STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE:	:	
	:	
A PETITION OF T-MOBILE NORTHEAST,	:	SUB-PETITION NO. 1133
LLC FOR A DECLARATORY RULING FOR	:	46 BRENDAN STREET
APPROVAL OF AN ELIGIBLE FACILITY	:	STAFFORD, CONNECTICUT
REQUEST FOR MODIFICATIONS TO AN	:	
EXISTING TELECOMMUNICATIONS TOWER	:	
AT 46 BRENDAN STREET, STAFFORD,	:	
CONNECTICUT	:	DECEMBER 14, 2015

I. Introduction

Pursuant to Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. §1455(a) ("Section 6409(a)") and the October 21, 2014 Report and Order (FCC-14-533) issued by the Federal Communications Commission ("FCC") (the "FCC Order"), T-Mobile Northeast LLC ("T-Mobile") hereby petitions the Connecticut Siting Council ("Council") for a declaratory ruling that the proposed modifications to the existing Crown Castle ("Crown") tower at 46 Brendan Street Stafford (aka Stafford Springs) Connecticut ("Property") constitutes an Eligible Facilities Request ("EFR") under the FCC Order.

II. Background

The Crown tower is a 115 foot monopole ("Facility") located on the northerly portion of a 14.5 acre parcel. An Aerial Map is attached hereto as Exhibit A. The Crown tower is currently shared by T-Mobile, AT&T, Verizon, Sprint, and Nextel. Equipment associated with the existing antennas is located within a fenced compound near the base of the tower.

III. Proposed Facility Modifications

T-Mobile proposes to remove an antenna mount at 122 feet and install a fourteen (14) foot monopole extension that will extend to a height of 129 feet. It will remove and replace an existing antenna mount with new T-arm mounts at a centerline of 123 feet, install three (3) new antennas and install three (3) new bias tees on the proposed mounts, relocate three (3) existing antennas and relocate three (3) existing tower mounted amplifiers ("TMAs") to the proposed mounts, all at a centerline of 123 feet AGL. Six (6) new lines of coax cable will be routed along the outside of the monopole. T-Mobile will also install one (1) new battery backup unit (BBU) cabinet in the equipment compound. (Collectively, these modifications are referred to as "Facility Modifications"). Plans depicting the Facility Modifications are attached hereto as Exhibit B. Equipment specifications for T-Mobile's new antennas and bias tees are attached hereto as Exhibit C. A Structural Analysis Report dated October 23, 2015 confirming the Facility's integrity at 129 feet is attached hereto as Exhibit D. A Monopole Reinforcement and Retrofit Project Design Plan dated May 5, 2015 and stamped August 4, 2015 is attached hereto as Exhibit E.

IV. Eligible Facilities Request

A. The Proposed Modifications Will Not Cause a Substantial Change to the Physical Dimensions of the Existing Tower or Base Station

Section 6409(a) provides, in relevant part, that "a State or local government 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." In accordance with the FCC Order, the proposed

modification does not substantially change the physical dimensions of the tower or base station if the following criteria are satisfied:

1. *The proposed modified facility will not increase the height of the tower by more than (ten) percent or by the height of one additional array with separation from the nearest existing antenna not to exceed twenty (20) feet, whichever is greater.*

   The existing Crown tower is a 115 foot monopole. T-Mobile is located on a mount at a height of 122 feet AGL on the tower. T-Mobile proposes to remove the existing mount and extend the 115 foot tower by 14 feet.

2. *The proposed facility will not protrude from the edge of the structure more than six (6) feet.* The equipment will protrude approximately 4' 10" from the tower structure.

3. *The proposed facility does not involve the installation of more than the standard number of new equipment cabinets for the technology involved, but not to exceed four cabinets.*

   T-Mobile proposes to locate one new BBU cabinet within the existing equipment compound.

4. *The proposed facility does not entail any excavation or deployment outside the current site of the base station.*

   The BBU cabinet will be located within the existing compound area – no excavation or deployment outside the current site is planned.

5. *The proposed facility does not defeat the existing concealment elements of the base station.*

   The existing antennas on the Facility are not concealed and T-Mobile does not propose to conceal its new antennas.

6. *The proposed facility complies with the conditions associated with the prior approvals of construction or modification of the base station.*

   T-Mobile is not aware of any restriction or condition placed on the Facility that would limit or prohibit the proposed Facility Modifications.

B. FCC Compliance

The Facility Modifications proposed by T-Mobile will not increase the total radio frequency (RF) power density, measured at the base of the tower, to a level at or above the applicable standard. According to a Radio Frequency Emissions Analysis Report prepared by EBI Consulting dated October 21, 2015, T-Mobile's operations would add 1.62% of the FCC Standard. Therefore, the calculated "worst case" power density for the planned combined operation at the site including all of the proposed antennas would be 15.83% of the FCC

Standard as calculated for a mixed frequency site as evidenced by the engineering exhibit attached hereto as Exhibit F.

C. Notice

On December 11, 2015 a copy of this Sub-Petition was sent to the Stafford's First Selectman Anthony Frassinelli. A copy of that letter is attached hereto as Exhibit G.

A copy of the Sub-Petition was sent to the property owner, Tiziani, LLC on this date. A copy of that letter is attached hereto as Exhibit H.

A copy of this Sub-Petition was also sent to each owner of land that abuts the Property on this date. A list of the abutting property owners and a sample notice letter are attached hereto as Exhibit I.

V. Conclusion

T-Mobile respectfully submits, that based upon the information provided above and the materials attached, the proposed Facility Modifications constitutes an "eligible facilities request" under Section 6409(a) and the FCC Order.

Respectfully Submitted,

T-MOBILE NORTHEAST LLC

By: _____

Julie D. Kohler, Esq.
Cohen and Wolf, P.C.
1115 Broad Street
Bridgeport, CT 06604
Tel. (203) 368-0211
Fax (203) 394-9901
jkohler@cohenandwolf.com

EXHIBIT A

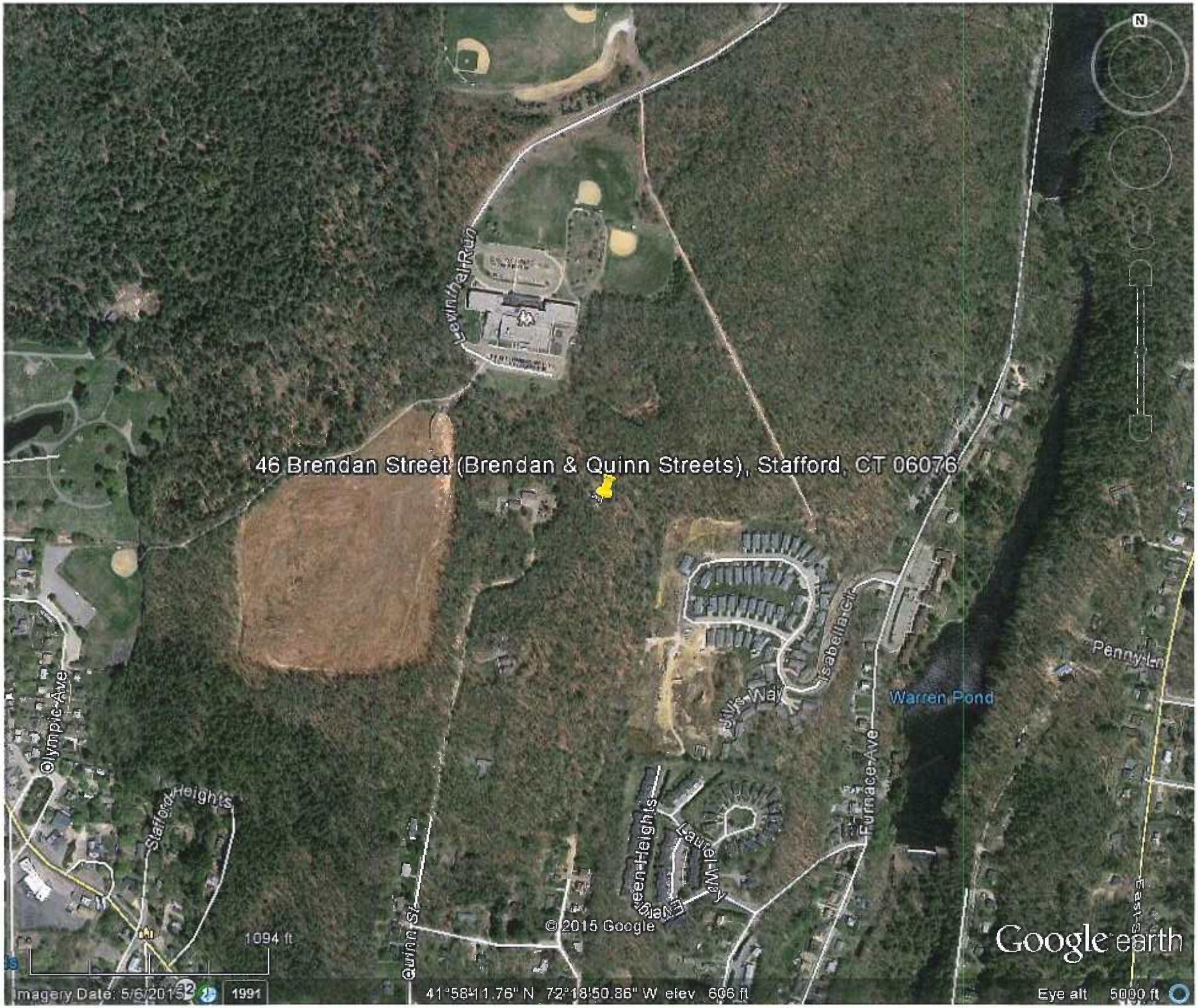
46 Brendan Street (Brendan & Quinn Streets), Stafford, CT 06076
Levin Ter
Olympic Ave
Stafford Heights
Quinn St
Queen Heights
Laurel Way
Furnace Ave
Isabella Ct
Jays Way
Warren Pond
Penny Ln
East St
1094 ft
© 2015 Google
Google earth
Imagery Date: 5/6/2015
1991
41°58'41.76" N 72°18'50.86" W elev 606 ft
Eye alt 5000 ft

EXHIBIT B

T-MOBILE NORTHEAST LLC

T-MOBILE SITE #: CT11528C
CROWN CASTLE BU #: 806365
SITE NAME: HRT 303 943203
46 BRENDAN STREET
STAFFORD, CT 06076
TOLLAND COUNTY

VICINITY MAP

FROM BLOOMFIELD, CT:

HEAD NORTHEAST ON GRIFFIN RD S TOWARD W NEWBERRY RD. TURN RIGHT ONTO DAY HILL RD. USE THE RIGHT LANE TO MERGE ONTO I-91 S VIA THE RAMP TO HARTFORD. MERGE ONTO I-91 S. TAKE EXIT 35A FOR I-291 TOWARD MANCHESTER. CONTINUE ONTO I-291 E. USE THE LEFT LANE TO MERGE ONTO I-84 E TOWARD BOSTON. TAKE EXIT 70 FOR CONNECTICUT 32 TOWARD STAFFORD SPRINGS. TURN LEFT ONTO CT-32 N/RIVER RD. AT THE TRAFFIC CIRCLE, TAKE THE 1ST EXIT ONTO MAIN ST. CONTINUE STRAIGHT ONTO FURNACE AVE. TURN LEFT ONTO HIGH ST. TURN RIGHT ONTO PROSPECT ST. TURN RIGHT ONTO BRENDAN ST. SITE WILL BE ON THE LEFT.

CONSULTANT TEAM

ENGINEER
DEWBERRY ENGINEERS INC.
600 PARSIPPANY ROAD
SUITE 301
PARSIPPANY, NJ 07054

CONTACT: BRYAN HUFF
PHONE #: (973) 576-0147

CONSTRUCTION
CROWN CASTLE
3 CORPORATE PARK DRIVE, SUITE 101
CLIFTON PARK, NY 12065

CONTACT: PATRICIA PELON
PHONE #: (518) 373-3507

PROJECT SUMMARY

SITE NAME:
HRT 303 943203

SITE NUMBER:
CT11528C

PROPERTY OWNER:
TIZIANI LLC
C/O TIZIANI, GLENN & PETER
1014 BUCKLEY HWY
UNION, CT 06076

TOWER OWNER:
CROWN CASTLE
3 CORPORATE PARK DRIVE, SUITE 101
CLIFTON PARK, NY 12065

APPLICANT/DEVELOPER:
T-MOBILE NORTHEAST LLC
35 GRIFFIN RD SOUTH
BLOOMFIELD, CT 06002

COORDINATES:
LATITUDE: 41°-57'-51.2" N (NAD83)
LONGITUDE: 72°-18'-17.8" W (NAD83)
(PER CROWN CASTLE)

CONFIGURATION
704G

PROJECT DIRECTORY

SITE ADDRESS:
46 BRENDAN STREET
STAFFORD, CT 06076
TOLLAND COUNTY

PARCEL ID:
49/004

SCOPE OF WORK

- INSTALL NEW MONOPOLE EXTENSION.
- REMOVE AND REPLACE EXISTING ANTENNA MOUNT WITH A NEW ANTENNA MOUNT.
- INSTALL (3) NEW ANTENNAS.
- INSTALL (3) NEW BIAS TEES.
- INSTALL (6) NEW LINES OF COAX.
- INSTALL (1) NEW BBU CABINET AT GRADE.

THIS DOCUMENT WAS DEVELOPED TO REFLECT A SPECIFIC SITE AND ITS SITE CONDITIONS AND IS NOT TO BE USED FOR ANOTHER SITE OR WHEN OTHER CONDITIONS PERTAIN. REUSE OF THIS DOCUMENT IS AT THE SOLE RISK OF THE USER.

A.D.A. COMPLIANCE:
FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION.

SHEET INDEX

SHT. NO.	DESCRIPTION
T-1	TITLE SHEET
G-1	GENERAL NOTES
C-1	PERIMETER PLAN & ABUTTERS LIST
C-2	COMPOUND PLAN & EQUIPMENT PLANS
C-3	ANTENNA LAYOUTS & ELEVATIONS

T-Mobile

T-MOBILE NORTHEAST LLC
35 GRIFFIN RD SOUTH
BLOOMFIELD, CT 06002

CROWN CASTLE

CROWN CASTLE
3 CORPORATE PARK DRIVE, SUITE 101
CLIFTON PARK, NY 12065

CT11528C
HRT 303 943203

CSC PLANS

1	12/04/15	ISSUED FOR FILING
0	11/25/15	ISSUED FOR FILING

Dewberry
Dewberry Engineers Inc.
600 PARSIPPANY ROAD
SUITE 301
PARSIPPANY, NJ 07054
PHONE: 973.739.9400
FAX: 973.739.9710

JIANG YU, P.E.
CONNECTICUT LICENSE NO. 0023222

DRAWN BY:	JC
REVIEWED BY:	BSH
CHECKED BY:	GHN
PROJECT NUMBER:	50066258
JOB NUMBER:	50071479

SITE ADDRESS:

46 BRENDAN STREET
STAFFORD, CT 06076
TOLLAND COUNTY

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1

PERIMETER PLAN (1)
SCALE: 1"=200' FOR 11"x17"
1"=100' FOR 22"x34"

0' 100' 200'

NOTE:

1. PERIMETER PLAN & PARCEL INFORMATION WAS COMPILED FROM INFORMATION OBTAINED FROM CONNECTICUT FREE PUBLIC RECORDS DIRECTORY, TOWN OF STAFFORD PROPERTY SEARCH AND GIS MAPS ON NOVEMBER 24, 2015.

ABUTTERS LIST

PARCEL ID	SITE ADDRESS	OWNER NAME	OWNER ADDRESS
49/002	54 QUINN ST, STAFFORD, CT 06076	MAYNARD, MARGARET A. D.	PO BOX 221/54 QUINN ST, STAFFORD SPRINGS, CT 06076
49/003	38 QUINN ST, STAFFORD, CT 06076	DEARY, LISA D. & RICHARD P.	38 QUINN ST, STAFFORD SPRINGS, CT 06076
49/003.01	42 QUINN ST, STAFFORD, CT 06076	GIBBONS, PAULA D.	42 QUINN ST, STAFFORD SPRINGS, CT 06076
49/003.02	40 QUINN ST, STAFFORD, CT 06076	DELLUOMO ROLAND E. & MARY E.	11130 DUMBARTON DR, DUNKIRK, MD 20754
49/005	46 EDGEWOOD ST, STAFFORD, CT 06076	LAUREL HILL OF STAFFORD CONDOMINIUM ASSOCIATION INC. C/O WESTFORD REAL ESTATE MANAGEMENT LLC	348 HARTFORD TURNPIKE, SUITE 200, VERNON, CT 06066
49/006	90 FURNACE AVE, STAFFORD, CT 06076	GLENVILLE DEVELOPMENT CORPORATION	31 WALES RD, STAFFORD SPRINGS, CT 06076
49/007	21 LEVINTHAL RUN, STAFFORD, CT 06076	TOWN OF STAFFORD	21 LEVINTHAL RUN, STAFFORD SPRINGS, CT 06076
52/175&174	42 BRENDAN ST, STAFFORD, CT 06076	JOHNSTON, RICHARD A. & CAROL A.	42 BRENDAN ST, STAFFORD SPRINGS, CT 06076
52/176	42 BRENDAN ST, STAFFORD, CT 06076	JOHNSTON, RICHARD A. & CAROL A.	42 BRENDAN ST, STAFFORD SPRINGS, CT 06076
52/177	25 QUINN ST, STAFFORD, CT 06076	MODR, ALOIS G. & SHIRLEY U.	247 BASIN POINT, HARPSWELL, ME 04079
52/312	41 BRENDAN ST, STAFFORD, CT 06076	KASCHULUK, ANN & JAMES TRIPOLI	41 BRENDAN ST, STAFFORD SPRINGS, CT 06076

NOTES:

1. ABUTTERS LIST CONSISTS OF PARCELS PHYSICALLY TOUCHING THE SUBJECT PROPERTY OR ABUT ACROSS THE STREET FROM THE SUBJECT PROPERTY.
2. ABUTTERS INFORMATION WAS COMPILED FROM INFORMATION OBTAINED FROM CONNECTICUT FREE PUBLIC RECORDS DIRECTORY, TOWN OF STAFFORD PROPERTY SEARCH AND GIS MAPS ON NOVEMBER 24, 2015.

T-MOBILE NORTHEAST LLC
35 GRIFFIN RD SOUTH
BLOOMFIELD, CT 06002

CROWN CASTLE

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CLIFTON PARK, NY 12065

CT11528C
HRT 303 943203

CSC PLANS

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Dewberry®
Dewberry Engineers Inc.
600 PARSIPPANY ROAD
SUITE 301
PARSIPPANY, NJ 07054
PHONE: 973.739.9400
FAX: 973.739.9710

STATE OF CONNECTICUT JIANG YU 0023222 PROFESSIONAL ENGINEER

JIANG YU, P.E.
CONNECTICUT LICENSE NO. 0023222

DRAWN BY:	JC
REVIEWED BY:	BSH
CHECKED BY:	GHN
PROJECT NUMBER:	50066258
JOB NUMBER:	50071479
SITE ADDRESS:	

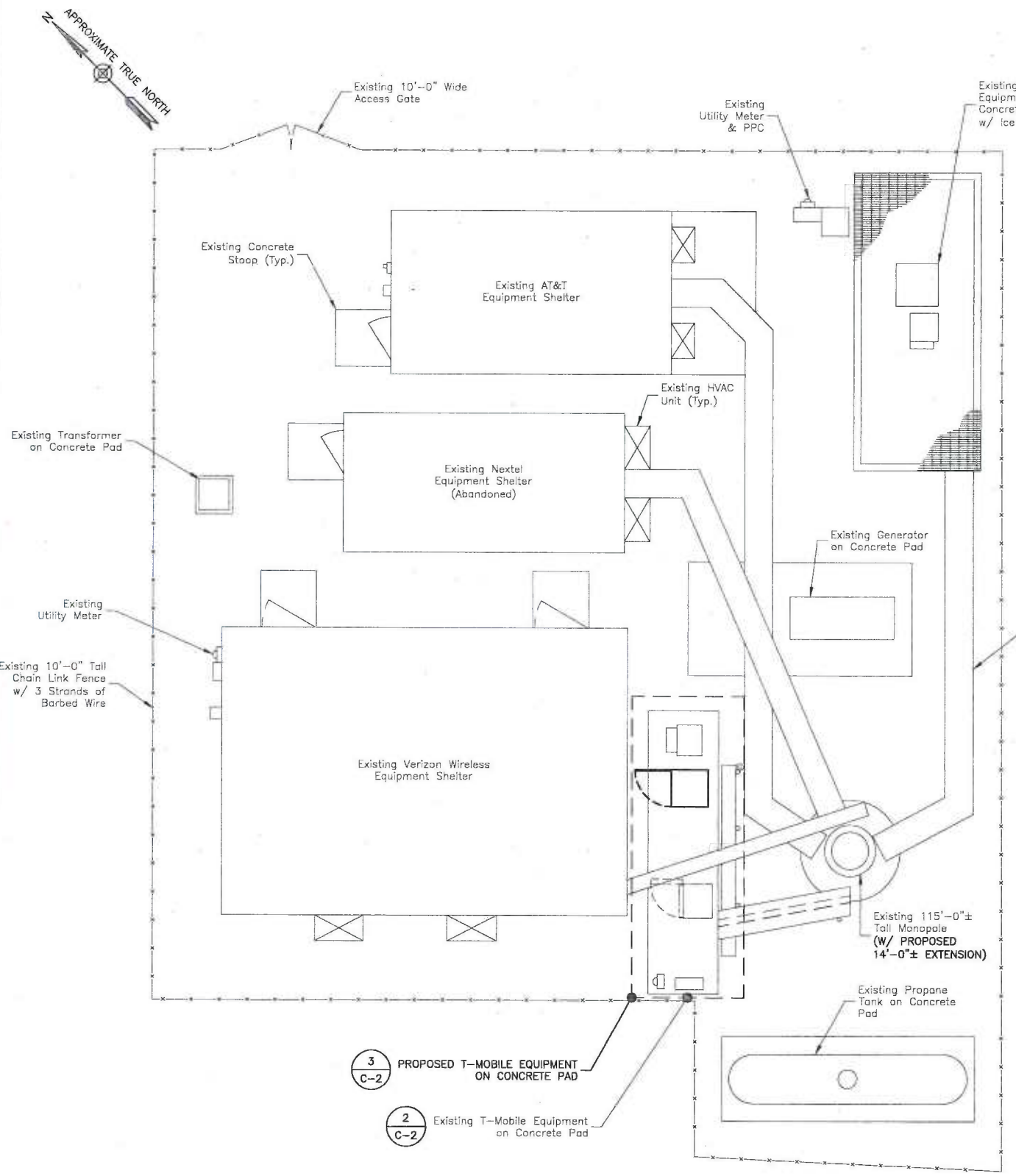
46 BRENDAN STREET
STAFFORD, CT 06076
TOLLAND COUNTY

