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@ct.gov
www.ct.gov/csc

July 31, 2006

Elizabeth H. Lankenau, AICP
Planner
Kise Straw & Kolodner Inc.
123 South Broad Street, Suite 1270
Philadelphia, PA 19109

RE: **EM-CING-064-119-060707** - New Cingular Wireless PCS, LLC notice of intent to modify existing telecommunications facilities located at 92 Weston Street, Hartford; and 52 New Britain Avenue, Rocky Hill, Connecticut.

Dear Ms. Lankenau:

At a public meeting held on July 27, 2006, the Connecticut Siting Council (Council) acknowledged your notice to modify these existing telecommunications facilities, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies with the condition that the modifications specified on the attached drawings sealed by Robert Semaan, P.E. are performed at the Hartford site prior to the antenna installation and a signed letter from a Professional Engineer is submitted to the Council to certify that the modifications have been properly completed.

The proposed modifications are to be implemented as specified here and in your notice dated July 6, 2006 and errata sheet dated July 20, 2006, including the placement of all necessary equipment and shelters within the tower compounds. 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 existing facility sites that would not increase tower heights, extend the boundaries of the tower sites, increase noise levels at the tower site boundaries by six decibels, and increase the total radio frequencies electromagnetic radiation power densities measured at the tower site boundaries 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 these towers.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to any of these facilities 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,

Colin C. Tait
Chairman

CCT/laf

c: See Attached List.

List Attachment.

c: The Honorable Eddie A. Perez, Mayor, City of Hartford
Roger J. O'Brien, Director of Planning, City of Hartford
Lee C. Erdmann, Chief Operating Officer, City of Hartford
The Honorable Anthony P LaRosa, Mayor, Town of Rocky Hill
Barbara Gilbert, Town Manager, Town of Rocky Hill
Kimberly Ricci, Director of Planning, Town of Rocky Hill
Karen L. Couture, Site Acquisition Specialist
Thomas J. Regan, Esq., Brown Rudnick Berlack Israels LLP
Christine Farrell, T-Mobile
Christopher B. Fisher, Esq., Cuddy & Feder LLP
Michele G. Briggs, New Cingular Wireless PCS, LLC
Global Signal

Perrone, Michael EM-CING-064-119-060707

From: Karen Couture [karencouture@myeastern.com]
Sent: Thursday, July 20, 2006 3:39 PM
To: Perrone, Michael
Subject: 52 New Britain Avenue, Rocky Hill, CT-Errata Sheet
Importance: High

Dear Mr. Perrone,

Attached you will find an errata sheet for 52 New Britain Avenue, Rocky Hill, CT. The power density sheet has been revised to show Verizon at 90'.

Should you have any further questions, please do not hesitate to call.

Thank you.

Karen L. Couture
Site Acquisition Specialist
Mobile: 860-389-4924
E-Fax: 888-281-6394
Email: karencouture@myeastern.com

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 Federal Communications Commission. The table below 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 FCC OET 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.

Site # 5123								
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	170	1935.0	1	500.0	820.0	6.2	1000	0.62%
Rocky Hill	180	-	-	-	-	-	-	2.00%
AT&T	170	1900.0	10	100.0	1640.0	12.4	1000	1.24%
T-Mobile	160	1900.0	8	276.1	3622.0	31.0	1000	3.10%
Sprint	140	1900.0	11	445.3	8032.3	89.9	1000	8.99%
Verizon 800	90	880.0	19	100.0	3116.0	84.4	587	14.38%
Verizon 1900	90	1900.0	3	285.0	1402.2	38.0	1000	3.80%
TOTAL								**34.13%**

EM-CING-064-119-060707

Kise Straw & Kolodner

Architects Planners Historians Archaeologists

James Bennett Straw, AIA

Harvey D. Kolodner, MBA

ORIGINAL

6 July 2006

Mr. Colin C. Tait, 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 Hartford County
Site 1: 92 Weston Street, Hartford
Site 2: 52 New Britain Avenue, Rocky Hill

Dear Chairman Tait 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 an existing facility 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 installations.

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 locations 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 each site. Also included is documentation of the structural sufficiency of each tower 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:

James Bennett Straw, AIA
Harvey D. Kolodner, MBA

James Nelson Kise, AIA/AICP/PP
Scott W. Killinger, AIA

John R. Gibbons, AIA/AICP
Philip E. Scott, EA

Suzanna Barucco
Katherine Bottom, LEED
LaVern Browne
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.kskl.com

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

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 tables provided for each facility summarize 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 Federal Communications Commission'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 the 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 Eddy A. Perez., Mayor, City of Hartford
Honorable Anthony LaRosa, Mayor, Town of Rocky Hill

92 Weston Street, Hartford, CT

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

CINGULAR WIRELESS
Proposed Modifications

Site Address: 92 Weston Street, Hartford, CT; *Project Location Map* attached

Coordinates: Lat: 41' 47' 12.2"; Long: 72' 39' 44.24"

Site Owner: Global Signal

Type of Existing Facility: 110' monopole; irregularly shaped compound with existing equipment shelter

Antenna Configuration: Center line – 92' above ground level; remove existing antennas and replace with six (6) Powerwave 7770 units; *specification attached*

TMA Configuration: Existing units to be removed and add twelve (12) new LGP 214nn units; *specification attached*

Coaxial Cables: Nine (9) existing 1 5/8" diameter coaxial cables to remain and add three (3) new cables of the same dimension

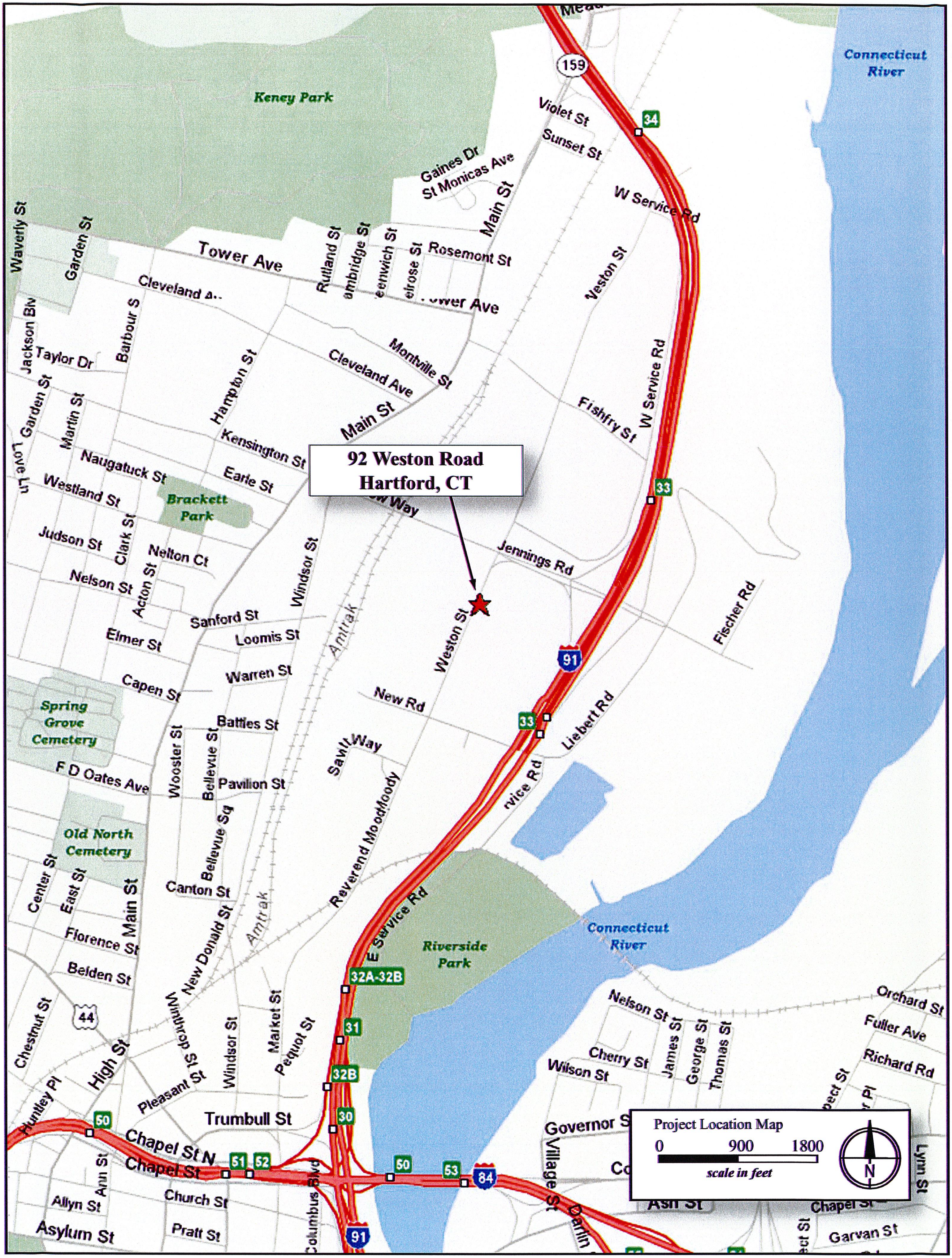
Other Work: Add one (1) new Ericsson RBS 3206 equipment cabinet

Power Density:

As the table demonstrates, the cumulative worst-case exposure would be approximately 57.16% 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 # 5152								
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	92	1935.0	1	500.0	820.0	19.1	1000	1.91%
Sprint	107	1900.0	12	500.0	9840.0	188.5	1000	18.85%
Cingular TDMA	92	880.0	12	250.0	4920.0	114.7	587	19.55%
T-Mobile	80	1900.0	12	250.0	4920.0	168.6	1000	16.86%
TOTAL								**57.16%**

Structural Analysis: *Structural Analysis* attached.


