EM-CING-070-081030

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New Cingular Wireless PCS, LLC
500 Enterprise Drive
Rocky Hill, Connecticut 06067-3900
Phone: (860) 513-7636
Fax: (860) 513-7190

Steven L. Levine
Real Estate Consultant

ORIGINAL

HAND DELIVERED

October 30, 2008

Honorable Daniel F. Caruso, Chairman,
and Members of the Connecticut Siting Council
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

Re: New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at Clinton Road (78 Rte 81), Killingworth (owner, Crown Castle)

Dear Chairman Caruso and Members of the Council:

In order to accommodate technological changes, implement Uniform Mobile Telecommunications System ("UMTS") capability, and enhance system performance in the State of Connecticut, New Cingular Wireless PCS, LLC ("AT&T") plans to modify the equipment configurations at many of its existing cell sites. Please accept this letter and attachments as notification, pursuant to R.C.S.A. Section 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2). In compliance with R.C.S.A. Section 16-50j-73, a copy of this letter and attachments is being sent to the chief elected official of the municipality in which the affected cell site is located.

UMTS technology offers services to mobile computer and phone users anywhere in the world. Based on the Global System for Mobile (GSM) communication standard, UMTS is the planned worldwide standard for mobile users. UMTS, fully implemented, gives computer and phone users high-speed access to the Internet as they travel. They have the same capabilities even when they roam, through both terrestrial wireless and satellite transmissions.

Attached is a summary of the planned modifications, including power density calculations reflecting the change in AT&T's operations at the site. Also included is documentation of the structural sufficiency of the tower to accommodate the revised antenna configuration.

The changes to the facility do not constitute modifications as defined in Connecticut General

Statutes ("C.G.S.") Section 16-50i(d) because the general physical characteristics of the facility will not be significantly changed or altered. Rather, the planned changes to the facility fall squarely within those activities explicitly provided for in R.C.S.A. Section 16-50j-72(b)(2).

1. The height of the overall structure will be unaffected. Modifications to the existing site include all or some of the following as necessary to bring the site into conformance with the plan:

- Replacement of existing panel antennas with new antennas or, installation of additional antennas of a size required to accommodate UMTS.
- Installation of small tower mount amplifiers ("TMA's") and/or diplexers to the platform on which the panel antennas are mounted to enhance signal reception.
- Installation of additional or larger coaxial cables as required.
- Installation of an additional equipment cabinet in existing shelters, or on existing or enlarged concrete pads.
- Radome enlargement for flagpole and "stick" structures to accommodate larger antennas and additional associated equipment.

None of these modifications will extend the height of the tower.

2. The proposed changes will not extend the site boundaries. There will be no effect on the site compound other than some enlarged equipment pads as may be noted in the attachments.

3. The proposed changes will not increase the noise level at the existing facility by six decibels or more.

4. Radio frequency power density may increase due to use of one or more GSM channel for UMTS transmissions. However, the changes will not increase the calculated "worst case" power density for the combined operations at the site to a level at or above the applicable standard for uncontrolled environments as calculated for a mixed frequency site.

For the foregoing reasons, New Cingular Wireless respectfully submits that the proposed changes at the referenced site constitute exempt modifications under R.C.S.A. Section 16-50j-72(b)(2).

Please feel free to call me at (860) 513-7636 with questions concerning this matter. Thank you for your consideration.

Sincerely,

Steven L. Levine
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Attachments

NEW CINGULAR WIRELESS
Equipment Modification

Clinton Road (78 Rte 81), Killingworth
Site Number 2057
Exempt Modifications approved 7/02, 12/03, 8/07

Tower Owner/Manager: Crown Castle

Equipment Configuration: Monopole

Current and/or Approved: Twelve CSS DUO-1417-8686 panel antennas @ 140 ft AGL
Six TMA's and three combiners @ 140 ft
Twelve runs 1 5/8 inch coax cable
12 x 20 ft equipment shelter

Planned Modifications: Remove existing antennas and TMA's
Install six Powerwave 7770 antennas (or equivalent) @ 140 ft
Install six TMA's and six diplexers @ 140 ft

Power Density:

Worst-case calculations for existing wireless operations at the site indicate a radio frequency electromagnetic radiation power density, measured at ground level beside the tower, of approximately 7.8 % of the standard adopted by the FCC. As depicted in the second table below, the total radio frequency electromagnetic radiation power density following proposed modifications would be approximately 9.4 % of the standard.

