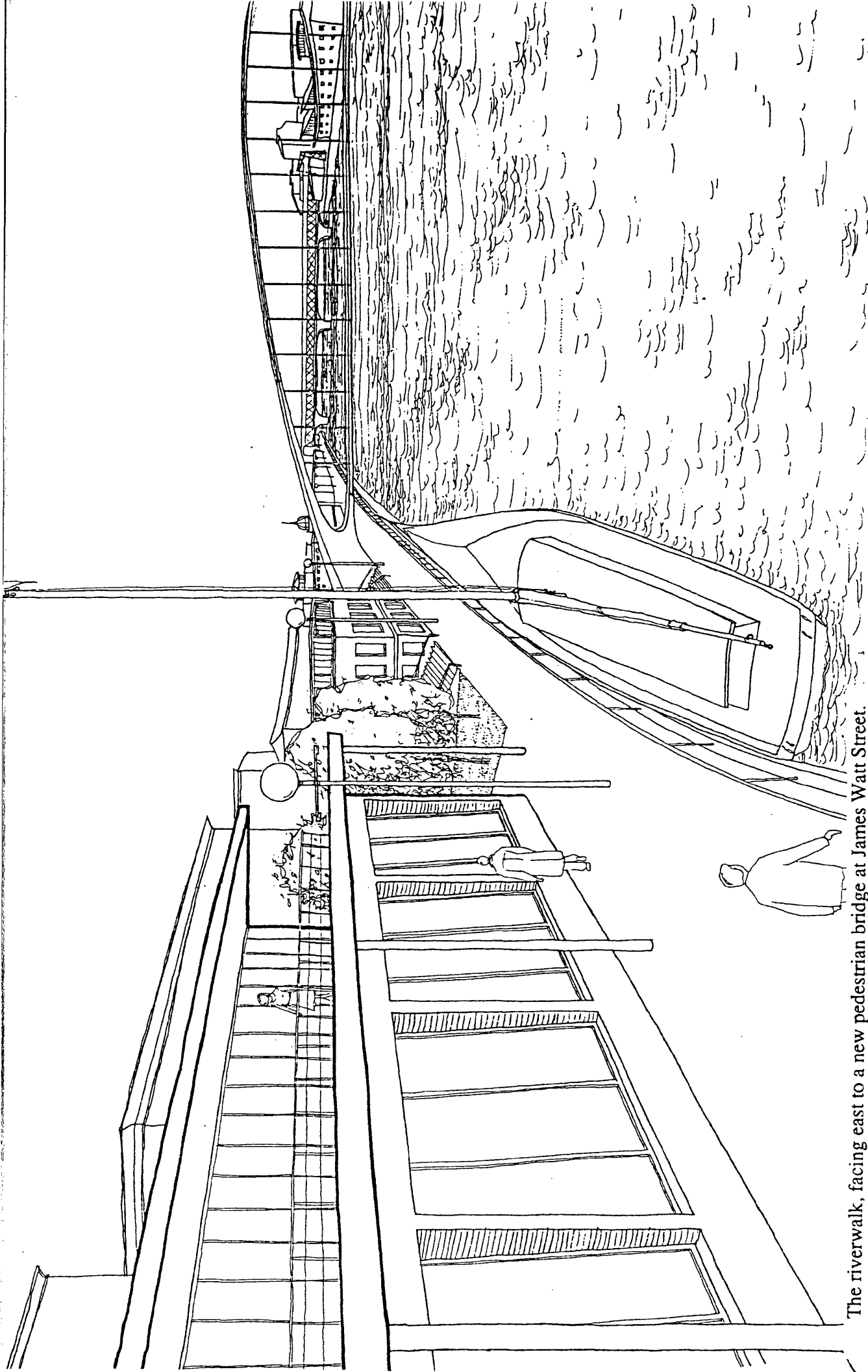


The eastern riverwalk.

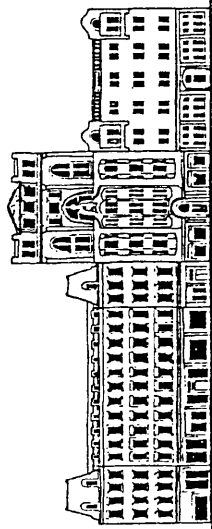
View from the river, facing north.



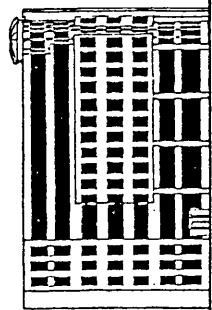
The riverwalk, facing west from the pedestrian bridge at James Watt Street.



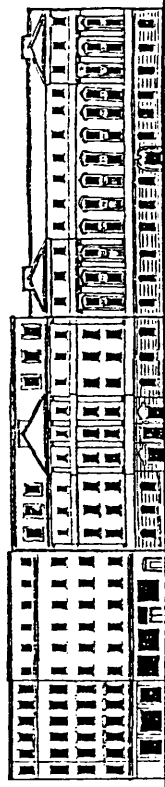
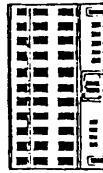
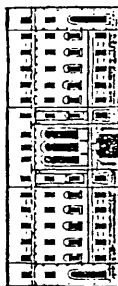
The riverwalk, facing east to a new pedestrian bridge at James Watt Street.



