
Drive-through Facilities

Urban Design Study and Guidelines



MBPD Inc. in association with the Town of Oakville

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EXECUTIVE SUMMARY

The Town of Oakville commissioned this study to develop urban design guidelines for drive-throughs for Oakville in consultation with the community and the industry, for adoption by the Town Council.

The overall intent of the guidelines is to ensure a good balance of:

- Minimum impacts on adjacent properties
- An attractive streetscape appearance
- Functional and safe traffic movement

It is noted at the outset that these are urban design guidelines and not zoning by-law provisions. As such, the objective is to provide flexibility in interpreting the guidelines based on site-specific conditions.

The guidelines will be used to assist development proponents and staff on municipal expectations for drive-through facilities, and will be applied during the various stages of the development review and approval process in Oakville. The guidelines will be used in conjunction with the Oakville Official Plan and Zoning By-law, as well as the applied standards and procedures of the various departments.

The scope of this study has been limited to stand-alone drive-through facilities. The principles espoused in these guidelines will have general application for all facilities that include drive-throughs. Nevertheless, future detailed study areas may include drive-through facilities in conjunction with gas stations and car wash establishments, or other types of drive-through facilities that may evolve over time.

Drive-through operations have proven to be very successful as they target the mobile and car-oriented Canadian market. Aside from providing a certain amount of convenience for the traveling public, it is seen that drive-throughs also provide a level of safety, for example for using restaurants and financial institutions at night. Furthermore, drive-throughs may make it easier for the physically challenged to use certain facilities.

While the retail and development sectors have adopted the drive-through model enthusiastically in response to general demand, there are some public concerns that have been raised in various communities, including Oakville, about the impacts of drive-through establishments on adjacent residential areas, the streetscape, traffic, and the environment.

Most areas of Oakville have been planned in a pattern that relies on the use of the automobile as a major, or primary, means of transportation. Therefore, drive-throughs provide an increasingly popular service to the driving public and as their level of use indicates, they are a convenience that is widely sought after. However, there are various impacts that should be considered in assessing where and how drive throughs should be accommodated in Oakville.

Drive-through facilities raise several planning, environmental and urban design issues. Their capacity to attract high volumes of vehicular activity to a site, and particularly the potential impacts on neighbouring land uses, has in a number of instances generated public concern.

The issues include:

- Impacts on adjacent land-uses, specifically residential uses, including noise, illumination, odour, and litter.
- Impacts on the streetscape and urban design concerns
- Site planning and traffic concerns
- Environmental concerns

The applicable policies of four other Ontario municipalities have been reviewed with a view to assessing how they might provide relevant input into this study. In this regard the study looked at the by-law provisions, standards and guidelines of the city of Mississauga, Kitchener, and Toronto and the Region of Durham.

Various stakeholders representing the broader community and the retail and development industries were invited to participate in a half-

day stakeholder workshop on February 25, 2003. This workshop represented an important step in the study process. In total 34 people attended the workshop representing various affiliations and professional expertise.

In the working group segment of the workshop, the participants were divided into four teams to provide a list of guiding urban design principles and any accompanying concept sketches. In this regard, three generic sites were made available to the teams representing varying sizes and contexts, which were used as base drawings. Each team presented their findings and recommendations to all the attendants.

An Open house was held on May 15, 2003 to discuss the progress of the study and to receive comments on the draft urban design guidelines, prior to finalizing a report to the Site Plan Committee and to Council. The 15 attendants included representatives of the community, industry, and members of Oakville Council. Staff from MBPD and Oakville Planning Department prepared and facilitated the Open House.

There was general support on the direction of the study, which emphasized a balanced approach in addressing the public demand for drive-throughs, modified or eliminated impacts, and improved design attributes.

The urban design guidelines have been designed to accommodate a wide range of potential design alternatives, while promoting high quality commercial developments containing drive-through facilities.

Some of the guidelines below have applicability for other commercial developments. As a future study area, it is recommended that Oakville develop urban design guidelines to address commercial developments generally, and to support and work in concert with the guidelines devised for drive-through facilities.

The design quality required by the guidelines will be exhibited by a development's regard for:

- Locational and contextual fit
- Minimal impacts on adjacent sites and neighbourhoods
- Site organization features and functional integration with other on-site facilities, including safety of pedestrian and vehicular movement in and around the site
- Urbanistic attributes, such as location of the building on the site and the project's contribution to the streetscape

Thirty-nine guidelines have been organized under seven headings, as follows:

- Locational Criteria
- Site Access, Vehicular and Pedestrian Traffic
- Stacking Lanes
- Site Size
- Relationship to Adjacent Uses
- Building and Site Organization, and Streetscape
- Landscaping

A two-year monitoring period is recommended from the date of the approval of the guidelines to gauge their effectiveness. Subsequent to the monitoring period, it is recommended that the guidelines be reviewed for their effect and revised as required. Furthermore in this regard, if it is determined that the guidelines by themselves are not able to achieve the desired results to create drive-through developments that are: locationally and contextually suitable; functionally and urbanistically appropriate; and causing a minimum amount of negative impacts on neighbouring properties, it is recommended that other regulatory options be considered including by-law provisions or outright prohibitions.

1.0 OBJECTIVE AND SCOPE OF THE STUDY

The mandate of this study is to develop urban design guidelines for drive-throughs for Oakville in consultation with the community and the industry, for adoption by the Oakville Town Council.

The overall intent of the guidelines is to ensure:

- Minimum impacts on adjacent properties
- An attractive streetscape appearance
- Functional and safe traffic movement

It should be noted at the outset that these are urban design guidelines and not zoning by-law provisions. As such, the objective is to provide flexibility in interpreting the guidelines based on site-specific conditions. The intent is to apply them as stand-alone guidelines during the various stages of the development review and approval process in Oakville. The guidelines should be used in conjunction with the Oakville Official Plan and Zoning By-law, as well as the applied standards and procedures of the various departments.

A two-year monitoring period is recommended from the date of the approval of the guidelines to gauge their effectiveness. Subsequent to the monitoring period, it is recommended that the guidelines be reviewed for their effect and revised as required. Furthermore in this regard, if it is determined that the guidelines by themselves are not able to achieve the desired results to create drive-through developments that are: locationally and contextually suitable; functionally and urbanistically appropriate; and causing a minimum amount of negative impacts on neighbouring properties, it is recommended that other regulatory options be considered including zoning by-law provisions or outright prohibitions.

1.1 Study Process

The study has been conducted in the following sequence:

- Describe drive-through uses, and the different types of facilities
- Review drive-through facilities and their characteristics
- Define relevant issues
- Review what other municipalities are doing – examine selected municipalities’ studies, reports, standards and regulations and summarize
- Meet with Oakville Council members to review analysis and confirm study direction
- Conduct workshop with participation of stakeholders to help determine guiding design principles
- Evaluate the findings of the workshop
- Prepare draft design guidelines



This Tim Hortons restaurant is located on Lakeshore Rd. in Oakville. It is placed on a small Downtown site adjacent residential uses.



This Bank of Montreal at the intersection of Trafalgar & Dundas in Oakville in a retail plaza is located to address the urban corner appropriately. The drive-through stacking lane is contained within the site without any negative impacts.

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- Conduct an open house to present the draft guidelines and obtain feedback
- Refine the guidelines as required and prepare the final report

It should be noted that no queuing and utilization studies of drive-through facilities in Oakville was conducted as part of the study. Such studies conducted by the City of Mississauga and the Region of Durham were reviewed and incorporated into the guidelines as appropriate.

1.2 Future Study Areas

The scope of this study has been limited to stand-alone drive-through facilities. The principles espoused in these guidelines will have general application for all facilities that include drive-throughs. Nevertheless, future detailed study areas may include drive-through facilities in conjunction with gas stations and car wash establishments, or other types of drive-through facilities that may evolve over time. Also, it is recommended that Oakville develop urban design guidelines to address commercial developments generally, to work in concert with the guidelines devised for drive-through facilities.

2.0 BACKGROUND

Drive-through facilities have evolved from the 50's and 60's drive-in restaurants. Drive throughs have been the fastest growing area in fast food sales in the past several years. The retail and development industries are constructing more drive-throughs, and retrofitting existing facilities to add drive-throughs to address demand – it is estimated that between 1994 and 2001 drive-through traffic in Canada increased by 250%. While in the GTA drive-throughs are primarily used for restaurants, an increased number of financial institutions are providing this type of facility. Other sectors are also emerging, including pharmacies and dry cleaners.

Drive-through operations have proven to be very successful as they target the mobile and car-oriented Canadian market. Aside from providing a certain amount of convenience for the traveling public, it is seen that drive-throughs also provide a certain level of safety for using restaurants and financial institutions at night. Furthermore, drive-throughs may make it easier for the physically challenged to use facilities such as restaurants, financial institutions and pharmacies.

While the retail and development sectors have adopted the drive-through model enthusiastically in response to general demand, there are some public concerns that have been raised in various communities, including Oakville, about the impacts of drive-through establishments on adjacent residential areas, the streetscape, traffic, and the environment.



Photograph of McDonald's restaurant on Bayly St. in Ajax showing the building set back from the street. However the frontage contains appropriate landscaping as well as an outdoor patio.



This Dairy Queen restaurant on Bayly St. in Ajax is more typical for drive-through restaurants, with the building set back from the street and parking in front.

2.1 Characteristics of Drive-through Facilities

Drive-through facilities now encompass fast food restaurants, financial institutions, pharmacies, dry cleaners, and the list is growing.

