STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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

January 3, 2002

Richard Greene
Senior Wireless Designer
Edward and Kelcey
One Church Street, 3rd Floor
New Haven, CT 06510

RE: **EM-AT&T-005-018-031-055-068-092-111-125-153-162-168-011121** - Edwards and Kelcey on behalf of AT&T Wireless notice of intent to modify existing telecommunications facilities located at twelve sites throughout the State of Connecticut.

Dear Mr. Greene:

At a public meeting held on January 3, 2002, the Connecticut Siting Council (Council) acknowledged your notice to modify the Litchfield-Kent (L04); Mohawk Mountain (L12); Pine Meadows (L14); and North Kent (L17) sites of the proposed twelve existing telecommunications facilities, eight of which were previously approved on December 17, 2001, 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 notices dated November 20, 2001, December 10, 2001, and December 21, 2001. 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. These facilities have 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: See attached list

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List Attachment:

Honorable Dolores R. Schiesel, First Selectman, Town of Kent
Judith Wick, Zoning Enforcement Officer, Town of Kent
Honorable James P. O'Leary, First Selectman, Town of Goshen
Martin Connor, Town Planner, Town of Goshen
Honorable Michael D. Fox, First Selectman, Town of Barkhamsted
Karl Nilsen, Zoning Enforcement Officer, Town of Barkhamsted
Honorable P. Robert Moeller, First Selectman, Town of Sharon
Elizabeth H. Casey, Zoning Enforcement Officer, Town of Sharon
Honorable Gorden M. Ridgway, First Selectman, Town of Cornwall
Ruth Mucahy, Zoning Enforcement Officer, Town of Cornwall

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square
New Britain, Connecticut 06051
Phone: (860) 827-2935
Fax: (860) 827-2950

December 13, 2001

Richard Greene
Senior Wireless Designer
Edward and Kelcey
One Church Street, 3rd Floor
New Haven, CT 06510

RE: **EM-AT&T-005-018-031-055-068-092-111-125-153-162-168-011121** - Edwards and Kelcey on behalf of AT&T Wireless notice of intent to modify existing telecommunications facilities located at twelve sites throughout the State of Connecticut.

Dear Mr. Greene:

At a public meeting held on December 11, 2001, the Connecticut Siting Council (Council) acknowledged your notice to modify eight of the proposed twelve existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies. The Litchfield-Kent (L04); Mohawk Mountain (L12); Pine Meadows (L14); and North Kent (L17) sites will be presented at a future Council meeting after requested information is received.

The proposed modifications are to be implemented as specified here and in your notice dated November 20, 2001. 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. These facilities have 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: See attached list

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Honorable John F. Arcelaschi, Mayor, Town of Winchester
Anthony Cannavo, Planning and Zoning Chairman, Town of Winchester
Margaret A. Johnson, Town Manager, Town of Winchester
Honorable Rosalie G. Loughran, Chairman of the Town Council, Town of Watertown
Mary Barton, Zoning Enforcement Officer, Town of Watertown
Charles T. O'Conner, Jr., Town Manager, Town of Watertown
Honorable David C. Mischke, Mayor, Town of Plymouth
William Kuehn, Town Planner, Town of Plymouth
Honorable Richard W. Crane, First Selectman, Town of Woodbury
Christopher S. Wood, Town Planner, Town of Woodbury
Honorable Arthur J. Peitler, Mayor, Town of New Milford
David, N. Hubbard, Planning and Econ. Director, Town of New Milford
Honorable Dolores R. Schiesel, First Selectman, Town of Kent
Judith Wick, Zoning Enforcement Officer, Town of Kent
Honorable James P. O'Leary, First Selectman, Town of Goshen
Martin Connor, Town Planner, Town of Goshen
Honorable Katherine L. Rieger, First Selectman, Town of New Hartford
Karl Nilsen, Zoning Enforcement Officer, Town of New Hartford
Honorable Michael D. Fox, First Selectman, Town of Barkhamsted
Karl Nilsen, Zoning Enforcement Officer, Town of Barkhamsted
Honorable P. Robert Moeller, First Selectman, Town of Sharon
Elizabeth H. Casey, Zoning Enforcement Officer, Town of Sharon
Honorable Martin J. Foncello, Jr., First Selectmen, Town of Brookfield
Clare Ann Walsh, Land Use Enforcement Officer, Town of Brookfield
Heather Paton, Land Use Office, Town of Brookfield

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STAMFORD, CONNECTICUT
NORWALK, CONNECTICUT

NEIL J. ALEXANDER (also CT)
CHARLES T. BAZYDLO (also NJ)
THOMAS R. BEIRNE (also DC)
THOMAS M. BLOOMER
JOSEPH P. CARLUCCI
KENNETH J. DUBROFF
ROBERT FEDER
CHRISTOPHER B. FISHER (also CT)
ANTHONY B. GIOFFRE III (also CT)
SUSAN E.H. GORDON
KAREN G. GRANIK
JOSHUA J. GRAUER
WAYNE E. HELLER (also CT)
KENNETH F. JURIST
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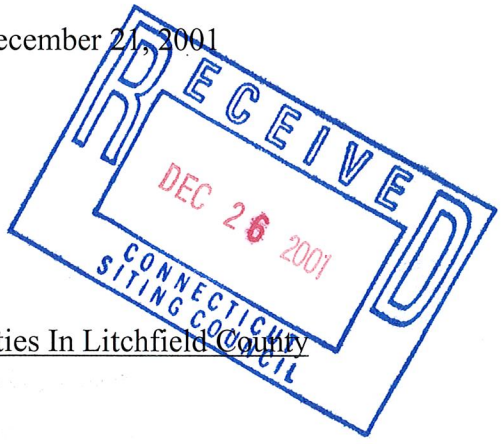
RUTH E. ROTH
JENNIFER L. VAN TUYL
CHAUNCEY L. WALKER (also CA)
ROBERT L. WOLFE
DAVID E. WORBY

Of Counsel
MICHAEL R. EDELMAN
ANDREW A. GLICKSON (also CT)
ROBERT L. OSAR (also TX)
MARYANN M. PALERMO
ROBERT C. SCHNEIDER
LOUIS R. TAFFERA

December 21, 2001



VIA FEDERAL EXPRESS
Robert Mercier
Siting Analyst
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

Re: AT&T Exempt Modification Filings For Facilities In Litchfield County

Dear Mr. Mercier:

On behalf of Litchfield Acquisition Corporation d/b/a AT&T Wireless ("AT&T") enclosed please find additional information that you had requested with respect to the Notice of Exempt Modifications that were filed with the Council by Edwards & Kelcey on November 27, 2001:

1. As noted in our December 10, 2001 correspondence with respect to AT&T Site L04, Bulls Bridge Road, Kent, Edwards & Kelcey and AT&T have confirmed that based on their information, AT&T's antennas are at 152' centerline on this existing tower facility with SCLP (Cingular) located at the 170' level (this is consistent with the Council's inventory).

2. AT&T Site L12 Mohawk State Forest, West Goshen - AT&T Wireless believes that this tower is owned by AT&T Long Lines which no longer has a corporate relationship with AT&T Wireless.

3. AT&T Site L14, 127 New Hartford Road, Barkhamsted - Annexed hereto is a revised report by RF Emissions Experts, dated December 19, 2001 with AT&T, Nextel and Cingular included as approved by the Council in 1998. As you may know, Sprint is

currently processing an application for an amended certificate and has included calculations in their filing for all carriers should a modified facility be approved by the Council.

4. AT&T Site L17, Herb Road, Sharon – Annexed hereto is a revised report by RF Emissions Experts, dated December 20, 2001 including AT&T, Nextel and Cingular as approved by the Council in 1998. At this time the State Police are not proposing to use the tower and as such have been excluded from the calculations provided by AT&T.

We would appreciate it if these notices were placed on the next available agenda of the Council for acknowledgement.

Thank you for your continued assistance. Please do not hesitate to contact me, should you require any additional information or have any questions.

Very truly yours,

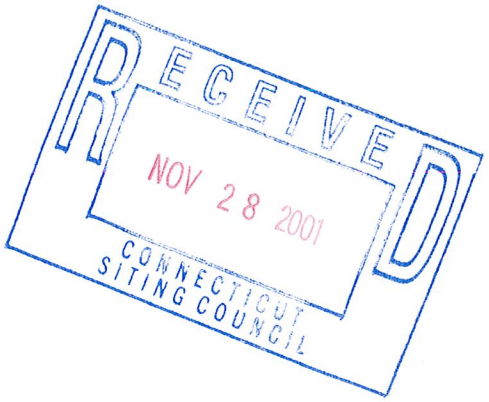
Christopher B. Fisher

cc: Carmen Chapman, AT&T
Richard Greene, E&K
Darryl Hendrickson, Bechtel

C&F&W:

Edwards AND Kelcey

Engineering
Consulting
Construction
Value Engineering
Real Estate Services



November 27th, 2001

Mr. Mortimer A. Gelston, Chairman
Connecticut Siting Council
10 Franklin Square
New Britain, CT. 06051

RE: Notice of Intent to modify an existing telecommunication facility at 127 New Hartford Road Barkhamsted, CT. (Site ID: L14).

Dear Mr. Gelston:

On behalf of AT&T Wireless, Edwards and Kelcey is enclosing 20 copies of an RF study that was recently done on the above site as well as 20 - ½ size drawing of our modifications to the site.

The changes we are proposing will have no visual changes to the site. One antenna will be changed out and replaced with a new one, same shape, size and weight. New radio equipment will be installed in an enclosed shelter.

The drawings were stamped by a structural engineer on the cover stating that no changes were required for this site.