Existing

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm^2)	Standard Limits (mW/cm^2)	Percent of Limit
Other Users *							4.39
Cingular GSM*	140	1900 Band	2	427	0.0157	1.0000	1.57
Cingular GSM*	140	880 - 894	2	296	0.0109	0.5867	1.85
Total							7.8%

* Per CSC records

Proposed

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm^2)	Standard Limits (mW/cm^2)	Percent of Limit
Other Users *							4.39
Cingular UMTS	140	880 - 894	1	500	0.0092	0.5867	1.56
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Total							9.4%

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Structural information:

The attached structural analysis for Cingular's original installation on this tower in 2003 accounts for 12 CSS antennas, 6 TMA's, 3 combiners, and 12 lines 1 5/8 inch coax in the Cingular equipment inventory. Additionally, AT&T (old) had 6 antennas, 12 lines coax, and T-arms included in the 2003 structural analysis; these items have since been removed.

As shown on the attached loading comparison, the *original configuration represents both greater weight and greater wind loading* than the proposed new array of 6 Powerwave antennas, 6 TMA's, 6 diplexers, and 12 lines 1 5/8 inch coax, and with the AT&T (old) equipment removed.

Accordingly, the 2003 structural is still valid for assessing the structural impacts of the proposed equipment modifications and demonstrates that there is adequate structural capacity to accommodate the proposed modifications.

Loading Comparison - 2057 - Killingworth

		QTY	Length	Width	Depth	Weight	Sail Area	Total Sail Area (sq in)	Total Weight (lbs)
Existing (per 2003 structural analysis)									
Antennas - Cingular	CSS DUO 1417-8686	12	48	14	9	30.8	672	8064	369.6
TMAs - Cingular	ADC CG1900W850	6	11.7	11.3	2.8	15.4	132.21	793.26	92.4
Combiners - Cingular	CSS DBC-750	3	7.9	6.6	1.3	4.9	52.14	156.42	14.7
coax - Cingular	1 5/8 inch	12	140			0.8	0		1344
Antennas - old AT&T	Allgon 7250	6	61	6	2	15	366	2196	90
coax - old AT&T	1.25 inch	12	130			0.69			1076.4
								11209.68	**2987.1**
Proposed -- AT&T (old) equipment removed									
Antennas	Powerwave 7770	6	55	11	5	35	605	3630	210
TMAs	Powerwave LGP 21401	6	14	9	2.7	19	126	756	114
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coax	twelve 1 5/8 inch	12	140			0.8	0		1344
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	Powerwave LGP 21903	4.4	6.3	3	5.3	27.72
coax	7/8 inch				.34 / ft	
	1 1/4 inch				.69 / ft	
	1 5/8 inch				.8 / ft	

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Honorable Richard J. Cabral
1st Selectman, Town of Killingworth
Town Office Bldg. 323 Route 81
Killingworth, CT 06419

Re: Telecommunications Facility – Clinton Road (78 Route 81)

Dear Mr. Cabral:

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As required by Regulations of Connecticut State Agencies ("R.C.S.A.") Section 16-50j-73, the Connecticut Siting Council has been notified of the changes and will review Cingular's proposal. Please accept this letter as notification under Section 16-50j-73 of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2).

The accompanying letter to the Siting Council fully describes Cingular's proposal for the referenced cell site. However, if you have any questions or require any further information on our plans or the Siting Council's procedures, please call me at (860) 513-7636 or Mr. Derek Phelps, Executive Director, Connecticut Siting Council at (860) 827-2935.

Sincerely,

Steven L. Levine
Real Estate Consultant

Enclosure

ENGINEERED
ENDEAVORS
INCORPORATED
The Experienced Point of View

November 12, 2003

#2057

Reference: Structural Analysis of a 150' Monopole
Site Name: CT33XC543
Site Location: Killingworth, CT
EEI Job Number: 6927
EEI Drawing #: GS52258

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Executive Summary

The monopole and foundation are adequate to carry the proposed loads and new configuration presented herein.

Introduction

The monopole was analyzed under the proposed loading presented by Russ Van Oudenaren of Sprint Sites on the Tower Loading Form.

Structure Type: Monopole – 18 Poly-Sided
Manufacturer: Engineered Endeavors, Inc.

