

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051 Phone: (860) 827-2935 Fax: (860) 827-2950 E-Mail: siting.council@po.state.ct.us Web Site: www.state.ct.us/csc/index.htm

October 24, 2002

Wendell G. Davis, Esq. Hartford Square North Ten Columbus Boulevard Hartford, CT 06106

RE: EM-SBA-032-021015 - SBA Towers, Inc. d/b/a SBA notice of intent to modify an existing telecommunications facility located at 712 Bread and Milk Street, Coventry, Connecticut.

Dear Attorney Davis:

At a public meeting held on October 23, 2002, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice dated October 15, 2002. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

Thank you for your attention and cooperation.

Very truly yours,

Mortimer A. Gelston

Chairman

MAG/laf

c: Honorable Joan A. Lewis, Chairman Town Council, Town of Coventry John A. Elsesser, Town Manager, Town of Coventry Eric M. Trott, Director of Planning & Development, Town of Coventry Christopher B. Fisher, Esq., Cuddy & Feder & Worby LLP Stephen J. Humes, Esq., LeBoeuf, Lamb, Greene & MacRae

LAW OFFICES OF WENDELL G. DAVIS, LLC

- Attorney At Law -

HARTFORD SQUARE NORTH TEN COLUMBUS BOULEVARD HARTFORD, CONNECTICUT 06106

Wendell G. Davis, Esq. wendelldavis@usa.net

October 15, 2002

Telephone (860) 549-5402 Facsimile (860) 522-4261

S. Derek Phelps
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

RECEIVED

OCT 15 2002

RE:

NOTICE OF INTENT TO MODIFY AN EXISTING TELECOMMUNICATIONS FACILITY AT 712 BREAD AND MILK STREET, COVENTRY, CT

CONNECTICUT SITING COUNCIL

Dear Mr. Phelps:

SBA Towers, Inc. ("SBA") hereby requests acknowledgment that the proposed co-location of AT&T Wireless PCS, LLC ("AT&T Wireless") on a telecommunications tower owned by SBA and located at 712 Bread and Milk Street, in Coventry, Connecticut ("Bread and Milk Street Facility") constitutes an exempt modification pursuant to the Public Utility Environmental Standards Act, Connecticut General Statutes Section 16-50g et. seq. (PUESA), and Section 16-50j-72(b)(2) of the Regulations of the Connecticut State Agencies adopted pursuant to PUESA. In accordance with R.C.S.A. Section 16-50j-73, a copy of this letter has been sent to Joan Lewis, the Chairperson of the Town Council for the Town of Coventry.

SBA and AT&T Wireless have agreed to share the use of the Bread and Milk Street Facility, as detailed below.

The Bread and Milk Street Facility

The Bread and Milk Street Facility consists of a 175 foot monopole within a site compound which is surrounded by a chain link fence. The facility can support the antenna arrays and related equipment of several carriers. The facility was approved by the Coventry Planning and Zoning Commission on October 23, 2000. (See attached Approval Letter)

AT&T Wireless' Facility

AT&T Wireless will install 6 panel antennas at an antenna center line height of approximately 162 feet. A structural integrity report, attached as Exhibit A, was

generated by Chazen Engineering and Land Surveying Co. P.C. and confirms that the tower is structurally capable of supporting AT&T Wireless' proposed antennas. AT&T Wireless will also install equipment cabinets (2 proposed, 2 future, each 76"H x 30"W x 30" D) on a concrete pad within the existing fenced compound.

AT&T Wireless' Facility Constitutes An Exempt Modification

For the following reasons, the proposed modifications to the Bread and Milk Street Facility meet the exempt modification criteria set forth in R.C.S.A. Section 16-50j-72(b)(2):

- 1. As evidenced by the attached Tower Elevation Drawing (<u>Exhibit B</u>), the proposed modification will not increase the height of the tower as AT&T Wireless' antennas will be installed at a center line height of approximately 162 feet.
- 2. As evidenced by the attached Site Plan Drawing (<u>Exhibit B</u>), the installation of AT&T Wireless' equipment will not require an extension of the site boundaries.
- 3. The proposed modifications will not increase the noise levels at the existing facility by six decibels or more.
- 4. As set forth in the Emissions Report prepared by C Squared Systems, Inc., attached as Exhibit C, the operation of the additional antennas will not increase the total radio frequency (RF) power density, measured at the site boundary, to a level at or above the standard adopted by the Connecticut Department of Environmental Protection as set forth in Section 22a-162 of the Connecticut General Statutes and MPE limits established by the Federal Communications Commission.

