



Buildings
2021-011
Bulletin
TECHNICAL
ISSUANCE DATE
July 21, 2021



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Assistant Commissioner, Code & Zoning Interpretation

PURPOSE: This bulletin clarifies the applicability and limitations of TPPN 5 of 1998 to cellular antennas.

SUBJECT(S): Cellular antenna; related cellular equipment; Spectrum Act; Federal Communications Commission; Eligible facility; Substantial change; Use Group 6, communication equipment structures; Board of Standards and Appeals; Rooftop; Water tank; Lawful sign; Chimney; Smokestack; Façade; Platform; Dunnage; Cell phone antenna; Wireless technology; Small cell technology

Technical Policy Procedure Notice (TPPN) 5 of 1998; Zoning Resolution (ZR) 22-21, 32-15, 32-31, 42-12, 42-31; Building Code (BC) 3202.2, 1704.10, 1704.32; Fire Code (FC) 504.4.1; Administrative Code (AC) 28-105.4.2; Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012 ('Spectrum Act')

I. BACKGROUND

Technical Policy and Procedure Notice (TPPN) 5 of 1998 clarifies that cellular antennas and related equipment meeting the limitations of such notice are not regulated by the Zoning Resolution. Technologies have advanced greatly since the issuance of TPPN 5 of 1998, requiring further clarifications on the specific limitations of cellular antennas based on the most recent antenna technology. Such limitations are applicable to antenna installations in all zoning districts. Antenna installations exceeding these limitations shall be subject to the Zoning Resolution.

II. CLARIFICATION OF PART A OF TPPN 5 OF 1998

TPPN 5 of 1998, Part A states:

"A. Zoning Exemption

... To the extent the antenna and related equipment do not meet these criteria, they may be classified as Use Group 6 "communication equipment structures," and as such, may require a special permit in residence districts pursuant to Z.R. §22-21."

A. Use Group 6 "communication equipment structures"

To the extent the antenna and related equipment do not meet the criteria of TPPN 5/98 as interpreted in this bulletin, they may be classified as Use Group 6 (UG 6) "communication equipment structures," and as such, may be erected as-of-right in Commercial and Manufacturing Districts, subject to the zoning bulk regulations, or by Special Permit or Variance, or may be permitted in a Residence District pursuant to a special permit issued by the Board of Standards and Appeals.

III. CLARIFICATION OF PART A(1) OF TPPN 5 OF 1998

TPPN 5 of 1998, Part A(1) states:

"1. The antennas must be attached to a building or other structure that has a use independent of supporting the antennas."

Independent Use

The antennas must be attached to a building or other structure that has a use beyond solely supporting the antennas.

A. Buildings

Antennas may be attached to the roof or façades of a building, and their related equipment may be placed on the roof, inside a building, or at grade, provided they meet the limitations of TPPN 5 of 1998 and the clarifications in this bulletin.

B. Lawful sign structures as “other structure”

Lawful signs and their structure, including those mounted on a building or at grade, may be considered “other structure that has a use independent of supporting the antennas.” Antennas may be attached to such sign structure provided they meet the limitations of TPPN 5 of 1998 and the clarifications in this bulletin.

C. Water tank structures as “other structure”

A water tank and its supporting structure erected on a building or at grade may be considered “other structure that has a use independent of supporting the antennas.” Antennas may be attached to the water tank supporting structure provided they meet the limitations of TPPN 5 of 1998 and the clarifications in this bulletin.

D. Chimneys and smokestacks as “other structure”

Chimneys and smokestacks that are part of a building or at grade may be considered “other structure that has a use independent of supporting the antennas.” Antennas may be attached to them provided they meet the limitations of TPPN 5 of 1998 and the clarifications in this bulletin.

IV. CLARIFICATION OF PART A(2) OF TPPN 5 OF 1998

TPPN 5 of 1998, Part A(2) states:

“2. The antennas may not extend higher than six (6) feet above the height of the roof or parapet on the roof, or six feet above any penthouse or bulkhead, if placed on such penthouse or bulkhead.”

A. Measurement of the 6-foot height limitation

- a. Where an antenna structure is attached to a roof without parapets, the 6 feet is to be measured from the surface of the roof where such structure is anchored (*See Figure 1*).
- b. Where an antenna structure is attached to a roof with parapets, the 6 feet is to be measured from the top of the nearest parapet on that building to the antenna structure. Where the nearest parapets are of different heights, the 6 feet is to be measured from the shortest parapet (*See Figure 2*).
- c. Where an antenna structure is attached to a parapet, the 6 feet is to be measured from the top of such parapet (*See Figure 3*).
- d. Where an antenna structure is attached to a sign structure that is lawful with a lawful sign (e.g., legal billboard):
 - i. if the sign structure is mounted at grade, the antenna array is limited to 6 feet maximum and must not exceed the highest point of the display surface of the sign to which the antenna is attached (*See Figure 4*);
 - ii. if the sign structure is mounted on a building, the antenna array is limited to 6 feet maximum and must not exceed the highest point of the display surface of the sign to which the antenna is attached (*See Figure 5*).

- e. Where an antenna structure is attached to a water tank supporting structure, chimney or smokestack, the antenna array is limited to 6 feet maximum and must not exceed the highest point of the water tank, chimney, or smokestack to which the antenna is attached (See Figures 6 and 7).