2.1.1 Fast Food Restaurants

Drive-throughs associated with fast food restaurants are the most numerous in the GTA and specifically in Oakville. Fast food restaurants with drive-through facilities can be categorized as follows:

- Take-out restaurant: All the food is carried and consumed outside the building.
- Combination eat-in and take-out restaurant: Food is consumed within the building as well as outside the premises.
- Two restaurants combined: Separate drive-through windows are allocated to each restaurant. The restaurants share access and parking.
- Drive-through restaurants located on service station sites: The restaurant structure may be combined with the service station kiosk or free standing.

A report titled “Joint Municipal Study of Fast Food Restaurant Drive-through and Parking” which was prepared for the area municipalities of Durham Region on February 2000 by SRM Associates Inc. includes several findings on the types of restaurants with drive-throughs. It states “donut shops with drive-throughs are generally in the 250 m² to 300 m² building size group, while convenience restaurants with drive throughs are between 300 m² to 500 m².”

2.1.2 Financial Institutions

Financial institutions are another popular type of drive-through facilities. In contrast to fast food restaurants, financial institutions:

- Do not have order boxes; drive-through customers make their decisions when they reach the banking machine without any ordering ahead.
- Generally, require shorter stacking/queuing lanes; currently even at peak times there are usually 3 to 4 cars waiting in line.
- Due to the nature of the facility, do not become potential locations for community gathering.
- In some instances establish a stand-alone banking machine without an associated bank building.



This Wendy's/Tim Hortons restaurant grouping on Woodbine Ave. in Markham contains most of the three drive-through lanes at the rear.



This Scotiabank facility on the Queensway in Etobicoke places the drive-through stacking lane away from the street and skillfully incorporates it into the parking lot of the adjacent retail plaza.

2.1.3 Double Stacking Lanes and Multiple Drive-throughs

The location, as well as length and configuration of the vehicle stacking spaces often determine how well a drive-through establishment functions on the site, urbanistically as well as in terms of potential impacts on the adjoining properties. Certain drive-through facilities contain multiple stacking lanes. For example, the commonly used term “double drive-through” means one building with two separate stacking lanes. In this instance, two different scenarios may occur: two tenants occupy a single building with two separate stacking lanes and pick up areas; or a single user is served by a double lane. There are also examples of multiple drive-through sites, which refer to sites with more than one drive-through facility.

2.2 Drive-throughs in Oakville

The Oakville Zoning By-law does not address drive-through operations. The closest definition under “restaurant take-out” describes it as “providing refreshments or meals to order to be picked up or consumed elsewhere”, and is permitted in all commercial zones. C1 (Local Shopping Centre), C2 (Community Shopping Centre), and C6 (Service Station) zones require a landscape buffer strip at least 7.62m wide in each yard adjoining the residential area. The C3 (Central Business District) and C3R (Central Business District Residential) zones require a landscaped buffer at least 3m wide in each yard adjoining the residential area. Also, C6 (Service Station) requires that “ a building or structure or portion thereof containing a drive through window must be set back a minimum of 15 m from the boundary of a residential zone.”

The Zoning By-law’s Employment Lands provisions define drive-throughs as “...a banking or restaurant service or car wash provided to a user in the user’s vehicle”, and permits them in all Employment Zones except on a lot abutting a Residential Zone. It should also be noted that a buffer strip 7.5m wide is required for Employment uses located adjacent residential zones.

Oakville Anti-idling By-law 2002-153 prohibits the idling of a vehicle for more than five minutes. This by-law has proven to be difficult to monitor and enforce. However, it is noted that the Town is embarking on a public education and outreach campaign to inform residents about the anti-idling by-law and encourage people to “turn off their engines.”

With some notable exceptions, such as the Downtown, a certain segment of Kerr St., and Bronte Village, most areas of Oakville have been planned in a pattern that relies on the use of the automobile as a major or primary means of transportation. Therefore, drive-throughs provide an increasingly popular service to the driving public and as their level of use indicates, they are a convenience that is widely sought after. However, there are various impacts that should be considered in assessing if, where and how drive throughs should be accommodated in Oakville.

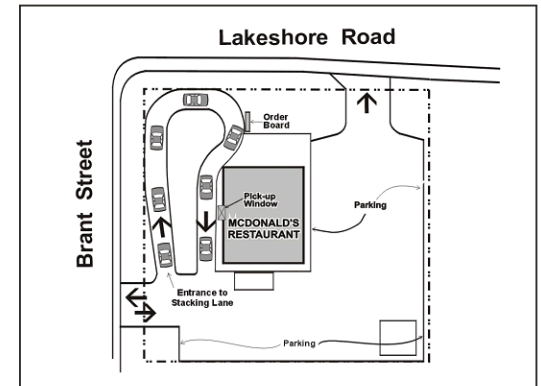


Figure 1. Sketch plan of the McDonald’s restaurant at Lakeshore Rd. in Oakville. Note the stacking lane located at the corner of the site, which is adjacent the urban intersection.

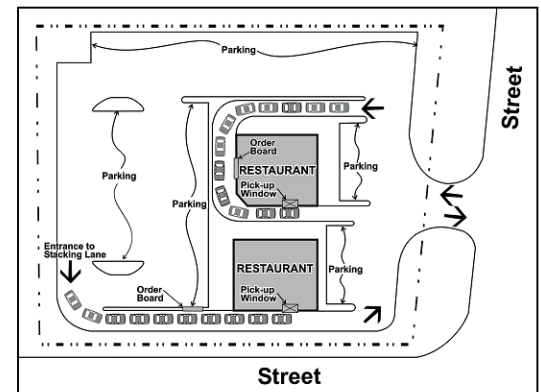


Figure 2. A typical layout with double stacking lanes. Note that both buildings are internalized on the site and surrounded by parking or stacking lanes.

To-date all the drive-through facilities in Oakville are comprised of fast food restaurants and financial institutions. Certain drive-through restaurants have generated some public concern in Oakville. The concerns often result from the apparent negative impacts on adjacent residential uses, and focus on noise generated by the drive-through use, the intensity of traffic, and lack of buffering.

3.0 ISSUES

Drive-through facilities raise several planning, environmental and urban design issues. Their capacity to attract high volumes of vehicular activity to a site, and particularly the resultant potential impacts on neighbouring land uses has in a number of instances generated public concern.

3.1 Impacts On Adjacent Land-Uses, Specifically Residential Uses

The issues under this heading include:

- Intrinsic to drive-throughs is the engine noise generated by idling cars, placing orders at the order box, and car stereos. This impact can be further compounded by facilities that operate 24 hours 7 days a week.
- Illumination of the site, particularly along the stacking lanes and pick-up windows, and the lights of a large number of cars lining up and accessing the facility may create problems with adjacent uses.
- While not specifically limited to drive-through restaurants, smells associated with food serving establishments can be found to be offensive in some instances. Furthermore, idling cars in drive-throughs generate exhaust fumes, which have associated odours.
- Litter may be increased on the site in drive-through facilities due to the queuing cars, and which may be spread beyond the premises.

3.2 Impacts On The Streetscape And Urban Design Concerns

The issues under this heading include:

- Drive-through facilities, by their nature, create a site, and often a streetscape, dominated by vehicles and asphalt.
- If designed with a wrap around stacking lane, which separate buildings from the adjacent street(s), drive-through facilities do not contribute to a built form that supports a pedestrian-friendly, and transit supportive streetscape.
- Increased traffic volumes generally add to the potential of pedestrian/vehicular conflicts.



Photograph of the boundary fence for the Burger King restaurant on Hwy. 7 in Markham. Note the relative absence of landscape buffering adjacent the residential property.



This photograph of parking and stacking areas for a Burger King restaurant in a retail plaza on Wilson Ave. in Toronto illustrates the large amount of asphalt often required for such facilities.

- Facility designs with wrap-around stacking aisles, create on-site pedestrian safety concerns, with pedestrians potentially forced to cross vehicular circulation or stacking aisles form anywhere on the site or the street.
- Signage is a key element for the identification of most all retail uses. Usually there are additional signage requirements for drive-through operations, which may impact on the streetscape and that may not be consistent with the visual character of established communities.

3.3 Site Planning And Traffic Concerns

The issues under this heading include:

- Drive-through facilities, particularly those involving food, generate increased levels of traffic in comparison to the same uses without it.
- Stacking lanes present a bigger level of complexity to site design as they introduce additional traffic movements, which can be circuitous and intersecting. Furthermore, “decision” points for drivers are increased in comparison with similar non-drive-through facilities, which may cause congestion and traffic back-ups onto public roads. This condition may be most sensitive on corner sites where it may impact on the adjacent intersection.
- Stacking lanes may block parking spaces on the site.
- If a stacking lane has several turning movements and realignments along its route, it becomes less user-friendly and inefficient.
- Narrow stacking lanes restrict vehicle access, particularly in winter conditions, and may force vehicles across curbs and landscaped or pedestrian areas.
- Particular site planning challenges are presented where double or multiple drive-through facilities are concerned. A number of traffic movements usually result on a site with these types of facilities, potentially pausing safety and convenience concerns. As well, with double or multiple drive-throughs large asphalted areas are created on the site requiring additional attention to the establishment of soft landscaped areas.

3.4 Environmental Concerns

The issues under this heading include:

- Vehicle emissions can contribute to poor air quality. Pollutant discharge is found to be increased when vehicles are standing and idling.
- Air quality concerns due to idling vehicles are frequently expressed by residential neighbours adjacent drive-through facilities.

