STREETSCAPE DESIGN STUDY for Downtown Burlington

du TOIT ASSOCIATES LIMITED • URBAN PLANNERS • LANDSCAPE ARCHITECTS

Adopted by Council Dec. 1981

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1.0 Introduction

The primary purpose of this study is to indicate how a cohesive and attractive identity can be developed in downtown Burlington, through a co-ordinated streetscape design program.

Downtown Burlington - once the identifiable centre of a self-contained community - has now been engulfed in the Toronto/Hamilton axis. The commercial area, although it has many buildings and pedestrian environments of great attraction, suffers in general from being dispersed, and it therefore lacks a cohesive identity. Steps have been taken to rectify this, including mainstreet tree planting a few years ago and the current banner program. This study builds on those beginnings, and shows how the design of all of the streetscape elements can be co-ordinated so that the downtown is perceived as a cohesive and attractive place, both to people in it and to people passing by.

This report therefore presents design guidelines for streetscape development in the Study Area. In order to do this, an assessment of the planning context and site conditions in the downtown area has been made, a design theme has been developed, a framework or master plan for street improvements is then presented, followed by design criteria for the selection of street furniture, vegetation and paving, as well as examples of what would be suitable. This report also records the detailed landscape design for Pine and Elizabeth Streets undertaken during the course of the study. We have therefore not only formulated conceptual design ideas, these have been tested in a section of the downtown to the point of complete construction documents ready for construction in the spring of 1982.

There are three major aspects to an appropriate design theme for downtown Burlington:

1. Gateways, which have sufficient visual impact to clearly denote that the traveller is entering downtown Burlington.

2. Streetscape design of attractive and repetitious paving patterns, tree plantings, lamp standards, banners, benches, signage, and other elements of street furniture to tie the area together so that people passing through or staying in the area will be clearly aware that they are in a unified downtown area.

3. A civic square acting as the central focus to the downtown area.

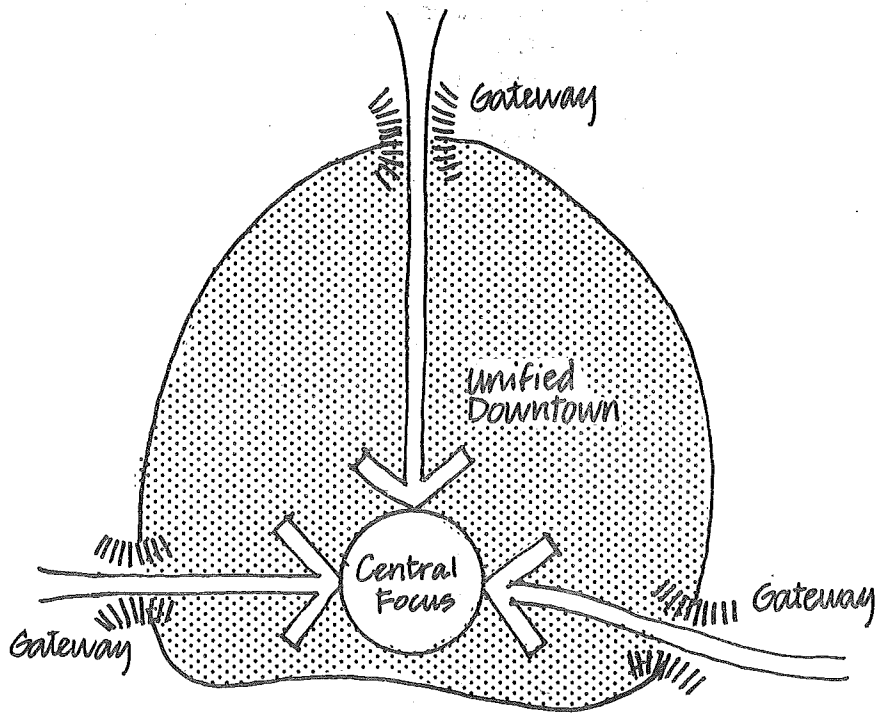
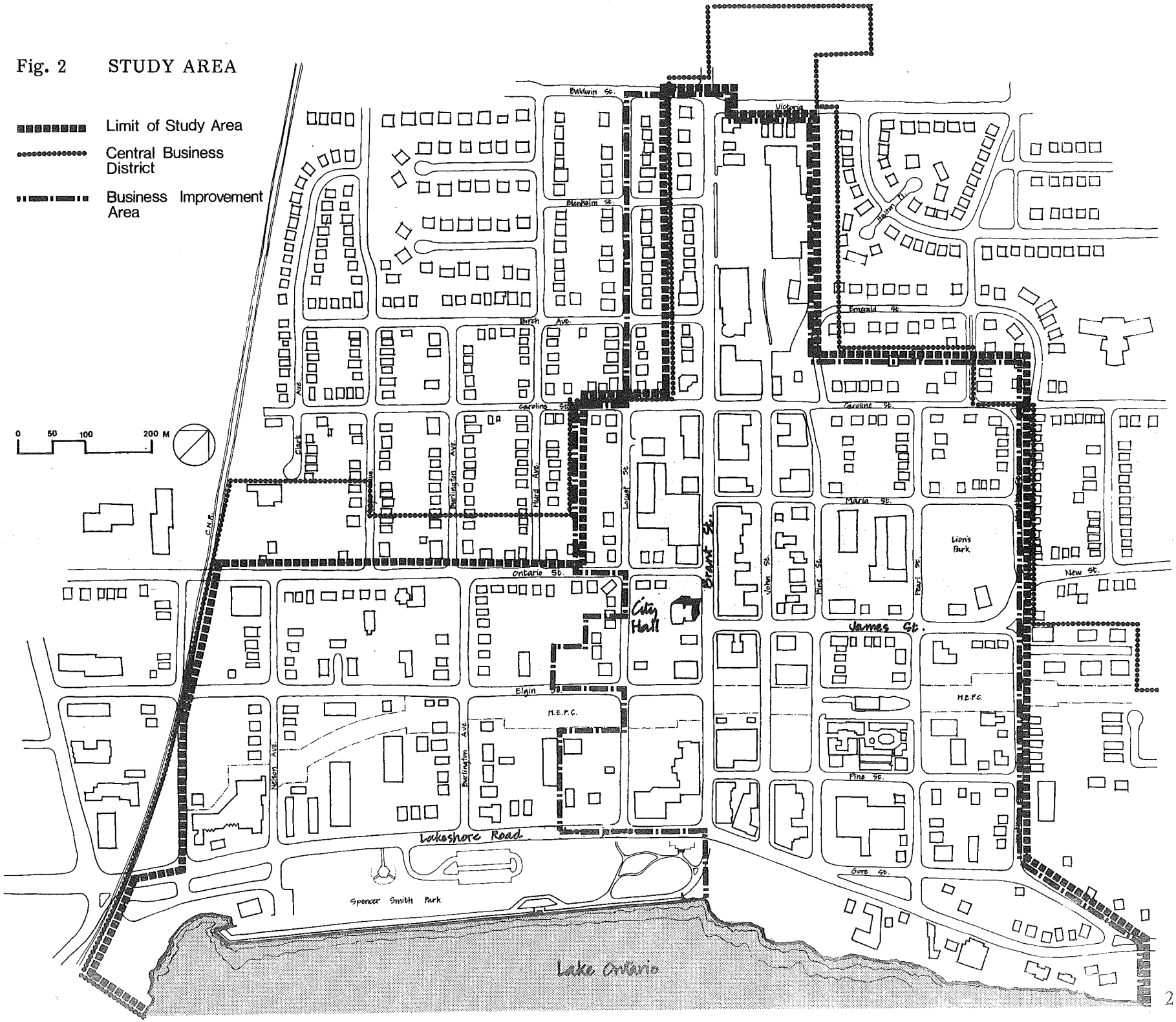


Fig. 1 The three requirements for establishing downtown unity and identity

Fig. 2 STUDY AREA



2.0 Planning Context

Figure 2 on the previous page shows the study area in relation to the Burlington Central Business District boundary (established in the Official Plan) and the Business Improvement Area boundary. The Business Improvement Area is the portion of downtown covered by special legislation (Section 361 of the Ontario Municipal Act) which allows for the funding of improvements and maintenance of municipally owned lands beyond routine works and for the promotion of the area as a business or shopping centre. Most of the study area is contained within the Business Improvement Area, with the exception of the western portion west of Locust Street and a small section east of Martha Street.

Land uses in the study area are generally organized with the primary commercial zoning along the major arteries, Brant Street and Lakeshore Road; a major park on the Lakeshore; the central city hall complex facing Brant Street between Ontario and Elgin Streets; and these commercial areas surrounded by high, medium and low density residential areas.

As can be seen in the Generalized Downtown Structure Plan facing this page, the arterial roads and their supporting commercial land uses together with Spencer Smith Park form an inverted 'T' facing the lake. A utility corridor runs through the middle, including the hydro electric power right-of-way.

There are four major land use precincts: the central commercial area focused on Brant Street; two predominantly residential areas to either side; and Spencer Smith Park on Lake Ontario.

Brant Street Commercial Precinct

This is the area with dominant "downtown" character, and includes most of the older commercial buildings as well as the new highrise offices and the City Hall. Its character is predominantly influenced by the older one to three storey street-related commercial buildings, City Hall in the centre, Brant Plaza to the north, Upper Canada Place (a standard highrise commercial development), Village Square (a lowrise commercial development with an historic theme), the bus depot, and the Paul Revere Office Building (a modern mid-rise block in the middle of town). A predominant land use feature, which has a great effect on the appearance downtown, is the City-owned open parking lots, many of them on the Utility Corridor.

Western Residential Precinct

This area has many substantial and beautiful older single-family houses, as well as three new apartment buildings to the south. Saint Lukes Church, with its axial boulevard to the waterfront is a particularly attractive feature. The precinct also includes a cultural centre at the terminus of the Utility Corridor which contains meeting rooms, art studios, and a small auditorium in a low rise building.

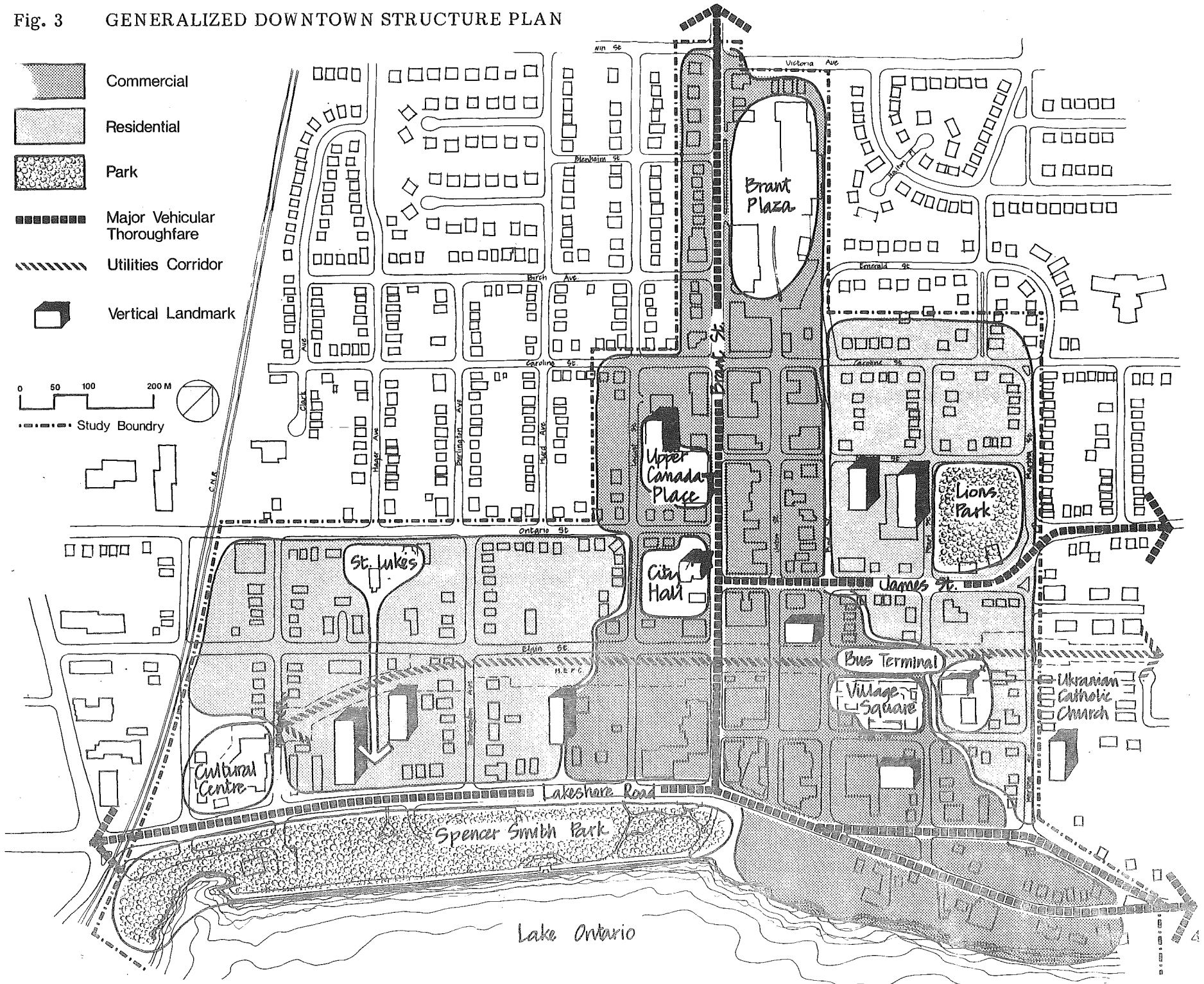
Eastern Residential Precinct

This area includes many single family residences, although generally smaller in size than the western precinct. It also contains highrise apartments and a park for active recreation.

Spencer Smith Park

This is Burlington's major waterfront park, containing a breakwater walkway, boat launch, decorative planting and large lawns for casual use.

Fig. 3 GENERALIZED DOWNTOWN STRUCTURE PLAN



3.0 Streetscape Theme

An essential requirement in developing a unified "look" to downtown is to establish a streetscape design theme. The theme should reinforce the best of what already exists. In a town which has a very strong historic identity, for instance, an "historic" and renovation theme would be appropriate. In a new town, or one being redeveloped in boom conditions, it may be appropriate to develop a contemporary or sophisticated, international "minimalist" design theme.

Burlington has such a mix of styles that there is no single common denominator. There are some historic buildings with great architectural character, particularly in the older residential areas, and in such commercial structures as the Sherwood Inn and a few of the older stores.

Village Square is an example of modern construction which successfully develops the historic theme. The interior treatment of Upper Canada Place does much the same thing, although less successfully because it is an interior design treatment inside a large modern building, rather than a total environment.

There are also examples of deliberate contemporary treatment, the strongest being City Hall. There are other examples such as the exterior of Upper Canada Place, and the Brant Plaza Shopping Mall.

As a unifying force between this stylistic mix, the streetscape design theme should reflect elements of both approaches while retaining a design integrity of its own. We have thus called it a "reflective" design theme. The choice of design for each streetscape element is therefore conditioned both by the way in which these would be dealt with historically - generally using the Victorian or Georgian periods - and then how these would be expressed in a contemporary way while retaining the historic sense of order and use of materials. The development of the design theme through design criteria for each element of street furniture is discussed in further detail under Chapter 5.



Fig. 4 Historic design: Sherwood Inn



Fig. 7 Contemporary design: City Hall

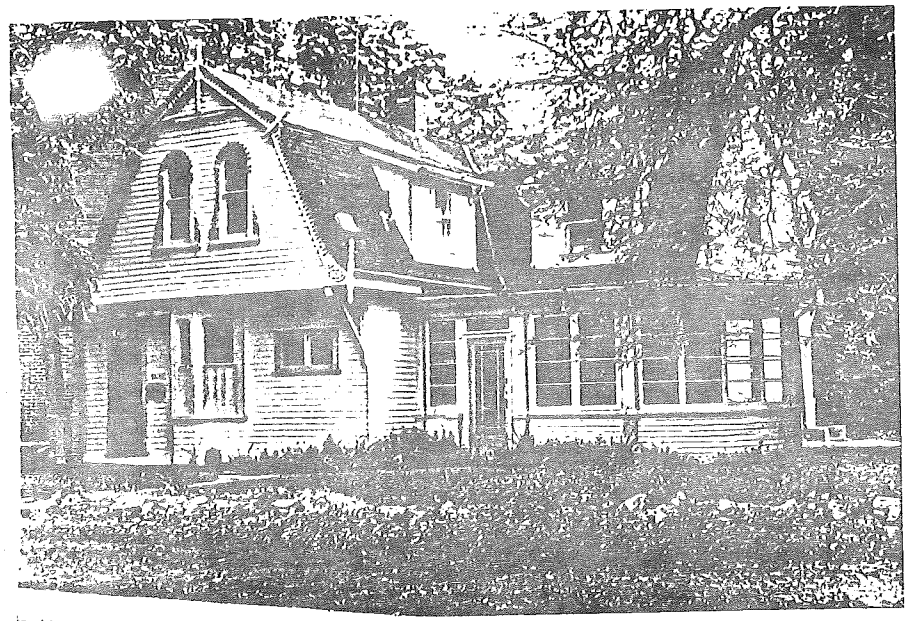


Fig. 5 Historic design: Ontario Street residence

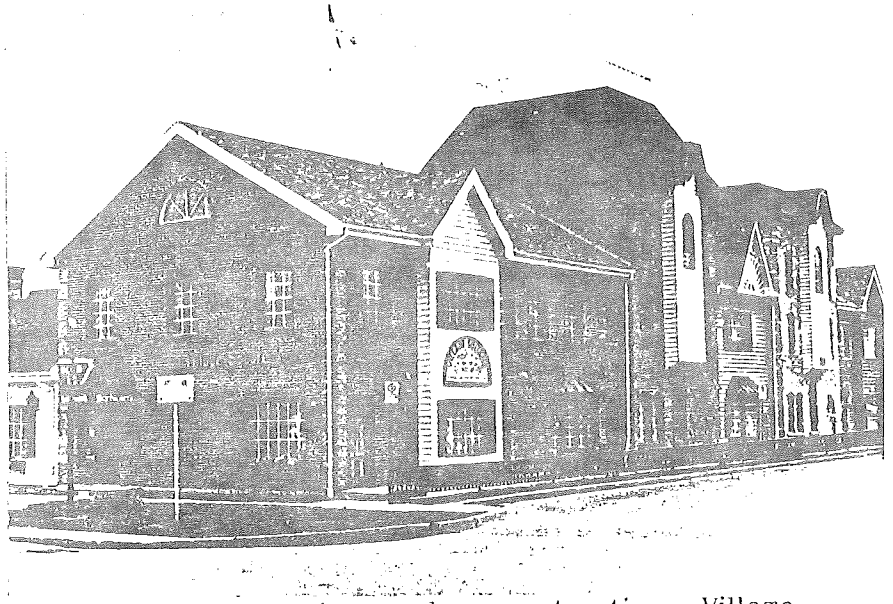


Fig. 6 Historic design, modern construction: Village Square

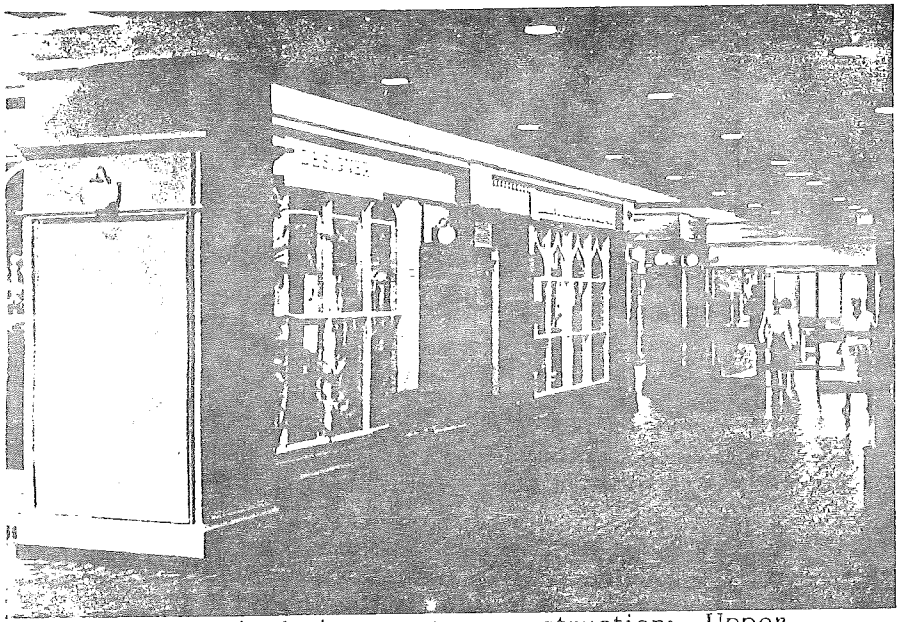


Fig. 8 Historic design, modern construction: Upper Canada Place interior



Fig. 9 Contemporary design: Brant Plaza

4.0 Streetscape Design Influences

There are three fundamental influences on the final character of streetscape design in various locations of the study area: vehicular circulation and parking, street frontage, and open space.

4.1 VEHICULAR CIRCULATION AND PARKING

Figure 12 distinguishes the major automobile arterials from their surrounding local roads and indicates local and regional bus routes, and public and private parking lots. In addition, it shows locations for "downtown gateways", where the arterial roads intersect the study area boundaries.

The major design influences springing from a review of circulation and parking include:

a) The major visual impact of the gateways should be oriented towards the car driver.

b) Sidewalk widenings or other streetscape improvements along the major arterials and bus routes should not occur where they would increase congestion.

c) Shelters, seating, and possibly landscape intensity should relate to the bus stops where space permits.

d) The parking lots presently form many large "holes" in the urban fabric. Landscape screening treatment should reinforce the visual connections between surrounding buildings. Alternatively, they should act as development sites, the design of which will create new connecting building frontages.

As new development occurs, parking lots will have to be replaced and the development's access points should be co-ordinated with both the circulation system and the sidewalk improvement plans.



Fig. 10 Sidewalk widening must be co-ordinated with traffic flows

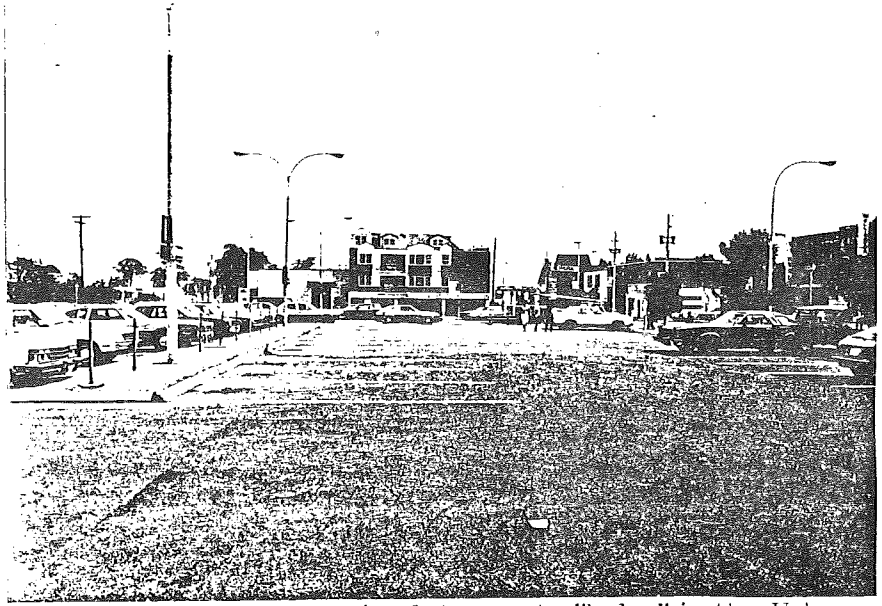
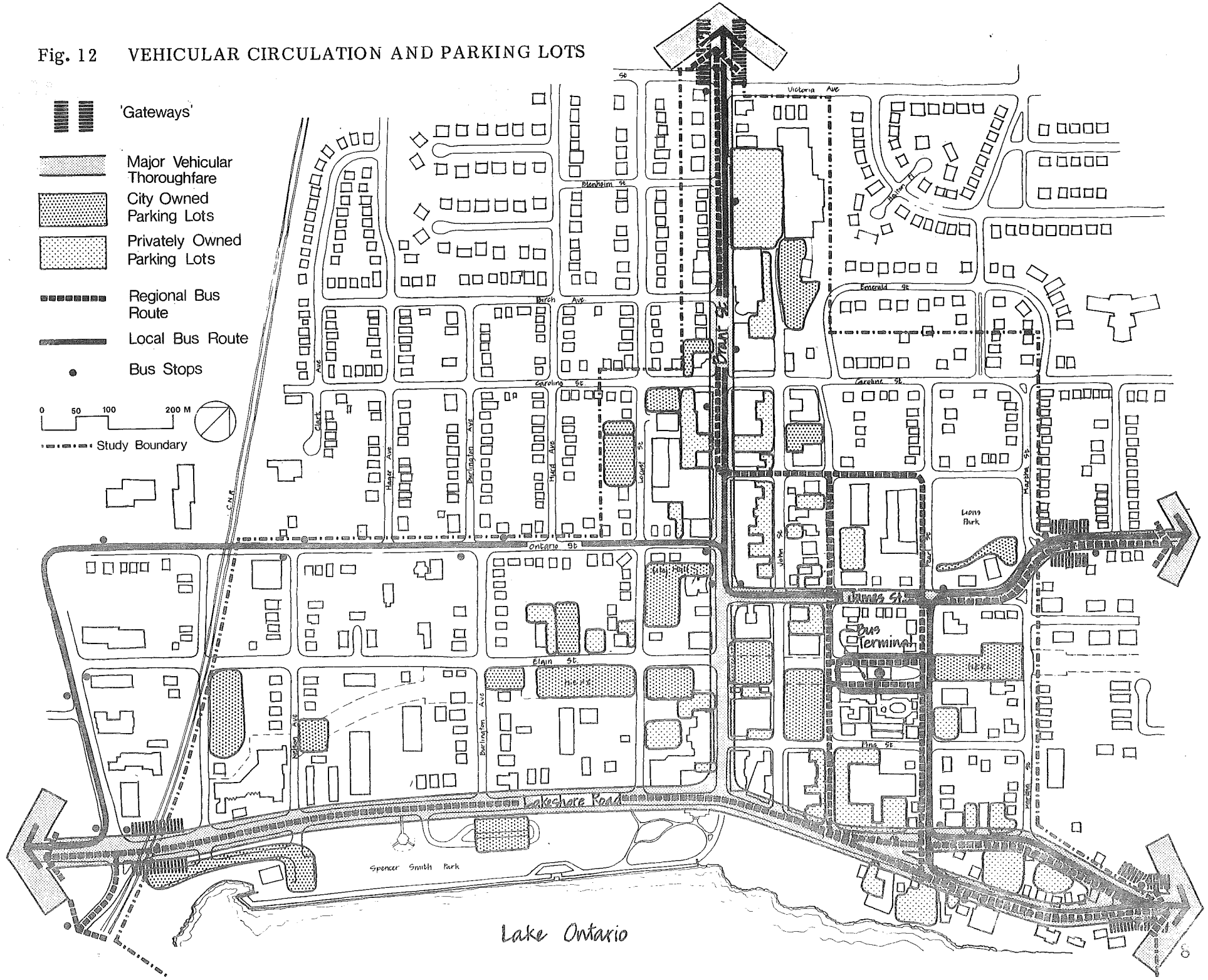


Fig. 11 Numerous parking lots create "holes" in the Urban Fabric

Fig. 12 VEHICULAR CIRCULATION AND PARKING LOTS



4.2 STREET FRONTAGE

The second major design influence is street frontage, which, by the way it is handled, can have enormous unifying influence to the character of the street. Figure 15 indicates those commercial frontages presently existing which reinforce streetscape unity, and also shows where continuous street frontages in potential future development will act as a positive reinforcement. In most places, this means reinforcing a public domain which is confined within the street right-of-way. In a few special places, this means reinforcing courtyards within development.

The major design influences springing from a review of street frontage include:

a) The prime shopping streets should maintain a continuity of street frontage. Existing continuous street frontages should be preserved or replaced with redevelopment, and new development should create new continuous frontages. Where this is not likely to occur soon, the voids should be reinforced with landscape screens.

b) Where open plazas are created, a retail or public-oriented frontage should wrap around these spaces.

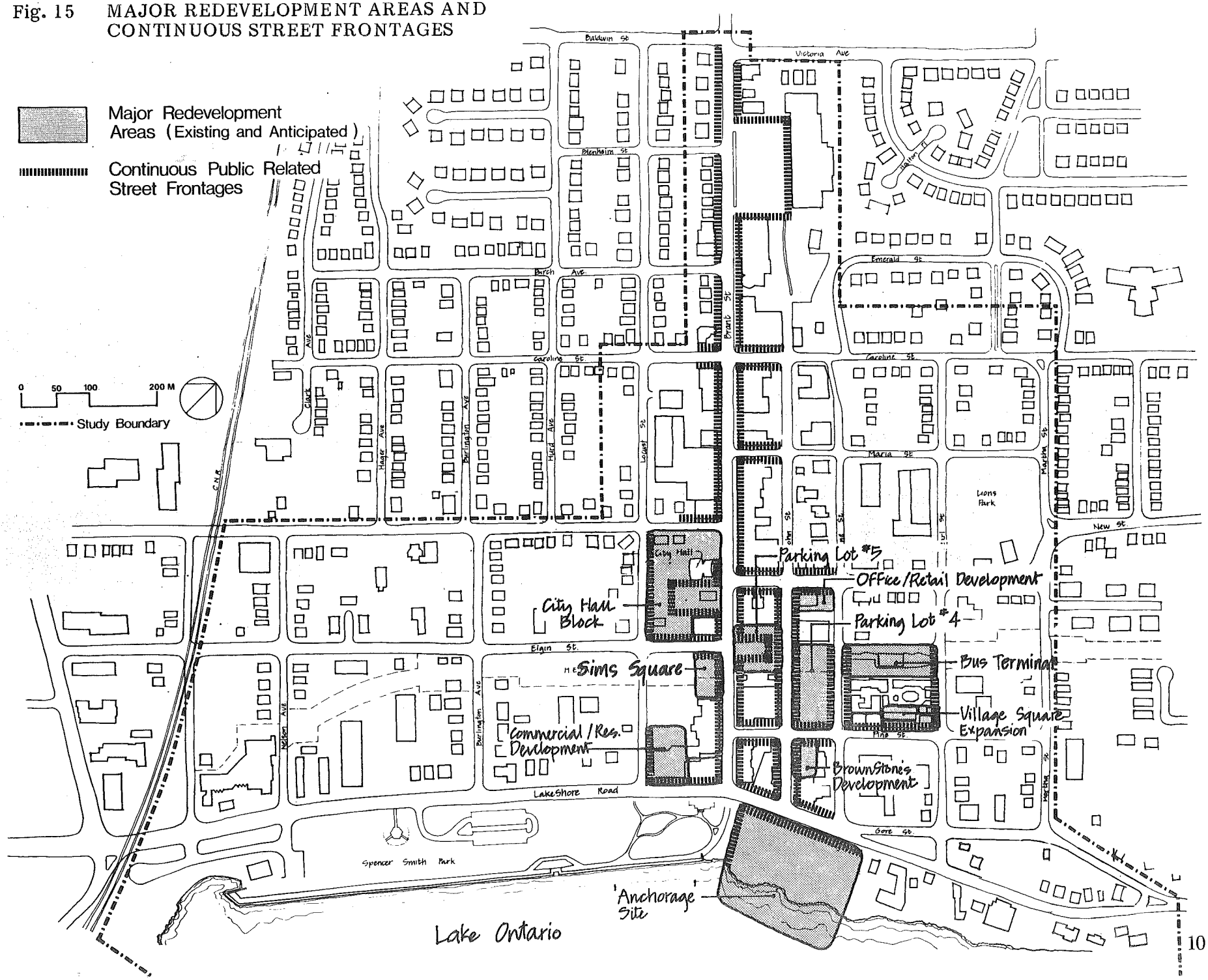


Fig. 13 Continuous street frontage



Fig. 14 Street frontage broken by parking lot

Fig. 15 MAJOR REDEVELOPMENT AREAS AND CONTINUOUS STREET FRONTAGES



4.3 OPEN SPACE: INSTITUTIONS AND PARKS

The third major design influence is the appropriate response to existing open spaces and how these are linked together. Figure 18 shows public parkland, major landscaped institutional areas, and desirable linkages between them.

The major design influences springing from a review of the role of open space includes:

a) The route along the utility corridor, part of a proposed bicycle path system, travels through a number of conditions. To the west, it goes through parkland. It then proceeds beside Elgin Street, and then through future development areas. Streetscape treatment should respond to each different condition.

b) Street improvements adjacent to major open spaces, particularly parks, can be integrated into the park landscaping and need not be restricted to the road right-of-way.

c) A public walkway should be maintained and further developed along the waterfront, potentially having a nautical theme, and not restricted to the rest of the streetscape design style.

d) The frontal landscaped boulevard between St. Luke's Church and the waterfront is a rare and beautiful resource for the City, and should be preserved and respected in future street landscaping.

