Kise Straw & Kolodner

Architects Planners Historians Archaeologists

James Bennett Straw, AIA

Harvey D. Kolodner, MBA

ORIGINAL

EM-CING-155-159-060616

14 June 2006

Ms. Pam Katz, Chairman, and
Members of the Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

RE: Notice of Exempt Modification – Two (2) Existing Telecommunications Tower Facilities in West Hartford and Wethersfield, CT

Dear Chairman Katz and Members of the Council:

Kise Straw & Kolodner Inc., in association with Network Building & Consulting, LLC, submits this notice of intent to modify existing telecommunications facilities. New Cingular Wireless PCS, LLC ("Cingular") proposes to remove and replace telecommunications antennas and associated equipment located on existing facilities in the above-referenced municipalities. Cingular operates under licenses issued by the Federal Communications Commission (FCC) to provide cellular and PCS mobile telephone service in the areas to be served by the proposed installation.

Please accept this letter and attachments as notification to the Council, pursuant to Regulations of Connecticut State Agencies (RCSA) Section 16-50j-73. This submission will demonstrate that the proposed changes fall within the limits of an exempt modification as described under the RCSA Section 16-50j-72(b)(2).

In accordance with RCSA Section 16-50j-73, the chief elected officials will receive notification of the work proposed at the location within their jurisdiction.

Attached you will find summary sheets detailing the planned changes, including power density calculations reflecting the change in the effect of Cingular's operations at these sites. Also included is documentation of the structural sufficiency of the towers to accommodate the revised antenna configuration.

The planned changes to these facilities fall within those activities explicitly provided for in RCSA Section 16-50j-72(b)(2). As such, the proposed work does not result in any substantial adverse environmental effect.

1. The proposed work does not affect the height of the structure.

Kise Straw & Kolodner Inc.
123 South Broad St.
Suite 1270
Philadelphia, PA 19109
(215) 790-1050 FAX (215) 790-0215
www.kskl.com

2. The proposed changes do not affect the existing property boundaries. All proposed work will occur on the property controlled by Cingular.

3. The proposed work will not increase noise levels at the site boundary by six (6) decibels or more.

4. Addition of the UMTS broadcasts will not increase the exposure to radio frequency electromagnetic energy, measured at the base of the tower, to or above the standard adopted by the state of Connecticut and the FCC. The power density table provided for this facility summarizes the cumulative results for a point of interest at the tower's base of the "worst-case" exposure calculations resulting from all carriers co-located on this tower. The calculations are in accordance with the FCC's Office of Engineering and Technology Bulletin No. 65 (1997), and for simplicity, an assumption is made that the antennas are all pointed down, thus focusing their energy at the tower's base.

For the foregoing reasons, Cingular respectfully submits that proposed changes at these facilities constitute an exempt modification under RCSA Section 16-50j-72(b)(2).

Please do not hesitate to call me at 215.790.1050 ext. 138 with questions concerning this notice. Thank you for your consideration of this matter.

Sincerely,

Elizabeth H. Lankenau, AICP
Planner

Attachments

cc: Honorable Scott Slifka, Mayor, Town of West Hartford
Honorable Russell Morin, Mayor, Town of Wethersfield

27-31 South Main Street, West Hartford, CT

Summary Sheet
Project Location Map
Site Plan and Elevation
Structural Analysis
Elected Official Letter

CINGULAR WIRELESS
Proposed Modifications

Site Address: 27-31 S. Main Street, West Hartford, CT

Site Owner: Global Signal / Town Center West Associates

Type of Existing Facility: Rooftop tower

Antenna Configuration: Center line – 89.7' above ground level; remove existing Allgon 7250 antennas and replace with six (6) Powerwave 7770 units; *specification attached*

TMA Configuration: Existing units to be replaced with twelve (12) new LGP 214nn units; *specification attached*

Coaxial Cables: Existing six (6) 1 5/8" diameter cables to remain and add six (6) new cables of the same dimension

Other Equipment: One (1) Ericsson RBS 3106 equipment cabinet in existing shelter

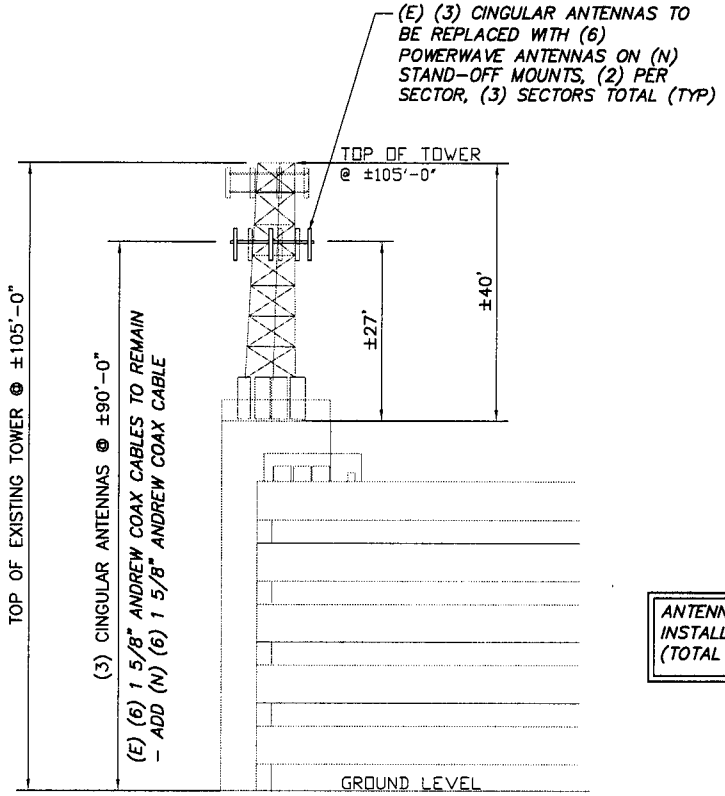
Power Density:

As the table demonstrates, the cumulative worst-case exposure would be approximately 37.35% of the ANSI/IEEE standard, as calculated for mixed frequency sites. Total power density levels resulting from Cingular's use of the facility would be within applicable standards.

