GENERAL INFORMATION

Special Permit: X Variance:	Appeal:
and relief pursuant to Section 6409 of the Middle Class Tax Re	elief Act
PETITIONER: T-Mobile Northeast LLC	
PETITIONER'S ADDRESS: Prince Lobel Tye, LLP, Attn. Add	am Braillard, Esq., One International Place, Suite 3700, Boston, MA
LOCATION OF PROPERTY: 955 Massachusetts Avenue	
TYPE OF OCCUPANCY: Telecommunications ZON	NING DISTRICT: C2-B
REASON FOR PETITION:	
Additions	New Structure
Change in Use/Occupancy	Parking
Conversion to Addi'l Dwelling Ur	nit's Sign
Dormer	Subdivision
X Other: Section 6409(a) of the Spectrum A	Act relief for Special Permit for the collocation of a Wireless Facility
SECTIONS OF ZONING ORDINANCE CITED:	
Article 4.00 Section 4.32 (g)(1) Utilities - Telep	hone Exchange
Article 10.00 Section 10.4 - Special Permit	
Article 6409 Section Middle Class Tax Relief A	ct
Applicants for a Variance must complete Pages Applicants for a Special Permit must complete Applicants for an Appeal to the BZA of Inspectional Services Department must attach for the appeal	Pages 1-4 and 6 a Zoning determination by the
Original Signature(s):	(Peritioner(s)/Owner) Adam F Braillard, Esq.
Address:	(Print Name) One International Place, Suite 3700
Tel. No.:	Boston, MA 02110 617-456-8153
E-Mail Address	abraillard@princelobel.com
December 11, 2018 Date:	0.1

BZA APPLICATION FORM - OWNERSHIP INFORMATION

To be completed by OWNER, signed before a notary and returned to The Secretary of the Board of Zoning Appeals.

We: DWF V 955 Massachusetts, LLC, a Delaware limited liability company (OWNER)

Address: c/o Divco West Real Estate Services, LLC, 575 Market Street, 35^{th} Floor San Francisco, CA 94105

We own the property located at 955 Massachusetts Avenue, Cambridge, MA, which is the subject of this zoning application.

The record title of this property is in the name of Owner-DWF V 955 Massachusetts, $\ensuremath{\mathsf{LLC}}$

*Pursuant to a deed of duly recorded in the date June 7, 2017, Middlesex South County Registry of Deeds at Book 69398 Page 76.

OWNER:

DWF V 955 MASSACHUSETTS, LLC,

BY: DIVCO WEST REAL ESTATE SERVICES, INC.,

ITS AUTHORIZED AGENT

SIGNATURE BY AUTHORIZED AGENT FOR OWNER

*Written evidence of Agent's standing to represent petitioner may be requested.

Commonwealth of Massachusetts, County of	MIDDLESEX
The above-name	personally appeared before me,
this 17th of SEPTEMBER, 2016, and made	oath that the above statement is true.
	MARK MILONE Notary
My commission expires	(Notary Seal) (Notary Seal) (Notary Public COMMONWEALTH OF MASSACHUSETTS My Commission Expires August 10, 2023

^{&#}x27; If ownership is not shown in recorded deed, e.g. if by court order, recent deed, or inheritance, please include documentation.

December 11, 2018

City of Cambridge Board of Zoning Appeals 831 Massachusetts Avenue Cambridge, MA 02139

Re: Eligible Facilities Request pursuant to Section 6409 of the

Spectrum Act and an Application for Special Permit, in

the Alternative

Property Address: 955 Massachusetts Ave, Cambridge, MA 02139

Assessor's Map 116, Lot 117 (the "Property")

Applicant: T-Mobile Northeast LLC (the "Applicant")

Dear Honorable Members of the Board of Zoning Appeals:

This firm represents T-Mobile Northeast LLC ("T-Mobile") (hereinafter, the "Applicant") in connection with an application for a special permit from the City of Cambridge Board of Zoning Appeals (the "Board"), to modify an existing wireless communications facility on the Property. The Property is located in the Residential C2-B zoning district. To the extent that the Board determines that the requirements of Article 4 Section 4.32G.1 of the City of Cambridge Zoning Ordinance (the "Ordinance") apply, the use of the Property for a wireless telecommunications facility is permitted by special permit from the Board. The Applicant's proposal satisfies the requirements for the grant of a special permit pursuant to Section 10-43 of the Ordinance.

The Applicant's Proposed Facility (as defined herein) is subject to Section 6409 of the Middle Class Tax Relief and Job Creation Act of 2012, more commonly known as the "Spectrum Act" (47 U.S.C. § 1455). As such, we respectfully submit that in the event that the Board determines that the application does not comply with the Spectrum Act, the Applicant hereby states that the special permit requirements set forth in the Ordinance are hereby met by the Applicant, and that relief must be granted to the Applicant. The compliance with the Spectrum Act is shown on the Eligible Facilities Request permit application form attached hereto and incorporated herein by reference (the "EFR").

The Applicant seeks to modify and upgrade its existing wireless communications facility by replacing three (3) existing panel antennas with three (3) new panel antennas

Prince Lobel Tye LLP

One International Place

Boston, MA 02110

Suite 3700

TEL: 617 456 8000 FAX: 617 456 8100

¹ Pursuant to Section 6409(a) of the Spectrum Act, state and local governments "may not deny and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station." As such, the Applicant submits that they need not apply for a special permit from the board. To the extent that this Board determines that the Applicants' proposed wireless facility must comply with special permit requirements set forth in Section 10-43 of the Ordinance, the Applicants submit that they have complied with said requirements, without waiving the argument that such relief is not required.

(the "Proposed Facility"). All of the proposed antennas and RRH units will be installed on the roof or façade of the existing building located at the Property (the "Building"). The antennas mounted to the façade of the Building will be painted to match the façade of the building. The Applicant's facilities are shown on the Plans attached hereto and incorporated herein by reference (the "Plans").

I. Background

The Applicant is licensed by the Federal Communications Commission (the "FCC") to construct and operate a wireless telecommunications network in various markets throughout the country, including the Commonwealth of Massachusetts and in particular in the City of Cambridge. A copy of the Applicant's FCC license is attached hereto. The Applicant is in the process of designing and constructing a telecommunications system to serve all of the Commonwealth of Massachusetts. One of the key design objectives of its systems is to provide seamless coverage. Such a system requires a grid of radio transmitting and receiving links located approximately .5 to 2 miles apart, depending on the location of existing and proposed installations in the surrounding area, the existing use of the network and the existing topography. The radio transmitting and receiving facilities operate on a line-of-sight basis, requiring a clear path from the facility to the user on the ground. This dynamic requires the antennas to be located in a location where the signal is not obstructed or degraded by other buildings or by topographical features such as hills.

II. Project Description

As noted above, the Applicant proposes to modify its existing wireless facility currently operating on the rooftop of the Building by replacing three (3) existing panel antennas with three (3) new panel antennas. All of the proposed antennas and RRH units will be installed on the roof or façade of the Building. The antennas mounted to the façade of the Building will be painted to match the façade of the building. The new antennas will be installed to be consistent with the previous decisions of the Board for this facility, dated October 24, 2002 (Case NO.8593) (the "Original Decision"), the first subsequent decision, dated December 5th, 2012 (Case No. 10335), and the second subsequent decision, dated December 19th 2016 (Case No. BZA-011652-2016) (the "Previous Decisions") (together, the Original and the Previous Decisions shall hereafter be referred to as the "Decisions"). Consequently, the visual change to the Applicant's existing facility will be de minimus.

III. Legal Arguments

A. The Applicant complies with the Wireless Communications provisions set forth in Section 4.32(g), footnote 49 of the Ordinance

Pursuant to Section 4.32(g) of the Ordinance, the Applicant's proposed use for a wireless communications facility in the C-2B zoning district is permitted by special permit. The Applicant's Proposed Facility further complies with the provisions set forth in Section 4.32(g), footnote 49 of the Ordinance:

1. The Board of Zoning Appeal shall consider the scope of or limitations imposed by any license secured from any state or federal agency having jurisdiction over such matters.

Enclosed herewith is the Applicant's FCC license. The Applicant meets all requirements imposed by governmental authorities having jurisdiction over the Proposed Facility, including by the FCC, to provide wireless communications in this market area.

The intent of the U.S. Congress, when it enacted the Telecommunications Act of 1996 ("TCA") was to institute a framework to promote competition and innovation within the telecommunications industry. Under its license from the FCC, T-Mobile is obligated to provide a reliable "product" (i.e. wireless communications service) to the population of the City of Cambridge. Likewise, consumer expectations for increasingly robust and reliable service requires competing service providers (including T-Mobile) to identify and remedy existing gaps in reliable network coverage, or gaps that result from increasing subscriber voice and data traffic beyond the limits of existing network infrastructure. A carrier's failure to remedy network gaps in a timely fashion can result in a significant loss of subscribers to competing telecommunications carriers. As demonstrated in the Affidavit of Radio Frequency Expert provided by the Applicant and attached hereto, the Proposed Facility and corresponding relief requested are necessary to remedy a gap in reliable service coverage within T-Mobile's existing network infrastructure.

T-Mobile investigated alternative sites in and around the defined geographic area within which its engineers determined that a facility must be located to fill the gap in service coverage and to function effectively within its network of existing and planned facilities. This is an existing location that is being upgraded with new technology to provide the necessary coverage to the subject area of the City of Cambridge. Therefore, the Proposed Facility in the BC zoning district is necessary to close the coverage gap that is illustrated on the propagation maps submitted herewith. Consequently, T-Mobile is unable to close a gap in its wireless network without obtaining the requested relief under Section 6409 of the Spectrum act or a Special Permit to modify its existing wireless facility in the C-2B zoning district.

Furthermore, Section 6409(a) of the Spectrum Act mandates that state and local governments "may not deny, and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station." Under Section 6409(a)(2)(A)-(C) an Eligible Facilities Request is any request to modify a Tower or Base Station that involves "collocations of new Transmission Equipment," "removal," or "replacement" of Transmission Equipment.

Because federal law now preempts many of the permit application requirements that this jurisdiction would previously have required from an Applicant, we have provided, on the attached EFR, only the information that federal law allows this jurisdiction to consider when reviewing an EFR. As such, we submit that the Wireless Communications set forth in Section 4.32(g), footnote 49 of the Ordinance, provisions are not applicable to Proposed Facility and relief must be granted pursuant to Section 6409(a) of the Spectrum Act.

2. The Board of Zoning Appeal shall consider the extent to which the visual impact of the various elements of the proposed facility is minimized: (1) through the use of existing mechanical elements on the building's roof or other features of the building as support and background, (2) through the use in materials that in texture and color blend with the materials to which the facilities are attached, or (3) other effective means to reduce the visual impact of the facility on the site.

The Applicant's Proposed Facility will have no additional visual impact on the existing facility and Building. The Proposed Facility will be installed on the roof, the chimney, and the façade and of the Building, replacing three (3) of the existing antennas, and in conformity with the Decision.

As stated above, federal law now preempts many of the permit applications requirements that the Ordinance sets forth. To the extent that this Board determines that the Applicants' proposed wireless facility must comply with the Wireless Communications provisions set forth in Section 4.32(g), footnote 49 of the Ordinance, the Applicants submit that they have complied with said requirements, without waiving the argument that such relief is not required.

3. Where it is proposed to erect such a facility in any residential zoning district, the extent to which there is a demonstrated public need for the facility at the proposed locations, the existence of alternative, functionally suitable sites in nonresidential locations, the character of the prevailing uses in the area, and the prevalence of other existing mechanical systems and equipment carried on or above the roof of nearby structures. The Board of Zoning Appeal shall grant a special permit to erect such a facility in a residential zoning district only upon a finding that nonresidential uses predominate in the vicinity of the proposed facility's location and that the telecommunications facility is not inconsistent with the character that does prevail in the surrounding neighborhood.

The Proposed Facility is located in the Residential C-2B Zoning District but nonresidential uses predominate in the area. For example, the UPS Store, Allston Insurance, Dado Tea, Workers Compensation Research Institute, Keller Williams Realty, all located within the building at 955 Massachusetts Avenue, the Dumpling House across the street and John and Nicks auto service as an abutter. Furthermore, the Board, in the Decisions has previously found that nonresidential uses predominate in the area.

As such, the Applicant submits that nonresidential uses predominate in the area, and in keeping with the Decisions, respectfully requests that the Board find the same.



- B. The Applicant complies with the Special Permit Criteria set forth in Section 10-43 of the Ordinance²:
 - 1. The requirements of the Ordinance can be met:

As provided above, the Applicant has met the requirements set forth in Section 4.32(g), footnote 49 of the Ordinance.

2. Traffic generated or patterns of access or egress would not cause congestion hazard, or substantial change in established neighborhood character for the following reasons:

The proposed installation will not obstruct existing rights-of-way or pedestrian access and will not change the daily conditions of access, egress, traffic, congestion hazard, or character of the neighborhood. The installation will not require the addition of any new parking or loading spaces. The use is passive and will not change the current conditions or appearance surrounding the Building. The facility will not produce any odors, fumes, noise or waste. There will be no need for water, sewer, or other municipal services.

As mentioned above, once modified, the facility will be unmanned and will only require infrequent visits by a technician, typically two times per month for routine diagnostics and/or maintenance, except in cases of emergency. These infrequent visits will not result in any material increase in traffic or disruption to patterns of access or egress that will cause congestion hazards or cause a substantial change in the established neighborhood character. The Applicant's maintenance personnel will make use of the existing access roads and parking at the Building.

3. The continued operation of or the development of adjacent uses as permitted in the Zoning Ordinance would not be adversely affected by the nature of the proposed use for the following reasons:

As described above and illustrated on the attached photograph simulations, the modification of the existing facility will produce a minimal change in the appearance of the Building. The modification of the existing facility will blend with the existing characteristics of the Building and the surrounding neighborhood. Moreover, the proposed installation will not generate any traffic, smoke, dust, heat, glare, discharge of noxious substances, nor will it pollute waterways or groundwater. Conversely, the surrounding properties and general public will benefit from the potential to enjoy improved wireless communication.

² Pursuant to Section 6409(a) of the Spectrum Act, state and local governments "may not deny and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station." As such, the Applicant submits that they need not apply for a special permit from the board. To the extent that this Board determines that the Applicants' proposed wireless facility must comply with special permit requirements set forth in Section 10-43 of the Ordinance, the Applicants submit that they have complied with said requirements, without waiving the argument that such relief is not required.

▶ PRI∩CE LOBEL

4. Nuisance or hazard would not be created to the detriment of the health, safety, and/or welfare of the occupant of the proposed use or the citizens of the City for the following reasons:

The operations of the proposed telecommunications facility will not adversely impact the health, safety, and the welfare of the residents of the City of Cambridge. On the contrary, the proposed use will benefit the City and promote the safety and welfare of its residents, businesses and drivers by providing reliable state-of-the-art digital wireless voice and data services. Further, the site will improve the reliability of emergency communications with the police and fire departments by eliminating dropped or blocked calls due to inadequate signal strength or insufficient network capacity to handle call volume, particularly important during emergency situations.

The Proposed Facility will comply with all federal, state and local safety requirements including the standards established by the FCC, Federal Aviation Administration (FAA), the American Standards Institute (ANSI), and the Massachusetts Department of Public Health (MDPH).

Accordingly, the Proposed Facility will not adversely impact the health, safety and/or welfare of the neighborhood or the residents of the City of Cambridge.

5. For other reasons, the proposed installation will not impair the integrity of the district or adjoining district or otherwise derogate from the intent or purpose of this ordinance for the following reasons:

The Proposed Facility is designed to blend with the existing characteristics of the Property, reducing any visual impacts to the surrounding area. Accordingly, the Proposed Facility's design results in a minimal impact on the underlying and adjacent zoning district and is consistent with the Ordinance's intention to allow for less intrusive wireless telecommunications facilities in all districts (other than Open Space), including the C-2B zoning districts.

As mentioned above, the proposed modifications to the existing installation will not generate any traffic, smoke, dust, heat, glare, discharge or noxious substances, nor will it pollute waterways or groundwater.

6. The new use of the building construction is consistent with the Urban Design Objective set for tin Section 19.30 of the Ordinance:

Not Applicable. The Applicant is not proposing to construct a new building or structure.

IV. Summary

The Applicant hereby requests that the Board determine that the City of Cambridge has the right to authorize the construction of the Proposed Facility through the issuance of a Building Permit, pursuant to Section 6409(a) of the Spectrum Act. Or, in the alternative, its proposed modifications to the existing telecommunications facility will not have any adverse effect on the neighborhood within which the Property is located in particular, and the City of Cambridge as a whole. The findings are made in view of the particular characteristics of the Property and of the Applicant's proposed siting and equipment, as detailed above. This Property is the most appropriate location for the installation and operation of the wireless communications facility.

For the foregoing reasons the Applicant respectfully requests that the Board grant the foregoing relief pursuant to Section 6409(a) of the Spectrum Act or, in the alternative, zoning relief in the form of a Special Permit and such other relief as the Board deems necessary to allow the installation and operation of the Applicant's Proposed Facility.

Sincerely,

Adam F. Braillard Direct: 617-456-8153

Email: abraillard@princelobel.com

15 Rell

DIMENSIONAL INFORMATION

APPLICANT: T-Mobile Northeast			PRESENT USE/OCCUPANO	Y:	communicatio
OCATION:	955 Massachusetts Aver	nue	ZONE:	C-2B	
PHONE:	617-456-8153	_ REQUESTED USE	E/OCCUPANCY: Wire	eless Telecommunic	ations
		EXISTING CONDITIONS	REQUESTED CONDITIONS	ORDINANCE REQUIREMENTS	
OTAL GROSS	S FLOOR AREA:	N/A	No Change	N/A	(max.)
OT AREA:		N/A		N/A	(min.)
ATIO OF GE	ROSS FLOOR AREA	N/A	No Change	N/A	(max.)
OF ADEA E	- OR EACH DWELLING UNIT:	N/A	No Change	N/A	(min.)
IZE OF LOT		N/A	_	N/A	(min.)
	DEPTH				
etbacks in	<u>n</u> FRONT	N/A	No Change	N/A	(min.)
et:	REAR	N/A	No Change	N/A	(min.)
	LEFT SIDE	N/A	No Change	N/A	(min.)
	RIGHT SIDE	N/A	No Change	N/A	(min.)
IZE OF BLI	OG.: HEIGHT	N/A	No Change	N/A	_(max.)
	LENGTH				
	WIDTH				
ATIO OF US LOT AREA	SABLE OPEN SPACE A: 3)	N/A	No Change	N/A	(min.)
o. OF DWE	LLING UNITS:	N/A	No Change	N/A	- (max.)
	KING SPACES:	N/A	No Change	N/A (mir	./max)
	DING AREAS:	N/A	No Change	N/A	(min.)
	NEAREST BLDG.	N/A	No Change	N/A	(min.)
n same le teel, etc	here applicable, other ot, and type of cons The proposed installation in a monly referred to as a "colloca	volves a modification	osed, e.g.; wood fr	ame, concrete,	brick,

^{1.} SEE CAMBRIDGE ZONING ORDINANCE ARTICLE 5.000, SECTION 5.30 (DISTRICT OF DIMENSIONAL REGULATIONS).

^{2.} TOTAL GROSS FLOOR AREA (INCLUDING BASEMENT 7'-0" IN HEIGHT AND ATTIC AREAS GREATER THAN 5') DIVIDED BY LOT AREA.

3. OPEN SPACE SHALL NOT INCLUDE PARKING AREAS, WALKWAYS OR DRIVEWAYS AND SHALL HAVE A MINIMUM DIMENSION OF 15'.

GENERAL INFORMATION

2018 DEC 12 PM 3: 17

and relief pursuant to Section 6409 of the	Variance:		Appeal:	OFFICE OF THE (CITY OF ERK
PETITIONER: T-Mobile Northeast					
PETITIONER'S ADDRESS: Prince Lo			Esq., One Into	ernational Place, Suite	3700, Boston, MA
LOCATION OF PROPERTY: 955	Massachusetts Aver	nue		· ·	
TYPE OF OCCUPANCY:Telecom	munications Z	ONING DISTR	ICT: C2-B		
REASON FOR PETITION:					
Additions			Ne	w Structure	
Change in Use/Oc	cupancy		Pa	rking	
Conversion to Ad	di'l Dwelling	Unit's	Si	gn	
Dormer			Su	bdivision	
X Other: Section 640	9(a) of the Spectrum	n Act relief for Sp	pecial Permit for	the collocation of a Wi	reless Facility
on the building, together with supporting equenthouse on the roof of the building, adjace proposal complies with Section 6409 of the Spase station. Moreover, the Applicants proposed Sections of Zoning Ordinance (nt to the existing ant pectrum Act as the cast sal complies with Security.	ennas and paint collocation of an ection 4.32 and 1	ed to match the lennas is not a 0.4 of the Cami	existing building The Asubstantial change to the bridge Zoning Code.	Applicants
Article 4.00 Section 4.32					
Article 10.00 Section 10.					
Article 6409 Section Mid					
Applicants for a Variance must Special Permi Applicants for an Appeal to Inspectional Services Department for the appeal Original Sie	it must comple to the BZA c ent must attac	te Pages 1- of a Zonir	ng determi		
Oliginal Si	gnacure (5).	(Peti Adam F Brai	tioner(s)/C llard, Esq.	Owner)	
			(Print Name		
	Address:	One Internati	onal Place, Sui	te 3700	
	-	Boston, MA	02110		
	Tel. No.:	617-456-81	53		
	E-Mail Addres	ss: _abraillard@	princelobel.co	m	
December 11, 2018					

APPLICATION FOR RELIEF UNDER SECTION 6409(a) OF THE SPECTRUM ACT OR FOR SPECIAL PERMIT For a Modification to an Existing WIRELESS COMMUNICATION FACILITY

T-Mobile Northeast LLC

c/o Adam F. Braillard, Esq.
Prince Lobel Tye LLP
One International Place, Suite 3700
Boston, MA 02110

Applicant

Property Location: 955 Massachusetts Avenue Cambridge, MA 02139

Map 116, Lot 117

Prepared by: Adam F. Braillard, Esq.

Prince Lobel Tye LLP

One International Place, Suite 3700

Boston, MA 02110

Telephone: (617) 456-8153 Facsimile: (617) 456-8100

December 11, 2018

TABLE OF CONTENTS

APPLICATION TO THE BOARD OF ZONING APPEALS For Relief under Section 6409 of the Spectrum Act Or For a Special Permit for an Existing WIRELESS COMMUNICATION FACILITY

Property located at:

955 Massachusetts Avenue Cambridge, MA 02139

Map 116, Lot 117

Board of Zoning Appeals Special Permit Application	Tab 1
Zoning Supporting Statement	Tab 2
Plans	Tab 3
Structural Analysis	Tab 4
Photograph Simulations	Tab 5
FCC License	Tab 6
Previous Decisions	Tab 7
Eligible Facilities Request	Tab 8

GENERAL INFORMATION

and rel		o Section 640	Variance:	Relief Act	Appeal:	
PETITION	NEAK .					
PETITION	NER'S ADD	RESS: Prin			Esq., One International Place, Suite	3700, Boston, MA
LOCATION	N OF PROP	ERTY:	955 Massachusetts Avenu	ie.		
TYPE OF	OCCUPANC	Y:	elecommunications ZC	ONING DISTR	ICT: C2-B	
REASON I	FOR PETIT	ION:				
_	Add	itions			New Structure	
_	Cha	nge in Us	e/Occupancy		Parking	
	Con	version t	o Addi'l Dwelling (Unit's	Sign	
	Dor	mer			Subdivision	
	X Oth	er: Secti	on 6409(a) of the Spectrum	Act relief for Sp	ecial Permit for the collocation of a V	Vireless Facility
			NCE CITED:			
Article	_4.00 S	ection	4.32 (g)(1) Utilities - Tele	phone Exchang	е	
Article	10.00 S	ection	10.4 - Special Permit			
Article	6409 S	ection	Middle Class Tax Relief	Act		
Applicar Applicar	nts for a nts for ional Ser	special an Appe vices Dep		e Pages 1-4 f a Zonin n a stateme	determination by the reasons F. B. M. tioner(s)/Owner)	
			-	Adam F Brail	lard, Esq. [Print Name]	
			Address:		onal Place, Suite 3700	
				Boston, MA	02110	
			Tel. No.:	617-456-815	53	
			E-Mail Addres	s: abraillard@	princelobel.com	
Date:	December 1	1, 2018	ens wroteness contains to			

BZA APPLICATION FORM - OWNERSHIP INFORMATION

To be completed by OWNER, signed before a notary and returned to The Secretary of the Board of Zoning Appeals.

We: DWF V 955 Massachusetts, LLC, a Delaware limited liability company (OWNER)

Address: c/o Divco West Real Estate Services, LLC, 575 Market Street, 35th Floor

San Francisco, CA 94105

We own the property located at 955 Massachusetts Avenue, Cambridge, MA, which is the subject of this zoning application.

The record title of this property is in the name of Owner-DWF V 955 Massachusetts, LLC

*Pursuant to a deed of duly recorded in the date June 7, 2017, Middlesex South County Registry of Deeds at Book 69398 Page 76.

OWNER:

DWF V 955 MASSACHUSETTS, LLC,

BY: DIVCO WEST REAL ESTATE SERVICES, INC.,

ITS AUTHORIZED AGENT

SIGNATURE BY AUTHORIZED AGENT FOR OWNER

*Written evidence of Agent's standing to represent petitioner may be requested.

Commonwealth of Massachusetts, County of	MIDDLESEX
The above-name JEFFREY LONGHELLER	personally appeared before me,
this 17th of SEPTEMBER, 2016, and made	e oath that the above statement is true.
	MARK MILONE Notary
My commission expires Avout 10,202	(Notary Seal) (Notary Public Seal) (Notary Public Notary Public

^{&#}x27; If ownership is not shown in recorded deed, e.g. if by court order, recent deed, or inheritance, please include documentation.

DIMENSIONAL INFORMATION

PPLICANT:_	T-Mobile Northeast		RESENT USE/OCCUPANO	CY: Wireless Tele	
CATION:	955 Massachusetts Ave	nue	ZONE :	C-2B	
IONE :	617-456-8153	REQUESTED USE,	OCCUPANCY: Wire	eless Telecommunic	ations
		EXISTING CONDITIONS	REQUESTED CONDITIONS	ORDINANCE REQUIREMENTS	
DTAL GROSS	FLOOR AREA:	N/A	No Change	N/A	(max.)
OT AREA:		N/A		N/A	(min.)
TIO OF GR	ROSS FLOOR AREA	N/A	No Change	N/A	(max.)
nn 2002 oc	- KD MAGUE BARTET TAKE FINETY.	N/A	No Change	N/A	tout on the
IZE OF LOT	R EACH DWELLING UNIT: : WIDTH	N/A		N/A	(min.) (min.)
	DEPTH				
etbacks in	FRONT	N/A	No Change	N/A	(min.)
eet:	REAR	N/A	No Change	N/A	(min.)
	LEFT SIDE	N/A	No Change	N/A	(min.)
	RIGHT SIDE	N/A	No Change	N/A	(min.)
IZE OF BLD	G.: HEIGHT	N/A	No Change	N/A	_(max.)
	LENGTH				
	WIDTH				
TIO OF US	ABLE OPEN SPACE	N/A	No Change	N/A	(min.)
). OF OWEL	LING UNITS:	N/A	No Change	N/A	(max.)
	ING SPACES:	N/A	No Change	N/A (min	·/max)
	ING AREAS:	N/A	No Change	N/A	(min.)
***************************************	NEAREST BLDG.	N/A	No Change	N/A	(min.)
N SAME LOT					,
escribe wh n same lo teel, etc.	ere applicable, other t, and type of cons	occupancies on truction propos	same lot, the size ed, e.g.; wood fr	of adjacent bu ame, concrete,	ildings brick,
	The proposed installation inv	volves a modification	of an existing Wireless T	elecommunications	Facility,
	only referred to as a "colloca			and the company	

^{1.} SEE CAMBRIDGE ZONING ORDINANCE ARTICLE 5.000, SECTION 5.30 (DISTRICT OF DIMENSIONAL

SEE CAMBRIDGE ZONING ORDINANCE ARTICLE 5.000, SECTION 5.30 (DISTRICT OF DIMENSIONAL REGULATIONS).
 TOTAL GROSS FLOOR AREA (INCLUDING BASEMENT 7'-0" IN HEIGHT AND ATTIC AREAS GREATER THAN 5') DIVIDED BY LOT AREA.
 OPEN SPACE SHALL NOT INCLUDE PARKING AREAS, WALKWAYS OR DRIVEWAYS AND SHALL HAVE A MINIMUM DIMENSION OF 15'.

SUPPORTING STATEMENT FOR A VARIANCE

EACH OF THE FOLLOWING REQUIREMENTS FOR A VARIANCE MUST BE ESTABLISHED AND SET FORTH IN COMPLETE DETAIL BY THE APPLICANT IN ACCORDANCE WITH MGL 40A, SECTION 10:

A) A Literal enforcement of the provisions of this Ordinance would involve a substantial hardship, financial or otherwise, to the petitioner or appellant for the following reasons:

N/A

B) The hardship is owing to the following circumstances relating to the soil conditions, shape or topography of such land or structures and especially affecting such land or structures but not affecting generally the zoning district in which it is located for the following rearsons:

N/A

- C) DESIRABLE RELIEF MAY BE GRANTED WITHOUT EITHER:
 - 1) Substantial detriment to the public good for the following reasons:

N/A

2) Relief may be granted without nullifying or substantially derogating from the intent or purpose of this Ordinance for the following reasons:

N/A

* If You have any questions as to whether you can establish all of the applicable legal requirements, you should consult with your own attorney.

(ATTACHMENT B - PAGE 5)

SUPPORTING STATEMENT FOR A SPECIAL PERMIT

Please describe in complete detail how you meet each of the following criteria referring to the property and proposed changes or uses which are requested in your application. Attach sheets with additional information for special permits which have additional criteria, e.g.; fast food permits, comprehensive permits, etc., which must be met.

Granting the Special Permit requested for 955 Massachusetts Avenue (location) would not be a detriment to the public interest because:

A) Requirements of the Ordinance can or will be met for the following reasons:

Please see the attached supporting statement.

B) Traffic generated or patterns of access or egress would not cause congestion hazard, or substantial change in established neighborhood character for the following reasons:

Please see the attached supporting statement.

C) The continued operation of or the development of adjacent uses as permitted in the Zoning Ordinance would not be adversely affected by the nature of the proposed use for the following reasons:

Please see the attached supporting statement.

Nuisance or hazard would not be created to the detriment of the health, safety and/or welfare of the occupant of the proposed use or the citizens of the City for the following reasons:

Please see the attached supporting statement.

E) For other reasons, the proposed use would not impair the integrity of the district or adjoining district or otherwise derogate from the intent or purpose of this ordinance for the following reasons:

(ATTACHMENT B - PAGE 6)

▶ PRI∩CE LOBEL

December 11, 2018

City of Cambridge Board of Zoning Appeals 831 Massachusetts Avenue Cambridge, MA 02139

Re:

Eligible Facilities Request pursuant to Section 6409 of the

Spectrum Act and an Application for Special Permit, in

the Alternative

Property Address:

955 Massachusetts Ave, Cambridge, MA 02139

Assessor's Map 116, Lot 117 (the "Property")

Applicant:

T-Mobile Northeast LLC (the "Applicant")

Dear Honorable Members of the Board of Zoning Appeals:

This firm represents T-Mobile Northeast LLC ("T-Mobile") (hereinafter, the "Applicant") in connection with an application for a special permit from the City of Cambridge Board of Zoning Appeals (the "Board"), to modify an existing wireless communications facility on the Property. The Property is located in the Residential C2-B zoning district. To the extent that the Board determines that the requirements of Article 4 Section 4.32G.1 of the City of Cambridge Zoning Ordinance (the "Ordinance") apply, the use of the Property for a wireless telecommunications facility is permitted by special permit from the Board¹. The Applicant's proposal satisfies the requirements for the grant of a special permit pursuant to Section 10-43 of the Ordinance.

The Applicant's Proposed Facility (as defined herein) is subject to Section 6409 of the Middle Class Tax Relief and Job Creation Act of 2012, more commonly known as the "Spectrum Act" (47 U.S.C. § 1455). As such, we respectfully submit that in the event that the Board determines that the application does not comply with the Spectrum Act, the Applicant hereby states that the special permit requirements set forth in the Ordinance are hereby met by the Applicant, and that relief must be granted to the Applicant. The compliance with the Spectrum Act is shown on the Eligible Facilities Request permit application form attached hereto and incorporated herein by reference (the "EFR").

The Applicant seeks to modify and upgrade its existing wireless communications facility by replacing three (3) existing panel antennas with three (3) new panel antennas

Prince Lobel Tye LLP One International Place

Suite 3700 Boston, MA 02110

> TEL: 617 456 8000 FAX: 617 456 8100

¹ Pursuant to Section 6409(a) of the Spectrum Act, state and local governments "may not deny and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station." As such, the Applicant submits that they need not apply for a special permit from the board. To the extent that this Board determines that the Applicants' proposed wireless facility must comply with special permit requirements set forth in Section 10-43 of the Ordinance, the Applicants submit that they have complied with said requirements, without waiving the argument that such relief is not required.

(the "Proposed Facility"). All of the proposed antennas and RRH units will be installed on the roof or façade of the existing building located at the Property (the "Building"). The antennas mounted to the façade of the Building will be painted to match the façade of the building. The Applicant's facilities are shown on the Plans attached hereto and incorporated herein by reference (the "Plans").

I. Background

The Applicant is licensed by the Federal Communications Commission (the "FCC") to construct and operate a wireless telecommunications network in various markets throughout the country, including the Commonwealth of Massachusetts and in particular in the City of Cambridge. A copy of the Applicant's FCC license is attached hereto. The Applicant is in the process of designing and constructing a telecommunications system to serve all of the Commonwealth of Massachusetts. One of the key design objectives of its systems is to provide seamless coverage. Such a system requires a grid of radio transmitting and receiving links located approximately .5 to 2 miles apart, depending on the location of existing and proposed installations in the surrounding area, the existing use of the network and the existing topography. The radio transmitting and receiving facilities operate on a line-of-sight basis, requiring a clear path from the facility to the user on the ground. This dynamic requires the antennas to be located in a location where the signal is not obstructed or degraded by other buildings or by topographical features such as hills.

II. Project Description

As noted above, the Applicant proposes to modify its existing wireless facility currently operating on the rooftop of the Building by replacing three (3) existing panel antennas with three (3) new panel antennas. All of the proposed antennas and RRH units will be installed on the roof or façade of the Building. The antennas mounted to the façade of the Building will be painted to match the façade of the building. The new antennas will be installed to be consistent with the previous decisions of the Board for this facility, dated October 24, 2002 (Case NO.8593) (the "Original Decision"), the first subsequent decision, dated December 5th, 2012 (Case No. 10335), and the second subsequent decision, dated December 19th 2016 (Case No. BZA-011652-2016) (the "Previous Decisions") (together, the Original and the Previous Decisions shall hereafter be referred to as the "Decisions"). Consequently, the visual change to the Applicant's existing facility will be de minimus.

III. Legal Arguments

A. The Applicant complies with the Wireless Communications provisions set forth in Section 4.32(g), footnote 49 of the Ordinance

Pursuant to Section 4.32(g) of the Ordinance, the Applicant's proposed use for a wireless communications facility in the C-2B zoning district is permitted by special permit. The Applicant's Proposed Facility further complies with the provisions set forth in Section 4.32(g), footnote 49 of the Ordinance:

1. The Board of Zoning Appeal shall consider the scope of or limitations imposed by any license secured from any state or federal agency having jurisdiction over such matters.

Enclosed herewith is the Applicant's FCC license. The Applicant meets all requirements imposed by governmental authorities having jurisdiction over the Proposed Facility, including by the FCC, to provide wireless communications in this market area.

The intent of the U.S. Congress, when it enacted the Telecommunications Act of 1996 ("TCA") was to institute a framework to promote competition and innovation within the telecommunications industry. Under its license from the FCC, T-Mobile is obligated to provide a reliable "product" (i.e. wireless communications service) to the population of the City of Cambridge. Likewise, consumer expectations for increasingly robust and reliable service requires competing service providers (including T-Mobile) to identify and remedy existing gaps in reliable network coverage, or gaps that result from increasing subscriber voice and data traffic beyond the limits of existing network infrastructure. A carrier's failure to remedy network gaps in a timely fashion can result in a significant loss of subscribers to competing telecommunications carriers. As demonstrated in the Affidavit of Radio Frequency Expert provided by the Applicant and attached hereto, the Proposed Facility and corresponding relief requested are necessary to remedy a gap in reliable service coverage within T-Mobile's existing network infrastructure.

T-Mobile investigated alternative sites in and around the defined geographic area within which its engineers determined that a facility must be located to fill the gap in service coverage and to function effectively within its network of existing and planned facilities. This is an existing location that is being upgraded with new technology to provide the necessary coverage to the subject area of the City of Cambridge. Therefore, the Proposed Facility in the BC zoning district is necessary to close the coverage gap that is illustrated on the propagation maps submitted herewith. Consequently, T-Mobile is unable to close a gap in its wireless network without obtaining the requested relief under Section 6409 of the Spectrum act or a Special Permit to modify its existing wireless facility in the C-2B zoning district.

Furthermore, Section 6409(a) of the Spectrum Act mandates that state and local governments "may not deny, and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station." Under Section 6409(a)(2)(A)-(C) an Eligible Facilities Request is any request to modify a Tower or Base Station that involves "collocations of new Transmission Equipment," "removal," or "replacement" of Transmission Equipment.

Because federal law now preempts many of the permit application requirements that this jurisdiction would previously have required from an Applicant, we have provided, on the attached EFR, only the information that federal law allows this jurisdiction to consider when reviewing an EFR. As such, we submit that the Wireless Communications set forth in Section 4.32(g), footnote 49 of the Ordinance, provisions are not applicable to Proposed Facility and relief must be granted pursuant to Section 6409(a) of the Spectrum Act.

2. The Board of Zoning Appeal shall consider the extent to which the visual impact of the various elements of the proposed facility is minimized: (1) through the use of existing mechanical elements on the building's roof or other features of the building as support and background, (2) through the use in materials that in texture and color blend with the materials to which the facilities are attached, or (3) other effective means to reduce the visual impact of the facility on the site.

The Applicant's Proposed Facility will have no additional visual impact on the existing facility and Building. The Proposed Facility will be installed on the roof, the chimney, and the façade and of the Building, replacing three (3) of the existing antennas, and in conformity with the Decision.

As stated above, federal law now preempts many of the permit applications requirements that the Ordinance sets forth. To the extent that this Board determines that the Applicants' proposed wireless facility must comply with the Wireless Communications provisions set forth in Section 4.32(g), footnote 49 of the Ordinance, the Applicants submit that they have complied with said requirements, without waiving the argument that such relief is not required.

3. Where it is proposed to erect such a facility in any residential zoning district, the extent to which there is a demonstrated public need for the facility at the proposed locations, the existence of alternative, functionally suitable sites in nonresidential locations, the character of the prevailing uses in the area, and the prevalence of other existing mechanical systems and equipment carried on or above the roof of nearby structures. The Board of Zoning Appeal shall grant a special permit to erect such a facility in a residential zoning district only upon a finding that nonresidential uses predominate in the vicinity of the proposed facility's location and that the telecommunications facility is not inconsistent with the character that does prevail in the surrounding neighborhood.

The Proposed Facility is located in the Residential C-2B Zoning District but nonresidential uses predominate in the area. For example, the UPS Store, Allston Insurance, Dado Tea, Workers Compensation Research Institute, Keller Williams Realty, all located within the building at 955 Massachusetts Avenue, the Dumpling House across the street and John and Nicks auto service as an abutter. Furthermore, the Board, in the Decisions has previously found that nonresidential uses predominate in the area.

As such, the Applicant submits that nonresidential uses predominate in the area, and in keeping with the Decisions, respectfully requests that the Board find the same.



