

CITY OF HAMILTON

PLANNING AND ECONOMIC DEVELOPMENT DEPARTMENT
Planning Division

TO: Chair and Members Planning Committee	WARD(S) AFFECTED: CITY WIDE
COMMITTEE DATE: May 1, 2012	
SUBJECT/REPORT NO: Amendments to Telecommunication Tower and Antenna Protocol (PED09206(b)) (City Wide) (Outstanding Business List Item)	
SUBMITTED BY: Tim McCabe General Manager Planning and Economic Development Department	PREPARED BY: Heather Travis (905) 546-2424, Ext. 4168
SIGNATURE:	

RECOMMENDATION:

- (a) That the amended City of Hamilton Telecommunication Tower and Antenna Protocol, attached as Appendix “A” to Report PED09206(b), be adopted.
- (b) That the City Clerk forward a copy of the amended Protocol to Industry Canada and the Federation of Canadian Municipalities for information.
- (c) That the item “Cell Phone Towers (Motion)” be identified as completed, and removed from the Planning Committee Outstanding Business List, as per Report PED09206(b).

EXECUTIVE SUMMARY

The Telecommunication Tower and Antenna Protocol was approved by the former Economic Development and Planning Committee on August 10, 2009, and Council on August 13, 2009. At the November 8, 2011, Planning Committee meeting, the following Motion was passed: “That staff report back on our ability to ban the use of Lattice towers for cell phone towers.” Staff has investigated this issue, and are recommending

SUBJECT: Amendments to Telecommunication Tower and Antenna Protocol (PED09206(b)) (City Wide) - Page 2 of 12

that the Protocol be amended (see Appendix “A”) to clearly identify the City’s preference for monopole towers and restrict Lattice towers to certain Industrial zones. Staff is also recommending revisions to the Protocol related to co-location requirements, exemptions from municipal review, and distance from sensitive land uses.

Alternatives for Consideration - See Page 11.

FINANCIAL / STAFFING / LEGAL IMPLICATIONS (for Recommendation(s) only)

Financial: N/A.

Staffing: N/A.

Legal: N/A.

HISTORICAL BACKGROUND (Chronology of events)

Report PED09206:

On August 10, 2009, Report PED09206, “Telecommunication Tower and Antenna Protocol”, was approved by the former Economic Development and Planning Committee. The Report included a Protocol for the design and siting of new telecommunication facilities within the City of Hamilton. The Protocol was approved by Committee, and is now in effect, and provides guidance on the location and siting of new telecommunication proposals.

PED09206(a):

Report PED09206(a), Telecommunication Tower and Antenna Follow-up Report, was presented at the February 17, 2010 Economic Development and Planning Committee. The purpose of the Report was to address four items that had been identified by the Economic Development and Planning Committee, those being:

- (i) Change separation for new towers from 120 metres to 400 metres from residential areas and schools (Planning staff);
- (ii) All new towers should be Monopoles and not Lattice towers with multiple antennae; (Planning staff);
- (iii) The revenue that could be generated, and how water security can be protected if wireless telecommunication devices are installed on City-owned water towers (Public Works staff); and,

SUBJECT: Amendments to Telecommunication Tower and Antenna Protocol (PED09206(b)) (City Wide) - Page 3 of 12

- (iv) The health effects on water towers by wireless telecommunication devices (Medical Officer of Health).

Report PED09206(a) was a joint report, prepared by staff from Planning, Public Works, and Public Health. Planning staff responded to Items (i) and (ii) above. With regard to Item (i), staff responded that the 120 metre separation distance between towers and sensitive uses should be maintained, as the 400 metre separation distance would be too restrictive, and would essentially eliminate most locations in the urban area from accommodating a new tower. With regard to Item (ii) above, Planning staff recommended that the Protocol should not be amended to restrict Lattice towers. Rather, the Protocol should focus on the issue of co-location and multiple antennas on a tower, and where this is appropriate. This issue is the subject of this Report, and will be discussed in detail below.

Staff from Public Works reported back on Item (iii), and advised that the prohibition of water towers should be maintained. Public Health staff reported on Item (iv), and advised that there is no evidence to suggest there is an adverse health effect on humans from telecommunication towers.

Committee received Report PED09206(a), and did not recommend any changes to the Protocol regarding the 120 metre separation distance or the restriction on Lattice towers. Committee did require Public Works staff to report further on the water tower issue, as noted below.

PW11033 and PW11033(a):

Information Report PW11033 was presented to Planning Committee on April 19, 2011, in response to Committee's request for further information on the water tower issue. The Information Report stated that staff had met with representatives of the Telecommunication industry, and that staff would be working collaboratively with the industry to promote City of Hamilton lands as options for new tower/antenna locations. The Report was received by Committee.

Report PW11033(a) was presented to Public Works Committee on October 17, 2011, and recommended that the Telecommunication Tower and Antenna Protocol be amended to allow for the installation of telecommunication towers and antennas on City of Hamilton water towers. This Report was approved by Committee.

Current Motion:

At the Planning Committee meeting of November 8, 2011, the following Motion was approved:

"That staff report back on our ability to ban the use of Lattice towers for cell phone towers."