Site # 5843								
Carrier	Antenna Height (ft)	Freq. (MHz) For Limit	# of Channels	W ERP/Channel (ref 1/2-w dipole)	W EIRP/Sector	Power Density ($\mu W/cm^2$)	FCC Limit ($\mu W/cm^2$)	Percent of Limit (%)
Cingular UMTS	89.7	1935.0	1	500.0	820.0	22.3	1000	2.23%
Sprint	99.7	1900.0	12	500.0	9840.0	217.1	1000	21.71%
AT&T	89.7	1900.0	12	250.0	4920.0	134.1	1000	13.41%
TOTAL								**37.35%**

Structural Analysis: *Structural Analysis* attached.


27-31 S. Main Street
West Hartford, CT
West Hartford
Town Hall
Project Area Location
0
900
1800
scale in feet
N
Fernridge Park
Fairview Cemetery
Rockledge Country Club
Farmington Ave
N Main St
S Main St
Sedgwick Rd
Park Rd
Trout Brook Dr
S Quaker Ln
Boulevard
Tunxis Rd
Ranger Ln
Hickory Ln
Fulton Pl
Clifford Ln
Clifford Dr
Hammick Rd
Duffield Dr
Pine Rd
Middlebrook Rd
Steele Rd
Brookside Dr
Brookside Blvd
Brookfield Rd
Linbrook Rd
Bainbridge Rd
Fox Chase Ln
Flagstad Rd
Banbury Ln
Wyndwood Rd
Linnard Rd
Timrod Rd
Cliffmore Rd
Rustic Ln
Linwold Dr
Montclair Dr
Middlefield Dr
Brookline Dr
Ballard Dr
Griswold Dr
Penn Dr
Cumberland Rd
Auburn Rd
N Quaker Ln
Foxcroft Rd
E Normandy Dr
E Maxwell Dr
Hilltop Dr
Fern St
Farnham Rd
Edmund Pl
Fernridge Rd
Cobbs Rd
Arundel Ave
Sylvan Ave
Robin Rd
Dover Rd
Ardmore Rd
Bretton Rd
Keeney Ave
Loomis Dr
Warwick
Milton St
Fernbrook
Lilley Rd
Walkley Rd
Vanderbilt Rd
Arnold Way
Whitman Ave
Arlington Rd
Grennan Rd
Stanley St
Dale St
Outlook Ave
Bishop Rd
Garden Ln
High St
Ware Ave
Maplewood Ave
Whiting Ln
Wells Rd
Pleasant St
Four Mile Rd
Arapahoe Rd
Raymond Rd
Kingswood Rd
Avalon Rd
Vincent St
Forest Rd
Ellsworth Rd
Burr St
Pelham Rd
Westland Ave
Sunset Ter
Washington Cir
Vera St
Jessamine St
Nesbit Ave
Price Blvd
Eastview St
Woodrow St
Meadowbrook Rd
Court Park
Richard St
Van Bure
Riggs Ave
Newport Ave
Thomson Rd
Lemay St
Garfield Rd
Fairlee Rd
Waardwell Rd
Castlewood Rd
Trout Brook Ter
Clearview Ave
Gifford Rd
Seymour Ave
White Ave
Paxton Rd
Ridgebrook Dr
Westbrook Rd
Fennbrook Rd
St James St
St Charles St
Woodmere Rd
Sulgrave Rd
Glenbrook Rd
Overbrook Rd
Greenhurst Rd
Webster Hill Blvd
Bonny View Rd
Pebblebrook Dr
King Rd
Wilfred St
St Augustine St
Hemlock Ln
Smallwood Rd
Elm Dr
Edgemere Ave
Englewood Ave
Cherryfield Dr
Spring Ln
Crestwood Rd
Rumford St
Westminster Dr
Farm Hill Rd
Pheasant Hill Dr
Rockledge Dr
Taylor Rd
Edgemont Ave
Northfield Dr
Greystone Rd
Jackson Ave
Sidney Ave
Chapman Rd
Carleton Rd
Sunrise Hill Dr
Belcrest Rd
Ledgewood Rd
Bentwood Rd
Cassilis Rd
Ridgewood
Foxridge Rd
Cottage
43
42



ANTENNA CONTRACTOR TO INSTALL (12) NEW TMA UNITS. (TOTAL TMA UNITS = 12)

BUILDING/TOWER ELEVATION

SCALE: 1" = 20'-0"

LATITUDE: XX° XX' XX"
LONGITUDE: XX° XX' XX"

cingular
CINGULAR WIRELESS
580 MAIN STREET
BOLTON, MA 01740

ERICSSON
6300 LEGACY DRIVE
PLANO, TX 75024

CH2MHILL
8619 WEST BRYN MAWR
CHICAGO, ILLINOIS 60631

infinigy engineering
300 GREAT OAKS BLVD.
SUITE 312
ALBANY, NY 12203
OFFICE: (518) 690-0790
FAX: (518) 690-0793
185-051

SITE NAME: WEST HARTFORD CENTRAL

SITE NUMBER: 5843

27-31 SOUTH MAIN STREET
WEST HARTFORD, CT 06107

NO.	DATE	REVISION DESCRIPTION	BY	CHK	APP'D
2	05/31/06	MISC. REVISIONS	PHR	CJW	CJW
1	05/17/06	MISC. REVISIONS	PHR	CJW	CJW
0	04/24/06		PHR	CJW	CJW

SITE NUMBER
5843

1079 N. 204th Avenue
Elkhorn, NE 68022
Ph: 402-289-1888
Fax: 402-289-1861

SEMAAN ENGINEERING SOLUTIONS

40 ft Rohn SSV
Roof mounted
Self Supported Tower
Structural Analysis

Prepared for:
Global Signal
301 North Cattlemen Road, Suite 300
Sarasota, FL 34232

Site: 3017648 / CT03XC075
For Cingular
West Hartford, CT

June 9, 2006

Mr. Louis Belizaire
Global Signal
301 North Cattlemen Road, Suite 300
Sarasota, FL 34232

Re: Site 3017648 / CT03XC075 – West Hartford, CT.

Dear Mr. Belizaire:

We have completed the structural analysis for the existing Self Supported Tower, located at the above referenced site. The purpose of this analysis is to determine that the existing Self Supported Tower design is in conformance with the TIA/EIA-222 Rev F standard and local building codes for the proposed antennae loads installation. Refer to the Review and Recommendations section at the end of this report for the analysis results.

Description of Structure:

The structure is a roof mounted 40 ft Rohn SSV Self Supported Tower.