- B. The Applicant complies with the Special Permit Criteria set forth in Section 10-43 of the Ordinance²:
 - 1. The requirements of the Ordinance can be met:

As provided above, the Applicant has met the requirements set forth in Section 4.32(g), footnote 49 of the Ordinance.

2. Traffic generated or patterns of access or egress would not cause congestion hazard, or substantial change in established neighborhood character for the following reasons:

The proposed installation will not obstruct existing rights-of-way or pedestrian access and will not change the daily conditions of access, egress, traffic, congestion hazard, or character of the neighborhood. The installation will not require the addition of any new parking or loading spaces. The use is passive and will not change the current conditions or appearance surrounding the Building. The facility will not produce any odors, fumes, noise or waste. There will be no need for water, sewer, or other municipal services.

As mentioned above, once modified, the facility will be unmanned and will only require infrequent visits by a technician, typically two times per month for routine diagnostics and/or maintenance, except in cases of emergency. These infrequent visits will not result in any material increase in traffic or disruption to patterns of access or egress that will cause congestion hazards or cause a substantial change in the established neighborhood character. The Applicant's maintenance personnel will make use of the existing access roads and parking at the Building.

3. The continued operation of or the development of adjacent uses as permitted in the Zoning Ordinance would not be adversely affected by the nature of the proposed use for the following reasons:

As described above and illustrated on the attached photograph simulations, the modification of the existing facility will produce a minimal change in the appearance of the Building. The modification of the existing facility will blend with the existing characteristics of the Building and the surrounding neighborhood. Moreover, the proposed installation will not generate any traffic, smoke, dust, heat, glare, discharge of noxious substances, nor will it pollute waterways or groundwater. Conversely, the surrounding properties and general public will benefit from the potential to enjoy improved wireless communication.

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² Pursuant to Section 6409(a) of the Spectrum Act, state and local governments "may not deny and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station." As such, the Applicant submits that they need not apply for a special permit from the board. To the extent that this Board determines that the Applicants' proposed wireless facility must comply with special permit requirements set forth in Section 10-43 of the Ordinance, the Applicants submit that they have complied with said requirements, without waiving the argument that such relief is not required.

4. Nuisance or hazard would not be created to the detriment of the health, safety, and/or welfare of the occupant of the proposed use or the citizens of the City for the following reasons:

The operations of the proposed telecommunications facility will not adversely impact the health, safety, and the welfare of the residents of the City of Cambridge. On the contrary, the proposed use will benefit the City and promote the safety and welfare of its residents, businesses and drivers by providing reliable state-of-the-art digital wireless voice and data services. Further, the site will improve the reliability of emergency communications with the police and fire departments by eliminating dropped or blocked calls due to inadequate signal strength or insufficient network capacity to handle call volume, particularly important during emergency situations.

The Proposed Facility will comply with all federal, state and local safety requirements including the standards established by the FCC, Federal Aviation Administration (FAA), the American Standards Institute (ANSI), and the Massachusetts Department of Public Health (MDPH).

Accordingly, the Proposed Facility will not adversely impact the health, safety and/or welfare of the neighborhood or the residents of the City of Cambridge.

5. For other reasons, the proposed installation will not impair the integrity of the district or adjoining district or otherwise derogate from the intent or purpose of this ordinance for the following reasons:

The Proposed Facility is designed to blend with the existing characteristics of the Property, reducing any visual impacts to the surrounding area. Accordingly, the Proposed Facility's design results in a minimal impact on the underlying and adjacent zoning district and is consistent with the Ordinance's intention to allow for less intrusive wireless telecommunications facilities in all districts (other than Open Space), including the C-2B zoning districts.

As mentioned above, the proposed modifications to the existing installation will not generate any traffic, smoke, dust, heat, glare, discharge or noxious substances, nor will it pollute waterways or groundwater.

6. The new use of the building construction is consistent with the Urban Design Objective set for tin Section 19.30 of the Ordinance:

Not Applicable. The Applicant is not proposing to construct a new building or structure.

IV. Summary

The Applicant hereby requests that the Board determine that the City of Cambridge has the right to authorize the construction of the Proposed Facility through the issuance of a Building Permit, pursuant to Section 6409(a) of the Spectrum Act. Or, in the alternative, its proposed modifications to the existing telecommunications facility will not have any adverse effect on the neighborhood within which the Property is located in particular, and the City of Cambridge as a whole. The findings are made in view of the particular characteristics of the Property and of the Applicant's proposed siting and equipment, as detailed above. This Property is the most appropriate location for the installation and operation of the wireless communications facility.

For the foregoing reasons the Applicant respectfully requests that the Board grant the foregoing relief pursuant to Section 6409(a) of the Spectrum Act or, in the alternative, zoning relief in the form of a Special Permit and such other relief as the Board deems necessary to allow the installation and operation of the Applicant's Proposed Facility.

Sincerely,

Adam F. Braillard Direct: 617-456-8153

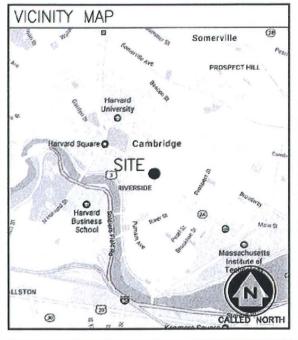
Email: abraillard@princelobel.com

T-MOBILE NORTHEAST LLC

4BN0029B **BN029/955 MASS AVE**

955 MASSACHUSETTS AVENUE CAMBRIDGE, MA 02139





DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME



- THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH B. THE CONTRACTOR SHALL PROVIDE A FULL SET OF ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK, THE WORK PERFORMED ON THE PROJECT AND THE
- THE ARCHITECT/ENGINEER HAVE MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONSTRUCT DOCUMENTS THE COMPLETE SCOPE OF WORK. THE CONTRACTOR BIDDING THE JOB IS NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND OR SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE

MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH

ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES,

- THE CONTRACTOR OR BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE T-MOBILE REPRESENTATIVE OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO THE SUBMISSION OF THE CONTRACTOR'S PROPOSAL OR PERFORMANCE OF WORK. IN THE EVENT OF DISCREPANCIES, THE CONTRACTOR SHALL PRICE THE MORE COSTLY OR EXPENSIVE WORK, UNLESS DIRECTED IN WRITING OTHERWISE.
- THE SCOPE OF WORK SHALL INCLUDE FURNISHING OF ALL MATERIALS, EQUIPMENT, LABOR AND ALL OTHER MATERIALS AND LABOR DEEMED NECESSARY TO COMPLETE THE WORK/PROJECT AS DESCRIBED HEREIN.
- THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO THE SUBMISSION OF BIDS OR PERFORMING WORK TO FAMILIARIZE HIMSELF WITH THE FIELD CONDITIONS AND TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- 6. THE CONTRACTOR SHALL OBTAIN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS/CONTRACT DOCUMENTS.
- . THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO THE MANUFACTURER'S / VENDOR'S SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.

- CONSTRUCTION DOCUMENTS AT THE SITE UPDATED WITH THE LATEST REVISIONS AND ADDENDUM OR CLARIFICATIONS AVAILABLE FOR THE USE BY ALL PERSONNEL INVOLVED WITH
- 9. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER CONTRACT.
- 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY PERMITS AND INSPECTIONS WHICH ARE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY, OR LOCAL GOVERNMENT AUTHORITY.
- 11. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC., DURING CONSTRUCTION. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE
- 12. THE CONTRACTOR SHALL KEEP THE GENERAL WORK AREA CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON PROPERTY. PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.
- 13. THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS. AS WELL AS THE LATEST EDITIONS OF ANY PERTINENT STATE SAFETY REGULATIONS.
- 14. THE CONTRACTOR SHALL NOTIFY THE T-MOBILE REPRESENTATIVE WHERE A CONFLICT OCCURS ON ANY OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE WORK THAT IS IN CONFLICT UNTIL CONFLICT IS RESOLVED BY THE T-MOBILE REPRESENTATIVE.
- 15. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC., ON THE JOB.
- 16. THE CONTRACTOR SHALL RETURN ALL DISTURBED AREAS TO THEIR ORIGINAL CONDITION AT THE COMPLETION OF WORK.

PROJECT SUMMARY T-MOBILE NORTHEAST LLC APPLICANT: SITE NUMBER: 4BN0029B 400 STREET RD SITE NAME: BN029/955 MASS AVE BENSALEM, PA 19020 SITE ADDRESS: 955 MASSACHUSETTS AVENUE CAMBRIDGE, MA 02139 AMERICAN TOWER CORPORATION PROJECT MANAGER: AMERICAN TOWER CORPORATION TOWER OWNER! 116 HUNTINGTON AVENUE, 11TH FLOOR BOSTON, MA 02116 ATC SITE NUMBER: US-MA-6019 N 42.36889" / W 71.10964" LAT./LONG.: CONTACT-KATHLEEN BURKE 781-926-4636 CONSTRUCTION TYPE: IIB USE GROUP: ARCHITECT/ENGINEER: INFINIGY ENGINEERING 1033 WATERVLIET SHAKER ROAD ALBANY, NY 12205 CONTACT: ALFY WELLER 518-690-0790

PROJECT DESCRIPTION

☐ EXISTING TRANSMISSION TOWER ☐ EXISTING RBS 3106

EXISTING CABINET(S)

EXISTING RBS 2106

EXISTING RBS 6201

EXISTING RBS 6131

GPS GPS

T-MOBILE NORTHEAST LLC PROPOSES THE MODIFICATION OF AN

REPLACE (3) PANEL ANTENNAS, ADDITIONAL OF (4) 6 AWG DC CABLES. REUSE, GPS ANTENNA AND EXISTING EQUIPMENT CABINETS.

SITE SUPPORT CABINET Z EXISTING P

EXISTING MONOPOLE

EXISTING LATTICE TOWER

FXISTING WATER TANK

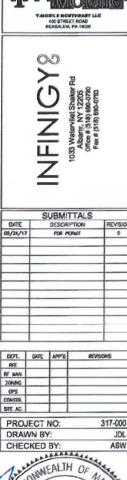
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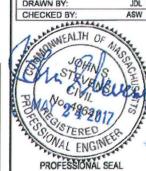
EXISTING BUILDING

EXISTING FLACPOLE

		SHEET INDEX	
Ø OUTDOOR	SHEET	DESCRIPTION	REVISION
☐ INDOOR	T-1	TITLE SHEET	0
EXISTING	C-1	SITE PLAN	0
ROOF CURBS	C-2	EQUIPMENT PLAN & ELEVATION	0
STEEL PLATFORM	C-3	ANTENNA ORIENTATION & RF SCHEDULE	0
EXISTING PPC	C-4	EQUIPMENT SPECIFICATIONS	0
☐ PANELBOARD	E-1	GROUNDING AND POWER DIAGRAMS	0
	E-2	COAX/FIBER PLUMBING DIAGRAM	0
CATION OF AN ED REMOVE AND 4) 6 AWG DC WENT CABINETS.	N-1	GENERAL AND ELECTRICAL NOTES	0

CLIEFT INDEV





THIS DOCUMENT IS THE CREATION DESIGN PROPERTY AND COPYRIGHTE WORK OF T-MOBILE. ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED.

NOTE: IF DRAWINGS ARE 22"x34", USE **GRAPHICAL SCALE AND/OR 1/2 TIMES** OF THE NOTED SCALE.

4BN0029B

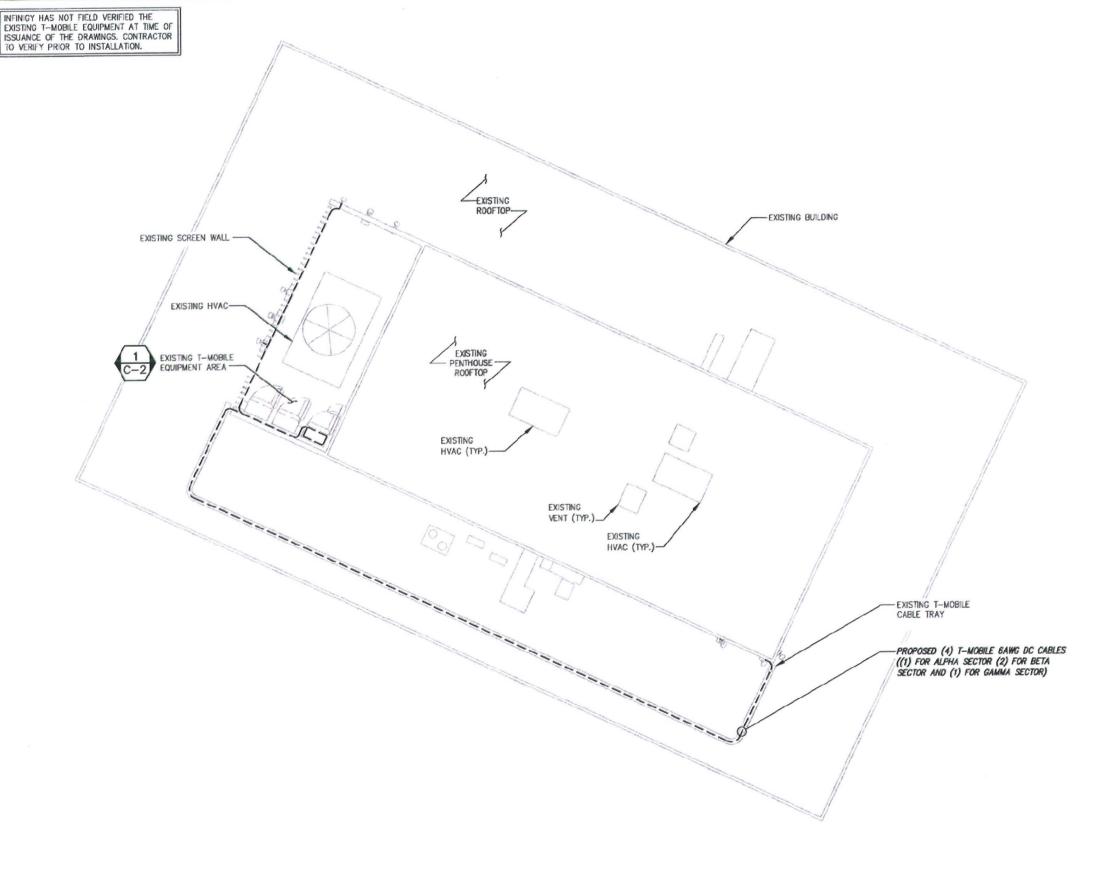
SITE NAME: BN029/955 MASS AVE 955 MASSACHUSETTS AVENUE CAMBRIDGE, MA 02139

SHEET TILLE

TITLE SHEET

SHEET NUMBER

SHEET 1 OF 8 SHEETS



GENERAL SITE NOTES:

- A COMPLETE BOUNDARY SURVEY OF THE HOST PARCEL HAS NOT BEEN PERFORMED BY INFINIGY, BOUNDARY INFORMATION IF SHOWN WAS OBTAINED FROM INFORMATION PROVIDED BY OTHERS. PROPERTY IS SUBJECT TO ALL EASEMENTS AND RESTRICTIONS OF RECORD.
- BASEMAPPING INFORMATION BASED ON PROVIDED INFORMATION.
- CONTRACTOR TO FIELD VERIFY DIMENSIONS AS NECESSARY BEFORE
- THE PROPOSED DEVELOPMENT DOES NOT INCLUDE SIGNS OF
- THE PROPOSED DEVELOPMENT IS UNMANNED AND THEREFORE DOES NOT REQUIRE A MEANS OF WATER SUPPLY OR SEWAGE DISPOSAL.
- NO LANDSCAPING WORK IS PROPOSED IN CONJUNCTION WITH THIS DEVELOPMENT OTHER THAN THAT WHICH IS SHOWN.
- THE PROPOSED DEVELOPMENT DOES NOT INCLUDE OUTDOOR STORAGE OR ANY SOLID WASTE RECEPTACLES.
- UTILITIES SHOWN ON PLAN ARE TAKEN FROM OWNERS RECORDS UTILITIES SHOWN ON PLAN ARE TAKEN FROM OWNERS RECORDS AND FIELD LOCATION OF VISIBLE SURFACE FEATURES. THE DISTENCE, EXTENT AND EXACT HORIZONTAL AND VERTICAL LOCATIONS OF UTILITIES HAS NOT BEEN VERFIED. ANY CONTRACTOR PERFORMING WORK ON THIS SITE MUST CONTACT MISS UTILITY AT LEAST 48 HOURS PRIOR TO COMMENCING WORK.
- ALL OBSOLETE OR UNUSED FACILITIES SHALL BE REMOVED WITHIN 12 MONTHS OF CESSATION OF OPERATIONS.

SITE LEGEND --- SITE PROPERTY LINE STREET OR ROAD DEFT. SATE APP'D -x-x- CHAIN LINK FENCE RF MAN.

TREES/SHRUBS TREE LINE

UTILITY POLE

(E) **EXISTING**

(N) NEW

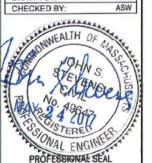
PROPOSED (P)

(F) **FUTURE**

OPAQUE WOODEN FENCE 20HNG OPS CONSTR. SITE AC 317-000 PROJECT NO: DRAWN BY: JDL

FINIG

SUBMITTALS DESCRIPTION FOR PORMET



THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND COPYRIGHTED WORK OF T-MOBILE. ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED.

NOTE: IF DRAWINGS ARE 22"x34", USE GRAPHICAL SCALE AND/OR 1/2 TIMES OF THE NOTED SCALE.

> SITE NUMBER: 4BN0029B

SITE NAME: BN029/955 MASS AVE

956 MASSACHUSETTS AVENUE CAMBRIDGE, MA 02139

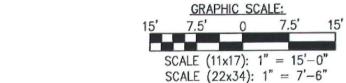
SHEET TITLE

SITE PLAN

SHEET NUMBER

C-1

SHEET 2 OF 8 SHEETS



INFINIGY HAS NOT FIELD VERIFIED THE EXISTING T-MOBILE EQUIPMENT AT TIME OF ISSUANCE OF THE DRAWINGS. CONTRACTOR TO VERIFY PRIOR TO INSTALLATION. PROPOSED (4) T-MOBILE GAWG DC CABLES ((1) FOR ALPHA SECTOR (2) FOR BETA SECTOR AND (1) FOR GAMMA SECTOR) -EXISTING SCREEN WALL-EXISTING EXISTING T-MOBILE GPS MOUNTED TO EXISTING ROOFTOP-SCREEN WALL EXISTING HVAC EQUIPMENT EXISTING T-MOBILE CABLE TRAY EXISTING T-MOBILE PPC CABINET EXISTING T-MOBILE 2106 EQUIPMENT CABINET EXISTING T-MOBILE 2106 EQUIPMENT CABINET -PENTHOUSE WALL EXISTING T-MOBILE 6131 EQUIPMENT CABINET TO REMAIN, INSTALL SECOND DUS41 AS REQUIRED -EQUIPMENT PLAN CALLED NORTH GRAPHIC SCALE SCALE (11x17): 1'' = 4'-0''SCALE (22x34): 1" = 2'-0"

TOWER OR MOUNT LOADING FOR THIS SITE, AND ASSUMES NO RESPONSIBILITY FOR ITS STRUCTURAL INTEGRITY REGARDING ITS EXISTING OR PROPOSED LOADING. FINAL INSTALLATION TO COMPLY WITH RESULTS OF PASSING STRUCTURAL ANALYSIS. EXISTING T-MOBILE RRUS11 B12 TO REMAIN (TYP. OF (1) PER SECTOR (3) SECTORS TOTAL) EXISTING T-MOBILE TMA TO REMAIN (TYP. OF (1) PER EXISTING T-MOBILE GPS SECTOR (3) SECTORS TOTAL) -EXISTING PENTHOUSE -EXISTING T-MOBILE PANEL ANTENNAS TO REMAIN (TYP. OF (2) PER SECTOR (3) SECTORS TOTAL) PROPOSED T-MOBILE PANEL
ANTENNA TO REPLACE EXISTING
PANEL ANTENNA (TYP. OF (1)
PER SECTOR (3) SECTORS TOTAL) - PROPOSED (4) T-MOBILE GANG DC CABLES ((1) FOR ALPHA SECTOR (2) FOR BETA SECTOR AND (1) FOR GAMMA SECTOR) EXISTING T-MOBILE EQUIPMENT CABINET (TYP.) -EXISTING BUILDING 9 GROUND LEVEL

NOTE: INFINICY ENGINEERING HAS NOT EVALUATED THE

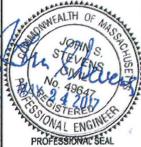
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317-000 PROJECT NO: DRAWN BY: JDL CHECKED BY: ASW



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NOTE: IF DRAWINGS ARE 22"x34", USE GRAPHICAL SCALE AND/OR 1/2 TIMES OF THE NOTED SCALE.

> SITE NUMBER: 4BN0029B

SITE NAME: BN029/955 MASS AVE

956 MASSACHUSETTS AVENUE CAMBRIDGE, MA 02139

SHEET TITLE

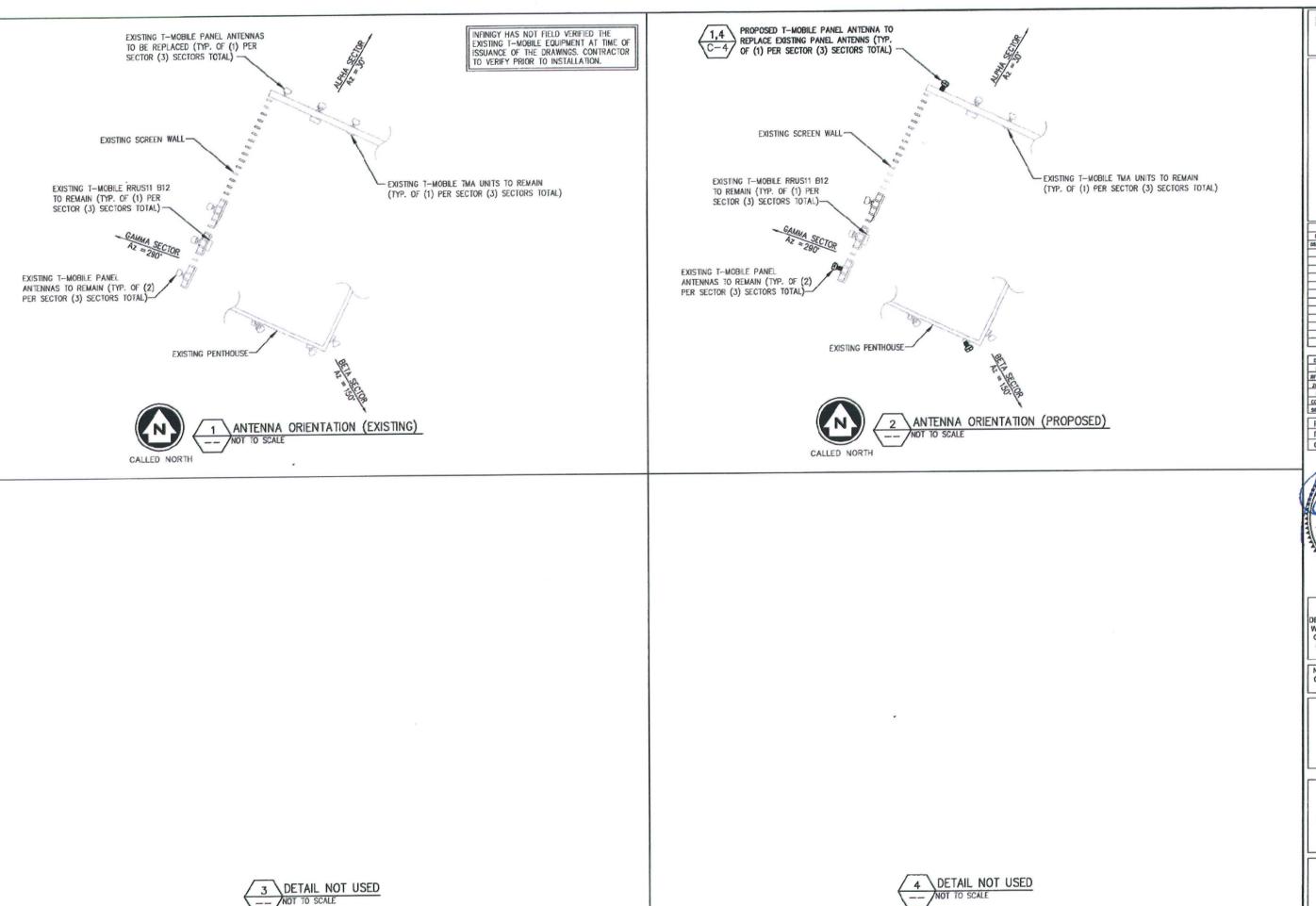
EQUIPMENT PLAN & ELEVATION

SHEET NUMBER

C-2

SHEET 3 OF 8 SHEETS

TOWER ELEVATION



T - Mobile-

400 STREET FOAD

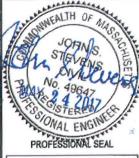
VEINIGY®

1033 Watervlet Shaker Rd
Albary, NY 12205
College A (516) 880-0790

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955 MASSACHUSETTS AVENUE CAMBRIDGE, MA 02139

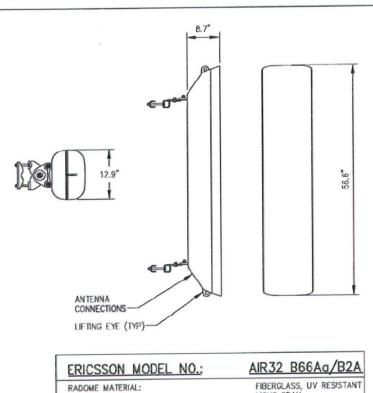
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ANTENNA ORIENTATION & RF SCHEDULE

SHEET NUMBER

C-3

SHEET 4 OF 8 SHEETS

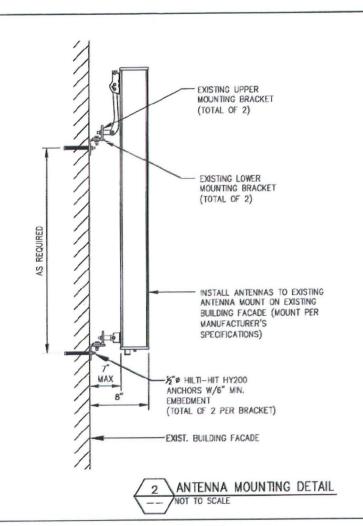


RADOME COLOR: DIMENSIONS, HxWxD: WEIGHT, W/ PRE-MOUNTED BRACKETS: CONNECTOR:

LIGHT GRAY 56.6"X12.9"x8.7"

132.2 LBS (2) 7-16 DIN FEMALE

ANTENNA DETAIL



STRUCTURAL NOTES:

1. SPECIFICATIONS / CODES:

-CONCRETE WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE ACI CODE.
-STEEL WORK SHALL BE PERFORMED IN ACCORDANCE WITH AISC STEEL CONSTRUCTION MANUAL,

-WELDING SHALL BE PERFORMED IN ACCORDANCE WITH AMERICAN WELDING SOCIETY (AWS) D1.1-92 "STRUCTURAL WELDING" CODE-STEEL.

-REINFORCING STEEL SHALL BE PLACED IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI), "MANUAL OF STANDARD PRACTICE."

2. MATERIALS:

-CONCRETE: fc' - 3000psi. (MIN. U.N.O.)
-REINFORCING STEEL: ASTM A615, GRADE 60.

-WIRE MESH: ASTM A185.

-STRUCTURAL STEEL: ASTM A36. -ELECTRODES FOR WELDING: E 70xx.

-GALVANIZING: ASTM A153 (BOLTS) OR ASTM A123 (SHAPES, PLATES).

-EXPANSION BOLTS: HILTI KWIK BOLT II, STAINLESS STEEL, 3/4" Øx43/4" EMBEDMENT OR AN APPROVED

NOTES



TAG #2

#1

TAG #2

METALLIC TAG NOTES:

1. TWO METALLIC TAGS SHALL BE ATTACHED AT EACH END

OF EVERY CABLE LONGER THAN (3) THREE FEET.

2. CABLES LESS THAN (3) THREE FEET WILL HAVE TWO METALLIC TAGS ATTACHED AT THE CENTER OF THE CABLE. 3. TAGS WILL BE FASTENED WITH STAINLESS STEEL ZIP TIES

APPROPRIATE FOR CABLE DIAMETER. 4. STANDARDIZED METALLIC TAG KITS WILL BE ASSEMBLED WITH TAGS ALREADY ENGRAVED TO ACCOMODATE ALL CONFIGURATIONS.

> METALLIC TAG DETAIL NOT TO SCALE



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PROJECT NO: 317-000 DRAWN BY: JDL CHECKED BY: ASW



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955 MASSACHUSETTS AVENUE CAMBRIDGE, MA 02139

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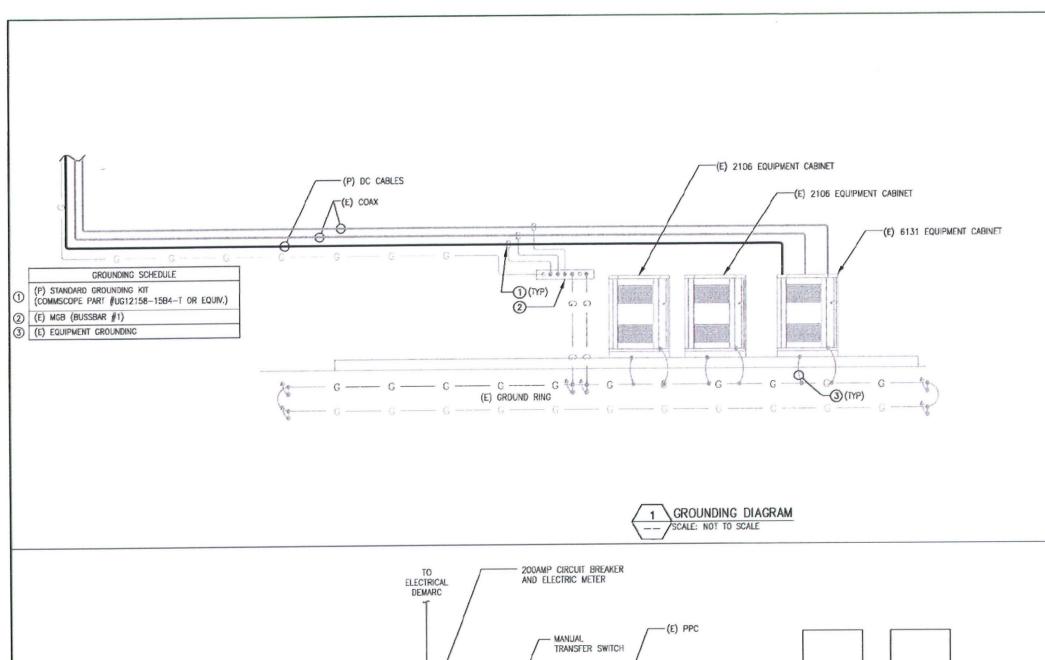
EQUIPMENT **SPECIFICATIONS**

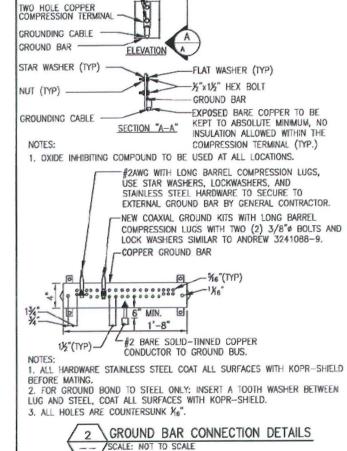
SHEET NUMBER

SHEET 5 OF 8 SHEETS







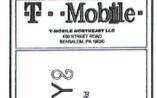


STAINLESS STEEL HARDWARE-

CONTRACTOR NOTE: CONTRACTOR TO VERIFY THAT THE EXISTING CONDUITS AND WIRE SIZES ARE ADEQUATE FOR THE PROPOSED LOADING IN ACCORDANCE WITH NEC AND INCLUDE ELECTRICAL UPGRADES IN THE SCOPE OF WORK AS REQUIRED.

INFINITE HAS NOT CONDUCTED AN ELECTRICAL LOAD STUDY FOR THIS SITE. CONTRACTOR IS TO VERIFY EXISTING

ELECTRICAL LOADING PRIOR TO CONSTRUCTION TO ENSURE EXISTING INCOMING SERVICE CAPACITY. ALL ELECTRICAL INSTALLATION IS TO COMPLY WITH NEC, ADOPTED VERSION.



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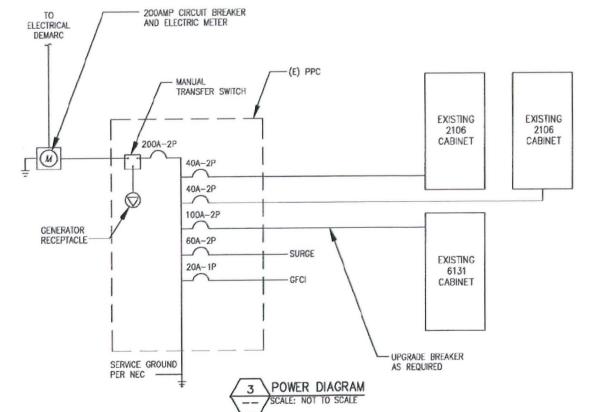
955 MASSACHUSETTS AVENUE CAMBRIDGE, MA 02139

SHEET TITLE

GROUNDING & POWER **DIAGRAMS**

SHEET NUMBER

SHEET 6 OF 8 SHEETS



CONTRACTOR TO VERIFY LATEST T-MOBILE RFDS

T-MOBILE NORTHEAST LLC

INSTINIGY®
1033 Watervilet Shaker Rd
Albary, NY 12205
Rome # Give Processor

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> SITE NUMBER: 4BN0029B

SITE NAME: BN029/955 MASS AVE

955 MASSACHUSETTS AVENUE CAMBRIDGE, MA 02139

SHEET TITLE

COAX/FIBER PLUMBING DIAGRAM

SHEET NUMBER

E-2

SHEET 7 OF 8 SHEETS

				CONFIGURATION	COAX/FIBER	PLUMBING	DIAGRAM
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ELECTRICAL NOTES:

WORK INCLUDED

- 1. INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, PLANT SERVICES AND ADMINISTRATIVE TASKS REQUIRED TO COMPLETE AND MAKE OPERABLE THE ELECTRICAL WORK SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN, INCLUDING BUT NOT LIMITED TO THE FOLLOWING
- A PREPARE AND SUBMIT SHOP DRAWINGS, DIAGRAMS AND
- B. PROCURE ALL NECESSARY PERMITS AND APPROVALS AND PAY ALL REQUIRED FEES AND CHARGES IN CONNECTION WITH THE WORK OF THIS CONTRACT.
- C. SUBMIT AS-BUILT DRAWINGS, OPERATING AND MAINTENANCE NSTRUCTIONS AND MANUALS.
- D. EXECUTE ALL CUTTING, DRILLING, ROUGH AND FINISH PATCHING OF EXISTING OR NEWLY INSTALLED CONSTRUCTION REQUIRED FOR THE WORK OF THIS CONTRACT. FOR SLAB PENETRATIONS THROUGH POST TENSION SLABS, X-RAY EXACT AREA OF PENETRATION PRIOR TO PERFORMING WORK. COORDINATE ALL X-RAY WORK WITH BUILDING ENGINEER.
- E. PROVIDE HANGERS, SUPPORTS, FOUNDATIONS, STRUCTURAL FRAMING SUPPORTS, AND BASES FOR CONDUIT AND EQUIPMENT PROVIDED OR INSTALLED UNDER THE WORK OF HIS CONTRACT PROMOF COUNTER FLASHING SLEEVES AND
- F. MAINTAIN ALL EXISTING ELECTRICAL SERVICES IN THE BUILDING AREAS NOT AFFECTED BY THE ALTERATION DURING THE PROGRESS OF THE WORK INCLUDING PROVIDING ALI TEMPORARY JUMPERS, CONDUITS, CAPS, PROTECTIVE DEVICES. CONNECTIONS AND EQUIPMENT REQUIRED. PROVIDE TEMPORARY LIGHT AND POWER FOR CONSTRUCTION PLIRPOSES
- IS THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS TO CALL FOR AN INSTALLATION THAT IS COMPLETE IN EVERY RESPECT. IT IS NOT THE INTENT TO GIVE EVERY DETAIL ON THE DRAWINGS AND IN THE SPECIFICATIONS. IF AN ITEM OF WORK IS INDICATED IN THE DRAWINGS. IT IS CONSIDERED SUFFICIENT FOR INCLUSION IN THE CONTRACT, FURNISH AND INSTALL ALL MATERIAL AND EQUIPMENT USUALLY FURNISHED OR NEEDED TO MAKE A COMPLETE INSTALLATION WHETHER OR NOT SPECIFICALLY MENTIONED IN THE CONTRACT DOCUMENTS.

GENERAL REQUIREMENTS

- PROVIDE ALL WORK IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC) AND LOCAL AND STATE ELECTRICAL
- 2. THE ELECTRICAL PLANS ARE DIAGRAMMATIC ONLY. REFER TO THE ARCHITECTURAL PLANS FOR THE EXACT DIMENSIONS OF
- 3. LOAD CALCULATIONS ARE BASED ON EXISTING BUILDING INFORMATION/DRAWINGS PROVIDED TO ENGINEERING. CONTRACTOR IS TO VERIFY ALL EXISTING RATINGS AND LOADS PRIOR TO PURCHASING OF SPECIFIED FOUIPMENT FOR COMPLIANCE TO NEC. CONTRACTOR TO NOTIFY ENGINEER OF ANY DISCREPANCIES AND REQUEST FURTHER DIRECTION BY **FNGINFFR**
- 4. EXISTING BUILDING EQUIPMENT IS NOTED ON THE DRAWINGS. NEW OR RELOCATED EQUIPMENT IS SHOWN WITH SOLID LINES. FUTURE EQUIPMENT (NOT IN THIS CONTRACT) IS DEPICTED WITH SHADED LINES. REQUEST CLARIFICATION OF DRAWINGS OR OF SPECIFICATIONS PRIOR TO PRICING OR INSTALLATION.

- 5. GENERAL

 A. AFTER CAREFULLY STUDYING THE DRAWINGS AND SPECIFICATIONS, AND BEFORE SUBMITTING THE PROPOSAL MAKE A MANDATORY SITE VISIT TO ASCERTAIN CONDITIONS OF THE SITE, AND THE NATURE AND EXACT QUANTITY OF WORK TO BE PERFORMED. NO EXTRA COMPENSATION WILL BE ALLOWED FOR FAILURE TO NOTIFY THE OWNER, IN WRITING, OF ANY DISCREPANCIES THAT WAY HAVE BEEN NOTED BETWEEN THE EXISTING CONDITIONS AND THE DRAWINGS AND SPECIFICATIONS
- B. VERIFY ALL MEASUREMENTS AT THE SITE AND BE RESPONSIBLE FOR CORRECTNESS OF SAME.

 6. QUALITY, WORKMANSHIP, MATERIALS AND SAFETY
- PROVIDE NEW MATERIALS AND EQUIPMENT OF A DOMESTIC PRODUCTION AND MANUFACTURE OF SPECIFIED MATERIALS AND EQUIPMENT, WHERE UL, OR OTHER AGENCY, HAS ESTABLISHED STANDARDS FOR WATERIALS, PROVIDE MATERIALS WHICH ARE LISTED AND LABELED ACCORDINGLY. THE COMMERCIALLY STANDARD ITEMS OF EQUIPMENT AND THE SPECIFIC NAMES MENTIONED HEREIN ARE INTENDED FOR THE
- PROPER FUNCTIONING OF THE WORK.

