

EXPLANATORY COVER SHEET

COUNCILMAN'S BILL NO. CB-1593

SPONSOR: COUNCIL MEMBER

TITLE: A BILL FOR AN ORDINANCE REQUIRING THAT CERTAIN NEW BUILDINGS OR STRUCTURES SUPPORT ADEQUATE RADIO COVERAGE FOR EMERGENCY SERVICE PROVIDERS.

PURPOSE:

It is important for emergency service providers to be able to transmit to and receive signals from all buildings or structures within the City. This Ordinance establishes transmission standards and radio signal testing procedures to help ensure that emergency radio communications can occur in buildings or structures within the City

ADDITIONAL EXPLANATORY REMARKS:

DRAFT

SPONSORED BY:

COUNCILMAN'S BILL

ORDINANCE NO.

No. CB-1593
Series of 2006

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A BILL FOR AN ORDINANCE REQUIRING THAT CERTAIN NEW BUILDINGS OR STRUCTURES SUPPORT ADEQUATE RADIO COVERAGE FOR EMERGENCY SERVICE PROVIDERS.

WHEREAS, it is necessary for emergency service providers to be able to transmit to and receive signals from all buildings or structures within the City; and

WHEREAS, to ensure that emergency radio communications can occur in buildings or structures within the City, transmission standards must be enacted and radio signal testing procedures must be established.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF NORTHGLENN, COLORADO, THAT:

SECTION 1. CHAPTER 10 OF THE NORTHGLENN MUNICIPAL CODE IS HEREBY AMENDED BY THE ADDITION OF A NEW ARTICLE 14, WHICH SHALL READ AS FOLLOWS:

SECTION 10-14-1. DEFINITIONS. THE FOLLOWING WORDS, TERMS AND PHRASES, WHEN USED IN THIS ARTICLE, SHALL HAVE THE MEANINGS ASCRIBED TO THEM IN THIS SECTION:

(A) **“EMERGENCY COMMUNICATIONS CENTER(S)”** SHALL MEAN ANY CENTRALIZED DISPATCH SERVICE FOR EMERGENCY SERVICE PROVIDERS.

(B) **“EMERGENCY SERVICE PROVIDER(S)”** SHALL MEAN ANY POLICE, FIRE OR AMBULANCE SERVICE OPERATING WITHIN THE CITY.

(C) **“EMERGENCY SERVICES COMMUNICATIONS”** SHALL MEAN ANY COMMUNICATION BETWEEN AN EMERGENCY COMMUNICATIONS CENTER AND EMERGENCY SERVICE PROVIDER.

SECTION 10-14-2. PURPOSE. THE PURPOSE OF THIS ARTICLE IS TO PROVIDE MINIMUM STANDARDS TO ENSURE A REASONABLE DEGREE OF RELIABILITY FOR EMERGENCY SERVICES COMMUNICATIONS FROM WITHIN CERTAIN BUILDINGS AND STRUCTURES WITHIN THE CITY TO AND FROM EMERGENCY COMMUNICATION CENTERS. IT IS NECESSARY FOR THE EMERGENCY SERVICE PROVIDER TO RECEIVE THE SIGNAL TO AND FROM ALL

BUILDINGS OR STRUCTURES WITHIN THE CITY.

SECTION 10-14-3. SCOPE. THE PROVISIONS OF THIS ARTICLE SHALL APPLY TO:

(A) BUILDINGS AND STRUCTURES OF TYPE I OR TYPE II CONSTRUCTION GREATER THAN 50,000 SQUARE FEET OR ADDITIONS OR MODIFICATIONS THAT CAUSE THE BUILDINGS TO BE GREATER THAN 50,000 SQUARE FEET.

(B) ALL BASEMENTS OVER 10,000 SQUARE FEET WHERE THE DESIGN OCCUPANT LOAD IS GREATER THAN 50, REGARDLESS OF THE OCCUPANCY.

