



STAFF REPORT ACTION REQUIRED

Electronic and Illuminated Sign Study and Recommendations for Amendments to Chapter 694

Date:	May 20, 2015
To:	Planning and Growth Management Committee
From:	Chief Building Official and Executive Director, Toronto Building
Ward:	All
Reference Number:	PG15009

SUMMARY

This report provides the results of an inter-divisional review of electronic and projected image signs, and of illuminated signs within Residential Sign Districts ("Sign Study"). The sign study was carried out in response to requests from City Council and the Planning and Growth Management Committee for recommendations on amendments to Chapter 694, Signs, General of the City of Toronto Municipal Code ("Sign By-law") related to the regulation of illuminated and electronic signs.

As a result of the sign study and feedback from public and stakeholder consultation, this report proposes amendments to the Sign By-law for signs displaying electronic sign copy and illumination requirements for all signs, summarized as follows:

- Allow signs displaying electronic static copy in Employment, Commercial and Utility Sign Districts;
- Reduce the size and height of all third party signs permitted in Commercial Residential Sign Districts;
- Require signs for institutional uses that are located in or near residential districts to turn off lighting at 9:00 p.m. instead of the current 11:00 p.m.;
- Reduce the permitted brightness of signs by 40%;
- Establish electronic signs as a separate sign type, and to require an amendment to the Sign By-Law where third party signs are not permitted in the sign district in which they are located; and,
- Establish a larger notification area for variance and by-law amendment applications related to electronic signs.

This report was prepared in consultation with staff from Transportation Services.

RECOMMENDATIONS

The Chief Building Official and Executive Director, Toronto Building recommends that:

1. City Council amend the City of Toronto Municipal Code, Chapter 694, Signs, General, to add various definitions and sign types for signs displaying electronic copy, establish regulations for the display of the additional sign types, and amend the regulations concerning the display of third party wall signs in CR-Sign Districts, as well as provisions concerning the illumination of signs, message duration, and the display of readograph, and electronic copy, along with related administrative and technical changes, substantially in accordance with the draft by-law attached as Appendix 1 to this report; and
2. City Council authorize the City Solicitor to prepare the necessary Bills for introduction in Council to implement the above recommendations, subject to such stylistic and technical changes to the draft bills as may be required.

FINANCIAL IMPACT

This report has no financial implications.

DECISION BACKGROUND

New Sign Regulation and Revenue Strategy

(<http://www.toronto.ca/legdocs/mmis/2009/pg/bgrd/backgroundfile-24387.pdf>)

New Sign Regulation and Revenue Strategy: Additional Considerations

(<http://www.toronto.ca/legdocs/mmis/2009/cc/bgrd/backgroundfile-25449.pdf>)

Amendments to Chapter 694 of the City of Toronto Municipal Code with respect to 123 and 145 Queen Street West

- *Planning and Growth Management Committee requested staff to review the issue of projected image signs and report back to the Committee on possible sign by-law amendments.*

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2011.PG2.3>

Supplemental Report – Area-Specific Amendments to Chapter 694, Concerning Third Party Ground Signs Located on Certain Rail Lands

- *As part of the recommendations, City Council directed staff to undertake a study and report on the impact of signs containing electronic sign copy.*

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2012.PG15.4>

Illuminated Signage at Churches and Schools in Residential Areas

- *The Planning and Growth Management Committee requested staff to report on the impact of illuminated signs on the quality of life in residential areas, and to make recommendations for illuminated signs in residential areas.*

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2013.PG22.10>

Electronic and Illuminated Sign Study and Recommendations for Amendments to Chapter 694 of the Municipal Code

- *The Planning and Growth Management Committee deferred the matter to its April 10, 2014 meeting, and directed staff to undertake further consultations and report back on the recommendations. There was also a request to report back on the level of resources required to effectively enforce the Sign By-law.*

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2013.PG29.4>

Supplementary Report - Electronic and Illuminated Sign Study and Recommendations for Amendments to Chapter 694 of the Municipal Code

- *The Planning and Growth Management Committee referred the item back to staff for further consideration and to report back on a series of amendments to the Sign By-law. The Committee also directed that staff convene an industry workshop to review the recommendations. There was also a further request to report back on the level of resources required to effectively enforce the Sign By-law which was reported on and adopted by Council in early 2015.*

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2014.PG32.2>

ISSUE BACKGROUND

When the Sign By-law was adopted in 2009, electronic signs raised concerns with respect to their potential impact on surrounding neighbourhoods and sensitive land uses. Concerns primarily centered on the impact of the light emitted by large electronic signs, the impact on adjacent residential buildings and the risk of driver and pedestrian distraction. To address these concerns, the Sign By-law included the following restrictions on illuminated and electronic signs:

- Signs that display electronic static and/or electronic moving copy are prohibited in all Sign Districts except in the Dundas Square Special Sign District (DS-SSD) and the Gardiner Gateway Special Sign District (GG-SSD);
- First party ground and wall signs can include an electronic display, restricted to readograph copy and limited to a maximum of 50% of the sign face area;
- Projected image signs are not permitted in any Sign District; and,
- The illumination of all signs be turned off between the hours of 11 p.m. and 7a.m., except where there is a business in operation on the property, and that signs not exceed brightness levels set out in the By-law.