EEI used an "in-house" program to analyze the multi-sided pole structure. The

CELLPOLE is a geometrically nonlinear program for tubular steel structures employing the finite element method (FEM) to perform the calculations. This program performs a non-linear geometric analysis to account for secondary moments caused by structural deflections due to anticipated loading. The program has been verified against closed form solutions and full-scale load tests, both providing excellent results.

Analysis Criteria

The objective of this analysis is to determine if the monopole can structurally support the desired configuration and meet the requirements of the:

1. EIA/TIA 222-F Code
2. *Manual of Steel Construction ASD Ninth Edition* American Institute of Steel Construction
3. American Concrete Institute's *Building Code Requirements for Structural Concrete* (ACI 318-95)
4. American Society of Civil Engineers (A.S.C.E.) *Design of Steel Transmission Pole Structures*

Monopole Loading

For further information on the structural loading, refer to the *EEI* analysis cover sheet and calculations. All mounts are assumed to be EEI's standard mounting systems, unless noted otherwise. All transmission lines are assumed running inside of the pole shaft.

Monopole Results

This monopole is structurally adequate to support the desired antennas and ancillary equipment. The maximum bending stress in the shaft (40 *ksi*) occurs at the lower middle splice elevation, 46 *ft,* on the structure. The allowable strength at this point is 47.6 *ksi*. Refer to Case 1 of the design calculations for the full design loading output. In addition, all other components of the structure are adequate to support the proposed loading, *e.g.*, the base plate and anchor bolts. Refer to Table I for a summary of the maximum capacity of the individual structural components.

Table I: Capacity Usage on Pole

Description	% of Capacity
Maximum Shaft	85
Base Plate	79
Anchor Bolts	75

Foundation Results

The original foundation design for this site was provided by EEI and is depicted in drawing F6927-150. Table II provides a comparison of foundation loads between the original design loading and the new base loads; the new base loads less than the original base loads. Assuming that the foundation has been installed exactly according to the above referenced design and is in excellent condition, it will be adequate to support the desired loading.

Table II: Foundation Base Loads

	New Base Loads	Original Base Loads	% of Design
Moment - *ft-kips*	2128.0	2433.3	87
Shear – *kips*	19.5	22.3	87
Axial – *kips*	23.2	24.2	96

Conclusion

The **monopole and foundation are adequate** to handle the desired loading configuration, refer to the EEI cover sheet for the summary of the loading configuration.

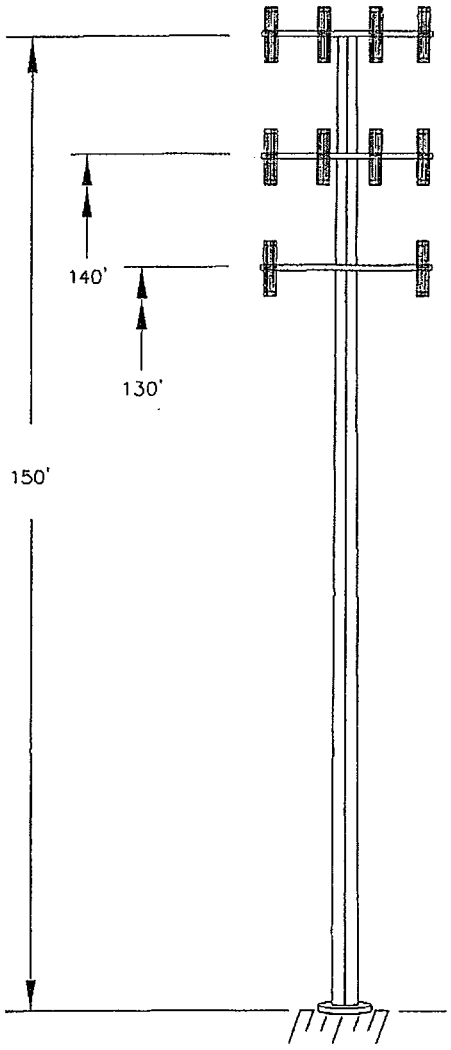
It is the responsibility of Sprint Sites USA to verify that the monopole modeled and analyzed is the correct structure that exists. This report is intended for use with regard to this specific monopole discussed in general herein and any substantial changes in mounting or loading should be brought to EEI's attention so that we may determine how this may effect our conclusions.

