



SBA

July 2, 2015

Members of the Siting Council
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RE: Notice of Work Complete
331 Killingworth Road
Guilford, CT
Sprint Site #: NV2.5_CT03XC068
EM-SPRINT-060-140605

Members of the Siting Council:

On behalf of Sprint Spectrum, SBA Communications is hereby notifying the Connecticut Siting Council that work has been completed at the aforementioned telecommunications facility.

Pursuant to the Council's letter of acknowledgement dated June 30, 2014, please find the enclosed Post Modification Inspection Report and Statement of Special Inspections confirming that the installation meets with the recommendations made in the structural analysis report.

Thank you,



Kri Pelletier
Property Specialist
SBA Communications Corporation
33 Boston Post Road West, Suite 320
Marlborough, MA 01752
508-251-0720 x 3804 + T
508-251-1755 + F
kpelletier@sbsite.com



Final Report of Special Inspections

Project: CT03XC068-A NORTH GUILFORD/ SPRINT PCS (NV2.5 PROJECT)

Location: 331 Killingworth Road Guilford, CT

Owner: David Acampora

Owner's Address: 331 Killingworth Road
Guilford, CT 06437

Engineer of Record: Derek J. Creaser, P.E.
Hudson Design Group, LLC.

To the best of my information, knowledge and belief, the Special Inspections required for this project, and itemized in the *Statement of Special Inspections* submitted for permit, have been performed and all discovered discrepancies have been reported and resolved.

Comments: Based on my knowledge, information and belief the completed construction substantially conforms to the approved plans, Connecticut State Building Code, Structural Standards for Steel Antenna Towers and Antenna Supporting Structures (ANSI/TIA/EIA-222-F), the equipment manufacturer's installation guidelines, and the following:

1. Final Construction Drawings dated 05-22-2014, prepared by Hudson Design Group, LLC entitled "NORTH GUILFORD".
2. Passing Structural Analysis with mods dated 05-29-2014, prepared by FDH Engineering, Inc.
3. Modifications Drawings dated 05-29-2014, prepared by FDH Engineering, Inc.

All deviations from the approved plans do not endanger the intended occupancy of the facility and equipment substitutions are approved as equivalent to the original specifications. Construction has been satisfactorily completed. This inspection does not include testing and inspections of any modifications to the tower. Such inspections are strictly the responsibility of the design professional performing those design and analyses.

Interim reports submitted prior to this final report form a basis for and are to be considered an integral part of this final report.

Respectfully submitted,
Special Inspector

Derek J. Creaser, P.E.
(Type or print name)


Signature

3/31/15
Date





6521 Meridien Drive
 Raleigh, NC 27616
 (919) 755-1012 P
 (919) 755-1031 F

February 23, 2015

Stephen Roth
 Regional Site Manager
 SBA Network Services
 5900 Broken Sound Parkway, NW
 Boca Raton, FL 33487

Subject: Modification Inspection Report

SBA Designation: SBA Site Number: CT13065-A-03
 SBA Site Name: Guilford

Carrier: Sprint

Inspection Firm Designation: FDH Inc. Project Number: 1466HY1700

Site Data: 331 Killingworth Road, Guilford, CT 06437
 Latitude: 41.3532° Longitude: -72.6883°
 152' Self-Support Tower

FDH Engineering, Inc. is pleased to submit this “**Modification Inspection Report**” (MI Report) to SBA Network Services for the modification/reinforcement to the subject structure. This Modification Inspection (MI) was performed in accordance with Contract Documents, and FDH Inspection Standards. The purpose of this MI is to confirm that the modification installation configuration and workmanship are in accordance with the contract document(s) listed in Table 1. The MI is not a review of the adequacy or effectiveness of the modification solution.

Table 1 – General Information

	Company	Contact
MI Inspector	FDH Inc.	Manning H Lilienthal 314-773-4000
Independent	EOR	Turnkey
Modification Design EOR	FDH Engineering Inc.	Dennis Daniel Abel, PE 919-755-1012
General Contractor	Northeast Towers, Inc.	Mike Foley 203-414-1184
Sub to the General Contractor	NA	NA
Field CWI for the General Contractor	NA	NA
Field NDE for the General Contractor	NA	NA

Table 2 – Design Documents

Document(s)	Remarks	Source
Tower Modification Drawings	FDH Engineering 4664X1400 Dated 05-29-14	FDH Engineering, Inc.

Based on our inspection, FDH Engineering determines this project:

X_PASSING MI

The configuration, materials and/or workmanship of the modifications are installed in accordance with the Contract Documents and no deficiencies were found.

- Issues noted in the MI notes have been approved by the Engineer of Record.

All observations were performed after the construction was complete and that FDH Engineering, Inc. was not present during the construction phase.

We at FDH Engineering, Inc. appreciate the opportunity of providing our continuing professional services to you and SBA Network Services. If you have any questions or need further assistance on this or any other projects please give us a call.

Respectfully submitted,

Dennis D. Abel, P.E.
Connecticut License # 23247



Project Closeout Information - Table of Contents

PRE-CONSTRUCTION

- MI Checklist Drawing
- EOR Approved Shop Drawings
- Fabrication Inspection
- Fabricator Certified Welding Inspection (CWI)
- Material Testing Report (MTR)
- Fabricator NDE Inspection
- NDE Report of Monopole Base Plate
- Packing Slips

Reference Document

7
NA
NA
8-10
11-27
NA
NA
28

CONSTRUCTION

- Construction Inspections
- Foundation Inspections
- Concrete Compression Strength and Slump Tests
- Post Installed Anchor Rod Verification
- Base Plate Grout Verification
- Contractor's Certified Weld Inspection
- Earthwork: Lift and Density
- Galvanization Verification
- Guy Wire Tension Report
- GC As-Built Documents

29
NA
NA
NA
NA
NA
NA
30
NA
31-36

POST-CONSTRUCTION

- MI Inspector Redline/Record Drawings
- Engineer Approval
- Post Installed Anchor Rod Pull-out Testing
- On-Site Inspection Photographs

37-42
43-45
NA
See Table 3

Table 3.0 – On-Site Inspection Photographs




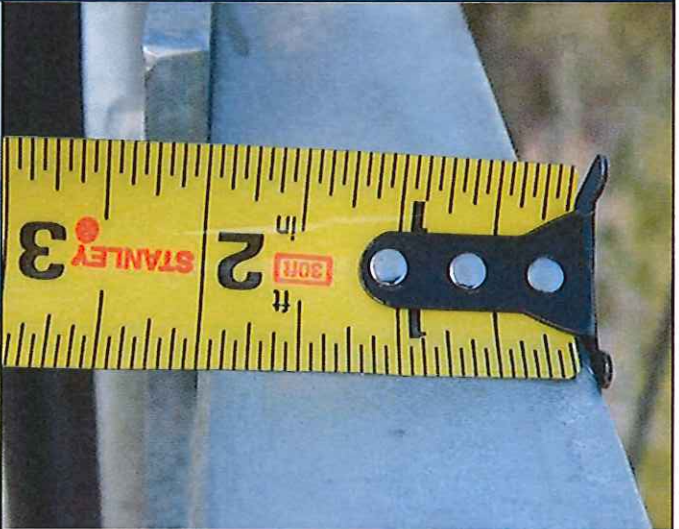
PH#01 Site Sign –	PH#02 Installation of Modification – New Sub-Horizontals
 A white rectangular sign is posted on a green chain-link fence. The sign features the SBA logo (a red square with white signal waves) and the text: "SITE I.D.#: CT13065", "FCC#:", "LEASING (800) 487-SITE (7483)", "EMERGENCY (888) 950-SITE (7483)", and "WWW.SBASITE.COM".	 A close-up photograph of a metal lattice tower structure against a clear blue sky. Numerous black cables are bundled together and run vertically along the tower's frame.
PH#03 Installation of Modification – New Sub-Horizontals	PH#04 Installation of Modification – New Sub-Horizontals
 A photograph showing a horizontal metal cable or pipe. A yellow measuring tape is held vertically against the cable, showing measurements in feet and inches. The background shows a landscape with trees and a blue sky.	 A close-up photograph of a yellow Stanley measuring tape being used to measure a metal surface. The tape shows markings for 2 feet and 3 inches. The brand name "STANLEY" and the number "3" are visible on the tape.

Table 3.1 – On-Site Inspection Photographs

PH#05 Installation of Modification – New Sub-Horizontals	PH#06 Installation of Modification – New Sub-Horizontals
 A close-up photograph of a digital depth gauge. The gauge is held against a metal surface. The digital display shows the number 0.2571. The gauge has markings for 'Inch/mm' and 'OFF ON ZERO'.	 A photograph showing a yellow Stanley tape measure held against a horizontal metal beam. The tape is extended to approximately 2 inches. A blue bolt is visible on the beam above the tape.
PH#07 Installation of Modification – New Sub-Horizontals	PH#08 Installation of Modification – New Sub-Horizontals
 A photograph showing a yellow Stanley tape measure held against a horizontal metal beam. The tape is extended to approximately 4 inches. Two blue bolts are visible on the beam below the tape.	 A photograph showing a yellow Stanley tape measure held against a horizontal metal beam. The tape is extended to approximately 6 inches. Two blue bolts are visible on the beam above the tape.

Table 3.2 – On-Site Inspection Photographs

PH#09 Installation of Modification – New Sub-Hizontals	PH#10 Installation of Modification – New Sub-Hizontals
	
PH#11 Installation of Modification – New Sub-Hizontals	PH#12 Installation of Modification – New Sub-Hizontals
	

POST CONSTRUCTION INSPECTION NOTES:

GENERAL

- THE POST CONSTRUCTION INSPECTION (PCI) IS A VISUAL INSPECTION OF TOWER MODIFICATIONS AND A REVIEW OF CONSTRUCTION INSPECTIONS AND OTHER REPORTS DOCUMENTS, INCLUDING THE MODIFICATION DRAWINGS, AS DESIGNED BY THE ENGINEER OF RECORD (EOR).
- THE PCI IS TO VERIFY INSTALLATION, CONFIGURATION AND WORKMANSHIP ONLY AND IS NOT A DESIGN REVIEW OF THE MODIFICATION DESIGN. OWNERSHIP OF THE STRUCTURAL MODIFICATION DESIGN EFFECTIVENESS AND INTEGRITY RESIDES WITH THE EOR AT ALL TIMES.
- ALL PCIS SHALL BE CONDUCTED BY A PCI INSPECTOR THAT IS APPROVED TO PERFORM ELEVATED WORK FOR FDH ENGINEERING, INC.
- TO ENSURE THAT THE REQUIREMENTS OF THE PCI ARE MET, IT IS VITAL THAT THE GENERAL CONTRACTOR (GC) AND THE PCI INSPECTOR BEGIN COMMUNICATING AND COORDINATING EARLY IN THE PROJECT. THE PCI INSPECTOR IS REQUESTING THAT THE PARTY WILL BE PROACTIVE IN REACHING OUT TO THE OTHER PARTY. IF CONTACT INFORMATION IS NOT KNOWN, CONTACT YOUR FDH POINT OF CONTACT (POC).
- REFER TO COR-01 : CONTRACTOR CLOSEOUT REQUIREMENTS FOR FURTHER DETAILS AND REQUIREMENTS.

PCI INSPECTOR

- THE PCI INSPECTOR IS REQUIRED TO CONTACT THE GC AS SOON AS RECEIVING A PO FOR THE PCI TO, AT A MINIMUM:
 - REVIEW THE REQUIREMENTS OF THE PCI CHECKLIST
 - CONFIRM LOG TO SCHEDULE TO CONDUCT ON-SITE INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS
- THE PCI INSPECTOR IS RESPONSIBLE FOR COLLECTING ALL GENERAL CONTRACTOR (GC) INSPECTION AND TEST REPORTS, REVIEWING THE DOCUMENTS FOR ADHERENCE TO THE PCI REQUIREMENTS, CONDUCTING THE IN-FIELD INSPECTIONS, AND SUBMITTING THE PCI REPORT TO FDH.

CORRECTION OF FAILING PCIS

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

REQUIRED PHOTOS

- BETWEEN THE GC AND THE PCI INSPECTOR THE FOLLOWING PHOTOGRAPHS, AT A MINIMUM, ARE TO BE TAKEN AND INCLUDED IN THE PCI REPORT:
 - PRE-CONSTRUCTION GENERAL SITE CONDITION
 - PHOTOGRAPHS DURING THE REINFORCEMENT MODIFICATION CONSTRUCTION/ERECTION AND INSPECTION
 - PHOTOS OF ALL CRITICAL DETAILS
 - FOUNDATION MODIFICATIONS
 - WELD PREPARATION
 - BOLT INSTALLATION AND TORQUE
 - REINFORCEMENT CURING
 - SURFACE COATING REPAIR
 - POST CONSTRUCTION PHOTOGRAPHS
 - FINAL INFIELD CONDITION
- PHOTOS OF ELEVATED MODIFICATIONS TAKEN FROM THE GROUND SHALL BE CONSIDERED INADEQUATE.