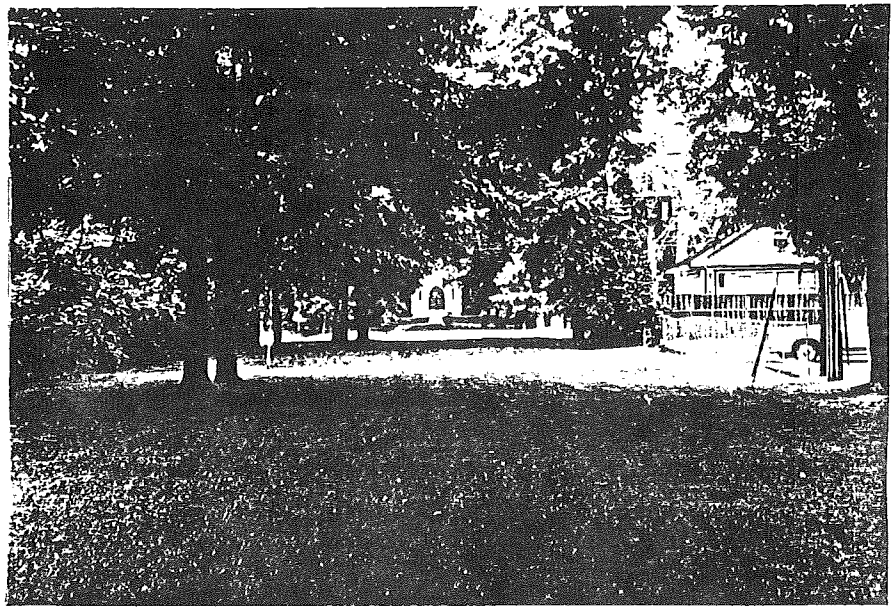


Fig. 16 St. Luke's frontal boulevard

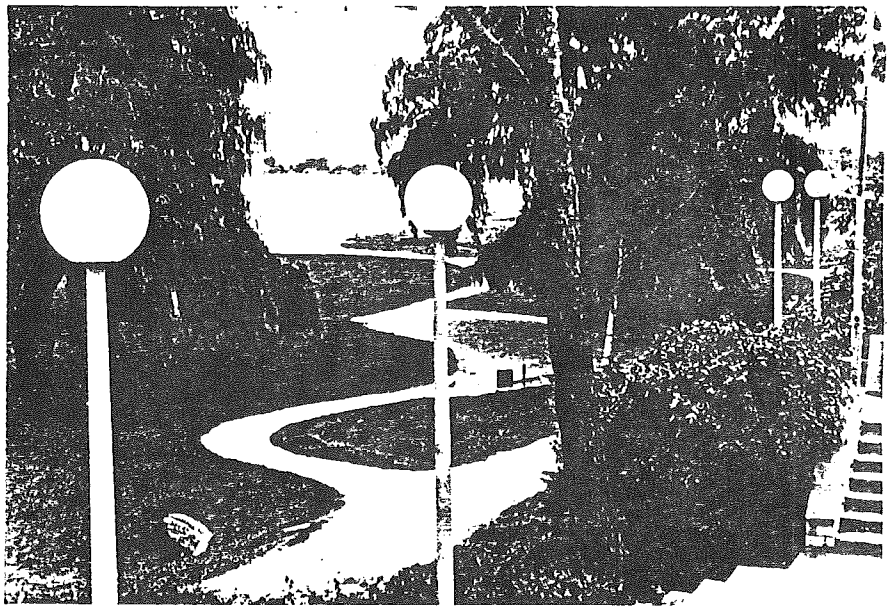
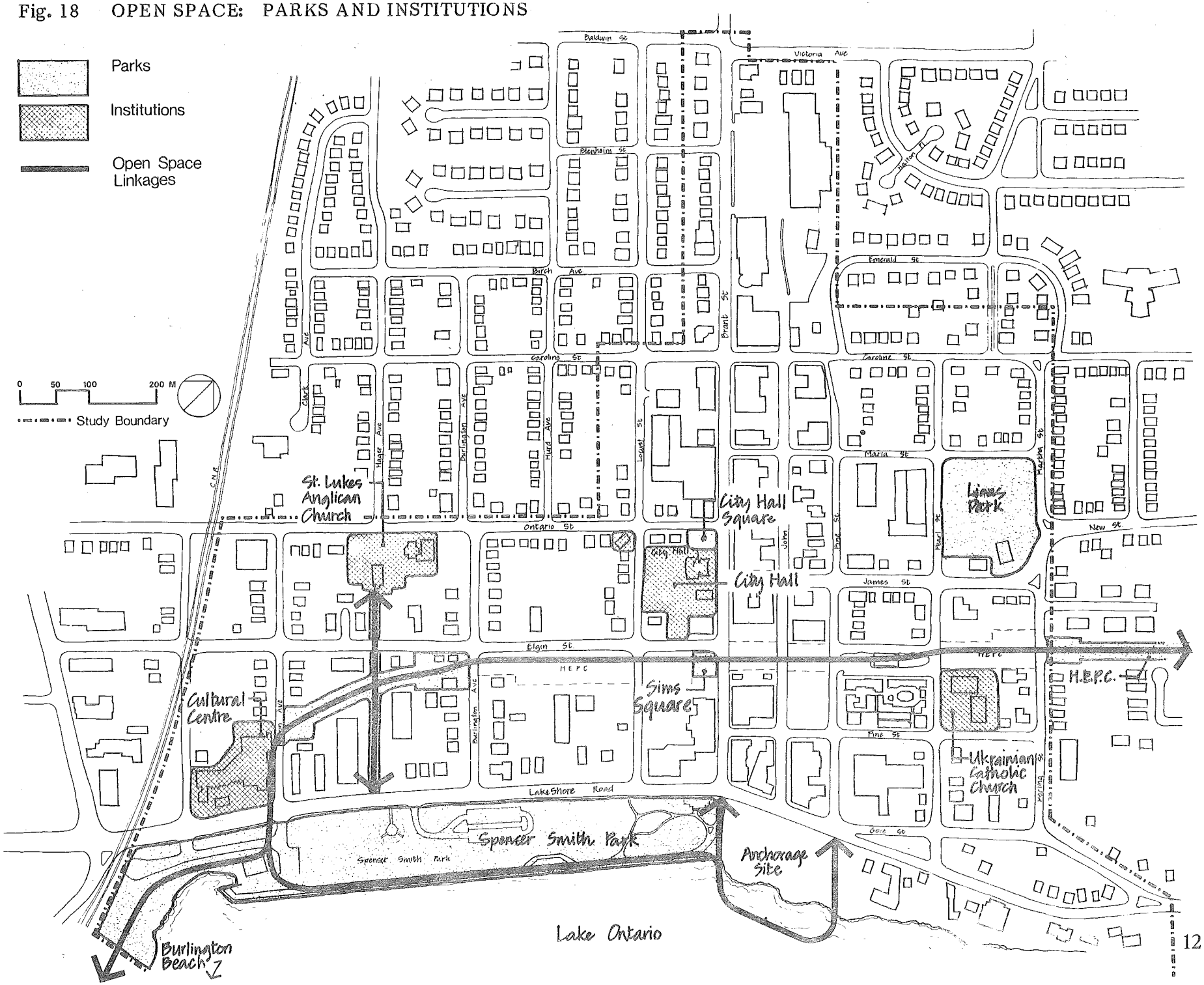


Fig. 17 Spencer Smith Park: streetscape spills into park and connects to waterfront

Fig. 18 OPEN SPACE: PARKS AND INSTITUTIONS



5.0 Streetscape Framework

The design influences described previously, when taken in combination and applied to the study area, generate a pattern of design treatment, in which different intensities in street improvement occur in different locations.

STREET RELATED AREAS

5.1 Gateways

As people, particularly drivers, enter downtown, they should be alerted that they are entering a special area. This can be done with a concentration of banners, display planting, and the beginning of the typical design treatment.

5.2 Typical Treatment

One of the most important design objectives is to establish a "field" of street improvements throughout the downtown area to encourage a visual cohesion about it. A repetitive typical treatment incorporating the rhythmic use of sidewalk paving patterns, street tree planting, lighting and other street furniture should therefore be applied on most of the shopping streets, as well as key streets leading to shopping areas.

5.3 Special Treatment

Some areas deserve special treatment because they are in particularly crucial locations, they are heavily used, or they have symbolic importance. Such areas include a Civic Square related to the City Hall, a Town Square or downtown focus which may complement or overlap the civic square; the gateways to downtown; a waterfront focus; and street intersections.

5.4 Partial Treatment

There are streets within the commercial areas of downtown which are not heavily used and could, in the interests of economy, be treated with less intensity. These are primarily service or parking frontages and are expected to remain so for some time.

5.5 Residential Treatment

Those parts of the study area which are residential have a character distinct from the commercial areas. They have very large existing tree cover with considerable landscaping to the front yards and street. Only minor improvements are required in these areas.

LOCALIZED SITE TREATMENT

5.6 Waterfront

Special treatment with nautical flavour is required along the waterfront, for both Spencer Smith Park and the Anchorage development.

5.7 Park Edge

A looser treatment, integrating park landscaping with the sidewalk improvements are required along park edges.

5.8 Bicycle Route

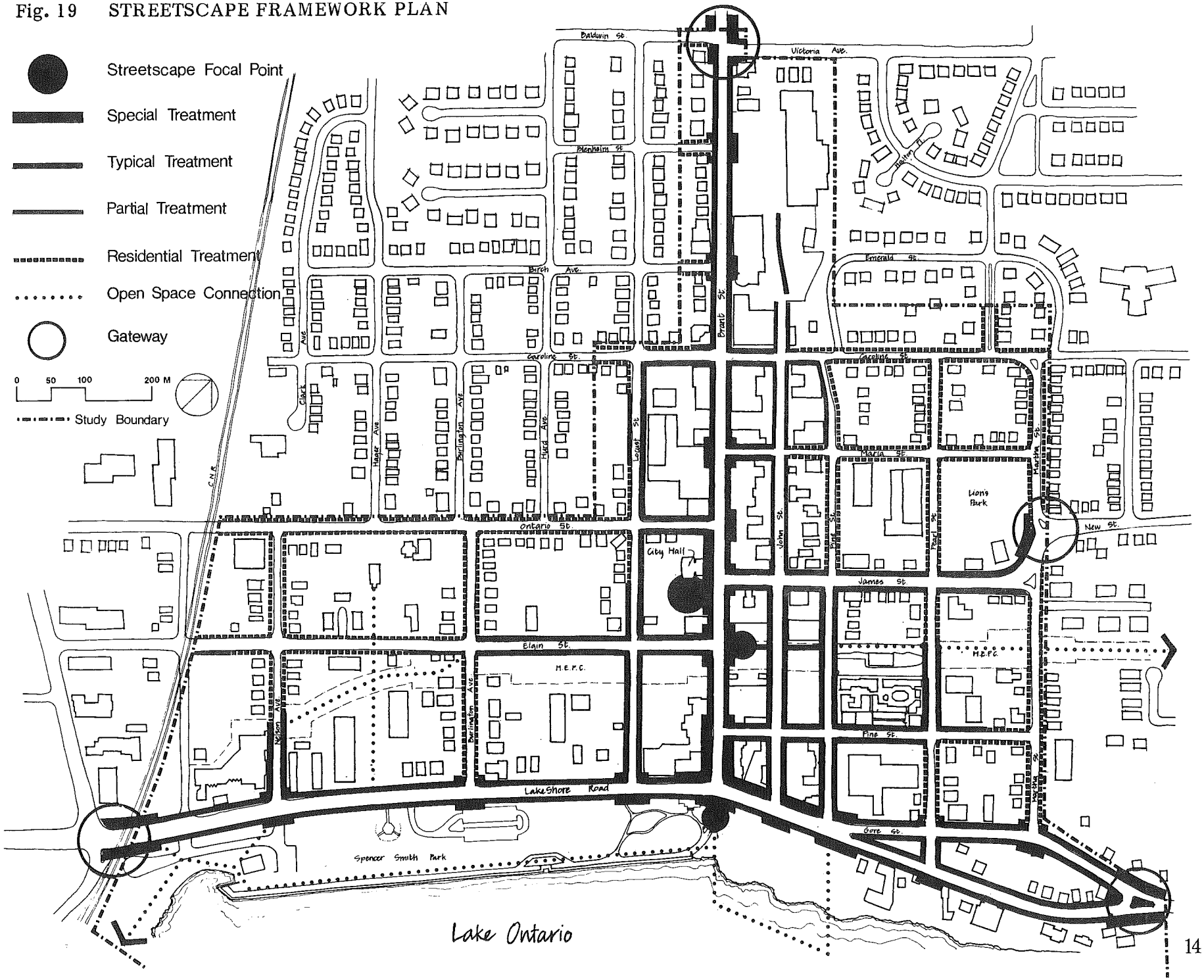
The future bicycle route along the utilities corridor requires separate treatment for each area which the route passes through.

5.9 Parking Lots

Once the street improvements are in place, the parking lots will front and be surrounded by various streetscape treatments, but they require additional screening on their perimeter.

The streetscape framework plan illustrated opposite (Figure 19) shows the pattern of best location for these treatment areas. Each treatment type is dealt with in further detail in Chapter 7.

Fig. 19 STREETSCAPE FRAMEWORK PLAN



6.0 Streetscape Furnishings

In order to obtain the co-ordinated visual effect discussed in previous chapters, the various elements of the streetscape must be carefully selected according to a set of consistent guidelines or criteria. This chapter sets out the criteria by which appropriate plant material, lighting fixtures, benches, waste receptacles, signage and paving may be selected. Incidental items such as traffic barriers, fountains, bicycle racks, newstands, kiosks and other secondary structures in the public spaces are also covered.

Further information is provided in the appendices - recommended plant materials are listed in Appendix A, a directory of manufacturers and distributors of street furniture products in Appendix B, and street light specifications in Appendix C.

6.1 GENERAL GUIDELINES

a) All elements should take into account the "reflective" design theme, meaning that their design should blend both historic and contemporary design principles.

b) The material, colour, form and general design of each streetscape element should be selected so as to be compatible with others - for example, benches should co-ordinate with waste receptacles and lamp standards, and so on with all street furnishings.

c) Streetscape elements should be selected so that they will be sufficiently affordable in the future to allow the continued acquisition of similar designs in the progressive implementation of street improvements throughout the study area.

d) All elements should be durable and sufficiently robust to minimize maintenance, and resist impact damage and vandalism.

e) Street furnishings and planting material should be selected so that each is to some extent unique to Burlington, such as an "orchard" theme in the planting, and possible Burlington crests or decors on items such as benches, planters and waste receptacles.

6.2 PLANTING

The primary function of planting is to provide:

a) An attractive touch to the urban environment, brought out by tree form, foliage pattern, and colour.

b) Spatial definition to the street, for instance by clearly identifying pedestrian routes and seating areas.

c) Climatic moderation, providing shade in summer and wind protection in winter.

There are three primary types of planting required:

a) Large-crowned, long-trunked trees set in the pavement, so that people can walk under and between them. Street trees are used along all sidewalks, in pedestrian plazas, and in special boulevards.

b) Buffer planting where low and dense foliage is used to screen parking lots, for seasonal colour masses, and to define park edges.

c) Special displays, being a combination of shrubs, flowers, and trees with more than normal impact at places like the downtown gateways, seasonal hanging baskets, and flower beds.

Planting should contribute to the design theme in two ways:

a) By recreating the old time Burlington orchard through the use of flowering street trees. This approach not only reinforces historical associations, but also capitalizes on the possibility of large tree blossom displays.

b) By setting street trees on a regular rhythm along streets creating boulevards or alles.

General selection criteria for planting are as follows:

a) Specimens should have a history of survival in Burlington under similar planting conditions.

b) Specimens should be tolerant to road salt, soil compaction, drought, air pollutants, and the effects of night lighting.

c) Specimens should require low maintenance - there should be a minimum of fruit, seed and twig litter.

d) Specimens should have a maximum seasonal effect in terms of foliage and flower colour.

e) Specimens should have a long life, particularly the street trees.

f) Specimens should be resistant to disease and blight.

Specific selection criteria regarding street trees are as follows:

a) The tree should be of a size and branching habit suitable to the proposed location. Medium to large trees are suitable for boulevard situations. Medium trees should be used where the width of sidewalk from curb to building frontages is 3 metres or less. The minimum branching height should be 2 meters or more. The branching habit of the trees should be neither wide spreading nor in the form of a vertical column, but should have a relatively confined or upright spread.

b) For maximum visual impact, the foliage density in most cases should be medium to heavy. However, where it is desirable that a building facade should be seen behind the trees, a light foliage should be selected. This will happen when the adjoining buildings have particular architectural or historic character.

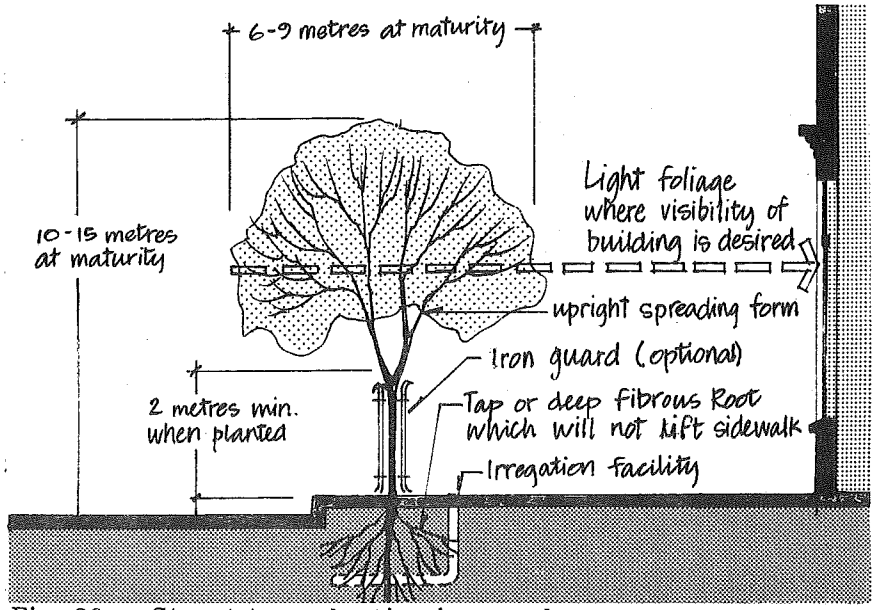


Fig. 20 Street tree planting in paved areas

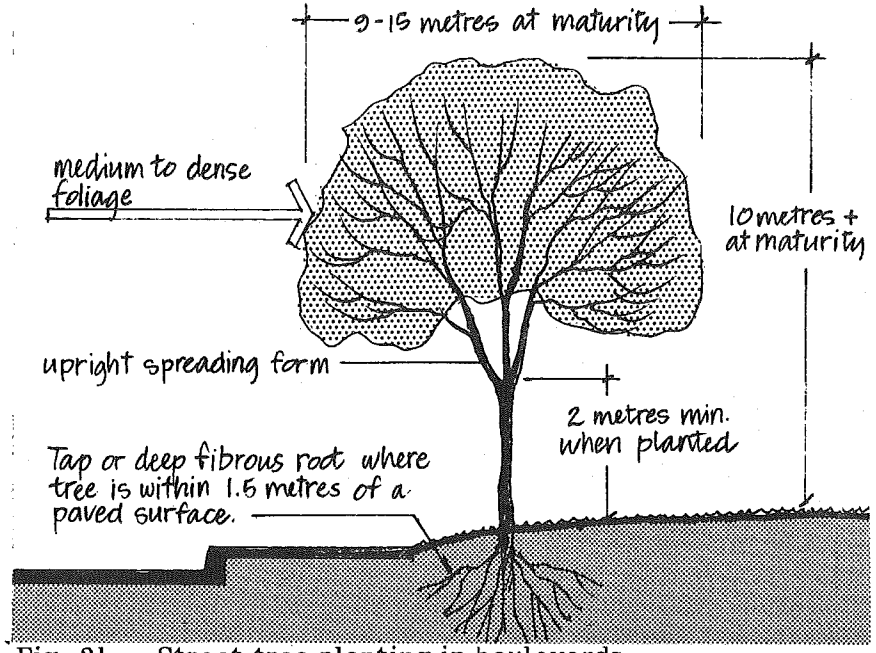


Fig. 21 Street tree planting in boulevards

c) Trees rising from paved surfaces should preferably have deep roots, so as to avoid grade heaving adjacant to the trunk.

d) Trees should be strong wooded, so as to withstand wind and ice damage.

The arrangement and placement of street trees should be as follows:

a) On sidewalks, generally 10 m spacing with as regular a rhythm as possible subject to such site conditions as the need to frame buildings or cross access routes. They should be located near the curb to avoid obstruction of pedestrian movement, but sufficiently far in (approximately 0.6 m) to avoid damage when car doors are opened. In the interests of visibility from vehicles, tree spacing should begin about 10 m away from street corners.

b) In special conditions such as in front of major spaces, or a civic square, the design requirements of that place take precedence over general criteria: in some areas there should be no tree planting, in others they might be grouped together in a bosque.

We have indicated in Fig. 20 the optional use of iron tree guards. We recommend that tree guards be used where trees are located in paved sidewalk areas. The guards provide protection from damage to tree trunks resulting from bicycle parking and snow removal. Since the additional cost of tree guards will increase the overall cost of the street tree planting program, the City of Burlington may wish to confine their application to the busiest commercial streets.

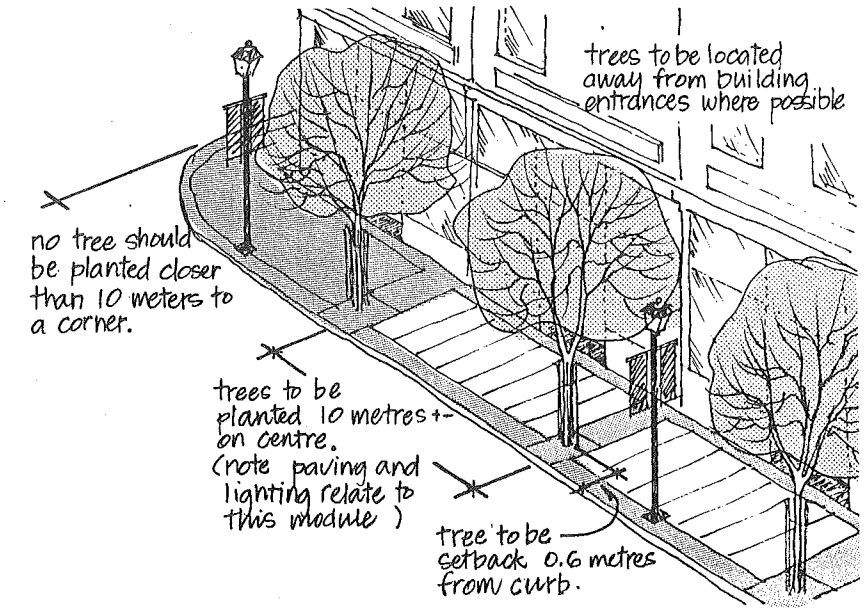


Fig. 22 Locating street trees in paved areas

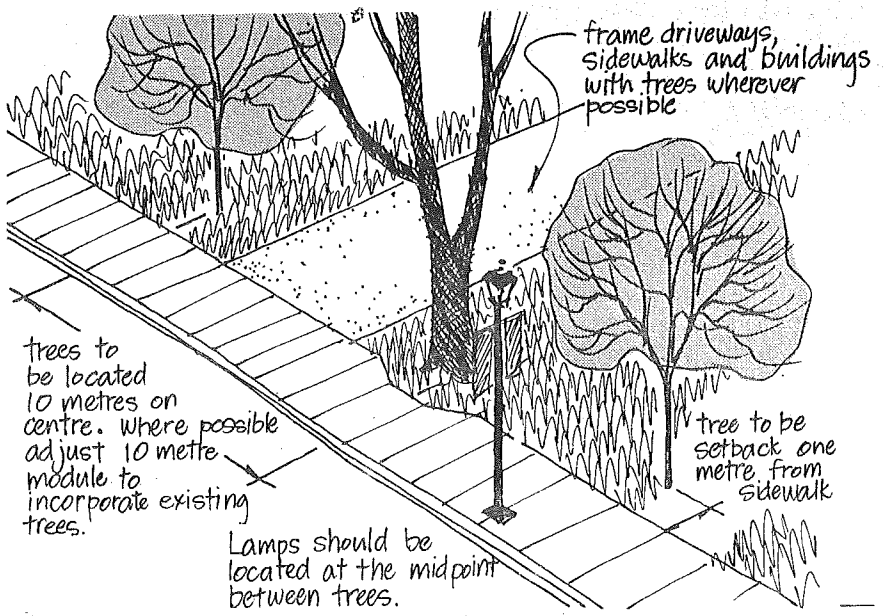


Fig. 23 Locating street trees in boulevards

Specific selection criteria related to buffer planting are as follows:

a) Trees and shrubs should have a dense foliage and branching habit so as to function as a screen.

b) Low flowering trees and evergreens should be emphasized.

c) Buffers should contain an understory comprised of a mix of deciduous and coniferous shrubs.

Buffers should be located around the perimeter of all parking lots and wherever visual barriers in parks are required.

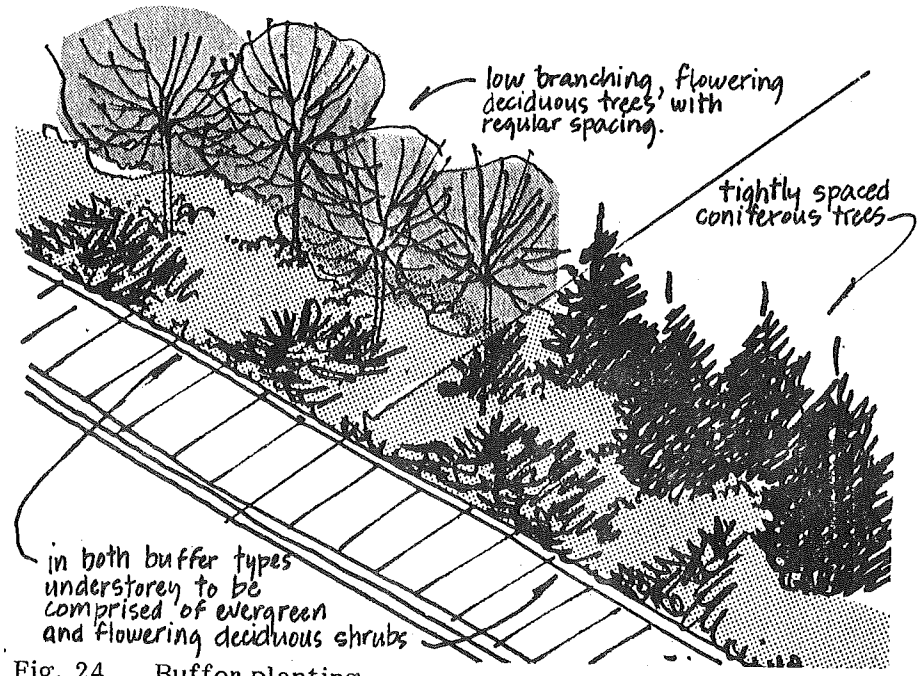


Fig. 24 Buffer planting

Selection criteria related to special displays are as follows:

a) Display plantings function as highlights, so the showy quality of the plant material, (whether trees, shrubs or flowers) is the most important aspect to be considered. Qualities to be considered are foliage colour through the seasons, unusual forms or textures and flowering characteristics.

b) The layout of special planting areas will vary according to site conditions. At the gateways, for example, trees should be "packed" and incorporate display beds of shrubs and flowers where space permits.

Display planting areas should be located at all four gateways (space permitting), around the perimeter of the proposed civic square and in public parks and parkettes as desired.

Recommended species for various uses can be found in Appendix A.

6.3 PAVING

The design of paving should:

a) Provide a surface suitable for pedestrians which is distinctive and durable and appropriately scaled for pedestrian use.

b) In response to the design theme, a warm modular brick paving is most appropriate. Brick as a material spans all historic periods, and a regular, formal pattern brings to mind historic promenades. The most appropriate would be red clay brick, and in the interests of economy this can be combined with scored concrete paving. The brick should be overlaid on a solid concrete base so as to avoid uneven heaving which invariably occurs when unit pavers are laid on a flexible base Concrete paving should be scored to establish a scale that relates well to the brickwork.

c) The proportion of brick to concrete can vary according to the intensity of use established in the planning framework. The more important the area, the greater percentage of brick can be used.

The paving surface will also expand or contract in area depending upon the importance of the location. This means that sidewalks will be widened in special places such as street intersections (where this can be done without interfering with traffic flow.)

The paving pattern forms the strongest visual backbone of the streetscape improvements. There are four prototypical conditions:

1. The typical condition (Fig. 25) is a 3 metre sidewalk, bordered on both sides with brickwork, with brickwork cross-bands and tree locations at 10 m centres. Concrete is scored at 1 m centres to create the effect of linear pavers. At the street corners, the brick band expands to take over the whole corner and thereby identify the intersection.

   Crosswalks are strongly identified by taking the concrete surface in preference to the street asphalt at the intersections. These are 3 m wide, with an edge band of brickwork to identify them as a continuation of the pedestrian surface.

2. In special wider areas (Fig. 26), the typical condition is "doubled-up". Cross bands are at 5 m centres and the curb band is doubled in width.

3. In partial treatment areas, (Fig. 27), the edge brick bands and concrete score modules are maintained, but the brickwork cross-bands are eliminated. This allows a less regular rhythmic module of tree planting - regularity is often difficult to achieve in these areas because of the many access points required for deliveries.

4. In the residential condition, (Fig. 28), the sidewalk is narrowed and all concrete. This is visually offset by the greater landscaped setbacks to the buildings. Brick is confined to the corners.

The brickwork itself has a fine-grained pattern, and it is important that this is maintained. Figures 26, 27, 28, 29, illustrate a combination of standard (rectangular) and double standard (square) bricks, which are made by a number of manufacturers listed in Appendix B. Standard bricks trim the edges of the brick bands, the interiors are laid up with square brick.