92 Weston Road
Hartford, CT
Project Location Map
0
900
1800
scale in feet
N
Keney Park
Connecticut River
Brackett Park
Spring Grove Cemetery
Old North Cemetery
Riverside Park
Tower Ave
Main St
Weston St
Jennings Rd
Windsor St
Amtrak
W Service Rd
E Service Rd
Liebert Rd
Fischer Rd
Fishfry St
Cleveland Ave
Montville St
Rosemont St
Violet St
Sunset St
New Rd
Chapel St N
Chapel St
Trumbull St
Asylum St
Church St
Pratt St
Columbus Blvd
High St
Governor St
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51
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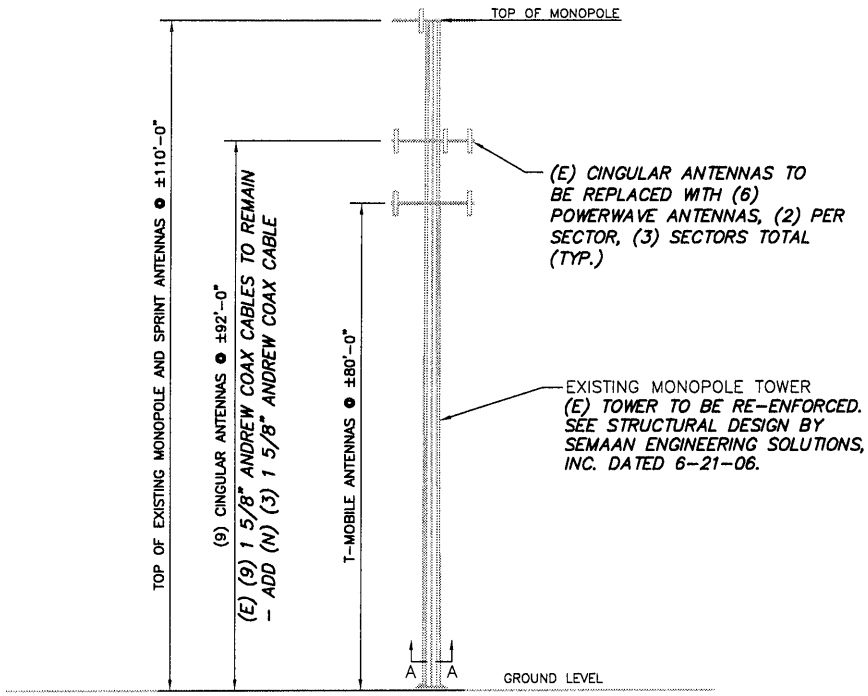
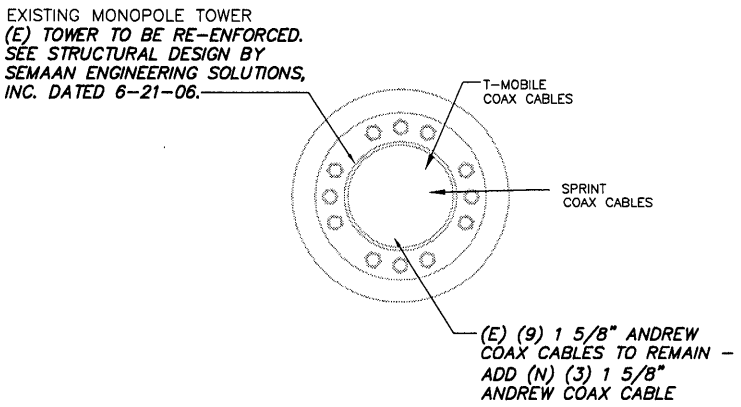
53



TOWER ELEVATION

SCALE: 1" = 30'-0"



SECTION VIEW

LATITUDE: 41° 47' 12.2"
LONGITUDE: 72° 39' 44.24"

cingular
CINGULAR WIRELESS
560 MAIN STREET
BOLTON, MA 01740

ERICSSON
6300 LEGACY DRIVE
PLANO, TX 75024

CH2MHILL
8619 WEST BRYN MAWR
CHICAGO, ILLINOIS 60631

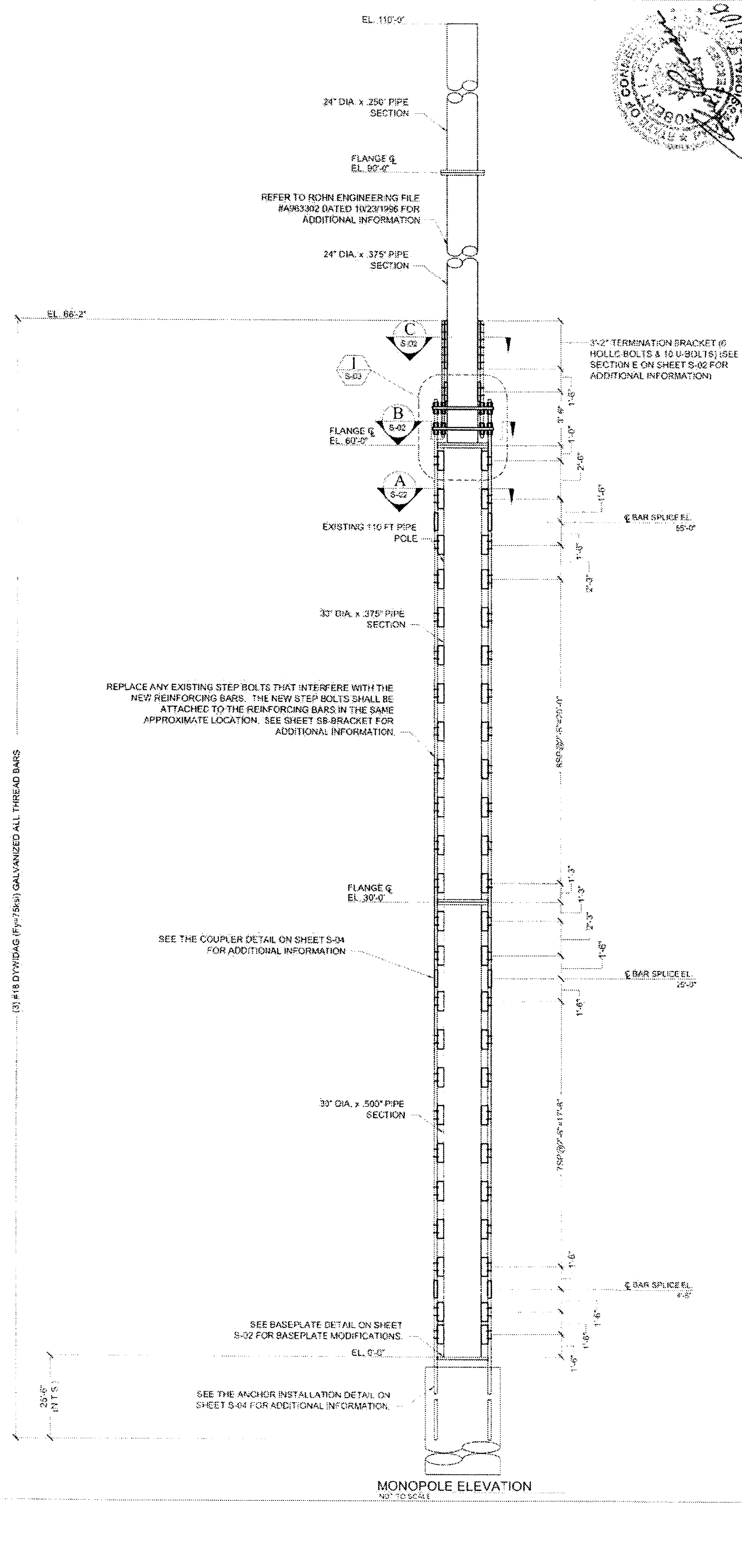
infinigy engineering
300 GREAT OAKS BLVD.
SUITE 312
ALBANY, NY 12203
OFFICE: (518) 690-0790
FAX: (518) 690-0793
185-048

SITE NAME: HARTFORD NORTH

SITE NUMBER: 5152
92 WESTON STREET
HARTFORD, CT 06103

NO.	DATE	REVISION DESCRIPTION	BY	CHK	APP'D
4	07/05/06	MISC. REVISIONS	MAK	CJW	CJW
3	06/27/06	MISC. REVISIONS	PHR	CJW	CJW
2	05/18/06	MISC. REVISIONS	PHR	CJW	CJW
1	05/05/06	MISC. REVISIONS	PHR	CJW	CJW
0	04/21/06		PHR	CJW	CJW

SITE NUMBER
5152



MONOPOLE ELEVATION
NOT TO SCALE

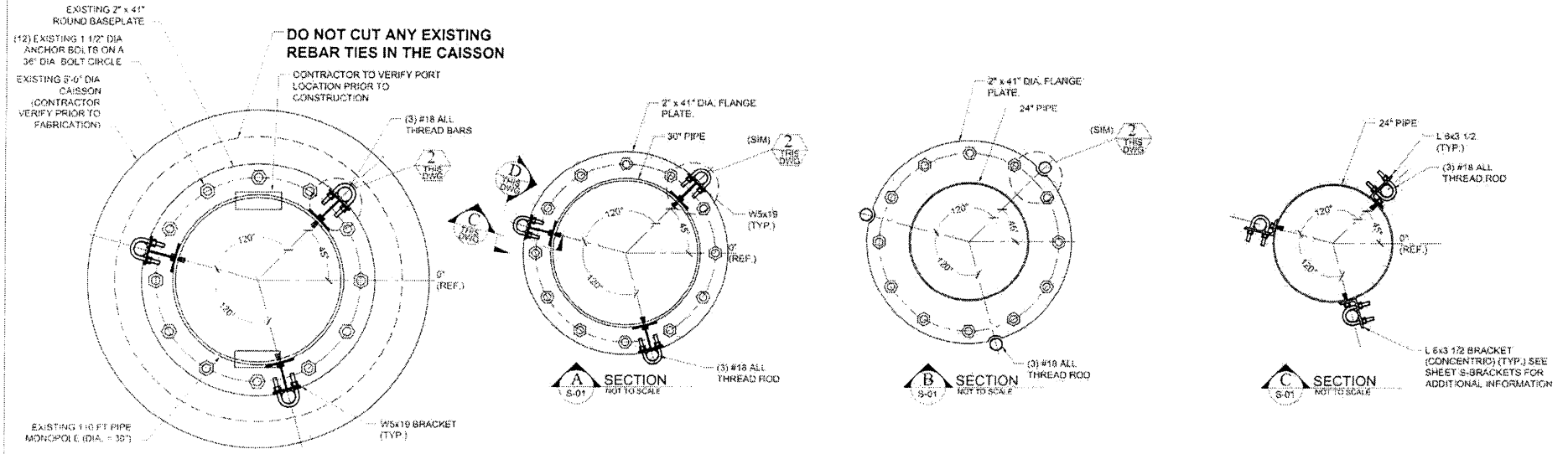
NOTE:
30 FT BAR LENGTHS ARE BASED ON 60 FT MILL LENGTHS CUT IN HALF.