 WORK SHALL BE PERFORMED BY WORKMEN SKILLED IN THE TRADE REQUIRED FOR THE WORK. INSTALL MATERIALS AND EQUIPMENT TO PRESENT A NEAT APPEARANCE WHEN COMPLETED AND IN ACCORDANCE WITH THE APPROVE RECOMMENDATIONS OF THE MANUFACTURER AND IN ACCORDANCE WITH CONTRACT DOCUMENTS.
 C. PROVIDE LABOR, MATERIALS, APPARATUS AND APPLIANCES
- ESSENTIAL TO THE FUNCTIONING OF THE SYSTEMS DESCRIBED OR INDICATED HEREIN, OR WHICH MAY BE REASONABLY IMPLIED AS ESSENTIAL WHENEVER MENTIONED IN THE CONTRACT DOCUMENT OR NOT.
- D. MAKE WRITTEN REQUESTS FOR SUPPLEMENTARY INSTRUCTIONS TO ARCHITECT/ENGINEER IN CASE OF DOUBT AS TO WORK INTENDED OR IN EVENT OF NEED FOR EXPLANATION THEREOF.
- PERFORMANCE AND WATERIAL REQUIREMENTS SCHEDULED OR SPECIFIED ARE MINIMUM STANDARD ACCEPTABLE. THE RICHT TO JUDGE THE QUALITY OF EQUIPMENT THAT DEVATES FROM THE CONTRACT DOCUMENT REMAINS SOLELY WITH ARCHITECT/ENGINEER, CONTRACT DOCUMENT OR NOT.

. GUARANTEE MATERIALS, PARTS AND LABOR FOR WORK FOR ONE YEAR FROM THE DATE OF ISSUANCE OF OCCUPANCY PERMIT. DURING THAT PERIOD, MAKE GOOD FAULTS OR IMPERFECTIONS THAT MAY ARISE DUE TO DEFECTS OR OMISSIONS IN MATERIALS OR WORKMANSHIP WITH NO ADDITIONAL COMPENSATION AND AS DIRECTED BY ARCHITECT.

CLEANING

- 1. REMOVE ALL CONSTRUCTION DEBRIS RESULTING FROM THE
- 2. CLEAN EQUIPMENT AND SYSTEMS FOLLOWING THE COMPLETION OF THE PROJECT TO THE SATISFACTION OF THE ENGINEER.
- COORDINATION AND SUPERVISION CAREFULLY LAY OUT ALL WORK IN ADVANCE TO AVOID UNNECESSARY CUTTING, CHANNELING, CHASING OR DRILLING OF FLOORS, WALLS, PARTITIONS, CEILINGS OR OTHER SURFACES. WHERE SUCH WORK IS NECESSARY, HOWEVER, PATCH AND REPAIR THE WORK IN AN APPROVED MANNER BY SKILLED MECHANICS AT NO ADDITIONAL COST TO THE OWNER, RENDER FULL COOPERATION TO OTHER TRADES WHERE WORK WILL, BE INSTALLED IN CLOSE PROXIMITY TO WORK OF OTHER TRADES. ASSIST IN WORKING OUT SPACE CONDITIONS. IF WORK IS INSTALLED BEFORE COORDINATION WITH OTHER TRADES, OR CAUSES INTERFERENCE, MAKE CHANGES NECESSARY TO

- A. UPON COMPLETION OF THE WORK, FURNISH TO THE OWNER "AS-RUILT" DRAWINGS.
- 2. SERVICE MANUALS: A. UPON COMPLETION OF THE WORK, FULLY INSTRUCT T-MOBILE AS TO THE OPERATION AND MAINTENANCE OF ALL MATERIAL, EQUIPMENT AND SYSTEMS.
- B. PROVIDE 3 COMPLETE BOUND SETS OF INSTRUCTIONS FOR OPERATING AND MAINTAINING ALL SYSTEMS AND EQUIPMENT

CUTTING AND PATCHING

- 1. PROVIDE ALL CUTTING, DRILLING, ROUGH AND FINISH PATCHING
- REQUIRED TO COMPLETE THE WORK.
 OBTAIN OWNER APPROVAL PRIOR TO CUTTING THROUGH FLOORS OR WALLS FOR PIPING OR CONDUIT

TESTS, INSPECTION AND APPROVAL

- 1. BEFORE ENERGIZING ANY ELECTRICAL INSTALLATION, INSPECT EACH UNIT IN DETAIL TIGHTEN ALL BOLTS AND CONNECTIONS (TORQUE—TIGHTEN WHERE REQUIRED) AND DETERMINE THAT AL COMPONENTS ARE AUGNED, AND THE EQUIPMENT IS IN SAFE, OPERATIONAL CONDITION.
 PROVIDE THE COMPLETE ELECTRICAL SYSTEM FREE OF GROUND
- FAULTS AND SHORT CIRCUITS SUCH THAT THE SYSTEM WILL OPERATE SATISFACTORILY UNDER FULL LOAD CONDITION WITHOUT EXCESSIVE HEATING AT ANY POINT IN THE SYSTEM

- 1. DO NOT LEAVE ANY WORK INCOMPLETE NOR ANY HAZARDOUS SITUATIONS CREATED WHICH WILL AFFECT THE LIFE OR SAFETY OF THE PUBLIC AND/OR BUILDING CCCUPANTS, DO NOT INTERFERE WITH OR CUTOFF ANY OF THE EXISTING SERVICES WITHOUT THE OWNER'S WRITTEN PERMISSION.
- 2. WHEN NECESSARY TO TEMPORARILY DISCONNECT ANY EXISTING BUILDING UTILITIES AND SERVICE SYSTEMS, INCLUDING FEEDER OR BRANCH CIRCUITING SUPPLYING EXISTING FACILITIES, CONFER WITH THE OWNER AND ARRANGE THE PERIOD OF INTERRUPTION FOR A TIME MUTUALLY AGREED UPON SHUTDOWN NOTE: SCHEDULE AND NOTIFY OWNER 48 HOURS PRIOR TO SHUTDOWN ALL SHUTDOWN WORK TO BE SCHEDULED AT A TIME CONVENIENT TO OWNER

- 1. ROUTE ALL GROUNDING CONDUCTORS AS SHOWN ON CONDUIT/GROUNDING RISER
- 2. ROUTE 500 KCMIL CU. THHN CONDUCTOR FROM THE MGB LOCATION TO BUILDING STEEL VERIFY BUILDING STEEL IS EFFECTIVELY GROUNDED PER NEC TO THE MAIN SERVICE
- 3. MAKE ALL GROUND CONNECTIONS FROM MGB TO ELECTRICAL EQUIPMENT WITH 2 HOLE, CRIMP TYPE, BURNDY COMPRESSION TERMINATIONS, SIZED AS REQUIRED.
- 4. USE 1 HOLE, CRIMP TYPE, BURNDY COMPRESSIONS TERMINATIONS, SIZED AS REQUIRED, AT EQUIPMENT CROUND CONNECTIONS.
- 5. HIRE AN INDEPENDENT LAB TO PERFORM THE SPECIFIED OHMS TESTING. PROVIDE 4 SETS OF THE CERTIFIED DOCUMENTS TO THE OWNER FOR VERIFICATION PRIOR TO THE PROJECT COMPLETION.

- 1. ALL WIRING TO BE INSTALLED IN CONDUIT SYSTEMS IN
- ACCORDANCE WITH THE FOLLOWING:
 A. EXTERIOR FEEDERS AND CONTROL, WHERE UNDERGROUND, TO BE IN SCH 40 PVC.
- B. EXTERIOR, ABOVE GROUND POWER CONDUITS TO BE GALVANIZED RIGIO STEEL (RGS).
 C. ALL TELECOMMUNICATION CONDUITS, INTERIOR/EXTERIOR, TO
- D. INSTALL PULL ROPES IN ALL NEW EMPTY CONDUITS INSTALLED ON THIS PROJECT.

 E. ALL TELECOM CONDUITS AND PULL BOXES INSTALLED ON THIS PROJECT TO BE LABELED "T-MOBILE". OWNER WILL
- PROVIDE LABELS FOR CONTRACTOR TO INSTALL
- F. INTERIOR FEEDERS TO BE INSTALLED IN E.M.T. WITH STEEL G. MINIMUM SIZE CONDUIT TO BE 1/4" TRADE SIZE
- UNLESS OTHERWISE INDICATED ON THE DRAWINGS. H. FINAL CONNECTIONS TO MOTORS AND VIBRATING EQUIPMENT TO BE INSTALLED IN LIQUID-TIGHT FLEXIBLE METAL CONDUIT.
- I. CONDUIT TO BE RUN CONCEALED IN CEILINGS, FINISHED AREAS OR DRYWALL PARTITIONS, UNLESS OTHERWISE NOTED.

 J. THE ROUTING OF CONDUITS INDICATED ON THE DRAWINGS IS
- DIAGRAMMATIC, BEFORE INSTALLING ANY WORK, EXAMINE THE WORKING LAYOUTS AND SHOP DRAWINGS OF THE OTHER TRADES TO DETERMINE THE EXACT LOCATIONS AND
- K. ALL EXTERIOR MOUNTING HARDWARE TO BE GALVANIZED STEEL COORDINATE WITH BUILDING ENGINEER PRIOR TO

- L. PENETRATIONS OF WALLS, FLOORS AND ROOFS, FOR THE PASSAGE OF ELECTRICAL RACEWAYS, TO BE PROPERLY SEALED AFTER INSTALLATION OF RACEWAYS SO AS TO MAINTAIN THE STRUCTURAL OR WATERPROOF INTEGRITY OF THE WALL, FLOOR OR ROOF SYSTEM TO BE PENETRATED SEAL ALL CONDUIT PENETRATIONS THROUGH FIRE OR SMOKE RATED WALLS, CEILINGS OR SMOKE TIGHT CORRIDOR PARTITIONS TO MAINTAIN PROPER RATING OF WALL OF CEILING.
- W. PROVIDE ALL CONDUIT ENDS WITH INSULATED METALLIC GROUNDING BUSHINGS.
- N. CONDUIT TO BE SUPPORTED AT MAXIMUM DISTANCE OF -O", OR AS REQUIRED BY NEC, IN HORIZONTAL AND VERTICAL DIRECTIONS.
- O. PROVIDE STAINLESS STEEL BLANK COVER PLATES FOR ALL JUNCTION BOXES AND/OR OUTLET BOXES NOT USED IN EXPOSED AREAS, PROVIDE ALL OTHER UNUSED BOXES WITH
- STANDARD STEEL COVER PLATES.
 P. WHERE APPLICABLE, PROVIDE ROOFTOP CONDUIT SUPPORT SYSTEM, CONFORMING TO ROOFTOP WARRANTY REQUIREMENTS,

WIRES AND CARLES

- 1. CONTRACTOR TO COORDINATE WITH EQUIPMENT SUPPLIER AND VENDOR FOR EXACT EQUIPMENT OVER-CURRENT PROTECTION VOLTAGE, WIRE SIZE AND PLUG CONFIGURATION, IF APPLICABLE,
- 2. ALL EQUIPMENT/DEVICES TO BE PROVIDED WITH INSULATED GROUND CONDUCTOR.

 3. ALL WIRE AND CABLE TO BE 600VOLT, COPPER, WITH THWN/
- THIN INSULATION, EXCEPT AS NOTED.

 4. WIRE FOR POWER AND LIGHTING WILL NOT BE LESS THAN NO.
- 12AWG, ALL WIRE NO. 8 AND LARGER TO BE STRANDED.
- CONTROL WIRING IS NOT TO BE LESS THAN NO. 144NG, FLEXIBLE IN SINGLE CONDUCTORS OR MULTI-CONDUCTOR CARLES CONTROL WIRING WILL CONSIST OF MULTI-CONDUCTOR CABLES WHEREVER POSSIBLE. CABLES TO BE PROVIDED WITH AN OVERALL FLAME-RETARDANT, EXTRUDED JACKET AND RATED FOR PLENUM USE. ALL CONTROL WIRE TO BE 600VOLT RATED.

 8. WIRE PREVIOUSLY PULLED INTO CONDUIT IS CONSIDERED USED
- AND IS NOT TO BE RE-PULLED.
- 7. HOME RUNS AND BRANCH CIRCUIT WIRING FOR 20A, 120V CIRCUITS: LENGTH (FT.) HOME RUN WIRE SIZE
- NO. 12 NO. 10 51 TO 100 VOLTAGE DROP IS NOT TO EXCEED 3%.
- 9. MAKE ALL CONNECTIONS WITH UL APPROVED, SOLDERLESS, PRESSURE TYPE INSULATED CONNECTORS: SCOTCHLOK OR AND APPROVED EQUAL.
- . ALL RECEPTACLES INSTALLED IN THIS PROJECT TO BE GROUNDING TYPE, WITH GROUNDING PIN SLOT CONNECTED TO DEVICE GROUND SCREW FOR GROUND WIRE CONNECTION.
- DISCONNECT SWITCHES AND FUSES

 1. DISCONNECT SWITCHES TO BE VOLTAGE—RATED TO SUIT THE CHARACTERISTICS OF THE SYSTEM FROM WHICH THEY ARE SUPPLIED.
- 2. PROMDE HEAVY-DUTY, METAL-ENCLOSED, EXTERNALLY-OPERATED DISCONNECT SWITCHES, FUSED OR UNFUSED, OF SUCH TYPE AND SIZE AS REQUIRED TO PROPERLY PROTECT OR DISCONNECT THE LOAD FOR WHICH THEY ARE INTENDED.
- 3. PROVIDE NEMA 1 DISCONNECT SWITCHES FOR INTERIOR INSTALLATION, NEWA 3R FOR EXTERIOR INSTALLATION.
- DISCONNECT SWITCHES TO BE MANUFACTURED BY:
 A. GENERAL ELECTRIC COMPANY B. SQUARE-D
- PROVIDE RK-1 TYPE FUSES, UNLESS NOTED OTHERWISE. INSTALLATION 1. INSTALL DISCONNECT SWITCHES WHERE INDICATED ON
- 2. INSTALL FUSES IN FUSIBLE DISCONNECT SWITCHES, FUSES
- MUST MATCH IN TYPE AND RATING.

 3. FUSES TO BE MOUNTED SO THAT THE LABELS SHOWING THEIR RATINGS CAN BE READ WITHOUT REQUIRING FUSE REMOVAL
- 4. FURNISH AND DEPOSIT SPARE FUSES AT THE JOB SITE AS FOLLOWS:
- THREE SPARES FOR EACH TYPE AND SIZE, IN EXCESS OF 60A, USED FOR INITIAL FUSING.

 B. TEN PERCENT SPARES FOR EACH TYPE AND SIZE, UP TO
- AND INCLUDING 60A, USED FOR INITIAL FUSING. IN NO CASE WILL LESS THAN THREE FUSES OF ONE PARTICULAR TYPE AND SIZE BE FURNISHED.

GENERAL NOTES:

INTENT

- 1. THESE SPECIFICATIONS AND CONSTRUCTION DRAWINGS ACCOMPANYING THEM DESCRIBE THE WORK TO BE DONE AND THE MATERIALS TO BE FURNISHED FOR CONSTRUCTION.
- THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO BE FULLY EXPLANATORY AND SUPPLEMENTARY. HOWEVER, SHOULD ANYTHING BE SHOWN, INDICATED, OR SPECIFIED ON ONE AND NOT THE OTHER, IT SHALL BE DONE THE SAME AS IF SHOWN INDICATED OR SPECIFIED IN BOTH
- AND MATERIALS REASONABLY NECESSARY FOR THE PROPER
 EXECUTION AND COMPLETION OF THE WORK AS STIPULATED IN
- 4. THE PURPOSE OF THE SPECIFICATIONS IS TO INTERPRET THE INTENT OF THE DRAWINGS AND TO DESIGNATE THE METHOD OF THE PROCEDURE, TYPE AND QUALITY OF MATERIALS REQUIRED TO COMPLETE THE WORK.
- IN COMPLETE THE WORK.

 MINOR DEVATIONS FROM THE DESIGN LAYOUT ARE ANTICIPATED AND SHALL BE CONSIDERED AS PART OF THE WORK. NO CHANGES THAT ALTER THE CHARACTER OF THE WORK WILL BE MADE OR PERMITTED BY THE OWNER WITHOUT ISSUING A CHANGE ORDER.

CONFLICTS

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATIONS OF ALL MEASUREMENTS AT THE SITE BEFORE ORDERING ANY MATERIALS OR DOING ANY WORK, NO EXTRA CHARGE OR COMPENSATION SHALL BE ALLOWED DUE TO DIFFERENCE BETWEEN ACTUAL DIMENSIONS AND DIMENSIONS INDICATED ON THE CONSTRUCTION DRAWINGS. ANY SUCH DISCREPANCY IN DIMENSION WHICH MAY BE FOUND SHALL BE SUBMITTED TO THE OWNER FOR CONSIDERATION BEFORE THE CONTRACTOR PROCEEDS WITH THE WORK IN THE AFFECTED AREAS.
- THE BIDDER, IF AWARDED THE CONTRACT, WILL NOT BE ALLOWED ANY EXTRA COMPENSATION BY REASON OF ANY MATTER OR THING CONCERNING SUCH BIDDER MIGHT HAVE FULLY INFORMED THEMSELVES PRIOR TO THE BIDDING.
- 3. NO PLEA OF IGNORANCE OF CONDITIONS THAT EXIST. OR OF DIFFICULTIES OR CONDITIONS THAT MAY BE ENCOUNTERED, OR OF ANY OTHER RELEVANT MATTER CONCERNING THE WORK TO BE PERFORMED IN THE EXECUTION OF THE WORK WILL BE ACCEPTED AS AN EXCUSE FOR ANY FAILURE OR DMISSION THE PART OF THE CONTRACTOR TO FULFILL EVERY DETAIL OF ALL THE REQUIREMENTS OF THE CONTRACT DOCUMENTS

CONTRACTS AND WARRANTIES

- 1. CONTRACTOR IS RESPONSIBLE FOR APPLICATION AND PAYMENT OF CONTRACTOR LICENSES AND BONDS.
- 2. SEE MASTER CONTRACTION SERVICES AGREEMENT FOR ADDITIONAL DETAILS.

1. ALL MATERIALS MUST BE STORED IN A LEVEL AND DRY FASHION AND IN A MANNER THAT DOES NOT NECESSARILY OBSTRUCT THE FLOW OF OTHER WORK. ANY STORAGE METHOD MUST MEET ALL RECOMMENDATIONS OF THE ASSOCIATED MANUFACTURER

- 1. THE CONTRACTORS SHALL AT ALL TIMES, KEEP THE SITE FREE FROM ACCUMULATION OF WASTE MATERIALS OR RUBBISH CAUSED BY THEIR EMPLOYEES AT WORK AND AT THE COMPLETION OF THE WORK. THEY SHALL REMOVE ALL RUBBISH FROM AND ABOUT THE BUILDING AREA, INCLUDING ALL THEIR TOOLS, SCAFFOLDING AND SURPLUS MATERIALS AND SHALL LEAVE THEIR WORK CLEAN AND READY TO USE.
- A VISUALLY INSPECT EXTERIOR SURFACES AND REMOVE ALL TRACES OF SOIL, WASTE MATERIALS, SMUDGES AND OTHER FOREIGN MATTER.
- B. REMOVE ALL TRACES OF SPLASHED WATERIALS FROM ADJACENT SURFACES,
 C. IF NECESSARY, TO ACHIEVE A UNIFORM DEGREE OF
- CLEANLINESS, HOSE DOWN THE EXTERIOR OF THE STRUCTURE. 3. INTERIOR VISUALLY INSPECT INTERIOR SURFACE AND REMOVE ALL
- TRACES OF SOIL, WASTE MATERIALS, SMUDGES AND OTHER FOREIGN MATTER FROM WALLS, FLOOR, AND CEILING. B. REMOVE ALL TRACES OF SPLASHED MATERIALS FROM
- ADJACENT SURFACES. C. REMOVE PAINT DROPPINGS, SPOTS, STAINS, AND DIRT FROM

CHANGE ORDER PROCEDURE-

1. REFER TO SECTION 17 OF SIGNED MCSA: SEE PROFESSIONAL SERVICE AGREEMENT FOR MCSA.

RELATED DOCUMENTS AND COORDINATION

- 1. GENERAL CARPENTRY, ELECTRICAL AND ANTENNA DRAWINGS ARE INTERRELATED. IN PERFORMANCE OF THE WORK, THE CONTRACTOR MUST REFER TO ALL DRAWINGS, ALL COORDINATION TO BE THE RESPONSIBILITY OF THE CONTRACTOR
- 1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AS REQUIRED AND LISTED IN THESE SPECIFICATIONS TO THE OWNER FOR
- 2. ALL SHOP DRAWINGS SHALL BE REVIEWED, CHECKED AND ECTED BY CONTRACTOR PRIOR TO SUBMITTAL TO THE

- PRODUCTS AND SUBSTITUTIONS

 1. SUBMIT 3 COPIES OF EACH REQUEST FOR SUBSTITUTION, IN EACH REQUEST, IDENTIFY THE PRODUCT OR FABRICATION OR INSTALLATION METHOD TO BE REPLACED BY THE SUBSTITUTION. INCLUDE RELATED SPECIFICATION SECTION AND DRAWING NUMBERS AND COMPLETE DOCUMENTATION SHOWING COMPLIANCE WITH THE REQUIREMENTS FOR SUBSTITUTIONS
- 2. SUBMIT ALL NECESSARY PRODUCT DATA AND CUT SHEETS WHICH PROPERLY INDICATE AND DESCRIBE THE ITEMS, PRODUCTS AND MATERIALS BEING INSTALLED, THE CONTRACTOR SHALL IF DEFINED NECESSARY BY THE DWNER, SUBMIT ACTUAL SAMPLES TO THE OWNER FOR APPROVAL IN LIEU OF CUT

ARCHITECTURAL SYMBOLS

###

DETAIL REFERENCE KEY

DRAWING DETAIL NUMBER

LISHEET NUMBER OF DETAIL

REFFR TO

RE: 2/A-3

 ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE LOCAL
STATE AND FEDERAL REGULATIONS, THESE SHALL INCLUDE, BUT NOT BE LIMITED TO THE APPLICABLE CODES SET FORTH BY THE LOCAL GOVERNING BODY, SEE "CODE COMPLIANCE" T-1.

- 1. BEFORE THE COMMENCEMENT OF ANY WORK, THE CONTRACTOR WILL ASSIGN A PROJECT MANAGER WHO WILL ACT AS A SINGLE POINT OF CONTACT FOR ALL PERSONNEL INVOLVED IN THIS PROJECT, THIS PROJECT MANAGER WILL DEVELOP A MASTER SCHEDULE FOR THE PROJECT WHICH WILL BE SUBMITTED TO THE OWNER PRIOR TO THE COMMENCEMENT OF ANY WORK.
- 2. SLIBMIT A BAR TYPE PROCRESS CHART, NOT MORE THAN 3 DAYS AFTER THE DATE ESTABLISHED FOR COMMENCEMENT THE WORK ON THE SCHEDULE, INDICATING A TIME BAR FOR EACH MAJOR CATEGORY OR UNIT OF WORK TO BE PERFORMED AT THE SITE, PROPERLY SEQUENCED AND COORDINATED WITH OTHER ELEMENTS OF WORK AND SHOWING COMPLETION OF THE WORK SUFFICIENTLY IN ADVANCE OF THE DATE ESTABLISHED FOR SUBSTANTIAL COMPLETION OF THE WORK.
- 3 PRICE TO COMMENCING CONSTRUCTION THE OWNER SHALL SCHEDULE AN ON-SITE MEETING WITH ALL MAJOR PARTIES. THIS WOULD INCLUDE, BUT NOT LIMITED TO, THE OWNER, PROJECT MANAGER, CONTRACTOR, LAND OWNER REPRESENTATIVE, LOCAL TELEPHONE COMPANY, TOWER ERECTION FOREMAN (IF SUBCONTRACTE()
- CONTRACTOR SHALL BE EQUIPPED WITH SOME MEANS OF CONSTANT COMMUNICATIONS, SUCH AS A MOBILE PHONE OR A AFFPER. THIS EQUIPMENT WILL NOT BE SUPPLIED BY THE WINER, NOR WILL WIRELESS SERVICE BE ARRANGED.
- 5. DURING CONSTRUCTION, CONTRACTOR MUST ENSURE THAT FMPLOYEES AND SURCONTRACTORS WEAR HARD HATS AT ALL TIMES. CONTRACTOR WILL COMPLY WITH ALL WPCS SAFETY REQUIREMENTS IN THEIR AGREEMENT.
- PROVIDE WRITTEN DAILY UPDATES ON SITE PROGRESS TO THE 7. COMPLETE INVENTORY OF CONSTRUCTION MATERIALS AND
- EQUIPMENT IS REQUIRED PRIOR TO START OF CONSTRUCTION.

 8. NOTIFY THE OWNER/PROJECT MANAGER IN WRITING NO LESS THAN 48 HOURS IN ADVANCE OF CONCRETE POURS, TOWER ERECTIONS, AND EQUIPMENT CABINET PLACEMENTS.

INSURANCE AND RONDS

- 1. CONTRACTOR, AT THEIR OWN EXPENSE, SHALL CARRY AND MAINTAIN, FOR THE DURATION OF THE PROJECT, ALL AS REQUIRED AND LISTED, AND SHALL NOT COMMENCE WITH THEIR WORK UNTIL THEY HAVE PRESENTED AN ORIGINAL CERTIFICATE OF INSURANCE STATING ALL COVERAGES TO THE OWNER, REFER TO THE WASTER AGREEMENT FOR REDURED INSURANCE LIMITS.
- 2. THE OWNER SHALL BE NAMED AS AN ADDITIONAL INSURED ON
- ALL POLICIES. 3. CONTRACTOR MUST PRO

NTS

OC OPP

(P) PCS

PPC

SIM

TOC

TOM TYP VIF

UON WWF W/

OVIDE PROOF OF	INSURANCE.	CHECK
	ABBREVIATIONS	7 4
ADJ	ADJUSTABLE	1 /8
AGL	ABOVE GROUND LINE	1 37 3
&	AND	1 1/1/25
APPROX	APPROXIMATE	3Kc8/h
0	AT	3/1-40
BTS	BASE TRANSMISSION STATION	1 3// /
CAB	CABINET	1 2 14
CLG	CEILING	13/2/2
CONC	CONCRETE	3/71/2
CONT	CONTINUOUS	PROFESSIO
DIA OR #	DIAMETER	300
DWG	DRAWING	3/10
EA	EACH	1
ELEC	ELECTRICAL	PROFESSIO
ELEV	ELEVATION	PRO
EQ	EQUAL	
EQUIP	EQUIPMENT	
EGB	EQUIPMENT GROUND BAR	THIS DOO
(E)	EXISTING	DESIGN, PR
ÈΧΤ	EXTERIOR	WORK OF
FF	FINISHED FLOOR	OR USE W
GA	GAUGE	CONSENT
GALV	GALVANIZED	
GC	GENERAL CONTRACTOR	NOTE: IF D
GRND	GROUND	GRAPHICA
LG	LONG	
MAX	MAXIMUM	OF
MECH	MECHANICAL	
WW	MICROWAVE DISH	1 11
MFR	MANUFACTURER	111 '
MGB	MASTER GROUND BAR	1 11

MINIMUM

NOT IN CONTRACT

PERSONAL COMMUNICATION SYSTEM

POWER PROTECTION CABINET

NOT TO SCALE

ON CENTER

OPPOSITE

SHEET

TYPICAL

PROPOSED

SQUARE FOOT

STAINLESS STEEL

TOP OF CONCRETE

TOP OF MASONRY

VERIFY IN FIELD

UNLESS OTHERWISE NOTED WELDED WIRE FABRIC

NEW

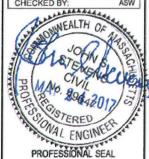
T - Mobile

00 0 33 Watervliet Albany, NY Office # (518) 8 Fax # (518) 89

	SUBMITTALS	
DATE	DESCRIPTION	REVISIO
/24/17	FOR PERMIT	0
-		

DEPT.	DATE	APP'0	REVISIONS
RE			
RT WAN.			
ZONING			
OPS			
CONSTR.			
SITE AC.			

PROJECT NO KED BY ASW



DOWNENT IS THE CREATION. ROPERTY AND COPYRIGHTE T-MOBILE. ANY DUPLICATION WITHOUT EXPRESS WRITTEN IT IS STRICTLY PROHIBITED.

DRAWINGS ARE 22"x34", USE AL SCALE AND/OR 1/2 TIMES F THE NOTED SCALE

> SITE NUMBER: 4BN0029B

SITE NAME: BN029/955 MASS AVE 955 MASSACHUSETTS AVENUE CAMBRIDGE, MA 02139

SHEET TITLE

GENERAL AND ELECTRICAL NOTES

SHEET NUMBER

SHEET 8 OF 8 SHEETS

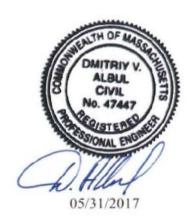


Structural Analysis Report

May 31, 2017

Site Name	4B0029B
Infinigy Job Number	317-501
Client	American Tower
Proposed Carrier	T-Mobile
Site Location	955 Massachusetts Avenue, Cambridge, MA 02139 42° 22' 8.004" N NAD83 71° 6' 34.7034" W NAD83
Structure Type	Wall Mounted Equipment
Structural Usage Ratio	5.6% - Alpha; 5.5% - Beta; 50.2% - Gamma
Overall Result	PASSING

Upon reviewing the results of this analysis, it is our opinion that the structure meets the specified TIA and ASCE code requirements. The wall mounts and connections are therefore deemed adequate to support the existing and proposed loading as listed in this report.



Structural Analysis Report

May 31, 2017

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Supporting Documentation	3
Analysis Code Requirements	3
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Existing & Reserved Loading	4
To Be Removed Loading	4
Proposed Loading	4
Final Loading Configuration	5
Structure Usages	5
Anchor Reactions	5
Assumptions and Limitations	6
Calculations	Annended

4BN0029B

Introduction

Infinigy Engineering has been requested to perform a structural analysis on the existing antenna supporting structures. All supporting documents have been obtained from the client and are assumed to be accurate and applicable to this site. The antenna mounts were analyzed using RISA 3D v. 13.0.0 software.

Supporting Documentation

Proposed Loading	Loading RFDS provided by T-Mobile, dated 3/9/2017	
Construction Drawings	Infinigy Engineering, PLLC, Dated 05/09/2017	

Analysis Code Requirements

Wind Speed	105 mph (3-Second Gust)	
Wind Speed w/ ice	40 mph (3-Second Gust) w/ 3/4" ice	
TIA Revision	ANSI/TIA-222-G	
Adopted IBC	2009 IBC / 2010 Massachusetts State Building Code, 8th Ed.	
Structure Class	II	
Exposure Category	C	
Topographic Category	1	

Conclusion

Upon reviewing the results of this analysis, it is our opinion that the structure meets the specified TIA and ASCE code requirements. The wall mounts and connections are therefore deemed adequate to support the existing and proposed loading as listed in this report.

The structure configuration and sizes presented in this report are based on the data obtained from provided photos and past engineering experience. Before any installation please verify all assumed values in field. If you have any questions, require any additional information, or if actual conditions differ from those detailed in this report, please contact us via the information below:

Dmitriy Albul, P.E. structural@infinigy.com | www.infinigy.com

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May 31, 2017

Existing & Reserved Loading

Rad Center (ft)	Qty.	Appurtenance	Mount Type	Coax & Lines	Sector
1	Ericsson KRC118046-1 B2P/B4A				
	1	Ericsson KRC118023-1 B2A/B4P			
	1	Andrew LNX-6514DS-A1M		(2) 7/8"	Alpha
	1	Ericsson RRUS 11 B12			
	1	Style 1B - TWIN AWS			
	1 Ericsson KRC118046-1 B2P/B4A 1 Ericsson KRC118023-1 B2A/B4P				
		Ericsson KRC118023-1 B2A/B4P	11/ 11		
113.0	1	Andrew LNX-6514DS-A1M	Wall (2) 1-5/8"		Beta
	1	Ericsson RRUS 11 B12	Mounted		
	1	Style 1B - TWIN AWS			
	1	Ericsson KRC118046-1 B2P/B4A			
	1	Ericsson KRC118023-1 B2A/B4P			
	1	Andrew LNX-6514DS-A1M		(2) 7/8"	Gamma
	1	Ericsson RRUS 11 B12			
	1	Style 1B - TWIN AWS			

To Be Removed Loading

Rad Center (ft)	Qty.	Appurtenance	Mount Type	Coax & Lines	Sector
	1	Ericsson KRC118046-1 B2P/B4A			Alpha
113.0	1	Ericsson KRC118046-1 B2P/B4A			Beta
	1	Ericsson KRC118046-1 B2P/B4A			Gamma

Proposed Loading

Rad Center (ft)	Qty.	Appurtenance	Mount Type	Coax & Lines	Sector
	1	Ericsson KRD901146-1 B66A/B2A		(A) DC	Alpha
113.0	1	Ericsson KRD901146-1 B66A/B2A	**	(4) DC	Beta
	1	Ericsson KRD901146-1 B66A/B2A		Cables	Gamma

May 31, 2017

Final Loading Configuration

Rad Center (ft)	Qty.	Appurtenance	Mount Type	Coax & Lines	Sector	
	1	Ericsson KRD901146-1 B66A/B2A				
	1	Ericsson KRC118023-1 B2A/B4P		(2) 7/02		
	1	Andrew LNX-6514DS-A1M		(2) 7/8"	Alpha	
	1	Ericsson RRUS 11 B12		(1) DC Cable		
	1	Style 1B – TWIN AWS				
	1 Ericsson KRD901146-1 B66A/B2A 1 Ericsson KRC118023-1 B2A/B4P					
		Ericsson KRC118023-1 B2A/B4P	11/ 11	(2) 1 5 (02)		
113.0	Andrew LNX-6514DS-A1M	Wall (2) 1-5/8"		Beta		
	1	Ericsson RRUS 11 B12	Mounted	d (2) DC Cable		
	1	Style 1B – TWIN AWS				
	1	Ericsson KRD901146-1 B66A/B2A				
	1	Ericsson KRC118023-1 B2A/B4P		(2) 7/02		
	1	Andrew LNX-6514DS-A1M	(2) 7/8"		Gamma	
	1	Ericsson RRUS 11 B12		(1) DC Cable		
	1	Style 1B – TWIN AWS				

Structural Usages

Component Type	% Capacity	Pass / Fail
Beta Mount Bracket	11.7	Pass
Gamma Sector Angles	12.7	Pass
Summary	12.7	Pass

Anchor Bolt Capacity

Reaction Data	% Capacity	Pass / Fai
Alpha Sector*	5.6	Pass
Beta Sector*	5.5	Pass
Gamma Sector**	50.2	Pass
Summary	50.2	Pass

^{*}Assumed (4) 1/2" HILTI-HIT HY200 anchors with 6" embedment per connection. Contractor to field verify anchor diameters prior to proposed installation.

Anchor reactions are acceptable when compared to manufacturer's listed capacities.

^{**}Assumed (2) 1/4x1-1/2" Simpson SDS Screws per angle. Contractor to field verify screw diameters prior to proposed installation.

May 31, 2017

Assumptions and Limitations

Our structural calculations are completed assuming all information provided to Infinigy Engineering is accurate and applicable to this site. For the purposes of calculations, we assume an overall structure condition of "like new" and all members, connections, anchors, and masonry to be free of corrosion and/or structural defects. The structure owner and/or contractor shall verify the structure's condition prior to installation of any proposed equipment. If actual conditions differ from those described in this report Infinigy Engineering should be notified immediately to complete a revised evaluation.

Our evaluation is completed using standard TIA, AISC, ACI, and ASCE methods and procedures. Our structural results are proprietary and should not be used by others as their own. Infinigy Engineering is not responsible for decisions made by others that are or are not based on our supplied assumptions and conclusions.

This report is an evaluation of the rooftop mounted equipment and/or antenna supporting structures to be proposed or modified as shown in the referenced construction drawings. Applicable building element adequacy to support these structures is also evaluated when the applied forces increase significantly based on engineering judgment.

4BN0029B Page | 6

Site Name: 4BN0029B

Client: American Tower

Carrier: T-Mobile

Engineer: DVA

Date: 5/31/2017



INFINIGY WIND LOAD CALCULATOR 3.0

Site Information Inputs:

Adopted Building Code:

Structure Load Standard:

Antenna Load Standard:

Structure Risk Category:

Structure Type:

Number of Sectors:

Structure Shape 1:

Flat

Rooftop Inputs:

Rooftop Wind Speed-Up?: No

W	/ind Loading Inpu	its:
Design Wind Velocity:	105	mph (nominal 3-second gust
Wind Centerline 1 (z ₁):	113.0	ft
Side Face Angle (θ):	90	degrees
Exposure Category:	c	
Topographic Category:	1	<u> </u>

Wind with No Ice				
a, (psf)	q. (psf) Gh F ₅₇ (psf)			
31.15	0.85	52.96		

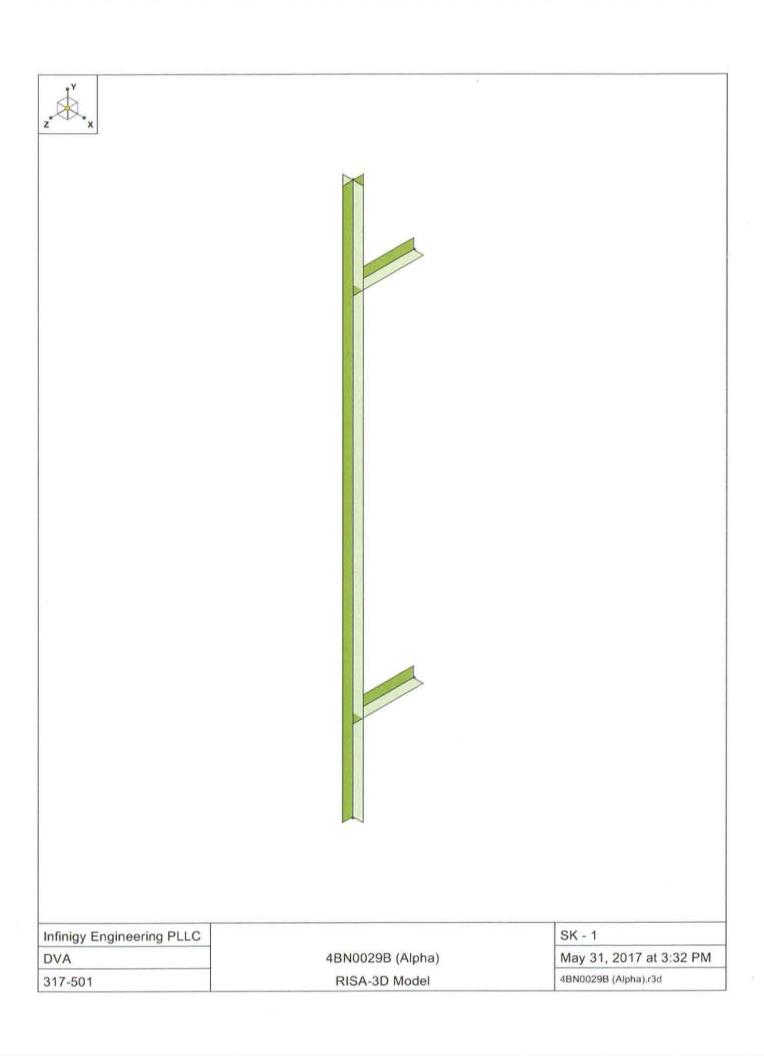
V	Vind with Ic	e
q _z (psf)	Gh	F _{ST} (psf)
4.52	0.85	#DIV/0!

