

GOVERNMENT OF THE DISTRICT OF COLUMBIA
OFFICE OF PLANNING



Office of the Director

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MEMORADUM

TO: Zoning Commission

FROM: *ALS for*
Andrew Altman, Director
Office of Planning

DATE: April 10, 2002

SUBJECT: Waiver of Rules for Late Submittal of Report on Case No. 01-02TA
Antennas, Antenna Tower and Monopoles

The attached report concerning a proposed text amendment for Antennas, Antenna Tower and Monopoles is being submitted less than 10 days prior to the Zoning Commission's consideration of the item and scheduled public hearing. The Office of Planning respectfully requests that the Commission waive its rule and accept the report into the record.

Attachments

AA/

ZONING COMMISSION
District of Columbia
Case 01-02TA
Exhibit 44

ZONING COMMISSION
District of Columbia
CASE NO.01-02
EXHIBIT NO.44

GOVERNMENT OF THE DISTRICT OF COLUMBIA
OFFICE OF PLANNING



Office of the Director

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MEMORANDUM

TO: D.C. Zoning Commission

FROM:  Andrew Altman, Director

DATE: April 9, 2002

SUBJECT: Setdown and Prehearing Report on proposed zoning text amendments regarding development standards and review procedures for antennas, antenna towers and monopoles in all zone districts (11 DCMR).

This hearing report also serves as OP's supplemental filing provided for in 11 DCMR 3013

RECOMMENDATION

The Office of Planning **recommends the following:**

- **A new Chapter 26, 11DCMR** regarding development standards and review procedures for antennas, antenna towers and monopoles, **be advertised for public hearing, and**
- **Section 2605.3, Stealth Structures, be advertised for public hearing in the alternative.**

PURPOSE

The purpose of the proposed zoning text amendments is to provide regulations that further define and guide the development of antennas, antenna towers, monopoles, and their related structures.

The purpose of the regulations is to:

- (a) Accommodate the growing demand for telecommunication facilities and antennas;
- (b) Ensure antennas, antenna towers and monopoles are located and constructed to minimize their visual and physical impacts on the Nation's Capital;
- (c) Ensure compliance with FCC standards;
- (d) Ensure the proper placement, scale and height of antennas, antenna towers and monopoles is consistent with the intent and purposes of the various zone districts and the current Section 2520 of 11DCMR (Regulation of Antenna); and

- (e) Require public hearing and special exception review of antenna towers and monopoles.

BACKGROUND

The Office of Planning performed a comprehensive review of the issues related to antennas, broadcast towers and other related telecommunications facilities. Washington is a residential community of approximately 600,000 citizens, a business and international diplomatic community and the National Capitol whose image has international prestige. The city has a national and international image for architecture, urban design and as the seat of the United States federal government.

The city has 25 neighborhood historic districts that preserve the classical character of the original L'Enfant Plan and the early 20th century character of the neighborhoods that grew with the city. The United States Congress took measures to preserve the city's scale and character through the adoption of the 1910 Height Act. OP believes that the image of Washington as the nation's capital has national importance and all available efforts must be taken to balance the image of the city as the nation's capital with the need to accommodate modern communication technology.

Telecommunication facilities continue to expand due to the growth in use of cellular telephones, digital television and other wireless data transmissions. The increased demand for antennas and related structures such as towers and monopoles can be seen throughout the city. The many existing towers and recently proposed monopoles have raised the issues of appropriate height, setbacks, compliance with FCC radiofrequency (RF) emission standards, impact on neighborhood character, and public input on structures of exceptional heights and the growing need for improved wireless communications coverage.

In an effort to understand and appropriately control this increasing demand, the City Council passed a moratorium on September 21, 2000 that prohibited the construction of antenna towers taller than 200 feet until spring 2001. As part of that moratorium, the Council has requested a policy be developed for the comprehensive review of antennas and antenna towers.

The Office of Planning proposed changes to the zoning regulations regarding antenna towers and monopoles in the winter of 2000. The Zoning Commission determined that a broader review of all existing antenna regulations was necessary and asked the Office of Planning to expand the review. The Zoning Commission then scheduled two roundtables to gather public comment.

Round Tables

The Zoning Commission held two round table sessions one in February and one in March 2001, inviting the public at large to express their opinions and concerns about the existing

antenna regulations. The round tables were broadcast on DC Cablevision and accommodated approximately six hours of public testimony. In brief, the issues raised were:

- RF Emissions:
 - RF Emission was the foremost issue raised by the residents. There was great concern expressed about the FCC levels and the cumulative measure of RF emission and human access to their location;
 - How to verify compliance with the FCC's RF levels;
- Towers
 - There was significant discussion about special exception review of all towers, including monopoles;
 - Setbacks and height of towers was raised relative to safety issues (possible falling ice, falling tools, bird collisions and wind damage), and neighborhood character;
 - The effects of multiple towers on a neighborhood was raised; related issues were RF interference, character of neighborhood, National Capitol skyline and RF emission levels;
 - It was suggested that the City require "Evidence of Need" for any new towers to deter speculative towers;
 - It was suggested that the City also require towers make provisions for co-location of antennas to reduce the potential overall demand for towers.
- Antenna Types
 - Many speakers stressed the position that the various types of antennas should be classified and regulated separately from broadcast towers. The industry representatives were very strong on their position that the roof-top and wireless antennas should not be captured in the same requirements as the broadcast towers;
 - Additional definitions need to be added to the regulations including monopoles, roof-top placement and building-mounted options.
- Regulations
 - Drawing on the current regulations, the industry representatives felt any new regulations should continue to include matter-of-right provisions for certain classes of antennas;
 - Provisions for Special Exception Review were suggested for towers and possibly after a threshold for roof-top antennas. It was also suggested that review criteria be established for such review;
 - The issue of requiring towers to provide for co-location of services and evidence/self-certification of FCC compliance was supported by many speakers;
 - Other regulation issues include assessment of the visual effects, designating appropriate zoning districts, limiting the approval as done by NCPC and providing a clause that requires removal of unused or outdated equipment;
 - The regulations were encouraged to strengthen the setbacks / height / appearance standards and include associated structures and cabinets;
 - Local Enforcement of federal regulations was also suggested to be included as a means to force evidence of compliance and due to the low enforcement ability of the FCC.

Antenna Regulations Review Group

After the roundtables, the Commission invited those interested to participate in a group with the Office of Planning in reviewing the new proposed antenna and tower regulations. The Zoning Commission encouraged the legal representatives to invite technicians from the telecommunications industry to participate. The resulting group included the following citizen and industry representatives:

Citizen Representatives:

- Ann Loikow,
- Dorothy Miller,
- Peter Tannenwald, citizen and RF engineer,
- Stephanie Kinny,
- Liz Harris

Industry representatives:

- Cole, Raywid & Braverman - Edward L. Donahue and Terry Cooke
- Jackson & Campbell – Robert C. Cooper and Alan R. Swendiman
- Holland and Knight – Christie Mosley-Shiker
- Venable - Eric V. Huey and William P. Cook (joined group in January 2002)

Industry firms represented by above law firms included:

- AT&T
- Cellular One
- Comcast Cable
- Nextel
- Sprint
- Winstar
- Verizon
- Verizon Wireless

At the final meeting of March 27, 2002, at which the group considered the final draft of the proposed regulations, Sean Hughes of Nextel also attended.

The Department of Consumer and Regulatory Affairs (DCRA), Department of Health and the DC Office of Cable Television also monitored the process and received copies of the proposed regulations.

Antenna Review Group Process

The Antenna group met on eight separate dates: one in May 2001, one in June 2001, July 25, 2001, January 30, 2002, February 5 and 12, 2002, March 5 and 27, 2002. It was agreed that the OP staff would draft the initial set of proposed regulations and the group would review them.

On July 25, 2001, Dr. Robert F. Cleveland and Ed Maniple of the Federal Communications Commission (FCC) Office of Engineering and Technology, and Mr. Evan Baranoff, FCC staff attorney met with the group and explained the radiofrequency (RF) standards, the legal boundaries of local regulation of RF standards and other exercises of local zoning regulations. A copy of their Powerpoint presentation slides is included as Appendix A.

In brief, the FCC staff relayed that:

- Local municipalities cannot set RF standards in excess of those established by the FCC [FCC publication: Local Official's Guide to RF, Appendix C (7) (B) (iv)];
- Local zoning regulations may not result in the prohibition of service or the discrimination between service providers [FCC publication: Local Official's Guide to RF, Appendix C (7) (B) (i)];
- Local zoning regulations may be used to address the placement and construction of antennas [FCC publication: Local Official's Guide to RF, Appendix C (7) (A) (i)];
- FCC's RF limits apply cumulatively to all sources of RF emissions affecting a given area (i.e. collocation must consider all RF power from ALL antennas on site) (FCC Publication: Local Official's Guide, page 6 and 8).

OP presented the proposed draft to the group on January 30, 2002. The group spent that meeting and the following four meetings of February and March reviewing the text amendment.

ORDINANCE PROPOSAL

OP reviewed the existing planning issues, Comprehensive Plan and zoning regulations and recommends that the antenna regulations be amended to create a new Chapter 26. The new Chapter 26 will unify the antennas and towers regulations into one comprehensive chapter further strengthening the purpose of the regulations, specifying appropriate zoning districts for towers and monopoles, establishing matter-of-right uses and special exception uses, establishing new definitions, requiring evidence of FCC compliance, establishing submittal information, ensuring a public hearing review of towers and monopoles and providing for the reasonable expansion of antennas and wireless service.

The proposed draft does not represent a consensus agreement of the group. The industry representatives opposed several key elements of the proposal:

- The tower and monopole exclusion from single-family residential and C-1 local commercial zone districts;

- The required special exception review of any tower or monopole outside of the M Industrial zone district;

At the February 12th and March 5th meetings, OP staff asked for technical evidence that these proposals could not work or would *prohibit* the delivery of service; none was provided.

Other members expressed serious concerns about abuse of the proposed stealth structure provisions.

Language Proposed After Review Group Meeting

OP acknowledges that alternate language was submitted by the lawyers representing the telecommunications companies but it was not submitted until the day after the final group meeting. Neither OP nor the rest of the review group has had an opportunity to review the proposed language. The alternate language will be distributed to the remainder of the group and addressed in OP's final report.

OP has included a revised version of stealth structures language presented after the final meeting by Cole Raywid & Braverman for consideration in the alternative.

The following two tables briefly outline the OP proposed antenna regulations and the current antenna regulations.

PROPOSED ANTENNA and TOWER REGULATIONS AMENDMENTS

Antenna Type	R Residence	C-1 Local Comm	C-2 thru C-4 Commercial	CR Mixed Use	SP Special Purpose	W Waterfront	CM Comm/Indust	M Manufacturing
Panel *	MoR	MoR	MoR	MoR	MoR	MoR	MoR	MoR
Dish *	MoR	MoR	MoR	MoR	MoR	MoR	MoR	MoR
Yagi *	MoR	MoR	MoR	MoR	MoR	MoR	MoR	MoR
GPS *	MoR	MoR	MoR	MoR	MoR	MoR	MoR	MoR
Whip *	MoR	MoR	MoR	MoR	MoR	MoR	MoR	MoR
Monopole	<i>Not Permitted</i>	<i>Not Permitted</i>	Sp Except	Sp Except	Sp Except	Sp Except	Sp Except	MoR
Antenna Tower w/ Broadcast Studio	<i>Not Permitted</i>	<i>Not Permitted</i>	Sp Except	Sp Except	Sp Except	Sp Except	Sp Except	MoR

MoR = matter-of-right use; OP report required for aesthetic impact

* Numbers limited by class of antenna

NOTES ON PROPOSED AMENDMENTS:

Towers and Monopoles restricted from R residential and C-1 zones as inconsistent with intent and purpose of zones

Combined “Antenna Tower with equipment” and “Antenna Tower with Broadcast Studio” into one section

Added requirement for evidence or certification of compliance with FCC RF levels

Removed distinction between commercial broadcast and non-commercial broadcast antennas