Semaan Engineering Solutions, Inc.
Phone Number: (402)289-1888 Fax Number: (402)289-1861
Address: 1079 N. 204th Avenue, Elkhorn Nebraska 68022

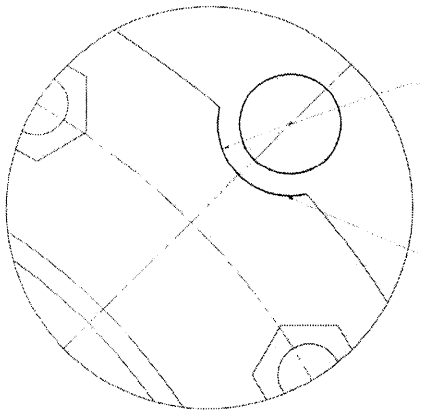
PROJECT NUMBER	3017645-CT03XC064
SITE LOCATION	HARTFORD, CT
DRAWN BY	KRC
DATE	06/20/2006
REFERENCE DRAWING	NONE

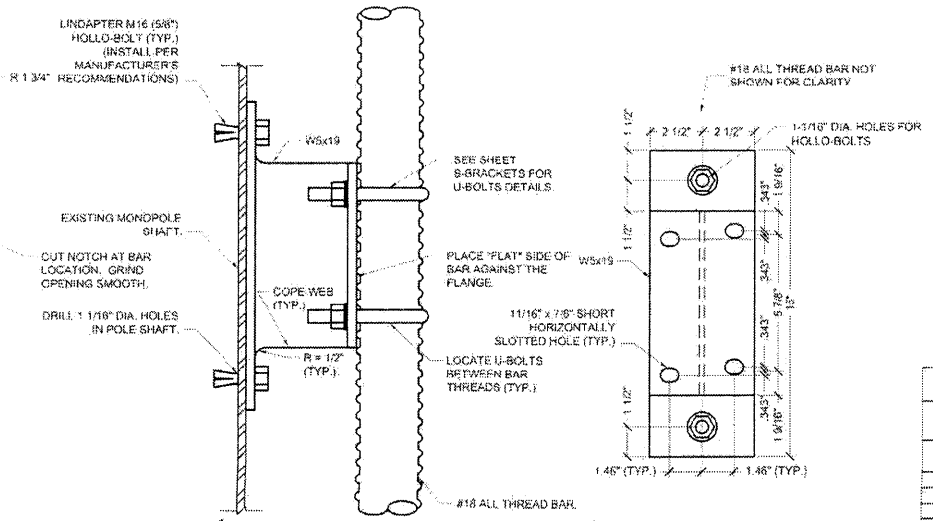
REV. #	DATE	REVISION DESCRIPTION	BY	CHK
0	06/21/2006	ISSUE FOR CONSTRUCTION	ELT	

CLIENT	DRAWING DESIGNATION	SHEET NUMBER
GLOBAL SIGNAL	MONOPOLE RINFORCEMENT DRAWINGS	S-01



BASPLATE DETAIL
NOT TO SCALE





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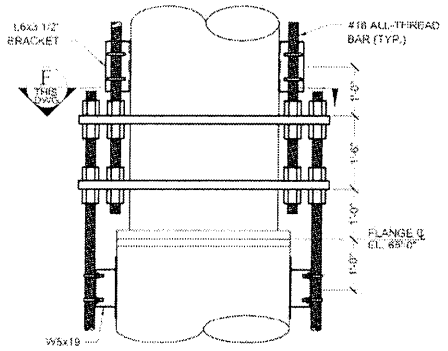
D THIS DWG SECTION NOT TO SCALE

Semaan Engineering Solutions, Inc.
Phone Number: (402)289-1888 Fax Number: (402)289-1861
Address: 1079 N. 204th Avenue, Elkhorn Nebraska 68022

PROJECT NUMBER			
3017645-CT03XC064			
DRAWN BY	DATE	REFERENCE DRAWING	SITE LOCATION
KRC	06/20/2006	S-01	HARTFORD, CT

REV #	DATE	REVISION DESCRIPTION	BY	CHK
0	06/21/2006	ISSUE FOR CONSTRUCTION	TLT	

CLIENT	DRAWING DESCRIPTION	SHEET NUMBER
GLOBAL SIGNAL	MONOPOLE REINFORCEMENT DRAWINGS	S-02



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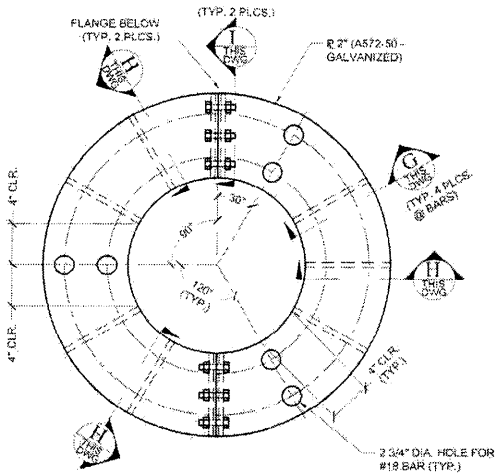
S-01 NOT TO SCALE



SEE THE TRANSITION RING SCHEDULE FOR DIMENSIONAL INFORMATION

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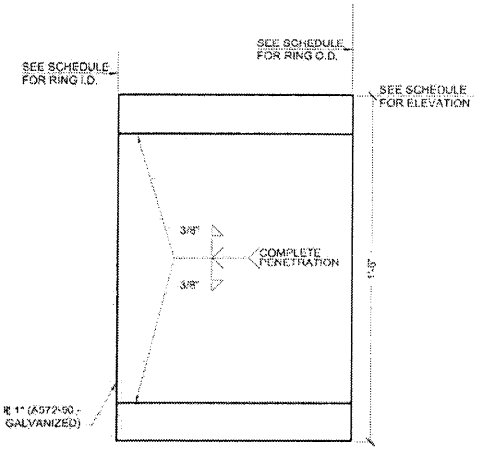

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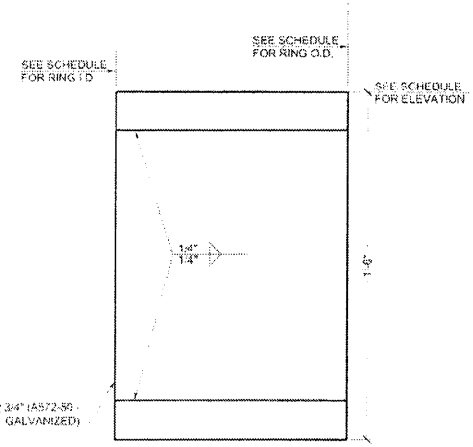

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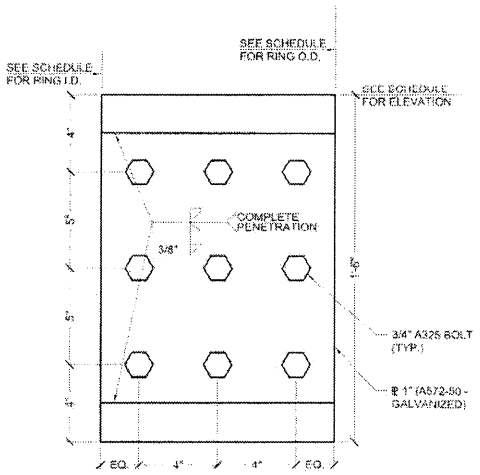

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NOT TO SCALE

TRANSITION RING SCHEDULE

T/RING ELEV. (FT.)	PIPE DIA. (IN.)	RING I.D. (IN.)	RING O.D. (IN.)	BAR INNER B.C. (IN.)	BAR OUTER B.C. (IN.)
62'-6"	24	25	48.875	30.875	42.875

6/21/08

Semaan Engineering Solutions, Inc.
Phone Number: (402)289-1568 Fax Number: (402)369-1861
Address: 1079 N. 204th Avenue, Elkhorn Nebraska 68022

PROJECT NUMBER	DRAWN BY	DATE	REFERENCE DRAWING	SITE LOCATION
3017645-CT03XC064	KRC	06/20/2008	S-01, S-02	HARTFORD, CT

REV #	DATE	REVISION DESCRIPTION	BY	CHK
0	06/21/2008	ISSUE FOR CONSTRUCTION	TLT	

CLIENT	DRAWING DESCRIPTION	SHEET NUMBER
GLOBAL SIGNAL	MONOPOLE REINFORCEMENT DRAWINGS	S-03

NOTES AND SPECIFICATIONS

GENERAL:

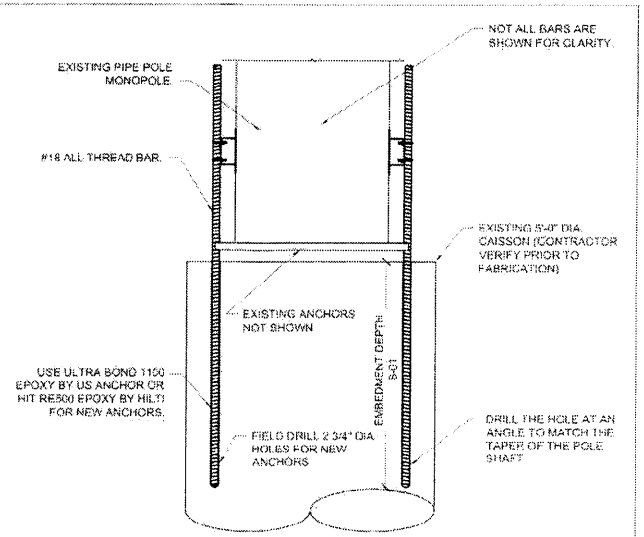
1. THE MODIFICATIONS OUTLINED IN THESE DOCUMENTS WERE DESIGNED IN ACCORDANCE WITH THE EIA/TIA REV. F CODE.
2. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS, ELEVATIONS, AND CONDITIONS PRIOR TO FABRICATION. THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR THE PROPER FIT AND CLEARANCE IN THE FIELD. CONTACT SEMAAN ENGINEERING IF ANY DISCREPANCIES EXIST.
3. REFERENCE THE SEMAAN ENGINEERING SOLUTIONS ANALYSIS FOR THIS SITE DATED 06/21/2006 FOR THE PROPOSED AND EXISTING LOADS CONSIDERED. THIS DRAWING IS NOT VALID IF LOADS OTHER THAN THOSE CONSIDERED IN THE ANALYSIS ARE ADDED TO OR REMOVED FROM THE STRUCTURE UNLESS APPROVED IN WRITING BY SES, INC.
4. THE PROPOSED LOADS SHALL NOT BE ADDED TO THE STRUCTURE UNTIL ALL MODIFICATIONS ARE MADE AND APPROVED BY THE WELDING INSPECTOR.
5. THIS DRAWING DOES NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND HE SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, TECHNIQUES, SEQUENCES AND PROCEDURES.
6. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE ON-SITE SAFETY ASSOCIATED WITH THE WORK TO BE PERFORMED. ALL SAFETY REQUIREMENTS AS DICTATED BY OSHA AND THE LOCAL JURISDICTION'S SHALL BE FOLLOWED.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF ITS OWN PERSONNEL AS WELL AS THE PUBLIC AFFECTED BY THE WORK IN THE VICINITY OF THE JOB SITE.
8. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE PROTECTION OF THE PROPERTY IN THE VICINITY OF THE JOB SITE. THE CONTRACTOR SHALL USE THE PRECAUTIONARY MEANS NECESSARY FOR ADEQUATE PROTECTION.

