

Policy

Policy Title: **Antenna System Siting Policy**

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History:

Department:

Planning & Development

1. PURPOSE AND OBJECTIVES

1.1 Purpose

The purpose of this Policy is to establish the local land use consultation process and a guideline in review and evaluating Antenna System siting within the City of Surrey.

1.2 Objectives

The objectives of this Policy are:

- (1) To allow timely development of efficient and reliable radiocommunication services within the City of Surrey while ensuring that community objectives are met;
- (2) To establish a siting and consultation process that is harmonized with ISED's Radiocommunication and Broadcasting Antenna Systems Client Procedures Circular (CPC-2-0-03) for reviewing land use issues associated with Antenna System siting proposals;
- (3) To set out an objective process with clear criteria and guidelines that are transparent, consistent and predictable for the evaluation of Antenna System siting proposals that:
 - a. Minimize the number of new Antenna System Tower sites by encouraging co-location;
 - b. Encourage designs that integrate with the surrounding land use and public realm;
 - c. Establish when local public consultation is required; and
 - d. Allow ISED and the telecommunications industry to identify and resolve any potential land use, siting or design concerns with the City at an early stage in the process.

2. DEFINITIONS

Antenna System: means a Telecommunications Antenna that is mounted on an Antenna Supporting Structure.

Antenna Supporting Structure: means any Tower, roof-top, building-mounted pole, spire or other freestanding structure; existing electric or other utility tower or structure, streetlight pole, parking lot light pole or combination thereof, including supporting lines, cables, wires, and braces intended for the purpose of mounting a Telecommunication Antenna or series of antennas on it. Also included are any onsite cabinets or shelters containing electronic or other equipment associated with these antenna structures and any compound required to accommodate these components. Amateur Radio Supporting Structures are excluded and are not administered by this Policy.

City Area Planning Contact: means the City staff member(s) tasked with receiving, evaluating and processing submissions for Antenna Systems.

City Departments: means departments of City government that administer public services and are operated by city staff.

Co-Location: means the placement of Telecommunications Antennas that are operated by different service providers on a single Antenna Supporting Structure.

Commercial Areas: means land designated Commercial in the Surrey Official Community Plan. The commercial designation is intended to support major commercial developments, including neighbourhood-serving and city-serving retail and office developments. Primary uses within the commercial designation are retail and stand-alone office uses including institutional offices. Limited light industrial, public facilities and multi-unit residential may be permitted in this designation with certain restrictions applicable.

Designated Community Association: means area- or neighbourhood-specific group that is recognized by the City.

Heritage Structures/Areas: means buildings and structures (e.g. monuments) or areas/neighbourhoods receiving a heritage designation by the City.

Industrial Areas: means land designated Industrial in the Surrey Official Community Plan. The industrial designation supports light and heavy industrial land uses, including manufacturing, warehouse, wholesale trade and equipment storage and repair. Accessory uses that operate ancillary to a main industrial use may include limited office uses, a caretaker's residence, and commercial uses that are strictly limited to those that support industrial activities. Public facilities are permitted within the industrial designation, but retail uses and stand-alone office uses are generally not supported.

Mixed Employment Areas: means land designated Mixed Employment in the Surrey Official Community Plan. The mixed employment designation is intended to support a mix of industrial, commercial, business and office uses that are not suited for location within Town Centres or commercial centres. Commercial use examples may include business parks and, in select locations, large-scale retail outlets with warehousing requirements as shown in an approved Secondary Plan. Industrial uses are encouraged to be located in mixed employment designated areas, except heavy industry. Public facilities are permitted within the mixed employment designation. Residential uses are not permitted in this land use classification except for accessory caretaker units.

Prescribed Distance: means three times the height of the proposed Antenna System measured horizontally from the outside perimeter of the Antenna System. The outside perimeter begins at the furthest point of the supporting mechanism (which, in the context only of this measurement, excludes cabinets or shelters), be it the outermost guy line, building edge, face of the self-supporting tower, etc.