Ice Loading Inputs:

Is Ice Loading Needed?:	Yes	
ice Wind Velocity:	40	mph (nominal 3-second gust)
Base Ice Thickness:	0.75	in

Input Appurtenance Information and Load Placements:

input ripput tettative ittiorinatio.	TOMA LOGO / TOCCITI											
Appurtenance Name	Elevation (ft)	Total	Ka	Front	Side	q,	EPA	Fz	Fx	Fz(90)	Fx(0)	
Appartenance Manie	Lievation (it)	Quantity	ν.σ.	Shape	Shape	(psf)	(ft ²)	(lbs)	(lbs)	(lbs)	(lbs)	
Ericsson KRD 901 146-1 866A/B2A	113.0	3	1.00	Flat	Flat	31.15	6.51	172.39	124.79	124,79	172.39	



: Infinigy Engineering PLLC

DVA

317-501 4BN0029B (Alpha)

May 31, 2017

Checked By: DVA

Member Primary Data

	Label	. I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N2	N1			RIGID	None	None	RIGID	Typical
2	M2	N4	N6		270	RIGID	None	None	RIGID	Typical
3	M3	N3	N5		270	RIGID	None	None	RIGID	Typical

Material Takeoff

	Material	Size	Pieces	Length[in]	Weight[K]
1	General				
2	RIGID		3	67	0
3	Total General		3	67	0

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me	Surface(P
1	Self Weight	DL		-1			2			
2	Wind Load AZI 000	WLZ					2			
3	Wind Load AZI 090	WLX					2			
4	Ice Weight	OL1					2	3		
5	Wind + Ice Load AZI	OL2					2			
6	Wind + Ice Load AZI	OL3					2	A COUNTY		

Load Combinations

	Description						Fa.	В.,	Fa.	В.	Fa	В.,	Fa.	В.,	Fa.	В.,	Fa.	В.,	Fa.	В.,	Fa	В	Fa.
1	1.4D	Y	Y		1.4																		
2	1.2D + 1.6W AZI 000	Υ	Y				1.6		1		9		-			-							
3	1.2D + 1.6W AZI 030	Y	Y				.1.3.																
4	1,2D + 1,6W AZI 060	Y	Y				8	W.	1.3.	-							-						
5	1.2D + 1.6W AZI 090	Y	Y		1.2			W.	1.6														
6	1.2D + 1.6W AZI 120	Y	Y				8																
7	1.2D + 1.6W AZI 150	Y	Y				-1		.8														
8	1.2D + 1.6W AZI 180	Y	Y	DL	1.2	W	1.6												1 3				
9	1.2D + 1.6W AZI 210	Y	Y	DL	1.2	W	-1	W.	8														
10	1.2D + 1.6W AZI 240	Y	Y				8	W.	-1				2										117
11	1.2D + 1.6W AZI 270	Y.,.	Y		1.2				1.6														
12	1.2D + 1.6W AZI 300	Υ	Y	DL	1.2	W	8	W.	-1							4							
13	1.2D + 1.6W AZI 330	Y	Y	DL	1.2	W	1.3.	W.	8														
14	0.9D + 1.6W AZI 000	Y	Y	DL	.9	W	1.6					- 2		1					-				
15	0.9D + 1.6W AZI 030	Υ	Y	DL	.9	W	.1.3.	W.	8														
16	0.9D + 1.6W AZI 060	Y	Y	DL	.9	W	8	W.	1.3.								1000						
17	0.9D + 1.6W AZI 090	Y	Y	DL	.9			W.	1.6														
18	0.9D + 1.6W AZI 120	Υ	Y	DL	.9	W	8	W.	1.3.												0.75	Q.,	123.0
19	0.9D + 1.6W AZI 150	Y	Y	DL	.9	W	-1	W.															
20	0.9D + 1.6W AZI 180	Y	Y	DL	.9	W.	1.6					-											
21	0.9D + 1.6W AZI 210	Υ	Y	DL	.9	W.	-1	W.	8														
22	0.9D + 1.6W AZI 240	Y	Y	DL	.9	W.	8	W.	-1												E.		
23	0.9D + 1.6W AZI 270	Υ	Y	DL	.9				-1.6														
24	0.9D + 1.6W AZI 300	Y	Y	DL	.9	W.	8	W.	-1														6
25	0.9D + 1.6W AZI 330	Y	Y	DL			1.3																
26	1.2D + 1.0Di	Y	Y	DL	1.2													1					
27	1.2D + 1.0Di + 1.0Wi AZI 000	Y	Υ		1.2			O.,	1														
28	1.2D + 1.0Di + 1.0Wi AZI 030	Y						0	.866	0	.5							18		-			
29	1.2D + 1.0Di + 1.0Wi AZI 060	Υ			1.2			0	.5	0	.866												
30	1.2D + 1.0Di + 1.0Wi AZI 090	Y			1.2					0	1												

Infinigy Engineering PLLC

DVA 317-501

4BN0029B (Alpha)

May 31, 2017

Checked By: DVA

Load Combinations (Continued)

	Description	S.	P				Fa.	В.,	Fa.	В.,	Fa	B.,	Fa.	В.,	Fa.	B.,	Fa	В.,	Fa.	В.,	Fa	В.,	Fa.
31	1.2D + 1.0Di + 1.0Wi AZI 120	Y.,	Y		1.2						.866												
32	1.2D + 1.0Di + 1.0Wi AZI 150	Y.,	Y	DL	1.2	O.,	1	0	8	0	.5		-7			1						-	
33	1.2D + 1.0Di + 1.0Wi AZI 180	Υ.,	Y	DL	1.2	O.,	1	0	-1														
34	1.2D + 1.0Di + 1.0Wi AZI 210	Υ	Y	DL	1.2	0	1	0	8	0	5												
35	1.2D + 1.0Di + 1.0Wi AZI 240	Υ.,	Y		1.2		1	0.,	5	0	8												
36	1.2D + 1.0Di + 1.0Wi AZI 270	Υ	Y		1.2	0	1			0	_	1											
37	1.2D + 1.0Di + 1.0Wi AZI 300	Y.,	Y	DL	1.2			O.,			8												
38	1.2D + 1.0Di + 1.0Wi AZI 330	Υ	Y	DL	1.2	O.,	1	0	.866	Ο.,	5												
39	1.2D + 1.5L + 1.0WL (30 mph) AZI 000	Υ	Y	DL					.055														
40	1.2D + 1.5L + 1.0WL (30 mph) AZI 030	Υ.,	Y	DL	1.2	LL	1.5	W.	.048	W.	.027												
41	1.2D + 1.5L + 1.0WL (30 mph) AZI 060	Υ	Y						-027	W.	.048												
42	1.2D + 1.5L + 1.0WL (30 mph) AZI 090	Υ.,	Y	DL	1.2	LL	1.5			W.	.055			1									
43	1.2D + 1.5L + 1.0WL (30 mph) AZI 120	Υ.,	Y								.048												
44	1.2D + 1.5L + 1.0WL (30 mph) AZI 150	Υ.,	Y	DL	1.2	LL	1.5	W.	r.0	W.	.027												
45	1.2D + 1.5L + 1.0WL (30 mph) AZI 180	Υ	Y						0														
46	1.2D + 1.5L + 1.0WL (30 mph) AZI 210			DL	1.2	LL	1.5	W.	0	W.	r.0												
47	1.2D + 1.5L + 1.0WL (30 mph) AZI 240	Υ	Y						0	W.	r.0												
	1.2D + 1.5L + 1.0WL (30 mph) AZI 270						1.5				0												
49	1.2D + 1.5L + 1.0WL (30 mph) AZI 300	Y.,	Y	DL	1.2	LL	1.5	W.	-027	W.	r.0												
50	1.2D + 1.5L + 1.0WL (30 mph) AZI 330	Υ	Y	DL	1.2	LL	1.5	W.	.048	W.,	0												

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1	N5	max	99.824	17	180.418	28	144.166	2	-22.505	20	49.912	5	0	5
2		min	-99.824	23	59.49	15	-133.208	20	-67.873	27	-49.912	11	0	11
3	N6	max	99.824	5	180.418	28	133.208	14	-22.505	20	49.912	17	0	5
4	HE INC.	min	-99.824	11	59.49	15	-144.166	8	-67.873	27	-49.912	23	0	11
5	Totals:	max	199,648	5	360.837	28	275.808	14						
6	1	min	-199.648	11	118.98	15	-275.808	8					100000000000000000000000000000000000000	

Envelope AISC 14th(360-10); LRFD Steel Code Checks

Member	Shape	Code Check	Loc[in]	LC	Shear	Loc[in]DirLC phi*Pncphi*Pntphi*Mnphi*MnCb Eqn	
			No	Data	a to Pr	int	



ANCHOR BOLT CALCULATIONS (HILTI-HIT HY 200)

Customer:

American Tower

Site Name:

4BN0029B (Alpha Sector)

Job Number:

317-501

Structure Type:

Rooftop

Date:

5/31/2017

Input Information:

Existing Bolts

Bolts, N

4

Distance b/w Bolts, L Bolt Diameter, d 6 in 0.5 in

Threads per Inch, n

13

Applied Pull-Out Load, T

0.006 kips

Applied Shear, S

0.100 kips

Applied Moment, M

0.599 kip-in

Net Bolt Cross-Sectional Area, A_n Bolt Group Moment of Inertia, I 0.142 in² (each) 36.000 in4

Maximum Tensile Force (per bolt)

0.051 kips

Maximum Shear Force (per bolt)

0.176 kips

Nominal Shear Strength (per bolt), R_{nt}

8.19 kips

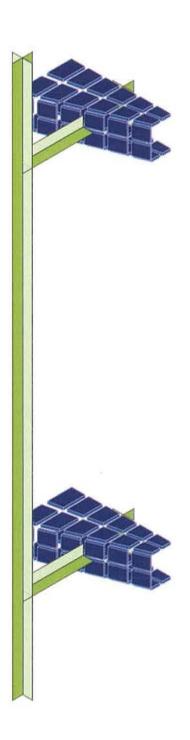
Nominal Shear Strength (per bolt), V_{nt} Anchor Rod Interaction Equation 3.53 kips 0.06

% Capacity

5.6%

The Bolt Group is Adequate for Loading





Infinigy	Engineering PLLC
DVA	
317-50	1

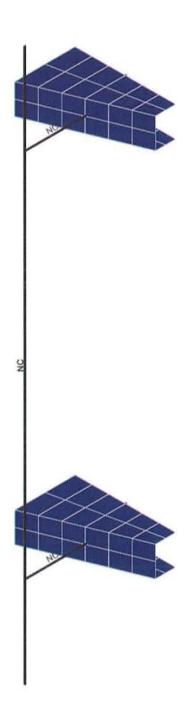
4BN0029B, MA (Beta) RISA-3D Model

SK -	1				
May	31,	2017	at	3:49	РМ
4BN0	129B	(Beta)	r3rl		









Member Code Checks Displayed Results for LC 1, 1,4D

Infinigy	Engineering PLLC
DVA	
317-501	

4BN0029B (Beta) Plate Stress Check SK - 2 May 31, 2017 at 4:01 PM 4BN0029B (Beta).r3d

Infinigy Engineering PLLC DVA

317-501 4BN0029B, MA (Beta)

May 31, 2017

Checked By: DVA

Member Primary Data

	Label	. I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N2	N1			RIGID	None	None	RIGID	Typical
2	M2	N15	N3	-84-		RIGID	None	None	RIGID	Typical
3	M4	N4	N44A			RIGID	None	None	RIGID	Typical
4	M5	N92	N104			RIGID	None	None	RIGID	Typical
5	M6	N68	N80			RIGID	None	None	RIGID	Typical

Material Takeoff

	Material	Size	Pieces	Length[in]	Weight[K]
1	General				
2	RIGID	And the second second	5	73	0
3	Total General		5	73	0

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me	Surface(P.
1	Self Weight	DL		-1			2			
2	Wind Load AZI 000	WLZ					2		The same	The same of
3	Wind Load AZI 090	WLX					2			
4	Ice Weight	OL1					2	5		
5	Wind + Ice Load AZI	OL2					2			
6	Wind + Ice Load AZI	OL3					2			The Wall

Load Combinations

	Description	S	P	S	3	Fa.	В.	Fa.	В.,	Fa.	В.	Fa.	В.,	Fa.	В.,	Fa.	В.	Fa.	В	Fa.	В.,	Fa.	B.,	Fa.
1	1.4D	Y	Y	1	DL	1.4																		
2	1.2D + 1.6W AZI 000	Y	Y	1	DL	1.2	W.	1.6	3															
3	1.2D + 1.6W AZI 030	Y	Y	1	DL	1.2	W.	1.3.	.W.	8.														
4	1.2D + 1.6W AZI 060	Y	Y	[DL	1,2	W.	.8	W.	1.3.														
5	1.2D + 1.6W AZI 090	Y	Υ	[DL	1.2			W.	1.6														
6	1.2D + 1.6W AZI 120	Y	Υ	1	DL	1.2	W.	8	W,	1.3.			11										2	
7	1.2D + 1.6W AZI 150	Y	Y		DL	1.2	W.	-1	W.	.8														
8	1,2D + 1,6W AZI 180	Y	Y	I	DL	1.2	W.	-1.6	3									1						
9	1.2D + 1.6W AZI 210	Y	Y							8														
10	1.2D + 1.6W AZI 240	Y	Y		DL	1.2	W.	8	W.	-1		7.0										E		
11	1,2D + 1,6W AZI 270	Y	Y			1.2				1.6														
12	1.2D + 1.6W AZI 300	Y	Y					8	W.	-1														
13	1.2D + 1.6W AZI 330	Y	Y							8														
14	0.9D + 1.6W AZI 000	Y	Y					1.6																
15	0.9D + 1.6W AZI 030	Y	Y	[DL	.9	W.	1.3.	.W.	.8														
16	0.9D + 1.6W AZI 060	Y	Y	1	DL	.9	W.	8	W.	1.3.								W 1	- 1			1		
17	0.9D + 1.6W AZI 090	Y	Y		DL	.9			W.	1.6														
18	0.9D + 1.6W AZI 120	Y	Y	1	DL	.9	W.	8	W.	1.3.										6.0				
19	0.9D + 1.6W AZI 150	Y	Y		DL	.9	W.	-1	W.	8														
20	0.9D + 1.6W AZI 180	Y	Y	1	DL	.9	W.	1.6													741			
21	0.9D + 1.6W AZI 210	Υ	Y		DL	.9	W.	-1	W.	8														
22	0.9D + 1.6W AZI 240	Y	Y		DL	.9	W.	8	W.	-1		N.												
23	0.9D + 1.6W AZI 270	Y	Y	0	JL.	.9			W.	1.6														
24	0.9D + 1.6W AZI 300	Y	Y	1	DL	.9	W.	8.	W.	+1.0				2										
25	0.9D + 1.6W AZI 330	Y	Y	0	DL	.9	W.	1.3.	.W.	8														
26	1.2D + 1.0Di	Y	Y			1.2							-											
27	1.2D + 1.0Di + 1.0Wi AZI 000	Y	Y			1.2			O.,	1														
28	1.2D + 1.0Di + 1.0Wi AZI 030	Y	Y			1.2			0	.866	0	.5												

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DVA 317-501

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Load Combinations (Continued)

	Description	S.,	P.,	S.	В	Fa.	.,B	Fa	1	В	Fa	В.,	Fa	В.,	Fa.	B.,	Fa	B.,	Fa	В.,	Fa.	В.	Fa	B.,	Fa.
29	1.2D + 1.0Di + 1.0Wi AZI 060	Υ	Y		DL			1	Ц	0	.5	0	.866												
30	1.2D + 1.0Di + 1.0Wi AZI 090	Y.,	Y		DL	1.2	0	. 1				0													
31	1.2D + 1.0Di + 1.0Wi AZI 120	Υ.,	Y		DL	1.2	0	1					.866												
32	1.2D + 1.0Di + 1.0Wi AZI 150	Υ.,	Y		DL					O.,	8	0.,	.5	7											
33	1.2D + 1.0Di + 1.0Wi AZI 180	Υ	Y		DL	1.2	0	1	$\overline{}$	0	-1														
34	1.2D + 1.0Di + 1.0Wi AZI 210	Y.,	Y		DL	1.2	0	1		0.,	8	0	5												
35	1.2D + 1.0Di + 1.0Wi AZI 240	Y	Y		DL	1.2	0	. 1		0	1.00														
36	1.2D + 1.0Di + 1.0Wi AZI 270	Υ.,	Y		DL	1.2	0	1					-1								No.				
37	1.2D + 1.0Di + 1.0Wi AZI 300	Υ	Y		DL	1.2	0	1		0			8												
38	1.2D + 1.0Di + 1.0Wi AZI 330	Y	Y		DL	1.2	0	. 1		0			5												
39	1.2D + 1.5L + 1.0WL (30 mph) AZI 00	0 Y	Y		DL	1.2	L	L 1.	5	W.,	.055														
40	1.2D + 1.5L + 1.0WL (30 mph) AZI 03	0 Y.,	Y		DL	1.2	2 L	L 1.	5	W.,	.048	W.	.027						111						
41	1.2D + 1.5L + 1.0WL (30 mph) AZI 06	0 Y	Y										.048												
42	1.2D + 1.5L + 1.0WL (30 mph) AZI 09	0 Y	Y					L 1.					.055						9 5						
43	1.2D + 1.5L + 1.0WL (30 mph) AZI 12	0 Y.,	Y										.048												
44	1.2D + 1.5L + 1.0WL (30 mph) AZI 15	0 Y.,	Y			1.2	2 L	L 1.	5	W	r.0	W.	.027												
45	1.2D + 1.5L + 1.0WL (30 mph) AZI 18	0 Y	Y		DL	1.2	2 L	L 1.	5	W.,	r.0														
46	1.2D + 1.5L + 1.0WL (30 mph) AZI 21	0Y	Y		DL	1.2	L	L 1.	5	W.,	0	W.	r.O												FF
47	1.2D + 1.5L + 1.0WL (30 mph) AZI 24	0 Y.,	Y								r.0,														
48	1.2D + 1.5L + 1.0WL (30 mph) AZI 27	0 Y	Y					L 1.					0								Time!				
49	1.2D + 1.5L + 1.0WL (30 mph) AZI 30	0 Y	Y		DL	1.2	L	L 1.	5	W.,	.027	W.	r.0												
50	1.2D + 1.5L + 1.0WL (30 mph) AZI 33	0 Y	Y		DL	1.2	L	L 1.	5	W.,	.048	W	·.O												17

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1	N111	max	100.518	5	191.092	30	119.915	14	-23.42	23	0	1	2.025	30
2		min	-99.301	23	66.656	23	-161.89	8	-67.94	30	0	1	.521	23
3	N112	max	99,307	17	191.092	30	161.89	2	-23,42	23	0	1	2.025	30
4		min	-100.524	11	66.656	23	-119.915	20	-67.94	30	0	1	.521	23
5	Totals:	max	199,652	17	382,183	30	275.808	2						
6		min	-199.652	11	133.311	23	-275.808	20						

Envelope Plate/Shell Principal Stresses

	Plate		Surf	Sigma1 [ksi]	LC	Sigma2 [ksi]	LC	Tau Max [ksi]	LC	Angle [rad]	LC	Von Mises [ksi	LC
1	P21	max	T	4.204	11	2.239	11	1.291	5	1.976	23	3.643	11
2		min		-1.626	16	-4.01	17	.029	2	.413	17	.139	2
3		max	В	3.729	17	1.467	16	1.223	5	1.958	17	3.453	11
4		min		-2.114	11	-3.985	11	.042	14	.426	24	.156	2
5	P11	max	T	4.098	11	2.026	11	1.238	5	1.976	23	3.567	5
6		min		-1.786	16	-4.09	17	.063	48	.413	17	.189	39
7		max	В	3.829	17	1.615	16	1.191	5	1.958	17	3.346	5
8		min		-1.917	11	-3.851	11	.053	2	.425	24	.238	39
9	P22	max	T	4.09	23	1.665	23	1.238	11	1.158	24	3.567	11
10		min		-2.147	4	-4.098	5	.063	42	406	17	.189	45
11		max	В	3.851	5	2.028	4	1.191	11	1.145	17	3.347	11
12		min		-1.504	23	-3.829	23	.053	8	387	23	.238	45
13	P23	max	T	4.013	5	1.786	6	1.376	11	1.148	17	3.485	5
14		min		-1.102	24	-3.624	23	.092	14	367	23	.186	2
15		max	В	3.444	23	1.046	24	1,306	11	2.24	14	3.437	5
16		min		-1.69	6	-3.951	5	.229	42	633	7	.419	14
17	P12	max	T	4.01	23	1.505	23	1.291	11	1,159	24	3.643	5
18		min		-2.36	4	-4.204	5	.029	8	405	17	.139	8
19		max	В	3.985	5	2.225	4	1.223	11	1.145	17	3.453	5
20	Mary Car	min		-1.356	23	-3.728	23	.042	20	387	23	.156	8

Infinigy Engineering PLLC DVA

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	Plate		Surf	Sigma1 [ksi]	LC	Sigma2 [ksi]	LC	Tau Max [ksi]	LC	Angle [rad]		Von Mises [ksi	
21	P13	max	T	3.956	5	1.614	6	1.318	11	1.148	17	3.449	5
22		min		-1.231	24	-3.666	23	.098	42	365	23	.279	50
23		max	В	3.468	23	1.171	24	1.239	11	2.316	14	3.431	5
24		min		-1.519	6	-3.922	5	.228	20	606	7	.455	48
25	P24	max	T	3.666	17	1.1	18	1.318	5	1.936	16	3.449	11
26		min		-1.745	12	-3.956	11	.098	48	.422	23	.279	44
27		max	В	3.923	11	1.644	12	1.239	5	2.13	13	3.431	11
28		min		-1.047	18	-3.468	17	.228	14	745	20	.455	42
29	P14	max	T	3.624	17	.971	18	1.376	5	1.938	16	3.484	11
30		min		-1.918	12	-4.013	11	.092	20	.423	23	.186	8
31		max	В	3.951	11	1.815	12	1.306	5	2.146	13	3.437	11
32		min	-	923	18	-3.444	17	.229	48	669	20	.419	20
33	P66	max	T	2.183	31	1.245	36	.54	5	2.273	22	1.892	31
34		min		.584	25	.078	17	.021	13	6	10	.528	25
35		max	В	213	23	472	25	.311	4	1.992	15	1,411	30
36		min		-1.161	36	-1.581	30	.031	25	.56	24	.445	25
37	P44	max	T	2.083	31	1.226	36	.524	5	2.176	22	1.807	31
38		min		.582	25	.07	17	.047	13	781	10	.514	14
39		max	В	223	16	456	25	.331	4	2.034	14	1.431	30
40		min		-1.152	36	-1.613	30	.012	25	.532	24	.445	25
41	P68	max	T	1.957	36	1.265	31	.376	11	1.847	3	1.717	35
42	1.00	min		.439	15	.222	16	.023	19	432	14	,395	15
43		max	В	056	17	268	16	.16	12	2.356	8	1.329	36
44		min		-1.171	36	-1,445	36	.022	15	732	20	.232	16
45	P46	max	T	1.862	36	1.221	32	.364	11	1.802	3	1.636	35
46	140	min	-	.426	15	.189	16	.013	19	484	14	.378	15
47		max	В	078	17	247	16	.185	12	2.348	4	1.335	36
48		min	-	-1.155	36	-1.462	36	.033	15	783	20	.217	16
49	P15		T	1.686	11	.559	36	1.059	5	1.104	24	1.835	5
50	P 15	max		.508	20	-1.091	17	.137	14	312	17	,464	14
51			D		17		20		5				
52		max	В	1.174 557	36	548 -1.789	11	1.055	14	2.185 785	14	1.828	14
53	P25	min	T	1.634	11	.47	36	1.092	5	1.098	24	1.892	5
	PZS	max				-1.132			-				
54 55		min	D	.513	20		17	.136	14	312	17	.449	14
		max	В	1.218	17	552	14	1.094	5	2.298	9	1.897	5
56	DEE	min	-	473	36	-1.732	11	.159	14	724	21	.48	14
57	P55	max	T	1.613	36	1.152	30	.326	11	2.325	15	1.431	36
58		min	-	.458	19	.223	16	.01	19	723	3	.448	19
59		max	В	07	23	561	19	.524	11	2.214	20	1.807	37
60	200	min	-	-1.226	30	-2.083	37	.039	7	406	7	.509	19
61	P33	max	T	1.581	36	1.161	30	.308	11	2.323	15	1.411	36
62		min	-	.464	19	.202	16	.018	19	741	3	.447	19
63		max	В	078	23	561	19	.541	12	2.124	20	1.892	37
64		min		-1.245	30	-2.183	37	.019	7	773	7	.522	19
65	P57	max	T	1.462	30	1.155	30	.174	6	1,008	24	1.335	30
66		min		.261	22	.07	24	.037	22	354	19	.233	22
67		max	В	21	23	43	21	.364	5	1.399	13	1.636	29
68		min		-1.221	38	-1.862	30	.011	25	635	25	.389	21
69	P35	max	T	1.445	30	1.171	30	.152	12	1.011	24	1,329	30
70		min		.281	22	.049	24	.032	21	324	19	.245	22
71		max	В	242	23	441	21	.376	5	2.064	25	1,717	29
72		min		-1.265	37	-1.957	30	.013	25	262	24	.407	21
73	P9	max	T	1.439	5	.514	30	1.142	11	2.106	14	1.978	11
74		min	N. The	.316	14	-1.13	23	.039	2	693	2	.278	14
75		max	В	1.284	23	263	14	1.227	11	1.889	25	2.126	11
76		min		495	30	-1.542	5	.015	14	.329	15	.25	14
				1.366	and the State of	.359	_	1.203		2.152	- 10	2.085	11

	Plate		Surf	Sigma1 [ksi]	LC	Sigma2 [ksi]	LC	Tau Max [ksi]	LC	Angle [rad]	LC	Von Mises [ks	I LC
78	//	min		.271	14	-1.185	23	.02	14	473	14	.253	14
79		max	В	1.333	23	272	14	1.282	11	1.886	25	2.222	11
80		min		353	30	-1.478	5	.031	14	.333	16	.247	14
81	P56	max	T	1.215	17	.366	18	1.051	37	2.264	21	2.287	12
82		min		755	12	-2.569	12	.15	19	1.136	18	.302	20
83		max	В	2.082	12	.795	12	.849	37	.632	22	1.848	37
84		min		338	18	87	17	.129	19	239	18	.303	20
85	P10	max	T	1.185	17	271	20	1.203	5	2.044	20	2.084	5
86		min	ml d	359	36	-1.366	11	.02	20	498	13	.253	20
87		max	В	1.478	11	.353	36	1.282	5	1.238	22	2.221	5
88	Maria Maria	min		.272	20	-1.333	17	.031	20	313	18	.247	20
89	P34	max	Т	1.175	17	.263	18	1,198	37	2.212	22	2.513	37
90		min		805	12	-2.714	12	.193	19	1.199	18	.385	20
91		max	В	2.242	37	.839	12	.942	37	.602	22	2.086	37
92		min		255	18	835	17	.161	19	197	17	.369	19
93	P16	max	Т	1.132	23	513	14	1.092	11	1.882	23	1.892	11
94	110	min		47	30	-1.634	5	.136	20	.476	17	.449	20
95		max	В	1.732	5	.473	30	1.094	11	2.309	3	1.897	11
96		min	-	.552	20	-1.218	23	.159	20	523	20	.48	20
97	P20		Т	1.13	17	316	20	1.142	5	2.264	8	1.978	5
98	F20	max		514	36	-1.439	11	.039	8	535	20	.278	20
99			В	1.542	11	.495	36	1.227				2.126	
100		max	D						5	1.245	21		5
	DOC	min	Т	.263	20	-1.285	17	.015	20	315	18	.25	20
101	P26	max		1.091	23	508	14	1.059	11	1.883	23	1.835	11
102		min	-	559	30	-1.686	5	.137	20	.471	17	.464	20
103		max	В	1.789	5	.557	30	1.055	11	2.267	3	1.828	11
104	500	min	-	.548	14	-1.174	23	.164	20	614	20	.497	20
105	P60	max	T	.886	23	.168	23	.483	36	2.018	17	1.179	5
106		min		-,819	5	-1.351	5	.151	19	,996	23	.362	20
107		max	В	1.112	30	.685	5	.395	34	.091	16	.989	30
108	-0x- Tar-	min		187	23	514	23	.123	14	389	22	.229	25
109	P45	max	T	.87	23	.413	24	.849	31	2.211	16	1.847	31
110		min	PLE	776	5	-2.006	5	.131	25	1,274	24	.303	14
111		max	В	2.478	5	.721	5	1.051	31	.702	15	2.207	5
112		min		433	24	-1.215	23	.172	14	478	24	.303	14
113	P38	max	T	.851	23	.155	23	.469	36	2.032	17	1,216	5
114		min		839	5	-1.395	5	.154	14	1.004	23	.364	20
115		max	В	1.141	30	.707	5	.379	34	.13	16	1.005	30
116		min		181	23	491	23	.12	14	37	22	.216	25
117	P67	max	T	.835	23	.332	24	.942	31	2.183	16	2.085	31
118		min		823	5	-2.24	31	.161	25	1.327	24	.371	14
119		max	В	2.616	5	.778	5	1,198	31	.651	16	2.512	31
120	E THAT A SE	min		335	24	-1.175	23	.211	14	417	24	.385	14
121	P71	max	Т	.491	17	.181	17	.379	28	1.68	22	1.005	36
122	A TO SERVICE STATE OF THE SERV	min		707	11	-1.141	36	.12	20	1.188	16	.21	19
123		max	В	1.395	11	.839	11	.469	30	.461	23	1.216	11
124	But duling	min		155	17	852	17	.154	20	567	16	.356	19
125	P49	max	Т	.514	17	.187	17	.395	28	1.641	22	.989	36
126	1 10	min	E 1974	685	11	-1,112	36	.123	20	1.17	16	.218	19
127		max	В	1.351	11	.819	11	.483	30	.447	23	1.179	11
128		min		168	17	886	17	.155	20	576	16	.362	14
129	P17A	-	Т			.209							
	PITA	max	1	.643	11		9	.409	5	2.356	11	.722	5
130	The second second	min	D	.083	14	558		.052	20	771	10	.129	14
131		max	В	.506	17	085	14	.351	5	2.307	17	.625	5
132	007	min	-	227	9	578	11	.056	20	.886	23	.143	14
133	P27	max	T	.624	30	.1	35	.374	5	.831	18	.688	5
134		min		.168	14	23	24	.087	20	498	23	.184	14

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	Plate		Surf	Sigma1 [ksi]	LC	Sigma2 [ksi]	LC	Tau Max [ksi]	LC	Angle [rad]		Von Mises [ksi]	LC
135		max	В	.175	24	144	25	.286	5	2.326	18	.552	5
136		min		142	34	58	30	.058	21	1.01	23	.151	21
137	P7	max	T	.608	11	.184	9	.415	5	2.346	24	.738	5
138		min		.065	14	585	17	.056	20	783	11	.137	14
139		max	В	.535	5	067	14	.357	5	2.306	17	.644	5
140		min		201	9	542	11	.06	20	.891	23	.152	14
141	P17	max	T	.599	30	.063	8	.371	5	.821	18	.678	5
142		min		.162	14	246	24	.087	20	49	23	.187	14
143		max	В	.192	24	139	25	.285	5	2.312	18	.544	5
144		min		095	33	556	30	.064	21	1.023	23	.15	21
145	P18A	max	T	.585	23	065	20	.415	11	2.354	5	.738	11
146		min		-,181	3	608	5	.056	14	78	18	.137	20
147		max	В	.542	5	.204	3	,357	11	.68	17	.644	11
148		min		.067	20	535	11	.06	14	735	23	.152	20
149	P58	max	T	.582	22	.377	22	.991	29	2.337	11	1.99	4
150		min		369	16	-2,147	4	.037	21	775	24	.313	24
151		max	В	1.75	29	.432	4	.802	30	1.722	23	1.681	29
152	Manager 1	min		28	22	377	22	.005	23	648	22	.134	24
153	P8	max	T	.558	23	083	20	.409	11	2.349	4	.722	11
154		min		-,206	3	643	5	.052	14	785	5	.129	20
155		max	В	.578	5	.23	3	.351	11	.684	17	.625	11
156		min		.085	20	506	23	.056	14	736	23	.143	20
157	P48	max	T	.502	4	.024	14	.31	11	2.185	15	.564	11
158	N. S. L. V. S. L.	min		.061	20	486	10	.06	14	.776	24	.134	14
159		max	В	.423	10	057	20	.276	10	.776	16	.501	10
160		min		039	14	316	16	.04	14	541	24	.105	14
161	P32	max	T	.462	17	34	16	.543	31	2.261	30	1.402	36
162		min	1111	498	36	-1.583	36	.186	14	776	8	.408	15
163		max	В	1.406	36	.451	36	.477	36	1.369	17	1.243	36
164		min		.188	16	273	17	.121	15	.312	24	.243	15
165	P69	max	T	.314	16	.267	16	.855	36	2.113	17	1.9	35
166		min		494	10	-2.046	35	.023	16	.959	16	.196	18
167		max	В	2.395	35	.437	10	1.099	35	1.202	16	2.302	35
168		min		306	16	557	16	.02	15	148	14	.295	3
169	P54	max	T	.481	17	354	16	.56	31	2.306	30	1.407	36
170		min		483	36	-1.585	36	.184	14	74	8	.429	15
171		max	В	1.416	36	.442	36	.487	36	1.367	17	1.255	36
172		min		.201	16	284	17	.132	15	.328	24	.259	15
173	P36	max	T	.469	23	.288	22	1.099	29	2.269	24	2.304	29
174		min		453	4	-2.396	29	.056	21	557	23	.27	21
175		max	В	2.047	29	.516	4	.855	30	.542	23	1.901	29
176		min		21	22	285	22	.024	23	334	22	,162	24
177	P70	max	T	.462	16	.01	14	.336	11	2.144	15	.617	11
178		min		.059	20	543	10	.052	14	.795	24	.11	14
179		max	В	.482	10	05	19	.305	10	.737	16	.557	10
180		min		017	14	276	16	.039	14	536	24	.088	14
181	P65	max	T	.273	23	197	23	.477	30	2.287	36	1.243	30
182		min	-	451	30	-1.406	30	.114	21	768	2	.25	21
183		max	В	1.583	30	.498	30	.543	37	1.201	23	1.402	30
184	D 40	min	-	.347	22	462	23	.186	20	.097	17	.392	21
185	P43	max	T	.284	23	21	23	.487	30	2.325	36	1.255	30
186		min	-	442	30	-1.416	30	.124	21	-,738	2	.263	21
187		max	В	1.585	30	.483	30	.56	37	1.206	23	1.407	30
188	B / E	min	-	.361	22	-,48	23	.184	20	.111	17	.41	21
189	P47	max	T	.425	16	.318	16	.802	36	1.839	18	1.68	35
190		min	-	411	10	-1.749	35	.005	17	.151	17	.145	18
191		max	В	2.057	10	.353	22	.991	36	1.977	15	1.982	35

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192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218	P50 P52 P72 P30 P59	min max min max min max min max min max min max min max	T B T B	394 .316 .005 .575 072 .077 303 .999 .11 .296	16 17 24 11 17 23 30 30 23	671 .023 72 .039 151 .051 -1.032 .283	16 5 11 23 17 23 30	.023 .366 .034 .302 .014	15 11 19 36 18	-,222 2,306 -,731 .927 -,399	14 6 15 17 22	.274 .726 .059 .583	18 11 19 36
194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218	P52 P72 P30	min max min max min max min max min max min max min max	B T B	.005 .575 072 .077 303 .999 .11	24 11 17 23 30 30 23	72 .039 151 .051 -1.032 .283	11 23 17 23	.034 .302 .014	19 36 18	731 .927 399	15 17 22	.583	19 36
195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218	P72	max min max min max min max min max min max min max	T B T B	.575 072 .077 303 .999 .11	11 17 23 30 30 23	.039 151 .051 -1.032 .283	23 17 23	.302	36 18	.927 399	17 22	.583	36
196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218	P72	min max min max min max min max min max	T B T B	072 .077 303 .999 .11	17 23 30 30 23	151 .051 -1.032 .283	17 23	.014	18	399	22		
197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218	P72	max min max min max min max min max min	B T B	.077 303 .999 .11	23 30 30 23	.051 -1.032 .283	23					.061	4 -
198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218	P72	min max min max min max min max min	B T B	303 .999 .11 .296	30 30 23	-1.032 .283		.365	20				15
199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218	P30	max min max min max min max min	ТВ	.999 .11 .296	30 23	.283	30	100000000000000000000000000000000000000	30	2.132	19	.919	30
200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218	P30	min max min max min max min	ТВ	.11 .296	23			.013	23	1.875	23	.053	22
201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218	P30	max min max min max min	В	.296			30	.358	30	.606	21	.892	30
202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218	P30	min max min max min	В		4.79	075	23	.092	24	.455	15	.16	24
203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218		max min max min		006	17	.023	5	.38	11	2.233	6	.753	11
204 205 206 207 208 209 210 211 212 213 214 215 216 217 218		min max min			24	747	11	.039	3	766	15	.069	19
205 206 207 208 209 210 211 212 213 214 215 216 217 218		max min		.608	36	.04	23	.323	36	.897	17	.628	36
206 207 208 209 210 211 212 213 214 215 216 217 218		min		-,07	17	135	17	.015	18	402	22	.056	15
207 208 209 210 211 212 213 214 215 216 217 218	P59		T	.082	23	.054	23	.365	30	2.129	19	.909	30
208 209 210 211 212 213 214 215 216 217 218	P59	Contract on the		292	5	-1.018	30	.014	23	1.823	23	.051	22
208 209 210 211 212 213 214 215 216 217 218	P59	max	В	.988	30	.276	5	.357	30	.602	22	.883	30
210 211 212 213 214 215 216 217 218	P59	min		.108	23	077	23	.091	24	.442	15	.159	24
210 211 212 213 214 215 216 217 218		max	Т	.289	22	.039	20	.292	4	2.338	22	.53	4
211 212 213 214 215 216 217 218		min		.057	14	449	4	.04	20	1.035	17	.105	20
212 213 214 215 216 217 218		max	В	.518	4	061	14	.32	4	.608	21	.589	4
213 214 215 216 217 218	The state of the s	min		024	20	485	11	.06	20	784	18	.134	20
214 215 216 217 218	P41	max	Т	.075	17	11	17	.358	36	2.185	16	.892	36
215 216 217 218		min		283	36	999	36	.093	17	2.024	21	.161	17
216 217 218		max	В	1.032	36	.303	36	.365	36	.559	25	.919	36
217 218		min		051	17	077	17	.013	17	.304	17	.048	16
218	P63	max	Т	.077	17	108	17	.357	36	2.167	16	.883	36
	F 03	min		276	11	988	36	.092	17	2.01	21	.16	17
		max	В	1.018	36	.292	11	.365	36	.556	24	.909	36
219			В		17	082	17	.014	17		17		
220	D40	min	т	054			_			.252	_	.051	16
221	P42	max	T	.259	23	148	14	.434	5	1.78	9	.811	5
222		min	-	157	36	738	5	.055	14	753	20	.133	14
223		max	В	.683	30	.134	36	.327	5	2.195	13	.64	30
224	em 10 mm	min	-	.126	25	11	17	.023	13	751	25	.116	25
225	P37	max	T	.249	22	.017	20	.321	4	2.293	22	.586	4
226		min	-	.054	14	-,508	4	.039	20	1.039	17	.088	20
227		max	В	.574	4	059	14	.348	4	.564	22	.643	4
228		min		01	20	-,444	23	.052	20	764	18	.11	20
229	P64	max	T	.247	23	156	25	.443	5	1.842	9	.83	5
230		min		148	36	759	5	.055	14	-,779	20	.139	14
231		max	В	.723	30	.132	36	.334	5	1.161	14	.68	30
232		min		.125	25	109	17	.01	13	675	13	.11	25
233	P28	max	T	.243	17	162	20	.371	11	2.06	17	.678	11
234		min	4 3	063	2	599	36	.087	14	.741	24	.187	20
235		max	В	.556	36	.095	27	.285	11	.554	16	.544	11
236		min		.135	19	182	17	.067	14	-,751	24	.166	15
237	P51	max	T	.206	23	237	23	.456	36	1.599	18	.918	37
238		min		228	5	945	29	.093	17	1,436	25	.302	20
239		max	В	1.049	30	.16	4	.496	30	.343	23	1.021	30
240		min		079	23	147	23	.034	23	13	17	.105	24
241	P18	max	Т	.227	17	168	20	.374	11	2.068	17	.688	11
242		min	3.116	1	29	624	36	.087	14	.732	24	.184	20
243		max	В	.58	36	.142	28	.286	11	.571	16	.552	11
244		min		.139	19	166	17	.066	14	764	24	.165	20
245	D72	max	Т	.212	23	229	23	.453	37	1.617	18	.904	37
246	per 1 . S	-	-										-
247	P73				5	- 92	29	093	17	1 445	25	208	20
248	F/3	min	В	219 1.015	30	92 .149	29	.093	30	1.445	25 23	.298	30