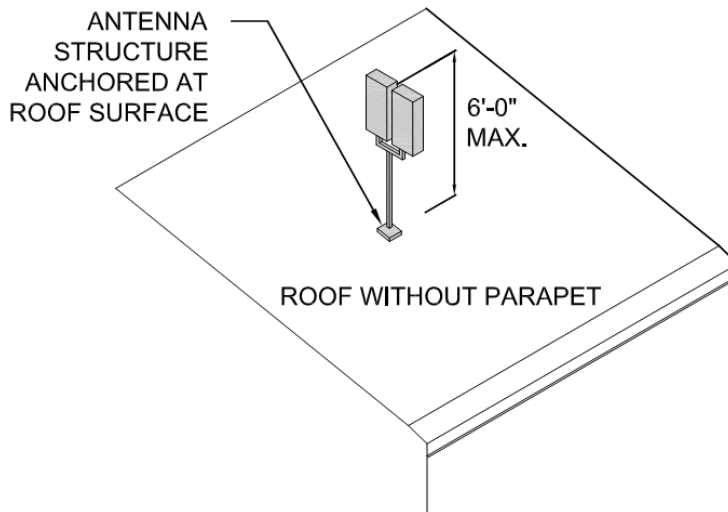


Figure 1

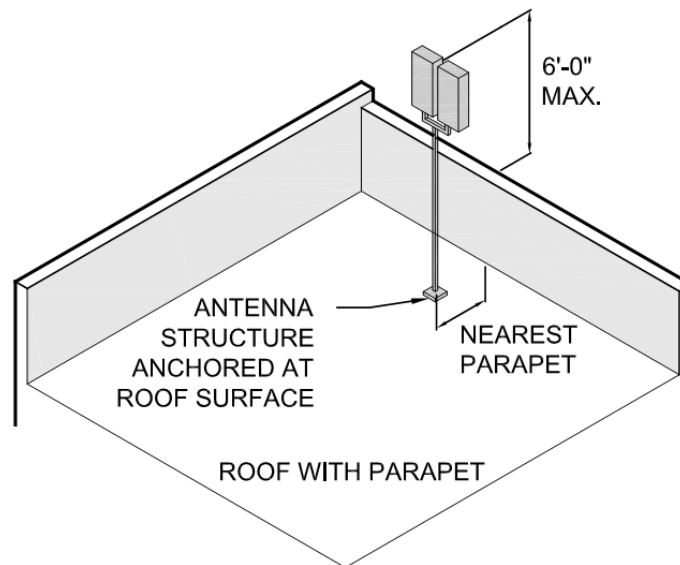


Figure 2

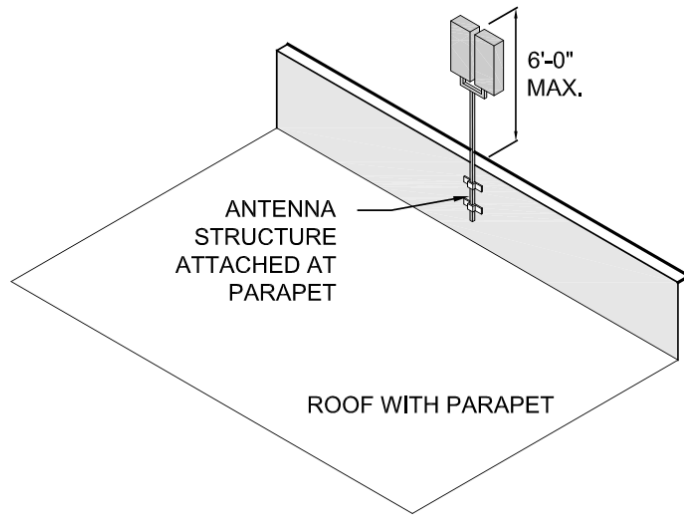


Figure 3

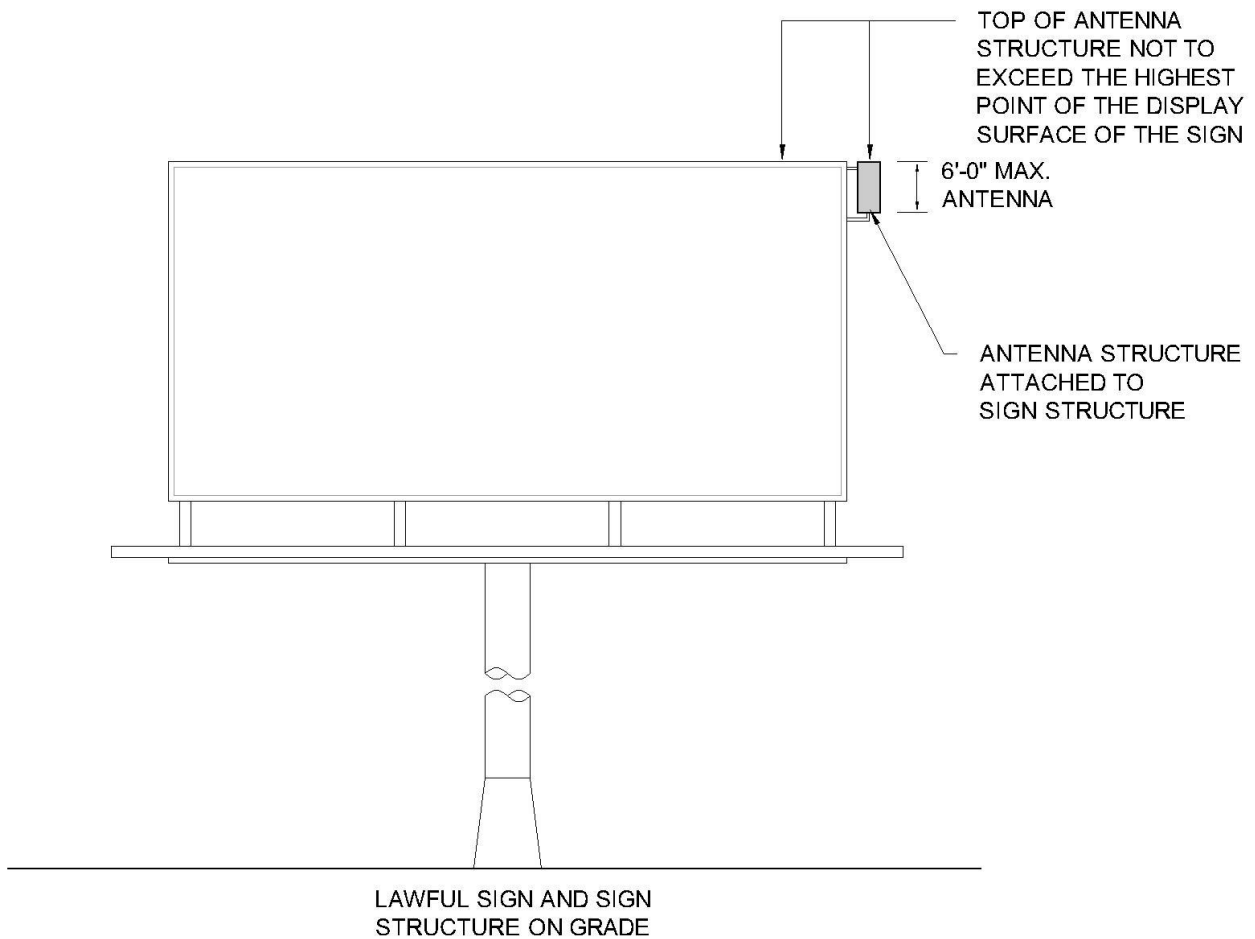


Figure 4

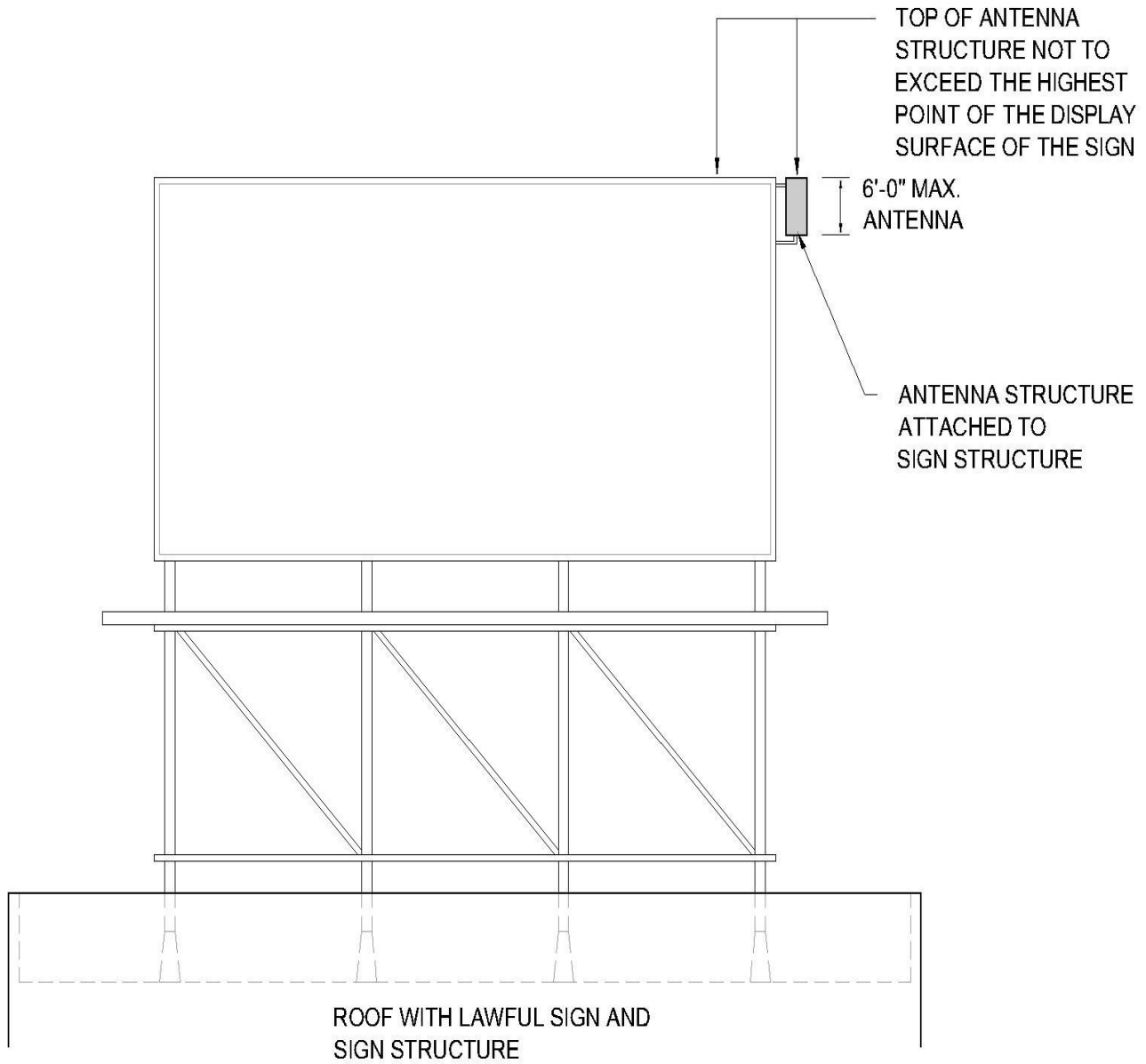


Figure 5

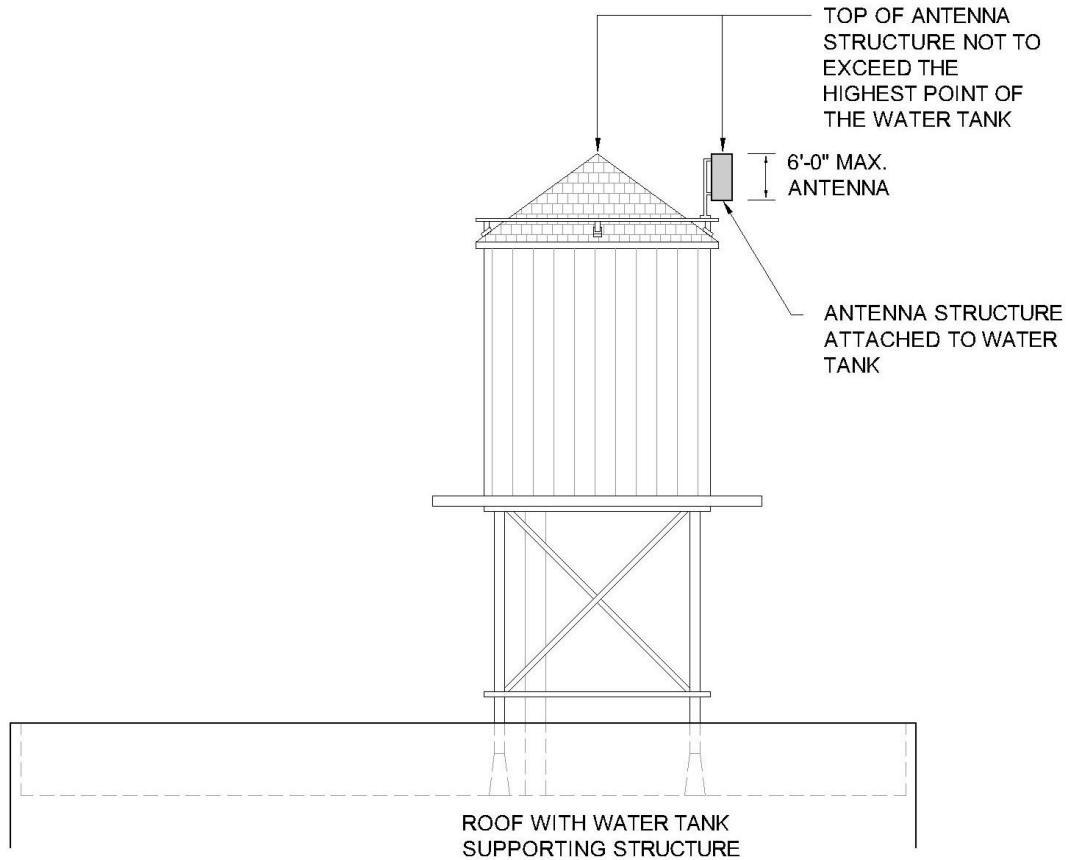


Figure 6

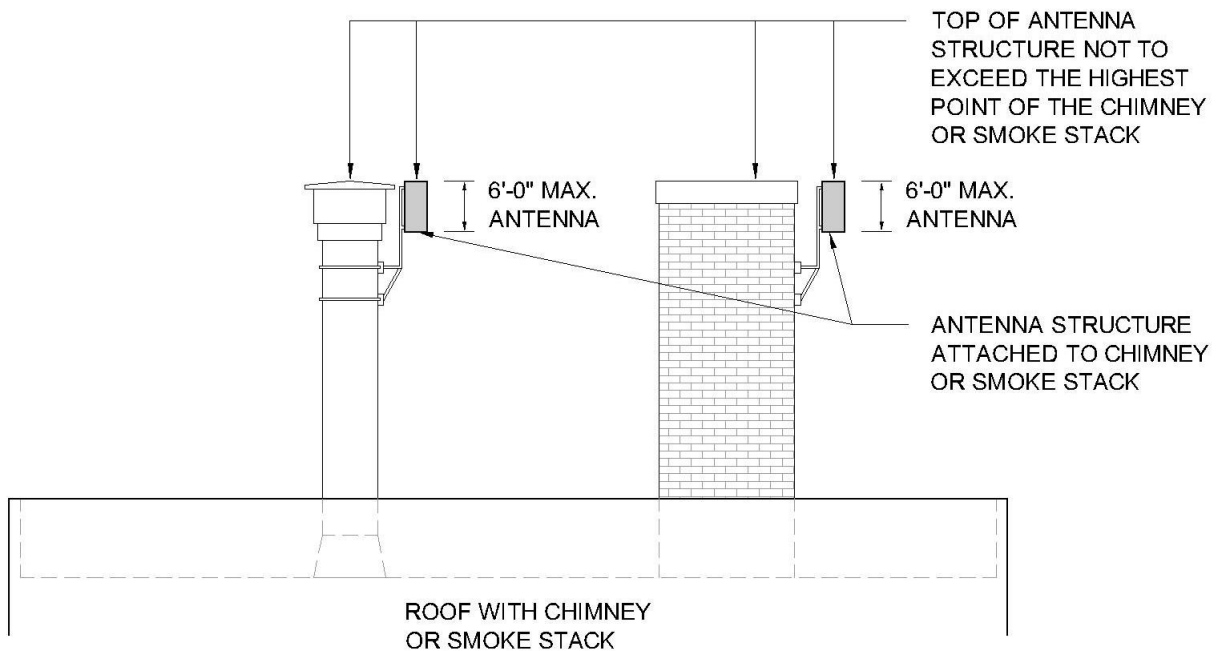


Figure 7

V. CLARIFICATION OF PART A(3) OF TPPN 5 OF 1998

TPPN 5 of 1998, Part A(3) states:

“3. The antennas shall each have an area no more than 8.45 square feet or one meter in diameter.”

A. Antennas attached to building façades on a street line

Antennas that are attached to building façades as projections may be considered architectural details subject to Building Code section 3202.2 (Encroachments above grade). Antennas, each measuring no more than 8.45 square feet or one meter in diameter (39.37 inches), may project not more than 4 inches when they are less than 10 feet above the ground or sidewalk level immediately below, and project not more than 10 inches when they are 10 feet or more above the ground or sidewalk level immediately below. Building Code section 3202.2 limits the aggregate area of all such elements constructed to extend beyond the street line to not exceed 10 square feet within any 10 feet by 10 feet square area of façade. Such installations shall not obstruct fire apparatus aerial ladder access to the rooftop perimeter access locations pursuant to Fire Code section 504.4.1 (See *Figure 8*).