For the foregoing reasons, SBA respectfully submits that the proposed addition of AT&T Wireless' antenna and equipment at the Bread and Milk Street Facility constitutes an exempt modification under R.C.S.A. Section 16-50j-72(b)(2).

Wendell G. Davis

ery truly yours,

cc: Joan Lewis, Chairperson, Coventry Town Council John Elsesser, Coventry Town Manager Harold Hewett, Bechtel Mark Roberts, SBA Christopher Fisher, Esq. Cuddy, Feder & Worby



Town of Coventry

1712 Main Street • Coventry, CT 06238 • Fax (860) 742-8911

CERTIFIED MAIL # 7099 3400 0007 2017 0328 October 27, 2000

Attorney Wendell G. Davis, Jr. Cranmore, Fitzgerald, & Meany For: SBA, Inc. 49 Wethersfield Avenue Hartford CT 06114

Dear Attorney Davis:

At its regular meeting on October 23, 2000, the Coventry Planning and Zoning Commission made the following decision:

Approved special permit application 00-20S of SBA, Inc. to construct a 175' monopole telecommunications tower with the capability of expanding to 195', antenna, and associated equipment; Nadeau property located at 712 Bread and Milk Street (Assessor's Map 4, Block 12, Lot 8); LI Zone.

The following conditions apply:

- 1. A copy of federal licenses necessary to operate the facility must be submitted by the applicant as necessary.
- 2. The landscape plans provided on the site plan, currently propose vegetation on the westerly fence as white pine, the condition is that the PZC request vegetation other than white pine be used. The vegetation is to be reviewed and approved by the Planning and Zoning staff.
- 3. The tower be constructed to provide service for seven carriers, and that it be built and constructed with the ability to be expanded to 195'.

Reason for approval: Application meets the regulations and is appropriate for the location.

SBA, Inc, Page 2.

I wish to remind you that you must file an 8-3d form of approval with the Town Clerk's office and Mylars of the final approved plans. Please see the attached information for further details or call the Planning office at 742-4062.

Sincerely,

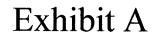
Eric M. Trott

Director of Planning and Zoning

EMT/lpe

cc: SBA, Inc.

Messrs. Nadeau Goodkind & O'Dea



Received: 10/15/02 1:05PM; 845 454 4026 -> SBA Network Services, Inc.; Page

OCT 15 2002 13:00 FR CHAZEN ENGINEERING

845 454 4026 TO 18606599140

P.02/03

CHAZEN ENGINEERING & LAND SURVEYING CO., P.C.

Dutchess County Office Phone: (845) 454-3980

New England Office Phone: (781) 556-1037 20 Gurley Avenue, Troy, New York 12182 Phone: (518) 235-8050 Fax: (518) 235-8051 Email: albany@chazencompanies.com Orange County Office Phone: (845) 567-1133

North Country Office Phone: (518) 812-0513

October 15, 2002

Mr. Ed Dupont SBA Network Services, Inc. 80 Eastern Boulevard Glastonbury, CT 06033

Re: Structural Review of the Coventry 2, CT Monopole

TCC Job Number: NE094.00 SBA Site No.: CT02573-S-02 Cingular Site No.: CT-818

Dear Mr. Dupont:

As requested, The Chazen Companies (TCC) has performed a structural review of the above referenced monopole located at Connecticut. Our review is based on existing and proposed antenna information as provided by SBA, original design document by Fred A. Nudd Corporation, and analysis and tower modification calculations by 02 Wireless Solutions, dated May 30, 2002.