PCI CHECKLIST	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED	REPORT ITEM
X	PCI CHECKLIST DRAWING
N/A	EOR APPROVED SHOP DRAWINGS
N/A	FABRICATION INSPECTION
X	FABRICATOR CERTIFIED WELD INSPECTION
X	MATERIAL TEST REPORT (MTR)
N/A	FABRICATOR NDE INSPECTION
N/A	NDE REPORT OF MONOPOLE BASE PLATE (AS REQUIRED)
X	PACKING SLIPS
ADDITIONAL TESTING AND INSPECTIONS:	
CONSTRUCTION	
X	CONSTRUCTION INSPECTIONS
N/A	FOUNDATION INSPECTIONS
N/A	CONCRETE COMP. STRENGTH AND SLUMP TESTS
N/A	POST INSTALLED ANCHOR ROD VERIFICATION
N/A	BASE PLATE GROUT VERIFICATION
N/A	CONTRACTOR'S CERTIFIED WELD INSPECTION
N/A	EARTHWORK: LIFT AND DENSITY
X	ON SITE COULD GALVANIZING VERIFICATION
N/A	CUT WIRE TENSION REPORT
X	GC AS-BUILT DOCUMENTS
ADDITIONAL TESTING AND INSPECTIONS:	
POST-CONSTRUCTION	
X	PCI INSPECTOR REDLINE OR RECORD DRAWING(S)
N/A	POST INSTALLED ANCHOR ROD PULL-OUT TESTING
X	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	

NOTE: X DENOTES A DOCUMENT NEEDED FOR THE PCI REPORT
N/A DENOTES A DOCUMENT THAT IS NOT REQUIRED FOR THE PCI REPORT



DENNIS D. ABEL, P.E.
CONNECTICUT LIC. NO. 23247
05/29/14

DRAWN BY: BTX
CHECKED BY: MTR
INCL. APPROV: DDA
PROJECT NO: 14864X1400

SUBMITTALS	
DATE	DESCRIPTION
05/29/14	CONSTRUCTION

THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY BY NATURE. REPRODUCTION OR CAUSING TO BE REPRODUCED IN ANY MANNER WITHOUT THE PERMISSION OF FDH ENGINEERING, INC. IS PROHIBITED.

SITE NAME:
GUILFORD

SITE NUMBER:
CT13065-A-03

SITE ADDRESS:
331 KILLINGWORTH ROAD
GUILFORD, CT 06437

SHEET TITLE
POST CONSTRUCTION
INSPECTION NOTES

SHEET NUMBER
N-1

CUSTOMER: Northeast Towers	DATE OF INSPECTION	M	D	Y
ATTENTION:	REPORT No:	2	20	2015
PROJECT: Modification of Guilford 152' Self-support Tower	PAGE	1	OF	3
COMPONENT INSPECTED: New V-bracket Assembly	JOB No:	14664X1400		
AREA OF INTEREST: New Weld	P.O No:	N/A		
COMPONENT LOCATION: 331 Killingworth Road Guilford, CT 06437	INSPECTION EQUIPMENT			
SITE NAME: Guilford	Site No: CT13065-A-03	TYPE:	Visual, Fillet Gauges,	
MATERIAL: Galvanized Carbon Steel	HEAT No: N/A	Tape Measure		
COMPONENT SURFACE CONDITION: As Welded and Galvanized	EQUIPMENT No:			

EXAMINATION DATA

PROJECT CODE/SPEC. AWS D1.1
PROCEDURE No: QC - VT - CWI TECHNIQUE No: VT-1

REMARKS:
 As requested Visual Inspection was performed on the following welded areas:

1) New V-Bracket Assembly Plates at elevation 110'.
 A. Typical weld profile on tower legs a, b, and c is shown in photos "A".
 B. Typical weld size on tower legs a, b, and c is shown in photo "B".

RESULTS:
 1) ALL WELDS WERE FOUND TO BE ACCEPTABLE TO CODE AT TIME OF EXAMINATION



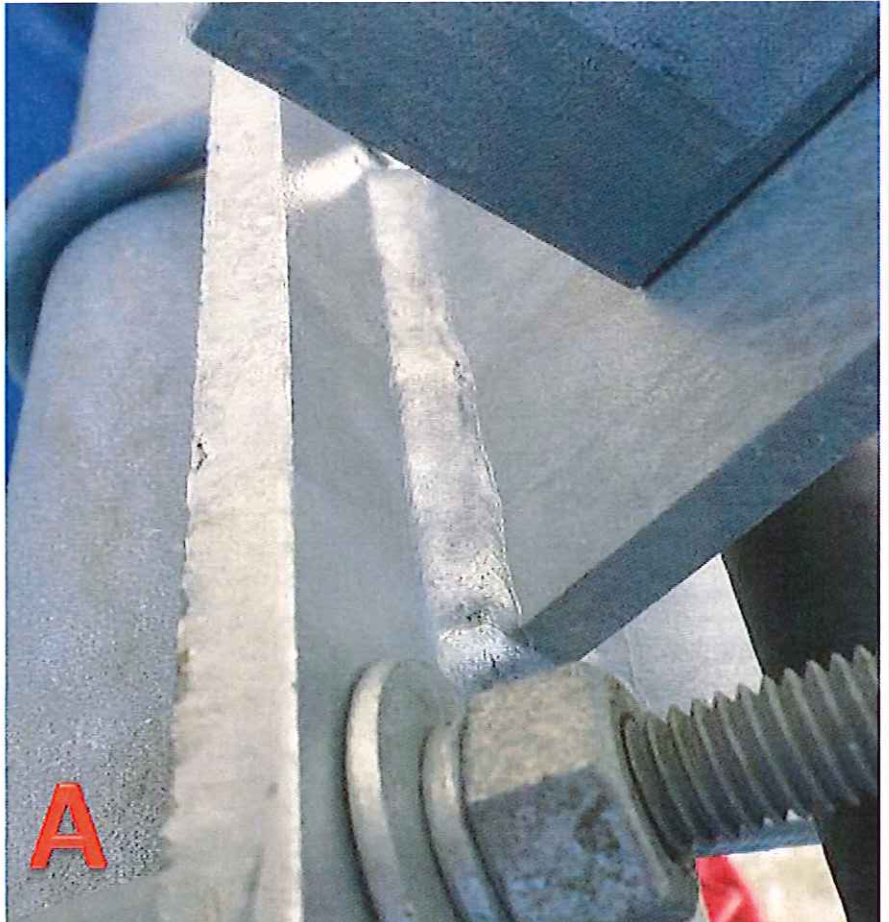
ADDITIONAL INFORMATION - SEE ATTACHED: PHOTO(S) SUPPLEMENTARY SHEET(S) NDT REPORTS VIDEO


SIGNATURES

	SIGNATURE	CERTIFICATION	DATE		
			LEVEL	M	D
INSPECTOR	A. Devine <i>Alex Devine</i>	CWI	2	20	15
SUPERVISOR					
AUTHORIZED INSPECTOR					
CUSTOMER REPRESENTATIVE					

CUSTOMER: Northeast Towers		DATE OF INSPECTION	M 2	D 20	Y 2015
ATTENTION:		REPORT No:	NH15-0064		
PROJECT: Modification of Guilford 152' Self-support Tower		PAGE	2	OF	3
COMPONENT INSPECTED: New V-bracket Assembly		JOB No:	14664X1400		
AREA OF INTEREST: New Weld		P.O No:	N/A		
COMPONENT LOCATION: 331 Killingworth Road Guilford, CT 06437		INSPECTION EQUIPMENT			
SITE NAME: Guilford	Site No: CT13065-A-03	TYPE:	Visual, Fillet Gauges, Tape Measure		
MATERIAL: Galvanized Carbon Steel	HEAT No: N/A				
COMPONENT SURFACE CONDITION: As Welded and Galvanized		EQUIPMENT No:			

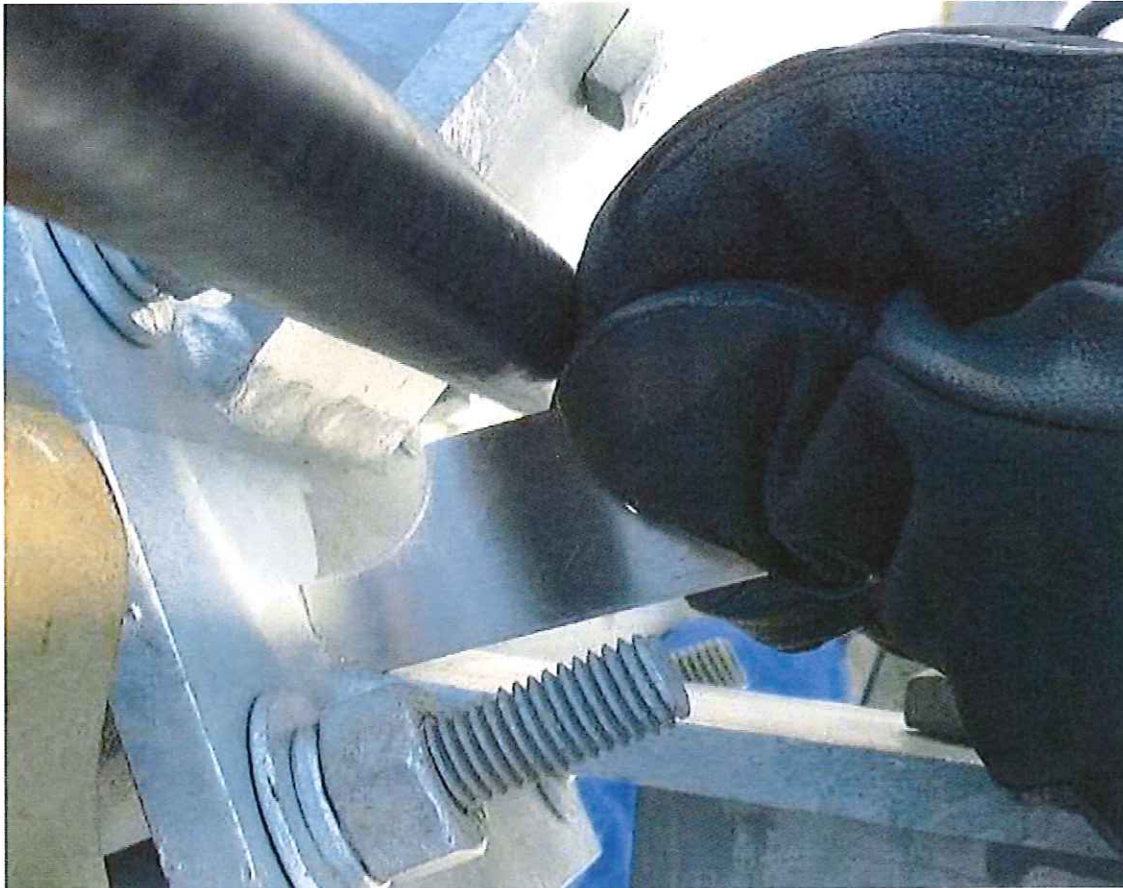
PHOTOS




INSPECTOR	A. Devine <i>Alex Devine</i>	 Alexander P Devine CWI 12070681 QC1 EXP. 7/1/2015	CWI		2	20	15
SUPERVISOR							
AUTHORIZED INSPECTOR							
CUSTOMER REPRESENTATIVE							

CUSTOMER: Northeast Towers		DATE OF INSPECTION	M 2	D 20	Y 2015
ATTENTION:		REPORT No:	NH15-0064		
PROJECT: Modification of Guilford 152' Self-support Tower		PAGE	3	OF	3
COMPONENT INSPECTED: New V-bracket Assembly		JOB No:	14664X1400		
AREA OF INTEREST: New Weld		P.O No:	N/A		
COMPONENT LOCATION: 331 Killingworth Road Guilford, CT 06437		INSPECTION EQUIPMENT			
SITE NAME: Guilford	Site No: CT13065-A-03	TYPE:	Visual, Fillet Gauges, Tape Measure		
MATERIAL: Galvanized Carbon Steel	HEAT No: N/A	EQUIPMENT No:			
COMPONENT SURFACE CONDITION: As Welded and Galvanized					


PHOTOS



B

INSPECTOR	A. Devine <i>Alex. Devine</i>	 Alexander P Devine CWI 12070661 QC1 EXP. 7/1/2015	CWI		2	20	15
SUPERVISOR							
AUTHORIZED INSPECTOR							
CUSTOMER REPRESENTATIVE							

CERTIFIED MATERIAL TEST REPORT

 <p>US-ML-JACKSON TN 801 GERDAU AMERISTEEL ROAD JACKSON, TN 38305 USA</p>		<p>CUSTOMER SHIP TO CERTIFIED STEEL 199 WHITEHEAD RD TRENTON, NJ 08619-3201 USA</p>	<p>CUSTOMER BILL TO CERTIFIED STEEL 1333 BRUNSWICK AVE LA WRENCEVILLE, NJ 08648-4502 USA</p>	<p>GRADE A36/57250X</p>	<p>SHAPE / SIZE Angle / 2X2X1/4</p>
<p>SALES ORDER 957255/000570</p>		<p>CUSTOMER MATERIAL N°</p>		<p>LENGTH 40'00"</p>	<p>WEIGHT 9,825 LB</p>
<p>CUSTOMER PURCHASE ORDER NUMBER 140693\MEX3</p>		<p>BILL OF LADING 1333-0000028155</p>	<p>DATE 07/09/2014</p>	<p>SPECIFICATION / DATE OF REVISION A529-05(2009), A572-13A A6-13A, A36-12, ASME SA-36 A709-13A, AASHTO M270-12 CSA-G40.21-04(2013)</p>	

CHEMICAL COMPOSITION		%		%		%		%		%	
C	Mn	P	S	Si	Cr	Ni	Cu	Mo	V	Nb	Sp
0.13	0.70	0.015	0.030	0.21	0.33	0.10	0.15	0.028	0.020	0.000	0.015

MECHANICAL PROPERTIES		Elong.		G/L		UTS		UTS	
YS	MPa	Inch	mm	min	min	PSI	PSI	MPa	PSI
27.00	27.00	8.000	200.0	200.0	200.0	74130	74810	511	54710
377	380							516	55170

MECHANICAL CHARACTERISTICS
R:R
29.15

COMMENTS / NOTES
This grade meets the requirements for the following grades:
ASTM Grades: A36; A529-50; A572-50; A709-36; A709-50
CSA Grades: 44W; 50W
AASHTO Grades: M270-36; M270-50
ASME Grades: SA36

The above figures are certified chemical and physical test records as contained in the permanent records of company. This material, including the billets, was melted and manufactured in the USA. CMTR complies with EN 10204 3.1.