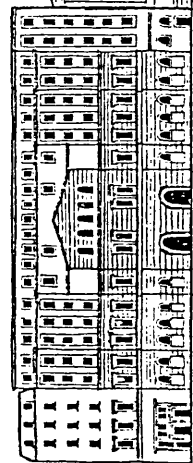
YORK STREET FACING EAST



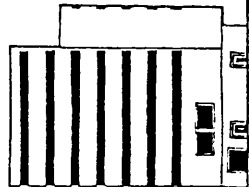
YORK STREET FACING WEST



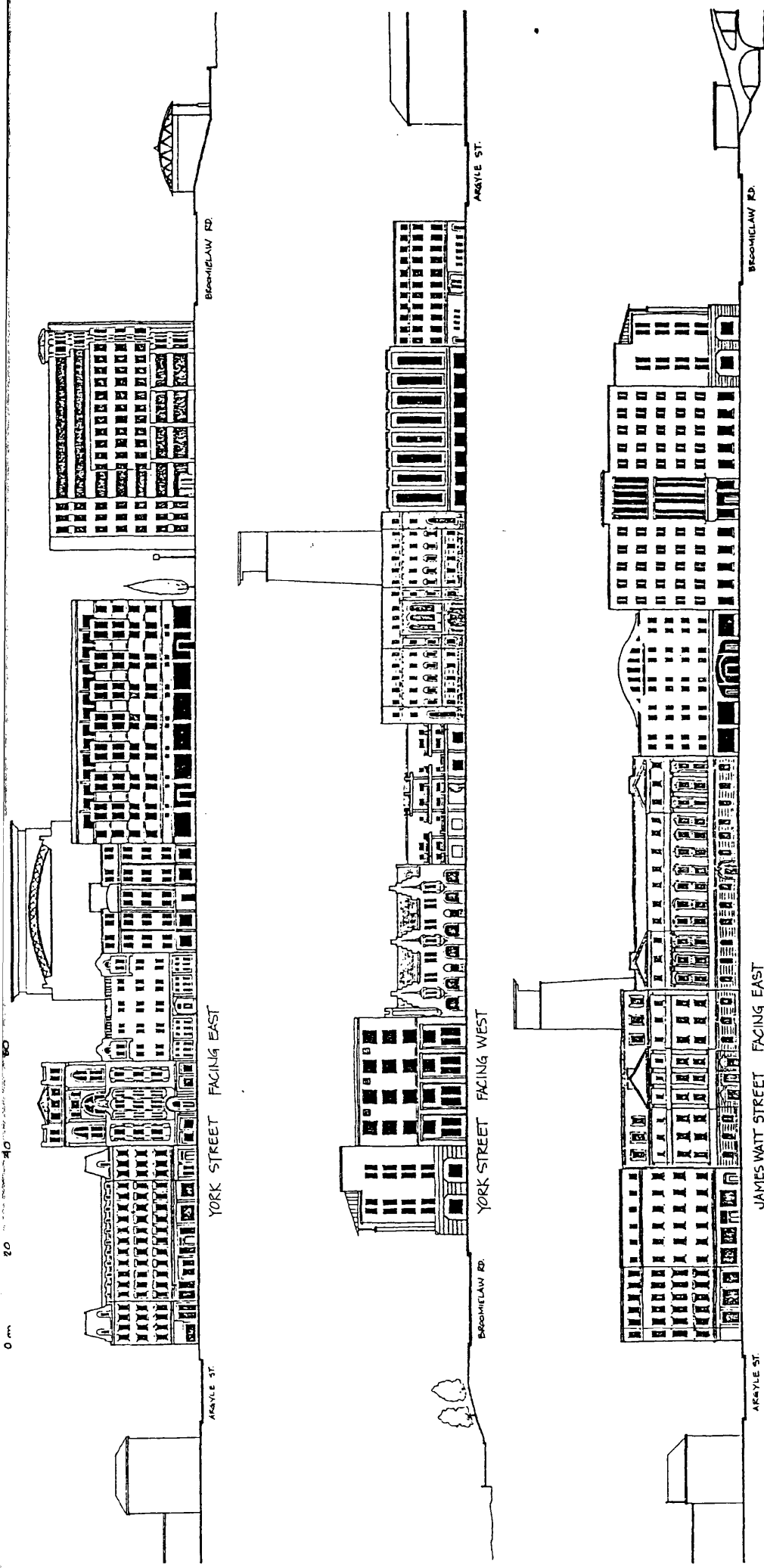
JAMES WATT STREET FACING EAST



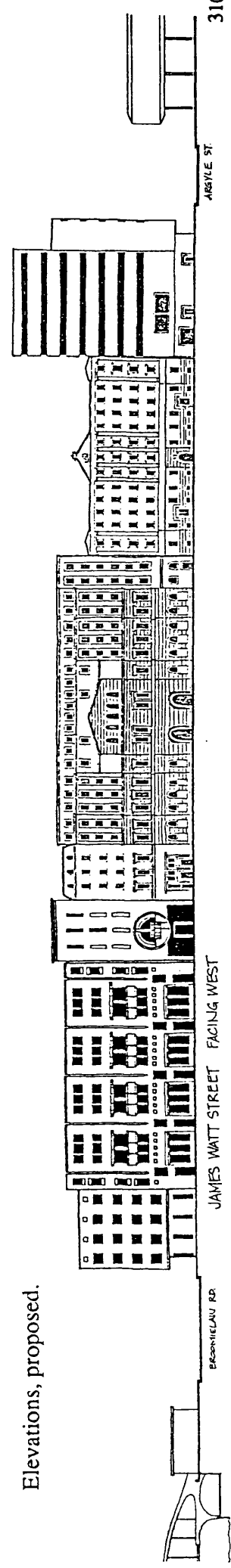
JAMES WATT STREET FACING WEST



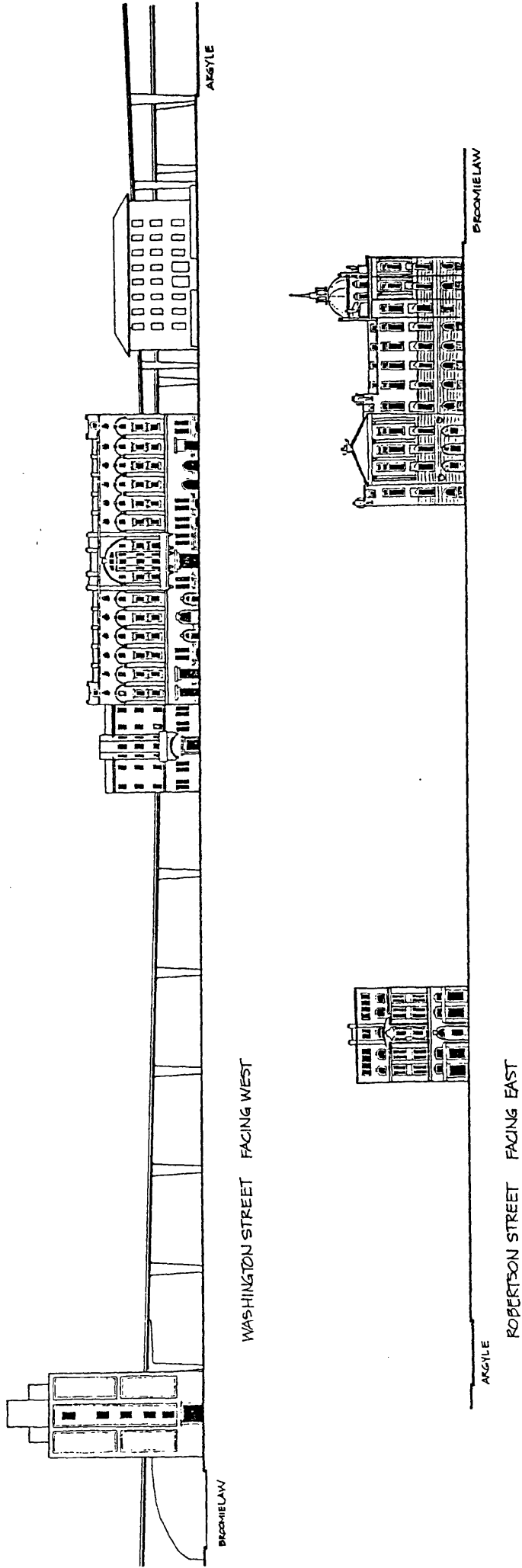
Elevations, existing.



Elevations, proposed.