ENGINEERED ENDEAVORS INCORPORATED

Customer SPRINT SITES USA By MRM 11/12/03 Dote

Structure 150' MONOPOLE Checked ____ 6927 Job/Quote No.

SITE LOCATION – KILLINGWORTH, MIDDLESEX COUNTY, CT ANALYSIS
SITE NAME – CT33XC543/CLINTON



ANTENNA LOADING:

(12) DB980H90 PANEL ANTENNAS
LOW PROFILE PLATFORM @ 150' (SPRINT)

(12) CSS DUO1417-8686 PANEL ANTENNAS
(6) ADC TMAs
(3) CSS COMBINERS
LOW PROFILE PLATFORM @ 140' (CINGULAR)

(6) ALLGON 7250.02 PANEL ANTENNAS
T ARM MOUNTS @ 130' (AT&T)

DESIGN NOTES:

DESIGNED IN ACCORDANCE WITH TIA/EIA 222-F
85 MPH BASIC WIND SPEED
1/2" RADIAL ICE

CASE 1 – 85 MPH BASIC WIND SPEED

CASE 2 – 75% OF 85 MPH WIND LOAD
WITH 1/2" RADIAL ICE

NOTE: IT IS THE RESPONSIBILITY OF THE PURCHASER TO VERIFY THAT THE WIND LOADS AND DESIGN CRITERIA SPECIFIED MEET THE REQUIREMENTS OF ALL LOCAL BUILDING CODES

ENGINEERED ENDEAVORS, INC.
7610 Jenther Drive * Mentor, Ohio 44060
Telephone: (440) 918-1101 * Telefax: (440) 918-1108

Reference: *Structural Analysis of a 150' Monopole in Killingworth, CT*
Site Name: CT33XC543
EEI Job Number: 6927

Monopole Loading Provided to EEI

Engineered Endeavors, Inc.

7610 Jenther Drive
Mentor, OH 44060
Phone (440) 918-1101 ♦ Fax (440) 918-1108

Sprint

Tower Loading Form

Site Reference Information:

Cascade #: CT33XC543

☐ % of Structural Capacity at last analysis

Site Address: Rt 81, Killingworth, CT

Lease Area 10,000SQ

Structure Height: 150

Compound Size: 60x60

Tower Manufacturer: EEI

Structure Type: Monopole

Tower Contact #: 440-918-1101

File #: 6927

Original Design Load for Structure: ☐ 1 Carrier ☐ 2 Carrier ☒ 3 Carrier ☐ 4 Carrier ☐ __Carrier

Prepared By: B.Ackerson Date: 5/14/02 MPE: ☐ INTERFERENCE: ☐ Structural: ☐ Carrier Requested: Name

Sprint Antenna Information:

ACL	# of Ant.	Frequency	Model #	Type	Orientation	Mounting Type	# of Cables	Cable Size
150	12	A Block	DB980H90	Panel	0 120 240	Platform	12	1-5/8"
	*	*		*		*	*	*
	*	*		*		*	*	*

Co-location Information:

ID	Carrier	ACL	# Of Ant.	Frequency	TX Output	Model #	Antenna Type	Orientation	Mounting Type	# of Cables	Cable Size	Tenant Cable Status	Cable Loc
1	Voicestream		*	*	*	withdrawn	*		*	*	*	*	*
2	ATT	130	6	D Block	* 25 Watts	Allgon 7250.02	Panel	0,120,240	T-Arm	12	1-1/4"	EXT	Ins
3	Cingular	140	12	* 850&1900	*	CSS DUO1417-8686	Panel	143-263-23	Platform	12	1-5/8"	NEW	Ins
3	Cingular	140	6	*	*	ADC TMA's	*		*	*	*	*	*
3	Cingular	140	3	*	*	CSS COMBINERS	*		*	*	*	*	*
*	*		*	*	*		*		*	*	*	*	*
*	*		*	*	*		*		*	*	*	*	*
*	*		*	*	*		*		*	*	*	*	*
*	*		*	*	*		*		*	*	*	*	*
*	*		*	*	*		*		*	*	*	*	*

Comments:

Contact Information:

Co Id	Contact Person	Phone Number	E-Mail Address
1			
2	Henry Rabinderath	(203) 238-3078	hrabindr@bechtel.com

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November 12, 2003

#2057

Reference: Structural Analysis of a 150' Monopole
Site Name: CT33XC543
Site Location: Killingworth, CT
EEI Job Number: 6927
EEI Drawing #: GS52258

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Executive Summary

The monopole and foundation are adequate to carry the proposed loads and new configuration presented herein.