This Report will address the above noted Motion.

POLICY IMPLICATIONS

Urban Hamilton Official Plan:

The New Urban Hamilton Official Plan was adopted by City Council on July 9, 2009. While the Plan is not yet in force and effect, it is noted that the attached Protocol conforms with the Council-adopted Plan. Policy 3.2.1(b) states that telecommunication facilities shall be permitted in all land use designations. In addition, Policy 3.4.10 states that the City of Hamilton shall prepare a telecommunications antenna siting protocol to ensure effective local participation in decisions respecting the siting of proposed antennas and their supporting structure. Therefore, the Telecommunication Tower and Antenna Protocol is implementing the policies of the Urban Hamilton Official Plan.

Rural Hamilton Official Plan:

An OMB ruling on March 7, 2012, brought most portions of the New Rural Hamilton Official Plan into full force and effect, save for certain sections which are still under appeal. Section C.3.4 - Utilities is now in full force and effect. Policy C.3.4.2 states that only major utility facilities such as compressor stations, major easements, waste management facilities, and commercial wind farms shall be designated as Utilities. All other utility uses, which would include telecommunication facilities, shall be permitted in all designations. The Plan also states that utilities shall be developed to integrate with the general character of the surrounding uses through the provision of landscaping, screening and buffering, siting of structures, height control, and any other measures as may be deemed appropriate by the City. These issues have been addressed in the Protocol and, therefore, the Protocol is consistent with the policies of the Rural Hamilton Official Plan.

RELEVANT CONSULTATION

- **Industry Canada** was contacted to discuss the subject of this Report, specifically the ability of the City to ban the use of Lattice towers for new cell towers in the City. Industry Canada's input is summarized in the Analysis/Rationale for Recommendation section below.

ANALYSIS / RATIONALE FOR RECOMMENDATION

(include Performance Measurement/Benchmarking Data, if applicable)

1. Staff has been asked to report back on the issue of whether or not the City has the ability to ban the use of Lattice towers for new cell tower construction. Staff has been asked to investigate this issue due to the perceived visual obtrusiveness of Lattice type towers. As noted above in the Historical Background section, staff addressed this issue in the Follow-Up Report that was presented to Committee in 2010. At that time, staff did not recommend any changes to the Protocol to address this issue, as the Protocol already addresses the City's objectives for unobtrusive design, particularly in proximity to sensitive land uses. However, staff is aware that recent tower installations within the City have not met this objective and, as such, staff is revisiting this issue to determine what amendments could be made to the Protocol to strengthen and clarify the City's position with regard to this issue.

In order to address this issue, staff has consulted with Industry Canada and reviewed Protocols in place in surrounding municipalities, as outlined below. In addition, staff has considered issues related to design and siting of new cell towers including tower type, co-location, and distance of new towers from sensitive uses. All of these considerations are elaborated upon below.

Tower Types:

Staff has been asked to report back on the City's ability to ban the use of Lattice towers for new cell tower construction. In order to provide some background information on the different types of towers, staff has provided pictures of some of the tower types, as shown in Appendix "B". Photo 1 is a Self-Support Lattice type tower. These typically range in height from 45 metres (150 feet) to 75 metres (250 feet). Photo 2 shows a Tripole Lattice tower, which can range in height from 18 metres (60 feet) to 45 metres (150 feet). Photos 3 and 4 are Monopole towers, which range in height from 18 metres (60 feet) to 45 metres (150 feet). Monopole towers may be either Co-location towers (Photo 3) or Single Carrier towers (Photo 4).

Co-location:

As identified in the photos attached as Appendix "B", telecommunication towers may also be classified as either Single Carrier towers or Co-located towers. The difference is apparent in Photos 3 and 4. A Single Carrier tower accommodates the antennae of only one provider. A Co-located tower accommodates, or is designed to accommodate, antennae from multiple providers.

Towers designed to accommodate co-location capacity (i.e. multiple antennas) are generally greater in height and have a thicker pole than towers designed as a Single Carrier Monopole. The pole must be larger in size to handle all of the equipment required for each antenna. The benefit of telecommunication towers designed for co-location are that multiple antenna (users) may be accommodated on a single tower and, therefore, the overall number of individual towers is decreased. The drawback of Co-location towers is that they are more visually obtrusive than Single Carrier Monopole installations, and cannot be disguised using stealth design techniques, such as a flagpole design. In general, Lattice style towers can more easily accommodate multiple carriers. While Monopole towers can be designed to accommodate co-location, it requires the Monopole to be of greater height and diameter than a Single Carrier Monopole. This, in turn, leads to a greater degree of visual obtrusiveness.

Consultation with Industry Canada:

Wireless telecommunication facilities (antennas and towers) are federally regulated. Industry Canada is the body that regulates the approval and siting of new telecommunication facilities. Telecommunication towers and antenna are, therefore, not subject to the provisions of the Ontario Planning Act or the Ontario Building Code Act. Within *Client Procedures Circular CPC-2-0-03 - Radiocommunication and Broadcasting Antenna Systems*, Industry Canada directs that telecommunication providers must consult with the local land use authority (municipality) on any new tower location (unless specifically exempted through CPC-2-0-03); however, Industry Canada is the final approval authority in the case of any disputes.

