

Please Reply To:
Sam Simons
35 Griffin Road South
Bloomfield, CT 06002
203-482-5156
Sam.Simons@T-Mobile.com

June 27, 2018

Attorney Melanie Bachman Connecticut
Siting Council
10 Franklin Square
New Britain, CT 06501

EM-T-MOBILE-064-170329

T-Mobile Site ID CT11062B

92 Weston Street, Hartford CT

Notice of Compliance with Conditions and Construction Completion

Dear Attorney Bachman:

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:

1. The tower shall be reinforced in accordance with the Structural Analysis report prepared by Paul J. Ford and Company dated March 22, 2017, and stamped by Justin Kline and related Tower Modification Drawings dated February 10, 2017 and stamped by Justin Kline on February 15, 2017;
2. Within 45 days following completion of the equipment installation, T-Mobile shall provide documentation certified by a Professional Engineer that its installation complied with the recommendations presented in the Structural Analysis and related Tower Modification Drawings;
3. Any deviation from the proposed modification as specified in this notice and supporting materials with the Council shall render this acknowledgement invalid;
4. Any material changes to this modification as proposed shall require the filing of a new notice with the Council;
5. Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
6. Any nonfunctioning antenna and associated antenna mounting equipment on this facility owned and operated by T-Mobile shall be removed within 60 days of the date the antenna ceased to function;
7. The validity of this action shall expire one year from the date of this letter; and
8. 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 attached PE Closeout Letter dated August 4, 2017 provides evidence of compliance with the conditions outlined by the Council. In addition, T-Mobile hereby notifies the Council that construction of the acknowledged modifications were complete as of October 5, 2017.

Sincerely,



Samuel Simons, Engineering Development - Connecticut

cc: Mark Richard, Engineering and Operations

Engineered Tower Solutions, PLLC.
 2624 Leighton Ridge Dr. Suite 100
 Wake Forest, NC 27587
 (919) 782-2710
 Kurt.Vandeventer@ets-pllc.com



Date: **August 4, 2017**

Dan Vadney
 Crown Castle USA, Inc.
 3 Corporate Park Drive, Suite 101
 Clifton Park, NY 12065

Subject: Modification Inspection Report

Crown Castle Designation: **Crown Castle BU Number:** 876325
Crown Castle Site Name: *Weston Square*
Crown Castle JDE Job Number: N/A

Engineering Firm Designation: **ETS Project Number:** 171195

Site Data: **92 Weston St, Hartford CT, Hartford County**
Latitude 41° 47' 12.3", Longitude -72° 39' 44.42"
110 Foot – Monopole Tower

Engineered Tower Solutions, PLLC. is pleased to submit this “**Modification Inspection Report**” (MI Report) to Crown Castle for the modification/reinforcement to the subject structure. This Modification Inspection (MI) was performed in accordance with Crown Castle ENG-SOW-10007 Modification Inspection SOW, Contract Documents, and Crown Castle Purchase Order number 1034199. 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 2. The MI is not a review of the adequacy or effectiveness of the modification/reinforcement solution.

Table 1 – General Information

| | Company | Contact | Dates on Site |
|---|----------------------------------|-----------------------|----------------------|
| MI Inspector | Engineered Tower Solutions, PLLC | Hunter Thomas, E.I. | 7/20/2017 |
| MI Inspector Field Representative (if applicable) | N/A | N/A | N/A |
| <input checked="" type="checkbox"/> Independent <input type="checkbox"/> EOR <input type="checkbox"/> Turnkey | | | N/A |
| Modification Design EOR | Paul J. Ford and Co | Justin T. Kline, P.E. | N/A |
| General Contractor | Skyclimber Wind Solutions, LLC | John Lawrence | 7/3/2017 – 7/21/2017 |

| | | | |
|--------------------------------------|-----|-----|-----|
| Sub to the General Contractor | N/A | N/A | N/A |
| Field CWI for the General Contractor | N/A | N/A | N/A |
| Field NDE for the General Contractor | N/A | N/A | N/A |

Table 2 – Documents

| Document(s) | Remarks | Source |
|---|---|------------------------------|
| Tower Modification drawings, 2/10/17; PJF Job #: 37517-0431.001.7700 | Justin T. Kline, P.E. WO#: 1354293 Application ID: 366958 | CCIsites Doc Number: 6702634 |

Based on our inspection, *Engineered Tower Solutions, PLLC.* determines this project:

PASSING MI

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

PASS AS NOTED MI

The configuration, materials and/or workmanship of the modifications are accepted as noted (see detail below).

FAILED MI

The configuration, materials and/or workmanship of the modifications are NOT installed in accordance with the Contract Documents. The rejection is based on non-conformance in the following area(s):

- Materials (see detail below)
- Workmanship (see detail below)
- Configuration (see detail below)

We at *Engineered Tower Solutions, PLLC.* 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,



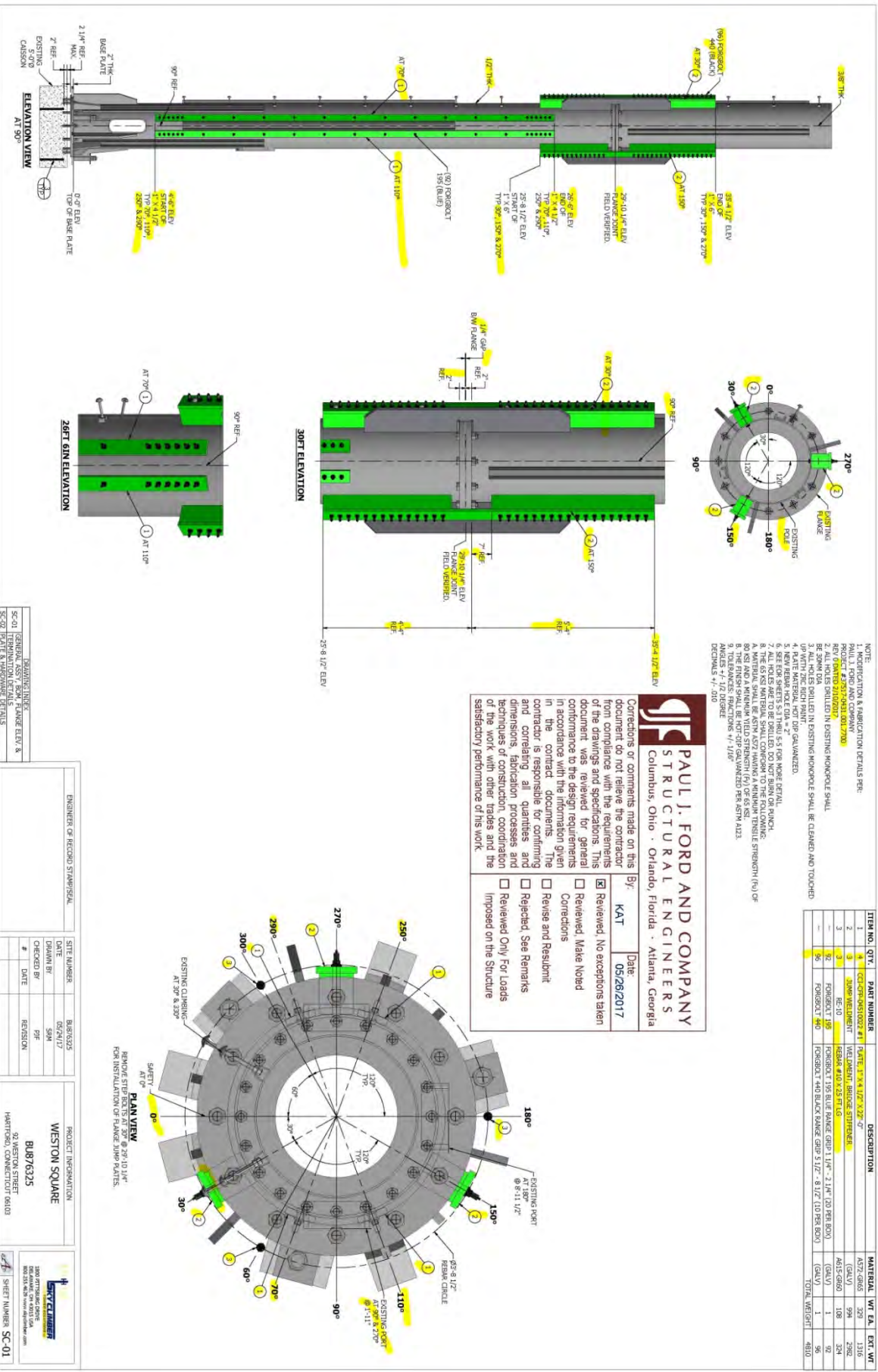
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PRE-CONSTRUCTION