CURRENT ANTENNA and TOWER REGUALTIONS

Antenna Type	R Residential	C-1 Local Comm	C-2	C-3	C-4	CR Mixed Use	SP Special Purpose	W Waterfront	CM Comm/Indust	M Manufacturing
Panel *	MoR (201.2)	MoR (701.8)	MoR (721.1)			MoR (601.1s)	MoR (501.1)	MoR (901.1 u)	MoR (801.1)	MoR (821.1)
Dish *	MoR (201.2)	MoR (701.7 & 8)	MoR (721.1)			MoR (601.1s)	MoR (501.1)	MoR (901.1 u)	MoR (801.1)	MoR (821.1)
Yagi *	MoR (201.2)	MoR (701.8)	MoR (721.1)			MoR (601.1s)	MoR (501.1)	MoR (901.1 u)	MoR (801.1)	MoR (821.1)
GPS *	MoR (201.3)	MoR (701.8)	MoR (721.1)			MoR (601.1s)	MoR (501.1)	MoR (901.1 u)	MoR (801.1)	MoR (821.1)
Whip *	MoR (201.2)	MoR (701.8)	MoR (721.1)			MoR (601.1s)	MoR (501.1)	MoR (901.1 u)	MoR (801.1)	MoR (821.1)
Ground Mounted	MoR (201.4)	MoR (701.7)	MoR (721.1)	MoR (741.6)	MoR (751.2)	MoR (601.1s)	MoR (501.1)	MoR (901.1 u)	MoR (801.1)	MoR (821.1)
Monopole	Sp Except as Antenna Tower (212)	Unidentified	Unidentified			Sp Except (617)	Sp Except (515)	Sp Except (914)	Sp Except as Antenna Tower	Sp Except as Antenna Tower
Antenna Tower w/ equipment	Sp Except (211)	MoR (701.6g)	MoR (721.1)			Sp Except (617)	Sp Except (514)	Sp Except (914)	MoR (801.1)	Sp Except
Antenna Tower w/ Broadcast Studio	Sp Except (211)	Unidentified	MoR (721.2 t) (TV / Radio only)			Sp Except (617)	Sp Except (514)	Sp Except (914)	MoR (801.1)	MoR (821.1)

MoR = matter-of-right use; OP report required for aesthetic impact

* Numbers limited by class of antenna

Comprehensive Plan

In preparing the proposed regulations, OP considered and worked to balance many of the Mayor Themes of the Comprehensive Plan:

102 STABILIZING AND IMPROVING THE DISTRICT'S NEIGHBORHOODS

102.2 The District elements of the Plan propose that the residential character of neighborhoods be maintained and improved. Many city neighborhoods are historic or possess social, economic, and physical qualities that make them unique and desirable places in which to live. These qualities can also lead to development and redevelopment pressures that threaten the very qualities that make the neighborhoods desirable. These pressures and potential adverse impacts must be controlled to ensure that the character of our neighborhoods is preserved and enhanced.

102.3 Many city neighborhoods also include integral commercial and institutional uses that contribute to their character. Neighborhood businesses, schools, park and recreational facilities, churches, and other public facilities all add to the livability of our communities. These uses too must be protected, stabilized, and improved.

106 RESPECTING AND IMPROVING THE PHYSICAL CHARACTER OF THE DISTRICT

106.1 The site selected for the National Capital was characterized by a very special topography, including hills interlaced with broad rivers and streams. This topography allowed for the construction of a special collection of buildings which give the District a unique profile. Over the years the profile has been protected by local and national ordinances. Policies in the District elements of the Plan will further protect and enhance the character of the city.

106.2 After two (2) centuries of building, the Nation's Capital is still remarkable, enhanced by the far-sighted and imaginative L'Enfant Plan which determined the placement of its major public buildings, monuments, plazas, squares, and parks. Today, trees, flowers, grass, and shrubs line the District's streets, parks and memorials, homes, and public buildings.

108 PRESERVING THE HISTORIC CHARACTER OF THE DISTRICT

108.1 The Nation's Capital contains many buildings and collections of buildings, which contribute to its beauty and fabric, as well as affording a picture of its history. Over the years, individual buildings and collections of buildings have been protected through historic preservation laws. The Plan recognizes the importance of historical Washington and provides policies to nurture this historic urban center.

109 REAFFIRMING AND STRENGTHENING THE DISTRICT'S ROLE AS THE ECONOMIC HUB OF THE NATIONAL CAPITAL REGION

- 109.1 An economically strong and viable District of Columbia economic is essential to the economic health and well-being of the region:
- (a) Encouraging the broad spectrum of both private and public growth, with the appropriate level of supporting infrastructure, is central to achieving this end;
 - (b) This effort should focus on making maximum use of the District's location at the center of the region's radial Metrorail and commuter rail systems, freeway and highway networks, communication networks, and headquarter functions;

110 PROMOTING ENHANCED PUBLIC SAFETY

- 110.1 Enhanced public safety is one of the highest priorities of the District and is vital to the economic well-being of the District:
- (a) The District can thrive and prosper only if residents, businesses, and visitors feel safe and secure in neighborhoods throughout the District;
 - (b) The District government, working in concert with the federal government and with the residential and business communities, must maximize available resources to reduce and prevent crimes against persons and property, particularly violent crimes;

OP believes the proposed regulations balance the need to encourage new telecommunication technology and the sensitive historic character of the city.

2600 Intent and New Chapter

Title 11, Zoning, DCMR, currently regulates antennas and towers through various chapters and sections - antennas are defined in §199, the purpose of the existing antennas regulations is established in §2520 and specific zoning districts regulate the particular types and uses of antennas.

The Office of Planning built on the existing purpose of the regulations as adopted in Section 2520. OP believes the new Chapter is consistent with the Section 2520:

2520 REGULATION OF ANTENNAS

- 2520.1** The purposes for the regulation of antennas as a particular type of structure shall be as follows:
- (a) The Zoning Commission has determined that certain antennas, because of their size, shape, design, construction or location, may affect the health, welfare or safety of the population and may detract from the streetscape, landscape, skyline, scenic beauty or aesthetic interests of Washington, D.C. and its role as the Nation's Capital;
 - (b) The Zoning regulations therefore regulate the size, height, construction, design, and location of antennas and antenna structures which have the greatest potential for adverse impact on the health, safety, and welfare of the population, and on

neighborhood quality, and those which have the greatest potential for adverse impact on the scenic beauty of the Nation's Capital;

- (c) The principal types of antennas regulated are those that, because of their shape and relatively large mass, potentially have the greatest visual impact and include, by example, large satellite earth station antennas and certain microwave terrestrial antennas.

OP further believes that the proposed antenna regulations are consistent with Section 332(c)(7) (A) of the federal 1996 Telecommunications Act:

(7) PRESERVATION OF LOCAL ZONING AUTHORITY

- (A) GENERAL AUTHORITY: Except as provided in this paragraph, nothing in this Act shall limit or affect the authority of a State or local government or instrumentality thereof over decisions regarding the placement, construction, and modification of personal wireless service facilities.

2699 Definitions

It appears that there was an intention for the zoning regulations to provide for antenna towers differently than antennas. Section 701.6 (g) refers to "Antenna tower for television and radio broadcasting" followed by §§701.7- 701.9, which regulate ground and roof mounted antennas. This reference to antenna towers continues through the commercial zone regulations and when used in conjunction with television and radio broadcasting.

The current regulations, however, do not include a definition of an "antenna tower." The definition of antenna, however, includes "any tower and immediately related support and stabilizing elements..." Section 530.3, 630.3 and 770.3 all subsequently permit antennas to exceed the height standards authorized for the Special Purpose, Mixed Use and Commercial districts respectively. These provisions create an ambiguous set of review criteria that can permit antenna towers and related structures to eclipse the maximum height limits authorized for each zoning district.

OP proposes keeping or amending many of the existing definitions and the addition of new definitions in Section 2699. The definitions have been modified as setout in the following table:

DEFINITIONS	STATUS
Antenna	Amended: Removed inclusion of tower and support elements as antenna
Antenna, commercial broadcast	Amended: 1) Removed "commercial" distinction- no longer a distinguished within proposed

	text; issue addressed through FCC compliance and special exception review criteria 2) Removed inclusion of tower as broadcast antenna for AM radio.
ANTENNA DISH	New: commonly used for private residential TV reception; placement restricted from front building walls and front yards
Antenna, microwave, terrestrial	No change to existing definition
ANTENNA PANEL	New: common antenna used by wireless industry
Antenna, satellite earth station	No change to existing definition
Antenna, super high frequency	No change to existing definition
Antenna, whip	No change to existing definition
Antenna, yagi	No change to existing definition
ANTENNA TOWER	New: distinguished from antennas, mounts and monopoles; appropriate zones and review criteria established
CO-LOCATION	New
EQUIPMENT CABINET OR SHELTER	New: cabinets and shelters accompany antennas
MONOPOLE	New: defined separately from towers, with development and review standards for certain zones; similar to Fairfax and Montgomery Co. Counties
MOUNT	New: to distinguish mounting fixtures from antennas, towers and monopoles; typically would be a sled or wall bracket.
RADIOFREQUENCY ELECTROMAGNETIC FIELD	New: same as NCPC definition
RADIOFREQUENCY RADIATION (RF RADIATION)	New: same as NCPC definition
BUILDING-MOUNTED ANTENNA	New: to define those antennas attached to walls, penthouses etc.; allows for separate development standards
STEALTH STRUCTURE	New:
TELECOMMUNICATION SERVICE PROVIDER	New: FCC definition
TELECOMMUNICATIONS FACILITY	New: FCC definition

2601 Determination:

Language remains the same as the current regulations and allows the Zoning Administrator to determine the appropriate class of antenna for those that may not fit within adopted definitions. OP supports this section and believes it accommodates the quickly changing technology of this industry.

2602 Certification of FCC Compliance

This new section requires evidence of compliance with FCC RF standards for any transmitting antenna and establishes the required information to be submitted before the issuance of a building permit. OP believes this section will allow for an increased level of assurance that the antennas met the FCC RF guidelines and will provide a file for public information. The information could be used as reference by future antenna applicants and building or Department of Health inspectors to determine the cumulative RF power levels of a particular site.

2603 Matter of Right Antennas

The matter-of-right provision is much the same as the existing regulations with only a few additions. OP recommends permitting antennas no taller than 18 inches to further the emergency communications and permitting antennas to be attached to existing utility distribution and transmission poles.

2604 Ground Mounted Antennas

2605 Antennas Placed on a Roof

2606 Building-Mounted Antennas

Three new sections are proposed that set different development standards for antennas that are either mounted on the ground, such as the familiar satellite dish, antennas that are located on the roof of building typically by means of a sled mount, and antennas that are flush-mounted directly to the walls, chimneys, steeples or other parts of a building. These three sections establish different setbacks, placement and screening requirements to minimize the appearance of the particular antenna.

2604. 2 Stealth Structures – Alternate Language

The proposed ground mounted antenna section (§2604) includes a new provision on stealth structures (structures built for the purpose of concealing antennas). This proposed section is proposed in the alternative because the proposed language was submitted by the industry attorneys the day after the last review group meeting and neither the group nor OP has had an opportunity to review the language in context. OP supports the idea of stealth structure enclosures but needs to further review the proposed language to assess the full potential impact.

2607 Antenna Additions to Existing Antenna Towers and Monopoles

This section allows for the continued use of existing towers and monopoles with the same language as the current regulations. It includes an additional section that prohibits transmitting antennas from being placed lower than fifty feet (50 ft.) above the base of the tower. This criterion is intended to ensure that the transmission is directed such that the RF power stays within FCC standards. The fifty-foot standard was taken from the FCC publication "Local Official's Guide to RF", Appendix B.

2608 Antenna Towers and Monopole In M Industrial Zones: Matter-of-Right

The proposed text amendment allows antenna towers and monopoles as a matter-or-right in the M industrial zones. OP believes the industrial appearance and nature of tower and monopole is consistent with the intent of the M zone:

820 GENERAL INDUSTRY DISTRICTS (M)

820.1 The General Industry (M) Districts are designed to provide areas suitable for development as heavy industrial sites, but at the same time protect those industrial developments from the intrusion of non-industrial uses that impede the full utilization of properly located industrial sites.

2611 Towers and Monopoles: Special Exceptions

The new proposed and requires any antenna tower or monopole to receive approval from the Board of Zoning Adjustments (BZA) as a special exception. Such a special exception would allow the BZA to review any impacts that may result from the exceptional height and would allow for public comment on the proposal. The special exception would include approval of the exceptional height in excess of that authorized for the zone district but not beyond that restricted by the height Act of June 1, 1910. Any antenna tower proposed at a height in excess of the Height Act of June 1, 1910 would require the approval of the Mayor for its height after the approval by BZA as a special exception. While the BZA would not regulate the height in excess of the Height Act, they would review the site, placement and proposal to mitigate any adverse impacts that may result.

Towers and Monopoles: Restrictions

The proposed text amendment restricts the use of single family residential and local commercial zoned land from use by antennas and monopoles. OP recognizes that this is a significant change from the current regulations. OP referred to the existing purpose of the antenna regulation and the intent of the R-1 and C-1 zone districts.

OP concluded that the permitting towers and monopoles in such clearly low-density, low intensity, low-height and residential-oriented zones was inconsistent with the stated intent:

200 R-1 DISTRICTS: GENERAL PROVISIONS

- 200.1 The R-1 district is designed to protect quiet residential areas now developed with one-family detached dwellings and adjoining vacant areas likely to be developed for those purposes.
- 200.2 The provisions of this chapter are intended to stabilize the residential areas and to promote a suitable environment for family life. For that reason, only a few additional and compatible uses shall be permitted.

The maximum height limitation in the R-1 zone is forty feet (40 ft.).