Since adoption of the By-law in 2009, a number of variance and amendment applications have been considered by the City to allow the display of electronic copy. More than 15 signs displaying electronic sign copy have been approved in areas outside of the Special Sign Districts where they are permitted. As the number of electronic signs has increased, there are continuing concerns with the proximity of electronic, projected image and illuminated signs to residential buildings, highways and public spaces.

In 2011, the Planning and Growth Management Committee and City Council requested that staff report on possible changes to the Sign By-law to regulate signs projected onto buildings. A separate request was made by Council in 2012 to study the impact of signs containing electronic copy. A further direction was received in 2012 to study illuminated signs and their impact on quality of life in residential areas.

In 2013, Toronto Building initiated a comprehensive research project in cooperation with City Planning and Transportation Services. This report provides results of the research.

In December 2013, the Planning and Growth Management Committee deferred PG 29.4 – Electronic and Illuminated Sign Study and Recommendations for Amendments to Chapter 694 of the Municipal Code to its April 10, 2014 meeting, and directed staff to undertake further consultation.

At its April 10, 2014 meeting, the Planning and Growth Management Committee referred the item to the Chief Building Official and Executive Director, Toronto Building for further consideration with a report back with recommendations on the following:

- i. reduced maximum brightness levels between sunset and sunrise to 40%;
- ii. reduced allowable light trespass levels by more than 50%;
- iii. establishing separate sign types for signs displaying electronic copy;
- iv. permit illuminated and non-electronic readograph signs for institutional uses in Residential Sign Districts;
- v. for illuminated signs in or within 30 metres of Residential Sign Districts to be turned off at 9:00 p.m. instead of 11:00 p.m.; and,
- vi. not permitting third party signs displaying electronic copy in Commercial Residential, Commercial, Employment and Utility Sign Districts.

The Committee also requested the Chief Building Official and Executive Director, Toronto Building to convene an industry workshop to review and collect feedback on the recommended amendments. This workshop was held in April 2015 and is summarized in Appendix 9 to this report.

COMMENTS

The sign study undertaken by staff examined the impact of signs and considered appropriate locations and illumination criteria for the various sign types.

The sign study was made up of four elements:

- A Planning and Design Review of the impact of electronic and illuminated signs on surrounding land uses and methods used in other municipalities to address that impact (See Appendix 3 to this report);
- A Traffic Safety Study which examined the potential safety implications of electronic signs (See Appendix 5, 6, and 7 to this report);
- Public and Stakeholder Consultations (See Appendix 8 and 9 to this report); and,
- A Public Opinion Poll on electronic and illuminated signs (See Appendix 4 to this report).

The types of sign copy reviewed in the study included (see Appendix 2 for a more detailed explanation of these types of sign copy):

- Signs displaying readograph copy –signs that display alpha-numeric text which can be changed manually or electronically.
- Signs displaying electronic copy that does not move ("Electronic Static Signs") – signs that display sign copy using LED (or similar) displays that change at regular intervals.
- Signs displaying full-motion or moving electronic copy ("Electronic Moving Signs") –signs that display copy using LED (or similar) displays.
- Signs projected onto buildings ("Projected Image Signs") –signs displayed by projecting an image onto a building wall or similar surface from a projector which is usually located on an adjacent property or vehicle.

The sign study also looked at the issue of illuminated signs in general, including their hours of operation and brightness levels. These regulations apply to any sign that is illuminated or displays electronic sign copy.

PLANNING AND DESIGN REVIEW

An element of the study was a review of the planning and urban design considerations for illuminated and electronic signs. The review included a workshop where staff with expertise in sign regulations and the design of public space met with architects and urban design experts to consider the impact of electronic and illuminated signs.

Martin Rendl and Associates was retained to prepare a report on the workshop and provide information on other jurisdictions with electronic and illuminated signs (see Appendix 3 for a full copy of this report).

Urban Design Workshop

The City hosted a workshop on June 24 and 25, 2013 with six external architects and urban design professionals, with expertise in public space who, along with staff from

Urban Design and the Public Realm Unit were asked to review and analyze and suggest methods to manage the potential impact of electronic and illuminated signs.

The workshop included an evening tour of sign locations across the city. The tour familiarized workshop participants with the types of signs in Toronto and provided an opportunity to observe signs in the context of their surroundings.

Subsequently, the group participated in a roundtable discussion which identified and reviewed the constraints and opportunities associated with the various types of electronic signs and their impact on the public realm.

The potential impact of illuminated and electronic signs were identified by the workshop participants as:

- The brightness;
- Transition effects with image changes on electronic signs;
- The compatibility of signs with their surroundings; and,
- Public safety concerns, such as driver and pedestrian distraction.

After considering the various sign types, workshop participants suggested several methods to manage the impacts of electronic and illuminated signs. These included:

- Controlling the brightness,
- Protecting sensitive land uses from sign illumination and
- Minimizing the impact of changing messages on electronic signs.