SHEET TITLE

PERIMETER PLAN & ABUTTERS LIST

SHEET NUMBER

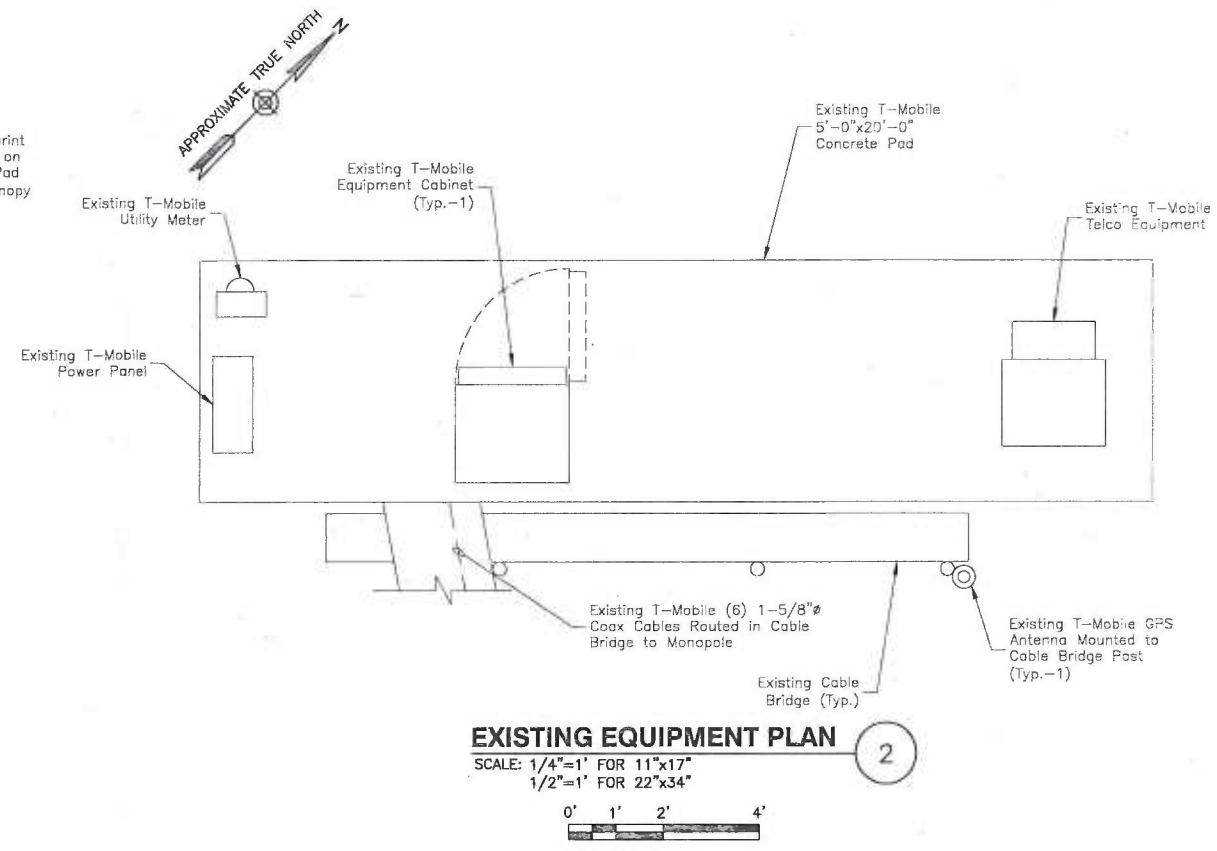
C-1



COMPOUND PLAN 1

SCALE: 1"=10' FOR 11"x17"
1"=5' FOR 22"x34"

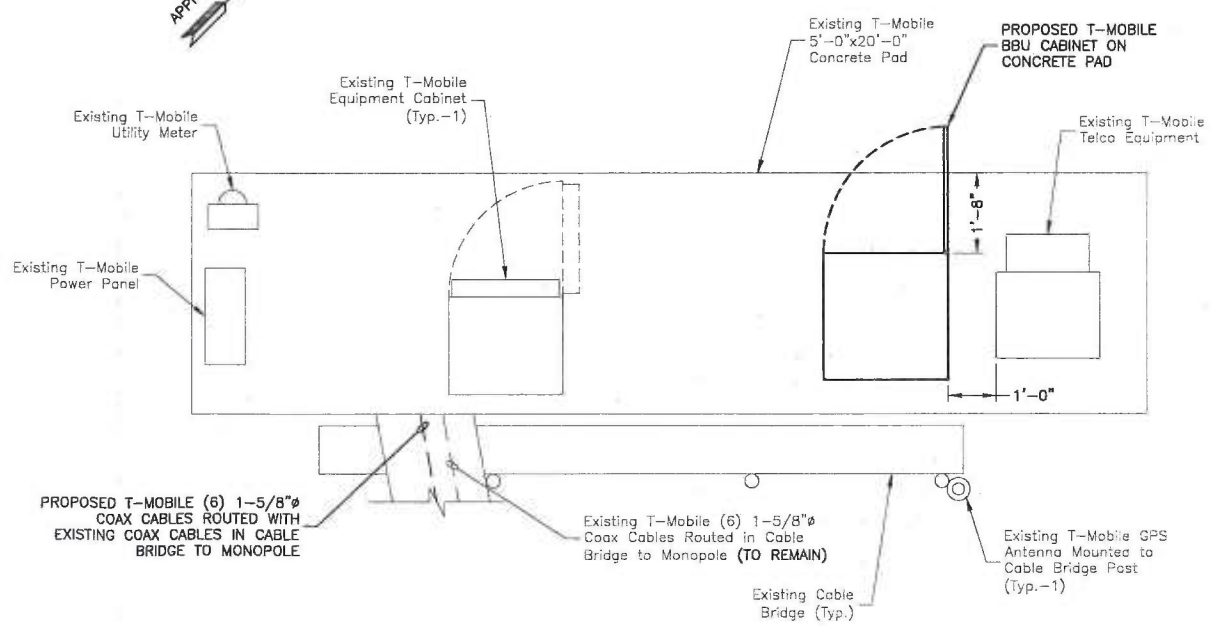
0' 5' 10'



EXISTING EQUIPMENT PLAN 2

SCALE: 1/4"=1' FOR 11"x17"
1/2"=1' FOR 22"x34"

0' 1' 2' 4'



PROPOSED EQUIPMENT PLAN 3

SCALE: 1/4"=1' FOR 11"x17"
1/2"=1' FOR 22"x34"

0' 1' 2' 4'

NOTES:

1. NORTH ARROW SHOWN AS APPROXIMATE.
2. NOT ALL INFORMATION IS SHOWN FOR CLARITY.
3. PROPOSED MONOPOLE EXTENSION SHALL BE INSTALLED IN ACCORDANCE WITH THE MONOPOLE REINFORCEMENT AND RETROFIT PROJECT BY PAUL J. FORD AND COMPANY DATED MAY 4, 2015.
4. ALL PROPOSED EQUIPMENT, INCLUDING ANTENNAS, BIAS TEES, COAX, ETC., SHALL BE MOUNTED IN ACCORDANCE WITH THE TOWER STRUCTURAL ANALYSIS BY PAUL J. FORD AND COMPANY DATED OCTOBER 23, 2015.

T-Mobile

T-MOBILE NORTHEAST LLC
35 GRIFFIN RD SOUTH
BLOOMFIELD, CT 06002

CROWN CASTLE

CROWN CASTLE
3 CORPORATE PARK DRIVE, SUITE 101
CLIFTON PARK, NY 12065

CT11528C
HRT 303 943203

CSC PLANS

1	12/04/15	ISSUED FOR FILING
0	11/25/15	ISSUED FOR FILING

Dewberry®
Dewberry Engineers Inc.
600 PARSIPPANY ROAD
SUITE 301
PARSIPPANY, NJ 07054
PHONE: 973.739.9400
FAX: 973.739.9710

JIANG YU, P.E.
CONNECTICUT LICENSE NO. 0023222

DRAWN BY:	JC
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SITE ADDRESS:	

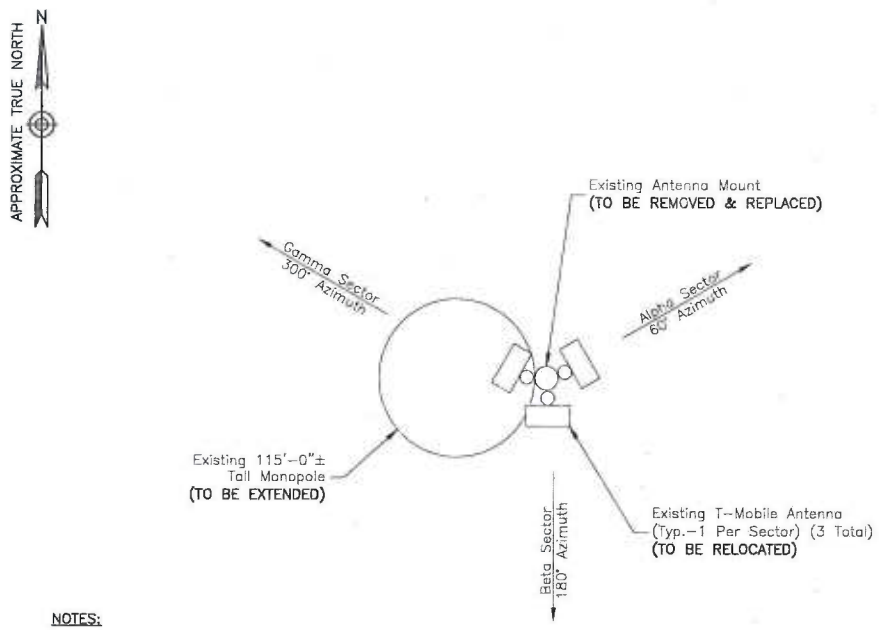
46 BRENDAN STREET
STAFFORD, CT 06076
TOLLAND COUNTY

SHEET TITLE

COMPOUND PLAN & EQUIPMENT PLANS

SHEET NUMBER

C-2

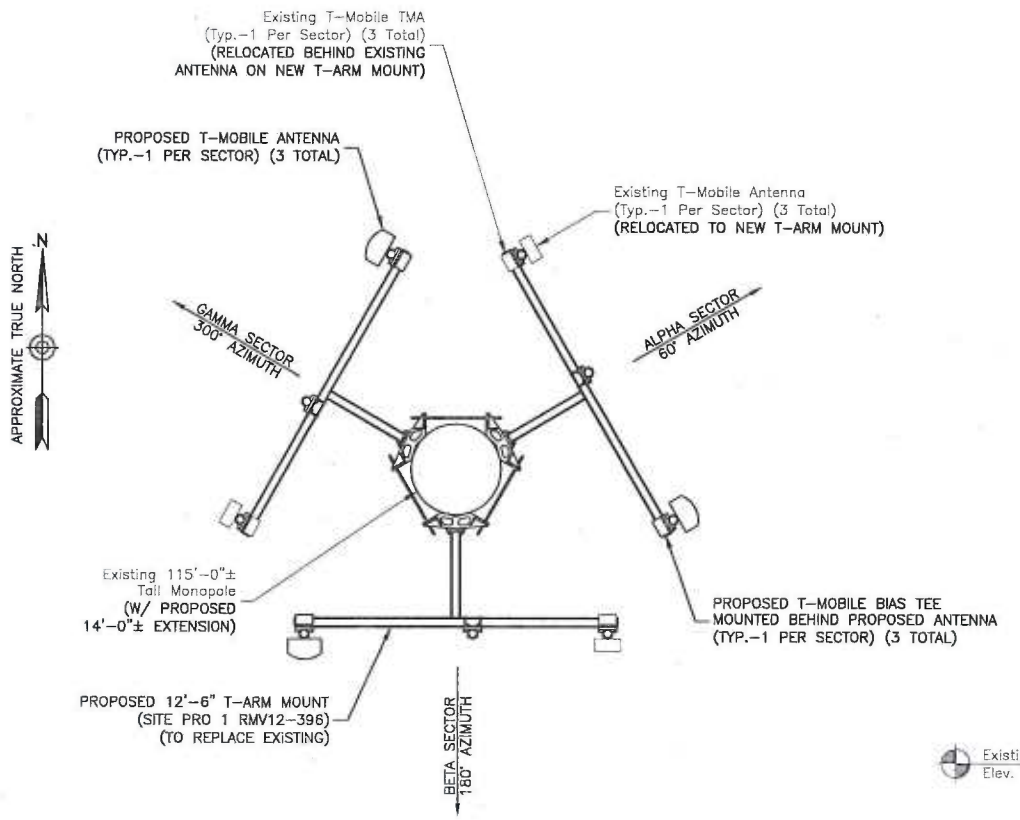


NOTES:

1. EXISTING TMA'S NOT SHOWN FOR CLARITY.
2. ALL EXISTING TMA'S ARE TO BE RELOCATED TO NEW ANTENNA MOUNT.

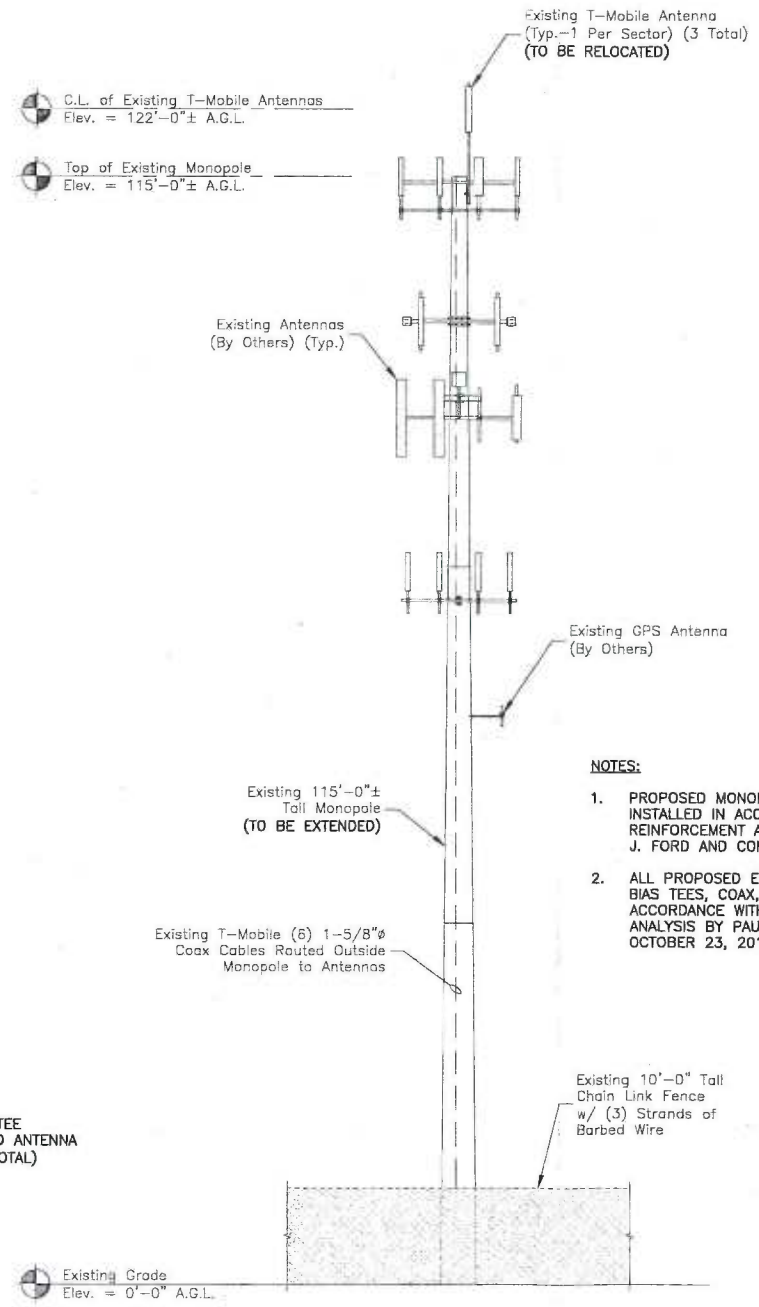
EXISTING ANTENNA LAYOUT (1)

SCALE: N.T.S.



PROPOSED ANTENNA LAYOUT (2)

SCALE: N.T.S.



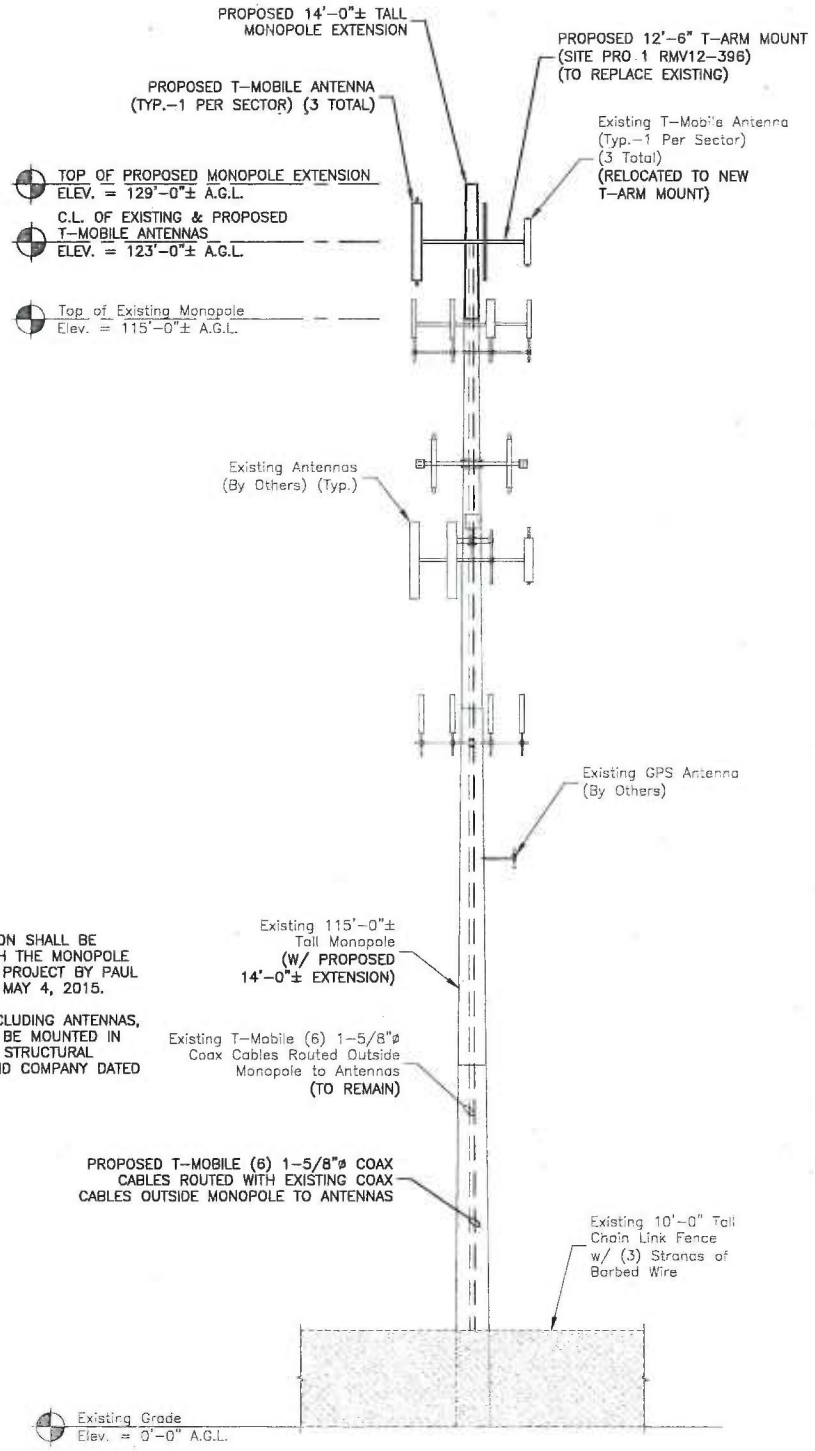
NOTES:

1. PROPOSED MONOPOLE EXTENSION SHALL BE INSTALLED IN ACCORDANCE WITH THE MONOPOLE REINFORCEMENT AND RETROFIT PROJECT BY PAUL J. FORD AND COMPANY DATED MAY 4, 2015.
2. ALL PROPOSED EQUIPMENT, INCLUDING ANTENNAS, BIAS TEES, COAX, ETC., SHALL BE MOUNTED IN ACCORDANCE WITH THE TOWER STRUCTURAL ANALYSIS BY PAUL J. FORD AND COMPANY DATED OCTOBER 23, 2015.