Refer to Rohn drawing B971773 dated April 14, 1997 for a detailed description of the structure.

Method of analysis:

The tower was analyzed using Semaan Engineering Solutions' software suite for communication structures. The structural analysis is performed using the SAPS finite element engine. The method is 3D, non-linear, which accounts for the second order geometric effects due to the displacements. It also treats guys as exact cable elements and therefore is ideal for guyed towers. The analysis was performed in conformance with **TIA/EIA-222 Rev F and local building codes for 80 mph with 1/2" radial ice (fastest mile)**. This is in conformance with the IBC 2003: Section 1609.1.1, Exception (5) and Section 3108.4. Wind is applied to the structure, accessories and antennas.

Structure loading:

The following loads were used in the tower analysis:

Elev (ft)	Qty	Antennas	Mounts	Coax	Carrier
39.0	9	DB980H90	(3) PCS frames	(9) 1 5/8	Sprint

Proposed Loads:

Elev (ft)	Qty	Antennas	Mounts	Coax	Carrier
29.0	6	Powerwave 7770.00	(3) PCS frames	(12) 1 1/4	Cingular
	12	LGP 2140X TMAs			

The transmission lines are assumed to be distributed and/or stacked to more than one tower face, such that only a maximum of (12) lines are exposed to the wind on any one tower face, otherwise this analysis is not valid.

Results of Analysis:

Refer to the attached Computer Summary sheets for detailed analysis results.

Structure:

The existing Self Supported Tower is structurally capable of supporting the existing and proposed antennas. The maximum structure usage is: 53.0%.

Foundation:

Leg Forces	Original Design Reactions	Current Analysis Reactions	% Of Design
Shear (Kips)	5.33	4.45	83.5
Axial (Kips)	32.40	29.94	92.4
Uplift (Kips)	27.10	24.73	91.2

The analysis reactions are less than the original design reactions therefore the roof framing is assumed to be adequate.

Review and Recommendations:

Based on the analysis results, the existing structure meets the requirements per the TIA/EIA-222 Rev F standards for 80 mph with 1/2" radial ice.

14 June 2006

Honorable Scott Slifka
Mayor, Town of West Hartford
50 South Main Street
West Hartford, CT 06107

RE: Notice of Exempt Modification – Existing Cingular Telecommunications Tower Facility at 27-31 South Main Street, West Hartford, Connecticut

Dear Mr. Slifka:

New Cingular Wireless PCS, LLC ("Cingular") proposes to remove and replace telecommunications antennas and associated equipment located on an existing tower at the above-referenced location. The facility is now controlled and operated by Cingular whose corporate office is located at 500 Enterprise Drive, Rocky Hill, CT 06067.

Proposed Modifications

Cingular proposes to remove the existing antennas and replace them with a total of six (6) new antennas, located at an existing centerline height of approximately 89.7' above ground level. Cingular will keep six (6) existing 1 5/8" diameter coaxial cables and add six (6) new cables of the same dimension. Cingular will also remove the existing tower mounted amplifiers and replace them with twelve (12) new units, located at the same height as the antennas.

In summary, the final antenna configuration at 27-31 South Main Street will include:

- 6 antennas,
- 12 coaxial cables, and
- 12 tower mounted amplifiers.

A structural evaluation has demonstrated that the tower will be structurally capable of supporting the proposed Cingular telecommunications equipment once the proposed modifications are complete.

James Nelson Kise, AIA AICP PP
James Bennett Straw, AIA
Harvey D. Kolodner, MBA
John R. Gibbons, AIA AICP
Philip E. Scott, RA

Suzanna Barucco
LaVern Browne
Katherine E. Cowing, LEED
Johnette Davies
Petar D. Glumac, Ph.D.
Douglas S. Heckrotte, RA LEED
Jody Holton, AICP
Marian Maxfield Hull, AICP PP

Kise Straw & Kolodner Inc.
123 South Broad St.
Suite 1270
Philadelphia, PA 19109
(215) 790-1050 FAX (215) 790-0215
www.ksk1.com

Statutory Considerations

The proposed work will not affect the height of the existing structure, nor will it alter the existing property boundaries. Furthermore, the proposed work will not increase noise levels at the facility's site boundary by six (6) decibels or more. Operation of additional antennas will not increase the radio frequency electromagnetic radiation power density, measured at the tower base, to or above the standard adopted by the State of Connecticut and the Federal Communications Commission.

A Notice of Exempt Modification has been filed with the Connecticut Siting Council (CSC) as required by the Regulations of Connecticut State Agencies (RCSA), Section 16-50j-73. Please accept this letter as notification to the Town of West Hartford under Section 16-50j-73 that the proposed work constitutes an exempt modification pursuant to RCSA Section 16-50j-72(b)(2).

Should you have any questions or require additional information about the plans or the CSC's procedures, please do not hesitate to contact me (215.790.1050 ext. 138) or Mr. Derek Phelps, Executive Director, Connecticut Siting Council (860.827.2935).

Sincerely,

Elizabeth H. Lankenau, AICP
Planner

23 Kelleher Court, Wethersfield, CT

Summary Sheet
Project Location Map
Site Plan and Elevation
Structural Analysis
Elected Official Letter

CINGULAR WIRELESS
Proposed Modifications

Site Address: 23 Kelleher Court, Wethersfield, CT

Site Owner: Town of Wethersfield

Type of Existing Facility: 180' monopole; Cingular has a concrete equipment pad within a compound that measures approximately 60' x 50'

Antenna Configuration: Center line – 145'' above ground level; remove existing Allgon 7250 antennas and replace with six (6) Powerwave 7770 units; *specification attached*

TMA Configuration: Existing units to be replaced with twelve (12) new LGP 214nn units; *specification attached*