Staff consulted with Industry Canada regarding the City's ability to ban Lattice type tower construction in the City. Industry Canada provided the following information to staff. The City of Hamilton may include any provisions or restrictions that it feels are warranted within the Protocol. This could include a restriction on Lattice type towers. However, Industry Canada also stated that there may be instances when a carrier would prefer to install a Lattice tower. This could include one of the following reasons:

- Desire to accommodate co-location;
- Locational characteristics, e.g. sandy soil or marshy conditions; or,
- Cost efficiencies gained through Lattice construction.

Industry Canada would review the rationale behind the request, and if deemed appropriate, Industry Canada could give approval to the Lattice type tower despite any restrictions in the City's Protocol.

Industry Canada suggests that it may be more appropriate for the City's Protocol to state that the Monopole type of tower is the preferred option for new towers in Hamilton, but that the City does recognize that the Lattice type of tower would be appropriate in some situations (e.g. Industrial areas).

With regard to the issue of Single-Carrier towers versus Co-Location towers, Industry Canada notes that co-location is one of Industry Canada's key requirements under CPC-2-0-03. Should the City of Hamilton choose to encourage Single-Carrier towers in proximity to sensitive land uses in order to reduce visual obtrusiveness, Industry Canada notes that this may result in a greater overall number of towers being required in the same general vicinity in order to provide adequate network coverage.

Review of Protocols in Other Municipalities:

Staff has reviewed Protocols that have recently (within the last 2 years) been approved in other municipalities, including Burlington, Oakville (Interim Protocol), Brampton, Kitchener, Waterloo, and Winnipeg, and find the following:

- One municipality, Brampton, included a prohibition on Lattice type towers. Specifically, the Brampton Protocol states that Lattice type towers shall not be permitted anywhere in the City, unless it is demonstrated that they will not be visible outside of an industrial area.
 - Four municipalities (Burlington, Oakville, Brampton, Winnipeg) state that a Monopole or stealth design is the preferred design for any new tower in the City.
 - Two municipalities qualify this to say that Single Carrier Monopoles (Oakville, Winnipeg) are preferred in proximity to sensitive uses.
 - In terms of separation distance from sensitive land uses, various different minimums are identified in the Protocols reviewed. One other municipality (Kitchener) identified a 120 metre distance separation, which is consistent with Hamilton's current Protocol. One municipality (Winnipeg) identified a distance of three times the height of the tower, which is consistent with Industry Canada direction. Burlington identified a greater separation distance, being six times the height of the tower.
2. Based on the considerations above, staff is of the opinion that amendments to the City's Protocol are warranted in order to clarify the City's preference for unobtrusive design, which is best achieved through Single Carrier Monopole construction. Staff is not recommending an outright ban on Lattice towers, as there may be situations where this type of construction is acceptable (e.g. Industrial areas). Staff, therefore, recommends the following amendments, which

SUBJECT: Amendments to Telecommunication Tower and Antenna Protocol (PED09206(b)) (City Wide) - Page 8 of 12

are included in the amended Protocol, attached as Appendix "A". The amendments to the Protocol have been italicized in Appendix "A".

Restriction on Lattice Style Towers:

In order to meet the City's objective of reducing the visual obtrusiveness of telecommunication towers, staff recommends the following provision be added under Section 1.2.2 - Design and Landscaping:

1.2.2.1 Monopole towers are the preferred tower type for any new telecommunication tower in the City. Lattice style towers should be restricted to the following Industrial Zones:

- *General Business Park (M2) Zone*
- *General Industrial (M5) Zone*

The General Business Park (M2) Zone and the General Industrial (M5) Zone are located on the interior of the City's Business Parks and Bayfront Industrial area. As such, towers located within these zones will not be visually prominent from sensitive land uses or from major transportation corridors. Staff, therefore, considers these areas to be appropriate for Lattice style towers. The restriction on Lattice style towers would apply to all other zones within the City.

Preference for Single Carrier Monopoles in Proximity to Sensitive Uses:

As noted above, in addition to the issue of tower type (Lattice vs. Monopole), the issue of co-location is also relevant to the City's objective of reducing visual obtrusiveness. In order to further reduce the obtrusiveness of towers located in proximity to sensitive uses, the following revisions to the Protocol are proposed.

Section 1.2.1 - Site Selection should be amended as follows:

1.2.1.1 Sites should be selected to minimize the total number of telecommunication tower sites required. Locations on existing structures or buildings are strongly encouraged. Co-locations on existing tower sites are encouraged provided that the existing tower is located a minimum of 120 metres, or three times the tower height (whichever is greater) from a Residential Zone, existing dwelling, or other sensitive land use. Opportunities to incorporate an antenna into the design of a new building or structure should be explored by the Proponent. The construction of a new telecommunication tower is discouraged, and will be accepted only when all other options to accommodate the telecommunication antenna are not viable.

This provision (underlined) has been amended to clarify the City's preference for co-location only on towers that are located the greater of 120 metres, or three times the tower height, from a sensitive land use. The current version of the Protocol is not clear in this Section on locational preferences for co-location of antennae. While staff acknowledges Industry Canada's comments regarding the importance of co-location, staff consider the visual obtrusiveness of a Co-Located tower to be undesirable in such close proximity to sensitive land uses. Co-location is still encouraged on towers located a greater distance from such sensitive uses.