EXISTING ELEVATION (3)

SCALE: 1"=20' FOR 11"x17"
1"=10' FOR 22"x34"

0' 10' 20'



PROPOSED ELEVATION (4)

SCALE: 1"=20' FOR 11"x17"
1"=10' FOR 22"x34"

0' 10' 20'

T-Mobile

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35 GRIFFIN RD SOUTH
BLOOMFIELD, CT 06002

CROWN CASTLE

CROWN CASTLE
3 CORPORATE PARK DRIVE, SUITE 101
CLIFTON PARK, NY 12065

CT11528C
HRT 303 943203

CSC PLANS

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Dewberry

Dewberry Engineers Inc.
600 PARSIPPANY ROAD
SUITE 301
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PHONE: 973.739.9400
FAX: 973.739.9710

STATE OF CONNECTICUT
JIANG YU
PROFESSIONAL ENGINEER

JIANG YU, P.E.
CONNECTICUT LICENSE NO. 0023222

DRAWN BY:	JC
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46 BRENDAN STREET
STAFFORD, CT 06076
TOLLAND COUNTY

SHEET TITLE

ANTENNA LAYOUTS & ELEVATIONS

SHEET NUMBER

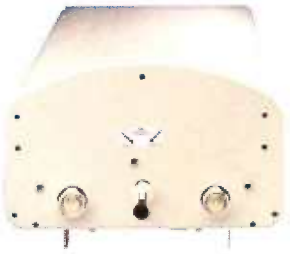
C-3

EXHIBIT C

Product Specifications

COMMSCOPE®

POWERED BY ANDREW.



LNX-6515DS-VTM

Andrew® Antenna, 698–896 MHz, 65° horizontal beamwidth, RET compatible

- Excellent choice to maximize both coverage and capacity in suburban and rural applications
- Fully compatible with Andrew remote electrical tilt system for greater OpEx savings
- Exceptional horizontal pattern roll-off and strong front-to-back ratio
- Extended bandwidth allows one antenna to serve multiple frequency allocations
- Great solution to maximize network coverage and capacity
- The RF connectors are designed for IP67 rating and the radome for IP56 rating

Electrical Specifications

Frequency Band, MHz	**698–806**	**806–896**
Gain, dBi	16.7	17.6
Beamwidth, Horizontal, degrees	65	65
Beamwidth, Horizontal Tolerance, degrees	±2	±2
Beamwidth, Vertical, degrees	9.6	8.6
Beam Tilt, degrees	0–8	0–8
USLS, typical, dB	17	17
Front-to-Back Ratio at 180°, dB	32	27
CPR at Boresight, dB	24	24
CPR at Sector, dB	10	10
Isolation, dB	30	30
VSWR | Return Loss, dB	1.4 | 15.6	1.4 | 15.6
PIM, 3rd Order, 2 x 20 W, dBc	-150	-150
Input Power per Port, maximum, watts	400	400
Polarization	±45°	±45°
Impedance	50 ohm	50 ohm

General Specifications

Antenna Brand	Andrew®
Antenna Type	DualPol®
Band	Single band
Brand	DualPol® | Teletilt®
Operating Frequency Band	698 – 896 MHz

Mechanical Specifications

Color	Light gray
Connector Interface	7-16 DIN Female
Connector Location	Bottom
Connector Quantity, total	2
Lightning Protection	dc Ground
Radiator Material	Aluminum
Radome Material	Fiberglass, UV resistant
Wind Loading, maximum	878.0 N @ 150 km/h 197.4 lbf @ 150 km/h
Wind Speed, maximum	241.0 km/h | 149.8 mph

Product Specifications

LNX-6515DS-VTM

Dimensions

Depth	181.0 mm | 7.1 in
Length	2449.0 mm | 96.4 in
Width	301.0 mm | 11.9 in
Net Weight	22.8 kg | 50.3 lb

Remote Electrical Tilt (RET) Information

Model with Factory Installed AISG 1.1 Actuator	LNX-6515DS-R2M
Model with Factory Installed AISG 2.0 Actuator	LNX-6515DS-A1M
RET System	Teletilt®

Regulatory Compliance/Certifications

Agency	Classification
RoHS 2011/65/EU	Compliant by Exemption
China RoHS SJ/T 11364-2006	Above Maximum Concentration Value (MCV)
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system

Included Products

DB380-3 — Pipe Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members. Used for wide panel antennas. Includes three clamp sets.

DB5083D — Downtilt Mounting Kit for 2.4"-4.5" (60-115 mm) OD round members. Consists of two DB5083 heavy-duty, galvanized steel downtilt mounting brackets. This kit is compatible with the DB380-3 pipe mount for panel antennas with three mounting points.

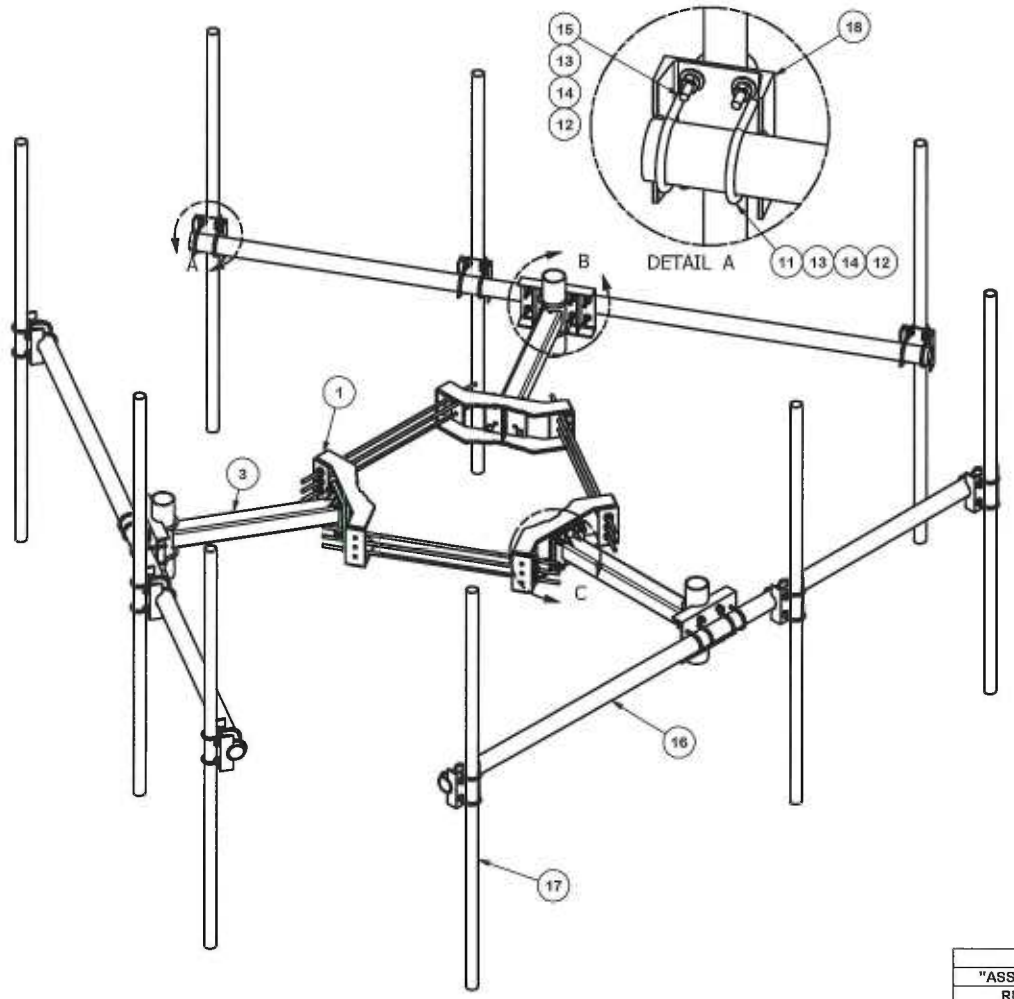
Smart Bias Tee Specs

Dimensions

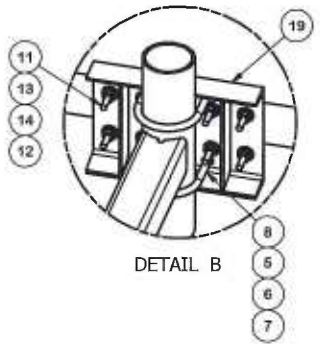
Width	94.0 mm	|	3.7 in
Depth	50.0 mm	|	2.0 in
Height	143.00 mm	|	5.63 in
Net Weight	0.8 kg	|	1.8 lb

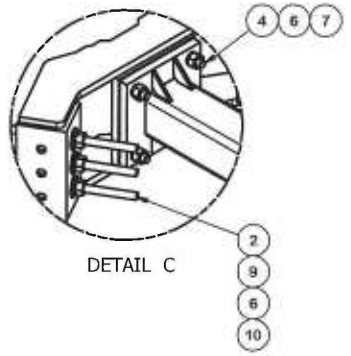
* This is not the exact Bias tee but the dimensions can be used fro scoping.

T··Mobile·



PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	3	X-LWRM	RING MOUNT WELDMENT		68.16	204.48
2	9	G58R-24	5/8" x 24" THREADED ROD (HDG.)		0.35	3.16
2	9	G58R-48	5/8" X 48" GALV THREADED ROD		4.18	37.63
3	3	X-SV197-36	SUPPORT ARM WELDMENT - 36"		67.29	201.88
4	12	A58234	5/8" x 2-3/4" HDG A325 HEX BOLT	2.75	0.36	4.27
5	12	A58FW	5/8" HDG A325 FLATWASHER		0.03	0.41
6	42	G58LW	5/8" HDG LOCKWASHER		0.03	1.10
7	24	A58NUT	5/8" HDG A325 HEX NUT		0.13	3.12
8	6	X-UB5458	5/8" X 4-5/8" X 7" X 3' U-BOLT (HDG.)		0.66	3.94
9	18	G58FW	5/8" HDG USS FLATWASHER		0.07	1.27
10	18	G58NUT	5/8" HDG HEAVY 2H HEX NUT		0.13	2.34
11	30	X-UB1306	1/2" X 3-5/8" X 6" X 3" U-BOLT (HDG.)		0.66	19.69
12	90	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	6.45
13	90	G12FW	1/2" HDG USS FLATWASHER		0.03	3.07
14	90	G12LW	1/2" HDG LOCKWASHER		0.01	1.25
15	18	X-UB1212	1/2" X 2-1/2" X 4-1/2" X 2" U-BOLT (HDG.)		0.63	11.25
16	3	P3150	3-1/2" X 150" SCH 40 GALVANIZED PIPE	150.000 in	94.92	284.76
17	9	A	B	C	D	
18	9	X-SP219	SMALL SUPPORT CROSS PLATE	8.250 in	8.61	77.50
19	3	X-SP216	LARGE SUPPORT CROSS PLATE		20.83	62.48





ANTENNA MOUNTING PIPES					
"ASSEMBLY NO."	PART NO. "A"	PART DESCRIPTION "B"	LENGTH "C"	UNIT WT. "D"	TOTAL WT.
RMV12-363	P263	2-3/8" O.D. SCH. 40 PIPE	63"	19.22	1,125.34
RMV12-372	P272	2-3/8" O.D. SCH. 40 PIPE	72"	23.07	1,159.99
RMV12-384	P284	2-3/8" O.D. SCH. 40 PIPE	84"	26.91	1,194.55
RMV12-396	P296	2-3/8" O.D. SCH. 40 PIPE	96"	30.76	1,229.20

REVISION HISTORY				
RE	DESCRIPTION OF REVISIONS	CPD	BY	DATE
A	REMOVED FLATWASHERS FROM ARM TO CLAMPRING CONNECTION	4516	CEK	11/4/2011

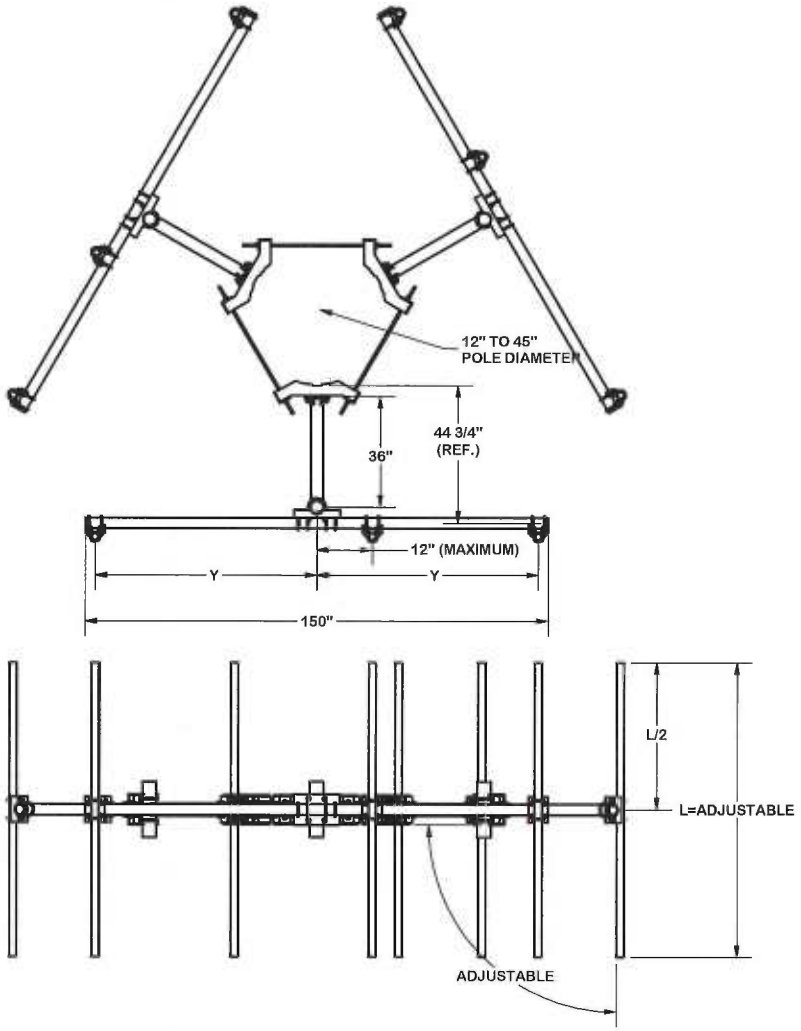
TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
SAWED, SHEARED AND GAS CUT EDGES *(± 0.030")*
DRILLED AND GAS CUT HOLES *(± 0.030")* - NO CONING OF HOLES
LASER CUT EDGES AND HOLES *(± 0.010")* - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

DESCRIPTION
MONOPOLE TRIPLE T-ARM
FOR 9 ANTENNAS

SITE PRO 1
A valmont COMPANY
Engineering Support Team: 1-888-753-7446
Locations: New York, NY; Atlanta, GA; Los Angeles, CA; Plymouth, IN; Salem, OR; Dallas, TX

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
4516	CEK 4/15/2011		SEE "ASSEMBLY NO."
CLASS / SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81 / 01	CUSTOMER	BMC 4/28/2011	RMV12-3XX



TOLERANCE NOTES

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SAWED, SHEARED AND GAS CUT EDGES *(± 0.030")*
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ALL OTHER ASSEMBLY *(± 0.060")*

REVISION HISTORY				
RE	DESCRIPTION OF REVISIONS	CPD	BY	DATE
A	REMOVED FLATWASHERS FROM ARM TO CLAMPRING CONNECTION	4516	CEK	11/4/2011

DESCRIPTION: MONOPOLE TRIPLE T-ARM FOR 9 ANTENNAS

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
4516	CEK 4/15/2011		SEE "ASSEMBLY NO."

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	01	CUSTOMER	BMC 4/28/2011	RMV12-3XX

SITE PRO 1 — A valmont COMPANY
Engineering Support Team: 1-888-753-7446
Locations: New York, NY; Atlanta, GA; Los Angeles, CA; Plymouth, IN; Salem, OR; Dallas, TX

EXHIBIT D

PJF PAUL J. FORD & COMPANY

Date: **October 23, 2015**

Sean Dempsey
Crown Castle
3530 Toringdon Way, Suite 300
Charlotte, NC 28277

Paul J. Ford and Company
250 E. Broad Street, Suite 600
Columbus, OH 43215
614.221.6679

Subject: **Structural Analysis Report**

Carrier Designation:	***T-Mobile* Co-Locate**	
	Carrier Site Number:	CT11528C
	Carrier Site Name:	CT528/Crown Castle MP
Crown Castle Designation:	**Crown Castle BU Number:**	806365
	Crown Castle Site Name:	HRT 303 943203
	Crown Castle JDE Job Number:	323991
	Crown Castle Work Order Number:	1139346
	Crown Castle Application Number:	282533 Rev. 9
Engineering Firm Designation:	**Paul J. Ford and Company Project Number:**	37515-0530.006.7805
Site Data:	**BRENDON & QUINN STREETS, STAFFORD, Tolland County, CT** **Latitude *41° 57' 51.2"*, Longitude *-72° 18' 17.8"*** **129 Foot - Monopole Tower**	

Dear Sean Dempsey,

Paul J. Ford and Company is pleased to submit this **"Structural Analysis Report"** to determine the structural integrity of the above mentioned tower. This analysis has been performed in accordance with the Crown Castle Structural 'Statement of Work' and the terms of Crown Castle Purchase Order Number 838002, in accordance with application 282533, revision 9.

The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

LC4.7: Existing + Reserved + Proposed Equipment **Sufficient Capacity**
Note: See Table I and Table II for the proposed and existing/reserved loading, respectively.

This analysis has been performed in accordance with the TIA/EIA-222-F standard and 2005 CT State Building Code with 2009 amendment based upon a wind speed of 85 mph fastest mile.

We at *Paul J. Ford and Company* appreciate the opportunity of providing our continuing professional services to you and Crown Castle. If you have any questions or need further assistance on this or any other projects please give us a call.

Respectfully submitted by:

Christopher Poelking, E.I.
Structural Designer

tnxTower Report - version 6.1.4.1

10/23/15

TABLE OF CONTENTS

1) INTRODUCTION

This tower is a 129-ft Monopole tower designed by VALMONT in January of 1995. The tower was originally designed for a wind speed of 90 mph per TIA/EIA-222-E.

2) ANALYSIS CRITERIA

This analysis has been performed in accordance with the TIA/EIA-222-F standard and 2005 CT State Building Code with 2009 amendment based upon a wind speed of 85 mph fastest mile.

Table 1 - Proposed Antenna and Cable Information

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
123.0	123.0	3	commscope	ATBT-BOTTOM-24V	6	1-5/8	-
		3	commscope	LNX-6515DS-VTM w/ Mount Pipe			
		3	ericsson	KRY 112 489/2			
		1	tower mounts	RMV12-3XX			

Table 2 - Existing and Reserved Antenna and Cable Information

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
123.0	123.0	3	ems wireless	RR90-17-02DP w/ Mount Pipe	6	1-5/8	1
115.0	115.0	6	remec	GSM PCS 1900 MASTHEAD AMPLIFIER	-	-	3
113.0	115.0	3	alcatel lucent	RRH2X60-AWS	2	1-5/8	2
		3	alcatel lucent	RRH2X60-PCS			
		6	andrew	HBXX-6517DS-VTM w/ Mount Pipe			
		6	andrew	LNX-8513DS-VTM w/ Mount Pipe			
		2	rfs celwave	DB-B1-6C-12AB-0Z			
	113.0	1	tower mounts	Platform Mount [LP 602-1]	12	7/8	1
100.0	100.0	6	decibel	DB980H90E-M w/ Mount Pipe	6	1-5/8	1
		1	tower mounts	Platform Mount [LP 1201-1]			
92.0	94.0	3	ericsson	RRUS 11	-	-	1
		1	raycap	DC6-48-60-18-8F			
	92.0	1	tower mounts	Side Arm Mount [SO 102-3]			
90.0	90.0	6	communication components inc.	DTMABP7819VG12A	1* 2* 1* 12	3/8 3/4 1-5/8 1-1/4	1
		3	powerwave technologies	7770.00 w/ Mount Pipe			
		8	powerwave technologies	LGP13519			
		6	powerwave technologies	P65-17-XLH-RR w/ Mount Pipe			
		1	tower mounts	Platform Mount [LP 601-1]			
59.0	59.0	1	gps	GPS_A	1	1/2	1
		1	tower mounts	Side Arm Mount [SO 701-1]			

Notes:
1) Existing Equipment
2) Reserved Equipment
3) Equipment to Be Removed

Table 3 - Design Antenna and Cable Information

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
-	-	-	-	-	-	-

3) ANALYSIS PROCEDURE

Table 4 - Documents Provided

Document	Remarks	Reference	Source
4-GEOTECHNICAL REPORTS	Clarence Welti Assoc., Inc.	262167	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	Tower Engineering Professionals (Mapping)	2294383	CCISITES
4-TOWER MANUFACTURER DRAWINGS	Valmont Industries, Inc.	2046046	CCISITES
4-POST-MODIFICATION INSPECTION	FDH Velocitel, 15BORF1500, 6/2/2015	5734218	CCISITES
4-PROPOSED TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	PJF, 37515-0530.005.7700, 8/3/2015	5664687	CCISITES

3.1) Analysis Method

tnxTower (version 6.1.4.1), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A.