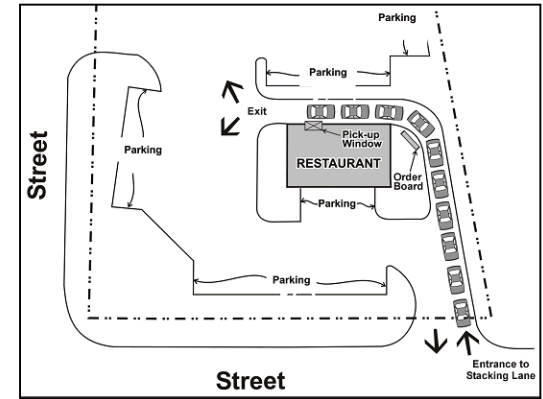


Figure 3. Sketch of a corner site. It illustrates some of the concerns related to building siting (away from the corner) and stacking lane location (in conflict with access to the site).

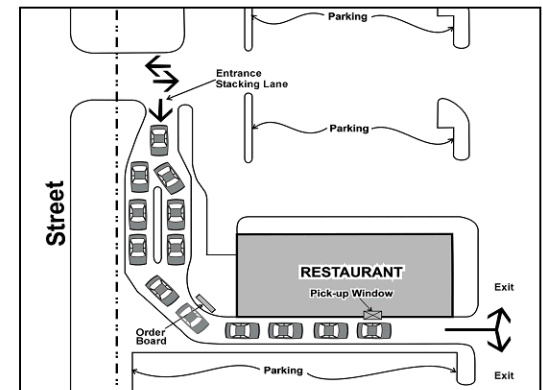


Figure 4. Mid-block site with a double stacking lane. The building is surrounded by asphalt, and is located in close proximity to the vehicular access to the site. This condition also causes conflicts with pedestrians.

4.0 OTHER MUNICIPALITIES

The applicable policies of several other Ontario municipalities have been reviewed with a view to assessing how they might provide relevant input into this study. Below, a brief summary of the material compiled from this review has been provided. For a more detailed account refer to Appendix A.

4.1 City of Mississauga

A City of Mississauga staff report titled “Drive-through Restaurants / Convenience Kiosks” to the Planning and Development Committee of Council dated December 18, 2001 has proposed several zoning by-law standards and design guidelines/principles. Furthermore, the report confirms the current setback provision for all restaurants, which are at least 60m away from residential areas. There has been no Council approval of the recommendations of this report to-date. The report also includes a thorough study of stacking lanes titled “Utilization of Drive-through Lanes Associated With Eating Establishments”.

Mississauga also restricts drive-through restaurants from main street commercial areas such as in Streetsville and Port Credit.

4.2 City of Toronto

The City of Toronto has proposed an amendment to its relevant Zoning By-laws to define drive-through facilities as a separate use and establish provisions to regulate the locations where such a use may or may not be allowed. Drive-through facilities will continue to be permitted in commercial and industrial zones throughout Toronto, subject to some limitations. However, drive-through facilities will not be allowed in zones permitting residential uses, which by definition includes mixed-use areas, designated centres and the downtown. The Zoning By-laws have been appealed to the Ontario Municipal Board by the Industry.

A staff report dated August 26, 2002 recommends a two-phase approach to resolving issues involving drive-through facilities. In the first phase Zoning By-law parameters are set out to define drive-through facilities as a separate use and where they should be permitted. The second phase will establish standards and guidelines for the development of drive-through facilities.

4.3 Region of Durham

A report titled “Joint Municipal Study of Fast Food Restaurant Drive-through and Parking” was prepared for the area municipalities of Durham Region on February 2000 by SRM Associates Inc. The report focuses on standards for parking and queuing for drive through restaurants and



This Scotiabank facility located on the Queensway in Etobicoke demonstrates how a drive-through facility can be made to address the street appropriately, while putting parking and stacking to the side and rear of the building.



Photograph of the stacking lane leading to the pick up area for the above Scotiabank building. Note the relatively new landscape screen adjacent the driveway.

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establishes four categories according to type of operation. The consultant undertook a study of 27 fast food restaurants in Durham Region.

4.4 City of Kitchener

Kitchener has an Urban Design Brief, which deals with Drive-through facilities. Proponents are urged to meet with city staff early in the development process where proponents are unable to meet the guidelines, and to review together how appropriate changes can be accommodated to satisfy the overall intent of the design guidelines.

The Kitchener design guidelines deal with:

- General Design Objectives
- Traffic Design Issues
- Landscape Design
- Noise Mitigation

5.0 STAKEHOLDER URBAN DESIGN WORKSHOP

Various stakeholders representing the broader community and the retail and development industries were invited to Oakville to participate in a half-day workshop on February 25, 2003. This workshop represented an important step in the study process. Staff from MBPD Inc. and representatives of the Town of Oakville facilitated the workshop. In total 34 people attended the workshop representing various affiliations and professional expertise.

The workshop followed an agenda, which included:

- Introduction and presentation
- General discussion
- Working groups - guiding urban design principles and any accompanying sketches
- Summary of findings and next steps

The proceedings commenced with a PowerPoint presentation describing drive-through uses, varying types of drive-throughs, issues, as well as experiences and examples from Oakville and other GTA municipalities. The general discussion following the presentation dealt with participants' observations and comments on a variety of issues related to drive-throughs.

In the working group segment of the workshop, the participants were divided into four teams, each led by an urban designer, to provide a list of guiding urban design principles and any accompanying concept sketches. In this regard, three generic sites were made available to the teams representing varying sizes and contexts, which were used as base drawings.



This photograph of Country Style restaurant on a corner site on Yonge St. in North York shows a fitting way to place a building with a drive-through facility along the street.



Photograph of a working group session in the February 25, 2003 stakeholder workshop, involving the community, Councillors, design professionals, and Oakville staff.

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Each team presented their findings and recommendations to all the attendants. For a detailed account of the Stakeholder Workshop Proceedings and the List of Participants refer to Appendices B and C.

6.0 OPEN HOUSE

An Open house was held on May 15, 2003 to discuss the progress of the study to date and to receive comments on the draft urban design guidelines, prior to finalizing a report to the Site Plan Committee and to Council. The 15 attendants included representatives of the community, industry, and members of Oakville Council. Staff from MBPD Inc. and Oakville Planning Department prepared and facilitated the Open House.

The Open House was comprised of: a display of boards with information on the scope of the study, the background, and the draft guidelines; a formal presentation; and a question and answer period.

There was general support on the direction of the study, which provides a balanced approach in addressing the public demand for drive-throughs, modifying impacts, and improving design attributes. There were several specific comments and questions on some of the guiding principles and the resultant urban design guidelines. The study reflects these comments to the best extent possible while balancing divergent viewpoints.

For a summary of the Open House Comments and Questions and the List of Participants refer to Appendices D and E.



This photograph of a Royal Bank building on Trafalgar Rd. in Oakville shows the drive-through lane wrapping around the building, which separates the building from the street.



Photograph of a Krispy Kreme Donuts store in Mississauga. Some fast food facilities may require particular consideration for traffic demands on their site and the arrangement of stacking lane(s).

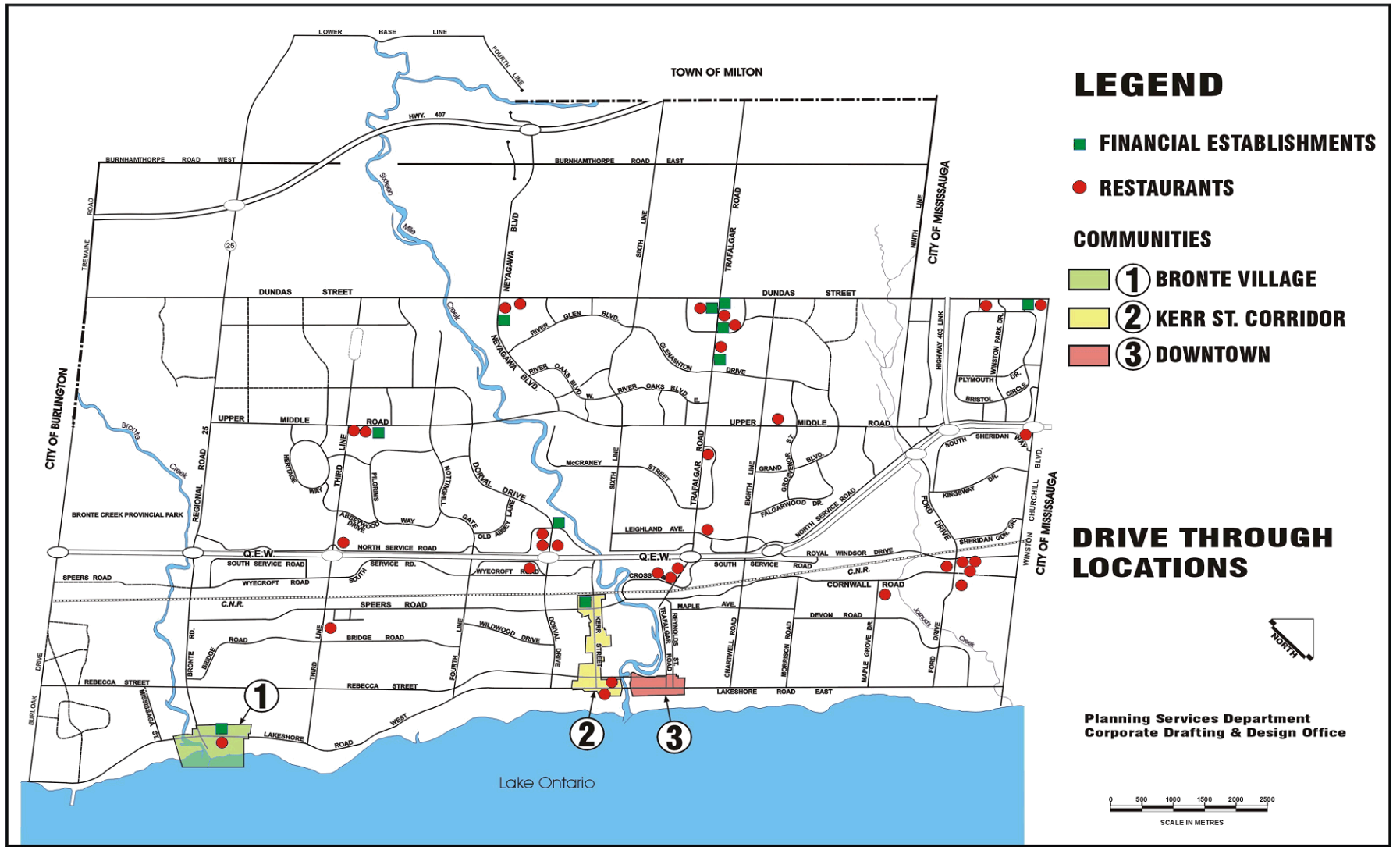


Figure 5. Locations of drive-through facilities in Oakville; and Downtown, Kerr St. Corridor, and Bronte Village areas

7.0 URBAN DESIGN GUIDELINES

The guidelines are designed to accommodate a wide range of potential design alternatives while promoting high quality commercial developments containing drive-through facilities. The guidelines will be used by developers, builders, planners and designers in preparation of their plans, and will be applied by municipal staff as well as the Site Plan Committee in the review of development applications.