To further address this issue, Section 1.2.2 - Design and Landscaping should also be amended as follows:

1.2.2.2 A Single Carrier Monopole design or other stealth design technique, as described in 1.2.2.4 below, is the preferred option for any new telecommunication tower which must be located within 120 metres, or three times the tower height (whichever is greater), of a Residential Zone, existing dwelling, or other sensitive land use. Any new telecommunication tower which is located within this buffer area should not be designed for future co-location capacity.

1.2.2.3 New telecommunication towers which are located greater than 120 metres, or three times the tower height (whichever is greater), from a Residential Zone, existing dwelling, or other sensitive land use may be designed with co-location capacity.

Remove Exemptions for Rural/Agricultural Zones and Limit Exemption for Industrial Zones:

Section 2 of the Protocol currently exempts new tower installations that are located in Rural/Agricultural Zones and Industrial Zones from the requirement for municipal review, provided that certain criteria are met (distance from sensitive uses or features). The rationale for including these two exemptions in the Protocol was that it provides an incentive for proponents to find new tower sites within Industrial or Rural areas, away from residential uses. However, recent tower installations within the City, particularly in some Rural areas, have resulted in towers that are visually obtrusive on the landscape. Staff, therefore, feels that a review of all new towers within the Rural area would be beneficial in achieving a tower design that is less obtrusive and, therefore, the exemption for new towers in the Rural area has been removed.

Further, the exemption for review of new towers within the Industrial area will remain, but will be limited to new towers in the General Business Park (M2) Zone and the General Industrial (M5) Zone only. This exemption only applies if the proposed tower in the M2 or M5 Zone is located a minimum of 120 metres, or three times the tower height, whichever is greater, from a Residential Zone or sensitive land use, and from a road which forms the boundary to an Industrial Business Park. All new towers within the City's other Industrial Zones will require municipal review.

Separation Distance from Sensitive Land Uses:

The City's Protocol currently states that new towers are strongly discouraged within 120 metres of a Residential Zone or school. However, staff notes that Industry Canada (through CPC-2-0-03) requires that proponents notify land owners within a distance of three times the tower height of new tower installations, thereby implying that the area of impact of a new tower is the distance of three times the tower height.

Therefore, staff is recommending that Section 1.2.1.2 - Site Selection be amended as follows:

1.2.1.2 New telecommunication towers are strongly discouraged within 120 metres, or three times the tower height (whichever is greater), of any Residential Zone, existing dwelling, or other sensitive land use, unless required for reasons of engineering or network objectives. If a new tower is proposed to be located within 120 metres, or three times the tower height (whichever is greater), of a Residential Zone, existing dwelling, or other sensitive land use, a detailed rationale for the necessity of this location must be provided in the Site Selection/Justification Report (see Section 3.3.1).

This will ensure that sensitive land uses are afforded proper protection and notification with regard to new tower installations, to the greatest extent possible. Similar amendments will also be made to other Sections of the Protocol (i.e. 1.2.2.2, 1.2.2.3, 2.6, 4.1, and 4.2.1) to clarify this area of impact regarding co-location preferences and requirements for public consultation.

In addition, the Protocol currently applies the 120 metre distance separation to Residential Zones or schools. As noted in the revised Section 1.2.1.2 above, the Protocol has been amended to state that the minimum distance separation applies to Residential zones or other sensitive land uses. This will capture other uses such as day care centres that are not currently captured in the Protocol. The following definition of *sensitive land use* has also been added, which is taken from the 2005 Provincial Policy Statement:

“Sensitive Land Use - means buildings, amenity areas, or outdoor spaces where routine or normal activities occurring at reasonably expected times would experience one or more adverse effects from contaminate discharges generated by a nearby major facility. Sensitive land uses may be a part of the natural or built environment. Examples may include, but are not limited to: residences, day care centres, and educational and health facilities. (PPS, 2005)”

ALTERNATIVES FOR CONSIDERATION:

(include Financial, Staffing, Legal and Policy Implications and pros and cons for each alternative)

1. Not revise the current Protocol. This could result in more Lattice style towers being constructed throughout the City and would not further the City’s objective of reducing the visual obtrusiveness of towers.
2. Amend the Protocol to ban the use of Lattice towers throughout the City. This option may be construed as overly restrictive by Industry Canada and the telecommunications industry. As such, staff is not recommending this option.
3. Amend the Protocol, attached as Appendix “A”, to state that Monopoles are the preferred tower type within the City of Hamilton, and that Lattice style towers should be restricted to specified Industrial zones (i.e. on the interior of Business Parks and the Bayfront Industrial area). This amendment, together with the other proposed changes such as requiring Single Carrier Monopoles in proximity to sensitive uses and removing the exemptions for towers in Rural areas and Prestige Industrial areas, should further the City’s goal of achieving unobtrusive tower design, while at the same time recognizing that towers are required to be located within the City to provide adequate coverage. This alternative is being recommended by staff.