Manoj
DIPANKAR YALAMANCHILI
QUALITY DIRECTOR

Prasanna Jinturkar
PRASANNA JINTURKAR
QUALITY ASSURANCE MGR

7 2x2x4
CERTIFIED 27204

3/8 H
 CERTIFIED 27180
 Çolakoğlu Metalurji

QM 1330
 QUALITY : ASTM A36-2005 ASTM A36

Certificate No : 15058851-20/2014
 Date : 27.08.2014

MILL'S CERTIFICATE (0.365 X 48.00 INCH)

MECHANICAL PROPERTIES

Coil No	Heat No	Yield Strength PSI	Tensile Strength PSI	Elongation %	%C	%Mn	%Si	%P	%S	%Cr	%Ni	%Cu	%Mo	%V	%Al	%N	%Ti	%Nb	%Sn	%Ceq	Weight Kg
F057978000	FA03835	46122	68313	33.40	0.16	0.77	0.02	0.016	0.013	0.06	0.10	0.23	0.018	0.002	0.029	0.008	0.002	0.002	0.013	0.33	21160
F057979000	FA03835	46122	68313	33.40	0.16	0.77	0.02	0.016	0.013	0.06	0.10	0.23	0.018	0.002	0.029	0.008	0.002	0.002	0.013	0.33	21320

CHEMICAL PROPERTIES

ÇOLAKOĞLU METALURJİ A.Ş.
 ANKARA
 0312 262 75 00

Çolakoğlu Metalurji A.Ş.
 Saniye Müdürlük • Rıhtım Yolu No:15 Kat:5 • 34605 Yatağan-Bağcıbaşı / İstanbul • Tel:2627 0045 • www.colakoglu.com.tr
 Fabrika • Diclece Organize Sanayi Bölgesi 1. Kısım Sokulu Samsun No: 6 • 41450 Diclece-Kocaeli • T: 0262 876 75 00 • F: 0262 754 64 20 - 1641 41 11



MECHANICAL PROPERTIES TESTING AFTER HOT DIP GALVANIZING
TESTED IN ACCORDANCE WITH F606

LOT NUMBER:

DESCRIPTION:

DATE TESTED:

	REQUIRED	SAMPLE 1	SAMPLE 2	SAMPLE 3
TENSILE LOAD	27100	32000	32300	32100
PROOFLOAD	19200	PASS	PASS	PASS
HARDNESS (HRC)	25-34	27.8	28.5	28.3

SLSB QC LAB, CERTIFICATIONS

510 E South 1st St.
Wright City, MO 63390

CHI INTERNATIONAL	
Date: 09-15-14	Time: 15:56:35
Customer: SL50	
Part No: 5/8 x 1 3/4	
Batch No: BG 0057	
Inspector: Joe J	
Accept /Reject	16,442 p.
SL 70766	

1 > Magnetic
Date: 09-15-14 Time: 15:56:35

A153/A123/F2329

F2329 Mils Minimum

Nutability

YES NO

Appearance

YES NO

CERTIFICATION OF COMPLIANCE

YES NO

This will serve as certification that the above referenced purchase order for the above referenced parts, which were Hot Dip Galvanized in our Wright City, MO plant in the U. S. A. at a bath temperature of 845° with a plus minus variance of 3° meets the ASTM specifications.

Joe Jokisch
QUALITY ASSURANCE MANAGER

- 1# 3.29 mil
- 2# 3.30 mil
- 3# 3.23 mil
- 4# 3.57 mil
- 5# 3.43 mil
- 6# 3.19 mil
- 7# 3.42 mil
- 8# 3.32 mil
- 9# 3.39 mil
- 10# 3.26 mil
- 11# 3.25 mil
- 12# 3.26 mil
- 13# 3.41 mil
- 14# 3.19 mil
- 15# 3.66 mil
- 16# 3.71 mil
- 17# 3.81 mil
- 18# 3.86 mil
- 19# 4.11 mil
- 20# 3.48 mil

SESSION STATS

N = 20
Average = 3.46 mil
Standard deviation = 0.254 mil
Accuracy = 0.11 mil
Percent deviation = 7.3%
High = 4.11 mil
Low = 3.19 mil
Range = 0.92 mil

SLSB, LLC dba St. Louis Screw & Bolt
 2000 Access Blvd.
 PO Box 260
 Madison, IL 62060
 PH: 800-237-7059
 FAX: 314-389-7510

PRODUCTION INFORMATION:

PART#: AAAG062175	SIZE: 5/8-11 X 1-3/4	LOT#: BG0057	DESCRIPTION: HHS	ASTM SPEC: A325-1	MFG DATE: 7/21/14	COATING SPEC: PLAIN	COATING DATE: N/A
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RAW MATERIAL INFORMATION:

GRADE: 10B30	HEAT NO: 10274670	ASTM SPEC: A-29	STEEL MILL SUPPLIER: BETA/CHARTER
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MECHANICAL PROPERTIES:

PRODUCTION QTY: 16,442	PCS SAMPLED: 5	ISSUE DATE: 9/09/14	SAMPLED BY: RC	TESTED BY: RC	H.T. PO#: 1264942-03	TEST METHODS: ASTM F606	VISUAL INSPECTION PER: ASTM F788 VISUAL	LOT PASSED: PASSED
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TENSILE STRENGTH

WEDGE AXIAL	LBS. 27100	LBS. 19200	ELONGATION ±0.0005	SURFACE N/A	HARDNESS CORE 25-34
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SAMPLES

	1	2	3	4	5	6	7	8	AVG.
TENSILE LOAD	32400	32500	32800	32100	32300				32,420
PROOF LOAD ELONGATION	.0001	.0002	.0002	.0003	.0003	.0003			.0002
HRB - SURF									
HRC - CORE	28.5	28.3	28.5	27.9	28.3				28.3

The SLSB, LLC Laboratory has been accredited by the American Association for Laboratory Accreditation in the field of mechanical and fastener testing for the tests listed above, certificate# 0696-01. The sampling plan meets or exceeds F 1470 Sample Size C or applicable specification. The steel was made and melted in the USA, and the product was manufactured & tested by SLSB, LLC in Madison IL, USA, free of mercury contamination. We certify that the samples tested conform to the ASTM specification listed above, and the data is a true representation of the information provided by the material supplier and our testing laboratory. This test certificate relates only to the items listed on this document and may not be reported or distributed except in full. Thread fit and dimensional requirements are compliant to ASME B 18.2.6 or B 18.2.1 specification where applicable.

[Signature]

Signed: _____ Date: 9/09/14

AMENDED **
 DATE: INITIAL:



MANUFACTURERS ID HEAD MARKING: SL

*Heats of steel used have not had the following materials intentionally added: bismuth, selenium, tellurium, or lead.

** Indicates the amended item, when and by whom.



CHARTER STEEL

A Division of
Charter Manufacturing Company, Inc.

FILE

1658 Cold Springs Road
Saukville, Wisconsin 53080
(262) 268- 2400

CHARTER STEEL TEST REPORT Reverse Has Text And Codes

1- 800- 437- 8789

FAX (262) 268- 2570

Beta Steel
44225 Utica Rd.
Utica,MI- 48318

Cust P.O.	301135- 01
Customer Part #	052510B300100SF(SW10B30- B)
Charter Sales Order	30064668
Heat #	10274670
Ship Lot #	1105283
Grade	10B30 R SK FG RHQ 5/8
Process	HR
Finish Size	5/8

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies these requirements.

Test Results of Heat Lot# 10274670

Lab Code: 7388

CHEM	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
%Wt	.32	.85	.008	.011	.230	.04	.07	.01	.09	.007	.003
	AL	N	B	TI	CA	NB					
	.025	.0060	.0020	.023	.0006	.001					

JOMINY(HRC)	J1	J2	J3	J4	J5	J6	J7	J8	J9	J10	J11	J12
	53	51	50	47	31	24	22	22	21	21	20	20

JOMINY SAMPLE TYPE ENGLISH = R JOMINY LAB = 0358- 01 DI = 2.28
CHEM. DEVIATION EXT.- GREEN =

Test Results of Rolling Lot# 1105283

	# of Tests	Min Value	Max Value	Mean Value	
TENSILE (KSI)	1	84.5	84.5	84.5	TENSILE LAB = 0358- 02
REDUCTION OF AREA (%)	1	48	48	48	RA LAB = 0358- 02

NUM DECARB = 1 AVE DECARB (Inch) = .003
REDUCTION RATIO = 99:1

Specifications: Manufactured per Charter Steel Quality Manual Rev. Date 09/12/12
Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:
Customer Document = PS- 1 Revision = Dated = 11- MAR- 08

Additional Comments:

Charter Steel
Saukville, WI, USA



Page 1 of 1

This MTR supersedes all previously dated MTRs for this order

Janice Barnard
Janice Barnard
Manager of Quality Assurance
02/17/2014

Rem: Load1,Fax0,Mail0

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled, and processed in the United States meeting DFAR's compliance.
2. Mercury was not used during the manufacture of this product, nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
		Code	Name	
0358-01	7388	CSSM	Charter Steel Melting Division	1653 Cold Springs Road, Saukville, WI 53080
0358-02	8171	CSSR/ CSSP	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	CSFP	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	CSCM/ CSCR	Charter Steel Cleveland	4300 E. 49th St., Cuyahoga Heights, OH 44125-1004
*	*	--	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Specification	CSSM	CSSR/CSSP	CSFP	CSCM/CSCR
Chemistry Analysis	ASTM E415; ASTM E1019	X			X
Macroetch	ASTM E381	X			X
Hardenability (Jominy)	ASTM A255; SAE J406; JIS G0561	X			X
Grain Size	ASTM E112	X	X	X	X
Tensile Test	ASTM E8; ASTM A370		X	X	X
Rockwell Hardness	ASTM E18; ASTM A370	X	X	X	X
Microstructure (spheroidization)	ASTM A892		X	X	
Inclusion Content (Methods A, E)	ASTM E45		X		X
Decarburization	ASTM E1077		X	X	X

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/15.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report subject to the following restrictions:
 - It may be distributed only to their customers
 - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgement (designated by our Sales Order number) to the customer's purchase order. Both order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.





UNYTITE INC.
 INNOVATIVE FASTENING SYSTEMS

Unytite, Inc.
 One Unytite Drive
 Peru, IL 61354
 Tel 815-224-2221
 Fax 815-224-3434

INSPECTION CERTIFICATE

Job No: 19450

Job Information

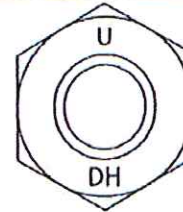
Certified Date: 11/14/14

Customer: HAYDON BOLTS
 Customer PO No: Z10798
 Lot Number: 19450-M55398

Ship To: HAYDON
 Shipped Qty: 16,200

Part Information

Part No: A563 5/8-11 +0.020 DH HHN HDG BLUE DYE
 Name: ASTM A563 HHN, Grade DH, Hot Dipped Galv, Blue Dye



Manufactured Quantity: 131,141

Applicable Specifications

Specification	Amend	Specification	Amend
ANSI B18.2.6M	2012	ASME B1.1	2008
ASME B18.2.2	2010	ASME B18.2.6	2010
ASTM A563	2007	ASTM F2329	2011
ASTM F606	2011	ASTM F812/F812M	2012

Test Results

Test No: 6267 Test: A563 DH Mechanical Properties

Description	Hardness (HRC)	Tempering Temp (800 degree F Min)	Proof Load (Pass/Fail) (ASTM Min)	Shape & Dimension ASME B18.2.2	Thread Precision ASME B18.1.1	Visual ASTM F812
Sample Inspection	28.62	1,211	33,900	Pass	Pass	Pass

Certified Chemical Analysis

Heat No	Grade	Manufacturer	Origin	C	Mn	P	S	Si	Cr	Ni	Cu
M55398	1045	Gerdau Mac Steel	USA	0.4600	0.7700	0.017	0.025	0.2600	0.1600	0.0700	0.2400

Notes

All tests are in accordance with the latest revisions of the methods prescribed in the applicable SAE and ASTM Specifications.

The samples tested conform the specifications as described/listed above and were manufactured free of mercury contamination and there is no welding performed in the production of the products. No heats to which Bismuth, Selenium, Tellurium, or Lead was intentionally added have been used to produce products.

The steel was melted and manufactured in the U.S.A. and the product was manufactured and tested in the U.S.A.

We certify that this data is true representation of information provided by the material supplier and our testing laboratory. This certified material test report relates only to the items listed on this document and may not be reproduced except in full.



Savage, Dan - Supervisor, Quality

11/14/14

Date

CERTIFIED MATERIAL TEST REPORT

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
P005007-1	B1045SC0.8750	M55398	288865 201	7/15/14

Danieli Cast

REPORT TO

SHIP TO

UNYTITE, INC.

UNYTITE, INC.

ONE UNYTITE DRIVE

ONE UNYTITE DRIVE

PERU , IL 61354-9710

PERU , IL 61354

ORDERED

GRADE	SIZE	LENGTH
1045	0 7/8" RND	24' 10 1/2"

CUSTOMER SPECIFICATIONS
SAE 1045; ASTM E381-01; RMS 021 DATED 9/28/06

CHEMICAL ANALYSIS

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al
0.46	0.77	0.017	0.025	0.26	0.07	0.16	0.03	0.24	0.009	0.003
V	Nb									
0.061	0.001									

GRAIN SIZE SPECIFICATION ASTM E112 FINE GRAIN 5-8

MICROCLEANLINESS SPECIFICATION ASTM E45 METH A

	A		B		C		D	
	T	H	T	H	T	H	T	H
AVERAGE	0.8	0.1	1.2	0.2	0.1	0.1	1.3	0.5

MACROCLEANLINESS SPECIFICATION ASTM E381

PLATE I

PLATE II

	S	R	C
FRONT	1	1	1
MIDDLE	1	1	1

PAGE 1

We certify that these data are correct and in compliance with specified requirements.