Coaxial Cables: Twelve (12) existing 1 5/8" diameter cables to remain

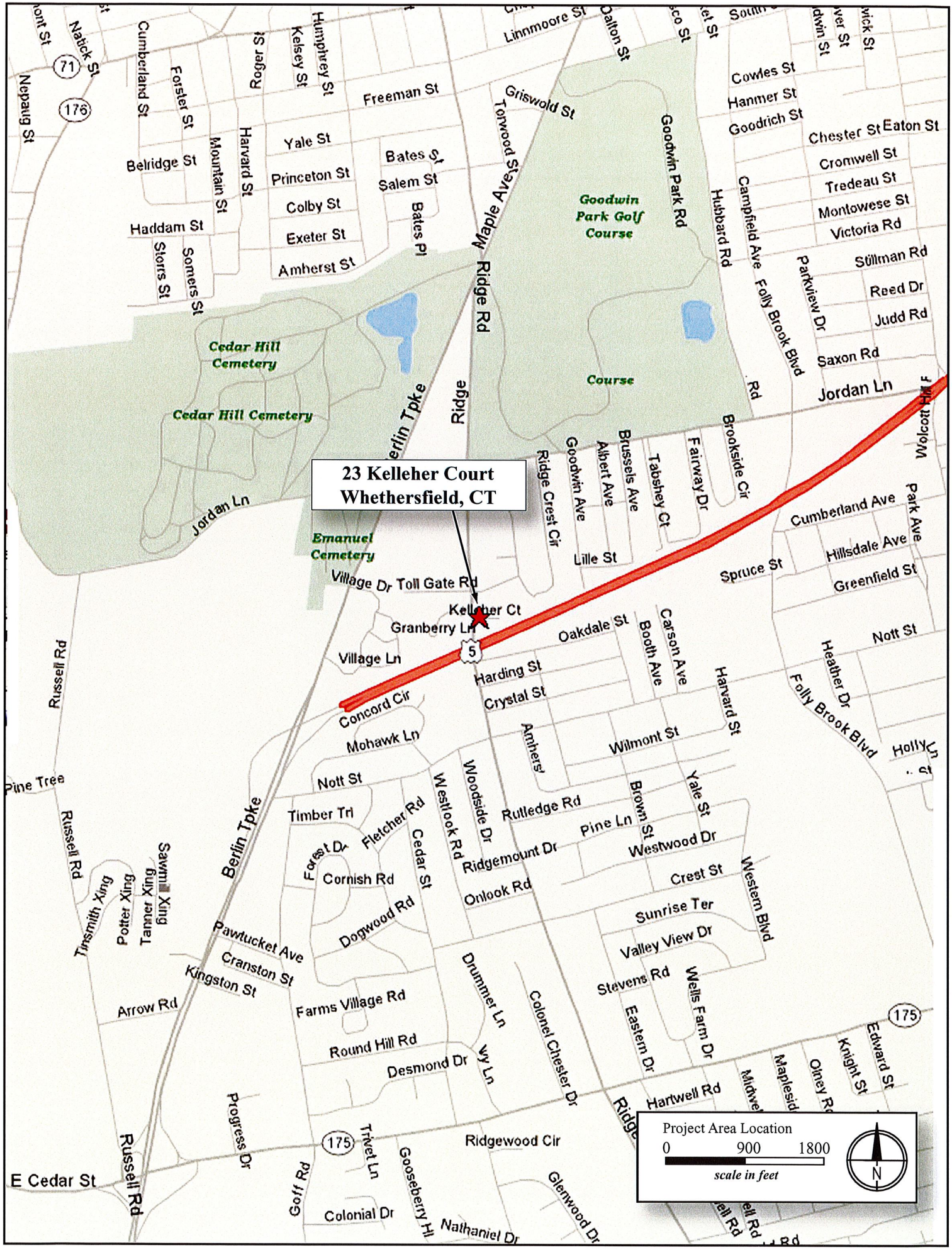
Other Equipment: One (1) Ericsson RBS 3106 equipment cabinet to be placed on an existing equipment pad

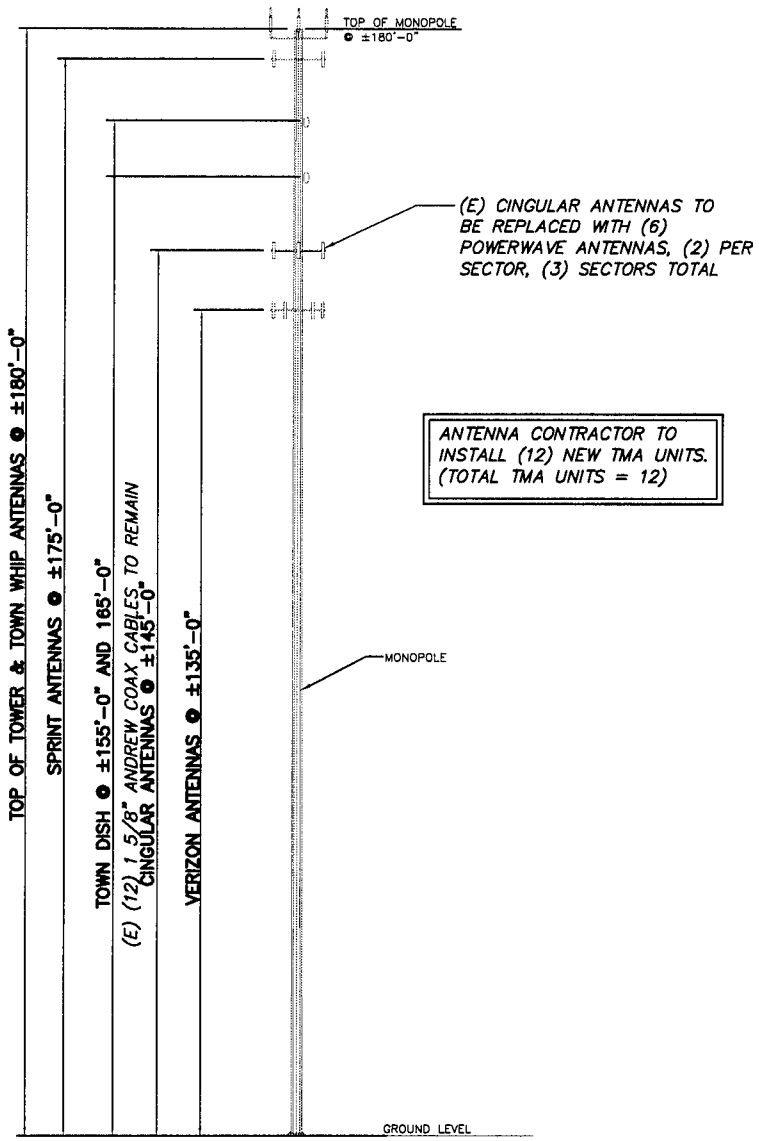
Power Density:

As the table demonstrates, the cumulative worst-case exposure would be approximately 37.90% of the ANSI/IEEE standard, as calculated for mixed frequency sites. Total power density levels resulting from Cingular's use of the monopole facility would be within applicable standards.