700 NEIGHBORHOOD SHOPPING DISTRICTS (C-1)

- 700.1 The C-1 district is designed to provide convenient retail and personal service establishments for the day-to-day needs of a small tributary area, with a minimum impact upon surrounding residential development. (Emphasis added)
- 700.2 Each C-1 district shall only permit low-bulk development and, in general, shall be mapped only in outlying areas. (Emphasis added)
- 700.3 Some community facilities, housing, and mixed uses, as well as the usual neighborhood shopping and service establishments, shall be permitted.

The maximum height limitation in the C-1 zone is forty feet (40 ft.)

The residential restriction is also consistent with the following elements of the Comprehensive Plan:

- 102 STABILIZING AND IMPROVING THE DISTRICT'S NEIGHBORHOODS
106 RESPECTING AND IMPROVING THE PHYSICAL CHARACTER OF THE DISTRICT
108 PRESERVING THE HISTORIC CHARACTER OF THE DISTRICT

The industry attorneys opposed this restriction, preferring to keep the entire city available for possible tower and monopole location. OP believes the proposed restriction is a legitimate exercise of zoning as stated by the Telecommunication Act and is a reasonable separation of land uses. At the February 12 and March 27, 2002 review group meetings OP asked for any technical or engineering evidence that service could not be provided from the other commercial and industrial zone districts. To date no evidence has been provided.

Towers and Monopoles: Variance

OP believes that tower and monopoles should only be in residential zone districts when there is no other technically viable option for service delivery in any other permitted zone. Such a situation could then be addressed by applying for a variance and providing evidence of “undue hardship” during a public hearing.

In summary an antenna tower or monopole could be either:

- (1) A matter of right use in the M industrial zone with height and setback requirements as prescribed;
- (2) A special exception approved by the BZA in the non-residential zones.

Any tower or monopole that is proposed to exceed the height limit must still obtain approval by the Mayor after any special exception approval.

Antenna Tower and Monopole Setbacks

Current Regulations: Antenna Towers and Monopoles as permitted in current §211 have minimum setback requirements established by §211.4, §514.4 of SP zone, and by reference the same setbacks are required in the CR zone. Section 2503.5 however, permits antennas to occupy any side or rear yard that is otherwise required. Because the definition of antennas also includes towers, OP believes this section could be misinterpreted to bypass the existing development standards and create unforeseen and undesirable results.

Not only do setbacks create a more attractive and orderly streetscape and skyline, they also provide for public safety. Citizens have testified that existing antenna towers shed ice in the winter months from substantial heights.

Proposed Regulations: OP has observed some of the current towers constructed throughout the city and believes that antenna towers and monopoles should have an increased minimum setback. Instead of the current setback of 1/6 of the total height, OP has recommended that the setback be increased to 1/3 of the total height or a minimum of twenty feet (20 ft.). The increased setback will help keep a tower or monopole from being an “attractive nuisance” by being too close to a property line, inducing someone to climb, loiter or otherwise inappropriately linger near the tower.

2609 Office of Planning Report

This section requires the Office of Planning to issue a report recommending whether the antenna, antenna tower or monopole complies with the review criteria and zoning regulations. The procedure is the same as currently exists.

2610 Antennas Subject To BZA Approval: General

This section allows for Special Exception review for antennas, towers and monopoles that do not otherwise qualify as a matter-of-right antenna and establishes submittal information. The

section also merges the existing Section 211 Commercial Antennas and Section 212 Other Than Commercial Antennas, into one section with one common set of criteria.

2612 Non-conforming Antennas

This section was taken in whole from the existing regulations.

CONCLUSION and RECOMMENDATION

The Office of Planning feels that the purpose of antenna regulation as set forth in §2520 is not fully met under the current zoning regulations. OP recommends that the proposed zoning text which includes a new Chapter 26 that compiles all the antenna, antenna towers and monopoles regulations into one comprehensive chapter be advertised for public hearing and that the proposed Stealth Structure language of §2604.2 be advertised in the alternative.

OP recognizes that the regulation of antennas and their related structures and facilities is a complex issue and OP welcomes public input on the proposed regulation.

AA/jls_{AICP}

OP proposed text amendment for Public Hearing regarding the regulation of antennas and towers.

April 19, 2002

AMEND 11 DCMR, ZONING BY ADDING THE FOLLOWING NEW CHAPTER 26, REGULATIONS OF ANTENNAS, ANTENNA TOWERS AND MONOPOLES

CHAPTER 26 REGULATIONS OF ANTENNAS, ANTENNA TOWERS AND MONOPOLES

2600 PURPOSE

2600.1 The purposes **OF** the regulation of antennas **AND FOR THE REGULATION OF ANTENNA TOWERS AND MONOPOLES** as a particular type of structure shall be as follows:

- (a) The Zoning Commission has determined that certain antennas, **ANTENNA TOWERS AND MONOPOLES** because of their size, shape, design, construction or location, may affect the health, welfare or safety of the population and may detract from the streetscape, landscape, skyline, scenic beauty or aesthetic interests of Washington, D.C., and its role as the Nation's Capital;
- (b) The zoning regulations therefore regulate the size, height, construction, design and location of antennas, ~~and antenna structures~~ **ANTENNA TOWERS AND MONOPOLES** which have the greatest potential for adverse impact on the impact on the health, safety and welfare of the population, and on neighborhood quality, and those which have the greatest potential for adverse impact on the scenic beauty of the Nation's Capital; and
- (c) The principal types of antennas, **ANTENNA TOWERS AND MONOPOLES** regulated are those that, because of their shape and relatively large mass, potentially have the greatest visual impact and include, by example, large satellite earth station antennas ~~and~~ certain microwave terrestrial antennas, **MONOPOLES AND BROADCAST TOWERS**.

2600.2 THE CONSTRUCTION OF NEW TOWERS OR MONOPOLES IS CONSIDERED INCOMPATIBLE WITH §2520.1 AND SHALL BE CONSIDERED ONLY WHEN NO OTHER MOUNTING OPTION IS AVAILABLE AND SHALL BE SUBJECT TO SPECIAL EXCEPTION REVIEW AS APPLICABLE.

2601 DETERMINATION

2601.1 If the Zoning Administrator determines that an antenna does not meet the definition of any specific class of an antenna as set forth in § ~~§§~~**199 AND 2601** of this title, the Zoning Administrator shall determine the class of antenna to which it is closest, and treat the antenna accordingly.

2602 CERTIFICATION OF FCC COMPLIANCE

2602.1 NO BUILDING PERMIT SHALL BE ISSUED UNTIL A WRITTEN CERTIFICATION IS PROVIDED BY THE APPLICANT EVIDENCING THAT ANY PROPOSED TRANSMITTING ANTENNA COMPLIES WITH THE RADIOFREQUENCY (RF) RADIATION GUIDELINES ADOPTED BY THE FEDERAL COMMUNICATIONS COMMISSION AND THE HEALTH AND SAFETY REGULATIONS ADOPTED BY THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.

2602.2 THE CERTIFICATION SHALL BE PROVIDED AS PART OF ANY APPLICATION OR BUILDING PERMIT FOR AN ANTENNA AND SHALL INCLUDE THE FOLLOWING REQUIRED INFORMATION:

- a) THE RADIOFREQUENCY (RF) RADIATION TO BE GENERATED BY THE PROPOSED ANTENNA OR ANTENNAS;**
- b) THE CUMMULATIVE RF RADIATION GENERATED BY ALL OTHER ANTENNAS AT THE PROPOSED SITE;**
- c) THE MEANS USED TO DETERMINE THE RF LEVELS;**
- d) THE APPLICABLE LEGAL CITATIONS RELAVENT TO THE RF LEVELS AND ANTENNA TYPE;**
- e) THE DATE, TIME AND LOCATION THAT ANY FIELD MEASUREMENTS WERE TAKEN;**
- f) THE EXACT LEGAL NAME, ADDRESS OF PRINCIPLE PLACE OF BUSINESS AND TELPHONE NUMBER OF THE CERTIFYING ENGINEER;**
- g) THE EXACT LEGAL NAME, ADDRESS OF PRINCIPLE PLACE OF BUSINESS AND TELPHONE NUMBER OF THE APPLICANTAND PROPERTY OWNER;**

- h) THE EXACT LEGAL NAME, ADDRESS OR PRINCIPLE PLACE OF BUSINESS AND TELEPHONE NUMBER OF THE PERSON TO WHOM CORRESPONDENCE IS TO BE SENT;**
- i) A SITE PLAN, AND ROOF PLAN IF APPROPRIATE, DRAWN TO SCALE SHOWING THE LOCATION OF THE PROPOSED ANTENNAS AND ALL EXISTING ANTENNAS ON THE SITE, ROOF, TOWER OR MONOPOLE.**

2603 MATTER OF RIGHT ANTENNAS

2603.1 Subject to the requirements for each class of antenna, the following classes of antennas shall be permitted as a matter-of-right **IN ALL ZONE DISTRICTS:**

- (a) No more than two (2) residential type UHF/VHF television and frequency modulation (FM) radio receiving Yagi antenna not to exceed eight feet (8 ft.) horizontally;
- (b) No more than two (2) whip antennas not exceeding two and one-half inches (2 1/2 in.) in diameter, with a mounted dimension no longer than twelve feet (12 ft.) in any direction, and located on a principal building;
- (c) No more than one (1) residential type super high frequency antenna, not to exceed three feet (3 ft.) in any dimension, excluding the support element;
- (d) One (1) or more antennas entirely enclosed on all sides within a building or by the penthouse walls or extensions of the penthouse walls. Those walls may include an opaque membrane covering a port in front of the antenna, **PROVIDED HOWEVER, THE ANTENNAS AND RELATED EQUIPMENT SHALL NOT BE THE PRIMARY USE WITHIN THE BUILDING.**
- (e) One (1) or more antennas located entirely behind and no taller than the parapet walls; Provided, that the parapet wall may include an opaque membrane covering a port in front of an antenna;
- (f) One satellite earth station or one microwave terrestrial antenna with a diameter of no more than four feet (4 ft.), not taller than eight feet (8 ft.), located on the roof of a principal building, and set back from the edge of the roof a distance at least equal to its height above the roof. The principal building shall have a height of no less than ~~fifty feet (50 ft.)~~ **TWENTY-FIVE (25) FEET;**

- (g) A whip antenna mounted on a vehicle;
- (h) An antenna, other than a whip antenna, mounted on a vehicle located in a given square for not longer than one hundred and twenty (120) hours.
- (i) **AN ANTENNA, NO TALLER THAN EIGHTEEN INCHES (18 IN.) IN HEIGHT AND NECESSARY FOR THE IMPLEMENTATION OF EXPANDED 911 OR EMERGENCY COMMUNICATIONS;**
- (j) **AN ANTENNA MOUNTED TO AN EXISTING UTILITY POLE WITHIN THE PUBLIC RIGHT-OF-WAY, PROVIDED THE FOLLOWING CONDITIONS ARE MET:**
 - 1) **THE ANTENNA DOES NOT ADD TO THE HEIGHT OF THE UTILITY POLE;**
 - 2) **THE ANTENNA IS NO LARGER THAN SIX INCHES (6 in.) PLUS THE DIAMETER OF THE UTILITY POLE;**
 - 3) **THE USE OF THE UTILITY POLE SHALL BE APPROVED BY THE DEPARTMENT OF PUBLIC WORKS OR THEIR REPRESENTATIVE;**
 - 4) **THE ANTENNA PLACEMENT SHALL NOT RESULT IN THE REMOVAL OF ANY TREES;**
- (k) An antenna which is listed in (a) through ~~(h)~~ (j) but which does not comply with the requirements that apply to its class of antennas, shall be permitted as a matter of right by administrative review, subject to the requirements of §~~2610~~ **2609**.

2604 GROUND MOUNTED ANTENNAS

2604.1 Subject to the procedure of §**2609** one ground-mounted antenna, **NOT INCLUDING MONOPOLES OR ANTENNA TOWERS**, shall be permitted as a matter of right provided, that the following conditions apply:

- (a) **THE ANTENNA MAY NOT EXCEED A MOUNTED HEIGHT OF TWELVE FEET (12 ft.) AT ITS HIGHEST POINT ABOVE THE GROUND IN THE FOLLOWING ZONES:**
 - 1) **ANY RESIDENCE (R),**
 - 2) **SPECIAL PURPOSE (SP),**
 - 3) **MIXED USE (CR) OR**
 - 4) **WATERFRONT (W) ZONE DISTRICT;**
- (b) **THE ANTENNA MAY NOT EXCEED A MOUNTED HEIGHT OF TWENTY FEET (20 ft.) AT ITS HIGHEST POINT ABOVE THE**

GROUND IN ANY COMMERCIAL OR INDUSTRIAL ZONE DISTRICT;

- (c) The antenna is located in either the rear yard or the side yard of the principal building on the lot;
- (d) Each part of the antenna is removed from all lot lines by a minimum distance of ten feet (10 ft.);
- (e) The antenna is not visible from any public park which is within the Central Employment Area or from any street which the lot abuts;
- (f) The antenna, to the maximum practical extent, shall be ~~black-mesh construction or~~ **CONSTRUCTED** of materials and colors that blend with the surroundings;
- (g) The installation shall include screening **TREATMENTS** necessary to ensure compliance with paragraph (e) of this subsection, and, to the maximum practical extent, to reduce the adverse impact of the antenna as viewed from adjacent property; and
- (h) The antenna installation shall be as small as is practical for its intended use.