3.2) Assumptions

1) Tower and structures were built in accordance with the manufacturer's specifications.
2) The tower and structures have been maintained in accordance with the manufacturer's specification.
3) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.
4) Pier foundation vertical steel information was taken from Crown analysis, CCI# 3833112.
5) Monopole will be reinforced in conformance with the referenced proposed modification drawings.
6) Monopole was modified in conformance with the referenced modification drawings.

This analysis may be affected if any assumptions are not valid or have been made in error. Paul J. Ford and Company should be notified to determine the effect on the structural integrity of the tower.

4) ANALYSIS RESULTS

Table 5 - Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
L1	129 - 115.5	Pole	TP16x16x0.375	1	-1.79	515.29	14.1	Pass
L2	115.5 - 115	Pole	TP17.81x16x0.375	2	-1.79	515.29	14.1	Pass
L3	115 - 92.0833	Pole	TP23.0822x17.81x0.2188	3	-7.37	837.41	77.2	Pass
L4	92.0833 - 73.75	Pole	TP27.3x23.0822x0.399	4	-11.55	1275.48	87.9	Pass
L5	73.75 - 71.5	Pole	TP27.3778x25.5242x0.4884	5	-13.19	1622.05	83.3	Pass
L6	71.5 - 56.5	Pole	TP30.8233x27.3778x0.5177	6	-16.41	2128.96	83.3	Pass
L7	56.5 - 36.75	Pole	TP35.36x30.8233x0.4947	7	-19.67	2266.79	94.0	Pass
L8	36.75 - 22	Pole	TP38.1343x33.1647x0.5988	8	-26.20	3098.45	85.0	Pass
L9	22 - 20.5	Pole	TP38.4797x38.1343x0.5965	9	-26.64	3107.42	85.7	Pass
L10	20.5 - 19.0833	Pole	TP38.8059x38.4797x0.5943	10	-27.07	3123.63	86.2	Pass
L11	19.0833 - 18	Pole	TP39.0553x38.8059x0.517	11	-27.37	3047.94	88.7	Pass
L12	18 - 4	Pole	TP42.279x39.0553x0.6525	12	-32.08	3604.58	83.3	Pass
L13	4 - 3	Pole	TP42.5092x42.279x0.737	13	-32.47	4193.23	72.4	Pass
L14	3 - 0	Pole	TP43.2x42.5092x0.7883	14	-33.70	5001.80	62.0	Pass
							Summary	
						Pole (L7)	94.0	Pass
						Rating =	94.0	Pass

Table 6 - Tower Component Stresses vs. Capacity – LC4.7

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1, 2	Anchor Rods	0	83.1	Pass
1	Base Plate	0	49.0	Pass
1	Base Foundation Structural Steel	0	82.8	Pass
1	Base Foundation Soil Interaction	0	34.0	Pass

Structure Rating (max from all components) =	94%

Notes:
1) See additional documentation in "Appendix C – Additional Calculations" for calculations supporting the % capacity consumed.
2) Worst case scenario between existing and post installed anchors.

4.1) Recommendations

The monopole and its foundation will have sufficient capacity to carry the existing, reserved, and proposed loads once the proposed modifications are installed.

- Install the proposed modifications per the referenced modification drawings (document # 5664687).

EXHIBIT E

37515-0530.005.R1.DWG

MONOPOLE REINFORCEMENT AND RETROFIT PROJECT

BU NUMBER; SITE NAME

BU #806365; HRT 303 943203

APP: 282533 REV. 3; WO: 1047691

SITE ADDRESS

BRENDON & QUINN STREETS
STAFFORD, CONNECTICUT 06076
TOLLAND COUNTY

PROJECT NOTES

1. THESE DRAWINGS WERE PREPARED FROM INFORMATION AND DOCUMENTS PROVIDED BY CROWN CASTLE. THE INFORMATION PROVIDED HAS NOT BEEN FIELD VERIFIED BY THE ENGINEER OF RECORD (EOR) FOR ACCURACY AND THEREFORE DISCREPANCIES BETWEEN THESE DRAWINGS AND ACTUAL SITE CONDITIONS SHOULD BE ANTICIPATED. DETAILED FIELD INFORMATION REGARDING INTERFERENCES AND/OR EXISTING FIELD CONDITIONS MAY BE AVAILABLE ON CROWN CASTLE'S COISITES AND FROM CONTRACTOR'S PRE-MOD MAPPING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AND COORDINATE WITH THE AVAILABLE SOURCES OF INFORMATION ABOVE AND WITH THE PROJECT DRAWINGS BEFORE PROCEEDING WITH THE WORK. CONTRACTOR SHALL IMMEDIATELY REPORT ANY AND ALL DISCREPANCIES TO THE EOR AND CROWN CASTLE FIELD PERSONNEL BEFORE PROCEEDING WITH THE WORK.
2. ALL STRUCTURAL BOLTS SHALL BE INSTALLED AND TIGHTENED TO THE PRETENSIONED CONDITION ACCORDING TO THE REQUIRMENTS OF THE AISC 'SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS', DEC. 31, 2009.
3. ALL STRUCTURAL BOLTS SHALL BE FIELD INSPECTED ACCORDING TO THE REQUIREMENTS OF THE AISC 'SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS', DEC. 31, 2009.
4. DTI'S REQUIRED: ALL FORGBOLTS™ SHALL BE INSTALLED USING DIRECT TENSION INDICATORS (DTI'S) AND HARDENED WASHERS. ALL FORGBOLTS™ SHALL BE PRETENSIONED AND TIGHTENED UNTIL THE DTI WASHERS SHOW THAT THE PROPER BOLT TENSION HAS BEEN REACHED. SEE NOTES AND DETAILS ON SHEET S-2A FOR REQUIREMENTS ON THE USE OF DTI WASHERS WITH THE BOLTS.
5. ATTENTION ALL CONTRACTORS, ANYTIME YOU ACCESS A CROWN SITE FOR ANY REASON YOU ARE TO CALL THE CROWN NOC UPON ARRIVAL AND DEPARTURE, DAILY AT (800) 788-7011.

PROJECT CONTACT:

MONOPOLE OWNER:
CROWN CASTLE
MOD PM: JOHN MCGEE AT JOHN.MCGEE@CROWNCASTLE.COM
PH: (704) 877-8397

ENGINEER OF RECORD:
PJFMOD@PJFWEB.COM

DESIGN STANDARD

THIS ANALYSIS HAS BEEN PERFORMED IN ACCORDANCE WITH THE TIA/EIA-222-F STANDARD AND 2005 CT STATE BUILDING CODE WITH 2009 AMENDMENT BASED UPON A WIND SPEED OF 85 MPH FASTEST MILE.

REFER TO THE POLE DESIGN AND ANTENNA LOADING DOCUMENTED IN THE PJF STRUCTURAL ANALYSIS FOR THIS SITE (PJF#37515-0530.005.7700), DATED 5-4-2015.

THIS PROJECT INCLUDES THE FOLLOWING ITEMS:

- SHAFT EXTENSION
- SHAFT REINFORCING
- FIELD WELDED ANCHOR BRACKETS
- POST INSTALLED ANCHOR RODS

1

SHEET INDEX

STATE OF CONNECTICUT
JOSEPH PACHICAAAH JACKSON
No. PEN 22731
LICENSED PROFESSIONAL ENGINEER

AUG 04 2015

1 5-4-2015

PAUL J. FORD AND COMPANY
STRUCTURAL ENGINEERS
250 East Broad Street - Suite 600 - Columbus, Ohio 43215
(614) 221-6679 www.pjfweb.com

CROWN CASTLE
3530 TORINGDON WAY, SUITE 300, CHARLOTTE, NC 28277
PH: (704) 416-2000

BU #806365; HRT 303 943203
STAFFORD, CONNECTICUT
MONOPOLE REINFORCEMENT AND RETROFIT PROJECT

PROJECT: 37515-0530.005.7700 R1

DRAWN BY: B.M.S.	TITLE SHEET
CHECKED BY: C.P.	
APPROVED BY: K.A.T.	T-1
DATE: 5-4-2015	

CROWN CASTLE PROJECT: BU #806365; HRT 303 943203; STAFFORD, CONNECTICUT
MONOPOLE RETROFIT PROJECT MASTER NOTES DOCUMENT (REV. 3, 02/05/2015)

1. GENERAL NOTES

1.1. THE MONOPOLE STRUCTURE IN ITS EXISTING CONDITION DOES NOT HAVE THE STRUCTURAL CAPACITY TO CARRY ALL OF THE ANTENNA AND PLATFORM LOADS SHOWN ON THESE DRAWINGS AT THE REQUIRED MINIMUM WIND SPEEDS. DO NOT INSTALL ANY ADDITIONAL OR NEW ANTENNA AND PLATFORM LOADS UNTIL THE MONOPOLE REINFORCING SYSTEM IS COMPLETELY AND SUCCESSFULLY INSTALLED.

1.2. IF MATERIALS, QUANTITIES, STRENGTHS OR SIZES INDICATED BY THE DRAWINGS OR SPECIFICATIONS ARE NOT IN AGREEMENT WITH THESE NOTES, THE BETTER QUALITY AND/OR GREATER QUANTITY, STRENGTH OR SIZE INDICATED, SPECIFIED OR NOTED SHALL BE PROVIDED.

1.3. THIS STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE INSTALLATION OF THE REINFORCING REPAIR SYSTEM HAS BEEN SUCCESSFULLY COMPLETED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO ENSURE THE SAFETY AND STABILITY OF THE MONOPOLE AND ITS COMPONENT PARTS DURING FIELD MODIFICATIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF WHATEVER TEMPORARY BRACING, GUYS OR TIE DOWNS THAT MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER THE COMPLETION OF THE PROJECT.

1.4. THE STRUCTURAL CONTRACT DOCUMENTS DO NOT INDICATE THE METHOD OR MEANS OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY CROWN CASTLE AND/OR THE EOR SHALL NOT INCLUDE INSPECTIONS OF THE PROTECTIVE MEASURES OR THE CONSTRUCTION PROCEDURES.

1.5. ANY SUPPORT SERVICES PERFORMED BY THE EOR DURING CONSTRUCTION ARE SOLELY FOR THE PURPOSE OF ASSISTING IN QUALITY CONTROL AND IN ACHIEVING GENERAL CONFORMANCE WITH CONTRACT DOCUMENTS. THEY DO NOT GUARANTEE CONTRACTOR'S PERFORMANCE AND SHALL NOT BE CONSTRUED AS SUPERVISION OF CONSTRUCTION.

1.6. ALL MATERIALS AND EQUIPMENT FURNISHED SHALL BE NEW AND OF GOOD QUALITY, FREE FROM FAULTS AND DEFECTS AND IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ANY AND ALL SUBSTITUTIONS MUST BE PROPERLY APPROVED AND AUTHORIZED IN WRITING BY CROWN CASTLE AND EOR PRIOR TO INSTALLATION. THE CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE AS TO THE KIND AND QUALITY OF MATERIALS AND EQUIPMENT BEING SUBSTITUTED.

1.7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT THIS PROJECT AND RELATED WORK COMPLIES WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL SAFETY CODES AND REGULATIONS GOVERNING THIS WORK AS WELL AS CROWN CASTLE SAFETY GUIDELINES.

1.8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING AND NEW COAXIAL CABLES AND OTHER EQUIPMENT DURING CONSTRUCTION.

1.9. ANY EXISTING ATTACHMENTS AND/OR PROJECTIONS ON THE POLE THAT MAY INTERFERE WITH THE INSTALLATION OF THE REINFORCING SYSTEM WILL HAVE TO BE REMOVED AND RELOCATED, REPLACED, OR RE-INSTALLED AS REQUIRED AFTER THE REINFORCING IS SUCCESSFULLY COMPLETED. THE CONTRACTOR SHALL IDENTIFY AND COORDINATE THESE ITEMS PRIOR TO CONSTRUCTION WITH CROWN CASTLE, TESTING AGENCY, AND EOR.

1.10. ANY AND ALL EXISTING PLATFORMS THAT ARE LOCATED IN AREAS OF THE POLE SHAFT WHERE SHAFT REINFORCING MUST BE APPLIED SHALL BE TEMPORARILY REMOVED OR OTHERWISE SUPPORTED TO PERMIT NEW CONTINUOUS REINFORCEMENT TO BE ATTACHED. AFTER THE CONTRACTOR HAS SUCCESSFULLY INSTALLED THE MONOPOLE REINFORCEMENT SYSTEM THE CONTRACTOR SHALL RE-INSTALL THE PLATFORMS.

1.11. THE CLIMBING FACILITIES, SAFETY CLIMB AND ALL PARTS THEREOF SHALL NOT BE IMPEDED, MODIFIED OR ALTERED WITHOUT THE EXPRESS APPROVAL OF THE EOR.

1.12. ALL SOLUTIONS FOR THE REPLACEMENT, RELOCATION OR MODIFICATION OF THE SAFETY CLIMB AND/OR ANY OF THE MONOPOLE CLIMBING FACILITIES SHALL BE COORDINATED WITH TUF-TUG. CONTACT DETAILS:

TUF-TUG PRODUCTS
3434 ENCRETE LANE
MORAINE, OHIO 45439
PHONE: 937-299-1213
EMAIL: TUFTUG@AOL.COM

2. STRUCTURAL STEEL

2.1. STRUCTURAL STEEL MATERIALS, FABRICATION, DETAILING, AND WORKMANSHIP SHALL CONFORM TO THE LATEST EDITION OF THE FOLLOWING REFERENCE STANDARDS:

2.1.1. BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC):

2.1.1.1. "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS."

2.1.1.2. "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM HIGH STRENGTH BOLTS," AS APPROVED BY THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS.

2.1.1.3. "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES"

2.1.2. BY THE AMERICAN WELDING SOCIETY (AWS):

2.1.2.1. "STRUCTURAL WELDING CODE – STEEL D1.1."

2.1.2.2. "STANDARD SYMBOLS FOR WELDING, BRAZING, AND NONDESTRUCTIVE EXAMINATION"

2.2. ANY MATERIAL OR WORKMANSHIP WHICH IS OBSERVED TO BE DEFECTIVE OR INCONSISTENT WITH THE CONTRACT DOCUMENTS SHALL BE CORRECTED, MODIFIED, OR REPLACED AT THE CONTRACTOR'S EXPENSE.

2.3. WELDED CONNECTIONS SHALL CONFORM TO THE LATEST REVISED CODE OF THE AMERICAN WELDING SOCIETY, AWS D1.1. ALL WELD ELECTRODES SHALL BE E80XX UNLESS NOTED OTHERWISE ON THE DRAWINGS.

2.4. ALL WELDED CONNECTIONS SHALL BE MADE BY WELDERS CERTIFIED BY AWS. CONTRACTOR SHALL SUBMIT WELDERS' CERTIFICATION AND QUALIFICATION DOCUMENTATION TO CROWN CASTLE'S TESTING AGENCY FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

2.5. STRUCTURAL STEEL PLATES SHALL CONFORM TO ASTM A572 GRADE 65 (FY = 65 KSI MIN.) UNLESS NOTED OTHERWISE ON THE DRAWINGS.

2.6. SURFACES OF EXISTING STEEL SHALL BE PREPARED AS REQUIRED FOR FIELD WELDING PER AWS. SEE SECTION I NOTES REGARDING TOUCH UP OF GALVANIZED SURFACES DAMAGED DURING TRANSPORTATION OR ERECTION AND ASSEMBLY AS WELL AS FIELD WELDING.

2.7. NO WELDING SHALL BE DONE TO THE EXISTING STRUCTURE WITHOUT THE PRIOR APPROVAL AND SUPERVISION OF THE TESTING AGENCY.

2.8. FIELD CUTTING OF STEEL:

2.8.1. IMPORTANT CUTTING AND WELDING SAFTEY GUIDELINES: THE CONTRACTOR SHALL FOLLOW ALL CROWN CASTLE CUTTING, WELDING, FIRE PREVENTION AND SAFTEY GUIDELINES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN A COPY OF THE CURRENT CROWN CASTLE GUIDELINES. PER THE 12-01-2005 CROWN CASTLE DIRECTIVE: "ALL CUTTING AND WELDING ACTIVITIES SHALL BE CONDUCTED IN ACCORDANCE WITH CROWN CASTLE POLICY "CUTTING AND WELDING SAFETY PLAN" (DOC # ENG-PLN-10015) ON AN ONGOING BASIS THROUGHOUT THE ENTIRE LIFE OF THE PROJECT". ANY DAMAGE TO THE COAX CABLES, AND/OR OTHER EQUIPMENT AND/OR THE STRUCTURE, RESULTING FROM THE CONTRACTOR'S ACTIVITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. THE INSPECTION/TESTING AGENCY SHALL CLOSELY AND CONTINUOUSLY MONITOR THIS ACTIVITY.

2.8.2. ALL REQUIRED CUTS SHALL BE CUT WITHIN THE DIMENSIONS SHOWN ON THE DRAWINGS. NO CUTS SHALL EXTEND BEYOND THE OUTLINE OF THE DIMENSIONS SHOWN ON THE DRAWINGS. ALL CUT EDGES SHALL BE GROUND SMOOTH AND DE-BURRED. CUT EDGES THAT ARE TO BE FIELD WELDED SHALL BE PREPARED FOR FIELD WELDING PER AWS D1.1 AND AS SHOWN ON THE DRAWINGS. CONTRACTOR TO AVOID 90 DEGREE CORNERS. IT MAY BE NECESSARY TO DRILL STARTER HOLES AS REQUIRED TO MAKE THE CUTS.

3. BASE PLATE GROUT - (NOT REQUIRED)

4. FOUNDATION WORK - (NOT REQUIRED)

5. CAST-IN-PLACE CONCRETE - (NOT REQUIRED)

6. EPOXY GROUTED REINFORCING ANCHOR RODS

6.1. UNLESS OTHERWISE NOTED, REINFORCING ANCHOR RODS SHALL BE 150 KSI ALL-THREAD BARS CONFORMING TO ASTM A722. RECOMMENDED MANUFACTURERS/SUPPLIERS OF 150 KSI ALL-THREAD BARS ARE WILLIAMS FORM ENGINEERING CORPORATION AND DYWIDAG SYSTEMS INTERNATIONAL.

6.2. ALL REINFORCING ANCHOR RODS SHALL BE HOT DIP GALVANIZED PER ASTM A123. ALTERNATIVELY, ALL REINFORCING ANCHOR RODS MAY BE EPOXY COATED PER ASTM A775

6.3. THE CORE-DRILLED HOLES IN THE CONCRETE FOR THE ANCHOR RODS SHALL BE CLEAN AND DRY, AND OTHERWISE PROPERLY PREPARED ACCORDING TO THE ANCHOR ROD AND EPOXY MANUFACTURERS' INSTRUCTIONS, PRIOR TO PLACEMENT OF ANCHOR RODS AND EPOXY. CONTRACTOR SHALL FOLLOW ALL ANCHOR ROD AND EPOXY MANUFACTURER RECOMMENDATIONS REGARDING HANDLING OF RODS, EPOXY, ACCEPTABLE AMBIENT TEMPERATURE RANGE DURING INSTALLATION AND POST-INSTALLATION CURING, THE EFFECT OF TEMPERATURE ON EPOXY CURING TIME, PREPARATION OF HOLE, ETC.

6.4. HILTI HIT RE-500 SD OR ITW RED HEAD EPCON G5 EPOXY SHALL BE USED TO ANCHOR THE BAR IN THE DRILL HOLES. IF CONTRACTOR WISHES TO USE A DIFFERENT EPOXY, A REQUEST INCLUDING THE EPOXY TECHNICAL DATA SHEET(S) SHALL BE SUBMITTED TO THE EOR FOR REVIEW PRIOR TO CONSTRUCTION.

6.5. ONCE THE REINFORCING ANCHOR RODS HAVE BEEN INSTALLED AND ALL EPOXY AND GROUT HAVE CURED (IF BASE PLATE AND/OR BEARING PLATES HAVE BEEN GROUTED PRIOR TO TESTING), ALL REINFORCING ANCHORS SHALL BE LOAD TESTED PER CROWN CASTLE ENGINEERING DOCUMENT ENG-PRC-10119. REFER TO THE NEW ANCHOR & BRACKET DETAIL ON FOLLOWING SHEETS FOR SPECIFIED ANCHOR ROD PROOF LOAD.

6.6. ONCE THE REINFORCING ANCHOR RODS HAVE BEEN SUCCESSFULLY LOAD TESTED AND APPROVED THE CONTRACTOR SHALL TIGHTEN ALL HEAVY HEX ANCHOR NUTS TO SNUG TIGHT PLUS 1/8 TURN OF NUT.

7. TOUCH UP OF GALVANIZING

7.1. THE CONTRACTOR SHALL TOUCH UP ANY AND ALL AREAS OF GALVANIZING ON THE EXISTING STRUCTURE OR NEW COMPONENTS THAT ARE DAMAGED OR ABRADED DURING CONSTRUCTION. GALVANIZED SURFACES DAMAGED DURING TRANSPORTATION OR ERECTION AND ASSEMBLY AS WELL AS ANY AND ALL ABRASIONS, CUTS, FIELD DRILLING, AND ALL FIELD WELDING SHALL BE TOUCHED UP WITH TWO (2) COATS OF ZRC COLD GALVANIZING COMPOUND. FILM THICKNESS PER COAT SHALL BE: WET 3.0 MILS, DRY 1.5 MILS. APPLY PER ZRC (MANUFACTURER) RECOMMENDED PROCEDURES. CONTACT ZRC AT 1-800-831-3275 FOR PRODUCT INFORMATION.

