dundas carlaw quarter

A CAPITAL WORKS DESIGN STRATEGY

BY BROWN + STOREY ARCHITECTS AND RODGER TODHUNTER ASSOCIATES

FOREWORD AND ACKNOWLEDGEMENTS

FOREWORD

The study area for the Carlaw Capital Improvement Plan primarily focuses on the Carlaw corridor form Gerrard St. in the north to Queen St. in the south. Logan Ave. comprises the western boundary, while Boston Ave. constitutes the eastern boundary of the project area.

This report builds upon the Carlaw Dundas Neighborhood Improvement Plan and other initiatives as part of the South Riverdale Revitalization Project (SRRP). It identifies specific capital works for the project area, investigates possible long range development scenarios and potentials for key public open spaces. It builds upon broad community support as was evident in the public meeting held in December of 2003 in which over 60 community members were in attendance. The plan was very well received, and there was broad consensus on the general principles of the plan and there was a positive response to the development initiatives presented. The SRRP Capital Plan Steering Committee recommends that additional discussions be held with community stakeholders in order to engage more area stakeholders and build consensus with regards to specific recommendations forwarded in this report before implementation.

The purpose of this report is to identify capital improvements to enhance the unique employment character of the area. As such it is a mechanism which identifies capital projects which can be undertaken by the City to further revitalize the area.

The Carlaw/Dundas Area is a unique area in transition. The Carlaw Corridor or "Quarter" is primarily comprised of former industrial buildings in various states of repair ranging from derelict conditions through to fully renovated and reconverted loft condominium and studio spaces.

During the 1980's, the Carlaw area attracted a range of artists, artisans and small business owners who were drawn to the area due to its affordability and the availability of flexible live/work spaces. Hence most of the former industrial buildings were or are in the process of being converted to space to live/work and residential use. Currently the mix of land uses in the area is approximately 1/3 industry/commercial, 1/3 live/work and 1/3 residential.

Dramatic rises in property values over the last decade have led to increasing difficulty for industrial and commercial ventures to maintain viable and profitable business.

The poor physical condition of the public realm (sidewalks, lighting, roadways), due to the former industrial nature of the area, and the underutilized vacant and derelict lands create an impression that the area is struggling. Evening lighting conditions are also considered as sub-standard e.g. both roadway and pedestrian lighting levels are inadequate. Given the vibrant artisan, artist, media and photography community who

live and work in the area it is important that the City of Toronto address the public realm of the Carlaw area with the intention of improving the physical conditions of City owned properties.

Economically the study area is stable and healthy. The 34% increase in market value indicates how the commercial/industrial base in the City of Toronto has increased in value from the low point in the mid 1990's. Employment in the area has declined from 2,476 jobs in 1996, to 1,295 jobs in 2002(1). Again this reflects the change in land use in the area from industrial to live/work residential.
Therefore, in order to ensure the long-term viability of the area, the City of Toronto Economic Development Division, through the SRRP retained the firms of Todhunter Associates (Landscape Architects/Planners) and Brown + Storey Architects to prepare a capital design program in order to revitalize the Carlaw Quarter.

This Capital Works Plan presents a clearly defined strategy and identifies capital works projects, which are based on a set of principles and targeted actions, which follow. It is intended that the capital works identified herein be undertaken on a priority basis, in the context of city-wide needs, and within the allocated and approved City Capital Budgets.

STUDY OBJECTIVES

The objectives of the undertaking are to develop a Capital Design Strategy that:

- In consultation with the Infrastructure Asset Management and Programming section of W&ES, summarizes an assessment of deficiencies and potential improvements to increase the attractiveness of the Project Area for employment generating investment;
- Improves the economic performance and aesthetic and functional values of the Project Area;
- Prioritizes areas of public investment in the Project Area;
- Liaises with staff at Toronto Hydro regarding future work plans (e.g. burial of hydro lines) and the development of the proposed Hydro Parkette on the Carlaw/Dundas site;
- Identifies areas where strategic use of resources could augment or provide additional improvements beyond those provided by the City standards for these services or capital improvements;
- Develops conceptual design proposals for strategic physical enhancements using the city's palette of streetscape details which meet both Urban Design and W&ES requirements;
- Includes conceptual drawings suitable for estimating a capital budget; and,
- Provides, through consultation with City staff, estimated capital costs in spreadsheet format for each segment of the proposed work component (paving, curbs, lighting, signage, street trees, etc.) for the Project Area.

REPORT STRUCTURE

This report addresses urban revitalization initially on a broad city precinct or "Quarter" scale and focuses not solely on capital improvements to the public realm, but with respect to urban renewal and identifies the true redevelopment potential of the area.

The document is accordingly structured as follows:

1. **Zone** - **An approach** - Introduces the concepts of branding the area; the opportunity for creating informal spaces, framing, and the introduction of the new electronic/technologies and lighting which guide the plan.

2. **Existing Context** - Introduces the term "Quarter" and describes the physical characteristics of the precinct, the cultural ecology of this unique area, introduces redevelopment potentials and appropriate precedents for the entire "Quarter" under the headings
    - Cultural Ecology Put to the Test
    - A New Role for Built Form
    - De Boomjes Precedent, Rotterdam
    - Taking Responsibility for the Public Realm
    - Public Space out of an Industrial Fabric
    - The Zone: a Complementary Meeting Place

3. **Capital Improvement Initiatives** - In this section key redevelopment initiatives of the capital improvement plan are featured:
    These include:
    - The Zone: A complementary meeting place (Carlaw-Dundas-Dickens Urban Parkette)
    - Carlaw Avenue
    - Dundas Street
    - Boston Avenue
    - Colgate Avenue
    - Gerrard Street and Logan Avenue

4. **Capital Works Plan -** Summarizes the key design treatments, proposed for major initiatives and associated capital costs.

The report concludes with the design drawings for the entire Quarter and the Phasing Priorities Capital Improvements Table - Appendix A identifies approximately 5 million dollars in improvements to this unique area. With the Carlaw-Dundas-Dickens Urban Parkette the capital works budget for this project is estimated at approximately 5.5 million dollars.

ACKNOWLEDGEMENTS

The Capital Works Strategy was very much a collaborative effort between the consultant team and technical support committee members, stakeholders and area residents.

Steering Committee

Karen Keskull	City of Toronto Economic Development, Culture and Tourism Department
Reid Henry	Project Manager - South Riverdale Revitalization Project (SRRP)
Paul Young	South Riverdale Community Health Centre
Denise Graham	City of Toronto Urban Development Services - Planning Division
Joe Lobko	Joe Lobko Architect Inc.

Special Contributors

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carlaw dundas quarter

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Part 1

ZONE - An Approach

An intense wave of rezonings, redevelopments and area improvements in the Carlaw-Dundas precinct have begun to reshape the area and redefine how it will fit into the fabric of a new and evolving City. As the intensity of these changes moderates, it will be important for the area to have a clear understanding of what it aspires to be in the future. The factors behind this new intensity have been triggered by the real contributors to the "funk" of Dundas Carlaw: the nearby film industry and spin-off jobs, cheap rent, 200 plus photographers and allied industries, and artists. The combination of all these factors are actively contributing to a major on-going transformation.

This is where the physical nature of the urban fabric becomes critical to defining the way the quarter will function and will ultimately be perceived. The sidewalks of Carlaw Avenue need to increase their space perceptually by extending their visibility to building faces and the adjacent streets and lanes beyond. A less ornamental urban design approach and a more experimental encounter with Carlaw's physical reality is required. Seeing the place in a new light means framing views and showing things that are not immediately evident. This could be achieved through a structured-informal approach, offering an entirely new interpretation of the public realm: the actual space and the extension of the perceptual.

The intersection of Carlaw Ave. and Dundas St. is a place where a vital public space can be created. This could form a special place that the current communities and social network could claim as their own. A narrative of urban, economic and social change could find expression here. This unique surface could include a gallery and stage in which work can be presented, performances realized, an event staged for lectures, and exhibitions of products. It is a space that is livable, open and inhabitable in more than one interpretation. "Zone" could be a physical and conceptual space, rather than a place that is overly determined by specific restrictions or types of construction. For example, this space could present itself in a unique way with very expressive materials. It could have a wooden deck, interspersed trees, event lighting, adjacent amenities, a café, and supporting businesses. Here "zone" could be an emblem and branding for an area of the city that is the exception to zoning.