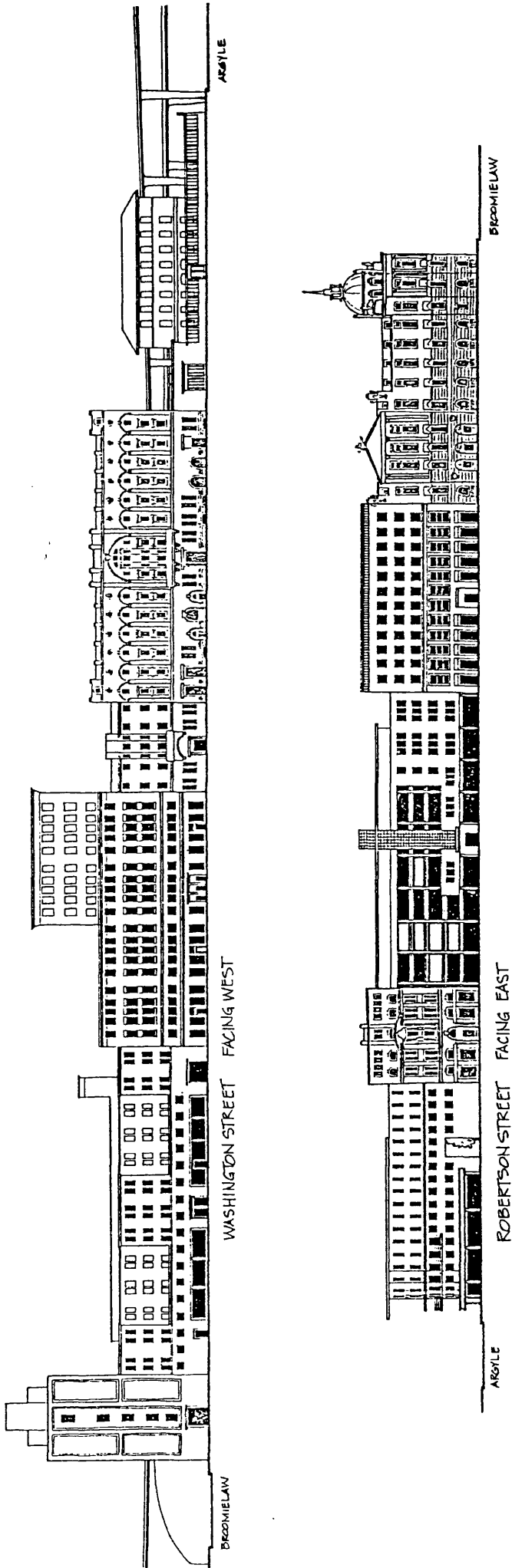
EXISTING CONDITIONS



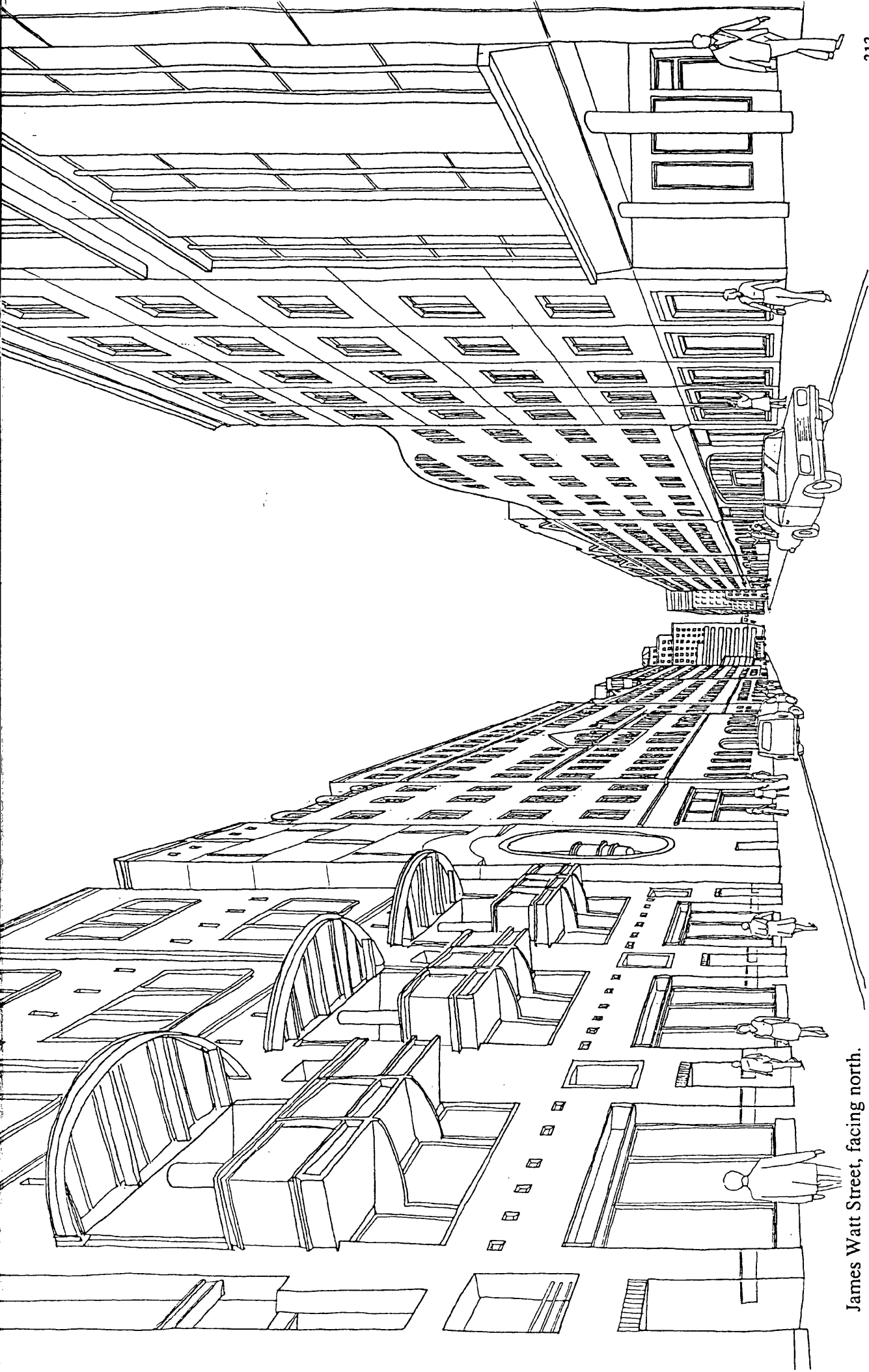
Elevations, existing.