In conclusion Edwards and Kelcey on behalf of AT&T Wireless Service Petition for a declaratory ruling that no amendment to the Certificate of Environmental Compatibility and public need is required for modifications to a facility located at 127 New Hartford Road in Barkhamsted, CT.

Thank you for your consideration of this matter

Very truly yours,

EDWARDS AND KELCEY

Richard Greene
Senior Wireless Designer

EM-AT&T-005-018-031-055-068-092-096-111-125-153-162-168-011121

Cc: Rob Davis

One Church Street, 3rd Floor
New Haven, Connecticut 06510

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Edwards AND Kelcey

Engineering
Consulting
Construction
Value Engineering
Real Estate Services

November 20th, 2001

Mr. Mortimer A. Gelston, Chairman
Connecticut Siting Council
10 Franklin Square
New Britain, CT. 06051

RE: Request by Edwards And Kelcey for an order to approve the AT&T Wireless 1900 MHZ System for cellsites named below

Dear Mr. Gelston:

Enclosed you will find 20 copies of 12 cellsite RF reports and 20 copies of ½ size construction drawings showing the changes we will be making at these sites. As well as a statement on the cover of each drawing set stating that these changes will have no additional structural effect on the tower structure. We will be removing one panel on each sector and replacing it with one the same size, shape and weight.

Cellsite numbers involved in this study are as follows:

L02 Plymouth
L03 Watertown
L04 Litchfield-Kent
L05 Winstead
L06 New Milford
L07 Woodbury
L09 Cornwall
L12 Mohawk Mountain
L13 Brookfield
L14 Pine Meadows
L16 Nepaug
L17 North Kent

In conclusion we are requesting the approval by the siting council for the addition of the AT&T Wireless 1900 MHZ System.

Thank you for your consideration of this matter

Very truly yours,

EDWARDS AND KELCEY

Richard Greene
Senior Wireless Designer

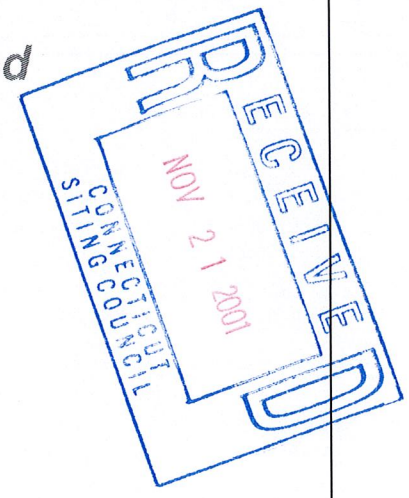
One Church Street, 3rd Floor
New Haven, Connecticut 06510

Voice 203.772.1710
Fax 203.772.1701
www.ekcorp.com

RF Emissions Experts
AN EDWARDS AND KELCEY SERVICE

Analysis and Report of RF Exposure Levels and Compliance with FCC Regulations

Pine Meadows Site
127 New Hartford Road
Barkhamsted, CT
Site ID: L14



Prepared for

AT&T Wireless

November 16, 2001

EDWARDS AND **KELCEY**
299 Madison Avenue - PO Box 1936
Morristown, NJ 07962-1936

Tel: 973-267-8830 Fax: 973-267-3555
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Internet: http://www.ekcorp.com

RF Emissions Experts
AN EDWARDS AND KELCEY SERVICE

FCC RF COMPLIANCE ANALYSIS FOR

AT&T Wireless

Barkhamsted, CT Monopole

This site compliance report is organized as follows:

- Site Technical Data
- Analysis Method and Assumptions
- The FCC RF Radiation Exposure Regulations
- Applicable Formulas
- Analysis Results
- Conclusion

SITE TECHNICAL DATA (replacing one existing 800 MHz antenna per sector with one 1900 MHz antenna per sector – data reflects additional 1900 MHz system)

Facility type	Existing Monopole
Transmit frequency band (proposed additional band)	1965 - 1975 MHz
Replacement Antenna type	Allgon 7262
Antenna major dimension (length)	4.3 ft.
Maximum antenna gain	14.0 dBd
Antenna centerline height	120 ft. above ground level
Total number of 1900 MHz antennas added	3 (1 per sector)
Number of 1900 MHz channels per antenna	2 channels
Maximum ERP per channel	150 watts
Maximum antenna downtilt	4 degrees (mechanical)
Existing carriers on monopole	See report

ANALYSIS METHOD AND ASSUMPTIONS

Type of analysis	Maximum / ground-level
Area analyzed	0' to 500' from monopole
Classification of area	Uncontrolled (gen. pop.)
FCC Maximum Permissible Exposure (MPE) limit	1.000 mW/ cm^2 (1900 MHz)
Mathematical model	Point source, far field
Assumed ground reflection factor	100%
Assumed human height	6'0"
Vertical antenna discrimination included	from Ant. Mfr. data

THE FCC RF RADIATION EXPOSURE REGULATIONS

This RF exposure analysis is based on the current FCC guidelines for human exposure to RF fields, which represent the consensus of federal agencies responsible for RF safety matters. Those agencies include the National Council on Radiation Protection and Measurements (NCRP), the Occupational Health and Safety Administration (OSHA), the National Institute for Occupational Safety and Health (NIOSH), the American National Standards Institute (ANSI), the Environmental Protection Agency (EPA), and the Food and Drug Administration (FDA). In formulating its guidelines, the FCC also considered input from the public and technical community – notably the Institute of Electrical and Electronics Engineers (IEEE).

The FCC's RF exposure guidelines are incorporated in Section 1.1301 *et seq* of its Rules and Regulations. Those guidelines specify maximum permissible exposure (MPE) levels for both occupational and general population exposure on a continuous basis, as well as averaging times for each of those categories when and if exposure exceeds the specified continuous exposure limits. (The concept of averaging time will be ignored in this analysis, as the results show the potential exposure levels are far below those permitted even for continuous exposure.)

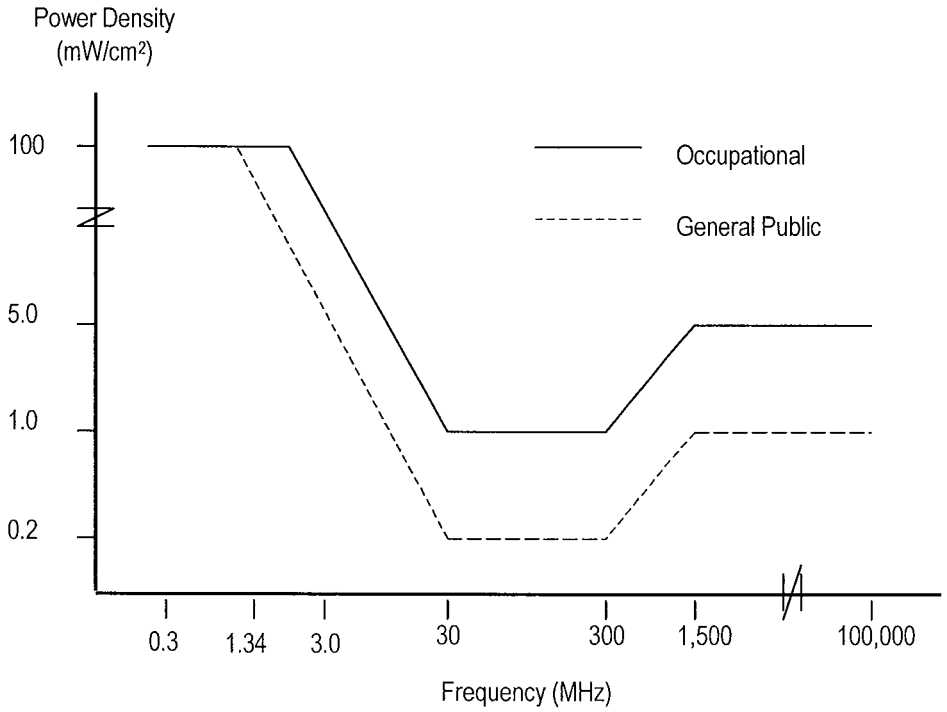
The specified continuous exposure MPE limits are based on known variation of human body susceptibility in different frequency ranges, and a Specific Absorption Rate (SAR) of 4 watts per kilogram, which is universally considered to accurately represent human capacity to dissipate incident RF energy (in the form of heat). The occupational MPE guidelines incorporate a safety factor of 10 or greater with respect to RF levels known to represent a health hazard, and an additional safety factor of five is applied to the MPE limits for general population exposure. Thus the general population MPE limit has a built-in safety factor of more than 50. Continuous exposure at levels equal to or below the applicable MPE limits is considered to result in no adverse health effects on humans.

The reason for *two* tiers of MPE limits is based on an understanding and assumption that members of the general public are unlikely to have had appropriate RF safety training and may not be aware of the exposures they receive; occupational exposure in controlled environments, on the other hand, is assumed to involve individuals who have had such training, are aware of the exposures, and know how to maintain a safe personal work environment.

The FCC's RF exposure limits are expressed in two equivalent forms, using alternative units of field strength (expressed in volts per meter, or V/m), and power density (expressed in milliwatts per square centimeter, or mW/cm^2). The more popularly used reference unit is power density, as it is more easily understood. One milliwatt per square centimeter is approximately the energy impinging on an area roughly one-fourth the size of a dime from a light bulb emitting ten thousand times less than the energy of a common 100-watt bulb. The table below lists the FCC limits for both occupational and general population exposure to different radio frequencies.

Frequency Range (F) (MHz)	Occupational Exposure (mW/cm^2)	General Public Exposure (mW/cm^2)
0.3 - 1.34	100	100
1.34 - 3.0	100	$180 / F^2$
3.0 - 30	$900 / F^2$	$180 / F^2$
30 - 300	1.0	0.2
300 - 1,500	F / 300	F / 1500
1,500 - 100,000	5.0	1.0

The figure below provides a graphical illustration of both the FCC's occupational and general population MPE limits.