7.2. CONTRACTOR SHALL CLEAN AND PREPARE ALL FIELD WELDS ON GALVANIZED AND PRIME PAINTED SURFACES FOR TOUCH-UP COATING IN ACCORDANCE WITH AWS D1.1. CROWN CASTLE'S TESTING AGENCY SHALL VERIFY THE PREPARED SURFACE PRIOR TO APPLICATION OF THE TOUCH-UP COATING.

7.3. CROWN CASTLE'S TESTING AGENCY SHALL TEST AND VERIFY THE COATING THICKNESS AFTER THE CONTRACTOR HAS APPLIED THE ZRC COLD GALVANIZING COMPOUND AND IT HAS SUFFICIENTLY DRIED. AREAS FOUND TO BE ADEQUATELY COATED, SHALL BE RE-COATED BY THE CONTRACTOR AND RE-TESTED BY THE TESTING AGENCY.

8. HOT-DIP GALVANIZING

8.1. HOT-DIP GALVANIZE ALL STRUCTURAL STEEL MEMBERS AND ALL STEEL ACCESSORIES, BOLTS, WASHERS, ETC. PER ASTM A123 OR PER ASTM A153, AS APPROPRIATE.

8.2. PROPERLY PREPARE STEEL ITEMS FOR GALVANIZING.

8.3. DRILL OR PUNCH WEEP AND/OR DRAINAGE HOLES WITH EOR APPROVAL OF LOCATIONS.

8.4. ALL GALVANIZING SHALL BE DONE AFTER FABRICATION IS COMPLETED AND PRIOR TO FIELD INSTALLATION.

9. PERPETUAL INSPECTION AND MAINTENANCE BY THE OWNER

9.1. AFTER THE CONTRACTOR HAS SUCCESSFULLY COMPLETED THE INSTALLATION OF THE MONOPOLE REINFORCING SYSTEM AND THE WORK HAS BEEN ACCEPTED BY CROWN CASTLE, CROWN CASTLE WILL BE RESPONSIBLE FOR THE LONG TERM AND PERPETUAL INSPECTION AND MAINTENANCE OF THE POLE AND REINFORCING SYSTEM.

9.2. ANY FIELD WELDED CONNECTIONS ARE SUBJECT TO CORROSION DAMAGE AND DETERIORATION IF THEY ARE NOT PROPERLY MAINTAINED AND COVERED WITH CORROSION PREVENTIVE COATING SUCH AS THE ZRC GALVANIZING COMPOUND SPECIFIED PREVIOUSLY. THE STRUCTURAL LOAD CARRYING CAPACITY OF THE REINFORCED POLE SYSTEM IS DEPENDENT UPON THE INSTALLED SIZE AND QUALITY, MAINTAINED SOUND CONDITION AND STRENGTH OF THESE FIELD WELDED CONNECTIONS. ANY CORROSION OF, DAMAGE TO, FATIGUE, FRACTURE, AND/OR DETERIORATION OF THESE WELDS AND/OR THE EXISTING GALVANIZED STEEL POLE STRUCTURE AND THE WELDED COMPONENTS WILL RESULT IN THE LOSS OF STRUCTURAL LOAD CARRYING CAPACITY AND MAY LEAD TO FAILURE OF THE STRUCTURAL SYSTEM. THEREFORE, IT IS IMPERATIVE THAT CROWN CASTLE REGULARLY INSPECTS, MAINTAINS, AND REPAIRS AS NECESSARY, ALL OF THESE WELDS, CONNECTIONS, AND COMPONENTS FOR THE LIFE OF THE STRUCTURE.

9.3. CROWN CASTLE SHALL REFER TO TIA/EIA-222-F-1996, SECTION 14 AND ANNEX E FOR RECOMMENDATIONS FOR MAINTENANCE AND INSPECTION. THE FREQUENCY OF THE INSPECTION AND MAINTENANCE INTERVALS IS TO BE DETERMINED BY CROWN CASTLE BASED UPON ACTUAL SITE AND ENVIRONMENTAL CONDITIONS. THE EOR RECOMMENDS THAT A COMPLETE AND THOROUGH INSPECTION OF THE ENTIRE REINFORCED MONOPOLE STRUCTURAL SYSTEM BE PERFORMED YEARLY AND/OR AS FREQUENTLY AS CONDITIONS WARRANT. ACCORDING TO TIA/EIA-222-F-1996, SECTION 14.1, NOTE 1: "IT IS RECOMMENDED THAT THE STRUCTURE BE INSPECTED AFTER SEVERE WIND AND/OR ICE STORMS OR OTHER EXTREME LOADING CONDITIONS".

STATE OF CONNECTICUT
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AUG 0 4 2015

1 6-03-2015

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BU #806365; HRT 303 943203
STAFFORD, CONNECTICUT
MONOPOLE REINFORCEMENT AND RETROFIT PROJECT

PROJECT: 37515-0530.005.7700 R1	
DRAWN BY: B.M.S.	GENERAL NOTES
CHECKED BY: C.P.	
APPROVED BY: KAT/BKK	S-1
DATE: 5-4-2015	

37515-0530.005 R1.DWG

FORGBolt™ NOTE SHEET: A325/PC8.8 PORTRAIT VERSION DATE 04/24/2015

NOTES:
1. ALL STRUCTURAL BOLTS SHALL BE INSTALLED AND TIGHTENED TO THE PRETENSIONED CONDITION ACCORDING TO THE REQUIREMENTS OF THE AISC 'SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS', DEC. 31, 2009.
2. ALL STRUCTURAL BOLTS SHALL BE INSPECTED ACCORDING TO THE REQUIREMENTS OF THE AISC 'SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS', DEC. 31, 2009.

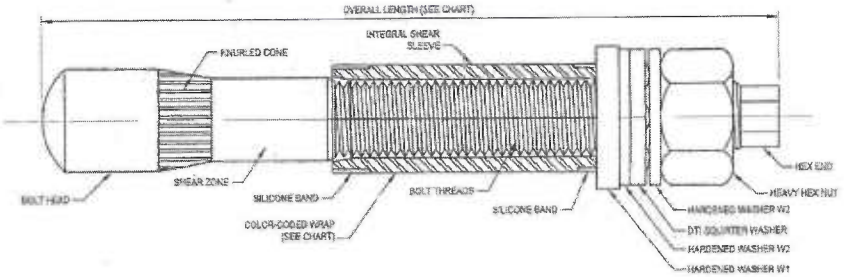
FORGBolt™		AISC Group A Material: ASTM A325 and PC8.8 (Tensile Stress, Fu = 120 ksi minimum)				
GROUP A		FORGBolt™ Size (mm)	Overall Length (inches)	Estimated Weight Each (lbs)	Grip Range (inch)	Comment	Color Code
FORGBolt™ A325 - PC8.8	1	135	5.31	1.3	3/8" to 1"	--	RED
	2	160	6.30	1.6	3/4" to 1-1/2"	--	GREEN
	3	195	7.68	1.9	1-1/4" to 2-1/4"	--	BLUE
	4	260	10.24	2.6	2" to 3-1/2"	Splice Bolt	YELLOW
	5	365	14.37	3.6	3-1/2" to 5-1/2"	Flange Jump Bolt	ORANGE
	6	440	17.32	4.3	5-1/2" to 8-1/2"	Flange Jump Bolt	BLACK
DTI Note		Each Group A (A325/PC8.8) FORGBolt™ assembly shall have a 'Squirter' DTI that is compatible with a M20-PC8.8 bolt.					

FORGBolt™ Installation

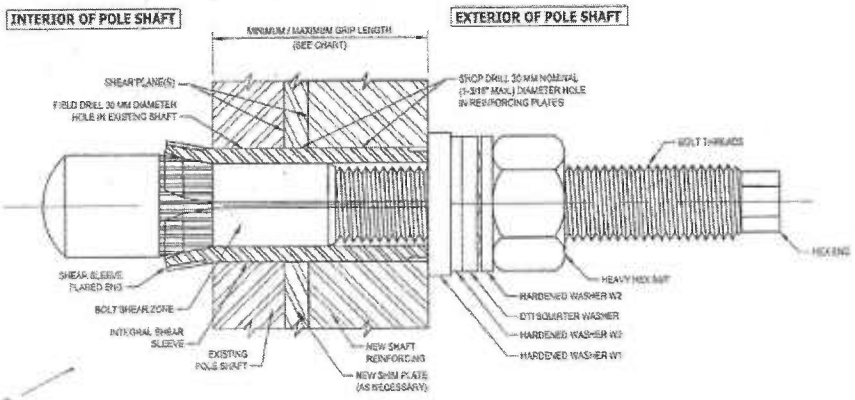
Follow all Manufacturer / Distributor Recommendations for Installation, Tightening, and Inspection.

1. FIELD DRILL HOLES TO 30 MM DIAMETER.
2. SELECT CORRECT BOLT SIZE FOR INSTALLATION GRIP (REFER TO PLANS).
3. INSERT BOLT ASSEMBLY THROUGH HOLES IN SHAFT REINFORCING PLATES AND SEAT THE HARDENED WASHER W1 FLUSH AGAINST OUTSIDE OF PLATE.
4. HAND TIGHTEN NUT TO FINGER TIGHT.
5. TIGHTEN NUT TO PRETENSIONED CONDITION AND UNTIL DTI SHOWS PROPER INDICATION.
6. PROPERLY DOCUMENT AND INSPECT BOLT TIGHTENING PER PLAN REQUIREMENTS.

BOLT HOLE NOTES:
1. ALL SHOP-DRILLED HOLES SHALL BE NOMINAL 30 MM DIAMETER. THE MAXIMUM SHOP-DRILLED HOLE DIAMETER PERMITTED IS 1-3/16".
2. ALL FIELD-DRILLED HOLES SHALL BE NOMINAL 30 MM DIAMETER. THE MAXIMUM FIELD-DRILLED HOLE DIAMETER PERMITTED IS 30 MM.



PRE-INSTALLED FORGBolt™ ASSEMBLY DETAIL (1 / S-2A)



INSTALLED FORGBolt™ ASSEMBLY DETAIL (2 / S-2A)

AUG 0 4 2015

AISC GROUP A MATERIAL: ASTM A325 AND PC8.8 (Fu = 120 KSI MIN. TENSILE STRESS)

CONTAINS PROPRIETARY INFORMATION
PATENT PENDING

FORGBolt™ DETAILS

DISTRIBUTOR CONTACT:
PRECISION TOWER PRODUCTS
PHONE: 888-926-4857
EMAIL: info@precisiontowerproducts.com
WEB: www.precisiontowerproducts.com

1 5-04-2015

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BU #806365; HRT 303 943203
STAFFORD, CONNECTICUT
MONOPOLE REINFORCEMENT AND RETROFIT PROJECT

PROJECT: 37515-0530.005.7700 R1
DRAWN BY: B.M.S.
CHECKED BY: C.P.
APPROVED BY: KAT/DRK
DATE: 5-4-2015
FORGBolt™ DETAILS
S-2A

37515-0530.005 R1.DWG

NEXGEN2™ BOLT NOTE SHEET: REV. 1.01, 04-15-2015

NOTES:

1. ALL NEXGEN2™ BOLT ASSEMBLIES SHALL BE INSTALLED AND TIGHTENED TO THE PRETENSIONED CONDITION ACCORDING TO THE REQUIREMENTS OF SECTION 8.2.3 OF THE AISC 'SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS', DEC. 31, 2009. PER SECTION 8.2.3: ALL FASTENER ASSEMBLIES SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS IN AISC SECTION 8.1 WITHOUT SEVERING THE SPLINED END AND WITH WASHERS POSITIONED AS REQUIRED IN AISC SECTION 6.2. PER REQUIREMENTS IN SECTION 8.1: PRIOR TO BOLT PRETENSIONING, THE JOINT SHALL FIRST BE COMPACTED TO THE SNUG-TIGHT CONDITION. SNUG TIGHT IS THE CONDITION THAT EXISTS WHEN ALL OF THE PLIES IN THE CONNECTION HAVE BEEN PULLED INTO FIRM CONTACT BY THE BOLTS AND THE BOLTS HAVE BEEN TIGHTENED SUFFICIENTLY TO PREVENT THE REMOVAL OF THE NUTS WITHOUT THE USE OF A WRENCH. ONCE THE SNUG TIGHT CONDITION IS ACHIEVED, THEN THE BOLT ASSEMBLY CAN BE TIGHTENED TO THE PRETENSIONED CONDITION.

2. ALL NEXGEN2™ BOLT ASSEMBLIES SHALL BE INSPECTED ACCORDING TO THE REQUIREMENTS OF SECTION 9.2.3 OF THE AISC 'SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS', DEC. 31, 2009. NOTE THAT COMPLETE INSPECTION OF ALL NEXGEN2™ BOLT ASSEMBLIES IS REQUIRED IN ADDITION TO ROUTINE OBSERVATION.

NOTES FOR NEXGEN2™ M20 BLIND BOLTS:

DISTRIBUTOR CONTACT DETAILS:
ALLFASTENERS
15401 COMMERCE PARK DR.
BROOKPARK, OHIO 44142
PHONE: 440-232-6060
E-MAIL: SALES@ALLFASTENERS.COM

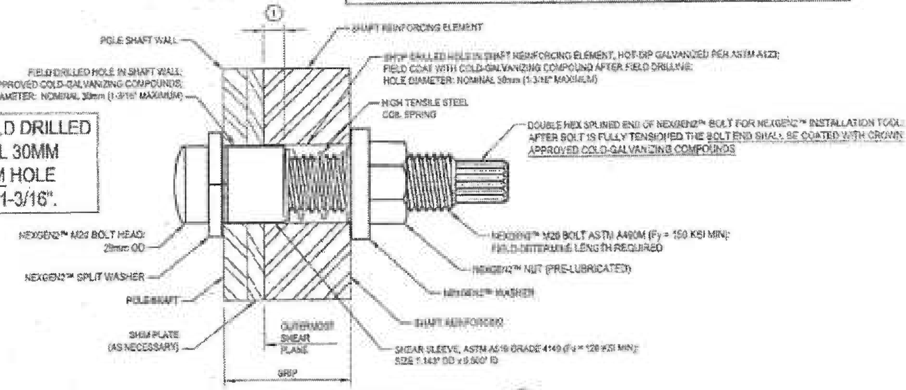
INSPECTION REQUIRED: ALL NEXGEN2™ BOLTS SHALL BE INSPECTED BY A QUALIFIED BOLT INSPECTOR PER NOTES 1 AND 2, ABOVE. DURING INSTALLATION, THE BOLT INSPECTOR SHALL VERIFY AND DOCUMENT: THE SHOP-DRILLED AND FIELD-DRILLED HOLE SIZES; THE INSTALLATION OF THE NEXGEN2™ BOLT ASSEMBLY, INCLUDING THE SHEAR SLEEVE PLACEMENT AND NUT LUBRICATION; AND THE CONTRACTOR'S TENSIONING PROCEDURE. THE BOLT INSPECTOR SHALL PROVIDE COMPLETE DOCUMENTATION OF ALL BOLTS AFTER TIGHTENING CLEARLY SHOWING THAT THE DOUBLE HEX SPLINED END OF THE BOLTS HAVE BEEN TWISTED OFF AND COATED WITH CROWN APPROVED COLD-GALVANIZING COMPOUND.

INTERIOR OF POLE SHAFT

EXTERIOR OF POLE SHAFT

(1) NOTE: SHEAR SLEEVE LENGTH: THE SHEAR SLEEVE SHALL PROJECT A MINIMUM OF 3/8" BEYOND THE OUTERMOST SHEAR PLANE. THE CONTRACTOR SHALL SUBMIT FABRICATION DRAWINGS SHOWING NEXGEN2™ BOLT LENGTHS AND SHEAR SLEEVE LENGTHS TO THE EOR FOR REVIEW AND APPROVAL.

NOTE: ALL SHOP AND FIELD DRILLED HOLES SHALL BE NOMINAL 30MM DIAMETER. THE MAXIMUM HOLE DIAMETER PERMITTED IS 1-3/16".



TYPICAL NEXGEN2™ BOLT DETAIL (1 / S-2B)

CROWN APPROVED BLIND BOLT

NOTE: NEXGEN2™ BOLT ASSEMBLY SHALL BE MAGNI 565 COATED PER ASTM F2833 AND MANUFACTURER SPECIFICATIONS.

NOTE: INSTALL NEXGEN2™ BOLT ASSEMBLY PER MANUFACTURER'S INSTRUCTIONS.

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AUG 04 2015

⚠ 5-03-2015: REVISED NOTE

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BU #806365; HRT 303 943203
STAFFORD, CONNECTICUT
MONOPOLE REINFORCEMENT AND RETROFIT PROJECT

PROJECT: 37515-0530.005.7700 R1	
DRAWN BY: B.M.S.	NEXGEN2™ BOLT DETAIL
CHECKED BY: C.P.	
APPROVED BY: KAT/AKH	S-2B
DATE: 5-4-2015	

37515-0530.005 R1.DWG

POLE SPECIFICATIONS	
POLE SHAPE TYPE:	12-SIDED POLYGON
TAPER:	0.230769 INFT
SHAFT STEEL:	ASTM A572 GRADE 65 & A53 GRADE B (65 KSI)
BASE PL STEEL:	Fy=60 KSI
ANCHOR RODS:	21 1/4"ø #18U ASTM A615 GRADE 75

SHAFT SECTION DATA

SHAFT SECTION	SECTION LENGTH (FT)	PLATE THICKNESS (IN)	LAP SPLICE (IN)	DIAMETER ACROSS FLATS (IN) @ TOP	DIAMETER ACROSS FLATS (IN) @ BOTTOM
PROP EXT	13.50	0.3750	81.00 83.00	16.000	16.000
1	41.25	0.2500		17.813	27.333
2	41.25	0.3125		25.854	35.563
3	42.00	0.3750		33.528	43.200

NOTE: DIMENSIONS SHOWN DO NOT INCLUDE GALVANIZING TOLERANCES

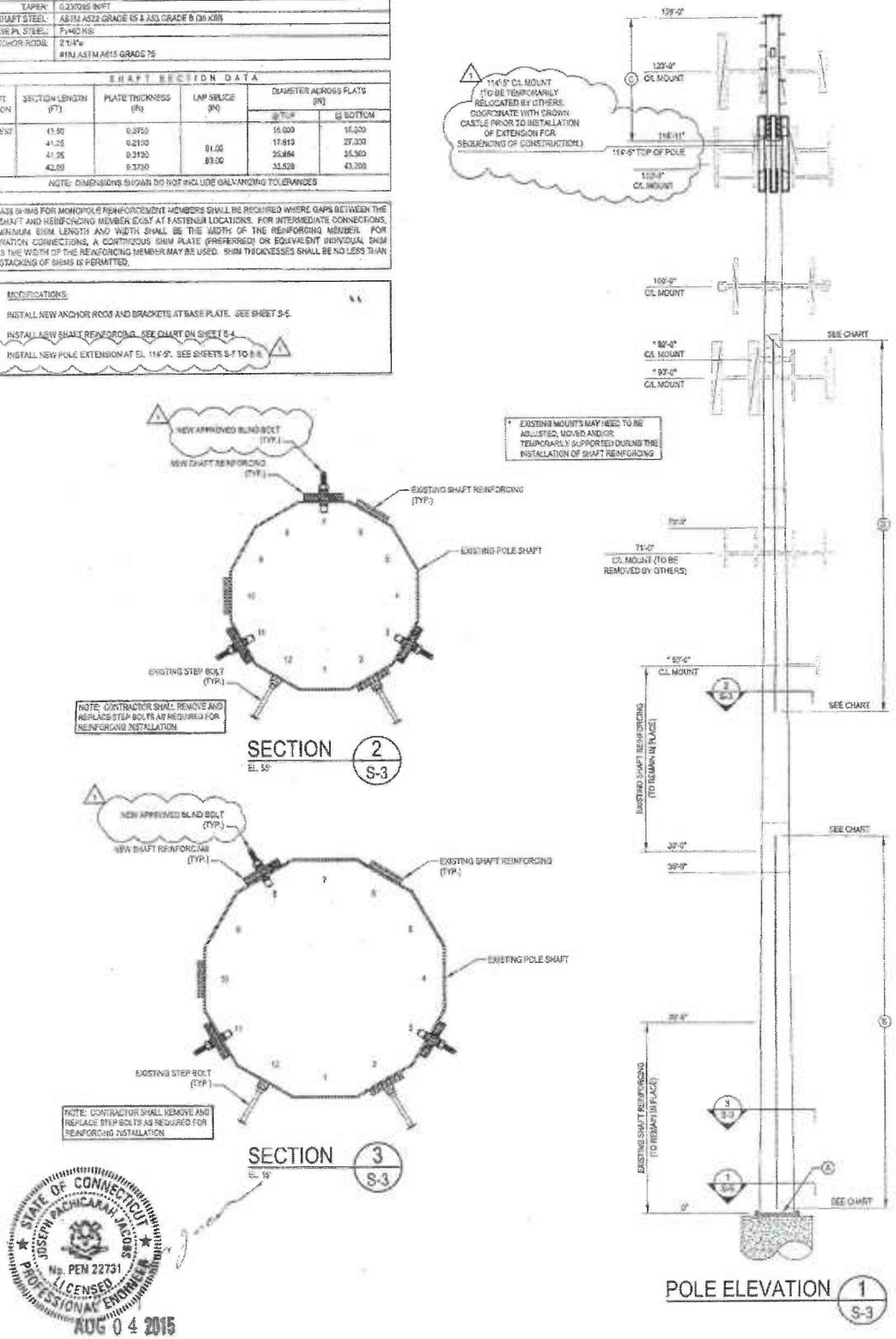
ASTM A36 SHIMS FOR MONOPOLE REINFORCEMENT MEMBERS SHALL BE REQUIRED WHERE GAPS BETWEEN THE POLE SHAFT AND REINFORCING MEMBER EXIST AT FASTENER LOCATIONS. FOR INTERMEDIATE CONNECTIONS, THE MINIMUM SHIM LENGTH AND WIDTH SHALL BE THE WIDTH OF THE REINFORCING MEMBER. FOR TERMINATION CONNECTIONS, A CONTINUOUS SHIM PLATE (PREFERRED) OR EQUIVALENT INDIVIDUAL SHIM PLATES THE WIDTH OF THE REINFORCING MEMBER MAY BE USED. SHIM THICKNESSES SHALL BE NO LESS THAN 1/16". STACKING OF SHIMS IS PERMITTED.