6.1.2 EOR APPROVED SHOP DRAWINGS



- NOTE:
1. MODIFICATION & FABRICATION DETAILS PER: PROJECT #201703010002000
 2. REV. 02/28/2017
 3. ALL BOLTS BOLTED IN EXISTING MONOCOKE SHALL BE 3/4" DIA
 4. ALL BOLTS BOLTED IN EXISTING MONOCOKE SHALL BE CLEANED AND TOUCHED
 5. REPAIR HOLE DIA = 2"
 6. ALL HOLE DIAMETERS SHALL BE 1/8" OVER HOLE DIA
 7. ALL HOLES ARE TO BE DRILLED, DO NOT BURR OR ROUNCH
 8. THE LASKI MATERIAL SHALL CONFORM TO THE FOLLOWING: 80 KS AND A MINIMUM YIELD STRENGTH (F_y) OF 65.00
 9. THE FINISH SHALL BE HOT-DIP GALVANIZED PER ASTM A123, ANGLES +/- 1/2 DEGREE
 10. DECIMALS - / - 010

| ITEM NO. | QTY. | PART NUMBER | DESCRIPTION | MATERIAL | WT. | EA. | EXT. WT. |
|----------|------|--------------------|---|--------------|-----|------|----------|
| 1 | 4 | CGC-070-0610022-41 | FLANGE, 3' X 4' 1/2" X 23' 0" | A327-0805 | 329 | 1316 | |
| 2 | 4 | 28W-WELDMENT | WELDMENT, BRIDGE STRUTTER | (GALV) | 994 | 2392 | |
| 3 | 10 | 28W-WELDMENT | WELDMENT, BRIDGE STRUTTER | (GALV) | 208 | 208 | |
| 4 | 8 | FORBOLCT 440 | FORBOLCT 440 BLACK RANDE GRP 1.1/2" X 2.1/2" (10 PER 800) | (GALV) | 1 | 96 | |
| 5 | 8 | FORBOLCT 440 | FORBOLCT 440 BLACK RANDE GRP 5.1/2" X 8.1/2" (10 PER 800) | (GALV) | 1 | 96 | |
| | | | | TOTAL WEIGHT | | 4810 | |

PAUL J. FORD AND COMPANY
STRUCTURAL ENGINEERS
Columbus, Ohio · Orlando, Florida · Atlanta, Georgia

Correctors or comments made on this document do not relieve the contractor from compliance with the requirements of the drawings and specifications. This document was reviewed for general conformance with the minimum requirements in accordance with the International Building Code. The contractor is responsible for confirming and correlating all quantities and dimensions of construction processes and techniques of construction, coordination of the work with other trades and the satisfactory performance of his work.

By: **KAT** Date: **05/28/2017**

Reviewed, No exceptions taken
 Reviewed, Make Noted Corrections
 Revise and Resubmit
 Rejected, See Remarks
 Reviewed Only For Loads Imposed on the Structure

| GENERAL INFORMATION | | ENGINEER OF RECORD STATISTICAL | |
|---------------------|--|--------------------------------|----------|
| SC-01 | GENERAL ASS'T. FOR ELEVATION & SECTION | DATE | 05/24/17 |
| SC-02 | PLATE & WELDMENT DETAILS | DRAWN BY | SMH |
| | | CHECKED BY | PF |
| | | REVISION | |
| | | DATE | |

| PROJECT INFORMATION | |
|---------------------|-----------------------------|
| PROJECT NUMBER | WESTON SQUARE |
| PROJECT ADDRESS | 83 WESTON STREET |
| CITY | HARTFORD, CONNECTICUT 06103 |

| DRAWING INFORMATION | |
|---------------------|----------|
| DATE | 05/24/17 |
| DRAWN BY | SMH |
| CHECKED BY | PF |
| REVISION | |
| DATE | |

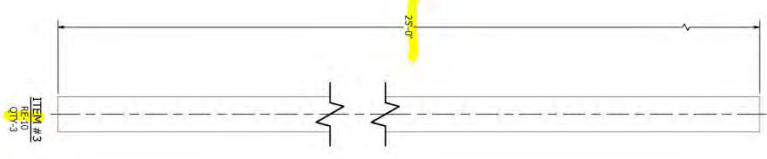
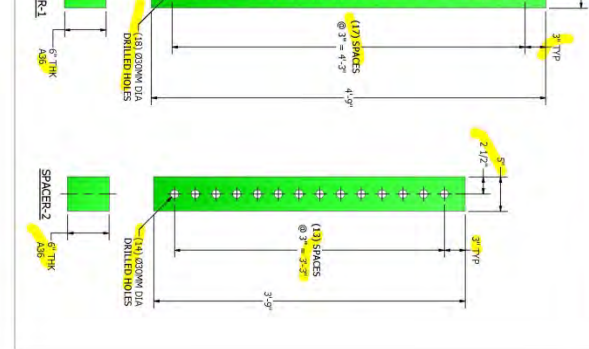
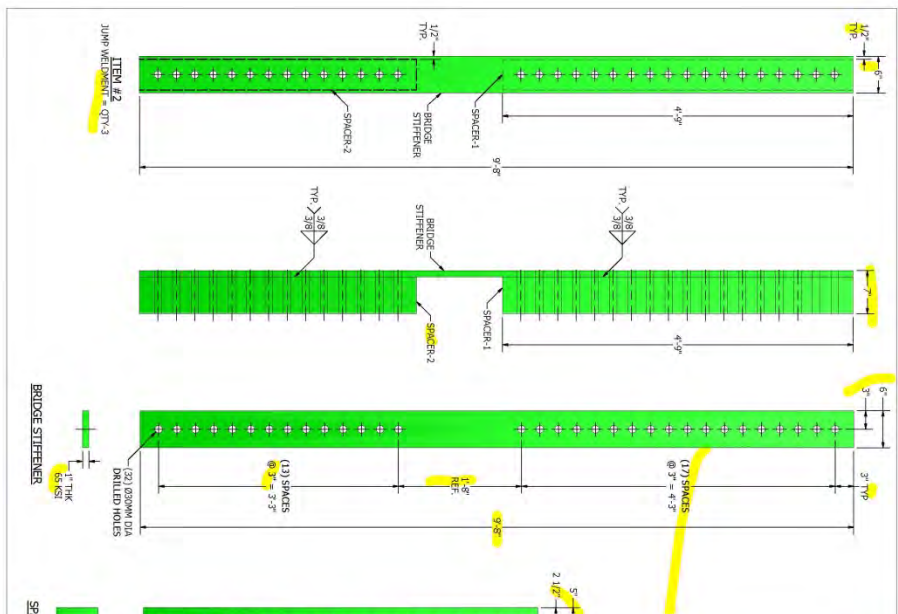
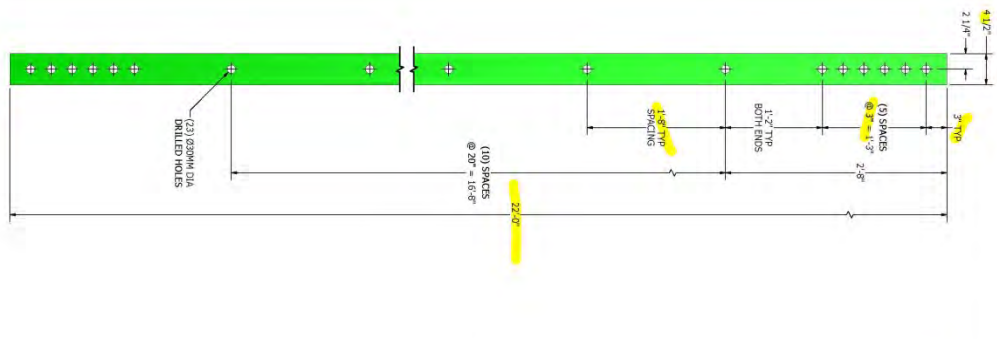
| PROJECT INFORMATION | |
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| PROJECT NUMBER | WESTON SQUARE |
| PROJECT ADDRESS | 83 WESTON STREET |
| CITY | HARTFORD, CONNECTICUT 06103 |

| DRAWING INFORMATION | |
|---------------------|----------|
| DATE | 05/24/17 |
| DRAWN BY | SMH |
| CHECKED BY | PF |
| REVISION | |
| DATE | |



Corrections or comments made on this document do not relieve the contractor from compliance with the requirements of the drawings and specifications. This document was reviewed for general conformance to the design requirements in accordance with the information given in the contract documents. The contractor is responsible for confirming and correlating all quantities and dimensions of construction, coordination of the work with other trades and the satisfactory performance of this work.

| | | | |
|-------------------------------------|--|--------------------------|------------------------|
| By: | KAT | Date: | 05/26/2017 |
| <input checked="" type="checkbox"/> | Reviewed | <input type="checkbox"/> | No exceptions taken |
| <input type="checkbox"/> | Reviewed | <input type="checkbox"/> | Make Noted Corrections |
| <input type="checkbox"/> | Revise and Resubmit | <input type="checkbox"/> | Rejected. See Remarks |
| <input type="checkbox"/> | Reviewed Only For Loads Imposed on the Structure | <input type="checkbox"/> | |



| | | | |
|--------------------------------|----------------------|---|------------------|
| ENGINEER OF RECORD: STAMPAISEL | SITE NUMBER: B087925 | PROJECT INFORMATION: WESTON SQUARE | DATE: 05/26/2017 |
| DESIGNED BY: SEM | CHECKED BY: PJP | PROJECT ADDRESS: 92 WESTON STREET HARTFORD, CONNECTICUT 06103 | DATE: 05/26/2017 |
| # | DATE | REVISION | |
| | | | |
| | | | |

2800 RUTLANDS CENTER

 800 SQUARE ON 40511 LANE

 BOSTON, MA 02128

 TEL: 617.552.3000

 FAX: 617.552.3001

 SHEET NUMBER: SC-02

JF Fabricators

Certificate of Compliance

BU876325

Site: Weston Square

This is to Certify that all fabricated components have been inspected in accordance to current Sky Climber drawings. All work was performed in accordance to industry standards and contract documents.