FCC MPE limits – graphical representation

The FCC makes it clear that the MPE limits apply only in accessible areas. Fundamentally, in areas that are considered normally inaccessible, the exposure issue is moot.

APPLICABLE FORMULAS

According to FCC OET Bulletin 65, different mathematical models apply to different distances around an antenna. At the height of the antenna, the breakpoint is the "far-field distance", calculated as the ratio of the square of the major dimension of the antenna divided by the signal wavelength . Beyond the far-field distance at the height of the antenna, as well as at ground-level underneath the antenna, a "far-field point source" model applies; within that distance, a "near-field cylindrical model applies. The subsections below provide background on the two applicable models in the 1900 MHz band.

Far-Field Point Source Model

(1) $S\ [mW/cm^2] = (4 * EIRP_{max} * VertAntDisc(\phi)) / (4 * \pi * R^2_{cm})$

(2) FCC MPE limit = 1.000 mW/cm^2

(3) MPE% = 100 * (S / 1.000)

where:

S	=	Calculated power density
4 (in numerator)	=	100% field ground reflection effect (has $[1 + 1]^2 = 4$ effect on power density)
$EIRP_{max}$	=	Maximum effective isotropically radiated power (Note: EIRP is 64% higher than ERP, which is referenced to a half-wave dipole)
VertAntDisc(ϕ)	=	Numeric factor for antenna discrimination (EIRP reduction) in the vertical plane, applicable at downward angle ϕ to a 6' human standing on ground, calculated at distances from 0' to 500' away from the antenna
R	=	Straight-line distance from antenna to 6' human
MPE%	=	Calculated exposure level, as a percentage of the FCC MPE limit for continuous exposure of the general population

Near-Field Cylindrical Model

(1) $S\ [mW/cm^2] = (P_i * ACF / (2 \pi R\ h)$

(2) FCC MPE limit = 1.000 mW/cm^2

(3) MPE% = 100 * (S / 1.000)

where:

S	=	Calculated power density
P_i	=	Total power input to the antenna, in mW
ACF	=	Antenna correction factor (adjustment to near-field power density calculation to compensate for the antenna mounting height above ground level and resulting partial-body exposure; see Richard Tell article listed in the References)
R	=	Straight-line distance from antenna to 6' human
h	=	Subtended height of the antenna, in cm
MPE%	=	Calculated exposure level, as a percentage of the FCC MPE limit for continuous exposure of the general population

ANALYSIS RESULTS – GROUND-LEVEL

AT&T Wireless will replace one existing antenna (in each of three sectors) presently transmitting in the 800 MHz band, with one new antenna that will transmit in the 1900 MHz band. This analysis will reflect the additional RF emissions from the replacement antennas.

The table on the following page summarizes the results of the calculations using the site data, method and far-field point source formula described above. Note that the information on the vertical antenna discrimination has been taken from the antenna manufacturer's specification sheets. In addition, note that while the tabular distances are listed in feet, the calculations translate these units into centimeters, to match the FCC specification of MPE units. Also note that the value for 'G dist' is the distance along the ground in feet, from the base of the monopole.

1900 MHz Antenna Array (AT&T Wireless)					
G dist	R dist	V angle	V disc	mW/cm^2	GPMPE%
0	111.0	86.0	0.025	0.0003	0.034
20	112.8	75.8	0.025	0.0003	0.033
40	118.0	66.2	0.025	0.0003	0.030
60	126.2	57.6	0.020	0.0002	0.021
80	136.8	50.2	0.020	0.0002	0.018
100	149.4	44.0	0.020	0.0002	0.015
120	163.5	38.8	0.020	0.0001	0.013
140	178.7	34.4	0.020	0.0001	0.011
160	194.7	30.8	0.020	0.0001	0.009
180	211.5	27.7	0.020	0.0001	0.008
200	228.7	25.0	0.020	0.0001	0.006
220	246.4	22.8	0.020	0.0001	0.006
240	264.4	20.8	0.020	0.0000	0.005
260	282.7	19.1	0.040	0.0001	0.008
280	301.2	17.6	0.040	0.0001	0.007
300	319.9	16.3	0.040	0.0001	0.007
320	338.7	15.1	0.040	0.0001	0.006
340	357.7	14.1	0.040	0.0001	0.005
360	376.7	13.1	0.040	0.0000	0.005
380	395.9	12.3	0.040	0.0000	0.004
400	415.1	11.5	0.040	0.0000	0.004
420	434.4	10.8	0.040	0.0000	0.004
440	453.8	10.2	0.040	0.0000	0.003
460	473.2	9.6	1.000	0.0008	0.075
480	492.7	9.0	1.000	0.0007	0.069
500	512.2	8.5	1.000	0.0006	0.064

Table 1. AT&T Wireless 1900 MHz ground level RF power density & percent-of-MPE calculations

On November 15, 2001 Edwards & Kelcey conducted on-site RF exposure measurements. These measurements were performed using a Narda model 8722 RF probe and Narda model 8718 RF meter. Both the probe and meter are capable of broadband RF measurements, covering a range of 300 kHz to 50 GHz. The measuring equipment is designed to automatically register measured total RF exposure levels and report them as percentages of the FCC's overall occupational MPE limit. The attached site plan shows measured MPE levels for general population.

CONCLUSION

The calculations presented above demonstrate that the maximum potential exposure level around the existing monopole induced by the 1900 MHz AT&T Wireless system is 0.0008 mW/cm^2, which represents 0.075% of the FCC limits for exposure of the general population.

The worst case ground level measurement around the site was determined to be 10.5% of the FCC limit (see attached). When added to the additional level expected from the proposed AT&T Wireless 1900 MHz system of 0.075%, the resultant cumulative level of 10.575% is still safe for continuous exposure of the general population based on FCC standards.

Therefore, the addition of the AT&T Wireless 1900 MHz system to the existing facility will not create a significant risk of cumulative exposure to RF emissions to the general population. And, according to the calculations, the AT&T Wireless facility is in compliance with the FCC regulations (FCC OET Bulletin 65) concerning the control of potential RF exposure.

CERTIFICATION

This report was prepared by George Burylo, Director – Engineering Services. The undersigned certifies that the analysis provided herein is consistent with the applicable FCC Rules and Regulations and accepted industry practice.

George Burylo
Director – Engineering Services

November 16, 2001

REFERENCES

47 CFR, FCC Rules and Regulations, Section 1.1301 *et seq.*

FCC Second Memorandum Opinion and Order and Notice of Proposed Rulemaking (FCC 97-303), *In the Matter of Procedures for Reviewing Requests for Relief From State and Local Regulations Pursuant to Section 332(c)(7)(B)(v) of the Communications Act of 1934 (WT Docket 97-192), Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation (ET Docket 93-62), and Petition for Rulemaking of the Cellular Telecommunications Industry Association Concerning Amendment of the Commission's Rules to Preempt State and Local Regulation of Commercial Mobile Radio Service Transmitting Facilities*, released August 25, 1997.

FCC First Memorandum Opinion and Order, ET Docket 93-62, *In the Matter of Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation*, released December 24, 1996.

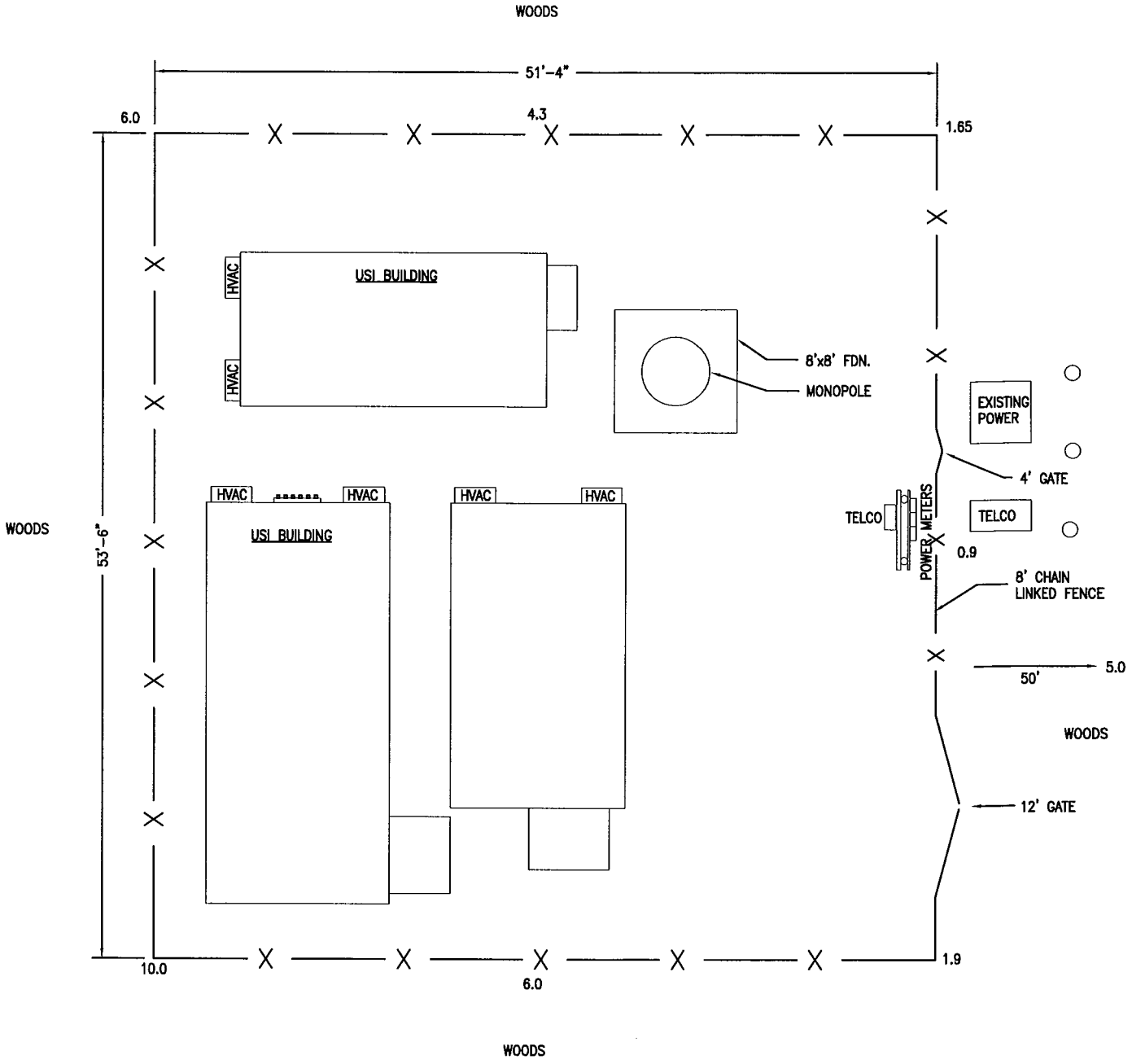
FCC Report and Order, ET Docket 93-62, *In the Matter of Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation*, released August 1, 1996.