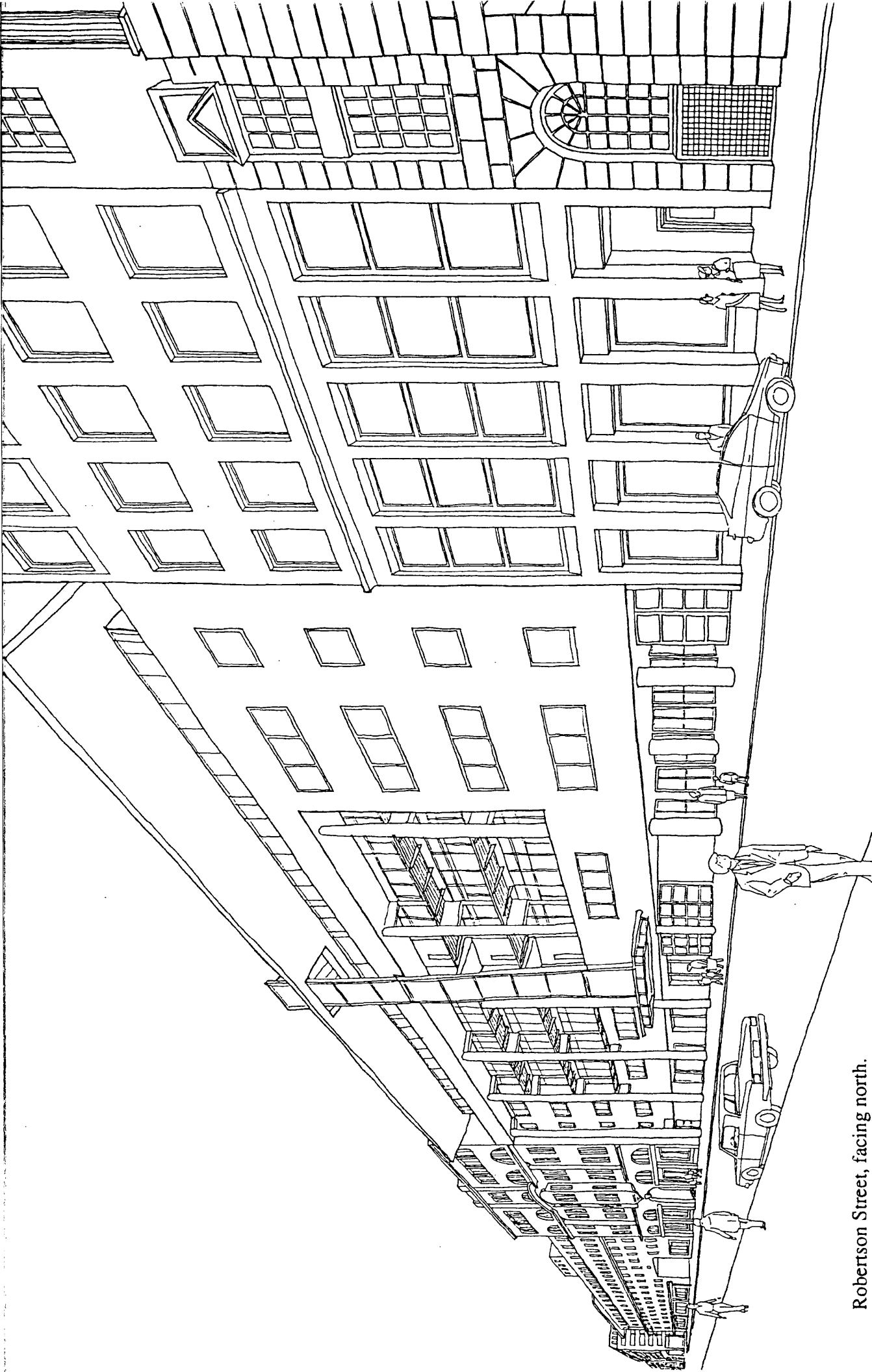
PROPOSED



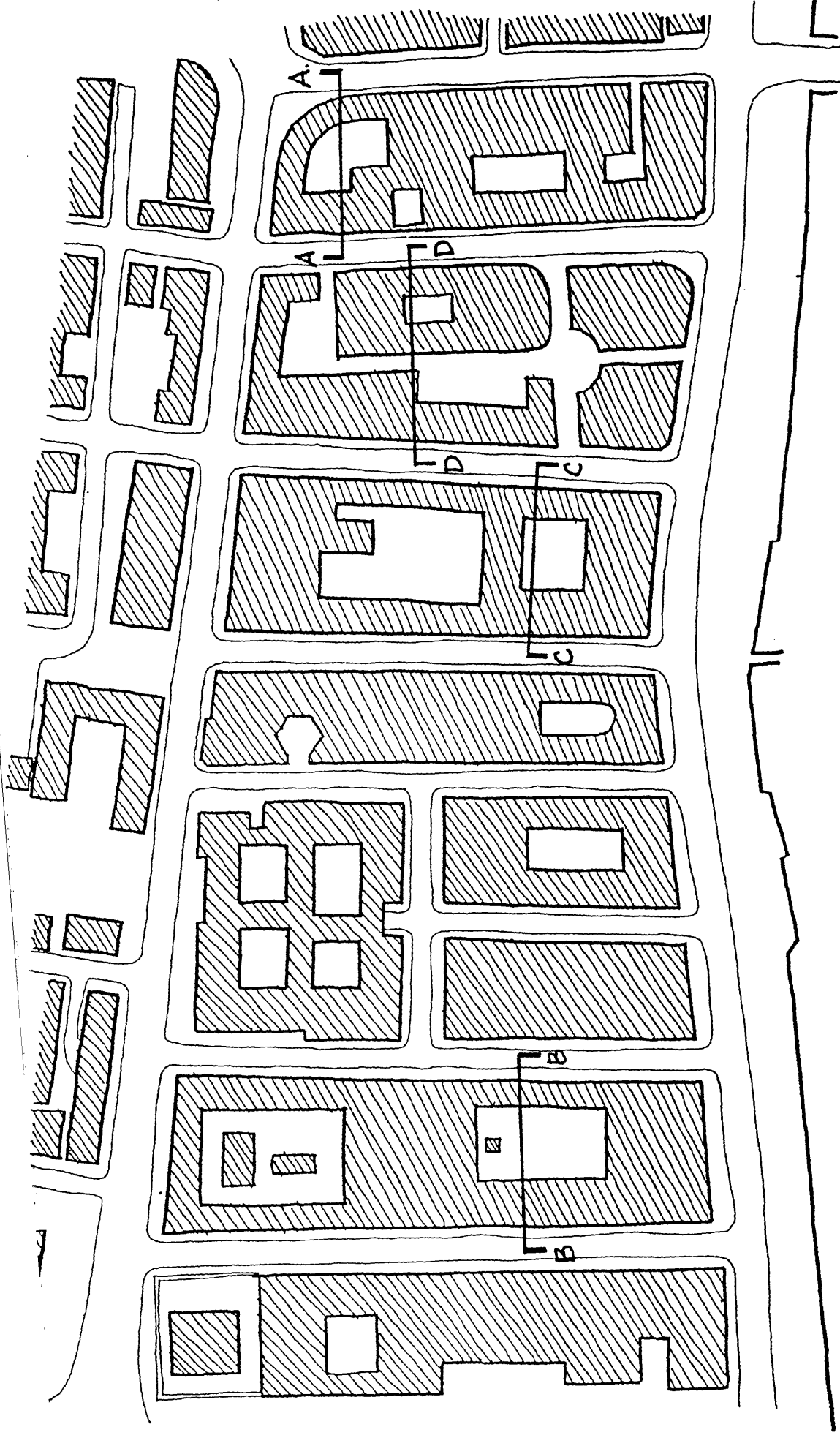
Elevations, proposed.



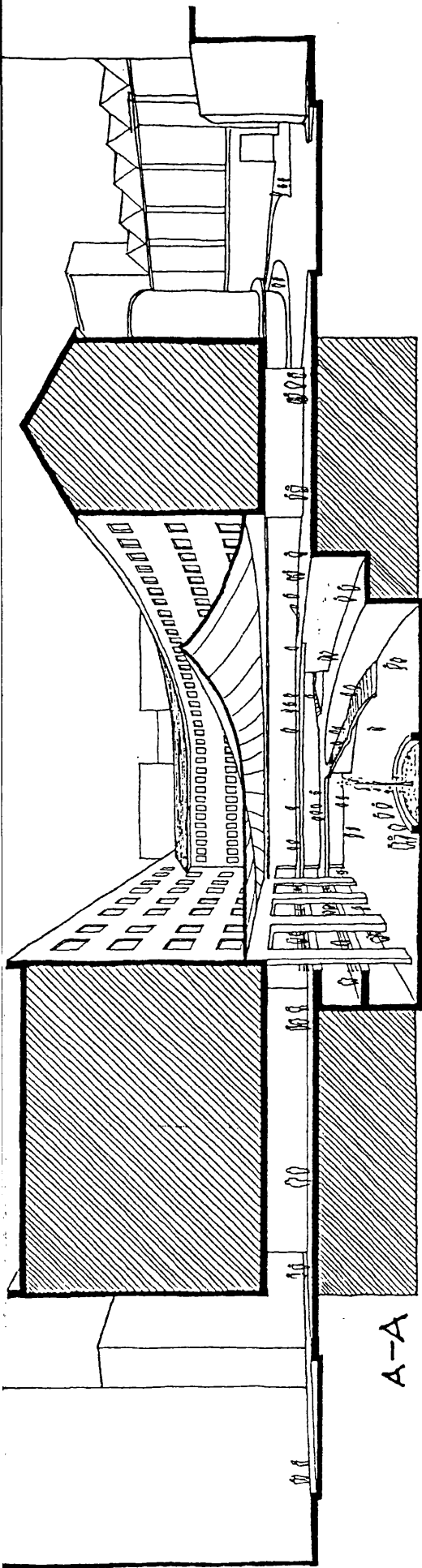
James Watt Street, facing north.



Robertson Street, facing north.

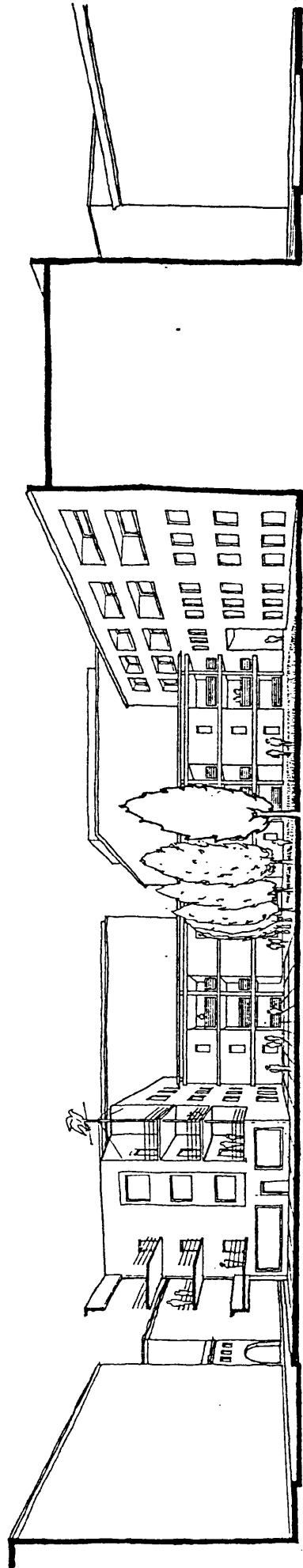


Proposed courts.



A-A

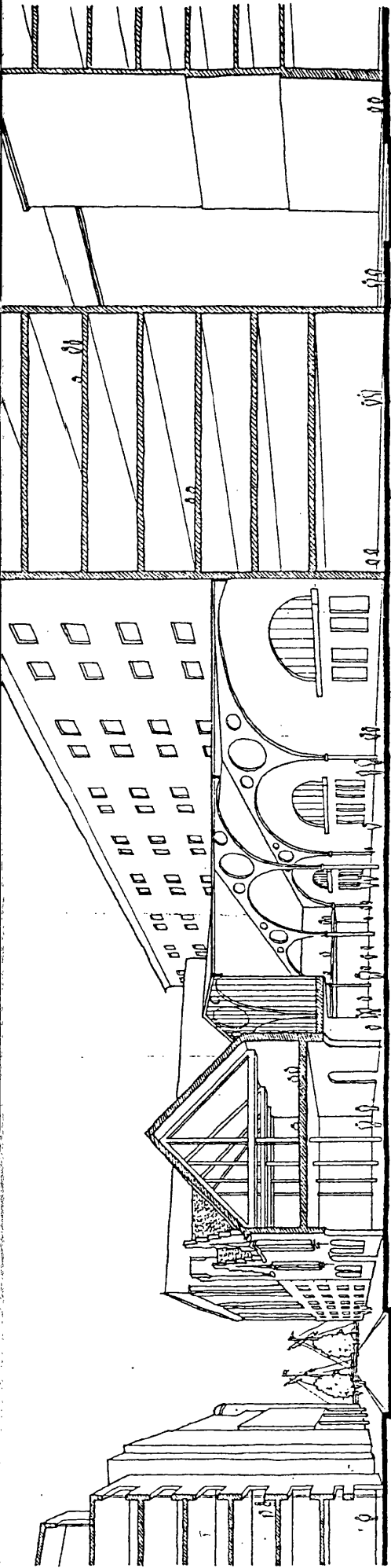
Section, facing north.