Approval signature: 

Date: 6/29/17



CONSTRUCTION WELDING INSPECTION SERVICES INCORPORATED

P. O. Box 673 - Matthews, NC 28106
Phone (704) 560-9755
cwiservice@bellsouth.net

SHOP INSPECTION REPORT



SHOP DAILY INSPECTION REPORT

Client SKY CLIMBER
Project WESTON SQUARE
Facility JF FABRICATORS LLC, 704-454-7224
Location HARRISBURG NC

Report No. Job Number
Inspector Date

6/13/17

Page 1 of 1

| QTY | PIECE MARK | CODE | LOT | | | WLD ID | PN T | NDT | QTY | PIECE MARK | CODE | LOT | | | WLD ID | PN T | NDT |
|-----|------------|------|---------|-----|----|--------|------|-----|-----|------------|------|---------|-----|----|--------|------|-----|
| | | | PO/HEAT | DIM | VT | | | | | | | PO/HEAT | DIM | VT | | | |
| 3 | JUMP BLOCK | | | | | | | | | | | | | | | | |
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Defect codes: MG-Material Grade ML-Material Length DM-Detail Missing DW-Detail Wrong DP-Detail Placement
WM-Weld Missing WR-Weld Reject S-Stencil Missing PM-Paint Masking PC-Paint Coverage PO-Paint Overspray

All Pre-During-Post Welding Operations Meet AWS D1.1

NOTES

OBSERVATIONS REPORTED HEREIN ARE INDICATIVE OF CONDITIONS FOUND AT THE EXACT LOCATION AND TIME OF OBSERVATION ONLY. THE ABOVE SERVICES AND REPORT AUTHOR HEREIN HOLD NO WARRANTY, GUARANTEE, OR REPRESENTATION OF ANY KIND, EITHER EXPRESS OR IMPLIED, UNDER THE STANDARD CONDITIONS OF THE CONTRACT BETWEEN CWS SERVICES INC. AND CLIENT UNDER THE STANDARD CONDITIONS OF THE CONTRACT. THIS REPORT IS THE PROPERTY OF CWS SERVICES INC. AND WILL BE RETURNED TO THE CLIENT AT THE CLIENT'S REQUEST. NO OTHER WARRANTY, GUARANTEE, OR REPRESENTATION, EXPRESSED OR IMPLIED, IS INCLUDED OR INTENDED.

Respectfully submitted,
Construction Welding Inspection Services Inc.
Inspector *[Signature]*
130N 2017

Reviewed By _____ Date _____
(Signed Copy on File)

CW I # 150921161
exp 01 Sep 2018





AWS WELDING PROCEDURE SPECIFICATION (WPS)

WPS NUMBER WPS-100ksi-GMAW-F1
(ANSI / AWS D1.1, STRUCTURAL WELDING CODE - STEEL)
Qualified by Testing

Company Name: JF Fabricators Written By: Perry L. Anderson
 Authorized By: Dave Fennell
 Welding Procedure Specification No.: WPS-100ksi-GMAW-F1 Date: 10/30/12 Supporting Procedure Qualification Record: PQR-100ksi-GMAW-F1
 Revision: 0 Revision: 0
 Welding Process (es): GMAW Type: Semiautomatic

JOINTS

Type: Fillet (T & Lap)
 Backing (Yes or No): No
 Backing Material (Type): N/A
 Preparation: 4.19

BASE METAL

Group No.: A514 To Group No.: A514
 Material Spec.: ASTM A514
 Type or Grade: Gr. B (100ksi)
 Thickness Range:
 Groove: N/A Fillet: Unlimited
 Diameter Range:
 Groove: N/A Fillet: N/A
 Other: Single max. 5/16"/Multi. Min. 3/8"

FILLER METAL

Spec. No. (SFA): A5.28
 AWS No. (Class): E110S-1
 F - No.: F-6
 A - No.: A5.28
 Size of Filler Metal: .045"
 Deposited Weld Metal: E110S-1
 Thickness Range Weld Metal:
 Groove: N/A
 Fillet: Unlimited
 Electrode - Flux (Class): N/A
 Flux Trade Name: N/A
 Consumable Insert: N/A
 Other: N/A

POSITION

Position of Groove (s): N/A
 Weld Progression: Flat/Horizontal
 Position of Fillet (s): 1F/2F
 Other: N/A

Page 1 of 2

PREHEAT

Preheat Temp. Min.: 150° F
 Interpass Temp. Max.: 400° F
 Preheat Maintenance: 150° F
 Other: _____

POSTWELD HEAT TREATMENT

Temperature Range: N/A
 Time Range: N/A
 Other: _____

GAS

Shielding Gas (cs): CO₂/AR
 Percent Comp. Mix: 98%/2%
 Flow Rate: 35CFM
 Gas Backing: N/A
 Trailing Shield Gas Comp.: N/A

ELECTRICAL CHARACTERISTICS

Current AC or DC: DC Polarity: Positive
 Amp Range: See Page 2 Volt Range: See Page 2
 Tungsten Size and Type (Pure, 2% Thoriated, Etc.): _____
 Mode of Metal Transfer for GMAW (Spray, Short Circuit, Etc.): Spray
 Electrode Wire Speed Range: See page 2
 Other: N/A

TECHNIQUE

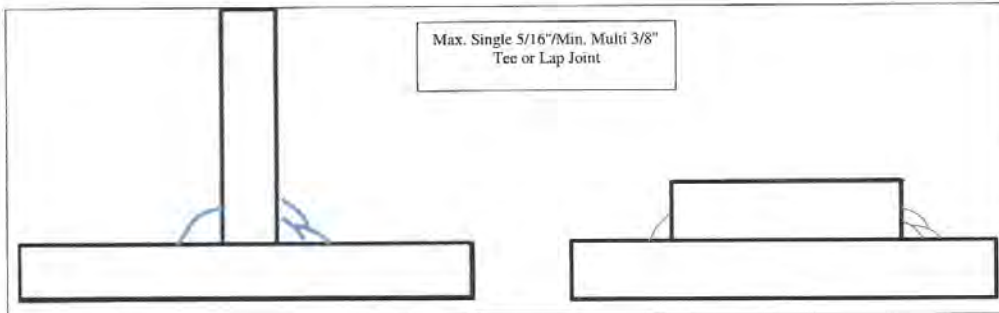
Stringer or Weave Bead: Stringer
 Orifice or Gas Cup Size: Standard
 Initial & Interpass Cleaning: Wire Brush
 Method of Back Gouging: N/A
 Contact Tube to Work Distance: 1/2" to 3/4"
 Multi or Single Pass (Per Side): Multi
 Multi or Single Electrodes: Single
 Travel Speed Range: See page 2
 Other: N/A



AWS WELDING PROCEDURE SPECIFICATION (WPS)

WPS NUMBER WPS-100ksi-GMAW-F1
 (ANSI / AWS D1.1, STRUCTURAL WELDING CODE – STEEL)
 Qualified by Testing

| Filler Metal | | | | Current | | | | | |
|----------------|---------|---------|----------|---------------|---------------|------------|--------------------|------------------|---------|
| Weld Layer (s) | Process | Class | Diameter | Type Polarity | Amp/WFS Range | Volt Range | Travel Speed Range | Wire Speed Range | Other |
| All | GMAW | E110S-1 | .045" | DECP | 275 | 26 | 8 ipm | 275 | Min/Max |
| | | | | | | | | | |



- Notes:
1. Single pass fillets limited to a maximum of 5/16" and multi pass fillets limited to a minimum of 3/8"
 2. At the option of the Organization, sketches maybe attached to illustrate joint design changes, weld layers and bead sequence without the complete rewriting of this procedure.
 3. Positions qualified are 1F and 2F
 4. This procedure meets the general requirements of ANSI/AWS D1.1-10, and ANSI/AWS D14.3

Date: 10/30/2012
 Page 2 of 2

Organization: JF Fabricators
 Authorized By: Dave Fennell



AWS WELDING PROCEDURE QUALIFICATION RECORD (PQR)