The design quality required by the guidelines will be exhibited by a development’s regard for:

- Locational and contextual fit
- Minimal impacts on adjacent sites and residential neighbourhoods
- Site organization features and functional integration with other on-site facilities, including safety of pedestrian and vehicular movement in and around the site
- Urbanistic attributes, such as location of the building on the site and the project’s contribution to the streetscape

Some of the guidelines below have applicability for other commercial developments. It is recommended that Oakville develop urban design guidelines to address commercial developments generally, and to support and work in concert with the following guidelines devised for drive-through facilities.

The guidelines have been organized under seven headings. It is recommended that they are read and applied in all their component parts to have a comprehensive understanding of their intent and derive maximum benefit.

7.1 Locational Criteria

Given their characteristics and the associated impacts, it is recommended that drive-through facilities be discouraged in certain locations of Oakville.

In this regard, one of the main concerns is the urbanistic and streetscape impact of drive-through facilities. As such, it is seen that for certain areas of Oakville, which have evolved in the model of a traditional urban neighbourhood with pedestrian friendly streetscapes and a transit-supportive urban pattern, drive-through uses should be discouraged. Specifically, the Downtown, the Kerr St. Corridor, and Bronte Village have the above characteristics and, as well, generally have lot sizes that are smaller and lotting patterns that are more intricate. In addition, other areas of the Town, which are evolving as important urban nodes with a transit supportive urban pattern such as the Midtown Core and Palermo Village may be identified in the future as areas where it may not be appropriate to locate drive-through facilities.



As this image along Lakeshore Rd. demonstrates, Downtown Oakville provides a pedestrian friendly streetscape in a transit-supportive development pattern.



This photograph of Bronte Rd. exhibits the intimate scale and fine-grain pattern of Bronte Village.

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As shown on Figure 5, the boundaries of these three areas correspond with the Community Improvement Area boundaries in the Oakville Official Plan. These areas contain important vibrant commercial main streets with significant levels of pedestrian activity. The Downtown is already recognized as an important historical residential and commercial area whereas the Kerr St. Corridor and Bronte Village are evolving into places of significance with pedestrian-friendly streetscapes and vibrant commercial uses.

Guideline 1: Ensure that proposed drive-through facilities are compatible with and sensitive to the prevalent urban form, streetscape features, and future development plans of the area.

Guideline 2: Discourage drive-through facilities in the Downtown, Kerr Street Corridor, and Bronte Village.

7.2 Site Access, Vehicular and Pedestrian Traffic

By their nature, drive-through facilities are dependent on high volumes of vehicles accessing the site and maneuvering within it. As such, drive-through facilities should be designed to minimize the impacts of extensive amounts of asphalt on the site, reduce the negative effects of stacking lanes on adjacent public street(s), maximize pedestrian safety on the site and the street(s), and make a positive contribution to the pedestrian environment.

For orderly vehicular movement upon entering the site, or exiting it, it is important to ensure ease and convenience for the motorists as well as safety for pedestrians. It is noted that whenever a vehicle crosses a sidewalk there is a possibility of conflict with pedestrians, which may result in injury. Therefore, in locating vehicular access points to a site, consideration should be given to the position of adjacent street access points, and reducing the number of movements around the entrance.

Guideline 3: Locate access points into the site away from street intersections and minimize the number of potential vehicular movements around the access location.

Guideline 4: Minimize the number and size of vehicular access points to the site from the public street.

Guideline 5: Locate parking stalls away from access points to the stacking lanes where possible.



The stacking lane for this Burger King restaurant on a large site on Hwy. 7 in Markham has been located internal to the site and avoids conflicts with parking and vehicular access.



The stacking lane for this Country Style restaurant on a small site on Yonge St. in North York is located close to the vehicular access to the site off a side street.

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If the entry point to the stacking lane is located in close proximity to the vehicular street access point of the site, the likelihood exists that in certain peak times vehicles will stack in the public right of way. In addition, such close proximity may create confusion and hesitation by the driver upon entering the site, potentially compromising safety. As such, the access point to the stacking lane should be set as deeply as possible into the site to reduce potential impacts on the public street and confusion for the drivers. In this regard, corner sites should be treated with particular care to prevent cars accessing and exiting the site from impeding traffic movement at intersections.

Guideline 6: Place the access point to the stacking lane of a drive-through facility as deeply as possible into the site.

Well-conceived and delineated vehicular and pedestrian access and circulation routes are important considerations in the design of drive-through developments. The placement of the building and the stacking lane on a site should be done with a view to ensuring the safe movement of pedestrians and vehicles within the site, as well as accessing the public street. In particular, the stacking lane of a drive-through facility can hamper access to the building from parking areas on the site or from the street. Efforts should be made to prevent pedestrians having to wind their way through vehicles in the stacking lane. In this regard, it is recommended that the major pedestrian walkways within the site, as well as the major pedestrian access points to the street, be demarcated with decorative paving or other similar means that change the look and/or texture of pavement. Furthermore, sites with drive-through facilities should be designed to minimize asphalt areas as much as possible, and maximize opportunities for walkways along the sides of buildings to assist pedestrian movement and safety.

Guideline 7: Divide large parking areas into smaller and well-defined sections where possible on the site, and use hard and soft landscaping to avoid large monotonous asphalt surfaces.

Guideline 8: Provide well articulated pedestrian routes and zones on the site, linking buildings and parking areas. Connect these routes and zones to the street(s) where feasible. Use decorative paving, or similar means, complemented by soft landscaping where appropriate, to delineate these linkages.

Guideline 9: Provide raised walkways for pedestrians on the sides of buildings wherever feasible. Consider a minimum clear walkway width of 1.0m.



This planted and decoratively paved boulevard and median are located in a retail plaza at Appleby Line in Burlington. The landscaping treatment contributes to a high quality environment.

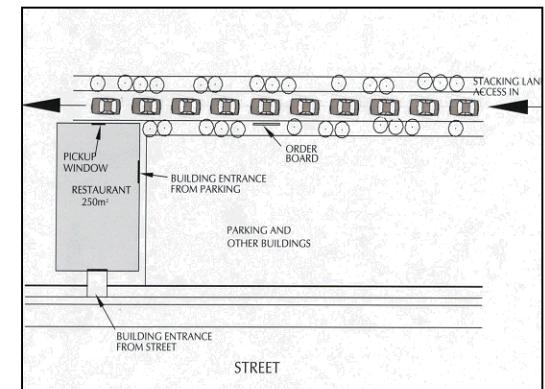


Figure 6. Sketch of a stacking lane, configured in a straight line. This configuration makes it easy to use. It is acknowledged however, that some site configurations may not make this practicable.

7.3 Stacking Lanes

Adequate vehicle stacking space is critical to prevent on and off site traffic problems for drive-through facilities. Furthermore, the location and geometry of stacking lanes need to be assessed with a view to ensuring ease and safety of operation within the site. In situations where a stacking lane is interrupted and crossed-over by other traffic, on-site congestion may result as drivers may be unsure of who has the right of way.

The number of turning movements along the drive through aisle(s) also determines its efficiency. In this regard, it is often desirable to maintain a largely linear and straight aisle to make it easy to use. As well, stacking lanes that block access to parking spaces and/or service and loading areas on the site may make their functions obsolete for a major part of the day. Therefore, to enable the site to fulfill the by-law requirements for parking and function effectively, stacking lanes should be designed with a view to eliminating any such conditions. The provision of escape routes from a stacking lane should be considered to allow motorists the option to leave a queue in certain circumstances and to prevent undue lengths of time of waiting in an idling vehicle.

Guideline 10: Avoid interruptions to stacking lanes by other vehicular traffic wherever possible.

Guideline 11: Use raised islands, or other forms of barriers such as concrete curbs, to separate stacking lanes from main parking areas and driveways. Provide decorative paving treatments and soft landscaping for the barriers where possible.

Guideline 12: To the extent feasible, design stacking lanes to be linear and straight, with a minimum amount of curves and turning movements. Where appropriate, provide escape lanes from stacking lanes.

Guideline 13: In locating the stacking lane(s), avoid blocking access to parking spaces and loading and service areas.

Typically for eating establishments, there are two component parts of a stacking lane: the area between the beginning of the stacking area and the order station, and the area between the order station and the pick up window. An adequate number of stacking spaces need to be accommodated in each segment of the stacking lane to ensure convenient operation. The required length for the stacking lane has to be balanced with the objective to minimize asphalt areas to the extent possible.