TCC has reviewed the above mentioned design calculations to determine the areas and elevations of the original design antennas to calculate the design forces and resulting bending moments. TCC then determined the areas and elevations of the existing and proposed antennas, from the information provided by SBA, to calculate the applied forces and moments. By direct comparison, the moments due to the existing and proposed antennas were determined to be less than the original design antennas' moments. TCC's recommendations are based on the existing and proposed antennas being within the original design parameters. TCC has not completed a structural analysis of the stresses in the individual components of the monopole, the monopole base plate, anchor bolts, or foundation.

Based on our review, the monopole is 190 feet tall and was designed to support seven (7) antenna arrays consisting of (12) DB896 Panel antennas at 190 feet and twelve (12) Swedcom ALP9212 at elevations of 180 feet, 170 feet, 160 feet, 150 feet, 140 feet, and 130 feet above ground level (AGL).



Mr. Ed Dupont October 15, 2002 Page 2

Information provided by SBA indicates that currently there is no panel antennas for Cingular. AT&T proposes to install six (6) Allgon 7250 panel antenna

The analysis and modification calculations provided indicate that the monopole was designed for a basic wind speed of 85 mph and ½" radial ice with wind/ice reduction in accordance with ANSI/TIA/EIA-222-F Structural Standards for Steel Antenna Towers and Antenna Supporting Structures. Revision F of this standard is the newest revision, and thus meets or exceeds the requirements of the previous revision, which is referenced in the 1996 BOCA National Building Code. The Connecticut State Building Code requires that television and radio towers be designed in accordance with Section 3108.4 of the 1996 BOCA National Building Code. Therefore TCC can conclude that the monopole design meets or exceeds the Connecticut State Building Code.

Based upon this information, TCC has determined that the proposed AT&T installation can be added to the structure and does not exceed the original design parameters for the above referenced monopole. Our conclusion assumes that the monopole and foundation were constructed in accordance with all applicable local, state, and federal codes, the original design documents, and the tower modification package prepared by 02 Wireless Solutions. However, TCC's review does not relieve the original or subsequent modification design engineer's responsibility for completeness or accuracy of work.

If you have any questions, or require any additional information please do not hesitate to contact this office.



kn/

cc: Kelly Libolt, TCC Kelly Phillips, TCC Tim O'Byrne, TCC File





C Squared Systems, LLC 13 Forest Drive East Kingston, NH 03827 Phone 603-758-1013 E-mail: kevin.mosher@csquaredsystems.com

Calculated Radio Frequency Emissions

Site Number CT02573-S-02
712 Bread and Milk Street, Coventry, CT

SBA Towers

TABLE OF CONTENTS

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1. Introduction

The purpose of this report is to investigate compliance with applicable federal, state and local EMF regulations for the 175-foot wireless telecommunications facility at 712 Bread and Milk Street in Coventry, CT.

These calculations assume that the antennas are operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. As a result, the predicted signal levels are much more conservative (higher) than the actual signal levels will be from the finished installation.

The results will be listed as a percentage of current Maximum Permissible Exposure (% MPE) limits as listed in the FCC OET Bulletin 65 Edition 97-01. Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter (μ W/cm²). The number of μ W/cm² emitted is called the power density. The general population exposure limit for the PCS band is 1000 μ W/cm².

2. Site Data

	Carrier	Freq (MHz)	# of Channels per Sector	# of Sectors	Height of Antenna	Power per Channel (Watts ERP)
250	AT&T	1900	16	3	162'	140

3. RF Exposure Prediction Methods

Power density is calculated in accordance with FCC OET Bulletin 65 formula (8): Power Density = $1.05 \text{ ERP/}\pi\text{R}^2$

Where:

ERP = Effective Radiated Power

R = Radial distance = $\sqrt{(H^2 + V^2)}$

H = Horizontal distance from antenna

V = Vertical distance from antenna

4. FCC Guidelines for Evaluating RF Radiation Exposure Limits

The Federal Communications Commission (FCC) OET Bulletin 65, Edition 97-01 dated August 1997 outlines requirements for radio frequency exposure and provides guidelines for determining whether proposed or existing transmitting facilities, operations or devices comply with limits for radio frequency exposure. These requirements include limits for Maximum Permissible Exposure (MPE) for transmitters operating between 300 kHz and 100 GHz. The FCC MPE limits are based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP), the exposure limits developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI).