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Envelope Plate/Shell Principal Stresses (Continued)

	Plate		Surf	Sigma1 [ksi]	LC	Sigma2 [ksi]	LC	Tau Max [ksi]	LC	Angle [rad]		Von Mises [ksi	
249	P62	max	T	.147	17	.079	17	.496	36	1.914	17	1.021	36
250		min		158	11	-1.049	36	.034	17	1.441	23	.102	18
251		max	В	.945	35	.228	11	.456	30	.033	24	.918	31
252		min	NA T	.229	16	206	17	.093	23	135	19	.302	14
253	P40	max	T	.156	17	.09	17	.492	36	1.928	17	1	36
254		min		147	11	-1.015	36	.033	17	1.44	23	.105	18
255		max	В	.92	35	.219	11	.453	31	.053	24	.904	31
256		min		.22	16	212	17	.093	23	125	19	.298	14
257	P61	max	T	.151	23	.072	23	.302	30	2.278	24	.583	30
258		min		039	17	575	5	.019	24	759	22	.056	21
259		max	В	.72	5	006	17	.366	5	.957	23	.726	5
260		min		023	11	316	23	.033	25	462	17	.064	25
261	P39	max	T	.135	23	.07	23	.323	30	2.308	22	.628	30
262		min		04	17	608	30	.014	24	674	23	.058	21
263		max	В	.747	5	006	17	.38	5	.949	23	.753	5
264		min	W.	023	11	296	23	.031	25	-,463	17	.056	25
265	P53	max	T	.11	23	116	19	.327	11	2.06	3	.64	36
266		min		134	30	-,683	36	.017	7	753	14	.101	19
267		max	В	.738	11	.157	30	.434	11	1.395	20	.811	11
268		min		.137	19	259	17	.055	20	538	19	.133	20
269	P31	max	Т	.109	23	113	19	.334	11	2.055	3	.68	36
270		min		132	30	723	36	.011	7	-,781	14	.098	19
271		max	В	.759	11	.148	30	.443	11	1.262	20	.83	11
272		min		.138	19	247	17	.055	20	-,474	19	.139	20
273	P62A	max	T	.095	36	24	20	.419	37	2.337	3	.795	38
274		min		.027	15	745	28	.138	20	764	20	.259	20
275		max	В	.742	36	02	15	.414	36	1,11	23	.789	36
276		min		.217	19	091	11	.123	19	.428	17	.233	19
277	P40A	max	Т	.094	36	244	20	.424	37	2.35	3	.806	38
278		min		.026	15	756	28	.139	20	75	20	.262	20
279		max	В	.753	36	018	15	.42	36	1.114	23	.8	36
280		min		.219	18	092	11	.123	19	.44	17	.234	19
281	P51A	max	Т	.092	5	219	25	.42	30	2.344	9	.8	30
282		min		.018	21	753	30	.124	25	742	14	.235	25
283		max	В	.756	34	025	21	.424	31	1.167	17	.806	32
284		min		.244	14	094	30	.139	14	.561	24	.262	14
285	P29	max	Т	.091	5	217	25	.414	30	2.332	9	.789	30
286		min	N 7	.019	21	742	30	.124	25	753	14	.234	25
287		max	В	.745	34	026	21	.419	31	1,161	17	.795	32
288	110/23 7/1	min	THE	.24	14	095	30	.138	14	.55	24	.259	14

Envelope AISC 14th(360-10): LRFD Steel Code Checks

Member	Shape	Code Check	Loc[in]	LC	Shear	Loc[in]DirLC phi*Pne	phi*Pnt	phi*Mn .	phi*Mn	Cb	Egn
			No	Data	a to Pr	int					



ANCHOR BOLT CALCULATIONS (HILTI-HIT HY 200)

Customer:

American Tower

Site Name:

4BN0029B (Beta Sector)

Job Number:

317-501

Structure Type:

Rooftop

Date:

5/31/2017

Input Information:

Existing Bolts

Bolts, N

4

Distance b/w Bolts, L Bolt Diameter, d 6 in 0.5 in

Threads per Inch, n

13

Applied Pull-Out Load, T

0.024 kips

Applied Shear, S

0.101 kips

Applied Moment, M

0.375 kip-in

Net Bolt Cross-Sectional Area, An

0.142 in2 (each)

Bolt Group Moment of Inertia, I

36.000 in4

Maximum Tensile Force (per bolt)

0.037 kips

Maximum Shear Force (per bolt)

0.177 kips

Nominal Tensile Strength (per bolt), \mathbf{R}_{nt}

8.19 kips 3.53 kips

Nominal Shear Strength (per bolt), V_{nt} Anchor Rod Interaction Equation

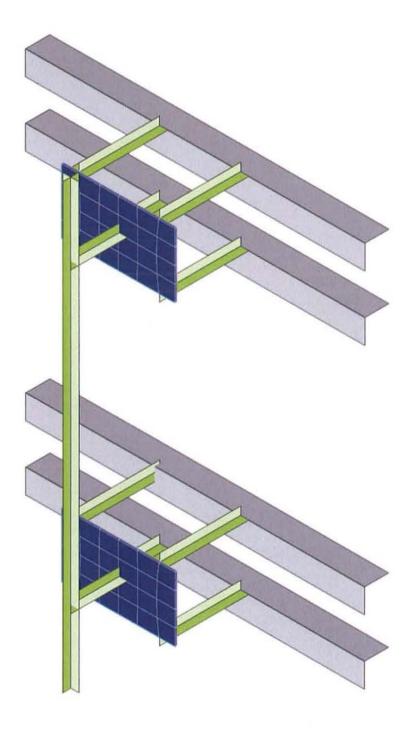
0.05

% Capacity

5.5%

The Bolt Group is Adequate for Loading





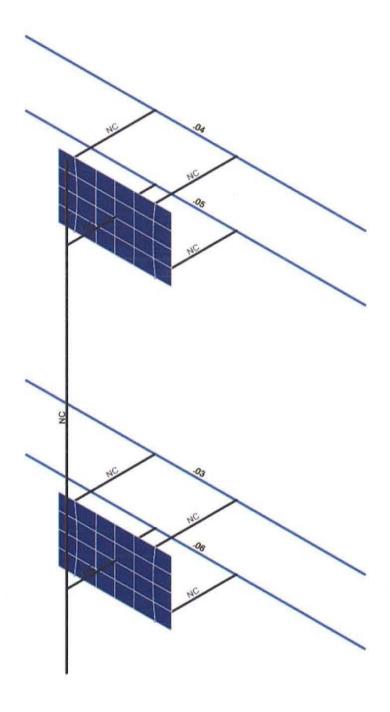
Infinigy	Engineering PLLC
DVA	
317-50	1

4BN0029B (Gamma) RISA-3D Model SK - 1 May 31, 2017 at 5:12 PM 4BN0029B (Gamma).r3d









Member Code Checks Displayed Results for LC 1, 1.4D

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317-501

4BN0029B (Gamma) Member Bending Check SK - 2 May 31, 2017 at 5:14 PM 4BN0029B (Gamma).r3d

Infinigy Engineering PLLC

DVA

317-501 4BN0029B (Gamma)

May 31, 2017

Checked By: DVA

Member Primary Data

	Label	. I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N2	N1			RIGID	None	None	RIGID	Typical
2	M2	N3	N5		270	RIGID	None	None	RIGID	Typical
3	M4	N144	N146		180	Horizaontal An.,	Beam	Single Angle	A36 Gr.36	Typical
4	M5	N145	N147		180	Horizaontal An	Beam	Single Angle	A36 Gr.36	Typical
5	M6	N148	N16			RIGID	None	None	RIGID	Typical
6	M7	N131	N149			RIGID	None	None	RIGID	Typical
7	M8	N24	N150			RIGID	None	None	RIGID	Typical
8	M9	N139	N151		P/E	RIGID	None	None	RIGID	Typical
9	M10	N4	N152		270	RIGID	None	None	RIGID	Typical
10	M12	N291	N293		180	Horizaontal An	Beam	Single Angle	A36 Gr.36	Typical
11	M13	N292	N294		180	Horizaontal An	Beam	Single Angle	A36 Gr,36	Typical
12	M14	N295	N163			RIGID	None	None	RIGID	Typical
13	M16	N171	N297			RIGID	None	None	RIGID	Typical
14	M17	N286	N298	The print		RIGID	None	None	RIGID	Typical
15	M15	N296	N45			RIGID	None	None	RIGID	Typical

Material Takeoff

	Material	Size	Pieces	Length[in]	Weight[K]
1	General				
2	RIGID		11	147	0
3	Total General		11	147	0
4		and his section of			
5	Hot Rolled Steel				
6	A36 Gr.36	L3x3x4	4	168	0
7	Total HR Steel		4	168	0

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me	Surface(P.
1	Self Weight	DL		-1			2			
2	Wind Load AZI 000	WLZ					2			
3	Wind Load AZI 090	WLX					2			
4	Ice Weight	OL1				Device.	2	15		
5	Wind + Ice Load AZI	OL2					2			
6	Wind + Ice Load AZI	OL3	A PART OF THE PART				2			

Load Combinations

	Description	S.,	P	SE	3	Fa.	B	Fa.	.B.,	Fa	B	Fa.	В.,	Fa.	B	Fa.	B	Fa.	В	Fa.	.B	Fa.	B.,	Fa.
1	1.4D	Υ.,	Y	1)L	1.4																		
2	1.2D + 1.6W AZI 000	Υ.,	Y	1	DL	1.2		1.6																
3	1.2D + 1.6W AZI 030	Υ	Y	_)L		W.	1.3.	.W.	8.														
4	1.2D + 1.6W AZI 060	Y.,	Y	_		and sold of the		8	W.	1.3														
5	1.2D + 1.6W AZI 090	Y	Y		DL	1.2				1.6														
6	1.2D + 1.6W AZI 120	Y	Y		DL	1.2	W.	8	W.	.1.3								7						
7	1.2D + 1.6W AZI 150	Υ.,	Y)L	1.2	W.	-1	W.	- ,8														
8	1.2D + 1.6W AZI 180	Υ	Y		DL	1.2	W.	1.6								10 10								
9	1.2D + 1.6W AZI 210	Y.,	Y)L			-1																
10	1.2D + 1.6W AZI 240	Y.,	Y)L	1.2	W.	8	W,	-1														
11	1.2D + 1.6W AZI 270	Y.,	Y	$\overline{}$	L	1.2			W.	1.6														
12	1.2D + 1.6W AZI 300	Y.,	Y			1,2	W.	8	W.	-1						-								
13	1.2D + 1.6W AZI 330	Υ.,	Y)L	1.2	W.	1.3.	W.	8														
14	0.9D + 1.6W AZI 000	Υ.,	Y	1)L	.9	W.	1.6									-							

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Load Combinations (Continued)

	Description	S	P	S.,	В	Fa.	В.,	Fa.	В.,	Fa.	B	Fa	В.,	Fa	В.,	Fa	В.,	Fa.	В.,	Fa.	В.,	Fa	В.,	Fa.
15	0.9D + 1.6W AZI 030	Y.,	Y		DL	.9	W.	1.3.	W.	8.														
16	0.9D + 1.6W AZI 060	Y.,	Y		DL	.9	W.	8	W.	1.3										V-				
17	0.9D + 1.6W AZI 090	Y.,	Y		DL	.9			W.	1.6														
18	0.9D + 1.6W AZI 120	Υ	Y		DL	.9	W.	8	W.	1.3.														
19	0.9D + 1.6W AZI 150	Υ	Y		DL			-1		8.														
20	0.9D + 1.6W AZI 180	Y.,	Y		DL	.9	W.	1.6				15									8			
21	0.9D + 1.6W AZI 210	Y	Y		DL					8														
22	0.9D + 1.6W AZI 240	Y.,			DL			8	W.	-1														
23	0.9D + 1.6W AZI 270	Y	Y		DL	.9			W.	1.6														
24	0.9D + 1.6W AZI 300	Y.,	Y		DL	100				-1														
25	0.9D + 1.6W AZI 330	Y	Y		DL	.9	W.	.1.3.	W.	8														
26	1.2D + 1.0Di	Υ				1.2								18						l.				
27	1.2D + 1.0Di + 1.0Wi AZI 000	Y				1.2			0	1														
28	1.2D + 1.0Di + 1.0Wi AZI 030	Υ				1.2			0.,	.866	_	-136-		12										
29		Y				1.2			0.,	.5	O.,	.866												
30	1.2D + 1.0Di + 1.0Wi AZI 090	Υ			DL	1.2	0	1			O	1												
31	1.2D + 1.0Di + 1.0Wi AZI 120	Y.,			DL	1.2	O.,		0.,	100														
32		Υ				1.2			0	8	0	.5							5			J. J.		
33	1.2D + 1.0Di + 1.0Wi AZI 180					1.2			0	-1														
34	1.2D + 1.0Di + 1.0Wi AZI 210					1.2				8											10.11		10	
35	1.2D + 1.0Di + 1.0Wi AZI 240								0	5														
36	1.2D + 1.0Di + 1.0Wi AZI 270				DL	1.2	0	1			0	-1												
37	1.2D + 1.0Di + 1.0Wi AZI 300								0	.5														
38	1.2D + 1.0Di + 1.0Wi AZI 330					1.2			0			5												
39	1.2D + 1.5L + 1.0WL (30 mph) AZI 000	Υ	Y		DL	1.2	LL	1.5	W.	.055														
	1.2D + 1.5L + 1.0WL (30 mph) AZI 030				DL	1.2	LL	1.5	W.	.048	W.,	.027												
	1.2D + 1.5L + 1.0WL (30 mph) AZI 060				DL	1.2	LL	1.5	W.	-027	W.,	.048												
	1.2D + 1.5L + 1.0WL (30 mph) AZI 090							1.5		_	W.,	.055	-											
43	1.2D + 1.5L + 1.0WL (30 mph) AZI 120	Υ	Y		DL	1.2	LL	1.5	W.	r.0	W	.048												
44	1.2D + 1.5L + 1.0WL (30 mph) AZI 150	Υ	Y					1.5			W	.027		V.						7	10			7 1
	1.2D + 1.5L + 1.0WL (30 mph) AZI 180				DL	1.2	LL	1.5	W.	r.0														
	1.2D + 1.5L + 1.0WL (30 mph) AZI 210				DL	1.2	LL	1.5	W.	0	NAME OF TAXABLE PARTY.					1					-			
47	1.2D + 1.5L + 1.0WL (30 mph) AZI 240	Υ	Y							0														
	1.2D + 1.5L + 1.0WL (30 mph) AZI 270							1.5				r.O		15										-
	1.2D + 1.5L + 1.0WL (30 mph) AZI 300				DL	1.2	LL	1.5	W.	.027	W	r.0												
50	1.2D + 1.5L + 1.0WL (30 mph) AZI 330	Y	Y		DL	1.2	LL	1.5	W.	.048	W	r.O											7	

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1	N144	max	23.361	16	83.615	34	10.718	15	0	1	0	1	0	1
2		min	-36.388	10	20.556	15	-90.71	34	0	1	0	1	0	1
3	N145	max	65.309	29	82.185	28	127.351	28	0	1	0	1	0	1
4		min	-8.391	22	20.535	21	2.234	21	0	1	0	1	0	1
5	N146	max	36.389	6	83.615	32	10.718	25	0	1	0	1	0	1
6		min	-23.361	24	20.555	25	-90.71	32	0	1	0	1	0	1
7	N147	max	8.391	18	82.185	38	127.351	38	0	1	0	1	0	1
8		min	-65.309	37	20.535	19	2.234	19	0	1	0	1	0	1
9	N291	max	18.263	16	88.896	34	-2.627	15	0	1	0	1	0	1
10		min	-43.101	10	22.267	15	-130.235	34	0	1	0	1	0	1
11	N292	max	50.635	29	79.829	28	93.55	28	0	1	0	1	0	1
12		min	-13.251	22	19.714	21	-8.887	21	0	1	0	1	0	1
13	N293	max	43.077	6	88.884	32	-2.614	25	0	1	0	1	0	1
14		min	-18.283	24	22.265	25	-130.196	32	0	1	0	1	0	1
15	N294	max	13.27	18	79.819	38	93.512	38	0	1	0	1	0	1
16		min	-50.578	37	19.712	19	-8.9	19	0	1	0	1	0	1

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Envelope Joint Reactions (Continued)

		Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1	7	Totals:	max	199.648	5	665.575	32	275.808	2						
1	8		min	-199.648	23	195.012	24	-275.807	20			THE REAL PROPERTY.		1 1-12	

Envelope Plate/Shell Principal Stresses

	Plate		Surf	Sigma1 [ksi]	LC	Sigma2 [ksi]	LC	Tau Max [ksi]	LC	Angle [rad]	LC	Von Mises [ksi	1 LC
1	P26	max	T	9.125	35	1.292	6	4.197	36	048	15	8.774	35
2		min		2.305	16	673	24	.667	17	521	19	2.063	16
3		max	В	.803	24	-2.297	16	4.29	36	1.509	15	8.721	36
4		min	- 1	-1.079	6	-8.872	35	.709	17	1.115	20	2.066	16
5	P29	max	T	9.11	31	1,296	10	4.185	30	.391	21	8.755	31
6		min		2.304	24	67	16	.665	23	084	25	2.062	24
7		max	В	.8	16	-2.296	24	4.278	30	1.897	20	8,703	30
8		min		-1.083	10	-8.858	31	.708	23	1.501	25	2.065	24
9	P25	max	T	9.086	36	.729	37	4.179	35	.525	15	8.744	36
10		min		2.824	17	.029	17	1.398	17	.194	21	2.81	17
11		max	В	022	17	-2.798	17	4.193	34	2.088	15	8.752	35
12		min	385	7	37	-9.08	36	1.388	17	1.788	21	2.787	17
13	P30	max	T	9.076	30	.731	29	4.173	31	081	19	8.733	30
14	The state of the s	min		2.82	23	.03	23	1.395	23	413	25	2.806	23
15		max	В	023	23	-2.794	23	4.186	32	1.466	19	8.741	31
16		min		703	29	-9.07	30	1.385	23	1.166	25	2.783	23
17	P24	max	T	8.861	29	.75	30	4.059	27	1.445	19	8.512	29
18		min		2.768	22	.001	24	1.358	22	1.103	25	2.742	22
19		max	В	011	23	-2.72	23	4.029	31	144	19	8.445	30
20		min		729	30	-8.786	30	1.355	23	-,459	25	2.715	23
21	P4	max	T	8.861	37	.75	36	4.059	27	2.039	15	8.512	37
22		min		2.768	18	.001	16	1.358	18	1.697	21	2.742	18
23		max	В	011	17	-2.72	17	4.029	35	.459	15	8,445	36
24	THE ALL STREET	min	1	729	36	-8.786	36	1.355	17	.144	21	2.715	17
25	P8	max	T	8.327	35	1.074	6	4.081	36	1,648	16	8.237	36
26		min		2.162	16	877	24	.693	17	1.129	20	1.932	17
27		max	В	.965	12	-2.158	16	4.166	36	.051	16	8.256	36
28		min		911	18	-8.189	35	.715	17	387	20	1.932	17
29	P20	max	Т	8.327	31	1.074	10	4.081	30	2.013	20	8.237	30
30		min		2.162	24	877	16	.693	23	1,494	24	1,932	23
31		max	В	.965	4	-2.158	24	4.166	30	.387	20	8.256	30
32		min		911	22	-8.189	31	.715	23	051	24	1.932	23
33	P15	max	T	5.76	12	4.443	12	1.808	5	2.311	9	5.227	12
34		min		-1.159	18	-4.218	18	.195	13	65	21	1,177	20
35		max	В	4.39	18	1.197	18	1.874	5	1.334	25	5.299	12
36		min		-4.455	12	-5.86	12	.224	13	261	14	1,199	21
37	P11	max	T	5.759	4	4.443	4	1.808	11	1.792	14	5.227	4
38		min		-1.159	22	-4.218	22	.195	3	.25	15	1.177	20
39		max	В	4.39	22	1.197	22	1.874	11	2.219	19	5.299	4
40		min		-4.455	4	-5.86	4	.224	3	732	7	1.199	19
41	P33	max	T	4.92	4	3.617	4	1.847	11	2.286	19	4.415	4
42		min		-1.743	22	-4.871	10	.215	3	678	7	.855	19
43		max	В	5.097	10	1.801	22	1.923	11	1.775	25	4.529	10
44		min		-3.609	4	-4.969	16	.218	3	.307	16	.773	19
45	P34	max	T	4.92	12	3.616	12	1.846	5	1.261	24	4.415	12
46		min		-1.745	18	-4.871	6	.215	13	181	15	.855	21
47		max	В	5.098	6	1.803	18	1.922	5	2.22	9	4.529	6
48	Harland I	min		-3.609	12	-4.969	24	.218	13	728	21	.773	21
49	P14	max	T	4.828	24	1.854	24	1.732	11	2.214	15	4.348	6
50		min		-3.439	6	-4.887	6	.266	7	785	3	.894	15

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	Plate		Surf	Sigma1 [ksi]	LC	Sigma2 [ksi]	LC	Tau Max [ksi]	LC	Angle [rad]	LC	Von Mises (ksi	I LC
51		max	В	4.872	18	3.392	6	1.836	11	1.852	20	4.538	12
52		min		-1.942	24	-5.149	12	.257	7	.225	19	.762	15
53	P10	max	Т	4.828	16	1.854	16	1.732	5	1.329	21	4.348	10
54		min		-3.439	10	-4.887	10	.266	9	228	20	.894	25
55		max	В	4.872	22	3.392	10	1.836	5	2.299	13	4.538	4
56		min		-1.942	16	-5.149	4	.257	9	673	25	.762	25
57	P40	max	T	4.172	24	1.234	24	1.712	11	1.907	20	5.156	6
58		min	100	-4.277	6	-5.725	6	.267	7	.165	19	1.065	2
59		max	В	5.732	6	4.249	6	1.806	11	2.335	3	5.153	6
60		min	T TO	-1.304	24	-4.419	24	.278	7	051	14	1.19	15
61	P39	max	T	4.171	16	1.232	16	1.713	5	1.693	14	5.157	10
62		min		-4.278	10	-5.726	10	.267	9	725	13	1.065	2
63		max	В	5.733	10	4.25	10	1.806	5	1.42	21	5.154	10
64		min	75	-1.302	16	-4.418	16	.278	9	388	20	1.191	25
65	P3	max	T	3.325	29	1.774	32	.802	28	1.753	15	2.88	29
66		min		.853	23	.245	14	.182	23	.672	21	.741	23
67		max	В	268	14	868	23	.769	28	2.341	20	2.792	29
68		min		-1.724	32	-3.223	29	.207	23	742	22	.752	23
69	P23	max	Т	3.325	37	1.774	34	.802	38	2.331	7	2.88	37
70		min		.853	17	.245	14	.182	17	771	18	.741	17
71		max	В	268	14	868	17	.769	38	.832	19	2.792	37
72		min		-1.724	34	-3.223	37	.207	17	-,165	25	.752	17
73	P16	max	T	3.287	38	.688	3	1.711	37	2.211	8	3.353	37
74		min		079	19	942	21	.102	5	754	21	.443	5
75		max	В	1.089	19	.112	20	1.627	37	1.894	16	3.163	37
76	Action to the second	min		697	3	-3.125	13	.156	16	417	17	.449	5
77	P12	max	T	3.287	28	.688	13	1.712	29	2.027	23	3.353	29
78		min		079	21	942	19	,102	11	247	24	.443	11
79		max	В	1.089	21	.112	20	1,627	29	2.34	7	3.163	29
80		min		697	13	-3.125	3	.156	24	751	19	.449	11
81	P31	max	Т	3.216	29	2.013	31	.608	28	2.314	19	2.813	29
82		min		.921	23	.373	21	.208	18	744	7	.798	23
83		max	В	383	22	923	24	.661	28	1.695	15	2.812	30
84		min	1100	-1.911	31	-3.229	30	.223	24	.673	21	.799	24
85	P36	max	T	3.212	37	2.014	35	.606	38	.991	19	2.81	37
86	7-11-11-11	min		.92	17	.374	19	.207	22	133	25	.797	17
87		max	В	383	18	922	16	.659	38	2.291	9	2.809	36
88		min		-1.911	35	-3.226	36	.223	16	778	21	.798	16
89	P19	max	T	2.493	12	.324	12	1.116	37	2.202	5	2.347	12
90	1442 /- 7	min		254	18	793	18	.099	7	-,663	17	.248	20
91		max	В	.801	18	,323	18	1.111	37	2.139	20	2.324	12
92	ELA GLICA	min		386	12	-2,492	12	.076	7	678	8	.276	20
93	P7	max	Т	2.493	4	.324	4	1.116	29	2.288	8	2.347	4
94		min		254	22	793	22	.099	9	-,496	20	.248	20
95		max	В	.801	22	.323	22	1.111	29	2.278	23	2.324	4
96		min		386	4	-2.492	4	.076	9	547	11	.276	20
97	P27	max	T	2.491	3	.505	25	1.459	4	2.347	12	2.693	4
98		min		268	20	-1.389	21	.045	12	726	7	.462	24
99		max	В	1.647	21	.329	20	1,428	4	2.079	24	2.622	4
100	Name of Street	min		51	25	-2.43	3	.07	12	.267	25	.422	12
101	P28	max	Т	2.491	13	.506	15	1.457	12	1.329	15	2.691	12
102		min		267	20	-1.387	19	.044	4	626	16	.464	16
103		max	В	1.645	19	.328	20	1.427	12	2.232	9	2.621	12
104		min		511	15	-2.43	13	.069	4	771	32	.423	4
105	P35	max	Т	2.13	12	.266	24	.935	12	1.948	8	2.013	12
106		min	13	31	6	-1.062	18	.136	4	765	21	.275	4
107		max	В	1.077	18	.409	6	.912	12	2.088	16	1.987	12
101		THICK		1.077	10	1100		10.1%	1.60	2.000	10	1,001	150

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	Plate		Surf	Sigma1 [ksi]	LC	Sigma2 [ksi]	LC	Tau Max [ksi]	LC	Angle [rad]	LC	Von Mises [ksi	LC
108		min	150	308	24	-2.118	12	.149	16	544	5	.305	4
109	P32	max	T	2.128	4	.266	16	.934	4	2.062	11	2.011	4
110		min		309	10	-1.061	22	.136	12	605	24	.274	12
111		max	В	1.076	22	.408	10	.911	4	2.3	19	1.986	4
112		min		309	16	-2.116	4	.149	24	473	8	.305	12
113	P9	max	T	1.346	15	.309	14	1.405	10	2.052	6	2.595	10
114		min		485	19	-2.393	9	.032	6	721	18	.448	6
115		max	В	2.232	9	.483	19	1.332	10	2.353	50	2.435	10
116		min	1	387	14	-1.724	15	.12	6	783	43	.372	6
117	P13	max	T	1.346	25	.309	14	1.406	6	2.24	38	2.595	6
118		min		485	21	-2.393	7	.032	10	751	3	.448	10
119		max	В	2.232	7	.483	21	1.332	6	2.109	22	2.435	6
120		min		387	14	-1.724	25	.12	10	.191	21	.372	10
121	P18	max	T	1.237	24	.321	12	.854	6	2.266	22	1.837	6
122		min		247	18	-1.943	6	.105	10	775	10	.313	10
123		max	В	1.918	6	.25	18	.851	6	2.336	3	1.82	6
124		min	170	475	12	-1.265	24	.089	10	747	15	.343	10
125	P6	max	T	1.237	16	.321	4	.854	10	2.338	13	1.837	10
126		min		247	22	-1.943	10	.105	6	57	24	.313	6
127		max	В	1.918	10	.249	22	.851	10	2.154	6	1.82	10
128		min		474	4	-1.265	16	.089	6	779	18	.342	6
129	P41	max	Т	.936	24	.269	24	1.015	6	2.243	15	2.198	6
130		min		303	6	-2.334	6	.155	22	59	2	.298	22
131		max	В	2.32	6	.321	18	1.004	6	2.329	11	2.181	6
132	To Call Heal	min		39	12	955	24	.132	11	329	22	.32	22
133	P38	max	T	.935	16	.268	16	1.014	10	2.003	18	2.196	10
134		min		303	10	-2.332	10	.155	18	-,636	5	.298	18
135		max	В	2.318	10	.321	22	1.003	10	2.283	2	2.179	10
136	The Later	min		389	4	954	16	.133	5	631	25	.32	18
137	P45	max	Т	.896	25	.097	15	1.679	35	2.255	2	3.296	35
138		min		654	7	-3.236	34	.117	5	72	25	.43	4
139		max	В	2.948	9	.652	7	1.54	10	2.036	18	2.953	10
140		min	WE ST	164	14	-1.14	15	.172	18	436	17	,469	5
141	P46	max	Т	.894	15	.096	25	1.678	31	2.127	11	3.295	31
142		min		654	9	-3.236	32	.117	11	321	22	.429	12
143		max	В	2.947	7	.652	9	1,539	6	2.331	3	2.951	6
144		min		163	14	-1.138	25	.172	22	762	15	.469	11
145	P44	max	Т	.805	18	-2.049	22	3.707	30	2.044	14	7.623	29
146		min		-1.191	12	-7.835	29	.599	23	1.475	22	1.833	23
147		max	В	7.566	29	.883	24	3.907	30	.383	14	7.685	30
148		min		2.033	22	999	6	.679	23	091	22	1.831	23
149	P47	max	T	.803	22	-2.049	18	3.699	36	1.798	18	7.61	37
150	THE RESERVE	min	771	-1.193	4	-7.825	37	.6	17	1.228	14	1.833	17
151		max	В	7.557	37	.885	16	3.9	36	.222	18	7.673	36
152		min	19	2.034	18	997	10	.679	17	253	14	1.831	17
153	P17	max	Т	.617	22	-2.058	18	3.659	36	.01	18	7.827	37
154		min		-1,387	4	-8.261	38	.509	17	-,54	15	1.813	18
155		max	В	7.848	37	1.045	4	3.834	36	1.596	18	7.753	37
156				2.034	18	835	22	.596	17	1.142	100000000000000000000000000000000000000	1.826	18
157	P5	min	Т	.617	18	-2.058	22	3.659	30	.54	14 25	7.827	29
158	FQ	min		-1.387	12	-8.261	28	.509	23	01	22	1.813	22
159			В		29	7. The second se	12	3.834		2		7.753	
		max	В	7.848		1.045 835			30		14		29
160	D42	min	т	2.034	22		18	.596	23	1.546	22	1.826	22
161	P43	max	Т	023	22	-2.654	24	3.734	36	1,335	15	7.901	30
162		min	-	834	30	-8.285	30	1.239	18	.967	21	2.611	24
163		max	В	8.405	29	.785	30	3.817	38	27	15	8.043	29
164		min		2.67	23	.02	22	1.257	18	601	21	2.656	23

: Infinigy Engineering PLLC

DVA 317-501

4BN0029B (Gamma)

May 31, 2017

Checked By: DVA

Envelope Plate/Shell Principal Stresses (Continued)

	Plate		Surf	Sigma1 [ksi]	LC	Sigma2 [ksi]	LC	Tau Max [ksi]	LC	Angle [rad]	LC	Von Mises [ksi]	LC
165	P48	max	T	024	18	-2.651	16	3.728	30	2.063	19	7.89	36
166		min	17 11 1	837	36	-8.275	36	1.237	22	1.694	25	2.607	16
167		max	В	8.394	37	.787	36	3.81	28	.489	19	8.031	37
168		min		2.666	17	.021	18	1.254	22	.157	25	2.652	17
169	P1	max	T	052	23	-2.564	23	3.649	27	064	15	7.712	29
170		min		79	30	-8.074	29	1,205	18	442	21	2.539	23
171		max	В	8.256	29	.743	30	3.764	27	1.465	15	7.914	28
172		min		2.597	23	.036	23	1.234	18	1.13	21	2.579	23
173	P21	max	T	052	17	-2.564	17	3.649	27	.442	19	7.712	37
174	RAIL OF THE	min		79	36	-8.074	37	1.205	22	.064	25	2.539	17
175		max	В	8.256	37	.743	36	3,764	27	2.012	19	7.914	38
176		min		2.597	17	.036	17	1.234	22	1.677	25	2.579	17
177	P22	max	T	19	25	635	22	.468	13	2.189	11	2.232	29
178	The state of the s	min		-1.871	30	-2.475	29	.091	22	748	16	.566	22
179		max	В	2.621	29	1,776	30	.431	13	1.757	19	2,316	29
180		min	111 9	.68	22	.256	24	.131	22	.551	25	.594	22
181	P2	max	T	19	15	635	18	.468	3	1,121	15	2.232	37
182		min		-1.871	36	-2.475	37	.091	18	215	21	,566	18
183		max	В	2.621	37	1.776	36	.431	3	2.352	5	2.316	37
184		min	7	.68	18	.256	16	.131	18	72	17	.594	18
185	P42	max	T	211	20	64	23	.581	7	1.818	20	2.353	31
186		min		-1.771	28	-2.681	31	.101	23	.499	25	.567	23
187		max	В	2.757	31	1.681	28	,562	32	2.336	2	2.403	31
188	Assistant Control	min	1	.683	23	.221	20	.134	23	754	12	.596	23
189	P37	max	T	212	20	641	17	.58	9	2.298	13	2.355	35
190	DICTOR OF THE	min		-1.773	38	-2.683	35	.102	17	7	25	.567	17
191		max	В	2.759	35	1,682	38	.562	34	.922	15	2.404	35
192		min		.684	17	.222	20	.134	17	253	21	.597	17

Envelope AISC 14th(360-10): LRFD Steel Code Checks

	Member	Shape	Code Check	Loc[in]	LC	Shear.	.Loc[in]	Dir	LC	phi*Pnc	phi*Pnt	.phi*Mn	phi*Mn.	Cb	Egn
1	M4	L3x3x4	.054	26.25	7	.006	26.6	Z	32	35567.9	46656	1688.138	3755.74	5 1	H2-1
2	M5	L3x3x4	.125	15.75	28	.009	2.188	z	28	35567.9	46656	1688.138	3755.74	5 1	H2-1
3	M12	L3x3x4	.082	15.75	34	.009	15.3	Z	34	35567.9	46656	1688.138	3731.60	4 1	H2-1
4	M13	L3x3x4	.097	15.75	28	.006	1.75	7	28	35567.9	46656	1688.138	3755.74	5 1	H2-1



BOLT CALCULATIONS (SIMPSON SCREWS)

Customer:

American Tower

Site Name:

4BN0029B (Gamma Sector)

Job Number:

317-501

Structure Type:

Rooftop

Date:

5/31/2017

Input Information:

Existing Bolts

Bolts, N

Bolt Diameter, d

0.25 in

Applied Pull-Out Load, T

0.0904 kips

Applied Shear, S

0.0375 kips

Nominal Tensile Strength (per bolt), Rnt

0.180 kips

Nominal Shear Strength (per bolt), Vnt

0.255 kips

Bolt Interaction Equation

0.502

% Capacity

50.2%

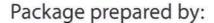
The Bolt Group is Adequate for Loading

Photographic Simulation Package

Proposed Wireless Telecommunications Facility:

4BN0029B BN029/955 Mass Ave 955 Massachusetts Ave Cambridge, MA 02139

- Photos taken 10/16/17



Virtual Site Simulations, LLC 28 Caswell Street Suite 100 Narragansett, Rhode Island 02882

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or

with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution

www.VirtualSiteSimulations.com www.ThinkVSSFirst.com











Wireless Telecommunications Facility:

4BN0029B BN029/955 Mass Ave 955 Massachusetts Ave Cambridge, MA 02139 Legend:

Facility Location 750 Ft Radius

Photo location - Year Round Visibility

X Photo location- Obscured Visibility

Photo location - NOT visible

Photo Simulations are for demonstration purposes only. It should not be used in any other fashion or with any other intent. The accuracy of the resulting data is not guaranteed and is not for redistribution









Site: 4BN0029B BN029/955 Mass Ave

VSS*







Site: 4BN0029B BN029/955 Mass Ave

vss'







VSS'

CENTERLINE

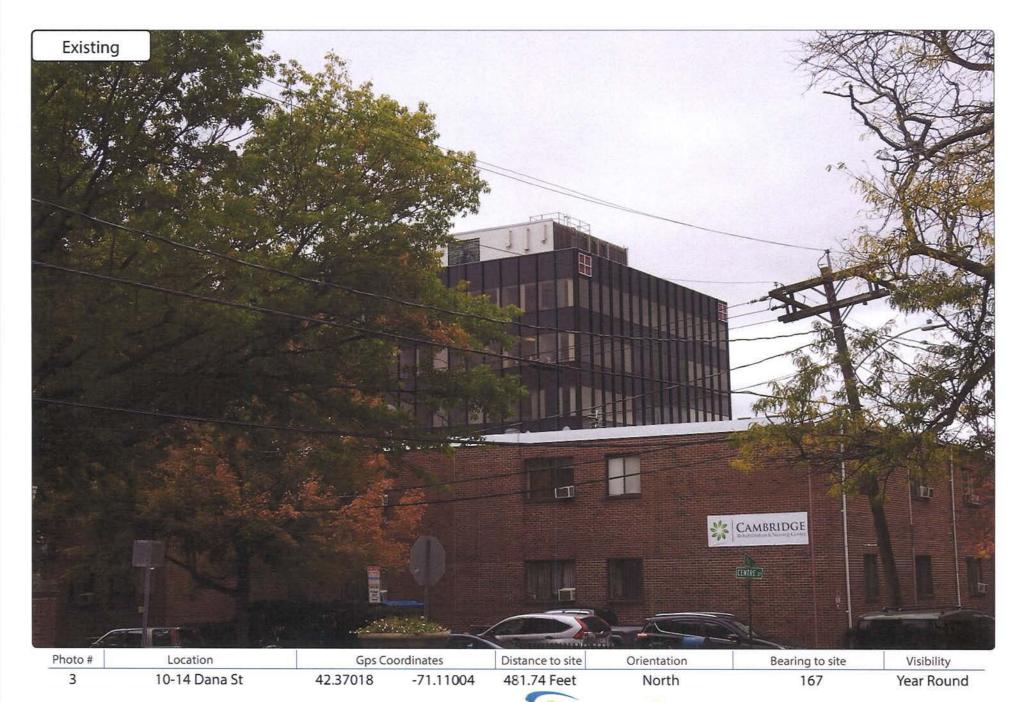




VSS'



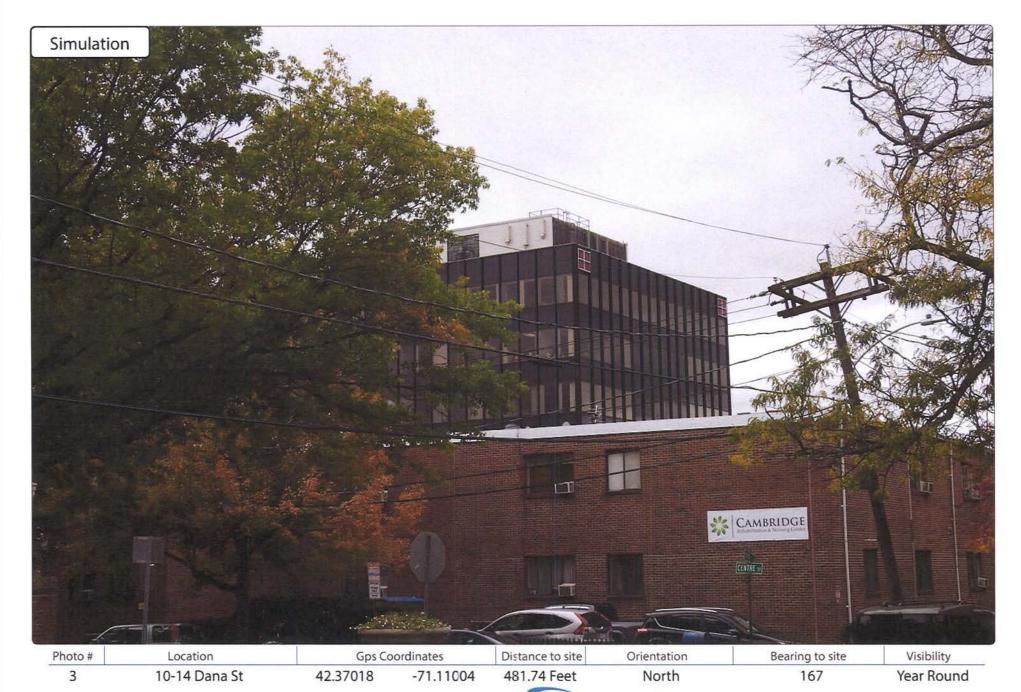








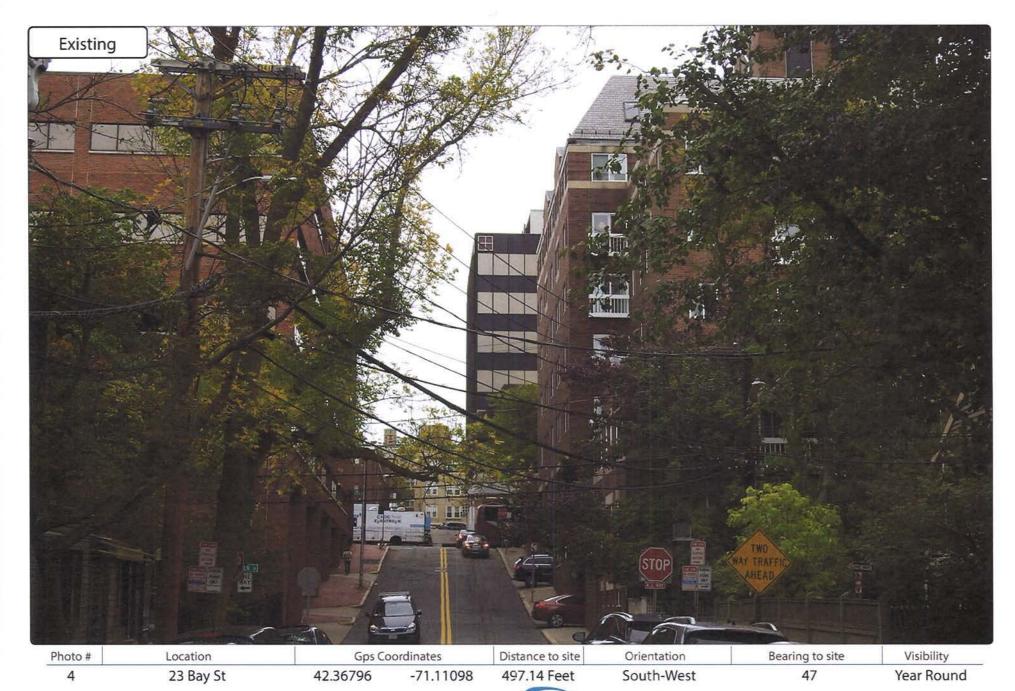






























Universal Licensing System

FCC > WTB > ULS > Online Systems > License Search

FCC Site Map

ULS License

AWS (1710-1755 MHz and 2110-2155 MHz) License - WQPG202 THELP - T-Mobile License LLC

Q New Search Q Refine Search Return to Results Printable Page Reference Copy

MAIN	ADMIN MARKET MAI	•	
Call Sign	WQPG202	Radio Service	AW - AWS (1710-1755 MHz and 2110-2155 MHz)
Status	Active	Auth Type	Regular
Market			
Market	BEA003 - Boston-Worcester- Lawrence-Lowell-Brockton, MA-NH- RI-VT	Channel Block	C
Submarket	4	Associated Frequencies (MHz)	001730.00000000- 001735.00000000 002130.00000000- 002135.00000000
Dates			
Grant	04/18/2012	Expiration	11/29/2021
Effective	04/18/2012	Cancellation	
Buildout Deadli	nes		
1st		2nd	
Notification Dat	es		
1st		2nd	
Authoris Saviture			
FRN	0001565449 (<u>View Ownership Filing</u>)	Туре	Limited Liability Company
Licensee			
T-Mobile License L 12920 SE 38th S Bellevue, WA 980 ATTN Dan Menser	treet 06	P:(425)383-4000 F:(425)383-4840 E:fccregulatoryco	

Contact

Wiley Rein LLP

1776 K Street, NW Washington, DC 20006 ATTN Nancy J. Victory P:(202)719-7344 F:(202)719-7049 E:nvictory@wileyrein.com

Yes

Radio Service Type Mobile Regulatory Status Common Carrier Interconnected Yes Alien Ownership Is the applicant a foreign government or the representative of any No foreign government? Is the applicant an alien or the representative of an alien? No Is the applicant a corporation organized under the laws of any No foreign government? Is the applicant a corporation of which more than one-fifth of the No capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?

Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by allens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?

The Alien Ruling question is not answered.

Basic Qualifications

The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits

This license did not have tribal land bidding credits.

Race

Ethnicity Gender

ULS Help ULS Glossary - FAQ - Online Help - Technical Support - Licensing Support

ULS Online Systems CORES - ULS Online Filing - License Search - Application Search - Archive License Search

Privacy Statement - About ULS - ULS Home **About ULS**

SEARCH By Call Sign **Basic Search**

FCC | Wireless | ULS | CORES Help | Tech Support

Federal Communications Commission 445 12th Street 5W Washington, DC 20554

Phone: 1-377-480-3201 TTY: 1-717-338-2824 Submit Help Request

Local Multipoint Distribution Service License - WQPD278 - T-Mobile License LLC

Call Sign

WQPD278

Radio Service

LD - Local Multipoint Distribution

Service

Status

Active

Auth Type

Regular

Market

Market

BTA051 - Boston, MA

Channel Block

Α

Submarket

Associated

027500.00000000-

Frequencies (MHz)

028350.00000000 029100.000000000

029250.00000000 031075.00000000-031225.00000000

Dates

Grant

02/15/2012

Expiration

10/06/2018

Effective

12/30/2013

Cancellation

Buildout Deadlines

2nd

Notification Dates

1st

2nd

FRN

0001565449

Type

Limited Liability Company

Licensee

T-Mobile License LLC 12920 SE 38th Street

Bellevue, WA 98006

ATTN FCC Regulatory Compliance

The American State (1984)

P:(425)383-8401

F:(425)383-4840

E:FCCregulatorycompliancecontact@t-mobile.com

Contact

T-Mobile License LLC

P:(425)383-5178 F:(425)383-4840

12920 SE 38th Street Bellevue, WA 98006

E:shannon.reilly@t-mobile.com

ATTN Shannon Kraus

Radio Service Type

Fixed

Regulatory Status

Common Carrier,

Interconnected

No

Non-Common Carrier

Alien Ownership

Is the applicant a foreign government or the representative of any

foreign government?

Is the applicant an alien or the representative of an alien?

No

6/9/2017

Is the applicant a corporation organized under the laws of any foreign government?

No

Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?

Yes

Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?

Yes

If the answer to the above question is 'Yes', has the applicant received a ruling(s) under Section 310(b)(4) of the Communications Act with respect to the same radio service involved in this application?

Yes

Basic Qualifications

The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits

This license did not have tribal land bidding credits.

Race

Ethnicity

Gender

700 MHz Lower Band (Blocks A, B & E) License - WQIZ578 - T-Mobile License LLC

Call Sign WQIZ578 Radio Service WY - 700 MHz Lower Band (Blocks

A, B & E)

Status Active Auth Type Regular

Market

Market BEA003 - Boston-Worcester- Channel Block A

Lawrence-Lowell-Brockton, MA-NH-

RI-VT

Submarket 0 Associated 000698.000000000-Frequencies 000704.00000000

(MHz) 000728.0000000 000734.0000000

Dates

Grant 06/26/2008 Expiration 06/13/2019

Effective 12/02/2013 Cancellation

Buildout Deadlines

1st 2nd 06/13/2019

Notification Dates

1st 2nd

 $(x_{n})^{-\frac{n}{2}} \left(\frac{x_{n}}{2} + \frac{x_{n}}{2} \right) = \frac{x_{n}}{2} \left(\frac{x_{n}}{2} + \frac{x_{n}}{2} \right)$

FRN 0001565449 Type Limited Liability Company

Licensee

T-Mobile License LLC P:(425)383-8401 12920 SE 38th Street F:(425)383-4840

Bellevue, WA 98006 E:FCCregulatorycompliancecontact@t-mobile.com

ATTN FCC Regulatory Compliance

Contact

T-Mobile License LLC P:(425)383-5178
Shannon Kraus F:(425)383-4840

12920 SE 38th Street E:shannon.reilly@t-mobile.com

Bellevue, WA 98006 ATTN Shannon Kraus

Commence of Charles and Commence of the Commen

Radio Service Type Fixed, Mobile

Regulatory Status Common Carrier Interconnected Yes

Alien Ownership

Is the applicant a foreign government or the representative of any No

foreign government?

Is the applicant an alien or the representative of an alien? No

Is the applicant a corporation organized under the laws of any No

foreign government?

Yes

Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?

Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?

If the answer to the above question is 'Yes', has the applicant received a ruling(s) under Section 310(b)(4) of the Communications Act with respect to the same radio service involved in this application?

Basic Qualifications

The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits

This license did not have tribal land bidding credits.

Race Ethnicity	Gender

AWS (1710-1755 MHz and 2110-2155 MHz) License - WQGB373 - T-Mobile License LLC

Call Sign WQGB373 Radio Service AW - AWS (1710-1755 MHz and

2110-2155 MHz)

Status Active Auth Type Regular

Market

Market REA001 - Northeast Channel Block E

 Submarket
 1
 Associated
 001740.000000000

 Frequencies
 001745.00000000

(MHz) 002140.00000000-002145.00000000

Dates

Grant 11/29/2006 Expiration 11/29/2021

Effective 06/26/2012 Cancellation

Buildout Deadlines

1st 2nd

Notification Dates

1st 2nd

11.51.

FRN 0001565449 Type Limited Liability Company

Licensee

T-Mobile License LLC P:(425)383-4000 12920 SE 38th St. F:(425)378-4040

Bellevue, WA 98006 E:FCCRegulatoryComplianceContact@t-mobile.com

ATTN Dan Menser

Contact

T-Mobile License LLC P:(425)383-4000 Kathleen O Ham F:(202)654-5963

12920 SE 38th St. E:FCCRegulatoryComplianceContact@t-mobile.com

Bellevue, WA 98006 ATTN Dan Menser

ing the way of the incidence of the control of

Radio Service Type Mobile

Regulatory Status Common Carrier Interconnected Yes

Alien Ownership

Is the applicant a foreign government or the representative of any No

foreign government?

Is the applicant an alien or the representative of an alien?

Is the applicant an alien or the representative of an alien?

No

Is the applicant a corporation organized under the laws of any

No

foreign government?

Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their

http://wireless2.fcc.gov/UIsApp/UIsSearch/license.jsp?licKey=2863084&printable

Yes

representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?

Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?

The Alien Ruling question is not answered.

Basic Qualifications

The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits

This license did not have tribal land bidding credits.

Race		
Ethnicity	Gend	ler

AWS (1710-1755 MHz and 2110-2155 MHz) License - WQGA731 - T-Mobile License LLC

Call Sign WQGA731 Radio Service AW - AWS (1710-1755 MHz and

2110-2155 MHz)

Status Active Auth Type Regular

Market

Market REA001 - Northeast Channel Block D

Submarket 1 Associated 001735.000000000

Frequencies 001740.00000000 (MHz) 002135.00000000 002140.00000000

Dates

Grant 11/29/2006 Expiration 11/29/2021

Effective 12/10/2015 Cancellation

Buildout Deadlines

1st 2nd

Notification Dates

1st 2nd

FRN 0001565449

0001565449 Type Limited Liability Company

No

Licensee

T-Mobile License LLC P:(425)383-8401 12920 SE 38th Street F:(425)383-4840

Bellevue, WA 98006 E:FCCregulatorycompliancecontact@t-mobile.com

ATTN FCC Regulatory Compliance

Contact

T-Mobile License LLC P:(425)383-8401 F:(425)383-4840

12920 SE 38th Street E:FCCregulatorycompliancecontact@t-mobile.com
Bellevue, WA 98006

ATTN FCC Regulatory Compliance

in the market to be a like in Equation 18 and the like in

Mobile

Is the applicant an alien or the representative of an alien?

Regulatory Status Common Carrier Interconnected Yes

Alien Ownership

Radio Service Type

Is the applicant a foreign government or the representative of any $$N_{\hbox{\scriptsize 0}}$$

foreign government?

toreign government:

Is the applicant a corporation organized under the laws of any foreign government?

Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their

Yes

6/9/2017

representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?

Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?

If the answer to the above question is 'Yes', has the applicant received a ruling(s) under Section 310(b)(4) of the Communications Act with respect to the same radio service involved in this application?

Basic Qualifications

The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits

This license did not have tribal land bidding credits.

Race

Ethnicity Gender

PCS Broadband License - WPZY689 - T-Mobile License LLC

Call Sign WPZY689 Radio Service CW - PCS Broadband

Status Active Auth Type Regular

Market

Market BTA051 - Boston, MA Channel Block C

Submarket Associated 001895.000000000 Frequencies 001910.00000000

(MHz) 001975.000000000-001990.00000000

Dates

Grant 12/06/2016 Expiration 01/03/2027

Effective 12/06/2016 Cancellation

Buildout Deadlines

1st 12/07/2003 2nd 01/03/2007

Notification Dates

1st 01/30/2002 2nd 12/22/2006

FRN 0001565449 Type Limited Liability Company

Licensee

T-Mobile License LLC P:(425)383-8401 12920 SE 38th Street F:(425)383-4840

Bellevue, WA 98006 E:FCCregulatorycompliancecontact@t-mobile.com

ATTN FCC Regulatory Compliance

Contact

T-Mobile License LLC P:(425)383-8401 F:(703)584-8696

12920 SE 38th ST. E:fccregulatorycompliancecontact@t-mobile.com Bellevue, WA 98006 ATTN FCC Regulatory Comp

approximate (1985年)。 1985年 - 1985年 - 1986年 -

Interconnected Regulatory Status Common Carrier Yes

Alien Ownership

Mobile

Is the applicant a foreign government or the representative of any No

foreign government?

Radio Service Type

Is the applicant an alien or the representative of an alien? No

Is the applicant a corporation organized under the laws of any No

foreign government?

Is the applicant a corporation of which more than one-fifth of the No capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?

Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?

The Applicant has received a declaratory ruling(s) approving its foreign ownership, and the application involves only the acquisition of additional spectrum for the provision of a wireless service in a geographic coverage area for which the Applicant has been previously authorized.

✓

Yes

Basic Qualifications

The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits

This license did not have tribal land bidding credits.

Race

Ethnicity

Gender

PCS Broadband License - KNLH310 - T-Mobile License LLC

Call Sign KNLH310 Radio Service CW - PCS Broadband

Status Active Auth Type Regular

Market

Market BTA051 - Boston, MA Channel Block Е

Submarket Associated 001885.00000000-0 Frequencies 001890.00000000

(MHz) 001965.00000000-001970.00000000

Dates

06/08/2017 Grant Expiration 06/27/2027

Cancellation Effective 06/08/2017

Buildout Deadlines

06/27/2002 2nd

Notification Dates

1st 04/01/1999 2nd

FRN 0001565449 Type Limited Liability Company

Licensee

T-Mobile License LLC P:(425)383-8401

12920 S.E. 38th Street E:FCCRegulatoryComplianceContact@t-mobile.com Bellevue, WA 98006

No

Contact

T-Mobile License LLC P:(425)383-8401 FCC REGULATORY COMPLIANCE E:FCCRegulatoryComplilanceContact@t-mobile.com

12920 S.E. 38th Street Bellevue, WA 98006

ATTN FCC Regulatory Compliance

Radio Service Type Fixed, Mobile Regulatory Status Interconnected Common Carrier Yes

Alien Ownership

ATTN FCC Regulatory

Is the applicant a foreign government or the representative of any No foreign government?

Is the applicant an alien or the representative of an alien?

Is the applicant a corporation organized under the laws of any No

foreign government?

Is the applicant a corporation of which more than one-fifth of the No capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?

Yes

Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?

If the answer to the above question is 'Yes', has the applicant received a ruling(s) under Section 310(b)(4) of the Communications Act with respect to the same radio service involved in this application?

Basic Qualifications

The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits

This license did not have tribal land bidding credits.

Race	
Ethnicity	Gender

Local Multipoint Distribution Service License - WQPD278 - T-Mobile License LLC

Call Sign

WQPD278

Radio Service

LD - Local Multipoint Distribution

Service

Status

Active

Auth Type

Regular

Market

Market

BTA051 - Boston, MA

Channel Block

Α

Submarket

Associated Frequencies (MHz)

027500.00000000-028350.00000000 029100.000000000

029250.00000000 031075.00000000-031225.00000000

Dates

Grant

02/15/2012

Expiration

10/06/2018

Effective

12/30/2013

Cancellation

Buildout Deadlines

1st

2nd

Notification Dates

1st

2nd

FRN

0001565449

Type

Limited Liability Company

Licensee

T-Mobile License LLC 12920 SE 38th Street

Bellevue, WA 98006

P:(425)383-8401 F:(425)383-4840

E:FCCregulatorycompliancecontact@t-mobile.com

ATTN FCC Regulatory Compliance

Contact

T-Mobile License LLC

P:(425)383-5178 F:(425)383-4840

12920 SE 38th Street Bellevue, WA 98006

E:shannon.reilly@t-mobile.com

ATTN Shannon Kraus

and the management of the confidence of

Radio Service Type

Fixed

Regulatory Status

Common Carrier,

Interconnected

No

Non-Common Carrier

Alien Ownership

Is the applicant a foreign government or the representative of any

foreign government?

Is the applicant an alien or the representative of an alien?

No

No

Is the applicant a corporation organized under the laws of any foreign government?

No

Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?

Yes

Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?

Yes

If the answer to the above question is 'Yes', has the applicant received a ruling(s) under Section 310(b)(4) of the Communications Act with respect to the same radio service involved in this application?

Yes

Basic Qualifications

The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits

This license did not have tribal land bidding credits.

Race

Ethnicity

Gender



City of Cambridge

MASSACHUSETTS

BOARD OF ZON	$\mathbf{H}\mathbf{N}\mathbf{G}$	APPEAL:
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2001 100 17 2 3 29

MARGINAL REFERENCE REQUESTED

831 Mass Avenue, Cambridge, MA. (617) 349-6100

CA	١.	NI	

8593

LOCATION:

955 Mass Ave.

Cambridge, MA

BOOK 31014

PAGE 8

PETITIONER:

Peter Cooke/Omnipoint Holdings Inc.

PETITION:

Special Permit: To erect telecommunication antennas and equipment.

VIOLATIONS:

Art. 4.000, Sec. 4.32.G.1 (Telecommunications Special Permit).

DATE OF PUBLIC NOTICE: October 4, 2002 and October 11, 2002

DATE OF PUBLIC HEARING: October 24, 2002

MEMBERS OF THE BOARD:

THOMAS SIENIEWICZ - CHAIR

ARCH HORST JOHN O'CONNELL SUSAN SPURLOCK

KEEFE B. CLEMONS

ASSOCIATE MEMBERS:

JENNIFER PINCK - VICE-CHAIR

MARC TRUANT SUSAN CONNELLY REBECCA TEPPER

Brendan Sullivan

Members of the Board of Zoning Appeal heard testimony and viewed materials submitted regarding the above request for relief from the requirements of the Cambridge Zoning Ordinance. The Board is familiar with the location of the petitioner's property, the layout and other characteristics as well as the surrounding district.

Case No.

8593

Location:

955 Mass Ave

Petitioner:

Peter Cooke/Omnipoint Holdings Inc.

On February 13, 2003, Petitioner Peter Cooke appeared before the Board of Zoning Appeal requesting a special permit to install telecommunication antennae and equipment. The Petitioner submitted plans and photographs.

This case had been continued from October 24, 2002, so that the Petitioner had the opportunity to correspond with an abutter regarding health issues, to provide the Board with information regarding the Petitioner's current lack of coverage in the City, and to present evidence that residential uses do not predominate in the area.

At the October 24, 2002 hearing the Chair read letters of opposition from Milton and Elsa Banger of 931 Mass Ave, based on health concerns. James White who works at 955 Mass Ave inquired about health affects. RF engineer Raza Rizvi stated that the site would operate well within the FCC guidelines and was therefore safe.

At the February 13, 2003 hearing, Mr. Cooke stated that the antennae would be camouflaged and the equipment would be placed within existing screening. He stated that he had corresponded with the abutter, who now appeared appeased. He provided the Board with documentation regarding the need for additional coverage in this area of the City. He also provided the Board with a detailed analysis of the surrounding uses to show that residential uses did not predominate in this area.

The Chair asked if anyone wished to be heard on the matter, no one indicated such.

After discussion, the Chair moved that the Board make a finding that residential uses do not predominate in this area, which is supported by testimony that this is a commercial structure, that commercial scaled activity in this neighborhood is prevalent, and that the antenna additions here, by virtue of the fact that they are on that commercial building, will have a diminimus effect. The Chair moved that the Board find that residential uses do not predominate.

The five member Board voted unanimously in favor of the finding (Sieniewicz, Pinck, Horst, O'Connell, and Sullivan).

The Chair moved that the Board grant the special permit to erect telecommunications antennae and equipment, at 955 Massachusetts Avenue, based on the above and following findings:

- 1. that the aesthetic concerns of the Ordinance are addressed because this is properly camouflaged as evidenced in the photo simulations,
- 2. that there will be virtually no increase in the traffic across the threshold of the property,
- 3. that this use will not derogate from the intent or purpose of the Ordinance, nor affect adjacent uses or the ability to use these properties.

The Chair moved that the Board grant the special permit on the following conditions:

- that the work be consistent with drawings submitted in support of this
 application, sheets of drawings produced at T Mobile, 50 Vision Boulevard
 in East Providence, Rhode Island, MRC Engineering, entitled 955
 Massachusetts Avenue, consisting of sheet Z1, and stamped by a registered
 civil engineer in the Commonwealth of Massachusetts, No. 40313, and
- 2. that the antenna equipment be removed from the premises within six months of any abandonment of use.

The five member Board voted unanimously in favor of granting the special permit (Sieniewicz, Pinck, Horst, O'Connell, and Sullivan) with the above conditions. Therefore, the special permit is granted.

The Board based its decision upon the above findings and upon the following:

- 1) The meeting of the requirements of the Ordinance;
- 2) Traffic generated or patterns of access or egress would not cause congestion, hazard, or substantial change in the established neighborhood character;
- 3) The continued operation of or the development of adjacent uses as permitted in the Ordinance would not be adversely affected by the nature of the proposed uses:
- 4) Nuisance or hazard would not be created to the detriment of the health, safety and /or welfare of the occupants of the proposed use;
- 5) The proposed use would not impair the integrity of the district or adjoining district or otherwise derogate for the Ordinance, and in fact be a significant improvement to the structure and benefit the neighborhood, and;
- 6) The new use or building construction is not inconsistent with the Urban Design Objectives set forth in Section 19.30 of the Cambridge Zoning Ordinance.

The Board of Zoning Appeal is empowered to waive local zoning regulations only. This decision therefore does not relieve the petitioner in any way from the duty to comply with local ordinances and regulation of the other local agencies, including, but not limited to the Historical Commission, License Commission and/or compliance with requirements pursuant to the Building Code and other applicable codes.

Thomas Sieniewicz, Chair

Attest: A true and correct copy of decision filed with the offices of the City Clerk and Planning Board on 3/17/03 by Mana Chara. Clerk.
Twenty days have clapsed since the filing of this decision.
No appeal has been filed
Appeal has been filed and dismissed or denied.
Date: 4-23-03 City Clerk



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City of Cambridge



BOARD OF ZONING APPEAL



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831 Mass Avenue, Cambridge, MA? EEG (617) 349-6100

MAR DEC 5 PM 3 13

CASE NO:

10335

CATIOE OF THE CITY CLERK CAMERIDGE, MASSACHUSETTS

LOCATION:

PETITIONER:

955 Mass Avenue

Residence C-2B Zone

Cambridge, MA

T-Mobile Northeast, LLC C/o Jackie Slaga, Agent

PETITION:

Special Permit: In-kind replacement of existing 5 antennas with new antennas; relocation of existing antenna from the southeast corner façade of building to southeast penthouse façade and the addition of 1 antenna adjacent to the relocated antenna on penthouse; and replacement of 1 existing cabinet with smaller cabinet. All antennas will be mounted in the same location and painted to match façade of building; existing screening

of equipment to remain.

VIOLATION:

Art. 4.000, Sec. 4.32.G.1 & 4.10 (Footnote 49) (Telecommunication

Facility). Art. 10.000, Sec. 10.40 (Special Permit).

DATE OF PUBLIC NOTICE:

September 27, 2012 & October 4, 2012

DATE OF PUBLIC HEARING:

October 11, 2012

MEMBERS OF THE BOARD:

L gee War doubte live

BRENDAN SULLIVAN - CHAIR

CONSTANTINE ALEXANDER - VICE-CHAIR

TIMOTHY HUGHES THOMAS SCOTT

JANET GREEN

ASSOCIATE MEMBERS:

MAHMOOD R. FIROUZBAKHT

DOUGLAS MYERS

SLATER W. ANDERSON

TAD HEUER

ANDREA A. HICKEY KEVIN C. McAVEY

Members of the Board of Zoning Appeal heard testimony and viewed materials submitted regarding the above request for relief from the requirements of the Cambridge Zoning Ordinance. The Board is familiar with the location of the petitioner's property, the layout and other characteristics as well as the surrounding district.

TACKIE Slaga 95 Indian Tr - Saunderstown R1 02874

Case No.

10335

Location:

955 Massachusetts Avenue

Petitioner:

T-Mobile Northeast, LLC c/o Jackie Slaga, Agent

On October 11, 2012, Petitioner's attorney Ricardo Sousa appeared before the Board of Zoning Appeal requesting a special permit in order to permit the in-kind replacement of five existing antennas with new antennas mounted in the same location and painted to match the façade of the building, the relocation of an existing antenna from the southeast corner façade of the building to southeast penthouse façade and the addition of one antenna adjacent to the relocated antenna on the penthouse both painted to match the façade of the building, and the replacement of one existing cabinet with a smaller cabinet. The Petitioner requested relief from Article 4, Sec. 4.32.G.1 of the Cambridge Zoning Ordinance ("Ordinance"). The Petitioner submitted application materials including information about the project, plans, and photographs.

Mr. Sousa stated that the Petitioner wished to upgrade its existing specially permitted wireless facility as part of a system wide upgrade. He stated that new antennas would replace existing ones, that one antenna would be moved, and that one new antenna would be added. He stated that everything would be painted and placed so as to reduce visual impacts. He also agreed to replace the proposed pole mounts with low profile mounts and that there would be at least a one foot separation between the top of the antenna and the cornice line of the penthouse. He stated that there was an increasing need for more coverage.

The Chair asked if anyone wished to be heard on the matter, no one indicated such.

After discussion, the Chair moved that the Board grant the special permit for relief in order to permit the in-kind replacement of five existing antennas with new antennas mounted in the same location and painted to match the façade of the building, the relocation of an existing antenna from the southeast corner façade of the building to southeast penthouse façade and the addition of one antenna adjacent to the relocated antenna on the penthouse both painted to match the facade of the building, and the replacement of one existing cabinet with a smaller cabinet, and that there are no limitations imposed by any license secured from any state or federal agency having such jurisdiction over such matters. The Chair moved that the Board find that the visual impact of the various elements of the proposed facility would be minimized by the reduction of the antenna's projection from the building and the painting of the new antennas to match the background color. The Chair moved that the Board find that, while the site was located in a Residence C-2B Zone, there was a public need for the facility at the proposed location, there was no existing alternative functionally suitable sites in nonresidential locations, the proposed facility was appropriate given the character of the prevailing uses in the area and the prevalence of existing mechanical systems and equipment carried on or above the roofs of nearby structures. The Chair moved that the

Board find that there was an existing telecommunication facility on the building which had served the community since 2003. The Chair moved that the Board find that there had not been any adverse reaction to the facility and that it had enhanced communication for citizens, businesses, and emergency services. The Chair moved that the Board find that the proposed site was suitable and the proposed facility much needed. The Chair moved that the Board find that the requirements of the Ordinance were met. The Chair moved that the Board find that traffic generated or patterns of access or egress would not cause congestion, hazard, or substantial change in the established neighborhood character. The Chair moved that the Board find that the continued operation of or development of adjacent uses as permitted in the Ordinance would not be adversely affected by the nature of the proposed use, but rather the upgraded equipment would enhance telecommunications for citizens and businesses. The Chair moved that the Board find that there would not be any nuisance or hazard created to the detriment of the health, safety, or welfare of the occupants of the proposed use or the city and that the proposed use would not impair the integrity of the district or adjoining districts, or otherwise derogate from the intent and purpose of the Ordinance. The Chair moved that the Board find that there was no reason to allow further replacement or upgrade of the equipment without an additional special permit. The Chair moved that the Board grant the special permit on the following conditions:

- 1. that the work proceed as per the plan and the photo simulations submitted,
- 2. that should the equipment become unused, it be removed within six months and the facade to which it had been mounted be repaired to its original condition, and
- 3. that the appearance of the equipment be maintained and not be allowed to deteriorate.

The five member Board voted unanimously in favor of granting the special permit (Sullivan, Alexander, Hughes, Green, and Myers) with the above conditions. Therefore, the special permit is granted.

The Board based its decision upon all the information presented, the above findings and upon the following:

- 1) The meeting of the requirements of the Ordinance;
- 2) Traffic generated or patterns of access or egress would not cause congestion, hazard, or substantial change in the established neighborhood character;
- 3) The continued operation of or the development of adjacent uses as permitted in the Ordinance would not be adversely affected by the nature of the proposed uses;
- 4) Nuisance or hazard would not be created to the detriment of the health, safety and /or welfare of the occupants of the proposed use;
- 5) The proposed use would not impair the integrity of the district or adjoining district or otherwise derogate from the Ordinance, and in fact would be a significant improvement to the structure and benefit the neighborhood, and;
- 6) The new use or building construction is not inconsistent with the Urban Design Objectives set forth in Section 19.30 of the Cambridge Zoning Ordinance.

The Board of Zoning Appeal is empowered to waive local zoning regulations only. This decision therefore does not relieve the petitioner in any way from the duty to comply with local ordinances and regulations of the other local agencies, including, but not limited to the Historical Commission, License Commission and/or compliance with requirements pursuant to the Building Code and other applicable codes.

Attest: A true and correct copy of decision filed with the offices of the City Clerk and Planning Board on 12/5/12 by Wante (Edition), Clerk.

Twenty days have elapsed since the filing of this decision.

No appeal has been filed

Appeal has been filed and dismissed or denied.

Date: January 2, 20/3

City Clerk.



City of Cambridge



MASSACHUSETTS

BOARD OF ZONING APPEAL

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831 Mass Avenue, Cambridge, MARCES 5 PM 3 13 (617) 349-6100

STANCE OF THE CITY CLERK SKIEDLING, MASSACHUSETTS

CASE NO:

10335

LOCATION:

955 Mass Avenue Cambridge, MA

Residence C-2B Zone

PETITIONER:

T-Mobile Northeast, LLC C/o Jackie Slaga, Agent

PETITION:

Special Permit: In-kind replacement of existing 5 antennas with new antennas; relocation of existing antenna from the southeast corner façade of building to southeast penthouse façade and the addition of 1 antenna adjacent to the relocated antenna on penthouse; and replacement of 1 existing cabinet with smaller cabinet. All antennas will be mounted in the same location and painted to match façade of building; existing screening of equipment to remain.

VIOLATION:

Art. 4.000, Sec. 4.32.G.1 & 4.10 (Footnote 49) (Telecommunication

Facility). Art. 10.000, Sec. 10.40 (Special Permit).

DATE OF PUBLIC NOTICE:

September 27, 2012 & October 4, 2012

DATE OF PUBLIC HEARING:

October 11, 2012

MEMBERS OF THE BOARD:

1 - 4 -

BRENDAN SULLIVAN - CHAIR

CONSTANTINE ALEXANDER - VICE-CHAIR

TIMOTHY HUGHES THOMAS SCOTT

JANET GREEN

ASSOCIATE MEMBERS:

MAHMOOD R. FIROUZBAKHT

DOUGLAS MYERS

SLATER W. ANDERSON

TAD HEUER

ANDREA A. HICKEY KEVIN C. McAVEY

Members of the Board of Zoning Appeal heard testimony and viewed materials submitted regarding the above request for relief from the requirements of the Cambridge Zoning Ordinance. The Board is familiar with the location of the petitioner's property, the layout and other characteristics as well as the surrounding district.

Markie Slaga 95 Indian Tr-Saunderstown R1 02874

Case No. 10335

Location: 955 Massachusetts Avenue

Petitioner: T-Mobile Northeast, LLC c/o Jackie Slaga, Agent

On October 11, 2012, Petitioner's attorney Ricardo Sousa appeared before the Board of Zoning Appeal requesting a special permit in order to permit the in-kind replacement of five existing antennas with new antennas mounted in the same location and painted to match the façade of the building, the relocation of an existing antenna from the southeast corner façade of the building to southeast penthouse façade and the addition of one antenna adjacent to the relocated antenna on the penthouse both painted to match the façade of the building, and the replacement of one existing cabinet with a smaller cabinet. The Petitioner requested relief from Article 4, Sec. 4.32.G.1 of the Cambridge Zoning Ordinance ("Ordinance"). The Petitioner submitted application materials including information about the project, plans, and photographs.

Mr. Sousa stated that the Petitioner wished to upgrade its existing specially permitted wireless facility as part of a system wide upgrade. He stated that new antennas would replace existing ones, that one antenna would be moved, and that one new antenna would be added. He stated that everything would be painted and placed so as to reduce visual impacts. He also agreed to replace the proposed pole mounts with low profile mounts and that there would be at least a one foot separation between the top of the antenna and the cornice line of the penthouse. He stated that there was an increasing need for more coverage.

The Chair asked if anyone wished to be heard on the matter, no one indicated such.

After discussion, the Chair moved that the Board grant the special permit for relief in order to permit the in-kind replacement of five existing antennas with new antennas mounted in the same location and painted to match the facade of the building, the relocation of an existing antenna from the southeast corner façade of the building to southeast penthouse façade and the addition of one antenna adjacent to the relocated antenna on the penthouse both painted to match the façade of the building, and the replacement of one existing cabinet with a smaller cabinet, and that there are no limitations imposed by any license secured from any state or federal agency having such jurisdiction over such matters. The Chair moved that the Board find that the visual impact of the various elements of the proposed facility would be minimized by the reduction of the antenna's projection from the building and the painting of the new antennas to match the background color. The Chair moved that the Board find that, while the site was located in a Residence C-2B Zone, there was a public need for the facility at the proposed location, there was no existing alternative functionally suitable sites in nonresidential locations, the proposed facility was appropriate given the character of the prevailing uses in the area and the prevalence of existing mechanical systems and equipment carried on or above the roofs of nearby structures. The Chair moved that the

Board find that there was an existing telecommunication facility on the building which had served the community since 2003. The Chair moved that the Board find that there had not been any adverse reaction to the facility and that it had enhanced communication for citizens, businesses, and emergency services. The Chair moved that the Board find that the proposed site was suitable and the proposed facility much needed. The Chair moved that the Board find that the requirements of the Ordinance were met. The Chair moved that the Board find that traffic generated or patterns of access or egress would not cause congestion, hazard, or substantial change in the established neighborhood character. The Chair moved that the Board find that the continued operation of or development of adjacent uses as permitted in the Ordinance would not be adversely affected by the nature of the proposed use, but rather the upgraded equipment would enhance telecommunications for citizens and businesses. The Chair moved that the Board find that there would not be any nuisance or hazard created to the detriment of the health, safety, or welfare of the occupants of the proposed use or the city and that the proposed use would not impair the integrity of the district or adjoining districts, or otherwise derogate from the intent and purpose of the Ordinance. The Chair moved that the Board find that there was no reason to allow further replacement or upgrade of the equipment without an additional special permit. The Chair moved that the Board grant the special permit on the following conditions:

- 1. that the work proceed as per the plan and the photo simulations submitted,
- 2. that should the equipment become unused, it be removed within six months and the facade to which it had been mounted be repaired to its original condition, and
- 3. that the appearance of the equipment be maintained and not be allowed to deteriorate.

The five member Board voted unanimously in favor of granting the special permit (Sullivan, Alexander, Hughes, Green, and Myers) with the above conditions. Therefore, the special permit is granted.

The Board based its decision upon all the information presented, the above findings and upon the following:

- 1) The meeting of the requirements of the Ordinance;
- 2) Traffic generated or patterns of access or egress would not cause congestion, hazard, or substantial change in the established neighborhood character;
- 3) The continued operation of or the development of adjacent uses as permitted in the Ordinance would not be adversely affected by the nature of the proposed uses;
- 4) Nuisance or hazard would not be created to the detriment of the health, safety and /or welfare of the occupants of the proposed use;
- 5) The proposed use would not impair the integrity of the district or adjoining district or otherwise derogate from the Ordinance, and in fact would be a significant improvement to the structure and benefit the neighborhood, and;
- 6) The new use or building construction is not inconsistent with the Urban Design Objectives set forth in Section 19.30 of the Cambridge Zoning Ordinance.

The Board of Zoning Appeal is empowered to waive local zoning regulations only. This decision therefore does not relieve the petitioner in any way from the duty to comply with local ordinances and regulations of the other local agencies, including, but not limited to the Historical Commission, License Commission and/or compliance with requirements pursuant to the Building Code and other applicable codes.

Brendan Sullivan, Chair	
Attest: A true and correct copy of decision filed with the offices of the Planning Board on 12/5/12 by Mana (Sachola	e City Clerk and ġ, Clerk.
Twenty days have elapsed since the filing of this decision.	
No appeal has been filed	
Appeal has been filed and dismissed or denied.	1 ~ ' '
Date: January 2, 20/3 Donne P. Kopy	Julerine) City Clerk.

Official Receipt for Recording in:

Middlesex South Registry of Deeds 208 Cambridge St.

Cambridge, Massachusetts 02141

Issued To: GREEN MOUNTAIN COMMUNICATIONS

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Reco	rai	na -	F 888

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Document Description		Book/Page	Recording Amount
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Thank You MARIA C. CURTATONE - Register of Deeds

By: Ed Wheeler

Receipt# Date Time 1508730 01/02/2013 01:20p



CITY OF CAMBRIDGE **MASSACHUSETTS BOARD OF ZONING APPEAL** 831 MASSACHUSETTS AVENUE CAMBRIDGE, MA 02139 617 349-6100





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50077-549

NOTICE OF DECISION

DECISION FILED WITH THE OFFICE OF THE CITY CLERK ON December 19, 2016

Any person aggrieved by a decision of the Board of Zoning Appeal may appeal to the Superior Court or Land Court. Appeals, if any, shall be made pursuant to Section 17, Chapter 40A, Massachusetts General Laws and shall be filed within twenty calendar days from the above date, and a copy thereof shall be filed with the Cambridge City Clerk's office by that same date

nover:

Brickman 955 passachusetts LC PREMISES:

955 Massachusetts Ave

Cambridge, MA

PETITIONER: T-Mobile Northeast LLC - C/O Ricardo M. Sousa, Esq.

PETITION:

Special Permit: To modify its existing wireless telecommunications facility by collocating three (3) new L700 antennas on the existing building, together with supporting equipment. All three (3) proposed antennas will be facade mounted to the existing penthouse on the roof of the building, adjacent to the existing antennas and painted to match the existing building. The Applicants proposal complies with Section 6409 of the Spectrum Act as the collocation of antennas is not a substantial change to the existing base station. Moreover, the Applicants proposal complies with Section 4.32 and 10.4 of the Cambridge Zoning Ordinance.

DECISION:

Approved

CASE NO:

BZA-011652-2016

^{*}For full details, please refer to the decision available at Inspectional Services Dept.