Review of other Jurisdictions

The review of practices in other North American Jurisdictions completed by Martin Rendl and Associates found that electronic and illuminated signs are commonly regulated in the following ways (See Appendix 3):

- The maximum brightness of signs is often limited between sunset and sunrise;
- Where electronic signs are permitted, they are often limited to Commercial and Industrial (Employment) areas;
- Message duration between image changes on electronic signs is often regulated and ranges from six to 60 seconds;
- Transition time between images on electronic signs is often limited to a maximum of one second and visual effects (e.g. scrolling, flashing) are generally not permitted; and,
- Most jurisdictions require a separation distance between:
 - Electronic signs and sensitive land uses (e.g. residential uses or parks);
 - Signs and roadways, traffic signals and/or intersections; and,

- Two electronic signs (ranging between 100 and 500 metres, between signs).

PUBLIC OPINION POLL

Ipsos Reid was commissioned by the City of Toronto to determine the views of residents across the city with respect to illuminated and electronic signs. The Public Opinion Poll can be found in Appendix 4 to this report.

The poll was intended to gain a better understanding of public attitudes and opinions on:

- Different types of electronic and illuminated signs;
- The hours of operation for electronic and illuminated signs;
- Perceptions of driver, cyclist and pedestrian distraction with respect to illuminated and electronic signs; and,
- The acceptability of different types of electronic and illuminated signs in residential, commercial, and other areas of the city.

Overall, the poll found that Toronto residents accept that illuminated and electronic signs are a natural accessory in large cities like Toronto, with 70% agreeing that illuminated and electronic signs are a normal part of the public landscape. Despite this, only 43% of those surveyed were supportive of having any type of electronic or illuminated sign in their neighborhood, street, or in residential areas, and fewer than 20% of residents feel that electronic signs are acceptable in residential areas or on their street.

TRAFFIC SAFETY STUDY

As part of the sign study, Transportation Services completed a review of signs with electronic images comprised of two elements. The first was a literature review of studies that had been completed on the topic; the second element was a statistical analysis of locations in Toronto where electronic signs have been installed to determine whether there has been an increase in traffic collisions. In addition to these two elements, the public opinion poll conducted by Ipsos Reid contained a number of questions with respect to driver distraction.

The main conclusion of this research was that while electronic signs have been shown to contribute to driver distraction more than other types of signs (traditional, non-electronic signs), no statistically significant effect on collisions has been identified.

Literature Review (see Appendix 5)

A literature review was completed by CIMA+ on behalf of Transportation Services in order to consider the safety impact of Electronic Static Signs. A 2009 study: “Safety

Impacts of the Emerging Digital Display Technology for Outdoor Advertising Signs”, commissioned and published by the National Cooperative Highway Research Program ("the NCHRP Report") was used as the baseline for this review. This document is considered a landmark report due to the comprehensive and critical review of literature on the subject matter up to the time of its publishing, including 45 studies completed between 1983 and 2009.

To update this literature review, CIMA+ looked at seven comprehensive studies that have been completed since 2009. Most of the conclusions found in the literature published since, are similar to those reached in the 2009 NCHRP Report - that electronic signs may contribute to driver distraction more than other types of signs; however, no statistically significant effect on collisions has been identified.

Additional Literature Reviewed:

Since the completion of the CIMA+ literature review in 2013, there have been two additional, technical documents made available on the subject of electronic signs. "Driver Visual Behaviour in the Presence of Commercial Electronic Variable Message Signs (CEVMS)", published by the U.S. Federal Highway Administration ("FHWA") in 2014 and, Digital and Projected Advertising Displays: Regulatory and Road Safety Assessment Guidelines", published by the Transportation Association of Canada ("TAC") in 2015.

In the 2014 report, the FHWA reviewed driver behaviour with electronic signs in comparison to more traditional signs or no signs. Although it was based on a limited number of signs and sign locations, it concluded that the electronic signs studied did not appear to result in any statistically significant findings with respect to the following:

- Decreased overall driver attention to the roadway ahead;
- Increased safety risk in terms of frequency and duration of glances away from the roadway; and,
- Increases in the frequency and duration of glances compared to standard signs under all conditions.

In addition to the FHWA Study, TAC completed a study titled "Digital and Projected Advertising Displays: Regulatory and Road Safety Assessment Guidelines" in 2015.

The TAC study contained recommendations on the various attributes of electronic signs that should be regulated in local by-laws with respect to traffic safety. The attributes that are recommended for regulation in the TAC study are consistent with the NCHRP report attributes currently regulated in the Sign By-law.

City of Toronto Research and Experience with Traffic Safety Implications

Transportation Services conducted a statistical analysis of collisions before and after electronic signs were installed using the methodology outlined in the American Association of State Highway Traffic Officials (AASHTO) Highway Safety Manual. Six

to seven years of collision data was analyzed for 12 electronic sign locations across the city. The following locations were analyzed:

1. Signalized Intersection Installation (See Appendix 7)

A total of 426 collisions at the intersection of Victoria Park Avenue and Sheppard Avenue were analyzed as part of this review. The sign in question is a roof sign displaying electronic static sign copy. The results indicated there was a 3.3% increase in the number of collisions after installing the sign, which was considered to be statistically insignificant.

2. Expressway and Highway Installations (See Appendix 6)

A total of 1,727 collisions at 11 sign locations along the FG Gardiner Expressway and Highway 27 were analyzed for this review. The results indicated there was a four percent decrease in the number of collisions after the electronic signs were installed, which is considered to be statistically insignificant.