Gerdau Monroe
3000 East Front Street
Monroe, MI 48161

Wendy J. Craig
Wendy J. Craig
Quality Assurance Representative

CERTIFIED MATERIAL TEST REPORT

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
P005007-1	B1045SC0.8750	M55398	288865 201	7/15/14

Danieli Cast

REPORT TO

SHIP TO

UNYTITE, INC.

UNYTITE, INC.

ONE UNYTITE DRIVE

ONE UNYTITE DRIVE

PERU , IL 61354-9710

PERU , IL 61354

ORDERED

GRADE	SIZE	LENGTH
1045	0 7/8" RND	24' 10 1/2"

CUSTOMER SPECIFICATIONS

SAE 1045; ASTM E381-01; RMS 021 DATED 9/28/06

BACK 1 1 1

DECARB SPECIFICATION ASTM E1077

F TOTAL= 0.005

REDUCTION RATIO

RATIO= 59.9 TO 1.0

RESIDUAL MAX SPECIFICATION RMS 021


Ni+Cr = 0.2300

** MATERIAL 100% MELTED AND MANUFACTURED IN THE U.S.A. BY THE ELECTRIC
 ARC FURNACE AND CONTINUOUS CASTING METHOD. THE PRODUCT HAS NOT
 BEEN REPAIRED BY WELDING AND THIS MATERIAL HAS NOT BEEN EXPOSED
 TO MERCURY OR TO ANY OTHER METAL ALLOY THAT IS LIQUID AT AMBIENT
 TEMPERATURES DURING PROCESSING OR WHILE IN OUR POSSESSION.
 GERDAU MONITORS ALL INCOMING SCRAP AND ALL HEATS OF STEEL TO ENSURE THAT
 PRODUCTS SHIPPED ARE FREE OF RADIOACTIVE MATERIAL.

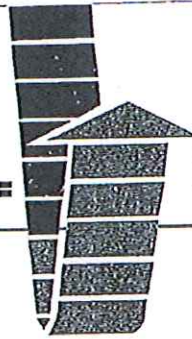
PAGE 2 OF 2

We certify that these data are correct and in compliance with specified requirements.

 Gerdau Monroe
 3000 East Front Street
 Monroe, MI 48161


 Wendy J. Craig
 Quality Assurance Representative

ROGERS BROTHERS INC.



HOT DIP
GALVANIZING

October 30, 2014

Unytite, Inc.
Unytite Quality Department
One Unytite Drive
Peru, IL 61354

To Whom It May Concern:

This is to certify that the hot dip galvanizing of the following material on your Purchase Order number 5354 conforms to specification ASTM A-153. The following sizes and lot numbers comply with the coating, workmanship, finish, and appearance requirements of ASTM F2329 specifications. The hot dip galvanizing is ROHS compliant. The galvanizing process was conducted in a temperature range of 830F to 850F.

40,281 Pieces	3/4"-10 A563 DH HHN	Lot#19381-144236	7.00 Avg. Mils.
131,141 Pieces	5/8"-11 A563 DH HHN	Lot#19450-M55398	6.26 Avg. Mils.
130,191 Pieces	5/8"-11 A563 DH HHN	Lot#19436-M55398	5.14 Avg. Mils.

This certification in no way implies anything other than the quality of our hot dip galvanizing as it pertains to your order.

This product was galvanized in Rockford, IL USA

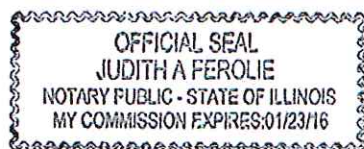
Yours very truly,

ROGERS BROTHERS INC.

Lorraine P. Shelburne
Vice President

LPS:pd

SUBSCRIBED AND SWORN
BEFORE ME THIS 30TH DAY
OF OCTOBER 2014, AD

NOTARY PUBLIC

Prestige
Stamping,
Inc.



23813 Greenback Highway
Warren, Michigan 48089
(586)773-2700 * Fax (586)773-2298
www.PrestigeStamping.com

PRODUCT CERTIFICATION
CERTIFICATION NUMBER

126316

THIS IS TO CERTIFY THE PRODUCT STATED BELOW WAS FABRICATED AND PROCESSED TO THE ORDER AS INDICATED AND CONFORMS TO THE APPLICABLE SPECIFICATIONS AND STANDARDS.

Customer: HAYDON BOLT INC
1181 UNITY ST
PHILADELPHIA, PA 19124-3104

Customer Part: AAWG062
Prestige Part: P1383HP300
Part Name: 5/8" F436 H/DIP
Purchase Order: Z12341-1
Shipment BOL: B177593
Shipment ID: A0188974
Quantity: 29230
Manufacturers Marking: "P"

Steel Supplier: HORIZON STEEL CO.
Grade: CF436 GRADE STEEL
Lot: C8815D
Heat: 314598
Carbon: .29 (.21 - .93)
Manganese: 1.15 (.43 - 1.6)
Phosphorous: .009 (.03 Max.)
Sulfur: .009 (.05 Max.)
Silicon: .218

SPECIFICATIONS

HARDNESS: TEST METHOD: ASTM E18
HRC 38 - 45
CHECKED TO ASTM F606


PLATING: TEST METHOD: ASTM B499
0.0017" Min.
HOT DIP GALV TO ASTM F-2329

TEST RESULTS

HARDNESS:
HRC 41 - 42

PLATING:
0.0017" - 0.0030"

Chemistry is as reported from raw material certification and does not fall under Prestige Stamping's accreditation.
This product was produced under an ISO/TS 16949 Quality Assurance System.
ISO/TS 16949 Certification No: 0082833.
Material was melted and manufactured in the U.S.A.
This product was manufactured in Warren, Michigan U.S.A.
This product conforms to all requirements for materials as produced according to A.S.T.M. F-436-11.
Sampling Plan per P.S.I. W.I. # 84-18-018.
The test results only apply to the items tested.
This test report must not be reproduced except in full without prior written approval.
Materials used to manufacture these products are mercury, asbestos and radio activity free.
No weld repairs made to material.


FRANK SCHUBERT
Quality Assurance Manager

C8815

CERTIFIED TEST REPORT

*HORIZON STEEL
50390 UTICA DRIVE
SHELBY TWP., MICH. 48315
800-576-9914

7/01/14

TO: PRESTIGE STAMPING
23513 GROESBECK HWY.
WARREN, MI 48090

SHIP TO: PRESTIGE STAMPING, INC.
23513 GROESBECK HIGHWAY
WARREN, MI. 48090
586-773-2700

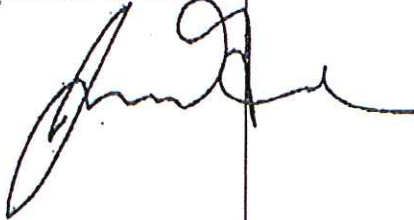
SIZE: .122 MIN X 3.95 X COIL
GRADE: HRPO F436 GRADE
MELTED & MFG IN USA

B/L Date 7/01/14 Bill/Ladng# 010783 Sales Order 814188 01
Cust. P/O#: 23558-1 Part No.: Z25180122 FOR PT# P1303H00

Tag# 762502 01 Heat# 314598 MasterTag# 236515 01
C : .290 Mn: 1.150 P : .009 S : .002 Al: .034 Si: .218
Ni: .005 Nb: .001 Mo: .001 Cu: .008 V : .001 Cr: .022
Ca: .001 N : .005 Ti: .001

Rock: 58 Olsen: 540
WE HEREBY CERTIFY THE ABOVE IS CORRECT AS CONTAINED IN THE RECORDS OF THE
COMPANY

.....HORIZON STEEL CO.....
QUALITY ASSURANCE MANAGER



ArcelorMittal
Indiana Harbor
Flat Carbon
East Chicago, In 46312

Horizon Steel Company
50390 Utica Dr.
Shelby Township, MI. 48315



ArcelorMittal

Dear Jim,

April 25th, 2014

I have reviewed our records and have confirmed that the following coil was manufactured from a heat that was "melted/smelted" at the Indiana Harbor Facility.

The heat number and the relating coil are stated below:

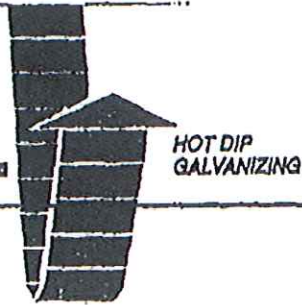
-- Heat number: 314600 Coil number 06947471

Heat Chemistry																		
C	Mn	P	S	Si	Al	Ni	Cr	Mo	V	Al	Ob	B	Ti	N	Bb	Ca		
0.204	1.163	0.008	0.00	0.216	0.008	0.008	0.022	0.001	0.00	0.03	0.001	0.000	0.001	0.008	0.000	0.001		
2	3	8	2	1	6	7	9	7	9	1	4	2	1	8	8	1	2	

Best regards

Thomas Godfrey
Manager - Quality systems
Quality Assurance
T 219-968-5123
F 219-968-4788
Thomas.godfrey@arcelormittal.com

ROGERS BROTHERS INC.



August 28, 2014

Frank Schubert
Prestige Stamping
23513 Groesbeck Highway
Warren, MI 48089

To Whom It May Concern:

This certifies that the following product that we have galvanized for your company meets the specifications of ASTM A153, Class C and the hot dip galvanizing requirements of ASTM F2329.

The hot dip galvanizing is RoHS compliant. The galvanizing process was conducted in a temperature range of 830F to 850F.

This certification in no way implies anything other than the quality of our hot dip galvanizing as it pertains to your order.

This product was galvanized in Rockford, IL USA

53,213 pieces	P1388HP300	5/8" F436 Structural Washer	Lot#C8815	3.70 Avg. Mills
33,985 pieces	P1383HP300	5/8" F436 Structural Washer	Lot#C8815	5.40 Avg. Mills
23,511 pieces	P1383HP300	5/8" F436 Structural Washer	Lot#C8815	5.05 Avg. Mills

Yours very truly,

ROGERS BROTHERS INC.

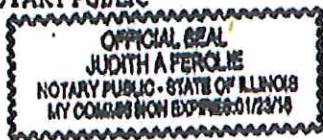
Lorraine P. Shelburne

Lorraine P. Shelburne
Vice President

LPS:pd

SUBSCRIBED AND SWORN
BEFORE ME THIS 28TH DAY
OF AUGUST 2014, AD

Judith A. Perolie
NOTARY PUBLIC



Cert Summary Page HAYDON BOLTS, INC.

DYCO INDUSTRIES INC Customer PO 27222

Invoice No. D4120977 Invoice Date 12/19/14 Sales Order L28551

Cert No	Inv Line No	Item No	Quantity	Lot No	Heat	Assembly No	PO	
74718	3000	ATSG	4		10317860		Z12673	
	Description:	3/4"(10) X 12" ALL THD ROD A449 H D GALV					Supplier:	VULCAN THREADED PRODUCTS INC
74718	6000	ATSG	4		10317860		Z12673	
	Description:	3/4"(10) X 16" ALL THD ROD A449 H D GALV					Supplier:	VULCAN THREADED PRODUCTS INC
74187	8000	VDHG075	32	19253-S21001	S21001		Z10798	
	Description:	3/4(10) HVY HEX NUT A563-DH HDG					Supplier:	UNYTITE INC.
74373	9000	AAWG075	32	C8709D	335777		Z12466	
	Description:	3/4 F436-1 STRUCTURAL WASHER HDG					Supplier:	PRESTIGE STAMPING
74208	11000	AAAG062175	25	BG0057	10274670		PS10500	
	Description:	5/8(11)X 1-3/4 A325-1 BOLT HDG					Supplier:	SLSB LLC.
75170	12000	VDHG062	25	19450-M55398	M55398		Z10798	
	Description:	5/8(11) HVY HEX NUT A563-DH HDG					Supplier:	UNYTITE INC
73291	13000	AAWG062	25	C8815D	314598		Z12341	
	Description:	5/8 F436-1 STRUCTURAL WASHER HDG					Supplier:	PRESTIGE STAMPING INC.
74414	14000	AAAG075175	75	BG0078	10326120		Z12562	
	Description:	3/4(10)X 1-3/4 A325-1 BOLT HDG					Supplier:	ST. LOUIS
74061	15000	AAAG075200	20	BG0048	10326120		Z12562	
	Description:	3/4(10)X 2" A325-1 BOLT HDG					Supplier:	SLSB LLC.
74246	16000	AAAG075225	20	BG0069	20334160		Z12644	
	Description:	3/4(10)X 2-1/4 A325-1 BOLT HDG					Supplier:	ST. LOUIS
37590	17000	AAAG075550	4	G678/589410	CR477830		Z01742	
	Description:	3/4(10)X 5-1/2 A325-1 BOLT HDG					Supplier:	ST. LOUIS SCREW & BOLT

DYCO TOB# 31151

GUILFORD SITE CT13065 A03



DYCO INDUSTRIES, INC.
 229 S. Satellite Rd.
 SOUTH WINDSOR, CT 06074
 (860) 289-4957

Sales Order

No **31151**

CUSTOMER ORDER NO.	DATE SHIPPED <i>12.23.14</i>	SHIPPED VIA CPU	OUR NO. 31151	ORDER DATE 12/5/2014
SHIP TO:		SOLD TO:		
GUILFORD SITE CT13065-A-03		NORTHEAST TOWERS, INC		
3331 KILLINGWOTH RD		119 BRICKYARD ROAD		
GUILFORD, CT		FARMINGTON, CT 06032-1236		
MIKE FOLEY 203 414 1184				
✓	QUANTITY	DESCRIPTION		
	3	MK-1 SUBHORIZONTAL ANGLE 2"x 2"x 1/4" x 5'0		
	3	MK-2 SUBHORIZONTAL ANGLE 2"x 2"x 1/4" x 5'0		
	3	MK-3 STITCH PLATES 3/8"x 3"x 22"		
	3	V-PILATE BRACKETS FOR 2.875 O.D TOWER LEG		
	6	1/2"x 3"x 5" HDG U-BOLTS VALMONT P/N UB1300		
	21	5/8"x 1 3/4" A325 HDG BOLTS w/N&W		
HOT DIP GALV				
TOTAL PCS.	TOTAL WEIGHT	ORDER COMPLETE	CHECKED BY	RECEIVED BY <i>[Signature]</i>

PLEASE NOTIFY US IMMEDIATELY
 IF ERROR IS FOUND IN SHIPMENT

OFFICE COPY



ENGINEERING INNOVATION

Subcontractor Due Diligence Form

Form Number: SDD-01

Site Name:	Guliford
Site ID:	CT13085-A-03
Proposed Carrier:	Sprint
Tower Type:	152' Self Support Tower
Site Address:	331 Killingsworth Road Guliford, CT 06437

FDH No.:	1468HY1700
Str. Analysis Date:	5/7/14
Drawing Date:	5/29/14
Drawing Issue:	Construction
Coordinates:	41.3532 -72.6893

Safety Agreement

It is the responsibility of the Subcontractor's foreman on-site to plan for the safety of all personnel and property. It is required that all crews on-site follow all OSHA (Paris 1910 and 1926), TIA Standard 1019-A, and SBA safety standards. Should the Subcontractor violate any mandated safety standards, the Subcontractor is in breach of contract, and Subcontractor, along with all other lower tier subcontractors associated with project, will be pulled from the job site immediately. The Subcontractor is responsible for the actions of all subcontractors with whom they are contracted.