STEEL CONSTRUCTION:

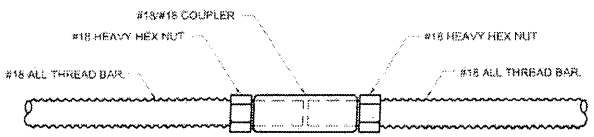
1. STRUCTURAL STEEL SHALL CONFORM TO THE AISC MANUAL OF STEEL CONSTRUCTION, NINTH EDITION, FOR THE DESIGN AND FABRICATION OF STEEL COMPONENTS.
2. ALL PLATE STEEL SHALL CONFORM TO A572-50 UNLESS NOTED OTHERWISE. ALL CHANNELS C8 AND LARGER SHALL CONFORM TO A572 GRADE 50. ALL CHANNELS C6 AND SMALLER SHALL CONFORM TO A572 GRADE 65.
3. SHOP DRAWINGS SHALL BE SUBMITTED TO SES FOR APPROVAL PRIOR TO FABRICATION. SHOP DRAWINGS SHALL INCLUDE ALL FABRICATED STEEL ASSEMBLIES INCLUDING MONOPOLE/TOWER EXTENSIONS.
4. ALL EXTERIOR STEEL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123 AND AS FOLLOWS, UNLESS OTHERWISE NOTED:
   A. GALVANIZING SHALL BE PERFORMED AFTER SHOP FABRICATION AND WELDING TO THE GREATEST EXTENT POSSIBLE.
   B. ALL DINGS, SCRAPES, MARS AND WELDS IN THE GALVANIZED AREA SHALL BE COATED WITH A ZINC-RICH PAINT, APPLIED IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
   C. IF THE STRUCTURE WAS ORIGINALLY PAINTED, AFTER ZINC-RICH PAINT IS DRY, OVERCOAT WITH AN APPROPRIATE PAINT WITH THE SAME COLOR AS THE EXISTING.
5. DO NOT PLACE HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON DRAWINGS.
6. CONNECTIONS SHALL BE CONSTRUCTED AS FOLLOWS:
   A. ALL WELDING SHALL BE DONE USING E70XX ELECTRODES.
   B. ALL WELDING SHALL CONFORM TO AISC AND AWS D1.1 LATEST EDITION.
   C. THE WELDER(S) SHOULD BE QUALIFIED FOR THE METHODS AND POSITIONS TO BE USED AND SHOULD HAVE EXPERIENCE WELDING GALVANIZED MATERIALS.
   D. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC MANUAL OF STEEL CONSTRUCTION, NINTH EDITION.
   E. ALL EXISTING GALVANIZING IN WELD AREAS SHALL GROUND OFF PRIOR TO WELDING.
   F. ALL WELDS SHALL BE INSPECTED VISUALLY. 25 % OF WELDS SHALL BE INSPECTED WITH DYE PENETRATE OR MAGNETIC PARTICLE (100 % IF REJECTABLE DEFECTS ARE FOUND) TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1 REPAIR ALL WELDS AS NECESSARY.
   G. INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
7. ALL BOLTS SHALL BE TIGHTENED TO A "SNUG TIGHT" CONDITION AS DEFINED BY AISC.
8. ALL LINDAPTOR HOLLOBOLTS SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMENDATIONS.

CONTINUOUS STRUCTURE INSPECTION AND MAINTENANCE:

CONTINUOUS ANNUAL INSPECTION OF THE STRUCTURE AND THE ADDED REINFORCING SHALL BE IMPLEMENTED BY THE OWNER. ANY FUTURE CORROSION OR OTHER DETERIORATION OF THE STRUCTURE OR ITS REINFORCING WILL REDUCE ITS CAPACITY TO WITHSTAND THE REQUIRED LOADS. ANY DEFECTS SHALL BE REPAIRED TO ENSURE THE STRUCTURAL INTEGRITY FOR THE LIFE OF THE STRUCTURE.



ANCHOR INSTALLATION DETAIL
NOT TO SCALE

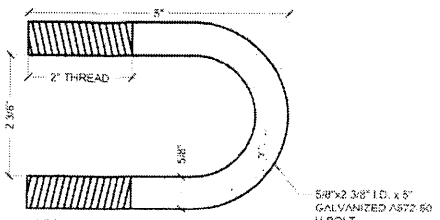


COUPLER DETAIL
NOT TO SCALE

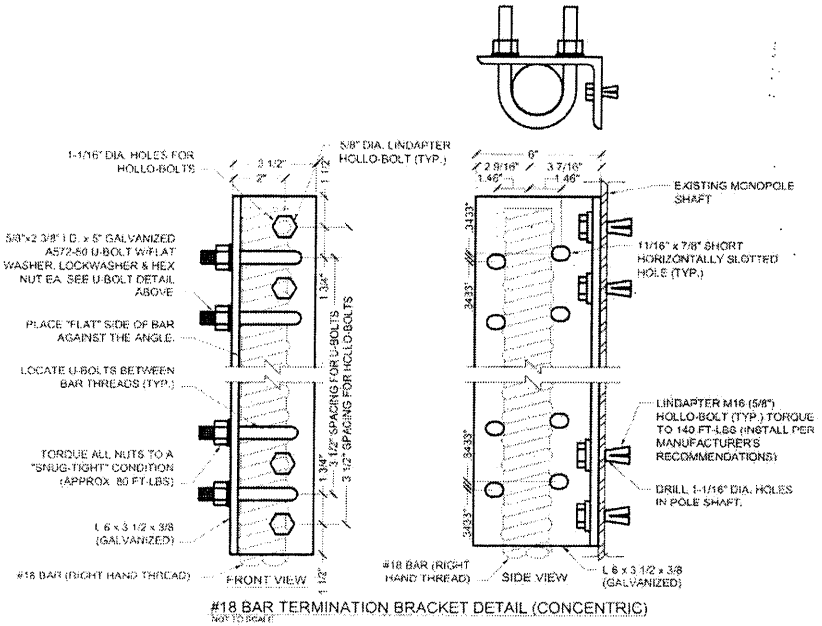
Semaan Engineering Solutions, Inc.			
Phone Number: (402)289-1688 Fax Number: (402)289-1861 Address: 1079 N. 204th Avenue, Elkhorn Nebraska 68022			PROJECT NUMBER 3017645-CT03XC064
DRAWN BY KRC	DATE 06/20/2006	REFERENCE DRAWINGS S-01, S-02, S-03	SITE LOCATION HARTFORD, CT

REV #	DATE	REVISION DESCRIPTION	BY	CHK
4	06/21/06	ISSUE FOR CONSTRUCTION	RJ	

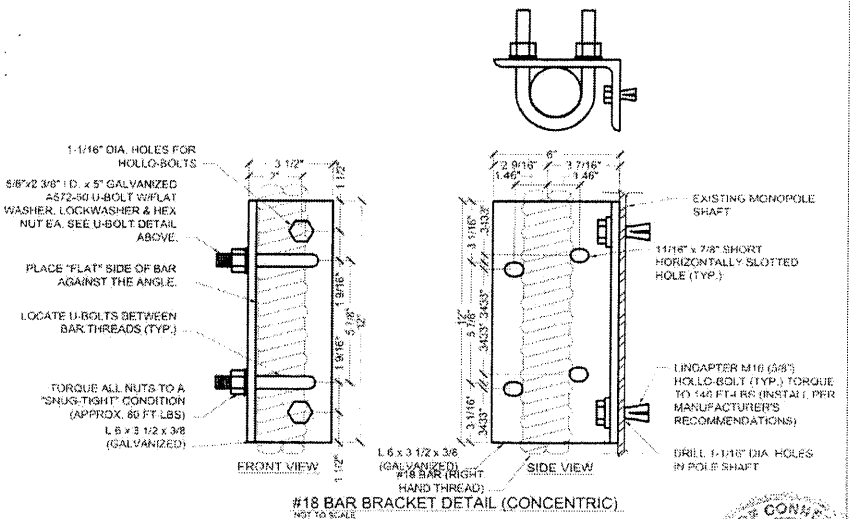
CLIENT	DRAWING DESCRIPTION	SHEET NUMBER
GLOBAL SIGNAL	MONOPOLE REINFORCEMENT DRAWINGS	S-04



5/8" U-BOLT DETAIL
NOT TO SCALE



#18 BAR TERMINATION BRACKET DETAIL (CONCENTRIC)
NOT TO SCALE



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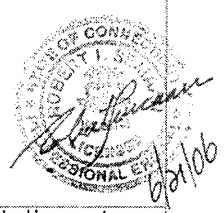
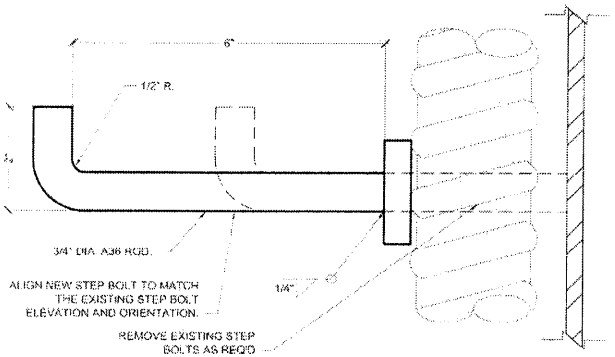


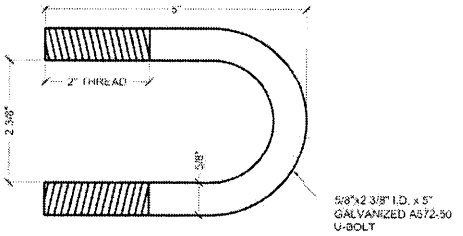
DYWIDAG BARS ONLY

Semaan Engineering Solutions, Inc.			
Phone Number: (402)289-1868 Fax Number: (402)289-1361 Address: 1079 N. 204th Avenue, Elkhorn Nebraska 68022			PROJECT NUMBER: VARIOUS
DRAWN BY: KRC	DATE: 06/06/06	REFERENCE DRAWING: NONE	SITE LOCATION: VARIOUS