Traffic Safety findings from the Public Opinion Poll (See Appendix 4)

As part of the public opinion poll conducted by Ipsos Reid, respondents were asked to consider a number of distractions typically faced by a driver and asked to rate their level of distraction. The question asked was: *Thinking about when you are driving in the city, how distracting do you find the following?* The responses to those questions are listed below in Table 1.

Table 1 - Poll Results on Distraction While Driving (n=1504)

Item	Very Distracting (%)	Somewhat Distracting (%)	Not Very Distracting (%)	Not at all Distracting (%)	% Somewhat or Very Distracting
Cell Phones	44%	30%	16%	10%	74%
Pedestrians	15%	41%	32%	12%	56%
Electronic Signs	13%	39%	37%	12%	52%
GPS/Road Maps	12%	38%	35%	16%	50%
Adjusting Vehicle Controls	5%	35%	42%	18%	40%
Passengers	4%	34%	47%	15%	38%
Scenery	3%	24%	48%	25%	27%
Traditional (non-electronic signs)	3%	15%	57%	25%	18%

As can be seen from Table 1, over half of those polled find electronic signs somewhat or very distracting when driving (52%), on par with GPS and road maps (50%). Respondents indicated that traditional non-electric signs were the least distracting.

Based on the above findings, research and experience in the City of Toronto with respect to electronic signs, driver distraction and automobile collisions, is consistent with the findings from the traffic safety literature review. While electronic signs are perceived to contribute to driver distraction more than other types of signs, there is no statistically significant evidence that this distraction has led to an increase in collisions.

PUBLIC AND STAKEHOLDER CONSULTATION

As part of the study, staff consulted extensively to gather information and input on potential Sign By-law amendments related to the impact of illuminated and electronic signs in Toronto. Over the course of the study, there have been a total of 18 public and stakeholder consultation sessions.

THE CONSULTATION PROCESS:

- Throughout August and September 2013, ten public and stakeholder consultation sessions were held: four public, four sign industry, and two ratepayer and public interest group consultations:
 - In August 2013, meetings were held with representatives from the Outdoor Advertising Industry, the Sign Association of Canada, and Ratepayer and Public Space groups to review the initial sign study findings.
 - During the consultation, each of the groups requested additional time to review the sign study results and asked for further opportunities for consultation.
 - At the September 2013, meeting, members of the Planning and Growth Management Committee supported the staff recommendation to receive the preliminary report and conduct further consultation prior to reporting on proposed amendments to the Sign By-law.
- In response to direction from the Planning and Growth Management Committee at its December 2013 meeting, seven additional consultation meetings were held:
 - One meeting in each of the six former municipalities in February 2014;
 - One additional public meeting at Toronto City Hall in March 2014.
 - Meetings were attended by members of the public, ratepayer groups, representatives from the sign industry, business improvement areas (BIAs) and Members of Council.
 - Staff also received comments by email and telephone and held follow-up meetings with Councillors and other interested parties.

- In April 2015, one additional industry workshop was held at the request of the Planning and Growth Management Committee.
 - This workshop was developed and hosted by the Public Consultation Unit on behalf of the Sign By-law Unit.
 - The 25 most frequent sign permit applicants were invited to the workshop, as well as representatives from the Out-of-Home Marketing Association of Canada and the Sign Association of Canada.
 - The purpose of the workshop was to review and gather feedback on recommendations for amendments to the Sign By-law suggested by the Planning and Growth Management Committee at its April 2014 meeting.

COMMENTS HEARD THROUGHOUT THE CONSULTATION PROCESS:

The main comments received throughout the public consultation process were related to:

- Concerns about traffic safety and driver distraction, particularly with signs displaying electronic copy;
- Impacts of illuminated and electronic signs on neighbourhoods, residential properties and sensitive land uses;
- The need to strengthen regulations around the illumination of signs;
- Appropriate location for signs displaying electronic sign copy, e.g. Dundas Square, Employment and Commercial areas;
- Concerns with the brightness of signs; and,
- Perceived flashing effect that can occur with electronic signs.

Comments on specific (proposed) changes to the Sign By-law that were received throughout the consultation process are included in the discussion of the recommended amendments in this report.

An overview of the particulars of the consultation process and a summary of the feedback and comments received is provided in Appendix 8 and Appendix 9 to this report.

PROPOSED SIGN BY-LAW AMENDMENTS FOR ELECTRONIC AND ILLUMINATED SIGNS

As a result of the findings of the sign study, it is recommended that regulations in the Sign By-law be amended to reflect the study findings and the recommendations from the Planning and Design Review.

ADMINISTRATIVE CHANGES:

As part of the sign study, a number of procedural and administrative changes are recommended as outlined below:

Amend the list of 'Sign Types' to include Signs Displaying Electronic Sign Copy:

The Sign By-law establishes a number of "Sign Types". Sign types are currently defined based on their physical characteristics (e.g., ground, wall, roof) and restricts sign types to specific Sign Districts. Currently, changes to the method of sign copy display, for example, changing a sign copy display from static to electronic static or electronic moving copy, can be considered through the sign variance process.

Changes to the method of copy display, including a change from traditional (static) to electronic static or moving, can be considered through the variance process. Due to the potential impact that electronic copy can have on the surrounding community, it is recommended that the list of Sign Types provided in the By-law be expanded to include signs displaying electronic copy.