I have read the above statement and understand.

Subcontractor's Initials mdf

Permit Release

In accordance to paragraph 4.2 on page 3 of the master subcontractor agreement the contractor will obtain all permits and inspections necessary for the proper execution and completion of the project. Subcontractor is also responsible for all cost associated with obtaining permits. If the state or jurisdiction does not require any permits for the modification as detailed, subcontractor must submit a form of verification to the FDH construction manager prior to beginning any construction.

Is permit required Yes No

Subcontractor's Initials mdf

Permit Number _____

Utility Due Diligence

Subcontractor is responsible of obtaining utility locates for entire lower compound (a minimum of 500' radius around compound) 72 hours prior to start of construction. Any repairs resulting from the damage of said utilities shall be the sole responsibility of the contractor.

I have read the above statement and understand.

Subcontractor's Initials mdf

Pre-Construction Site Walk

A. Subcontractor has performed site visit to verify all dimensions and existing conditions prior to fabrication

Yes No

Subcontractor's Initials mdf

B. There are no deviations from specifications and drawings. Work can proceed as specified by FDH Engineering

Yes No

Subcontractor's Initials mdf

Scope and Design Deviation Notification

A. No deviation from the scope of work or operating standards in the Master Service Agreement will be allowed. Any deviation will result will be corrected at the expense of the subcontractor and/or termination of the subcontractor from the work site

I have read the above statement and understand.

Subcontractor's Initials mdf

B. If modifications are made to the original design during construction, red-line drawings will be provided by the subcontractor. Subcontractor must make FDH aware of their intended changes before said changes take place. If changes are made without consent of FDH in writing; the subcontractor will be responsible for all cost associated with corrected measures.

I have read the above statement and understand.

Subcontractor's Initials mdf

Steel and Concrete Certifications

A. Subcontractor must submit all documentation required for verification of proposed steel members and their grade of steel, this may include steel certification from steel mill. Subcontractor must submit a form of verification to FDH prior to beginning any construction.

I have read the above statement and understand.

Subcontractor's Initials mdf

B. Subcontractor must submit all batch reports for all concrete poured. If more than 8 yards of concrete are poured then a minimum of 3 cylinders will be made per truck of concrete.

I have read the above statement and understand.

Subcontractor's Initials mdf

Weather and Fabrication Delays

All delays caused by fabrication and weather must be brought to the attention of FDH in writing. Delays at the result of weather shall be sent to FDH immediately. Should there be any delays subcontractor must submit a written response detailing the delay within 24 hrs of the occurrence. Each occurrence will be evaluated on a case by case basis.

I have read the above statement and understand.

Subcontractor's Initials mdf

Subcontractor Notification

Contractor will list all subcontractors that will be utilized below. All subcontractors must have all required local and federal certifications. It is the responsibility of the general contractor to handle all liens and payments of contracted subcontractors. **N/A**

Subcontractor: _____

Contact: _____

Telephone: _____

Subcontractor: _____

Contact: _____

Telephone: _____

Subcontractor: _____


Contact: _____

Telephone: _____

Subcontractor has read and understands all aforementioned terms and conditions listed in this document and any preceding bid documents. Subcontractor also agrees to abide by these terms and conditions for the duration of this project.

Company's Name: Northeast Towers, Inc.

Contact(Print Name): Mike Foley - 203-414-1184

Signature:  Digitally signed by Michael Foley
Date: 2015.01.06 12:02:31 -0500

Date: 1-6-2015

Revised 03/04/14



I.D.#: CT13065

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POST CONSTRUCTION INSPECTION NOTES:

GENERAL

1. THE POST CONSTRUCTION INSPECTION (PCI) IS A VISUAL INSPECTION OF TOWER FOUNDATION AND STRUCTURE. THE REPORTING ENGINEER SHALL BE RESPONSIBLE TO ENSURE THE INSTALLATION WAS CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, NAMELY THE MODIFICATION DRAWINGS, AS DESIGNED BY THE ENGINEER OF RECORD (EOR).
2. THE PCI IS TO CONFIRM INSTALLATION CONFIGURATION AND WORKMANSHIP ONLY AND IS NOT A REVIEW OF THE MODIFICATION DESIGN ITSELF. NOR DOES THE PCI INSPECTOR TAKE OWNERSHIP OF THE MODIFICATION DESIGN. OWNERSHIP OF THE STRUCTURAL MODIFICATION DESIGN EFFECTIVENESS AND INTEGRITY RESIDES WITH THE EOR AT ALL TIMES.
3. ALL PCI'S SHALL BE CONDUCTED BY A PCI INSPECTOR THAT IS APPROVED TO PERFORM ELEVATED WORK FOR FDH ENGINEERING, INC.
4. TO ENSURE THAT THE REQUIREMENTS OF THE PCI ARE MET, IT IS VITAL THAT THE GENERAL CONTRACTOR (GC) AND THE PCI 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 FDH POINT OF CONTACT (POC).
5. REFER TO GC-01 : CONTRACTOR CLOSEOUT REQUIREMENTS FOR FURTHER DETAILS AND REQUIREMENTS.

PCI INSPECTOR

1. THE PCI INSPECTOR IS REQUIRED TO CONTACT THE GC AS SOON AS RECEIVING A PO FOR THE PCI TO, AT A MINIMUM:
 - REVIEW THE REQUIREMENTS OF THE PCI CHECKLIST
 - WORK WITH THE GC TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS
2. THE PCI INSPECTOR IS RESPONSIBLE FOR COLLECTING ALL GENERAL CONTRACTOR (GC) REPORTS, INCLUDING THE DOCUMENTS FOR ADHERENCE TO THE CONTRACT DOCUMENTS, CONDUCTING THE IN-FIELD INSPECTIONS, AND SUBMITTING THE PCI REPORT TO FDH.

CORRECTION OF FAILING PCIS

1. IF THE MODIFICATION INSTALLATION WOULD FAIL THE PCI (FAILED PCI), THE GC SHALL WORK WITH FDH TO COORDINATE A REMEDIATION PLAN IN ONE OF TWO WAYS:
 - CORRECT FAILING ISSUES TO COMPLY WITH THE SPECIFICATIONS CONTAINED IN THE ORIGINAL CONTRACT DOCUMENTS AND COORDINATE A SUPPLEMENT PCI.
 - OK WITH FDH'S APPROVAL, THE GC MAY WORK WITH THE EOR TO RE-ANALYZE THE MODIFICATION/REINFORCEMENT USING THE AS-BUILT CONDITION.

REQUIRED PHOTOS

1. BETWEEN THE GC AND THE PCI INSPECTOR THE FOLLOWING PHOTOGRAPHS, AT A MINIMUM, ARE TO BE TAKEN AND INCLUDED IN THE PCI REPORT:
 - PRE-CONSTRUCTION GENERAL SITE CONDITION
 - PHOTOGRAPHS DURING THE REINFORCEMENT MODIFICATION CONSTRUCTION/ERECTION PHASES
 - PHOTOS OF ALL CRITICAL DETAILS
 - FOUNDATION MODIFICATION
 - WELD PREPARATION
 - WELDING PROCEDURE AND TORQUE
 - FINAL INSTALLED CONDITION
 - SURFACE COATING REPAIR
 - POST CONSTRUCTION PHOTOGRAPHS
 - FINAL INFELD CONDITION
2. PHOTOS OF ELEVATED MODIFICATIONS TAKEN FROM THE GROUND SHALL BE CONSIDERED INADEQUATE.

PCI CHECKLIST

CONSTRUCTION/INSTALLATION INSPECTION/TESTING REQUIRED	REPORT ITEM
PRE-CONSTRUCTION	
X	PCI CHECKLIST DRAWING
N/A	EOR APPROVED SHOP DRAWINGS
N/A	FABRICATOR INSPECTION
X	FABRICATOR CERTIFIED WELD INSPECTION
X	MATERIAL TEST REPORT (MTR)
N/A	FABRICATOR NDE INSPECTION
N/A	NDE REPORT OF MONOPOLE BASE PLATE (AS REQUIRED)
X	PACKING SLIPS
ADDITIONAL TESTING AND INSPECTIONS:	
CONSTRUCTION	
X	CONSTRUCTION INSPECTIONS
N/A	FOUNDATION INSPECTIONS
N/A	CONCRETE COMP. STRENGTH AND SLUMP TESTS
N/A	POST INSTALLED ANCHOR ROD VERIFICATION
N/A	BASE PLATE GROUT VERIFICATION
N/A	CONTRACTOR'S CERTIFIED WELD INSPECTION
N/A	EARTHWORK: LIFT AND DENSITY
X	ON SITE COLD GALVANIZING VERIFICATION
N/A	GUY WIRE TENSION REPORT
X	GC AS-BUILT DOCUMENTS
ADDITIONAL TESTING AND INSPECTIONS:	
POST-CONSTRUCTION	
X	PCI INSPECTOR REDLINE OR RECORD DRAWING(S)
N/A	POST INSTALLED ANCHOR ROD PULL-OUT TESTING
X	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	

NOTE: X DENOTES A DOCUMENT NEEDED FOR THE PCI REPORT
N/A DENOTES A DOCUMENT THAT IS NOT REQUIRED FOR THE PCI REPORT



PREPARED FOR:



DENNIS D. ABEL, P.E.
CONNECTICUT LIC. NO. 23247

DRAWN BY: DTB
CHECKED BY: MTB
ENCL APPR'D: DDA
PROJECT NO: 14864X100

SUBMITTALS		
DATE	DESCRIPTION	REV
07/29/14	CONSTRUCTION	0

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SITE NAME
GUILFORD

SITE NUMBER
CT13065-A-03

SITE ADDRESS:
331 KILLINGSWORTH ROAD
GUILFORD, CT 06437

SHEET TITLE
POST CONSTRUCTION
INSPECTION NOTES

SHEET NUMBER
N-1

ASBuilt

FDH
ENGINEERING INNOVATION

601 MERIDEN DRIVE
RALEIGH, NC 27615
PHONE: 919-876-1011
FAX: 919-876-1017

SBA

2000 BRIDGE SQUARE PARKWAY, NW
SUITE 100
ALPHARETTA, GA 30201

DENNIS D. ABEL, P.E.
CONNECTICUT LIC. NO. 23247

DATE: 05/29/14

PROJECT NO.: 14664K1400

DATE	DESCRIPTION	REV
05/29/14	CONSTRUCTION	0

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SITE NAME:
GUILFORD

SITE NUMBER:
CT13065-A-03

SITE ADDRESS:
331 KILLINGWORTH ROAD
GUILFORD, CT 06437

SHEET TITLE
GENERAL NOTES

SHEET NUMBER
N-2

GENERAL NOTES:

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND ORDINANCES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL PERMITS NECESSARY TO COMPLETE THE PROJECT AND ABIDE BY ALL CONDITIONS AND REQUIREMENTS OF THE PERMITS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS, ELEVATIONS AND EXISTING CONDITIONS AT THE PROJECT SITE. THE CONTRACTOR SHALL BE ALLOWED DUE TO DIFFERENCE BETWEEN ACTUAL DIMENSIONS AND DIMENSIONS INDICATED ON THE CONSTRUCTION DRAWINGS. ANY SUCH DISCREPANCY SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSIDERING BEFORE THE CONSTRUCTION COMMENCES ANY CORRECTIVE ACTION, OTHER THAN REPAIRS, DAMAGED, OTHERWISE IDENTIFIED OR NOTICED TO THE ARCHITECT PRIOR TO ANY REMEDIAL OR CORRECTIVE ACTION. ALL ACTIONS SHALL REQUIRE FDH ENGINEERING APPROVAL.
- IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE THE ERECTION PROCEDURE AND SEQUENCE TO ENSURE THE SAFETY OF THE STRUCTURE AND ITS COMPONENT PARTS DURING ERECTION AND/OR FIELD MODIFICATIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, THE SEQUENCE OF ERECTION, THE ORDER OF BRACING, THE ORDER OF TOWER DECKING, AND THE ORDER OF TOWER DECKING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE PROJECT.
- CONTRACTOR SHALL PROMPTLY REMOVE ANY & ALL DEBRIS FROM THE PROJECT SITE AS BEST AS POSSIBLE TO PRECONSTRUCTION CONDITION.