B-B

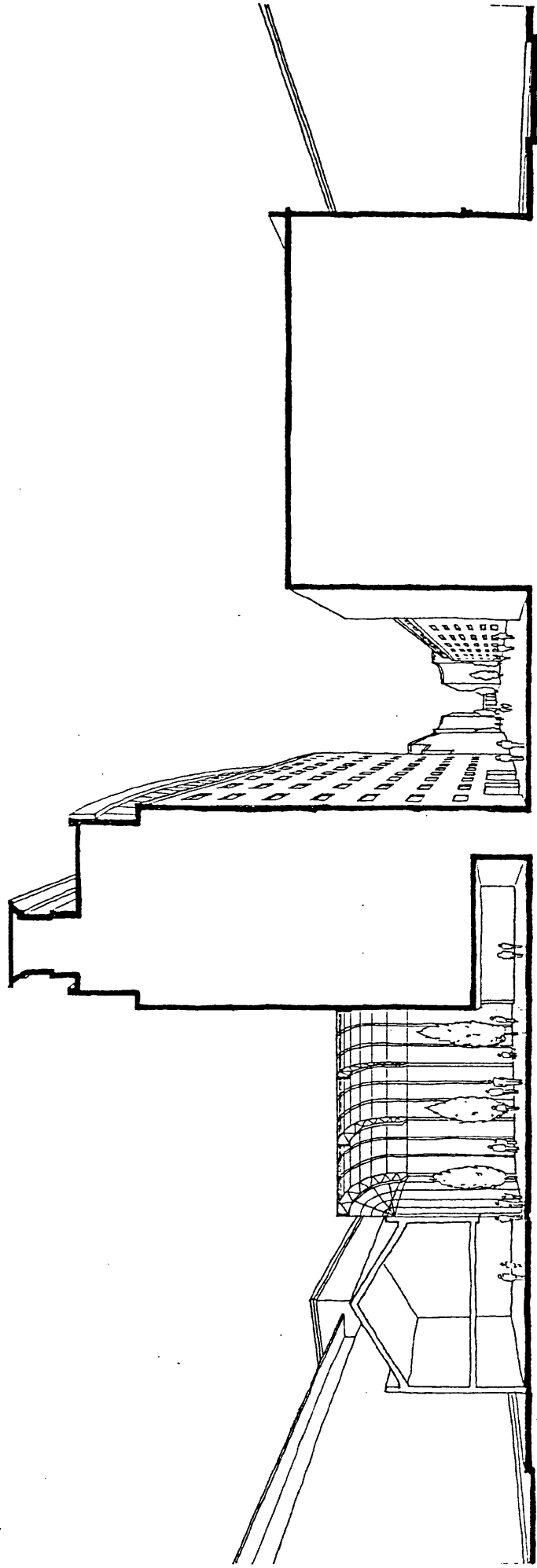
Section, facing south.

Proposed courts.



Section, facing south.

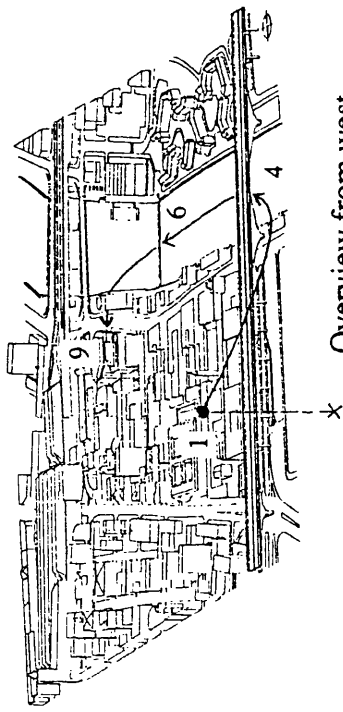
C-C



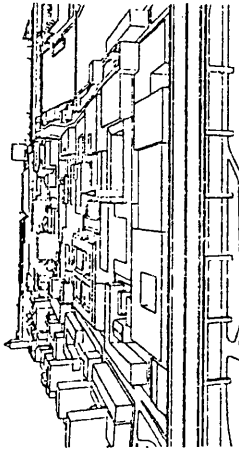
Section, facing south.

D-D

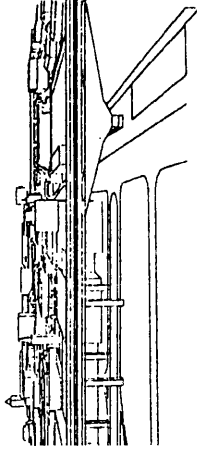
Proposed courts.



1

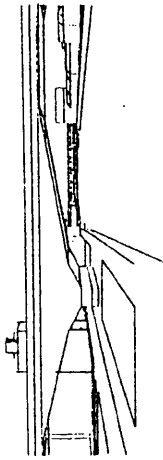


2

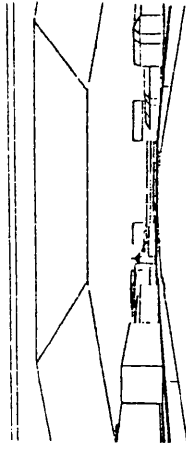


Overview from west.

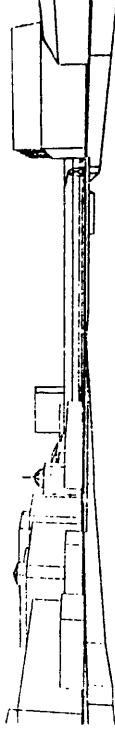
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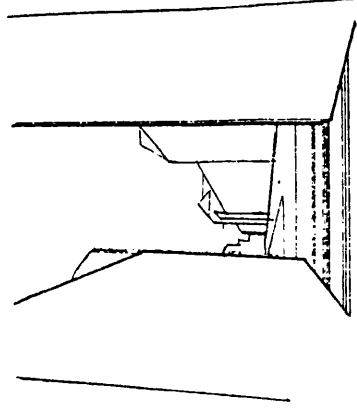
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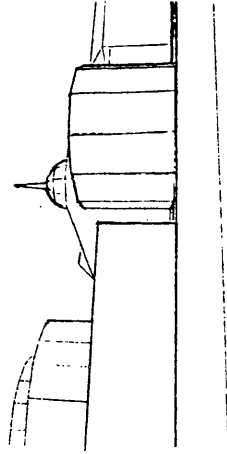
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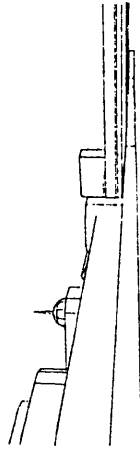
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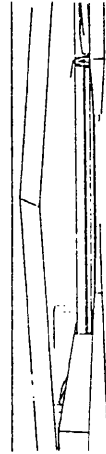
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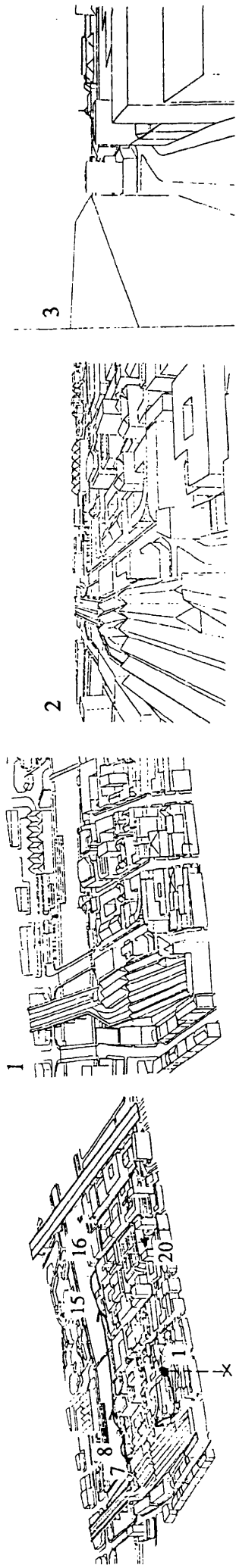
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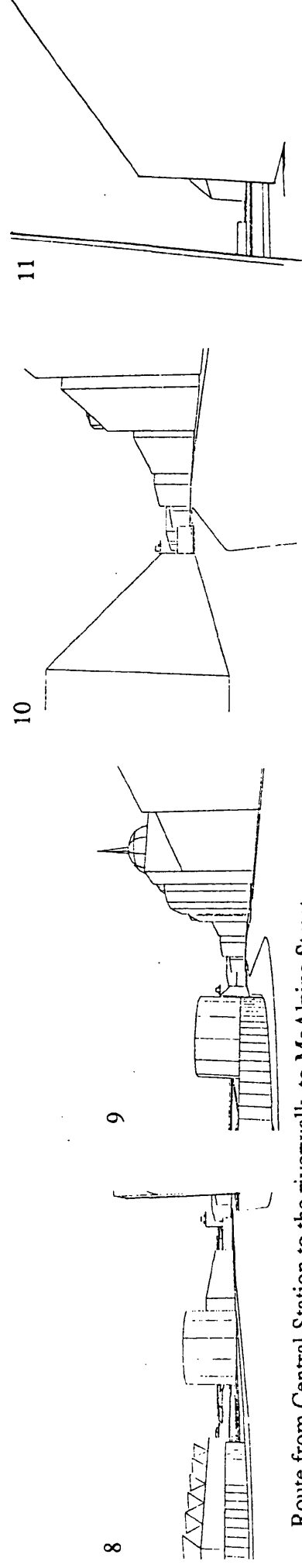
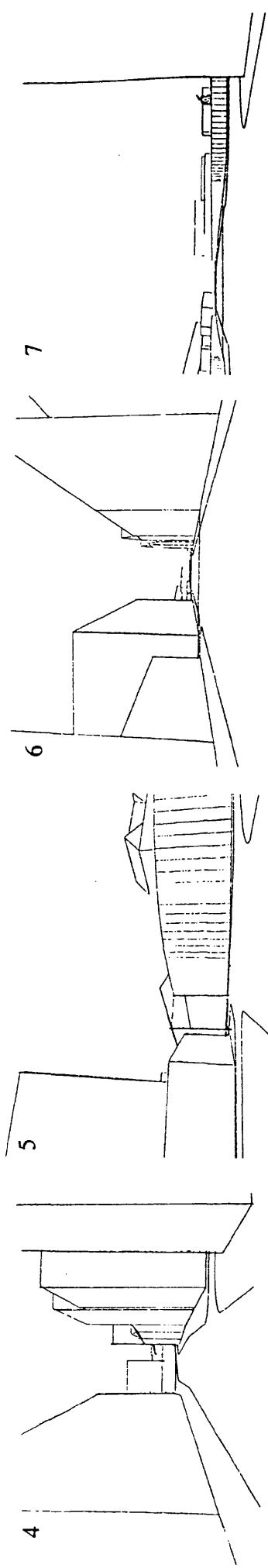
6