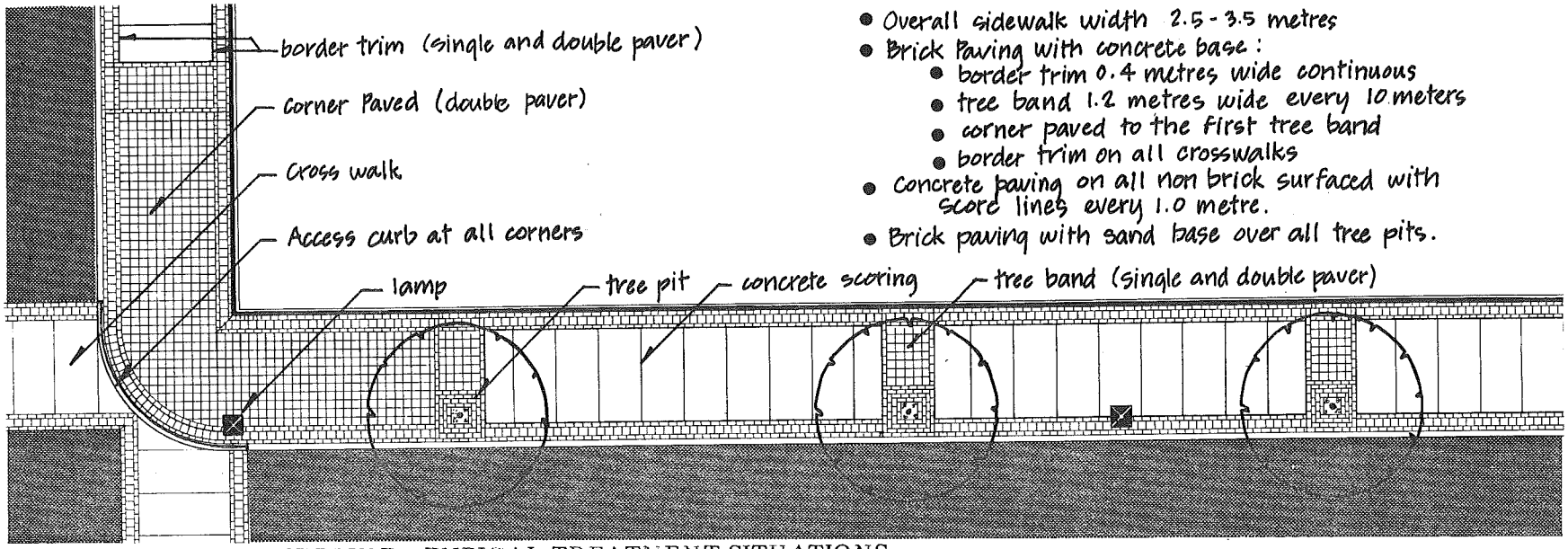


Fig. 25 PAVING GUIDELINE - TYPICAL TREATMENT SITUATIONS

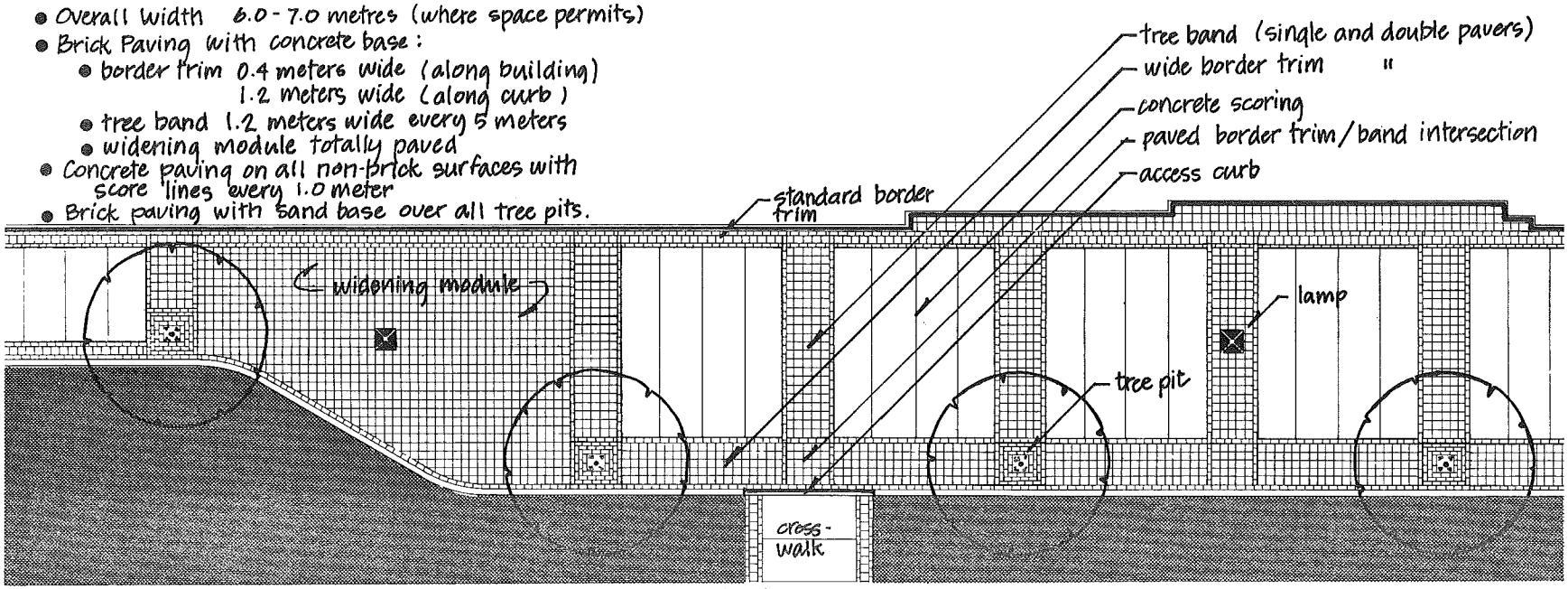


Fig. 26 PAVING GUIDELINE - SPECIAL TREATMENT SITUATIONS

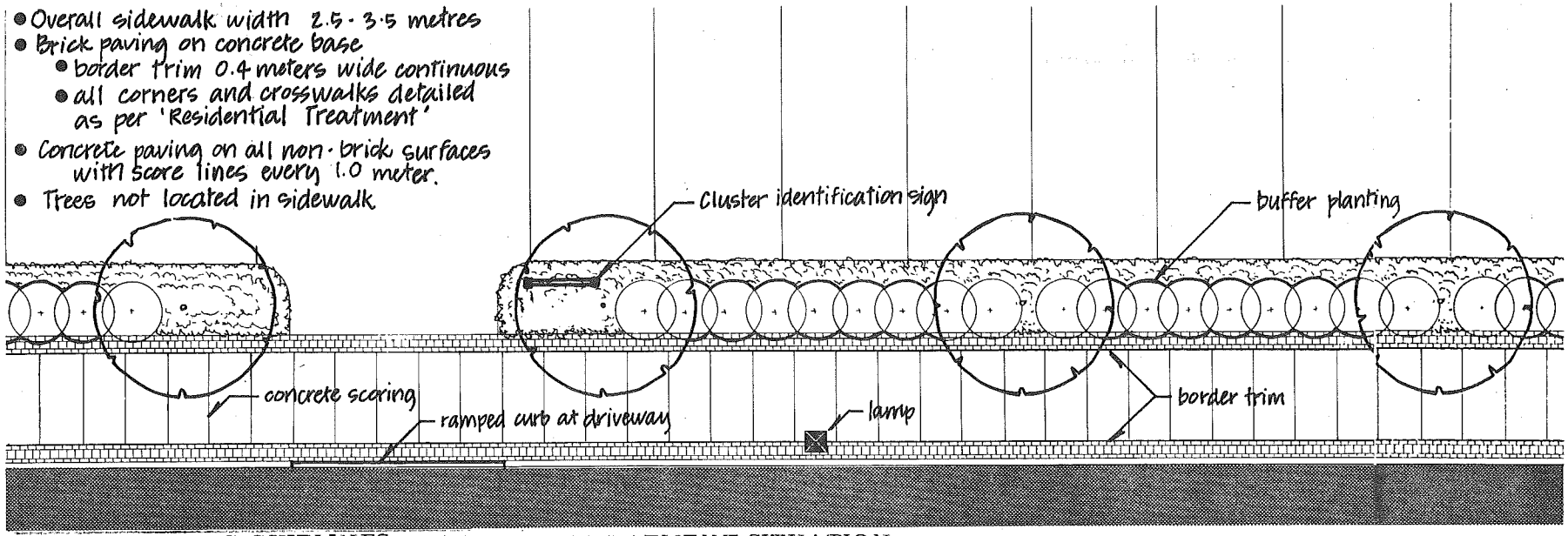


Fig. 27 PAVING GUIELINES - PARTIAL TREATMENT SITUATION

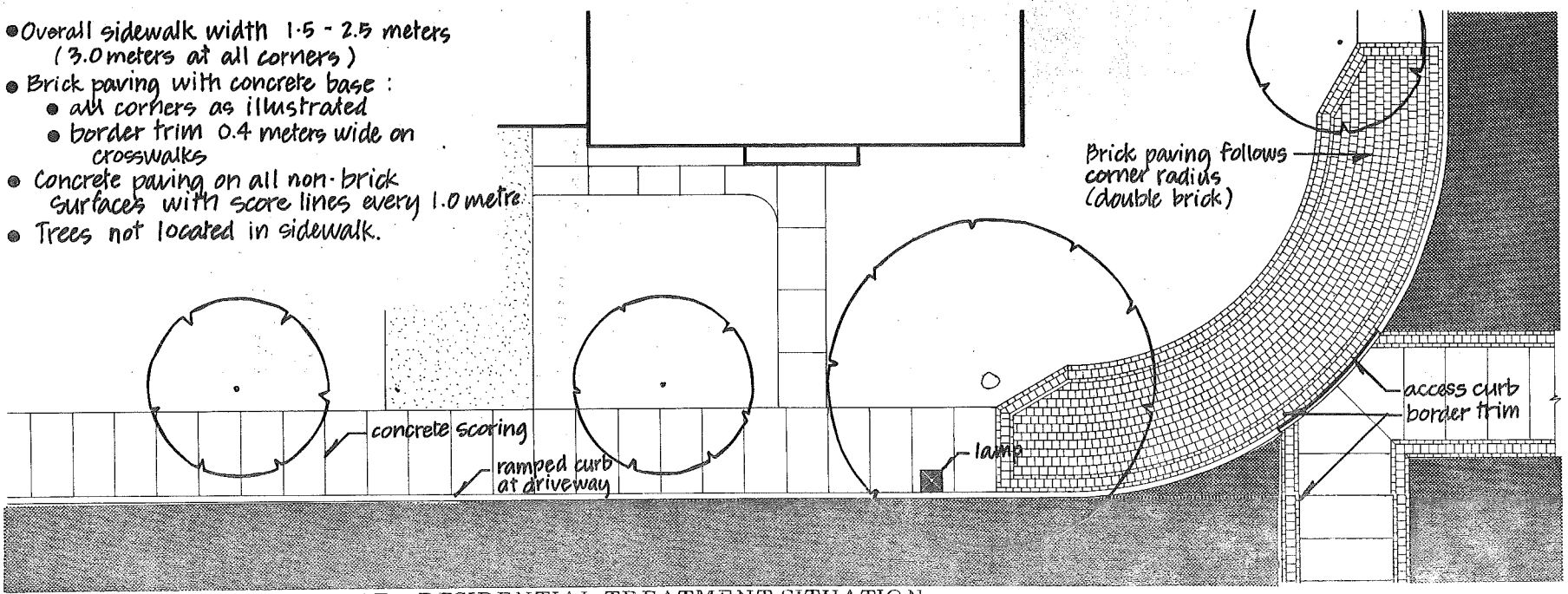


Fig. 28 PAVING GUIDELINE - RESIDENTIAL TREATMENT SITUATION

6.4 LIGHTING

The design objectives for street light fixtures are:

a) To create a distinctive quality in both the lighting performance and fixture appearance so that it is recognizably different from lighting in the rest of the City.

b) To allow for a phased replacement of the downtown's lighting fixtures over a period of years.

Selection of street lights should respond to the design theme in the following way:

a) The design of the luminaire should have an historic derivation such as a coach lamp of metal construction with a black finish.

b) The scale of the fixture should relate to pedestrians, and therefore be shorter than existing lamp poles - an average luminaire mounting height of 15 foot; 12 foot minimum and 16 foot maximum.

c) There should be no visible overhead wires since early lamps were gas lamp style, the light quality should be from an indirect source to reflect the gas lamp quality.

d) Components should be sufficiently durable to resist weather and vandals.

e) The light source should be energy-efficient and designed for long life, the most appropriate being high pressure sodium vapour.

f) The lighting level of each fixture should be sufficient so that they can be spaced reasonably far apart in the interest of cost effectiveness. At the same time, the optic system should be indirect to reduce glare and throw light to the ground so as to eliminate light penetration into second storey windows.

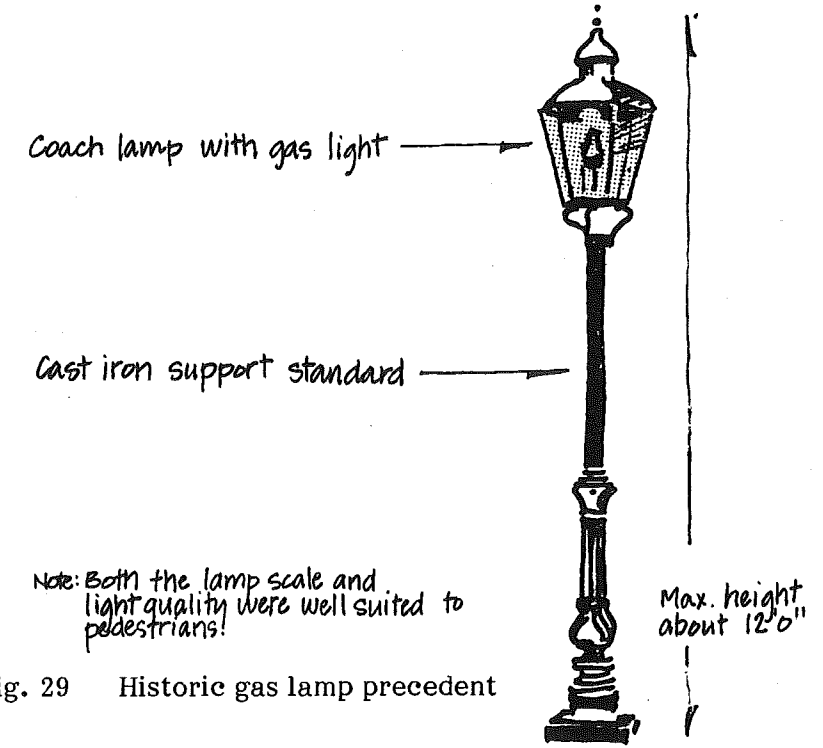


Fig. 29 Historic gas lamp precedent

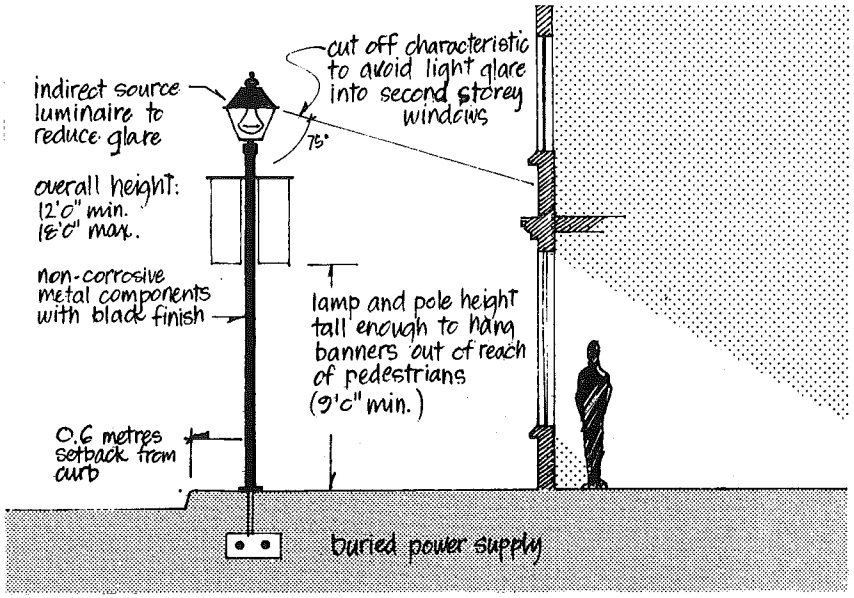


Fig. 30 Street lamp guideline

g) Spacing will vary according to the intensity of pedestrian use and the City's standards for various street types. For the typical situation, a staggered spacing of approximately 10 meters should achieve the required light level for an arterial road. The spacing of light standards sets up a basis for a rhythm of all the street furnishings, and a module of lamps, paving strips, and street trees can be developed from lamp spacing.

h) Standards should be close to the curb to allow free pedestrian movement, but since they will also act as poles for banners projecting at right angles to the street, and should not impede door opening from parked cars, they should be set back about 0.6 m from the curb.

The recommended product is the Moldcast Pericline series. The "Traditional Pericline", a coach lamp style, best meets the design theme requirements. At a mounting height of 15 foot, the luminaire incorporating a 150 watt H.P.S. lamp will, by varying the spacing, meet the different light level requirements for arterial, local, and minor roads.

While the Moldcast lamp best meets the design criteria, the lamp is more expensive in initial and maintenance costs than some of the alternatives.

Should an alternative be selected, the spacing of lamps will have to be re-examined as well as the locations of trees and the paving modules which relate to the lamp spacing.

(See Appendix C for detailed information regarding lighting levels and spacing.)

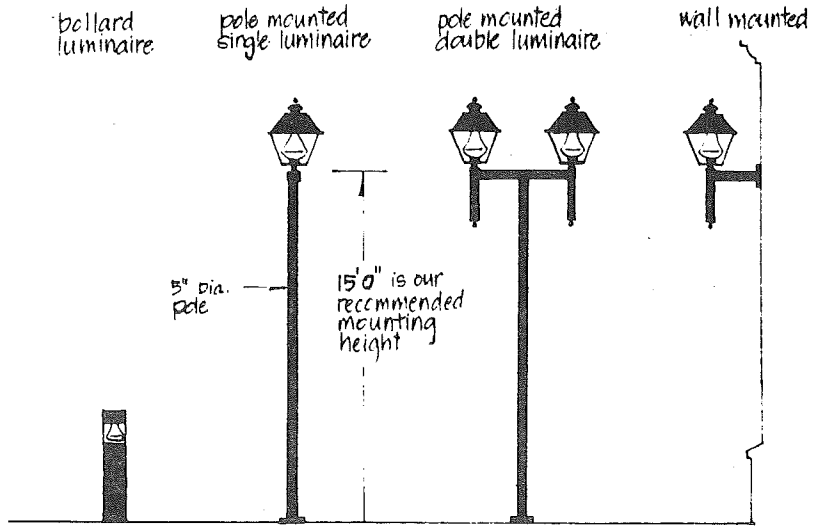


Fig. 31 Variations of the recommended Moldcast "Pericline Series"

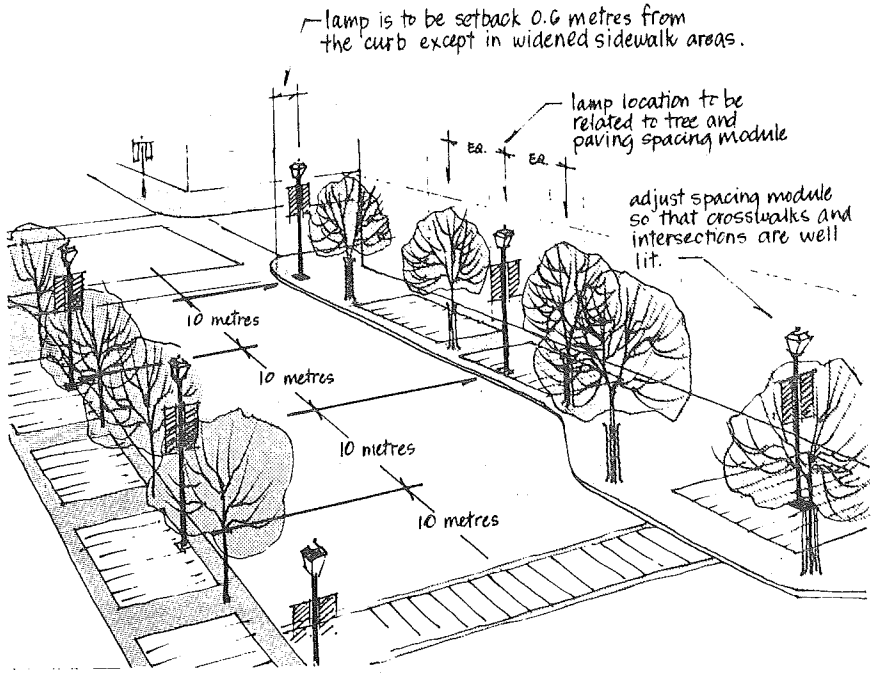


Fig. 32 Locating street lamps

6.5 SEATING

The function of seating is not only to provide something to rest on, but also to encourage social interaction by the way seats are grouped, and by locating them at places where conversation might be struck up. While seating is primarily accomplished by providing benches, walls and planters should also be selected, keeping in mind a seating edge as a secondary function.

Benches of historic design were generally of cast iron supports with wooden slat seating surface and backrests. It was common to identify the name of the municipality in the casting support or the wood. Benches in Burlington should reflect both these attributes.

The selection criteria are as follows:

a) Seating base and support brackets of black metal, preferably cast iron.

b) Seating and back surface of wood slats.

c) Material and construction to be sufficiently robust to be vandal and weather resistant. The metal finish should be rust resistant. The wood slats should be finished naturally or with stain. Fastening system should be concealed or otherwise require special tools for disassembly.

d) Most importantly the bench should be comfortable to sit on, which removes many presently available seat designs from contention.

We recommend the "Harbourfront Bench" provided by Streetseat Systems. It features a cast iron base, which can be supported to the ground either by legs or on a pole mount. The bench can be made to a variety of lengths. The name and crest of the municipality can be cast into the metal base. It is a high quality and distinctive design, and has not been used in too many other locations. It will therefore be perceived as being relatively unique to

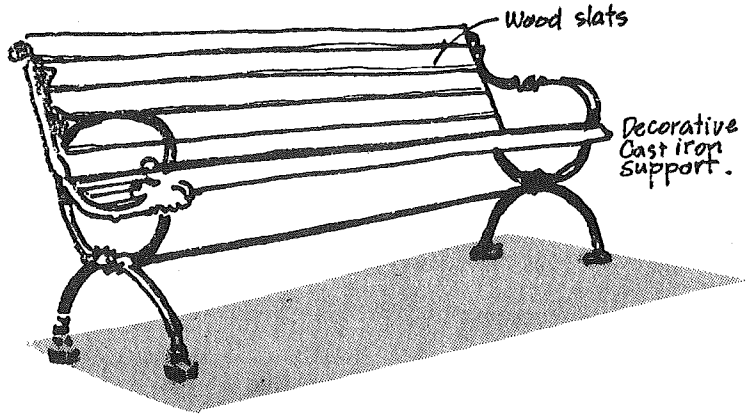


Fig. 33 Historic bench precedent

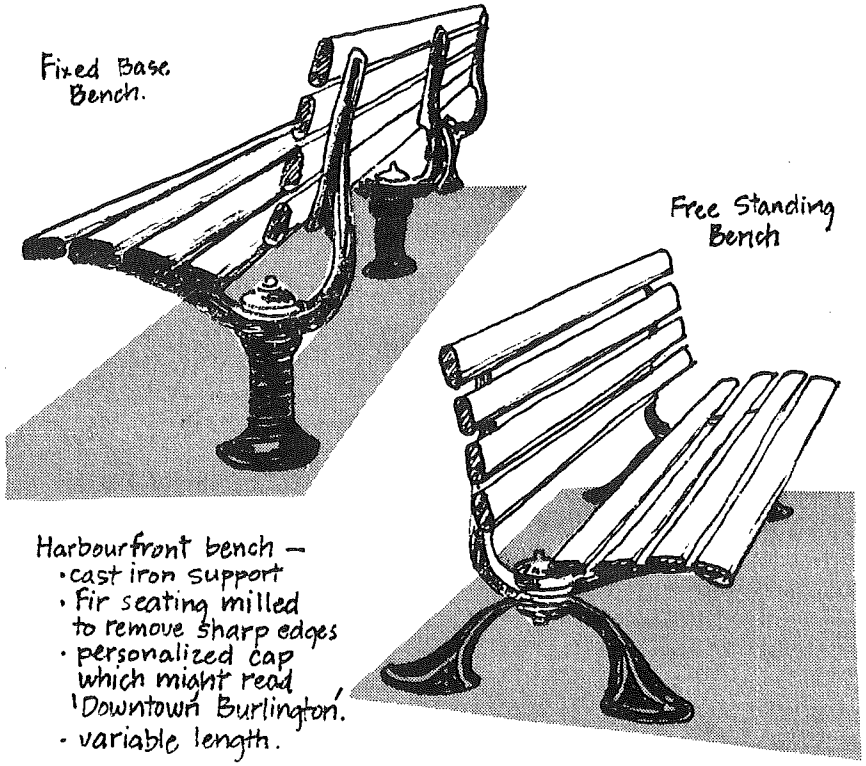


Fig. 34 Recommended "harbourfront bench"

downtown Burlington. It is more expensive than many other benches, but this price difference will be recouped over the years due to lower maintenance. In our opinion, it is better to have fewer high quality benches than numerous low quality benches.

The arrangement and placement of benches must relate to site conditions, but some general observations can be made:

a) Benches should be grouped together wherever possible to create "seating areas".

b) Seating should be combined with planters, receptacles and lighting in order to complement and define the seating area.

c) Seating areas should be located and arranged with a judicious blend of sunny, shady, private, busy and quiet environments so that the user can choose according to his mood.

d) Ambitious arrangements of numerous elements should be restricted to special areas where there is adequate room and sufficient demand for such a feature. Seating should not be "forced" upon an area.

Benches should be provided in all parks and parkettes, in all specially widened sidewalk areas, at all bus stops where shelters are not provided, in the proposed Civic Square, and in places on typical sidewalks where space permits.

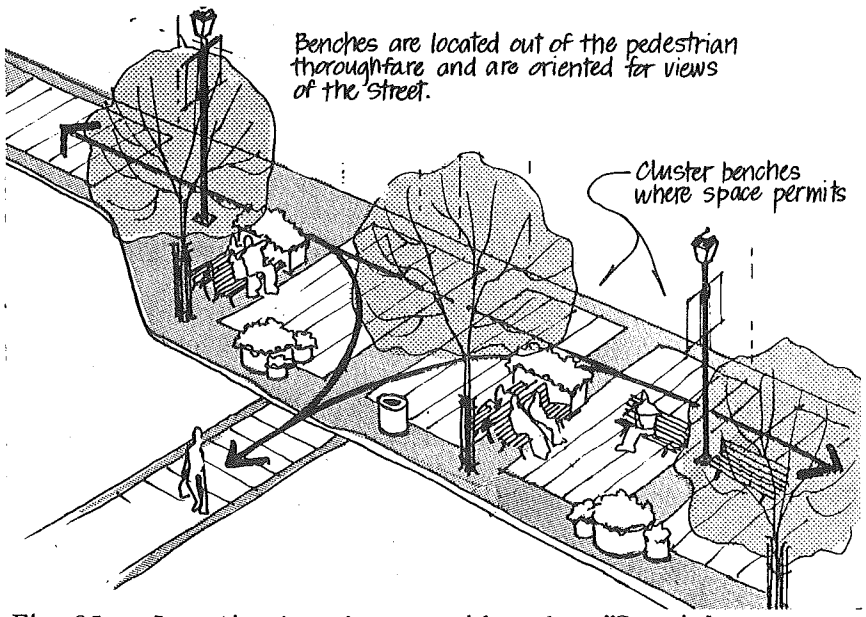


Fig. 35 Locating benches on widened or "Special Treatment" sidewalks

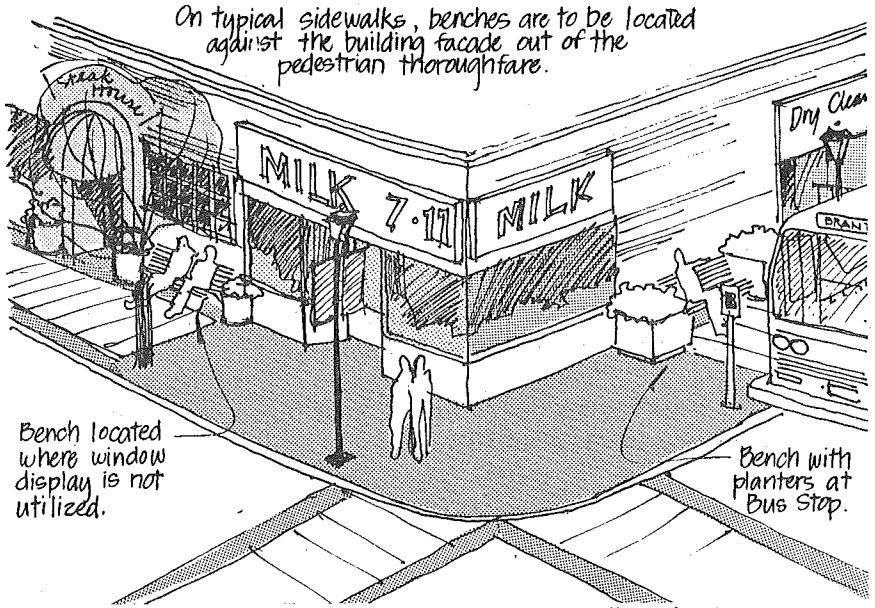


Fig. 36 Locating benches on standard or "Typical Treatment" sidewalks

6.6 PLANTERS

Planters may be a quick and easy way of getting planting into the downtown environment without getting involved in underground servicing, poor soil, road salt and the hazards of snow removal equipment, but they are not very satisfactory from an aesthetic and functional point of view. Their use should be restricted for genuinely temporary tree planting applications, or where they can be used successfully with low shrubs and flowers.

The large scale planters now associated with urban environments do not have an historic precedent, since before heavy moving equipment was available, planters were constructed of clay or wood for small plants and were taken indoors in the winter. The main response to the design theme, therefore, is to cast a municipal name band into the container.

The general design requirements are as follows:

a) The construction material should be durable so as to withstand occasional abuse by equipment and vandalism. Concrete is probably the only really suitable material.

b) The finish should be easily cleaned and patched: sandblasted or bushhammered concrete rather than exposed aggregate.

c) The container should allow for proper watering, percolation and drainage - weep holes should release excess water.

d) The planter should be personalized by casting the name and/or crest of the municipality.

e) Planters should be as small as possible so as to avoid obstructing pedestrian flow.

We recommend the Knecht and Berchtold series of planters as being superior in terms of proportion, finish and optional sizes.

Planters are particularly inappropriate for trees since they impede pedestrian traffic and draw attention away from the tree itself. Where planters are used for low shrubs and flowers, they should be clustered for the best effect - either with other planters or with benches and waste receptacles. They can be used to define areas set aside from the main pedestrian traffic flow, such as widened sidewalk areas or the proposed Civic Square.

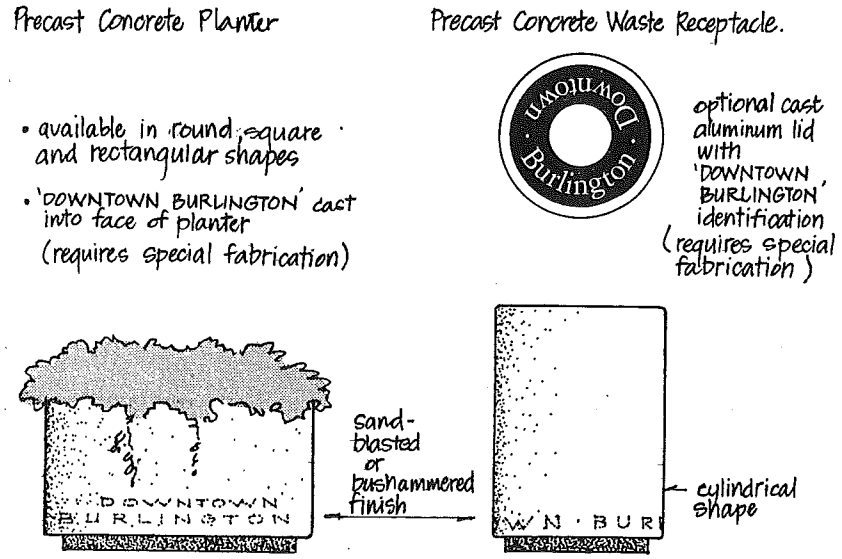


Fig. 37 Recommended precast concrete planters and waste receptacles

6.7 WASTE RECEPTACLES

Nothing detracts more from the aesthetics of the urban landscape than visible garbage. Well-designed and located waste receptacles are essential to the control of litter, and they also save time and money in landscape maintenance.

In considering the design theme, historic precedents of waste paper baskets were generally open mesh or wrought iron open work. These have the disadvantage of exposing the litter they are meant to contain. Since this is inappropriate, the main design theme guideline is to coordinate waste receptacles with other streetscape elements, particularly the planters. A cast iron or black aluminum lid and crest castings will help achieve this. The design requirements, therefore, are:

a) The container should entirely conceal litter from view and from the weather. A lid should be part of the design in order to reduce smell and cut down on litter-attracted insects.

b) It should not be so large that it dominates its location, yet it should be sufficiently generous in size to prevent overflow between pick-ups.

c) Material should be sufficiently sturdy to withstand minor impact and resist flame. Painted sheet metal will conceal litter but can dent on impact, and will blister and peel in a litter fire. Sandblasted or bushhammered concrete appears the most appropriate.

d) The receptacles should be personalized by casting the name and/or crest of the municipality into the container and/or the lid.

The recommended product is again the Knecht and Berethold Ltd. cylindrical receptacle type TR1, being well-made, pleasantly proportioned and would match the planters.

Placement and arrangement should take into account the following considerations:

a) Receptacles should be located close to high use areas such as pedestrian thoroughfares, rest areas, fast food outlets and restaurants, seating areas and bus stops.

b) In high use areas, they should be plentiful, visible and convenient.

c) They should be situated so that they do not interfere with pedestrian movement.

d) The container should be anchored in place or sufficiently heavy to prevent removal by vandals.

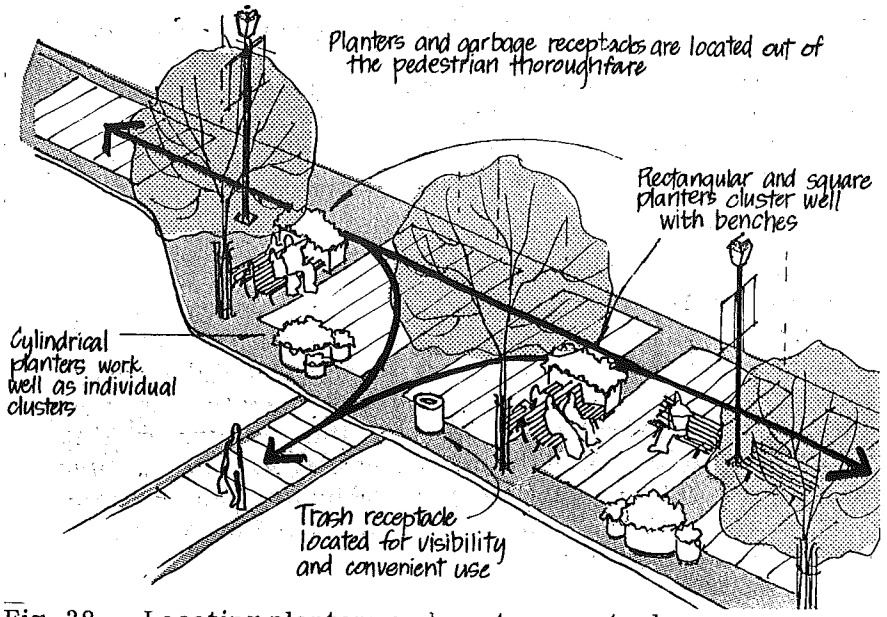


Fig. 38 Locating planters and waste receptacles

6.8 PUBLIC SIGNAGE

Signage is a major culprit in the proliferation of visual confusion in downtown areas. The major design objective is therefore to coordinate information such as traffic directions and advertising signs of all types so that while the individual messages are easily perceived and identified, the total effect is cohesive rather than disruptive.

One problem with tightly controlled comprehensive graphic systems is that they all too often coordinate so rigidly that spontaneity, creativity, and variation is lost in the process. To avoid this pitfall, the signage guidelines occur in two parts: guidelines relating to private advertising and building signage, which is treated separately in Chapter 8; and which allow for a great deal of variation, and more controlled standards relating to signs for public buildings, parking lots, parks, downtown symbol signs, and street signs.

In considering the design theme, historic signs have taken many forms, but generally the lettering is of a simple classic type, construction is of traditional materials, and the size is not excessive. The letter script recommended, and shown in our examples, is the "Garamond" style.

The Burlington city colours are blue and gold. This colour combination is attractive and messages will be readily perceived if blue lettering is placed on a gold or yellow background for smaller signs, and vice versa for larger signs. This colour combination is therefore recommended for all signs under municipal control.

Identifying Signs

For signs identifying a place or entrance (such as the "Service Entrance" for a group of businesses) we recommend a double-faced, black finished metal standard system into which panels may be placed, added or replaced as required, as shown in Figure 39. The Burlington City colours of blue and gold should be consistently used: blue background, gold (or pale yellow) lettering, or the reverse. It should be noted that these signs are not allowed within the public road right-of-way.

Street Signs

Street signs in Burlington now are of two types: traditional black and white and a more contemporary type using a combination of green or blue with white letters.

We suggest a special downtown Burlington street sign which uses the style of the traditional street signs with black metal surround and finial mounted on circular black metal poles. The lettering would be blue on a pale gold background and incorporate the words "Downtown Burlington".

Downtown Symbol Signs

The existing downtown Burlington promotional sign represents good design in itself and it will co-ordinate sufficiently well with the proposed signage system for them to remain as they are.

As these signs come up for replacement, however, we recommend that they be redesigned to co-ordinate more completely with the graphics system illustrated for other signs.