B. Antennas attached to building façades other than those on a street line

Antennas that are attached onto any exterior building wall surface other than façade walls on street lines, are permitted to comply with Part V(A) on such façades of this bulletin, only when such antennas are not located in any required yards, courts, open space, open area or similar. In addition, such projections require an easement agreement if mounted on a wall that abuts another tax lot.

C. Special Inspections

Antenna installations on existing façade are subject to special inspections in accordance with Building Code Chapter 17, including but not limited to section 1704.10 for wall panels, curtain walls and veneers, and section 1704.32 for post-installed anchors, as applicable to the specific installation.

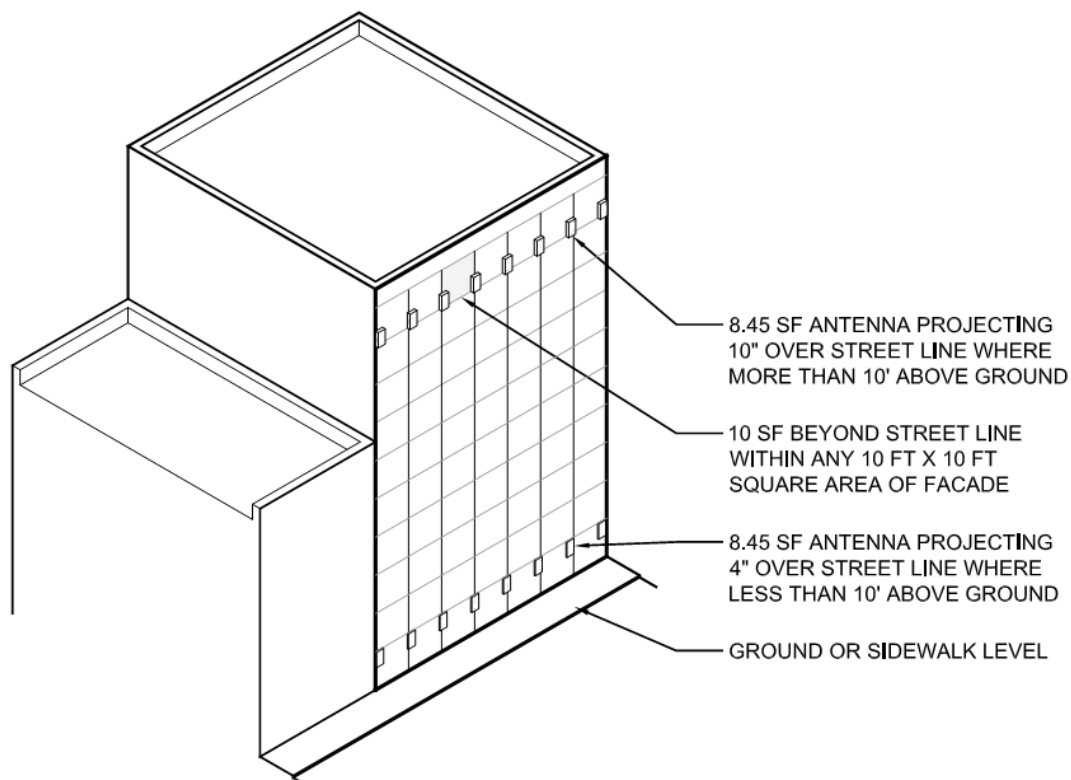


Figure 8

VI. CLARIFICATION OF PART A(4) OF TPPN 5 OF 1998

TPPN 5 of 1998, Part A(4) states:

“4. The related cellular equipment must not occupy more than 5% of the floor area on a zoning lot or 400 square feet.”

A. Platform and dunnage as related cellular equipment

Platform and dunnage that are provided to support cellular antenna structure and its equipment is considered “related cellular equipment”. Steps and stairways serving platform or dunnage shall be included the size limitation calculation. If the platform or dunnage occupies the same footprint as other related cellular equipment it supports, and the footprint of other related cellular equipment is accounted for, the overlapping square footage of the platform or dunnage need not be included (See *Figures 9 and 10*).

B. Related cellular equipment floor space

1. To facilitate safe maneuverability around the cellular antennas, 40 square feet is permitted in addition to the 400 square feet given to the related cellular equipment. The 440 total square feet limitation is applicable to each building, for all carriers combined, when related cellular equipment is located on a roof, sign, water tank, chimney and smokestack, or in open space on the zoning lot. The 440 square feet per building allowance can be applied to multiple buildings on the same zoning lot and is independent of the cumulative total area that the related cellular equipment may occupy within a building (See *Figures 9, 10, 12 and 13*).
2. Where related cellular equipment is located within a building, including in a cellar, the cumulative total of the area occupied by the related cellular equipment shall not exceed 5 percent of the current zoning floor area of the building in which the equipment is located (See *Figure 11*).