2605 ANTENNAS PLACED ON A ROOF

2605.1 SUBJECT TO THE PROCEDURES OF §2609 ANTENNAS PLACED ON A ROOF OF A BUILDING SHALL BE PERMITTED AS A MATTER OF RIGHT IN ANY ZONE DISTRICT PROVIDED THAT THE FOLLOWING CONDITIONS APPLY:

- (a) **A BROADCAST ANTENNA MAY NOT BE PLACED IN A RESIDENTIAL ZONE;**
- (b) **EACH PART OF AN ANTENNA IS REMOVED FROM EACH EDGE OF THE ROOF A MINIMUM DISTANCE EQUAL TO ITS TOTAL MOUNTED HEIGHT ABOVE ITS BASE;**
- (c) **AN ANTENNA MAY NOT EXCEED A TOTAL MOUNTED HEIGHT OF TWELVE (12) FEET AT THE HIGHEST POINT ABOVE THE ROOF AS MEASURED FROM THE ANTENNA'S BASE;**
- (d) **EACH ANTENNA INSTALLATION SHALL BE LOCATED AND OR SCREENED TO MINIMIZE, TO THE GREATEST**

**PRACTICABLE EXTENT THE VIEW OF THE ANTENNA FROM
THE ~~GROUND~~ FOLLOWING:**

- 1) ADJACENT STREETS,**
- 2) ANY PUBLIC PARK OR PUBLIC OPEN SPACE,
WITHIN ONE-QUARTER MILE, AND**
- 3) ANY LANDMARKED STRUCTURE OR SITE
WITHIN ONE-QUARTER MILE.**

**(e) AN ANTENNA, SHALL BE ~~OF BLACK-MESH CONSTRUCTION, OR~~
CONSTRUCTED OF MATERIALS AND COLORS THAT BLEND
WITH THE SURROUNDINGS TO THE MAXIMUM PRACTICAL
EXTENT;**

**(f) ANTENNAS PLACED ON A ROOF THAT HAS OUTDOOR
RECREATION SPACE SHALL BE SUBJECT TO THE
FOLLOWING:**

- 1) THE ANTENNA LOCATION SHALL BE SECURED
FROM UNAUTHORIZED ACCESS FOR A
MINIMUM DISTANCE OF TWENTY-FIVE (25)
FEET, BY A FENCE OR SCREEN AT LEAST FIVE
(5) FEET IN HEIGHT, AND**
- 2) TRANSMISSION ANTENNAS SHALL BE
ORIENTED SUCH THAT TRANSMISSION IS NOT
DIRECTED AT THE RECREATION SPACE.**

**(g) AN ANTENNA ON ANY LOT ADJACENT TO A NAVIGABLE
WATERWAY SHALL BE PLACED SUCH THAT ITS VISIBILITY
FROM THE NAVIGABLE WATERWAYS IS MINIMIZED TO
THE GREATEST PRACTICABLE EXTENT;**

**(h) ANY RELATED EQUIPEMNT CABINET OR SHELTER SHALL
BE:**

- 1. CONSTRUCTED OF MATERIALS AND COLORS
THAT BLEND WITH THE BUILDING OR
PENTHOUSES; AND**
- 2. LOCATED TO REDUCE ITS VISIBILITY FROM
PUBLIC SPACE TO THE GREATEST
PRACTICABLE EXTENT.**

**DELETE (e): IF THE ANTENNA IS LOCATED ON THE ROOF OF A BUILDING, WHICH HAS A
HEIGHT OF FIFTY FEET (50 FT.) OR LESS, THE ANTENNA SHALL NOT BE VISIBLE FROM THE
GROUND;**

2606 BUILDING-MOUNTED ANTENNAS

2606.1 SUBJECT TO THE PROCEDURES OF §2609 BUILDING-MOUNTED ANTENNAS SHALL BE PERMITTED AS A MATTER OF RIGHT IN ANY ZONE DISTRICT PROVIDED THAT THE FOLLOWING CONDITIONS APPLY:

- (a) A BROADCAST ANTENNA MAY NOT BE PLACED IN A RESIDENTIAL ZONE;**
- (b) THE TOP OF THE ANTENNA DOES NOT ECLIPSE THE ROOF OF THE WALL, BUILDING OR STRUCTURE TO WHICH IT IS MOUNTED;**
- (c) EACH ANTENNA INSTALLATION SHALL BE LOCATED OR SCREENED TO MINIMIZE, TO THE GREATEST PRACTICABLE EXTENT THE VIEW OF THE ANTENNA FROM THE FOLLOWING:**
 - a. ADJACENT STREETS,**
 - b. ANY PUBLIC PARK OR PUBLIC OPEN SPACE, WITHIN ONE-QUARTER MILE, AND**
 - c. ANY LANDMARKED STRUCTURE OR SITE WITHIN ONE-QUARTER MILE.**
- (c) AN ANTENNA, SHALL BE ~~OF BLACK-MESH CONSTRUCTION, OR~~ CONSTRUCTED OF MATERIALS AND COLORS THAT BLEND WITH THE SURROUNDINGS TO THE MAXIMUM PRACTICAL EXTENT;**
- (d) BUILDING-MOUNTED ANTENNAS PLACED ON A ROOF STRUCTURE OF A BUILDING WITH ROOFTOP OUTDOOR RECREATION SPACE SHALL BE SUBJECT TO THE FOLLOWING:**
 - 1) THE ANTENNA LOCATION SHALL BE SECURED FROM UNAUTHORIZED ACCESS FOR A MINIMUM VERTICAL DISTANCE OF TEN (10) FEET, AND**
 - 2) TRANSMISSION ANTENNAS SHALL BE ORIENTED SUCH THAT TRANSMISSION IS NOT DIRECTED AT THE RECREATION SPACE.**
- (e) ANTENNA ON ANY LOT ADJACENT TO A NAVIGABLE WATERWAY SHALL BE PLACED SUCH THAT ITS VISIBILITY**

FROM THE NAVIGABLE WATERWAYS IS MINIMIZED TO THE GREATEST PRACTICABLE EXTENT;

(f) TO AVOID OFF-SITE RECEPTION INTERFERENCE, A TRANSMISSION ANTENNA SHALL NOT BE DIRECTED INTO ANY ADJACENT BUILDING WINDOW;

(g) ANY RELATED EQUIPEMNT CABINET OR SHELTER SHALL BE:

a. CONSTRUCTED OF MATERIALS AND COLORS THAT BLEND WITH THE BUILDING OR PENTHOUSES; AND

b. LOCATED TO REDUCE ITS VISIBILITY FROM PUBLIC SPACE TO THE GREATEST PRACTICABLE EXTENT.

(h) BUILDING MOUNTED ANTENNAS SHALL BE SCREENED AND/OR PAINTED TO BLEND WITH THE SURFACE FACE TO WHICH THEY ARE ATTACHED;

2607 ANTENNA ADDITIONS TO EXISTING ANTENNA TOWERS AND MONOPOLES

2607.1 SUBJECT TO THE PROCEDURE OF §2609, AN ADDITION OF AN ANTENNA TO AN EXISTING ANTENNA TOWER OR MONOPOLE SHALL BE PERMITTED AS A MATTER OF RIGHT; PROVIDED, THE FOLLOWING CONDITIONS ARE MET:

(a) THE SIZE OF THE ANTENNA TOWER OR MONOPOLE IS NOT INCREASED;

(b) THE APPEARANCE OF THE ANTENNA TOWER OR MONOPOLE IS NOT CHANGED IN A MANNER WHICH CAUSES AN ADVERSE IMPACT ON THE SURROUNDING AREA; AND

(c) A TRANSMITTING ANTENNA MAY NOT BE PLACED LOWER THAN FIFTY FEET (50 FT.) ABOVE THE BASE OF THE ANTENNA TOWER OR MONOPOLE;

2608 ANTENNA TOWERS AND MONOPOLE IN M INDUSTRIAL ZONES (M) (matter of right)

2608.1 SUBJECT TO THE PROCEDURES OF §2609 AND INFORMATION OF §2610.2, AN ANTENNA TOWER OR MONOPOLE IN CONJUNCTION WITH A STUDIO OR IN CONJUNCTION WITH THE ERECTION, ALTERATION, OR USE OF BUILDINGS FOR TRANSMISSION OR RECEPTION EQUIPMENT, SHALL BE PERMITTED IN THE M ZONE INDUSTRIAL DISTRICTS AS A MATTER-OF-RIGHT; PROVIDED, THE ANTENNA TOWER OR MONOPOLE COMPLIES WITH THE FOLLOWING CONDITIONS APPLY ARE MET:

- (a) AN ANTENNA TOWER OR MONOPOLE SHALL BE SET BACK A MINIMUM HORIZONTAL DISTANCE EQUAL TO ITS TOTAL HEIGHT AS MEASURED FROM THE BASE OF THE TOWER, FROM ANY ADJACENT RESIDENTIALLY DEVELOPED OR ZONED PROPERTY;**
- (b) EXCEPT AS PROVIDED ABOVE, EACH PART OF AN ANTENNA TOWER OR MONOPOLE SHALL BE REMOVED FROM EACH LOT LINE A MINIMUM DISTANCE EQUAL TO THE GREATER OF THE FOLLOWING:**
 - 1) TWENTY (20) FEET, OR**
 - 2) A DISTANCE OF AT LEAST ONE-THIRD (1/3) OF THE TOTAL MOUNTED HEIGHT;**
- (c) THE HEIGHT OF AN ANTENNA TOWER OR MONOPOLE SHALL NOT EXCEED THE MAXIMUM HEIGHT PERMITTED FOR STRUCTURES WITHIN THE PARTICULAR ZONE DISTRICT PLUS THIRTY FEET (30 FT.) AS A MATTER OF RIGHT.**
- (d) ANY ANTENNA TOWER OR MONOPOLE WITH A HEIGHT IN EXCESS OF (c) ABOVE, MAY BE PERMITTED IF APPROVED BY THE BOARD OF ZONING ADJUSTMENT SUBJECT TO THE CONDITIONS OF THE §2610.**
- (e) ANY ANTENNA TOWER OR MONOPOLE WITH A HEIGHT IN EXCESS OF THAT PERMITTED BY THE ACT OF JUNE 1, 1910 (36 STAT. 452), AS AMENDED, SHALL NOT BE PERMITTED, UNLESS THE HEIGHT IS APPROVED BY THE MAYOR.**
- (f) A WRITTEN STATEMENT SHALL BE PROVIDED AGREEING TO DESIGNED AND MAKE THE ANTENNA TOWER AVAILABLE FOR CO-LOCATION BY OTHER SERVICE PROVIDERS.**

- (g) A WRITTEN STATEMENT SHALL BE PROVIDED AGREEING TO DESIGN THE MONOPOLE FOR AT LEAST THREE (3) ANTENNA ARRAYS AND TO MAKE THE ARRAY SPACE AVAILABLE FOR CO-LOCATION BY OTHER SERVICE PROVIDERS IF UNUSED BY INITIAL SERVICE PROVIDER.**

2609 OFFICE OF PLANNING REPORT

2609.1 THE FOLLOWING PROCEDURE SHALL APPLY TO AN APPLICATION, WHICH IS FILED FOR A PERMIT AS AN ANTENNA, ANTENNA TOWER OR MONOPOLE UNDER §§2605 THROUGH 2608:

- (a) BEFORE TAKING FINAL ACTION ON THE APPLICATION, THE ZONING ADMINISTRATOR SHALL SUBMIT THE APPLICATION TO THE DIRECTOR OF THE OFFICE OF PLANNING FOR REVIEW AND REPORT; AND**
- (b) THE FOLLOWING INFORMATION SHALL BE SUBMITTED TO THE OFFICE OF PLANNING FOR REVIEW:**
 - 1) MAP OF AREA TO BE SERVED BY THE NEW ANTENNA;**
 - 2) A SITE AND ROOF PLAN SHOWING ALL STRUCTURES AND ANTENNAS ON SITE;**
 - 3) ELEVATION DRAWINGS OF THE STRUCTURE AND PROPOSED ANTENNAS FROM ALL FOUR DIRECTIONS;**
 - 4) A PICTURE OF THE PROPOSED ANTENNA;**
 - 5) THE TOTAL MOUNTED HEIGHT OF THE ANTENNA RELATIVE TO THE TOPS OF SURROUNDING TREES AS THEY PRESENTLY EXIST;**
 - 6) OTHER INFORMATION AS MAY BE NECESSARY FOR IMPACT ASSESSMENT OF THE ANTENNA.**
- (c) THE DIRECTOR SHALL REPORT TO THE ZONING ADMINISTRATOR EITHER WITHIN THIRTY (30) DAYS OF THE DATE OF SUBMISSION OF THE APPLICATION TO THE DIRECTOR, OR WITHIN SUCH LONGER OR SHORTER PERIOD AS THE APPLICANT, THE ZONING ADMINISTRATOR, AND THE DIRECTOR MAY AGREE TO ESTABLISH FOR THE REPORT OF THE DIRECTOR.**

2610 ANTENNAS SUBJECT TO BZA APPROVAL: GENERAL

2610.1 ANTENNAS THAT DO NOT QUALIFY AS A MATTER-OF-RIGHT SHALL BE PERMITTED BY SPECIAL EXCEPTION IN ACCORDANCE WITH THE CONDITIONS SPECIFIED IN §§ 2605, 2606 AS APPROPRIATE, AND §§ 2611 AND 3104 OF THIS TITLE.