Establishing electronic signs as a "Sign Type" would require that applications for third party signs displaying electronic copy in a Sign District where not expressly permitted could only be considered as a By-law amendment.

Increased Notification for Electronic Sign Proposals

Throughout the consultation process, it was suggested that the notification area for amendment and variance applications should be expanded because electronic signs can impact a larger area compared to traditional signs. Residents living in close proximity to electronic signs suggested that they should have more opportunity for input into the decision-making process where new signs are proposed.

Currently, the Sign By-law requires notification to properties within 60 metres of the sign location for first party signs and 120 metres for third party signs. This report recommends that the public notification requirements be expanded to 250 metres for signs displaying electronic copy. Throughout the sign study, 250 metres was suggested as an appropriate separation between sensitive land uses and signs displaying electronic copy.

Community Meetings for Electronic Sign Proposals

As was suggested in the consultation process, it is also recommended that staff undertake a pilot project starting in 2016 to hold community meetings for variance and amendment applications where an electronic copy display is proposed to have a sign face area or height greater than the By-law permits.

The community meeting would provide an opportunity obtain feedback on the impact of a specific sign on nearby properties and provide an opportunity for those who wish to provide input, but are unable to attend committee meetings held at City Hall. These public meetings would be held after business hours in the community where the sign is being proposed.

GENERAL AMENDMENTS

Illumination Requirements for all Sign Categories:

The amount of light from illuminated and electronic signs has consistently been identified as having a significant impact on the surrounding community, particularly at night. With an increasing amount of the city being redeveloped to contain a mix of commercial and residential uses, illumination restrictions should be considered in that context.

The illumination controls currently address the following aspects of the illumination of all signs:

- Maximum luminance - the amount of light leaving the source (emitted by the light source). The By-law currently permits a maximum of 500 nits at night and 5000 nits during the day.
- Maximum illuminance - the amount of light falling on a surface such as the ground surrounding a sign. This is currently permitted to be 6.5 lux above the ambient light levels and is measured at a distance of ten metres from the sign face.

It is proposed that the maximum night-time luminance levels be reduced by 40% for all signs from a maximum of 500 nits to a maximum of 300 nits. These proposed levels are consistent with the benchmark levels for the luminance of signs in other jurisdictions (see Appendix 3).

It also proposed that the maximum illuminance for all signs be reduced from a maximum of 6.5 lux to a maximum of 3.0 lux above ambient light when measured at a distance of ten metres. This reduction would bring the illuminance levels in Toronto into line with regulations in other Canadian jurisdictions.

Although there was support from the sign industry representatives for the proposed levels for light trespass, there were concerns expressed about the distance at which the level of light trespass is measured (currently ten metres from the sign). Despite these questions, there is not sufficient justification to change the measurement distance at this point in time.

Image Transition and Brightness Variation on Electronic Static Signs

The key distinction between traditional illuminated signs and signs displaying electronic copy is the ability of the electronic copy to change at regular intervals. When an image with a dark background changes to an image with a lighter background, the change can be perceived as a flash. This flash effect was raised during the consultation as a significant impact, particularly to those living in close proximity to electronic signs.

This report proposes that the difference in brightness from one image to the next on a sign displaying electronic copy be restricted to a maximum of 25%, to minimize the flash effect with the transition between images.

It is also recommended that an image be permitted to fade into a subsequent image over a one second transition to create a more consistent appearance. The By-law would continue to prohibit any other visual effects during the transition.

CHANGES TO REGULATIONS IN SIGN CATEGORIES:

Signs in Residential Sign Districts:

Illuminated Signs in Residential Sign Districts

Currently, signs associated with institutional uses (schools, churches, community centres) are permitted to be illuminated in accordance with the requirements of the Sign By-law. This allows signs associated with these uses to be illuminated until 11:00 p.m., or until events taking place at the property have finished for the evening.

Based on the findings of the study, it is proposed that illuminated signs in Residential Sign Districts, or within 30 metres of Residential Sign Districts, be subject to the following:

- That signs not be illuminated between the hours of 9:00 pm and 7:00 am.
 - This would not apply to signs associated with emergency services, which can be illuminated 24 hours per day; or, where a sign is associated with a lawful business that is in operation beyond those hours.
- That illumination levels be consistent with the reduced illumination proposed earlier in this report.

All other signs in Residential Sign Districts, such as those permitted for a home occupation business, will be unchanged from the current requirement that they not be illuminated.

Readograph Sign Copy in Residential Sign Districts

Based on the findings of the study, it is proposed that readograph signs only be permitted in Residential Sign Districts where they are associated with schools, churches, hospitals, nursing homes and community centres, subject to the following:

- Only non-electronic readograph copy be permitted (see Figure 1 for an example of non-electronic readograph sign copy).

Figure 1: Illuminated Sign with a Non- Electronic Readograph



- That illumination levels and hours of operation be consistent with the proposed changes described earlier in this report.
- That the maximum permitted sign face area displaying readograph copy does not exceed 30% of a wall sign to a maximum of 4.0 square metres or 50% of a ground sign to a maximum of 4.0 square metres.

Institutional uses located in Residential Sign Districts often have special events or important dates that need to be communicated to local residents; allowing readograph sign copy is an appropriate way to do this.

Limiting the readograph copy to non-electronic copy in residential areas will eliminate the variable light levels that electronic copy can cast on the surrounding community.