PQR NUMBER PQR-100KSI-GMAW-01
(AWS D1.1/D1.1M, STRUCTURAL WELDING CODE - STEEL)

Company Name: JF Fabricators Written By: Perry L. Anderson
Authorized By: David Fennell
PQR Number: PQR-100KSI-GMAW-01 Date: 10/18/12 Supporting WPS No. WPS-100KSI-GMAW-01
Welded By: Jared Bradley ID No. JFFAB-01
Welding Process (es): GMAW Type: Semiautomatic

JOINTS

Groove Design B-U2a-GF
Backing (Yes or No) Yes
Backing Material (Type) A36
Preparation Per Figs. 4.21 & 4.23

BASE METAL

Group No. 1 To Group No. 1
Material Spec. ASTM A514
Type or Grade Grade 100
Thickness of Test Coupon
Groove 1 inch Fillet N/A
Diameter Range of Test Coupon
Groove Plate Fillet
Other

FILLER METAL

Spec. No. (SFA) A5.28
AWS No. (Class) E110S-1
F - No. N/A
A - No. A5.28
Size of Filler Metal .045"
Deposited Weld Metal 1"
Thickness range weld Metal
Groove Unlimited
Fillet N/A
Electrode - Flux (Class) N/A
Flux Trade Name N/A
Consumable Insert N/A
Other

POSITION

Position of Groove 1G
Weld Progression 1G
Position of Fillet N/A
Other

PREHEAT

Preheat Temp. Min. 150°
Interpass Temp. Max. 400°
Preheat Maintenance 150°
Other

POSTWELD HEAT TREATMENT

Temperature Range N/A
Time Range N/A
Other

GAS

Shielding Gas (es) CO2/AR
Percent Comp. Mix 98%/2%
Flow Rate 50CFM
Backing Gas N/A Flow N/A
Trailing Shield Gas Comp. N/A

ELECTRICAL CHARACTERISTICS

Current AC or DC DC Polarity Positive
Amp See Page 2 Volt Range See Page 2
Range
Tungsten Size and Type
Etc.) N/A
Mode of Metal Transfer for GMAW
(Short Circuit, Spray, etc.) Spray
Electrode Wire Speed Range See Page 2
Other

TECHNIQUE

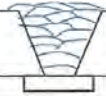
Stringer or Weave Bead Stringer
Orifice or Gas Cup Size Standard
Initial & Interpass Cleaning Wire Brush
Method of Back Gouging Grinding
Contact Tube to Work Distance 1/2" to 3.4"
Multi or Single Pass (Per Side) Multi
Multi or Single Electrodes Single
Travel Speed Range See page 2
Other





AWS WELDING PROCEDURE QUALIFICATION RECORD (PQR)

PQR NUMBER PQR-100KSI-GMAW-01
 (AWS D1.1/D1.1M, STRUCTURAL WELDING CODE – STEEL)

| Filler Metal | | | | | Current | | | Joint Details |
|----------------|---------|---------|----------|---------------|------------|-------|--------------------|--|
| Weld Layer (s) | Process | Class | Diameter | Type Polarity | Amp or WFS | Volts | Travel Speed Range | |
| All | GMAW | E110S-1 | .045" | DECP | 275 | 26 | 8 imp |  <p>Gap 1/4" Bevel Angle 45° Backing 1/4"</p> |
| | | | | | | | | |
| | | | | | | | | |
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| | | | | | | | | |

** Voltage controlled internally by machine with relation to amperage

TEST RESULTS

Visual Examination: Perry L. Anderson Radiographic Test: N/A

GUIDED BEND TEST

| Test Piece No. | Figure / Type | Results | Test Piece No. | Figure / Type | Results |
|----------------|---------------|---------|----------------|---------------|---------|
| JFFAB-01 | 4.23/Side | Accept | JFFAB-01 | 4.23/Side | Accept |

ALL WELD METAL TENSILE TEST

| Test Piece No. | Width (in.) | Thickness (in.) | Area (sq. in.) | Ultimate Tensile (ksi) | Yield Strength (ksi) | Location and Type of Failure | Results |
|---------------------|-------------|-----------------|----------------|------------------------|----------------------|---|---------|
| JFFAB-01 | .5" | .5" | .25" | 114 | 108 | Reduced Area @ 58%/ Elongation % @ 19% | Accept |
| <i>Requirements</i> | | | | <i>110</i> | <i>100</i> | <i>50%/18%</i> | |

Test Witnessed By: Perry L. Anderson Project Number: 121286 Task 2
 Destructive Testing By: Element (Crystal Dibble) Lab Test Number: JFF001-10-19-809905-1
 Visual Inspector: Perry L. Anderson, CWI/ASNT Level III Date: 10/18/2012

We certify that the statements in this record are correct and that the test weld(s) were prepared, welded and tested in accordance with the requirements of Section 4, ANSI/AWS D1.1-2010.

Date: 10/19/12 Organization: Kleinfelder
 Authorized By: Perry L. Anderson



Reported To: TEP Design Build
 326 Tryon Road
 Raleigh, NC 27603

Date: 6-22-15
 P/O: QAF
 Report Number: 1
 Project: CWI Witnessing Crown Castle Mountain Tower

AWS - WELDER, WELDING OPERATOR OR TACK WELDER QUALIFICATION TEST RECORD

Name: David Hernandez Welding Code: AWS D1.1
 Type of Welder: Semi-automatic Identification Number: 9003
 Welding Procedure Specification No. FCAW-CJP-E81T8-Ni2 J.. Rev: 0 Date: 6-22-15

| Variables | Record Actual Values | | Qualification Range |
|-----------------------------|----------------------|---------------|---|
| Process/Type | FCAW | | FCAW |
| Electrode (single/multiple) | Single | | Single |
| Current/Polarity | DCEP | | Flat, Horizontal & Vertical Fillet and Groove |
| Position | 3G | | |
| Weld Progression | UP | | Uphill |
| Backing (With or Without) | With | | With |
| Material/Spec | ASTM A 572 | to ASTM A 572 | All AWS Prequalified Material |
| Base Metal | | | |
| Thickness: (Plate) | | | |
| Groove | 1" | | 1/8" - Unlimited |
| Fillet | N/A | | 1/8" - Unlimited |
| Thickness: (Pipe/tube) | | | |
| Groove | N/A | | 1/8" - Unlimited |
| Fillet | N/A | | 1/8" - Unlimited |
| Diameter: (Pipe) | | | |
| Groove | N/A | | 24" and greater |
| Fillet | N/A | | Any Diameter |
| Filler Metal Spec. No. | AWS 5.29 | | F6 Filler Metal |
| Class | E81T8-Ni2 J H8 | | |
| F-No. | 6 | | |
| Gas/Flux Type | N/A | | |
| Other | N/A | | N/A |

VISUAL INSPECTION Acceptable: Yes No Date coupon welded: 6-22-15

Guided Bend Test Results

| Type 3G | Result | Type | Result |
|---------|-------------------|------|--------|
| Side | No Defects - PASS | | |
| Side | No Defects - PASS | | |

Fillet Test Results

| | |
|--|--------------|
| Appearance: | Fillet Size: |
| Fracture Test Root: | Macroetch: |
| (Describe the location, nature, and size of any crack or tearing of the specimen): | |

Radiographic Test Results

| Film ID | Results | Remarks | Film ID | Results | Remarks |
|--|---------|---------|--|---------|---------|
| Film evaluated by: _____ Company: _____ | | | | | |
| Mechanical tests conducted by: Tom Plese | | | Laboratory Test Number: 150967 | | |
| Welding supervised by: Jace McAnally CWI | | | Company: TUV Rheinland Industrial Solutions AWS Accreditation No. 14120521 | | |

The welder identified above PASSES FAILS based on the requirements of the code listed above.

Reviewer's Signature: Richard A. Portman Date: 7/28/15

Client Approval: _____ Date: _____

TUV RHEINLAND INDUSTRIAL SOLUTIONS, INC.

These test results report our findings at the time of inspection and shall be reviewed by the client for compliance to the project requirements. Due to the limitations of nondestructive testing in evaluating all of the factors that determine the overall component quality, no guarantee is made or liability assumed by TÜV Rheinland Industrial Solutions, Inc. ("TRIS") for the component quality or serviceability.

 Richard A. Portman
 CWI 05061311 Revision 7/10/2013
 AWS Welder Qualification



CANADIAN SPECIALTY INSPECTION SERVICES, LTD.