BZA-011652-2016

CASE NO:

CITY OF CAMBRIDGE MASSACHUSETTS BOARD OF ZONING APPEAL 831 MASSACHUSETTS AVENUE CAMBRIDGE, MA 02139 617 349-6100

Residence C2-B Zone

2016 DEC 19 PH 2: 36

LOCATION:	955 Massachusetts Ave Cambridge, MA								
PETITIONER:	T-Mobile Northeast LLC - C/O Ricardo M. Sousa, Esq.								
PETITION:	Special Permit: To modify its existing wireless telecommunications facility by collocating three (3) new L700 antennas on the existing building, together with supporting equipment. All three (3) proposed antennas will be facade mounted to the existing penthouse on the roof of the building, adjacent to the existing antennas and painted to match the existing building. The Applicants proposal complies with Section 6409 of the Spectrum Act as the collocation of antennas is not a substantial change to the existing base station. Moreover, the Applicants proposal complies with Section 4.32 and 10.4 of the Cambridge Zoning Ordinance.								
VIOLATION:									
Article 4.000	Section 4.32.G.1 (Telecommunication Facility).								
Article <u>4.000</u>	Section 4.40 (Footnote 49) (Telecommunication Facility).								
Article 6409	Section Middle Class Tax Relief & Job Creation Act								
Article 10.000	Section 10.40 (Special Permit).								
DATE OF PUBL DATE OF PUBL MEMBERS OF TH ASSOCIATE MEM	IC HEARING: November 17, 2016; IE BOARD: CONSTANTINE ALEXANDER - CHAIR BRENDAN SULLIVAN - VICE-CHAIR JANET O. GREEN PATRICK TEDESCO ANDREA A. HICKEY								

Members of the Board of Zoning Appeal heard testimony and viewed materials submitted regarding the above request for relief from the requirements of the Cambridge Zoning Ordinance. The Board is familiar with the location of the petitioner's property, the layout and other characteristics as well as the surrounding district.

Case No. BZA-011652-2016

Location: 955 Massachusetts Avenue

Petitioner: T-Mobile Northeast LLC – c/o Ricardo Sousa, Esq.

On November 17, 2016, Petitioner's attorney Daniel Glissman appeared before the Board of Zoning Appeal requesting a special permit in order to modify its existing wireless telecommunications facility by collocating three new L700 antennas on the existing building, together with supporting equipment, to be façade mounted to the penthouse adjacent to the existing antennas and painted to match the building. The Petitioner requested relief under Article 4, Section 4.32.G.1 and Article 10, Section 10.40 of the Cambridge Zoning Ordinance ("Ordinance") and Section 6409 of the Middle Class Tax Relief & Job Creation Act. The Petitioner submitted materials in support of their application including information about the project, plans, and photographs.

Mr. Glissman stated that as part of a system wide upgrade, the Petitioner wished to add three new antennas to an existing telecommunications site, painted to match the building. He stated that while the site sat within a residential district, residential uses did not predominate as the area consisted largely of commercial uses. He stated that the proposed work did not constitute a substantial change under Section 6409.

The Chair asked if anyone wished to be heard on the mater, no one indicated such. The Chair read a letter of support from the Planning Board.

After discussion, the Chair moved that the Board make the following findings based upon the application materials submitted and all evidence before the Board and that based upon the findings the Board grant the requested relief as described in the Petitioner's submitted materials and the evidence before the Board: that the Board find that nonresidential uses predominated in the vicinity of the proposed facility's location, and that the telecommunication facility was not inconsistent with the character that prevailed in the surrounding neighborhood; that the Board find that the findings regarding the neighborhood had been made by the Board in earlier special permits and that nothing had changed that would alter those findings; that the Board find that the proposed modification of the existing telecommunication facility at the site would not substantially change the physical dimensions of the existing wireless tower or base station at such facility within the meaning of 6409(a) of The Middle Class Tax Relief and Job Creation Act of 2012, also known as The Spectrum Act; that the Board find that the requirements of the Ordinance could not be met without the granting of the Special Permit; that the Board find that traffic generated or patterns of access or egress resulting from the proposed work would not cause congestion, hazard, or substantial change in established neighborhood character; that the Board find that the continued operation or development of adjacent uses as permitted in the Ordinance would not be adversely affected by the proposed work; that the Board find that no nuisance or hazard would

be created to the detriment of the health, safety, and/or welfare of the occupant of the proposed use or the citizens of the city; and that the Board find that what was proposed would not impair the integrity of the district or adjoining district or otherwise derogate from the intent and purpose of the Ordinance.

The Chair further moved that based upon all the information presented the Board grant the requested relief as described in the Petitioner's submitted materials and the evidence before the Board on the following conditions:

- 1. that the work proceed in accordance with plans submitted by the petitioner, as initialed by the Chair,
- 2. that upon completion of the work, the physical appearance and visual impact of the proposed work be consistent with the photo simulations submitted by the petitioner, as initialed by the Chair,
- 3. that the petitioner at all times maintain the proposed work so that its physical appearance and visual impact remain consistent with the photo simulations previously referred to,
- 4. that should the petitioner cease to utilize the equipment approved tonight for a continuous period of six months or more, it promptly thereafter remove such equipment and restore the building on which it was located to its prior condition and appearance to an extent reasonably practicable,
- that the petitioner continue to comply with the conditions imposed by the Board with respect to previous Special Permits granted to the petitioner with regard to the site in question,
- 6. that inasmuch as the health effects of the transmission of electromagnetic energy waves is a matter of ongoing societal concern and scientific study, the Special Permit is also subject to the following conditions:
 - A. that the petitioner shall file with the Inspectional Services Department each report it files with the federal authorities regarding electromagnetic energy wave emissions emanating from all of the petitioner's equipment on the site. Each such report shall be filed with the Inspectional Services Department no later than ten business days after the report has been filed with the federal authorities. Failure to timely file any such report with the Inspectional Services Department shall ipso facto terminate the Special Permit granted tonight.

- B. that in the event that at any time federal authorities notify the petitioner that its equipment on the site, including, but not limited to the special permit granted tonight, fails to comply with the requirements of law or governmental regulations, whether with regard to the emissions of electromagnetic energy waves or otherwise, the petitioner, within ten business days of receipt of such notification of such failure, shall file with the Inspectional Services Department a report disclosing in reasonable detail that such failure has occurred and the basis for such claimed failure. The special permit shall ipso facto terminate if any of the petitioner's federal licenses are suspended, revoked, or terminated.
- C. that to the extent a special permit has terminated pursuant to the foregoing paragraphs A and B, the petitioner may apply to this Board for a new special permit provided that the public notice containing such application discloses in reasonable detail that the application has been filed because of a termination of the special permit pursuant to paragraphs A or B above. Any such new application shall not be deemed a repetitive petition and therefore will not be subject to the two-year period during which repetitive petitions may not be filed.
- D. that within ten business days after receipt of a Building Permit for installation of equipment subject to this petition, the petitioner shall file with the Inspectional Services Department a sworn Affidavit of the person in charge of the installation of equipment by the petitioner of the geographical area that includes Cambridge. Stating that A, he or she has such responsibility, and B that the equipment being installed pursuant to the special permit will comply with all federal safety rules and will be situated and maintained in locations with appropriate barricades and other protections, such that individuals, including nearby residents and occupants of nearby structures, will be sufficiently protected from excessive radio frequency radiation under federal law.

The five member Board voted unanimously in favor of granting the special permit with the above conditions (Alexander, Sullivan, Green, Hickey, and Best). Therefore, the special permit is granted as conditioned.

The Board of Zoning Appeal is empowered to waive local zoning regulations only. This decision therefore does not relieve the petitioner in any way from the duty to comply with local ordinances and regulations of the other local agencies, including, but not limited to the Historical Commission, License Commission and/or compliance with requirements pursuant to the Building Code and other applicable codes.

CCL
Constantine Alexander, Chair
Attest: A true and correct copy of decision filed with the offices of the City Clerk and Planning Board on 12/19/16 by Maria (Lacales , Clerk.
Twenty days have elapsed since the filing of this decision.
No appeal has been filed
Appeal has been filed and dismissed or denied.
Date: January 17, 2017 Roma P. Kopz City Clerk.

Official Receipt for Recording in:

Hiddlesex South Registry of Deeds 208 Cambridge St.

Cambridge, Massachusetts 02141

Issued To: SMARTLINK LLC 35 RANGEWAY RD

N BILLERICA MA

Recording Fees

Document Description	Number	Book/Page	Recording Amount
DECIS	00008630	68768 136	\$75.00
		d Amounts	\$75.00
Payment Tune			Amount
Check	8108		\$75.00
			\$75.00
	otal Receiv otal Record		\$75.00 \$75.00
Ct	nange Due	:	\$.00

Thank You MARIA C. CURTATONE - Register of Deeds

By: Linda B

Receipt# Date Time 2044150 01/17/2017 02:23p



December 11, 2018

VIA HAND DELIVERY

Ranjit Singanayagam Commissioner of Inspectional Services/Building Commissioner City of Cambridge 831 Massachusetts Avenue Cambridge, MA 02139

Eligible Facilities Request to Modify Transmission Equipment at an Existing Base Station located at 955 Massachusetts Avenue, Cambridge, MA 02139.

Dear Mr. Singanayagam:

Re:

A. T-Mobile is Filing an Eligible Facilities Request

Prince Lobel Tye LLP, on behalf of T-Mobile Northeast LLC is submitting the attached Eligible Facilities Request application to add, remove, modify, or replace Transmission Equipment at an Existing Base Station located at 955 Massachusetts Avenue, Cambridge, MA 02139.

Because this jurisdiction has not yet developed an Eligible Facilities Request permit application form that complies with Section 6409 of the Middle Class Tax Relief and Job Creation Act of 2012, commonly known as the "Spectrum Act" (Pub. Law No. 112-96, 126 Stat 156) (codified at 47 U.S.C. § 1455), this Eligible Facilities Request is attached to the Building Permit Application form which was customarily used by this jurisdiction when reviewing requests to collocate or modify wireless telecommunications facilities. Because federal law now preempts many of the permit application requirements that this jurisdiction would previously have required from an applicant, this Eligible Facilities Request application provides only the information that federal law allows this jurisdiction to consider when reviewing an Eligible Facilities Request.

Section 6409(a) of the Spectrum Act mandates that state and local governments "may not deny, and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station." Under Section 6409(a)(2)(A)-(C) an Eligible Facilities Request is any request to modify a Tower or Base Station that involves "collocations of new Transmission Equipment," "removal," or "replacement" of Transmission Equipment.

Prince Lobel Tye LLP

One International Place

Suite 3700

Boston, MA 02110

TEL: 617 456 8000

FAX: 617 456 8100



B. Why this Eligible Facilities Request Must Be Granted

This Eligible Facilities Request involves an effort to collocate, remove, modify, or replace Transmission Equipment at an existing Base Station operated by an FCC licensed wireless carrier. The FCC has defined Base Station as "the equipment and non-tower supporting structure at a fixed location that enable Commission-licensed or authorized wireless communications between user equipment and a communications network . . . the term includes equipment associated with wireless communications service including, but not limited to, radio transceivers, antennas, coaxial or fiber-optic cable, regular and backup power supply, and comparable equipment." The term existing base station also includes a structure that currently houses or supports an antenna, transceiver or other associated equipment that constitutes part of a Base Station at the time the application is filed even if the structure was not built solely or primarily to provide such support. The existing Base Station in this application is approximately one hundred and sixteen (116') feet high and presently contains wireless facilities. The existing Base Station meets the Federal Communications Commission ("FCC") definition of a Base Station.

The list of equipment identified in the Eligible Facilities Request application that will be collocated, removed, or replaced at the Base Station also is Transmission Equipment as determined by the FCC. The FCC has defined Transmission Equipment as "any equipment that facilitates transmission for any Commission-licensed or authorized wireless communication service, including, but not limited to, radio transceivers, antennas and other relevant equipment associated with and necessary to their operation, including coaxial or fiber-optic cable, and regular and back-up power supply. This definition includes equipment used in any technological configuration associated with any Commission-authorized wireless transmission, licensed or unlicensed, terrestrial or satellite, including commercial mobile, private mobile, broadcast and public safety services, as well as fixed wireless services such as microwave backhaul or fixed broadband."

The FCC, in a Report and Order adopted on October 17, 2014, determined that any modification to an existing telecommunications Base Station that meets the following six criteria does not substantially change the physical dimensions of the existing Base Station and therefore is an Eligible Facilities Request which must be granted:

- 1. The modifications to the Transmission Equipment do not increase the height of the Base Station by more than 10 percent (10%) or ten (10) feet, whichever is greater.
 - a. The height of the Base Station is approximately one hundred and sixteen (116') feet high. The proposed replacement of three (3) of the existing nine (9) panel antennas will not affect the height of the Base Station.
- 2. The modifications to the Transmission Equipment do not protrude from the edge of the support structure by more than six (6) feet.
 - a. The replacement of three (3) of the existing antennas will not protrude from the edge of the building and therefore will not exceed the six (6) foot limitation. The replacement antennas will be installed at the same distance

PRINCE LOBEL

from the roof line as the existing antennas. As such, the proposed modification will not protrude from the edge of the building by more than six (6) feet.

- The modifications to the Transmission Equipment do not involve the installation of more than the standard number of equipment cabinets for the technology involved, not to exceed four.
 - a. There are currently three (3) equipment cabinets existing at the Base Station. The Applicant does not propose to install any additional equipment cabinets.
- 4. The modifications to the Transmission Equipment do not entail any excavation or deployment outside of the Base Station site.
 - a. The Applicant is proposing to replace three (3) antennas consistent with its existing antennas. There will be no excavation or deployment outside of the Base Station site.
- 5. The modifications to the Transmission Equipment do not defeat any existing concealed or stealth-design.
 - a. Pursuant to the previous decisions by the Board of Zoning Appeal for the City of Cambridge (the "Board") for this site, dated October 24, 2002 (Case NO.8593), and the subsequent decisions, dated December 5th, 2012 (Case No. 10335), and dated December 19th 2016 (Case No. BZA-011652-2016) (together, the "Decisions"), the existing panel antennas are located in the preferred location on the building. The replacement of three (3) new antennas at the same location of the existing antennas will not defeat the existing stealth design as the replacement antennas will be painted to match the existing building and mounted on low-profile mounts. Furthermore, the proposed replacement antennas will be integrated into the building to the extent possible. As such, the three (3) replacement antennas will be in conformity with the Decisions and do not defeat the existing stealth design. The proposed installations will not substantially increase the facility and as such the proposed visual impact will be de minimus for many of the same reasons stated in the Decisions attached hereto.
- 6. The modifications to the Transmission Equipment comply with prior conditions of approval of the Base Station, unless the non-compliance is due to an increase in height, increase in width, addition of equipment cabinets, or new excavation that does not exceed the corresponding "substantial change" thresholds in numbers 1-4.
 - a. Based on the foregoing, the proposed modifications to the Base Station fully conform to Section 6409(a) of the Spectrum Act and comply with the prior conditions of approval of the Base Station.

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There is a certification attached to the accompanying Eligible Facilities Request that identifies how each of the six review criteria identified by the FCC is met. The modifications to the Transmission Equipment at the Base Station located at 955 Massachusetts Avenue, Cambridge, MA 02139 contained in this Eligible Facilities Request fully conform to Section 6409(a) as enacted by Congress and as interpreted by the FCC. Accordingly, this Eligible Facilities Request must be approved within 60 days, as required by federal law and FCC implementing regulations.

C. Notice of Federal Law Expedited Permit Processing and Deemed Granted

Under federal law, an Eligible Facilities Request is deemed granted sixty (60) days after a complete application is filed with a local jurisdiction. If sixty days pass after the submission of T-Mobile's accompanying Eligible Facilities Request and the City of Cambridge has not acted to grant or deny the request, it will be deemed granted. At that time, the applicant may advise the City of Cambridge that the application has been deemed granted. If the City of Cambridge wishes to contest whether the Eligible Facilities Request has been deemed granted, the burden is on the City of Cambridge to file a lawsuit in a court of competent jurisdiction within 30 days after receipt of a written communication notifying it that the Eligible Facilities Request has been deemed granted. Failure to file a lawsuit in a timely manner may forever bar this jurisdiction from contesting that this Eligible Facilities Request has been deemed granted.

T-Mobile is committed to working cooperatively with you, and all jurisdictions around the country, to secure expeditious approval of requests to modify existing personal wireless service facilities. Please do not hesitate to contact me if you have questions.

Sincerely,

Adam F. Braillard

Direct: 617-456-8153

Email: abraillard@princelobel.com

ELIGIBLE FACILITIES REQUEST CERTIFCATION FOR NON-SUBSTANTIAL CHANGES TO AN EXISTING BASE STATION

"Base Station" means the equipment and non-tower supporting structure at a fixed location that allow Commission-licensed or authorized wireless communications between user equipment and a communications network. The term base station includes any equipment associated with wireless communications services including but not limited to radio transceivers, antennas, coaxial or fiber-optic cables, regular or back up power supply, and comparable equipment. The term existing base station also includes a structure that currently houses or supports an antenna, transceiver or other associated equipment that constitutes part of a base station at the time the application is filed even if the structure was not built solely or primarily to provide such support. "Base Station" includes the relevant equipment in any technological configuration, including small cells and DAS. Remember "Base Station" has two separate meanings: (1) the supporting structure that houses FCC licensed or authorized wireless equipment and (2) the wireless equipment itself. Keep this distinction in mind when calculating a substantial change in physical dimensions.

"Transmission Equipment" means any equipment that facilitates transmission for any FCC licensed or authorized wireless communication service, including but not limited to, radio transceivers, antennas and other relevant equipment associated with and necessary to their operation, including coaxial or fiber-optic cable, and regular and back-up power supply. This definition includes equipment used in any technological configuration associated with any Commission-authorized wireless transmission, licensed or unlicensed, terrestrial or satellite, including commercial mobile, private mobile, broadcast and public safety services, as well as fixed wireless services such as microwave backhaul or fixed broadband.

"Collocation" means the addition, removal or replacement of Transmission Equipment to an existing tower or a base station. This means that the existing support structure, be it a tower or a building or some other structure, must presently support FCC licensed or authorized wireless facilities. The FCC further requires that the site (tower, building, or other structure) was previously approved by the appropriate agency of government to house wireless facilities. Illegal wireless installations cannot be the basis for an eligible facilities request. However, if a communications Tower was erected at a time when it was exempt from zoning, the Tower can be modified through the Eligible Facilities Request process even if the Tower is no longer exempt from zoning.

Site Address: 955 Massachusetts Ave

Existing Facilities

The Existing Facility is comprised of nine (9) panel antennas mounted to the roof and the façade of the existing building, together with supporting equipment.

Height of Base Station

He	eight above ground level of the tallest point on the existing base station: 116'(feet)
	eight above ground level of the tallest point of the existing base station after the installation of eproposed equipment: 116'(feet)
1)	Does the height above ground level of the proposed equipment exceed the height of the tallest point on the existing base station by more than 10 percent (10%) or ten (10) feet, whichever is greater?
	☐ Yes ⊠ No
Wi	idth of Base Station
2)	Will any of the proposed equipment protrude from the edge of the support structure by more than six (6) feet?
	☐ Yes ⊠ No
Ex	cavation or Equipment Placement
3)	Will the proposed changes in Transmission Equipment involve excavation or placement of new equipment outside the existing Base Station site or outside any access or utility easements currently related to the site? Yes No
Eq	quipment Cabinets
4)	Will the proposed modification in Transmission Equipment involve installation of more than the standard number of new equipment cabinets for the technology involved, but not to exceed four? Yes No
Co	oncealed or Stealth-Designed Wireless Facilities
5)	 a) Is the existing wireless facility concealed or stealth- designed? ✓ Yes ☐ No
	 b) If the answer to 5a) is "Yes," will the proposed modification in Transmission Equipment defeat the existing concealed or stealth-design? ☐ Yes ☒ No

Compliance with Preexisting Conditions of Approval for the Base Station

6)		
,	a)	Were there any conditions of approval stated in the original government approval of the Base Station?
		⊠ Yes □ No
	b)	Will the proposed modification in Transmission Equipment comply with conditions of approval imposed on the Base Station prior to February 22, 2012?
		⊠ Yes □ No
	c)	If the answer to 6b) is "No," is the non-compliance due solely to any of the conditions addressed in Questions 1-5 above?
		⊠ Yes □ No
an: mo	swe	answers to questions 1-4 are "No," the answer to either 5a) or b) is "No," and the rs to 6a) is "No" or the answers to either 6b) or 6c) are "Yes," then the proposed ications do not substantially change the physical dimensions of the existing Base n.
Ex	plar	natory Comments:
Qu	esti	on No. <u>5 (b)</u>

Comment: a. Pursuant to the original decision by the Zoning Board of Appeal for the City of Cambridge (the "Board") for this Facility, dated October 24, 2002 (Case NO.8593), and the subsequent decisions, dated December 5th, 2012 (Case No. 10335), and dated December 19th 2016 (Case No. BZA-011652-2016) (together, the "Decisions"), attached hereto, the existing antennas are located in the preferred location on the building and comply with the required conditions for a stealth design. The Applicant proposes to upgrade the facility by replacing three (3) existing antennas with three (3) new antennas. The antennas mounted to the building will be painted to match the façade of the building. All proposed antennas and equipment will be integrated into the existing building to the extent possible. As such, the proposed modification will not defeat any existing stealth design.

Question No.6 (c)

Comment: Notwithstanding the aforementioned showing that the proposed modification to this site does not substantially change the physical dimensions of the existing Base Station and is subject to the Spectrum Act, this site is the proper location for a wireless installation pursuant to the Decision. Furthermore, in the Decisions, the Board stated that continued operation of adjacent uses would not be adversely affected by the previously proposed equipment addition, and no nuisance or hazard would be created to the detriment of the health, safety or welfare of

the occupant or the citizens of the City of Cambridge. The proposed modification to this site is very similar to the previous modification approved by this board and as such, we submit will have the same de mimimus impact. Moreover, the proposed installation is necessary to accommodate the existing and future customer base as demand for data and cell service has steadily increased and continues to do so.

This certification is dated this 11th of December, 2018.

Signature

Adam F. Braillard, Esq., Attorney for Applicant

Name & Title

Eligible Facilities Request (EFR) Application Form

[Attach this EFR form to the local jurisdiction form used to process cell site modifications.]

Date of Submittal: December 11, 2018
Submitted by:
Name: Adam F. Braillard, Esq.
Title: Attorney for the T-Mobile Northeast LLC (the "Applicant")
Contact information: 617-456-8153, abraillard@princelobel.com
Name of Jurisdiction: City of Cambridge
Address of Jurisdiction: 831 Massachusetts Avenue, Cambridge MA 02139
Contact Name for Jurisdiction: Ranjit Singanayagam
Name of Local Government Permit Application: Building Permit
Local Government File #:
Street Address of Site: 955 Massachusetts Ave
Tax Parcel # of Site: Map 116, Lot 117
Latitude/Longitude of Site:
List Each Piece of Transmission Equipment that will be Collocated or Added:
The Applicant proposes to replace three (3) existing antennas. All antennas mounted to the building will be painted to match the facade of the building.
List Each Piece of Transmission Equipment that will be Removed:
None

Eligible Facilities Request Application 2015

List Cabinets that will be Collocated or Added at the Site:
None
List Cabinets that will be Removed at the Site:
None
Permit Application Deposit Amount:
Municipal Consultant Review Fee Deposit (if applicable):



INSPECTIONAL SERVICES DEPARTMENT

City of Cambridge 831 Massachusetts Avenue Cambridge, MA 02139

Tel: 617-349-6100 Fax: 617-349-6132

PERMIT TO BUILD, ALTER OR REPAIR ANY BUILDING

(Other than a 1 or 2 family dwelling) in accordance with the Massachusetts State Building Code 780 CMR (MSBC)

Application must be filled out <u>completely</u> in ink.

Building Address	: 955 Massachu	955 Massachusetts Ave Cambridge, MA								
Building Owner:	American Tow	ver Corporation			Tel.#	508-667-3100				
Building Owner A	Address:	95 Ryan Drive, Ste	1, Raynham MA							
Building Owner E	mail Address:	awolfrey@clinellc.d	awolfrey@clinellc.com							
Contractor:	Kevin Cunning	gham								
Contractor Addre	255:	29 Hale Road, Stow	MA	**						
Type of Work:	Addition / Alte	eration								
Zoning Informati	on - Required (The ap	oplicant is responsible	for proving Zoning	compliance.):						
	Rooftop Cell Site(T-Mobile)	Proposed Use:	no change	Zone:	commericial	BZA/PB case #	011652-2016			
For residential:	Curren	nt # of dwelling units:	0		Proposed # of dwe	lling units:	0			
	rk includes: reconstruct s and fully dimensioned	tion of an existing exterions.	or building element (porch, deck, etc.). Provide recent ph	otos of				
1st floor level, build Provide a stamped and fully dimensio Proposed wo the 2nd floor level change the use or i listed documents (Ordinances. If Boa V None of the a	d roof decks over existing and scalable surveyor' med plans and elevation or higher, roof decks over increase number of dwe see above), plus a compard of Zoning Appeal cases bove. The proposed wo	rer porch, build uncovered by 1st or 2nd floors, creates for 1st or 2nd floors, creates for 1st or 2nd floors, creates for 1st or 2nd floor or higher elling units of a building, prehensive Zoning analyse, include copy of registors is not of the types list a certified plot plan shall be standing:	the new windows, do If the highest point of Interpolar case, include Interpolar case, include Interpolar case, include Interpolar case, include Include effections Include effetions Include effections Include effections Include effetions	ors, or skylights of th roof, recent copy of registers overed stairs/lar asement, change , or to do any sin once with all asp egulated by the ; tion is poured and b	(including moving ext photos of existing ed decision. Indings and/or porche any floor or ceiling nilar work. Provide a sects of the Cambrid Zoning Ordinance.	isting units). conditions, es, decks at height, ill previously ge Zoning mmences.	ergy			
	n behalf of T-Mobile	digital format required to be s	ubmitted for review.							
Estimated Cost o										
Building \$	15,000.00		Pla	umbing/Gas	\$0.00					
Electric \$	0.00			HVAC	\$0.00					
Total Estimated (Cost of Construction:	\$15.0	00.00							

Total construction costs include all work done concurrently with the work contemplated by the building permit including demolition, plumbing, heating, electrical, air conditioning, painting, wall to wall carpeting, landscaping, site improvements, etc. A final cost affidavit signed by the owner will required at construction completion for all projects over \$50,000.

Energy Conservation - Stretch Code Compliance

New Construction - HERS Rating (Home Energy Rating System, report included)

Additions, Alterations, Renovations or Repairs Proposed work does not access or affect building energy envelope. Envelope insulation requirements meet or exceed Energy Code requirements (additions or renovations											
Envelope insulation requirements meet or exceed Energy Code requirements (additions or renovations	Proposed work does not access or affect building energy envelope.										
	Envelope insulation requirements meet or exceed Energy Code requirements (additions or renovations										
Cavities fully filled with insulating materials which meet or exceed an R-value of 3.5 inches (renovation only). Indicate type:											
Blown in Fiberglass Spray Foam Cellulose Other											
U - Value of windows											
All work requires a completed Energy Star Qualified Homes Thermal Bypass Inspection Checklist at final inspections. The form is											
available at www.energystar.gov or from the Building Official.											
LEED Certification Ratings Level Ratings Credits O											
Alternative Energy											
Solar Panels No. 0 Use for hot water											
Cogeneration System No. 0 Size	_										
Location											
Wind Turbines No. 0 Size	•										
Location											
Building Construction Type											
Non Combustible (Type I/II) Wood (IV,V) Wood (IV,V)											
Building equipped with: Sprinkler System Fire Alarm Smoke Detection											
Fire Protection											
For proposed work that may include any fire protection work as regulated by MSBC Ch. 9, Fire Protecton Systems, review and approval of the construction documents by the Cambridge Fire Dept. is required before submittal.											
Cambridge Fire Dept. has reviewed this application Yes No											
A narrative report describing all fire protection systems and their operation is required to be submitted with this application (Sec. 902.1 #1a, MSBC Amended)											
This report has been submitted Yes No V											
City of Cambridge Noise Ordinance											
The undersigned as the Architect/Construction Supervisor/Owner for this proposed construction do hereby certify awareness and knowledge of Chapter 8.16 of the Cambridge Municipal Code concerning noise control. Cambridge Municipal Code available upon request or online.											
l certify that necessary actions will be taken concerning the design, specification of and location of noise producing equipment: e.g., air conditioning condensers, heating equipment exhausts, etc., to insure that this project will not result in noise levels that exceed that allowed by the Municipal Code.											
Name Adam Wolfrey Title Consultant											
License /											
Applicant Signature Adam Wolfrey Registration #											

Please note that additional Mechanical permits and Sheet Metal permits may be required for installation of any mechanical system. New rooftop units (including solar panels) require an existing building analysis by a Registered Structural Engineer for suitability of the installation.

Construction Services (Required)

Any project proposed for any building over 35,000 ft. must meet the requirements of Sec. 107.6 & Ch. 17 MSBC

Architect/Registed Design Professional (Construction Control Sec. 107, MSBC Amended)

Name: John Stevens Phone #: Firm: Cell Phone #: 508-667-3100 Address: 95 Ryan Drive STe, Raynaham MA MA Registration #. 4964 Email Address: awolfrey@clinellc.com Application shall include signed and stamped letter from Registered Design Professonal attesting to duties and obligations required by Sec. 107.6 and Chp. 17 MSBC Amended. Application shall also include schedule of tests, inspections and observations as required by Sec. 1701.11 MSBC Amended. Structural Peer Review (MSBC 780 CMR 105.9 Amended) Is Independent Structural Engineering Peer Review required? Yes If Yes, review must be submitted with application. Peer review is required for high rise construction or buildings of unusual complexity as determined by the BBRS. Read before signing: the undersigned hereby certifies that he/she has read and examined this application and that the proposed work subject to the provisions of the Massachusetts State Building Code and other applicable laws and ordinances is accurately represented in the statements made in this application and that the work shall be carried out in accordance with the foregoing statements and in compliance with the provisions of law and ordinance in force on the date of this application to the best of his/her ability. **Licensed Construction Supervisor** Name: Kevin Cunningham Phone #: Address: 29 Hale Road, Stow MA Cell Phone #: 508-667-3100 License #: 088703 **Expiration Date:** 10/17/2017 Class: CS Email Address: kevin@aerialwireless.com Signature: Adam Wolfrey(agent) Date: 07/31/2017 Registered Home Improvement Contractor (required only for 3 or 4 family owner-occupied dwellings) Name: Phone #: Firm Name: Cell Phone #: Address: **Expiration Date:** Registration #: Email Address: Signature: Date: Building Owner of Record (Application must be signed by owner of building) Name: American Tower Corporation Phone #: Cell Phone #: Address: 95 Ryan Drive, Ste 1, Raynham MA 508-667-3100 Email Address: awolfrey@clinellc.com Signature: Adam Wolfrey 07/31/2017 Date:

Hold Harmless Clause: The permitee(s) by acceptance of this permit agree(s) to indemnify and hold harmless the City of Cambridge and it's employees from and against any and all claims, demands and actions for damages resulting from operations under this permit regardless of negligence of the City of Cambridge and it's employees are to assume the defense of the City of Cambridge and it's employees against all claims, demands and actions.

Massachusetts general Law Requirements

Worker's Compensation Insurance Affidavit (MGL c. 152 § 25C96)

A certificate of insurance indicating Worker's Compensation coverage or a completed Worker's Compensation Insurance Affidavit must be submitted with this application. Failure to provide this affidavit will result in the denial of issuance of the building permit. Failure to secure coverage as required under Section 25A of MGL c.152 can lead to imposition of a fine of up to \$1500.00 and/or one-year imprisonment as well as civil penalties in the form of a Stop Work Order and a fine of up to \$250.00 a day against the violator.

Signed affidavit or certificate of insurance attached:

Construction Debris Affidavit (MGL c.40 §54)

Structural Engineer

As a result of the provisions of MGL c.40 §54, I acknowledge that as a condition of the building permit all debris resulting from the construction activity governed by this building permit shall be disposed of in a properly licensed waste disposal facility as defined by MGL c. 111 § 150A. The debris will be disposed at/by: Method of Removal: Dumpster License: 0 Dumpster I certify that I will notify the Building Official by (date, 2 months max.) of the location of the solid waste disposal facility where the debris resulting from said construction activity shall be disposed of and I shall submit the appropriate form for attachment to the building permit. Signature: AW(agent) Official Use Only **Department Approvals** BZA Date: Electrical Date: Planning Board Date: Plumbing Date: Historic Date: D. P. W. Date: Fire Department Date: Parking **Application Approval** Subject to the provisions of the Massachusetts State Building Code 780 CMR and the Zoning Laws of the City of Cambridge. Application and plans accepted by: Date: Zoning approved by: Date: Plan review approved by: Date: Permit approved/granted by: Date: Inspection Record Final Inspection Date: **Final Affidavits Submitted** Final Cost Cirtified Foundation Plan Architect Certificate of Occupancy Issued General Contractor



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 09/10/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER. AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in liquid found and provided the certificate holder in liquid found and provided the certificate holder in liquid found and provided the certificate holder in liquid found the certificate holder in liquid found and provided the certificate holder in liquid found to the certificate holder in liquid found to the certificate holder in liquid found to the certificate holder in liquid for the certificate holder in

this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).									
PRODUCER				CONTAC NAME:	T Wanda M	ondry			
The James B. Oswald Company				PHONE (A/C, No	Ext): (248) 4:	33-1466		FAX (A/C, No):	(248) 433-7611
39572 Woodward Ave				E-MAIL ADDRES	MMonday	@oswaldcom		,,	
Suite 201						SURER(S) AFFO	RDING COVERAGE		NAIC #
Bloomfield Hills			MI 48304	INSURE	RA: Zurich A	merican Insura	ince Company		16535
INSURED				INSURE	RB: Indian H	arbor Insuranc	e Co.		
Aerial Wireless Services LLC				INSURE	R C :				
125 Depot Street				INSURE	RD:	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
				INSURE	₹E:				
Bellingham									
COVERAGES CERTIFICATE NUMBER: 18-19 GL, Umb, WC.E&O REVISION NUMBER:									
THIS IS TO CERTIFY THAT THE POLICIES OF									
INDICATED. NOTWITHSTANDING ANY REQUI CERTIFICATE MAY BE ISSUED OR MAY PERTA									HS
EXCLUSIONS AND CONDITIONS OF SUCH PO							30000110710	e reimo,	
INSR LTR TYPE OF INSURANCE	ADDL	SUBR	POLICY NUMBER		POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)		LIMITS	}
COMMERCIAL GENERAL LIABILITY							EACH OCCURRENCE		s 1,000,000
CLAIMS-MADE X OCCUR							DAMAGE TO RENTED PREMISES (Ea occurre		s 300,000
							MED EXP (Any one pe	erson)	s 10,000
A	Υ	Y	GLO-0147104-02		09/09/2018	09/30/2019	PERSONAL & ADV IN.	JURY	s 1,000,000
GEN'L AGGREGATE LIMIT APPLIES PER					GENERAL AGGREGA		\$ 2,000,000		
POLICY X PRO-					PRODUCTS - COMP/C	OP AGG	\$ 2,000,000		
OTHER.							CGL		\$

COMBINED SINGLE LIMIT AUTOMOBILE LIABILITY (La accident) ANY AUTO BODILY INJURY (Per person) OWNED SCHEDULED BODILY INJURY (Per accident) \$ AUTOS ONLY HIRED AUTOS ONLY NON-OWNED AUTOS ONLY PROPERTY DAMAGE (Per accident) 5 W UMBRELLA LIAB 10,000,000 OCCUR EACH OCCURRENCE AUC-7199801-00 09/09/2018 **EXCESS LIAB** 09/09/2019 10,000,000 CLAIMS-MADE AGGREGATE DED RETENTION \$ WORKERS COMPENSATION PER STATUTE AND EMPLOYERS' LIABILITY \$ 1,000,000 ANY PROPRIETOR/PARTNER/EXECUTIVE E.L. EACH ACCIDENT Υ WC-0147105-02 09/09/2018 09/09/2019 OFFICER/MEMBER EXCLUDED? 1,000,000 (Mandatory in NH)
If yes, describe under
DESCRIPTION OF OPERATIONS below E.L. DISEASE - EA EMPLOYEE 1,000,000 E.L. DISEASE - POLICY LIMIT Errors & Omissions Liability В PEC0049858 05/11/2018 05/11/2019 Per Occ / Agg Limit \$1M / \$1M

CERTIFICATE HOLDER

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

AUTHORIZED REPRESENTATIVE

ACCORDANCE WITH THE POLICY PROVISIONS.

THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN



6. Other
Contact Person:

The Commonwealth of Massachusetts Department of Industrial Accidents Office of Investigations 600 Washington Street Boston, MA 02111 www.mass.gov/dia

www.mass.gov/dia Workers' Compensation Insurance Affidavit: Builders/Contractors/Electricians/Plumbers Applicant Information Please Print Legibly Name (Business/Organization/Individual): Aerial Wireless Services Address: 125 Depot Street City/State/Zip: Bellingham, MA 02019 508-657-1213 Phone #: Are you an employer? Check the appropriate box: Type of project (required): 4. Ham a general contractor and f 1. N Lam a employer with 120 6. New construction have hired the sub-contractors cmployees (full and/or part-time),* 7. Remodeling listed on the attached sheet. 2. I am a sole proprietor or partner-These sub-contractors have 8, Demolition ship and have no employees employees and have workers' working for me in any capacity. 9. Building addition comp. insurance. No workers' comp. insurance 10. Electrical repairs or additions 5. We are a corporation and its required.] officers have exercised their 11. Plumbing repairs or additions 3. Tam a homeowner doing all work right of exemption per MGL myself. [No workers' comp. 12. Roof repairs c. 152, §1(4), and we have no insurance required. | † 13. X Other employees. [No workers' comp. insurance required.] *Any applicant that checks box #1 must also fill out the section below showing their workers' compensation policy information. Homeowners who submit this affidavit indicating they are doing all work and then hire outside contractors must submit a new affidavit indicating such *Contractors that check this box must attached an additional sheet showing the name of the sub-contractors and state whether or not those entities have employees. If the sub-contractors have employees, they must provide their workers' comp. policy number I am an employer that is providing workers' compensation insurance for my employees. Below is the policy and job site information. Insurance Company Name: Zurich American Insurance Company Policy # or Self-ins, Lic, #: WC-0147105-02 Expiration Date: 9/9/2019 Job Site Address: City/State/Zip: Attach a copy of the workers' compensation policy declaration page (showing the policy number and expiration date), Failure to secure coverage as required under Section 25A of MGL c. 152 can lead to the imposition of criminal penalties of a fine up to \$1,500.00 and/or one-year imprisonment, as well as civil penalties in the form of a STOP WORK ORDER and a fine of up to \$250.00 a day against the violator. Be advised that a copy of this statement may be forwarded to the Office of Investigations of the DIA for insurance coverage verification. I do hereby certify under the pains and penalties of perjury that the information provided above is true and correct. Date: 9/14/18 Signature: Phone #: 508-657-1213 Official use only. Do not write in this area, to be completed by city or town official. City or Town: Permit/License # Issuing Authority (circle one):

1. Board of Health 2. Building Department 3. City/Town Clerk 4. Electrical Inspector 5. Plumbing Inspector

Phone #:

To Whom It May Concern:

My name is Adam Wolfrey and recently T-Mobile hired my company to upgrade their equipment at the cell site located on 955 Massachusetts Avenue. The total cost of construction is \$15,000. Can you please email me how much the permit fee is?