MODIFICATIONS:

(A) INSTALL NEW ANCHOR RODS AND BRACKETS AT BASE PLATE. SEE SHEET S-5.

(B) INSTALL NEW SHAFT REINFORCING. SEE CHART ON SHEET S-4.

(C) INSTALL NEW POLE EXTENSION AT EL. 114'-5". SEE SHEETS S-7 TO S-8. 1



STATE OF CONNECTICUT
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1 6-03-2015: REVISED EXTENSION CONNECTION ELEVATIONS, MODIFICATION LIST AND DIMENSIONS.

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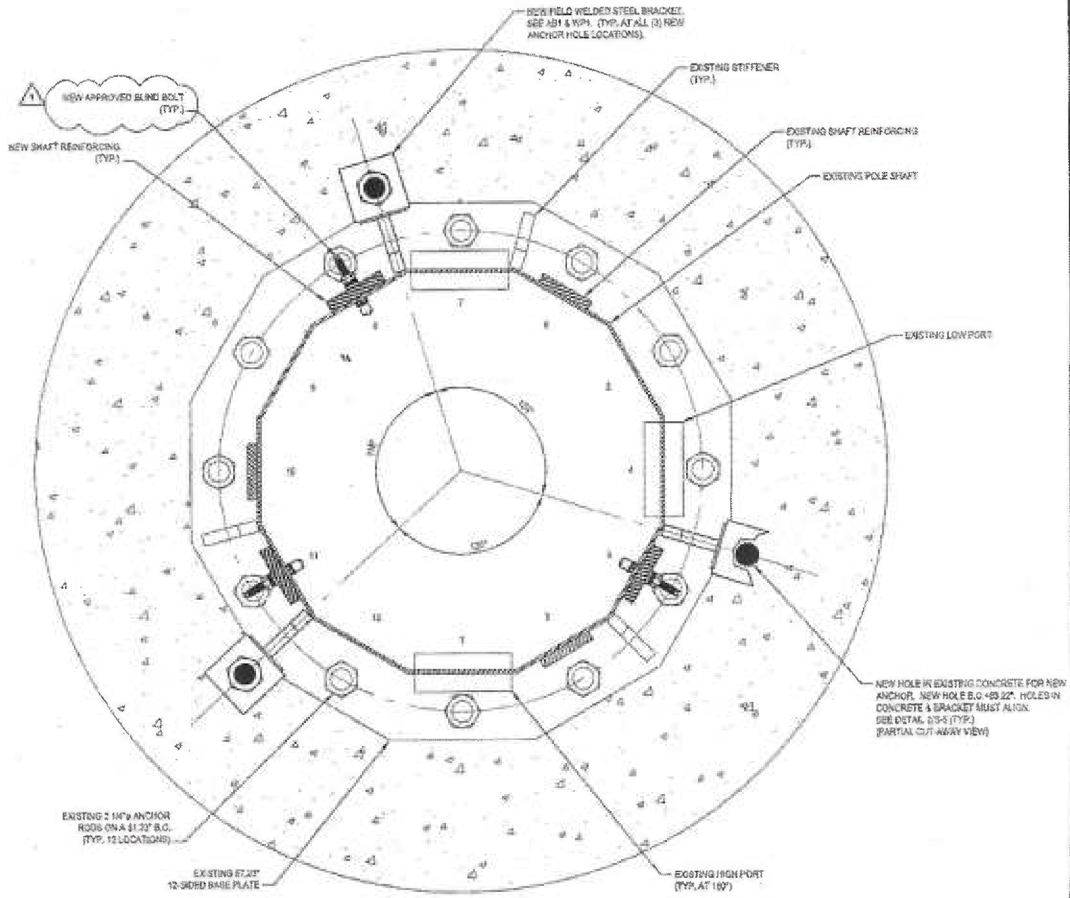
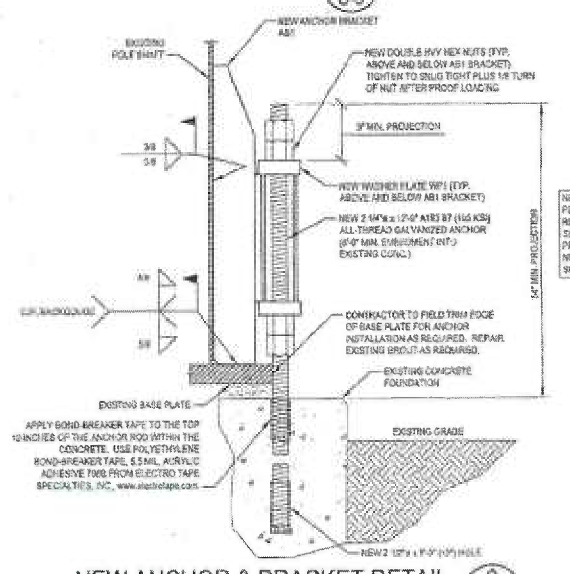
PROJECT: 37515-0530.005.7700 R1
DRAWN BY: B.M.S.
CHECKED BY: C.P.
APPROVED BY: KAT/BKF
DATE: 5-1-2015
MONOPOLE PROFILE
S-3



BASE PLATE (1/S-5)



NEW ANCHOR ROD REINFORCING SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. ONCE ALL RESIN HAS CURED, ALL NEW ANCHOR ROD REINFORCING SHALL BE PROOF LOADED TO 200 KIPS. ONCE THE PROOF LOAD HAS BEEN RELEASED, TIGHTEN HEAVY HEX NUT TO SNUG TIGHT PLUS 1/8 TURN OF NUT. REFER TO SHEET S-1, SECTION 6 FOR ADDITIONAL INFORMATION.

NEW ANCHOR & BRACKET DETAIL (2/S-5)

STATE OF CONNECTICUT · JOSEPH PACHICARAN JACOBS · No. PEN 22731 · LICENSED PROFESSIONAL ENGINEER

AUG 0 4 2015

⚠1 8-03-2015: REVISED TEXT

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STAFFORD, CONNECTICUT
MONOPOLE REINFORCEMENT AND RETROFIT PROJECT

PROJECT: 37515-0530.005.7700 R1

DRAWN BY: B.M.S.	BASE PLATE DETAILS
CHECKED BY: C.P.	
APPROVED BY:	S-5
DATE: 5-4-2015	

37515-0530L005 R1.DWG

NEW CCI FLAT PLATE (65 KSI) REINFORCING SCHEDULE

BOTTOM ELEVATION	TOP ELEVATION	FLAT #1 (INSIDE) SEPARATION	ELEMENT	ELEMENT LENGTH	ELEMENT QUANTITY	APPROXIMATE BOLTS PER ELEMENT	APPROXIMATE TOTAL BOLT QUANTITY	TERMINATION BOLTS (BOTTOM)	TERMINATION BOLTS (TOP)	MAXIMUM INTERMEDIATE BOLT SPACING	ESTIMATED TOTAL STEEL WEIGHT
0'-0"	20'-0"	F3 & F15	CCI-AFP-06512520	20'-0"	2	36	72	14	14	19"	5198 LBS.
0'-6"	25'-6"	F8	CCI-AFP-06512525	25'-0"	1	39	39	14	14	19"	691 LBS.
25'-7"	40'-7"	F7	CCI-AFP-06512525	25'-0"	1	39	39	14	14	19"	691 LBS.
20'-7"	40'-7"	F3 & F15	CCI-AFP-06512520	20'-0"	2	36	72	14	14	19"	1196 LBS.
54'-0"	74'-0"	F3, F7 & F11	CCI-AFP-05510020	20'-0"	3	31	93	19	19	16"	1225 LBS.
74'-1"	94'-1"	F3, F7 & F11	CCI-AFP-04510020	20'-0"	3	25	75	8	8	20"	919 LBS.
							330				9738 LBS.

NOTES:

1.) ALL STEEL SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123. ALTERNATIVELY, ALL NEW STIFFENER PLATE STEEL REINFORCING MAY BE COLD GALVANIZED AS FOLLOWS: APPLY A MINIMUM OF TWO COATS OF ZRC-BRAND ZINC-RICH COLD GALVANIZING COMPOUND. FILM THICKNESS PER COAT SHALL BE WET 3.0 MILS; DRY 1.5 MILS. APPLY PER ZRC (MANUFACTURER) RECOMMENDED PROCEDURES. CONTACT ZRC AT 1-800-435-7275 FOR PRODUCT INFORMATION.

2.) ALL REINFORCING SHALL BE ASTM A572 GR. 65.

3.) WELDS SHALL BE E70XX OR GREATER. TERMINATION WELDS SHALL BE 3/8" FILLET WELDS.

4.) HOLES FOR BOLTS ARE 30mm UNLESS NOTED OTHERWISE.

5.) ALL SHIMS SHALL BE ASTM A36.

SPLICE PLATE INSTALLATION CHART

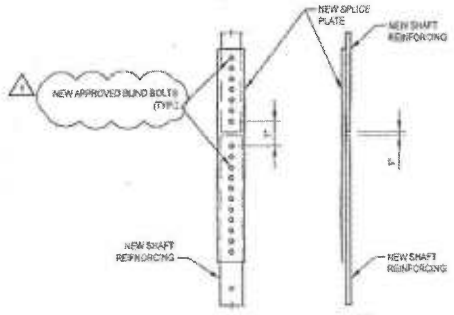
ELEVATION	FLAT PLATE THICKNESS	FLAT PLATE WIDTH	FLAT PLATE LENGTH	FLAT PLATE QUANTITY	WELD LENGTH PER SIDE	TOTAL WELD LENGTH	BOLTS PER SPLICE*	TOTAL STEEL WEIGHT
20'-7"	1-1/4"	8-1/2"	7'-7"	2	0"	0"	28	419 LBS.
74'-1"	1"	8-1/2"	9'-1"	3	0"	0"	18	234 LBS.
						0"		653 LBS.

* BOLTS INCLUDED IN THE TOTAL QUANTITY LISTED IN THE FLAT PLATE INSTALLATION CHART.

NEW SHIM CHART

1/16" SHIM QUANTITY	1/4" SHIM QUANTITY	SHIM WIDTH	SHIM LENGTH	HOLE DIAMETER
0	0	4-1/2"	4-1/2"	1-1/4"
53	0	6"	6"	1-1/4"
12	0	8-1/2"	8-1/2"	1-1/4"

SHIMS ARE FOR BIDDING PURPOSES ONLY. FINAL SHIM REQUIREMENTS TO BE DETERMINED BY CONTRACTOR DURING FABRICATION.



DETAIL 1 / S-4
SCALE: NTS

STATE OF CONNECTICUT
JOSEPH PACHIKARAN JACOBS
No. PEN 22731
LICENSED PROFESSIONAL ENGINEER

AUG 04 2015

CROWN CASTLE US PATENT NOS 8,644,972; 8,154,712; 7,843,656; 8,424,269 AND PATENT PENDING

1 6-03-2015: REVISED TEXT AND UPDATED REINFORCEMENT CHART

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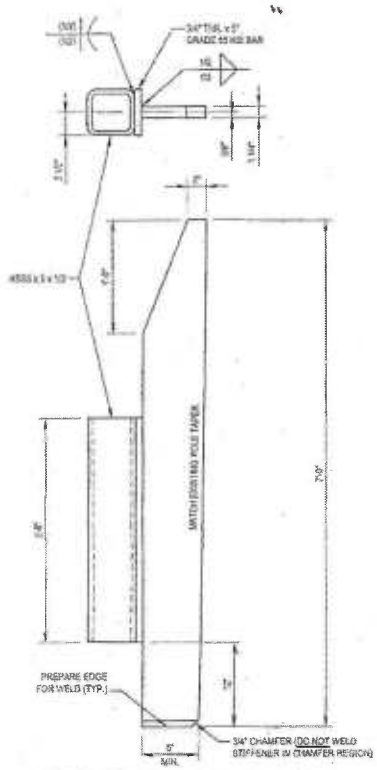
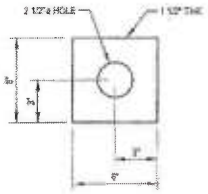
BU #806365; HRT 303 943203
STAFFORD, CONNECTICUT
MONOPOLE REINFORCEMENT AND RETROFIT PROJECT

PROJECT: 37515-0530.005.7700 R1
DRAWN BY: B.M.S.
CHECKED BY: C.P.
APPROVED BY: KMT
DATE: 5-4-2015
SHAFT REINFORCING CHART AND DETAIL
S-4



ANCHOR BRACKET MK~AB1

(3 REQUIRED) (TUBE Fy = 46 KSI) (STIFFENER Fy = 65 KSI)



WASHER PLATE MK~WP1

(6 REQUIRED) (Fy = 50 KSI)

STATE OF CONNECTICUT
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No. PEN.29731
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1 8-03-2015

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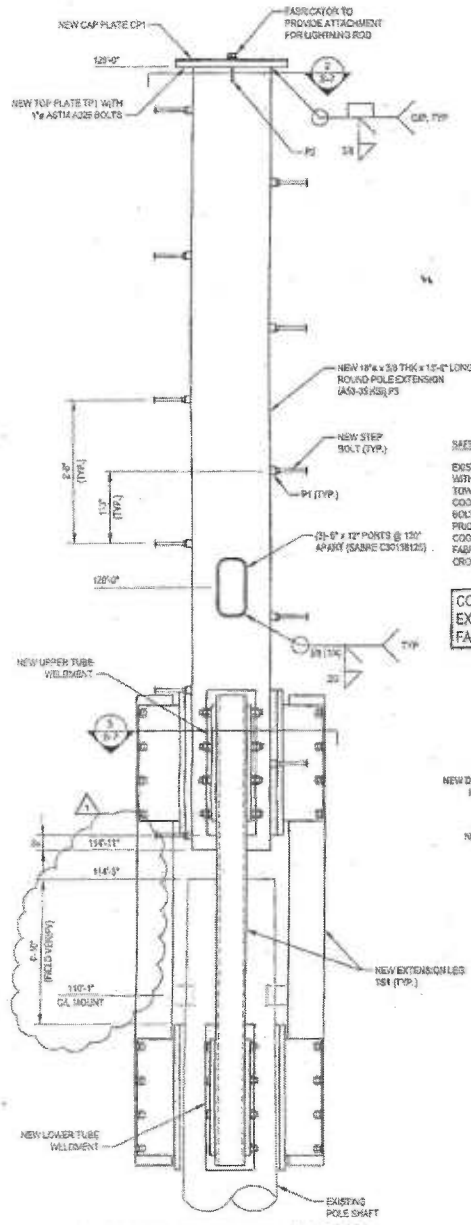
MONOPOLE REINFORCEMENT AND RETROFIT PROJECT

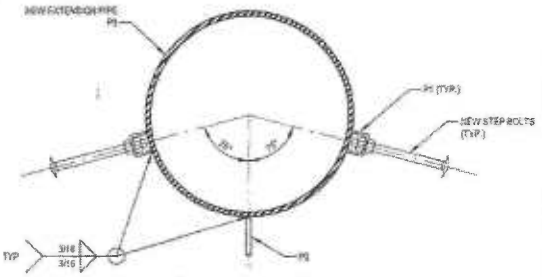
PROJECT: 37515-0530.005.7700 R1

DRAWN BY: B.M.S.	MISC DETAILS
CHECKED BY: C.P.	
APPROVED BY: KAT DKF	S-6
DATE: 5-4-2015	

37515-0530.005 R1.DWG



PARTIAL ELEVATION 1 S-7



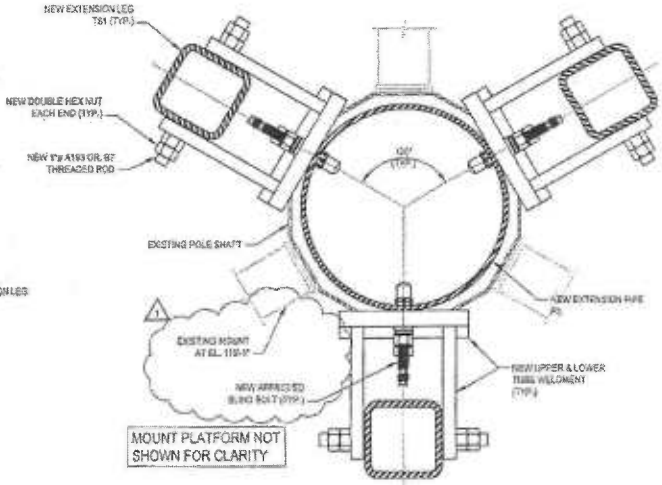
SECTION 2 S-7

SAFETY CABLE NOTE:

EXISTING SAFETY CABLE SHALL BE REPLACED WITH A NEW CABLE THAT EXTENDS THE ENTIRE TOWER LENGTH. CONTRACTOR SHALL COORDINATE LOCATIONS OF EXISTING STEP BOLTS AND SAFETY CLIMB WITH NEW EXTENSION PRIOR TO FABRICATION. CONTRACTOR SHALL COORDINATE SOLUTION WITH TUF-TUG PRIOR TO FABRICATION. THE NEW SYSTEM SHALL BE CROWN APPROVED PRIOR TO CONSTRUCTION.

CONTRACTOR TO VERIFY ALL EXISTING DIMENSIONS PRIOR TO FABRICATION OF EXTENSION

4 NOTE: CONTRACTOR TO VERIFY THAT EXISTING MOUNT AT ELEVATION 110'-1" DOES NOT INTERFERE WITH NEW REINFORCEMENT. NOTIFY PAUL J. FORD AND COMPANY IF A CONFLICT EXISTS.



SECTION 3 S-7

STATE OF CONNECTICUT
JOSEPH PACHICARAN JACOBS
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LICENSED PROFESSIONAL ENGINEER

AUG 04 2015

4 8-5-2015 REVISED EXTENSION CONNECTION ELEVATIONS AND DIMENSIONS

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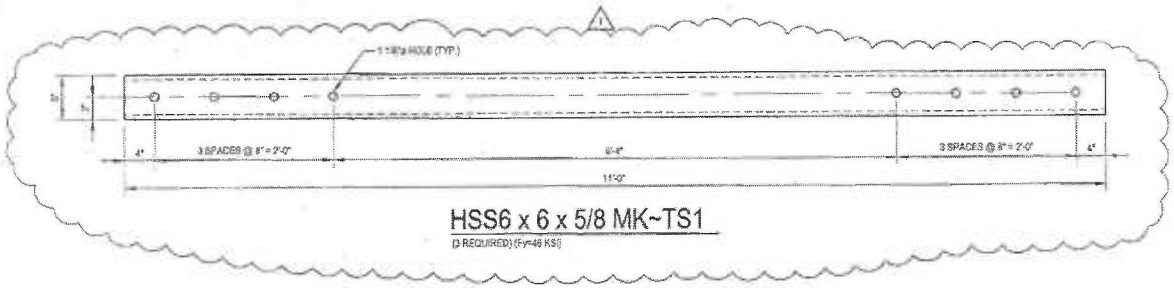
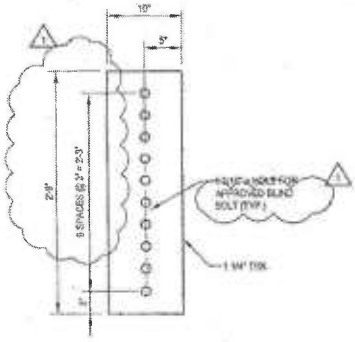
PROJECT: 37515-0530.005.7700 R1

DRAWN BY: B.M.S.	EXTENSION DETAILS
CHECKED BY: C.P.	
APPROVED BY: KAT/BKK	S-7
DATE: 5-4-2015	



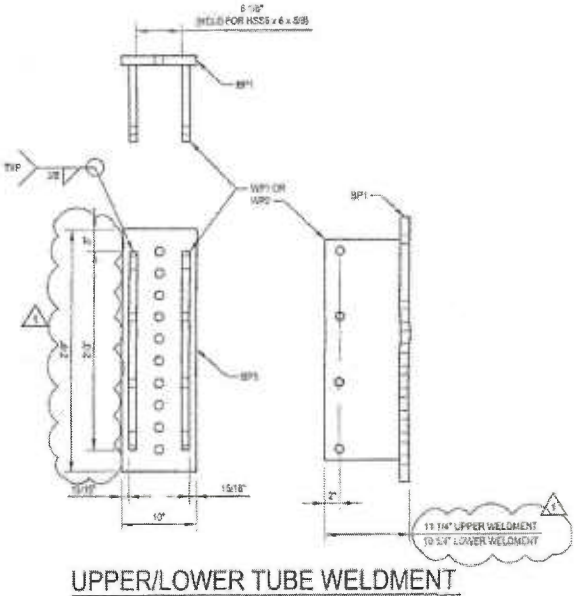
HSS6 x 6 x 5/8 MK~TS1

(3 REQUIRED) (Fy=46 KSI)



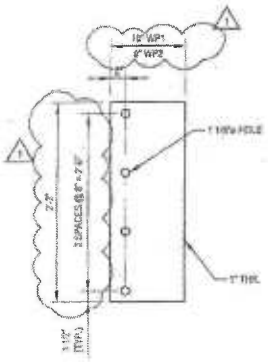
BACKER PLATE MK~BP1

(6 REQUIRED) (Fy=65 KSI)