2610.2 AN APPLICATION FOR SPECIAL EXCEPTION SHALL INCLUDE THE FOLLOWING WRITTEN AND GRAPHIC DOCUMENTATION:

- (a) MAP OF AREA TO BE SERVED BY THE NEW ANTENNA;**
- (b) MAP AND EXPLANATION OF INADEQUATE SERVICE AREA;**
- (c) OTHER ANTENNAS AND FACILITY SITES PROVIDING SERVICE BY THE APPLICANT WITHIN A TWO MILE RADIUS OF THE PROPOSED ANTENNA SITE, WITH IDENTIFIED HEIGHTS ABOVE GRADE;**
- (d) A SITE AND ROOF PLAN SHOWING ALL STRUCTURES AND ANTENNAS ON SITE;**
- (e) ELEVATION DRAWINGS OF THE STRUCTURE AND PROPOSED ANTENNAS FROM ALL FOUR DIRECTIONS;**
- (f) A PICTURE OF THE PROPOSED ANTENNA;**
- (g) THE TOTAL MOUNTED HEIGHT OF THE ANTENNA RELATIVE TO THE TOPS OF SURROUNDING TREES AS THEY PRESENTLY EXIST;**
- (h) OTHER INFORMATION AS MAY BE NECESSARY FOR IMPACT ASSESSMENT OF THE ANTENNA.**

2610.3 THE BOARD MAY REQUIRE THE REMOVAL OF ANY ON-SITE NON-CONFORMING, NON-OPERABLE OR UNPERMITTED ANTENNA AS A CONDITION TO THE APPROVAL.

2611 ANTENNA TOWERS AND MONOPOLES

2611.1 A MONOPOLE, SHALL BE PERMITTED IF APPROVED BY THE BOARD OF ZONING ADJUSTMENT IN ACCORDANCE WITH §3104 OF THIS TITLE, SUBJECT TO THE PROVISIONS OF THIS SECTION, IN THE SPECIFIED ZONE DISTRICTS.

- 2611.2 AN ANTENNA TOWER, IN CONJUNCTION WITH A STUDIO, OR THE ERECTION, ALTERATION, OR USE OF BUILDINGS FOR TRANSMISSION OR RECEPTION EQUIPMENT ON THE SAME LOT, SHALL BE PERMITTED IF APPROVED BY THE BOARD OF ZONING ADJUSTMENT IN ACCORDANCE WITH §3104 OF THIS TITLE AND SUBJECT TO THE PROVISIONS OF THIS SECTION, IN THE SPECIFIED ZONE DISTRICTS.**
- 2611.3 AN ANTENNA TOWER OR MONOPOLE MAY BE PERMITTED AS A SPECIAL EXCEPTION USE IN THE FOLLOWING ZONE DISTRICTS:**
- (a) C-2 THROUGH C-4 COMMERCIAL DISTRICTS**
 - (b) SP, SPECIAL PURPOSE DISTRICTS**
 - (c) CM, COMMERCIAL-LIGHT MANUFACTURING DISTRICTS**
 - (d) CR, MIXED USE DISTRICT, IF THE BOARD CONSIDERS IT APPROPRIATE IN FURTHERING THE OBJECTIVES OF THE MIXED USE DISTRICTS.**
 - (e) WATERFRONT DISTRICTS (W), IF THE BOARD CONSIDERS IT APPROPRIATE IN FURTHERING THE OBJECTIVES OF THE WATERFRONT DISTRICTS.**
- 2611.4 THE LOCATION, HEIGHT AND OTHER CHARACTERISTICS OF AN ANTENNA TOWER OR MONOPOLE SHALL BE:**
- (a) CONSISTENT WITH THE PURPOSE OF THIS CHAPTER;**
 - (b) DESIGNED AND AVAILABLE FOR CO-LOCATION BY OTHER SERVICE PROVIDERS;**
 - (c) LOCATED SO THE VISUAL IMPACTS ARE MINIMIZED TO THE GREATEST PRACTICAL EXTENT, FROM NEIGHBORING PROPERTY AND ADJACENT PUBLIC SPACE, OR APPROPRIATELY SCREENED BY LANDSCAPING OR OTHER TECHNIQUES TO MINIMIZE THE VISIBILITY OF THE ANTENNA TOWER OR MONOPOLE;**
 - (d) EXISTING TREES SHALL BE PRESERVED TO THE GREATEST PRACTICABLE EXTENT.**

**2611.5 THE LOCATION, HEIGHT AND OTHER CHARACTERISTICS OF A
AN ANTENNA TOWER OR MONOPOLE SHALL NOT:**

- (a) ADVERSELY AFFECT THE USE OF NEIGHBORING
PROPERTY;**
- (b) ADVERSELY AFFECT THE PRESENT CHARACTER AND
FUTURE DEVELOPMENT OF NEIGHBORING PROPERTY; OR**
- (c) EXCEED THAT WHICH IS ~~REASONABLY NECESSARY~~ EVIDENCED
TO RENDER SATISFACTORY SERVICE TO ITS SERVICE
AREA.**

**2611.6 ANY ANTENNA TOWER OR MONOPOLE WITH A PROPOSED
HEIGHT IN EXCESS OF THAT PERMITTED BY THE ACT OF JUNE
1, 1910 (36 STAT. 452), AS AMENDED, SHALL NOT BE PERMITTED,
UNLESS THE HEIGHT IS APPROVED BY THE MAYOR.**

**2611.7 EACH PART OF AN ANTENNA TOWER OR MONOPOLE SHALL
BE REMOVED FROM EACH LOT LINE THE GREATER OF THE
FOLLOWING:**

- (a) TWENTY FEET (20 FT.), OR**
- (b) A DISTANCE OF AT LEAST ONE-THIRD OF THE
TOTAL CONSTRUCTED HEIGHT.**

**2611.8 IF REVIEW BY THE HISTORIC PRESERVATION REVIEW BOARD
OR COMMISSION OF FINE ARTS IS REQUIRED, CONCEPT
REVIEW AND APPROVAL SHALL OCCUR BEFORE REVIEW BY
THE BOARD OF ZONING ADJUSTMENT.**

**2611.9 BEFORE TAKING FINAL ACTION, THE BOARD SHALL SUBMIT
THE APPLICATION TO THE D.C. OFFICE OF PLANNING FOR
REVIEW AND REPORT.**

**2611.10 THE APPLICANT SHALL HAVE THE BURDEN OF
DEMONSTRATING THE FOLLOWING:**

- (a) THE NEED FOR THE PROPOSED LOCATION;**
- (b) THE NECESSITY OF THE PROPOSED HEIGHT; AND**
- (c) FULL COMPLIANCE WITH BOTH CUMMULATIVE SITE AND
INDIVIDUAL ANTENNA RF EMISSION LEVELS AS
ESTABLISHED BY THE FCC**

- 2611.11 THE APPLICANT SHALL PROVIDE WRITTEN AND/OR GRAPHIC DOCUMENTATION OF THE FOLLOWING:**
- (a) OTHER TOWERS OR MONOPOLES WITHIN A TWO-MILE RADIUS OF THE PROPOSED SITE,**
 - (b) AN EXPLANATION OF WHY THE APPLICANT CANNOT CO-LOCATE ON AN EXISTING TOWER OR MONOPOLE,**
 - (c) A COMMITMENT TO PERMIT THE CO-LOCATION BY OTHER SERVICE PROVIDERS ON AN ANTENNA TOWER**
 - (d) A COMMITMENT TO PERMIT THE CO-LOCATION OF AT LEAST THREE ANTENNA ARRAYS ON A MONOPOLE,**
 - (e) THE TOPOGRAPHIC CONDITIONS OF THE AREA TO BE SERVED,**
 - (f) THE RELATIVE HEIGHT OF THE ANTENNA TOWER OR MONOPOLE TO THE TOPS OF SURROUNDING TREES AS THEY PRESENTLY EXIST,**
 - (g) THE PROPOSED APPEARANCE OF THE TOWER OR MONOPOLE, INCLUDING EXTERIOR FINISH,**
 - (h) OTHER INFORMATION AS MAY BE NECESSARY FOR IMPACT ASSESSMENT OF THE ANTENNA TOWER OR MONOPOLE**
- 2611.12 THE BOARD MAY IMPOSE CONDITIONS OR MODIFY CRITERIA RELATING TO OPERATION, LOCATION, SCREENING, CO-LOCATION OR OTHER REQUIREMENTS AS IT SHALL DEEM NECESSARY TO PROTECT ADJACENT AND NEARBY PROPERTY, NEIGHBORHOOD CHARACTER, AND THE IMAGE OF THE CITY AS THE NATION'S CAPITAL, CONSISTENT WITH THE GENERAL PURPOSE AND INTENT OF THIS CHAPTER.**
- 2611.13 THE BOARD MAY REQUIRE THE REMOVAL OF ANY ON-SITE ~~NON-CONFORMING~~ NON-OPERABLE OR UNPERMITTED ANTENNA AS A CONDITION TO THE APPROVAL.**
- 2612 NON-CONFORMING ANTENNAS**
- 2612.1 A nonconforming antenna shall not be altered, modernized, or otherwise replaced, except in conformity with all provisions of this title.**

2612.2 If a nonconforming antenna stops functioning, a temporary replacement antenna may be installed, subject to the following conditions:

- (a) A permanent replacement antenna cannot be installed as a matter-of-right;**
- (b) The temporary installation shall be removed no later than one (1) year after the nonconforming antenna stops functioning;**
- (c) Within three (3) months after the nonconforming antenna stops functioning, the owner or occupant of the land or structure on which the antenna is installed shall apply for a special exception to install a longer term replacement: and**
- (d) If the owner or occupant elects to install an immediate replacement antenna, the cost of the temporary replacement shall not be considered by the Board of Zoning Adjustment as a basis for approval of a special exception to install a longer term replacement.**

2613 Through 2698 reserved.

2699 Definitions (also add to §199)

Antenna – A device used to transmit or receive communications signals. This term encompasses transmitting and receiving elements, ~~and any tower and immediately related support and stabilizing elements,~~ and rotating or other directional mechanism. (36 DCR 1509)

Antenna, commercial broadcast - an antenna used for television and commercial radio broadcasting by a profit or non-profit entity. The transmitting **BROADCAST** antenna may be affixed to a tower or to the top of a building. ~~In amplitude modulation (AM) radio service, the tower also acts as the antenna.~~ (36 DCR 1509)

ANTENNA, DISH - A BOWL-SHAPED DEVICE FOR THE RECEPTION AND/OR TRANSMISSION OF COMMUNICATION SIGNALS IN A SPECIFIC DIRECTIONAL PATTERN.

Antenna, microwave, terrestrial - a dish, horn, or other type antenna used for point-to-point microwave communication of sound, visual images or data from one terrestrial point to another. (36 DCR 1509)

ANTENNA, PANEL - A RELATIVELY FLAT RECTANGULAR OR CIRCULAR DEVICE THAT TRANSMITS OR RECEIVES COMMUNICATION SIGNALS IN A DIRECTIONAL PATTERN OF LESS THAN 360 DEGREES

Antenna, satellite earth station - an antenna used to transmit or receive sound, visual images or data from one or more space stations or from one or more stations of the same kind by means of satellites or other objects in space. (36 DCR 1509)

Antenna, super high frequency - an antenna which serves a super high frequency channel and requires a line of sight to the transmitting antenna, and which generally consists of a metal grid or a sheet of bent metal, and is mounted on the pole of a UHF or VHF antenna or on a roof structure. (36 DCR 1509)

Antenna, whip - an antenna generally consisting of a single pole or mast, also called a broomstick antenna, sometimes including irregularly shaped prongs or attachments at its extremity, including an antenna used for citizens band or two-way radio communications. (36 DCR 1509)

Antenna, yagi - a very high frequency (VHF) or ultrahigh frequency (UHF) directional antenna array in which a basic whip or dipole antenna is supplemented by one or more parallel reflector and director elements. (36 DCR 1509)

ANTENNA TOWER - A LATTICE-TYPE STRUCTURE, GUYED OR SELF-SUPPORTING, USED TO SUPPORT ANTENNAS FOR BROADCASTING, TRANSMISSION, RECEPTION, OR OTHER UTILITY EQUIPMENT.