**WELDER OR WELDING OPERATOR
PERFORMANCE QUALIFICATION RECORD (WPQR)
(4C, AWS D1.1/D1.1M-15, STRUCTURAL WELDING CODE – STEEL)**

Welder Name: Matthew Benjamin Styles ID No.: NCDL 31081326 Stamp No: MBS
 Welding Procedure Specification No.: WPS-100KSI-GMAW-01 Rev.: 0 Date: 8/18/16
 Welding Process: Gas Metal Arc Welding (GMAW) Type: Semi-Automatic

FILLET WELDS ONLY

| Variables | Actual Values Used In Qualification | Qualification Range |
|-----------------------------------|-------------------------------------|---|
| Backing (Yes or No) Material Type | Yes – Base Metal Carbon | With Backing or None with Backgouge |
| Base Metal Specification | | |
| Group No. | A36 | AWS Table 3.1 |
| Thickness (Plate) | | |
| Groove | 1" | 1/8" through Unlimited |
| Fillet | NA | 1/8" through Unlimited |
| Thickness (Pipe/Tube) | | |
| Groove | NA | 1/8" through Unlimited (24" diameter min) |
| Fillet | NA | 1/8" through Unlimited (24" diameter min) |
| Filler Metal | | |
| Specification No. | A5.28 | A5.18 and A5.28 |
| Class | ER110S-1 | Any A5.18 and A5.28 |
| Deposited Weld Metal | | |
| Groove | CJP | |
| Fillet | NA | |
| Weld Position | | |
| Orientation | Flat (1G) | 1G, 1F |
| Weld Progression | Forehand | Forehand /Push |
| Gas Type | | |
| Shielding | AR=98% / CO2=2% | Per Manufacturers Recommendation |
| Backing | NA | |
| Electrical Characteristics | | |
| Current | Direct (DC) | Per manufacturers recommendation |
| Polarity | Reverse (EP) | Per manufacturers recommendation |

Qualification Test Results

| | | | | | |
|--------------------|--------------------------|------------|-----------------------------|---------------------|----|
| Appearance Results | Visual Inspection | Acceptable | Radiographic Testing | Film Identification | NA |
| | | Passed | | Results | NA |

Guided Bend Test

| | | | |
|----------------------------|----------------|----------------------------|----------------|
| Type and Figure No. | Results | Type and Figure No. | Results |
| 1G Side (4.21) | Pass | NA | NA |
| 1G Side (4.21) | Pass | NA | NA |

Fillet Weld Test

| | | | |
|---------------|----|-------------|----|
| Figure No.: | NA | Fillet Size | NA |
| Fracture Test | NA | Macroetch | NA |

Test Conducted by: John Fennell Test Number: MBS1G-100KSI
 Inspector: Ryan Fitzgerald, CSI Date: 8/18/16
 Ryan N Fitzgerald
 CWI 08010581
 QC1 EXP. 1/1/2018

We, the undersigned certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in conformance with the requirements of Clause 4 of AWS D1.1/D1.1M 2015 Structural Welding Code - Steel.

Authorized By: John Fennell Organization: JF Fabricators
 Date: 8/18/16



COLUMBIA SPECIALTY INDUSTRIES, INC.

**WELDER OR WELDING OPERATOR
PERFORMANCE QUALIFICATION RECORD (WPQR)
(4C, AWS D1.1/D1.1M-10, STRUCTURAL WELDING CODE - STEEL)**

Welder Name: Matthew Benjamin Styles ID No.: NCDL 31081326 Stamp No: MBS
 Welding Procedure Specification No.: CSI-WPS-GMAW-G-WQ Rev.: 1 Date: 8/30/16
 Welding Process: Gas Metal Arc Welding (GMAW) Type: Semi-Automatic

FILLET WELDS ONLY

| Variables | Actual Values Used In Qualification | Qualification Range |
|-----------------------------------|-------------------------------------|---|
| Backing (Yes or No) Material Type | Yes - Base Metal Carbon | With or without backing |
| Base Metal Specification | | |
| Group No. | A36 | AWS Table 3.1 |
| Thickness (Plate) | | |
| Groove | 1" | 1/8" through Unlimited |
| Fillet | NA | 1/8" through Unlimited |
| Thickness (Pipe/Tube) | | |
| Groove | NA | 1/8" through Unlimited (24" diameter min) |
| Fillet | NA | 1/8" through Unlimited (24" diameter min) |
| Filler Metal | | |
| Specification No. | A5.28 | A5.18 and A5.28 |
| Class | ER80S-1 | Any A5.18 and A5.28 |
| Deposited Weld Metal | | |
| Groove | CJP | |
| Fillet | NA | |
| Weld Position | | |
| Orientation | Horizontal (2G) | 1F, 2F, 1G, 2G |
| Weld Progression | Forehand | Forehand /Push |
| Gas Type | | |
| Shielding | AR=98% / CO2=2% | Per Manufacturers Recommendation |
| Backing | NA | |
| Electrical Characteristics | | |
| Current | Direct (DC) | Per manufacturers recommendation |
| Polarity | Reverse (EP) | Per manufacturers recommendation |

Qualification Test Results

Visual Inspection **Radiographic Testing**

Appearance Acceptable Film Identification NA
 Results Passed Results NA

Guided Bend Test

| | | | |
|----------------------------|----------------|----------------------------|----------------|
| Type and Figure No. | Results | Type and Figure No. | Results |
| <u>2G Side (4.21)</u> | <u>Pass</u> | <u>NA</u> | <u>NA</u> |
| <u>2G Side (4.21)</u> | <u>Pass</u> | <u>NA</u> | <u>NA</u> |

Fillet Weld Test

| | | | |
|---------------|-----------|-------------|-----------|
| Figure No.: | <u>NA</u> | Fillet Size | <u>NA</u> |
| Fracture Test | <u>NA</u> | Macroetch | <u>NA</u> |

Test Conducted by: John Fennell Test Number: MBS2G
 Inspector: Ryan Fitzgerald, CWI Date: 8/30/16
Ryan N Fitzgerald
CWI 06010581
QC1 EXP. 1/1/2018

We, the undersigned certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in conformance with the requirements of Clause 4 of AWS D1.1/D1.1M 2010 Structural Welding Code - Steel.

Authorized By: John Fennell Organization: JF Fabricators
 Date: 8/30/16

**CONSTRUCTION WELDING INSPECTION SERVICES INC.
CERTIFICATE OF PERSONNEL QUALIFICATIONS**

The individual named below has met the qualification and certification requirements of Construction Welding Inspection Services Inc.'s WRITTEN PRACTICE NONDESTRUCTIVE EXAMINATION PROCEDURE FOR PERSONNEL QUALIFICATION AND CERTIFICATION (NDT-Qual-1) in the method listed below.

Visual Inspection Examination Method-Level II /SNT-TC-1A

Employment/Education History

Name Joseph D. Clark Date Employed 01/02/2015

High School Graduate (Date) 2003 Course Hours in Technical/Scientific Areas NA

College NA Yrs. NA Degree NA Year NA
NA NA NA NA

Previous NDE Experience NDT Level II (MT, VT), NDT Level I (UT)

EXAMINATION

Exam Grades: General 98 Specific 98 Practical 100
Average 98

CERTIFICATION

Training Certified by CWI Services Inc - William A. Clark NDT Level III
Qualified by CWI Services Inc - William A. Clark NDT Level III
Date of Certification 4/17/2015
Level Certified to II Certified by William A Clark NDT Level III

RECERTIFICATION

Date of Recertification April 2018 Signature _____

I, the undersigned, verify that all information contained on the Certificate of Personnel Qualification forms of the above individual is true. The examination scores, dates and names and signatures of qualified examiners listed on these forms were taken from the original or copies of the original documents.


William A. Clark, NDT Level III


CWI SERVICES INC.
Construction Welding Inspection Services
Inc.

**CONSTRUCTION WELDING INSPECTION SERVICES INC.
CERTIFICATE OF PERSONNEL QUALIFICATIONS**

The individual named below has met the qualification and certification requirements of Construction Welding Inspection Services Inc.'s WRITTEN PRACTICE NONDESTRUCTIVE EXAMINATION PROCEDURE FOR PERSONNEL QUALIFICATION AND CERTIFICATION (NDT-Qual-1) in the method listed below.

Ultrasonic Testing Examination Method-Level II /SNT-TC-1A

Employment/Education History

Name Joseph D. Clark Date Employed 01/02/2015

High School Graduate (Date) 2003 Course Hours in Technical/Scientific Areas NA

College NA Yrs. NA Degree NA Year NA
NA NA NA NA

Previous NDE Experience NDT Level II (MT, VT), NDT Level I (UT)

EXAMINATION

Exam Grades: General 83.5 Specific 89 Practical 95
Average 89

CERTIFICATION

Training Certified by CWI Services Inc - William A. Clark NDT Level III
Qualified by CWI Services Inc - William A. Clark NDT Level III
Date of Certification 4/17/2015
Level Certified to II Certified by William A Clark - NDT Level III

RECERTIFICATION

Date of Recertification April 2018 Signature _____

I, the undersigned, verify that all information contained on the Certificate of Personnel Qualification forms of the above individual is true. The examination scores, dates and names and signatures of qualified examiners listed on these forms were taken from the original or copies of the original documents.


William A. Clark, NDT Level III


CWI SERVICES INC.
Construction Welding Inspection Services
Inc.