Sign Size in Residential Sign Districts

Residential Sign Districts currently have special provisions addressing ground signs associated with certain non-residential uses (Schools, Churches, Community Centres). These provisions allow ground signs to have a maximum sign face area of eight square metres.

At the consultation, the public questioned the maximum sign face area of eight square metres currently permitted, as signs of this size do not generally reflect the built form typically found in Residential Sign Districts and could have a significant impact on nearby properties.

This report recommends that the maximum sign face area for illuminated ground signs in Residential Sign Districts be reduced from the current maximum of eight square metres to a maximum of five square metres. A review of recent permits for ground signs associated with institutional uses determined that most signs of this type would meet the proposed requirement.

Sign Copy in Open Space Sign Districts

Open Space Sign Districts are areas of the city containing parks, community centres and other recreational areas as well as "naturalized" open spaces. The Sign By-law currently permits signs in those districts to display readograph copy (alpha-numeric messages) that can be changed either manually or electronically. During the consultation, questions were raised about permitting readograph copy in naturalized open space areas and parks where there is no Community Centre on the premises.

Community Centres often contain multi-purpose spaces and serve the larger community such that a sign displaying readograph copy can provide a valuable function.

Community Centres are also not limited to Open Space Sign Districts and are found in other sign districts throughout the city where readograph copy is permitted. Based on the

unique purpose of Community Centres and the feedback obtained through the public consultation, it is proposed that readograph copy not be permitted in Open Space Sign Districts, except where there is a Community Centre on the premises.

First Party Signs Displaying Electronic Static Copy:

It is proposed that first party signs (business signs) displaying electronic static sign copy be permitted in Commercial and Employment Sign Districts subject to the following:

- The maximum electronic copy area is 30% of the total sign face area to a maximum of 5.0 square metres on a wall or ground sign;
- Where the sign is located in a Commercial Sign District, signs displaying electronic copy only be permitted on properties with commercial developments that contain ten or more tenants;
- That the lot frontage where the sign is located is 100 metres or greater;
- That there be no more than one sign containing electronic static copy per premise;
- That the sign not be located within 60 metres of a Residential, Residential Apartment, Commercial Residential, Institutional, or Open Space Sign District;
- That the portion of the sign displaying electronic static copy be located in the bottom 50% of the sign face area;
- That the minimum duration between message changes be one minute;
- That the image transitions and illumination levels be consistent with the proposed changes in this report; and,

Figure 2: Rendering - Proposed First Party Wall Sign Displaying Electronic Copy

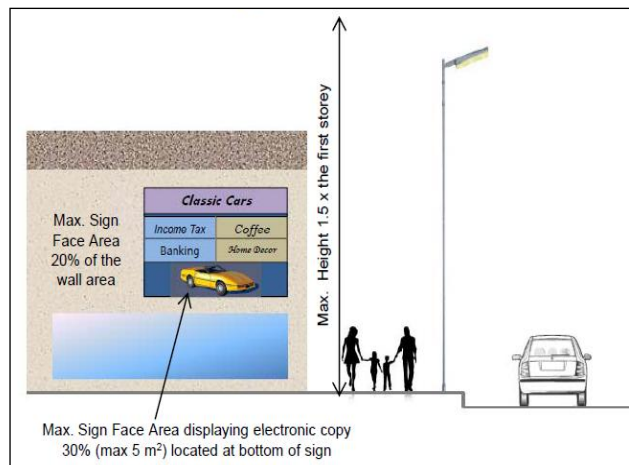
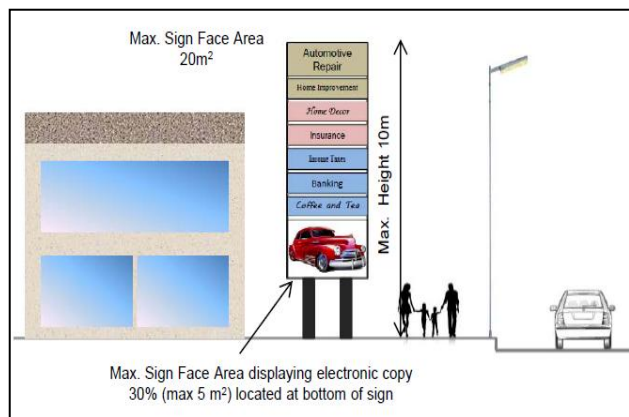


Figure 3: Rendering - Proposed First Party Ground Sign Displaying Electronic Copy



During the consultation process, staff were informed that signs displaying electronic static copy could be of benefit to commercial properties, such as plazas and shopping centres. Permitting multi-tenant commercial developments to have signs with electronic static copy will allow for increased flexibility for multiple tenants to advertise promotions or products on one sign.

The maximum sign face area of five square metres that may be displayed as electronic static copy is limited to the same total area that is currently permitted to display readograph copy.

The proposed dwell time (duration between message changes) of one minute and the requirement for the electronic portion of the sign to be in the bottom 50% of the sign face area will reduce the potential impact of changing copy and variable light levels that can be associated with electronic static copy.

The regulations for image transitions for signs displaying electronic static copy, as well as the changes to sign brightness and dwell time proposed in this report, will also limit the potential impact that these signs have on driver or pedestrian distraction.