ZONE IDEAS

ZONE - Scattered Informal Spaces

Intensity occurs in the midst of things. The street is the space that occupies that midst. The scattered intervals of Carlaw, its informal spaces of parks, intersections and edges – the displacements rather than planned places – are not composed. They have generated their own lines of intensity and exist as divergences arising from structured arrangements, forming their own type of multiple fabric. The textural and material nature that can be applied to these kinds of informal spaces can have a strong expressive force. Strengthening these spaces, along with the linkages between them, through multiple and diverse experimental interventions can point to a unique vision for the Carlaw area.

ZONE - Site of Exceptional Intervals

The discontinuous street, the unique breaks and brief perspectives created from the space between buildings, interior courtyard and short discontinuous streets, are exceptional encounters unique to the Carlaw area. Chance thrives and can be indexed as part of multiple and complex fabric. The framing of these spaces allows them to evolve their own particular potentials – reframed without being overly determined.

ZONE - Framings/ Segments of Trees

A strategy of framing the informal structure of the Carlaw-Dundas area exposes its special elements in a unique way. For example, the traditional line of trees on both sides of the street do not frame, but in fact constrain the adjacent building to the limited space of the adjacent sidewalk. A more effective strategy is to allow the frame to be surpassed by what it is trying to contain. This strategy discounts the traditional continuous line of trees in favour of segments, that allow the space of the framed segments to be extended and be open-ended.

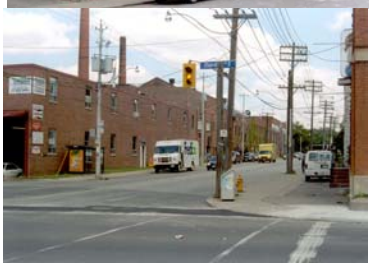
ZONE - Electronic Technologies

The role of signage, illumination and information systems is evolving as an architectural and infrastructural system on its own, and the artists, filmmakers and others in business related fields are closely allied to new electronic spaces, forming virtual communities. In an updated interpretation of this new signage, what was once the entry "canopy" marking building entrance could evolve to establish a new identity along Carlaw as a "visible sign element" forming a multiple system at entrances, gaps and intervals along the street – an outward and visible reference to the invisible elements that can be linked together between architecture, community and the urban fabric.

ZONE - Light Regimes

The Carlaw-Dundas area presents an "uneven" set of conditions that doesn't necessarily suggest a common lighting solution – a "fits-all" scenario. Carlaw would benefit significantly from improved lighting levels properly placed and tuned to surface materials. Lighting itself could become a better "gateway". In particular, the bridge underpass could be improved substantially with a carpet of lighting at the ceiling and special lighting at the walls.

The intersections and fragmented park spaces also require more particular and intensive high-lighting. These somewhat hidden gaps and special places offer singular focuses and communication links that can be strengthened by effective lighting, propelling the existing and new communities into the public life of the Carlaw Dundas area.




PRO GLO
PAINTS


245
235
CARLAW

Part 2

EXISTING CONTEXT

We have given the Carlaw Dundas area the name "Quarter". The Carlaw Dundas area is unique in it's physical form and structure, hence its description as a 'quarter' is derived from an area having a strong individual presence that marks it out and contrasts with the surrounding neighbourhood street pattern of single family houses and tree lined streets. As a quarter it has clear boundaries that are defined by the surrounding streets that include Carlaw Ave, Boston Ave, Gerrard, Dundas and Queen Streets. Added to these boundaries are the adjacent raised railway corridors that create under-passes at Gerrard and Carlaw and again at Logan and Dundas Streets. These infrastructures were once vital linkages to the railway lines supplying spur lines to the adjacent industrial buildings. Carlaw and Dundas form the predominant two streets crossing though the Carlaw Dundas Quarter area and contain the dominant number of industrial fabric buildings. Historically this industrial fabric provided jobs for the surrounding neighbourhood. Wrigley, Colgate, and Dunlop Tire are some of the former businesses that occupied some of these industrial buildings. Relatively recently these buildings have been witness to many forms of redevelopment many of which are trying to entice new people to live and move into the area. Live/work studios taking advantage of originally cheaper rents drew many studios and professional groups into the area to take advantage of these spaces. In the context of the larger city these small professional groups support the larger film industry located nearby and in the Port Lands Industrial District.

While most of these transformations were interior changes and to a certain extent invisible changes, there have been recent new developments filling the many voids within the Quarter. New housing and studio apartments are starting to fill in. To date, the public spaces characterized by the sur-rounding streets and the new developments have not coalesced with the public realm in any com-prehensive way. Contributing to this affect of the area is a 'mean' quality to the public spaces of the street; narrow sidewalks, cluttered infrastructure, and lacking in improvments. While there are some exemplary buildings to be found on Carlaw Ave., there are also many low scale industrial buildings put up quickly, and built tightly together. This pragmatic nature has had both positive and negative effects for the area. Deep industrial spaces when subdivided for new uses require considerable effort to maintain light and air quality. Similarly the industrial pragmatic nature of these structures meant they were less concerned with quality relationships along the street. They seldom contributed to the public realm hence there are seldom any forecourts, courtyards, or entry spaces off the street. The current low status of the public realm and its lack of improvements does not contribute to the newly arrived structures nor does it suggest a quality of development industry in the area that would extend a confidence in the development, investing and building here.

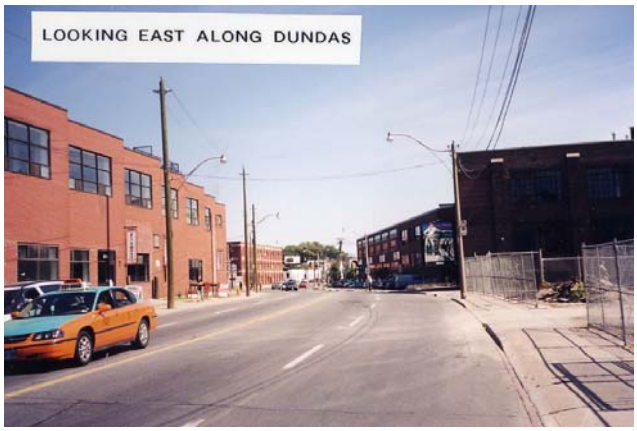
Carlaw Avenue in its City Context

CULTURAL ECOLOGY PUT TO THE TEST

The Carlaw/Dundas Quarter, and to a certain extent the East Chinatown Broadview/Gerrard area, are unique within the city. Each of these districts manifests an atmosphere particular to itself, one which reflects the typical 'users' : inhabitants, merchants, visitors, etc. These atmospheres or ecologies, however, are in a state of flux; seen as newly-evolving layers in the city, they present a patchwork of cultural groups across the metropolis seen as "New Urban Tribes". Both areas are fringes outside the centre of the city and represent a cultural compartmentalization going on in the city. Once described as "Toronto's Brooklyn", the Carlaw/Dundas district is currently undergoing intensification and expansion without a clear strategy, at odds with these cultural trends.

What explains this intensification and expansion in areas other than the city centre? And why does this tendency carry with it a process of social and cultural compartmentalization? The distinctiveness of diverse cultures can only enrich our experience of the city. It also points to the need for design solutions that are not part of the standard repertoire of modern urban design, a better fit to these rapidly developing cultural zones.

The Carlaw/Dundas quarter exemplifies this phenomenon in which a section of the urban domain is annexed by specific groups and lifestyle choices. These various groups are capable of shaping their own urban world out of existing and new amenities. The positive effect of these fractured domains of the city is that they actually allow the public domain to be experienced in different ways. This process of diversification that enables different groups, cultures and lifestyles to manifest themselves contribute to the experience of the city as a true urban mosaic. Various atmospheres emerge, each with its own identity, turning the city into a fascinating kaleidoscope of humanity.