FCC Office of Engineering and Technology (OET) Bulletin 65, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields", Edition 97-01, August 1997.

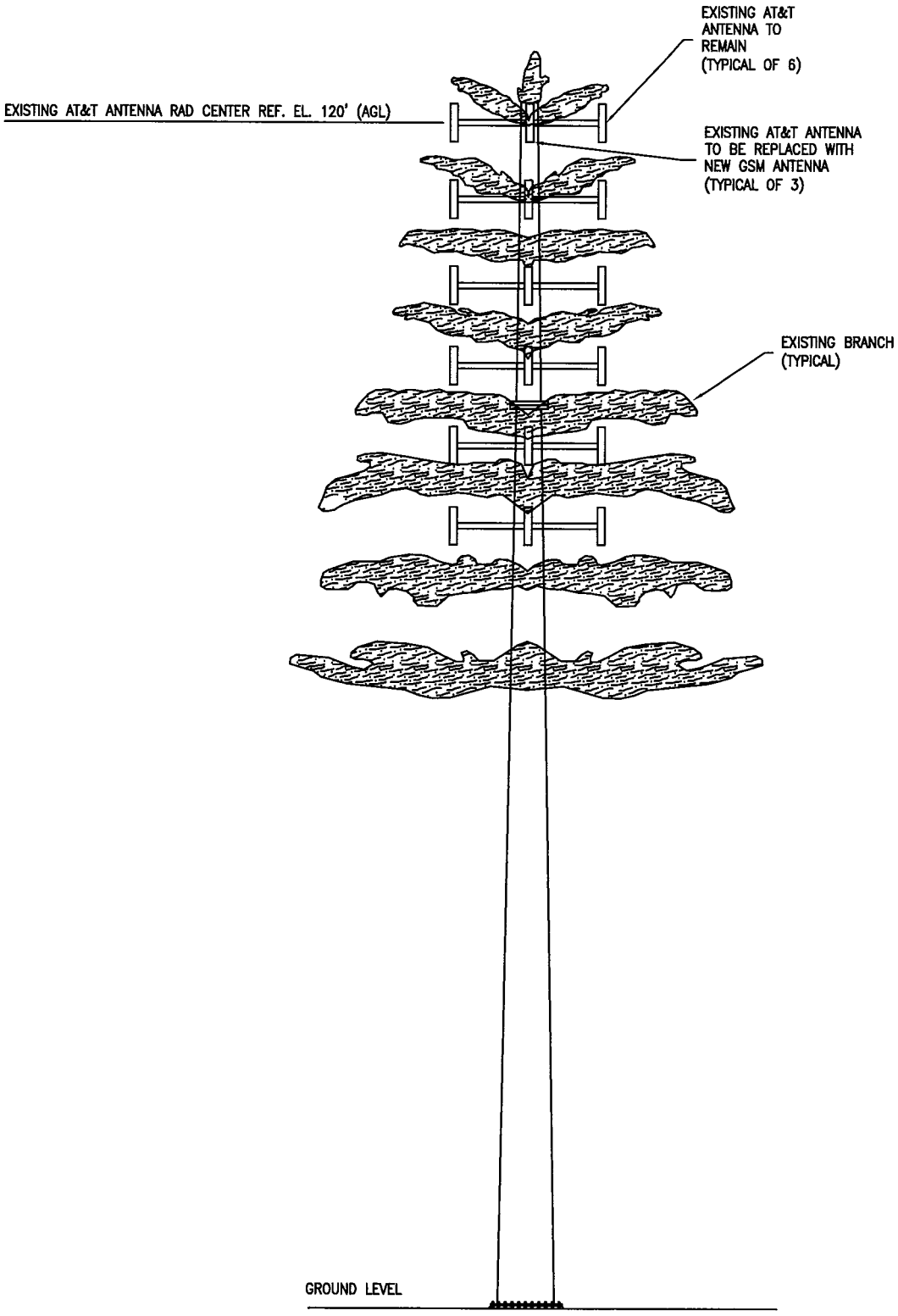
FCC Office of Engineering and Technology (OET) Bulletin 56, "Questions and Answers About Biological Effects and Potential Hazards of Radiofrequency Electromagnetic Fields", Fourth Edition, August 1999.

Richard Tell, "CTIA's EME Design and Operation Considerations for Wireless Antenna Sites", November 15, 1996.

Site Data



SITE ID NO:	Edwards AND Kelcey WE'LL TAKE YOU THERE	AT&T WIRELESS COMMUNICATIONS FACILITY	Dwg. No. SK-1
Designed by:		SITE ADDRESS: BARKHAMSTEAD 127 NEW HARTFORD ROAD BARKHAMSTEAD, CT	REV. DATE: DESCRIPTION
Drawn by:			Scale: Date: 11/02/01
Checked by:			Job No. File No. Dwg. of 1
Approved by:			



SITE ID NO:	Edwards AND Kelcey WE'LL TAKE YOU THERE	AT&T WIRELESS COMMUNICATIONS FACILITY	REV. DATE: DESCRIPTION	Dwg. No. SK-2
Designed by:		SITE ADDRESS: BARKHAMSTEAD 127 NEW HARTFORD ROAD BARKHAMSTEAD, CT	Scale:	Date: 11/02/01
Drawn by:			Job No.	File No.
Checked by:				Dwg. of 1
Approved by:				

AT&T

AT&T WIRELESS SERVICES, LLC

SITE NUMBER: L14
SITE NAME: BARKHAMSTED

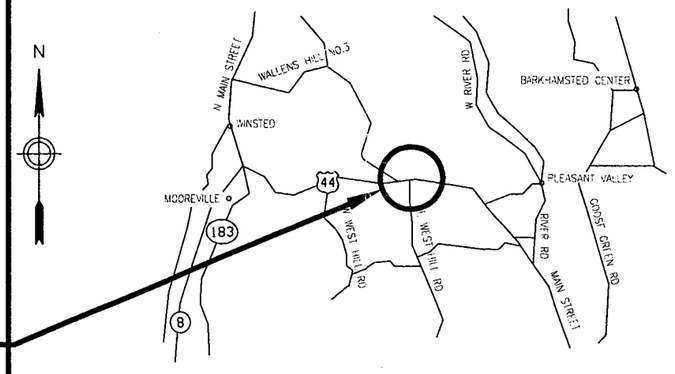
DRAWING INDEX

		REV.
24623-313-CT-L14-01	TITLE SHEET	1
24623-313-CT-L14-02	SITE LAYOUT	0
24623-313-CT-L14-03	EQUIPMENT ROOM LAYOUT & NOTES	0
24623-313-CT-L14-04	ELEVATION AND ANTENNA AZIMUTH	1
24623-313-CT-L14-05	ANTENNA SCHEMATIC AND BILL OF MATERIALS	1
24623-313-CT-L14-06	STANDARD DETAILS	0
24623-313-CT-L14-07	STANDARD DETAILS	0

DIRECTIONS

TAKE I-95 NORTH. TAKE THE EXIT CT-25/CT-8 EXIT 27A, TOWARDS TRUMBULL/WATERBURY. MERGE ONTO COLONEL HENRY MUCCI HIGHWAY. TAKE CT-8 NORTH TOWARDS CT-15 NORTH/SHELTON/WATERBURY. MERGE ONTO CT-8 NORTH. STAY STRAIGHT TO GO ONTO SOUTH MAIN ST/US-44/CT-183. SOUTH MAIN ST/US-44/CT-183 BECOMES US-44/NEW HARTFORD RD/CT-183. STAY STRAIGHT ONTO US-44/NEW HARTFORD RD.