If any changes are made to the approved Protocol, a copy of the updated Protocol should be forwarded to Industry Canada and the Federation of Canadian Municipalities for information.

CORPORATE STRATEGIC PLAN (Linkage to Desired End Results)

Focus Areas: 1. Skilled, Innovative and Respectful Organization, 2. Financial Sustainability, 3. Intergovernmental Relationships, 4. Growing Our Economy, 5. Social Development, 6. Environmental Stewardship, 7. Healthy Community

Skilled, Innovative, and Respectful Organization

- ◆ More innovation, greater teamwork, better client focus.

Financial Sustainability

- ◆ Generate assessment growth/non-tax revenues.

Growing Our Economy

- ◆ An improved customer service.

Environmental Stewardship

- ◆ Natural resources are protected and enhanced.

Healthy Community

- ◆ An engaged Citizenry.

APPENDICES / SCHEDULES

- Appendix “A”: City of Hamilton Telecommunication Tower and Antenna Protocol.
- Appendix “B”: Types of Telecommunication Towers.

:HT
Attachs. (2)

City of Hamilton

Telecommunication Tower and Antenna Protocol

Section 1 - Goals and Guidelines

1.1 - Protocol Goals

1. To provide a consistent and timely process for the review of telecommunication facilities and installations within the City of Hamilton;
2. To encourage consultation by telecommunication providers with the municipality as early in the location process as practical and feasible;
3. To encourage the location and siting of telecommunication facilities in a manner which minimizes the effects on residents, lessens visual impact, and respects natural and human heritage features and sensitive land uses to the greatest extent possible;
4. To afford an appropriate and effective opportunity for public consultation with respect to mitigating concerns over the siting of wireless telecommunication facilities; and,
5. To recognize the jurisdiction of Industry Canada with respect to the implementation of appropriate health, safety, and environmental standards in exercising its authority to approve the location of telecommunications facilities.

1.2 - Guidelines

1.2.1 - Site Selection

In determining an appropriate site for a new tower or antenna, the Proponent shall adhere to the following principles:

1. Sites should be selected to minimize the total number of telecommunication tower sites required. Locations on existing structures or buildings are strongly encouraged. *Co-locations on existing tower sites are encouraged provided that the existing tower is located a minimum of 120 metres, or three times the tower height (whichever is greater), from a Residential Zone, existing dwelling, or other sensitive land use.* Opportunities to incorporate an antenna into the design of a new building or structure should be explored by the Proponent. The construction of a new telecommunication tower is discouraged, and will be accepted only when all other options to accommodate the telecommunication antenna are not viable.

2. New telecommunication towers are strongly discouraged within 120 metres, *or three times the tower height (whichever is greater), of any Residential Zone, existing dwelling, or other sensitive land use*, unless required for reasons of engineering or network objectives. If a new tower is proposed to be located within 120 metres, or three times the tower height (whichever is greater), of a Residential Zone, existing dwelling, or other sensitive land use, a detailed rationale for the necessity of this location must be provided in the Site Selection/Justification Report (see Section 3.3.1).
3. The Proponent shall make every effort to locate new telecommunication towers within lands zoned for primarily Industrial, Commercial, or Utility uses, whenever possible, where technically feasible.
4. When selecting sites for telecommunication towers, the following shall be considered:
 - a) Maximizing distance from residential uses, schools, and active park space;
 - b) Maximizing distance from properties designated under Parts IV or V of the Ontario Heritage Act;
 - c) Maximizing distance from natural features, Environmentally Sensitive Areas, Hazard Lands, and Key Natural Heritage Features and Key Hydrologic Features, as defined by the Urban and Rural Hamilton Official Plans (completion of an Environmental Impact Statement may be required should the telecommunication tower be located on lands adjacent to a Key Natural Heritage Feature);
 - d) Avoiding sites that would obscure public views, vistas, and significant Cultural Heritage Landscapes; and,
 - e) Compatibility with adjacent uses.
5. Proponents shall be encouraged to locate telecommunication towers with a minimum setback to all property lines and to all existing buildings of a distance equivalent to the height of the tower (measured from grade), whenever possible.
6. New telecommunication facilities should comply with all Zoning By-law regulations.
7. Any request to install a telecommunication facility on City-owned lands shall be reviewed in accordance with the Procedure for the Installation of Broadcasting Communication Facilities on City of Hamilton Properties (2001), attached as Appendix "A" to this Protocol.

8. Any proposed telecommunication facility located within the Development Control Area of the Niagara Escarpment Plan (NEP) shall be in accordance with the current Niagara Escarpment Commission (NEC) Radio and Telecommunications Protocol. Any proposed telecommunication facility that is located within the NEP, but outside of the Development Control Area, shall be in accordance with this Protocol. The City of Hamilton will circulate the NEC on any proposals for new telecommunication facilities that are within the NEP but outside of Development Control, in accordance with Section 3.2, Minor Site Plan Application Process.

