

# 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](mailto:siting.council@ct.gov)

Internet: [ct.gov/csc](http://ct.gov/csc)

Daniel F. Caruso

Chairman

February 25, 2008

Steven Levine  
New Cingular Wireless PCS, LLC  
500 Enterprise Drive  
Rocky Hill, CT 06067-3900

RE: **EM-CING-054-080201** – New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 2577 Main Street, Glastonbury, Connecticut.

Dear Mr. Levine:

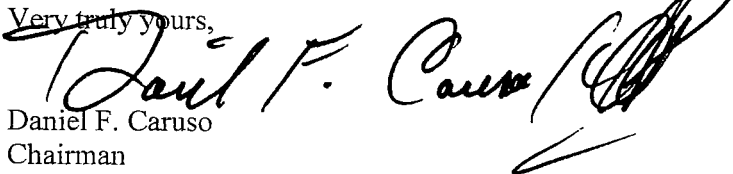
At a public meeting held on February 14, 2008, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice dated January 31, 2008, including the placement of all necessary equipment and shelters within the tower compound. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

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

Thank you for your attention and cooperation.

Very truly yours,



Daniel F. Caruso  
Chairman

DFC/MP/cm

c: The Honorable Susan Karp, Chairman Town Council, Town of Glastonbury  
Kenith Leslie, Community Development Director, Town of Glastonbury  
Thomas J. Regan, Brown Rudnick Berlack Israels LLP

ORIGINAL



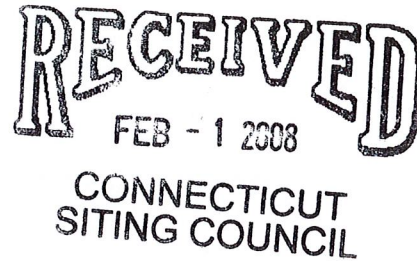
New Cingular Wireless PCS, LLC  
500 Enterprise Drive  
Rocky Hill, Connecticut 06067-3900  
Phone: (860) 513-7636  
Fax: (860) 513-7190

**Steven L. Levine**  
Real Estate Consultant

HAND DELIVERED

January 31, 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 tele-communications facility located at 2577 Main Street, Glastonbury (owner, Sprint / Nextel)

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 ("Cingular") 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 Cingular'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 of similar size, shape, and weight, or, installation of additional antennas of similar size, shape, and weight.
- 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.

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 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, 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  
Real Estate Consultant

Attachments

**CINGULAR WIRELESS  
Equipment Modification**

2577 Main Street, Glastonbury, CT  
Site Number 5273  
Former AT&T site  
Exempt Modification 10/3/01

**Tower Owner/Manager:** Sprint / Nextel

**Equipment configuration:** Self Supporting Lattice

**Current and/or approved:** Six Allgon 7250 antennas @ 108 ft c.l.  
Twelve runs 1 1/4 inch coax

**Planned Modifications:** Remove all existing antennas  
Install six Powerwave 7770 antennas @ 108 ft c.l.  
Install six TMA's @ 108 ft  
Install six diplexers @ 108 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 27.9 % 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 30.4 % of the standard.

**Existing**

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm <sup>2</sup> )	Standard Limits (mW/cm <sup>2</sup> )	Percent of Limit
Other Users *							25.16
Cingular GSM *	108	1900 Band	8	113	0.0279	1.0000	2.79
<b>Total</b>							<b>27.9%</b>

\* Per CSC Records

**Proposed**

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm <sup>2</sup> )	Standard Limits (mW/cm <sup>2</sup> )	Percent of Limit
Other Users *							25.16
Cingular GSM	108	1900 Band	2	427	0.0263	1.0000	2.63
Cingular UMTS	108	880 - 894	1	500	0.0154	0.5867	2.63
<b>Total</b>							<b>30.4%</b>

\* Per CSC Records

**Structural information:**

The attached structural analysis demonstrates that the structure has sufficient structural capacity to accommodate the proposed modifications. (Semaan Engineering Solutions, 1/29/08)



**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

January 31, 2008

Richard J. Johnson, Town Manager  
Town of Glastonbury  
Town Hall 2155 Main St.  
Glastonbury, CT 06033-6523

Re: Telecommunications Facility – 2577 Main Street, Glastonbury

Dear Mr. Johnson:

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 (“Cingular”) will be changing its equipment configuration at certain cell sites.