Dundas St. looking East


Carlaw Ave. looking South


Boston Ave. looking South


Carlaw Ave. looking North

Existing Plan Showing Area of Study

A NEW ROLE FOR BUILT FORM

The intersection of Carlaw and Dundas illustrates the potential of a more enlightened private development that seeks to improve the public realm. This pattern we are proposing utilizes an interlocking set of architectural volumes, using an 'industrial' open fit building typology (live/work studies) as an imaginable structure. These structures, typical of the 5 storey structures on Carlaw, can attract and take on all kinds of uses.

The northwest quadrant of the Carlaw-Dundas intersection is improved by a number of factors; we have subdivided the current 'open' and built sites into smaller 'plots' and reworked the Dickens/ Thackeray Streets to include a new looping roadway and green linkage along the southern edge of the railway corridor. This has the effect of substantially normalizing Dickens and Thackeray as continuous streets linked to the surrounding Carlaw in a looping condition. The northern new street extends both Dickens and Thackeray, creating a 'new front', which replaces the current back condition of the property. Combining a new green linkage to Gerrard and Carlaw with a street liberates the former land-locked property. The new plots can be interpreted in a more improved and flexible manner, creating (where the space is available) courtyards, forecourts and spaces to qualify the interlocking volumes and forms specific to each plot. The most southern plot at Carlaw and Dundas creates an open forecourt to support the city public space, or zone, located on the southeastern portion of the intersection. We are demonstrating another instance in which the private development can create a more robust public/private realm relationship. Three new structures carry the lane pattern that is evident further south on Carlaw, as well as creating a new open corner space at the intersection.

This intersection, seen as an open space framed by new development, is important for a number of reasons and in particular lies at the centre of resolving issues relevant to Boston Ave., Dundas, and Carlaw at the heart of the Carlaw-Dundas Quarter. To begin with, Boston Ave.'s new green boulevard needs a point of culmination or rather a way of extending itself between Boston and Carlaw. The new laneways will strengthen and reinforce these patterns, by creating an enclosed courtyard, and an open new public space at the corner registers a new civic presence and environmental addition desperately needed by the present Carlaw-Dundas intersection that is steadily improving. Seen in its totality, the new 1,000-m2 public space stands in the centre of the two new spaces created at diagonal corners to itself. The effect will be to change the dynamics of the two intersecting streets, creating a new and improved environment. It will add to the total value and quality of the surrounding development as a new place in the city. The improved public spaces and connected streets contribute to an avalanche of improved relations between public streets, public and private spaces, new developments and existing structures.

DE BOOMJES PRECEDENT, ROTTERDAM

"London Arcade Along the River", Caruso St. John Architects, London

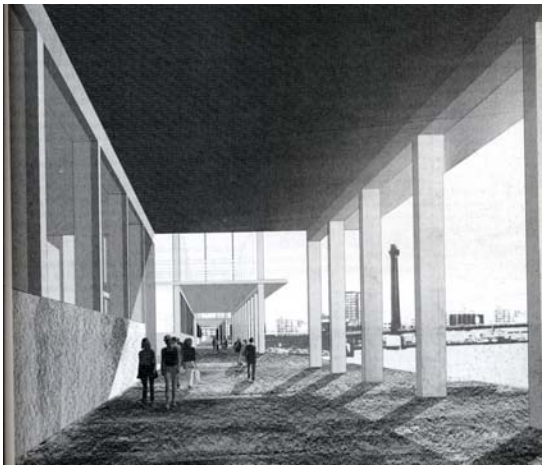
The Warehouse model with an open mix of uses, offers both internal and external spaces of flexibility. These new buildings offer almost pure structure. This would allow different constituencies to discover opportunities in the Carlaw Dundas Precinct.

"In the coming decades a new type of building will go up everywhere; a roofed-over amalgam of trains, busses, offices, parking garages and shops, situated on large plots in or very near historic town centres. This is a totally new typology for the disciplines of architecture, urbanism and infrastructure. The new building for the urban transportation area addresses all three of these fields and requires an integral approach. This is no time for laissez-faire urbanism; design a big, neutral space and within a few years, or even months, it will be going out of control with unplanned additional shops, pavilions and street furniture."

-Ben Van Berkel and Caroline Bos, *UN STUDIO-IMAGINATION*

Existing Building at 245 Carlaw

De Boompjes Example



Arcade under building

De Boompjes Building Sketch Model

De Boompjes as a city street

TAKING RESPONSIBILITY FOR THE PUBLIC REALM

Vitally important to the overall identity and image of Carlaw-Dundas is the need to improve the quality of the public realm. The city can do its part to improve the spaces of the public and its streets, but where also might the responsibility lie?

It is not enough simply to build and develop a site to maximize densities and heights at the cost of the public realm whose environmental fitness is low. Nor is it enough to architecturally produce the most sophisticated building aesthetically and technically. Although these qualities are desirable, it is imperative that private development contribute to the 'public spaces', and create its own environment. Lifting sections of buildings up, creating courtyards and plazas for instance, creates improvements and reinforces the qualities of the architecture, not having to build the required density, creating more flexible spaces in which the 'private realm' takes a lead in the larger total environment.

We have suggested in a number of precise areas within the Carlaw-Dundas precinct an image of what is possible. In particular, properties abutting railway corridors with dead-end streets cannot attract good architecture or create safe environments if neglected 'back conditions' prevent a more positive urban environment from evolving between buildings and spaces.

PUBLIC SPACE OUT OF A FAIRLY INDUSTRIAL FABRIC

The physical environment of the Carlaw Dundas Quarter is one that has been constructed primarily with buildings that fill their entire site, building a continuous wall to the street. This demarcates the private realm in sharp contrast to the public space of the street. Having their origin as industrial spaces, these structures illustrate a pragmatic straight forwardness indicative of the period of construction in which the interior working production environment took priority over the public realm. Carlaw/Dundas has little or no public spaces. The spaces that do exist cluster themselves along the edges of the infrastructures, passing through the area. Carlaw/Gerrard for example has three park fragments that collectively don't add up to a system and in particular the sidewalks adjacent to these parks simply pass by rather than taking a more direct role in impacting the public space.

We are proposing that these fragments become more actively engaged in the public realm, connected where possible and that they form part of a larger matrix. In particular, we are proposing that the sidewalks take on a more specific role in inscribing themselves into the parks themselves. This utilization of the sidewalks to penetrate into the park makes them more accessible and safe, reducing the many closed, dead-end conditions in favour of an open circuit of movement and access.

The urban design street improvements to Carlaw, Dundas, Boston and Colgate and their complement of new trees will further reinforce the connectivity of these revitalized park fragments and include them into a larger collective organization of spaces with a corresponding benefit to the over all Carlaw Dundas Quarter.