1.2.2 - Design and Landscaping

The use of design features, colour, and landscaping can be used to screen telecommunication facilities from view and should be encouraged, whenever possible. The following design guidelines should be taken into consideration when designing a new tower or antenna:

1. *Monopole towers are the preferred tower type for any new telecommunication tower in the City. Lattice style towers should be restricted to the following Industrial Zones:*
 - *General Business Park (M2) Zone*
 - *General Industrial (M5) Zone*
2. *A single-carrier Monopole design or other stealth design technique, as described in 1.2.2.4 below, is the preferred option for any new telecommunication tower which must be located within 120 metres, or three times the tower height (whichever is greater), of a Residential Zone, existing dwelling, or other sensitive land use. Any new telecommunication tower which is located within this buffer area should not be designed for future co-location capacity.*
3. *New telecommunication towers which are located greater than 120 metres, or three times the tower height (whichever is greater), from a Residential Zone, existing dwelling, or other sensitive land use may be designed with co-location capacity.*
4. Where appropriate, stealth design techniques, including, but not limited to, camouflaging towers within church steeples, clock towers, or flagpoles, should be used in the design of a new telecommunication tower. If stealth design techniques are employed in the design of a new tower, co-location capacity will not be required in accordance with Section 1.2.2.2 above.

5. Efforts should be made to decrease the size and visibility of telecommunication towers so that they blend in with the surroundings to the greatest extent possible. To reduce the scale and visual impact of towers, mitigation measures should include consideration of design features, structure type, colour, materials, landscaping, screening, and decorative fencing. Neutral colours that blend the structure with its surroundings are encouraged (though it is recognized that new towers must comply with the requirements of Transport Canada and NAV Canada). Where equipment shelters are located on the ground, the visual impact of the built form shall be mitigated through the use of colour, decorative fencing, screening, and/or landscaping.
6. Where appropriate, the planting of trees and shrubs at the tower site is encouraged to enhance the character of the surroundings.
7. Telecommunication towers will only accommodate telecommunication antennas. Only signage directly related to the equipment or required by Industry Canada shall be permitted on the site. A small plaque must be placed at the base of the structure identifying the owner/operator and contact information. No third party advertising or promotion shall be permitted. All signage shall comply with the City of Hamilton Sign By-law 06-243.
8. Lighting of telecommunication antenna and towers is prohibited unless required by Transport Canada. Proof of this requirement should be provided by the Proponent to the City of Hamilton with the Minor Site Plan application.

Section 2 - Exemptions from Requirement for Municipal Review

Proposed telecommunication towers and antennas which are exempted from the requirement to consult with the City of Hamilton under the provision of Industry Canada's CPC-2-0-03 ("Radiocommunication and Broadcasting Antenna Systems", June 2007) will be exempt from the requirement to submit a Minor Site Plan application. The exemptions are listed as follows:

1. Maintenance of existing radio apparatus including the antenna system, transmission line, mast, tower or other antenna-supporting structure.
2. Addition or modification of an antenna system (including improving the structural integrity of its integral mast to facilitate sharing), the transmission line, antenna-supporting structure or other radio apparatus to existing infrastructure, a building, etc., provided the addition or modification does not result in an overall height increase above the existing structure of 25% of the original structure's height.
3. Maintenance of an antenna system's painting or lighting in order to comply with Transport Canada's requirements.

4. Installation, for a limited duration (typically not more than 3 months), of an antenna system that is used for a special event, or one that is used to support local, provincial, territorial, or national emergency operations during the emergency, and is removed within 3 months after the emergency or special event.
5. New antenna systems, including masts, towers, or other antenna-supporting structure, with a height of less than 15 metres above ground level.

In addition to the above exemptions mandated by Industry Canada, the City of Hamilton will also exempt the following installations from the requirement to submit a Minor Site Plan application:

6. Any new telecommunication tower or antenna proposed within the *General Business Park (M2) Zone* or the *General Industrial (M5) Zone*, provided that the following criteria are met:
 - (a) The proposed tower is located the *greater of 120 metres or three times the tower height* from a road that forms the boundary to an Industrial Area or an Industrial Business Park, as defined by the Urban and Rural Hamilton Official Plans, measured from the tower base or the outside perimeter of the supporting structure, whichever is greater; and,
 - (b) The proposed tower is located the *greater of 120 metres or three times the tower height* from a *Residential Zone, existing dwelling, or other sensitive land use*, measured from the tower base or the outside perimeter of the supporting structure, whichever is greater.

If a new telecommunication tower is exempt from municipal review, the City of Hamilton requests that the Proponent still provide the City with information on their proposed installation for information purposes. This information will be provided to the local Ward Councillor so that they may respond to any questions from constituents, should they arise.

Section 3 - Minor Site Plan Review

All proposals for a new telecommunication tower which are not exempt from the requirement for municipal consultation, as specified in Section 2, are required to submit a Minor Site Plan application to the City of Hamilton for review. Applications are to be submitted to the attention of the Director of Planning. While the City of Hamilton recognizes that Industry Canada is the final approval authority for telecommunication facilities, it is also recognized that Industry Canada directs telecommunication providers to consult with the local municipality prior to erecting any non-exempt telecommunication towers. Although new telecommunication facilities are not required to obtain site plan approval under *The Planning Act*, the City's Minor Site Plan application process is an existing process which affords the City an opportunity to review and comment on new telecommunication towers. There will be no requirement for the Proponent to enter into a Site Plan Agreement as part of this process.