Site # 5122								
Carrier	Antenna Height (ft)	Freq. (MHz) For Limit	# of Channels	W ERP/Channel (ref 1/2-w dipole)	W EIRP/Sector	Power Density ($\mu W/cm^2$)	FCC Limit ($\mu W/cm^2$)	Percent of Limit (%)
Cingular UMTS	145	1935.0	1	500.0	820.0	8.6	1000	0.86%
Sprint	175	1900.0	12	500.0	9840.0	70.5	1000	7.05%
Cingular 800	145	880.0	20	250.0	8200.0	85.5	587	14.58%
Cingular 1900	145	1900.0	3	427.0	2100.8	21.9	1000	2.19%
Verizon 800	135	880.0	9	200.0	2952.0	35.5	587	6.05%
Verizon 1900	135	1900.0	3	285.0	1402.2	16.9	1000	1.69%
Wethersfield	187	866.0	4	64.0	419.8	2.6	577	0.46%
Wethersfield	187	460.3	4	204.0	1338.2	8.4	307	2.74%
Wethersfield	190	140.0	4	100.0	656.0	4.0	200	1.99%
Wethersfield	155.5	18000.0	2	100.0	328.0	3.0	1000	0.30%
TOTAL								**37.90%**

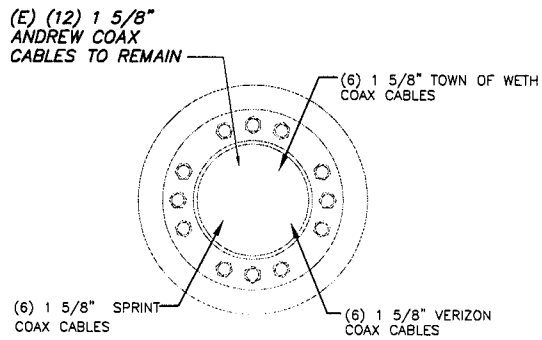
Structural Analysis: *Structural Analysis* attached.


23 Kelleher Court
Whethersfield, CT
Project Area Location
0 900 1800
scale in feet
N
Goodwin Park Golf Course
Cedar Hill Cemetery
Emanuel Cemetery
Ridge Rd
Maple Ave
Berlin Tpke
Jordan Ln
Village Dr
Toll Gate Rd
Kelleher Ct
Granberry Ln
Village Ln
Concord Cir
Mohawk Ln
Nott St
Timber Trl
Fletcher Rd
Forest Dr
Cornish Rd
Dogwood Rd
Pawtucket Ave
Cranston St
Kingston St
Arrow Rd
Farms Village Rd
Round Hill Rd
Desmond Dr
Drummer Ln
Colonel Chester Dr
Ridgewood Cir
Hartwell Rd
Eastern Dr
Wells Farm Dr
Stevens Rd
Valley View Dr
Sunrise Ter
Crest St
Western Blvd
Onlook Rd
Ridgemount Dr
Rulledge Rd
Pine Ln
Brown St
Yale St
Westwood Dr
Woodside Dr
Westlook Rd
Cedar St
Amherst
Wilmont St
Harvard St
Harding St
Crystal St
Oakdale St
Booth Ave
Carson Ave
Folly Brook Blvd
Heather Dr
Holly Ln
Spruce St
Cumberland Ave
Park Ave
Hillsdale Ave
Greenfield St
Lille St
Ridge Crest Cir
Goodwin Ave
Albert Ave
Brussels Ave
Tabshey Ct
Fairway Dr
Brookside Cir
Jordan Ln
Saxon Rd
Judd Rd
Reed Dr
Stillman Rd
Parkview Dr
Folly Brook Blvd
Campfield Ave
Hubbard Rd
Goodwin Park Rd
Griswold St
Torwood St
Linnmoore St
Dalton St
Cowles St
Hanmer St
Goodrich St
Chester St
Eaton St
Cromwell St
Tredeau St
Montowese St
Victoria Rd
Freeman St
Yale St
Princeton St
Colby St
Exeter St
Amherst St
Bates St
Salem St
Bates Pl
Haddam St
Storrs St
Somers St
Mountain St
Harvard St
Belridge St
Forster St
Cumberland St
Kelsey St
Humphrey St
Roger St
Nepaug St
Natick St
Russell Rd
Tinsmith Xing
Potter Xing
Tanner Xing
Sawmill Xing
Progress Dr
Goff Rd
Trivet Ln
Gooseberry Hl
Colonial Dr
Nathaniel Dr
Glenwood Dr
E Cedar St
Knight St
Edward St
Olney Rd
Maplesid
Midwe
71
176
5
175



TOWER ELEVATION

SCALE: 1" = 30'-0"



SECTION A-A

LATITUDE: 41° 42' 55"
LONGITUDE: 72° 41' 26"

cingular

CINGULAR WIRELESS
580 MAIN STREET
BOLTON, MA 01740

ERICSSON
6300 LEGACY DRIVE
PLANO, TX 75024

CH2MHILL
8619 WEST BRYN MAWR
CHICAGO, ILLINOIS 60631

infinigy engineering
300 GREAT OAKS BLVD.
SUITE 312
ALBANY, NY 12203
OFFICE: (518) 690-0790
FAX: (518) 690-0793
185-053

SITE NAME: WETHERSFIELD NORTH
SITE NUMBER: 5122
23 KELLEHER COURT
WETHERSFIELD, CT 06110

NO.	DATE	REVISION DESCRIPTION	BY	CHK	APP'D
3	06/14/06	MISC. REVISIONS	PHR	CJW	CJW
2	06/07/06	MISC. REVISIONS	PHR	CJW	CJW
1	04/07/06	MISC. REVISIONS	PHR	CJW	CJW
0	03/24/06		MAK	CJW	CJW

SITE NUMBER
5122

NATCOMM, LLC

Consulting Engineers

June 6, 2006

Mr. Thomas Sun, AIA
CH2M Hill Communications Group
8619 W. Bryn Mawr, Suite 615
Chicago, IL 60631

Re: Level 1 Structural Evaluation
Cingular Site #5122
23 Kelleher Ct.,
Wethersfield, CT 06109

Natcomm Project No. 06500.Co16-5122

Dear Mr. Sun,

We have reviewed the proposed Cingular UMTS antenna upgrade at the above referenced site. The purpose of the review is to determine the adequacy of an existing 180' AGL monopole to support the proposed antennas. The review considered the effects of wind load, dead load, ice load and seismic forces in accordance with TIA/EIA-222-F and Connecticut State Building Code. Site assessment information obtained by Natcomm personnel on June 5, 2006 was used as reference material.