Proponent: means a company or organization proposing to site an Antenna System (including contractors undertaking work for telecommunications carriers and third-party tower owners) for the purpose of providing commercial or private telecommunications services, exclusive of personal antenna systems (e.g. used for over the air and satellite television reception or amateur radio operation).

Residential Area: means lands used or zoned to permit residential uses, including mixed uses (i.e. where commercial use is permitted at-grade with residential apartments/condominiums above).

Telecommunications Antenna: means a device that requires a licence from the Federal Government and is used to receive and/or to transmit radio-frequency (RF) signals, microwave signals, or other communications energy transmitted from or to be received by other antennas.

Tower: means any ground-mounted monopole, tri-pole, or lattice work structure upon which Telecommunication Antennas are attached. Not included are streetlight poles, parking lot light poles, existing electric utility towers or similar type structures as determined by the City of Surrey.

3. EXCLUDED STRUCTURES

This section outlines Antenna System siting proposals excluded from the consultation process by ISED, the need to consider local circumstances for all excluded structures, and the process for Proponents to notify and discuss proposed excluded structures with the City.

3.1 Exclusions from Antenna System Siting Proposal Review and Public Consultation

Under ISED's process, certain proposals are considered to have minimal impact on the local surroundings and so are excluded from public and City consultations.

All proponents must satisfy the General Requirements outlined in Section 7 of the CPC-2-0-03 regardless of whether an exclusion applies to their proposal. The following proposals are excluded from City and public consultation requirements:

- (1) **New Antenna Systems:** where the height is less than 15 metres above ground level. This exclusion does not apply to Antenna Systems proposed by telecommunications carriers, broadcasting undertakings or third party tower owners;
- (2) **Existing Antenna Systems:** where modifications are made, antennas added or the tower replaced, including to facilitate sharing, provided that the total cumulative height increase is no greater than 25% of the height of the initial Antenna System installation. No increase in height may occur within one year of completion of the initial construction. This exclusion does not apply to Antenna Systems using purpose-built Antenna Supporting Structures with a height of less than 15 metres above ground level operated by telecommunications carriers, broadcasting undertakings or third party tower owners;
- (3) **Non-Tower Structure:** antennas on buildings, water towers, lamp posts, etc. may be excluded from consultation provided that the height above ground of the non-tower structure, exclusive of appurtenances, is not increased by more than 25%;
- (4) **Temporary Antenna Systems:** used for special events or emergency operations and must be removed within three months after the start of the emergency or special event; and
- (5) No consultation is required prior to **performing maintenance** on an existing Antenna System.

Height is measured from the lowest ground level at the base, including the foundation, to the tallest point of the Antenna System. Depending on the particular installation, the tallest point may be an antenna, lightning rod, aviation obstruction lighting or some other appurtenance. Any attempt to artificially reduce the height (addition of soil, aggregate, etc.) will not be included in the calculation or measurement of the height of the Antenna System.

3.2 Notification of Excluded Antenna Systems

Notwithstanding ISED's exclusion criteria for certain Antenna System siting proposals, Proponents are asked, as a courtesy, to inform the City of all new Antenna System installations within the City's boundaries so the City can:

- Be prepared to respond to public inquiries once construction/installation has begun;
- Be aware of site Co-location within the City; and
- Maintain records to refer to in the event of future modifications and additions.

Proponents are to notify the City of excluded Antenna System installations before commencing construction. Refer to the City's website information on Antenna System siting for details on notification.

3.3 Siting on City-Owned Properties

Siting Antenna Systems on City-owned properties is encouraged. Opportunities are explored through a pre-application consultation meeting between the proponent and City Realty staff to locate the proposed Antenna System on City-owned land, buildings, or infrastructure, acceptable to the City and in accordance with City policy.

4. PRE-APPLICATION CONSULTATION WITH THE CITY

Pre-application consultation is an important element in the Antenna System siting process as it generally occurs at a point before the Proponent is committed to a site or design. As a result, it represents the best opportunity to influence the siting decision since the Proponent will more likely become committed to a site once the detailed engineering has been completed.

Prior to submitting an Antenna System siting proposal that does not meet any of the exclusions listed in Section 3.1, the Proponent will undertake pre-application consultations with the City. Refer to the City's website information on Antenna System siting for pre-application consultation details.