Illuminated and Electronic Third Party Signs:

Third Party Signs in Employment, Commercial and Utility Sign Districts

It is recommended that third party signs displaying electronic static copy be permitted in Employment, Commercial and Utility Sign Districts subject to the following:

- That the sign be located a minimum of 30 metres from an intersection;
 - That the sign not be located within 60 metres of a Residential, Residential Apartment, Commercial Residential, Institutional, or Open Space Sign District; Where a sign is located within 250 metres of an Residential, Residential Apartment, Commercial Residential, Institutional, or Open Space Sign District, the sign cannot face any premise in that Sign District; 'Facing' means a 180-degree semi-circle in front and to the sides of the sign face;
- That the sign be located a minimum of 500 metres from any other third party sign that displays electronic copy on the same street, or street intersecting the street where the sign is located;
- The sign be located a minimum of 150 metres from any other third party sign;
- That image transitions be consistent with the proposed changes in this report; and,
- That illumination levels be consistent with proposed changes in this report.

The proposed restrictions on signs facing properties in Residential, Residential Apartment, Commercial Residential, Institutional, or Open Space Sign Districts are not currently regulated in the Sign By-law. Throughout the sign study, 250 metres was suggested as an appropriate separation between sensitive uses and signs displaying electronic copy in order to limit the impact.

The proposed separation distance requirement of 500 metres between large third party electronic signs on the same street, or an intersecting street, is intended to reduce the impression of flashing or animation that can occur when the copy on two or more electronic signs change at different times.

Measuring the distance between electronic signs on a linear basis and not a radial basis (which the Sign By-law currently does for separation distances) was suggested by the sign industry as an appropriate way to reduce the flashing effect that may occur when electronic signs are located too close to one another.

Figure 4: Rendering - Proposed Third Party Wall Sign Displaying Electronic Static Copy in Commercial and Utility Sign Districts

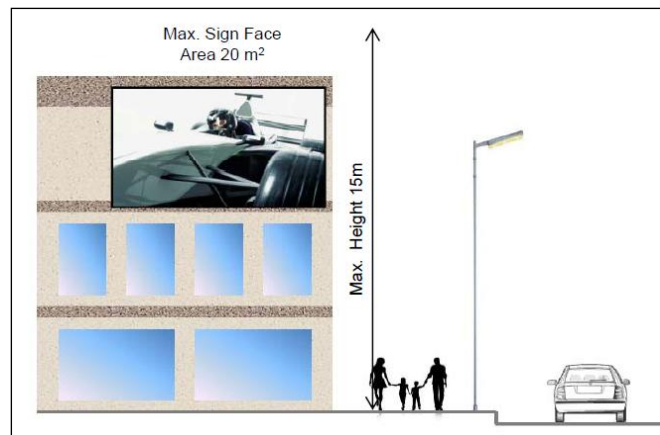
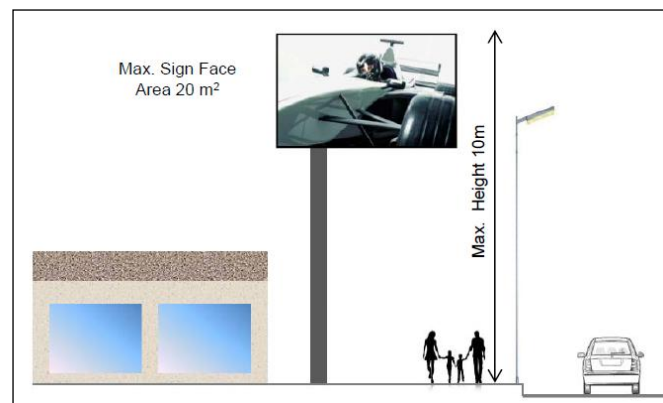


Figure 5: Rendering - Proposed Third Party Ground Sign Displaying Electronic Static Copy in Employment and Utility Sign Districts



Third Party Signs in Commercial Residential Sign Districts

This report recommends that third party signs displaying electronic copy not be permitted in Commercial Residential Sign Districts. It also recommends that the requirements for third party signs in Commercial Residential Sign Districts be modified to permit small third party wall signs displaying static and mechanical copy subject to the following:

- The maximum sign face area not exceed 3.0 square metres;
- The maximum sign height shall be 3.0 metres above grade;
- The sign be located a minimum of 30 metres from an intersection;
- The sign be located a minimum of 30 metres from an Residential, Residential Apartment, Institutional, or Open Space Sign Districts;
- The sign shall be located a minimum of 100 metres from any other third party sign; and,
- That illumination levels be consistent with the proposed changes to the illumination requirements described in this report.

Throughout the consultation, concerns were expressed with the introduction of electronic signs in Commercial Residential Sign Districts. Members of the public suggested that electronic signs would impact nearby residential units even with a maximum size of three square metres and located at street level. Representatives from the sign industry also questioned the economic feasibility of smaller electronic signs at street level and expressed concerns with the increased risk of damage that could occur to the signs placed low on a building.

There was, however, support from members of the public for maintaining the reduced size and height proposed in this report for third party signs displaying more traditional static or mechanical copy.