CONTRACTOR QUALIFICATION NOTES:

- ALL REPAIRS SHALL BE PERFORMED BY A TOWER CONTRACTOR WITH A MINIMUM 5 YEARS EXPERIENCE IN TOWER ERECTION AND RETROFIT AND WITH WORKING KNOWLEDGE OF THE TIA/EIA 222-F "STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES".
- CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION MEANS AND METHODS. SHOULD THE CONTRACTOR REQUIRE DIRECT CONSULTATION, FDH ENGINEERING, INC. IS WILLING TO OFFER SERVICES BASED UPON AN AGREED FEE FOR THE WORK REQUIRED.
- ALL SUBMITTAL INFORMATION MUST BE SENT TO FDH ENGINEERING, INC. 6521 MERIDEN DRIVE, RALEIGH, NC, 27616, TEL. (919) 755-1012, FAX. (919) 755-1031, E-MAIL, INFO@FDH-INC.COM. ANY VARIATION OF THESE SPECIFICATIONS OR DRAWINGS WITHOUT CONSENT FROM FDH ENGINEERING, INC. WILL VOID ANY WARRANTIES OR GUARANTEES AND MAY BE SUBJECT TO LITIGATION OR DAMAGE (MATERIAL OR PHYSICAL) TOWARDS FDH ENGINEERING, INC.
- ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THE TIA-1019-A STANDARD.

JOB SITE SAFETY & NOTES:

- NEITHER THE PROFESSIONAL ACTIVITIES OF FDH ENGINEERING, INC. NOR THE SUB-CONSULTANTS OF FDH ENGINEERING, INC. OR EMPLOYEES SHALL BE HELD RESPONSIBLE FOR THE SAFETY OF THE PROJECT. THE CONTRACTOR SHALL RELIEVE THE GENERAL CONTRACTOR AND/OR SUBCONTRACTORS AND ANY OTHER ENTITY OF THEIR OBLIGATIONS, DUTIES AND RESPONSIBILITIES INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION SAFETY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING NECESSARY PERMITS, SUPERINTENDING OR COORDINATING ALL PORTIONS OF THE WORK OF CONSTRUCTION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND ANY HEALTH OR SAFETY REGULATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE GENERAL CONTRACTOR AND/OR SUBCONTRACTORS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR JOB SAFETY, AND WARRANTS THAT THIS INTENT IS EVIDENT BY ACCEPTING THIS WORK.

STEEL:

- ALL STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST AISC CODE AND ASTM SPECIFICATIONS.
- *ALL STEEL ANGLE SHALL BE ASTM A36 (Fy=36KSI) UNLESS OTHERWISE SPECIFIED.
- *ALL STEEL PLATE SHALL BE ASTM A36 (Fy=36KSI) UNLESS OTHERWISE SPECIFIED.
- *ALL U-BOLTS TO BE MADE OF ASTM A36 (Fy=36KSI) UNLESS OTHERWISE SPECIFIED.
- ALL CONNECTIONS OF STRUCTURAL STEEL MEMBERS SHALL BE MADE USING SPECIFIED WELDS WITH WELDING BELENGEREN OR SPECIFIED HIGH STRENGTH BOLTS TO BE ASTM A325N, THREAD INCLUDED WITH SHEAR PLANE (UNLESS OTHERWISE NOTED).
- ALL BOLTED CONNECTIONS TO BE INSTALLED TO A SNUG-TIGHTENED CONDITION IN ACCORDANCE WITH AISC 13 PART 14.2. *SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS*, SECTION 8.1, UNLESS OTHERWISE SPECIFIED. WHEN "X" TYPE BOLTS ARE USED, CONTRACTOR MAY BE REQUIRED TO STACK ADDITIONAL WASHERS TO OBTAIN PROPER SNUG TIGHT INSTALLATION. ALL NUTS SHALL BE HEAVY HEX UNLESS OTHERWISE NOTED.
- ALL STEEL, AFTER FABRICATION, SHALL BE HOT DIPPED GALVANIZED PER AISC 153. ALL DAMAGED SURFACES, WELDED AREAS AND AIR WASHES SHALL BE GALVANIZED PER AISC 153. ALL NEW STEEL SHALL BE PAINTED WITH MULTIPLE COATS OF ZINC COLD GALVANIZING COMPOUND ACHIEVING A MINIMUM OF 4 MILS DRY FILM PER ASTM A 780.
- ALL SHOP AND FIELD WELDING SHALL BE DONE BY WELDERS QUALIFIED AS DESCRIBED IN THE "AMERICAN WELDING SOCIETY'S STANDARD QUALIFICATION PROCEDURE" TO PERFORM THE TYPE OF WORK REQUIRED. CONTRACTOR IS REQUIRED TO PROVIDE FDH ENGINEERING, INC. WITH A PASSING CERTIFIED WELDING INSPECTION FOR ALL WELDS.
- STRUCTURAL STEEL MAY NOT BE TORCH CUT FOR FABRICATION. ALL STEEL FABRICATION MUST FOLLOW AISC STANDARDS.

MISC. NOTES:

- ALL MODIFICATIONS ARE ASSUMED TO BE MADE ON AN EMPTY TOWER. CONTRACTOR IS RESPONSIBLE TO MAKE PROVISIONS TO PROTECT EXISTING AND NEW ANTENNAS AND TRANSMISSION LINES. MODIFICATIONS MUST BE CONTINUOUS THROUGH ALL AREAS SHOWN.
- CONTRACTOR FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.

FABRICATION NOTES:

- ALL DIMENSIONS ARE PRELIMINARY UNTIL FIELD VERIFIED BY CONTRACTOR. ALL DIMENSIONS SHALL BE RECORDED IN WRITING PRIOR TO FABRICATION AND INSTALLATION.
- NEW STEEL MEMBERS MUST HAVE SINGLE DRILLED HOLES, SLOTTED AND DOUBLE DRILLED HOLES ARE NOT ACCEPTABLE MEANS OF FABRICATION.

SUBSTITUTES AND/OR EQUALS:

- IF CONTRACTOR WISHES TO FURNISH OR USE A SUBSTITUTE ITEM OR MATERIAL, THE CONTRACTOR SHALL SUBMIT A WRITTEN APPLICATION TO ENGINEER OF RECORD FOR ACCEPTANCE THEREOF. CERTIFYING THAT THE PROPOSED SUBSTITUTE WILL PERFORM ADEQUATELY THE FUNCTIONS AND ACHIEVE THE RESULTS TO THAT SPECIFIED AND SUITED TO THE SAME USE AS THAT SPECIFIED. ALL VARIATIONS OF THE PROPOSED SUBSTITUTE FROM THAT SPECIFIED WILL BE IDENTIFIED IN THE APPLICATION AND WILL BE SUBJECT TO THE CONTRACTOR'S OBLIGATION TO MAINTAIN, REPAIR AND REPLACEMENT SERVICE WILL BE THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR SHALL ESTIMATE OF ALL COSTS OR CREDITS THAT WILL RESULT DIRECTLY OR INDIRECTLY FROM ACCEPTANCE OF SUCH SUBSTITUTE INCLUDING COSTS OF REVISION AND CLAIMS OF OTHER CONTRACTORS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND BE CONSIDERED BY ENGINEER OF RECORD IN EVALUATION OF THE PROPOSED SUBSTITUTE. ENGINEER OF RECORD MAY REQUIRE CONTRACTOR TO FURNISH ADDITIONAL DATA ABOUT THE PROPOSED SUBSTITUTE.

ASBUILT



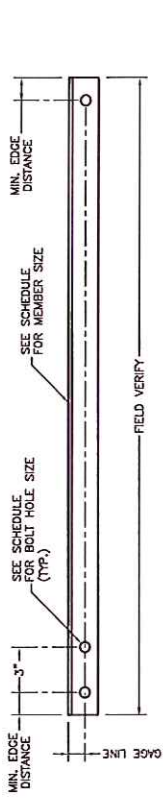
DENNIS D. ABEL, P.E.
 LICENSED PROFESSIONAL ENGINEER
 No. 23247
 STATE OF CONNECTICUT
 05/29/14
 CONNECTICUT LIC. NO. 23247

DATE	05/29/14	REV	0
DESCRIPTION	CONSTRUCTION		
SUBMITTALS			
DATE		REV	
DESCRIPTION			

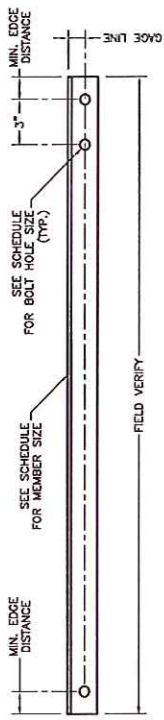
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SITE NAME: GUILFORD
 SITE NUMBER: CT13065-A-03
 SITE ADDRESS: 331 KILLINGWORTH ROAD GUILFORD, CT 06437

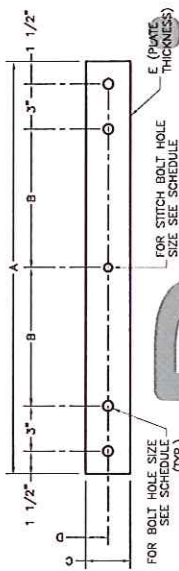
SHEET TITLE: SUBHORIZONTAL REINFORCEMENT DETAILS II
 SHEET NUMBER: S-3



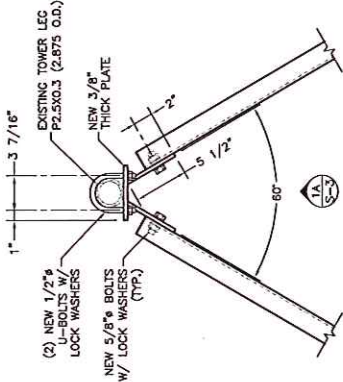
SUBHORIZONTAL LAYOUT FRONT VIEW
 MK-1 S-3 NTS



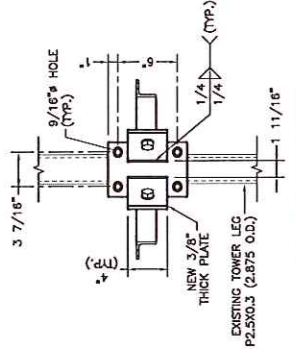
SUBHORIZONTAL LAYOUT FRONT VIEW
 MK-2 S-3 NTS



SUBHORIZONTAL LAYOUT FRONT VIEW
 MK-3 S-3 NTS



V-BRACKET ASSEMBLY "A" PLAN VIEW
 1 S-3 SCALE: 1" = 1'-0"



V-BRACKET ASSEMBLY "A" ELEVATION VIEW
 1A S-3 SCALE: 1" = 1'-0"

SUBHORIZONTAL REINFORCEMENT INSTALLATION SCHEDULE

SUBHORIZONTAL BRACE ELEVATION	TOWER LEG SIZE	FACE WIDTH* (CENTER OF LEG TO CENTER OF LEG)	STITCH PLATE SPECIFICATIONS					BOLT HOLE SIZE (TYP.)	BOLT SIZE (TYP.)	STITCH BOLT HOLE SIZE (TYP.)	STITCH BOLT SIZE (TYP.)	MIN. EDGE DISTANCE**	SUBHORIZONTAL SIZE	GAGE LINE***	BOLT GRADE
			A	B	C	D	E								
110.0±	P2.5X0.3 (2.875 O.D.)	9"-7"±	22"	6 1/2"	3"	1 1/2"	3/8"	11/16"	5/8"	9/16"	1/2"	1 1/4"	L2X2X1/4	1 1/8"	A325N

*FIELD VERIFY FACE WIDTH PRIOR TO FABRICATION. CONFIRM WITH ENGINEER OF RECORD.
 **MINIMUM EDGE DISTANCE FROM CENTER OF STANDARD HOLE TO EDGE OF CONNECTED PART.
 ***DISTANCE FROM HEEL OF ANGLE TO CENTER OF BOLT HOLE.

BRYCE D. PATE

PCI CHECKLIST

CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED	REPORT ITEM
X	PRE-CONSTRUCTION
N/A	PCI CHECKLIST DRAWING
N/A	EDR APPROVED SHOP DRAWINGS
N/A	FABRICATION INSPECTION
X	FABRICATOR CERTIFIED WELD INSPECTION
X	MATERIAL TEST REPORT (MTR)
N/A	FABRICATOR NDE INSPECTION
N/A	NDE REPORT OF MONOPOLE BASE PLATE (AS REQUIRED)
X	PACKING SLIPS
ADDITIONAL TESTING AND INSPECTIONS:	
CONSTRUCTION	
X	CONSTRUCTION INSPECTIONS
N/A	FOUNDATION INSPECTIONS
N/A	CONCRETE COMP. STRENGTH AND SLUMP TESTS
N/A	POST INSTALLED ANCHOR ROD VERIFICATION
N/A	BASE PLATE GROUT VERIFICATION
N/A	CONTRACTOR'S CERTIFIED WELD INSPECTION
N/A	EARTHWORK LIFT AND DENSITY
X	ON SITE COLD GALVANIZING VERIFICATION
N/A	CUT WIRE TENSION REPORT
X	GC AS-BUILT DOCUMENTS
ADDITIONAL TESTING AND INSPECTIONS:	
POST-CONSTRUCTION	
X	PCI INSPECTOR REDLINE OR RECORD DRAWING(S)
N/A	POST INSTALLED ANCHOR ROD PULL-OUT TESTING
X	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	

NOTE: X DENOTES A DOCUMENT NEEDED FOR THE PCI REPORT
N/A DENOTES A DOCUMENT THAT IS NOT REQUIRED FOR THE PCI REPORT

POST CONSTRUCTION INSPECTION NOTES:

GENERAL

- THE POST CONSTRUCTION INSPECTION (PCI) 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 ENGINEER OF RECORD (EOR).
- THE PCI IS TO CONFIRM INSTALLATION CONFIGURATION AND WORKMANSHIP ONLY AND IS NOT TO BE USED FOR THE MODIFICATION DESIGN ITSELF, NOR DOES THE PCI INSPECTOR HAVE THE AUTHORITY TO SIGN OFF ON THE MODIFICATION DESIGN OR ANY OTHER MODIFICATION DESIGN EFFECTIVENESS AND INTEGRITY RESIDES WITH THE EOR AT ALL TIMES.
- ALL PCIS SHALL BE CONDUCTED BY A PCI INSPECTOR THAT IS APPROVED TO PERFORM ELEVATED WORK FOR FDH ENGINEERING, INC.
- TO ENSURE THAT THE REQUIREMENTS OF THE PCI ARE MET, IT IS VITAL THAT THE GENERAL CONTRACTOR (GC) AND THE PCI INSPECTOR BEGIN COMMUNICATING AND COORDINATING EARLY IN THE PROJECT. THE PCI INSPECTOR IS PART OF EACH PARTY WILL BE PROACTIVE IN REACHING OUT TO THE OTHER PARTY IF CONTACT INFORMATION IS NOT KNOWN, CONTACT YOUR FDH POINT OF CONTACT (POC).
- REFER TO COR-01 : CONTRACTOR CLOSEOUT REQUIREMENTS FOR FURTHER DETAILS AND REQUIREMENTS.