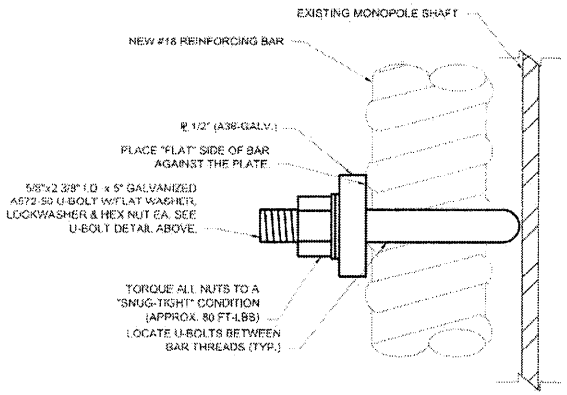
REV #	DATE	REVISION DESCRIPTION	BY	CHK
0	06/06/06	ISSUE FOR CONSTRUCTION	KRC	

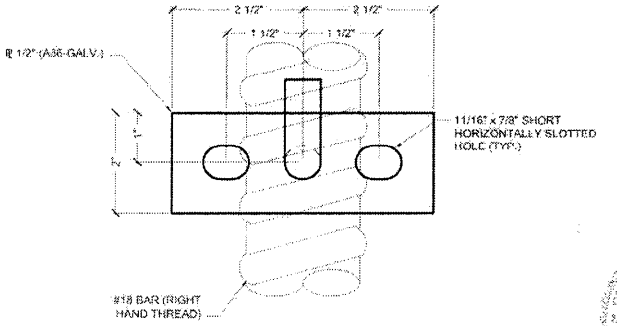
CLIENT	DRAWING DESCRIPTION	SHEET NUMBER
GLOBAL SIGNAL	#18 ROD BRACKET DETAILS (CONCENTRIC)	S-BRACKETS





5/8" U-BOLT DETAIL
NOT TO SCALE





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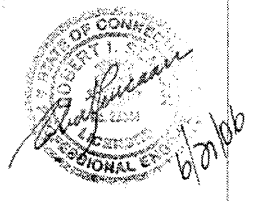


6/20/06

Semaan Engineering Solutions, Inc.

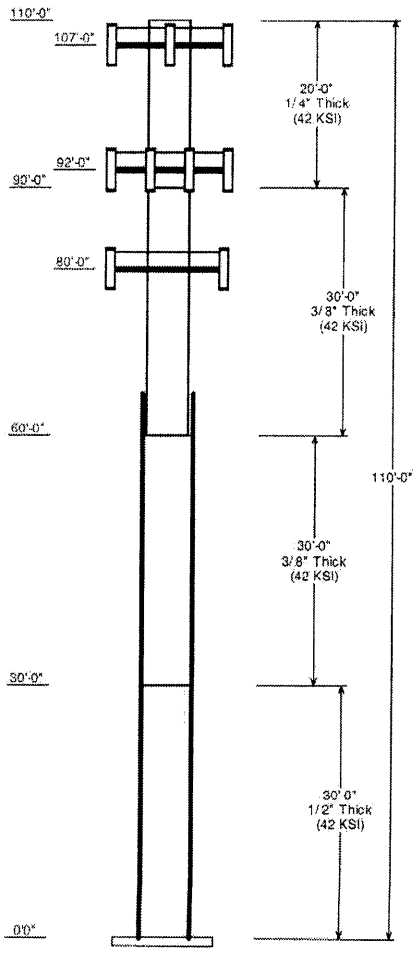
Phone Number: (402)289-1868 Fax Number: (402)289-1861
Address: 1079 N. 204th Avenue, Elkhorn Nebraska 68022

PROJECT NUMBER	DRAWN BY	DATE	REFERENCE DRAWING	SITE LOCATION
VARIOUS	KRC	12/08/04	NONE	VARIOUS

REV #	DATE	REVISION DESCRIPTION	BY	CHK
0	12/08/04	ISSUE FOR CONSTRUCTION	TLT	

CLIENT	DRAWING DESCRIPTION	SHEET NUMBER
VARIOUS	#18 ROD STEP BOLT BRACKET DETAILS	SB-BRACKET

SEMAAN ENGINEERING SOLUTIONS
1079 N.204th Avenue
Elkhorn, NE 68022
Phone: 402-289-1888
Fax: 402-289-1861



Job Information

Pole :	CT03XC064_FIX	Code: TIA/EIA-222 Rev F	
Description :			
Client :	Global Signal		
Location :	3017645 - Hartford, CT		
Shape :	Round	Base Elev (ft):	0.00
Height :	110.00 (ft)	Taper:	0.000000(in/ft)

Sections Properties

Shaft Section	Length (ft)	Diameter (in) Accross Flats Top	Bottom	Thick (in)	Joint Type	Overlap Length (in)	Taper (in/ft)	Steel Grade (ksi)
1	30.000	30.000	30.000	0.500		0.000	0.000000	42
2	30.000	30.000	30.000	0.375	Butt Joint	0.000	0.000000	42
3	30.000	24.000	24.000	0.375	Butt Joint	0.000	0.000000	42
4	20.000	24.000	24.000	0.250	Butt Joint	0.000	0.000000	42

Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
107.000	108.500	1	Platform w/Rail
107.000	107.000	9	UMWD-06517-XD
92.000	92.000	12	7770.00
92.000	93.500	1	Platform w/Rail
92.000	92.000	12	LGP 2140 TMA
80.000	80.000	5	Allgon 7250.01
80.000	80.000	2	RR90-17-00NP
80.000	81.500	1	Platform w/Rail

Linear Appurtenance

Elev (ft) From	To	Description	Exposed To Wind
0.000	70.000	bar reinforcing	Yes
0.000	80.000	7/8 Coax	No
0.000	80.000	7/8 Coax	No
0.000	92.000	7/8 Coax	No
0.000	107.00	1 5/8 Coax	No

Load Cases

No Ice	80.00 mph Wind with No Ice
Ice	69.28 mph Wind with Ice

Reactions

Load Case	Moment (Kip-ft)	Shear (Kips)	Axial (Kips)
No Ice	1226.20	15.81	23.67
Ice	1021.74	12.89	29.45

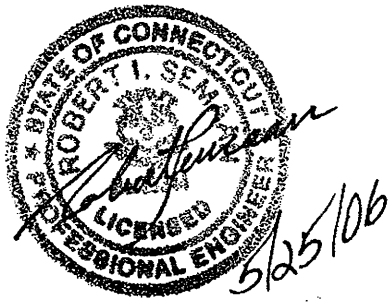
1079 N. 204th Avenue
Elkhorn, NE 68022
Ph: 402-289-1888
Fax: 402-289-1861

SEMAAN ENGINEERING SOLUTIONS

110 ft Rohn Monopole
Structural Analysis

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

Site: 3017645 / CT03XC064
Cingular
Hartford, CT



May 25, 2006

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

Re: Site Number 3017645 / CT03XC064 –Hartford, CT.

Dear Mr. Belizaire:

We have completed the structural analysis for the existing monopole, located at the above referenced site. The purpose of this analysis is to determine that the existing monopole 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 110 ft Rohn Monopole.

Refer to Rohn drawing A963302 dated October 23, 1996 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 a basic wind speed of 80 mph and 1/2" radial ice with reduced wind speed (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
107.0	9	UMWD-06517-XD	Platform w/Rail	(9) 1 5/8	Sprint
80.0	5	Allgon 7250.01	Platform w/Rail	(12) 1 5/8	T-Mobile
	2	RR90-17-00NP			

Proposed Loads:

Elev (ft)	Qty	Antennas	Mounts	Coax	Carrier
92.0	12	7770.00	Platform w/Rail	(12) 1 5/8	Cingular
	12	LGP 2140 TMA			

All new access holes shall be reinforced with welded rims that are compatible with the pole and to be sized and supplied by pole manufacturer.
All transmission lines are assumed running inside of pole shaft.

Results of Analysis:

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

Structure:

The existing pole shaft is significantly overstressed at the base (by 23.6%). The maximum structure usage is: 123.6%.

Foundation:

Pole Reactions	Original Design Reactions	Current Analysis Reactions	% Of Design
Moment (ft-kips)	937.00	1,150.71	122.8
Shear (kips)	10.80	13.52	125.2

The reactions calculated from the analysis greatly exceed the ones indicated on the original structure drawings.

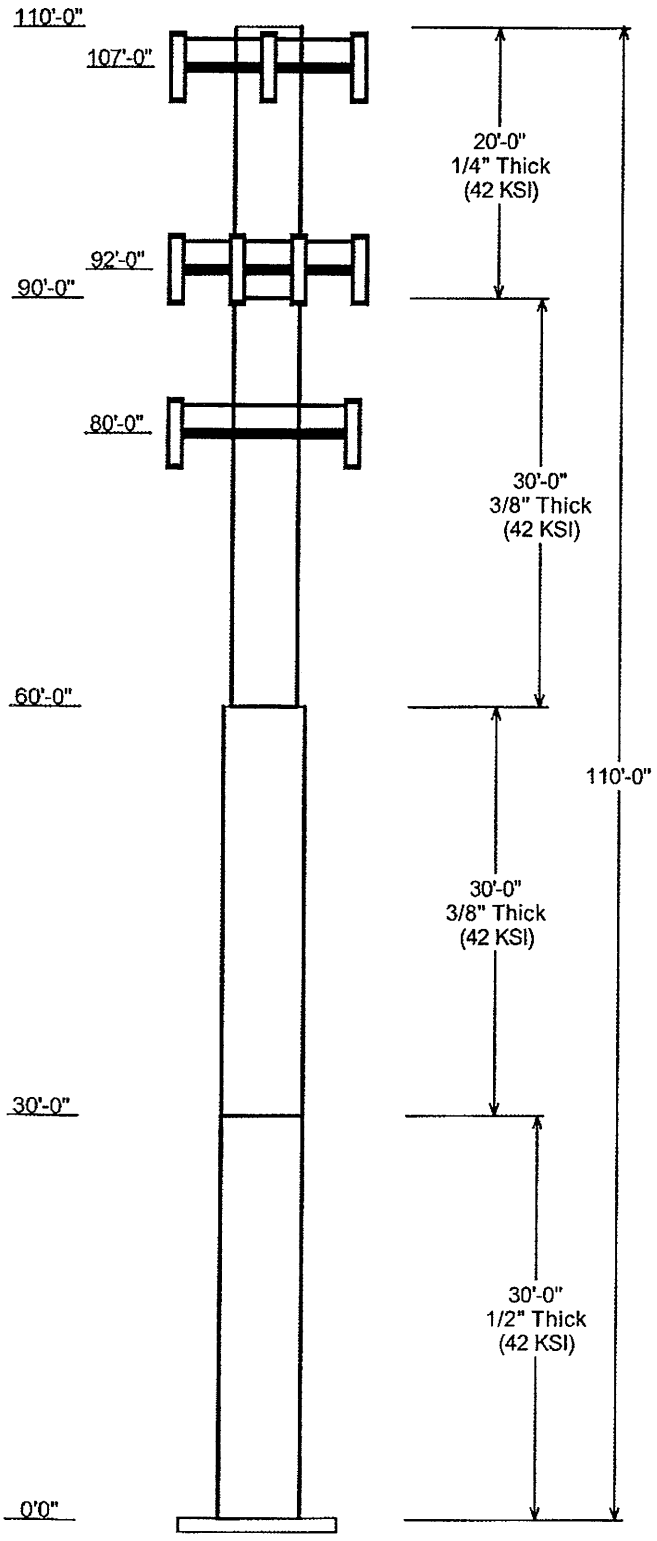
Review and Recommendations:

Based on the analysis results, the existing structure does not meet the requirements per the TIA/EIA-222 Rev F standards for a basic wind speed of 80 mph and 1/2" radial ice with reduced wind speed.