Radiation can be broadly broken into two groupings; ionizing and non-ionizing. Ionizing means that there is enough energy to cause electrons to be stripped from atoms "ionizing" the atom and changing its characteristics. Non-ionizing radiation means that there is not enough energy to create ions. It only causes vibrations or oscillations of the atoms, which results in heat but does not strip electrons from atoms. Non-ionizing radiation is usually absorbed as heat in the human body and its parts. Ionizing radiation occurs at frequencies exceeding 1,000,000,000 MHz. All PCS and Cellular providers operate within a much lower frequency band than those associated with ionizing.

Based on thorough scientific review of the studies and papers, various groups have developed exposure limits below which no health effects are known to occur. Two of the primary groups in the United States are the Institute of Electrical and Electronic Engineers (IEEE) and the National Council on Radiation Protection and Measurement (NCRP). As mentioned previously, the FCC limits are based on exposure limits recommended by these groups. The limits incorporate a safety factor of 50 for the general public populations. This means that the exposure limit set is at least 50 times below the level where any changes are noticeable. The impact of human exposure to levels equivalent to the limit set by the FCC is practically indistinguishable from the impact of normal ambient temperature variation, exposure to the sun, exercise, etc.

The attachments labeled Table 1 and Figure 1 are excerpts from OET Bulletin 65 and define the Maximum Exposure Limit. As shown in these excerpts, each frequency band has different exposure limits, requiring power density to be reported as a percent of Maximum Permissible Exposure (MPE) when dealing with carriers transmitting in different frequency bands.

5. Calculation Results

The calculated results indicate that radio frequency emissions expected from this installation are significantly less than the regulatory emission limits for public exposure. Specific maximum power densities and their percentage of the limits are listed below for each individual carrier.

Carrier Maximum Power Densities

Carrier	Calculated Maximum Power Density (uW/cm²)	MPE Limit (uW/cm²)	Max % Limits
AT&T	30.7	1000	3.07

6. Conclusion

All of the calculations in this report were computed for the 175-foot wireless facility in Coventry, CT. As can be seen from the above tables and attachments, the expected aggregate radio frequency emissions from the proposed installation are well below the regulatory emission limits for general public exposure, even under very conservative assumptions. The highest aggregate percent Maximum Permissible Exposure is 3.07% of the FCC limits for the general public as outlined in FCC OET Bulletin 65 Edition 97-01.

7. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The calculations were computed in accordance with and using techniques in compliance with ANSI/IEEE Std. C95.3, ANSI/IEE Std. C95.1 and FCC OET Bulletin 65 Edition 97-01.

Kevin Mosher

C Squared Systems

Kevin Mosher

Dale

References

OET Bulletin 65 - Edition 97-01 - August 1997 Federal Communications Commission Office of Engineering & Technology

ANSI C95.1-1982, American National Standard Safety Levels With Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 300 kHz to 100 GHz. IEEE-SA Standards Board

<u>IEEE Std C95.3-1991 (Reaff 1997), IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave.</u> IEEE-SA Standards Board

Table 1. LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

(A) Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	$(900/f^2)*$	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6

(B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)	
0.3-1.34	614	1.63	(100)*	30	
1.34-30	824/f	2.19/f	$(180/f^2)^*$	30	
30-300	27.5	0.073	0.2	30	
300-1500			f/1500	30	
1500-100,000			1.0	30	

f = frequency in MHz

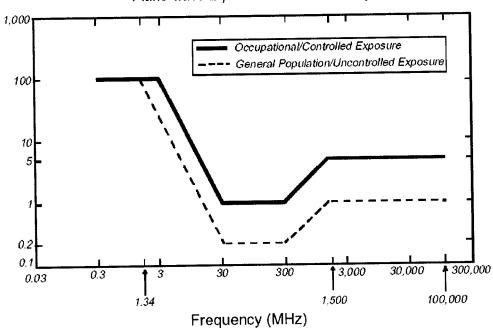
NOTE 1: Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