Route from the Kingston Bridge east to Robertson Street.



Overview from north-east.

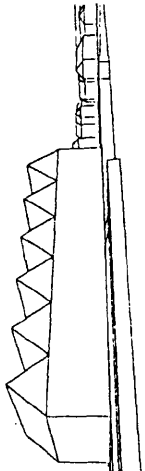


Route from Central Station to the riverwalk, to McAlpine Street, and continuing to Argyle Street.

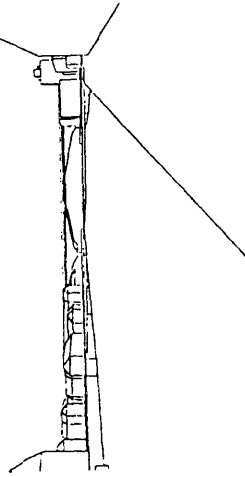
12



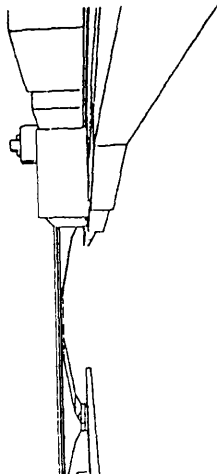
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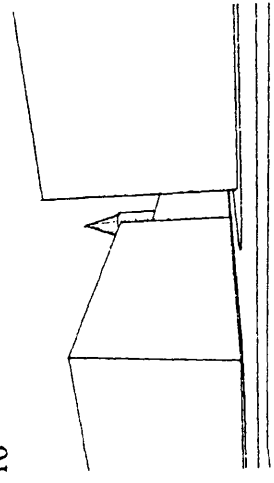
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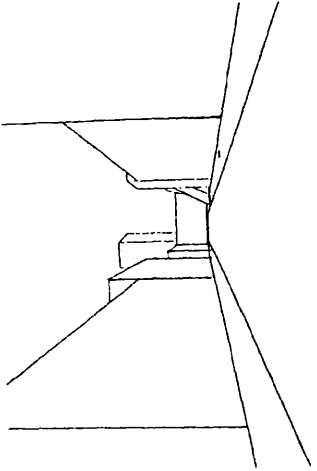
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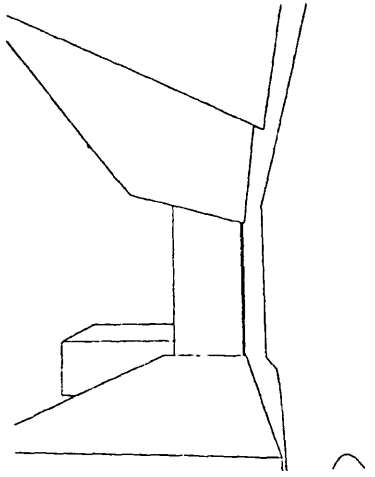
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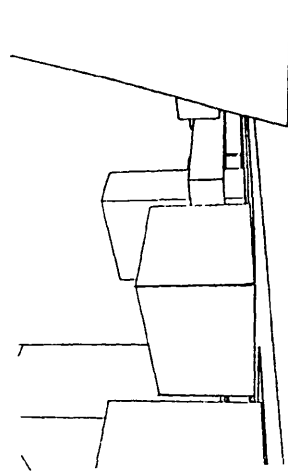
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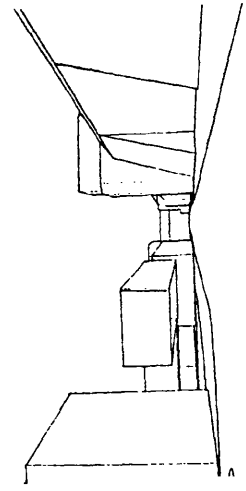
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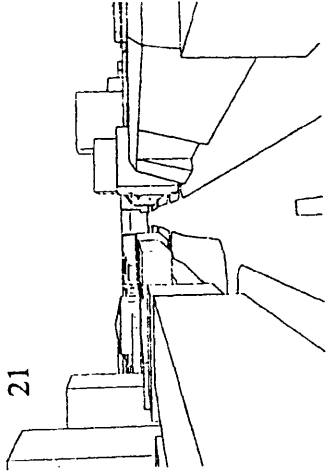
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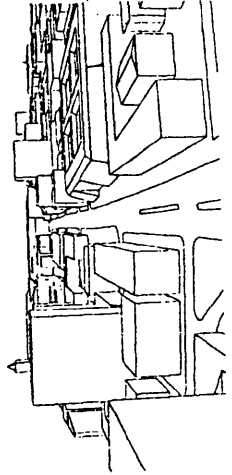
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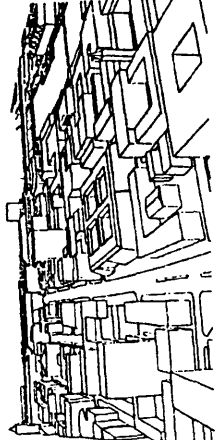
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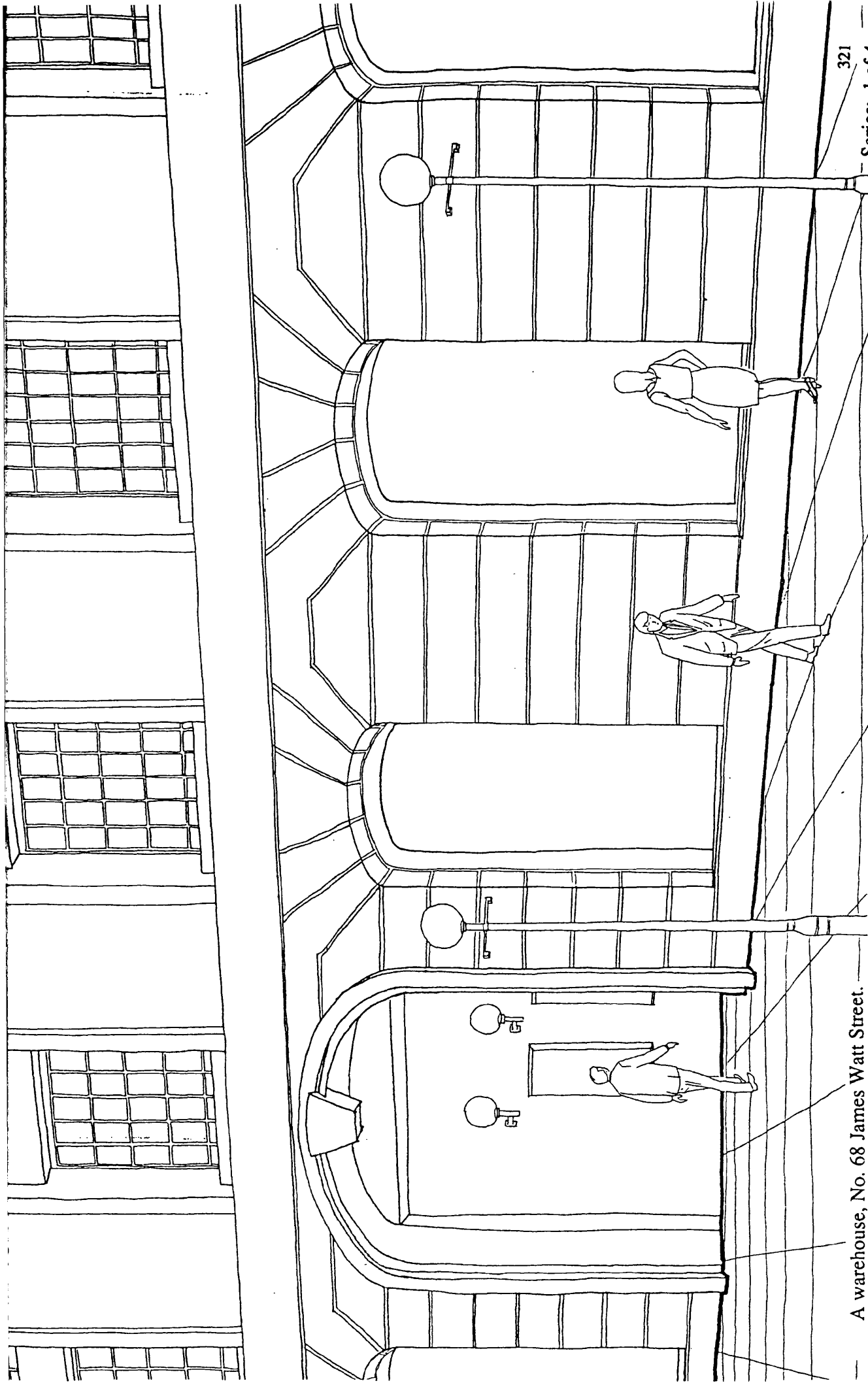