Existing View of Carlaw Ave. & Dundas St. Intersection

View of Proposed Public Space at
Carlaw Ave. & Dundas St. Intersection

Part 3

CAPITAL IMPROVEMENT INITIATIVES

THE ZONE: A COMPLEMENTARY MEETING PLACE

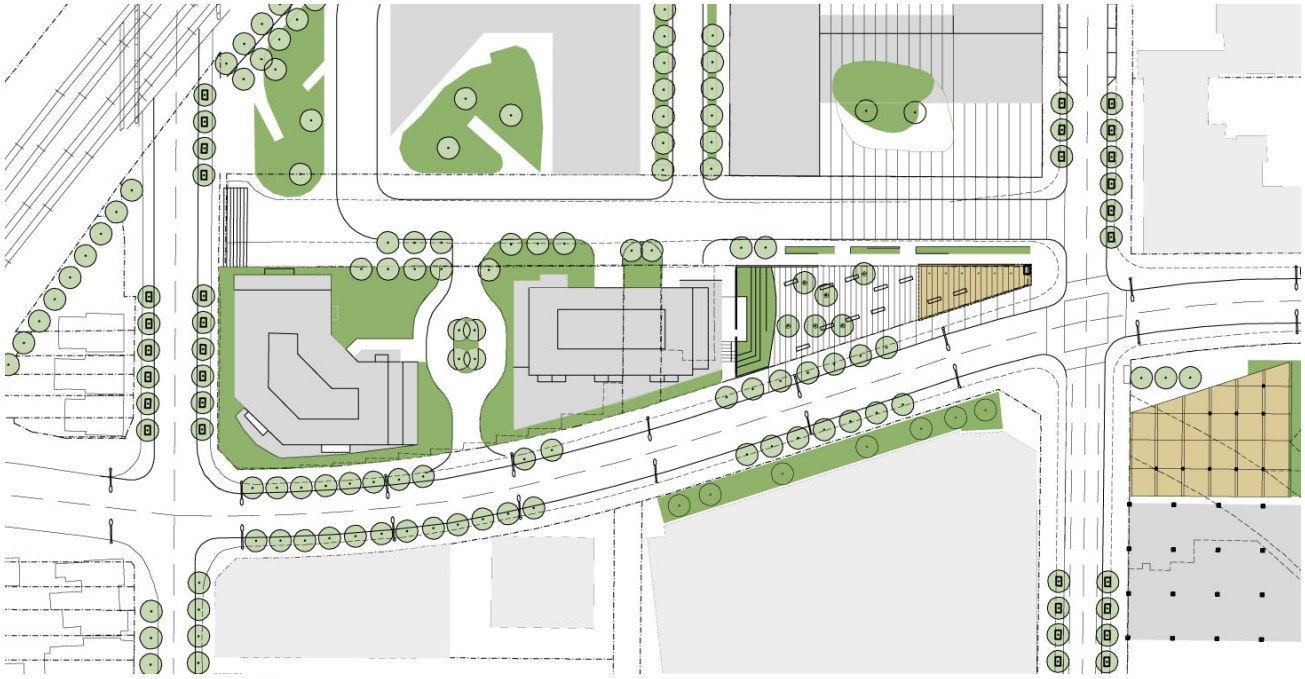
The 1,000-square metre site available for a public space is of strategic importance in getting started towards a new image for the area. As a space it needs to be programmed and understood in relationship to the needs of the adjacent developments, professionals, business, and local neighbours and neighbourhoods. On its own, the space is not large, but connects to at least 6 adjacent developments and owners. 401 Logan, its westerly neighbouring site, offers a good opportunity to connect it with a new building and future users. The buildings north of this site are more conjectural, not part of the idea that this new site can best maximize its surface by appropriately designing the urban characters of Dickens to create a more friendly edge. The visual axis of Carlaw when looking west culminates into the 'zone' – here trees will extend the alignment, and create an informal focus at the terminus of the site's western edge, partly enclosed by 401 Logan and a green treed effect. The zone is a small hybrid, triangular space, partially divided into three types of spaces. The first zone nearest Carlaw is a hard stone surface area with a raised wooden trellis and signage lighting feature, that acts both as a symbol for the new quarter, and also as a transition and corner. It intentionally leaves it relatively open, but also to suggest an informal structure to it as a support. The second or middle space of the triangular plaza, being the widest part of the triangle. This space extends the line of trees east of the site as a short line of trees that combine with the adjacent street trees proposed along Dundas Street to create a 'thicker' double layer of trees. This surface, in contrast to the first zone, is wood in nature, and is patterned to reinforce a larger-scale unit, and reflects a boardwalk image, scattered informal trees further the thickening aspect of this space, providing contrasting sites for shade and sunlight. Viewed from the east, looking west along Carlaw, the effect is of a consolidated impression of trees. This wooden surface, because of the grades around the site, takes advantage of the differences in slopes, thereby allowing stairs and edges to respond accordingly. In this space also are situated places to sit and lighting. This zone is intended for events and acts as a stage for events, exhibitions or other public uses, as well as simple day to day casual usage.

Located further west, the final zone of the space consists of a vertical wood event wall intended to create a series of portals and edges for the open space, while at the same time, providing space for commercial and community signage. It sits in a green and grass surface, suggesting a garden and protected space.

Bench seating within the boardwalk provides an ample number of spots to casually enjoy the unique qualities of the space.

View of Proposed Public Space

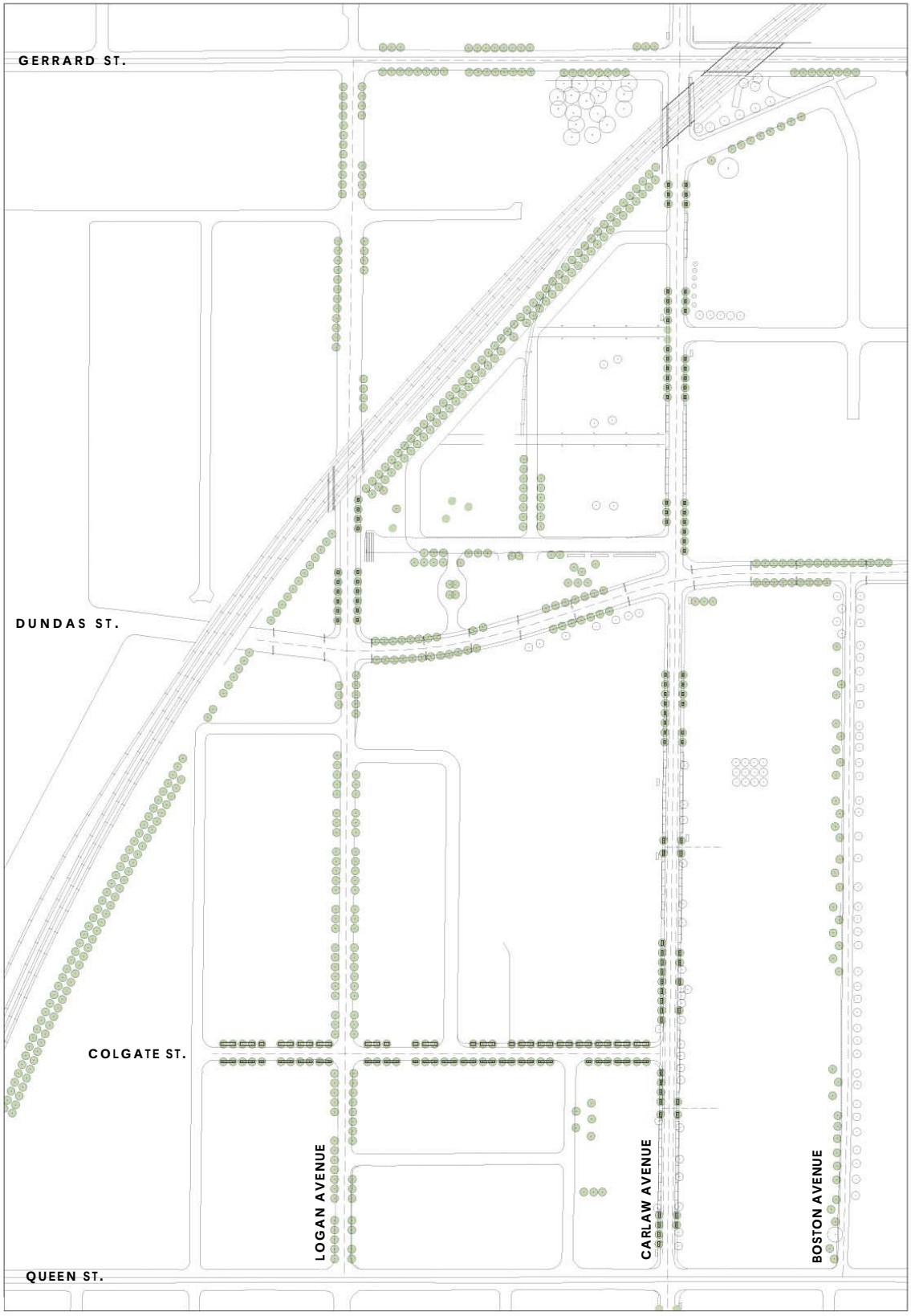
Aerial View of Proposed Public Space



Plan View at Carlaw Ave. and Dundas St. showing Street Improvements and Proposed Public Space.