The rear of this drive through facility on Woodbine Ave. in Markham with two restaurants and three stacking lanes illustrates the large maneuvering area required to make the site operate efficiently and safely.



The location of the stacking lane for this Starbucks restaurant on Trafalgar Rd. in Oakville is a good example of how to avoid traffic and pedestrian conflicts, and also allow the building to establish a good street relationship.

Guideline 14: For eating establishments, provide for a minimum total of 10 vehicle stacking spaces in the drive-through aisle. Unless specific operations mandate otherwise, ensure that a minimum length to accommodate 7 vehicles is available between the entrance to the stacking lane and the order station, and that the aisle is contained within the site and located a good distance from any vehicular entrance. Where required by the Town, provide a queuing study to confirm minimum length.

There is a marked difference between the stacking requirements of drive-through fast food facilities and others, such as financial institutions. Generally, drive-through automated banking machines require shorter queuing lanes as there are no requirements to prepare an order for a bank machine patron, and empirical evidence suggests there are no more than four cars waiting in line even at peak times.

Guideline 15: For financial establishments, provide for a minimum total of 4 vehicle stacking spaces in the drive-through aisle. Where required by the Town, provide a queuing study to confirm minimum length.

As also described in Section 3.0 of this report, particular site planning challenges are presented where double or multiple drive-through facilities are concerned. The building can be isolated for customers accessing it from the parking lot where both sides of a building are engaged by stacking lanes, resulting in potentially unsafe and inconvenient conditions. In this regard, double or multiple drive-through facilities should be discouraged on most sites. Vehicular entrances and exits should be clearly defined and situated to minimize conflict between vehicles using lanes for the same building, or a drive-through in an adjacent building. Moreover, the predominance of asphalt, which often results from double or multiple drive-throughs, should be compensated by the increased use of decorative paving treatments and soft landscaping.

Guideline 16: Where practicable, avoid double or multiple drive-through facilities on a site. Where double and/or multiple drive-through conditions cannot be avoided, increase opportunities for decorative paving treatments and landscaping.

Guideline 17: Provide clearly visible and appropriately placed directional signage at entrance and exit locations to stacking lanes.



View of the boundary fence of the Tim Hortons restaurant on Lakeshore Rd. in Oakville located next to residential properties. The small size of the site limits options to buffer adjacent lands.

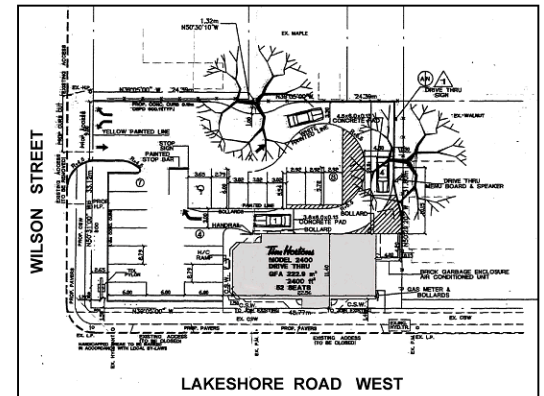


Figure 7. Plan of the Oakville Tim Hortons restaurant on Lakeshore Rd. While the building is located close to the street and away from the residences to the north, the location of the stacking lane along the north property line has been the cause of concerns.

7.4 Site Size

The size of a given site presents a major consideration in determining whether it can accommodate a drive-through facility adequately. Small sites present particular challenges for fast food drive through facilities, including available space to buffer against adjacent uses and ability to satisfactorily accommodate the stacking lane(s) on site. These challenges are amplified appreciably where drive through facilities are located adjacent residential sites. The experience in Oakville has demonstrated that sites containing drive-through facilities at or below 0.3 hectare in size have created impacts on residential properties, which are difficult to resolve

Guideline 18: Discourage fast food drive-through facilities on sites less than 0.3 ha in area when located adjacent residential uses.

7.5 Relationship to Adjacent Uses

The industry is making advances that improve drive-through customers' experience, as well as service more vehicles efficiently and quickly at any given time. These enhancements allow retailers to retain or expand their market, improve customer service and attain their business objectives. However, it is equally important that any impacts that may be created by drive-through uses also be addressed satisfactorily.

The existence of residential uses adjacent drive-through facilities creates particular concerns in terms of traffic and noise impacts, particularly in the case of fast food restaurants. As also mentioned in Section 3.0 of this report, drive-through facilities are traffic intensive, requiring a large volume of vehicles to access the site throughout the day and sometimes at night. This may affect adjacent residential areas with exhaust fumes, traffic congestion and noise.

One of the main noise sources is the order station of fast food restaurants. Without noise attenuation, order stations have proven to be a cause of complaints for neighbouring residents. Therefore, wherever possible, stacking lanes and order boxes should be located as far away from the residential property lines as practicable. Acoustic barriers to be considered in this regard include landscaped buffer zones, landscaped berms, and noise attenuation fences. As such, particularly for restaurants, the Town should require studies to detail the sound attenuation measures and to ascertain that noise levels will be acceptable for adjacent residential properties.

Guideline 19: Avoid placing drive-through facilities adjacent residential properties. Where this cannot be achieved, locate all parts of drive-through facilities as far away from a residential property line as possible.

Guideline 20: Where appropriate, provide a landscaped buffer zone, minimum 7.5m wide, along each yard adjoining residential uses.



The boundary fence of this Country Style restaurant on Yonge St. in North York shows a limited amount of perimeter buffering at the rear of the site. However, the impacts are more manageable as the adjacent property is a commercial use.



The boundary fence of this development in Mississauga along Eglinton Ave. demonstrates a residential and retail interface that has been left unresolved.

Guideline 21: Build a 1.8m high screen fence along the property line of adjacent properties where appropriate, complemented with landscaping. Where the adjacent uses are residential, as required by the Town, provide a sound attenuation study, which certifies measures to minimize noise impact.

Guideline 22: Ensure that any boundary or noise fence and the associated noise attenuation features are compatible with the design of the overall site.

A related issue is the location of garbage and loading areas associated with the drive-through use adjacent residential properties. As in most other commercial developments, these facilities have to be located on a site with due regard to noise impacts.

Guideline 23: Place garbage collection areas internal to the drive-through building, and locate loading areas away from residential properties.

Parking areas and stacking lanes associated with drive through facilities must be well lit for safety reasons. However, where such facilities are located adjacent residential properties, it is equally important that lighting be directed away from them and screened as necessary. In certain instances it may be necessary for the municipality to require and obtain light distribution information to gauge impacts on properties adjacent drive-through facilities.

Guideline 24: Direct lighting sources away from adjacent residential properties and provide screening as necessary. Where required by the Town, supply light distribution information to demonstrate minimal impacts on adjacent residential properties.

7.6 Building and Site Organization, Streetscape, and Signage

Buildings that help enclose public streets play a major role in the creation of viable streetscapes by emphasizing a pedestrian scale at the street edge and by reducing the amount of asphalt visible from the street. Additionally, when commercial retail buildings are located in close proximity to the street edge they enable convenient pedestrian access from the public right-of-way to the various services that are offered. There are many good examples of drive-through facilities throughout the GTA that are located in close proximity to the street and address the public realm appropriately.

To help achieve a pedestrian supportive, vibrant and animated streetscape, buildings associated with drive-through facilities should be located at or near the street line, without parking and drive-through stacking lanes located between the building and the street or the public sidewalk



This Burger King restaurant on Wilson Ave. in Toronto shows a building sited to address the Wilson Ave. frontage appropriately, and which further animates the street with an outdoor patio.



This Burger King restaurant on Hwy. 7 in Markham demonstrates a well massed building adjacent the road, with the stacking lane of the drive-through located at the side and rear, and an outdoor patio facing the street.

whenever possible. It is important to note that this approach to urban development also supports the principles of Crime Prevention Through Environmental Design (CPTED).

Guideline 25: Place the building at or near the street frontage of the site. Avoid locating parking and/or stacking lanes between the building and the street line.

The street frontage of the drive-through facility should be designed to create an attractive street edge, dominated by well-designed and articulated building(s) and landscaping, to establish a high quality public street experience. To encourage and support pedestrian access, the main entrance of the building should be visible and directly accessible from the street and directly connected to the public sidewalk. Furthermore, the use of canopies and awnings is recommended to provide weather protection for pedestrians.

Guideline 26: Where a building is setback from the street, provide ample landscaping in the front yard using coniferous and deciduous trees and shrubs. Also, use low decorative fences and masonry walls and other landscape features as required.

Guideline 27: Provide direct pedestrian access from public streets and sidewalks to the building entrance, and locate building entrance(s) to be directly visible from the public street. In providing such a walkway, avoid crossing driveways, stacking lanes or parking areas.

As with any other commercial development, buildings that are adjacent to or enclose public streets and open spaces play a major role in the creation of a viable streetscape. Buildings should be articulated to offer visual variety and interest. In this regard long and or unarticulated walls should be avoided where possible. Furthermore, while it is acknowledged that most retail facilities have to adhere to a specific brand identity, in developments with multiple retail stores it is encouraged to establish a certain design continuity among the various buildings and site elements.

Guideline 28: Treat the facades of the building, particularly the street elevation, with particular care for an aesthetically pleasing presence in the streetscape. Consider the use of appropriate fenestration, well-articulated entrances, roof elements, and façade articulation features, as well as canopies and awnings.

Guideline 29: In multi building developments, encourage the use of complimentary design elements for the buildings and other site features to create a distinctive development.