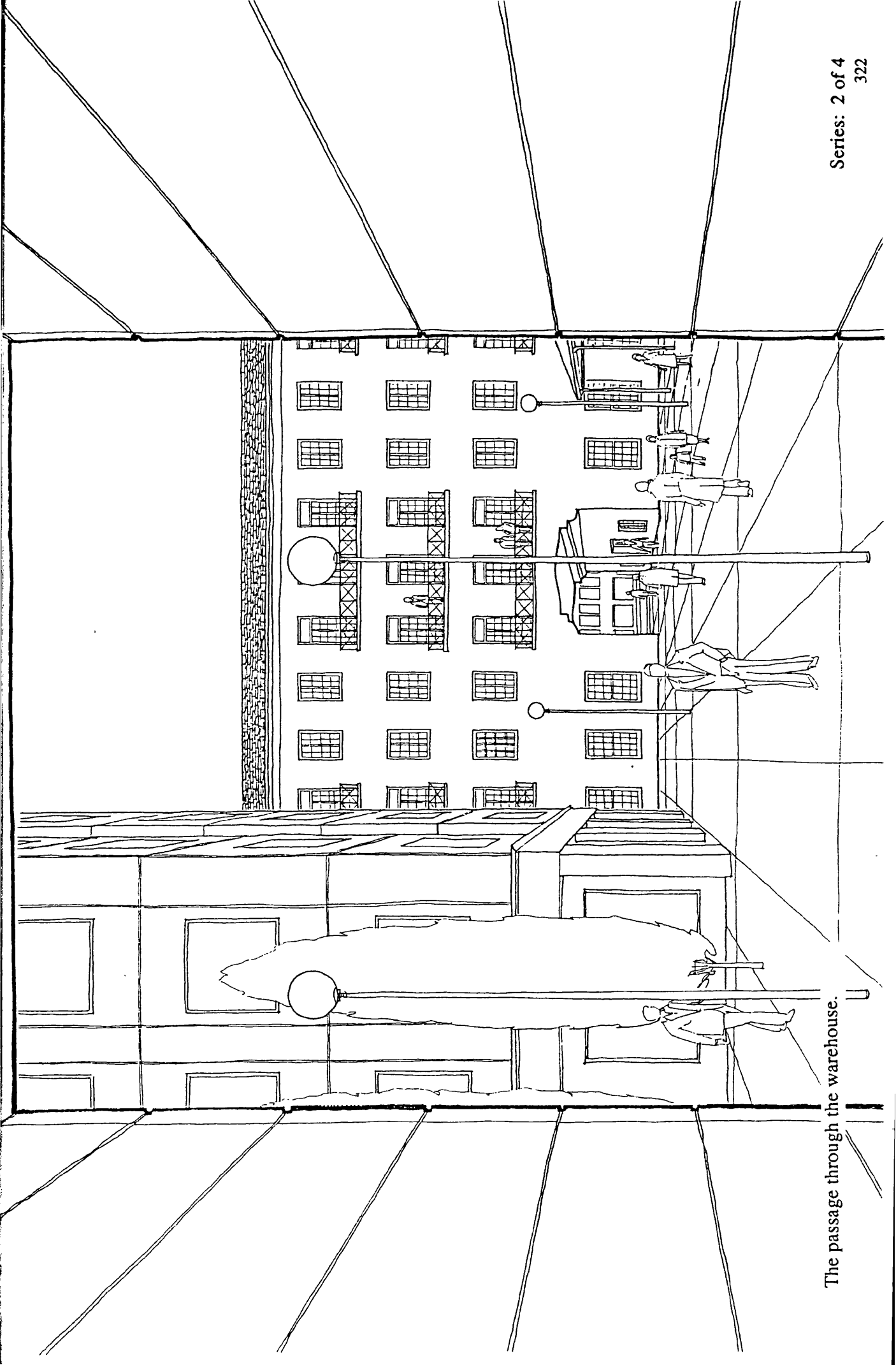
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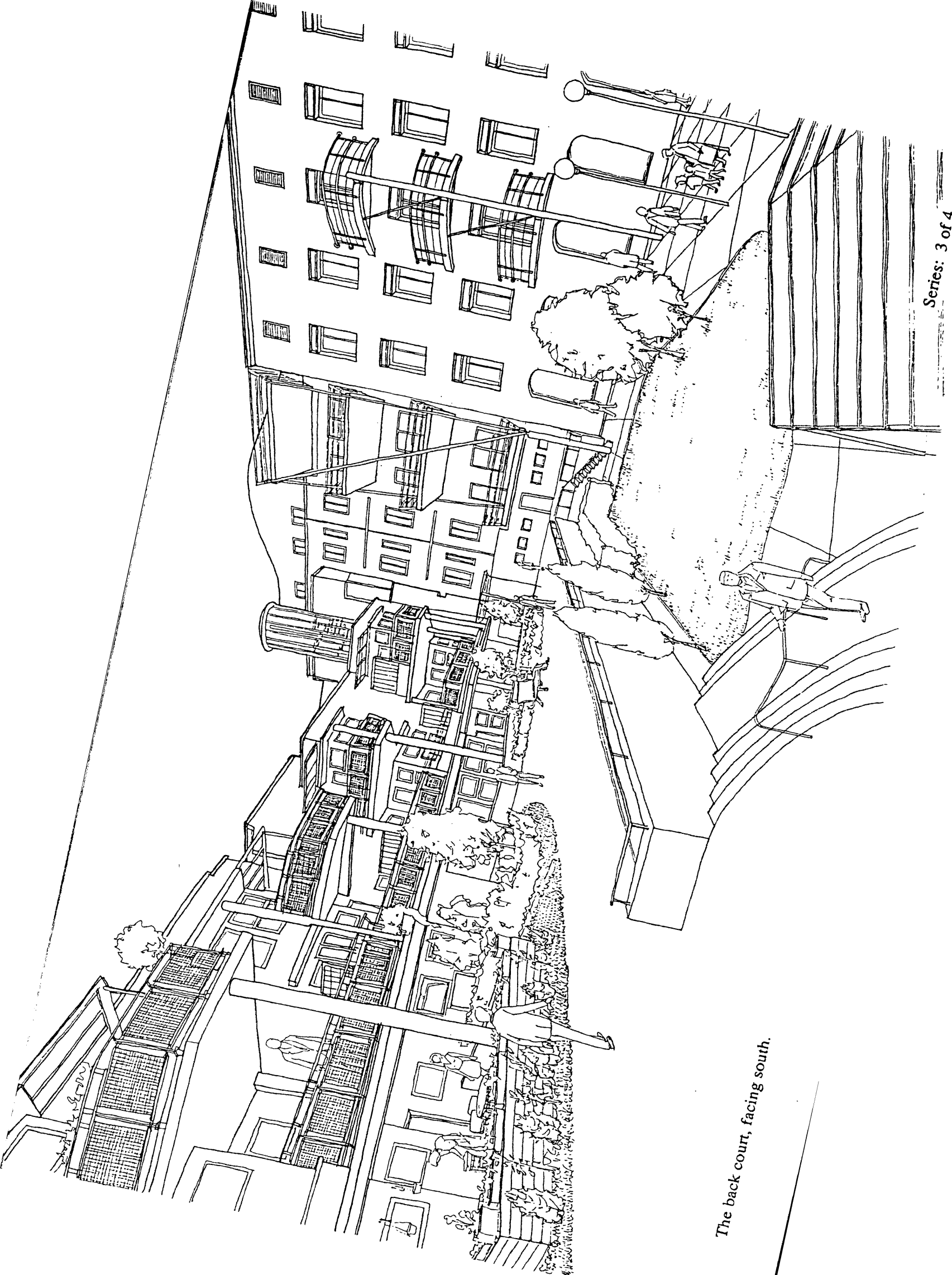
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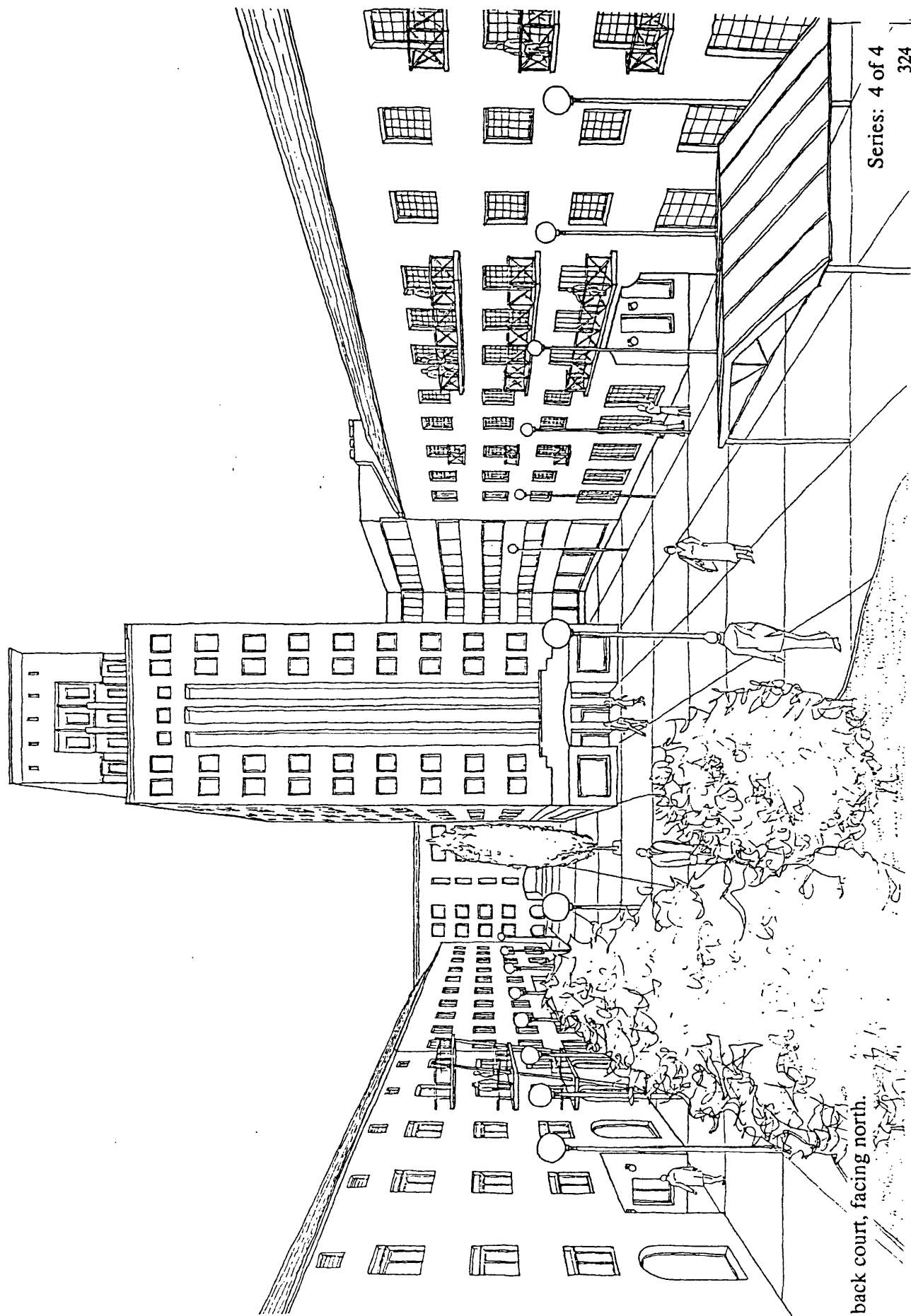