3.1 - Formal Consultation

Prior to submitting a Minor Site Plan application, the Proponent is required to attend a Formal Consultation meeting with City staff for any proposed telecommunication towers which are not exempt from the requirement for municipal consultation, as specified in Section 2. Proponents may obtain a Formal Consultation Request Form from the Planning and Economic Development Department or at www.hamilton.ca/planning. The purpose of a Formal Consultation meeting is to:

- Determine if the proposal meets any of the criteria specified in Section 2 for exemption from local municipality consultation;
- Determine if the proposal will require public consultation, as per Section 4;
- Provide an opportunity for discussion of site selection and design guidelines to ensure that all siting options are considered prior to a Minor Site Plan application being submitted;
- Identify any preliminary concerns or constraints on potential telecommunication tower sites; and,
- Review submission requirements for the Minor Site Plan application and identify any additional studies that may be required to be submitted with the application (including, for example, an archaeological assessment or an Environmental Impact Statement).

Following the Formal Consultation meeting, the applicant will be provided with a Formal Consultation Document which must be included when the Minor Site Plan application is submitted.

3.2 - Minor Site Plan Application Process

Following the Formal Consultation meeting, and upon submission of a completed Minor Site Plan application and fee, the following process shall be undertaken:

1. City of Hamilton Planning staff shall circulate the application to the Ward Councillor, the Hamilton Utility Co-ordinating Committee, and relevant departments/agencies for information and comment.
2. All comments received as a result of the internal circulation of the Minor Site Plan application shall be provided to the Proponent.
3. If public consultation is required, as per Section 4.1, the City can forward to the Proponent a list of all property owners within a radius of *the greater of 120 metres or three times the tower height*. An additional fee is required for this service. The Proponent is responsible for providing the required public notice and following the public consultation process, as outlined in Section 4.2.

4. The Proponent shall respond to the comments received, make the required modifications to the plans, and submit revised plans and drawings, where required.
5. The City of Hamilton shall provide a formal letter to Industry Canada and the Proponent with comments on the proposed tower, indicating concurrence or non-concurrence with the proposal, as outlined in Section 5.
6. The entire process shall take no more than 120 days to complete, as outlined in Industry Canada's publication CPC-2-0-03 ("Radiocommunication and Broadcasting Antenna Systems", June 2007). Proposals that do not require public consultation are expected to take less than 60 days to complete.

3.3 - Submission Requirements

The following information shall be submitted with the Minor Site Plan application:

1. Site Selection/Justification Report - this report shall outline the steps taken by the Proponent to investigate all non-tower and co-location options, and why a new tower option is the preferred alternative. The report shall identify the location of all existing telecommunication towers within the proponent's search area, and identify the reasons why these towers are not suitable for co-location. The location of these towers shall be illustrated on a map to be included in the Report. In addition, the report shall also identify any alternate sites for the location of the new tower that were investigated by the proponent, and the rationale for eliminating these sites as the preferred alternative. The report shall confirm the need for a new tower at the proposed location, and will also confirm the need for the proposed height of the tower. Future sharing possibilities with other providers shall also be reviewed. Finally, the report shall outline the design elements proposed in order to minimize the visual impact of the proposed structure, and address any lighting requirements that may be required by Transport Canada;
2. Site Plan with Key Map - the Site Plan shall be for the entire property and not only the leased portion, showing the relationship between the proposed telecommunication facility and existing features on the property such as buildings, parking, pedestrian and vehicular movement, natural features, site grading, property lines, fencing, and landscaping;
3. Elevation Drawings;
4. Minor Site Plan Application Form and Fee (available at www.hamilton.ca/planning);
5. A map indicating the horizontal distance between the proposed tower installation and the nearest residentially zoned property, dwelling, and/or sensitive land use;
6. A colour photograph of the subject property with a superimposed image of the proposed tower; and,

7. Any other information or studies identified in the Formal Consultation Meeting (see Section 3.1).

Section 4 - Public Consultation

4.1 - Exclusions from Requirement for Public Consultation

Where a proposed telecommunication tower is located a *minimum distance of 120 metres, or three times the tower height (whichever is greater) from a Residential Zone, existing dwelling, or other sensitive land use*, measured from the tower base or the outside perimeter of the supporting structure, whichever is greater, no public consultation is required. In addition, all telecommunication towers that are exempt from the requirement for municipal review, as per Section 2, are also exempt from the requirement for public consultation.

4.2 - Notice Requirements

1. For all applications that are not exempt from the requirement for public consultation, the Proponent will be required to send notice of the proposal by regular mail to all property owners within a radius of *the greater of 120 metres or three times the tower height*, measured from the tower base or the outside perimeter of the supporting structure, whichever is greater. The City of Hamilton can provide the Proponent with the list of property owners, for an additional fee.
2. The notification shall include the following information in plain language:
 - a) The address of the proposed tower site;
 - b) A Location Map identifying the site of the proposed tower;
 - c) A plan indicating the proposed location of the tower on the subject site;
 - d) Physical details of the tower including height, colour, type, and design;
 - e) Colour photograph of the property with a picture of the tower superimposed;
 - f) The last day of the 21 day comment period; and,
 - g) Contact information (name and telephone number) for both the Proponent and the City of Hamilton.