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

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

**SEMAAN ENGINEERING SOLUTIONS**

**130 ft Nudd Corporation Self Supported Tower  
Structural Analysis**

**Prepared for:  
Sprint Sites USA  
6120 Power Ferry Rd., 2nd Floor  
MAILSTOP: GAATLV0204-2078  
Atlanta, GA 30339-2923**

*#5273*

**Site: CT0057  
Cingular  
Glastonbury, CT**



**January 29, 2008**

Ms. Tawana Beverly  
Sprint Sites USA  
6120 Power Ferry Rd., 2nd Floor  
MAILSTOP: GAATLV0204-2078  
Atlanta, GA 30339-2923

**Re: Site Number CT0057 – Glastonbury, CT.**

Dear Ms. Beverly:

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 130 ft Nudd Corporation Self Supported Tower.

Refer to the HighTower Solutions mapping dated January 10, 2008 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 no ice and 69 mph with 1/2" radial ice (fastest mile). This wind speed is equivalent to a 100 mph 3-second gust per the IBC 2003. 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
127.5	12	DB844H90E-XY	(3) PCS frames	(12) 1 1/4	Sprint Nextel
117.5	4	DB980F40	(3) PCS frames	(4) 1 5/8	Sprint
	2	DB950F40T2E-M		(2) 1 5/8	
92.5	6	RR65-19-02DP	(3) PCS frames	(3) 1 5/8	T-Mobile
57.0	1	GPS antenna		(1) 1/2	
50.0	2	GPS antenna		(2) 1/2	

Proposed Loads:

Elev (ft)	Qty	Antennas	Mounts	Coax	Carrier
108.0	6	Powerwave 7770	(3) PCS frames	(12) 1 1/4	Cingular
	6	21401 TMA			
	6	LGP 13519			

**All transmission lines are distributed and/or stacked over the tower faces, with no more than (13) lines exposed to the wind on any one face.**

**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: 100.0% Legs, 94.0% Diagonals, and 93.0% Horizontals.

**Foundation:**

<b>Leg Forces</b>	<b>Original Design Reactions</b>	<b>Current Analysis Reactions</b>
Uplift (Kips)	N/A	254.95
Axial (Kips)	N/A	278.61

The foundation was not investigated due to the lack of design drawings and documents and is not part of this analysis.

**Review and Recommendations:**

Based on the analysis results, the existing structure meets the requirements per the TIA/EIA-222 Rev F standards for a basic wind speed of 80 mph no ice and 69 mph with 1/2" radial ice. This wind speed is equivalent to a 100 mph 3-second gust.