UPPER/LOWER TUBE WELDMENT

(3 REQUIRED TOTAL; 3 EACH) (Fy=65 KSI)



1 WELDED PLATE MK~WP1/WP2

(12 REQUIRED TOTAL; 6 EACH) (Fy=65 KSI)

AUG 04 2015

1 8-03-2015: REVISED TS1, BP1, WP1/WP2 & UPPER/LOWER TUBE WELDMENT DIMENSIONS

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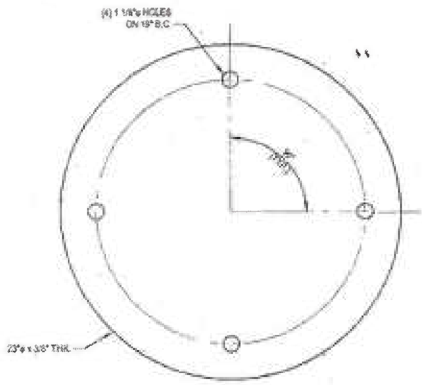
STAFFORD, CONNECTICUT
MONOPOLE REINFORCEMENT AND RETROFIT PROJECT

PROJECT: 37515-0530.005.7700 R1

DRAWN BY: B.M.S.	EXTENSION DETAILS
CHECKED BY: C.P.	
APPROVED BY: [signature] DATE: 5-4-2015	S-8

37515-0530.005 R1.DWG

MARK	QTY	MATERIAL	APPROX. LENGTH	STEEL WEIGHT
CP1	1	CAP PLATE 3/8" x 23"ø		44
BP1	6	BACKER PLATE 1 1/4" x 10"	2'-9"	[illegible]
WP1	6	WELDED PLATE 1" x 10" (UPPER)	2'-3"	[illegible]
WP2	6	WELDED PLATE 1" x 8" (LOWER)	2'-3"	414
P1	12	PLATE 3/16" x 1 1/2"	0'-4 5/8"	5
P2	1	PLATE 3/8" x 3"	0'-3"	1
P3	1	EXTENSION PIPE 16"ø x 3/8" THK.	14'-1"	[illegible]
TP1	1	TOP PLATE 1 1/4" x 22"ø		[illegible]
TS1	3	[illegible] x 6 x 5/8	11'-0"	1483
	3	6" x 12" SABRE PORT		
	4	1"ø ASTM A325 BOLT	3"	
	24	1"ø ASTM A193 GR. B7	7 3/4"	
	60	APPROVED BLIND BOLT		
	12	5/8"ø STEP BOLT	7"	
	24	LOCK WASHERS AND NUTS FOR 5/8"ø BOLTS		
			TOTAL (LBS)	[illegible]



CAP PLATE MK~CP1
(1 REQUIRED) (Fy = 36 KSI)

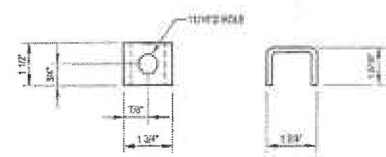


PLATE MK~P1
(11 REQUIRED) (Fy = 36 KSI)

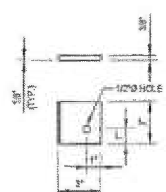
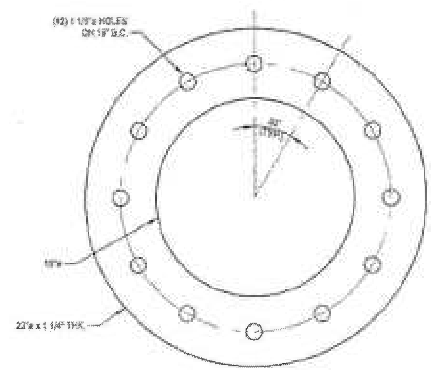


PLATE MK~P2
(1 REQUIRED) (Fy = 36 KSI)



TOP PLATE MK~TP1
(1 REQUIRED) (Fy = 50 KSI)

STATE OF CONNECTICUT
JOSEPH PACHICARAH JACOBS
No. PEN 22731
LICENSED PROFESSIONAL ENGINEER

AUG 04 2015

1 5-03-2015: REVISED MONOPOLE EXTENSION MATERIAL LIST

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PROJECT: 37515-0530.005.7700 R1	
DRAWN BY: B.M.S.	EXTENSION DETAILS
CHECKED BY: C.P.	
APPROVED BY:	S-9
DATE: 5-4-2015	

MODIFICATION INSPECTION NOTES:

1. **GENERAL**
   - 1.1. THE MODIFICATION INSPECTION (MI) IS A VISUAL INSPECTION OF TOWER MODIFICATIONS AND A REVIEW OF CONSTRUCTION INSPECTIONS AND OTHER REPORTS TO ENSURE THE INSTALLATION WAS CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, NAMELY THE MODIFICATION DRAWINGS, AS DESIGNED BY THE EOR.
   - 1.2. THE MI IS TO CONFIRM INSTALLATION CONFIGURATION AND WORKMANSHIP ONLY AND IS NOT A REVIEW OF THE MODIFICATION DESIGN ITSELF, NOR DOES THE MI INSPECTOR TAKE OWNERSHIP OF THE MODIFICATION DESIGN. OWNERSHIP OF THE STRUCTURAL MODIFICATION DESIGN EFFECTIVENESS AND INTEGRITY RESIDES WITH THE EOR AT ALL TIMES.
   - 1.3. ALL MI'S SHALL BE CONDUCTED BY A CROWN CASTLE ENGINEERING VENDOR (AEV) OR ENGINEERING SERVICE VENDOR (AESV) THAT IS APPROVED TO PERFORM ELEVATED WORK FOR CROWN CASTLE.
   - 1.4. TO ENSURE THAT THE REQUIREMENTS OF THE MI ARE MET, IT IS VITAL THAT THE GENERAL CONTRACTOR (GC) AND THE MI INSPECTOR BEGIN COMMUNICATING AND COORDINATING AS SOON AS A PO IS RECEIVED. IT IS EXPECTED THAT EACH PARTY WILL BE PROACTIVE IN REACHING OUT TO THE OTHER PARTY. IF CONTACT INFORMATION IS NOT KNOWN, CONTACT YOUR CROWN CASTLE POINT OF CONTACT (POC).
   - 1.5. REFER TO ENG-SOW-10007, MODIFICATION INSPECTION SOW FOR FURTHER DETAILS AND REQUIREMENTS.

2. **MI INSPECTOR**
   - 2.1. THE MI INSPECTOR IS REQUIRED TO CONTACT THE GC AS SOON AS RECEIVING A PO FOR THE MI TO, AT A MINIMUM:
     - 2.1.1. REVIEW THE REQUIREMENTS OF THE MI CHECKLIST.
     - 2.1.2. WORK WITH THE GC TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS.
     - 2.1.3. THE MI INSPECTOR IS RESPONSIBLE FOR COLLECTING ALL GC INSPECTION AND TEST REPORTS, REVIEWING THE DOCUMENTS FOR ADHERENCE TO THE CONTRACT DOCUMENTS, CONDUCTING THE IN-FIELD INSPECTIONS, AND SUBMITTING THE MI REPORT TO CROWN CASTLE.

3. **GENERAL CONTRACTOR**
   - 3.1. THE GC IS REQUIRED TO CONTACT THE MI INSPECTOR AS SOON AS RECEIVING A PO FOR THE MODIFICATION INSTALLATION OR TURNKEY PROJECT TO, AT A MINIMUM,
     - 3.1.1. REVIEW THE REQUIREMENTS OF THE MI CHECKLIST.
     - 3.1.2. WORK WITH THE MI INSPECTOR TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS.
     - 3.1.3. BETTER UNDERSTAND ALL INSPECTION AND TESTING REQUIREMENTS.
     - 3.1.4. THE GC SHALL PERFORM AND RECORD THE TEST AND INSPECTION RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE MI CHECKLIST AND ENG-SOW-10007.

4. **RECOMMENDATIONS**
   - 4.1. THE FOLLOWING RECOMMENDATIONS AND SUGGESTIONS ARE OFFERED TO ENHANCE THE EFFICIENCY AND EFFECTIVENESS OF DELIVERING AN MI REPORT:
     - 4.1.1. IT IS SUGGESTED THAT THE GC PROVIDE A MINIMUM OF 5 BUSINESS DAYS NOTICE, PREFERABLE 10, TO THE MI INSPECTOR AS TO WHEN THE SITE WILL BE READY FOR THE MI TO BE CONDUCTED.
     - 4.1.2. THE GC AND MI INSPECTOR COORDINATE CLOSELY THROUGHOUT THE ENTIRE PROJECT.
     - 4.1.3. WHEN POSSIBLE, IT IS PREFERRED TO HAVE THE GC AND MI INSPECTOR ON-SITE SIMULTANEOUSLY FOR ANY GUY WIRE TENSIONING OR RE-TENSIONING OPERATIONS.
     - 4.1.4. IT MAY BE BENEFICIAL TO INSTALL ALL TOWER MODIFICATIONS PRIOR TO CONDUCTING THE FOUNDATION INSPECTIONS TO ALLOW FOUNDATION AND MI INSPECTION(S) TO COMMENCE WITH ONE SITE VISIT.
     - 4.1.5. WHEN POSSIBLE, IT IS PREFERRED TO HAVE THE GC AND MI INSPECTOR ON-SITE DURING THE MI TO HAVE ANY DEFICIENCIES CORRECTED DURING THE INITIAL MI. THEREFORE, THE GC MAY CHOOSE TO COORDINATE THE MI CAREFULLY TO ENSURE ALL CONSTRUCTION FACILITIES ARE AT THEIR DISPOSAL WHEN THE MI INSPECTOR IS ON SITE.

5. **CANCELLATION OR DELAYS IN SCHEDULED MI**
   - 5.1. IF THE GC AND MI INSPECTOR AGREE TO A DATE ON WHICH THE MI WILL BE CONDUCTED, AND EITHER PARTY CANCELS OR DELAYS, CROWN CASTLE SHALL NOT BE RESPONSIBLE FOR ANY COSTS, FEES, LOSS OF DEPOSITS AND/OR OTHER PENALTIES RELATED TO THE CANCELLATION OR DELAY INCURRED BY EITHER PARTY FOR ANY TIME (E.G. TRAVEL AND LODGING, COSTS OF KEEPING EQUIPMENT ON-SITE, ETC.). IF CROWN CASTLE CONTRACTS DIRECTLY FOR A THIRD PARTY MI, EXCEPTIONS MAY BE MADE IN THE EVENT THAT THE DELAY/CANCELLATION IS CAUSED BY WEATHER OR OTHER CONDITIONS THAT MAY COMPROMISE THE SAFETY OF THE PARTIES INVOLVED.

6. **CORRECTION OF FAILING MI'S**
   - 6.1. IF THE MODIFICATION INSTALLATION WOULD FAIL THE MI ("FAILED MI"), THE GC SHALL WORK WITH CROWN CASTLE TO COORDINATE A REMEDIATION PLAN IN ONE OF TWO WAYS:
     - 6.1.1. CORRECT FAILING ISSUES TO COMPLY WITH THE SPECIFICATIONS CONTAINED IN THE ORIGINAL CONTRACT DOCUMENTS AND COORDINATE A SUPPLEMENT MI.
     - 6.1.2. OR, WITH CROWN CASTLE'S APPROVAL, THE GC MAY WORK WITH THE EOR TO RE-ANALYZE THE MODIFICATION/REINFORCEMENT USING THE AS-BUILT CONDITION.

7. **MI VERIFICATION INSPECTIONS**
   - 7.1. CROWN CASTLE RESERVES THE RIGHT TO CONDUCT A MI VERIFICATION INSPECTION TO VERIFY THE ACCURACY AND COMPLETENESS OF PREVIOUSLY COMPLETED MI INSPECTION(S) ON TOWER MODIFICATION PROJECTS.
   - 7.2. ALL VERIFICATION INSPECTIONS SHALL BE HELD TO THE SAME SPECIFICATIONS AND REQUIREMENTS IN THE CONTRACT DOCUMENTS AND IN ACCORDANCE WITH ENG-SOW-10007.
   - 7.3. VERIFICATION INSPECTION MAY BE CONDUCTED BY AN INDEPENDENT AEV/AESV FIRM AFTER A MODIFICATION PROJECT IS COMPLETED, AS MARKED BY THE DATE OF AN ACCEPTED "PASSING MI" OR "PASS AS NOTED MI" REPORT FOR THE ORIGINAL PROJECT.

8. **PHOTOGRAPHS**
   - 8.1. BETWEEN THE GC AND THE MI INSPECTOR THE FOLLOWING PHOTOGRAPHS, AT A MINIMUM, ARE TO BE TAKEN AND INCLUDED IN THE MI REPORT:
     - 8.1.1. PRECONSTRUCTION GENERAL SITE CONDITION
     - 8.1.2. PHOTOGRAPHS DURING THE REINFORCEMENT MODIFICATION CONSTRUCTION/ERECTION AND INSPECTION
     - 8.1.3. RAW MATERIALS
     - 8.1.4. PHOTOS OF ALL CRITICAL DETAILS
     - 8.1.5. FOUNDATION MODIFICATIONS
     - 8.1.6. WELD PREPARATION
     - 8.1.7. BOLT INSTALLATION AND TORQUE
     - 8.1.8. FINAL INSTALLED CONDITION
     - 8.1.9. SURFACE COATING REPAIR
     - 8.1.10. POST CONSTRUCTION PHOTOGRAPHS
     - 8.1.11. FINAL INFIELD CONDITION
     - 8.1.12. PHOTOS OF ELEVATED MODIFICATIONS TAKEN FROM THE GROUND SHALL BE CONSIDERED INADEQUATE.
     - 8.1.13. THIS IS NOT A COMPLETE LIST OF REQUIRED PHOTOS, PLEASE REFER TO ENG-SOW-10007.

9. **INSPECTION AND TESTING**
   - 9.1. ALL WORK SHALL BE SUBJECT TO REVIEW AND OBSERVATION BY CROWN CASTLE'S REPRESENTATIVE AND CROWN CASTLE'S AUTHORIZED INDEPENDENT INSPECTION AND TESTING AGENCY.
   - 9.2. INSPECTION SERVICES WHICH ARE FURNISHED BY OTHERS ARE STILL REQUIRED WHEN THE EOR PERFORMS SUPPORT SERVICES DURING CONSTRUCTION.
   - 9.3. OBSERVED DISCREPANCIES BETWEEN THE WORK AND THE CONTRACT DOCUMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST.
   - 9.4. AN INDEPENDENT QUALIFIED INSPECTION/TESTING AGENCY SHALL BE SELECTED, RETAINED AND PAID FOR BY CROWN CASTLE FOR THE SOLE PURPOSE OF INSPECTING, TESTING, DOCUMENTING, AND APPROVING ALL WELDING AND FIELD WORK PERFORMED BY THE CONTRACTOR.
     - 9.4.1. ACCESS TO ANY PLACE WHERE WORK IS BEING DONE SHALL BE PERMITTED AT ALL TIMES.
     - 9.4.2. THE INSPECTION AGENCY SHALL SO SCHEDULE THIS WORK AS TO CAUSE A MINIMUM OF INTERRUPTION TO, AND COORDINATE WITH, THE WORK IN PROGRESS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE WORK SCHEDULE WITH THE TESTING AGENCY. THE CONTRACTOR SHALL ALLOW FOR ADEQUATE TIME AND ACCESS FOR THE TESTING AGENCY TO PERFORM THEIR DUTIES.
   - 9.5. THE INSPECTION AND TESTING AGENCY SHALL BE RESPONSIBLE TO PERFORM THE FOLLOWING SERVICES AND INSPECT THE FOLLOWING ITEMS IN ACCORDANCE WITH THE CONSTRUCTION DRAWINGS. THE TESTING AGENCY SHALL INSPECT ITEMS ON THIS LIST AND OTHER ITEMS AS NECESSARY TO FULFILL THEIR RESPONSIBILITY. THE TESTING AGENCY SHALL UTILIZE EXPERIENCED, TRAINED INSPECTORS INCLUDING AWS CERTIFIED WELDING INSPECTORS (CWI). INSPECTORS SHALL HAVE THE TRAINING, CREDENTIALS, AND EXPERIENCE APPROPRIATE FOR AND COMMENSURATE WITH THE SCOPE AND TYPE OF INSPECTION WORK TO BE PERFORMED.
   - 9.6. **GENERAL**
     - 9.6.1. PERFORM PERIODIC ON-SITE OBSERVATION, INSPECTION, VERIFICATION, AND TESTING DURING THE TIME THE CONTRACTOR IS WORKING ON-SITE. AGENCY SHALL NOTIFY CROWN CASTLE AND THE EOR IMMEDIATELY WHEN FIELD PROBLEMS OR DISCREPANCIES OCCUR.
   - 9.7. **FOUNDATIONS AND SOIL PREPARATION - (NOT REQUIRED)**
   - 9.8. **CONCRETE TESTING PER ACI - (NOT REQUIRED)**
   - 9.9. **STRUCTURAL STEEL**
     - 9.9.1. CHECK STEEL ON THE JOB WITH THE PLANS.
     - 9.9.2. CHECK MILL CERTIFICATIONS. CALL FOR LABORATORY TEST REPORTS WHEN MILL CERTIFICATION IS IN QUESTION.
     - 9.9.3. CHECK GRADE OF STEEL MEMBERS, AND BOLTS FOR CONFORMANCE WITH DRAWINGS.
     - 9.9.4. INSPECT STEEL MEMBERS FOR DISTORTION, EXCESSIVE RUST, FLAWS AND BURNED HOLES.
     - 9.9.5. CHECK STEEL MEMBERS FOR SIZES, SWEEP AND DIMENSIONAL TOLERANCES.
     - 9.9.6. CHECK FOR SURFACE FINISH SPECIFIED, GALVANIZED.
     - 9.9.7. CHECK THAT BOLTS HAVE BEEN TIGHTENED PROPERLY.
     - 9.9.8. PRIOR TO ANY FIELD CUTTING THE CONTRACTOR SHALL MARK THE CUTOUT LINES ON THE STEEL AND THE INSPECTION/TESTING AGENCY SHALL VERIFY PROPOSED LAYOUT, LOCATION, AND DIMENSIONS. THE INSPECTION/TESTING AGENCY SHALL CLOSELY AND CONTINUOUSLY MONITOR THIS ACTIVITY.
   - 9.10. **WELDING:**
     - 9.10.1. VERIFY FIELD WELDING PROCEDURES, WELDERS, AND WELDING OPERATORS, NOT DEEMED PREQUALIFIED, IN ACCORDANCE WITH AWS D1.1.
     - 9.10.2. INSPECT FIELD WELDED CONNECTIONS IN ACCORDANCE WITH THE REQUIREMENTS SPECIFIED AND WITH AWS D1.1.
     - 9.10.3. APPROVE FIELD WELDING SEQUENCE.
     - 9.10.4. A PROGRAM OF THE APPROVED SEQUENCES SHALL BE SUBMITTED TO CROWN CASTLE BEFORE WELDING BEGINS. NO CHANGE IN APPROVED SEQUENCES MAY BE MADE WITHOUT PERMISSION FROM CROWN CASTLE.
     - 9.10.5. INSPECT WELDED CONNECTIONS AS FOLLOWS AND IN ACCORDANCE WITH AWS D1.1:
       - 9.10.5.1. INSPECT WELDING EQUIPMENT FOR CAPACITY, MAINTENANCE, AND WORKING CONDITIONS.
       - 9.10.5.2. VERIFY SPECIFIED ELECTRODES AND HANDLING AND STORAGE OF ELECTRODES FOR CONFORMANCE TO SPECIFICATIONS.
       - 9.10.5.3. INSPECT PREHEATING AND INTERPASS TEMPERATURES FOR CONFORMANCE WITH AWS D1.1.
       - 9.10.5.4. VISUALLY INSPECT ALL WELDS AND VERIFY THAT QUALITY OF WELDS MEETS THE REQUIREMENTS OF AWS D1.1. OTHER TESTS MAY ALSO BE PERFORMED ON THE WELDS BY THE TESTING AGENCY IN ORDER FOR THEM TO PERFORM THEIR DUTIES FOR THIS PROJECT.
       - 9.10.5.5. SPOT TEST AT LEAST ONE FILLET WELD OF EACH MEMBER USING MAGNETIC PARTICLE.
       - 9.10.5.6. INSPECT FOR SIZE, SPACING, TYPE AND LOCATION AS PER APPROVED DRAWINGS.
       - 9.10.5.7. VERIFY THAT THE BASE METAL CONFORMS TO THE DRAWINGS.
       - 9.10.5.8. REVIEW THE REPORTS BY TESTING LABS.
       - 9.10.5.9. CHECK TO SEE THAT WELDS ARE CLEAN AND FREE FROM SLAG.
       - 9.10.5.10. INSPECT RUST PROTECTION OF WELDS AS PER SPECIFICATIONS.
       - 9.10.5.11. CHECK THAT DEFECTIVE WELDS ARE CLEARLY MARKED AND HAVE BEEN ADEQUATELY REPAIRED.
       - 9.10.5.12. FULL PENETRATION WELDS IN THE VICINITY OF THE BASE OF THE TOWER ARE REQUIRED TO BE 100% NDE INSPECTED BY UT IN ACCORDANCE WITH AWS D1.1.
       - 9.10.5.13. PARTIAL PENETRATION AND FILLET WELDS IN THE VICINITY OF THE BASE OF THE TOWER ARE REQUIRED TO BE 50% NDE INSPECTED BY MP IN ACCORDANCE WITH AWS D1.1.
   - 9.11. **REPORTS:**
     - 9.11.1. COMPILE AND PERIODICALLY SUBMIT DAILY INSPECTION REPORTS TO CROWN CASTLE.
     - 9.11.2. THE INSPECTION PLAN OUTLINED HEREIN IS INTENDED AS A DESCRIPTION OF GENERAL AND SPECIFIC ITEMS OF CONCERN. IT IS NOT INTENDED TO BE ALL-INCLUSIVE. IT DOES NOT LIMIT THE TESTING AND INSPECTION AGENCY TO THE ITEMS LISTED. ADDITIONAL TESTING, INSPECTION, AND CHECKING MAY BE REQUIRED AND SHOULD BE ANTICIPATED. THE TESTING AGENCY SHALL USE THEIR PROFESSIONAL JUDGMENT AND KNOWLEDGE OF THE JOB SITE CONDITIONS AND THE CONTRACTOR'S PERFORMANCE TO DECIDE WHAT OTHER ITEMS REQUIRE ADDITIONAL ATTENTION. THE TESTING AGENCY'S JUDGMENT MUST PREVAIL ON ITEMS NOT SPECIFICALLY COVERED. ANY DISCREPANCIES OR PROBLEMS SHALL BE BROUGHT IMMEDIATELY TO CROWN CASTLE'S ATTENTION. RESOLUTIONS ARE NOT TO BE MADE WITHOUT CROWN CASTLE'S REVIEW AND SPECIFIC WRITTEN CONSENT. CROWN CASTLE RESERVES THE RIGHT TO DETERMINE WHETHER OR NOT A RESOLUTION IS ACCEPTABLE.
     - 9.11.3. AFTER EACH INSPECTION, THE TESTING AGENCY WILL PREPARE A WRITTEN ACCEPTANCE OR REJECTION WHICH WILL BE GIVEN TO THE CONTRACTOR AND FILED AS DAILY REPORTS TO CROWN CASTLE. THIS WRITTEN ACTION WILL GIVE THE CONTRACTOR A LIST OF ITEMS TO BE CORRECTED, PRIOR TO CONTINUING CONSTRUCTION, AND/OR LOADING OF STRUCTURAL ITEMS.
     - 9.11.4. THE TESTING AGENCY DOES NOT RELIEVE THE CONTRACTOR'S CONTRACTUAL OR STATUTORY OBLIGATIONS. THE CONTRACTOR HAS THE SOLE RESPONSIBILITY FOR ANY DEVIATIONS FROM THE OFFICIAL CONTRACT DOCUMENTS. THE TESTING AGENCY WILL NOT REPLACE THE CONTRACTOR'S QUALITY CONTROL PERSONNEL.