CO-LOCATION - THE USE OF A SINGLE MOUNT, TOWER, MONOPOLE, OR SITE BY MORE THAN ONE ANTENNA OR TELECOMMUNICATIONS SERVICE PROVIDER.

EQUIPMENT CABINET OR SHELTER - AN ENCLOSURE HOUSING ONLY EQUIPMENT RELATED TO THE OPERATION OF AN ANTENNA LOCATED AT THE SITE AND IS CONNECTED TO THE ANTENNA BY CABLE.

FCC – FEDERAL COMMUNICATIONS COMMISSION

MONOPOLE - A SINGLE, SELF-SUPPORTING POLE-TYPE STRUCTURE, SUPPORTING A FIXTURE DESIGNED TO HOLD ONE OR MORE ANTENNAS.

MOUNT- THE NECESSARY SUPPORT STRUCTURE TO WHICH AN ANTENNA IS ATTACHED, NOT INCLUDING ANTENNA TOWERS OR MONOPOLES.

RADIOFREQUENCY ELECTROMAGNETIC FIELD – THE PRESENCE OF ELECTROMAGNETIC ENERGY AT A GIVEN LOCATION THAT CAN BE DESCRIBED IN TERMS OF THE ELECTRIC AND/OR MAGNETIC FIELD STRENGTH AT THAT LOCATION. (NCPC)

RADIOFREQUENCY RADIATION (RF RADIATION) - THE PROPAGATION OF ENERGY THROUGH SPACE IN THE FORM OF WAVES OR PARTICLES. (NCPC)

BUILDING-MOUNTED ANTENNA - ANY ANTENNA AND ITS NECESSARY SUPPORT STRUCTURE, NOT INCLUDING A TOWER OR MONOPOLE, THAT IS ATTACHED TO THE WALLS OF, OR INTEGRATED INTO BUILDINGS, CHURCH STEEPLES, COOLING TOWERS, ELEVATOR BULKHEADS, PARAPETS, PENTHOUSES, FIRE TOWERS, TANKS, AND WATER TOWERS, OR OTHER SIMILAR STRUCTURES.

SERVICE PROVIDER – SEE TELECOMMUNICATION SERVICE PROVIDER

STEALTH STRUCTURE- A STRUCTURE USED OR DESIGNED TO ENCLOSE AND SCREEN FROM VIEW ANTENNAS. SUCH STRUCTURES MAY INCLUDE, BUT ARE NOT LIMITED TO FLAG POLES, TREE POLES AND BELL TOWERS BUT NOT LIGHT STANDARDS.

TELECOMMUNICATION SERVICE PROVIDER – ANY ENTITY LICENSED BY THE FCC TO PROVIDE TELECOMMUNICATIONS SERVICES.

TELECOMMUNICATIONS FACILITY – ALL EQUIPMENT, INCLUDING REPEATERS, WITH WHICH A TELECOMMUNICATIONS SERVICE PROVIDER BROADCASTS AND RECEIVES THE RADIOFREQUENCY WAVES THAT CARRY THEIR SERVICES, AND ALL LOCATIONS OF SAID EQUIPMENT OR ANY PART THEREOF.

AMEND EXSITING SECTIONS TO READ AS FOLLOWS:

CHAPTER 2 RESIDENCE DISTRICT USE REGULATIONS

Delete existing §201.2 through §201.7 in their entirety.

Add the following new §201.2 to read:

201 **USES AS A MATTER OF RIGHT (R)**

201.2 **ANTENNA, SUBJECT TO THE STANDARDS AND PROCEDURES
WHICH APPLY TO THE PARTICULAR CLASS OF ANTENNA
PURSUANT TO CHAPTER 26 OF THIS TITLE.**

Delete existing § 211, Antenna, Commercial Broadcast (R-1) in its entirety.

Delete existing § 212, Antenna, Other Than Commercial Broadcast Antenna (R-1)
in its entirety.

CHAPTER 5 SPECIAL PURPOSE DISTRICTS

Add the following new § 501.1 (i):

501 USES AS A MATTER OF RIGHT (SP)
501.1 (i) **ANTENNA, SUBJECT TO THE STANDARDS AND PROCEDURE
WHICH APPLY TO THE PARTICULAR CLASS OF ANTENNA
PURSUANT CHAPTER 26 OF THIS TITLE.**

Delete existing § 514, Antenna, Commercial Broadcast (SP) in its entirety.

Delete existing § 515, Antenna, Other Than Commercial Broadcast Antenna (SP) in its entirety

Amend §530 to read as follows:

530 HEIGHT
530.3 Spires, towers, domes, pinnacles or minarets serving as architectural
embellishments, penthouse over elevator shaft, ventilator shaft, antennas,
chimneys, smokestacks or fire sprinkler tanks may be erected to a height in
excess of that which this sections otherwise authorizes. **THIS SECTION
SHALL NOT BE INTERPRETED TO BYPASS OTHERWISE
REQUIRED SPEICAL EXCEPTION REVIEWS.**

Add the following new §535.12

534 REAR YARDS (SP)
534.12 **ANTENNAS, ANTENNA TOWERS AND MONOPOLES SHALL COMPLY
WITH THE SIDE YARD REQUIREMENTS AS SPECIFIED IN CHAPTER
26.**

Add the following new §535.4:

535 SIDE YARDS (SP)

535.4 ANTENNAS, ANTENNA TOWERS AND MONOPOLES SHALL COMPLY WITH THE SIDE YARD REQUIREMENTS AS SPECIFIED IN CHAPTER 26.

Renumber the existing 535.4 to 535.5

CHAPTER 6 MIXED USE DISTRICT (CR):

Amend §601.1 to read as follows:

- 601 **USES AS A MATTER OF RIGHT (CR)**
601.1 (s) Antenna, subject to the standards and procedures which apply to the particular class of antenna pursuant to §§201.1 through 201.7 **CHAPTER 26 OF THIS TITLE.**

Amend §617.1 to read as follows:

- 617 **ANTENNA TOWER AND MONOPOLE (CR)**
617.1 **IF THE BOARD CONSIDERS THAT IT IS APPROPRIATE IN FURTHERING THE OBJECTIVES OF THE MIXED USE DISTRICTS** an antenna **TOWER OR MONOPOLE** shall be permitted as a special exception in the CR district, if approved by the Board of Zoning Adjustment subject to the standards and procedures which apply to the particular class of antenna under §§211 or 212 **AS SPECIFIED IN CHAPTER 26 OF THIS TITLE.**

Amend §630.3 to read as follows:

- 630 **HEIGHT**
630.3 Spires, towers, domes, pinnacles or minarets serving as architectural embellishments, penthouse over elevator shaft, ventilator shaft, antennas, chimneys, smokestacks or fire sprinkler tanks may be erected to a height in excess of that which this sections otherwise authorizes. **THIS SECTION SHALL NOT BE INTERPRETED TO BYPASS OTHERWISE REQUIRED SPEICAL EXCEPTION REVIEWS.**

Amend §637.1 to read as follows:

- 637 **SIDE YARDS (CR)**
637.1 No side yard shall be required for any structure located in a CR district, **EXCEPT AS MAY BE OTHERWISE ESTABLISHED.**

CHAPTER 7 COMMERCIAL DISTRICT (C):

Delete § 701.6 (g):

~~(g) Antenna tower for television and radio broadcasting, and in conjunction with the erection, alteration, or use of buildings for transmission or reception equipment; and~~

Delete § 701.7 through 701.9 in their entirety.

Amend §721.2 (t) to read as follows:

721 USES AS A MATTER OF RIGHT (C-2)

721.2 (t) Radio or television broadcasting studio ~~and antenna tower in conjunction with the studio~~ **NOT INCLUDING ANTENNA TOWER OR MONOPOLE;**

Delete § 741.6 and 741.7 in their entirety.

Amend §770.3 to read as follows:

770 HEIGHT

770.3 Spires, towers, domes, pinnacles or minarets serving as architectural embellishments, penthouse over elevator shaft, ventilator shaft, antennas, chimneys, smokestacks or fire sprinkler tanks may be erected to a height in excess of that which this sections otherwise authorizes. **THIS SECTION SHALL NOT BE INTERPRETED TO BYPASS OTHERWISE REQUIRED SPEICAL EXCEPTION REVIEWS.**

Amend §840.2 to read as follows:

840 HEIGHT

840.2 Spires, towers, domes, pinnacles or minarets serving as architectural embellishments, penthouse over elevator shaft, ventilator shaft, antennas, chimneys, smokestacks or fire sprinkler tanks may be erected to a height in excess of that which this sections otherwise authorizes. **THIS SECTION SHALL NOT BE INTERPRETED TO BYPASS OTHERWISE REQUIRED SPEICAL EXCEPTION REVIEWS.**

CHAPTER 9 WATERFRONT DISTRICTS

Amend §901.1 (u) to read as follows:

901 USES AS A MATTER OF RIGHT (W)

901.1 (u) Antenna, subject to the standards and procedure which apply to the particular class of antenna pursuant to ~~§201.2 through 201.7~~ **CHAPTER 26 OF THIS TITLE.**

Amend §914.1 to read as follows:

914 ANTENNA TOWER AND MONOPOLE (W)

914.1 If the board considers that it is appropriate in furthering the objectives of the waterfront districts, an **ANTENNA TOWER OR MONOPOLE** shall be permitted as a special exception in the W districts, if approved by the Board of Zoning Adjustment subject to the standards and procedures which apply to the particular class of antenna under ~~§§211 or 212~~ **AS SPECIFIED IN CHAPTER 26 OF THIS TITLE.**

Amend §930.3 to read as follows:

930 HEIGHT

930.3 Spires, towers, domes, pinnacles or minarets serving as architectural embellishments, penthouse over elevator shaft, ventilator shaft, antennas, chimneys, smokestacks or fire sprinkler tanks may be erected to a height in excess of that which this sections otherwise authorizes. **THIS SECTION SHALL NOT BE INTERPRETED TO BYPASS OTHERWISE REQUIRED SPECIAL EXCEPTION REVIEWS or mayoral approvals.**

DELETE §2001.11:

~~2001.11 A nonconforming antenna shall not be altered, modernized, or otherwise replaced, except in conformity with all provisions of this title.~~

~~2001.12 If a nonconforming antenna stops functioning, a temporary replacement antenna may be installed, subject to the following conditions:~~

- ~~(a) A permanent replacement antenna cannot be installed as a matter of right;~~
- ~~(b) The temporary installation shall be removed no later than one (1) year after the nonconforming antenna stops functioning;~~
- ~~(c) Within three (3) months after the nonconforming antenna stops functioning, the owner or occupant of the land or structure on which the antenna is installed shall apply for a special exception to install a longer-term replacement; and~~
- ~~(d) If the owner or occupant elects to install an immediate replacement antenna, the cost of the temporary replacement shall not be considered by the Board of Zoning Adjustment as a basis for approval of a special exception to install a longer term replacement.~~

DELETE §2503.5:

~~2503.5 An antenna which complies with all other requirements of this title may occupy any side or rear yard which is required by any provision of this title.~~

LANGUAGE TO BE ADVERTIZED IN THE ALTERNATIVE:

2604.2 STEALTH STRUCTURE

2604.2 SUBJECT TO THE PROCEDURE OF §2609 ANTENNAS LOCATED ON STEALTH STRUCTURES MAY BE PERMITTED BY RIGHT PROVIDED THE FOLLOWING CONDITIONS ARE MET:

- (a) STEALTH STRUCTURES INCLUDE, BUT ARE NOT LIMITED TO FLAG POLES, TREE POLES, BELL TOWERS IN WHICH ANTENNAS ARE INTEGRATED INTO THE DESIGN OF THE STRUCTURE SUCH THAT THE ANTENNAS ARE NOT VISIBLE.**
- (b) IN EVALUATING AN APPLICATION UNDER THIS SUBSECTION AS REQUIRED UNDER SECTION 2609, THE OFFICE OF PLANNING SHALL MAKE THE FOLLOWING DETERMINATIONS:**
 - (1) THAT THE PROPOSED STEALTH DESIGN PROVIDES ADEQUATE SCREENING OF THE ANTENNAS;**
 - (2) THAT THE PROPOSED STEALTH STRUCTURE IS NOT OUT OF SCALE WITH THE SUBJECT PROPERTY TAKING INTO ACCOUNT THE SIZE, SET-BACKS, TOPOGRAPHY AND UNDERLYING USE OF THE PROPERTY;**
 - (3) THAT THE PRIMARY USE OF THE SUBJECT PROPERTY IS NOT SINGLE-FAMILY RESIDENTIAL;**
 - (4) THE OFFICE OF THE PLANNING MAY REQUIRE THAT THE GROUND EQUIPMENT OF THE PROPOSED FACILITY BE LANDSCAPED, FENCED OR OTHERWISE SCREENED.**
- (c) THE HEIGHT OF A STEALTH STRUCTURE SHALL BE PERMITTED AS A MATTER OF RIGHT TO THE PRESCRIBED HEIGHT OF THE ZONE IN WHICH THE STRUCTURE IS PROPOSED OR AS MAY OTHERWISE BE PERMITTED IN THIS TITLE.**
- (d) THE DIAMETER OF A STEALTH FLAGPOLE SHALL NOT EXCEED 30 INCHES AT ITS BASE.**