Parking Lot Signs

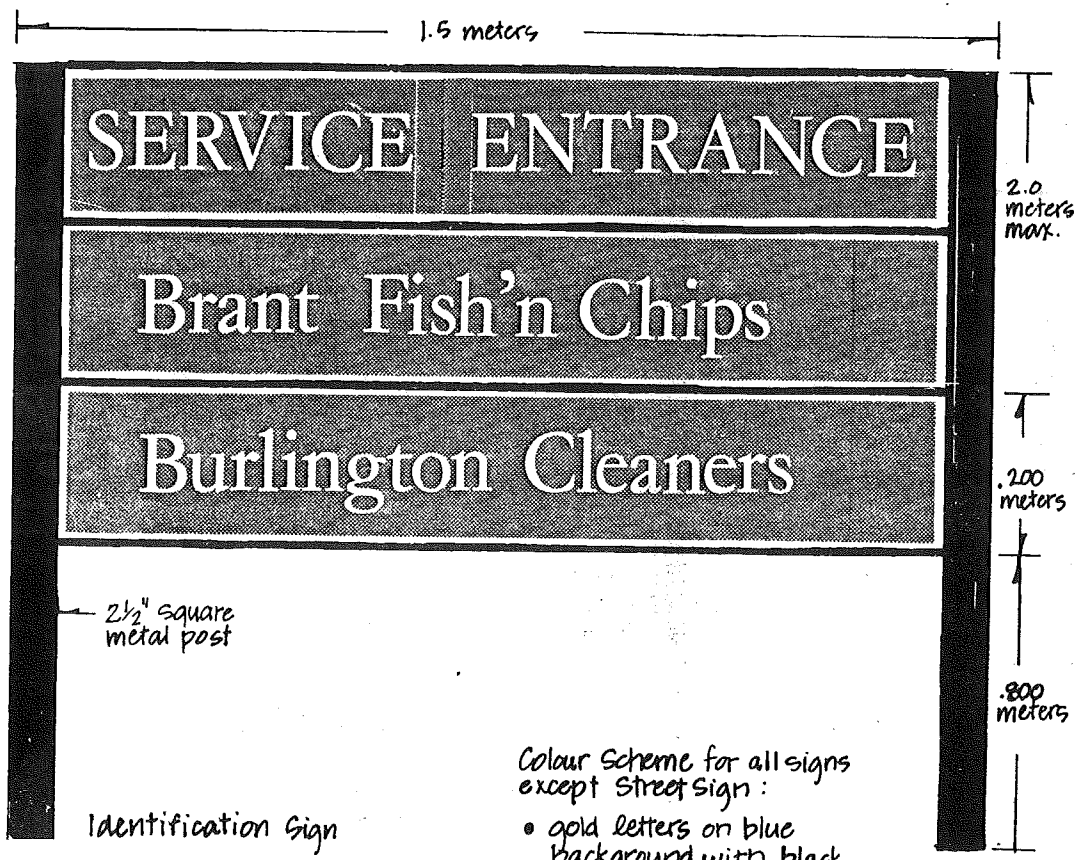
Identification for the major parking lots should be coordinated in colour and letter style with the street signs: blue background with pale gold lettering or symbolic "P". The parking sign should be reduced from its present size so that it is the same size as the "Downtown Burlington" symbol.

Traffic Signs

The design of directional traffic signs is beyond direct control of the municipality, but we make the following suggestions:

a) Wherever possible traffic signs should be clustered on a single pole to minimize visual clutter created by numerous standards each with its own sign.

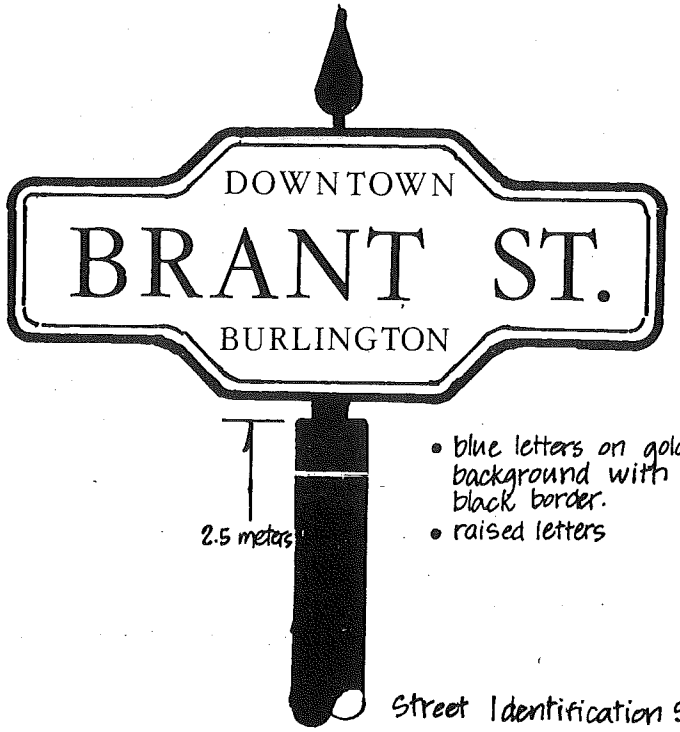
b) Where traffic signs require their own pole, a black finished metal standard matching the lamp and informational sign standards should be used. In other cities, this kind of colour coordination has been achieved by using a black vinyl sleeve which slips over the standard peforated channel pole.



Identification Sign

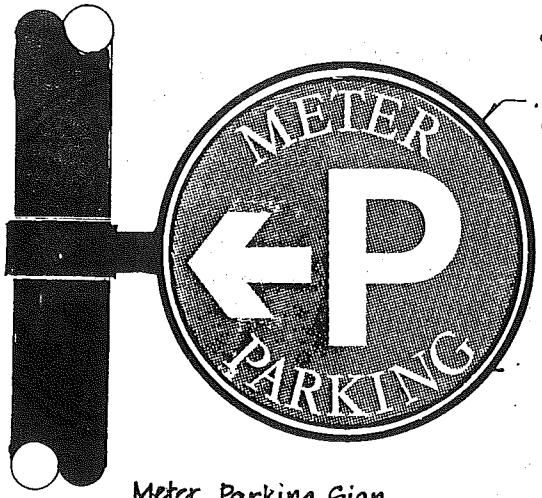
Colour Scheme for all signs except Street Sign :

- gold letters on blue background with black boraer.
- black finish on all support structure.
- all signs two sided.



- blue letters on gold background with black border.
- raised letters

Street Identification Sign



Meter Parking Sign



Downtown Burlington Directional Sign



Attendant Parking Sign.

Fig. 39 PUBLIC SIGNAGE GUIDELINES

6.9 BANNERS

The banner programme is well underway, and has been successful in identifying the downtown area. The design of the banner itself is attractive and there is no need to establish specific guidelines for the graphic design of the banners - they could vary from year to year or whenever a "new look" is desired. However, the new approach will be to fix the banners to the new lampstandards as they are put in place. As new banners are made for them, they should follow the following guidelines: construction should be of weather-resistant fabric with painted or silk-screened pattern with sewn loop to slip over top support, held in place with washer and clip. Rough dimension: 18" x 48"; minimum height from banner bottom to sidewalk grade should be 9'-0".

The brackets should be fixed to the pole with a two-piece clamp over a neoprene sleeve to avoid slipping and scratching. Support structures to be durable black finish. Banner shapes can vary, in fact it would be preferable to change shape and design according to the seasons.

We do not suggest that the banners be attached to the pole at the bottom of the banner to avoid wind action to the lamp standard. Should there be a wind problem with the banners themselves, we suggest that weights be attached to the banner bottom to assist in keeping them taut.

Banners should only be placed in the commercial areas, not the residential areas. They should be placed on all new lampstandards as they are put in place, slowly phasing out the existing banners which remain where they are until new pedestrian-scaled light standards are placed in each area.

As further described in Chapter 7, the gateways would have dense groupings of banners on separate poles, taller than the lampstandards but the same 5" diameter.

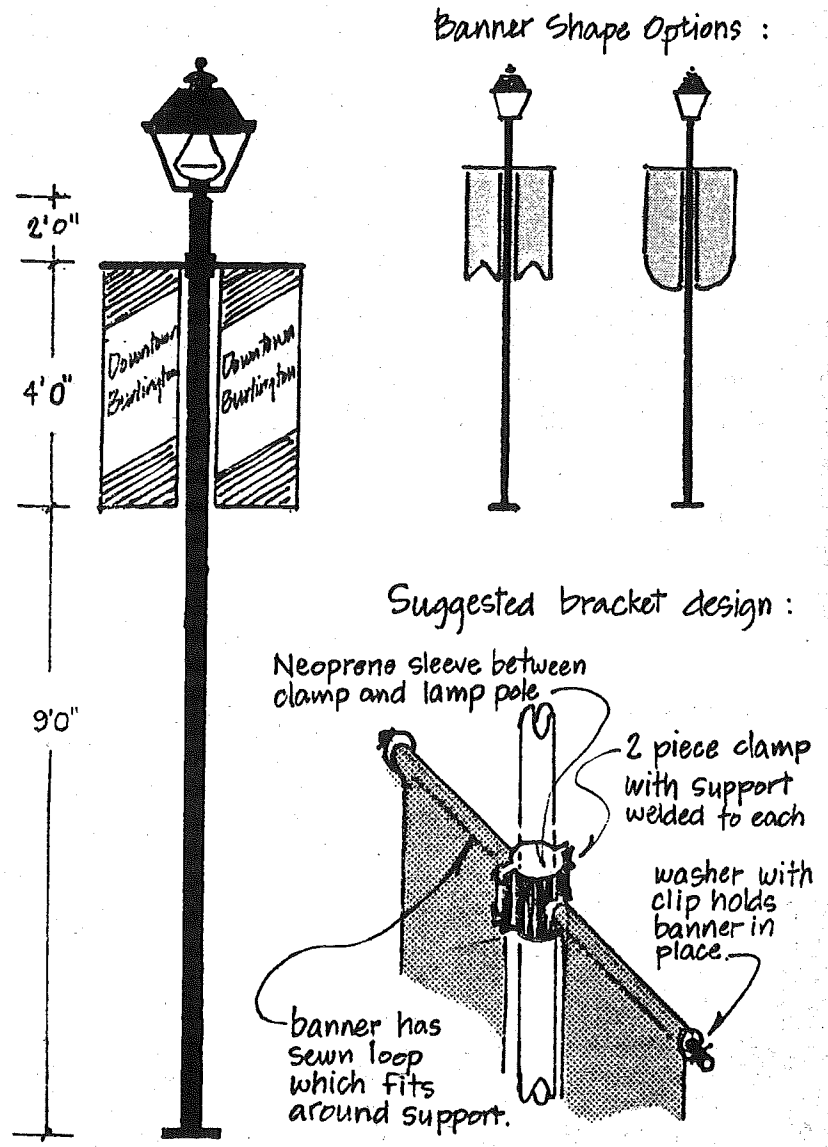


Fig. 40 Street banner guideline

6.10 BOLLARDS

The primary purpose for bollards is to prevent vehicles entering paved areas designed for pedestrians only, without posing an impedement to pedestrian flow. A secondary purpose is to act as a spatial definition between one area and another.

a) Bollards should be visible but not so tall as to dominate the scene; approximately 2'6" high.

b) Spacing between bollards should prevent access to small motor vehicles but easily accommodate other wheeled items such as wheelchairs, carriages and strollers.

c) In areas where service vehicles must have occasional access, bollards should be designed to allow removal and replacement.

d) They should be constructed out of sturdy material, such as wood, metal or concrete.

The design of bollards should vary in various downtown situations so that they can reflect the mood of the area.

In the main commercial area, simple black metal posts are most appropriate as they relate well to the other street furnishing, such as sign posts, lamps, and containers.

In park settings, a less formal timber bollard is more appropriate.

The waterfront should have a marine flavour, which is achieved by incorporating lamps, hauser notches and chains.

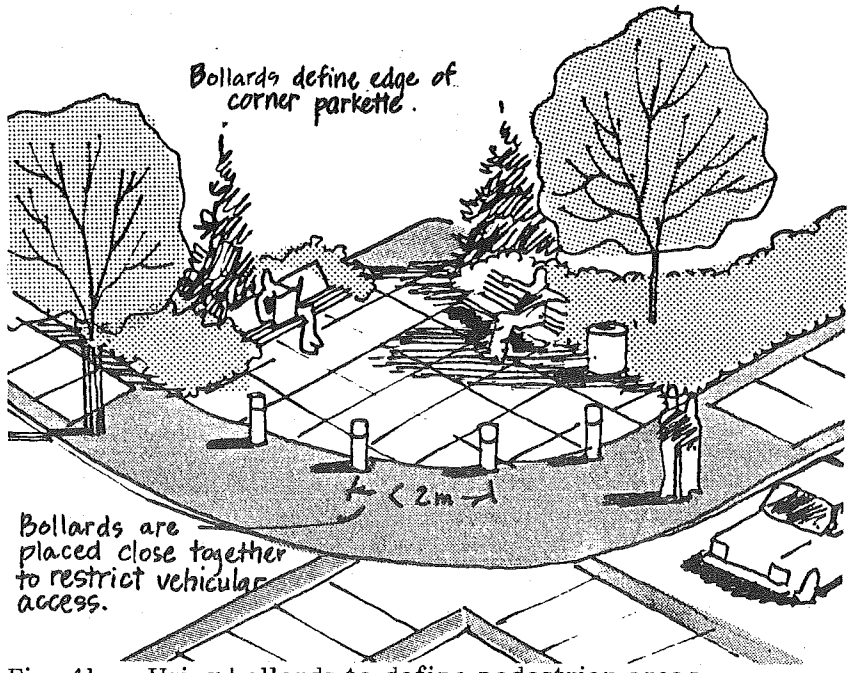


Fig. 41 Using bollards to define pedestrian areas

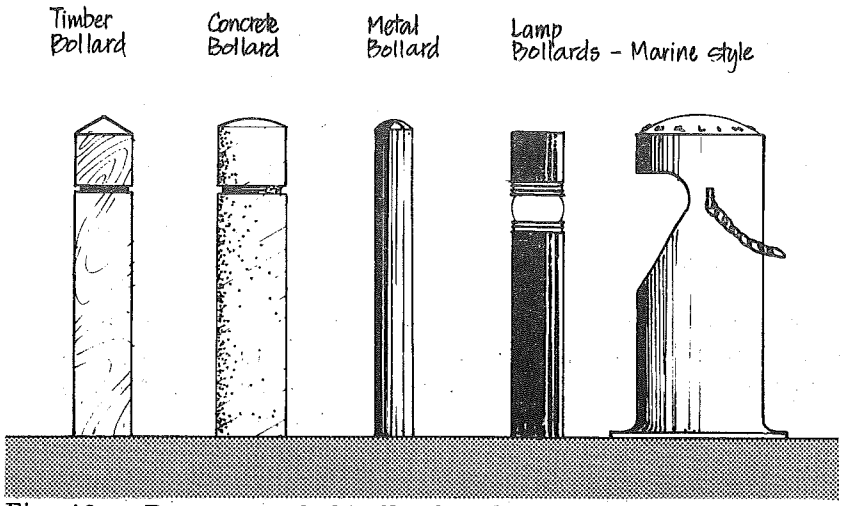


Fig. 42 Recommended bollard styles

6.11 BICYCLE RACKS

The function of bicycle racks is to provide a facility where bicycles can be parked and securely locked, taking up a minimum amount of space.

The design guidelines are as follows:

a) Racks should be readily seen and accessible by the potential users, without being visually obtrusive.

b) Racks should not be placed where parked bicycles will clutter the sidewalk and impede the flow of traffic.

c) Racks should be well anchored, and made of metal, with a durable black finish or alternatively precast concrete.

d) Bicycle rack locations should be widely distributed throughout the study area so as to offer many opportunities in small concentrations with one larger "parking space" at the intersection of the bicycle path system along the utilities corridor and Brant Street.

There are many suitable products on the market. We suggest a simple rack such as the one produced by Paris Playgrounds, illustrated in Figure 43.

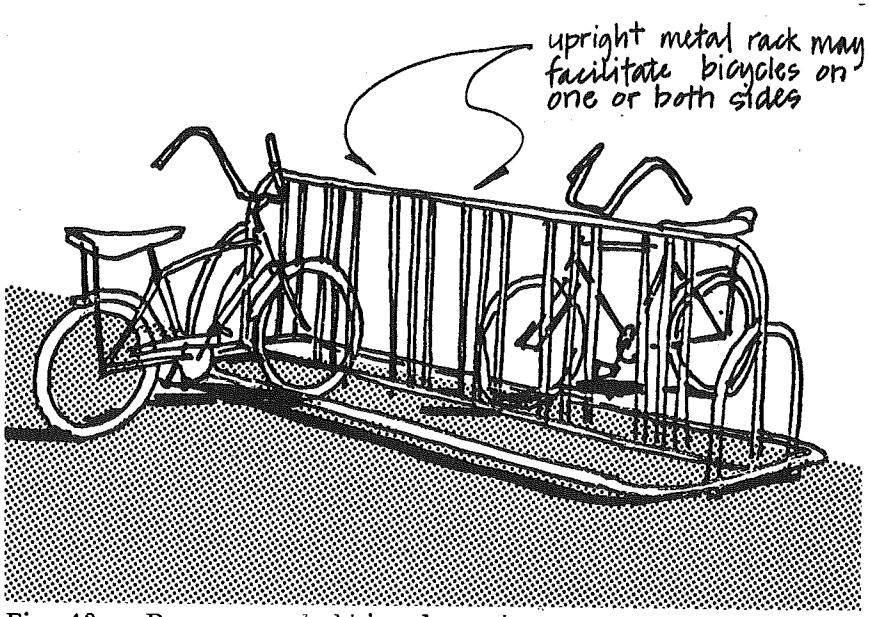


Fig. 43 Recommended bicycle rack

6.12 PARKING METERS

The parking meters currently used in Burlington are already colour co-ordinated with a dark blue finish on the meter while the support stands vary in construction.

We suggest that the existing meters be retained but that the support poles should be upgraded to a uniform steel pole, with welded joints and a durable black finish to match lamp poles and sign standards.

It is advisable to cluster two meters on one pole to reduce the overall number of units and care should be taken in their placement to avoid conflicts with other streetscape elements such as street trees and lamp standards.

Meters should be set back .600 meters from the curb to match the street alignment of trees and lamp standards, thus avoiding damage by car bumpers.

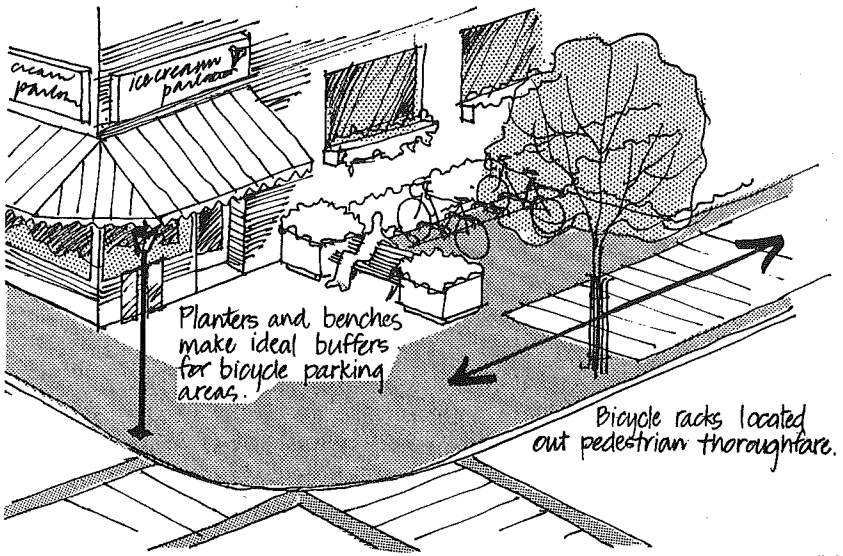


Fig. 44 Locating bicycle racks

6.13 DRINKING FOUNTAINS

This country has a long tradition of supplying drinking fountains in community centres. Downtown Burlington has a beautiful and historic cast iron lamp fountain at the City Square Parkette. It is everything a drinking fountain should be, reflecting the design theme to perfection, and because of the projecting drinking trays, can be used by people in wheel chairs. However, attractive and functional as it is, it is too expensive to duplicate, except in exceptional circumstances.

In assessing commercially available drinking fountains, our starting point is that it must be accessible to the handicapped. This criterion reduces the choice to one manufacturer and two products: one in precast concrete, the other in stainless steel and painted sheet metal. The metal alternative does not reflect the design theme to any great extent and is less durable. We therefore recommend HAWS Concrete fountain as shown in figure 45.

New fountains should be placed in the proposed Civic Square and in public parks. The existing fountain should remain where it is since the location is suitable and it is vulnerable to damage when moved.

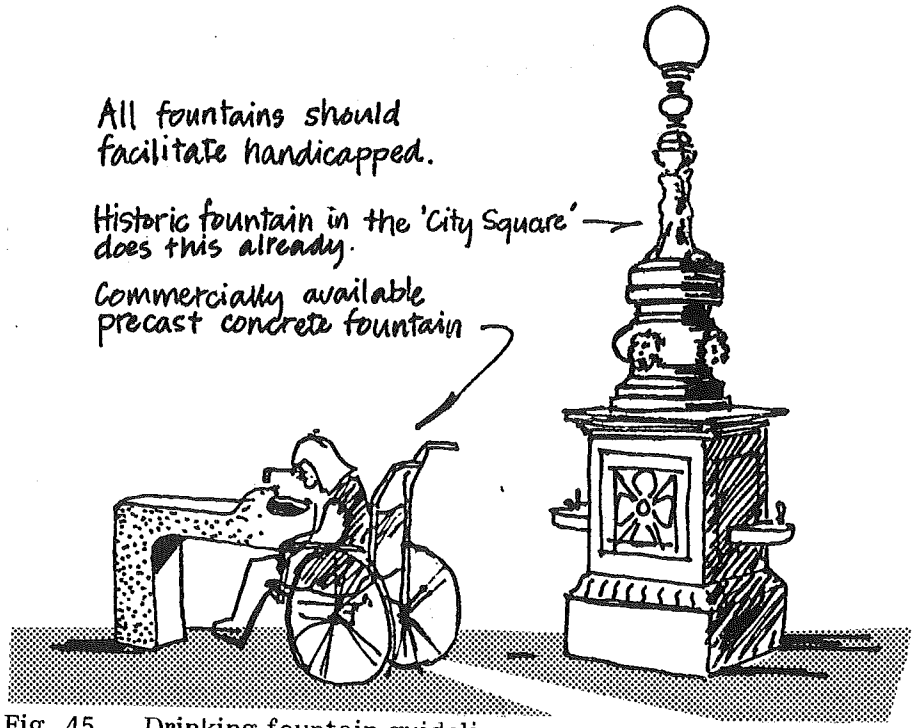


Fig. 45 Drinking fountain guideline

6.14 UTILITY BOXES

As Downtown electrical services are placed underground, a series of ancillary switching stations are required. Ideally, these should be underground, but this involves considerable expense.

Surface utility boxes should be screened from public view and yet accessible, at least on one side, for maintainence and servicing. This is illustrated in Figure 46, showing a low wood screen (4'-0") and shrubbery.

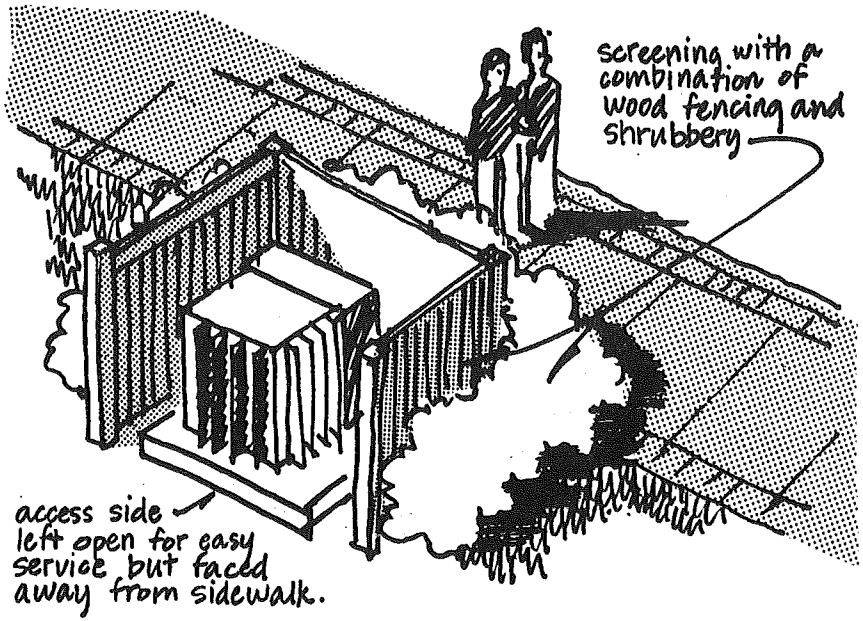


Fig. 46 Utility box screening

6.15 INFORMATION KIOSKS

The reason for constructing information kiosks is to provide a visually attractive location for directories, posters, notices and flyers, rather than allowing them to be pasted indiscriminately on telephone poles, fences or posts.

Downtown Burlington already has two kiosks which could be modified to fit in with the design theme. The attachment face is presently stainless steel which is not a good surface for fixing posters, either by staples or by paste, since it is not absorbant.

We recommend that they be reclad with wood and that the information band be refinished in the black, blue and gold Downtown Burlington colour combination established in the signage guidelines.

The existing kiosk in the city square should be relocated to the proposed Civic Square if this materializes, the kiosk at the bus terminal should remain there and new ones could be located at the Brant Street entrance to Spencer Smith Park and at the Brant Mall.

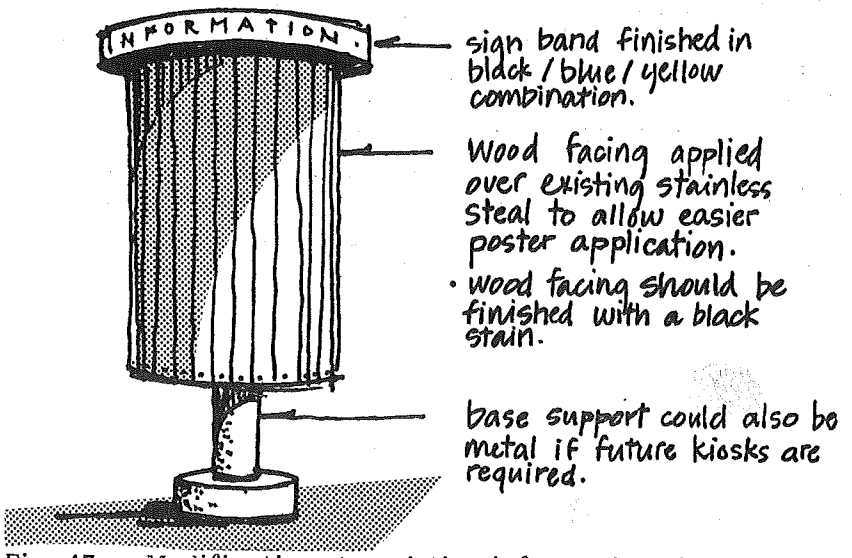


Fig. 47 Modifications to existing information kiosk

6.16 TELEPHONE BOOTHS

The municipality does not control the design of telephone booths, but we recommend that in dealing with the Telephone Company, the following requests be made:

a) The telephone booth sign band should be modified to fit with the colour combination and lettering type established in the Downtown Signage Guidelines.

b) Metal components should remain as they presently are in black finish, to relate to the other metal components of the street furniture downtown.

Telephone booths should be located off heavily used pedestrian thoroughfares, such as on the widened section of sidewalks, and in acceptable positions established during the landscape design of the proposed Civic Square and other public spaces.

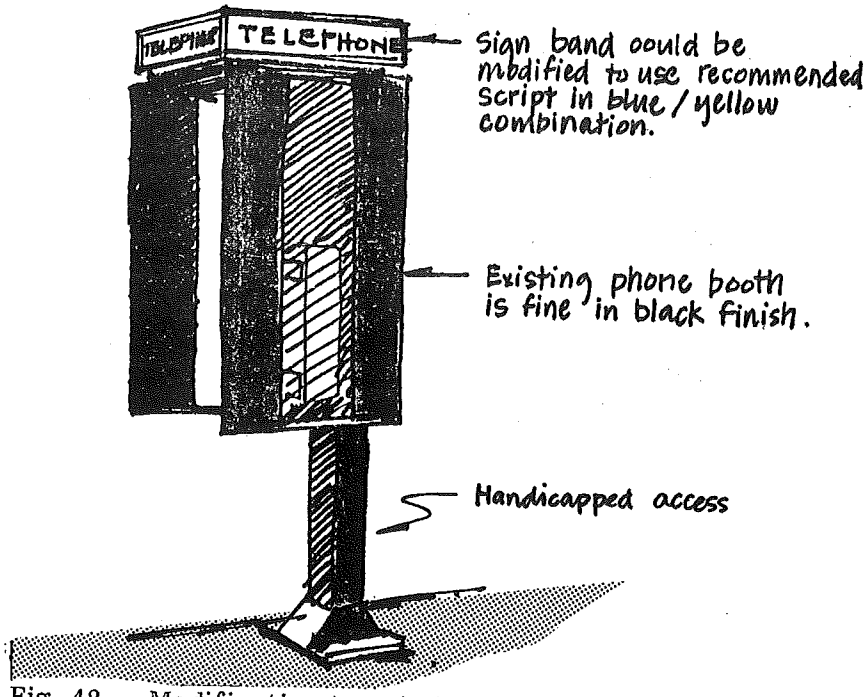


Fig. 48 Modification to existing telephone booth

6.17 BUS SHELTERS

The existing bus shelters, where they occur, are not appropriate to the downtown design theme. New shelters should be more cleanly designed and should incorporate large areas of plate glass in metal frames which relate in colour and lettering style to the signage guidelines.

Some advertising companies are prepared to provide well-designed bus shelters without charge to the municipality if they can incorporate advertising panels. The advertising faces the interior of the shelter and we recommend that the back side of the panel include a downtown directory.

Shelters should be located at all bus stops where space permits without impeding the sidewalk area. Figure 49 shows how the shelter can be tucked beside the main sidewalk surface.

6.18 NEWS BOXES

Newspaper dispensing boxes are currently placed indiscriminately around the downtown area at the discretion of the newspaper companies. They should be co-ordinated into special locations. For the present, they could simply be lined up together off the main flow of pedestrian traffic. In the long term, they could be accommodated within unified metal housings as illustrated in Figure 50.

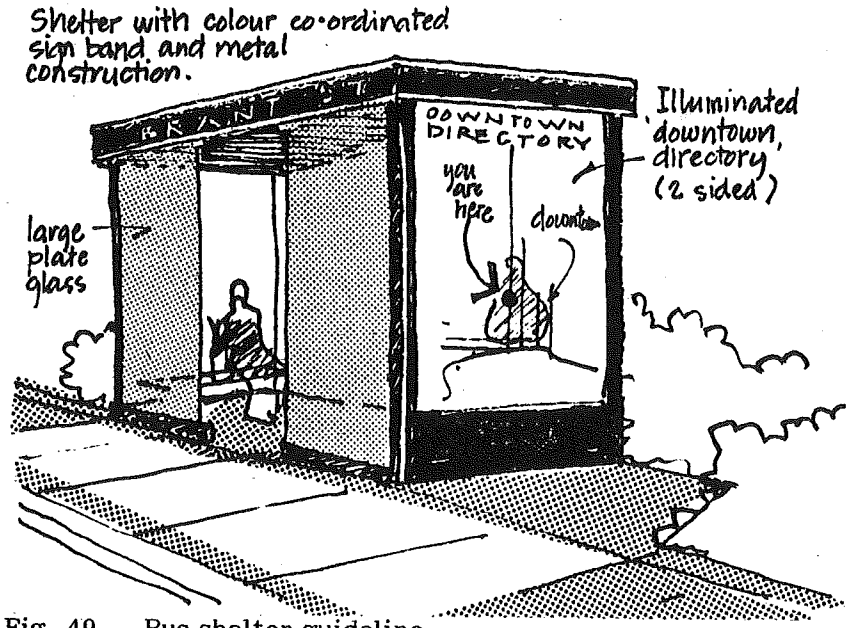


Fig. 49 Bus shelter guideline

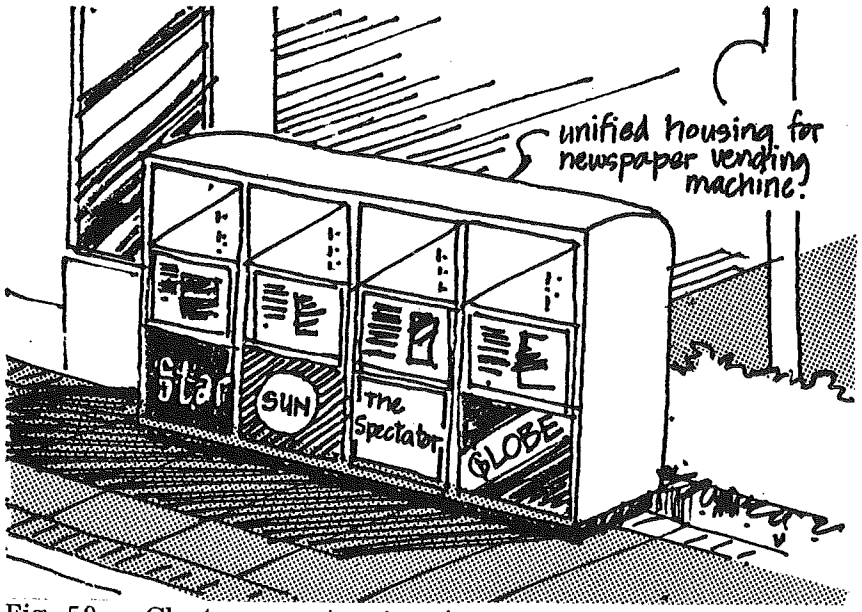


Fig. 50 Cluster news box housing

3. Sims Square is an inappropriate location for a major public focus. At present, it is simply acting as a landscaped edge to the parking lots along the utility and open space corridor, and the site would be far more appropriately used as a retail development at grade, providing shopping continuity along the street, with offices or residencies above.

4. Surface parking displaced by redevelopment should ideally be incorporated into underground structures as the buildings are constructed or replaced by new surface parking elsewhere.

Bearing these considerations in mind, we have developed two scenarios of future development which incorporate a central focus.

SCENARIO ONE: LIMITED DEVELOPMENT

Figure 53 shows how the focal area can be developed with a minimum of new buildings while maintaining surface parking in the municipal site.

In this scenario, the central square is located on Parking Lot #5, which is shown as a market square accessible to trucks on market days, and at other times acting as a public open space. It is flanked to the north and south by small scale buildings. These might be enclosed, year round market stalls either constructed by the City or by developers. Alternatively, they could be more substantial four storey office developments with retail at the ground floor.

Sims Square is shown with a four storey office development over a street related retail ground floor.

City Hall expansion is shown as being contained within a single building, linking the existing City Hall and Sherwood Inn with a landscape forecourt to Brant Street.