---Figures on following pages---

Legend:

----- Zoning Lot Line



Equipment Overlapping Square Footage of the Platform (not to be included in the area calculation)



Outdoor Equipment & Platform Area (cumulative total of the area occupied by the related cellular equipment shall be limited to 440 square feet per building)

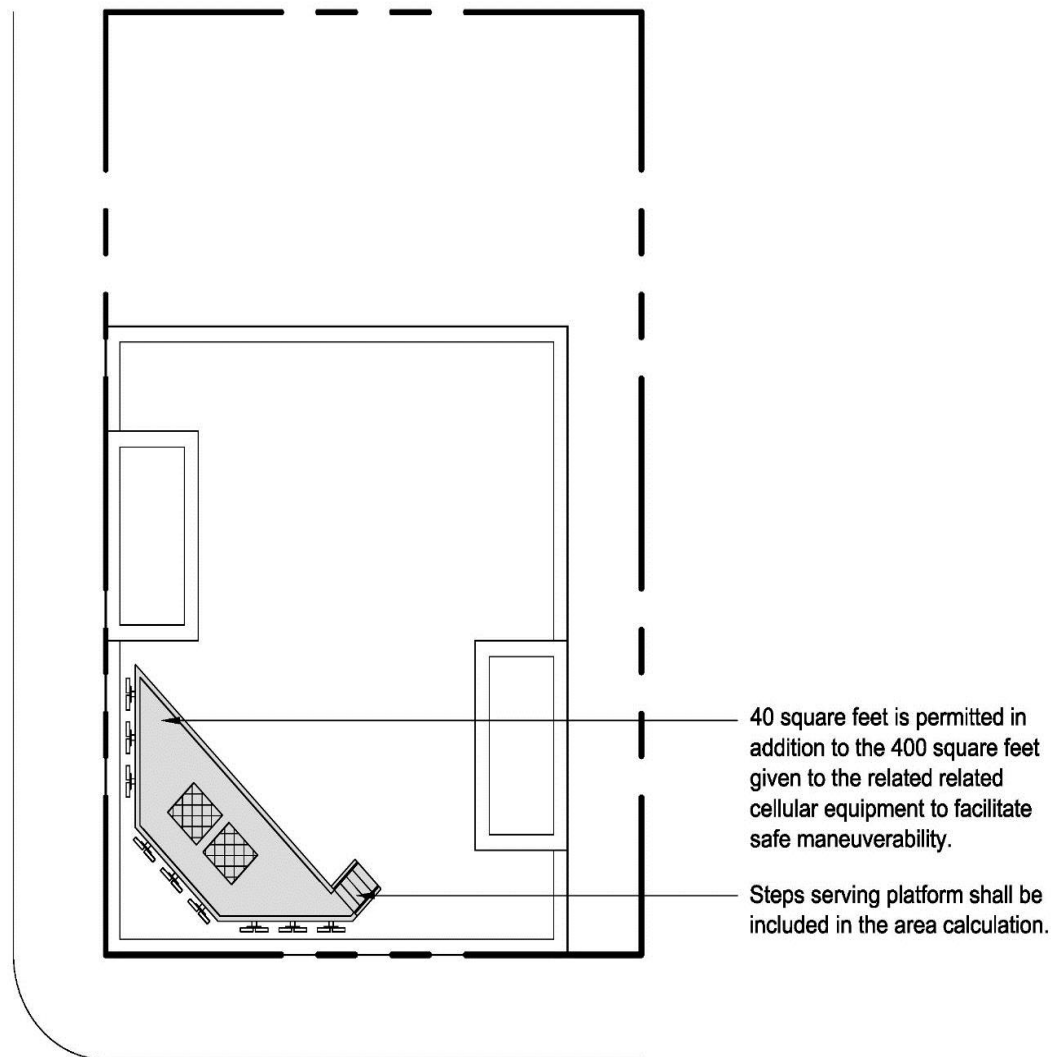


Figure 9

Legend:

----- Zoning Lot Line



Equipment Overlapping Square Footage of the Platform (not to be included in the area calculation)



Outdoor Equipment & Platform Area (cumulative total of the area occupied by the related cellular equipment shall be limited to 440 square feet per building)