SEMAAN ENGINEERING SOLUTIONS
1079 N.204th Avenue
Elkhorn, NE 68022
Phone: 402-289-1888
Fax: 402-289-1861

Job Information

Pole :	CT03XC064	Code: TIA/EIA-222 Rev F	
Description :			
Client :	Global Signal		
Location :	3017645 - Hartford, CT		
Shape :	Round	Base Elev (ft):	0.00
Height :	110.00 (ft)	Taper:	0.000000(in/ft)



Sections Properties

Shaft Section	Length (ft)	Diameter (in) Across Flats Top	Bottom	Thick (in)	Joint Type	Overlap Length (in)	Taper (in/ft)	Steel Grade (ksi)
1	30.000	30.00	30.00	0.500		0.000	0.000000	42
2	30.000	30.00	30.00	0.375	Butt Joint	0.000	0.000000	42
3	30.000	24.00	24.00	0.375	Butt Joint	0.000	0.000000	42
4	20.000	24.00	24.00	0.250	Butt Joint	0.000	0.000000	42

Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
107.000	107.000	9	UMWD-06517-XD
107.000	108.500	1	Platform w/Rail
92.000	92.000	12	LGP 2140 TMA
92.000	93.500	1	Platform w/Rail
92.000	92.000	12	7770.00
80.000	81.500	1	Platform w/Rail
80.000	80.000	2	RR90-17-00NP
80.000	80.000	5	Allgon 7250.01

Linear Appurtenance

Elev (ft) From	To	Description	Exposed To Wind
0.000	70.000	7/8 Coax	No
0.000	80.000	7/8 Coax	No
0.000	80.000	7/8 Coax	No
0.000	92.000	7/8 Coax	No
0.000	107.0	1 5/8 Coax	No

Load Cases

No Ice	80.00 mph Wind with No Ice
Ice	69.28 mph Wind with Ice

Reactions

Load Case	Moment (Kip-ft)	Shear (Kips)	Axial (Kips)
No Ice	1150.71	13.52	21.05
Ice	970.10	11.13	26.83

6 July 2006

Honorable Eddie A. Perez
Mayor, City of Hartford
550 Main Street
Hartford, CT 06103

RE: Notice of Exempt Modification – Existing Cingular Telecommunications Tower Facility at 92 Weston Street, Hartford, Connecticut

Dear Mr. Perez:

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 92' above ground level. Cingular will keep nine (9) of the existing 1 5/8" diameter coaxial cables and add three (3) of the same dimension. It will 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 92 Weston 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.

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 City of 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

52 New Britain Avenue, Rocky Hill, CT

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

CINGULAR WIRELESS
Proposed Modifications

Site Address: 52 New Britain Avenue, Rocky Hill, CT; *Project Location Map* attached

Coordinates: Lat: 41' 40' 02.4"; Long: 72' 38' 14.3"

Site Owner: Cingular

Type of Existing Facility: 180' monopole and a 13'8" x 9'2" equipment shelter

Antenna Configuration: Center line – 170' above ground level; remove existing antennas and replace with three (3) Powerwave 7770 units; *specification attached*

TMA Configuration: Remove existing units and replace with six (6) new LGP 214nn units; *specification attached*

Coaxial Cables: Nine (9) existing cables to remain and add three (3) new 1 5/8" diameter cables

Other Work: Add one (1) Ericsson RBS 3206 equipment cabinet inside an existing equipment shelter

Power Density:

As the table demonstrates, the cumulative worst-case exposure would be approximately 15.96% 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 # 5123								
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	170	1935.0	1	500.0	820.0	6.2	1000	0.62%
Rocky Hill	180	-	-	-	-	-	-	2.00%
AT&T	170	1900.0	10	100.0	1640.0	12.4	1000	1.24%
T-Mobile	160	1900.0	8	276.1	3622.0	31.0	1000	3.10%
Sprint	140	1900.0	11	445.3	8032.3	89.9	1000	8.99%
TOTAL								**15.96%**

Structural Analysis: *Structural Analysis* attached.


25 New Britain Avenue
Rocky Hill, CT
1860 Reservoir
Goff Brook
Old Post Rd
Old Common Rd
Deer Ledge Ln
Goff Brook Cir
Stockade Cir
Hedgerow St
Fox Hill Rd
Crestridge Rd
Valley View Dr
Raymond Rd
Gilbert Ave
Meadow View Dr
Springdale Rd
Sunset Blvd
Cloverdale Cir
Cross Hill Rd
Hang Dog Ln
Highcrest Rd
Butternut Cir
Penny Pl
Pond Side Dr
W Ledge Dr
Patriot Ln
Marshalls Mdw
Two Rod Hwy
Bay Roc Rd
Amato Cir
Rose Ct
Whitewood Dr
Summer Ln
Heather Hl
Garfield Rd
Hayes Rd
Dusty Ln
Manse Ln
Pebblebrook Dr
Bella Vista Dr
Lavender Ln
Falcon Ridge Rd
Jason Dr
Ridgewood Rd
Rosewood Dr
Countryside Dr
Knoll Ln
Westmeadow Rd
Trinity Rd
New Rd
Pondside Ln
Applewood Ln
Cronin Dr
Alexandra Ln
Maxwell Dr
Stagecoach Ln
N Condor Dr
Westerly Ter
Hollister Dr
Knollwood Rd
Farview Dr
Fernwood Dr
Copper Beech Dr
Little Oak Ln
Sandy Dr
June Ct
Crystal Dr
Tumblebrook Rd
Pheasant Dr
Fern St
Christiana Dr
Courtney Dr
Shea Cir
Oslund Way
Chatum Dr
Dogwood Ct
Cromwell Ave
Siderake Rd
Corncrib Ln
Silo Dr
Butternut Ln
Basswood Ct
Hickory Ln
Gilbert Ave
Corporate Pl
West St
France St
Murphy Dr
Farmstead Rd
Bucks Xing
Peria Dr
Ten Rod Hwy
Deerfield Run
Wynding Brook Dr
Sunset Rd
Fieldstone Dr
Fawn Run
Winter Ln
Kent Ln
Old Tannery Ln
Highland St
Tall Pines Ln
Woodfield Xing
Autumn Cir
Fox Hill Dr
France St
Cold Spring Rd
Diplietro Dr
Enterprise Dr
Capitol Blvd
Brook Xing
91
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3
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Project Area Location
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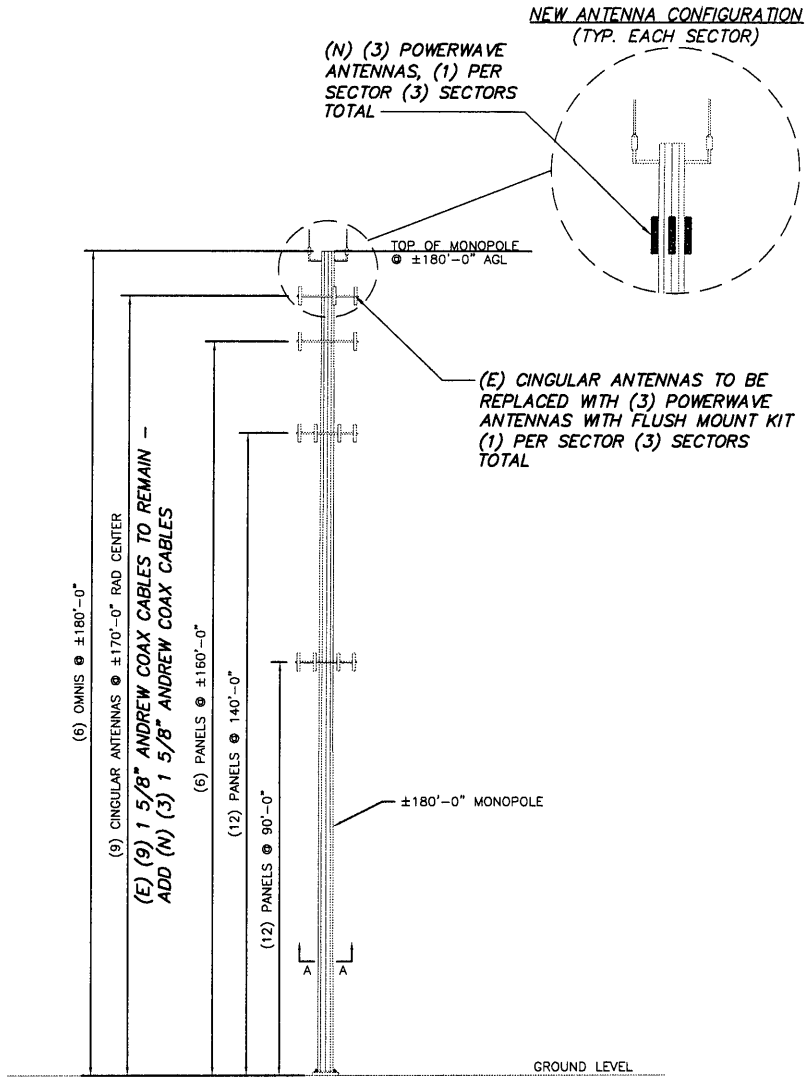
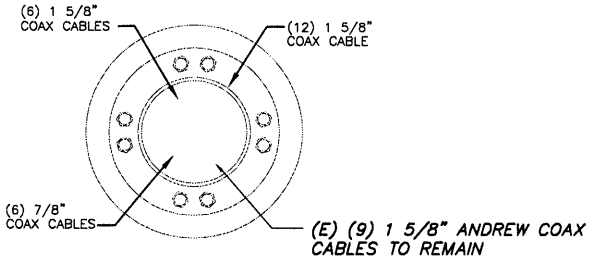
900
1800
scale in feet
N