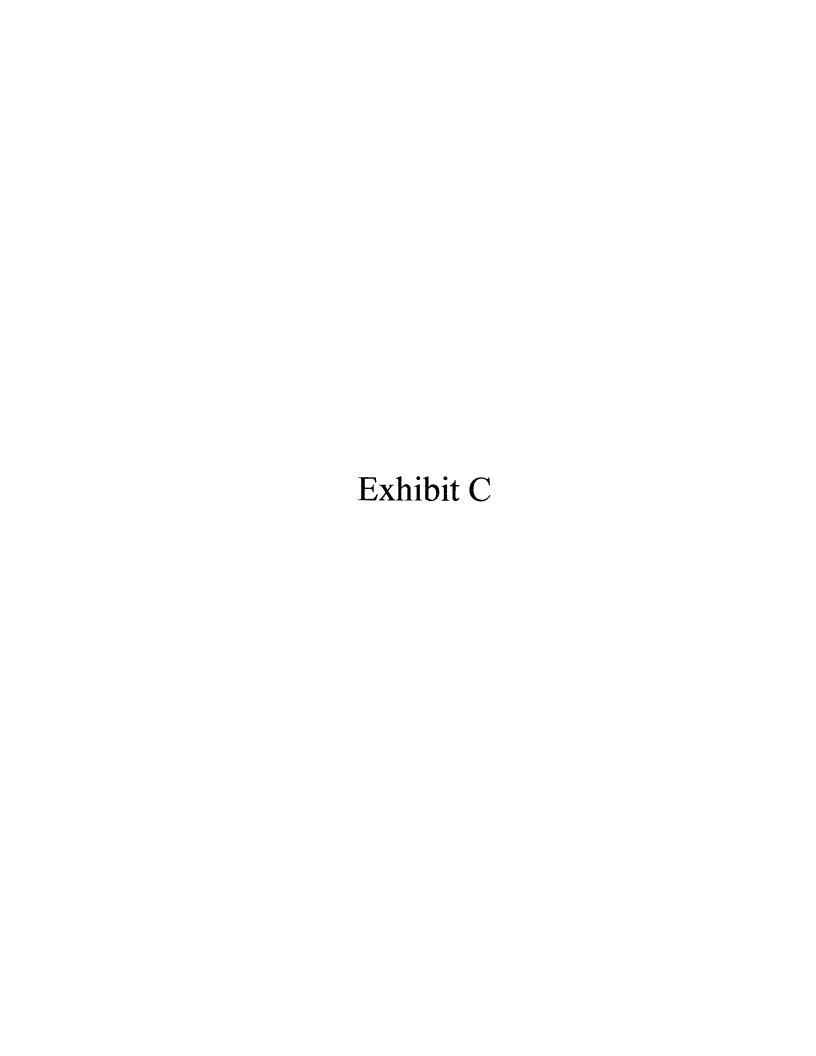
NOTE 2: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

