SITE OF PROPOSED 175' RUMBULL PD TOWER AND MARKED FOR DISTANCE BETWEEN RUMBULL SHOPPING PARK/ WESTFIELD MALL FERNATE LOCATION(S

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GPS BASED ACTUAL LONG/LAT & GROUND ELEVATIONS (NAD 83)

N41-13'50.4" W 073-13'18.0"

HASL=299

N 41-13'49.0" W 73-13'15.08"

**HASL=261

N 41-13'47 1" W 073-13'18 4"

N 41-13'47.1" W 073-13'18.4" HASL=272' N 41-13'49.5" W 073-13'14.3" HASL=228'

N 41-13'51.9" W 073-13'14.5" HASL=283' N 41-13'52.3" W 073-13'18.8" HASL=263'

HASL=263'
N 41-13'53.9" W 073-13'14.1"
HASL=310

N 41-13'53.0" W 073-13'22.8" HASL=223'

OVERHEAD UTILITY OBSERVATIONS

Whalburn Ave= 480v 1
phasey standard low voltage
step downs/ service off
United Illuminating Primary
Trumbull Branch Pole 278CATV standard residential
telco

Stuart PI= 480v 3 phase standard low voltage step downs/service off United Illuminating Primary
Trumbull Branch Pole 810ATT mutti Fiber POP/ plus 2 full copper slicks/

Stuart Pl= 480v 3 phase standard low voltage step downs/Primary AC service to mall/ service off United Illuminating Primary Trumbuli Branch Pole 810-ATT multi Fiber POP/ plus 2 full copper slicke/ primary hand off point for all data & telcom into shopping park

SECURITY PARKWAY ENTRANCE TO THE LEGISLAND

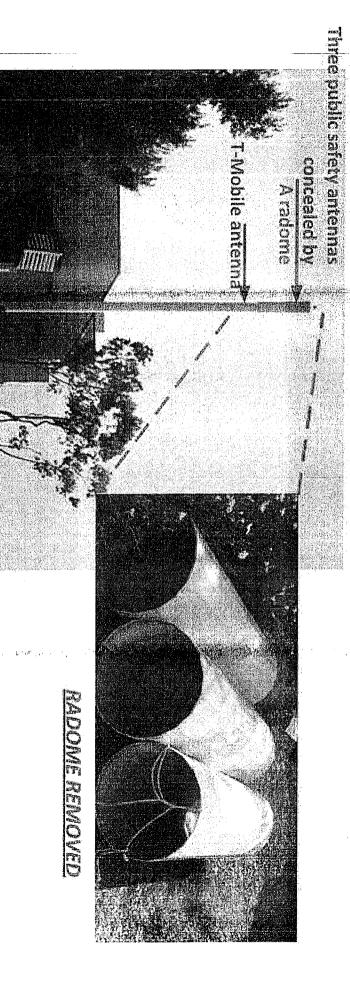
ACCAMAL WEST FILELD LAND

SECURITY AND ACCAMAL WEST FILELD AND ACCAMAL WEST FILELD

Figure 1

CONCEPTUAL ALTERNATE
LOCATION(S) OF TRUMBULL
CELL TOWER. NOTE
LOCATION BASED ON
DEVELOPMENT PLAN

BOUNDARY BETWEEN
DEVELOPED PROPERTY
AND VACANT PROPERTY
BOTH UNDER WESTFIELD
CONTROL



ALTERNATE MONOPOLE DESIGN FOR TRUMBULL PD TO REDUCE ICELOAD

OPPOSITION STATEMENT BY KEVIN PLUMB 11/22/11

Fact Sheet

DETERMINING DISTANCE OF ICE FALL FROM TOWERS

You can determine the approximate distance from a tower at which a chunk of ice of any size might land. Because that distance is dependent on what you assume about the ice, and because, to our knowledge, no one has measured the frequency of ice chunks of different sizes and shapes falling from towers, it is appropriate to use simplifying assumptions to get an approximate analytical solution to the problem, rather than to develop a numerical solution with all the detailed aerodynamics.