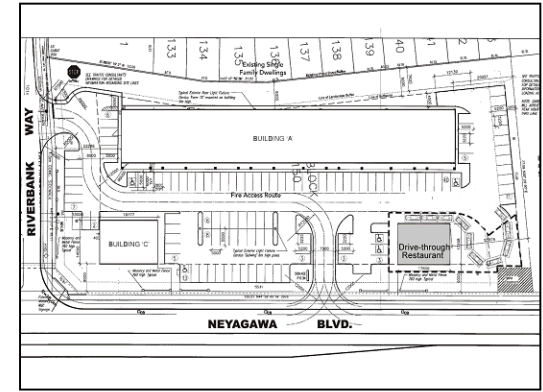


Figure 8. Drawing of a development proposal on Neyagawa Blvd. in Oakville. The site plan shows a future drive-through restaurant building located in a plaza adjacent the street with room for ample landscaping.



This photograph of a Burger King restaurant in a plaza on Weston Rd. in Vaughn is taken from the parking lot. The building is situated at the street line with the parking and stacking lane at the side and rear.

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Any setbacks from the street edge should be used for landscaping and/or outdoor patios or seating areas. Outdoor seating areas are particularly useful in providing an added dimension to fast food restaurants, and promoting increased pedestrian activity.

Guideline 30: Where appropriate, provide outdoor seating spaces and patios adjacent the building and close to the street.

Service spaces, such as loading and garbage areas, should be located away from the street and screened as required. It is also preferred that garbage storage areas are integrated into the main building.

Guideline 31: Put loading and garbage facilities at the rear of the drive-through building, and provide screening from neighbouring properties as necessary. Integrate such facilities into the building wherever possible.

Drive-through facilities located on corner lots should put specific emphasis on having the building sited and massed to recognize, as well as emphasize, the importance of the intersection location. In this regard, the building should be located as close as possible to the corner, without any parking between the building and the adjacent property lines. The massing of the building should provide visual emphasis to the corner, such as using additional height or roof features.

Guideline 32: Design corner buildings to address both streets directly, and without parking and stacking lanes between the building and the street line. Incorporate elements such as increased height at the corner, as well as massing and roof features. Articulate both street facing facades of the building appropriately.

Signs are an important aspect of commercial activity. Types of signage regularly used in retail plazas and stores, including drive-through facilities include fascia signs and freestanding ground signs. In design terms, signage should be part of the overall development design considerations and work in concert with building and landscaping on a given site.

Guideline 33: Incorporate all signage into the design consideration for the building(s) and landscaping. Promote the use of fascia signs that are in proportion with the building mass and façade proportions.

Guideline 34: Discourage the use of ground signs where possible. However, if ground signs are used, incorporate them into the landscape and encourage the maximum height not to exceed the height of the adjacent building.



This McDonald's restaurant on a mid-block site on Eglinton Ave. in Scarborough shows a building located to address the street appropriately. Also note the signage, which has been incorporated into the facades properly.

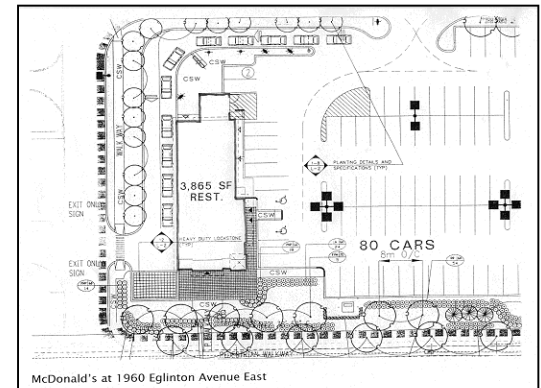


Figure 9. The site plan of the McDonald's restaurant on Eglinton Ave. It illustrates the positioning of the building, the outdoor patio along the streetline, the location of the stacking lane to the side, and the landscape plan.

7.7 Landscaping

It is acknowledged that drive-through facilities require an inordinate amount of asphalt. Therefore, it is essential that particular effort be shown to achieve a “green” site. In this regard, it is recommended that landscape opportunities be maximized at all site perimeters as well within the site. Given the volume and frequency of vehicles accessing the site, low maintenance and salt tolerant plant species are recommended.

Guideline 35: Maximize opportunities for on-site landscaping along site perimeters as well as within the site. Use a minimum width of 1.5m for perimeter landscaping.

Properly conceived landscaping provides aesthetically pleasing views into a site from the street. On-site landscaping should be complemented with street tree planting to achieve maximum benefits. Landscape screening plays a particularly important role where parking is located along the street frontages. Additionally, vehicular entrances into the site provide good opportunities for landscape emphasis, where attractive and colourful landscaping arrangements should be used to help create an attractive streetscape.

Guideline 36: Provide landscaping on either side of driveway entrances to a site. Place particular emphasis to landscaping at major access points to the site.

Guideline 37: Provide street trees on the public boulevard in keeping with Town standards. Use a minimum caliper of 70mm.

Guideline 38: Provide a mix of coniferous and deciduous trees and shrubs on the site for year-round vegetation, variety and colour. Use low maintenance and salt tolerant species.

As also discussed in Section 5.5, landscaping can play a very important role in buffering potential negative impacts from drive-through facilities on adjacent properties. Screen planting and berms should be considered at rear or side yards where additional height for a buffer may be warranted.

Guideline 39: For landscape buffers adjacent other land uses, and particularly adjacent residential properties, provide ample coniferous and deciduous plant material. Use a minimum height of 2.4m for coniferous trees, and minimum 70mm caliper for deciduous trees. Consider berming where additional height for a screen may be warranted for rear or side yards.



This photograph demonstrates a well-landscaped forecourt for a commercial plaza in Burlington, which also includes a Lick's drive-through restaurant.



This photograph of a Wendy's restaurant on Bayly St. in Ajax illustrates a well-landscaped forecourt for the building with stacking lane at the rear.

APPENDIX A

Other Municipalities

Town of Oakville - Drive-through Facilities, Urban Design Study and Guidelines

City of Mississauga

A City of Mississauga staff report titled "Drive-through Restaurants / Convenience Kiosks" to the Planning and Development Committee of Council dated December 18, 2001 has proposed several zoning by-law standards and design guidelines/principles. There has been no Council approval of the recommendations of this report to-date. The report includes a thorough study of stacking lanes titled "Utilization of Drive-through Lanes Associated With Eating Establishments".

Mississauga also restricts drive-through restaurants from main street areas in Streetsville and Port Credit.

The December 18, 2001 staff report has determined the following:

- Current standard requires a stacking lane accommodating a minimum of five vehicles for automobile service station convenience kiosks and 10 vehicles for restaurants
- Current setback provision for all restaurants to be at least 60m away from residential areas
- Discussion on-going about restricting drive-throughs from main streets in older built-up areas
- Utilization study conducted during summer 2001
- Greater complexity of site design due to need for additional space, traffic movements, pedestrian safety, and streetscape
- If a stacking lane is not continuous, several adverse conditions can occur
- Double stacking lanes occur for either two tenants using a single building, or two lanes serving a single user
- Stacking lane/s can restrict access to the building entry from the parking area and/or the public sidewalk
- To ensure that sufficient space to the public right-of-way is maintained, it is proposed that a minimum separation distance of 16m from the entry point of the stacking lane to the abutting streetline be required
- Min. width of 4.0m and a min. centerline radius of 6.5m are recommended
- Stacking lanes should not block abutting parking stalls
- A vehicle stacking capacity of 12 cars is recommended for restaurants
- The objective is to maintain a linear form for the stacking lane, with limited turning movements
- The stacking lane should be defined by concrete curbs and landscaping areas to ensure that it is separated from other traffic areas
- Safe access for pedestrians from parking areas and public sidewalk should be ensured
- Access driveways on a corner site shall be located as far as possible from abutting intersection
- Direct access should be provided between the sidewalk and the building entrance without crossing a stacking lane

City of Toronto

The City of Toronto has proposed an amendment to its relevant Zoning By-laws to define drive-through facilities as a separate use and establish provisions to regulate the locations where such a use may or may not be allowed. Drive-through facilities will continue to be permitted in commercial and industrial zones throughout Toronto, subject to some limitations. However, drive-through facilities will not be allowed in zones permitting residential uses, which by definition includes mixed-use areas, designated centres and the downtown. The Zoning By-laws have been appealed to the Ontario Municipal Board by the Industry.

The staff report dated August 26, 2002 recommends a two-phase approach to resolving issues involving drive-through facilities. In the first phase Zoning By-law parameters are set out to define drive-through facilities as a separate use and where they should be permitted. The second phase will establish standards and guidelines for the development of drive-through facilities.

The report highlights the following:

- None of the component municipalities of Toronto identify drive-throughs in their by-laws
- Issues
 - Traffic impacts – increased traffic, internal traffic patterns, pedestrian safety, queuing on the street
 - Impact on the streetscape – negative impacts on building/street relationship, increased no. of curb cuts, unpleasant pedestrian environment
 - Noise – running vehicles, order boards, loud music, particularly in 24-hr operations
 - Air quality – contribute to smog and poor air quality, idling
 - Odours – exhaust fumes
 - Hours of operation – concern when abutting use is residential
 - Landscaping – large requirement for paved surfaces
 - Illumination/signage – streetscape and visual impacts, increased site illumination for order boards and pick up windows, particularly abutting residential areas
 - Littering/waste – increase in litter
 - Visual impact – standard building prototypes often required are not compatible with established visual character of neighbourhoods
 - Land utilization – they require considerable amount of land
- Drive-through facilities should be permitted in commercial and industrial zones. However, within these areas all parts of the drive-through operation must be set back 30m from any abutting residential zone

Region of Durham

A report titled “Joint Municipal Study of Fast Food Restaurant Drive-through and Parking” was prepared for the area municipalities of Durham Region on February 2000 by SRM Associates Inc. The report focuses on standards for parking and queuing for drive through restaurants and establishes four categories according to type of operation. The consultant undertook a study of 27 fast food restaurants in Durham Region.