Figure 6: Rendering - Existing Third Party Wall Sign permissions for Commercial Residential Sign Districts

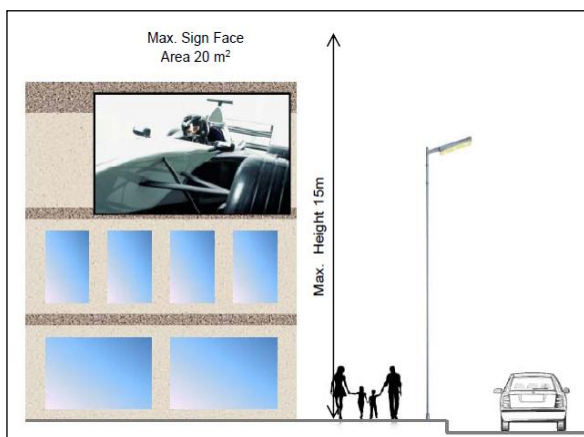
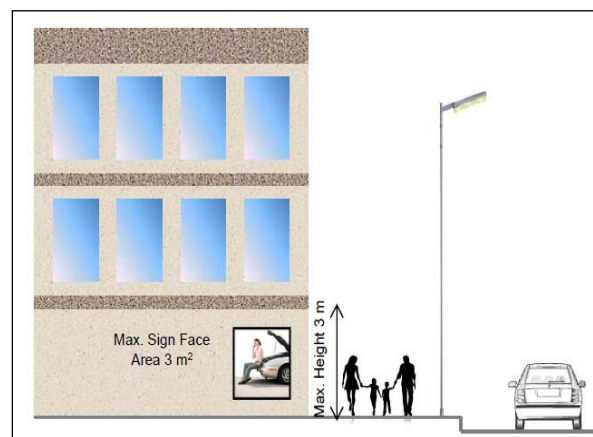


Figure 7: Rendering - Proposed Third Party Wall Sign permissions for Commercial Residential Sign Districts



The proposed reduction in size and height of third party wall signs in Commercial Residential Sign Districts, in conjunction with the illumination levels proposed in this report, are intended to result in signs that have less impact on residential dwelling units in upper storeys of mixed-use buildings. In many cases, these proposed changes will result in third party signs that are equal in size to typical first party signs, which are permitted to have a maximum sign face area of 20% of a building wall when located at the first storey.

Commercial Residential Sign Districts also tend to be in areas of the city that are more pedestrian-oriented and where smaller scale signs are more appropriate due to the close proximity of residential land uses, and reduced impact on the pedestrian environment.

Signs Displaying Electronic Moving Copy

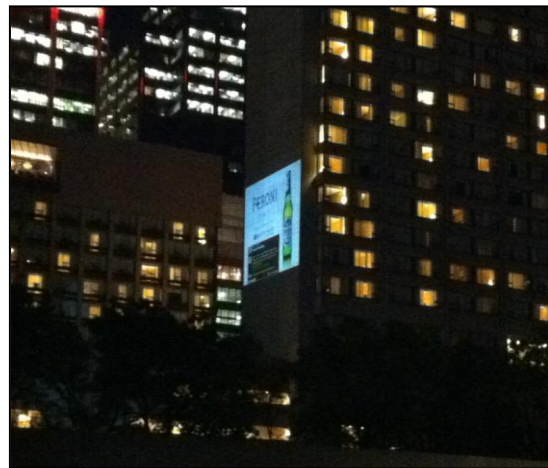
It is recommended that the current provisions of the Sign By-law for signs displaying electronic moving copy be maintained so that the location where these signs are permitted is restricted to the Dundas Square Special Sign District.

The Dundas Square Special Sign District has been identified as an area of the city where signs displaying electronic moving copy are a defining characteristic. While these signs can contribute to a sense of place and may be appropriate in other locations in the city, they have a more significant impact on adjacent properties.

Projected Image Signs

Based upon Sign Study findings, staff are proposing to amend the Sign By-law to add a specific definition for "Projected Image Signs". Projected Image Signs raise additional issues over and above those faced with other Electronic Signs, such as the potential large scale size (some can occupy an entire building wall) as well as changing images and variable light levels. Additionally, Projected Image Signs may often involve two or more premises as the source projecting the image is often separated from the structure on which the sign copy is displayed. However, as the Sign Study indicated that Projected Image Signs may be appropriate in exceptional circumstances, such as major attractions, this report proposes amendments to the Sign By-law, to allow Projected Image Signs, displaying first party copy to be the subject of a Signage Master Plan.

Figure 9 and 10: Projected Image Sign during the Day and Night



It is also possible that additional premises may be located between the projecting structure, and the sign face upon which the sign copy is displayed. Therefore, due to the unique characteristics of these signs, it is not proposed to add Projected Image Signs as a permitted sign type in any Sign District.

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ATTACHMENTS:

- 1) Draft By-law, Proposed Amendments to The Sign By-law
- 2) Descriptions Of The Signs Reviewed as Part of this Study
- 3) Planning And Design Review, Martin Rendl And Associates
- 4) Public Opinion Poll, June 2013, Ipsos Reid
- 5) Literature Review, Electronic Signs and Traffic Safety, CIMA +
- 6) Collision Analysis, Electronic signs on Expressways and Arterial Roads, CIMA+
- 7) Collision Analysis, Electronic Signs at Intersections, CIMA+
- 8) Summary of Comments received from 2013 Public Consultation Process
- 9) Summary of Comments received From 2015 Sign Industry Workshop