VICINITY MAP



SITE

NOT TO SCALE

PROJECT INFORMATION

SCOPE OF WORK:	REMOVE AND REPLACE EXISTING AT&T ANTENNAS WITH NEW GSM ANTENNAS & ASSOCIATED ITEMS AS SHOWN IN THE ATTACHED DRAWINGS
SITE ADDRESS:	127 NEW HARTFORD ROAD BARKHAMSTED, CONNECTICUT 06063
PROPERTY OWNER:	REGIONAL REFUSE DISPOSAL DISTRICT 1 PO BOX 306 PLEASANT VALLEY, CT 06063 (860) 379-1972
CONTACT PERSON:	JIM HART 860-379-1972
APPLICANT:	AT&T 15 EAST MIDLAND AVE PARAMUS, NJ 07652
LATITUDE:	41.89361
LONGITUDE:	-72.99666
ELEVATION:	809'
JURISDICTION:	TOWNSHIP OF BARKHAMSTED
TAX I.D. NUMBER:	LOT 14R, BLOCK 18 MAP 49
CURRENT USE:	WIRELESS TELECOMMUNICATIONS FACILITY
PROPOSED USE:	NO CHANGE
ZONING DISTRICT:	NAV
STRUCTURE HEIGHT:	125'
ANTENNA RAD CENTER:	120'
RF DATASHEET:	6/26/01 (REV. 1)
RF ENGINEER:	TONY HOUWELING LUCENT TECHNOLOGIES (973) 386-8621
ANTENNA LOCATION:	MONOPOLE-TREE
EQUIPMENT LOCATION:	GROUND EQUIPMENT SHELTER
GENERAL CONTRACTOR:	EDWARDS & KELCEY THOMAS E. SMITH 299 MADISON AVENUE MORRISTOWN, NJ 07962 973-267-8830

STRUCTURAL REVIEW

EXISTING TOWER/FOUNDATION AND BUILDING (AS APPLICABLE) HAVE BEEN EVALUATED FOR THE REPLACEMENT/ADDITION OF EQUIPMENT, ANTENNA AND COAX CABLES. NO STRUCTURAL MODIFICATIONS ARE REQUIRED

STATE OF CONNECTICUT
THOMAS R. CABANA
LICENSED PROFESSIONAL ENGINEER

THOMAS R. CABANA
P.E. No. 21784 11/19/01 DATE

Edwards AND Kelcey
EDWARDS AND KELCEY, INC.
1247 WARD AVENUE
WEST CHESTER, PA 19380-4259
E & K PROJ.#: 020015.011
CONTACT: ROB DAVIS
PHONE: (401) 272-1969

SITE NAME: BARKHAMSTED
SITE#: L14
127 NEW HARTFORD ROAD
BARKHAMSTED, CONNECTICUT 06063

AT&T
AT&T
15 EAST MIDLAND AVE.
PARAMUS, NJ 07652

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	10/29/01	ISSUED FOR PERMITS	DPD	PDC	
0	10/20/01	ISSUED FOR CONSTRUCTION	DPD	PDC	

SCALE AS SHOWN | DESIGNED | DRAWN

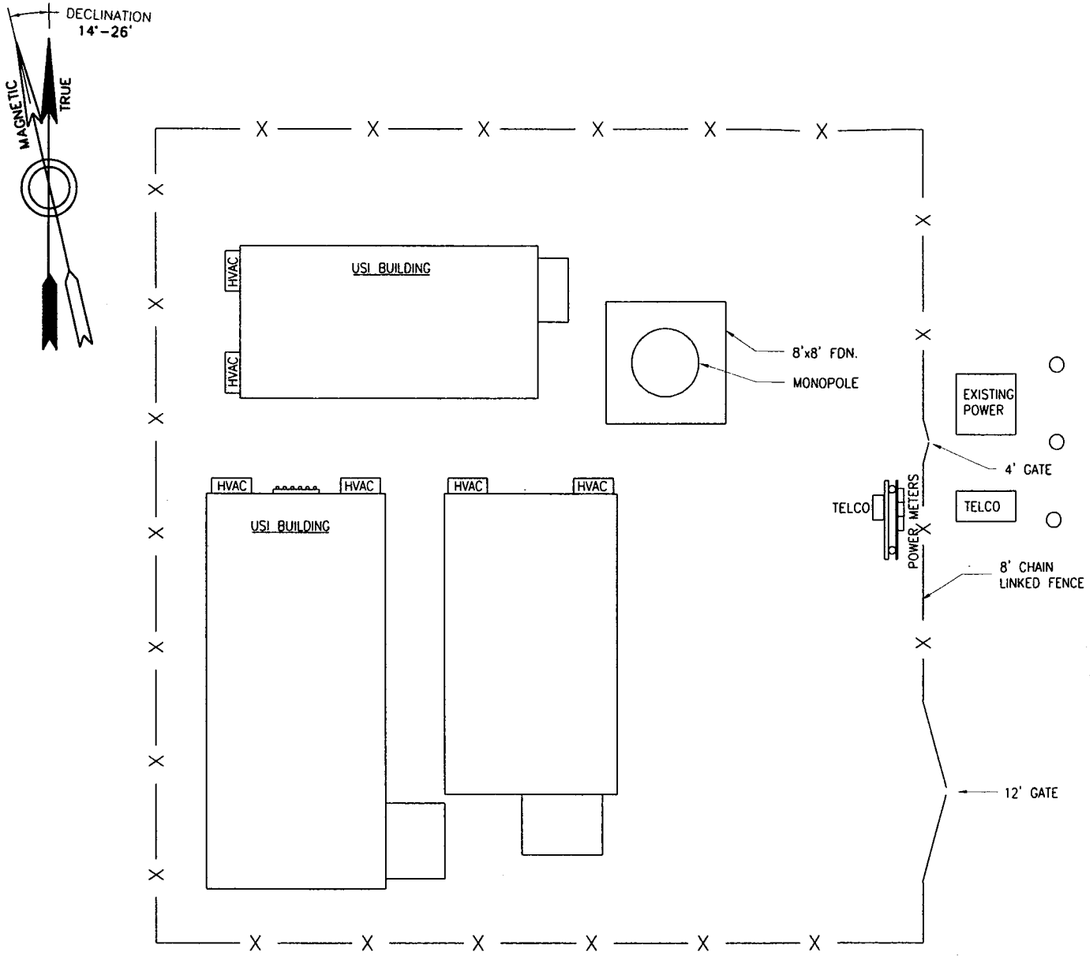
L14 - BARKHAMSTED

TITLE SHEET

JOB NO.	DRAWING NUMBER	REV
24623-313	CT-L14-01	1

6 5 4 3 2

020201



NOTE:
COMPLETENESS AND ACCURACY OF LOCATION AND DEPTH OF UNDERGROUND UTILITIES OR STRUCTURES CANNOT BE GUARANTEED. LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES MUST BE VERIFIED PRIOR TO ANY EARTH MOVING ACTIVITIES.

SITE PLAN (1/02)
NOT TO SCALE

THOMAS R. CABANA
P.E. No. 21784
11/19/01 DATE

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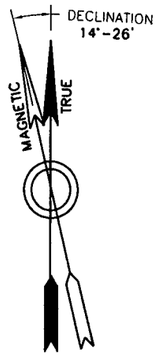
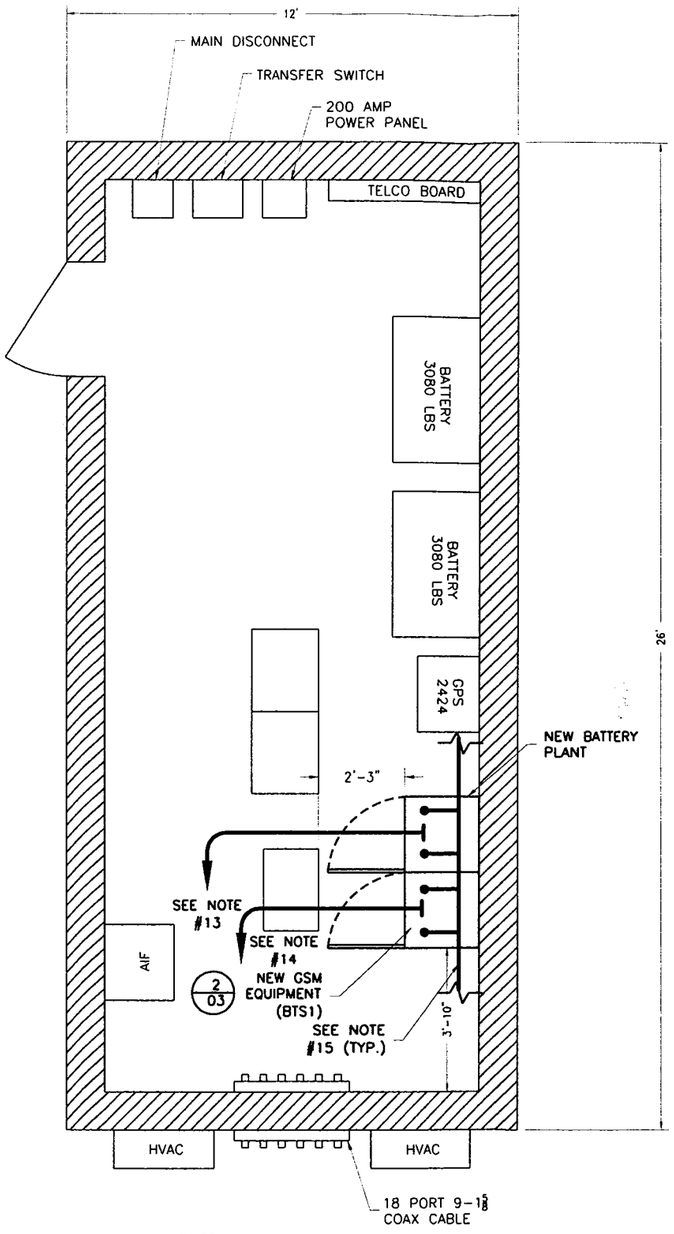
L14 - BARKHAMSTED

SITE LAYOUT

JOB NO.	DRAWING NUMBER	REV
24623-313	CT-L14-02	1

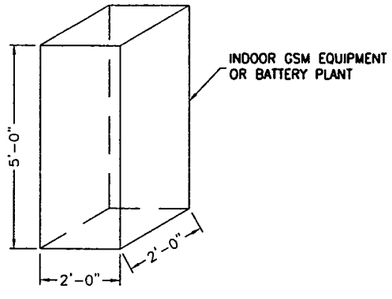
6 5 4 3 2





*NOTE:
DIMENSION FOR REFERENCE ONLY.
3'-0" MINIMUM CLEARANCE REQUIRED.