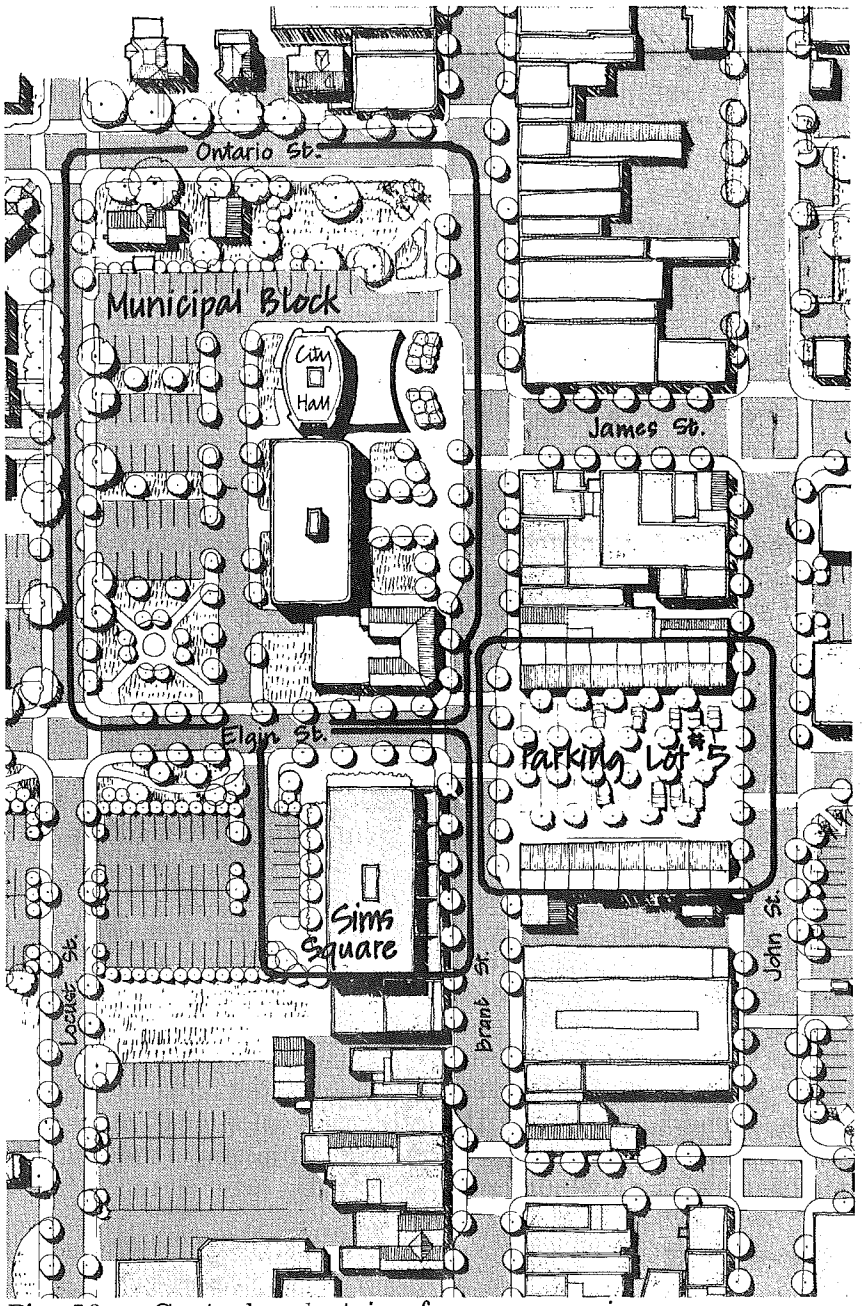


Fig. 53 Central pedestrian focus: scenario one

The advantages of the scheme are that it is relatively modest, and could be developed immediately. However, a development of Parking Lot #5 in this manner could also be considered as an interim measure, which, if properly planned, would not preclude the later and more intensive development of the site.

SCENARIO TWO: OPTIMUM DEVELOPMENT

In Figure 54 the central square doubles as a Civic Square acting as a focus for a more comprehensive redevelopment of the site. There is room for sufficient floor space to incorporate not only the municipal offices, but also other government agencies, such as the Court Houses, and theatres or a library.

Parking Lot #5 is shown with horseshoe development which maintains a significant commercial outdoor court, complementing the Civic Square. A central easement is accommodated through the commercial court and open through the office building.

Sims Square is redeveloped in the same way as in the previous scenario.

A three dimensional illustration of the Civic Square and the surrounding redevelopment containing it is shown in Figure 55.

This scenario is the preferred alternative, but it does depend on appropriate private redevelopment of Parking Lot #5 (subject to design control which ensures the creation of the commercial court) and a substantial government complex with underground parking adjacent to the City Hall. If this development does not appear viable in the immediate future, then the redevelopment of these three parcels should not preclude allowing the more comprehensive development to occur at a later date.

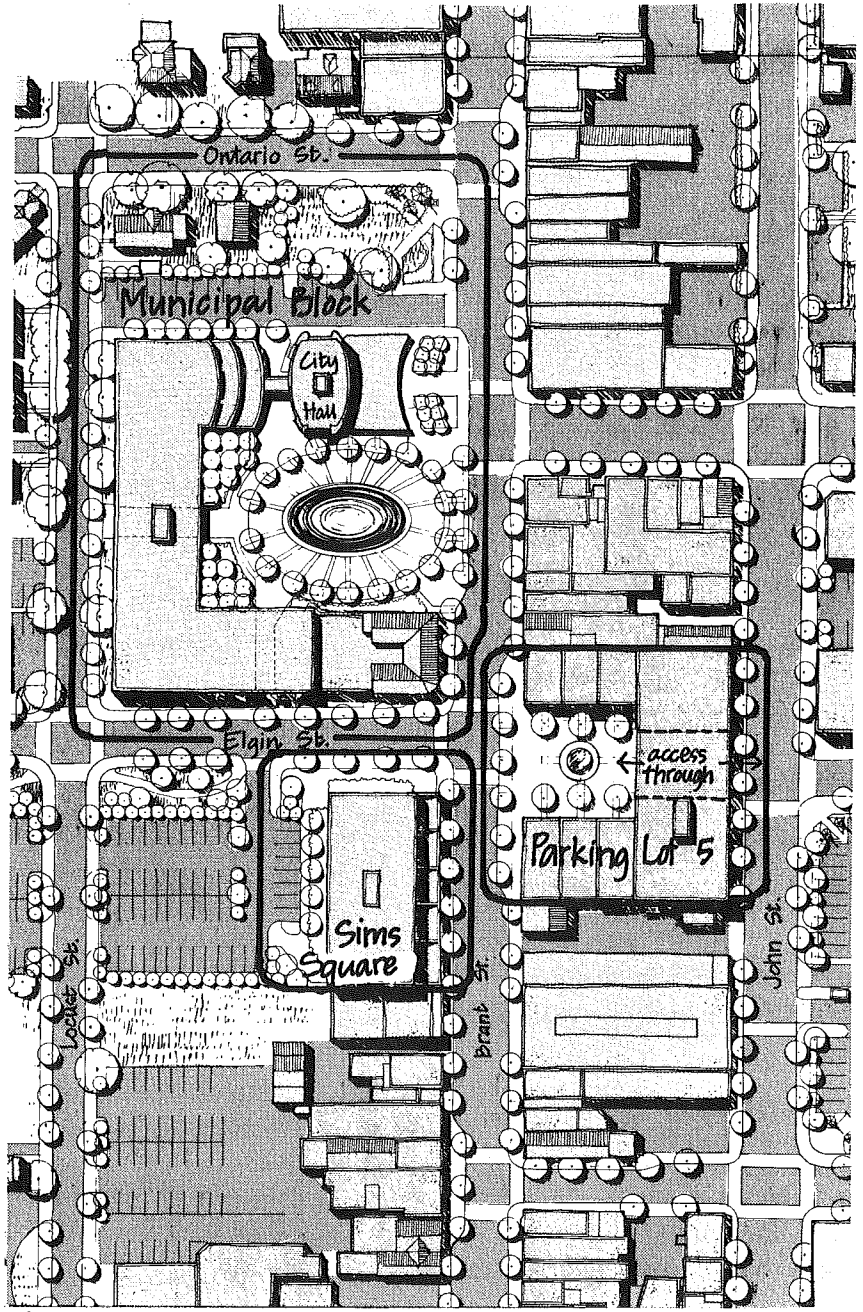


Fig. 54 Central pedestrian focus: scenario two

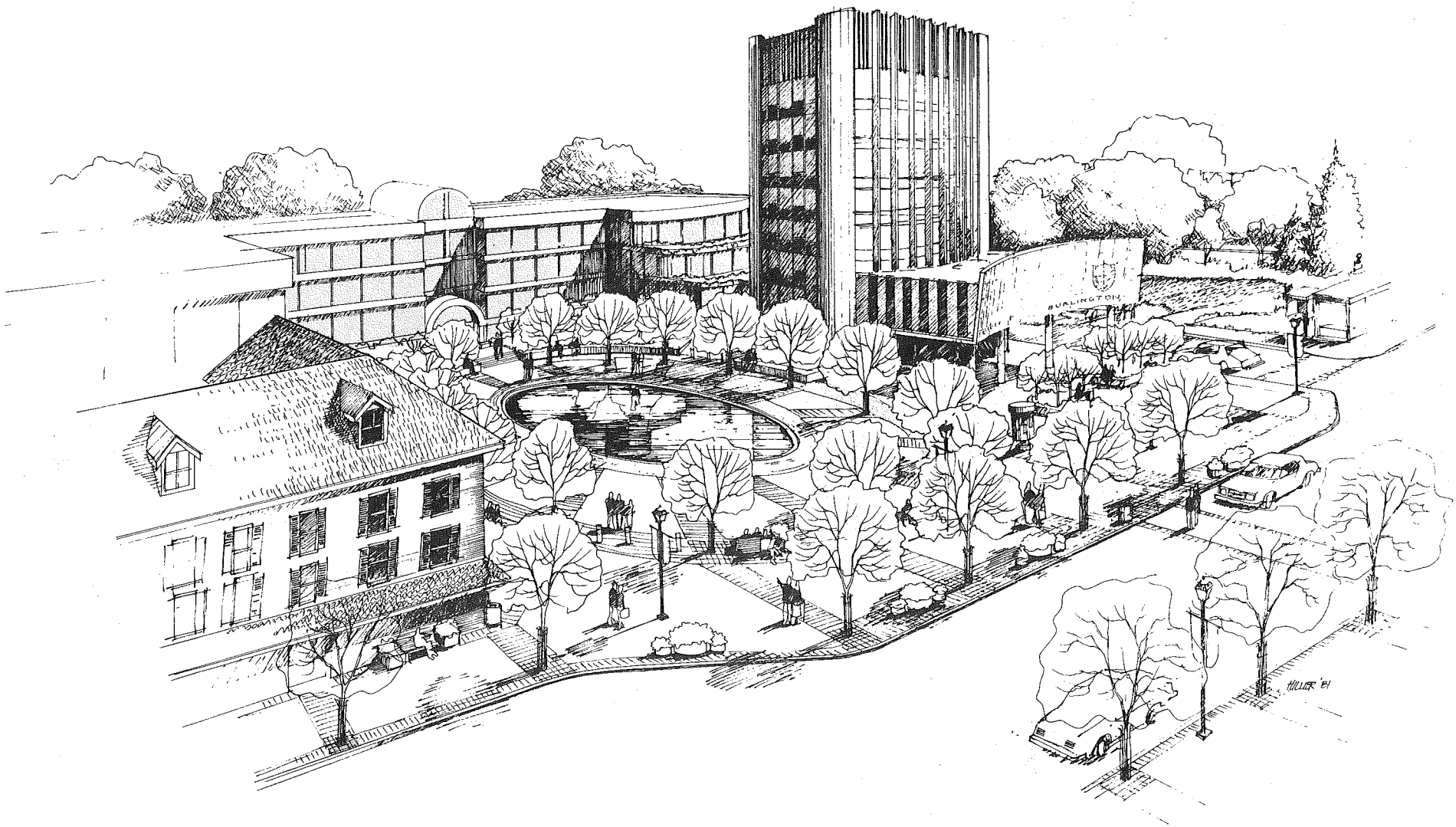


Fig. 55 Bird's eye perspective of proposed "Civic Square"

7.2 TYPICAL STREETSCAPE TREATMENT

This streetscape treatment will be used most often in the study area and it therefore is the basis for all other treatments.

It is intended for use in most commercial areas and is characterized by trees, paving and lighting. Specific notes regarding the placement of elements are illustrated opposite, but in general the following guidelines are observed:

a) A rhythmic 10 metre module is used to co-ordinate placement of trees, lamps and paving patterns. This pattern is to be observed rigorously, making adjustment only if essential. These are the primary elements and have the greatest effect on the streetscape as a whole.

b) As pedestrian movement space is minimal, furnishings such as benches, planters, kiosks, bollards, bicycle racks, telephone booths and fountains should not be located in this type of treatment.

c) Road crossings at all intersections are identified with the brick and concrete paving system.

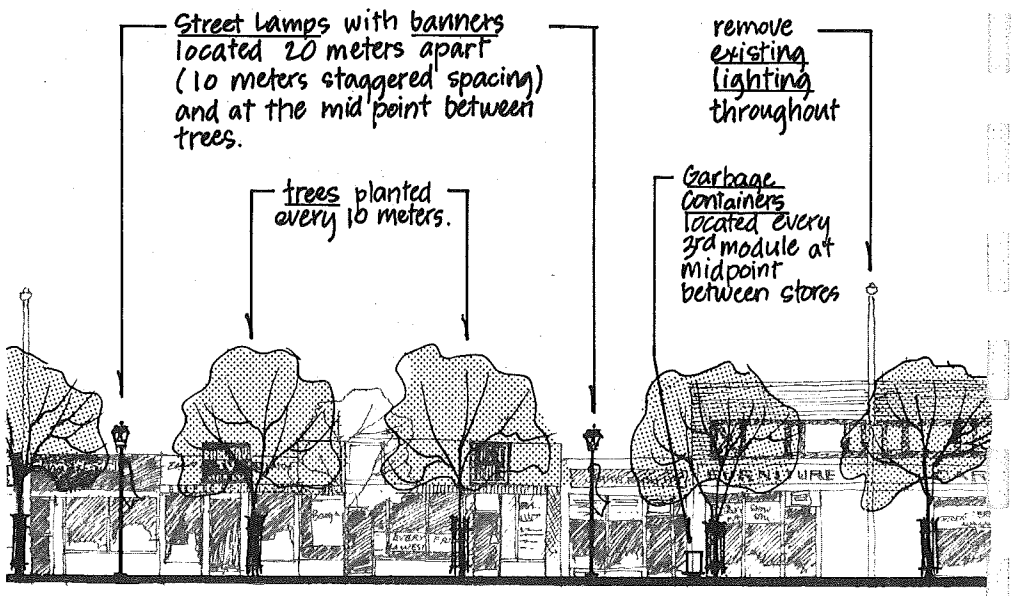
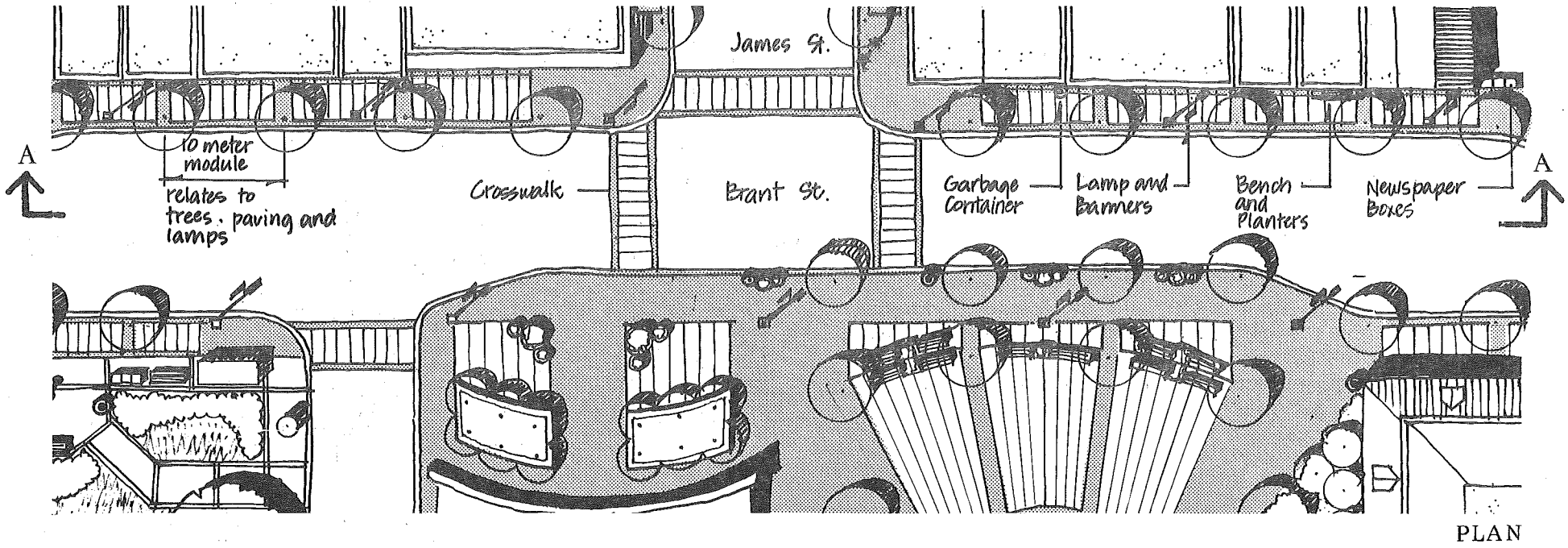
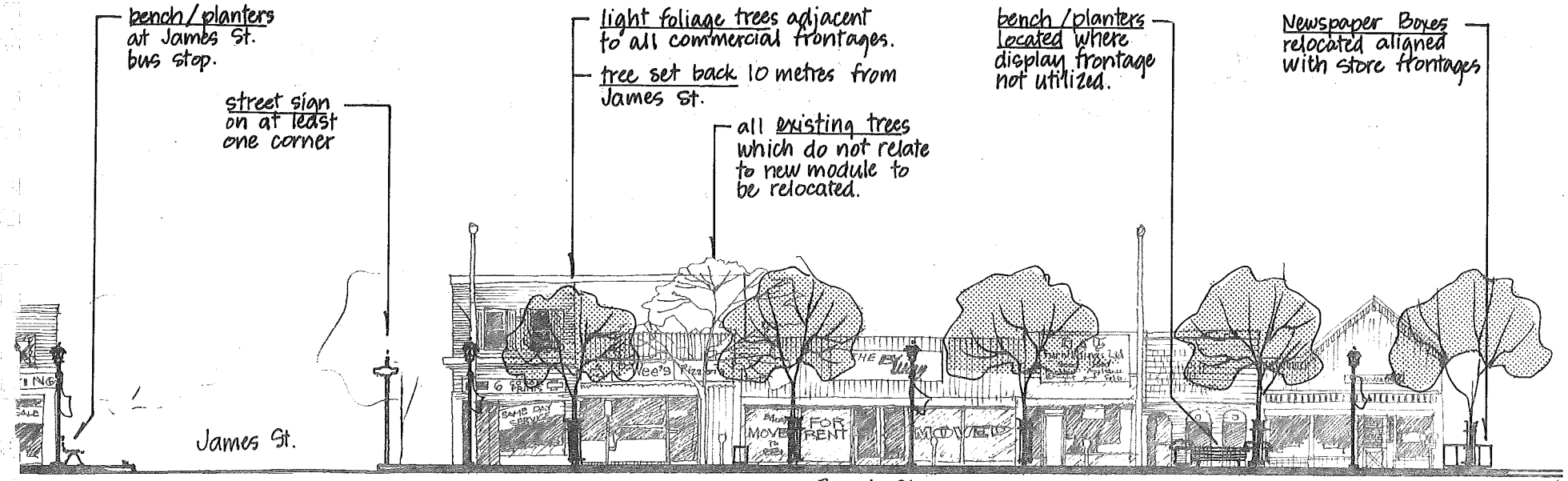


Fig. 56 TYPICAL STREETSCAPE TREATMENT



PLAN

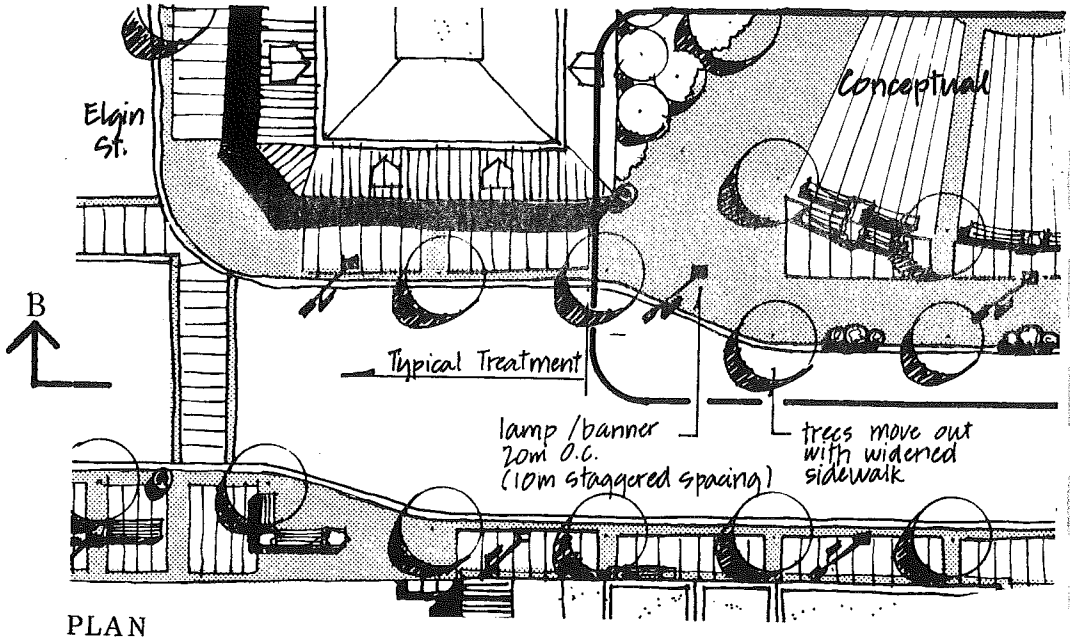


ELEVATION AA'

This treatment was developed to enhance special areas. Its main function is to provide more pedestrian space by widening sidewalks into the vehicular space where this is not required.

Since Typical Treatment sidewalks do not have the space for many furnishings, these widened areas allow the use of benches and planters for seating clusters, as well as space for kiosks, phone booths, newspaper boxes and other streetscape amenities.

Under most circumstances, the module technique of the Typical Treatment is utilized, but in a more intense fashion. In some cases, such as opposite the proposed Civic Square, the pattern may change to better integrate with the design of the Square. This type of modification is encouraged, provided that the same palate of materials is used.



PLAN

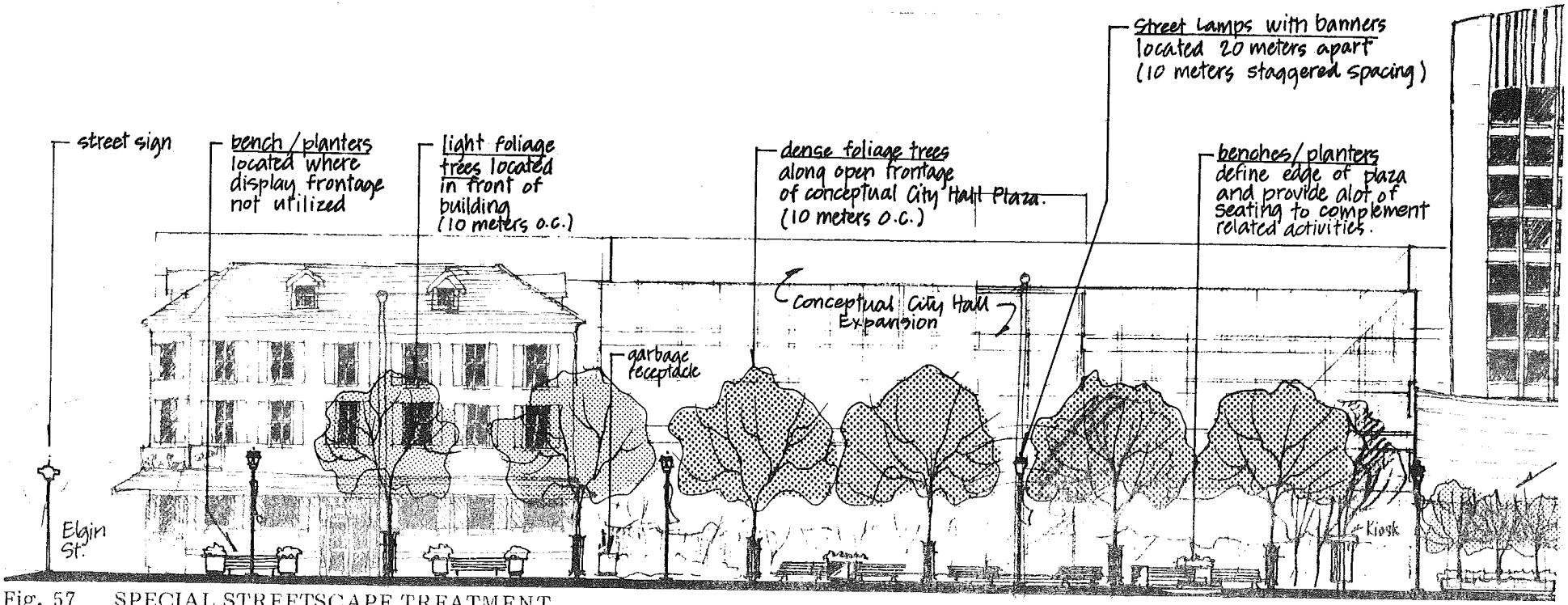
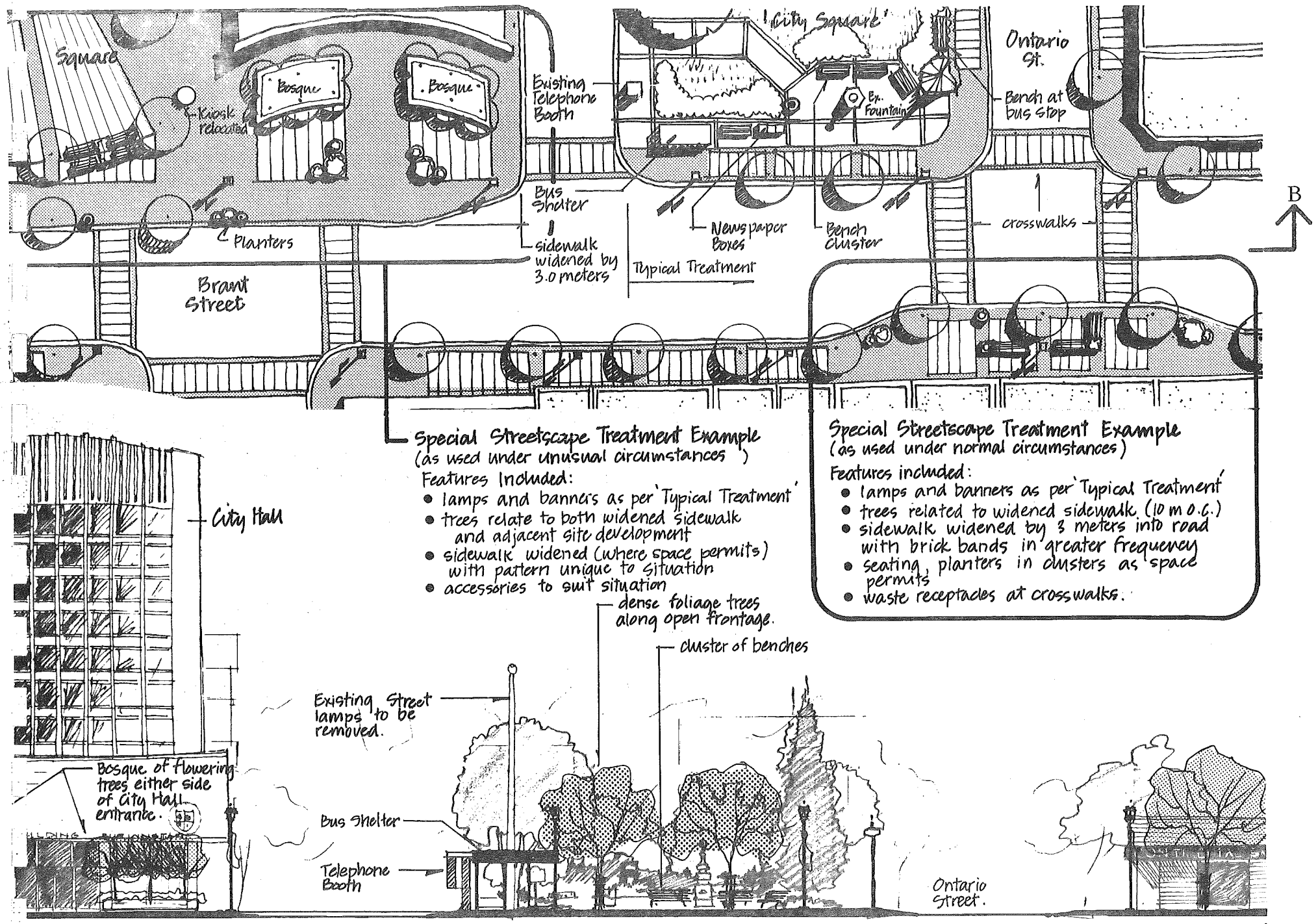


Fig. 57 SPECIAL STREETSCAPE TREATMENT



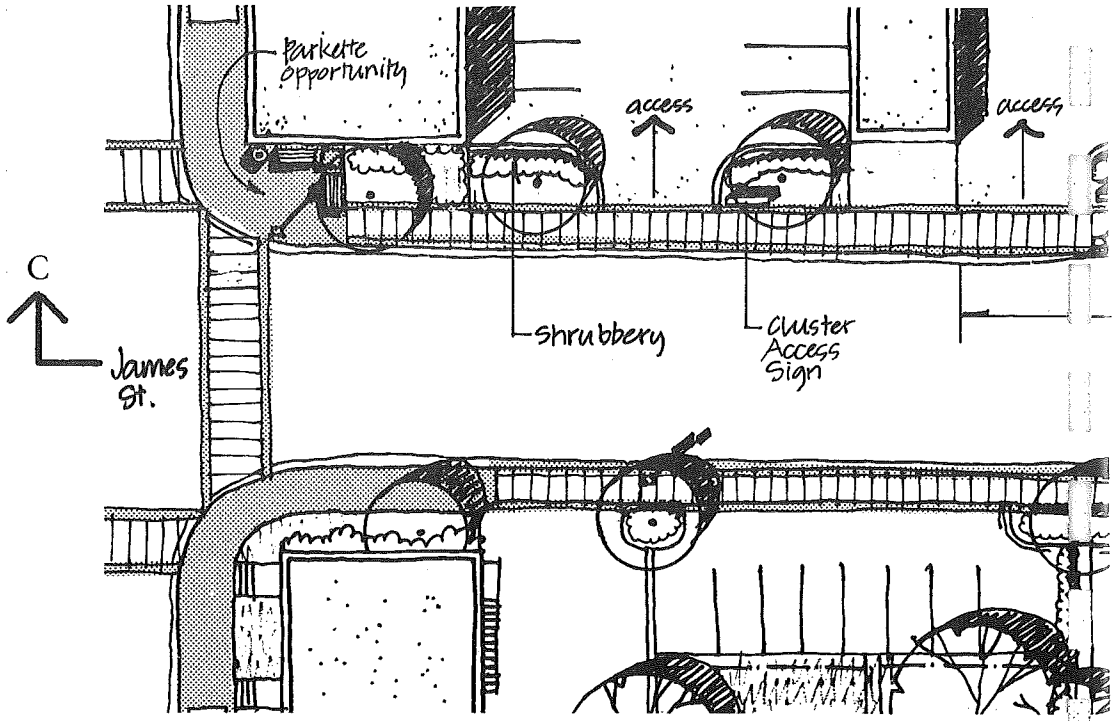
ELEVATION BB'

7.4 PARTIAL STREETSCAPE TREATMENT

This system was developed specifically to treat "backdoor streets" which primarily cater to service entrances or rear parking for businesses.

Due to the random locations of building frontages, a proper module as used in the Typical Situation is less punctuated and more related to points of vehicular entry.

The prime objective in the partial treatment areas is to buffer unsightly views of rear yards. This is done by clustering vehicular access points and by buffering the areas in between. As these streets are not heavily populated by pedestrians, furnishings such as benches and planters are kept to a minimum.