5. DEVELOPMENT GUIDELINES

Antenna Systems should be sited and designed to respect local sensitivities and preferences as identified by the City.

The City has set out a number of guidelines under the following criteria for the selection of sites and/or construction of new Antenna Systems:

- **Location Preferences (s. 5.1); and**
- **Design Preferences (s.5.2).**

The Proponent should review the guidelines identified below as early as possible and should attempt to resolve any outstanding issues prior to submitting its Antenna System siting proposal and undertaking the public consultation, where required by the City. Because expressed preferences may be location or site-specific, the Proponent is encouraged to discuss the guidelines fully with the City at the pre-application consultation meeting.

This Policy is intended to allow timely development of an efficient telecommunications network for the City of Surrey while ensuring that community objectives are met. For Antenna System siting proposals that exceed the height limits set out in the Zoning By-law, a development variance permit will be required. These height limits are 12 metres (40 ft.) for an Antenna System affixed directly to the ground, or 3 metres (10 ft.) above the building roof for an Antenna System affixed to a building.

A Development Permit will be required for all proposed Antenna Systems that are to be affixed to a building, subject to the exclusions set out in Section 3.1.

Proponents are also required to obtain all applicable building permits for additions and/or modifications to existing buildings.

Within these Development Guidelines, the words “preferred”, “encouraged”, “discouraged”, and “not supported” are used to describe the City’s preferences for different aspects of proposed Antenna Systems. A hierarchical guide to the intended differences in meaning between them are as follows:

- ‘Must’ or ‘shall’; same as “needs”
- Preferred (‘should’ conveys the same level of City support)
- Encouraged
- Will consider
- CITY OPINION IS NEUTRAL
- Discouraged (same as ‘should generally not’)
- Not supported
- “No”

5.1 Location Preferences

5.1.1 Co-location

The City encourages co-location of Telecommunication Antennas.

This Policy acknowledges that co-location will generally result in taller and wider Towers, more antennas on each structure and that there are physical limitations on how many antennas a single Antenna Supporting Structure can structurally support. Rooftops may have practical and aesthetic limits to the number of antennas that may be accommodated.

Before submitting a proposal for an app on a new site, the Proponent must explore the following options:

- Consider sharing an existing Antenna System, modifying or replacing a structure if necessary;
- Locate, analyze and attempt to use any feasible existing infrastructure, including (but not limited to) rooftops, water towers, utility poles or light standards.

The City recognizes that the objective of promoting Co-location and the objective of making Antenna Systems less noticeable may sometimes come into conflict. Nevertheless, the City intends to review each submission on its merits with a view to promoting both objectives and, where necessary, will determine the appropriate balance between them. The Proponent should, in all cases, verify the City's site-specific design preferences during the pre-application consultation process before investing in a final design or site.

5.1.2 Preferred Locations

The location of Antenna Systems has an impact on their efficacy, but also on the surroundings areas. The siting of a Tower or an antenna on a rooftop may be the most significant decision to reduce its visual impact. Antenna Systems should be located to be unobtrusive and minimize impeding public view corridors.

When new Antenna Systems must be constructed, where technically feasible, the following locations are preferred:

Towers

- Industrial and Mixed Employment areas.
- Other non-Residential Areas where appropriate.
- Areas that maximize the distance from Residential Areas.
- Areas with mature landscaping screening.

Antennas on Streetlights

- Commercial, Industrial and Mixed Employment areas.
- Along arterial and collector roads: these roadways are the preferred locations for poles that are taller than existing streetlight poles.
- Within City, Town, or Neighbourhood Centre areas.

Antennas on Buildings or Other Supporting Structures

- Commercial, Industrial and Mixed Employment areas.
- Within City, Town, or Neighbourhood Centre areas.
- Institutional uses where appropriate, including, but not limited to, those institutions that require telecommunications technology: emergency services, hospitals, colleges, and universities.
- In active sports field parks.

5.1.3 Discouraged Locations

No Antenna Systems in the following areas:

- Sensitive Ecosystem Areas (e.g. Green Infrastructure Networks (GIN)).
- Riparian lands.