CARLAW-DUNDAS QUARTER

TAKING RESPONSIBILITY FOR THE PUBLIC REALM



STREETS

Brown + Storey Architects
Rodger Todhunter Associates

CARLAW-DUNDAS QUARTER

TAKING RESPONSIBILITY FOR THE PUBLIC REALM

COMPOSITE PLAN

Brown + Storey Architects
Rodger Todhunter Associates

CARLAW AVENUE

Appendix B: Figure 1, 2 & 3

Carlaw is a north-south street that is the unofficial space of the Carlaw-Dundas precinct. It continues north to the Danforth and beyond, and almost touches the turning basin to the south in the Port Lands area.

Visually, it captures the large 'stack' of the Hearn Generation Station. It crosses the Lakeshore Blvd and Commissioners Street and has the potential to link to the waterfront, and the evolving city's waterfront.

The central section of Carlaw between Queen and Gerrard Streets reflects a unique pattern and fabric quite distinct from the surrounding neighbourhoods and streets. Large industrial buildings flank the two sides of Carlaw; built in increments, they reflect the early industrial workplaces that supported the local neighbourhoods. These structures have been taken over recently to reflect 'live/work' lifestyle options. New residential development has also taken place and in contrast to these changes to the economy and physical form of these industrial structures, the physical nature of the street spaces have seen little or no improvements.

The physical appearance of Carlaw is one in which narrow sidewalks, deteriorating road beds, proliferating cedar power lines and scattered trees prevail. There are scant breaks from this 'non-atmosphere' of the street. What further aggravates this hostile condition is the lack of parks or open spaces in the neighbourhood. There is no coherent urban design and it is conspicuous in its absence. It appears no-one has taken responsibility for the public realm. The street r.o.w. is 20.0 metres and because of its former industrial character, was simply seen in a utilitarian way - industrial buildings lining both sides of the street. The overall image is of a narrow street with lots of parking and cluttered utilities.

To improve this condition and create a unique support and identity to match the current transformation going on requires a large-scale plan. We are proposing a road narrowing, with a corresponding widening of the pedestrian realm; to further improve the street, we are suggesting a unique tree planting and lay-by parking strategy as an appropriate fit for Carlaw. By using segments of trees grouped and symmetrically located on both sides of the street, we are suggesting an alternating rhythm of trees, which create open frames to showcase the existing buildings and new buildings along the street. This idea is in contrast to continuous tree planting on both sides of the street, which we believe separates the sides of the street from each other. Segments of tree groupings of 8 to 10 trees alternate with balances and symmetrical parking lay-by's. These lay-by's are distributed along the street to take advantage of the best position for parking that maintains and protects lane access, corners and in turn, where the lay-by's do not exist, create wider sidewalk conditions and better conditions for tree planting. Two lanes of traffic are maintained along with bicycle lanes. The materials of the street is simple concrete with sawcuts and the same concrete material would define the bicycle lanes and lay-by's, thereby extending the effect of the pedestrian realm.

This rationalization of car parking and corresponding improvement of sidewalk surfaces and tree planting would be further supported by improvements in other areas; removal of hydro poles, underground utilities, improved lighting quality, and improved street crossings. As a template for extension south of "Queen Street, the particular parking lay-by and tree segment strategy can be varied and interpreted. In particular, Carlaw south of Queen has a quite different built form and could benefit from the addition of new trees to liven up the current dreariness continuing southward, Carlaw could utilize the trees in a stronger pattern to reinforce the linkage to the waterfront.

DUNDAS STREET

Appendix B: Figure 4 & 5

The recent improvements to Dundas Street with the inclusion of bicycle lanes has transformed Carlaw Avenue in a positive way. This slowing down of the street to engage a more complex and diverse functional use of the street can only help improve the 'staying side' of the 'passing through' nature of Dundas and its users.

We are proposing to build on this work. The current road and cycling improvements, mostly the result of road markings, has left a 'surplus' space in the middle of the road. We are proposing a total rethinking of Dundas into a configuration that maintains the current reduced car lanes and bicycle infrastructure into a more rationalized slimmer curb-to-curb street, effectively adding needed space to the pedestrian realm, with wider sidewalks and better planting opportunities for trees.

In the same manner, the trees are organized into complementary segments, rather than continuous lines of trees along Carlaw. The treatment of Dundas in particular, if we consider its curving stretch between Booth and Boston Ave., would be beneficial. Again seen as intermittent rhythms of trees, they both frame the buildings and spaces along the street, and open up views between both sides of the street in a way that unites the two sides of the street. This impact creates interest and visual contrast and excitement.

Along the length of Dundas, both sidewalks gain in dimension and improve the pedestrian realm. This added width to the sidewalk also provides for a better tree planting area, creating a safer protected space to use against the adjacent vehicular traffic speeding through the area. Unlike Carlaw (in which buildings front onto it with entrances and frontages), Dundas Street, resorted to shifting back from the street, creating buffers to compensate for the existing tight spatial conditions of the street. These new improvements to Carlaw emphasize the unique curving alignment of Carlaw as an east-west city street, yet with an attached boulevard improvement. The narrowing in all likelihood would extend west to Booth Avenue in the west and to Pape Avenue in the east.

BOSTON AVENUE

Appendix B: Figure 6 & 7

Boston Avenue is a north-south street that runs between Queen St. to its south and Dundas St. to its north. A fragmented counterpart of Boston continues north of Dundas to Gerrard. However, this lower section of Boston Ave. is an extremely long block, differentiated as a seam between an industrial western side of the street and a healthy residential eastern edge. Historically, the street has always had this split identity: half industrial, half residential. Efforts to ameliorate this conflict have shown up as attempts to create a planted green boulevard on the western edge of the street to mask the industrial edge and its corresponding parking access issues. These efforts have had limited success; remnants of trees, partial fences have not achieved the original purpose. At the northern end of the street, however, the tree pattern is intact along with a green start of a boulevard.

We are proposing two options to resolve the Boston Ave. residential/industrial conflict. Both options would result in a more robust boulevard landscape of trees and would include an additional central walk within the boulevard, consequently creating an inside and outside pedestrian walkway. Contributing to this effect is a reduction in the current road width to a better fit, retaining 1 drive lane and 1 street-parking area along its eastern edge. The current road width can be reduced in order to add more space to the western side of the street, appropriate to a one-way street going south.

Option A

This option utilizes the new improved linear boulevard idea and improved tree planting, but addresses a larger and perhaps 'historical' blindspot that could be resolved by the addition of a finer 'grain' studio housing between the larger set-back industrial buildings and the street boulevard edge. Currently, there exists an intermediate zone that varies along this entire stretch of Boston, alternately used as loading and parking for these industrial buildings (currently being renovated for a range of different uses – this same space has lost its original use and significance).

We are proposing a linear studio housing typology for this section, raised up, providing a protected and screened parking area beneath. These 2-storey residential apartments would create a new frontage and 'scale' to complement the existing residential housing along Boston, as well as providing infill housing. These studio apartments would create a new mediated scale with the higher industrial buildings that are adjacent. Entrances to these new apartments could be carefully located along the first open level of the street, providing stair access, storage and building address. The roofs of these apartment structures could also incorporate 'green-roof' technologies, providing a further green complement to the boulevard green linkage.

Option B

This option suggests that, like Option A, there is a need for a more complex 'techtonic' solution to resolve and protect the linear boulevard. In this option, a 1-storey screen trellis structure is proposed, running along the entire edge of the street. The parking is perpendicular to the street and slightly lowered into the grade, creating a condition in which the cars' lights are masked by a low wall and screen running parallel to the street. This option solves the parking problem along the street, and uses secondary and smaller wall/planting ideas to extend the quality of this side of the street.

Both Option A and Option B could be employed in combination; as well as creating a new capacity for residents to the street and normalizing relations between the two sides of the street. The attempt is to create a healthy incentive to build the linear boulevard, protect it, and create economic potentials that would ensure that private developments contribute to the improvement of the public realm. Healthy spaces would be created where now the street lacks them.