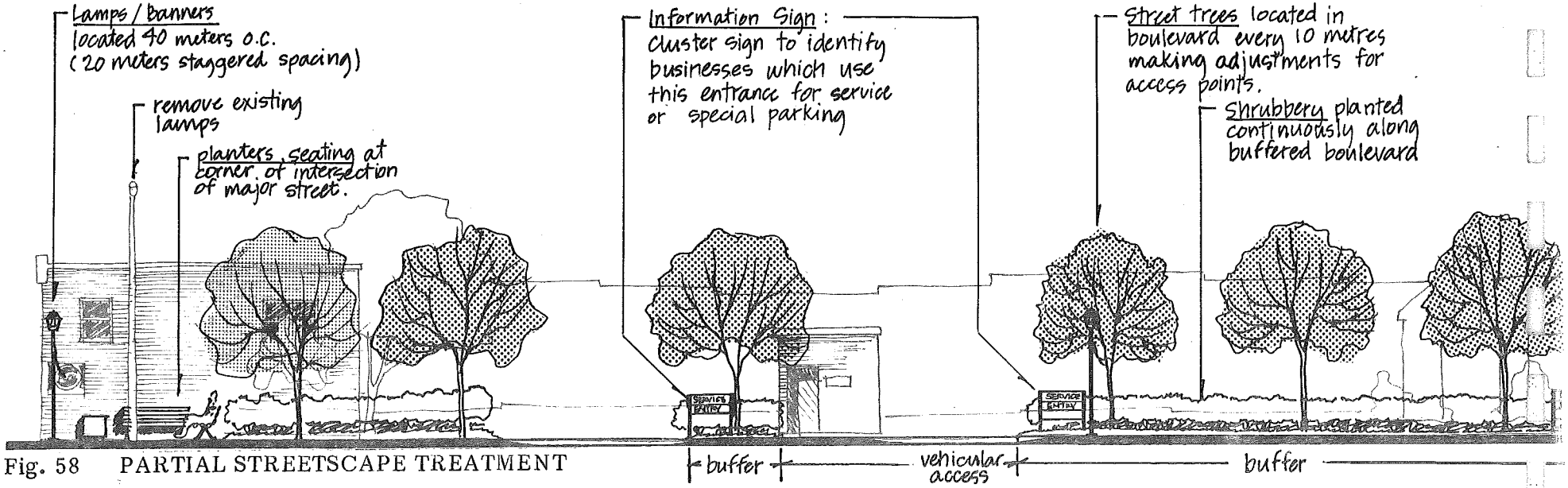
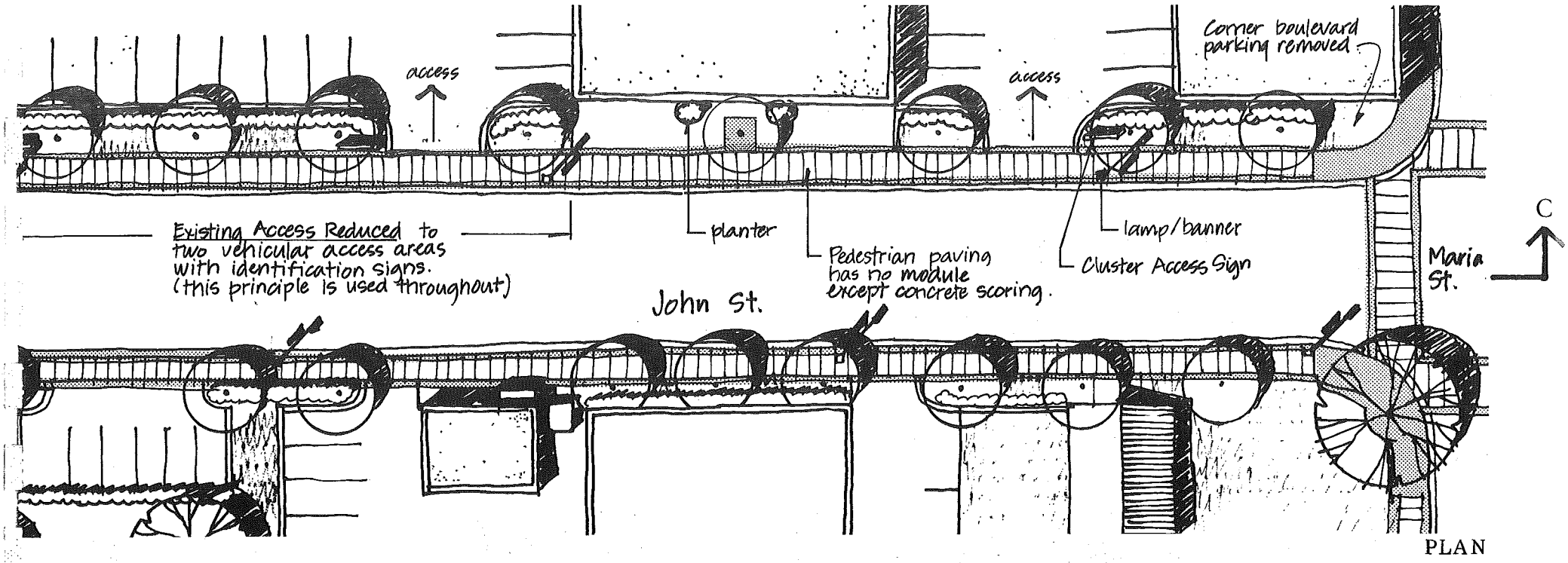
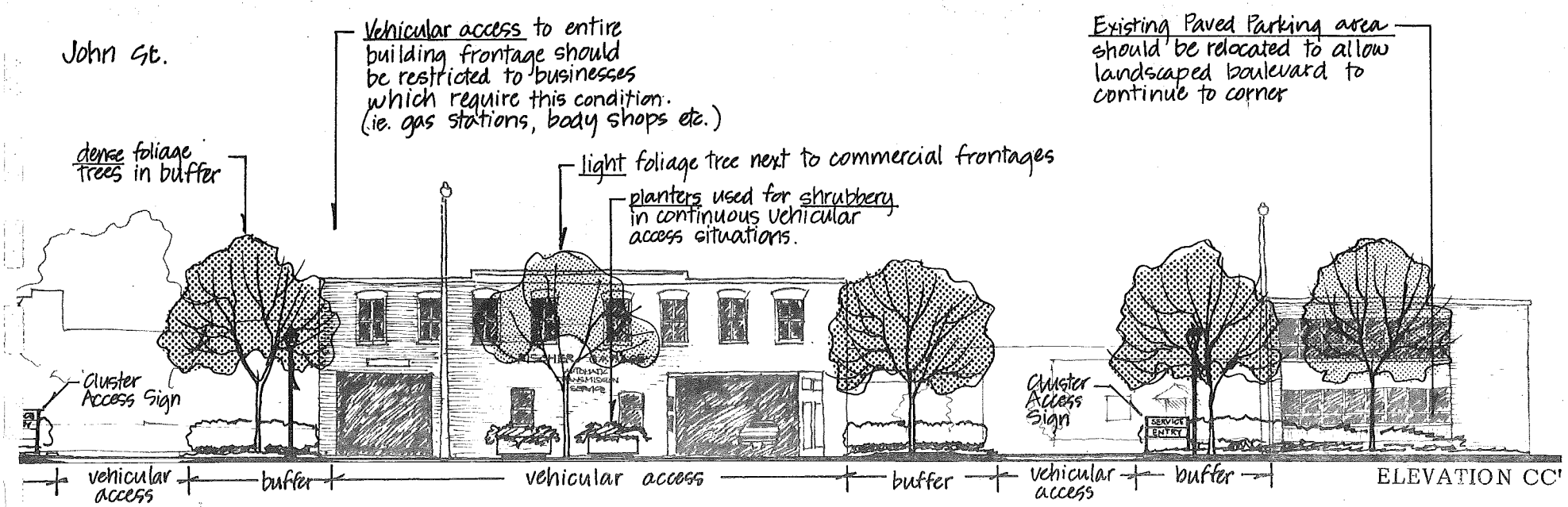


Fig. 58 PARTIAL STREETSCAPE TREATMENT



PLAN



ELEVATION CC'

7.5 RESIDENTIAL STREETSCAPE TREATMENT

Most residential areas in the study area are already very attractive with mature trees and well preserved historic homes. The objective here is to preserve this atmosphere while identifying these streets as part of the downtown. Since pedestrian traffic in these areas is casual, sidewalks need not be widened and, with minor modifications, they easily relate to the Typical paving system.

Since many of the existing trees are reaching maturity, new ones should be planted, as illustrated opposite.

The replacement of lighting to match that recommended for the rest of the study area, should provide an intimate and unique character, unlike neighbouring residential areas.

The use of banners is recommended on residential streets which have been converted to commercial uses. On streets where this conversion has not taken place, the banners need not be utilized.

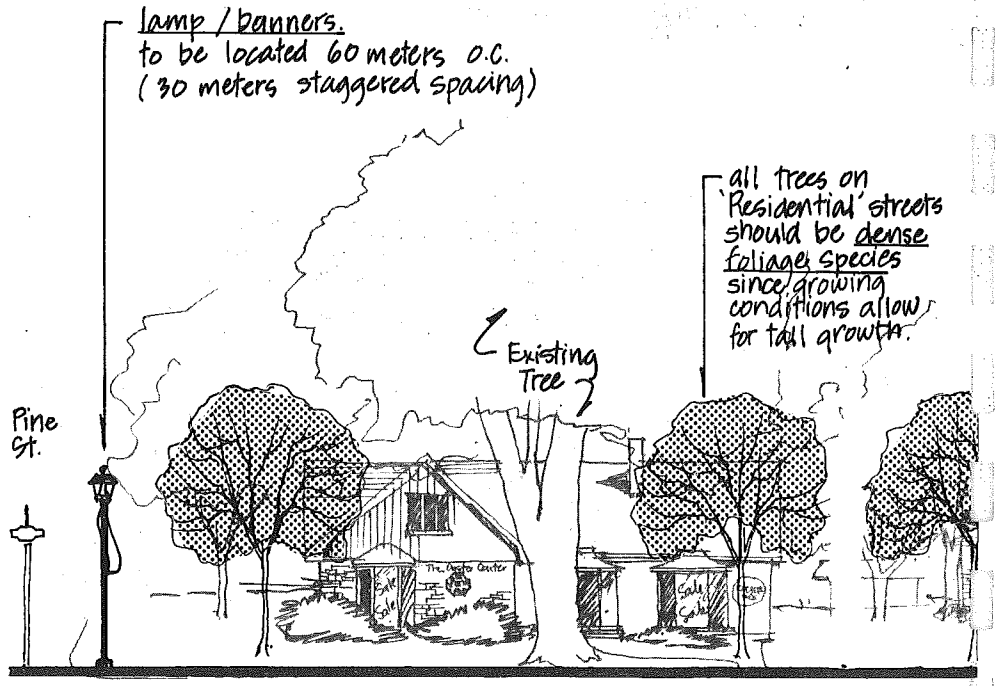
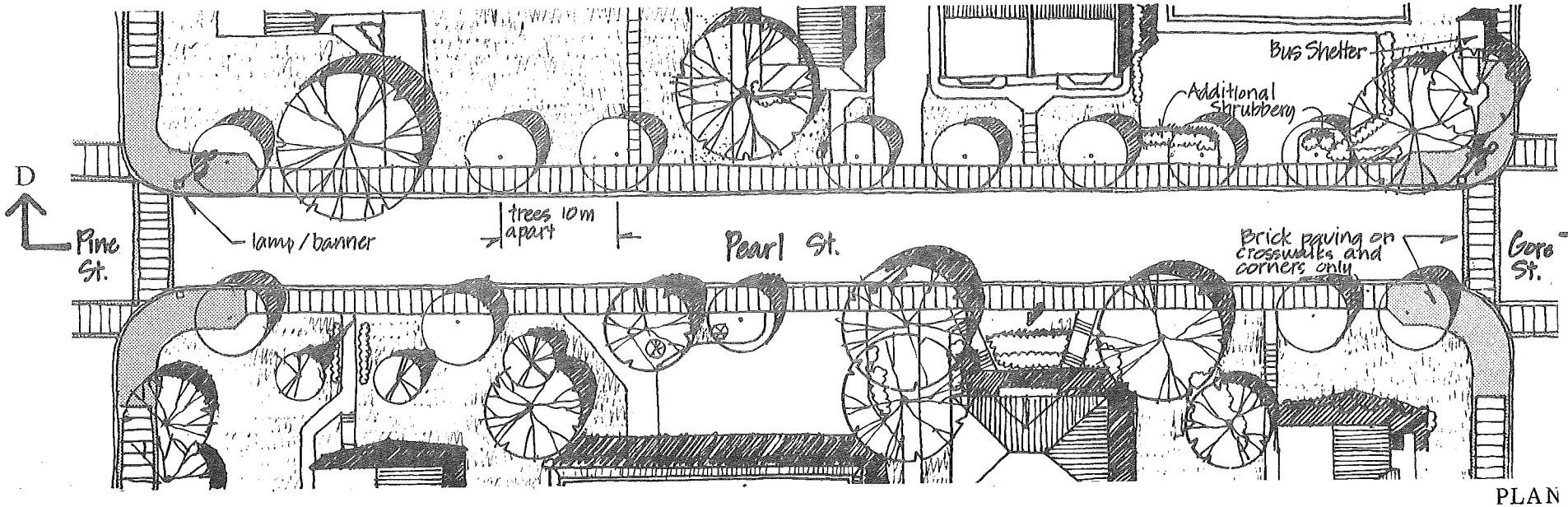
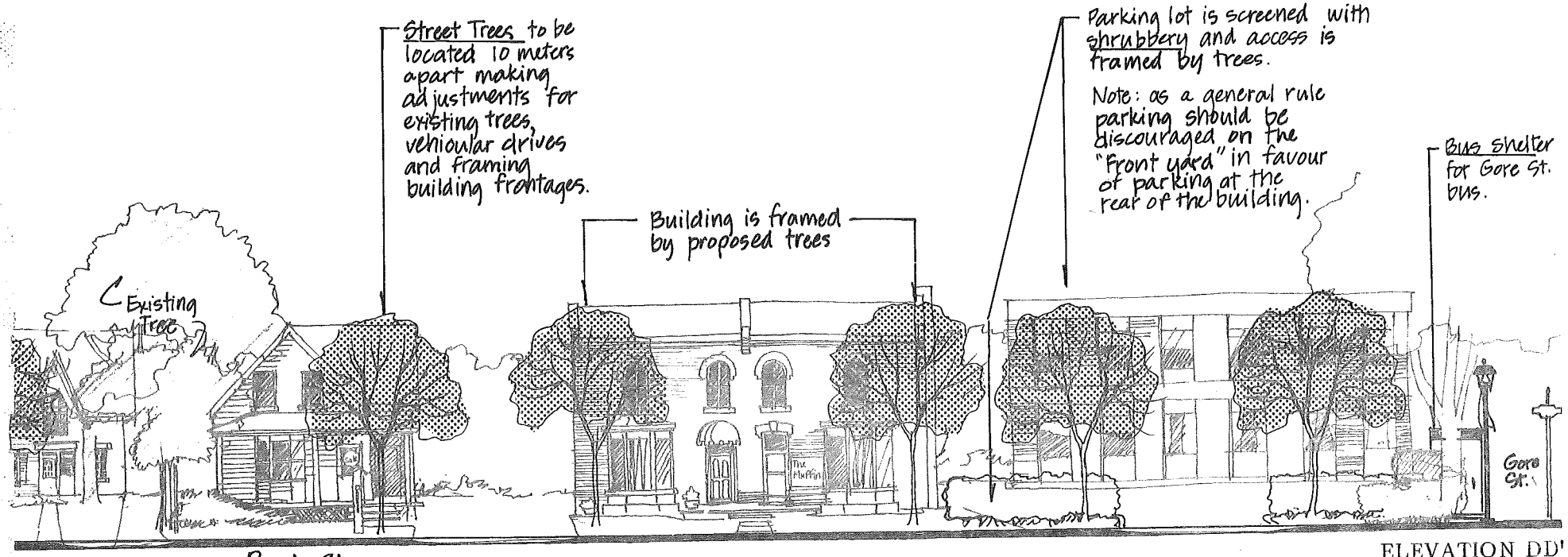


Fig. 59 RESIDENTIAL STREETSCAPE TREATMENT



PLAN



ELEVATION DD'

7.6 UTILITY AND OPEN SPACE CORRIDOR

As identified in Chapter 4.3, the open space corridor which follows the utility easement is an important cross downtown linkage which must be respected in all future developments.

The linkage to the east and west of the downtown area is substantially in place, and the primary concern is to ensure that the linkage is maintained through the central zone.

Figure 60 illustrates how it can be incorporated in three prototypical ways: along the edge of parking lots, through development, and beside streets. Where there is space, the pedestrian and bicycle paths are separated, buildings are set back from the street to provide extra width, and a designated cross walk is provided across streets even though not at an intersection.

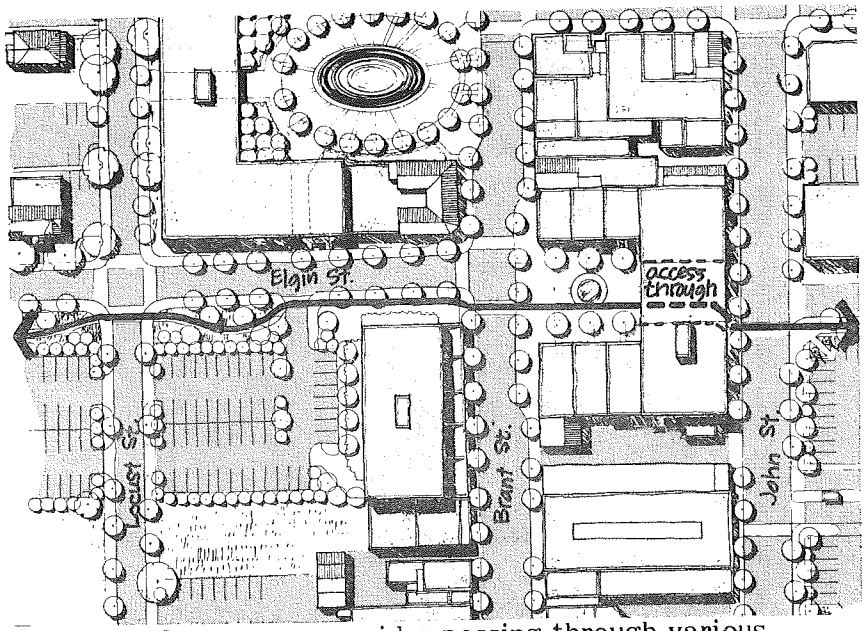


Fig. 60 Open space corridor passing through various development conditions

7.7 WATERFRONT

Burlington is a waterfront city, but like many other such communities could take far greater advantage of this relationship. Future development should use the waterfront as an asset and try to link the downtown area to it. The proposed Anchorage development, or something like it, should therefore be encouraged. The promenade on Spencer Smith Park should continue into the new development. The promenade should also be clearly connected back to the downtown areas at Brant and Elizabeth Streets since it is presently very isolated.

The overlap zone between Spencer Smith Park and the new development should be carefully designed to create a focal point at the foot of Brant Street with a view through to the waterfront and marine activities such as boat docks and a waterfront restaurant.

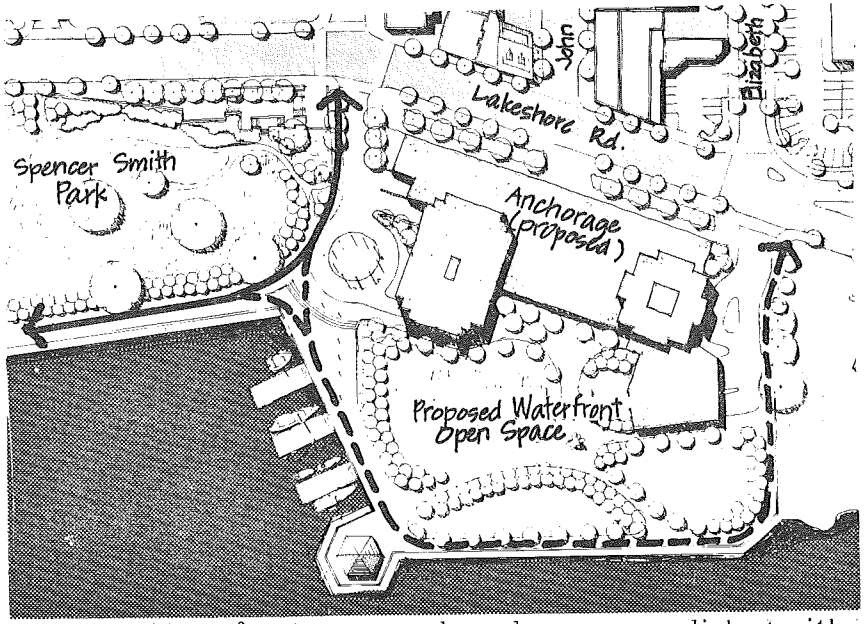


Fig. 61 Waterfront promenade and open space linked with future development

7.8 PARKING LOTS

One of the primary reasons why downtown Burlington presently has a scattered image is the proliferation of exposed surface parking lots. In order to retain the convenience of surface parking, but at the same time create some sense of place and cohesion in the downtown, parking lots should be heavily landscaped around their edges.

Figure 62 illustrates prototypical treatment. Tree species are selected and massed to develop the orchard theme to the extent possible within the width allowed. Pedestrian surface treatment starts within the parking lot and penetrates across the streets to the surrounding developments. The corners inaccessible to car access are treated as parkettes.

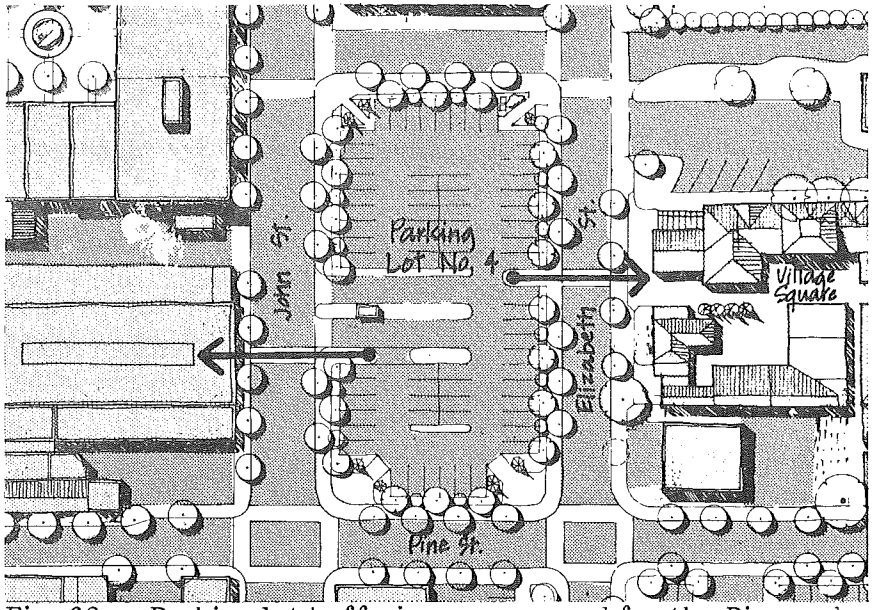


Fig. 62 Parking lot buffering as proposed for the Pine and Elizabeth Streets development phase

7.9 PARK EDGES

Most of the sidewalk improvements previously discussed are confined to the public domain but adjoin private development of some sort. Where the street fronts a park, however, the landscape function of the sidewalk improvement is fundamentally altered. In this case, the sidewalk improvement and the park should merge, so that there is a feeling of both the park coming right up to the street and also of the pedestrian surface flowing out into the park. A prime example of how this opportunity can be taken is the Centennial Fountain at Spencer Smith Park. Other possible locations for this kind of treatment occur at the Lyons Park, at the new Street Gateway, and at the west end of Spencer Smith Park.

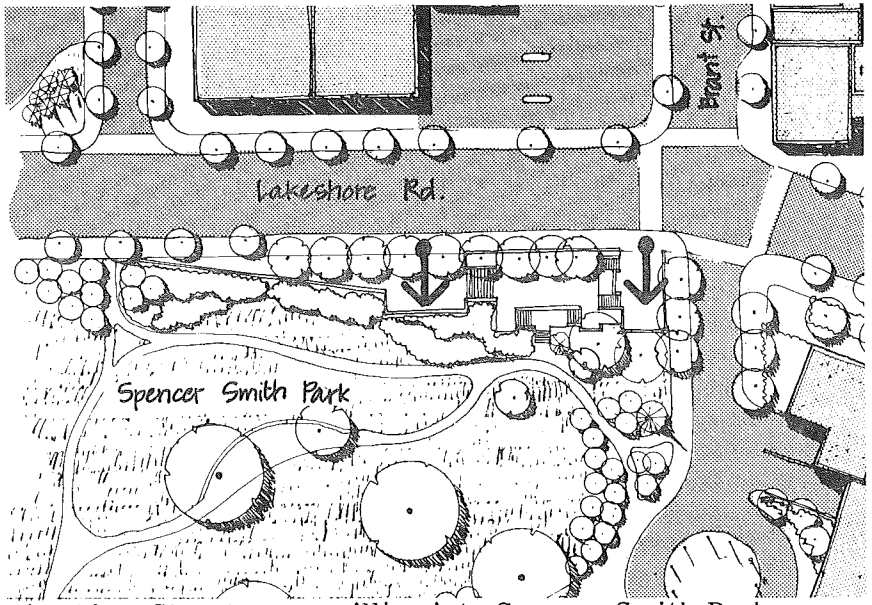


Fig. 63 Streetscape spilling into Spencer Smith Park

7.10 GATEWAYS

The prime purpose of a gateway is to alert people entering the area by car that they are crossing a threshold into a distinct place - Downtown Burlington.

To achieve this object, landscape features should be densely clustered.

There are four gateways of two types. Both Brant north at Baldwin, and Lakeshore Road at the CNR Tracks are linear, that is, the gateway occurs along a street without any special turning point or widening. Lakeshore Road at the east intersection of Lakeshore and Gore, and New Street at Lions Park both have a split in the road.

The plan layouts (Figures 64 and 65) show prototypical examples of each of these two conditions, illustrated by perspective views overleaf.

Figure 64 shows the situation at Brant and Baldwin. The typical sidewalk treatment begins at this point, but is modified slightly so that the first trees approached are placed on the far side of the sidewalk. This will create a funnelling effect into the normal treatment where the trees are on the curbside. In addition, banners are massed on both sides of the street, on both sides of the sidewalk, after passing Victoria Street. Crosswalks set into the street also create a threshold over which the traveller must pass to enter downtown.

The public right-of-way at this gateway is too confined to take any massed planting or floral displays. Figure 66 is an impression of what the driver would see on approach.

Figure 67 shows the situation at Lakeshore Road and the east intersection of Gore Street. In this case, there is sufficient space on the island and the verge to create a bigger planting display. The plan and perspective illustrate the potential of incorporating the word Burlington into a shrub and flower bed.

Special introductory planting occurs in advance of the typical treatment, which then continues onward into the downtown area. In this case there is greater space to accommodate flowering trees massed on either side of the road in the boulevard. Banner poles frame the roadway on both sides of each sidewalk.

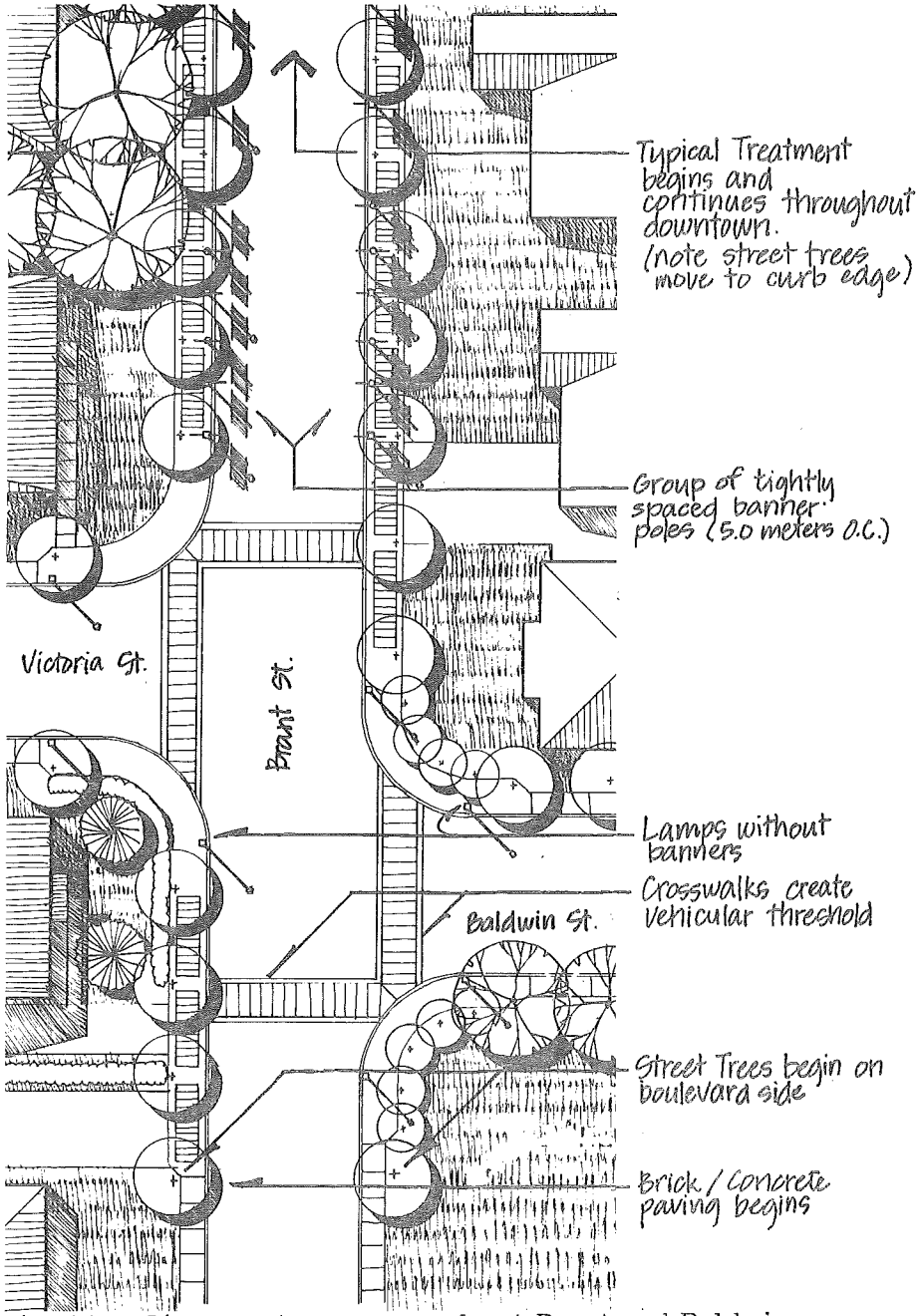


Fig. 64 Linear gateway example at Brant and Baldwin Streets

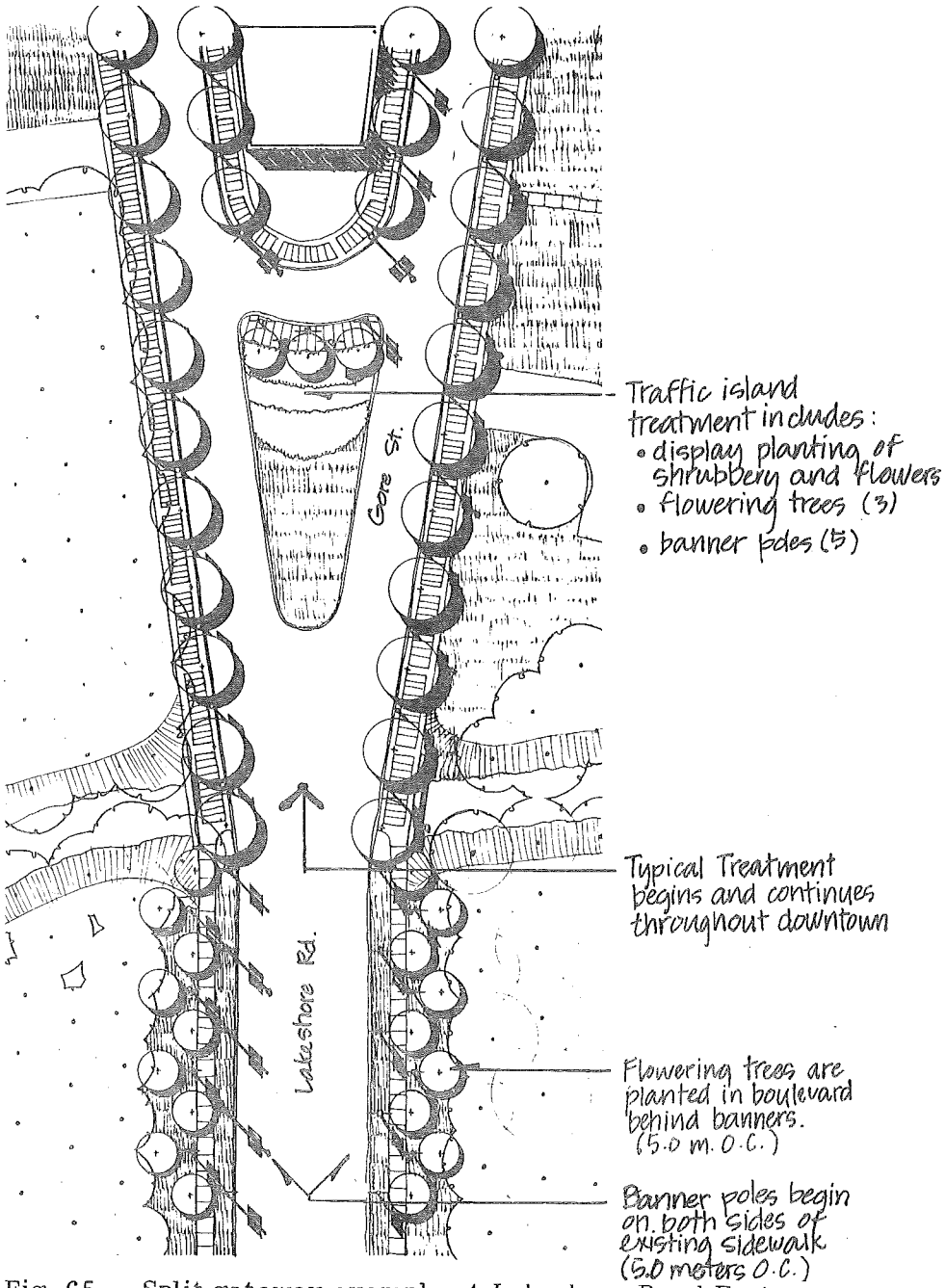


Fig. 65 Split gateway example at Lakeshore Road East and Gore Street

9.0 Phasing and Funding

9.1 ESTABLISHING IMPLEMENTATION PRIORITIES.

Implementing the proposals contained in this report will occur in four ways:

1. Streetscape improvement in association with the reconstruction of sub-grade services (sewers, water, hydro, gas, telephone) where the streetscape improvements represent a cost premium only over and above the cost that would be incurred in any event to demolish and restore the standard surface treatment.

2. Streetscape reconstruction implemented independently in cases where underground services have a long life expectancy but where streetscape improvements are a priority.

3. Public spaces developed in association with the major buildings such as large private developments (Anchorage, Parking Lot 5, Sims Square), expansion of the municipal centre (Civic Square) and regional park development (Spencer Smith Park).

4 Park redevelopment implemented through the Department of Recreation Services (Lions Park, Spencer Smith Park).

Phasing priority can be established by considering the greatest economy or the greatest effect. In economic terms, it makes sense to improve sidewalks as an addition to reconstruction of underground services. There is thus a strong reason why the services programme should dictate the phasing sequence.