The existing antenna configuration is as follows:

- Town: Three (3) Whip antennas on standard sidearm standoffs at an elevation of 180' AGL.
- Sprint: Six (6) panel antennas on standard t-arm mounts elevation of 175' AGL.
- Town: One (1) 24" diameter dish antenna on a standard sidearm standoff at an elevation of 165' AGL.
- Town: One (1) 24" diameter dish antenna on a standard sidearm standoff at an elevation of 155' AGL.
- AT&T: Nine (9) Allgon panel antennas mounted to a standard platform at an elevation of 145' AGL.
- Verizon: Six (6) panel antennas mounted to a standard low profile platform at an elevation of 135' AGL.

The proposed modified antenna loading is as follows:

- Cingular: Six (6) Powerwave 7770.00 panel antennas w/ twelve (12) Powerwave LGP21401 TMA's on the existing standard platform in lieu of the existing nine (9) panel antennas at an elevation of 145' AGL.

Based on the information provided and considering the interior routing of coaxial cables and reduced antenna loading, the existing structure will not exceed its original design capacity and meets the requirements of the TIA/EIA-222-F Standard considering the basic wind speed (fastest mile) of 80 mph for Hartford County.

In conclusion, the existing 180 ft monopole is adequate to support the proposed Cingular UMTS antenna upgrade and related equipment. If there are any questions regarding this matter, please feel free to call.

Submitted by:

Carlo E. Centore, PE
Project Manager

(203) 488-0580 • Fax (203) 488-8587 • www.natcommllc.com • 63-2 North Branford Rd. Branford, CT 06405

Kise Straw & Kolodner

Architects Planners Historians Archaeologists

James Bennett Straw, AIA

Harvey D. Kolodner, MBA

14 June 2006

Honorable Russell Morin
Mayor, Town of Wethersfield
31 Park Street
Wethersfield, CT 06107

RE: Notice of Exempt Modification – Existing Cingular Telecommunications Tower Facility at 23 Kelleher Court, Wethersfield, Connecticut

Dear Mr. Morin:

New Cingular Wireless PCS, LLC ("Cingular") proposes to remove and replace telecommunications antennas and associated equipment located on an existing tower at the above-referenced location. The facility is now controlled and operated by Cingular whose corporate office is located at 500 Enterprise Drive, Rocky Hill, CT 06067.

Proposed Modifications

Cingular proposes to remove the existing antennas and replace them with a total of six (6) new antennas, located at an existing centerline height of approximately 145' above ground level. Cingular will keep the twelve (12) existing 1 5/8" diameter coaxial cables and remove the existing tower mounted amplifiers and replace them with twelve (12) new units, located at the same height as the antennas.

In summary, the final antenna configuration at 23 Kelleher Court will include:

- 6 antennas,
- 12 coaxial cables, and
- 12 tower mounted amplifiers.

A structural evaluation has demonstrated that the tower will be structurally capable of supporting the proposed Cingular telecommunications equipment once the proposed modifications are complete.

Kise Straw & Kolodner Inc.
123 South Broad St.
Suite 1270
Philadelphia, PA 19109
(215) 790-1050 FAX (215) 790-0215
www.kskl.com

Statutory Considerations

The proposed work will not affect the height of the existing structure, nor will it alter the existing property boundaries. Furthermore, the proposed work will not increase noise levels at the facility's site boundary by six (6) decibels or more. Operation of additional antennas will not increase the radio frequency electromagnetic radiation power density, measured at the tower base, to or above the standard adopted by the State of Connecticut and the Federal Communications Commission.

A Notice of Exempt Modification has been filed with the Connecticut Siting Council (CSC) as required by the Regulations of Connecticut State Agencies (RCSA), Section 16-50j-73. Please accept this letter as notification to the Town of Wethersfield under Section 16-50j-73 that the proposed work constitutes an exempt modification pursuant to RCSA Section 16-50j-72(b)(2).

Should you have any questions or require additional information about the plans or the CSC's procedures, please do not hesitate to contact me (215.790.1050 ext. 138) or Mr. Derek Phelps, Executive Director, Connecticut Siting Council (860.827.2935).

Sincerely,

Elizabeth H. Lankenau, AICP
Planner

Specifications for Proposed New Equipment

27-31 South Main Street, West Hartford, CT
23 Kelleher Court, Wethersfield, CT

3 Dimensions

This section describes the physical characteristics of the RBS: dimensions, weight, and color.

Table 1 The RBS Dimensions

Unit	Dimensions (mm)
Height	1626
Width	1300
Depth	710
Depth including door	926

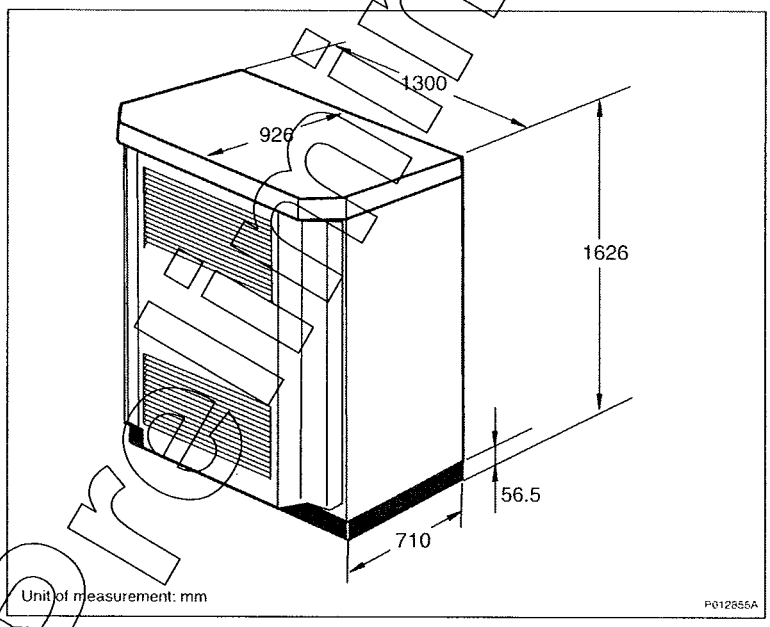


Figure 2 RBS 3106 Dimensions

The RBS weight is shown in the table below.