PCI INSPECTOR

- THE PCI INSPECTOR IS REQUIRED TO CONTACT THE GC AS SOON AS RECEIVING A PO FOR THE PCI TO, AT A MINIMUM:
 - REVIEW THE REQUIREMENTS OF THE PCI CHECKLIST
 - WORK WITH THE GC TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS
- THE PCI INSPECTOR IS RESPONSIBLE FOR COLLECTING ALL GENERAL CONTRACTOR (GC) INSPECTION AND TEST REPORTS, REVIEWING THE DOCUMENTS FOR ADHERENCE TO THE CONTRACT DOCUMENTS, CONDUCTING THE IN-FIELD INSPECTIONS, AND SUBMITTING THE PCI REPORT TO FDH.

CORRECTION OF FAILING PCIS

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

REQUIRED PHOTOS

- BETWEEN THE GC AND THE PCI INSPECTOR THE FOLLOWING PHOTOGRAPHS, AT A MINIMUM, ARE TO BE TAKEN AND INCLUDED IN THE PCI REPORT:
 - PHOTOGRAPHS DURING THE REINFORCEMENT MODIFICATION CONSTRUCTION/ERECTION AND INSPECTION
 - RAW MATERIALS
 - CRITICAL DETAILS
 - FOUNDATION MODIFICATIONS
 - WELD PREPARATION
 - BOLT INSTALLATION AND TORQUE
 - FINAL INSTALLED CONDITION
 - FINAL CONSTRUCTION PHOTOGRAPHS
 - FINAL INFIELD CONDITION
- PHOTOS OF ELEVATED MODIFICATIONS TAKEN FROM THE GROUND SHALL BE CONSIDERED INADEQUATE.

PREPARED BY:

 FDH ENGINEERING INNOVATION
 5000 WILSON DRIVE
 WASHINGTON, DC 20007
 PHONE: (703) 754-0132
 FAX: (703) 754-1031

PREPARED FOR:

 SBA
 5800 BROOKWOOD PARKWAY, NW
 SUITE 400
 BOSTON, MA 02122
 (617) 467-5716



DENNIS D. ABEL
 LICENSED PROFESSIONAL ENGINEER
 No. 23247
 STATE OF CONNECTICUT
 EXPIRES 05/29/14
 CONNECTICUT LIC. NO. 23247

DRAWN BY: BTX
 CHECKED BY: MTB
 ENG. APPROV: DDA
 PROJECT NO: 1486KX1400

DATE	DESCRIPTION	REV
05/29/14	CONSTRUCTION	0

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SITE NAME:
 GUILFORD
 SITE NUMBER:
 CT13065-A-03
 SITE ADDRESS:
 5800 BROOKWOOD PARKWAY, NW
 SUITE 400
 BOSTON, MA 02122

SECONDARY INSPECTION

EOR has reviewed the issues noted and passed the as-built condition(s).

GC has revisited the site and corrected the punchlist items shown. Documentation showing these corrections has been received by the EOR.



GENERAL NOTES:

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND ORDINANCES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL PERMITS NECESSARY TO COMPLETE THE PROJECT AND ABIDE BY ALL CONDITIONS AND REQUIREMENTS OF THE PERMITS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS, ELEVATIONS AND EXISTING CONDITIONS AT THE SITE BEFORE ORDERING ANY MATERIALS OR DOING ANY WORK. NO DISCREPANCY BETWEEN ACTUAL DIMENSIONS AND DIMENSIONS INDICATED ON THE CONSTRUCTION DRAWINGS. ANY SUCH DISCREPANCY IN DIMENSION WHICH MAY BE FOUND SHALL BE SUBMITTED TO THE ENGINEERING FOR CONSIDERATION BEFORE THE CONTRACTOR PROCEEDS WITH THE WORK IN THE AFFECTED AREAS.
- INCORRECTLY FABRICATED, DAMAGED, OTHERWISE MISFITTING, OR NON-CONFORMING MATERIALS AND CONDITIONS SHALL BE REJECTIVE ACTION. ALL ACTIONS SHALL REQUIRE FDH ENGINEERING APPROVAL.
- IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE THE STRUCTURE AND ITS COMPONENT PARTS DURING ERECTION AND/OR FIELD MODIFICATIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF TEMPORARY BRACING, CUTS OR TIE DOWNS THAT MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED AFTER THE COMPLETION OF THE PROJECT.
- CONTRACTOR SHALL PROMPTLY REMOVE ANY & ALL DEBRIS FROM SITE AND RESTORE AS BEST AS POSSIBLE TO PRECONSTRUCTION CONDITION.

CONTRACTOR QUALIFICATION NOTES:

- ALL REPAIRS SHALL BE PERFORMED BY A TOWER CONTRACTOR WITH A MINIMUM 5 YEARS EXPERIENCE IN TOWER, DIRECTION AND STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES.
- CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION MEANS AND METHODS. FDH ENGINEERING, INC. IS WILLING TO OFFER SERVICES BASED UPON AN AGREED FEE FOR THE WORK REQUIRED.
- ALL SUBMITTALS INFORMATION MUST BE SENT TO FDH ENGINEERING, INC. 1000 W. 10TH ST., SUITE 1031, E-MAIL: INFO@FDH-INC.COM, 755-1012, FAX: (913) 755-1031. E-MAIL: INFO@FDH-INC.COM. ANY VARIATION OF THESE SPECIFICATIONS OR DRAWINGS WITHOUT CONSENT FROM FDH ENGINEERING, INC. WILL VOID ANY RESPONSIBILITY OR LIABILITY FOR DAMAGE (MATERIAL OR PHYSICAL) TOWARDS FDH ENGINEERING, INC.
- ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THE TIA-1019-A STANDARD.

JOB SITE SAFETY & NOTES:

- NEITHER THE PROFESSIONAL ACTIVITIES OF FDH ENGINEERING, INC. NOR THE PRESENCE OF FDH ENGINEERING, INC. OR EMPLOYEES AND SUB-CONSULTANTS AT THE CONSTRUCTION SITE, SHALL IMPLY ANY LIABILITY OR OBLIGATIONS, DUTIES AND RESPONSIBILITIES INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES. ALL PORTIONS OF THE WORK OR CONSTRUCTION OR COORDINANCE WITH THE CONTRACT DOCUMENTS AND ANY HEALTH OR SAFETY PRECAUTIONS REQUIRED BY ANY REGULATORY AGENCIES. THE GENERAL CONTRACTOR AND OR SUBCONTRACTOR IS SOLELY RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS THAT THIS INTENT IS EVIDENT BY ACCEPTING THIS WORK.

STEEL:

- ALL STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST AISC CODE AND ASTM SPECIFICATIONS.
 - *ALL STEEL ANGLE SHALL BE ASTM A36 (Fy=36KSI) UNLESS OTHERWISE SPECIFIED.
 - *ALL STEEL PLATE SHALL BE ASTM A36 (Fy=36KSI) UNLESS OTHERWISE SPECIFIED.
 - *ALL U-BOLTS TO BE MADE OF ASTM A36 (Fy=36KSI) UNLESS OTHERWISE SPECIFIED.
- ALL CONNECTIONS OF STRUCTURAL STEEL MEMBERS SHALL BE MADE IN ACCORDANCE WITH THE AISC STEEL CONSTRUCTION MANUAL OR SPECIFIED HIGH STRENGTH BOLTS TO BE USED (ASTM A325) THROUGH INCLUDED WITH SHEAR PLANE (UNLESS OTHERWISE NOTED).
- ALL BOLTED CONNECTIONS TO BE INSTALLED TO A SNUG-TIGHTENED CONDITION IN ACCORDANCE WITH AISC 308, A325 OR A490 BOLTS, SECTION 8.1. UNLESS OTHERWISE SPECIFIED. WHEN "X" TYPE BOLTS ARE USED, CONTRACTOR MAY BE REQUIRED TO STACK ADDITIONAL WASHERS TO OBTAIN PROPER SNUG TIGHT INSTALLATION. ALL NUTS SHALL BE HEAVY HEX UNLESS OTHERWISE NOTED.
- ALL STEEL AFTER FABRICATION, SHALL BE HOT DIPPED GALVANIZED PER ASTM A-123. ALL DAMAGED SURFACES, WELDED AREAS AND AUTHORIZED NON-GALVANIZED MEMBERS OR PARTS (EXISTING OR NEW) SHALL BE REPAIRED WITH A MINIMUM OF 2 MILS DRY FILM GALVANIZING COMPOUND ACHIEVING A MINIMUM OF 4 MILS DRY FILM PER ASTM A 780.
- ALL SHOP AND FIELD WELDING SHALL BE DONE BY WELDERS EMPLOYED BY THE CONTRACTOR. ALL WELDING SHALL BE DONE TO STANDARD QUALIFICATION PROCEDURE TO PERFORM THE TYPE OF WORK REQUIRED. CONTRACTOR IS REQUIRED TO PROVIDE FDH ENGINEERING, INC. WITH A PASSING CERTIFIED WELDING INSPECTION FOR ALL WELDS.
- STRUCTURAL STEEL MAY NOT BE TORCH CUT FOR FABRICATION. ALL STEEL FABRICATION MUST FOLLOW AISC STANDARDS.

MISC. NOTES:

- ALL MODIFICATIONS ARE ASSUMED TO BE MADE ON AN EMPTY TOWER. CONTRACTOR IS RESPONSIBLE TO MAKE PROVISIONS TO SUPPORT OR WORK AROUND EXISTING ANTENNAS AND TRANSMISSION LINES. MODIFICATIONS MUST BE CONTINUOUS THROUGH ALL AREAS SHOWN.
- CONTRACTOR FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.

FABRICATION NOTES:

- ALL DIMENSIONS ARE PRELIMINARY UNTIL FIELD VERIFIED BY CONTRACTOR. ANY CHANGES MUST BE APPROVED BY ENGINEER OF RECORD IN WRITING PRIOR TO FABRICATION AND INSTALLATION.
- NEW STEEL MEMBERS MUST HAVE SINGLE DRILLED HOLES. SLOTTED AND DOUBLE DRILLED HOLES ARE NOT ACCEPTABLE MEANS OF FABRICATION.

SUBSTITUTES AND/OR EQUALS:

- IF CONTRACTOR WISHES TO FURNISH OR USE A SUBSTITUTE ITEM OF MATERIAL OR EQUIPMENT, CONTRACTOR SHALL FIRST MAKE WRITTEN REQUEST TO THE ENGINEER OF RECORD FOR APPROVAL. THEREOF, CERTIFYING THAT THE PROPOSED SUBSTITUTE WILL PERFORM ADEQUATELY THE FUNCTIONS AND ACHIEVE THE RESULTS CALLED FOR BY THE GENERAL DESIGN, BE SIMILAR IN SUBSTANCE TO THE SPECIFICATIONS AND THE PROPOSED SUBSTITUTE FROM WHICH THE SUBSTITUTION IS BEING MADE. THE PROPOSED SUBSTITUTE THAT SPECIFIED WILL BE IDENTIFIED IN THE APPLICATION AND AVAILABLE MAINTENANCE, REPAIR AND REPLACEMENT SERVICE WILL BE INDICATED. THE APPLICATION WILL ALSO CONTAIN AN ITEMIZED LIST OF THE PROPOSED SUBSTITUTE AND INDICATE THE COSTS OF REVISION FROM ACCEPTANCE OF SUCH SUBSTITUTE INCLUDING COSTS OF REVISION AND CLAIMS OF OTHER CONTRACTORS AFFECTED BY THE RESULTING CHANGE. ALL OF WHICH WILL BE SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL. THE PROPOSED SUBSTITUTE ENGINEER OF RECORD MAY REQUIRE CONTRACTOR TO FURNISH ADDITIONAL DATA ABOUT THE PROPOSED SUBSTITUTE.

COLD GALVANIZATION/SURFACE PREPARATION NOTES:

- CONTRACTOR TO USE ZINCO OR ZNS COLD GALVANIZATION COMPOUNDS OR APPROVED EQUIVALENT.
- PREPARE RUSTED/CORRODED SURFACE FOR TREATMENT ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
- CONTRACTOR TO APPLY (2) COATS OF COLD GALVANIZATION COMPOUND PER MANUFACTURER'S RECOMMENDATION. DRYING AND CURING TIMES MUST BE UTILIZED PER MANUFACTURER'S RECOMMENDATION.
- APPLY ALL COATINGS BY BRUSH IN CALM WIND CONDITIONS. THE USE OF AEROSOL IS NOT PERMITTED.
- IF THE TOWER IS PAINTED, BRUSH PAINT ALL TREATED AREAS WITH ZINCO AFTER COLD GALVANIZATION COMPOUND IS ALLOWED TO CURE.