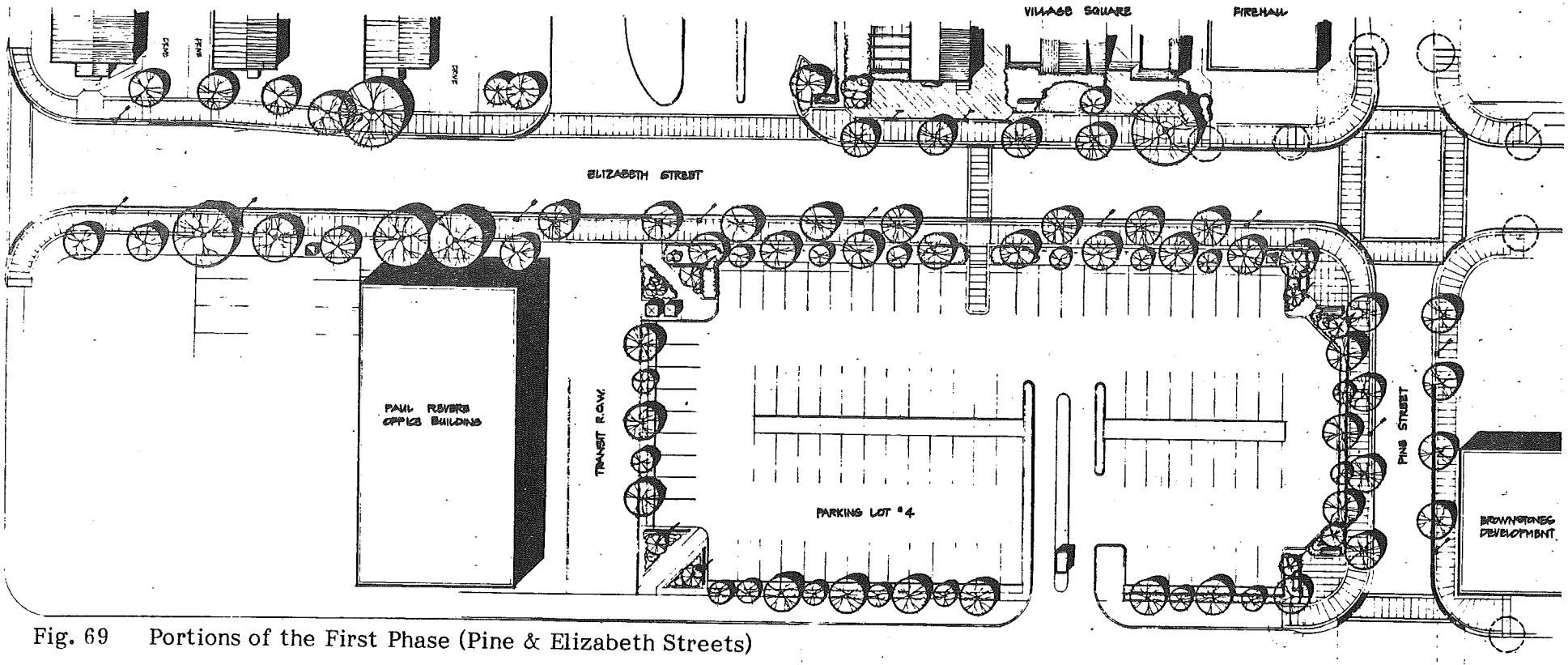


 Fig. 69 Portions of the First Phase (Pine & Elizabeth Streets)

However, this will not necessarily coincide with the priorities which would be established from considering the maximum effect or fulfilment of the basic objectives of the streetscape plan, i.e. to create a cohesive and effective total downtown area. The selected phasing sequence should therefore balance the benefits of economy and effect. Wherever possible, street improvements should follow the reconstruction of underground utilities, but high priority improvements should either influence the utility programme, or at least should not be indefinately postponed simply because no utility reconstruction is required.

The first phase has already been dictated by underground service improvements and includes Parking Lot #4 and portions of Pine and Elizabeth Streets. Figure 69 conceptually illustrates the improvements as they were tendered in 1981.

Construction was delayed a year and since that time the improvement area has been expanded to include Pine Street from Pearl Street to Elizabeth Street, Pine Street from John Street to Brant Street and Elizabeth Street from Pine Street to Lakeshore Road. This expanded improvement area is to be retendered for construction in 1982.

Reductions of the working drawings prepared for the area illustrated in Figure 69 are included in Appendix D.

9.2 FUTURE PRIORITIES

The following priority listing will not necessarily relate to the underground service priorities. It has been established on the basis of what construction will have the greatest effect on the downtown study area as a whole.

The highest priority areas which have the most far reaching effect on the streetscape improvement plan are:

1. Brant Street between Lakeshore Road and Caroline Street
2. Lakeshore Road between Locust and John Streets
3. An interim facelift for Parking Lot #5, such as the market/parking lot combination shown in Chapter 7.
4. Downtown gateways.
5. The Civic Square associated with City Hall expansion.

The creation of the Civic Square will be the single most effective action that can be taken in the downtown area to indicate a new era and improve the image of downtown. Either a permanent or temporary Civic Square could be put in place immediately, designed in such a way that it does not preclude the later development of the whole block in accordance with the site plan illustrated in Figures 53 and 54.

The second priority is to improve the remaining shopping streets with a primary image:

1. Brant Street north to Baldwin Street.
2. Locust Street from Lakeshore Road to Caroline Street.
3. John Street from Lakeshore Road to Caroline Street.
4. The side streets connecting Brant Street with John and Locust Streets.

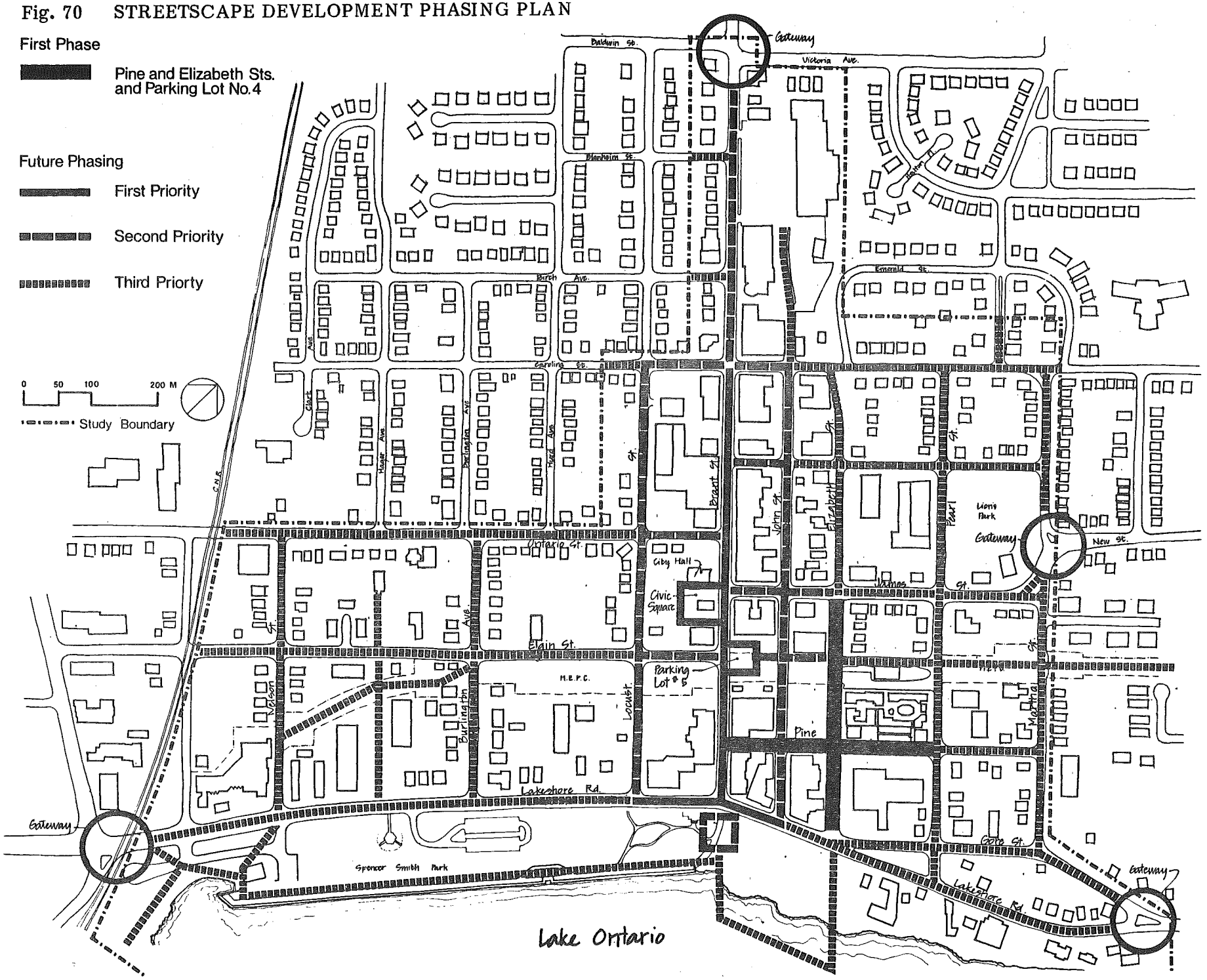
The third priority is to redevelop the remaining streets within the study area.

9.3 IMMEDIATE ACTION

Further action can be taken which are relatively independent of paved surface improvements, as follows:

1. The City can replace and incorporate new furnishings such as planters, waste receptacles and benches. These could be placed in interim locations awaiting further streetscape improvements. However, it must be pointed out that their real effect may be lost if they are placed in an untidy environment. In our view, the money would be better spent by properly and sequentially developing smaller areas than by scattering street furniture throughout. Accordingly, the first place to provide planters, waste receptacles and benches is during the reconstruction of Pine and Elizabeth Streets.

Fig. 70 STREETSCAPE DEVELOPMENT PHASING PLAN



2. The bus shelter programme could get underway immediately through further discussions with the advertising company prepared to put them in place.

3. A prime example of creating a maximum effect for a minimum expenditure is the existing banner programme. The new banners and fixings described in Section 6.9 should be added to the lamp standards planned for Pine and Elizabeth Streets. At that time, the banner shape throughout the downtown should be revised to suit so that they are narrower but longer than the existing ones.

4. Buffer planting to the parking lots could be accomplished prior to sidewalk improvements. This need not impede later underground construction if future utility planning is observed, and it will have a major effect. On a square foot comparison basis, buffer planting will be considerably cheaper than sidewalk paving: in the Pine and Elizabeth Street plan for instance, the budget for parking lot perimeter planting was about a quarter that of street improvements.

5. Renovation of the facades of private buildings can and should proceed immediately. The stores are, after all, the primary destination for most of the people downtown, and the effort spent in encouraging private owners to upgrade their buildings will be well worth it.

6. Continuation and expansion of other promotional efforts such as co-ordinated hours, advertising, sales promotions and sidewalk sales and seasonal events, will also develop the theme of downtown as an attractive destination.

It should be noted that interim measures should not be of such a scale that they impede permanent construction. Funds should not be spent doing half the job if this means the final job will be delayed.

9.4 FUNDING SOURCES

The main funding source for streetscape improvements is usually a combination of the municipality and the B.I.A., through tax levies. However, supporting funds from other sources can be obtained. The following list should serve as a starting point. There are various government assisted programmes, some providing capital funds and others for planning and design. A more detailed description of government programmes is included in Appendix E.

1. The Ontario Downtown Revitalization Programme is funded by the Provincial Ministry of Housing and provides partially recoverable, low interest loans for seed projects in the downtown.

2. The Neighbourhood Improvement Programme funded by the Provincial Ministry of Housing is a cost-sharing arrangement for repair of community facilities including streets, sidewalks and lighting. However, this does not include beautification, although if an area to be beautified does need essential repair, this portion can be pro-rated as a part of the total cost.

3. The Parks Assistance Programme funded by the Provincial Ministry of Natural Resources provides up to 50% cost-sharing of land acquisition and development. Portions of Spencer Smith Park and its planned expansion may apply.

4. The Community Recreation Centres Programme funded by the Provincial Ministry of Culture and Recreation provides assistance in building or upgrading community recreation centres. This would include outdoor skating rinks and might apply to the Civic Square.

5. The Heritage Conservation Programme set up by the Provincial Ministry of Culture and Recreation provides assistance towards the conservation, protection and preservation of heritage properties or buildings. The programme may apply to a few select properties in downtown Burlington, but it includes a restrictive covenant on the facade which private land owners may not wish to apply.

6. The Heritage Canada Foundation is funding a pilot programme in the Town of Perth for building facade restoration and renewal. The Programme presently provides professional assistance but no capital funding. Next year the programme will be expanded to include other communities and this might apply to Burlington.

7. The Access Programme by the Ministry of Culture and Recreation provides assistance for altering or replacing buildings and facilities to be suitable for use by the handicapped.

8. Service clubs and private donors may provide assistance for smaller identifiable facilities such as fountains for the handicapped and recreation facilities such as upgrading Lions Park.

9. Adjoining property owners may contribute funds to street improvements which directly benefit them.

10. The City of Burlington operates on a subsidy pursuant to the Public Transportation Act which includes funding assistance towards roadway construction and storm drainage.

11. Since the streetscape improvement should generate an improved development climate, the Municipality can expect increased tax revenues. It was calculated for the City of Belleville, for example, that Municipal funding of approximately $500,000 could be recouped in 3 years assuming a 20% increase in business and property values downtown. A major residential development in the downtown would do the same, and a major commercial redevelopment downtown would recoup the investment within a year and a half. Most downtowns which have executed improvement plans have experienced an increase in sales, development and property values.

9.5 COSTS

Extensive costing for streetscape work was prepared for the design of Pine and Elizabeth Streets preceding the preparation of this report.

The scope of the Pine and Elizabeth Streetscape work includes about 225m of street redevelopment (two sides), parking lot upgrading and parking lot buffering. One intersection will have four cross walks while two others will have only one each in this phase.

The lower two tender bids for this work (as shown in the working drawings in Appendix D) ranged between $179,982.65 to $196,371.40. This included boulevards, sidewalks and lighting fixtures.

Our quantity estimate was $170,680.00 for the same.

The City's Public Works Department has concluded that the tenders were high due in part of the small size of the job, and in part to the busy time of year when the tender was let. The expectation is that when the job is retendered (avoiding these problems) the prices will be in line with the quantity estimate.

By analyzing the tender we were able to establish yardstick costs for the various types of treatments for use in estimating future phases of implementation. These are listed below:

Typical Streetscape Treatment	$ 625.00/m
Special Streetscape Treatment	$1,050.00/m
Partial Streetscape Treatment	$ 475.00/m
Residential Streetscape Treatment	$ 275.00/m

These figures represent the cost per metre of each treatment along both sides of the street. Elements included are paving, tree planting, street lighting, banners and in some cases benches, planters, and waste receptacles in accordance with the proposals in Chapter 7.

Since these are 1981 dollars, the rate of inflation should be applied when doing future cost estimating.

These figures were generated from an example where the job was co-ordinated with the reconstruction of subgrade services.

An additional 20% should be added to cover the cost of demolition and other extras involved when these two types of work are not integrated.

Various unit costs of streetscape furnishings are summarized in Appendix B.

10.0 Conclusions

1. If the proposals in this report are implemented, downtown Burlington should be a source of pride to all citizens of the Municipality, an attractive destination, and a better place of business.

2. Implementation requires close co-operation between the City Planning Department, the City Public Works Department, and the Business Improvement Association. The Co-ordinating Committee could remain in operation and change its mandate to spearhead the implementation of these proposals.

3. The City should actively seek out developers for the development of Parking Lot #5 and Sims Square.

4. The City should incorporate the design of a Civic Square into the development of the municipal block as discussed in this report. This could be constructed in advance of any buildings.

5. Downtown gateways should be developed at the west, north, north-east and east extremities of the study area.

6. All public rights-of-way should be improved in accordance with the design guidelines of this report and implemented progressively each year.

7. Private redevelopment should be regulated so as to establish a continuous street frontage along the major commercial streets, including Brant Street, the south of John Street and portions of Caroline Street, Maria Street, Jane Street, Pine Street and Lakeshore Road.

8. A continuous waterfront promenade should be developed in the downtown area.

9. The hydro-electric power corridor should be developed as a cycle and pedestrian route.

10. Streetscape furnishing fitting the guidelines described in this report should be acquired.

11. Owners of existing commercial properties should be encouraged to renovate the facades in accordance with the design guidelines contained in this report.

Appendix A

RECOMMENDED PLANT MATERIALS

These lists represent a brief schedule of the trees and shrub types that are both readily available from various sources and deemed suitable for application in the major planting types.

Species (spp.) and/or cultivars (cvs.) are indicated for specific groups in which there exists a number of varieties exhibiting characteristics meeting the selection criteria for the major planting types. In cases such as these, selections should be made with an eye to ensuring an appropriate blend of colour, shape, size and texture.

Street Trees

Medium (10 - 14 in. tall)

Acer platanoides cvs. (C)
Tilia Cordata cvs. (C)
Gleditsia triaconthos 'Sunburst' (L)
Gleditsia triacanthos 'Skyline' (L)
Gleditsia triacanthos ' Shademaster' (L)
Ostrya virginiana (L)

Large (15+ in. tall)

Acer platanoides cvs. (C)
Acer rubrum (C)
Acer saccharum (C)
Fraxinus americana (C)
Fraxinus pennsylvanica 'Marshall's Seedless (C)
Quercus macrocarpa (C)
Quercus rubra

Coarse Foliage (C)
Light Foliage (L)

BUFFER PLANTING

Trees

Acer ginnala (S)
Aesculus parviflora (S)
Amelanchier canadensis (S)
Cercis canadensis (S)
Cornus kousa (S)
Cornus mas (S)
Elaeagnus angustifolia (S)
Quercus imbricaria (S)
Tilia cordata cvs. (S)
Acer platanoides 'Columnare' (Cl)
Fagus sylvatica 'Fastigiata' (Cl)
Picea omorika (Cl)
Pinus nigra (Cl)
Pinus sylvestris (Cl)
Quercus robur 'Fastigiata' (Cl)

Small Trees (S)
Columnar Trees (Cl)

Shrubs

Caragana arborescens (L)
Cornus alba cvs. (L)
Cornus racemosa (L)
Euonymus alatus (M)
Forsythia x intermedia (L)
Ligustrum amuense (L)
Ligustrum ibolium (L)
Conicera totarica (L)
Philadelphus coronarius cvs. (M)
Philadelphus virginaliz (L)
Prunus triloba 'multiplex' (L)
Prunus cistena (L)
Ribes alpinum (M)
Sorbaria sorbifolia (L)
Spirea spp. (L)
Syringa vulgaris cvs. (L) Small (S)
Viburnum spp. Large (L)

DISPLAY PLANTING

Trees

Cercis canadensis
Crataegus oxycantha cvs.
Magnolia x soulangiana
Malus spp.
Prunus serrulata 'Kwanzan'
Pyrus calleryana 'Bradford'
Syringa amuensis japonica

Shrubs

Cornus alba cvs. (L)
Cornus stolonifera cvs. (L)
Continus coggygria (L)
Cotoneaster dammeri (S)
Euonymus alatus (M)
Euonymus fortunei cvs. (S)
Forsythia x intermedia cvs. (L)
Forysthia suspensa (S)
Juniperus chinensis cvs. (Spr.)
Juniperus horizontalis cvs. (Spr.)
Juniperus sabina cvs. (Spr.)
Kerria japonica (S)
Philadlephus coronarius 'Aureus' (L)
Pinus mugo mugo (M)
Potentilla fuiticosa cvs. (S)
Prunus cistena (L)
Rosa multiflora (M)
Rosa rugosa (M)
Sorbaria sorbifolia (L)
Sprirea x bumalda cvs. (M)
Spirea x vanhouttei (L)
Taxus x media cvs. (Spr.)
Taxus x cuspidata cvs. (Spr.)
Viburnum spp.
Weigela 'Bristol Ruby' (M)

Appendix B

DIRECTOR TO STREETSCAPE FURNISHINGS
MANUFACTURERS AND DISTRIBUTORS

	PRODUCT/UNIT COST	MANUFACTURER/DISTRIBUTOR	COMMENTS
Tree Guards	Wrought iron tree guard ($125.00 - $160.00 each depending on the type selected)	Braun Nursery Ltd., R.R.#2 Mount Hope, Ontario	These are inexpensive and well made.
Lighting	Moldcast "Traditional Paricline" ($1,417.00 each P.U.C. price, includes vandal proof lense and electrical outlet at ground level)	Moldcast Inc., c/o N. Rutenburg Sales Ltd. Rexdale, Ontario	We know of no other equivalent product.
	Holophane RSL 350 ($500.00 - $600.00 each P.U.C. price, outlet at grade not included)	The Holophane Co. Ltd. 1620 Steeles Avenue Bramalea, Ontario	
Brick Paving	McFarren Tartan Brick Pavers (single and double sizes required) ($80.00 - $160.00 sq.m. installed with concrete base. Price varies with difficulty of installation)	F.B. McFarren Ltd. c/o Canada Brick Co. Streetsville, Ontario	The McFarren Paver provides better grip for pedestrians in ice conditions.
	Clay brick pavers, both single and double sizes. (same price range)	Domtar Construction Materials Limited Malton, Ontario	
	Clay brick pavers, both single and double sizes. (same prices)	Thames Valley Brick & Tile Toronto, Ontario	
Seating	Harbour front bench, freestanding or fixed base. ($620.00 each for 6'0" bench plus $800.00 initial cost to personalize the support casting for all benches)	Street Seat Systems Toronto, Ontario	We know of no other bench of this quality in this thematic style which is comparable.
	Custom bench for Burlington (costs will vary)	Street Seat Systems Toronto, Ontario	Both firms have been known to do this type of work.
	Custom bench for Burlington (costs will vary)	Toronto Fabricating Co. Toronto, Ontario	

	PRODUCT/UNIT PRICE	MANUFACTURER/DISTRIBUTOR	COMMENTS
Planters and Waste Receptacles	Reinforced concrete planters and waste receptacles ($40.00 - $350.00 each for planters) ($160.00 each for waste receptacles)	Alpha Precasts c/o Knecht & Berchtold Ltd. Brampton, Ontario	Knecht & Berchtold have indicated that personalizing products with cast-in identification is possible and can be negotiated.
		alternative	
		Expo Precast Expo Precast Ontario Ltd. Thornhill, Ontario	
Identification Signs	Combination painted metal, plastic or wood and metal support system (Cost will vary with size and construction technique)	King Plastics Ltd. Mississauga, Ontario	The actual construction options of each sign should be investigated before a manufacturer is selected.
		Sign Pro Systems Intl. Mississauga, Ontario	
		SprectraLite 70 Ltd. Toronto, Ontario	
		Signtech Inc. Mississauga, Ontario	
Street Signs	Street Signs (approximately $30.00 each)	Owl-Lite 33 Briden Drive Rexdale, Ontaro	Distributors of standard old style street sign.
	Street Signs (costs vary depending on construction)	Abel Machinery 91 Station Street Unit #5 Ajax, Ontario	Manufacturer of special street signs for City of Toronto
Banners	Custom design and fabrication of banners and support system (costs will vary, although we estimate the bracket and two banners should be in the $500.00 range)	John Ewing & Co. Ltd. Scarborough, Ontario (Flag Pole Division)	Manufacturers of banners for Yonge Street, Toronto

	PRODUCT/UNIT COST	MANUFACTURER/DISTRIBUTOR	COMMENTS
Bollards	Marine style lamp/bollards ($600.00 - $800.00 each)	Street Seat Systems Toronto, Ontario	
	Marine style lamp/bollards ($200.00 each, P.U.C. price)	Emoh Sales and Manufacturing Ltd. Rexdale, Ontario	
Bicycle Rack	Iron bicycle rack ($238.00 for 12'0" model)	Paris Playground Inc. Paris, Ontario	An inexpensive and adequate product
	Precast concrete bicycle rack (prices vary)	Most precast concrete manufacturers	
Telephone Kiosks	ADCO (costs not applicable)	Acoustics Development Corporation of Canada Burlington, Ontario	
Bus Shelters	Bus shelter with illuminated advertising display board ($6,000.00 each, although cost sharing is available from the distributor)	Daytech Manufacturing Ltd. Downsview, Ontario	Manufacturers of the shelter
		Media Comm Toronto, Ontario	Manufacturers of advertising signs and distributor of sign/bus shelter package
Newspaper Vending Machine	Multiple vending machine (price not available)	Kaspar Wire Works Berkley-Small Inc. Mobile, Alabama	We know of no local manufacturers or distributors
Drinking Fountains	'Haws' precast concrete handicapped access fountain ($1,800.00 each)	Haws (California) c/o Lanpar Corporation Markham, Ontario	The only known source of this type of product.

Appendix C

STREET LIGHTING SPECIFICATIONS

The chart below summarizes the lighting levels, mounting-heights, and pole spacings in various situation for the Moldcast, Traditional Pericline, street lamp assuming the use of a 150 w high pressure sodium source.

	Average Illumination Maintained (Foot Candles)	Average to Minimum Ratio	Minimum Illumination (Foot Candles)	Maximum to Minimum Ratio	Mounting Height (Feet) Metres	Road Width (Feet) Metres	Pole Spacing (Staggered) (Feet) Metres
Residential Treatment	.9	4.1:1	.22	18:1	(15) 4.57	(26) 7.92	(100) 30
Partial Treatment	1.13	1.5:1	.8	5:1	(15) 4.57	(35) 10.6	(65) 20
Typical and Special Treatment	2.0	1.1:1	1.8	2.2:1	(15) 4.57	(44) 13.4	(32.5) 10

ADDITIONAL NOTES:

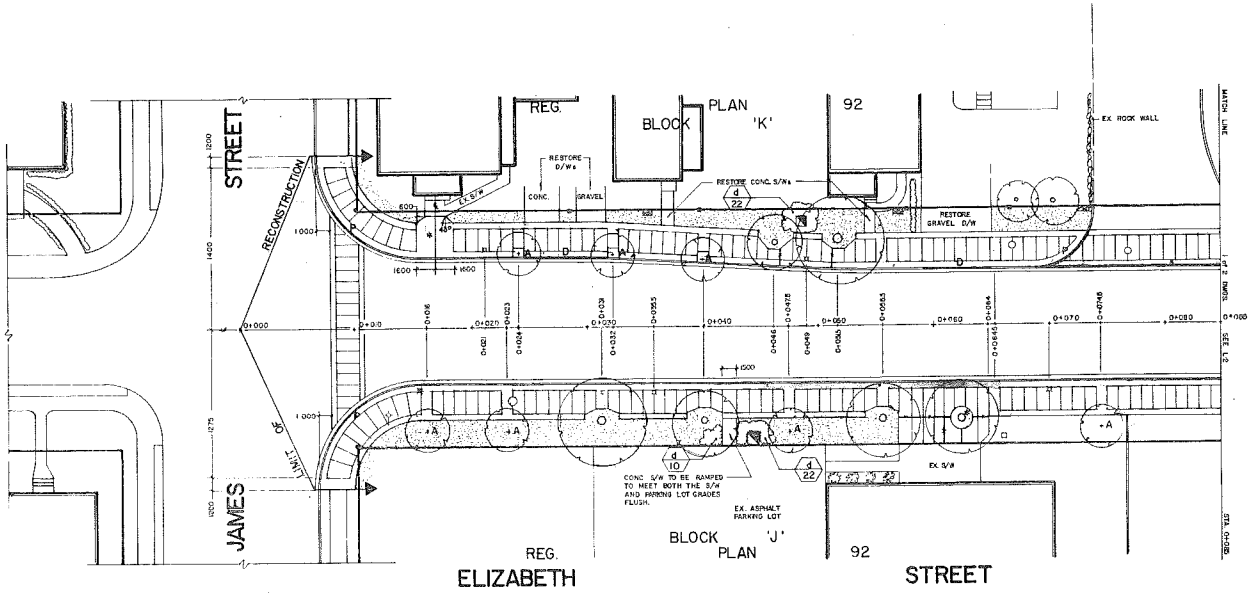
1. Average Illumination Maintained: Figures listed above are based on guideline standards provided to us by the City of Burlington at the outset of the study. In some cases the Average Illumination Maintained for Typical and Special Treatment Areas as outlined in Figure 19 may be reduced to the 1.2 footcandles range since the higher output of light is not warranted.

2. Street Lamp Spacing sets the rhythm for both tree planting and sidewalk paving. Should the spacing have to be altered for any reason, steps should be taken to ensure that trees do not get spread out significantly or be spaced irregularly. Since the paving accommodates both tree planting and lamp standards, the effect on the pattern should also be checked to ensure that the pattern may successfully be adapted.

3. Street Lamp Product Alternatives may be considered for reasons of lower initial and maintenance costs. We would find this regretable since we know of no other lamp which provides the lighting characteristics of the Moldcast street lamp. Of the alternatives available, the Holophane RSL 350 lamp, when used with a cylindrical support standard with a luminaire mounting height of 15'0" satisfies the thematic guidelines outlined in Chapter 6.

Appendix D

WORKING DRAWINGS FOR STREETSCAPE IMPROVEMENTS TO PORTIONS OF PINE AND ELIZABETH STREETS (PREPARED MAY 1981)



GENERAL NOTES: (FOR SHEETS L1-L6)

1. ALL GENERAL NOTES BELOW SHALL BE REGARDED AS PART OF THE GENERAL NOTES ON DWG 'ST', CONTRACT 81-5.
2. REFER TO THE DWGS LISTED BELOW AND NOTE RELATED WORK, CURB AND ROAD ELEVATIONS, AS WELL AS LOCATIONS OF ALL STRUCTURES AND SERVICES (BOTH ABOVE AND BELOW GRADE) INCLUDING BUT NOT LIMITED TO HYDRO, GAS, SEWERS AND TELEPHONE. ACTUAL LOCATIONS OF THE ABOVE MAY VARY AND THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND REPORTING ALL DESCREPANCIES.

   REFERENCE DWGS.: ST, ME-2 CONST. SHEETS 3&4, ME-4 CONST. SHEETS 1&2
3. DEMOLITION AND SITE PREPARATION INCLUDES THE GENERAL REMOVAL FROM THE SITE OF ALL EXISTING ITEMS NOT INCORPORATED INTO THE WORK, INCLUDING BUT NOT LIMITED TO VEHICULAR AND PEDESTRIAN PAVING, TREES, TRAFFIC SIGNS, LIGHT FIXTURES, AND IS COMMENSURATE UPON APPROVAL BY THE ENGINEER.
4. AREAS WHERE S/W PAVING PATTERNS SHALL BE DETERMINED ON SITE SHALL BE NOTED THUS + AND WILL REQUIRE APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
5. REFER TO 'STANDARD DETAILS' FOR ALL CURBS AND CURBS & GUTTERS.

LEGEND (FOR SHEETS L1, L2)

PLAN SYMBOL	DESCRIPTION	DETAIL NO. / SHEET NO.
☼	LOCATION OF LAMP STANDARD FOOTING	2 / L-6
⊡B	LOCATION OF BOLLARD (GENERAL LOCATION SHOWN. FINAL LOCATION TO BE DETERMINED ON SITE BY LANDSCAPE ARCHITECT)	4 / L-4
	LOCATION OF EXISTING TREE (LESS THAN 150 mm CAL.)	– / –
ACTUAL TRUNK DIA.	(GREATER THAN 150 mm CAL.)	– / –
SH SYMBOL	PROPOSED DECIDUOUS TREE	4 / L-6
SH SYMBOL	EXISTING TREE RELOCATION	– / –
SP SYMBOL	PROPOSED CONIFEROUS TREE	5 / L-6
EA 30	SYMBOL (REFER TO SCHEDULE) PROPOSED SHRUBBERY No. of SHRUBS PER GROUPING	3 / L-6
	NON-PAVED BOULEVARD TO BE RE-STORED WITH MIN. 80mm TOPSOIL & SOD	– / –
P	MODIFIED ACCESS CURBS P - PARAPLEGIC RAMP D - DRIVEWAY RAMP	P-7 D-1 / P-L5 D-L5
	EXPANSION JOINT (OTHER THAN THOSE CALLED FOR ON DWGS. L3-L6)	5 / L-4
	PROPOSED CROSSWALK	1 / L-5
	PROPOSED SIDEWALK -NOTE SPECIAL TREE PLANTING DETAIL	1 / L-4

PLANTING SCHEDULE (FOR SHEETS L1, L2) APPROVAL OF PLANT MAT'L TO BE MADE BY LANDSCAPE ARCHITECT PRIOR TO SITE DELIVERY.