(C) FOR PURPOSES OF THIS ARTICLE, FIRE BARRIERS OR FIRE WALLS CANNOT BE USED TO DEFINE SEPARATE BUILDINGS.

(D) EXCEPTIONS:

(1) ASSEMBLY OCCUPANCIES WITH AN OCCUPANT LOAD OF LESS THAN 300 WITHOUT LEGITIMATE STAGE.

(2) GROUP R, DIVISION 3 OCCUPANCIES.

(3) GROUP U OCCUPANCIES.

SECTION 10-14-4. RADIO COVERAGE. EXCEPT AS OTHERWISE PROVIDED IN THIS ARTICLE, NO PERSON SHALL ERECT, CONSTRUCT, OR MODIFY ANY BUILDING OR STRUCTURE WITHIN THE SCOPE OF THIS ARTICLE (AS SET FORTH IN SECTION 10-14-3) OR ANY PART THEREOF, OR CAUSE THE SAME TO BE DONE WHICH FAILS TO SUPPORT ADEQUATE RADIO COVERAGE FOR EMERGENCY SERVICE PROVIDERS.

(A) PLANS TO COMPLY WITH THESE PROVISIONS SHALL BE SUBMITTED WITH THE BUILDING PERMIT APPLICATION DOCUMENTS. THE POLICE DEPARTMENT WILL, WITHIN 14 DAYS, IDENTIFY THE FREQUENCY RANGE OR RANGES THAT MUST BE SUPPORTED BY REDUCING OR ELIMINATING INTERFERENCE.

(B) IN THE EVENT THAT AN EMERGENCY SERVICE PROVIDER MODIFIES ITS COMMUNICATIONS EQUIPMENT IN ANY WAY THAT IMPAIRS ITS ABILITY TO COMMUNICATE WITH AN EXISTING SYSTEM INSTALLED IN ACCORDANCE WITH THIS ARTICLE, SUCH EMERGENCY SERVICE PROVIDER SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH REESTABLISHING COMMUNICATIONS WITHIN THE AFFECTED BUILDING OR

STRUCTURE.

(C) FOR PURPOSES OF THIS ARTICLE, A SUCCESSFUL COMMUNICATIONS TEST SHALL CONSTITUTE ADEQUATE RADIO COVERAGE BETWEEN THE BUILDING AND THE EMERGENCY COMMUNICATIONS CENTER FOR ALL APPROPRIATE EMERGENCY SERVICE PROVIDERS FOR THE BUILDING.

(D) THE STANDARDS FOR INBOUND COMMUNICATIONS INTO A BUILDING ARE:

(1) A MINIMUM AVERAGE IN-BUILDING FIELD STRENGTH OF 8V (-88 DBM) THROUGHOUT 95 PERCENT OF THE AREA OF EACH FLOOR OF THE BUILDING WHEN TRANSMITTED FROM THE EMERGENCY COMMUNICATIONS CENTER TO THE EMERGENCY SERVICE PROVIDER PROVIDING POLICE, FIRE AND EMERGENCY MEDICAL SERVICES TO THE BUILDING (-88 DBM EQUATES TO 30 DBU AT VHF, 40 DBU AT UHF, AND 45 DBU AT 800 MHZ).

(2) IF THE FIELD STRENGTH OUTSIDE THE BUILDING WHERE THE RECEIVING ANTENNA SYSTEM FOR THE IN-BUILDING SYSTEM IS LOCATED IS LESS THAN THE -88 DBM, THEN THE MINIMUM REQUIRED IN-BUILDING FIELD STRENGTH SHALL EQUAL THE FIELD STRENGTH BEING DELIVERED TO THE RECEIVE ANTENNA OF THE BUILDING.

(3) AS USED IN THIS PART, 95 PERCENT COVERAGE OR RELIABILITY MEANS THE RADIO WILL TRANSMIT 95 PERCENT OF THE TIME AT THE FIELD STRENGTH AND LEVELS AS DEFINED IN THIS PART.