**CONSTRUCTION WELDING INSPECTION SERVICES INC.
CERTIFICATE OF PERSONNEL QUALIFICATIONS**

The individual named below has met the qualification and certification requirements of Construction Welding Inspection Services Inc.'s WRITTEN PRACTICE NONDESTRUCTIVE EXAMINATION PROCEDURE FOR PERSONNEL QUALIFICATION AND CERTIFICATION (NDT-Qual-1) in the method listed below:

Liquid Dye Penetrant Examination Method-Level II /SNT-TC-1A

Employment/Education History

Name Joseph D. Clark Date Employed 01/02/2015

High School Graduate (Date) 2003 Course Hours in Technical/Scientific Areas NA

College NA Yrs. NA Degree NA Year NA
NA NA NA NA

Previous NDE Experience NDT Level II (MT, VT), NDT Level I (UT)

EXAMINATION

Exam Grades: General 87.5 Specific 87.5 Practical 95
Average 90

CERTIFICATION

Training Certified by CWI Services Inc - William A. Clark NDT Level III
Qualified by CWI Services Inc - William A. Clark NDT Level III
Date of Certification 4/18/2015
Level Certified to II Certified by William A Clark NDT Level III

RECERTIFICATION

Date of Recertification April 2018 Signature _____


I, the undersigned, verify that all information contained on the Certificate of Personnel Qualification forms of the above individual is true. The examination scores, dates and names and signatures of qualified examiners listed on these forms were taken from the original or copies of the original documents.


William A. Clark, NDT Level III


CWI SERVICES INC.
Construction Welding Inspection Services
Inc.

6.1.5 MATERIAL TEST REPORT (MTR)

| | | | | | | | | | |
|---|-----------|------------------------|---------|-----------------|---|----------|-------------|-----------|----|
| Vendor Name: NingBo ZhenHai JunFeng JiXie | | | | | Material Test Report Date: 2015/6 | | | | |
| | | | | | Material Supplier: PuXin Iron @Steel CO.,LTD Part Number: BOLT 135 BOLT 160 BOLT 195 BOLT 260 BOLT 365 BOLT 440 P.O. Number: 1010 05/15/15 | | | | |
| | | | | | Heat Number: | | Grade: 40Cr | | |
| Spec: | | ASTM Spec: | | | Other Spec: | | | | |
| Description: | | | | | | | | | |
| BOLT 135 BOLT 160 BOLT 195 BOLT 260 BOLT 365 BOLT 440 | | | | | Grade 8.8 | | | | |
| Chemical Analysis | C | Mn | P | S | Si | Cu | Ni | Cr | Mo |
| | 0.37~0.44 | 0.50~0.80 | ≤ 0.035 | ≤ 0.035 | 0.17~0.37 | ≤ 0.030 | ≤ 0.030 | 0.80~1.10 | |
| Mechanical Test Results | | | | | | | | | |
| Yield Strength:(MPa) | | Tensile Strength:(MPa) | | Elongation :(%) | | ROA :(%) | | Hardness | |
| ≥ 785 | | ≥ 980 | | ≥ 9 | | ≥ 45 | | | |

| | |
|--|---|
| Vendor Representative Printed Name & Title | Vendor Representative Signed Name |
| |  |

| | |
|-------------------------------|-----------------------------------|
| Vendor Name: NingFeng XingCai | Material Test Report Date: 2015/6 |
|-------------------------------|-----------------------------------|

| | | | | | | | | | |
|-------------------------------------|-----------|--|---------|------------------|-----------|-------------|---------|-----------|-----------|
| | | Material Supplier: ZheJin GangCai Part Number: Shear Sleeve 39 Shear Sleeve 51 Shear Sleeve 70 Shear Sleeve 102 Shear Sleeve 153 Shear Sleeve 229 P.O. Number: 1010 05/15/15 | | | | | | | |
| Heat Number: | | Grade: 42CrMo | | | | Dimension: | | | |
| Spec: | | ASTM Spec: | | | | Other Spec: | | | |
| Description: Shear Sleeve 39 | | | | | | | | | |
| Chemical Analysis | C | Mn | P | S | Si | Cu | Ni | Cr | Mo |
| | 0.38~0.45 | 0.50~0.80 | ≅ 0.035 | ≅ 0.035 | 0.17~0.37 | ≅ 0.030 | ≅ 0.030 | 0.90~1.20 | 0.15~0.25 |
| Mechanical Test Results | | | | | | | | | |
| Yield Strength: (MPa) | | Tensile Strength: (MPa) | | Elongation : (%) | | ROA : (%) | | Hardness | |
| ≥ 930 | | ≥ 1080 | | ≥ 12 | | | | | |

| | |
|--|-----------------------------------|
| Vendor Representative Printed Name & Title | Vendor Representative Signed Name |
| | 李 |

| | |
|---|-----------------------------------|
| Vendor Name: NingBo ZhenHai YuDi Fastener Factory | Material Test Report Date: 2015/6 |
|---|-----------------------------------|

| | | | | | | | | | | | | |
|---|-----------|--|--------|-----------------|-----------|----------|-------------|---------|----|----|----|---|
| | | Material Supplier: ZhenHai BaoLin Steel Company Part Number: Hardened washer W1 W2 Grade 8.8 P.O. Number:1010 05/15/15 | | | | | | | | | | |
| Heat Number: | | Grade: GB45 | | | | | Dimension: | | | | | |
| Spec: | | ASTM Spec: | | | | | Other Spec: | | | | | |
| Description: HARDENED WASHER W1 W2,ASTM F436 Grade 8.8 | | | | | | | | | | | | |
| Chemical Analysis | C | Mn | P | S | Si | Cu | Ni | Cr | Mo | Sn | Al | V |
| | 0.42-0.50 | 0.50-0.80 | ≤0.035 | ≤0.035 | 0.17-0.37 | ≤0.25 | ≤0.25 | ≤0.25 | | | | |
| | Cb | N | | | | | | | | | | |
| Mechanical Test Results | | | | | | | | | | | | |
| Yield Strength:(MPa) | | Tensile Strength:(MPa) | | Elongation :(%) | | ROA :(%) | | Akv (J) | | | | |
| ≥355 | | ≥600 | | ≥16 | | ≥40 | | ≥39 | | | | |

| | |
|--|-----------------------------------|
| Vendor Representative Printed Name & Title | Vendor Representative Signed Name |
| | 王 |


| | |
|---|-----------------------------------|
| Vendor Name: NingBo ZhenHai YuDi Fastener Factory | Material Test Report Date: 2015/6 |
|---|-----------------------------------|

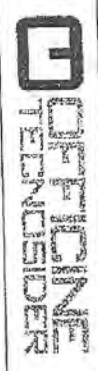
| | | | | | | | | | | | | |
|---------------------------------------|-----------|---|--------|-----------------|-----------|----------|-------------|---------|----|----|----|---|
| | | Material Supplier: ZhenHai BaoLin Steel Company Part Number: NUT M20X2.5 Grade 8.8 P.O. Number: 1010 05/15/15 | | | | | | | | | | |
| Heat Number: | | Grade: GB35 | | | | | Dimension: | | | | | |
| Spec: | | ASTM Spec: | | | | | Other Spec: | | | | | |
| Description: NUT M20-2.5 Grade 8.8 | | | | | | | | | | | | |
| Chemical Analysis | C | Mn | P | S | SI | Cu | Ni | Cr | Mo | Sn | Al | V |
| | 0.32-0.40 | 0.50-0.80 | ≤0.035 | ≤0.035 | 0.17-0.37 | ≤0.25 | ≤0.25 | ≤0.25 | | | | |
| | Cb | N | | | | | | | | | | |
| Mechanical Test Results | | | | | | | | | | | | |
| Yield Strength:(MPa) | | Tensile Strength:(MPa) | | Elongation :(%) | | ROA :(%) | | Akv (J) | | | | |
| ≥315 | | ≥530 | | ≥20 | | ≥45 | | ≥55 | | | | |

| | |
|--|-----------------------------------|
| Vendor Representative Printed Name & Title | Vendor Representative Signed Name |
| | 王 |

| | |
|------------------------------------|-----------------------------------|
| Vendor Name: NingBo BeiLun FangDai | Material Test Report Date: 2015/6 |
|------------------------------------|-----------------------------------|

| | | | | | | | | | | | | | |
|--------------------------------------|----|--|-------------------------|-----------------|----|-----------------|----|-------------|----------|----|----|----------|----|
| | | Material Supplier: Nanjing dongjue silicone co., LTD Part Number: Silicone 5H mm 10H mm P.O. Number: 1010 05/15/15 | | | | | | | | | | | |
| Heat Number: | | | | Grade: Silicone | | | | Dimension: | | | | | |
| Spec: | | | | ASTM Spec: | | | | Other Spec: | | | | | |
| Description: Silicone 5H mm 10Hmm | | | | | | | | | | | | | |
| Chemical Analysis | C | Mn | P | S | Si | Cu | Ni | Cr | Mg | Sn | Al | V | Fe |
| | Cb | N | | | | | | | | | | | |
| Mechanical Test Results | | | | | | | | | | | | | |
| Yield Strength:(MPa) | | | Breaking Strength:(MPa) | | | Elongation :(%) | | | ROA :(%) | | | Hardness | |
| ≥7.8 | | | ≥400 | | | | | | | | | 50±2 HA | |

| | |
|--|---|
| Vendor Representative Printed Name & Title | Vendor Representative Signed Name |
| |  |