The summary findings of the report are as follows:

- Categories of fast food restaurants:
 - Take-out drive-through restaurant – no sit down component
 - Drive-through combo restaurant – two restaurants in one building
 - Drive-through convenience restaurant – drive-through and sit down
 - Drive-through/service station restaurant

- A drive-through queue space of 12 vehicles (6m spaces) would be required – a combination queue space of 4 spaces between the order board and the pick up window along with 8 spaces behind the order board
- Donut restaurants require a slightly higher queue space to serve maximum demands
- Corner lots and gas station conversions exhibit the highest parking and queuing demands
- Where restaurant sites are small, a drive-through queue longer than 12 vehicles may impede roadway traffic

City of Kitchener

Kitchener has an Urban Design Brief, which deals with Drive-through facilities. Proponents are urged to meet with city staff early in the development process where proponents are unable to meet the guidelines, and to review together how appropriate changes can be accommodated to satisfy the overall intent of the design guidelines.

The design guidelines deal with:

- General Design Objectives
 - Sufficient area must be provided for vehicle stacking.
 - Points of access to and from the local street network must be prominent and of sufficient width.
 - Areas for site servicing (i.e. garbage, loading/unloading) and customer parking must be provided on site.
 - A high quality street environment should be created and maintained.
 - Adequate areas of landscaping should be provided to “soften” areas of asphalt.
 - Wherever possible, drive-through stacking areas should not wrap around the perimeter of the site, thereby cutting the building off from the street.
 - Points of entry and exit to a drive through should, where possible, not be provided at the same location.
 - Where possible, building served by drive-throughs should be located close to the street line, with parking and drive-through areas located away from the street.
 - Where buildings require a location away from the street, landscaping should be provided along the street frontages to “soften” the appearance of the site from the street.
- Traffic Design Issues
 - The location of vehicular access to an adjacent street should ensure minimal impact on the street.
 - Site access points shall be located so as to minimize conflict with adjacent community trails.
 - For drive-through facilities involved in the delivery of food, at least 13 vehicle stacking spaces should be provided in the stacking lane, of which at least 10 spaces should be located between the order menu station and the beginning of the drive-through stacking area.
 - For all other businesses, such as banks and dry cleaners, a minimum of 3 stacking spaces shall be provided in the stacking lane.
 - Where a double or multiple drive-through is proposed, the amount of stacking may be reduced.
 - Stacking lanes should be located away from adjacent sensitive land uses, such as residential and institutional uses.
 - Raised traffic islands or knock-down barriers should be used to separate vehicle stacking lanes from main parking areas.

- Clearly visible directional signage is required at entrance and exit locations, and appropriate locations on other parts of the site where necessary.
- The amount of asphalt on a double/multiple drive-through site should be mitigated by an appropriate amount of landscaped area.
- Landscape Design
 - Particular attention must be paid to the “greening” of the sites with both on-site and off-site landscaping.
 - Low-maintenance, salt tolerant planting is particularly important. Irrigation of both on-site and off-site planting will help ensure the longevity of landscaping.
 - A visual buffer may be required to eliminate the impact of vehicle headlight glare and to clearly separate the drive-through aisle from other driveways. A barrier could take the form of a fence, berm, landscaping, or a combination.
 - Where a drive-through is proposed adjacent to a multiple-storey residential use, appropriate, uninterrupted tree planting should be provided along the abutting lot line(s) to create a barrier and upward wind turbulence thereby aiding the dispersal of vehicle exhaust fumes.
- Noise Mitigation
 - Kitchener's Zoning By-law requires that a Professional Engineer prepare a noise study where a drive-through is proposed within 60m of a residential zone, or institutional zone. The noise level is not to exceed limits published by the Ministry of Environment. Where noise may exceed maximum allowable limits, appropriate noise mitigation measures will be required, such as a noise wall or a noise berm.
 - In all cases the noise attenuation feature should be compatible with adjacent property in terms of appearance and with the overall landscape design of the site.

APPENDIX B
Workshop Summary

Town of Oakville - Drive-through Facilities, Urban Design Study and Guidelines

Urban Design Workshop – February 25, 2003 Summary of Proceedings

Outline

The workshop is seen as a key component of the study process. The concepts generated at the workshop will be used to prepare a set of preliminary urban design guidelines, which will be instrumental in the preparation of draft urban design principles and guidelines.

Various stakeholders were invited to participate in this workshop. In total 34 people attended the workshop representing various affiliations and professional expertise including residents' groups, Councillors, industry representatives and Town staff. See attachment for a list of participants.

Agenda

The workshop followed an agenda, which included:

- Introduction and presentation
- General discussion
- Working groups - guiding urban design principles and any accompanying sketches
- Summary of findings and next steps

Presentation

The proceedings commenced with a PowerPoint presentation describing drive-through uses, varying types of drive-throughs, issues, as well as experiences and examples from Oakville and other GTA municipalities.

The presentation outlined the following topics:

- Describe drive-through uses, types and users of such facilities
- Define relevant issues, such as:
 - Impacts on adjacent land-uses, specifically residential uses (noise, illumination/signage, odour, litter etc.)
 - Impacts on the streetscape and urban design concerns
 - Impacts on pedestrians and safety concerns
 - Stacking lanes – types, locations, and number of cars
 - On-site circulation
 - Environmental concerns such as air quality/idling
 - Traffic generation

- Review examples of drive-through facilities – examples from the GTA and their characteristics
- Discuss what other municipalities are doing
- Develop guiding urban design principles, which will be used to generate the urban design guidelines

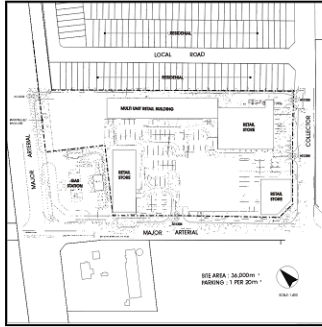
General Discussion

Following the presentation, a general discussion dealt with participants' observations and comments on a variety of issues related to drive-throughs. The following is a compilation of these comments:

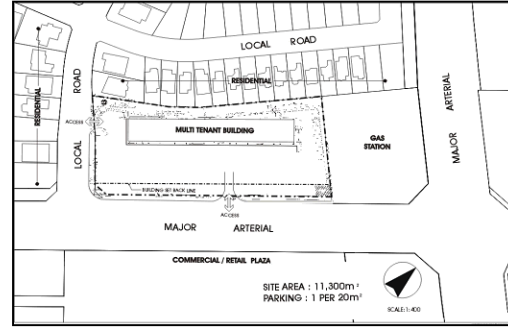
- Circulation within the site is important; where does the traffic go afterwards?
- The environment should be considered as an important factor in looking at drive-throughs. There is a conflict with the environment, for the greater good drive-throughs should be reduced in prevalence.
- There is not a clear verdict if drive-throughs contribute to damaging the environment. There is no scientific data that emissions from drive-through operations create environmental problems.
- Cars are already on the road. Drive throughs are not a destination.
- The architecture of the drive-through building should be discussed, although there is some debate about the relevance of this in this context.
- Technical innovations to speed up movement of cars through the site should be considered.
- The drive-through queues are moving much faster now than before. A lot of money is being invested to make everything move fast.
- The site layout and design should emphasize pedestrian safety and friendliness. Buildings should be located adjacent to the street so that pedestrians don't have to cross parking areas.
- Oakville is an auto-oriented community and drive-throughs are a reality. The development and retailing industries are responding to society's demands and are providing a convenience for the driving public.
- Possibility to reduce dependence on the automobile as part of the community design process for the lands north of Dundas Street. However, in other parts of Oakville we already have a pattern that relies on the car.
- Drive-throughs provide safety for women at night as they have the security of their automobile. Without drive-throughs, additional lighting would be needed for security and additional parking would be necessary which may have a greater impact on the neighbours.
- Problems are more amplified on tight sites. Maybe some sites are too small for drive-throughs.
- Combined gas stations and drive-through restaurants create additional challenges.
- The number of drive-throughs in an area should be taken into account in determining approval of additional ones.
- CPTED principles should be applied in designing these sites.
- Issue of context should be brought into the discussion; a downtown situation is different from an industrial setting.

Work Groups

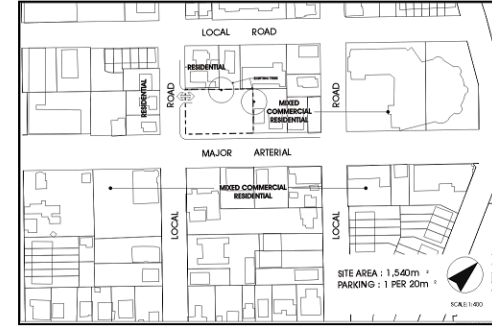
The participants were divided into four working groups, each led by an urban designer, to provide a list of guiding urban design principles and any accompanying concept sketches. In this regard, three generic sites were made available representing varying sizes and contexts, which were used as base drawings, as follows:



Site 1 – Large Site



Site 2 – Mid-size Site



Site 3 - Small Site

All groups deliberated on two of the generic site plans and provided input on:

- Building placement options
- Pedestrian, vehicular and bicycle access to the site
- Stacking lanes – locations, number of cars
- Order box location
- Landscaping locations
- Buffering features
- Street frontage treatments
- Parking lot locations
- Signage

Red Group: Sites 1 and 3

Guiding Principles and Observations

- Other buildings should be used as buffers to the drive-throughs where possible.
- Drive-through facilities should be placed away from residential.
- Drive-through facilities should address the street.
- They should not block other tenant's views.
- Ensure safe access to the building from the street and within the parking lot.
- Stack cars efficiently within the site; they should not block parking for other buildings.