Table 2 The RBS Weight

Unit	Weight (kg)
RBS fully equipped excluding batteries	560
RBS fully equipped including batteries	850
RBS fully equipped including batteries and future expansion of hardware (not yet available)	875
Installation frame	12

The RBS color is shown in the table below.

Table 3 The RBS Color

Color	Color Standard
Grey	RAL 7035
Green	NCS 8010–G 10 Y

Dual Broadband Antenna

90° 1.4 m MET Antenna

806-960/1710-2170 MHz

Part Number: 7770.00

Horizontal Beamwidth: 90°
Gain: 13.5/16 dBi

Electrical Downtilt: Adjustable
Connector Type: 7/16 female

The Powerwave dual band dual polarized broadband antenna has individual adjustable electrical downtilt per band (upgradeable to Remote Electrical Tilt (RET). Four connector ports allow separate tilts on each frequency band and ensure the use of diversity concepts. The phase shifter technology, based on a patented sliding dielectric, minimizes intermodulation distortion and maximizes efficiency. The slant +/- 45° dual polarization system provides the independent fading signals needed for achieving top-quality coverage via diversity concepts. The Powerwave Broadband antenna design is based on a patented stacked aperture-coupled patch technology, which provides high isolation performance and a wide VSWR bandwidth. The antennas have superior radiation patterns due to a unique reflector design which provides a very small variation of the –3dB horizontal beam width over the frequency band as well as a high front-to-back ratio.

Key Benefits

- Excellent broad- and multi-band capabilities
- Polarization purity makes good diversity gain
- Excellent pattern performance and high gain over frequency
- High passive intermodulation performance
- Light, slim and robust design

Preliminary

ANTENNA SYSTEMS

BASE STATION SYSTEMS

COVERAGE SYSTEMS

806-960/1710-2170 MHz

Dual Broadband Antenna

Electrical Specifications (Preliminary)

Frequency band (MHz)	806-960		1710-2170
Gain, ± 0.5dB (dBi)	13.5		16.0
Polarization		Dual linear ±45°	
Nominal Impedance (Ohm)		50	
VSWR	1.5:1		
VSWR			1.5:1
Isolation between inputs (dB)	30		
Isolation between inputs (dB)			30
Inter band isolation (dB)		40	
Horizontal -3 dB beamwidth	85 ± 5°		85 ± 5°
Tracking, Horizontal plane, ±60° (dB)	<2.0		
Tracking, Horizontal plane, ±60° (dB)			<2.0
Electrical downtilt range (adjustable)	0° to 10°		0° to 8°
Vertical -3 dB beamwidth	14.3 ± 2.0°		6.6 ± 1°
Sidelobe suppression, Vertical 1 st upper (dB)	>17,16,15 x=0, 5, 10° MET		> 17, 16,15 x=0, 4, 8° MET
Vertical beam squint	<0.8°		<0.5°
First null-fill (dB)	<-25		<-25
Front-to-back ratio (dB)	>25		>27
Front-to-back ratio, total power (dB)	>20		>23
IM3, 2Tx@43dBm (dBc)	<-153		
IM3, 2Tx@43dBm (dBc)			<-153
IM7, 2Tx@43dBm (dBc)			<-160
Power Handling, Average per input (W)	400		250
Power Handling, Average total (W)	800		500

All specifications are subject to change without notice.
Contact your Powerwave representative for complete performance data.

Mechanical Specifications

Connector Type	4 x 7/16 DIN female
Connector Position	Bottom
Dimensions, HxWxD	1408mm x 280mm x 125mm (55"x11"x5")
Weight Including Brackets	15.8 kg (35 lbs)
Wind Load, Frontal, 42m/s Cd=1	435N (98 lbf)
Survival Wind Speed (m/s)	70 (156mph)
Lightning Protection	DC grounded
Radome Material	GRP
Radome Color	Light Gray
Mounting	Pre-mounted Standard Brackets
Packing Size	1550mm x 355mm x 255mm (61"x14"x10")

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COVERAGE AND CAPACITY | TECHNOLOGY LEADERSHIP | GLOBAL PARTNER | INTEGRATED SOLUTIONS | QUALITY AND RELIABILITY

D031-08208 Rev A

Tower Mounted Amplifier

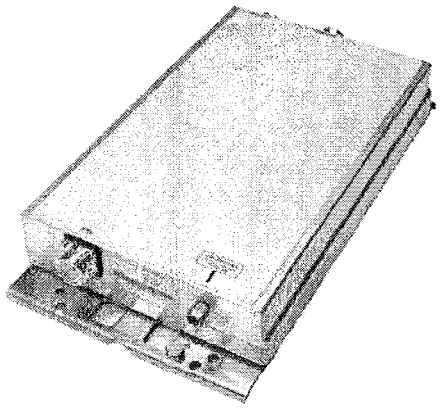
Dual Band 1900 MHz with 850 MHz Bypass

1900/850 MHz

Part Number:	Up-link: 1850-1910 MHz	Gain: 12 dB
LGP 214nn	Down-link: 1930-1990 MHz	Noise Figure: < 1.7 dB
	Bypass: 824-894 MHz	

The Powerwave® TMA-DD 1900/850 is a dual band Tower Mounted Amplifier (TMA) to be installed near the antenna. Deployed in an AMPS, GSM, GPRS, EDGE and CDMA network it will increase capacity and coverage as well as extend the battery life time for the handsets. The TMA System will provide enhanced coverage and improved up-link signal quality. Appropriate for new rollouts by optimizing coverage with a reduced number of BTSs or as an upgrade to existing BTSs for enhancing the existing coverage.

Extended band TMA facilitates simplified logistics, especially when the frequency bands are scattered. The unit comprises of high Q band-pass filters, dual balanced low noise amplifiers with circuits for active bias, supervision, alarms and lightning protection circuit. The Powerwave patented design with all active components integrated within the filter body provides an extremely reliable, compact and lightweight TMA solution. The vented enclosure design is employed to prevent the effect of condensation, thereby guaranteeing long, reliable, maintenance-free service in all environmental conditions. These TMAs offer an easy to install, maintenance free, cost effective solution for coverage enhancement and increased quality in mobile communication networks.