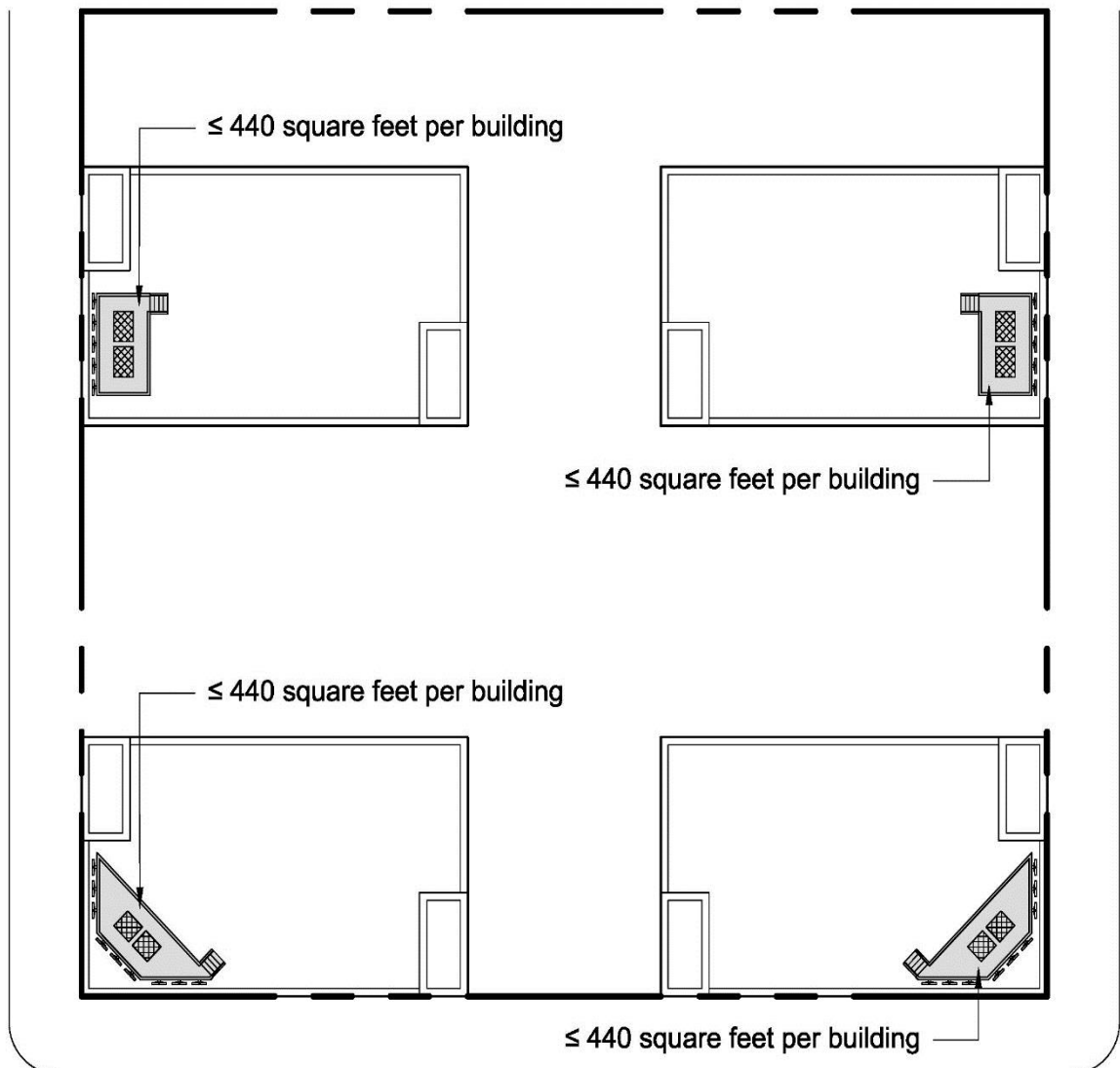


Figure 10

Legend:

----- Zoning Lot Line

Indoor Equipment Area (cumulative total of the area occupied by the related cellular equipment shall be limited to 5% of the existing floor area of the building)

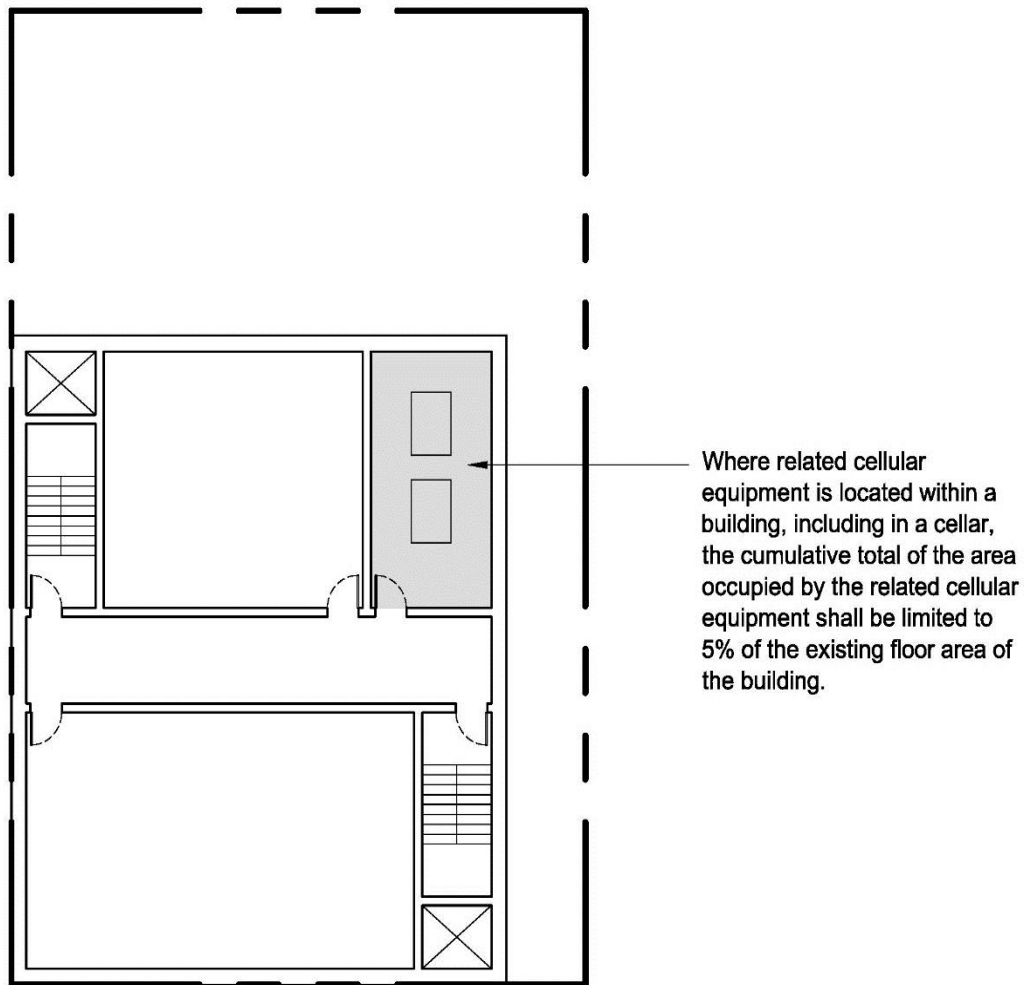


Figure 11



Figure 12. A steel flange support at a corner parapet that counts toward “related cellular equipment”.