Thanks,

Adam Wolfrey

awolfrey@clinellc.com



Massachusetts Department of Public Safety Board of Building Regulations and Standards

License: CS-088703 Construction Supervisor

KEVIN CUNNINGHAM 29 HALE RD STOW MA 01776



Commissioner

Expiration 10/09/2017

1,000,000



CERTIFICATE OF LIABILITY INSURANCE

DATE (MINIDO/YYYY) 9/7/2016

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED

REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER. IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(les) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in ileu of such endorsement(s). (248) 433-1466 CONTACT Wanda Mondry PRODUCER Oswald Companies - Detroit, MI PHONE (NC. No. Ext): (248) 433-7616 [A FAX, Not: (248) 433-1711 39572 Woodward Ave., Suite 201 Bloomfield Hills, MI 48304 INSURER(S) AFFORDING COVERAGE INSURER A : Zurich American Ins Co 16535 INSURED Aerial Wireless Services LLC INSURER B : 125 Depot Street INSURER C : Bellingham, MA 02019 INSURER D INSURER E INSURER F : COVERAGES CERTIFICATE NUMBER: **REVISION NUMBER:** THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS EXCLUSIONS AND CONDITIONS OF SUCH POLICIES, LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS. ADDL SUBR POLICY EFF POLICY EXP TYPE OF INSURANCE POLICY NUMBER LIMITS X COMMERCIAL GENERAL LIABILITY 1,000,000 Α EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) CLAIMS-MADE X OCCUR GLO014710400 9/9/2016 9/9/2017 1,000,000 N N 10,000 MED EXP (Any one person) 1.000,000 PERSONAL & ADV INJURY 2,000,000 GENT AGGREGATE LIMIT APPLIES PER GENERAL AGGREGATE 5 2,000,000 POLICY X PRO-PRODUCTS - COMP/OP AGG 5 OTHER MBINED SINGLE LIMIT AUTOMOBILE LIABILITY 5 (Ea accident) Х BAP014710600 9/9/2016 9/9/2017 BODILY NJURY (Per person) 5 1,000,000 ANY AUTO SCHEDULED AUTOS NON-OWNED AUTOS ALL OWNED AUTOS **BODILY INJURY (Per accident)** 5 PROPERTY DAMAGE Ś 1,000,000 HIRED AUTOS Ś UMBRELLA LIAB EACH DECURRENCE 5,000,000 OCCUR 5 AUC014711300 9/9/2016 9/9/2017 5,000,000 **EXCESS LIAB** N AGGREGATE CLAIMS-MADE ٤ None DED X RETENTION S 5 WORKERS COMPENSATION AND EMPLOYERS' LIABILITY X STATUTE AND EMPLOYERS CHARDENEXECUTIVE OFFICERMEMBER EXCLUDED? (Mandatory in NH) if yes, describe under DESCRIPTION OF OPERATIONS below WC014710500 9/9/2016 9/9/2017 1,000,000 E L EACH ACCIDENT E L DISEASE - EA EMPLOYEE S 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER	CANCELLATION
For Information Purposes	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE

EL DISEASE POLICY LIMIT S



The Commonwealth of Massachusetts Department of Industrial Accidents 1 Congress Street, Suite 100 Boston, MA 02114-2017

www.mass.gov/dia

Workers' Compensation Insurance Affidavit: Builders/Contractors/Electricians/Piumbers, TO BE FILED WITH THE PERMITTING AUTHORITY.

Applicant Information	Please Print Legibly	
Name (Business/Organization/Individual): Aerial Wireless Services, LLC		
Address: 125 Depot Street		
City/State/Zip: Bellingham, MA 02019 Phone #: 508-657	-1213	
Are you an employer? Check the appropriate box: 1. I am a employer with 83 employees (full and/or part-time).* 2. I am a sole proprietor or partnership and have no employees working for me in any capacity. [No workers' comp. Insurance required.] 3. I am a homeowner doing all work myself. [No workers' comp. insurance required.] † 4. I am a homeowner and will be hiring contractors to conduct all work on my property. I will ensure that all contractors either have workers' compensation insurance or are sole proprietors with no employees. 5. I am a general contractor and I have hired the sub-contractors listed on the attached sheet. These sub-contractors have employees and have workers' comp. insurance.† 6. We are a corporation and its officers have exercised their right of exemption per MGL c. 152, §1(4), and we have no employees. [No workers' comp. insurance required.] *Any applicant that checks box #1 must also fill out the section below showing their workers' compensation therefore that checks box #1 must also fill out the section below showing their workers' compensation therefore that checks box #1 must also fill out the section below showing their workers' compensation therefore that check this box must attached an additional sheet showing the name of the sub-contractors that check this box must attached an additional sheet showing the name of the sub-contractors that check this box must attached an additional sheet showing the name of the sub-contractors that check this box must attached an additional sheet showing the name of the sub-contractors.	rs must submit a new affidavit indicating such.	
I am an employer that is providing workers' compensation insurance for my emploinformation. Insurance Company Name: Zurich American Ins Co		
	iration Date: 9/9/2017	
	City/State/Zip:Compensation policy deciaration page (showing the policy number and expiration date).	
Failure to secure coverage as required under MGL c. 152, §25A is a criminal violatio and/or one-year imprisonment, as well as civil penalties in the form of a STOP WOR day against the violator. A copy of this statement may be forwarded to the Office of I coverage verification.	K ORDER and a fine of up to \$250.00 a	
I do hereby certify under the prins and penalties of perjury that the information pro	1 /	
Signature: / Date:	91812016	
Phone #: 508-657-1213		
Official use only. Do not write in this area, to be completed by city or town official.		
City or Town: Permit/License #		
Issuing Authority (circle one): 1. Board of Health 2. Building Department 3. City/Town Clerk 4. Electrical Inspector 5. Plumbing Inspector 6. Other		
Contact Person: Phone #:	Phone #:	

755 Mass 116-116 115-72 115-71 342 Harvard St 116-2 8 Dana Pl Dana Pl 344 Harvard St 134-55 115-70 116-114 340 Harvard St 116-20 116-113 116-112116-111 14 Dana St 338 Harvard St 134-54 116-110116-109 16 Ellery St 5 116-108 116-62 12 Ellery St 336 Harvard St 116-42 14-A Dana St 116-107116-106 116-16 334 Harvard St 116-63 14-B Dana St 116-22 116-5 9 Dana St 10 Ellery St 336 Harvard St 116-23 10 Dana St 116-119 8 Ellery St 10-2 Ellery St 116-83 19-5 Centre St 19-6 Centre St 7 Dana St 116-6 19-3 Centre St116-82 116-14 116-24 116-120 116-84 19-2 Centre St 19 Centre St 116-38 11-1/2 Centre St 116-85 17 Centre St 116-37 9-1/2 Centre St 116-13 3 Dana St (8) 15 Centre St Centre St 11 Centre St116-87 116-81 116-86 /116-35 116-12 18 Centre St 7 Centre St 116-43 116-75 22 Centre St 16 Centre St 8 Dana St 14 Centre St 116-68 116-76 997 Massachusetts Ave 116-94 10 Centre St 999 Massachusetts Ave 116-88 6 Centre St 987 Massachusetts Aveg83 Massachusetts Ave 1008 Massachusetts Ave 116-100 Massachusetts A 116-90 116-117 116-104 116-98 121-114 955 Massachusetts Ave 116-91 1000 Massachusetts Av 116-99 116-92 931 Massachusetts Ave 121-113 929 Massachusetts Ave 77 Hancock St 599 Green St Š 0 Massachusetts Ave 116-54 75 Hancock St 117-105 950 Massachusetts Ave/ 934 Massachusetts Ave 932 Massachusetts Ave 921 Massachusetts Ave Sullivan Park 938 Massachusetts Ave 120-40 928 Massachusetts Ave 121-23 120-45 930 Massachusetts Ave 120-73 594 Green St Green St 922 Massachusetts Ave 117-28 120-74 121-25 120-48 121-26 121-112 15 Bay St 912 Massachusetts Ave 551-5 Green St551-6 Green St 120-4957 Hancock St 120-54 529 Franklin St ₁₇ Bay St 120-103120-92 568 Green St 551 Green St 120-68 120-64 121-32 121-29 19 Bay St 18 Bay St 120-93 121-117 21 Bay St 120-95 120-83 560 Green St 543 Green St 120-106 562 Green St 120-106 53 Hancock St 119-90 56 Hancock St 119-91 5 120-105 120-88 48 11 898 Massachusetts Ave 120-87 120-105 120-96120-94120-96 Green St 119-21 120-94 495 Franklin St 120-23 120-24 121-118121-30 119-20 23 Bay St 521-C Green St 119-4 120-17 120-37 2 Belvidere Pl1 Franklin Pl120-25 538 Green St 119-19 119-18 121-60 Franklin St 120-54 Franklin St 120-54 Franklin Street Park 120-26 120-31 120-28 120-27 521 Green St119-98 119-5 /119-97 119-34 526 Green St 119-15 955 pass Are

116-43 CRNC REALTY, LLC 8 DANA ST CAMBRIDGE, MA 02138

116-98 GPT-929 HOUSE, LLC. EQR-R.E TAX DEPARTMENT P.O BX 87407 (19038) CHICAGO, IL 60680

116-99 SANTAMARIA, HERNANDO & MARIE E. JAMISON 931 MASS AVE.,UNIT #205 CAMBRIDGE, MA 02139

116-99 PAYNE, PATRICIA C. 931 MASS AVE #302 CAMBRIDGE, MA 02139

116-99
TSITSIKLIS, DAPHNE POLITIS &
KAREN POLITIS VIRK, TRS OF IRENE POLITIS
665 LOWELL ST #53
LEXINGTON, MA 02420

116-99 AMORNSIRIPANITCH, NITA 931 MASSACHUSETTS AVE. - UNIT #402 CAMBRIDGE, MA 02139

116-99 LAM, LUI & ADA AU 931 MASSACHUSETTS AVE., #405 CAMBRIDGE, MA 02139

116-99 LAI, HSIU-CHEN HSU. & CHING-LI LAI 931 MASSACHUSETTS AVE., STE #502 CAMBRIDGE, MA 02139

116-99 BUDNITZ, JESSICA S. 20000 BROADWAY ST., #1204 SAN FRANCISCO , CA 94115

116-99 PERIANA, CECILY 931 MASSACHUSETTS AVE. #603 CAMBRIDGE, MA 02139 116-46 BRACKMAN, DAVID J. & DEBRA B. SEGAL 16 CENTRE STREET CAMBRIDGE, MA 02139

LIN, THOMAS Y. & JENNIFER J. SHIN 931 MASS AVE., #203 CAMBRIDGE, MA 02139

116-99 KONG, WEN-YUAN, TR. THE WEN-YUAN KONG 2014 REV TRUST 72 HILL CREST AVE LEXINGTON, MA 02420

116-99 KOST, GENIA & JOSEPH KOST 931 MASSACHUSETTS AVE. -UNIT #303 CAMBRIDGE, MA 02139

THEODOSIOU, NICOLETA & GEORGE THEODOSIOU TRS. OF NICOLETA THEODOSIOU TRUST 931 MASS AVE., UNIT 306 CAMBRIDGE, MA 02139

116-99 GWC REALTY, LLC C/O CHAN 10 EDELWEISS AVE LINCOLN, RI 02865

116-99 PERIANA, CECILY J. 931 MASSACHUSETTS AVE. UNIT #406 CAMBRIDGE, MA 02139

116-99 VANGER, MILTON I. & ELSA M. VANGER 931 MASSACHUSETTS AVE #503 CAMBRIDGE, MA 02139

116-99
KIM, DAVID & EILEEN KIM
931 MASSACHUSETTS AVE., #506
CAMBRIDGE, MA 02139

116-99 TIAN, XIA 931 MASS AVE. UNIT#604 CAMBRIDGE, MA 02139 PRINCE LOBEL TYE, LLP C/O ADAM F. BRAILLARD, ESQ. ONE INTERNATIONAL PLACE – SUITE 3700 BOSTON, MA 02110

DWF V 955 MASSACHUSETTS, LLC ATTN: JEFFREY LONGNECKER DIVCOWEST 200 STATE STREET BOSTON, MA 02109

116-99 CHANG, YI PU 931 MASS AVE #301 CAMBRIDGE, MA 02139

116-99 BERRIZ, GABRIEL 931 MASS AVE.,UNIT #304 CAMBRIDGE, MA 02139

116-99 MOTAKEF, SHAHRNAZ 6775 MALACHITE PLACE CARLSBAD, CA 92009

116-99 LEE, JANICE Y. 931 MASSACHUSETTS AVE., #404 CAMBRIDGE, MA 02139

116-99 NG, CHONG KEAT & YI XE THNG 30 CAMBRIDGEPARK DRIVE, APT 414 CAMBRIDGE, MA 02142

116-99 GRAYSON III, MCCOMMA 931 MASS AVE #504 CAMBRIDGE, MA 02139

116-99 GRAGOUDAS, STELIOS 931 MASS AVE. UNIT#601 CAMBRIDGE, MA 02138

116-99 HAJJAR, CHARLES C. & ANNE T. HAJJAR C/O HAJJAR MANAGEMENT COMPANY, INC. 30 ADAMS ST. MILTON, MA 02186 116-99 ORLEN, YANA 931 MASS AVE #606 CAMBRIDGE, MA 02139

116-99
JANSON, ROBERT, PATRICIA JANSON AND
JENNIFER JANSON
931 MASSACHUSETTS AVE. - UNIT #703
CAMBRIDGE, MA 02138

116-99
MALAMUD, PAUL, JANNA M. SMITH &
DAVID M. SMITH, TRS
55 THOMPSON LANE
MILTON, MA 02186

116-99 ARNSTEIN, MATTHEW & DOLPHIA NANDI 931 MASSACHUSETTS AVE., #901 CAMBRIDGE, MA 02139

116-99 CHITILIAN, HOVIG 931 MASSACHUSETTS AVE.UNIT #904 CAMBRIDGE, MA 02139

116-99 THEODOSIOU, GEORGE TRUSTEE GEORGE THEODOSIOU TRUST 931 MASS AVE., UNIT #1002 /01 CAMBRIDGE, MA 02139

116-99
RUPPRECHT, HSIAO-WEI, KLAUS RUPPRECHT &
CHRISTOPH RUPPRECHT
1644 MASSACHUSETTS AVE
CAMBRIDGE, MA 02138

116-99 ALI, KHALEEM & KAMILA MOHAMMED-ALI 931 MASS AVE. UNIT#1201 CAMBRIDGE, MA 02139

116-100 KONSTANDAKIS, NICHOLAS & JOHN POLITIS, TRS. OF 975 REALTY TRUST 975 MASS AVE CAMBRIDGE, MA 02139

120-40 LIU, FAN 950 MASS AVE., #1B CAMBRIDGE, MA 02139 116-99 GRAGOUDAS, EVANGELOS S. 931 MASSACHUSETTS AVE. #701 CAMBRIDGE, MA 02139

116-99 KARNIK, ROHIT NANDKUMAR 931 MASS AVE. UNIT#704 CAMBRIDGE, MA 02139

116-99 CHEUNG, JOANNA K. & NIM KWAN CHEUNG VILLA ATHENA, #19A BLOCK-10 600 SA SHA RD MAOU SHAU, - -

116-99 TSAI WENG KUN -WU 931 MASS AVE #902 CAMBRIDGE, MA 02139

116-99 LO, STEPHANIE 931 MASSACHUSETTS AVE, #PH1 CAMBRIDGE, MA 02139

116-99 MAKHLIS, LEV 931 MASS AVE., UNIT #1003 CAMBRIDGE, MA 02139

116-99 ENTEKHABI, DARA 931 MASS AVE #1102 CAMBRIDGE, MA 02139

116-99 UNIT 1202 LLC 11008 BAYSHORE DR WINDERMERE, FL 34786

116-117 BRICKMAN 955 MASSACHUSETTS LLC, C/O DWF V 955 MASSACHUSETTS LLC 575 MARKET ST., 35TH FLOOR SAN FRANCISCO, CA 94105

120-40 MITZMAN, JONATHAN S. 950 MASSACHUSETTS AVE. - UNIT #1C CAMBRIDGE, MA 02139 116-99 UNIT 702, LLC 11008 BAYSHORE DR WINDERMERE, FL 34786

116-99 KONG, WEN-YUAN, TR. THE WEN-YUAN KONG 2014 REV TRUST 72 HILLCREST AVE LEXINGTON, MA 02420

116-99 HUI, MICHAEL 1132 SHORELINE DR SAN MATEO, CA 94404

116-99 ANISIMOV, ANDREW & NICHOLAS ANISIMOV 931 MASSACHUSETTS AVE.,#903 CAMBRIDGE, MA 02139

116-99
TENENBAUM, ARLENE B. &
JAY M. TENENBAUM TRUSTEE
931 MASSACHUSETTS AVE., #PHS
CAMBRIDGE, MA 02139

116-99 CHO FAMILY LIMITED PARTNERSHIP 257 LOWELL ST ARLINGTON, MA 02474

116-99
RAINWATER, CAROL K.
TRUSTEE OF CAROL K. RAINWATER REV TR
931 MASSACHUSETTS AVE. UNIT 1103
CAMBRIDGE, MA 02139

116-99 LEE, ARNOLD K.S. & ARTHUR K.C LEE & ANNABELLA M.Y. LEE 931 MASSACHUSETTS AVE., #1203 CAMBRIDGE, MA 02139

120-40 CORNELISON, CORBET L & JUDITH ANN PIRANI C/O LEE, SHIHUI JANICE & CHEE TENG LEE 950 MASS AVE #1A CAMBRIDGE, MA 02139

120-40 SMIRNAKIS, JOHN & STELIOS SMIRNAKIS 43 SCOTCH PINE RD WESTON, MA 02493 955 mars Are

120-40 TANG, ZHIQI JESSICA YU 110 LORI DR SCHENECTADY , NY 12309

120-40 ALCALAY, ROY N. 372 CENTRAL PARK WEST #8D NEW YORK, NY 10025

120-40 PAN, JUN 950 MASSACHUSETTS AVE ., #C2 CAMBRIDGE, MA 02139

120-40 RANDOLPH, BRETT W. F. 950 MASS AVE #104 CAMBRIDGE, MA 02139

120-40
QUIRK, PETER J & KATHERINE T. MATISON
TRUSTEES OF THE QUIRK/MATISON REALTY TR
8 DAVIS RD
SOUTHBOROUGH, MA 01772

120-40 LEE, KENNETH S. & PEGGY L. LEE 950 MASSACHUSETTS AVE. -UNIT #204 CAMBRIDGE, MA 02138

120-40 RAND, TIMOTHY D. 950 MASS AVE #207 CAMBRIDGE, MA 02139

120-40
CHAN, BELLE MAY-SHUN, MING-CHEONG ERIK
CHAN & DEREK VICTOR CHAN
3027 ULSTER COURT
DENVER, CO 80238

120-40 LANDAU, JACQUELINE C. 950 MASS. AVE., #214 CAMBRIDGE, MA 02139

120-40 LECERF, JEAN-MICHAEL & SARAH GHAFFARI-LECERF 22 WATSON STREET CAMBRIDGE, MA 02139 120-40 FLAHERTY, KEITH, MIRA KAUTZKY, & EVA EHRLICH 950 MASSACHUSETTS AVE., UNIT 2C CAMBRIDGE, MA 02139

120-40 WONG, GERMAINE 950 MASSACHUSETTS AVE.,#3C CAMBRIDGE, MA 02139

120-40 FINANCIAL ASSOCIATES, INC. P.O BOX 487 DEDHAM, MA 02026

120-40 RANDOLPH, BRETT W.F. 950 MASS AVE #104 CAMBRIDGE, MA 02139

120-40 BUNNER, BERNARD M. & ELENA CHEKHOVA 1044 CHESTNUT ST NEWTON, MA 02464

116-88
CAMBRIDGE CENTRE LLC,
C/O CHESTNUT HILL REALTY CORP.
300 INDEPENDENCE DRIVE
CHESTNUT HILL, MA 02467

120-40 BELLOW, JEAN M. 950 MASSACHUSETTS AVE., #208 CAMBRIDGE, MA 02139

120-40 HELLER, HOWARD 950 MASS. AVE. #212 CAMBRIDGE, MA 02139

120-40 GUPTA, NARINDER & HUMA GUPTA 950 MASSACHUSETTS AVE., #215 CAMBRIDGE, MA 02139

120-40 KHAN, MOHAMMED H. & HASINA A. KHAN CO-TRUSTEES, 950 MASS AVE REALTY TRUST 950 MASSACHUSETTS AVE., #218 CAMBRIDGE, MA 02138 120-40 MCDEVITT, KEVIN T. 950 MASS. AVE., #3A CAMBRIDGE, MA 02139

120-40 950 MASS ASSET HOLDING LLC C/O RUBERTO, ISRAEL & WEIINER, PC 255 STATE ST. 7TH FL BOSTON, MA 02109

120-40 BAY SQUARE CONDOMINIUM TRUST C/O THAYER & ASSOC. 1812 MASSACHUSETTS AVE CAMBRIDGE, MA 02140

120-40 KHANACHET, SAMER S., TR OF THE BAY SQUARE 106 REALTY TRUST C/O CHARTER CAPITAL MANG. INC. 176 FEDERAL ST., FL #2 BOSTON, MA 02110

120-40 SOLOMON, JONATHAN P.O BOX 426186 CAMBRIDGE, MA 02142

120-40 LIN, SU-MAAN KUO, TR. THE SU-MAAN KUO LIN REV TRUST 950 MASSACHUSETTS AVE., # 206 CAMBRIDGE, MA 02139

120-40 LAI, JOANNE P., TRUSTEE THE LILLIAN M. LAI TRUST 136 CENTRAL WAY, #203 KIRKLAND, WA 98033

120-40 GREENE, MARY E. & ROBERT A. GREENE 950 MASS AVE. UNIT#213 CAMBRIDGE, MA 02139

120-40 RUBIALES, CARLOS F. 950 MASS AVE #216 CAMBRIDGE, MA 02139

120-40 NEVINS, ROBERT L., TRUSTEE OF GRANITE NOMINEE TRUST C/O DEBBIE KOPLOW 950 MASS. AVE., UNIT #219 CAMBRIDGE, MA 02139 955 mas Are

120-40 MAO, YUNTAO 950 MASSACHUSETTS AVE., #220 CAMBRIDGE, MA 02139

120-40 PRAKASH, SADHANA 950 MASSACHUSETTS AVE., #303 CAMBRIDGE, MA 02139

120-40 ARNSTEIN, MATTHEW A. & DOLPHIA NANDI 950 MASSACHUSETTS AVE., #306 CAMBRIDGE, MA 02139

120-40 AL-HASHIMY, EBRAHIM REDHA ALI C/O NILES CO. , ATTN: BOBBI BISHOP ONE WATERHOUSE ST. CAMBRIDGE, MA 02138

120-40 WEISS, PAMELA FUIRST 950 MASS. AVE. UNIT #312 CAMBRIDGE, MA 02139

120-40 LIM, JONGWON & BOOYONG LIM, TRS THE LIM FAMILY TRUST 254 EAST EMERSON RD LEXINGTON, MA 02420

120-40 KEOW, GANN & SUSANNA BAY & KUEH HEONG MAH 50 DRAYCOTT PARK #07-01 SINGAPORE ---, -- 25939

120-40 WIRASINHA, EDWIN A., HEMAMILA C. WIRASINHA, & H. ANUSHKA WIRASINHA 950 MASS AVE #401 CAMBRIDGE, MA 02139

120-40 TRACHTA, SUSAN VERONICA 1033 BRUSH HILL RD. MILTON, MA 02186

120-40 O'LEARY, FRANCES P. 950 MASS AVE. UNIT#407 CAMBRIDGE, MA 02139 120-40
WIRASINHA, EDWIN A &
HEMAMALI C. WIRASINHA
950 MASSACHUSETTS AVE - UNIT 301
CAMBRIDGE, MA 02139

120-40 HUR, JAYOUN 550 FRONT ST UNIT #805 SAN DIEGO, CA 92101

120-40 ABBOTT, MIRI CHUNG 1 CENTRAL PARK WEST., #27E NEW YORK, NY 10023

120-40 ZAVOLEAS, KYRIAKOS P. & MELINA SMIRNIOU 950 MASS AVE. UNIT#310 CAMBRIDGE, MA 02138

120-40 MEISTER, MELVIN, JEAN R. MEISTER NINA R. MEISTER GRIMALDI, TRS 950 MASSACHUSETTS AVE - UNIT #313 CAMBRIDGE, MA 02139

120-40 SOLOMON, JONATHAN 950 MASSACHUSETTS AVE 316 CAMBRIDGE, MA 02139

120-40 KESHISHIAN, VARTAN & SEDA EBRAHIMI KESHISHIAN 950 MASS AVE. UNIT#319 CAMBRIDGE, MA 02139

120-40 AN, DAVID L. & YOHAN AN 950 MASSACHUSETTS AVE., #402 CAMBRIDGE, MA 02139

120-40 FLETCHER, CHRISTOPHER D.M. 950 MASSACHUSETTS AVE.,UNIT 405 CAMBRIDGE, MA 02139

120-40
JACOBSON, NANCY C.
TR. OF THE NANCY C. JACOBSON REV TRUST
950 MASS AVE. UNIT#408
CAMBRIDGE, MA 02139

120-40 SEAGRASS LLC C/O SULLIVAN, DAVID W. 390 GULL POND RD. WELLFLEET, MA 02667

120-40 LU, CHING C. & CHING-CHIEH LU TRUSTEE OF LU REAL ESTATE TRUST 950 MASS AVE.,UNIT #305 CAMBRIDGE, MA 02139

120-40 LESHKOWICH, MEREDITH 950 MASS AVE. UNIT#308 CAMBRIDGE, MA 02139

120-40 LIEN, LESTER 3640 RALSTON AVE HILLSBOROUGH, CA 94010

120-40 LIEN, LYNDON 30 SUMMERHOLME PLACE HILLSBOROUGH, CA 94010

120-40 SIREGAR, EMIR 950 MASS AVE., UNIT #317 CAMBRIDGE, MA 02139

120-40 CHUNG, JUN JA LEE 1 CENTRAL PARK WEST #27E NEW YORK, NY 10023

120-40 HASSON, AMIR A. 950 MASS AVE #403 CAMBRIDGE, MA 02139

120-40 HSIAO, JU-TING & HENRY K. WANG 3F #7 ALLEY 46 LONG JIANG RD TAIPEI, _ -

120-40 EICHLER, EWALD & HANSA EICHLER ROSEG GERWEG 2 MODLING, _ 2340 120-40 FISCHER, MARY ELLEN 270 SARATOGA BLVD SARATOGA SPRINGS, NY 12866

120-40 ARBOLEDA, CATALINA 950 MASSACHUSETTS AVE., #413 CAMBRIDGE, MA 02139

120-40 LIU, YU-TZU & LIN MEI-FUN LIU 950 MASS AVE., UNIT #416 CAMBRIDGE, MA 02139

120-40 RAHMAN, UPAL C/O SHEFFI, JONATHAN 950 MASS AVE.,UNIT# 419 CAMBRIDGE, MA 02139

120-40 SMIRNAKIS, STELIOS & KAREN M. SMIRNAKIS 43 SCOTCH PINE RD WESTON, MA 02493

120-40 HAGHAYEGHI, HOSSEIN, 1105 MASS AVE. UNIT PHA CAMBRIDGE, MA 02138

120-40 RONA, MEHMET 950 MASS. AVE., #508 CAMBRIDGE, MA 02139

120-40 YIP, WINNIE CHI-MAN 950 MASS. AVE., #511 CAMBRIDGE, MA 02139

120-40
BEINART, DOREEN,
TR OF BAY SQUARE REALTY TRUST
7 LONGFELLOW PK
CAMBRIDGE, MA 02138

120-40 LEE, HANMIN & YANPING WANG 18 WASHINGTON ST. #116 CANTON, MA 02021 120-40
SHIH, CHUNG & CHIN-CHIAO CAROL HSU
TRUSTEE OF HSU FAMILY TRUST.
P.O BX 2470
CUPERTINO, CA 95015

120-40 OWEN, THOMAS C. & SUE ANN OWEN 950 MASS AVE., UNIT #414 CAMBRIDGE, MA 02139

120-40 GRIGORIEV, SERGIE, TRUSTEE THE 950 U417 REALTY TRUST 110A INMAN ST CAMBRIDGE, MA 02139

120-40 MONTAGUT, ERIC & SHAHREZAD MOTAKEF 10 BURDEAN RD NEWTON, MA 02459

120-40 CLANCY, DEBRA FAUST 50 SANDY POND RD AYER, MA 01432

120-40 TIAN, XIN & XIAOTONG YAN 950 MASSACHUSETTS AVE 506 CAMBRIDGE, MA 02139

120-40 CHEN, JUI-LIAN & CHIH HUEI-CHENG CHEN 999 MARLIN AVE FOSTER CITY, CA 94404

120-40 CHABILL LLC C/O SARAH GRUNSTEIN 295 CENTRAL PARK WEST #16B NEW YORK, NY 10024

120-40 LAI, YI-SAN 37 WILLOW ST WELLESLEY, MA 02481

120-40 SCOTTI, NANCY F., TRUSTEE THE SCOTTI REV TRUST 950 MASSACHUSETTS AVE., #518 CAMBRIDGE, MA 02139 120-40 MOORE, DOMINIC 200 WEST 72ND ST., APT #18F NEW YORK, NY 10023

120-40 PATRICK, JOHN & SHARON BRITTON 950 MASS AVE #415 CAMBRIDGE, MA 02139

120-40 AL-SHARIKH, ADBULAZEEZ A. C/O CENTURY21 CITYSIDE 575 BOYLSTON ST BOSTON, MA 02116

120-40 CHIANG, YOU-CHIEN, SHU-YUAN CHIANG, SU LO-RONG CHIANG & LO-KU CHIANG 950 MASSACHUSETTS AVE. #501 CAMBRIDGE, MA 02139

120-40 AL-SHARIKH, ABOULAZEEZ ABULLATEEF C/O CENTURY 21 CITYSIDE 575 BOYLSTON ST BOSTON, MA 02116

120-40 YANG, WEI & LIN AN-CHEN YANG C/O JESSIE YANG 40 WOODSIDE RD SUDBURY, MA 01776

120-40
DAGOSTINO, RALPH B. &
LE LANIE C. D'AGOSTINO, TRS. NOMINEE TRUST
950 MASS. AVE., #510
CAMBRIDGE, MA 02139

120-40 HRYSHKO, WALTER JOSEPH & VIRGINIA HRYSHKO 71 CHARLES ST EAST - APT #1501 TORONTO ONTARIO, ___ M4Y2T

120-40 CHOUDHRY, JABEEN & JAVED AHMED 950 MASS AVE. UNIT#516 CAMBRIDGE, MA 02139

120-40 SKJAERVO, OKTOR 950 MASSACHUSETTS AVE., #519 CAMBRIDGE, MA 02139 120-40
WELCH, WILLIAM ROBERT & LAUREL WELCH
950 MASS AVE., UNIT #520
CAMBRIDGE, MA 02139

MOTAKEF, SHAHRYAR 950 MASS AVE #601 CAMBRIDGE, MA 02139

120-40

PATRICK, JOHN D., TRUSTEE THE JOHN D.
PATRICK 2006 REV TR
950 MASSACHUSETTS AVE 602
CAMBRIDGE, MA 02139

120-40 CHOUEIRI, EUGENIE , EID CHOUEIRI & ANTHONY E. CHOUEIRI 950 MASSACHUSETTS AVE - UNIT 603 CAMBRIDGE, MA 02139

CHANDRA, SANGITA LEE, MYONG SUK CHANDRA & VIPAN CHANDRA 950 MASS AVE. UNIT#604 CAMBRIDGE, MA 02139 120-40 WHITE, JR., MARC A. 10 BALLAST LANE MARBLEHEAD, MA 01945

120-40 GASPARIAN, LEVON & POLINA GASPARIAN, TRUSTEES 84 WELLESLEY RD BELMONT, MA 02478 120-40 MOORE, DOMINIC 200 WEST 72ND ST. APT #18F NEW YORK, NY 10023

120-40 DOLAN, ROBERT J. & KATHLEEN SPLAINE DOLAN 950 MASSACHUSETTS AVE., #608 CAMBRIDGE, MA 02139

120-40 MAHAJAN, SANJOY & JULIET JACOBSEN 950 MASSACHUSETTS AVE., #613 CAMBRIDGE, MA 02139 120-40 ELKIES, NOAM D. 950 MASS AVE #614 CAMBRIDGE, MA 02139 120-40 STRIEDTER, JURIJ & EMANUELA STRIEDTER TRS. THE 950 MASS AVE REALTY TRUST POA KORNEILA CEVASCO 5008 BERRYHILL CT TAMPA, FL 33624

120-40 DESHPANDE, PAWAN & SMITA DESHPANDE 950 MASSACHUSETTS AVE., #616 CAMBRIDGE, MA 02139 120-40 HERATY, JOHN E. 10 POST OFFICE SQ. 13TH FL BOSTON, MA 02109 120-40 DESHPANDE, PAWAN & SMITA DESHPANDE 950 MASSACHUSETTS AVE., #PH1 CAMBRIDGE, MA 02139

120-40 ZEMON, STANLEY A. & MICHAEL ANN ZEMON 950 MASSACHUSETTS AVE., #PH2 CAMBRIDGE, MA 02139 120-40 GIRALDO, CLAUDIA & JAMES M. GASPARELLO 950 MASSACHUSETTS AVE., #PH3 CAMBRIDGE, MA 02139 120-40 MCQUAID, KEVIN & LINDA E. MCQUAID, TR. OF THE THIRD MIDDLESEX REAL ESTATE 950 MASS AVE, UNIT PH4 CAMBRIDGE, MA 02139

120-40 SWANN, ANITA & DAVID SWANN C/O DREW M. SCHNELLER, CFA WELSH & FORBES LLC 45 SCHOOL ST BOSTON, MA 02108

116-99
KASPARYAN, N. GEORGE & ELIZABETH CALMAR
24 LOVERS LANE
SOUTHBOROUGH, MA 01772

120-45 NINE THIRTY-EIGHT REALTY CORP C/O ANISIMOV 940 MASS AVE CAMBRIDGE, MA 02139

121-113 1000 MASSACHUSETTS AVE MA LLC 1270 SOLDIERS FIELD ROAD BOSTON, MA 02135

WEI, XIAOHUI & STEPHEN N. RHOADES 22 CENTRE ST., UNIT #1 CAMBRIDGE, MA 02139 116-75 KESSLER, DAVID & MARIANNE WISER 22 CENTRE ST., #9 CAMBRIDGE, MA 02139

116-75 CAULFIELD, MARGARET A. 22 CENTRE ST., #8 CAMBRIDGE, MA 02139 116-75 MOSSEL, ELCHANAN 22 CENTRE ST., #7 CAMBRIDGE, MA 02138

116-75

116-75 GRUNBERG, DANIEL B. & ELAINE W. GRUNGBERG 11 LOCUST AVE LEXINGTON, MA 02421

116-75 KIM, IN SONG & YOON JUNG HUR C/O ERRAMUZPE, MATHIEU 22 CENTRE ST., #5 CAMBRIDGE, MA 02139 116-75 PALACIOS, TOMAS & NATALIA MOROZOVA 15 AMHERST RD BELMONT, MA 02478 116-75 DANG, KHANH P. & NGHIA H. DANG 27890 MT. HOOD WAY YORBA LINDA, CA 92887 955 Mass Are

116-75 SULLIVAN, ANGELA M. 22 CENTRE ST., UNIT #2 CAMBRIDGE, MA 02138

KANJILAL, SANJAT 18 CENTRE ST., #G/1 CAMBRIDGE, MA 02139

116-76

116-76 LEAVITT, JASON & ELIZABETH LEAVITT 1248 CAL YOUNG ROAD EUGENE, OR 97401

116-76 GUPTA, PAVI 18 CENTRE.ST., #G/2 CAMBRIDGE, MA 02139 116-76 MCCARTHY, MICHAEL COURT 18 CENTRE ST. UNIT#406 CAMBRIDGE, MA 02139 116-76 KOKSAL, ERIN S. 18 CENTRE STREET, UNIT #405 CAMBRIDGE, MA 02139

116-76 WENDER, PETER 10 DANA ST. UNIT#10 CAMBRIDGE, MA 02139

116-76 SPOONER, JERROD D. 18 CENTRE ST., #403 CAMBRIDGE, MA 02139 116-76
VITIELLO, PHILIP A. & JANET D. VITIELLO
TRUSTEE OF THE VITIELLO REALTY TR.
C/O GO MANAGEMENT CO.
2534 MASS AVE., SUITE#1
CAMBRIDGE, MA 02140

116-76 MEYER, MARILEE B. 10 DANA ST #404 CAMBRIDGE, MA 02138 116-76 JAHANMIR, FARID 18 CENTRE ST. UNIT#306 CAMBRIDGE, MA 02139 116-76 KHALVATI, LILA& JEFFREY K. BRUSSEL 18 CENTRE ST., #305 CAMBRIDGE, MA 02139

116-76
BENDOR, GIORA A. & MIRRELL M. BENDOR
TRS THE BENDOR FAMILY TRUST
18 CENTRE ST., UNIT #304
CAMBRIDGE, MA 02139

116-76 COLLI, DANIEL 504 EAST BROADWAY SOUTH BOSTON, MA 02127 116-76
KENNEDY, ROBERT COLIN & JENNIFER KENNEDY
C/O GOODCHILD, BRUCE
18 CENTRE STREET, UNIT #302
CAMBRIDGE, MA 02139

116-76
MARCOVITZ, DAVID E. & SABRINA J. POON
18 CENTRE ST. # 301
CAMBRIDGE, MA 02139

116-76 LAI, NAN-MING 18 CENTRE STREET, UNIT #206 CAMBRIDGE, MA 02139 116-76
PATEJ, ANNA & BARBARA PATEJ &
EDWARD PATEJ
18 CENTRE ST., #205
CAMBRIDGE, MA 02139

116-76
BLUESTONE, HUGH L.
18 CENTRE STREET, UNIT #204
CAMBRIDGE, MA 02139

116-76 BIBO, ERIN WARD & DAVID R, BIBO., JR 203 13TH ST NE WASHINGTON, DC 20002 116-76 BRAMHAVAR, DEEPAK & PURNIMA D. BRAMHAVAR 18 CENTRE ST., UNIT #202 CAMBRIDGE, MA 02138

116-76 SURESH, MEERA S. TR. OF MEERA S. SURESH ESTATE TRUST 18 CENTRE ST. UNIT#201 CAMBRIDGE, MA 02139 116-76 KIRSCH, GEOFFREY R. 18 CENTRE ST., UNIT #106 CAMBRIDGE, MA 02139 116-76 FU, YUE & FENG HAN 17 NORTHLAND RD WINDHAM, NH 03087

116-76 VOROBIEVA-SEGAL, KATERINA & MARIA CHKHEIDZE-BRETT 16 FARM PLACE LONDON, -- W8 7S

ANTZOULIS, PEGGY J. 18 CENTRE ST., UNIT #103 CAMBRIDGE, MA 02139 DEFAY, THOMAS & MARISA DEFAY 18 CENTRE ST., #102 CAMBRIDGE, MA 02139

116-76 FOOK SING ANGELS, LLC 205 MOUNT AUBURN ST #3C CAMBRIDGE, MA 02139 116-76 CHEN, WINNIE HSIN-WEN & ALLAN J. HSIAO 18 CENTRE ST., #G/5 CAMBRIDGE, MA 02139

116-76 LUBIN, VICTORIA 18 CENTRE ST., #G/4 CAMBRIDGE, MA 02139

PRINCE LOBEL

December 11, 2018

City of Cambridge Board of Zoning Appeals 831 Massachusetts Avenue Cambridge, MA 02139

Re:

Eligible Facilities Request pursuant to Section 6409 of the

Spectrum Act and an Application for Special Permit, in the

Alternative

Property Address:

955 Massachusetts Ave, Cambridge, MA 02139

Assessor's Map 116, Lot 117 (the "Property")

Applicant:

T-Mobile Northeast LLC (the "Applicant")

Dear Honorable Members of the Board of Zoning Appeals:

This firm represents the Applicant in connection with an application for a special permit from the City of Cambridge Board of Zoning Appeals, to modify an existing wireless communications facility on the Property.

Enclosed, in connection with this application, please find three (3) application packages along with an application filing fee in the amount of \$500.00 made payable to the City of Cambridge.

Please contact me with any questions or if you need additional information. Thank you for your attention to this matter.

Sincerely,

Adam F. Braillard Direct: 617-456-8153

Email: abraillard@princelobel.com

Prince Lobel Tye LLP
One International Place

Boston, MA 02110

Suite 3700

TEL: 617 456 8000

FAX: 617 456 8100