Key Benefits:

- 850 MHz Bypass
- Improved Network Quality
- Increased Coverage
- State of the Art Performance
- Excellent Power Handling
- Low Tx Loss
- Exceptional Reliability

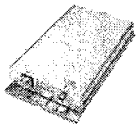
ANTENNA SYSTEMS

BASE STATION SYSTEMS

COVERAGE SYSTEMS

Powerwave technologies

Tower Mounted Amplifier



1900/850 MHz

Technical Specifications

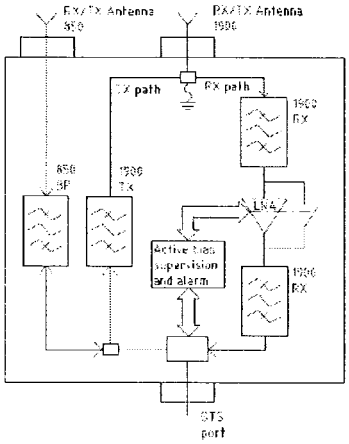
Product Number	LGP214nn	
850 MHz	Bypass (MHz)	824-894
	Return loss* (dB)	> 20
	Insertion loss* (dB)	< 0.3
1900 MHz		
Up-link	Frequency range, full band (60 MHz)	1850-1910
	Nominal gain (dB)	12
	Return loss* (dB)	> 20
	Noise figure* (dB)	< 1.7
	Output 3rd order Intercept Point* (dBm)	> +23
Down-link	Frequency range, full band (60 MHz)	1930-1990
	Insertion loss* (dB)	< 0.6
	Return loss* (dB)	> 20
Intermodulation	2 Tx@x43 dBm (dBc)	<-158
Alarm Functionality	Two levels,individually supervised LNAs	
Power Consumption	@12 VDC	1.2 W

* Typical

All specifications subject to change without notice. Please contact your Powerwave representative for complete performance data.

Mechanical Specifications

Size,W x H x D (without mounting plate)	235 x 366 x 66 mm (9.2 x 14.4 x 2.6 in)
Weight	6.4 kg (14.1 lbs)
Color	Off white (NCS 1502-R)
Housing	Aluminum
RF-connectors	DIN 7/16 female.
Mounting kit	Mounting kit for pole and wall is included
Temperature range	-40 °C to +65 °C (-40 °F to +149 °F)
MTBF	>1 million hours
Safety	UL 60 950
Ingress protection, IP 65	EN 60 529
Environmental	ETS 300 019
EMC	FCC Part 15



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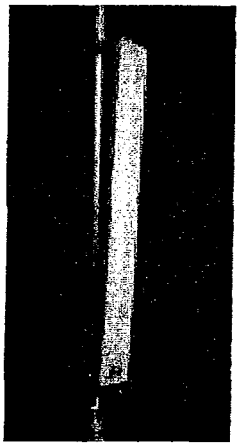
Specifications for Existing Antennas

Allgon 7250

1900 & 800 MHz Dual Polarized Antenna

Electrical Specifications

	7250 (XM-1900-65-18.5i)
Gain	16.5 dBd (18.5 dBi)
Polarization	linear, dual slant 45
VSWR, 50Ω	<1.3:1 (1850 MHz to 1990 MHz)
Horizontal 3dB beamwidth	65°
Vertical 3dB beamwidth	5.5°
Custom electrical downtilts	0°, 2°, & 4°
40 degree cone Front-to-back ratio	>25 dB co-polar, >20 dB total power
Cross-polar discrimination, boresite	>20 dB
Polarization Quality Ratio	20 dB (3dB beamwidth)/10 dB (forward sector)
Suppression of first upper side lobe	>20 dB
First lower null fill	N/A
Maximum CW input power	500W total at 250W per input
Two tone intermodulation 3rd order	<-110 dBm for 2x10W (150 dBc at 2x40 dBm)
Isolation between ports	>30 dB



Mechanical Specifications

Connector	7/16 DIN bottom mount
Height	61.3" (1560 mm)
Width	6.3" (160 mm)
Depth	2.2" (55 mm)
Weight	15.4 lbs (7 kg)
Survival wind speed	156 mph (70 m/s)
Maximum wind area	2.74 sq.ft (0.25 sq.m)
Frontal wind load @100mph (C=1)	71.9 lbf (320 N)

*All feed network components DC grounded for Lightning Protection

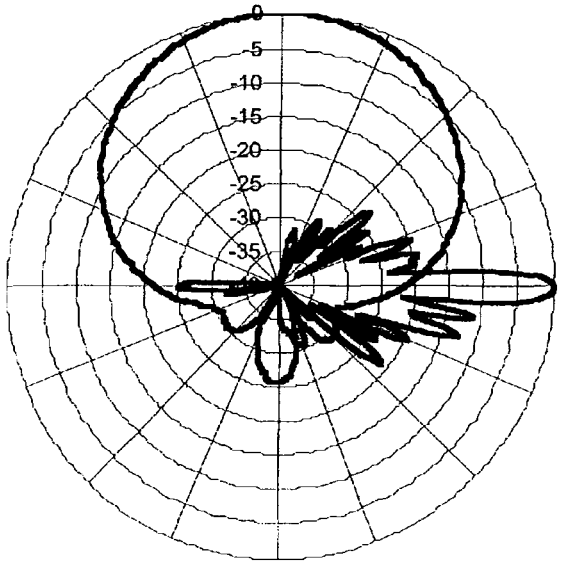
Mounting Hardware Options for Installation

1) Pole mount	2165.10
2)Combined pole mount/downtilt bracket	7254.10 (-0.6° to +13°)

Comments

Gain is typical within frequency band.
Beamwidths are defined using total power.
Cross-polar discrimination is defined within -3 dB beamwidth.
Front-to-back ratio is defined within 20° from the backwards direction in any plane.
Sidelobe suppression and null fill is relative to peak of main beam.
Maximum input power is total input power, divided arbitrarily between inputs.
Radome color is NCS 2502-B (RAL 7035)(gray).

For a complete list of released models pertaining to gain, electrical downtilt and connector placement, please see the quick reference guide on page 14.



Typical Horizontal and Vertical 7250.02 Patterns

A poster displaying a comparison of antenna patterns has been included at the back of the catalog.

ALLGON