The City of Hamilton (Planning staff and the Ward Councillor) must be provided with a complete notification package.

3. The public shall have a minimum 21 day comment period to provide comments in writing to the Proponent.
4. The Proponent shall provide a copy of all written comments received from the public to the City of Hamilton.

5. Upon receiving comments from the public, the Proponent shall respond, in writing, to all reasonable and relevant concerns, or explain why the question, comment, or concern is not, in the view of the Proponent, reasonable or relevant. The Proponent shall copy the City of Hamilton (Planning staff and the Ward Councillor) on all responses provided.
6. If any modifications to the proposal are agreed upon as a result of the public comments, revised drawings and plans must be submitted to the City of Hamilton.

Section 5 - Concluding Consultation

1. The City of Hamilton's response to the Proponent and Industry Canada will take into consideration all division and agency responses from the Minor Site Plan review and from the public consultation.
2. The Director of Planning, or his or her designate, on behalf of the City of Hamilton, will provide the Proponent and Industry Canada with a letter stating whether the local land-use consultation process has been completed in accordance with the City's Protocol, and will include recommendations regarding the proposal as follows:
 - a) Concurrence, if the proposal conforms with the City's requirements, as set out within this Protocol, and will include conditions of concurrence, if required; or,
 - b) Non-concurrence, if the proposal does not conform with the City's requirements, as set out in this Protocol.
3. The City will provide a copy of this letter to all interested parties and the Ward Councillor.

Definitions

Adjacent Lands - those lands contiguous to a specific natural heritage feature or area where it is likely that development or site alteration would have a negative impact on the feature or area. The extent of the adjacent lands may be recommended by the Province or based on municipal approaches which achieve the same objectives. (PPS, 2005)

Antenna - an exterior transmitting device used in telecommunications designed for various uses such as telephonic, radio, or television communications by sending and/or receiving radio signals.

Areas of Archaeological Potential - a defined geographical area with the potential to contain archaeological resources. Criteria for determining archaeological potential are established by the Province and the City's Archaeological Management Plan. Archaeological potential is confirmed through archaeological fieldwork undertaken in accordance with the Ontario Heritage Act. (PPS, 2005, amended)

Co-location - the installation of multiple telecommunication antenna systems on a building or tower structure by two or more Proponents.

Cultural Heritage Landscape - a defined geographical area of heritage significance, which has been modified by human activities and is valued by a community. It involves a grouping(s) of individual heritage features such as structures, spaces, archaeological sites, and natural elements, which together form a significant type of heritage form, distinctive from that of its constituent elements or parts. Examples may include, but are not limited to, heritage conservation districts designated under the Ontario Heritage Act; and villages, parks, gardens, battlefields, mainstreets and neighbourhoods, cemeteries, trailways, and industrial complexes of cultural heritage value. (PPS, 2005)

Industry Canada - the Federal Department which is responsible for radio frequency spectrum management. Information detailing federal procedures relating to the siting of radiocommunication and broadcasting antenna systems is available at: www.ic.gc.ca/antenna

Proponent - shall include the following: AM, FM, TV Broadcast Undertakings; Cable Television Distribution Undertakings; Radiocommunication Service Providers; and Radiocommunication Users (business or government use only).

Radiocommunication Carrier - a person who operates an interconnected radio-based transmission facility used by that person or another person to provide Radiocommunication services for compensation. (Radiocommunication Regulations, 1996)

Radiocommunication Service Provider - a person, including a Radiocommunication Carrier, who operates radio apparatus used by that person or another person to provide radiocommunication services for compensation. (Radiocommunication Regulations, 1996)

Radiocommunication User - a person who operates radio apparatus for government use or for a business other than the business of a Radio Communication Service Provider. (Radiocommunication Regulations, 1996)

Sensitive Land Uses - *means buildings, amenity areas, or outdoor spaces where routine or normal activities occurring at reasonably expected times would experience one or more adverse effects from contaminate discharges generated by a nearby major facility. Sensitive land uses may be a part of the natural or built environment. Examples may include, but are not limited to: residences, day care centres, and educational and health facilities. (PPS, 2005)*

Significant - in regard to cultural heritage and archaeology, means cultural heritage resources that are valued for the important contribution they make to our understanding of the history of a place, an event, or a people. (PPS, 2005)

Telecommunication Facility - the components required for the operation of a wireless communication network, which includes cell sites, transmitters, receivers (antennae), and an unoccupied equipment shelter.

Telecommunication Tower - a structure used to support one or more antenna systems for the purpose of radio telecommunications, and which may include, but is not limited to, a guyed tower, a self-support tower or monopole tower, and which may be located at ground level or on the roof of a building.

Photo 1



Self Support
45 metres (150 ft) to
75 metres (250 ft)

Photo 2



Tripole
18 metres (60 ft) to 45
metres (150 ft)

Photo 3



**Monopole
(Co-location)**
18 metres (60 ft) to 45
metres (150 ft)

Photo 4



**Monopole
(Single-Carrier)**
18 metres (60 ft) to 45
metres (150 ft)