COLGATE AVENUE

Appendix B: Figure 8

Colgate Avenue is a short discontinuous street that runs east-west, originating at Carlaw Avenue and terminating at Booth Avenue and Jimmy Simpson Park. Currently, the street's width varies from block to block; at its widest, the street is 12.5 metres, changes to 9.5 metres, and as it moves toward Booth Avenue, it tapers down to 8.0 metres. This varying condition is perhaps related to the former industries and shipping/trucking requirements for wide-turning trucks. The current condition of overly narrow sidewalks and alternating road widths have left the street characterless and in need of an improved identity.

The proposed solution is to normalize the current road width to match the existing most westerly section's width of approximately 8.0 metres. This would match it to the typical residential streets of the neighbourhood and improve the pedestrian realm with better sidewalks and street tree planting.

The adjacent Jimmy Simpson Park to the west of Colgate Avenue suggests a good opportunity for connection and greening of the street. Consequently, spacing new trees in open sod verges on both the north and south sides of the street will contribute to the quality of the street's environment. Paired usage of trees in discontinuous segments allows for pedestrian crossings. These open verges are treated differently on the south side, being somewhat narrower, to take into account the adjacent residential front gardens, whereas the north side has distinctly wider verges and improved sidewalks. Both green verges are set back from the road curb with a protected concrete strip to accommodate parked cars and to ensure the protection of the verge and its maintenance. Colgate Avenue would then have its own unique identity as a residential street and add necessary green to complement the existing parks along its edges.

GERRARD STREET AND LOGAN AVENUE

We have suggested in the overall plan improvements to Logan and Gerrard, but we haven't set up detail sheets for these areas. Of particular interest is Gerrard Street in relation to the city's capital works being proposed for College Street as it goes across the city. Forming the border to the north of the Carlaw/Dundas precinct, this Gerrard Street sidewalk edge could be improved. The especially wider 'set back' between Logan and Carlaw could be capitalized on with a streetscape plan of improvements along its edge. Again the current park fragments might gather more momentum and reduce their isolation if they were connected to better organized public events, exemplified by a strong organization of trees.

VIEW LOOKING SOUTH FROM GERRARD STREET

Part 4

CAPITAL WORKS PLAN

INTRODUCTION

The following sections outline the preferred capital works design direction and specific capital works for key character areas of the Carlaw "Quarter".

Given the industrial and diverse nature of the Carlaw Quarter and as the previous streetscape solutions indicate, no single (Victorian, BIA/tourist, post-industrial) aesthetic treatment for the streetscape is being suggested. Rather a variety of treatments will be used depending on street condition, existing building usage and built form for specific streets of the project area.

Functionality versus "branding" of Carlaw Quarter will predominate. Carlaw Quarter Streetspace will be distinct and identifiable but totally discrete. Treatments must have an integral feel of the "place" versus an imposed design solution.

CAPITAL IMPROVEMENT PRIORITIES - DISTRICT LEVEL

Through consultation with Works and Emergency Services Department, (W&ES) (both asset management and construction personnel) proposed capital cost budget and tendering formats were developed. Current (year 2004) tendered cost/tendered items were also developed and are reflected in the Tables.

As the Phasing, Priorities and Costs Table - Appendix A indicates, over 5 million dollars[1] of capital improvements are required for the Carlaw Quarter to bring up the standard of other important employment and live/work areas in the City. The overriding emphasis and priority of the capital improvements is for the re-construction of Carlaw Ave., the creation of the Dundas/Dickens Park and re-construction of Colgate Avenue and the west side of Boston Avenue. The following sections indicate specific design features of these areas.

CARLAW AVENUE

Carlaw Ave. is a relatively short north-south collector road. Presently it is also the most intensively used street in the district, therefore the following streetscape improvements are proposed.

- Distinctive intersection pavement treatments for southern (Queen) and central (Dundas) Streets
- New sidewalks and enhanced paving of the entire street from Queen to Gerrard Streets
- Signage markers to indicate laneways
- Removal of wood overhead poles and install new distribution service

Replacement of existing street lights with new luminaries on existing poles, and add pedestrian lighting, as indicated in Section - Street Lighting

[1] Capital Works budget for streetscape initiatives only. The park improvements in the plans would cost in order of half a million dollars. Therefore the entire park initiatives as illustrated in this document would total 5.5 million dollars.

It is proposed to have concrete lay-bys and concrete crosswalks running the entire length from Carlaw Ave. north to Gerrard St. Parking lay-bys are 2.3 metres in width and the bike lane is 1.5 metres wide. Currently, Carlaw Street has parking and one lane of traffic travelling in each direction during non-rush hour times, with parking eliminated at rush hours for two lanes of traffic travelling in each direction at rush hour. By creating parking lay-bys, rush hours would be restricted to the single lane in each direction. This proposed slight reduction in capacity would require a review from the Traffic Division of the W&ES division. However, it was noted that, during the last season of construction activity, where one lane in each direction was in force 24 hours a day for many months, there was little impact on the traffic flow.

DUNDAS STREET

It is proposed that the existing sidewalks be widened along Dundas St. from Logan Avenue to Pape Street by 1.5 metres on each side. This takes advantage of the newly created bike lanes that have reduced the traffic lanes to one lane in each direction with a wide painted centre median. It is proposed that the width of this centre median be redistributed to the sidewalks to allow for significant planting opportunities, a more generous public realm, and a strong signalling of the Carlaw Dundas Quarter, particularly as it approached the new proposed community meeting space at the intersection of Dundas and Carlaw. This will involve repainting the centre line of Dundas St. (removing the crosshatching to allow for widened sidewalks).

BOSTON AVENUE

The west side of this street is to be reconstructed to reflect the design intention as illustrated in the streetscape drawing in the previous section. The ambition of this proposed reconstruction is to ameliorate between the intimate domestic scale of the two story homes on the east side of the street and the much larger scale of the industrial buildings and parking lots on the west side of the street. The existing green verge on the west side of the street can be augmented 1.5 meters to permit new tree planting, by eliminating the angled parking and replacing it with conventional parallel on-street parking. Two alternatives are suggested for a new type of built form on the west side of the street – an elevated two story studio live/work building with screened parking below, or alternatively a wall and trellis structure that would also screen parking. Both alternatives suggest a middle scale mediating between the industrial buildings and the facing homes while also providing a physical screening of the large existing parking lots.

COLGATE AVENUE

Because of the earlier industrial building that once used part of Colgate for service access, the width of Colgate Street varies greatly from 8.0 meters at its most western block to approximately 14 meters at the most easterly block. The 8.0-meter road width is proposed to be consistently carried through from Booth Avenue to Carlaw Avenue. Because of existing tree planting and front yards, the new street section would be composed of 1.8-meter sidewalks at the curbside with expanded planting areas directly adjacent. The additional width would permit significant new tree planting along the length of the street.

CARLAW/DUNDAS/DICKENS PARK

In conjunction with the reconstruction of Dickens Ave. (and in co-operation with the proposed development of 401 Logan) the 1,000m^2 triangle can be redeveloped as an urban park. It will become the community meeting place and event space of the Dundas-Carlaw quarter. Note the sidewalk on the south side of the park is widened to increase the size of the proposed park, while proposed reconfigurations of the Dickens Street and Thackeray Street areas would also add to the overall greening of this northwest quadrant of the Dundas Carlaw precinct. If negations with Toronto Hydro, the City and the developer are not successful, the remaining publicly held lands could perhaps be suitable as a location for a public art piece or marker for the area. Many of the activities (art shows, volleyball) suggested for this park may better be accommodated on Dickens Street.

CAPITAL IMPROVEMENT PRIORITIES BY STREETSCAPE ELEMENT

STREETSPACE TREATMENTS

The Phasing, Priorities and Costs Table indicates specific improvements for each of the streets in the Carlaw Quarter. This table is arranged in alphabetical order by street name. The previous section includes the drawings for the entire Carlaw Quarter proposed works.