New Antenna Systems should avoid the following areas:

- Locations directly in front of doors, windows, balconies, or residential frontages.
- Areas that negatively impact public views and vistas of important natural or manmade features.
- Agricultural areas; if no alternate locations are possible, ensure siting avoids farmland, and ensures maximum potential for farming on remainder of site.
- Sites of topographical prominence.
- Heritage Areas or on Heritage Structures.
- Pitched roofs.

5.2 Design Preferences

Antenna Systems should be designed in terms of appearance and aesthetics to respect their immediate surroundings (e.g. Residential, parkland, Heritage Areas, etc.), including being unobtrusive and inconspicuous, minimizing visual impact, avoiding disturbance to natural features, and reduce the need for future facilities in the same area, where appropriate. The City's preferred design and development preferences are described below.

The City will identify to the Proponent which of the following design preferences are applicable in the proposed location.

5.2.1 Antenna Supporting Structures

- The appropriate type of telecommunication Antenna Supporting Structure for each situation should be selected with the goal of making best efforts to blend with the nearby surroundings and minimizing the visual aesthetic impacts of the Antenna System on the community.
- The use of monopoles is strongly encouraged.
- Lattice style poles are strongly discouraged.
- Flush-mounted antennas on monopoles are preferred.
- Pinwheel telecommunication antennas are discouraged but may be considered in specific circumstances (co-location needs, treeline clearance, etc.).
- The use of guy wires and cables to steady, support or reinforce a tower is discouraged.
- New supporting structures in residential or high-traffic areas should consider multi-use design to enable placement of antennas in combination with lighting, electric vehicle charging, parking payment terminals, signage, Wi-Fi etc.
- For high pedestrian traffic areas such as shopping locations, integrated shrouded multi-use design poles (such as lighting, electric vehicle charging, etc.) are preferred.
- Individual wall-mounted antennas should be fixed as close to the wall as possible and should not project above the height of the wall face they are mounted on, in order to avoid visual clutter, and should be painted to match the wall colour for stealth.
- Facilities located on rooftops should be not be visible (to the extent possible) from streets or other adjacent public areas.
- Proponents are encouraged to communicate with building developers at new building design stages to consider options for incorporating integrally screened Telecommunication Antenna support on the rooftops.

Refer to the City's website information on Antenna System siting for a visual glossary and references.

5.2.2 Height

- The City prefers that Towers be a maximum of 15 metres in height, except in industrial, mixed employment, commercial and agricultural areas.
- The City will consider increased height for a Tower when located in an Industrial or Mixed Employment Area, and preferably at a distance at least six times the height of the Antenna Supporting Structure away from Residential Areas.
- Height for a Tower must be measured from grade to the highest point on the structure, including lighting and supporting structures.
- The City prefers that the height of building or structure-mounted Antenna Systems, unless shrouded in an acceptable manner, not exceed 3 metres measured from the top of the roof, but not more than 1.2 metres above the highest point of the elevator penthouse.

5.2.3 Yards, Parking and Access

- Antenna Systems should comply with all setback distances as set out in the Zoning By-law applicable to the principal buildings for the Zone in which the Antenna System is located but should not be located in the front yard.
 - Except that in Industrial or Mixed Employment Areas, the side or rear setbacks may be reduced to 3 meters to the Antenna Systems.
- Parking spaces, where provided at each new Antenna System site, should have direct access to a public right-of-way at a private approach that does not unduly interfere with traffic flow or create safety hazards. Paved surfaces should be absolutely minimized.

5.2.4 Buffering and Screening

- Antenna Systems and associated equipment shelters should be attractively designed and screened or concealed from ground level or other public views to mitigate visual impacts. Screening could include using existing vegetation, landscaping, fencing, or other means to blend with the built and natural environments.
- When vegetative landscape screening is used, a mix of deciduous and coniferous trees is preferred to provide year-round coverage.
- Where adjacent to a principal building, equipment shelters should be constructed to be integrated. Consider using a material similar in appearance to at least one of the materials used in the facades of the principal building and one of the same colours used in the principal building.