Basically, as the ice starts falling from the tower, it falls faster and faster, accelerated by gravity until it reaches its terminal velocity, which depends on how much drag there is on it from the air through which it moves. You can determine the terminal velocity by equating the force of gravity with the drag force:

$$mg = \frac{1}{2}C_D\rho_aAV_T^2,$$

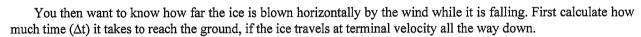
where

m is the mass of the chunk of ice; g is the acceleration of gravity; ρ_a is the density of air;

 C_D is the drag coefficient of the chunk of ice; A is the cross-sectional area of the chunk of ice; V_T is the terminal velocity of this chunk of ice.

Solve for V_T, to get

$$V_T = \sqrt{\frac{2mg}{C_D \rho_a A}} \; .$$



$$V_T \Delta t = H$$

where H is the height of the tower (assuming the ice falls from the top).

Assuming that the ice moves horizontally as fast as the wind blows, the ice will travel downwind a distance D before it hits the ground, where

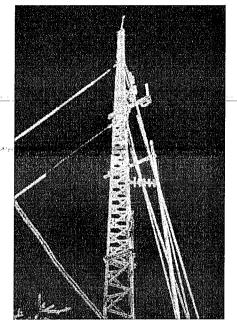
$$D = W\Delta t$$

where W is the wind speed. Putting it all together,

$$D = HW \sqrt{\frac{p_a c_D A}{2mg}}.$$

This says that the ice that falls from the top of the tower travels a greater distance before it hits if the tower is taller or if the wind speed is greater, as we all would have guessed without going through the equations. The distance also increases as the area assumed for the chunk of ice increases and the assumed mass decreases. If you think of a parachute compared to a rock, that makes sense, too.

This is a crude approximation, useful for crude assumptions about the ice. In reality, the ice spends more time than Δt falling from the tower, since it takes some time to accelerate to the terminal velocity, so D is an underestimate of the real distance. On the other hand, the ice takes some time to accelerate horizontally to the wind speed,



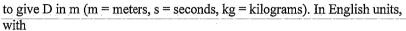




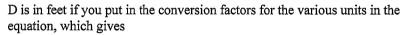
depending on its shape, roughness, and orientation as it falls, so D is an overestimate of the real distance. If we're lucky, the errors from those simplifications cancel each other. The drag coefficient C_D depends on the shape and surface roughness of the ice chunk and its orientation as it falls. Often, for bluff bodies, $C_D = 1$ is not an unreasonable assumption. A positive or negative lift force may also act on the ice chunk during its flight, which could either increase of decrease D.

This formula for D can be used in metric units with

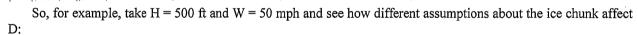
H in m, W and V_T in m/s, m in kg, $g = 9.8 \text{ m/s}^2$, $\rho_a = 1.3 \text{ kg/m}^3$, A in m²,



H in ft, W and V_T in mph, m in lb, g = 32.2 ft/s², $\rho_a = 0.081$ lb/ft³, A in ft²,



$$D = \frac{5280}{3600} HW \sqrt{\frac{\rho_a C_D A}{2mg}} \ .$$



$$D = 1300 \sqrt{\frac{C_D A}{m}}.$$

Assuming $C_D = 1$, and assuming the ice density is 57 lb/ft³, gives

$A(ft^2)$	m (lb)	D (ft)
0.25 (3 in. by 12 in.)	1 (3/4 in. thick)	650
0.25	0.6 (1/2 in. thick)	839
0.5 (4 in. by 18 in.)	2.4 (1 in. thick)	593
0.27 (3.25 in. by 12 in.)	2 (1.5 in. thick)	478

It might also be reasonable to assume an ice density less than 57 lb/ft³ to account for the possibility of rime ice, rather than glaze ice, forming on the tower. This would result in a smaller ice mass for a given-size ice chunk and thus a larger D.