CONTRACTOR QUALIFICATION NOTES:

- ALL REPAIRS SHALL BE PERFORMED BY A TOWER CONTRACTOR WITH A MINIMUM 5 YEARS EXPERIENCE IN TOWER, DIRECTION AND STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES.
- CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION MEANS AND METHODS. FDH ENGINEERING, INC. IS WILLING TO OFFER SERVICES BASED UPON AN AGREED FEE FOR THE WORK REQUIRED.
- ALL SUBMITTALS INFORMATION MUST BE SENT TO FDH ENGINEERING, INC. 1000 W. 10TH ST., SUITE 1031, E-MAIL: INFO@FDH-INC.COM, 755-1012, FAX: (913) 755-1031. E-MAIL: INFO@FDH-INC.COM. ANY VARIATION OF THESE SPECIFICATIONS OR DRAWINGS WITHOUT CONSENT FROM FDH ENGINEERING, INC. WILL VOID ANY RESPONSIBILITY OR LIABILITY FOR DAMAGE (MATERIAL OR PHYSICAL) TOWARDS FDH ENGINEERING, INC.
- ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THE TIA-1019-A STANDARD.

JOB SITE SAFETY & NOTES:

- NEITHER THE PROFESSIONAL ACTIVITIES OF FDH ENGINEERING, INC. NOR THE PRESENCE OF FDH ENGINEERING, INC. OR EMPLOYEES AND SUB-CONSULTANTS AT THE CONSTRUCTION SITE, SHALL IMPLY ANY LIABILITY OR OBLIGATIONS, DUTIES AND RESPONSIBILITIES INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES. ALL PORTIONS OF THE WORK OR CONSTRUCTION OR COORDINANCE WITH THE CONTRACT DOCUMENTS AND ANY HEALTH OR SAFETY PRECAUTIONS REQUIRED BY ANY REGULATORY AGENCIES. THE GENERAL CONTRACTOR AND OR SUBCONTRACTOR IS SOLELY RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS THAT THIS INTENT IS EVIDENT BY ACCEPTING THIS WORK.

BRYCE D. PATE



DRAWN BY: BTK
 CHECKED BY: MTE
 ENG. APPROV: DDA
 PROJECT NO: 14664X-400

SUBMITTALS		REV
DATE	DESCRIPTION	D
02/29/14	CONSTRUCTION	0

THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY TO FDH ENGINEERING, INC. AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF FDH ENGINEERING, INC. IS PROHIBITED.

SITE NAME:
 GUILFORD
 SITE NUMBER:
 CT13065-A-03
 SITE ADDRESS:



SECONDARY INSPECTION
 EOR has reviewed the issues noted and passed the as-built condition(s).
 GC has revisited the site and corrected the punchlist items shown. Documentation received by the EOR.

PREPARED BY:
FDH
 ENGINEERING INNOVATION

PREPARED FOR:
SBA
 1800 BIRNEY ROAD, PARKWAY, NY
 BOCA RATON, FL 33487
 (800) 487-8878

REGISTERED PROFESSIONAL ENGINEER
 No. 23247
 DENNIS D. ARBON
 CONNECTICUT LIC. NO. 23247

DATE: 05/29/14
 DESCRIPTION: CONSTRUCTION
 SUBMITTALS: 0

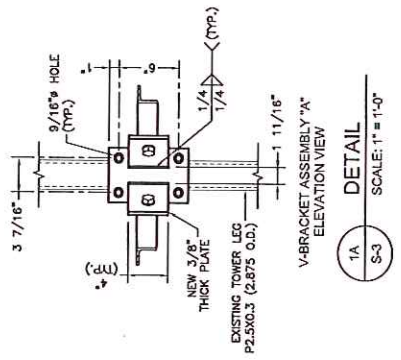
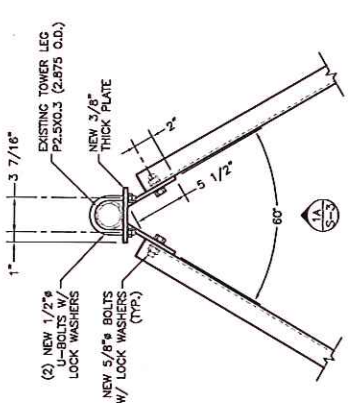
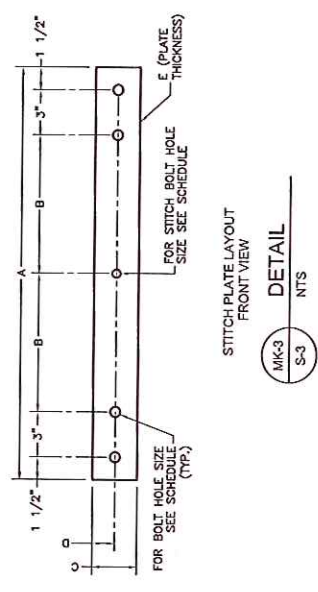
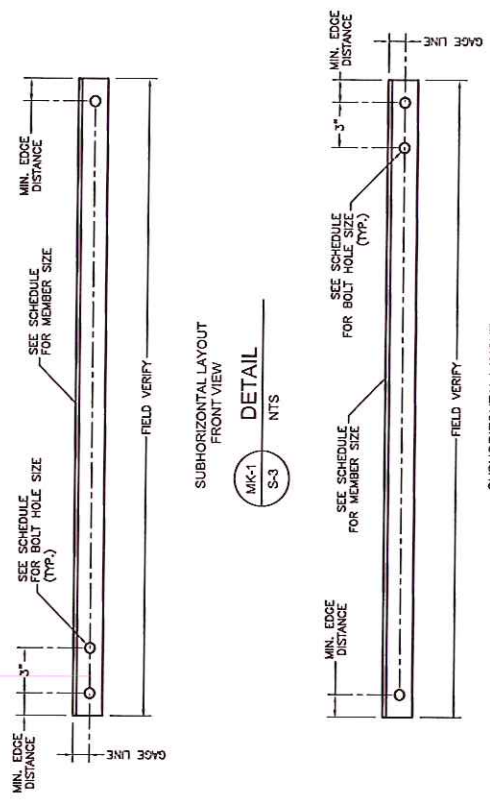
DATE: 05/29/14
 DESCRIPTION: CONSTRUCTION
 SUBMITTALS: 0

THE INFORMATION CONTAINED IN THIS DRAWING IS THE PROPERTY OF FDH ENGINEERING, INC. AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF FDH ENGINEERING, INC.

SITE NAME:
 GUILFORD
 SITE NUMBER:
 CT13065-A-03

SITE ADDRESS:
 331 KILLINGWORTH ROAD
 GUILFORD, CT 06437

SECONDARY INSPECTION
 EOR has reviewed the issues noted and passed the as-built condition(s).
 GC has revisited the site and corrected the punchlist items shown. Documentation showing these corrections has been received by the EOR.



SUBHORIZONTAL REINFORCEMENT INSTALLATION SCHEDULE

SUBHORIZONTAL BRACE ELEVATION	TOWER LEG SIZE	FACE WIDTH* (CENTER OF LEG TO CENTER OF LEG)	STITCH PLATE SPECIFICATIONS					BOLT HOLE SIZE (TYP.)	BOLT SIZE (TYP.)	STITCH BOLT HOLE SIZE (TYP.)	STITCH BOLT SIZE (TYP.)
			A	B	C	D	E				
110.0±	P2.5X0.3 (2.875 O.D.)	9"-3"±	22"	6 1/2"	3"	1 1/2"	3/8"	11/16"	5/8"	9/16"	1/2"

*FIELD VERIFY FACE WIDTH PRIOR TO FABRICATION. CONFIRM WITH ENGINEER OF RECORD.
 **MINIMUM EDGE DISTANCE FROM CENTER OF STANDARD HOLE TO EDGE OF CONNECTED PART.
 ***DISTANCE FROM HELL OF ANGLE TO CENTER OF BOLT HOLE.

Manning Lilienthal

From: Michael Brennan
Sent: Monday, February 23, 2015 2:50 PM
To: Manning Lilienthal
Subject: RE: CT13065-A-03_Guilford - NCN

Yes

From: Manning Lilienthal
Sent: Monday, February 23, 2015 2:37 PM
To: Michael Brennan
Subject: RE: CT13065-A-03_Guilford - NCN

Mike,

The prints for this site called for ½" stitch bolts, the GC installed 5/8" with flat washers and locking devices. Is this acceptable?

Thank you,

Manning Lilienthal
FDH, Inc.
222 S. Central Ave., Suite 1110
St. Louis, MO 63105
Ph: (314) 773-4000 Ext: 243
Fx: (314) 773-4002
mlilienthal@fdh-inc.com
www.fdh-inc.com

From: Steven Strickland
Sent: Thursday, January 15, 2015 9:36 AM
To: Darren Britton
Cc: Jeffrey Johnson
Subject: FW: CT13065-A-03_Guilford - NCN

Darren,

Please get this pulled together and off to EIS. Thank you.

Steven R. Strickland
Senior Manager - Construction Department

FDH, Inc.
6521 Meridien Drive
Raleigh, NC 27616
Direct: 919.367.5240 • Mobile:336.432.4943
Office : 919.755.1012 • Fax: 919.755.1031
Email: steven@fdh-inc.com

www.fdh-inc.com
Raleigh•St. Louis•Baton Rouge•Irvine•Dayton•Phoenix



ENGINEERING INNOVATION



From: Michael Brennan
Sent: Thursday, January 15, 2015 9:55 AM
To: Steven Strickland
Cc: Darren Britton; Jeffrey Johnson; John Wood
Subject: RE: CT13065-A-03_Guilford - NCN

Ah, Ok. That is fine. Approved.

From: Steven Strickland
Sent: Thursday, January 15, 2015 8:53 AM
To: Michael Brennan
Cc: Darren Britton; Jeffrey Johnson; John Wood
Subject: RE: CT13065-A-03_Guilford - NCN

Michael,

Please review the pictures again. They installed lock washers along with the flat washers. Please approve. Thank you

Steven R. Strickland
Senior Manager - Construction Department

FDH, Inc.
6521 Meridien Drive
Raleigh, NC 27616
Direct: 919.367.5240 • Mobile:336.432.4943
Office : 919.755.1012 • Fax: 919.755.1031
Email: steven@fdh-inc.com

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ENGINEERING INNOVATION



From: Michael Brennan
Sent: Thursday, January 15, 2015 9:44 AM
To: Steven Strickland
Cc: Darren Britton; Jeffrey Johnson; John Wood
Subject: RE: CT13065-A-03_Guilford - NCN

1. Replace flat washers with lock washers to prevent nuts from coming loose.

Michael Brennan, EI
Project Engineer

FDH Engineering Inc.
222 South Central Suite 1110
St. Louis, MO 63105

Office: 314.773.4000
Fax: 314.773.4002
Email: mbrennan@fdh-inc.com
Raleigh–St. Louis–Baton Rouge–Irvine–Dayton–Phoenix



From: Steven Strickland
Sent: Thursday, January 15, 2015 7:32 AM
To: Michael Brennan
Cc: Darren Britton; Jeffrey Johnson; John Wood
Subject: FW: CT13065-A-03_Guilford - NCN

Michael,

Please review and comment. Thank you

1. Flat washers installed on on all new sub-horizontal bolts, holes drilled are larger than specified, 3/4"Ø, rather than 11/16"Ø. (Photos 4227, 4226, 4229) – **Can this be approved?**

Steven R. Strickland
Senior Manager - Construction Department

FDH, Inc.
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Raleigh, NC 27616
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Email: steven@fdh-inc.com

www.fdh-inc.com
Raleigh•St. Louis•Baton Rouge•Irvine•Dayton•Phoenix



From: Manning Lillenthal
Sent: Thursday, January 15, 2015 8:16 AM
To: Steven Strickland; Darren Britton
Cc: Joshua Walton; William Holt; Michael Brockel
Subject: CT13065-A-03_Guilford - NCN

Steven,



STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
www.ct.gov/csc

Kri Pelletier
SBA Communications Corporation
33 Boston Post Road West Suite 320
Marlborough, MA 01752

RE: **EM-SPRINT-060-140605** – Sprint Spectrum notice of intent to modify an existing telecommunications facility located at 331 Killingworth Road, Guilford, Connecticut.

Dear Ms. Pelletier:

The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies with the following conditions:

- The proposed coax shall be installed, and the tower shall be modified, in accordance with the recommendations of the structural analysis report prepared by FDH Engineering, dated May 29, 2014 and stamped by Dennis Abel;
- Within 45 days following completion of the equipment installation, Sprint shall provide documentation certified by a professional engineer that its installation complied with the recommendations of the structural analysis;
- Any deviation from the proposed modification as specified in this notice and supporting materials with the Council shall render this acknowledgement invalid;
- Any material changes to this modification as proposed shall require the filing of a new notice with the Council;
- Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
- Any nonfunctioning antenna and associated antenna mounting equipment on this facility owned and operated by Sprint Spectrum shall be removed within 60 days of the date the antenna ceased to function.
- The validity of this action shall expire one year from the date of this letter; and
- The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration.

The proposed modifications including the placement of all necessary equipment and shelters within the tower compound are to be implemented as specified here and in your notice dated June 3, 2014. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site by any dimension, increase noise levels at the tower site boundary by six decibels or more, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site

boundary to or above the standards adopted by the Federal Communications Commission pursuant to Section 704 of the Telecommunications Act of 1996 and by the state Department of Energy and Environmental Protection pursuant to Connecticut General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below state and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Thank you for your attention and cooperation.

Very truly yours,



Melanie A. Bachman
Acting Executive Director

MAB/RDM/cm

c: The Honorable Joseph S. Mazza, First Selectman, Town of Guilford
George Kral, Town Planner, Town of Guilford
Regina Reid, Zoning Enforcement Officer, Town of Guilford