5.2.5 Style and Colour

- In all instances the Proponent should mitigate negative visual impacts through the use of appropriate landscaping, screening, stealth design techniques, etc.
- The design of Antenna Systems should generally be unobtrusive and consistent with area guidelines.
- Towers and communication equipment should have a non-glare surface.
- Special design treatments should be applied to Antenna Systems proposed to be located within parks and open space areas to make the Antenna Systems unobtrusive.
- The colour of constructed screens should be chosen to harmonize with the building and limit visual prominence.
- Cable trays should generally not be run up the exterior faces of buildings. Where they must be on the exterior, they should be located at the rear or sides, and incorporated into architectural features.
- Antennas that extend above the top of a supporting light standard should appear (e.g. in colour, shape and size) to be a natural extension of the pole.

5.2.6 Equipment Cabinets in Public Spaces

- Cabinets should be designed in a manner which integrates them into their surroundings, including use of decorative wraps that are graffiti-resistant.
- Cabinet dimensions shall be as minimal as possible to accommodate the amount of equipment required by the Proponent and sited to minimize the impact on the public space.
- Cables and wires should be concealed or covered.
- Cabinets/Compounds in parklands should be:
 - Powder coated black;
 - Enclosed with a 1.8-2.4m (6-8 ft) metal picket fence, powder coated black;
 - Provided with vegetative landscape screening in accordance with the list of plant species approved by the Parks, Recreation & Culture Department; and
 - Sited so that the shorter side faces the path/public space.

Note: Additional requirements may apply to city, community or neighbourhood parks and Town Centres. Please consult with the Parks Division for additional details.

5.2.7 Signage and Lighting

- Small owner identification signs up to a maximum of 0.03 square metres may be posted on Antenna Systems and associated equipment shelters or perimeter fencing.
- No advertising sign permitted. No logos are permitted other than those for a manufacturer of a component of the Antenna System, or as approved in writing by staff.
- Unless specifically required by Transport Canada and/or NAV Canada, the display of any lighting is discouraged.
- Where Transport Canada and/or NAV Canada requires a structure to be lit, the lighting should be limited to the minimum number of lights and the lowest illumination allowable, and any required strobe lightning should be set to the maximum strobe interval allowed by Transport Canada.
- The lighting of Antenna Systems and associated equipment shelters for security purposes is supportable provided it is shielded from adjacent residential properties, is kept to a minimum number of lights and illumination intensity, where possible, is provided by a motion detector or similar system.

5.2.8 Rooftop Equipment

- Where feasible, locate equipment and antennas so that they are not visible from the street or adjacent public spaces, while respecting the need to provide good signal strength and coverage.
- To minimize visibility of antennas and equipment, a variety of techniques may be used including setbacks, screening and stealth placement and finishes. Buildings vary in height, siting and context, and a creative and flexible approach is encouraged to minimize visibility of the antennas and equipment, depending on the situation.

- Optimum signal strength and coverage may encourage antenna placement in clusters. However, antenna placement should also consider integration with the architecture of the building. The desired number of antennas in a cluster may not be achievable, and alternate spacing may need to be considered.
- Notwithstanding the support of co-location, to avoid visual clutter, the overall number of antennas on a building may need to be limited.
- Screening should be designed to be integrated into the building form without unduly detracting from the architectural character or exaggerating less attractive features.
- Where an antenna is proposed on the rooftop of a building or affixed to the side of the building:
 - Antennas should be of a similar style/shape.
 - It is preferred that the antennas be mounted to stair or elevator overrun that are set back from building edges by at least 2.4m.
 - Where structurally feasible, roof penthouses may be extended horizontally to house antennas and equipment.
 - When affixed to the side of the building, antennas should be installed so that they do not project above the parapet. Installations on roof penthouses or overruns may project over parapets by approximately 1/3 their height, or more if they are screened as described above.
 - Pitched/sloping roof should be avoided. If there are no alternative locations in the area, installations may be considered if they are incorporated in an architecturally compatible manner. (e.g. screened in a “chimney”).
- Equipment shelters located on the roof of a building should be set back from the roof edge to the greatest extent possible and painted to match the penthouse/building. When possible, locate adjacent to existing penthouses.