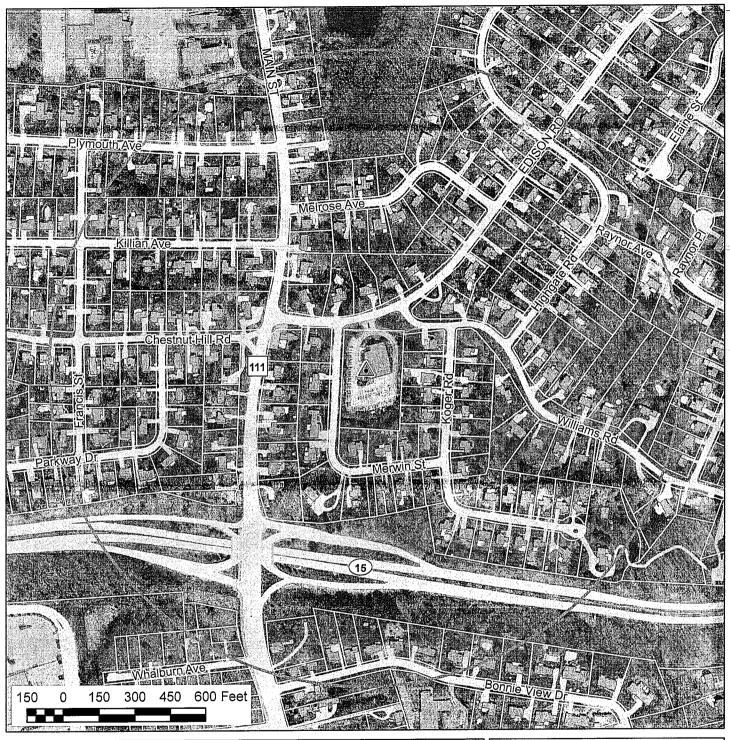
So, we have four not-unreasonable assumptions for the shape and size of a chunk of ice that might fall from the tower, and the calculated distance away from the tower at which it hits the ground varies from 478 ft to 839 ft. This illustrates the difficulties in determining the ice fall radius for a tower.

POINT OF CONTACT

Kathleen F. Jones 603-646-4417

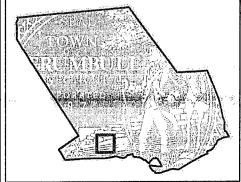
E-mail: Kathleen.F.Jones@erdc.usace.army.mil

Cell Tower — Quarter Mile



According to data from the 2010 Census, there are over 450 people within one-quarter mile of the proposed cell tower. This area of Trumbull is one of the most densely populated areas of town.

According to data from the Trumbull GIS, there are 212 buildings and 246 parcels within one-quarter mile of the proposed cell tower.



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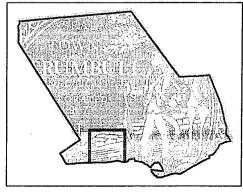
Town of Trumbull, CT

Cell Tower — Half Mile



According to data from the 2010 Census, there are over 1800 people within one-half mile of the proposed cell tower. This area of Trumbull is one of the most densely populated areas of town.

According to data from the Trumbull GIS, there are 729 buildings and 795 parcels within one-half mile of the proposed cell tower.



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PLANNING AND ZONING September 16, 2009

A meeting of the Planning and Zoning Commission of the Town of Trumbull was held in the Courtroom of the Trumbull Town Hall on Wednesday, September 16, 2009.

Attendance: Timothy M. Herbst, Chairman

Gary Bean, Anthony Chory, Arlyne Fox and alternates Steven Mahlstedt,

Don Scinto and Tony Silber

Staff Present: James Cordone, Town Attorney; Bill Levin, Town Planner and

Stephen Savarese, Town Engineer

The following is a brief summary of the meeting. The complete record is on tape, on file in the office of the Planning and Zoning Commission.

A quorum being present the meeting was called to order at 6:39 p.m.