TOWER ELEVATION

SCALE: 1" = 40'-0"



LATITUDE: 41° 40' 02.4"
LONGITUDE: 72° 38' 14.3"

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
185-037

SITE NAME: ROCKY HILL CT

SITE NUMBER: 5123

52 NEW BRITAIN AVE.
ROCKY HILL, CT 06067

NO.	DATE	REVISION DESCRIPTION	BY	CHK	APP'D
3	06/20/06	MISC. REVISIONS	PHR	CJW	CJW
2	06/07/06	MISC. REVISIONS	PHR	CJW	CJW
1	05/09/06	MISC. REVISIONS	PHR	CJW	CJW
0	05/08/06		PHR	CJW	CJW

SITE NUMBER
5123

DETAILED STRUCTURAL ANALYSIS AND EVALUATION OF EXISTING 182' MONOPOLE FOR NEW ANTENNA ARRANGEMENT

Cingular Site #5123
53 New Britain Avenue
Rocky Hill, Connecticut

prepared for

CH2MHILL
8619 West Bryn Mawr, Suite 615
Chicago, IL 60631

cingular WIRELESS
Cingular Wireless
580 Main Street
Bolton, MA 01740

prepared by

URS
URS CORPORATION
500 ENTERPRISE DR, SUITE 3B
ROCKY HILL, CT 06067
TEL. 860-529-8882

36922935.00008
CH2-025

Revision 1 June 7, 2006

TABLE OF CONTENTS

1. EXECUTIVE SUMMARY

This report summarizes the structural analysis of the existing 182' steel monopole structure located at 52 New Britain Avenue in Rocky Hill, Connecticut. The analysis was conducted in accordance with the 2005 Connecticut State Building Code and the TIA/EIA-222-F standard for wind velocity of 80 mph and 69 mph concurrent with ½" ice. The antenna loading considered in the analysis consists of all existing and proposed antennas, transmission lines, and ancillary items as outlined in the Introduction Section of this report. The proposed Cingular modification is as follows:

Proposed Antenna and Mount	Carrier	Antenna Center Elevation
Remove: **(9) existing Allgon 7184.14 antennas and (1) Low Profile Platform** **Install:** **(1) Valmont Flush Mount (P/N 840502),** **(3) Powerwave 7770.00 antennas** **(6) Powerwave LGP21401 TMA's** **with (9) existing 1 5/8" coax cables within the monopole and (3) new 1 5/8" coax cables within the monopole.**	**Cingular (Proposed)**	**@ 170'**

The results of the analysis indicate that the tower structure, anchor bolts, base plate, and foundation are in compliance with the proposed loading conditions. **The tower is considered structurally adequate with the wind load classification specified above and all the existing and proposed antenna loading.**

This analysis is based on:

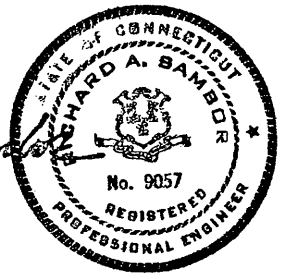
1) The tower structure's theoretical capacity, not including any assessment of the condition of the tower.
2) Tower geometry and structural member sizes taken from original construction drawings and structural calculations prepared by Engineer Endeavors, Inc., job number 5554, dated September 9, 1999.
3) Antenna and mount configuration as specified on the following page of this report.

This report is only valid as per the assumptions and data utilized in this report for antenna inventory, mounts and associated cables. The user of this report shall field verify the assumption of the antenna and mount configuration as well as the physical condition of the tower. Notify the engineer in writing immediately if any of the information in this report is found to be other than specified.

If you should have any questions, please call.

Sincerely,

URS Corporation



Richard A. Sambor, P.E.
Manager Facilities Design

RAS/jek

cc: AA, DR, IA, CF/Book – URS

2. INTRODUCTION

The subject tower is located at 52 New Britain Avenue in Rocky Hill, Connecticut. The structure is a 182' steel monopole designed and manufactured by Engineered Endeavors, Inc.

The inventory is summarized in the table below:

Antenna Type	*Carrier*	*Mount*	*Antenna Centerline Elevation*	*Cable*
(6) Cellwave PD-220 omni antennas	Town (existing)	(3) Standoff Mounts	180'	(6) 7/8" coax cables (within monopole)
(3) Powerwave 7770.00 antennas and (6) Powerwave LGP21401 TMA's	**Cingular (proposed)**	**(1) Valmont Flush Mount (P/N 840502)**	**170'**	(9) existing 1 5/8" coax cables (within monopole) and **(3) new 1 5/8" coax cables (within monopole)**
(6) EMS RR90-17-00DP antennas	T-Mobile (existing)	Low-Profile Platform	160'	(12) 1 5/8" coax cables (within monopole)
(6) Decibel DB980H65T2E-M antennas	Sprint (existing)	Low-Profile Platform	140'	(6) 1 5/8" coax cables (outside monopole)
(6) Decibel DB844H90E-XY antennas and (6) Decibel DB950F85E-M antennas	Verizon (existing)	Low-Profile Platform	90'	(12) 1 5/8" coax cables (within monopole)

This structural analysis of the communications tower was performed by URS Corporation (URS) for CH2Mhill/Cingular Wireless. The purpose of this analysis was to investigate the structural integrity of the existing tower with its existing and proposed antenna loads. This analysis was conducted to evaluate stress on the tower and the effect of forces to the foundation of the tower resulting from existing and proposed antenna arrangements.

3. ANALYSIS METHODOLOGY AND LOADING CONDITIONS

The structural analysis was done in accordance with the 2005 Connecticut State Building Code, TIA/EIA-222-F—Structural Standard for Steel Antenna Towers and Antenna Supporting Structures, and the American Institute of Steel Construction (AISC) Manual of Steel Construction—Allowable Stress Design (ASD).

The analysis was conducted using RISA Tower 4.5. Two load conditions were evaluated as shown below which were compared to allowable stresses according to AISC and TIA/EIA.

Load Condition 1 = 80 mph Wind Load (without ice) + Tower Dead Load
Load Condition 2 = 69 mph Wind Load (with ice) + Ice Load + Tower Dead Load

Please note that wind pressure is a function of velocity squared. Under Load Condition 2, a 25 percent reduction in wind pressure is allowed by code to account for the unlikelihood of the full wind pressure and ice load occurring at the same time. The same results may be achieved by utilizing a lower wind pressure without taking the 25 percent reduction, as shown above.

The TIA/EIA standard permits a one-third increase in allowable stresses for towers and monopoles less than 700 feet tall. For the purposes of this analysis, in computing the load capacity the allowable stresses of the tower members were increased by one-third.

4. FINDINGS AND EVALUATION

Combined axial and bending stresses on the monopole structure were evaluated to compare with allowable stresses in accordance with AISC. The calculated stresses under the proposed loading were within the allowable limits. Detailed analysis and calculations for the proposed load condition are provided in section 6 of this report. The anchor bolts, base plate, and foundation were also found to be within allowable limits.

5. CONCLUSIONS AND RECOMMENDATIONS

The results of the analysis indicate that the tower structure, anchor bolts, base plate, and foundation are in compliance with the proposed loading conditions. **The tower is structurally adequate under the wind load classification specified above and the proposed antenna loadings.**

Limitations/Assumptions:

This report is based on the following:

1. Tower inventory as listed in this report.
2. Tower is properly installed and maintained.
3. All members are as specified in the original design documents and are in good condition.
4. All required members are in place.
5. All bolts are in place and are properly tightened.
6. Tower is in plumb condition.
7. All member protective coatings are in good condition.
8. All tower members were properly designed, detailed, fabricated, and installed and have been properly maintained since erection.
9. Foundations were properly constructed to support original design loads as specified in the original design documents.
10. All coaxial cable is installed within the monopole unless specified otherwise.

URS is not responsible for any modifications completed prior to or hereafter in which URS is not or was not directly involved. Modifications include but are not limited to:

A. Adding antennas
B. Removing/replacing antennas
C. Adding coaxial cables

URS hereby states that this document represents the entire report and that it assumes no liability for any factual changes that may occur after the date of this report. All representations, recommendations, and conclusions are based upon information contained and set forth herein. If you are aware of any information which conflicts with that which is contained herein, or you are aware of any defects arising from original design, material, fabrication, or erection deficiencies, you should disregard this report and immediately contact URS. URS disclaims all liability for any representation, recommendation, or conclusion not expressly stated herein.

Ongoing and Periodic Inspection and Maintenance:

After the Contractor has successfully completed the installation and the work has been accepted, the owner will be responsible for the ongoing and periodic inspection and maintenance of the tower.

The owner shall refer to TIA/EIA-222-F for recommendations for maintenance and inspection. The frequency of the inspection and maintenance intervals is to be determined by the owner based upon actual site and environmental conditions. It is recommended that a complete and thorough inspection of the entire tower structural system be performed at least yearly and more frequently as conditions warrant. According to TIA/EIA-222-F section 14.1, Note 1: It is recommended that the structure be inspected after severe wind and/or ice storms or other extreme loading conditions.

Kise Straw & Kolodner

Architects Planners Historians Archaeologists

James Bennett Straw, AIA

Harvey D. Kolodner, MBA

6 July 2006

Honorable Anthony LaRosa
Mayor, Town of Rocky Hill
761 Old Main Street
Rocky Hill, CT 06067

RE: Notice of Exempt Modification – Existing Cingular Telecommunications Tower Facility at 52 New Britain Avenue, Rocky Hill, Connecticut

Dear Mr. LaRosa:

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 add one (1) new equipment cabinet inside an existing shelter and remove the existing antennas and replace them with a total of six (6) new antennas, located at an existing centerline height of approximately 170' above ground level. Cingular will keep nine (9) of the existing 1 5/8" diameter coaxial cables and add three (3) of the same dimension. It will remove the existing tower mounted amplifiers and replace them with six (6) new units, located at the same height as the antennas.

In summary, the final antenna configuration at 52 New Britain Avenue will include:

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

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

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.