**SEMAAN ENGINEERING SOLUTIONS**

1079 N.204<sup>th</sup> Avenue  
 Elkhorn, NE 68022

Copyright Semaan Engineering Solutions, Inc

Loads: 80 mph no ice  
 69 mph w/ 1/2" radial ice

**Job Information**

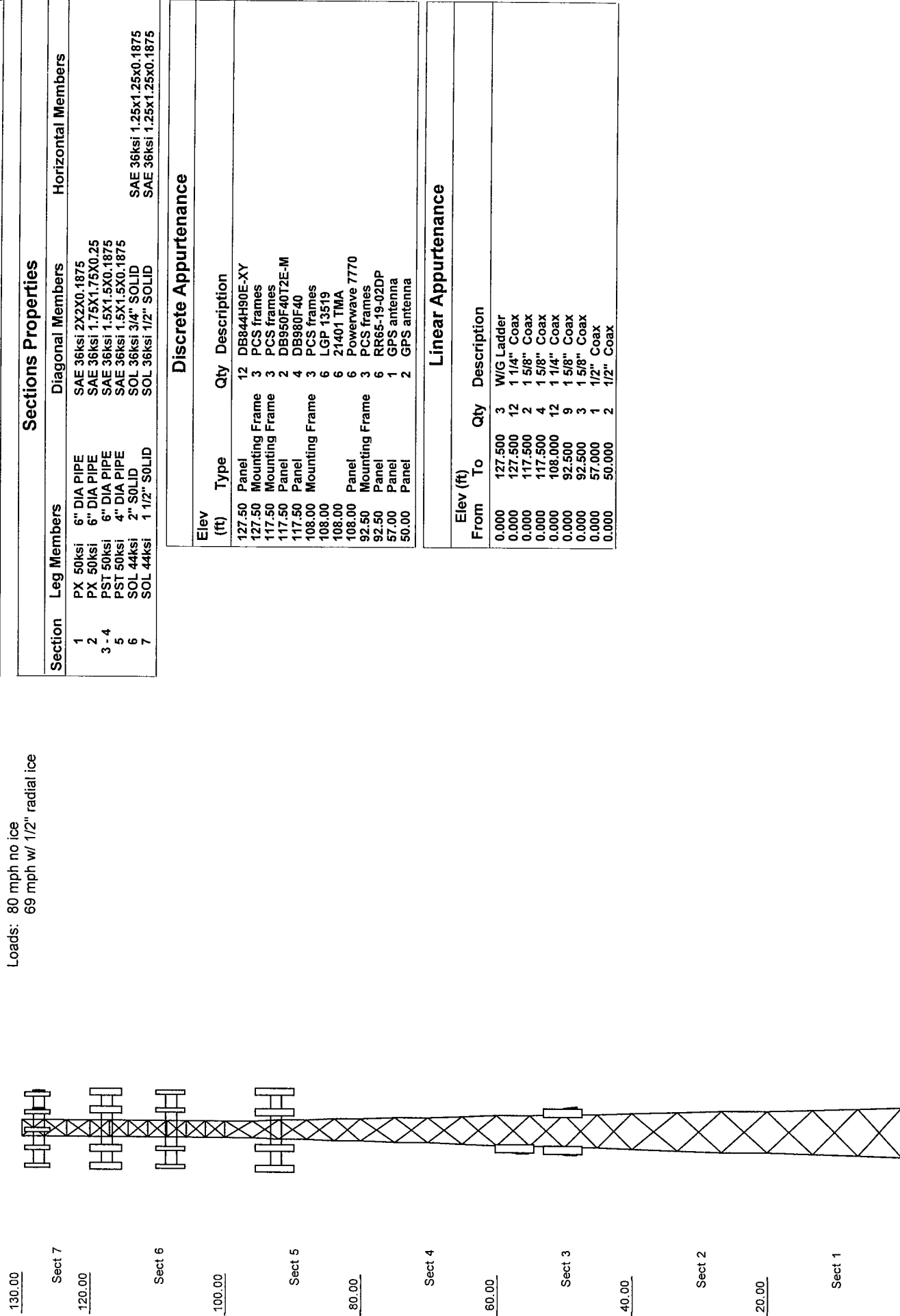
Tower : CT0057 Location : Glastonbury, CT  
 Code: TIA/EIA-222 Rev F Shape : Triangle  
 Client : Sprint Sites USA - GA

Base Width : 7.50 ft  
 Top Width : 2.50 ft

Sections Properties			
Section	Leg Members	Diagonal Members	Horizontal Members
1	PX 50ksi 6" DIA PIPE	SAE 36ksi 2X2X0.1875	
2	PX 50ksi 6" DIA PIPE	SAE 36ksi 1.75X1.75X0.25	
3-4	PST 50ksi 6" DIA PIPE	SAE 36ksi 1.5X1.5X0.1875	
5	PST 50ksi 4" DIA PIPE	SAE 36ksi 1.5X1.5X0.1875	
6	SOL 44ksi 2" SOLID	SOL 36ksi 3/4" SOLID	SAE 36ksi 1.25x1.25x0.1875
7	SOL 44ksi 1 1/2" SOLID	SOL 36ksi 1/2" SOLID	SAE 36ksi 1.25x1.25x0.1875

Discrete Appurtenance			
Elev (ft)	Type	Qty	Description
127.50	Panel	12	DB844H90E-XY
127.50	Mounting Frame	3	PCS frames
117.50	Mounting Frame	3	PCS frames
117.50	Panel	2	DB950F-40T2E-M
117.50	Panel	4	DB980F-40
108.00	Mounting Frame	3	PCS frames
108.00	Mounting Frame	6	LGP 13519
108.00	Panel	6	21401 TMA
108.00	Panel	6	Powerwave 7770
92.50	Mounting Frame	3	PCS frames
92.50	Panel	6	RR65-19-02DP
57.00	Panel	1	GPS antenna
50.00	Panel	2	GPS antenna

Linear Appurtenance			
Elev (ft)	From	To	Description
0.000	127.500	3	W/G Ladder
0.000	127.500	12	1 1/4" Coax
0.000	117.500	2	1 5/8" Coax
0.000	117.500	4	1 5/8" Coax
0.000	108.000	12	1 1/4" Coax
0.000	92.500	9	1 5/8" Coax
0.000	92.500	3	1 5/8" Coax
0.000	57.000	1	1/2" Coax
0.000	50.000	2	1/2" Coax



Uplift 254.95 k Moment 1,736.12 ft-k  
 Vert 278.61 k Total Down 33.96 k  
 Horiz 14.86 k Total Shear 21.77 k