Prior to the scheduled Public Hearing the following pre-application review was held.

Proposal to construct active adult apartments, a convalescent unit and skilled nursing facilities on four parcels of land, totaling 25 acres, at the end of Hardy Lane. Petitioner: David S. Bjorklund, Jr. P.E. of Spath-Bjorklund Associates, Inc.

Attorney Raymond Rizio appeared representing the developer, the Jewish Home for the Elderly and the property owners. He began his presentation with an overview of the facility's proposed location. The property is situated off of Church Hill Road at the end of Hardy Lane. There are five homes currently on Hardy Lane; three of which belong to the Penkoff family who are part owners of the subject property. Mr. Rizio indicated that due to the topography of the land the structure would be barely visible from Church Hill Road.

The concept being entertained consisted of a non-denominational senior residential community containing 190 independent living units, 40 assisted living apartments and a 280 bed nursing care facility. Attorney Rizio noted that though a Special Permit will be required the zoning regulations allow for assisted and convalescent facilities in a residential zone. A large buffer area was proposed between the facility and the Pequonock Valley. Attorney Rizio described the location as being ideal for senior living due to its close proximity to shopping and town buildings. He also noted that the project would provide a sound tax base to the Town and have a very low traffic impact.

The developer, Bob Scinto, described the relocation of the Jewish Home to Trumbull as an ideal situation for both the Home and the community. The project originally was proposed for Monroe, which, he indicated, is still an option but that Trumbull was the preferable location.

enterprise and only intended only for the enjoyment of his family and as a supplemental food source.

He reviewed the proposed amendment, which restricted the number of chickens to six. Roosters and free range fowl would not be permitted. Coops would need to adhere to a 35 foot setback from all property and street lines.

Mr. Fraczek commented that as long as chickens are contained they don't propose any more of a health risk than any other pet. Upon inquiry, he indicated that waste would be composted and utilized in the garden.

The Commission also inquired as to how this amendment would be enforced to assure that it would not result in a town wide commercial enterprise. Mr. Fraczek responded that with a maximum of six of chickens allowed the number of eggs being produced would be very small.

Testimony was then requested from the Zoning Enforcement Officer. Fred Beitsch expressed concern regarding enforcement issues. He relayed that the amendment would need to be clearly spelled out to avoid enforcement problems. Upon inquiry, he confirmed a complaint was received regarding the housing of chickens on this property and upon investigation a notice of violation had been issued.

Public Comment

Letters that were received in favor, including a petition in support, and correspondence in opposition were noted for the record.

The following spoke in favor. Deirdre MacNeill, 34 Argus La. indicating that chickens provide a hormone free food source. Keith Rongey, 7 Woodcrest Avenue believed that there was good educational value for children in having chickens. Alex Krampovitis, 5076 Main Street relayed that other towns have successfully implemented similar regulations. Marie Monks, 232 Church Hill Road, stated that she grew up with chickens and that it was a wonderful experience. Ms. Monks quoted an agricultural magazine indicating that chickens are effective in pest control. Mindy Gottlieb of 111 Crabapple Road expressed the view that keeping chickens is environmentally friendly. Carmine DeFeo, 15 Woodcrest Avenue, relayed that eggs can be disposed of, in the same manner as garden vegetables, to neighbors and friends.

John Egan of 10 St. John's Drive was opposed and submitted copies of letters in opposition from other Trumbull residents. Mr. Egan expressed the view that establishing the right to have chickens will decrease the value of neighboring properties. He had doubts that the regulation could be effectively enforced and also had health and vermin concerns. Mr. Egan also indicated that the current regulations pertaining to chickens have not been enforced.

Lenny Capozzi, 18 Hillston Road-asked-that-attention-be-paid-to-the-effect-this-proposed amendment would have on neighboring residents.

Bob Iannazzo, 25 Wild Rose Lane was concerned that the presence of chickens would encourage the growth and population of wild animals. He also had concerns relating to property values.