SIDEWALKS

CARLAW AVENUE

New sidewalks along the entire section of Carlaw, from Queen to Gerrard Streets, are to be constructed. The roadway will be narrowed to accommodate widened sidewalks of 3.4 metres. Sidewalks are to be constructed with monolithic curbs with simple concrete pavement with special jointing patterns to emphasize the new expanded width of the sidewalk. The conventional lockstone strip detail is not suggested here because of its tendency to perceptually narrow the sidewalk. However, in the pricing matrix, 20% of the pavement area is noted for special pavement to provide an allowance for other decorative pavement treatment if available. It is important that the new width play an important role in creating a generous pedestrian friendly zone between the industrial building and the road surface. It is this zone that has been minimally treated to date, which tends to devalue the role of the pedestrian in the neighbourhood. Where streets are widened, street trees are to be planted in according to the design drawings concluding this section.

DUNDAS STREET

The sidewalks on Dundas Street between Logan and Pape Avenues are expanded by 1.5 meters on each side with new tree planting. The proposed pavement treatment is noted as simple concrete pavement with special jointing patterns to emphasize the new expanded width of the

sidewalk, as noted for Carlaw Street above. As with Carlaw Street, in the pricing matrix, 20% of the pavement area is noted for special pavement to provide an allowance for other decorative pavement treatment if available. Where streets are widened, street trees are to be planted in according to the design drawings concluding this section.

COLGATE AVENUE

Sidewalks are to be 1.8 meters in width and located on either side of the proposed reconstructed street. A similar allowance for 20% of the pavement area for special pavement treatment is noted, although, as noted above, the conventional lockstone border strip is not recommended. The additional width gained in the street section by carrying the 8.0-meter roadway width consistently along its length will be added to a green planting area adjacent to the curbside sidewalk.

BOSTON AVENUE

On the east side of Boston Avenue, the existing concrete sidewalk is retained. On the west side of the avenue, the additional width gained by eliminating angled parking is added to the current verge, creating a generous linear green boulevard with a new 1.5 meter concrete sidewalk set between two rows of new tree planting.

ROAD WORK

The "Proposed Capital Works" indicates proposed road works in accordance with City standards. Roadwork includes asphalt resurfacing, road reconstruction, concrete crosswalks, interlocking paving cross works and brick gutters.

Given the extremely poor condition of Carlaw along it's entire length, from Gerrard to Queen Streets, and in light of the reduced roadway cross section width (2 lanes); the street will have to be reconstructed in its entirety. This will be accomplished to meet W&ES standards for collector roads.

DUNDAS STREET

In areas where the sidewalk has been widened, partial road reconstruction/resurfacing will be required.

COLGATE AVENUE

Refer to design drawings for the proposed new road.

BOSTON AVENUE

Partial road reconstruction / resurfacing will be required with the elimination of the angled parking and subsequent addition of an expanded planted boulevard on the west side of the street.

STREET LIGHTING COMPONENTS

The proposed luminaire and pole system for the Carlaw Quarter includes:

STREET LIGHTING

- Marquis luminaire by King Luminaire, 150 metal halide light source
- Decorative banner arm for roadway lighting along Carlaw Avenue and Dundas Street.

PEDESTRIAN LIGHTS

- Consist of the same luminaries (70 watt) only the mounting bracket is modeled after the rail design from Round House Park.

POLES

It is recommended not to utilize pedestrian poles, as pedestrian luminaires will be attached to the new roadway lighting poles.

TORONTO HYDRO UTILITIES

It is recommended that the City of Toronto wooden pole distribution system, which is posing health and safety hazards along Carlaw Ave., be replaced. While putting the utility underground is the preferred solution, costs will likely require that concrete poles be installed.

COLOUR

All streetscape accents (luminaries, benches, trash receptacles) are to be painted black to reflect the industrial nature of the area.

STREET TREES

Street trees are planted in fragmented groups to provide interest and screening functions along sections of Carlaw Ave. vs. the traditional linear planting scheme found on most residential streets. The intent here is to screen unsightly areas while allowing views of unique architectural features as one progresses north or south along Carlaw Ave.

It is highly recommended that street trees be planted in open pits with mulch covers vs. the City standard (concrete covers). This reduces costs and increases the survivability of the trees. See photographs below of similar 'green cities' where the mulch covers are the standard. This includes Montreal and Washington D.C. as illustrated below.

SUGGESTED TREE SPECIES ARE AS FOLLOWS:

- Carlaw Avenue: A 2:3 mix of Red Oak and 1:3 Columnar White Oak
- Dundas Street: Ginkgo Biloba Trees
- Boston Avenue: London Plane Trees (to reflect existing mature trees)
- Colgate Avenue: Mixture of Sugar and Silver Maples

STREET SIGNAGE

Since the Carlaw/Dundas area is not a BIA, standard City street signs are the only option.

STREET FURNISHINGS

BENCHES

Heritage style benches painted black is recommended (UDS - Railways Lands Bench). City standard aluminium trash receptacles (could be painted black) are recommended.

IMPLEMENTATION

CARLAW AVENUE RECONSTRUCTION

Given the unsafe condition of the entire public realm (sidewalks, roadways, lighting, utilities) it is highly recommended that the street be reconstructed.

This section of Carlaw from Queen Street north to Dundas Street is an especially important segment to be reconstructed. It is the heart of the community and provides an important connection to Queen Street. It is also in the poorest condition hence it is important thay W&ES personnel address this key concern.

COLGATE AVENUE

This street should be reconstructed in accordance with the design direction as indicated on the attached plans.

PHASING PRIORITIES AND COSTS TABLE

Phasing Priorities and Costs Table provide quantities and associated costs for the improvements to Carlaw Dundas Quarter.

Works and Emergency Services will renew all projects on the city's road right of way. The recommendations contained in this report are subject the standard capital budget review process

APPENDIX A

PHASING, PRIORITIES AND COSTS TABLE				
CARLAW DUNDAS CAPITAL WORKS DESIGN STRATEGY				
Note: Table modified to suit W&ES Street Inventory - Surface Facilities and Future Programs				
Location and Proposed works	**Units**	**Quantity**	**Unit Price $**	**Capital Costs**
Boston Ave *(West side, even numbers)*				
01 - Monolithic curb	m	428	120	$51,360.00
02 - Concrete sidewalk (1.5m width)	m2	513.6	75	$38,520.00
03 - Special paving (20% of sidewalk area)	m2	128.4	140	$17,976.00
04 - Asphalt resurfacing	m2	2417	15	$36,255.00
05 - Road reconstruction	m2	0	100	$0.00
06 - Concrete crosswalks	m2	0	135	$0.00
07 - Interlocking paving (vehicular)	m2	0	185	$0.00
08 - Lighting - on existing pole	ea	0	3000	$0.00
09 - Lighting - new pedestrian pole and luminaire	ea	0	4000	$0.00
10 - Roadway lighting - new pole/pedestrian luminaire (inc.East side)	ea	28	8000	$224,000.00
11 - Utility pole c/w pedestrian luminaire	ea	0	10000	$0.00
12 - Trees in boulevard	ea	0	500	$0.00
13 - Trees in sidewalk	ea	0	800	$0.00
14 - Sod	m2	1630	8	$13,040.00
			Sub-Total	**$381,151.00**
Carlaw Ave *(East side)*				
01 - Monolithic curb	m	875.9	120	$105,108.00
02 - Concrete sidewalk	m2	3,343.7	75	$250,777.50
03 - Special paving (20% of sidewalk area)	m2	835.9	140	$117,026.00
04 - Asphalt resurfacing	m2	0	15	$0.00
05 - Road reconstruction TOTAL AREA	m2	6830	100	$683,000.00
06 - Concrete crosswalks/Parking and Bike lanes	m2	2276.6	135	$307,341.00
07 - Interlocking paving (vehicular)	m2	0	185	$0.00
08 - Lighting - on existing pole	ea	0	3000	$0.00
09 - Lighting - new pedestrian pole and luminaire	ea	0	4000	$0.00
10 - Roadway lighting - new pole/pedestrian luminaire	ea	23	8000	$184,000.00
11 - Utility pole c/w pedestrian luminaire	ea	0	10000	$0.00