Refer to the City’s website information on Antenna System siting for additional details.

5.2.9 Antennas on Streetlights

- Some City, Town and Neighbourhood Plan areas have decorative streetlights. Poles in these areas are decorative and may not conform to the type of antenna poles required. Poles that are modified for installation of antennas may have to accommodate decorative Christmas lights, banners, and planters.
- Source for power is separate from that of city lighting.
- Sight line considerations: poles and cabinets should consider stopping sight distance for posted speed limits on the roadway. Proponents are to follow the Transportation Association of Canada (TAC) guidelines for stopping sight distance requirements or as otherwise specified by the City Engineering Department.
- The antenna, brackets and associated equipment needs to be painted to match Surrey pole colour.

- Each service needs a new MMCD combination streetlight panel installed as part of this work. Permits from Surrey electrical are required for these swaps.
- Each cell needs a dedicated wire run of #4AL installed from service to antenna.
- Some poles may have wire sentry devices (wire theft mitigation measure) installed and each pole affected will need to be removed and re-installed once wire pulled in for antenna.
- Antennas that extend above the top of a streetlight should appear (e.g. in colour, shape and size) to be a natural extension of the pole.

6. PROPOSAL SUBMISSION

For non-excluded proposed Antenna Systems, the Proponent will submit to the City an Antenna System siting proposal and the applicable fee. Refer to the City's website information on Antenna System siting for additional details on the information to be submitted.

6.1 Fees

The Proponent must pay any applicable application fee to the City.

The Proponent is responsible for securing applicable applications or permissions from all relevant City Departments and paying any applicable application fees or charges as required to the City.

7. PUBLIC CONSULTATION PROCESS

If the proposed Antenna System is not excluded from the public consultation process as per the requirements in Section 3, the Proponent will initiate the City's public consultation process, including issuing notice, undertaking written consultation, hosting a public information session where required and reviewing the consultation results with the City.

7.1 Notice Recipients

After the Proponent has submitted an Antenna Systems siting proposal, the Proponent will give notice to:

- (1) All affected residential properties within the Prescribed Distance;
- (2) All Designated Community Associations within the Prescribed Distance;
- (3) Any adjacent municipalities within the Prescribed Distance;
- (4) The City Area Planning Contact; and
- (5) The ISED regional office.

The City will assist the Proponent in compiling a mailing list of addresses of the affected residences within the Prescribed Distance from the proposed Antenna System.

Refer to the City's website information on Antenna System siting for further details on the public consultation process.

8. STATEMENT OF CONCURRENCE OR NON-CONCURRENCE

City Council will consider all applications for Antenna Systems where City concurrence is required (i.e. for those applications that are not already excluded by Section 3 in this Policy).

8.1 Concurrence

Where the proposal conforms with, to the satisfaction of the City, the guidelines as set out within this Policy, the City will express its concurrence with a proposed application by issuing a Development Variance Permit and/or Development Permit, as applicable.

8.2 Non-concurrence

If the proposal does not conform with City guidelines as set out within this Policy, the City will express its non-concurrence with a proposed application by denying a Development Variance Permit and/or Development Permit, as applicable.

8.3 Duration of Concurrence

A concurrence remains in effect for a maximum period of three years from the date it was issued by the City. If construction is not completed within this time period, the concurrence expires except in the case where a proponent secures the agreement of the City to an extension for a specified time period in writing. Once a concurrence expires, a new submission and review process, including public consultation as applicable, is necessary prior to any construction occurring.

9. REDUNDANT ANTENNA SYSTEM

The City can issue a request to network operators to clarify that a specific Antenna System is still required to support communication network activity. The network operator will respond within 30 days of receiving the request and will provide any available information on the future status or planned decommissioning of the Antenna System.

Where the network operators concur that an Antenna System is redundant, the network operator and City will mutually agree on a timeframe to remove the system and all associated buildings and equipment from the site. Removal will occur no later than 2 years from when the Antenna System was deemed redundant.