Application #09-16 – Amending Art. II, Sec. 2.1 (Design District) to establish a Design District, permitting professional office uses along the east side of lower Main Street consisting of 5 lots (126-130) located in the vicinity of Bonnie View Drive and the Merritt Parkway with pertinent setbacks and requirements, as proposed by the Planning and Zoning Commission.

The Town Planner, Bill Levin, presented a brief overview of the proposal. He relayed that though the plan, now under consideration, had some similarities to the existing District on White Plains Road; this proposed District would encompass a much smaller area. He stressed that uses would be restricted to professional offices. An extensive discretionary review process would be required for each proposed use application. A traffic analysis, an access parking study, along with a site plan, would also be required of the applicant.

Letters which were submitted in regard to this application were then noted for the record. Primary concerns centered on how the proposed Design District would affect property values, traffic flow and the long term impact on the entire area.

Correspondence from the First Selectman and the Chairman of the Economic Development Commission was then read for the record. The First Selectman and the EDC indicated their support of a Design District on lower Main Street in theory but were opposed to this proposal in its present form.

Public Comment

The following spoke in favor of the amendment.

Alex Krampovitis, 5076 Main Street, resident of one of properties being considered, indicated that the revamping of the traffic flow off of the Merritt Parkway has alleviated traffic problems.

Chris Hellthaler, 5090 Main Street, also an owner of one of the properties under consideration, indicated that he has plans to refurbish his property for professional use and will proceed once this proposal is approved.

Mr. & Mrs. Lisi, 1586 Main Street indicated that because of traffic issues their property is no longer a viable residential dwelling and would be better suited for professional offices.

Resident of 5003 Main Street was in favor of a comprehensive Design District up to the Bridgeport line.

Those in opposition then came forward.

Mr. and Mrs. Warren, 5078 Main Street were opposed to the current plan because of parking issues. They indicated that they would not be averse to having their property included in a Design District plan.

Marcella Barbin, 5027 Main Street, favored the inclusion of all of Main Street.

Robin Gottheil, 94 Botsford Place stated that she was totally opposed.

Craig Chapley, 24 Pert Street, had concerns with traffic issues and also that a Design District would eventually include the west side of Main Street, which is the Westfield Mall side of the street.

John Miolene, 60 Botsford Place was concerned that the increase in traffic would create further safety issues relating to the school busing of their children.

Before the close of the Public Hearing the Chairman announced that no action would be taken tonight on the two applications that were just heard.

This concluded the Public Hearing.

REGULAR MEETING

In the absence of Commissioner Costa, alternate Tony Silber was designated as the fifth voting member.

Approval of Minutes

MOTION MADE (Fox), seconded (Bean) and unanimously carried (Herbst, Bean, Chory, Fox, Silber) to approve the minutes of the August 19, 2009 meeting as submitted.

Minor Deviation

Modification of existing Special Permit #06-63, to add three antennas and one equipment cabinet to an existing telecommunications site located at Merrimac Drive. Petitioner T-Mobile Communications.

The subject proposal, which had been left opened at last month's meeting, was readdressed. At that time, the Commission requested that the Town Attorney determine if all conditions of the settlement regarding the original application had been met.

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Attorney Cordone reported that the Zoning Enforcement Officer has indicated that no complaints have been received with respect to this property. He also conveyed that the Town Tree Warden has indicated that all the terms pertaining to landscaping have been complied with.

Tom Flynn of T-Mobile Communications relayed that he has spoken with the Acquarian Water Co. and that they indicated to him that there were possibly some painting and shielding issues remaining but that they were not related to this proposal.

Louis Solari of 88 Merrimac Drive and Mahmoud Hessami of 112 Merrimac Drive addressed the Commission and argued that the painting of the cabinets and the required shielding were never completed.

Mr. Flynn indicated that T-Mobile would be agreeable to paint any cabinets placed by them, as a condition of approval.

Municipal Improvements Referral (CGS 8-24)

Proposed construction and lease for a communications tower at the Trumbull Police Station located on Edison Road.