- (e) FOR PURPOSES OF THIS SECTION ONLY, THE OFFICE OF PLANNING MAY REQUIRE THAT AN INDEPENDENT ENGINEER CERTIFICATE BE SUBMITTED TO DEMONSTRATE THAT THE FACILITY IS IN COMPLIANCE WITH ALL APPLICABLE BUILDING AND SAFETY REQUIREMENTS.**
- (f) ANY PROPOSED STEALTH STRUCTURE WHICH IS DETERMINED NOT TO COMPLY WITH THE STANDARDS OF (A), (B), (C) OR (D) MAY BE REFERRED TO THE BOARD OF ZONING ADJUSTMENT FOR REVIEW AS A SPECIAL EXCEPTION SUBJECT TO SECTION 3104.**

APPENDIX A



The FCC's Perspectives on Antenna and Tower Siting

Evan Baranoff
Staff Attorney
Federal Communications Commission
July 25, 2001



Federal Statutory Authority

- Section 332(c)(7) of the Communications Act of 1934, added by Section 704 of the Telecommunications Act of 1996
- Governs the powers of State and local governments with respect to the placement, construction, and modification of facilities used to provide cellular, broadband PCS, and other personal wireless services



July 25, 2001

Federal Communications Commission
Evan Baranoff

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Scope of Section 332(c)(7)

- Commercial mobile radio services
 - Cellular and broadband PCS
 - SMR and ESMR
 - Paging and narrowband PCS
 - Other CMRS
- Unlicensed PCS (low power, localized services)
- Fixed wireless services
- Not private wireless systems
- Not broadcast
- Not satellite dishes/receive antennas

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Evan Baranoff

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Section 332(c)(7) Generally

- Local authority generally preserved
- May not unreasonably discriminate among providers of functionally equivalent services
- May not prohibit or effectively prohibit provision of service
- May not regulate directly or indirectly based on the environmental effect of RF emissions, to the extent facility complies with FCC regulations



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Section 332(c)(7) Generally

- Must act within a reasonable time
- Denial must be in writing, based on substantial evidence in a written record
- Decisions appealable to federal or state court, RF appeals to courts or FCC



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Nondiscrimination

- Applies to providers of functionally equivalent services (e.g., cellular and PCS)
- Different facilities or different locations may be treated differently (e.g., height or type of support structure, residential or industrial zones)
- If no valid reason is given for different treatment, or reason is not supported by record, it's probably unreasonable



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No Prohibition of Service

- May not simply ban antennas or towers
- May not impose other restrictions (e.g., zoning or setbacks) if result is that service cannot be provided to desired areas
- Exactly what is permissible may depend upon layout, topography, etc.



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Reasonable Time

- Statute does not quantify.
- Same time period used for similar requests. Not required to give special priority.
- Exact requirements will depend on circumstances.



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Written Denial on Substantial Evidence

- Ordinary principles of administrative law
- Courts are divided on what written order must contain
- Record as a whole must reasonably support result



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Moratoria Generally

- Moratoria can delay buildout of network, thus retarding competition and burdening entry
- Moratorium may be a useful planning tool if limited and focused
- August 1998 agreement on guiding principles between representatives of local government and trade associations



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LSGAC Guidelines on Moratoria

- Guidelines:
 - fixed time period, often 180 days or less
 - do not use to delay, continue processing
 - work with carriers and community
- Non-binding alternative dispute resolution process



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RF Emissions

- State and local governments may not set substantive standards or disallow sites based on RF concerns if emissions are within federal guidelines
- State and local governments have reasonable concern with ensuring that sites comply with federal guidelines
- Local Official's Guide

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Collocation

- Popular means of reducing number of sites, but not always feasible or desirable
- May encourage, but do not force
- Use positive incentives



Other Specific Requirements

- Reasonable measures to protect community
- Use common sense

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Use of Municipal Property

- Can be mutually beneficial
- May encourage, but do not force
- Reasonable charges



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FCC Resources

- Informal, non-binding advice on legal and practical questions
- Appearance at regional/local forums
- Web site at <http://www.fcc.gov/wtb/siting>
- Initial Contact: Deborah Behlin
202-418-7242
dbehlin@fcc.gov



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**Human Exposure to Radiofrequency
Electromagnetic Fields: FCC guidelines;
global standards; evaluating compliance;
federal & local jurisdiction**




Robert F. Cleveland, Jr.
Office of Engineering & Technology
Federal Communications Commission
Washington, D.C. 20554



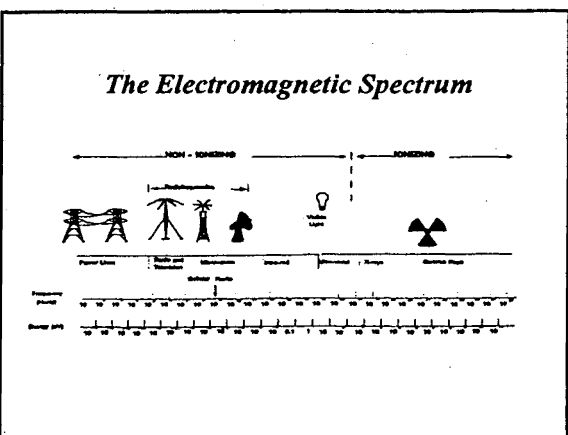
**U.S. FEDERAL COMMUNICATIONS
COMMISSION**

- Licenses or authorizes telecommunications services in the United States except those operated by the Federal Government
- Has regulatory authority over commercial broadcast stations, wireless facilities, civilian satellite communications, amateur radio, and other communications services

***What is a radiofrequency
electromagnetic field &
what is radiofrequency
radiation or energy?***

**Radiofrequency Radiation or
Radiofrequency Energy**

- a type of electromagnetic radiation
- radiofrequency = "RF"
- also written as "Radio Frequency"
- includes radio waves & microwaves
- a type of "non-ionizing" radiation



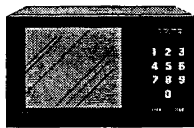
**Radiofrequency electromagnetic radiation
= Non-ionizing radiation**

- "non-ionizing" → "NOT" ionizing
- "ionizing" radiation has greater amount of energy and can result in more immediate harm (ex: nuclear radiation, gamma rays)
- mechanisms of interaction are different
- should not confuse these two types

Major uses of radiofrequency energy:

- Telecommunications
- Industrial applications
- Medical applications

What are the potential biological effects of RF energy?



+

Radiofrequency (RF) Energy (microwaves)

=



Mobile phones link to cancer

By Associated Press
The use of mobile phones has been linked to an increase in brain tumors, according to a new study. The study, which was published in the journal 'Cancer Epidemiology and Biomarkers Prevention', found that people who use mobile phones for more than 10 years have a higher risk of developing brain tumors. The study also found that the risk of brain tumors increases with the amount of time spent on the phone. The researchers concluded that the use of mobile phones may be a contributing factor to the increase in brain tumors. The study was based on data from a large population-based study of brain tumors in Sweden. The researchers found that the risk of brain tumors was higher in people who used mobile phones for more than 10 years compared to those who used them for less than 10 years. The risk was also higher in people who used mobile phones for more than 10 years and had a history of brain tumors. The researchers concluded that the use of mobile phones may be a contributing factor to the increase in brain tumors. The study was based on data from a large population-based study of brain tumors in Sweden. The researchers found that the risk of brain tumors was higher in people who used mobile phones for more than 10 years compared to those who used them for less than 10 years. The risk was also higher in people who used mobile phones for more than 10 years and had a history of brain tumors. The researchers concluded that the use of mobile phones may be a contributing factor to the increase in brain tumors.

Big Issue:

thermal biological effects

vs.

“non-thermal” biological effects

****Also: is an “effect” a hazard?***

Some “Non-thermal” Effects Reported in the Scientific Literature:

- *effects on calcium ions in brain tissue*
- *effects on leakage of blood-brain barrier*
- *certain effects on immune system*
- *breaks in genetic material (DNA)*

*** However, not all effects have been replicated & relevance to human health not known**

Current Research Studies Related to Cell Phone Safety

- Most research being carried out overseas
- Several research programs underway in Europe & Australia
- In USA most research industry-sponsored (ex. Motorola, CTIA/FDA research agreement)
- However, US Govt. National Toxicology Program (NIH) just committed \$10 million for research

World Health Organization (WHO) *EMF Project*

- Multi-year project to review data on health effects of electromagnetic fields (EMF) and promote international standards development and harmonization
- Collaborating organizations: 8 international agencies; 40+ national authorities, 8 WHO collaborating centers
- Web Site: www.who.int/peh-emf

What are the standards for safe exposure?



***Global Standards for RF Exposure:* principal organizations developing recommended exposure limits**

- Institute of Electrical and Electronics Engineers (IEEE)
- International Commission on Non-Ionizing Radiation Protection (ICNIRP)
- National Council on Radiation Protection and Measurements (USA)

How are safe exposure levels determined?

A: mainly through biological experiments (animals, cell cultures) & epidemiologic studies (studies of health status of large groups of people)

Derivation of Exposure Limits

Whole-body exposure:

Threshold for potential harm + safety factors
= *final limits*

Partial-body exposure (ex. cell phones):

Threshold for potential harm
+ safety & scaling factors = *final limits*

Most Exposure Guidelines Based on Specific Absorption Rate (SAR)

- › SAR = rate energy absorbed per unit mass of biological tissue
- › *Units:* watts/kg (W/kg) or milliwatts/gm (mW/g)

Principal RF safety guidelines based on same threshold level of SAR for “unfavorable” effects) of 4 W/kg

- › ANSI/IEEE
- › NCRP (USA)
- › ICNIRP (Europe and elsewhere)

Why is the FCC involved in this health & safety issue?

FCC has legal responsibilities under National Environmental Policy Act (NEPA) to evaluate environmental impact



U.S. Federal Communications Commission: Policy Concerning Exposure to Radiofrequency Radiation from FCC-Regulated Transmitters

- FCC not a health and safety agency
- Relies on expert organizations and agencies for advice and guidance
- FCC has legal responsibilities under National Environmental Policy Act (NEPA) to evaluate impact on environment and health of its actions

FCC adopted original rules regarding RF exposure in 1985 and revised them in 1996



In 1996, FCC adopted new guidelines for evaluating human exposure to radiofrequency electromagnetic fields

- 1993 Notice of Proposed Rule Making
- Comments submitted by public, industry and other Federal agencies
- Rule citation: 47 CFR 1.1307(b)
- Text available: www.fcc.gov/oet/rfsafety
- Required by Telecommunications Act of 1996



FCC Exposure Limits Based on NCRP and ANSI/IEEE Recommendations

- **NATIONAL COUNCIL ON RADIATION PROTECTION AND MEASUREMENTS (NCRP)**
A non-profit corporation chartered by the U.S. Congress to develop information & recommendations on radiation protection
- **AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)**
A non-profit, privately funded, membership organization that coordinates development of voluntary U.S. national standards
- **INSTITUTE OF ELECTRICAL & ELECTRONICS ENGINEERS (IEEE)**
A non-profit technical and professional society with membership of over 300,000 engineers and scientists worldwide



FCC Guidelines Also Based on Recommendations of U.S. Federal Government Health and Safety Agencies

EPA: Environmental Protection Agency
FDA: Food and Drug Administration
NIOSH: National Institute for Occupational Safety and Health
OSHA: Occupational Safety and Health Administration



Standards for RF Exposure Used in Various Countries

- ✓ **USA:** NCRP, IEEE
- ✓ **Europe (& others):** ICNIRP
- ✓ **Others (Eastern Europe, China, etc.)**



Court Reviews of FCC's RF Guidelines

- US Court of Appeals (Second Circuit) affirmed FCC Orders adopting RF guidelines (February 2000)
- Later petition for re-hearing denied (June 2000)
- US Supreme Court refused request to review Court of Appeals decisions (January 2001)



FCC INTERNET SITE for RF Safety: www.fcc.gov/oet/rfsafety

- Frequently asked questions (FAQs)
- Information on FCC actions
- FCC publications on RF safety
- FCC decision documents
- Links to other RF-related Web sites

Also: FCC RF Safety Information Telephone Line: +1-202-418-2464

What are the major sources of exposure to RF energy?