Site 1

- The existing building shown on the site is not in a good location on the site.

- A couple of different layouts were considered, placing the drive-through building either at the street corner or closer to the middle of the site along the street frontage.
- The site works for 8-10 car stacking.

Site 3

- The site is too small to develop for a drive-through operation.
- The site has got residential on three sides; not enough space on the site to provide an effective buffer against residential properties.
- Established criteria showed this is too small to function effectively as a drive-through site without negative impacts on residential.
- Noise impact is a major issue.

Yellow Group: Sites 2 and 3

Guiding Principles and Observations

- Drive-throughs provide safety and convenience.
- Queuing times relate to the speed of preparation of the food.
- Landscaping amenities should be provided on the site.
- From an owner/operator's viewpoint visibility is very important to generate sales.
- Safe access to the drive-through building is important, both from the street and internally.
- Adjacent residential, noise, litter, air pollution and light impacts have to be addressed.
- The location of the order box should be a minimum of 30m from any adjacent residential.
- Streetscape issues have to be addressed; where is the building best located for the facility in order to help create a good streetscape?
- One of the criteria in locating a drive-through in a site is whether the site is along a local road, an arterial road, or a highway.
- Signage has to be integrated into the site and building design, for visibility as well as for compatibility with the overall design intent.

Site 2

- The location of the drive-through should be away from residential. The multi-unit retail building already provides a buffer for the residential.
- Two different schemes were produced: one from an industry perspective, the other from an urban design perspective.
- The industry driven solution was less concerned with the location of the building along the street stating that the plaza is adjacent a major arterial road. It concentrated on ensuring appropriate circulation within the site.
- The urban design driven solution concentrated on placing the drive-through building close to the street and recommended a patio to enhance the streetscape.

Site 3

- This site is surrounded by residential development.

- As the voice box is less than 30 metres from residential, and stacking of the cars may have to occur close to residential, there are significant issues with this location for drive-throughs.
- Simply put, this site is too small for a drive-through.

Blue Group – Sites 2 and 3

Guiding Principles and Observations

- A minimum site size of ¾ acres should be considered for a drive-through facility, along with a minimum depth of 75m.
- Minimum road width considered for a drive-through facility should be 20m. No such facilities should be located on a local or a collector road.
- Maximum site coverage of 20% is recommended.
- Minimum queuing for 12 cars per lot.
- Drive-throughs should not be placed within 30m of a residential area in a downtown area, such as a C3R zone.
- Signage and lighting should be designed to minimize impacts, and complement the site design and the streetscape.

Site 2

- Drive-through building is placed at the intersection to address the urban corner.
- Good pedestrian connection to the entrance should be established from the sidewalk, while leaving room for appropriate landscaping and outdoor patio.
- Good separation of cars and pedestrians are achieved by placing the building close to the street, also promoting safety.
- Bicycle parking is provided for in front of the building.
- Stacking lanes are placed behind the building.
- Ample area is provided for landscaping.
- The drive-through building acts as a sign.
- Loading area is placed close to the stacking lane, and the garbage area is enclosed.

Site 3

- This site is too small to build a drive-through on. See established criteria under the heading: Guiding Principles and Observations.

Green Group – Sites 1 and 3

Guiding Principles and Observations

- Drive-through buildings should relate directly to the street.
- Direct access from the building to the sidewalk should be established, with entrances visible from the street.
- Urban corner locations should be given particular design attention when locating drive-through facilities near street intersections.
- Public realm planting should be used to enhance the sites.

- Drive-through facilities should be located away from residential areas.
- 30m min. distance should be observed between a drive-through building and a residential area. Similarly, a 30m min. distance should be placed between an order box for a drive-through facility and a residential area.
- Acoustic fencing should be placed adjacent residential areas.

Site 1

- Two options for drive-through location were modeled: one at the urban corner and the other closer to the middle of the site.
- In the corner option, the building creates a strong street relationship at the urban intersection.
 - Direct pedestrian connection is shown from the sidewalk to the building entrance.
 - The stacking allows up to 15 cars, with the order box close to the street.
 - Landscaping has been shown adjacent the drive-through aisle.
 - Signage is seen as predominantly incorporated into the building.
- In the mid-frontage location option, the building is placed to face the street and adjacent to the sidewalk.
 - Some parking is placed adjacent the front door.
 - Order box is placed adjacent the neighbouring gas station.
 - The stacking allows for a minimum of 6 cars, which would be too few.
 - Landscaping has been shown adjacent the drive-through aisle.
 - Signage is seen as predominantly incorporated into the building.
 - Pedestrian connections from public sidewalk to building through to parking.

Site 3

- The site is too small to accommodate a drive-through operation. However, to analyze if/how it could be made to work, two different schemes were developed.
- The first scheme modeled the building located at the corner intersection with the stacking aisle and parking immediately adjacent along the street frontage.
 - Building entrances would be directly from either or both sidewalks.
 - Order box would be placed near the street and away from the residential area.
 - Stacking would be for approximately 10 cars.
 - Landscape buffer and acoustic fence would have to be placed along the residential lots.
- The second scheme, locates the building at the other corner of the site, but also along the street, with the stacking aisle located along the
 - Building entrance would be directly from the sidewalk of the major arterial road.
 - Parking would have to be placed near the intersection of the local road and the major arterial road.
 - Landscaping and acoustic fencing would have to work towards modifying potential noise impact from order box.

Summary of Work Group Findings

1. A major portion of our urban environment is designed to accommodate the car, and the car is often the primary means of transportation in most all municipalities in the GTA, including Oakville. Therefore, drive-throughs provide an increasingly popular service to the driving public, and they are a convenience that is widely sought after.

2. However, there are various impacts that should be considered in assessing if and where and how drive-throughs should be accommodated in an urban environment. The considerations encompass environmental, traffic, noise, lighting, safety as well as urbanistic factors.
3. The size of a given site presents a major consideration in determining whether it can accommodate a drive-through facility. Small sites, particularly those in downtown locations, should be discouraged to include such facilities. In this regard, a min. lot size of $\frac{3}{4}$ of an acre, and a min. lot depth of 75m has been suggested.
4. The proximity of residential uses to a drive-through facility is a key determinant in the ability to address any undue impacts successfully. In this regard 30m should be considered and evaluated as a min. distance between the building and any residential lot line, as well as the order box and any residential lot line.
5. Impact control tools such as adequate landscape buffering and acoustic fencing should be used particularly adjacent residential buildings.
6. Drive-through buildings should be located in close proximity to the street line, with entrances visible and directly accessible from the adjacent sidewalk. In this regard, particular attention should be paid to local and collector type streets, while some flexibility should be exercised at highway locations.
7. Placing the building close to the street presents additional benefits in terms of pedestrian safety for those accessing the building by foot. A related matter of safety is for pedestrians accessing the building from the parking lot.
8. Street intersections present urbanistic opportunities in the streetscape. Where opportunities are available, drive-through facilities should be located to address urban corners.
9. Stacking aisles should be of adequate length to ensure that all the cars required for the use are contained within the site and do not spill into the public boulevard and street. Insufficient on-site stacking capability may be one indication that the size of the site is inadequate to accommodate drive-through uses.
10. Signage should be seen as an integral part of the design of a site and the buildings for drive-through facilities.

APPENDIX C
Workshop
List of Participants

**Town of Oakville - Drive-through Facilities, Urban Design Study and Guidelines
Urban Design Workshop, List of Participants – February 25, 2003**

Name	Organization	Address	Phone Number	E-Mail Address
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Lehmann, Klaus		City of Toronto	416-392-0175	

**Town of Oakville - Drive-through Facilities, Urban Design Study and Guidelines
Urban Design Workshop, List of Participants – February 25, 2003**

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APPENDIX D
Open House
Summary Comments

Town of Oakville - Drive-through Facilities, Urban Design Study and Guidelines

Open House, May 15, 2003

Summary of Comments

- These forums are good settings to discuss issues facing the municipality; this is an appropriate approach to setting out guidelines to deal with drive-throughs. The study provides a balanced method in dealing with the public demand for drive-throughs, modifying impacts, and improving design attributes.
- The study and the guidelines are on the right track.
- The anti-idling by-law should be enforced; drive-throughs contribute to air pollution and promote obesity.
- We should show more cars in the photos of the various drive-throughs, to reflect the reality of these sites.
- Many of the guidelines are also applicable to other commercial uses, why have the drive-throughs been singled out?
- Any pedestrian/traffic conflicts discussed here are the same as other commercial uses.
- We should apply these guidelines for other commercial uses.
- We should make specific references to CPTED principles in the study.
- We should find ways of restricting number of drive throughs on a site.
- Guideline 11: Mention the use of escape routes off a stacking lane, through breaks in curbs etc.
- Guideline 14: some fast food restaurants need more stacking space between the speaker and the window (to prepare food) rather than between the speaker and the street.
- Guideline 21: Is it appropriate to be so strict about a 7.5m buffer? In some instances it may need to be reduced due to site conditions.
- Guideline 22: Do we need a 1.8m fence every time? Also, we should consider asking for a sound attenuation study for each application located adjacent residential uses.
- Guideline 29: We should recognize that the design of retail buildings is often dictated by brand identity.
- Guideline 30: Further encourage the use of patios and other means to get people out of their cars.
- Guideline 32: It may not be desirable to have buildings address both streets, without any parking and/or stacking lanes in front, in all instances.
- Consider putting a sign in drive-through facilities reminding people about the Town's anti-idling by-law.

APPENDIX E

Open House
List of participants

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Angela Fritsche	The Planning Partnership			
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Debbie Pacchiarotti	First Pro Shopping Centres	259 Yorkland Rd Toronto		
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