Chief of Police Tom Keily conducted the presentation.

Chief Keily indicated that the tower currently located at the Station is less stable than it should be. He relayed that the tower is not only the Police Department's only link to their patrol cars but that it also services the EMS, fire department and other Town agencies.

The cost to replace this tower was quoted at approximately \$200,000. T-Mobile has offered to replace the tower in conjunction with a lease for the rental of space there.

Sgt. Arlio, Police Communications Officer spoke to the weak areas of communication within the Town. The existing antenna is 85 feet from the ground and the proposed antenna would extend approximately 130 feet from the ground. This added height would greatly improve reception.

Attorney Douglas LaMonte reviewed the lease that he has negotiated T-Mobile. He provided information regarding the several revenue streams that would be provided to the Town, among which was the monthly rental fee of \$1,800.00.

Ray Girardi of T-Mobile described the structure as being a steel tower. He indicated that the Town could provide input as to its design and color.

Eric Fine an engineer for Northeastern Communications relayed that his company maintains the communications system for the Police Department here in Trumbull. He

reiterated that this project would increase the footprint of communication. He added that links to other communities and State agencies would be incorporated into this tower.

The Commission then proceeded to take action as follows.

Minor Deviation of Application #06-03.

MOTION MADE (Fox) and seconded (Silber) to approve the proposed minor deviation of Application #06-03, as submitted.

MOTION MADE (Bean), seconded (Chory) and unanimously carried (Herbst, Bean, Chory, Fox, Silber), to amend the original motion to include the following special condition.

A \$2,000.00 cash bond shall be submitted to cover the painting of the cabinets with a dark green color.

MOTION MADE (Chory), seconded (Bean) and unanimously carried (Herbst, Bean, Chory, Fox, Silber), to amend the original motion to include the following specific condition.

The Town Tree Warden to review the existing landscaping to determine if additional plantings are required to shield the proposed equipment cabinet.

Vote (original motion as amended): Unanimous (Herbst, Bean, Chory, Fox, Silber) – MOTION CARRIES

Municipal Improvement Referral (CGS 8-24)

Proposed construction and lease for a communications tower at the Trumbull Police Station located on Edison Road.

MOTION MADE (Silber), seconded (Chory) and unanimously carried (Herbst, Bean, Chory, Fox, Silber) to recommend approval the proposed Municipal Improvement Referral, as submitted.

There being no further business to discuss a motion was made by Commissioner Fox and seconded by Commissioner Bean to adjourn. The September 16, 2009 meeting of the Planning and Zoning Commission adjourned at 10:55 p.m. with unanimous consent.

Respectfully submitted,

Helen Granskog Clerk of the Planning and Zoning Commission



February 9, 2009

Chief Thomas Kiely Trumbull Police Department 158 Edison Road Trumbull, CT 06611

RE: Proposal to Lease Wireless Telecommunications Facility at:

Trumbull Police Department 158 Edison Road Trumbull, CT 06611 T-Mpblle#: CTFF481

Dear Chief Kiely:

Pursuant to our meeting on February 6th, 2009, HPC Development, LLC is a site procurement and development consultant for T-Mobile. T-Mobile is a wireless telecommunications company licensed by the Federal Communications Commission (FCC) to operate a wireless telecommunications system in the State of Connecticut. We are currently looking for a location to install one of our communication sites in the vicinity of Trumbull, CT, The above mentioned candidate located at the Trumbull Police Department may be ideally suited for such an installation.