Sources of exposure to RF energy?



workers



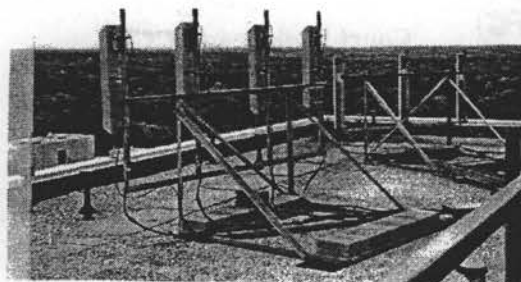
general public/consumers

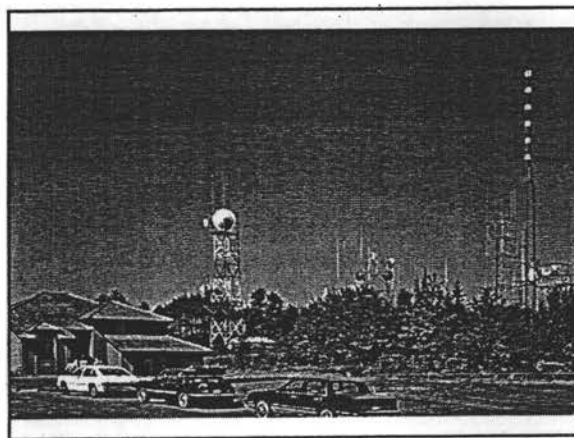
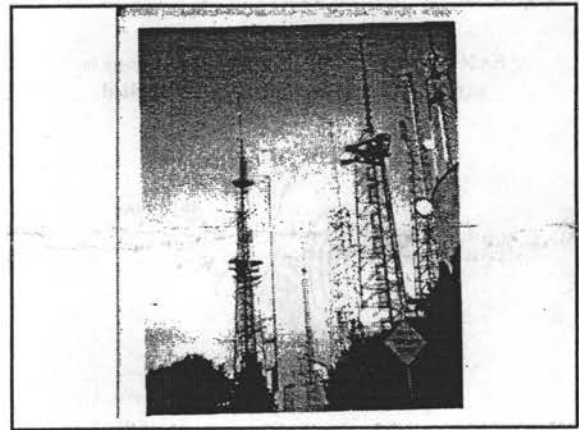
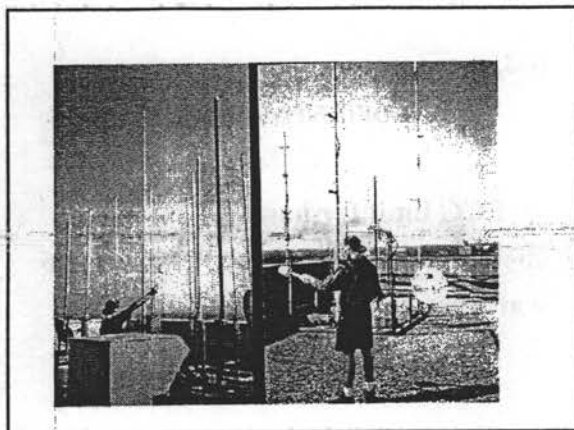
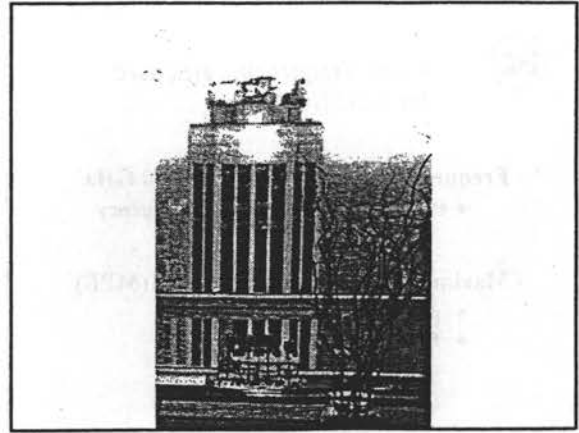
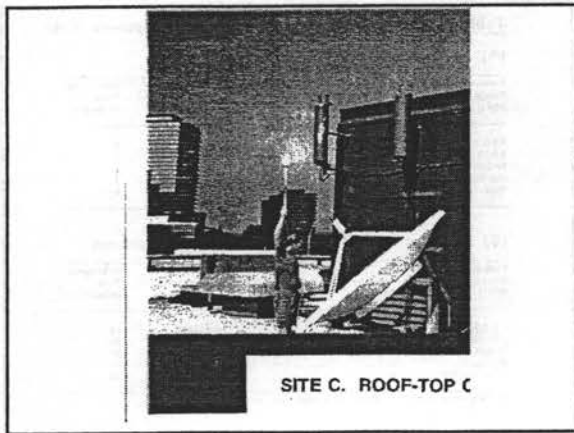


Recommended Power Density Limits at US Cellular Radio Transmitting Frequencies (calculated at 870 MHz)

	<u>Occupational (controlled)</u>	<u>General Public (uncontrolled)</u>
	(μW/cm ²)	
IEEE (1991)	2900	580
NCRP (1986)	2900	580
ICNIRP (1998)	2175	435

Typical ground-level reading: < 1 μW/cm²





***FCC limits have TWO
EXPOSURE TIERS***

A. Occupational/Controlled Limits:

➤ apply to workers

B. General Population/Uncontrolled Limits:

➤ apply to general public (residential exposure, etc.)



Units, Frequencies, etc., used for FCC Guidelines

- › Frequency range: 300 kHz to 100 GHz
- ♦ exposure limits depend on frequency

› Maximum Permissible Exposure (MPE)

- ♦ power density: mW/cm^2
- ♦ field strength: V/m or A/m

Table 1. FCC Limits for Maximum Permissible Exposure (MPE)

(A) Limits for Occupational/Controlled Exposure

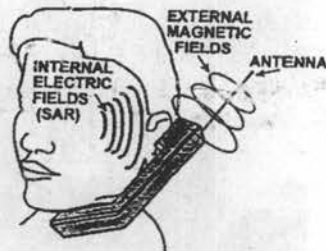
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Averaging Time (minutes)
0.3-3.0	914	1.83	(100) ^a	6
3.0-30	1842/f	4.89/f	(900/f) ^a	6
30-300	91.4	0.163	1.0	6
300-1500	—	—	0.500	6
1500-100,000	—	—	0	6

(B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Averaging Time (minutes)
0.3-1.34	914	1.83	(100) ^a	30
1.34-30	924/f	2.18/f	(180/f) ^a	30
30-300	27.5	0.073	0.2	30
300-1500	—	—	0.1500	30
1500-100,000	—	—	1.0	30

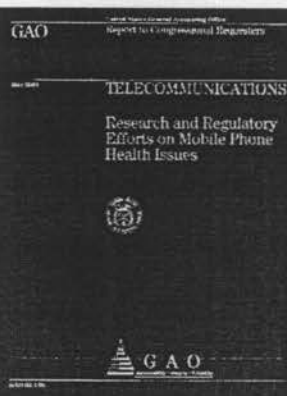
f = frequency in MHz ^a = Plane-wave equivalent power density

SAR induced in head of user by cell phone is proportional to the internal electric field



FCC POLICY ON EVALUATION OF MOBILE/PORTABLE DEVICES

- FCC limit for hand-held devices such as cell phones is SAR level of 1.6 watts per kilogram (1.6 W/kg)



Major Conclusions & Recommendations of GAO Report on Mobile Phone Health Issues

- No evidence that mobile phones have adverse health effects, but cannot conclude no risk. Further research needed.
- Will likely be many years before definitive conclusion reached
- FDA should make full disclosure regarding its research agreement (CRADA) with industry (CTIA)
- FCC should issue new guidance on cell phone test procedures
- FCC & FDA should provide consumers with updated and better information on cell phone safety

How is compliance with the standards evaluated by the FCC?



47 CFR 1.1307(b)(4) & (b)(5)

- **OCTOBER 15, 1997:**
 - effective date for implementing new RF guidelines
- **SEPTEMBER 1, 2000:**
 - all existing transmitting facilities, operations and devices must be in compliance with RF rules, or, if not, file an Environmental Assessment (EA)



FCC Enforcement of RF Safety Rules

- **Primary responsibility:** FCC Enforcement Bureau (+Office of Engineering & Technology)
- **Enforcement team:** Denver & DC
- **Field inspectors use checklist for RF compliance**
- **Potential problems referred to RF enforcement team for further investigation**



△ FCC RF Safety Publications

- **OET BULLETIN 56:** *general information, FAQ's*
- **OET BULLETIN 65:** *guide for evaluating compliance with FCC RF exposure limits*
- **OET 65 SUPPLEMENTS:**
 - A: Broadcast
 - B: Amateur radio
 - C: Mobile & portable devices
- **LOCAL GOVERNMENT (LSGAC) GUIDE**
- **Others** (Cellular/PCS factsheet, public notices, etc.)



Ways To Control Exposure For Fixed Transmitting Stations

PUBLIC EXPOSURE:

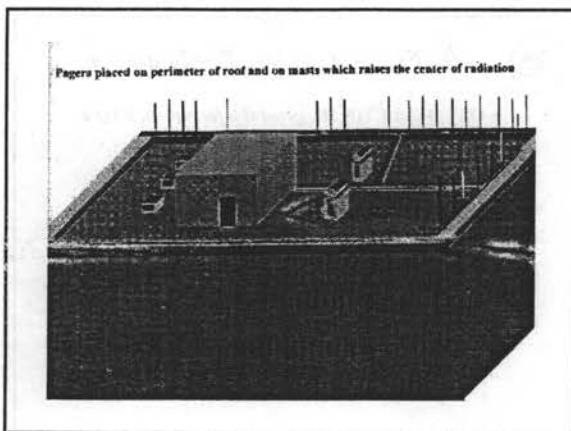
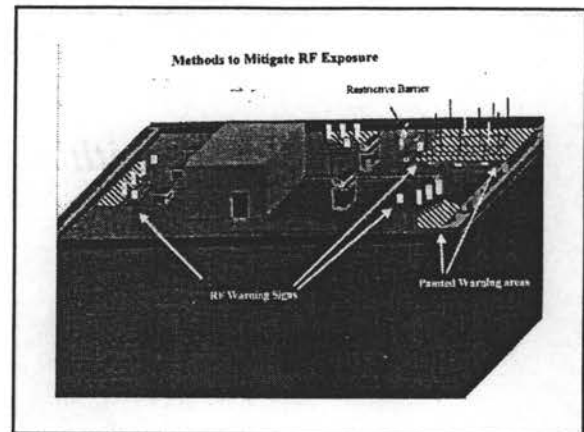
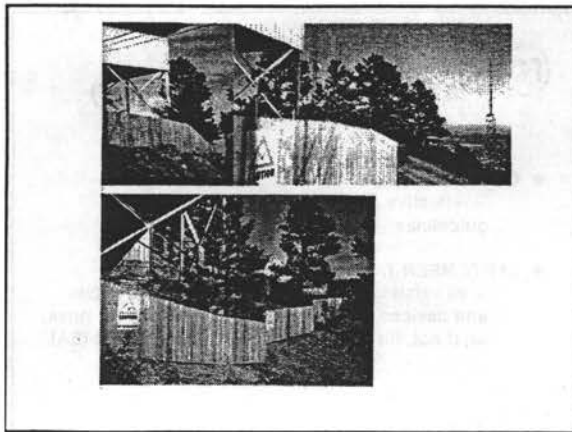
- Restrict access by fencing or other means
- Use warning/alerting signs in restricted areas
- Redesign antenna to selectively reduce RF levels
- Increase antenna height to reduce RF on ground
- Relocate to new site



Ways To Control Exposure For Fixed Transmitting Stations

WORKPLACE EXPOSURE:

- Educate & train personnel
- Develop RF work practices
- Limit time of exposure (time averaging)
- Use warning/alerting signs & restrict access
- Shield RF sources
- Reduce power as necessary
- Use auxiliary/temporary transmitters
- Use protective clothing and personal monitors
- Elevate rooftop antennas above roof level
- Locate directional antennas near edge of rooftop



Wireless Facility Siting: *Federal vs Local Jurisdiction*

- Sec 704 of Telecomm Act of 1996 amended Sec 332(c) of Communications Act
- Local authority limited to placement, construction, modification of wireless facilities
- Restricts local regulation of wireless facilities based on RF emissions
- LSGAC established to provide advice & information to FCC on local/state concerns
- Web information: www.fcc.gov/wtb/siting



Wireless Facility Siting: *Federal vs Local Jurisdiction (contd)*

- *Report & Order*, WT Docket 97-192, FCC 00-408, Nov 17, 2000 (*see* www.fcc.gov)
- Addresses issues relating to local regulation of wireless facilities (e.g., dispute resolution)
- Establishes procedures for requesting relief from impermissible state or local regulation
- Directs local/state officials to LSGAC *Guide* for help in ensuring compliance or initiating FCC compliance investigations



Local and State
Government
Advisory
Committee

A Local Government Official's Guide to
Transmitting Antennas RF Emission Safety:
Rules, Procedures, and Practical Guidance



June 9, 2000