3300 South Florida Ave, Jacksonville, FL 32209
 Tel: 904.251.8200 ext. 4290
 www.gulfstream.com

ULTRASONIC INSPECTION TEST REPORT

UT test certificate n. r.: A10
 Delivery mode n. r.: A10

CUT004098

30/10/2013



| Product | Q30 | Probe ID | Specs | Probe | Material | UT | AS | UT Class | Inspection Std |
|------------|---------|------------|-----------------|--------|----------|----|----|----------|----------------|
| Sheet Pile | AL20340 | 01A332732A | 4.0M 150/70/28" | AS2435 | MS504 | UT | AS | AS780 B | None |
| | AL20350 | 01A332732A | 4.0M 150/70/28" | AS2435 | MS504 | UT | AS | AS780 B | None |
| | AL20360 | 01A332732A | 4.0M 150/70/28" | AS2435 | MS504 | UT | AS | AS780 B | None |
| | AL20370 | 01A332732A | 4.0M 150/70/28" | AS2435 | MS504 | UT | AS | AS780 B | None |
| | AL20380 | 01A332732A | 4.0M 150/70/28" | AS2435 | MS504 | UT | AS | AS780 B | None |
| | AL20390 | 01A332732A | 4.0M 150/70/28" | AS2435 | MS504 | UT | AS | AS780 B | None |
| | AL20400 | 01A332732A | 4.0M 150/70/28" | AS2435 | MS504 | UT | AS | AS780 B | None |
| | AL20410 | 01A332732A | 4.0M 150/70/28" | AS2435 | MS504 | UT | AS | AS780 B | None |
| | AL20420 | 01A332732A | 4.0M 150/70/28" | AS2435 | MS504 | UT | AS | AS780 B | None |
| | AL20430 | 01A332732A | 4.0M 150/70/28" | AS2435 | MS504 | UT | AS | AS780 B | None |

Equipment: Gilson NIS 2000
Probe and frequency: Gilson 50 20 / 2.5MHz
CO operators: 701
Calibration: According to procedure AS 701 dated part inspection agreement
Surface conditions: As found
Couplant: Water
Result ACCORDING TO: ASTM A578/AS780 - 07 (2012)
 205
 Page 1

Operator: Operator

Result: Positive

UT Class: AS780 B

Inspection Std: None

Reliability control according to DIN 2303 Basic Corrosion. The goods have satisfied their natural origin. Consequently, the manufacturer's responsibility is not affected. The manufacturer's responsibility is not affected. The manufacturer's responsibility is not affected. The manufacturer's responsibility is not affected. The manufacturer's responsibility is not affected.

NUCOR

MILL TEST CERTIFICATE

1700 HOLT RD N.E.
TUSCALOOSA, AL 35404-1000
800 800-8204
customer.service@nucorfsk.com

Page: 1 of 1

| | | | | | | | | | | | | | | | |
|-------------|--|-------|----------------|------------------|--------------|-------|-------------|---------|---|-------------|--|--------------------|-------------|----------|------------------|
| Load Number | 1128231 | Tally | 00000000677988 | M11 Order Number | N-147492-001 | PO NO | CLT-7054721 | Line NO | 1 | Part Number | | Certificate Number | 567798801-1 | Prepared | 07/02/2016 11:10 |
| Grade | Order Description: Hot Roll Plate AS7265T3, 1.0000 IN x 96.000 IN x 480.000 IN Quality Plan Description: AS72-65 .50 CEV; ASTM A572-65 13-07 | | | | | | | | | | | | | | |
| Customer: | Sold TO: KLOECKNER Charlotte NC Ship TO: KLOECKNER METALS Charlotte NC Sent TO: | | | | | | | | | | | | | | |

| Shipped Item | Heat/Slab Number | Certified By | C | Mn | P | S | SI | Cu | Mg | Cr | No | CH | V | Al | Ti | N2 | B | Ca | SH | CEV | ACT |
|--------------|------------------|--------------|------|------|-------|-------|------|------|------|------|-------|-------|-------|-------|-------|-------|--------|--------|-------|------|------|
| 6F3241AA | B6S4977-03 *** | B6S4977 | 0.19 | 1.37 | 0.007 | 0.004 | 0.04 | 0.15 | 0.05 | 0.06 | 0.022 | 0.041 | 0.055 | 0.033 | 0.001 | 0.008 | 0.0001 | 0.0014 | 0.005 | 0.46 | 0.00 |
| 6F3241BA | B6S4977-03 *** | B6S4977 | 0.19 | 1.37 | 0.007 | 0.004 | 0.04 | 0.15 | 0.05 | 0.06 | 0.022 | 0.041 | 0.055 | 0.033 | 0.001 | 0.008 | 0.0001 | 0.0014 | 0.005 | 0.46 | 0.00 |
| 6F3241CA | B6S4977-03 *** | B6S4977 | 0.19 | 1.37 | 0.007 | 0.004 | 0.04 | 0.15 | 0.05 | 0.06 | 0.022 | 0.041 | 0.055 | 0.033 | 0.001 | 0.008 | 0.0001 | 0.0014 | 0.005 | 0.46 | 0.00 |

Items: 3 PCS: 3 Weight: 39204.9 LBS

Mercury has not come in contact with this product during the manufacturing process nor has any mercury been used by the manufacturing process. Certified in accordance with EN 10204 3.1. No weld repair has been performed on this material. Manufactured to a fully killed fine grain practice. ISO 9001:2008 Registered, PED Certified

We hereby certify that the product described above passed all of the tests required by the specifications.

Dr. Quinn Yu
Dr. Quinn Yu - Metallurgist

06-07-2017 04:20 Load - 2809165 BL - 6349702 Heat - B6S4977 Order-Line - 14945624 / 1
J F Fabricators, LLC Cust. PO - WESTON SQUARE
b1r466



U.S.-ML-JACKSONVILLE
 16770 Rebar Road
 JACKSONVILLE, FL 32234
 USA

CENTREHEAD MATERIAL TEST REPORT

| | | | | |
|---|---|---|------------------------------------|----------------------------|
| CUSTOMER SHIP TO JMS REBAR COMPANY 1211 ROTHERWOOD RD GREENSBORO, NC 27406-3825 USA | CUSTOMER BILL TO JMS REBAR INC GREENSBORO, NC 27416-6029 USA | GRADE 60 (420) | SHAPE / SIZE Rebar / #10 (32MM) | DOCUMENT ID: 0000020946 |
| SALES ORDER 5173209/000020 | CUSTOMER MATERIAL N# | LENGTH 60'00" | WEIGHT 32.016 LB | HEAT / BATCH 5613722302 |
| BILL OF LADING 1324-000099133 | DATE 06/01/2017 | SPECIFICATION / DATE OF REVISION ASTM A615/A615M-15 E1 | | |

| | | |
|--|----------------------|------|
| CUSTOMER PURCHASE ORDER NUMBER 1490 | CUSTOMER MATERIAL N# | DATE |
|--|----------------------|------|

| | | | | | | | | | | |
|----------------------|------|-------|-------|------|------|------|------|-------|-------|-------|
| CHEMICAL COMPOSITION | C | P | S | SI | CU | NI | CR | MO | SP | V |
| % | % | % | % | % | % | % | % | % | % | % |
| 0.40 | 1.08 | 0.032 | 0.036 | 0.22 | 0.35 | 0.09 | 0.14 | 0.022 | 0.026 | 0.016 |

| | | | | | |
|-----------------------|--------|-----|-------|-------|-------|
| MECHANICAL PROPERTIES | YS | UTS | UTS | G/L | G/L |
| MPa | MPa | MPa | Inch | mm | mm |
| 67000 | 103600 | 714 | 8.000 | 200.0 | 200.0 |
| 68000 | 104000 | 717 | 8.000 | 200.0 | 200.0 |

| | |
|-----------------------|-----------|
| MECHANICAL PROPERTIES | Bend Test |
| Elong. | OK |
| % | OK |
| 12.50 | OK |
| 12.50 | OK |

| | | | |
|---------------------------|---------|---------|----------|
| GEOMETRIC CHARACTERISTICS | Def Hgt | Def Cap | Def Spce |
| mm | mm | mm | mm |
| 4.33 | 0.080 | 0.176 | 0.133 |
| 4.33 | 0.080 | 0.178 | 0.133 |

COMMENTS / NOTES

The above figures are certified chemical and physical test records as contained in the permanent records of company. We certify that these data are correct and in compliance with specified requirements. This material, including the bills, was melted and manufactured in the USA. CMTR complies with EN 10204 3.1.