Introduction

The monopole was analyzed under the proposed loading presented by Russ Van Oudenaren of Sprint Sites on the Tower Loading Form.

Structure Type: Monopole – 18 Poly-Sided
Manufacturer: Engineered Endeavors, Inc.

EEI used an "in-house" program to analyze the multi-sided pole structure. The

CELLPOLE is a geometrically nonlinear program for tubular steel structures employing the finite element method (FEM) to perform the calculations. This program performs a non-linear geometric analysis to account for secondary moments caused by structural deflections due to anticipated loading. The program has been verified against closed form solutions and full-scale load tests, both providing excellent results.

Analysis Criteria

The objective of this analysis is to determine if the monopole can structurally support the desired configuration and meet the requirements of the:

1. EIA/TIA 222-F Code
2. *Manual of Steel Construction ASD Ninth Edition* American Institute of Steel Construction
3. American Concrete Institute's *Building Code Requirements for Structural Concrete* (ACI 318-95)
4. American Society of Civil Engineers (A.S.C.E.) *Design of Steel Transmission Pole Structures*

Monopole Loading

For further information on the structural loading, refer to the *EEI* analysis cover sheet and calculations. All mounts are assumed to be EEI's standard mounting systems, unless noted otherwise. All transmission lines are assumed running inside of the pole shaft.

Monopole Results

This monopole is structurally adequate to support the desired antennas and ancillary equipment. The maximum bending stress in the shaft (40 *ksi*) occurs at the lower middle splice elevation, 46 *ft,* on the structure. The allowable strength at this point is 47.6 *ksi*. Refer to Case 1 of the design calculations for the full design loading output. In addition, all other components of the structure are adequate to support the proposed loading, *e.g.*, the base plate and anchor bolts. Refer to Table I for a summary of the maximum capacity of the individual structural components.

Table I: Capacity Usage on Pole

Description	% of Capacity
Maximum Shaft	85
Base Plate	79
Anchor Bolts	75

Foundation Results

The original foundation design for this site was provided by EEI and is depicted in drawing F6927-150. Table II provides a comparison of foundation loads between the original design loading and the new base loads; the new base loads less than the original base loads. Assuming that the foundation has been installed exactly according to the above referenced design and is in excellent condition, it will be adequate to support the desired loading.

Table II: Foundation Base Loads

	New Base Loads	Original Base Loads	% of Design
Moment - *ft-kips*	2128.0	2433.3	87
Shear – *kips*	19.5	22.3	87
Axial – *kips*	23.2	24.2	96

Conclusion

The **monopole and foundation are adequate** to handle the desired loading configuration, refer to the EEI cover sheet for the summary of the loading configuration.

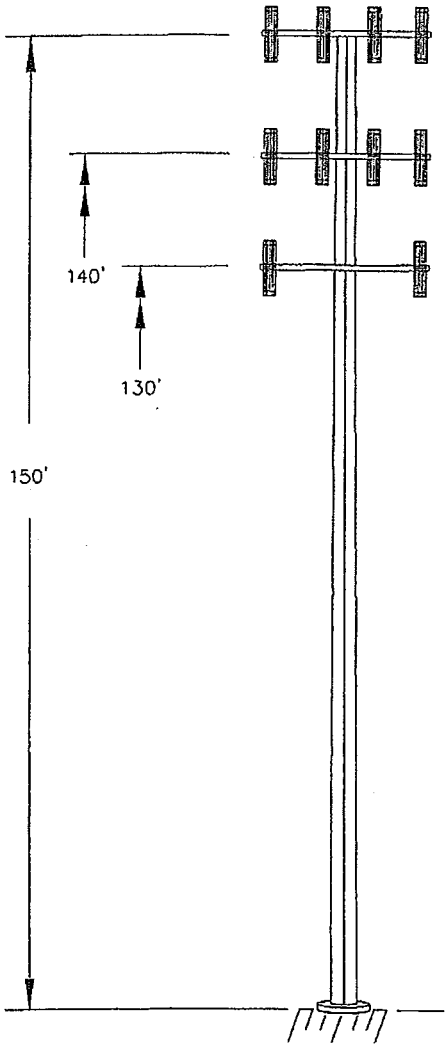
It is the responsibility of Sprint Sites USA to verify that the monopole modeled and analyzed is the correct structure that exists. This report is intended for use with regard to this specific monopole discussed in general herein and any substantial changes in mounting or loading should be brought to EEI's attention so that we may determine how this may effect our conclusions.