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 Rocky Hill 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

Ericsson RBS Equipment Cabinet
Powerwave 7770 Antenna
Powerwave LGP 214nn Tower Mounted Amplifier

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

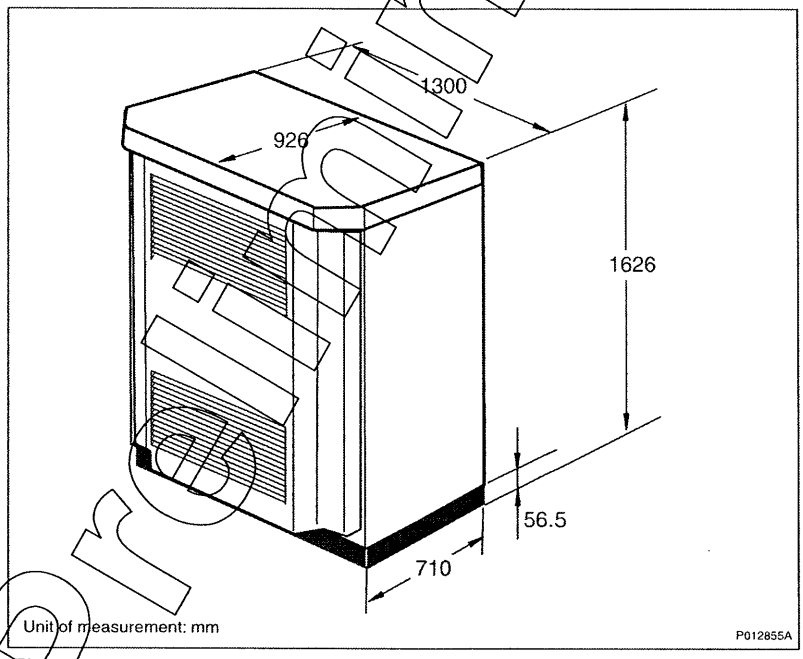


Figure 2 RBS 3106 Dimensions

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

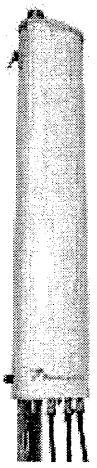
Dual Broadband Antenna

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

Dual Broadband Antenna

806-960/1710-2170 MHz

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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D031-08208 Rev A

Tower Mounted Amplifier

Dual Band 1900 MHz with 850 MHz Bypass

1900/850 MHZ

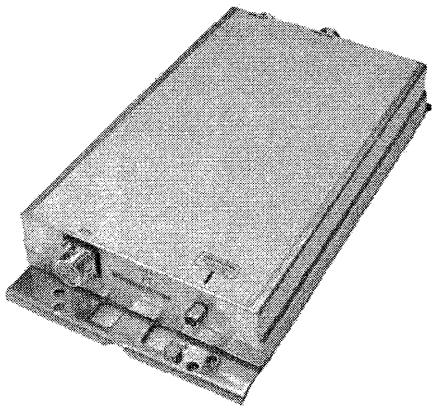
Part Number:
LGP 214nn

Up-link: 1850-1910 MHz
Down-link: 1930-1990 MHz
Bypass: 824-894 MHz

Gain: 12 dB
Noise Figure: < 1.7 dB

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

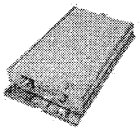
ANTENNA SYSTEMS

BASE STATION SYSTEMS

COVERAGE SYSTEMS

Powerwave technologies

Tower Mounted Amplifier



1900/850 MHz

Technical Specifications

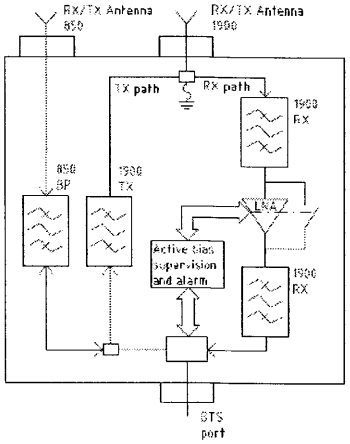
Product Number	LGP214nn	
850 MHz	Bypass (MHz)	824-894
	Return loss* (dB)	> 20
	Insertion loss* (dB)	< 0.3
1900 MHz		
Up-link	Frequency range, full band (60 MHz)	1850-1910
	Nominal gain (dB)	12
	Return loss* (dB)	> 20
	Noise figure* (dB)	< 1.7
	Output 3rd order Intercept Point* (dBm)	> +23
Down-link	Frequency 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 7184

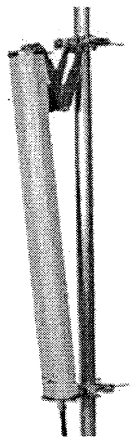
Single Band Metro Antenna

90° 1.3 m vertical polarized FET Antenna

1850-1990 MHz

Part Number:	Horizontal Beamwidth: 90°	Electrical Downtilt: 2°
7184.42	Gain: 16.5 dBi / 14.4 dBd	Connector Type: 7/16 DIN female

The Powerwave single band Metro antenna has a slim design and sophisticated electrical performance, typical of Powerwave antennas. This ensures maximum efficiency as well as stable pattern over the entire frequency range. The design relies on a micro strip PCB network. Special attention has been paid to ensure antenna pattern peak performance, making the Metro an excellent choice for optimal cell planning.



Key Benefits

- High gain performance
- Light and slim design
- Robust and reliable
- Pre-mounted brackets
- Guaranteed passive intermodulation performance

ANTENNA SYSTEMS

BASE STATION SYSTEMS

COVERAGE SYSTEMS

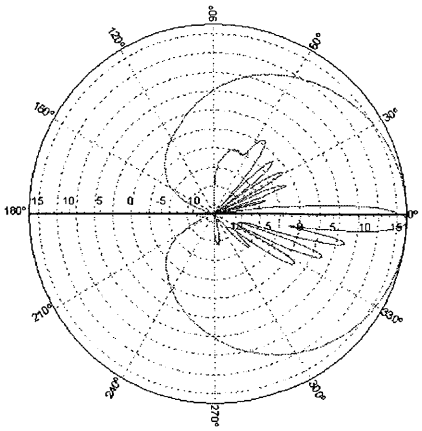
Single Band Metro Antenna

1850-1990 MHz

Electrical Specifications

Frequency Band (MHz)	1850 – 1990
Gain (dBi / dBd)	16.5 / 14.4
Polarization	Linear vertical
Nominal Impedence (Ohm)	50
VSWR (1850-1990 MHz)	< 1.3:1
Horizontal -3 dB beamwidth	90°
Electrical downtilt	2°
Vertical -3 dB beamwidth	6.5°
First upper sidelobe suppression (dB))	> 18
Front-to-back ratio, co-polar (dB)	> 27
Power Handling, Average total (W)	400
IM3, @2x43dBm (dBc)	<-146

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



Typical Horizontal and Vertical 7184.42 Patterns

Mechanical Specifications

Connector Type	7/16 DIN female
Connector Position	Bottom
Dimensions, HxWxD	1300x126x80mm (4' 3"x5"x3")
Weight Including Bracket	8.7 kg (19 lbs)
Wind Load, Frontal, 42 m/s, Cd=1	181N (41 lbf)
Survival Wind Speed	70m/s (156 mph)
Lightning Protection	DC grounded
Radome Material	PVC
Radome Color	Light gray
Packing Size	1410x190x140mm (4' 7"x7"x6")
Shipping Weight	9.7 kg (21.1lbs)

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D031-08084 Rev A

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@ct.gov
www.ct.gov/csc

July 19, 2006

The Honorable Anthony P. LaRosa
Mayor
Town of Rocky Hill
Town Hall
699 Old Main Street
P. O. Box 657
Rocky Hill, CT 06067

RE: **EM-CING-064-119-060707** - New Cingular Wireless PCS, LLC notice of intent to modify existing telecommunications facilities located at 92 Weston Street, Hartford; and 52 New Britain Avenue, Rocky Hill, Connecticut.

Dear Mayor LaRosa:

The Connecticut Siting Council (Council) received this request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72.

The Council will consider this item at the next meeting scheduled for July 27, 2006 at 1:30 p.m. in Hearing Room Two, Ten Franklin Square, New Britain, Connecticut.

If you have any questions or comments regarding this proposal, please call me or inform the council by July 26, 2006.

Thank you for your cooperation and consideration.

Very truly yours,

S. Derek Phelps
Executive Director

SDP/ap

Enclosure: Notice of Intent

c: Kimberly Ricci, Director of Planning, Town of Rocky Hill
Barbara Gilbert, Town Manager, Town of Rocky Hill

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@ct.gov
www.ct.gov/csc

July 19, 2006

The Honorable Eddie A. Perez
Mayor
City of Hartford
Municipal Building
550 Main Street
Hartford, CT 06103

RE: **EM-CING-064-119-060707** - New Cingular Wireless PCS, LLC notice of intent to modify existing telecommunications facilities located at 92 Weston Street, Hartford; and 52 New Britain Avenue, Rocky Hill, Connecticut.

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S. Derek Phelps
Executive Director

SDP/ap

Enclosure: Notice of Intent

c: Rogert J. O'Brien, Director of Planning, City of Hartford
Lee C. Erdmann, Chief Operating Officer, City of Hartford

Perrone, Michael EM-CING-064-119-060707

From: Karen Couture [karencouture@myeastern.com]
Sent: Thursday, July 20, 2006 3:39 PM
To: Perrone, Michael
Subject: 52 New Britain Avenue, Rocky Hill, CT-Errata Sheet
Importance: High

Dear Mr. Perrone,

Attached you will find an errata sheet for 52 New Britain Avenue, Rocky Hill, CT. The power density sheet has been revised to show Verizon at 90'.

Should you have any further questions, please do not hesitate to call.

Thank you.

Karen L. Couture
Site Acquisition Specialist
Mobile: 860-389-4924
E-Fax: 888-281-6394
Email: karencouture@myeastern.com

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 Federal Communications Commission. The table below 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 FCC OET 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.

Site # 5123								
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	170	1935.0	1	500.0	820.0	6.2	1000	0.62%
Rocky Hill	180	-	-	-	-	-	-	2.00%
AT&T	170	1900.0	10	100.0	1640.0	12.4	1000	1.24%
T-Mobile	160	1900.0	8	276.1	3622.0	31.0	1000	3.10%
Sprint	140	1900.0	11	445.3	8032.3	89.9	1000	8.99%
Verizon 800	90	880.0	19	100.0	3116.0	84.4	587	14.38%
Verizon 1900	90	1900.0	3	285.0	1402.2	38.0	1000	3.80%
TOTAL								**34.13%**