(E) THE STANDARDS FOR OUTBOUND COMMUNICATIONS FROM A BUILDING ARE:

A MINIMUM AVERAGE SIGNAL STRENGTH OF 4V (-95 DBM) AS RECEIVED BY THE EMERGENCY COMMUNICATIONS CENTER PROVIDING POLICE, FIRE AND EMERGENCY MEDICAL SERVICES TO THE BUILDING (-95 DBM EQUATES TO 24 DBU AT VHF, 33 DBU AT UHF, AND 38 DBU AT 800 MHZ).

(F) FCC AUTHORIZATION. IF AMPLIFICATION IS USED IN A SYSTEM, ALL FCC AUTHORIZATIONS MUST BE OBTAINED PRIOR TO THE USE OF THE SYSTEM. A COPY OF THESE AUTHORIZATIONS SHALL BE PROVIDED TO THE CITY.

SECTION 10-14-5. ENHANCED AMPLIFICATION SYSTEMS.

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(A) WHERE BUILDINGS AND STRUCTURES ARE REQUIRED TO PROVIDE AMENITIES TO ACHIEVE ADEQUATE SIGNAL STRENGTH, SUCH BUILDINGS AND STRUCTURES SHALL BE EQUIPPED WITH ANY OF THE FOLLOWING TO ACHIEVE THE REQUIRED ADEQUATE RADIO COVERAGE: RADIATING CABLE SYSTEMS, INTERNAL MULTIPLE ANTENNA SYSTEMS WITH A FREQUENCY RANGE AS ESTABLISHED BY THE EMERGENCY COMMUNICATIONS CENTER, WITH AMPLIFICATION SYSTEMS AS NEEDED, VOTING RECEIVER SYSTEM, OR ANY OTHER APPROVED SYSTEM.

(B) IF ANY PART OF THE INSTALLED SYSTEM OR SYSTEMS CONTAINS AN ELECTRICALLY POWERED COMPONENT, THE SYSTEM SHALL BE CAPABLE OF OPERATION ON AN INDEPENDENT BATTERY (UPS) AND/OR GENERATOR SYSTEM FOR A PERIOD OF AT LEAST FOUR HOURS WITHOUT EXTERNAL POWER INPUT OR MAINTENANCE. THE BATTERY SYSTEM SHALL AUTOMATICALLY CHARGE IN THE PRESENCE OF EXTERNAL POWER INPUT.

SECTION 10-14-6. TESTING PROCEDURES. METHOD TO CONDUCT THE TESTS:

(A) TESTS SHALL BE MADE USING FREQUENCIES CLOSE TO THE FREQUENCIES USED BY THE POLICE AND FIRE AND AMBULANCE SERVICES. IF TESTING IS DONE ON THE ACTUAL FREQUENCIES, THEN THIS TESTING MUST BE COORDINATED WITH THE POLICE AND/OR FIRE DEPARTMENT AND THE EMERGENCY COMMUNICATIONS CENTER. ALL TESTING MUST BE DONE ON FREQUENCIES THAT ARE AUTHORIZED BY THE FCC. A VALID FCC LICENSE WILL BE REQUIRED IF TESTING IS DONE ON FREQUENCIES DIFFERENT FROM THE POLICE, FIRE OR EMERGENCY MEDICAL FREQUENCIES.

(B) MEASUREMENTS SHALL BE MADE USING THE FOLLOWING GUIDELINES:

(1) WITH A SERVICE MONITOR USING A UNITY GAIN ANTENNA ON A SMALL GROUND PLANE.

(2) MEASUREMENTS SHALL BE MADE WITH THE ANTENNA HELD IN A VERTICAL POSITION AT THREE TO FOUR FEET ABOVE THE FLOOR.