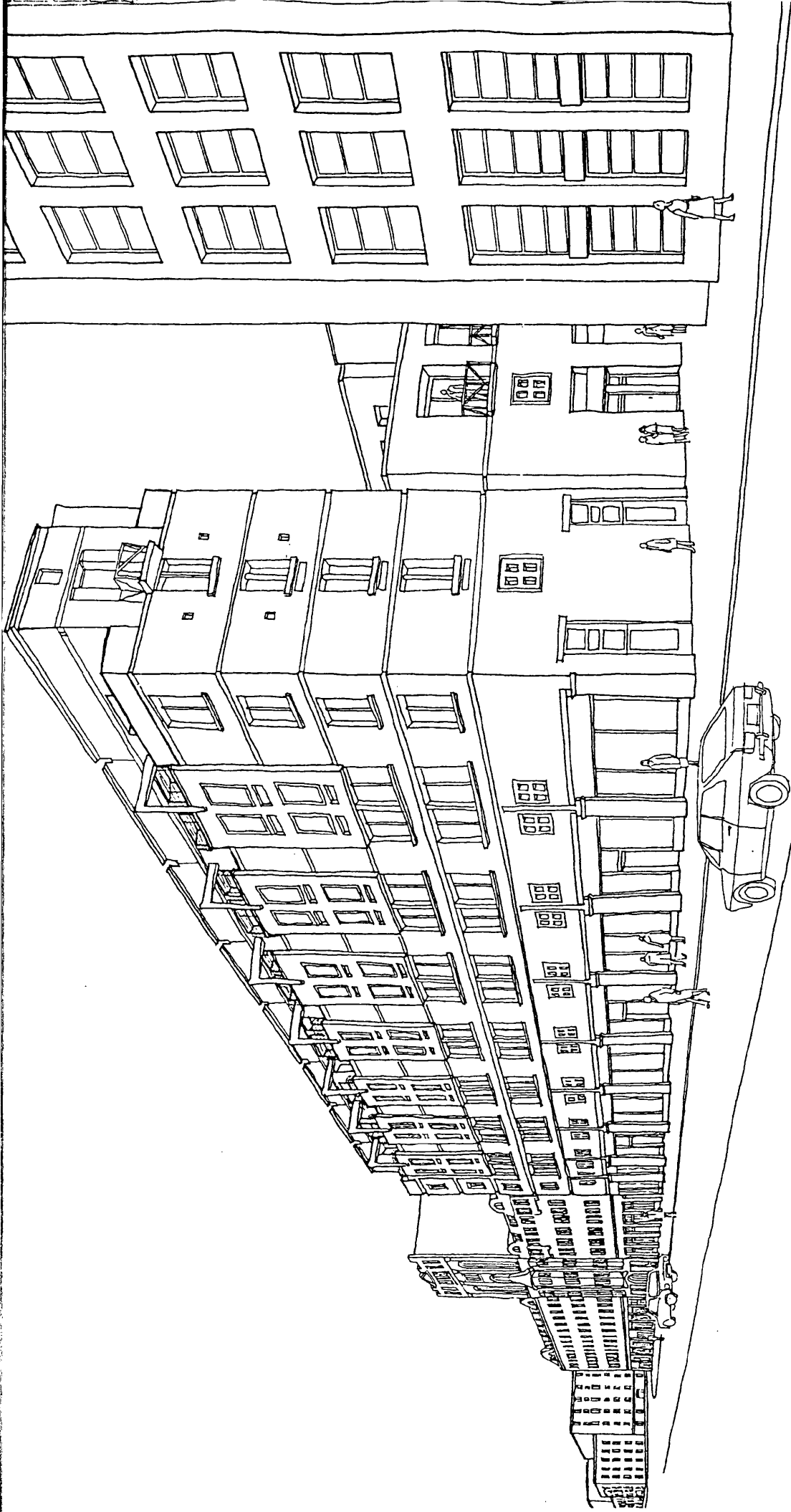
The passage through the warehouse.



The back court, facing south.



The back court, facing north.



York Street, facing north.

The Broomielaw is designed to be enduring. The only reasons that districts do not endure or are redesigned are:

1. Unhealthy living conditions.
2. Sites and buildings are unwanted and unused. An area is abandoned because it is remote or otherwise inactive.
3. The form of the district does not make full use of the potential of the site.