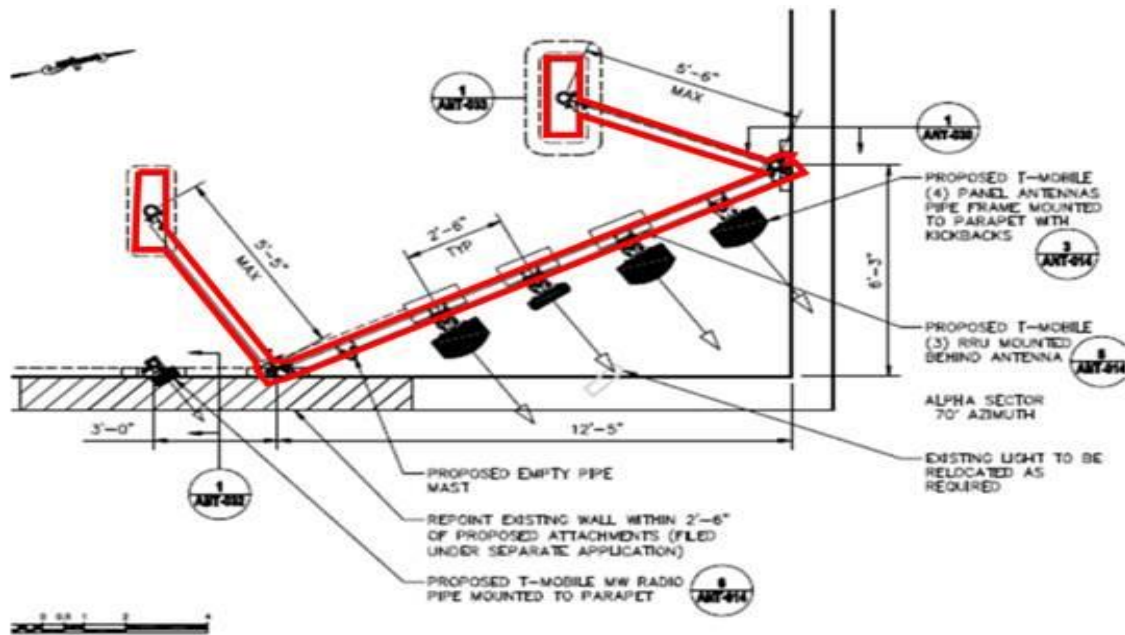


Figure 13. Red outline denotes supporting structure that counts toward “related cellular equipment”.

VII. CLARIFICATION OF PART B OF TPPN 5 OF 1998

TPPN 5 of 1998, Part B states:

“The installation of cellular antennas and their related equipment on any building in any district requires the filing of an alteration application.”

A. Lawful antennas and equipment undergoing ordinary repairs

The repair or replacement of antennas or equipment in kind, provided that such equipment does not exceed the area or volume indicated on the previous application, is considered ordinary repairs as defined in AC §28-105.4.2, and shall not require a permit for such repair or replacement work, provided the antennas were installed lawfully pursuant to permits issued by the Department. This exemption from permit shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this bulletin, or any other law or rules. Such exemptions shall not relieve any owner of the obligation to comply with the requirements of other city agencies, which may include the need to file with such agencies.

Where the Board of Standards and Appeals (BSA) has granted a special permit pursuant to ZR §22-21, any replacement or upgrade of the internal system or ordinary repair within the existing equipment of a lawful antenna need not obtain approval from the BSA for such scope of work provided that such equipment does not constitute a substantial change per Part VII(B) below. Other modifications beyond the scope of previously obtained Special Permit by the BSA require BSA approval, or where applicable, BSA Letter of No Objection.

B. Spectrum Act and its impact on existing cellular antennas

Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012 (“Spectrum Act”), as interpreted by the Federal Communications Commission’s (“FCC” or “Commission”) Acceleration of Broadband Deployment Report & Order, requires a state or local government to approve any Eligible Facilities Request for a modification of an existing tower or base station that does not result in a substantial change to the physical dimensions of such tower or base station, provided Code requirements are satisfied including but not limited to Fire Code.

- i. The Department will accept professional certification applications by Registered Design Professionals (“RDP”) for Eligible Facilities covered by the Act, identified by the RDP as not constituting a substantial change per the Spectrum Act.
- ii. Modifications to an existing lawful antenna equipment structure that constitutes a substantial change will not be accepted through professional certification as an Eligible Facility covered by the Act, and must comply with the requirements of Use Group 6 (UG 6) “communication equipment structures,” and may be erected as-of-right in Commercial and Manufacturing Districts, subject to the zoning bulk regulations, or may be permitted pursuant to a special permit issued by the Board of Standards and Appeals.

VIII. CLARIFICATION OF PART B(3) OF TPPN 5 OF 1998

TPPN 5 of 1998, Part B paragraph two states:

“In order to demonstrate compliance with this TPPN, the plans shall show all cellular equipment and antennas already located in or on the building, and the following:

...

3. *A calculation of the cumulative floor area and the dimensions of the room occupied by existing and proposed cellular equipment in the building.”*

Existing Conditions Documentation

1. **Antennas and related cellular equipment located on the roof, sign, water tank, chimney and smokestacks.** Roof plans of all existing antennas and related cellular equipment must be submitted to demonstrate installation locations, and cumulative areas already occupied by such antennas and related cellular equipment. Existing conditions of the roof including rooftop structures must be shown on submitted documents and include photographs. Direction, date and time of when images are taken must be included. Rooftop structures that are not “related cellular equipment” do not count toward the cumulative area calculations.
2. **Related cellular equipment located within a building.** Floor plans of existing related cellular equipment must be submitted to demonstrate interior locations, and cumulative areas already occupied by such equipment. Existing conditions documented by photographs that include direction, date and time of when images are taken must be included.
3. **Antennas installed onto building facades.** Elevation drawings of existing antennas installed onto building façades must be submitted to demonstrate installation locations and areas already occupied by such antennas. Existing conditions documented by photographs that include direction, date and time of when images are taken must be included.

Where an application includes installation involving multiple locations related to or serving the antenna array (e.g. antennas on roof with related cellular equipment inside the building), all respective relevant drawings must be provided.

IX. FILING IN DOB NOW

Applications must be filed through **DOB NOW: Build Antenna**. The Department anticipates that applications filed under this bulletin can be submitted in **DOB NOW: Build Antenna**, 30 days after the issuance of this Bulletin.