MI CHECKLIST

CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY EOR)	REPORT ITEM
PRE-CONSTRUCTION	
X	MI CHECKLIST DRAWINGS
X	EOR REVIEW
X	FABRICATION INSPECTION
X	FABRICATOR CERTIFIED WELD INSPECTION
X	MATERIAL TEST REPORT (MTR)
X	FABRICATOR NDE INSPECTION
NA	NDE REPORT OF MONOPOLE BASE PLATE (AS REQUIRED)
X	PACKING SLIPS
ADDITIONAL TESTING AND INSPECTIONS:	
CONSTRUCTION	
X	CONSTRUCTION INSPECTIONS
NA	FOUNDATION INSPECTIONS
NA	CONCRETE COMP. STRENGTH AND SLUMP TESTS
X	POST INSTALLED ANCHOR ROD VERIFICATION
NA	BASE PLATE GROUT VERIFICATION
X	CONTRACTOR'S CERTIFIED WELD INSPECTION
NA	EARTHWORK: [illegible] AND COMPACTION
X	ON SITE COLD GALVANIZING VERIFICATION
NA	GUY WIRE TENSION REPORT
X	GC AS-BUILT DOCUMENTS
NA	[illegible] INSTALLER'S DRILLING AND INSTALLATION LOGS AND [illegible] DOCUMENTS
ADDITIONAL TESTING AND INSPECTIONS:	
POST-CONSTRUCTION	
X	MI INSPECTOR REDLINE OR RECORD DRAWING(S)
X	POST INSTALLED ANCHOR ROD PULL-OUT TESTING
NA	REFER TO MICROPILE/ROCK ANCHOR NOTES FOR SPECIAL INSPECTION AND TESTING REQUIREMENTS.
X	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	

NOTE: X DENOTES A DOCUMENT NEEDED FOR THE MI REPORT
NA DENOTES A DOCUMENT THAT IS NOT REQUIRED FOR THE MI REPORT

STATE OF CONNECTICUT
JOSEPH PACHICARAN JACOBS
No. PEN 22731
LICENSED PROFESSIONAL ENGINEER

AUG 04 2015

1 8-03-2015

PAUL J. FORD AND COMPANY
STRUCTURAL ENGINEERS
250 East Broad Street · Suite 600 · Columbus, Ohio 43215
(614) 221-6679 www.pjfweb.com

CROWN CASTLE
3530 TORINGDON WAY, SUITE 300, CHARLOTTE, NC 28277
PH: (724) 416-2000

BU #806365; HRT 303 943203
STAFFORD, CONNECTICUT
MONOPOLE REINFORCEMENT AND RETROFIT PROJECT

PROJECT: 37515-0530.005.7700 R1

DRAWN BY: B.M.S.	MI CHECKLIST
CHECKED BY: C.P.	
APPROVED BY: KAT/BKR	S-10
DATE: 5-4-2015	

EXHIBIT F

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RADIO FREQUENCY EMISSIONS ANALYSIS REPORT
EVALUATION OF HUMAN EXPOSURE POTENTIAL TO NON-IONIZING EMISSIONS

T-Mobile Existing Facility

Site ID: CT11528C

Crown Castle MP
46 Brendan Street
Stafford Springs, CT 06076

October 21, 2015

EBI Project Number: 6215002958

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general public allowable limit:	15.83 %

21 B Street Burlington, MA 01803 Tel: (781) 273.2500 Fax: (781) 273.3311

EBI Consulting
environmental | engineering | due diligence

October 21, 2015

T-Mobile USA
Attn: Jason Overbey, RF Manager
35 Griffin Road South
Bloomfield, CT 06002

Emissions Analysis for Site: **CT11528C – Crown Castle MP**

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **46 Brendan Street, Stafford Springs, CT**, for the purpose of determining whether the emissions from the Proposed T-Mobile Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter (μW/cm2). The number of $\mu W/cm^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The general population exposure limit for the 700 MHz Band is approximately 467 $\mu W/cm^2$, and the general population exposure limit for the 1900 MHz (PCS) band is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed T-Mobile Wireless antenna facility located at **46 Brendan Street, Stafford Springs, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was focused at the base of the tower. For this report the sample point is the top of a 6 foot person standing at the base of the tower.

For all calculations, all equipment was calculated using the following assumptions:

1) 2 GSM channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel

2) 2 UMTS channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

3) 2 LTE channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.

4) 1 LTE channel (700 MHz Band) was considered for each sector of the proposed installation. This channel has a transmit power of 30 Watts.

5) Since the radios are ground mounted there are additional cabling losses accounted for. For each RF path the following losses were calculated. 0.84 dB of additional cable loss for all 700 MHz Channels and 1.52 dB of additional cable loss for all 1900 MHz. This is based on manufacturers Specifications for 150 feet of 1-5/8" coax cable on each path.

6) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.

7) For the following calculations the sample point was the top of a six foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufactures supplied specifications minus 10 dB was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

8) The antennas used in this modeling are the **EMS RR90_17_02DP** for 1900 MHz (PCS) channels and the **Commscope LNX-6515DS-VTM** for 700 MHz channels. This is based on feedback from the carrier with regards to anticipated antenna selection. The **EMS RR90_17_02DP** has a maximum gain of **14.4 dBd** at their main lobe. The **Commscope LNX-6515DS-VTM** has a maximum gain of **14.6 dBd** at its main lobe. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

9) The antenna mounting height centerline of the proposed antennas is **123 feet** above ground level (AGL).

10) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

All calculations were done with respect to uncontrolled / general public threshold limits.

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T-Mobile Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	EMS RR90_17_02DP	Make / Model:	EMS RR90_17_02DP	Make / Model:	EMS RR90_17_02DP
Gain:	14.4 dBd	Gain:	14.4 dBd	Gain:	14.4 dBd
Height (AGL):	123	Height (AGL):	123	Height (AGL):	123
Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)	Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)	Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)
Channel Count	6	Channel Count	6	# PCS Channels:	6
Total TX Power:	240	Total TX Power:	240	# AWS Channels:	240
ERP (W):	4,626.06	ERP (W):	4,626.06	ERP (W):	4,626.06
Antenna A1 MPE%	1.21	Antenna B1 MPE%	1.21	Antenna C1 MPE%	1.21
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	Commscope LNX-6515DS-VTM	Make / Model:	Commscope LNX-6515DS-VTM	Make / Model:	Commscope LNX-6515DS-VTM
Gain:	14.6 dBd	Gain:	14.6 dBd	Gain:	14.6 dBd
Height (AGL):	123	Height (AGL):	123	Height (AGL):	123
Frequency Bands	700 MHz	Frequency Bands	700 MHz	Frequency Bands	700 MHz
Channel Count	1	Channel Count	1	Channel Count	1
Total TX Power:	30	Total TX Power:	30	Total TX Power:	30
ERP (W):	713.05	ERP (W):	713.05	ERP (W):	713.05
Antenna A2 MPE%	0.40	Antenna B2 MPE%	0.40	Antenna C2 MPE%	0.40

Site Composite MPE%	
Carrier	**MPE%**
T-Mobile (Per Sector Max)	**1.62 %**
AT&T	4.97 %
Verizon Wireless	7.77 %
Sprint	0.48 %
Nextel	0.99 %
Site Total MPE %:	**15.83 %**

T-Mobile Sector 1 Total:	1.62 %
T-Mobile Sector 2 Total:	1.62 %
T-Mobile Sector 3 Total:	1.62 %
Site Total:	15.83 %

T-Mobile _per sector	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu W/cm^2$)	Frequency (MHz)	Allowable MPE ($\mu W/cm^2$)	Calculated % MPE
T-Mobile 1900 MHz (PCS) LTE	2	1156.51	123	6.07	2100	1000	0.61 %
T-Mobile 1900 MHz (PCS) GSM	2	578.25	123	3.04	1900	1000	0.30 %
T-Mobile 1900 MHz (PCS) UMTS	2	578.25	123	3.04	2100	1000	0.30 %
T-Mobile 700 MHz LTE	1	713.05	123	1.87	700	467	0.40 %
						Total:	1.62%

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Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general public exposure to RF Emissions.

The anticipated maximum composite contributions from the T-Mobile facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general public exposure to RF Emissions are shown here:

T-Mobile Sector	Power Density Value (%)
Sector 1:	1.62 %
Sector 2:	1.62 %
Sector 3 :	1.62 %
T-Mobile Per Sector Maximum:	1.62 %
Site Total:	15.83 %
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **15.83%** of the allowable FCC established general public limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.

Scott Heffernan
RF Engineering Director

EBI Consulting
21 B Street
Burlington, MA 01803

EXHIBIT G

COHEN and WOLF P.C.
ATTORNEYS AT LAW

JULIE D. KOHLER

PLEASE REPLY TO: Bridgeport
WRITER'S DIRECT DIAL: (203) 337-4157
E-Mail Address: jkohler@cohenandwolf.com

December 14, 2015

VIA CERTIFIED MAIL

First Selectman Anthony Frassinelli
Warren Memorial Town Hall
1 Main Street, Second Floor
Stafford Springs, CT 06076

Re: Sub-Petition for Declaratory Ruling Filed with the Connecticut Siting Council for Modifications to a Telecommunications Facility at 46 Brendan Street, Stafford (Stafford Springs), Connecticut

Dear First Selectman Frassinelli:

This firm represents T-Mobile Northeast LLC ("T-Mobile"). Today, T-Mobile filed a Sub-Petition for Declaratory Ruling ("Sub-Petition") with the Connecticut Siting Council ("Council") seeking approval to modify the existing wireless telecommunications facility at 46 Brendan Street in Stafford (the "Property").

T-Mobile proposes to remove an antenna mount at 122 feet and install a fourteen (14) foot monopole extension that will extend to a height of 129 feet. It will remove and replace an existing antenna mount with new T-arm mounts at a centerline of 123 feet, install three (3) new antennas and install three (3) new bias tees on the proposed mounts, relocate three (3) existing antennas and relocate three (3) existing tower mounted amplifiers ("TMAs") to the proposed mounts, all at a centerline of 123 feet AGL. Six (6) new lines of coax cable will be routed along the outside of the monopole. T-Mobile will also install one (1) new battery backup unit (BBU) cabinet in the equipment compound. (Collectively, these modifications are referred to as "Facility Modifications").

The Facility Modifications constitute an eligible facility request pursuant to Section 6409(a) of the Federal Middle Class Tax Relief and Job Creation Act of 2012 (47 U.S.C. § 1455(a)) and the October 21, 2014 Order of the Federal Communications Commission (FCC-14¬533). A copy of the full Sub-Petition is attached for your review. Landowners whose property abuts the Property were also sent a copy of this Sub-Petition.

Pursuant to its decision in Petition No. 1133, comments or concerns regarding this proposal should be submitted to the Council within thirty (30) days of the date of the Sub-Petition.

If you have any questions regarding the Sub-Petition or the Council's process for reviewing the Sub-Petition don't hesitate to contact me at the number listed above. You may also contact the Council directly at 860-827-2935.

Very truly yours,

Julie D. Kohler, Esq.

JDK/lcc
Enclosure

EXHIBIT H

COHEN and WOLF P.C.
ATTORNEYS AT LAW

JULIE D. KOHLER

PLEASE REPLY TO: Bridgeport
WRITER'S DIRECT DIAL: (203) 337-4157
E-Mail Address: jkohler@cohenandwolf.com

December 14, 2015

VIA CERTIFIED MAIL

Mr. Glenn Tiziani and
Mr. Peter Tiziani
Tiziani, LLC
1014 Buckley Highway
Union, CT 06076

Re: Sub-Petition for Declaratory Ruling Filed with the Connecticut Siting Council for Modifications to a Telecommunications Facility at 46 Brendan Street, Stafford (Stafford Springs), Connecticut

Dear Gentlemen:

This firm represents T-Mobile Northeast LLC ("T-Mobile"). Today, T-Mobile filed a Sub-Petition for Declaratory Ruling ("Sub-Petition") with the Connecticut Siting Council ("Council") seeking approval to modify the existing wireless telecommunications facility at 46 Brendan Street in Stafford (the "Property"). You are receiving this letter as Tiziani LLC is the property owner of record of this parcel.

T-Mobile proposes to remove an antenna mount at 122 feet and install a fourteen (14) foot monopole extension that will extend to a height of 129 feet. It will remove and replace an existing antenna mount with new T-arm mounts at a centerline of 123 feet, install three (3) new antennas and install three (3) new bias tees on the proposed mounts, relocate three (3) existing antennas and relocate three (3) existing tower mounted amplifiers ("TMAs") to the proposed mounts, all at a centerline of 123 feet AGL. Six (6) new lines of coax cable will be routed along the outside of the monopole. T-Mobile will also install one (1) new battery backup unit (BBU) cabinet in the equipment compound. (Collectively, these modifications are referred to as "Facility Modifications").

The Facility Modifications constitute an eligible facility request pursuant to Section 6409(a) of the Federal Middle Class Tax Relief and Job Creation Act of 2012 (47 U.S.C. § 1455(a)) and the October 21, 2014 Order of the Federal Communications Commission (FCC-14¬533). A copy of the full Sub-Petition is attached for your review.

Pursuant to its decision in Petition No. 1133, comments or concerns regarding this proposal should be submitted to the Council within thirty (30) days of the date of the Sub-Petition.

1115 Broad Street
P.O. Box 1821
Bridgeport, CT 06601-1821
Tel: (203) 368-0211
Fax: (203) 394-9901

158 Deer Hill Avenue
Danbury, CT 06810
Tel: (203) 792-2771
Fax: (203) 791-8149

320 Post Road West
Westport, CT 06880
Tel: (203) 222-1034
Fax: (203) 227-1373

657 Orange Center Road
Orange, CT 06477
Tel: (203) 298-4066
Fax: (203) 298-4068

If you have any questions regarding the Sub-Petition or the Council's process for reviewing the Sub-Petition don't hesitate to contact me at the number listed above. You may also contact the Council directly at 860-827-2935.

Very truly yours,

Julie D. Kohler, Esq.

JDK/lcc
Enclosure

EXHIBIT I

COHEN and WOLF P.C.
ATTORNEYS AT LAW

JULIE D. KOHLER

PLEASE REPLY TO: Bridgeport
WRITER'S DIRECT DIAL: (203) 337-4157
E-Mail Address: jkohler@cohenandwolf.com

December 14, 2015

VIA CERTIFIED MAIL

Re: Sub-Petition for Declaratory Ruling Filed with the Connecticut Siting Council for Modifications to a Telecommunications Facility at 46 Brendan Street, Stafford (Stafford Springs), Connecticut

Dear Abutting Property Owner:

This firm represents T-Mobile Northeast LLC ("T-Mobile"). Today, T-Mobile filed a Sub-Petition for Declaratory Ruling ("Sub-Petition") with the Connecticut Siting Council ("Council") seeking approval to modify the existing wireless telecommunications facility at 46 Brendan Street in Stafford (the "Property"). This notice is being sent to you because you are listed as an owner of land that abuts the Property.

T-Mobile proposes to remove an antenna mount at 122 feet and install a fourteen (14) foot monopole extension that will extend to a height of 129 feet. It will remove and replace an existing antenna mount with new T-arm mounts at a centerline of 123 feet, install three (3) new antennas and install three (3) new bias tees on the proposed mounts, relocate three (3) existing antennas and relocate three (3) existing tower mounted amplifiers ("TMAs") to the proposed mounts, all at a centerline of 123 feet AGL. Six (6) new lines of coax cable will be routed along the outside of the monopole. T-Mobile will also install one (1) new battery backup unit (BBU) cabinet in the equipment compound. (Collectively, these modifications are referred to as "Facility Modifications").

The Facility Modifications constitute an eligible facility request pursuant to Section 6409(a) of the Federal Middle Class Tax Relief and Job Creation Act of 2012 (47 U.S.C. § 1455(a)) and the October 21, 2014 Order of the Federal Communications Commission (FCC-14¬533). A copy of the full Sub-Petition is attached for your review.

Pursuant to its decision in Petition No. 1133, comments or concerns regarding this proposal should be submitted to the Council within thirty (30) days of the date of the Sub-Petition.

If you have any questions regarding the Sub-Petition or the Council's process for reviewing the Sub-Petition don't hesitate to contact me at the number listed above. You may also contact the Council directly at 860-827-2935.

Very truly yours,

Julie D. Kohler, Esq.

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Fax: (203) 227-1373

657 Orange Center Road
Orange, CT 06477
Tel: (203) 298-4066
Fax: (203) 298-4068

T-MOBILE

ABUTTERS LIST

46 BRENDAN STREET
STAFFORD SPRINGS, CONNECTICUT

	Property Address and Parcel Number	**Owner and Mailing Address**
1.	54 Quinn Street Stafford Springs, CT Parcel 49/002	Margaret A.D. Maynard PO Box 221 Stafford Springs, CT 06076 and 54 Quinn Street Stafford Springs, CT 06076
2.	42 Quinn Street Stafford Springs, CT Parcel 49/003.01	Paula D. Gibbons 42 Quinn Street Stafford Springs, CT 06076
3.	40 Quinn Street Stafford Springs, CT Parcel 40/003.02	Roland E. Delluomo and Mary E. Dulluomo 11130 Dumbarton Drive Dunkirk, MD 20754
4.	38 Quinn Street Stafford Springs, CT Parcel 49/ 3	Lisa D. Deary and Richard P. Dewy 38 Quinn Street Stafford Springs, CT 06076
5.	25 Quinn Street Stafford Springs, CT Parcel No. 52/177	Alois G. Modr and Shirley U. Modr c/o Robert Modr 247 Basin Point Harpswell, ME 04079
6.	41 Brendan Street Stafford Springs, CT Parcel No. 52/312	John C. Rocchetti and Antoinette L. Rocchetti 41 Brendan Street Stafford Springs, CT 06076
7.	36 Quinn Street Stafford Springs, CT Parcel No. 52/173	Robert J. Martorelli and the Estate of Elizabeth M. Martorelli 36 Quinn Street Stafford Springs, CT 06076

T-MOBILE

ABUTTERS LIST

46 BRENDAN STREET
STAFFORD SPRINGS, CONNECTICUT

	Property Address and Parcel Number	**Owner and Mailing Address**
8.	46 Edgewood Street Stafford Springs, CT Parcel No. 49/005	Laurel Hill of Stafford Condominium Association Inc. c/o Westford Real Estate Management LLC 348 Hartford Turnpike, Suite 200 Vernon, CT 06066
9.	90-92 Furnace Avenue Stafford Springs, CT Parcel No. 49/006	Isabella's Court Condominium Glenville Development Corporation 31 Wales Road Stafford Springs, CT 06076
10.	21 Levinthal Run Stafford Springs, CT Parcel No. 49/007	Town of Stafford Middle School 21 Levinthal Run Stafford Springs, CT 06076 and 1 Main Street Stafford Springs, CT 06076
11.	42 Brendan Street Stafford Springs, CT Parcel No. 52/(174) 175 & 176	Richard A. Johnston and Carol A. Johnston 42 Brendan Street Stafford Springs, CT 06076