EQUIPMENT PLAN
NOT TO SCALE
1
03



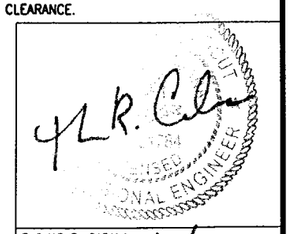
TYPICAL LUCENT GSM
EQUIPMENT/BATTERY PLANT
NOT TO SCALE
2
03

GENERAL NOTES:

1. ALL WORK SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF NATIONAL STATE, CITY, AND LOCAL CODES, STANDARDS, AND AMENDMENTS.
2. INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FROM INFORMATION AND DRAWINGS PROVIDED BY CONTRACTOR. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
3. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS ARE INTENDED AS GUIDELINES ONLY AND MUST BE VERIFIED.
4. ALL ITEMS OTHER THAN WHAT IS NOTED IN THE BILL OF MATERIALS FOR ANTENNAS, WILL BE PROVIDED BY THE SUBCONTRACTOR.
5. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR.
6. ALL MATERIAL SHALL BE FURNISHED AND WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF SPECIFICATIONS LISTED BELOW.
7. FIELD ROUTE ALL CONDUITS, CABLES, ETC. AS REQUIRED. CONFIRM THE EXACT ROUTING WITH THE ON-SITE CONTRACTOR CONSTRUCTION MANAGER PRIOR TO THE START OF WORK .
8. ALL DAMAGE TO THE EXISTING STRUCTURE DURING THE CELL SITE UPGRADE MUST BE MADE GOOD TO THE PRE-CONSTRUCTION CONDITION OR BETTER .
9. REMOVE AND CLEAN UP ANY DEBRIS OR MATERIAL FROM THE SITE THROUGHOUT THE DURATION OF THE CONTRACT UPON COMPLETION OF THE WORK AS DIRECTED BY THE CONTRACTOR.
10. THIS CELL SITE IS IN FULL COMMERCIAL OPERATION, THE SUBCONTRACTOR IS NOT TO DISRUPT THE EXISTING SITE'S NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR AND SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
11. SINCE THIS SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.
12. WHEN OTHER CARRIERS ARE PRESENT ON THE SAME STRUCTURE MAINTAIN 10' HORIZONTAL SEPARATION AND 5' VERTICAL SEPARATION BETWEEN CARRIERS.
13. POWER:
    SUBCONTRACTOR TO PROVIDE & INSTALL 3 DP 20 AMP BREAKERS. SUBCONTRACTOR TO FIELD ROUTE 6-#10 STRANDED WIRES AND 1-#10 STRANDED GREEN INSULATED GROUND WIRE 1-INCH EMT FROM AC PANEL TO A 8X8X4-INCH JUNCTION BOX NEAR EQUIPMENT LOCATION. SUBCONTRACTOR TO RUN FLEX CONDUIT FROM JUNCTION BOX TO 3-FEET ABOVE GROUND.
14. TELCO:
    SUBCONTRACTOR TO PROVIDE, INSTALL, & FIELD ROUTE (1.5 MBIT/s) CAT 5E T-1 LINE FROM THE NETWORK INTERFACE UNIT (NIU) TO LUCENT BTS CABINET PER DETAIL 1016A. CONNECTION TO CABINET WILL BE MADE BY LUCENT.
15. GROUND:
    SUBCONTRACTOR SHALL PROVIDE PIG TAIL WITH 2-HOLE LUG (DETAIL 508) FOR GROUNDING THE LUCENT GSM (BTS AND POWER) CABINET FRAMES TO EXISTING HALO GROUND RING USING #6 AWG STRANDED AND INSULATED GREEN COPPER WIRE WITH COMPRESSION TYPE CONNECTOR. IF CONNECTION TO HALO IS NOT FEASIBLE, PROVIDE #6 AWG STRANDED & INSULATED GREEN COPPER WIRE FROM LUCENT GSM (BTS AND POWER) CABINET FRAMES TO MASTER GROUND BAR (DETAIL 509) AND TERMINATE WITH 2-HOLE LUG PER DETAIL 508. PROVIDE 2 GROUNDS PER CABINET. CONNECTION TO CABINET WILL BE MADE BY LUCENT.
16. CLEARANCE:
    GSM CABINET SHOULD HAVE A MINIMUM OF 36-INCH FRONT CLEARANCE.

REFERENCE SPECIFICATIONS:

1. 24623-033-3PS-A00Z-00002, SCOPE OF WORK (EXHIBIT "D") FOR GENERAL CONSTRUCTION SERVICES.
2. 24623-033-3PS-A00Z-00005, (EXHIBIT "E") FOR GENERAL CONSTRUCTION SERVICES.



THOMAS R. CABANA
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11/19/01 DATE

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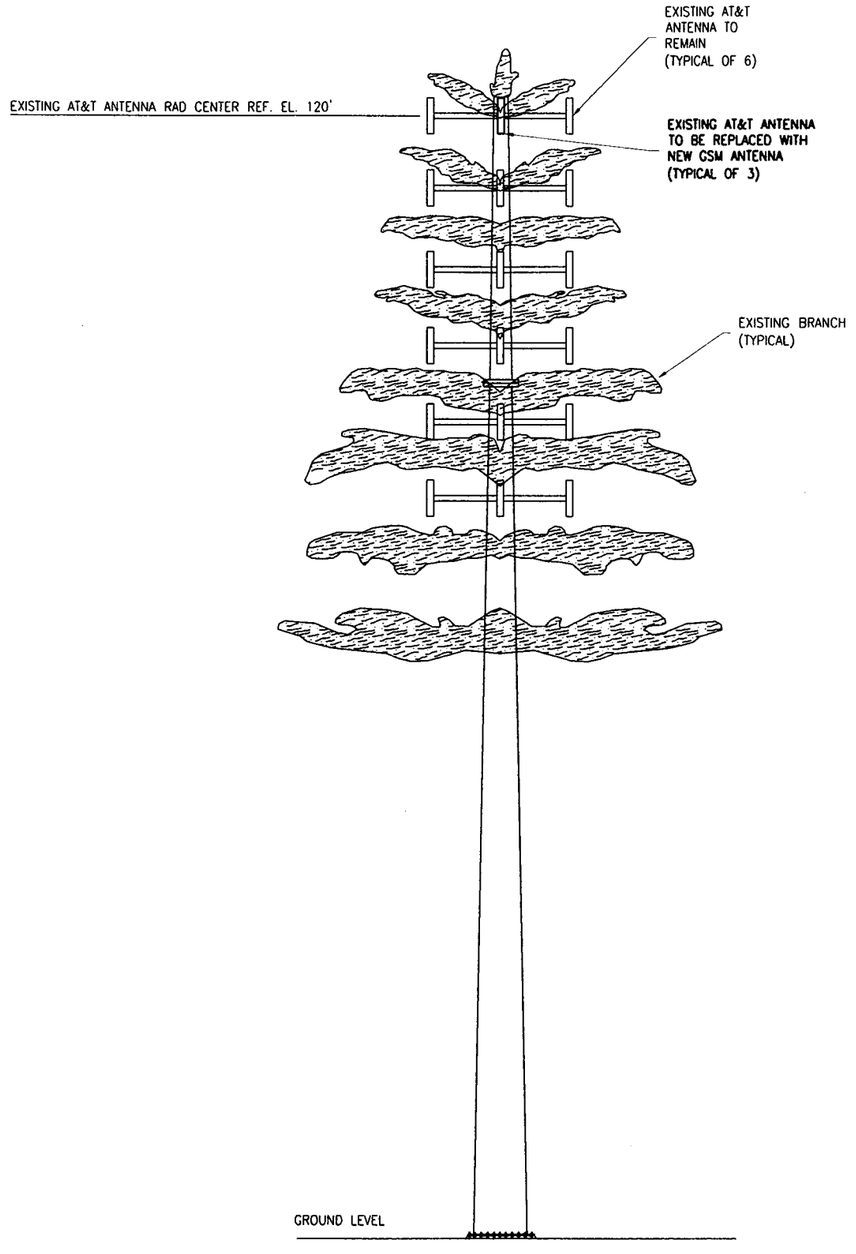
SCALE AS SHOWN | DESIGNED | DRAWN

L14 - BARKHAMSTED

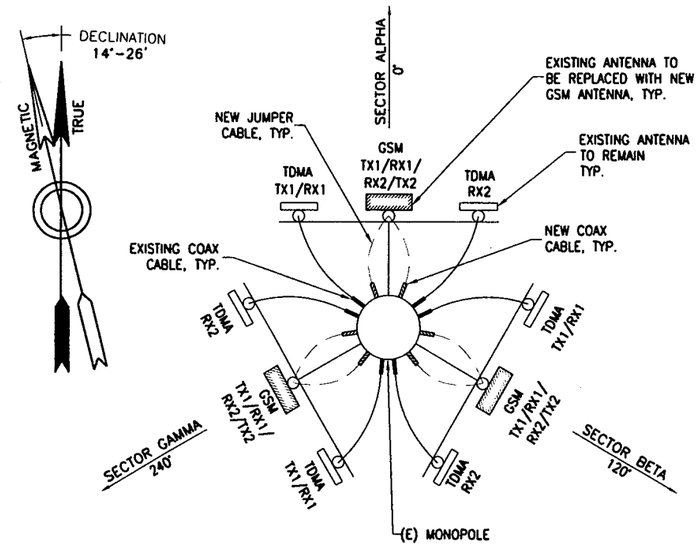
EQUIPMENT ROOM
LAYOUT AND NOTES

JOB NO.	DRAWING NUMBER	REV
24623-313	CT-L14-03	1

6 5 4 3 2



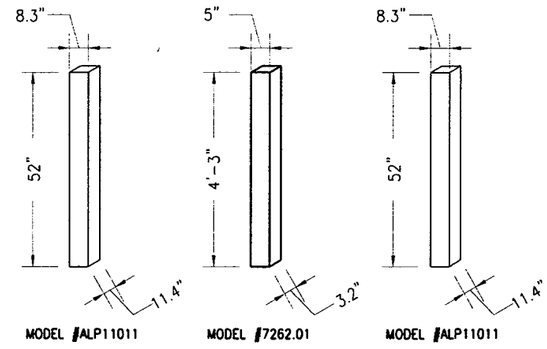
ELEVATION
NOT TO SCALE
1/04



NOTE:
1. SEE SHEET 05 FOR SPECIFIC ANTENNA/COAX CONFIGURATION.