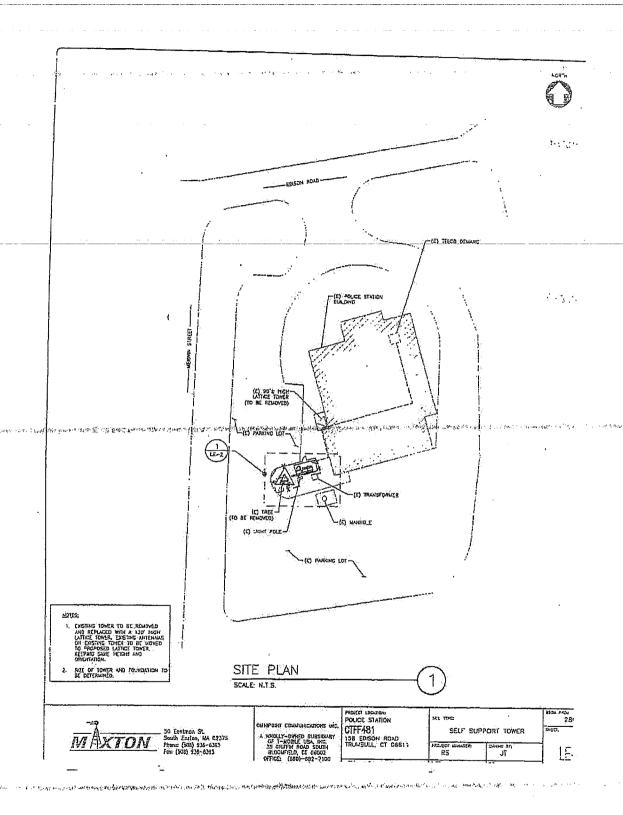
This installation involves replacing the existing tower and mounting (12) panel antennas to the new tower located at the Trumbull Police Department. These antennas are altached by coaxial cables to our radio equipment. The radio equipment would be housed in an area near the antennas where approximately 2500 square feet is evailable. This site is an unmanned facility with the exception of 1-2 hour site visits, by our technicians, once a month. T-Mobile would be responsible for all engineering costs, construction costs, permit approvals, utility consumption and maintenance associated with this installation. Additionally, T-Mobile would be responsible of relocating the Police Departments antennas and associated equipment to the new tower.

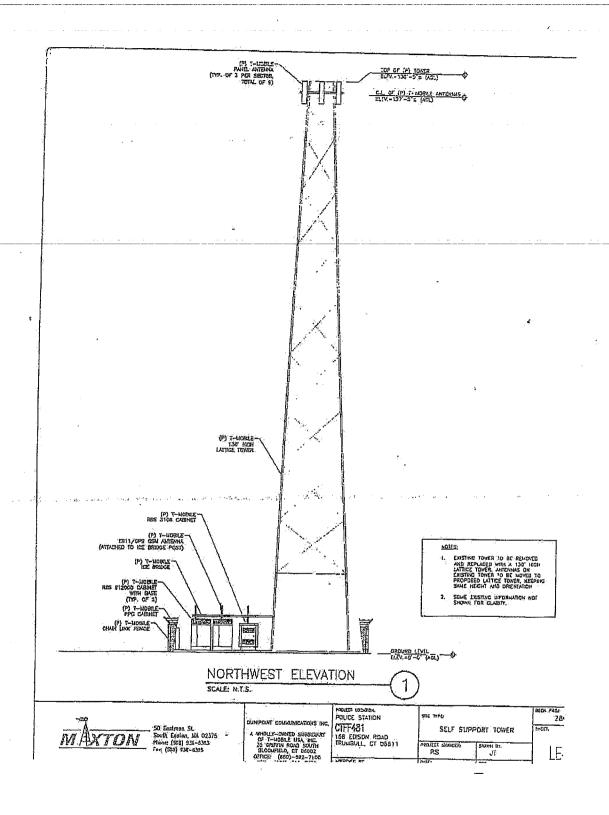
For the right to lease space for this proposed installation, T-Mobile is willing to pay a monthly rental fee of \$1700 per month. Our standard lease agreements are for an initial term of 5 years with five successive five-year renewals. Rental increases would also be established for each renewal period.

Thank you for your consideration and timely response to this proposal.

Sincerely,

Marc Anderson
HPC Development
53 Lake Ave Ext
Danbury, CT 08811
203-648-3829 (cell)
203-797-1112 x103 (office)
manderson@hpcdevelop.com





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