(3) A CALIBRATED SERVICE MONITOR (WITH A FACTORY CALIBRATION DATED WITHIN 24 MONTHS) MAY BE USED TO MAKE THE TESTS.

(4) THE SPECIAL INSPECTOR FOR THE CITY MAY ALSO MAKE SIMULTANEOUS MEASUREMENTS TO VERIFY THAT THE EQUIPMENT IS MAKING MEASUREMENTS ACCURATELY. A VARIANCE OF ± 3 DB BETWEEN THE INSTRUMENTS WILL BE ALLOWED.

(5) IF MEASUREMENTS IN ONE LOCATION ARE VARYING, THEN AVERAGE MEASUREMENTS MAY BE USED.

(C) INITIAL TESTS:

(1) ALL TESTING SHALL BE DONE IN THE PRESENCE OF THE SPECIAL INSPECTOR FOR THE CITY.

(2) SIGNAL STRENGTH, BOTH INBOUND AND OUTBOUND AS DEFINED ABOVE, SHALL BE MEASURED ON EACH AND EVERY FLOOR ABOVE AND BELOW GROUND INCLUDING STAIRWELLS, BASEMENTS, PENTHOUSE FACILITIES, AND PARKING AREAS OF THE STRUCTURE. THE STRUCTURE SHALL BE DIVIDED INTO 100-FOOT GRIDS AND THE MEASUREMENTS SHALL BE TAKEN AT THE CENTER OF EACH GRID. IN CRITICAL AREAS (POLICE SUBSTATION AND FIRE COMMAND POST) THE GRIDS SHALL BE REDUCED TO 25 FEET. THE SIZE OF THE GRIDS MAY ALSO BE REDUCED UPON RECOMMENDATIONS OF THE SPECIAL INSPECTOR, IN AREAS WHERE DISPLAYS, EQUIPMENT, STOCK, OR ANY OTHER OBSTRUCTION MAY SIGNIFICANTLY AFFECT COMMUNICATIONS IN THOSE AREAS.

(D) ANNUAL TESTS:

(1) ANNUAL TESTS WILL BE CONDUCTED BY THE FIRE DEPARTMENT OR THE POLICE DEPARTMENT OR BOTH. IF THE COMMUNICATIONS APPEAR TO HAVE DEGRADED OR IF THE TESTS FAIL TO DEMONSTRATE ADEQUATE SYSTEM PERFORMANCE, THE OWNER OF THE BUILDING OR STRUCTURE IS REQUIRED TO REMEDY THE PROBLEM AND RESTORE THE SYSTEM IN A MANNER CONSISTENT WITH THE ORIGINAL APPROVAL CRITERIA.

(2) IF THE DEGRADATION TO THE SYSTEM IS DUE TO BUILDING ADDITIONS OR REMODELING, THE OWNER OF THE BUILDING OR STRUCTURE IS REQUIRED TO REMEDY THE PROBLEM AND RESTORE THE SYSTEM IN A MANNER CONSISTENT WITH THE ORIGINAL APPROVAL CRITERIA IN ORDER TO OBTAIN A FINAL INSPECTION FOR OCCUPANCY.

(3) ANY SYSTEM DEGRADATION OR FAILURE NOT RELATED TO THE PERFORMANCE OF THE OWNER'S ON-SITE SYSTEM WILL BE THE RESPONSIBILITY OF THE EMERGENCY COMMUNICATIONS CENTER.

INTRODUCED, READ AND ORDERED POSTED this ____ day of _____, 2006.

KATHLEEN M. NOVAK
Mayor

ATTEST:

DIANA L. LENTZ, CMC
City Clerk

PASSED ON SECOND AND FINAL READING this ____ day of _____, 2006.

KATHLEEN M. NOVAK
Mayor

ATTEST:

DIANA L. LENTZ, CMC
City Clerk

APPROVED AS TO FORM:

COREY Y. HOFFMANN
City Attorney