12 - Trees in boulevard	ea	0	500	$0.00
13 - Trees in sidewalk	ea	40	800	$32,000.00
14 - Sod	m2	0	8	$0.00
			Sub-Total	**$1,679,252.50**
Carlaw Ave *(West side)*				
01 - Monolithic curb	m	907.6	120	$108,912.00
02 - Concrete sidewalk	m2	3287.6	75	$246,570.00
03 - Special paving (20% of sidewalk area)	m2	821.9	140	$115,066.00
04 - Asphalt resurfacing	m2	0	15	$0.00
05 - Road reconstruction	m2	0	100	$0.00
06 - Concrete crosswalks/Parking and Bike lanes	m2	2100.8	135	$283,608.00
07 - Interlocking paving (vehicular)	m2	0	185	$0.00
08 - Lighting - on existing pole	ea	0	3000	$0.00
09 - Lighting - new pedestrian pole and luminaire	ea	0	4000	$0.00
10 - Roadway lighting - new pole/pedestrian luminaire	ea	25	8000	$200,000.00
11 - Utility pole c/w pedestrian luminaire	ea	0	10000	$0.00
12 - Trees in boulevard	ea	0	500	$0.00
13 - Trees in sidewalk	ea	53	800	$42,400.00
14 - Sod	m2	0	8	$0.00
			Sub-Total	**$996,556.00**
Colgate St. *(North side)*				
01 - Monolithic curb	m	291.4	120	$34,968.00
02 - Concrete sidewalk	m2	1115.8	75	$83,685.00
03 - Special paving (20% of sidewalk area)	m2	278.9	140	$39,046.00
04 - Asphalt resurfacing TOTAL AREA	m2	2635.7	15	$39,535.50
05 - Road reconstruction	m2	0	100	$0.00
06 - Concrete crosswalks	m2	0	135	$0.00
07 - Interlocking paving (vehicular)	m2	0	185	$0.00
08 - Lighting - on existing pole	ea	0	3000	$0.00
09 - Lighting - new pedestrian pole and luminaire	ea	0	4000	$0.00
10 - Roadway lighting - new pole/pedestrian luminaire	ea	0	8000	$0.00
11 - Utility pole c/w pedestrian luminaire	ea	0	10000	$0.00
12 - Trees in boulevard	ea	35	500	$17,500.00
13 - Trees in sidewalk	ea	0	800	$0.00
14 - Sod	m2	315	8	$2,520.00
			Sub-Total	**$217,254.50**
Colgate St. *(South side)*				
01 - Monolithic curb	m	294.8	120	$35,376.00
02 - Concrete sidewalk	m2	1121.6	75	$84,120.00
03 - Special paving (20% of sidewalk area)	m2	280.4	140	$39,256.00
04 - Asphalt resurfacing	m2	0	15	$0.00
05 - Road reconstruction	m2	0	100	$0.00
06 - Concrete crosswalks	m2	0	135	$0.00
07 - Interlocking paving (vehicular)	m2	0	185	$0.00
08 - Lighting - on existing pole	ea	0	3000	$0.00
09 - Lighting - new pedestrian pole and luminaire	ea	0	4000	$0.00
10 - Roadway lighting - new pole/pedestrian luminaire	ea	0	8000	$0.00
11 - Utility pole c/w pedestrian luminaire	ea	0	10000	$0.00

12 - Trees in boulevard	ea	37	500	$18,500.00
13 - Trees in sidewalk	ea	0	800	$0.00
14 - Sod	m2	199.8	8	$1,598.40
			Sub-Total	**$178,850.40**
Dundas St. E *(East of Carlaw - North side only)*				
01 - Monolithic curb	m	187.3	120	$22,476.00
02 - Concrete sidewalk	m2	831	75	$62,325.00
03 - Special paving (20% of sidewalk area)	m2	207	140	$28,980.00
04 - Asphalt resurfacing TOTAL AREA - E CARLAW	m2	1974	15	$29,609.85
05 - Road reconstruction	m2	0	100	$0.00
06 - Concrete crosswalks	m2	0	135	$0.00
07 - Interlocking paving (vehicular)	m2	0	185	$0.00
08 - Lighting - on existing pole	ea	0	3000	$0.00
09 - Lighting - new pedestrian pole and luminaire	ea	0	4000	$0.00
10 - Roadway lighting - new pole/pedestrian luminaire	ea	6	8000	$48,000.00
11 - Utility pole c/w pedestrian luminaire	ea	0	10000	$0.00
12 - Trees in boulevard	ea	0	500	$0.00
13 - Trees in sidewalk	ea	20	800	$16,000.00
14 - Sod	m2	0	8	$0.00
			Sub-Total	**$207,390.85**
Dundas St. E (East of Carlaw - South side only)				
01 - Monolithic curb	m	93	120	$11,160.00
02 - Concrete sidewalk	m2	324.6	75	$24,345.00
03 - Special paving (20% of sidewalk area)	m2	81.2	140	$11,368.00
04 - Asphalt resurfacing	m2	0	15	$0.00
05 - Road reconstruction	m2	0	100	$0.00
06 - Concrete crosswalks	m2	0	135	$0.00
07 - Interlocking paving (vehicular)	m2	0	185	$0.00
08 - Lighting - on existing pole	ea	0	3000	$0.00
09 - Lighting - new pedestrian pole and luminaire	ea	0	4000	$0.00
10 - Roadway lighting - new pole/pedestrian luminaire	ea	6	8000	$48,000.00
11 - Utility pole c/w pedestrian luminaire	ea	0	10000	$0.00
12 - Trees in boulevard	ea	0	500	$0.00
13 - Trees in sidewalk	ea	16	800	$12,800.00
14 - Sod	m2	0	8	$0.00
			Sub-Total	**$107,673.00**
Dundas St. E (West of Carlaw - North side only)				
01 - Monolithic curb	m	109.3	120	$13,116.00
02 - Concrete sidewalk	m2	765.9	75	$57,442.50
03 - Special paving (20% of sidewalk area)	m2	191.5	140	$26,810.00
04 - Asphalt resurfacing TOTAL AREA - W CARLAW	m2	1905.4	15	$28,580.25
05 - Road reconstruction	m2	0	100	$0.00
06 - Concrete crosswalks	m2	0	135	$0.00
07 - Interlocking paving (vehicular)	m2	0	185	$0.00
08 - Lighting - on existing pole	ea	0	3000	$0.00
09 - Lighting - new pedestrian pole and luminaire	ea	0	4000	$0.00
10 - Roadway lighting - new pole/pedestrian luminaire	ea	8	8000	$64,000.00
11 - Utility pole c/w pedestrian luminaire	ea	0	10000	$0.00

12 - Trees in boulevard	ea	0	500	$0.00
13 - Trees in sidewalk	ea	19	800	$15,200.00
14 - Sod	m2	0	8	$0.00
			Sub-Total	**$205,148.75**
Dundas St. E (West of Carlaw. - South side only)				
01 - Monolithic curb	m	191.8	120	$23,016.00
02 - Concrete sidewalk	m2	744.9	75	$55,867.50
03 - Special paving (20% of sidewalk area)	m2	186.2	140	$26,068.00
04 - Asphalt resurfacing	m2	0	15	$0.00
05 - Road reconstruction	m2	0	100	$0.00
06 - Concrete crosswalks	m2	0	135	$0.00
07 - Interlocking paving (vehicular)	m2	0	185	$0.00
08 - Lighting - on existing pole	ea	0	3000	$0.00
09 - Lighting - new pedestrian pole and luminaire	ea	0	4000	$0.00
10 - Roadway lighting - new pole/pedestrian luminaire	ea	8	8000	$64,000.00
11 - Utility pole c/w pedestrian luminaire	ea	0	10000	$0.00
12 - Trees in boulevard	ea	0	500	$0.00
13 - Trees in sidewalk	ea	19	800	$15,200.00
14 - Sod	m2	0	8	$0.00
			Sub-Total	**$184,151.50**
			Total	**$4,157,428.00**
			Contingency 20%	**$831,485.00**
			Grand Total	**$4,988,914.00**

APPENDIX B: STREET PLANS