2. ROUTE NEW COAX CABLES ALONGSIDE EXISTING CABLES UNLESS OTHERWISE NOTED ON PLANS.

TYPICAL ANTENNA ORIENTATION PLAN
NOT TO SCALE
2/04



ANTENNA SCHEMATIC
NOT TO SCALE
3/04

THOMAS R. CABANA
P.E. No. 21784
11/19/01 DATE

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EDWARDS AND KELCEY, INC.
1247 WARD AVENUE
WEST CHESTER, PA 19380-4259
E & K PROJ #: 020015.011
CONTACT: ROB DAVIS
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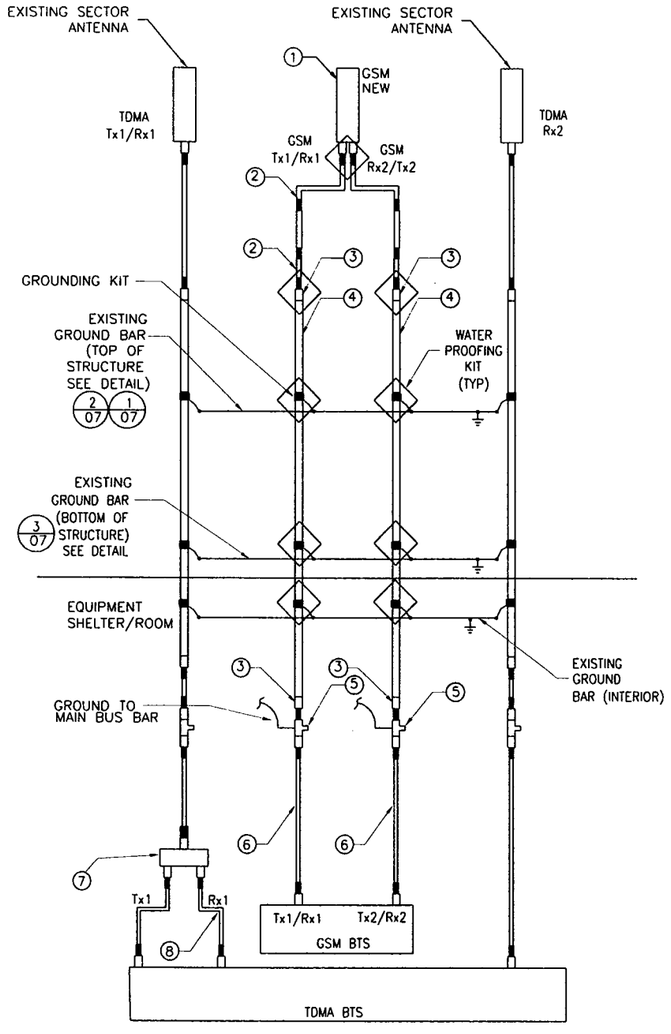
SCALE AS SHOWN | DESIGNED | DRAWN

L14 - BARKHAMSTED

ELEVATION AND ANTENNA AZIMUTH

JOB NO.	DRAWING NUMBER	REV
24623-313	CT-L14-04	1

6 5 4 3 2



3/4 VDP
ANTENNA CONFIGURATION
NOT TO SCALE

BILL OF MATERIALS

ITEM NO.	ITEM DESCRIPTION	SYS.	SECTOR ALPHA AZIMUTH 0°			SECTOR BETA AZIMUTH 120°			SECTOR GAMMA AZIMUTH 240°			TOTAL QUANTITY	SUPPLIED BY
			EXISTING	TX1/RX1/RX2/TX2 (GSM)	EXISTING	EXISTING	TX1/RX1/RX2/TX2 (GSM)	EXISTING	EXISTING	TX1/RX1/RX2/TX2 (GSM)	EXISTING		
1	ANTENNA		ALP 11011 EXISTING (52"x8.3"x11.4")	ALLGON 7262.01 NEW (51.2"x5"x3.2")	ALP 11011 EXISTING (52"x8.3"x11.4")	ALP 11011 EXISTING (52"x8.3"x11.4")	ALLGON 7262.01 NEW (51.2"x5"x3.2")	ALP 11011 EXISTING (52"x8.3"x11.4")	ALP 11011 EXISTING (52"x8.3"x11.4")	ALLGON 7262.01 NEW (51.2"x5"x3.2")	ALP 11011 EXISTING (52"x8.3"x11.4")	3	BECHTEL
	MECHANICAL DOWNTILT			2 DEG.			4 DEG.			2 DEG.			
2	STANDARD HELIAX JUMPER LDF 1/2" JUMPER, DIN MALE/DIN MALE			L4A-PDMDM-6 NEW			L4A-PDMDM-6 NEW			L4A-PDMDM-6 NEW		6	BECHTEL
3	STANDARD HELIAX UNATTACHED CONNECTOR, DIN FEMALE			L5PDF-RPC NEW			L5PDF-RPC NEW			L5PDF-RPC NEW		12	BECHTEL
4	MAIN COAXIAL CABLE (LENGTH)			LDF5-50A (180'-7/8") 1-NEW 1-EXISTING			LDF5-50A (180'-7/8") 1-NEW 1-EXISTING			LDF5-50A (180'-7/8") 1-NEW 1-EXISTING		540' (7/8")	BECHTEL
5	SURGE ARRESTOR			APTDC-BDFDM-SAT NEW			APTDC-BDFDM-SAT NEW			APTDC-BDFDM-SAT NEW		6	BECHTEL
6	1/2" JUMPER, DIN MALE/DIN MALE			L4A-PDMDM-25			L4A-PDMDM-25			L4A-PDMDM-25		TBD	TBD
7	DUPLEXER											TBD	TBD
8	1/2" JUMPER, DIN MALE/ DIN MALE											TBD	TBD
9	LOW NOISE AMPLIFIER											0	BECHTEL
	ID TAG			ALPHA A2/A3 ATTWS GSM			BETA B2/B3 ATTWS GSM			GAMMA C2/C3 ATTWS GSM			SUB CONTRACTOR
	COLOR CODE			2/3 RED			2/3 BLUE			2/3 GREEN			SUB CONTRACTOR

1. SUBCONTRACTOR SHALL VERIFY THE ACTUAL LENGTH IN THE FIELD BEFORE INSTALLATION
2. TAG (SEE DETAIL 5 ON SHEET 06) & COLOR CODE ALL MAIN CABLES AT LOCATIONS PER AWS TOWER/ANTENNA CABLE MARKING STANDARD:
   - TOP OF TOWER END OF MAIN COAX
   - BOTTOM OF TOWER SHELTER EXTERIOR AT CABLE ENTRY PORT
   - WAVE GUIDE PORT SHELTER INTERIOR AT CABLE ENTRY PORT
   - DIRECTLY BEFORE AND AFTER RF EQUIPMENT (DUPLEXERS, DIPLEXERS, ETC.)
   - END OF INTERIOR JUMPERS AT BTS EQUIPMENT
3. ANTENNAS SHALL BE PROCURED AND INSTALLED WITH DOWN TILT MOUNTING BRACKETS SUPPLIED BY ANTENNA MANUFACTURER
4. PRIOR APPROVAL IS REQUIRED BEFORE PERFORMING ANY WORK ON EXISTING CELL SITE EQUIPMENT
5. CONTRACTOR SHALL PROVIDE ALL GROUNDING KITS AND WEATHER PROOFING KITS.
6. INFORMATION FROM RF DATA SHEETS, REV. 1.

STATE OF CONNECTICUT
THOMAS R. CABANA
NO. 21784
LICENSED PROFESSIONAL ENGINEER

THOMAS R. CABANA
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SCALE AS SHOWN | DESIGNED | DRAWN

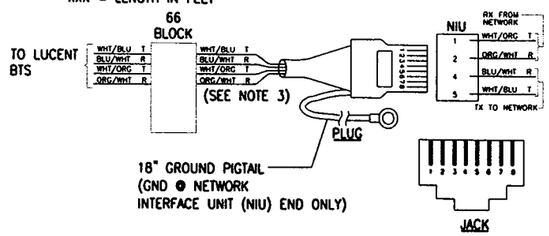
L14 - BARKHAMSTED

ANTENNA SCHEMATIC AND BILL OF MATERIALS

JOB NO.	DRAWING NUMBER	REV
24623-313	CT-L14-05	1

6 5 4 3 2

* VENDOR:
CDS DATACOM INC.
214-340-9199
INDOOR SINGLE ENDED P/N C00411482-XXX
OUTDOOR SINGLE ENDED P/N C00411492-XXX
XXX = LENGTH IN FEET



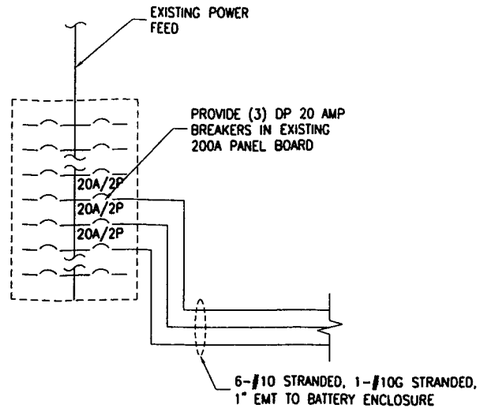
RJ48C 8 PIN CONNECTOR

* T1 CABLE MUST BE CDS DATACOM (NO SUBSTITUTION)

NOTES:

1. THE CABLE IS SUITABLE FOR LUCENT FLEXENT SITE GSM BTS.
2. THE CABLE IS A STRAIGHT-THROUGH CABLE WITH IDENTICAL CONNECTOR IF MODULAR PLUG USED AT BOTH ENDS.
3. PAIRS 3&4 NOT SHOWN/ USED FOR RJ48C BUT ARE TERMINATED IN MODULAR PLUG PER ANSI/TIA/EIA (T568B).