SYMBOL	BOTANICAL NAME	COMMON NAME	CALIPER	HEIGHT OR SIZE	ROOT CONDITION	SPACING	MIN. BRA. HEIGHT	REMARKS	TOTAL NO.
TREES									
A	ACER PLATANOIDES 'Emerald Queen'	EMERALD QUEEN MAPLE	80 mm	–	S & B	–	2000mm	UNIFORM CROWN AND CHARACTER	18
B	ACER PLATANOIDES 'Crimson King'	CRIMSON KING MAPLE	"	–	"	–	"	"	14
C	MALUS 'Radiant'	RADIANT CRAB APPLE	"	–	"	–	1500mm	"	5
D	PYRUS CALLERYANA 'Bradford'	BRADFORD PEAR	"	–	"	–	"	"	17
E	PINUS NIGRA	AUSTRIAN PINE	–	1800mm	"	–	–	"	9
F	GLEDITSIA TRIACANTHOS 'Skyline'	SKYLINE HONEYLOCUST	"	–	"	–	2000mm	"	4
SHRUBS						mm			
a	EUONYMUS ALATUS	BURNINGBUSH	–	600mm	potted	1000 O.C.	–	"	238
b	PHILADELPHIS CORONARIUS 'Aureus'	GOLDEN MOCK ORANGE	–	"	"	800 O.C.	–	"	226
c	RIBES ALPINUM	ALPINE CURRANT	–	"	"	300 O.C.	–	"	64
d	RIBES AUREUM	FLOWERING CURRENT	–	"	"	300 O.C.	–	"	112
e	PINUS MUGO MUGO	MUGO PINE	–	600 spr.	"	–	–	"	19
f	COTONEASTER DAMMERI 'Coral Beauty'	CORAL BEAUTY COTONEASTER	–	500 spr.	"	–	–	"	21

NOTES:

ALL MEASUREMENTS MUST BE CHECKED AT THE SITE. DO NOT SCALE DRAWINGS - FIGURED DIMENSIONS TO BE OBSERVED - READ THIS DRAWING IN CONJUCTION WITH GENERAL ARCHITECTURAL PLANS AND OTHER RELATED DOCUMENTS. THE ARCHITECT TO BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY FOUND THEREIN

REVISIONS

DATE	DESCRIPTION

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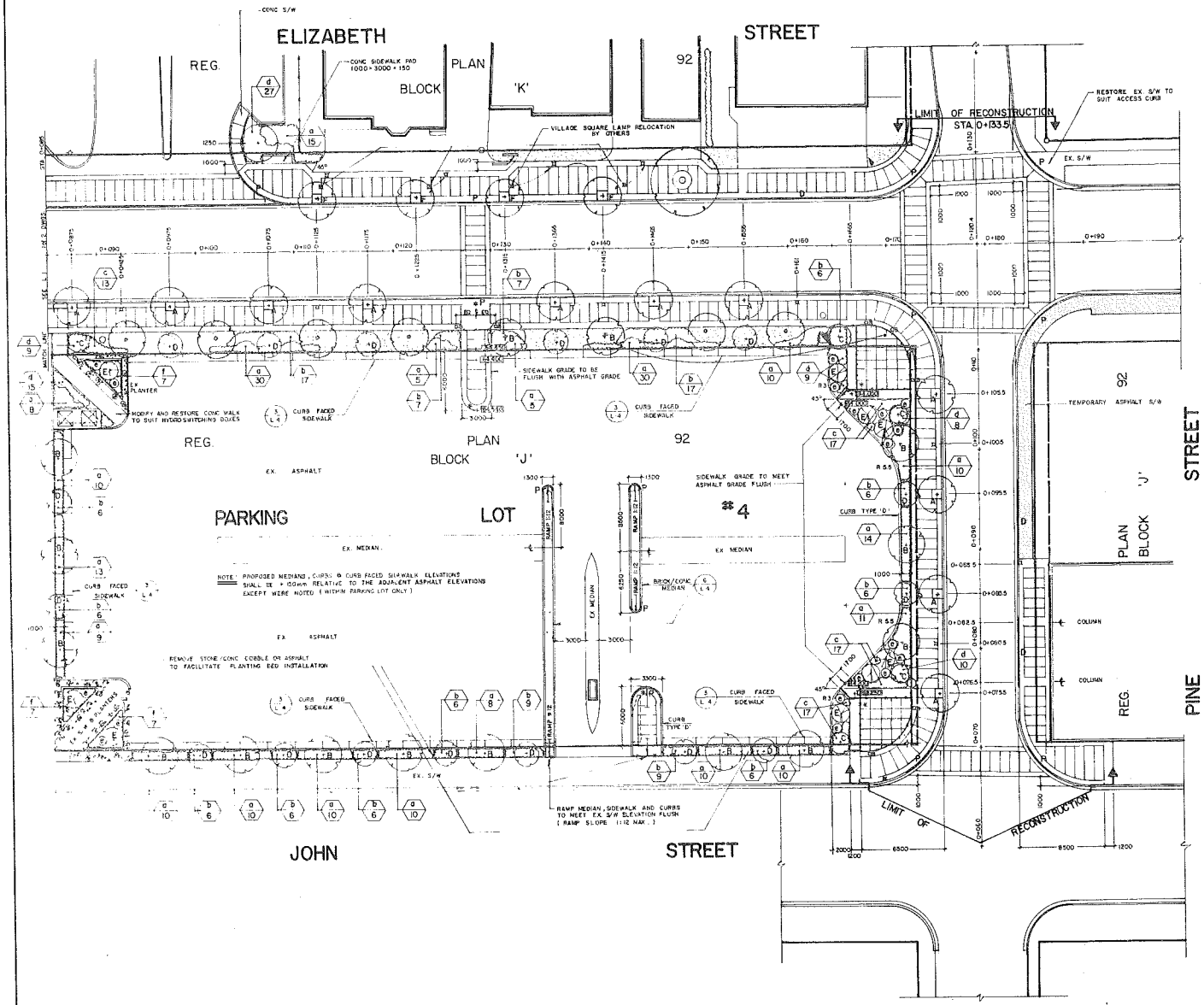
CITY OF BURLINGTON
PINE AND ELIZABETH STS.
STREETSCAPE CONSTRUCTION

LAYOUT AND PLANTING PLAN

Scale	1:200
Date	MAY 19/1981
Drawn	JBH
Approved	JBH
Project No.	805
Client's Project No.	

North

Dwg No. L-1



NOTES:

ALL MEASUREMENTS MUST BE CHECKED AT THE SITE DO NOT SCALE DRAWINGS FIGURED DIMENSIONS TO BE OBSERVED READ THIS DRAWING IN CONJUNCTION WITH GENERAL ARCHITECTURAL PLANS AND OTHER RELATED DOCUMENTS THE ARCHITECT TO BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY FOUND THEREIN

REVISIONS

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CITY OF BURLINGTON
PINE AND ELIZABETH STS.
STREETSCAPE CONSTRUCTION

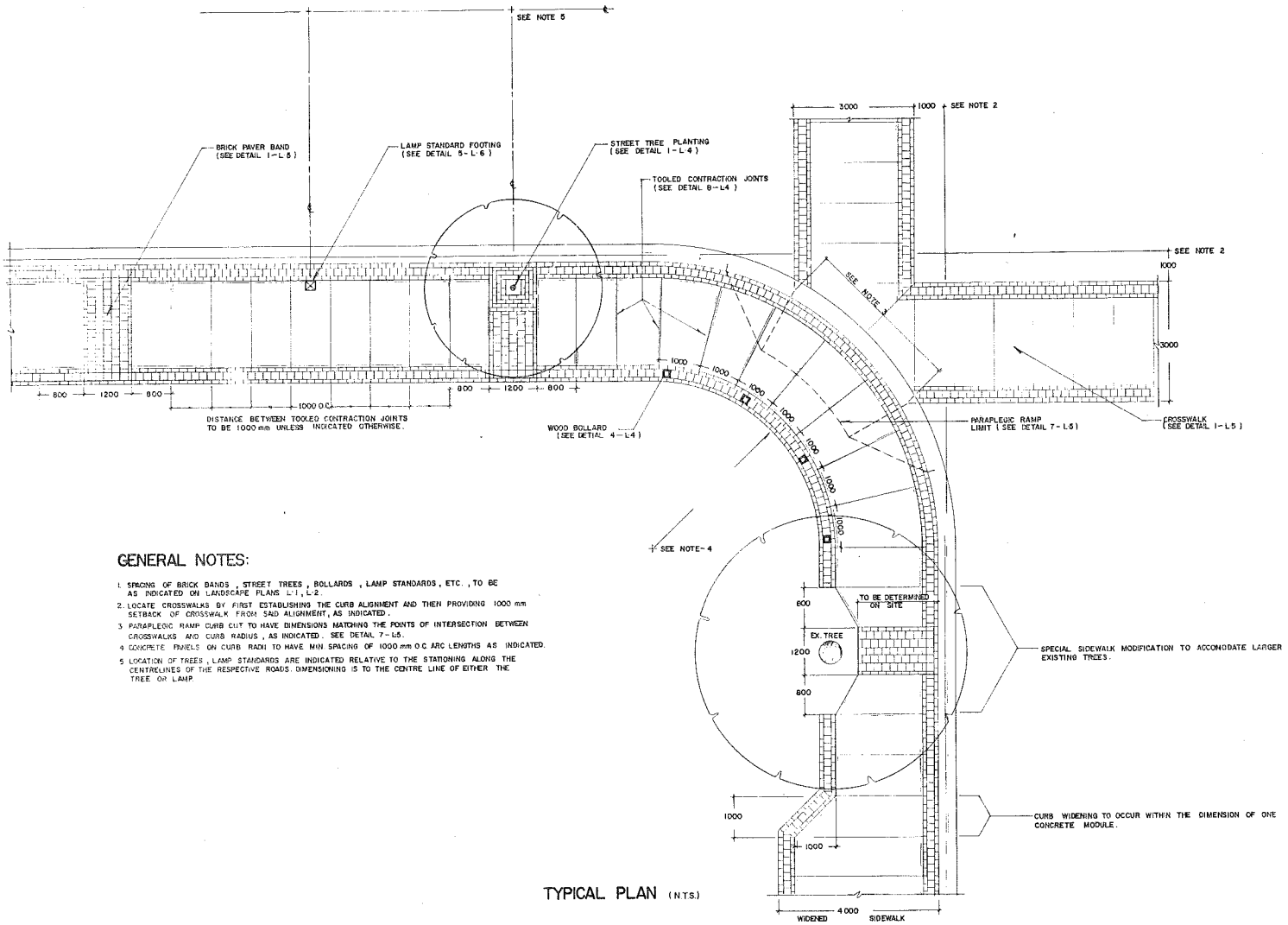
LAYOUT AND PLANTING PLAN

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Date	MAY 19, 1981
Drawn	JBH
Approved	JBH
Project No.	8015
Client's Project No.	

North

Dwg No. L-2

D2



GENERAL NOTES:

1. SPACING OF BRICK BANDS, STREET TREES, BOLLARDS, LAMP STANDARDS, ETC., TO BE AS INDICATED ON LANDSCAPE PLANS L-1, L-2.
2. LOCATE CROSSWALKS BY FIRST ESTABLISHING THE CURB ALIGNMENT AND THEN PROVIDING 1000 mm SETBACK OF CROSSWALK FROM SAID ALIGNMENT, AS INDICATED.
3. PARAPLEGIC RAMP CURB CUT TO HAVE DIMENSIONS MATCHING THE POINTS OF INTERSECTION BETWEEN CROSSWALKS AND CURB RADIUS, AS INDICATED. SEE DETAIL 7-L5.
4. CONCRETE PANELS ON CURB RADII TO HAVE MIN. SPACING OF 1000 mm O.C. ARC LENGTHS AS INDICATED.
5. LOCATION OF TREES, LAMP STANDARDS ARE INDICATED RELATIVE TO THE STATIONING ALONG THE CENTRELINES OF THE RESPECTIVE ROADS. DIMENSIONING IS TO THE CENTRE LINE OF EITHER THE TREE OR LAMP.

TYPICAL PLAN (N.T.S.)

No	DATE	BY	REVISION

DESIGN SR JH | DATE MAY / 81 | REFERENCES L-1 – L-6
DRAWN " "
SCALE NTS

APPROVALS
MUNICIPAL
REGIONAL

CONSULTANT du Toit Associates Ltd.
47 Colborne Street, Toronto, Ontario
M5E 1E3 • Tel. (416) 864 1876

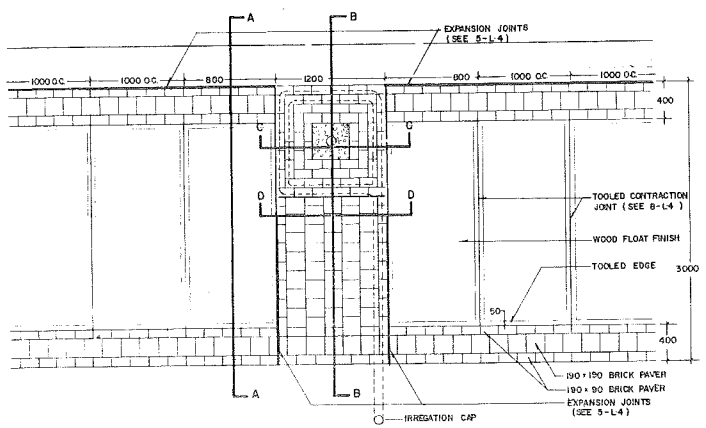
MUNICIPALITY
CITY OF BURLINGTON

TITLE
PINE ST. & ELIZABETH ST.
TYPICAL STREETSCAPE LAYOUT PLAN

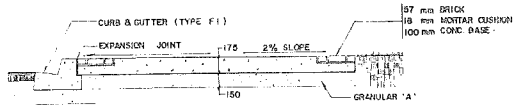
L-3

SHEET 3 OF 6

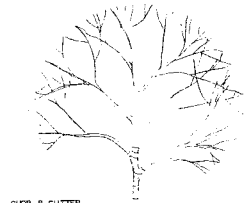
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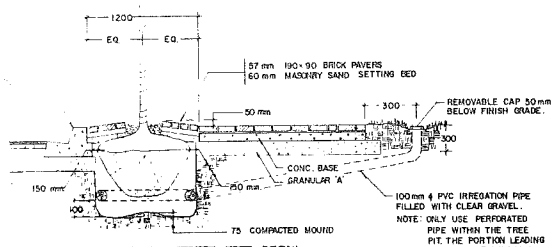
1 L-4 TYPICAL SIDEWALK



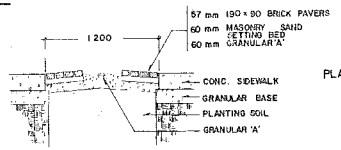
SECTION: A-A TYPICAL SIDEWALK



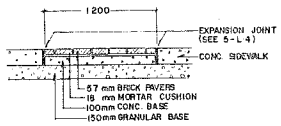
NOTES:
1. SEE 6-L-6 FOR GENERAL NOTES AND INSTRUCTIONS RELATED TO DECIDUOUS TREE PLANTING.
2. GUYING / 'T' BARS NOT REQUIRED FOR TREES PLANTED IN PAVED BOULEVARDS.
3. IRRIGATION PIPE AS SHOWN BELOW SHALL BE INSTALLED WITH ALL TREES IN PAVED AREAS.



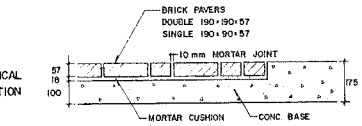
SECTION: B-B TYPICAL STREET TREE DETAIL



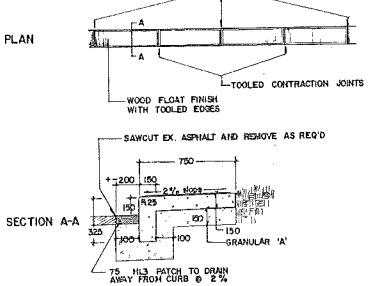
SECTION: C-C TYPICAL TREE HOLE



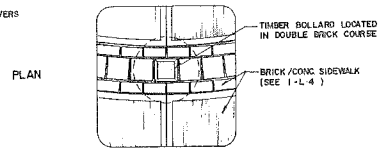
SECTION: D-D TYPICAL WIDE BRICK BAND

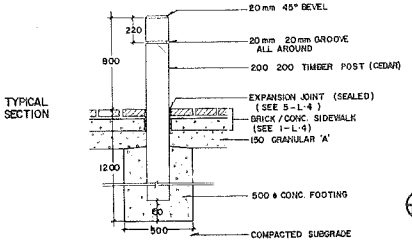


2 L-4 BRICK PAVING DETAIL (on Sidewalks)

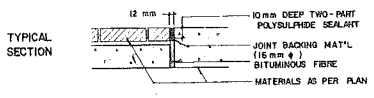


3 L-4 CURB FACED SIDEWALK DETAIL



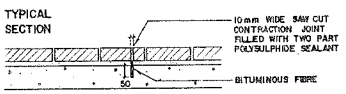


4 L-4 TIMBER BOLLARD DETAIL



5 L-4 EXPANSION JOINT DETAIL

6 L-4 MEDIAN STRIP DETAIL



7 L-4 SAWCUT CONTRACTION JOINT DETAIL



8 L-4 TOOLED CONTRACTION JOINT DETAIL

No.	DATE	BY	REVISION	DESIGN: S.R. J.H.	DATE: MAY/81
				DRAWN:	REFERENCES: L-1 - L-6
				SCALE: N.T.S.	

APPROVALS
MUNICIPAL
REGIONAL

CONSULTANT
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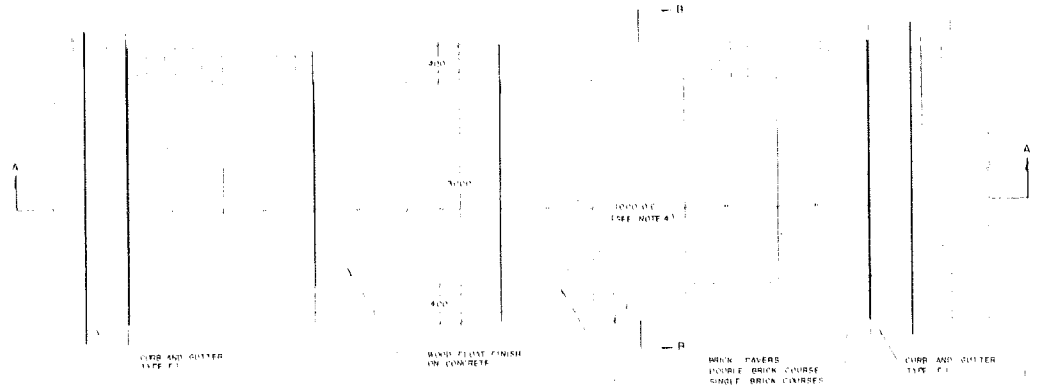
MUNICIPALITY
CITY OF BURLINGTON

TITLE
PINE ST. & ELIZABETH ST.
LANDSCAPE DETAILS

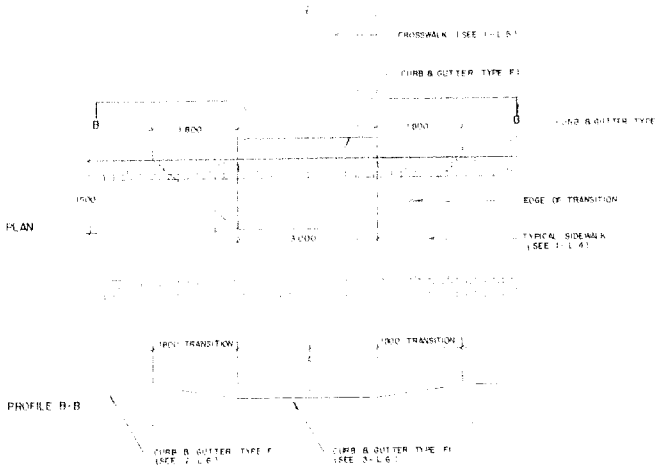
L-4

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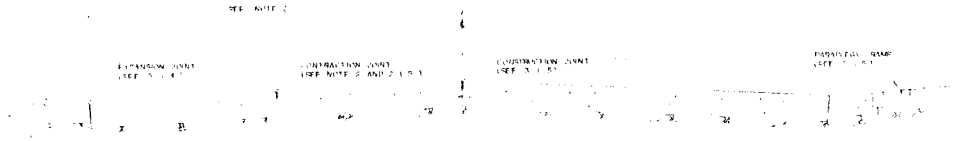
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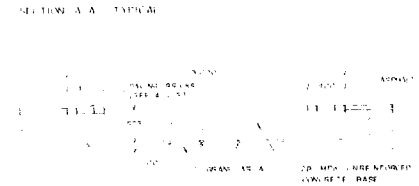


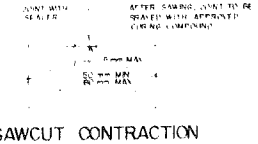
(L5) PEDESTRIAN CROSSWALK DETAIL



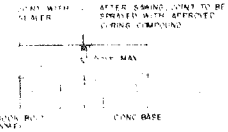
(L5) PARAPLEGIC RAMP DETAIL



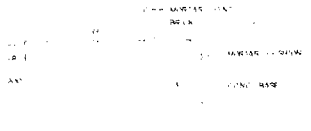




(L5) SAWCUT CONTRACTION JOINT DETAIL



(L5) CONSTRUCTION JOINT DETAIL



(L5) BRICK PAVING DETAIL
(on Crosswalks)



(L5) CROSSWALK CURB-CUT DETAIL



(L5) HOOK BOLT DOWEL DETAIL

GENERAL NOTES:

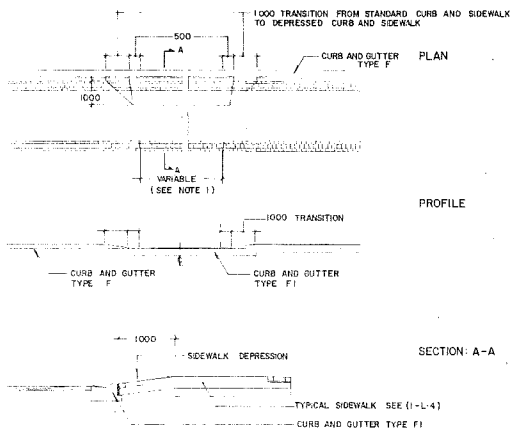
1. HOOK BOLT DOWEL TO BE SPACED 600 C.C. ALONG CONSTRUCTION JOINT.
2. CONTRACTION JOINT TO BE CONSTRUCTED WHERE THE DISTANCE OF CONSTRUCTION JOINT FROM CURB AND GUTTER EXCEEDS 4500.
3. CONSTRUCTION JOINT TO LOCATED AT ℄ OF ROAD OR AT THE CHANGE OF SLOPE IN THE ROAD GRADE.
4. ALL JOINTS TO BE LOCATED ON A ONE METRE MODULE RELATED TO THE CENTRE LINE. DECORATIVE SAW CUTS SHALL BE MADE ON EACH MODULE WHERE FUNCTIONAL JOINTS ARE NOT REQUIRED. DECORATIVE CUTS SHALL BE 20mm DEEP AND 5mm WIDE AND SEALED WITH AN APPROVED CURING COMPOUND AFTER SAWING.

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PINE ST. & ELIZABETH ST.
LANDSCAPE DETAILS

CITY OF BURLINGTON

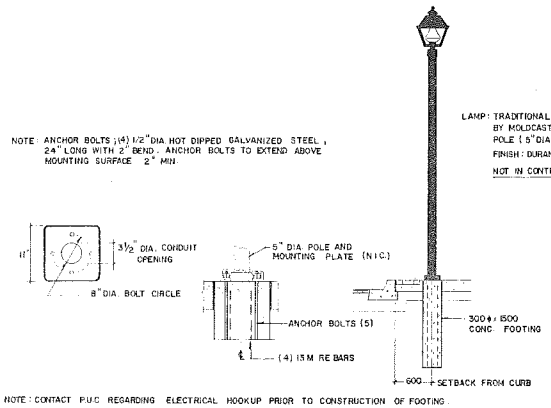
L-5



NOTES:

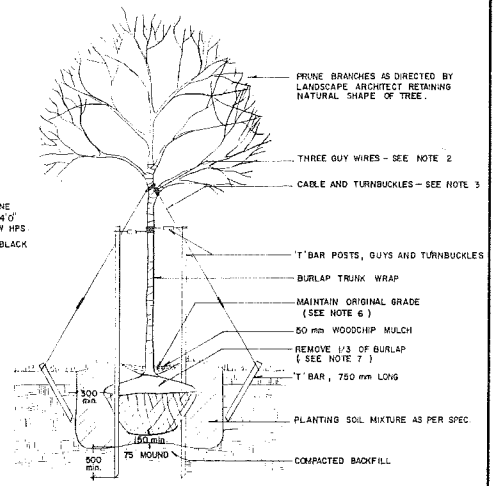
1. SINGLE DRIVEWAY - 3.5 M MIN. DEPRESSED CURB
   DOUBLE DRIVEWAY - 5.5 M MIN. DEPRESSED CURB
2. FOR INDUSTRIAL AND COMMERCIAL DRIVEWAYS REINFORCEMENT FOR SIDEWALKS TO BE 150 150 6 6 W.M., PLACED 50 mm FROM BOTTOM
3. CONCRETE TO BE 25 MPa AT 28 DAYS WITH 5% TO 7% AIR ENTRAINMENT.

(1/L6) DRIVEWAY RAMP



NOTE: CONTACT P.U.C. REGARDING ELECTRICAL HOOKUP PRIOR TO CONSTRUCTION OF FOOTING.

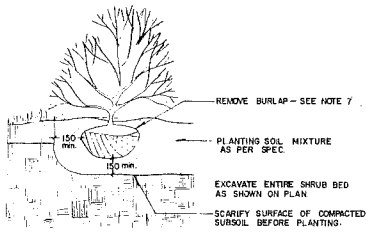
(2/L6) LAMP STANDARD FOOTING DETAIL



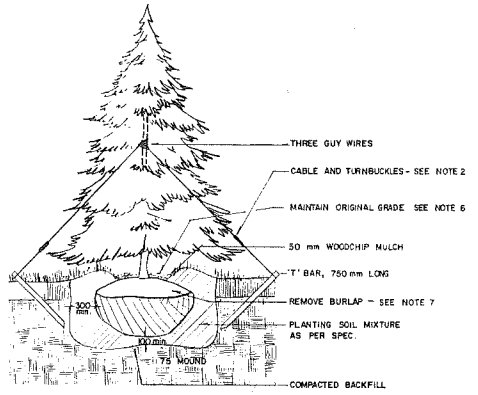
(4/L6) DECIDUOUS TREE PLANTING DETAIL (Typical)

GENERAL PLANTING NOTES:

1. SAUCER AROUND TREES TO BE 1000 OR AS DIRECTED.
2. ALL CONIFEROUS AND DECIDUOUS TREES 75 mm CALIPER OR OVER INSTALLED IN LAWN OR PLANTED AREAS SHALL BE TRIPLE GUYED, THREE GUY WIRES, ONE LOOP EACH OF #9 GALV. WIRE ENCASED IN 12 mm RUBBER HOSE. GUY WIRE TO BE RUST PROOF AND TURNBUCKLES OF SUFFICIENT STRENGTH TO WITHSTAND ANY WIND.
3. ALL TREES 60 mm CALIPER OR LESS INSTALLED IN LAWN OR PLANTED AREAS SHALL BE STAKED EXCEPT CONIFERS. T BAR FENCE POSTS WITH #10 GALV. WIRE ENCASED IN 12 mm ϕ RUBBER HOSE PLACED SO AS NOT TO DAMAGE TREE AND ROOT SYSTEM
4. PAINT ALL CUTS TO ROOTS AND BRANCHES OVER 12 mm ϕ WITH APPROVED TREE PAINT
5. WRAP ALL DECIDUOUS TREES WITH APPROVED TREE WRAP FROM THE TOP OF THE ROOT BALL TO ABOVE THE SECOND BRANCH
6. MAINTAIN ORIGINAL GRADE AT TREE BASE OR SLIGHTLY HIGHER THAN EXISTING GRADE TO SUIT EXISTING SOIL CONDITION AND ALLOW FOR SETTLEMENT
7. CUT AND REMOVE BURLAP FROM TOP 1/3 OF ROOT BALL.
8. FIRMLY COMPACT BACKFILLED SOIL TO ELIMINATE AIR POCKETS AND PREVENT SETTLEMENT.



(3/L6) SHRUB PLANTING DETAIL (Typical)



(5/L6) CONIFEROUS TREE PLANTING DETAIL (Typical)

		DESIGN S.R. J.H.	DATE - MAY '81	REFERENCES L-1 - L-6	APPROVALS	CONSULTANT du Toit Associates Ltd. 47 Colborne Street, Toronto, Ontario M5E 1E3 • Tel. (416) 864 1876
		DRAWN " "			MUNICIPAL	
		SCALE N.T.S.			REGIONAL	MUNICIPALITY CITY OF BURLINGTON

NO.	DATE	BY	REVISION

TITLE: PINE ST. & ELIZABETH ST.
LANDSCAPE DETAILS

L-6

SHEET 6 of 6

D6

FUNDING SOURCES: reprinted from "Provincial Assistance to Municipalities, Boards and Commissions"
Ministry of Intergovernmental Affairs

Appendix E

ONTARIO DOWNTOWN REVITALIZATION PROGRAM (ODRP)

Assistance towards

Provincial funds are available on a loan basis for the implementation of projects in downtown core areas where there is clear evidence of sluggish private sector renewal activity.

Eligible Recipients

Any municipality with a maximum population of 125,000.

Conditions and Procedures

A municipality must meet the following criteria:

a) have an approved Official Plan with policies concerning the downtown;
b) have a property maintenance and occupancy standards by-law applicable to commercial and residential buildings and being administered effectively;
c) have municipal council commitment and public support for the revitalization of the downtown;
d) demonstrate financial and administrative resources;
e) have a downtown revitalization project proposal capable of being completed within five years of the provincial financial commitment to the project;
f) the proposed revitalization is in accordance with provincial policies.

Basis of Assistance

The Province will provide assistance in the form of partially recoverable loans up to a maximum of 2/3 of the approved cost of a municipal downtown revitalization project. Such a project would be expected to generate additional revenue to the municipality in the form of taxes and/or rents. In addition, the project must be a development which acts as a "seeding" element for other complementary downtown improvements.

The total anticipated Provincial recovery under this Program is limited to 110% of the initial Provincial 2/3 contribution towards the implementation of a downtown revitalization project.

The terms and conditions of the provincial financial assistance and its subsequent partial recovery will be contained in all executed provincial- municipal enabling agreements under Section 24 of The Planning Act.

Further Information

Community Renewal Branch
Ministry of Housing
8th Floor, 60 Bloor St. West
Toronto, Ontario M4W 3K7
Phone (416) 965-2826
Regional Offices (see list below)

NEIGHBOURHOOD IMPROVEMENT PROGRAM

Assistance towards

The Province has allocated a portion of the funds it will receive under the Community Services Contribution Program (C.S.C.P.) to municipalities for a Neighbourhood Improvement Program.

The Program provides funds to assist in the repair and construction of Community facilities such as clinics, day-care centres, senior citizen centres, arenas, playgrounds, tot lots, neighbourhood parks, youth centres, community hall, libraries, street lighting, sewers, water lines, curbs, sidewalks, boulevards, roadworks, street signs, traffic signals, etc.

Eligible Recipients

All municipalities in the Province which have an approved official plan and have in effect or are willing to develop a minimum standards and occupancy by-law under Section 36 of The Planning Act.

Conditions and Procedures

Municipalities should submit applications to the Ministry of Housing at the beginning of the fiscal year. After review and consideration of the applications by the Province a list of municipal projects and fiscal allocations is submitted to the Federal Government for concurrence.

Basis of Assistance

The cost of the projects is cost shared by three levels of government as follows: 50% federal 25% provincial and 25% municipal.

Further Information

Community Renewal Branch
8th Floor, 60 Bloor St. West
Toronto, Ontario M4W 3K7
Phone (416) 965-2826
(Neighbourhood Improvement Program)

PARKS ASSISTANCE

Assistance towards

a) The acquisition of land for an approved park;
b) The development of an approved park;
c) The conversion of a provincial or public park into an approved park.

Eligible Recipients

Any municipality (including school boards in territory without municipal organization). Any Indian Band (which, under the Indian Act (Canada), controls and manages its revenues).

Conditions and Procedures

1) Applicant must have unencumbered title to land, or hold a long term lease.
2) Park must be maintained and operated for the enjoyment of the public in a manner complementary to the use of provincial parks, and may provide overnight camping and trailer facilities at comparable fees.
3) Approval of the purchase or development of the proposed park lands must be approved by the Minister in advance.
4) If the purpose of the park is the development of a natural beach for recreation, then overnight camping facilities and entrances controlling admission do not need to be provided and no entrance fees need be charged.

Basis of Assistance

Up to 50% of the total cost of acquisition and development or to a maximum of $100,000 in respect of any one park. (Grant towards land acquisition not to exceed $25,000). Grant may be paid on either beach development park, camping park, or a combination of both.

Conditions and Procedures

Approval for an agreement must be obtained from the Lieutenant Governor in Council.

Basis of Assistance

By agreement with the Minister of Natural Resources.

Reference

The Provincial Parks Act, R.S.O. 1970, Chap. 371.

Further Information

Parks & Recreational Areas Branch
Ministry of Natural Resources
Whitney Block, Queen's Park
Toronto, Ontario M7A 1W3
Phone (416) 965-2745
Regional Offices (see list below)

COMMUNITY RECREATION CENTRES

Assistance towards

The erection, alteration, extension, acquisition by purchase, lease or otherwise, or the renovation of a community recreation centre. Community recreation centres include:

1) Community Hall
2) Outdoor playing field for multiple activities
3) Regulation size tennis courts and amenities as approved by the Minister
4) Indoor and outdoor swimming pool
5) Snow skiing facility (not cross country ski trails)
6) Outdoor or indoor skating arena suitable for use by the public in the community
7) Fun fitness trails and facilities
8) Gymnasium
9) Cultural centre — to include an auditorium, art gallery, facilities for performance of visual and creative arts.

Eligible Recipients

Any municipality (or group of municipalities).
Boards with jurisdiction in territory without municipal organization (e.g. Boards of Education, Approved Corporations), Council of an Indian Band.
(Boards of Education in organized areas are only eligible for assistance after April 1, 1975 to Centres previously established.)

Conditions and Procedures

1) Municipality, band or board must pass a by-law (or resolution) providing for the establishment, maintenance and operation of one or more community recreation centres.
2) Property must be owned, leased, or controlled by agreement subject to Minister's approval.

3) Ministerial approval of the project must be obtained before its commencement (if buildings involved, plans, specifications prepared by architect or professional engineer required).
4) Application for grant must be accompanied by statement of estimated cost, stage of completion, and copy of the bylaw or resolution providing for the establishment of the community recreation centre.
5) Application for payment of a capital grant shall be made to the Minister within 3 years after the expenditure of the amounts applied for.
6) A municipality may appoint annually a committee of management consisting of at least three members. If there are five or more members at least two must be members of council. All members must be eligible for council.
7) The assistance to Indian Bands and localities without municipal organization is on such terms as the Minister determines.

Basis of Assistance

25% of approved costs up to $75,000 maximum per facility. Where there is an agreement for the joint establishment of a community recreation centre each municipality is eligible for the above proportion of its contribution.

The Minister may approve payments of up to 50% of approved costs up to $150,000 maximum on a building project which would place an undue financial burden on a municipality.

Special Assistance

Where an applicant provides facilities for handicapped persons that go beyond the requirements of the Building Code Act, 1974, a special grant equal to the additional cost of the special facilities may be available.

Reference

Community/Recreation Centres Act, 1974, O. Reg. 236/75.

Further Information

Manager, Capital Support Unit
Ministry of Culture and Recreation
6th Floor, 77 Bloor St. West
Toronto, Ontario M7A 2R9
Phone (416) 965-5399

HERITAGE CONSERVATION

Assistance towards

The conservation, protection and preservation of areas, properties, buildings and archaeological materials and sites of heritage value in Ontario.

Eligible Recipients

Ontario Municipal Corporations, Conservation Authorities, Heritage Conservation Societies and Groups, private property owners.

Conditions and Procedures

Each application should be by letter, outlining the project proposal.

Further information may be requested by the Ontario Heritage Foundation before the assistance proposal is considered.

Basis of Assistance

By agreement, as approved by the Directors of the Ontario Heritage Foundation.

Reference

Ontario Heritage Act, 1974 and Regulations.

Further Information

Chairman
Ontario Heritage Foundation
77 Bloor St. West, 7th Floor
Toronto, Ontario M7A 2R9
Telephone (416) 965-9504
Regional Offices (see list attached)