ENGINEERED ENDEAVORS INCORPORATED

Customer SPRINT SITES USA By MRM 11/12/03 Date

Structure 150' MONOPOLE Checked ____ 6927 Job/Quote No.

SITE LOCATION – KILLINGWORTH, MIDDLESEX COUNTY, CT ANALYSIS
SITE NAME – CT33XC543/CLINTON



ANTENNA LOADING:

(12) DB980H90 PANEL ANTENNAS
LOW PROFILE PLATFORM @ 150' (SPRINT)

(12) CSS DUO1417-8686 PANEL ANTENNAS
(6) ADC TMAs
(3) CSS COMBINERS
LOW PROFILE PLATFORM @ 140' (CINGULAR)

(6) ALLGON 7250.02 PANEL ANTENNAS
T ARM MOUNTS @ 130' (AT&T)

DESIGN NOTES:

DESIGNED IN ACCORDANCE WITH TIA/EIA 222-F
85 MPH BASIC WIND SPEED
1/2" RADIAL ICE

CASE 1 – 85 MPH BASIC WIND SPEED

CASE 2 – 75% OF 85 MPH WIND LOAD
WITH 1/2" RADIAL ICE

NOTE: IT IS THE RESPONSIBILITY OF THE PURCHASER TO VERIFY THAT THE WIND LOADS AND DESIGN CRITERIA SPECIFIED MEET THE REQUIREMENTS OF ALL LOCAL BUILDING CODES

ENGINEERED ENDEAVORS, INC.
7610 Jenther Drive * Mentor, Ohio 44060
Telephone: (440) 918-1101 * Telefax: (440) 918-1108

Reference: *Structural Analysis of a 150' Monopole in Killingworth, CT*
Site Name: CT33XC543
EEI Job Number: 6927

Monopole Loading Provided to EEI

Engineered Endeavors, Inc.

7610 Jenther Drive
Mentor, OH 44060
Phone (440) 918-1101 ♦ Fax (440) 918-1108

Sprint

Tower Loading Form

Site Reference Information:

Cascade #: CT33XC543

☐ % of Structural Capacity at last analysis

Site Address: Rt 81, Killingworth, CT

Lease Area 10,000SQ

Structure Height: 150

Compound Size: 60x60

Tower Manufacturer: EEI

Structure Type: Monopole

Tower Contact #: 440-918-1101

File #: 6927

Original Design Load for Structure: ☐ 1 Carrier ☐ 2 Carrier ☒ 3 Carrier ☐ 4 Carrier ☐ ___Carrier

Prepared By: B.Ackerson Date: 5/14/02 MPE: ☐ INTERFERENCE: ☐ Structural: ☐ Carrier Requested: Name

Sprint Antenna Information:

ACL	# of Ant.	Frequency	Model #	Type	Orientation	Mounting Type	# of Cables	Cable Size
150	12	A Block	DB980H90	Panel	0 120 240	Platform	12	1-5/8"
	*	*		*		*	*	*
	*	*		*		*	*	*

Co-location Information:

ID	Carrier	ACL	# Of Ant.	Frequency	TX Output	Model #	Antenna Type	Orientation	Mounting Type	# of Cables	Cable Size	Tenant Status	Cable Loc
1	Voicestream		*	*	*	withdrawn	*		*	*	*	*	*
2	ATT	130	6	D Block	* 25 Watts	Allgon 7250.02	Panel	0,120,240	T-Arm	12	1-1/4"	EXT	Ins
3	Cingular	140	12	* 850&1900	*	CSS DUO1417-8686	Panel	143-263-23	Platform	12	1-5/8"	NEW	Ins
3	Cingular	140	6	*	*	ADC TMA's	*		*	*	*	*	*
3	Cingular	140	3	*	*	CSS COMBINERS	*		*	*	*	*	*
*	*		*	*	*		*		*	*	*	*	*
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*	*		*	*	*		*		*	*	*	*	*

Comments:

Contact Information:

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