T-1/PCM
CONNECTOR PINOUT (1016A) 1/06
NOT TO SCALE

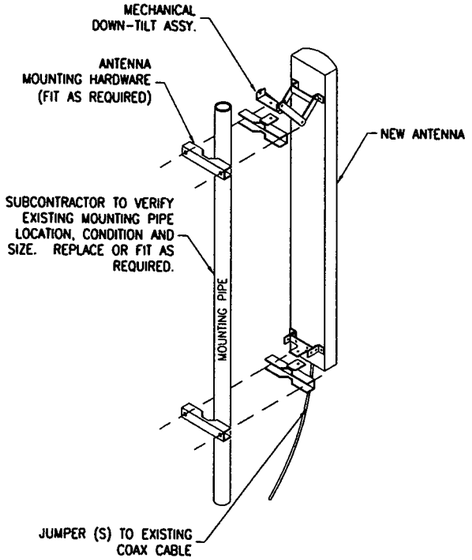


ONE
LINE DIAGRAM 2/06
NOT TO SCALE

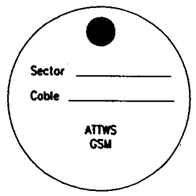
EXISITNG 200A PANEL					
DESCRIPTION	BREAKER	CIRCUIT	CIRCUIT	BREAKER	DESCRIPTION
UNKNOWN RECT. #1	20	1	2	60	SURGE
		3	4		
RECTIFIER #2	20	5	6	20	LIGHTS
		7	8	20	RECP
RECTIFIER #3	20	9	10	20	REC
		11	12	20	REC
RECTIFIER #4	20	13	14	20	GFI
		15	16	20	COND REEL
RECTIFIER #5	20	17	18	20	SMOKE
		19	20	50	HVAC #1
RECTIFIER #6	20	21	22		
		23	24	50	HVAC #2
SPARE RECTIFIER #7	20	25	26		
		27	28	20	NEW GSM
RECTIFIER #8	20	29	30		
		31	32	20	NEW GSM
RECTIFIER #9	20	33	34		
		35	36	20	NEW GSM
		37	38		
		39	40		
		41	42		
SURGE ARRESTER					

NOTE: SUBCONTRACTOR SHALL VERIFY IN FIELD AND MAKE ADJUSTMENTS IF NECESSARY

PANEL SCHEDULE 3/06
NOT TO SCALE

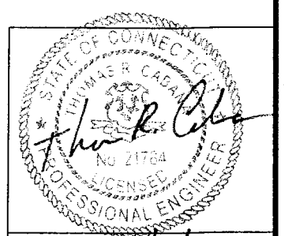


ANTENNA
MOUNT DETAIL 4/06
NOT TO SCALE



NOTE:
TAG SHALL BE MADE OF STEEL OR EQUIVALENT AND ATTACHED TO CABLE WITH CORROSION PROOF WIRE.

TAG LABELING 5/06
NOT TO SCALE



THOMAS R. CABANA
P.E. No. 21784 11/19/01 DATE

Edwards AND Kelcey
EDWARDS AND KELCEY, INC.
1247 WARD AVENUE
WEST CHESTER, PA 19380-4259
E & K PROJ.#: 020015.011
CONTACT: ROB DAVIS
PHONE: (401) 272-1969

SITE NAME: BARKHAMSTED
SITE#: L14
127 NEW HARTFORD ROAD
BARKHAMSTED, CONNECTICUT 06063

AT&T
AT&T
15 EAST MIDLAND AVE.
PARAMUS, NJ 07652

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	10/29/01	ISSUED FOR PERMITS	OPD	PDC	
0	10/20/01	ISSUED FOR CONSTRUCTION	OPD	PDC	

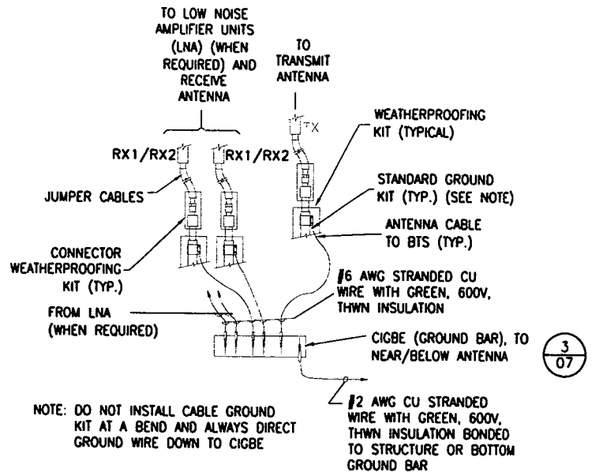
SCALE AS SHOWN | DESIGNED | DRAWN

L14 - BARKHAMSTED

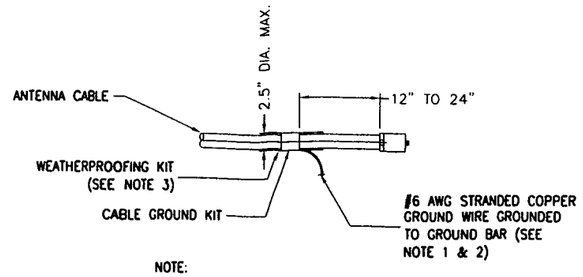
STANDARD
DETAILS

JOB NO.	DRAWING NUMBER	REV
24623-313	CT-L14-06	1

6 5 4 3 2



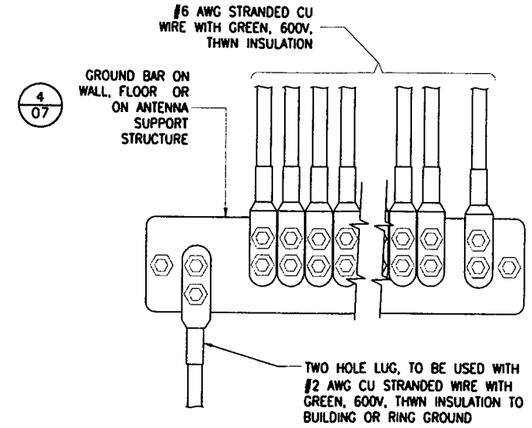
CONNECTION OF GROUND WIRE TO GROUND BAR (522A) 1/07
NOT TO SCALE



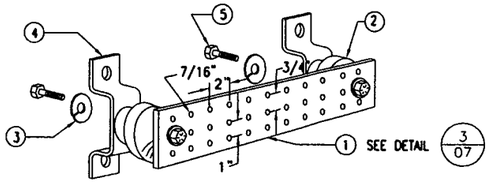
NOTE:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
3. WEATHER PROOFING SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.

CONNECTION OF CABLE GROUND KIT TO ANTENNA CABLE (513A) 2/07
NOT TO SCALE



INSTALLATION OF GROUND WIRE TO GROUND BAR (508A) 3/07
NOT TO SCALE



LEGEND

1- COPPER GROUND BAR, ¼"X 4"X 20", NEWTON INSTRUMENT CO. CAT. NO. B-6142 OR EQUAL. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION.

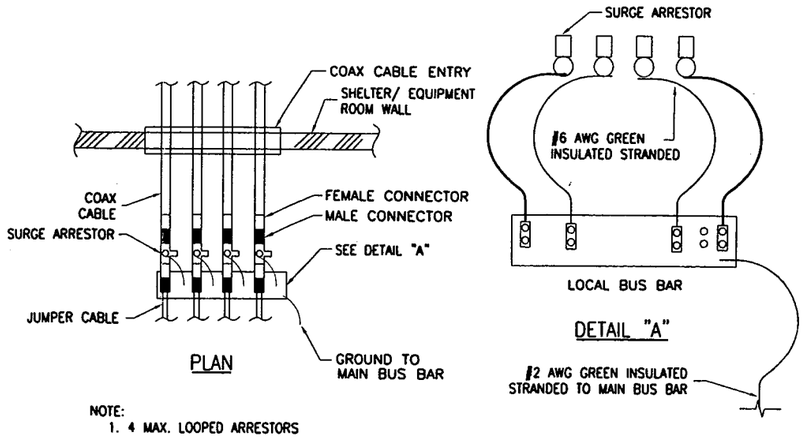
2- INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4

3- 5/8" LOCKWASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8

4- WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT NO. A-6056

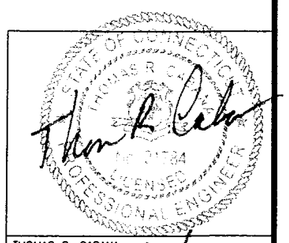
5- 5/8-11 X 1" HHCS BOLTS, NEWTON INSTRUMENT CO. CAT NO. 3012-1

GROUND BAR DETAIL (509) 4/07
NOT TO SCALE



NOTE:
1. 4 MAX. LOOPED ARRESTORS

SURGE ARRESTOR GROUNDING DETAIL (527) 5/07
NOT TO SCALE



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