^{*}Plane-wave equivalent power density

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

Plane-wave Equivalent Power Density

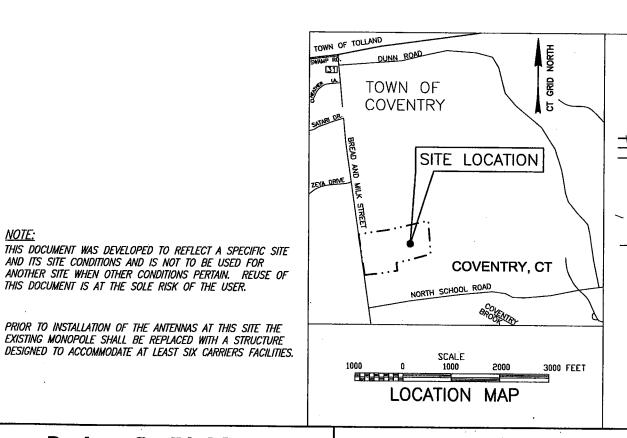




907-007-818 / COVENTRY 2 712 BREAD & MILK STREET **COVENTRY, CONNECTICUT 06238**

LEGEND

DATUM IS MEAN SEA LEVEL



EXISTING HIGHWAY LINE/PROPERTY LINE

- PROPOSED LEASE AREA

BUILDING SETBACKS

WETLAND BOUNDARY TREE. HEDGE, EDGE OF WOODS

EXISTING SPOT ELEVATION @ 2

ARBED WIRE, FARM AND CHAIN LINK FENCE

EXISTING UTILITY POLE AND OVERHEAD UTILITIES

PROPOSED UTILITY POLE AND OVERHEAD UTILITIES

APPLICANT / LESSEE AT&T WIRELESS PCS, LLC. 12 OMEGA DRIVE
STAMFORD, CT 06907
CONTACT: ROMEO F. BALLESTEROS (203) 639-1087

PROPERTY OWNER RONALD AND NORMAN NADEAU 2050 BOSTON TURNPIKE COVENTRY, CY 06238 APPLICANT / LESSOR SBA PROPERTIES, INC. 80 EASTERN BOULEVARD

CONTACTS: LAW OFFICES OF WENDELL G. DAVIS, LLC WENDELL DAVIS, ESQ. (860) 549-5402

HURWITZ & SAGARIN PC JULIE DONALDSON, ESQ. (203) 877-8000

THIS PROJECT CONSISTS OF THE INSTALLATION AND OPERATION OF AT&T ANTENNAS AND ASSOCIATED EQUIPMENT AS PART OF AN EXISTING WRELESS COMMUNICATIONS SYSTEM LICENSED BY THE FEDERAL COMMUNICATIONS COMMISSION (FCC).

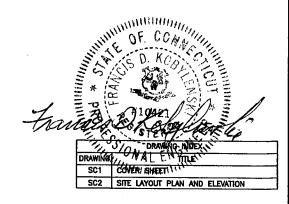
THE SYSTEM WILL BOTH TRANSMIT AND RECEIVE RADIO SIGNALS AT THE FREQUENCIES DESIGNATED BY THE FCC.

POWER AND TELCO UTILITIES NECESSARY FOR THIS FACILITY ARE EXISTING. NO WATER OR SEWER SERVICES ARE NEEDED.

THE PROPOSED USE DOES NOT REQUIRE FULL—TIME OR PART—TIME EMPLOYEES AT THE SITE.

ELECTRIC UTILITY: CONNECTICUT LIGHT & POWER "CALL BEFORE YOU DIG" 800-922-4455

TELEPHONE UTILITY: SOUTHERN NEW ENGLAND TELEPHONE (SNET)



Dewberry-Goodkind, Inc. A Dewberry Company

AND ITS SITE CONDITIONS AND IS NOT TO BE USED FOR

PRIOR TO INSTALLATION OF THE ANTENNAS AT THIS SITE THE

THIS DOCUMENT IS AT THE SOLE RISK OF THE USER.

59 Elm Street, Suite 101 New Haven, CT 06510 p. (203) 776-2277 f. (203) 776-2288

Engineers Planners Surveyors

COVENTRY 2 SITE NO. CT-818

712 BREAD AND MILK STREET **COVENTRY, CONNECTICUT 06238**

SBA PROPERTIES, INC.

(561) 995-7670

SCALE AS NOTED DESIGNED WILC DRAWN			WLC					
NO.	DATE	1.5	REVISIONS			BY.	CHK	WALL,D
▲	196762	PRELIMINA	RY ISSUE	FOR SMING C	OUNCIL	WLC	CKD	RMF
҈	19/15 ₀₂	ISSUE FOR	SITING	COUNCIL		WLC	CKD	FKD
\leq	1,							
Q	1/							
Δ	1,							

SITE NUMBER 907-007-818 **COVENTRY 2 COVER SHEET**

907-007-818-SC1

By: WLC Plot: WCH