Maskay
 BHASKAR VALAMANCHILI
 QUALITY DIRECTOR

Phone: (409) 760-1014 Email: Bhaskar.Valamanchili@gerdau.com

Alex Renosto
 ALEX RENOSTO
 QUALITY ASSURANCE MGR.

Phone: 904-206-1468 Email: Alexander.Renosto@gerdau.com

6.1.8 PACKING SLIPS

Precision Tower Products, LLC
 DBA Sky Climber Telecom
 1800 Pittsburgh Dr.
 Delaware, OH 43015



Packing Slip

| | |
|-----------|----------|
| Date | S.O. No. |
| 6/16/2017 | 778 |

| |
|---|
| Ship To |
| WESTON SQUARE TOWER SITE 92 Weston Street Hartford, CT 06103-1217 Hartford |

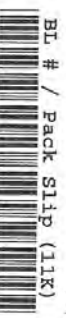
| | | | | |
|----------------------|-----------|----------|-----|------------------|
| P.O. No. | Ship Date | Ship Via | FOB | Project |
| Weston Square JL ... | 6/16/2017 | | | WESTON SQUARE... |

| Item | Description | Shipped | Ordered | |
|---------------------|---|---------|---------|----|
| Forgbolt 195MM-I... | Forgbolt 195MM -Blue (20 bolts /box) internal job cost | | 100 | ea |
| Forgbolt 440MM-I... | Forgbolt 440MM - Black (10 bolts/ box) internal job cost | | 100 | ea |
| | Total of 15 boxes Please ship with Fab material Weston Square | | | |

217-369-9687
 740-602-6162

Kloeckner Metals

Kloeckner Metals Corporation
 1300 Exchange Street
 Charlotte, NC 28208



BL # / Pack Slip (11X)

06/07/17 04:20 AM

Page 1 of 1

Sold To: 110133
 J F Fabricators, LLC
 8158 Mountain Shore Dr
 Sherrills Ford, NC 28673-9247
 Phone # (704) 607-8175

Ship To: 1
 J F Fabricators, LLC
 7315 Millbrook Rd
 Harrisburg, NC 28075-7489
 Phone # (704) 607-8175

Via Our Truck
 FOB Delivered
 Freight Prepaid
 Carrier Kloeckner Metals Corp - CI
 Truck # 111710

Load no. 2809165

Control # 6349702
 Bill of Lading 6349702
 Ship Date 06/07/17

CUST PO: WESTON SQUARE Order# 14945624 Entered: DDYE

| Line | Item Description | PVC Size | Pcs | Net Weight |
|------|--|--------------|-----|------------|
| 1 | Mill Rolled Plate 1" ASTM A572 Gr 65 Heat Num: B6S4977 Mill Id: | 4.50" X 264" | 3 | 1,011 |
| 2 | Mill Rolled Plate 1" ASTM A572 Gr 65 Heat Num: B6S4977 Mill Id: | 6" X 116" | 3 | 592 |
| 3 | Mill Rolled Plate 6" ASTM A36 / ASME-SA36 Heat Num: 335151 Mill Id: | 5" X 59" | 3 | 1,506 |
| 4 | Mill Rolled Plate 6" ASTM A36 / ASME-SA36 Heat Num: 335151 Mill Id: | 5" X 47" | 3 | 1,200 |
| 5 | FTG | | | 000 |

Carrier Signature Customer Signature Shipper Signature /Date

Total Pieces Gross Wgt Tare Wgt Net Wgt
 12 4,309 0 4,309



Material Certifications for Shipment

Bl Num: 6349702

Customer
J F Fabricators, LLC
8158 Mountain Shore Dr
Sherrills Ford, NC 28673-9247

Ship To
J F Fabricators, LLC
7315 Millbrook Rd
Harrisburg, NC 28075-7489

Orders

| Order | GA Ord | Width | Length | Description/Part Number | Grade |
|------------|--------|-------|--------|-------------------------|----------------------|
| 14945624-3 | | 5 | 59 | Mill Rolled Plate 6 " | ASTM A36 / ASME-SA36 |

| | | | | | |
|--------------------------------------|--|---|----|-----------------------|----------------------|
| Cust PO: WESTON SQUARE 14945624-4 | | 5 | 47 | Mill Rolled Plate 6 " | ASTM A36 / ASME-SA36 |
|--------------------------------------|--|---|----|-----------------------|----------------------|

Cust PO: WESTON SQUARE

Heat: 335151

Mill ID:

Vendor:

Certification # 2861894

Issue Date 20-OCT-15

Carbon Equivalent: .0

Chemical Properties

Physical Properties

| Property | YIELD | TENSILE |
|----------------------|-------|---------|
| Mill Test | | |
| Internal Test Head | | |
| Internal Test Middle | | |
| Internal Test Tail | | |



STRAIGHT BILL OF LADING

Carrier : OGG EQUIPMENT LLC
 Date : 06/29/17
 Trailer # : 405806
 Pro # :

SHIPPER

SKYCLIMBER FABRICATION
 1600 PILTSBURGH DR.
 DELAWARE OH 43015
 (740) 203-3962
 DAVID FENNELL
 Ref #

CONSIGNEE

WESTON SQUARE
 438 EAST 43RD STREET
 HARTFORD CT 06103
 (937) 620-2017
 JOHN LAWRENCE
 Ref #

INSTRUCTIONS

DELIVERY IS TUESDAY 06/16. PLEASE COORDINATE WITH TRAVIS FOR DELIVERY. THIS IS DELIVERING WITH BU 8 43098 V AND S TAG M67 PLEASE DELIVER AFTER 84309 8

| Description | Class | Pcs | Weight | Pkts | Additional Info |
|--------------------------------|-------|------|--------|------|-----------------|
| CELL TOWER PARTS | | 4810 | 4810 | | SCAC : BKRL |
| Totals | | 4810 | 4810 | | |
| Additional Ref #'s B0876328 | | | | | |

NOTE : Liability limitation for loss or damage in this shipment may be applicable pursuant to an agreement between the parties or under applicable law including, but not limited to, See 49 USC Section 101 et seq.

Subject to Section 7 conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
 The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.
 Shipper : SKYCLIMBER FABRICATION
 Signature _____ Date / /

Carrier acknowledges receipt of packages and required placards. Carrier certifies emergency response information was made available and/or carrier has the DOT emergency response guidebook or equivalent documentation in the vehicle. Property described about is received in good order, except as noted.
 Carrier/Driver _____ Pieces / /
 Signature _____ Date / /
 License Plate _____ Trailer # _____ MC # _____

This is to certify that the above named materials are classified, marked and labeled and are in proper condition for transportation according to the applicable regulations of the DOT.

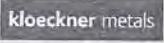
Shipper : SKYCLIMBER FABRICATION
 Name of Signor: _____
 Signature _____
 Time In : _____

Date / /
 Time Out: _____

Received subject to individually determined rates or contracts that have been agreed upon in writing between the carrier and shipper, if applicable, otherwise the rates, classifications and rules that have been established by the carrier and are available to the shipper, on request, and to all applicable state and federal regulations.
 Consignee : WESTON SQUARE
 Name of Signor: _____
 Signature: _____
 Time In: _____

Date / /
 Time Out: _____

ADD BI TEXT IN THE SETUP MENU



Kloekner Metals Corporation

Kloekner Metals Corp - CLT
1300 Exchange Street
Charlotte, NC 28208, United States
(704) 394-5999
blockhart@kloeknermetals.com
June 07, 2017

Material Certifications for Shipment

Bl Num: 6349702

Customer
J F Fabricators, LLC
8158 Mountain Shore Dr
Sherrills Ford, NC 28673-9247

Ship To
J F Fabricators, LLC
7315 Millbrook Rd
Harrisburg, NC 28075-7489

Orders

| Order | GA Ord | Width | Length | Description/Part Number | Grade |
|------------------------|--------|-------|--------|-------------------------|-----------------|
| 14945624-1 | | 4.5 | 264 | Mill Rolled Plate 1" | ASTM A572 Gr 65 |
| Cust PO: WESTON SQUARE | | | | | |
| 14945624-2 | | 6 | 116 | Mill Rolled Plate 1" | ASTM A572 Gr 65 |

Cust PO: WESTON SQUARE

Heat: B6S4977

Mill ID:

Vendor: NUCOR STEEL TUSCALOOSA

Certification # 3229611

Issue Date 02-JUL-16

Carbon Equivalent: .46

| Chemical Properties | | | | | | | | | |
|---------------------|------|------|------|-----|------|-------|-------|------|-----|
| C | Mn | P | S | Si | Al | B | Ca | Cb | Ce |
| .19 | 1.37 | .007 | .004 | .04 | .033 | .0001 | .0014 | .041 | .46 |
| Cr | Cu | Mo | N | Ni | Sn | Ti | V | | |
| .06 | .15 | .022 | .008 | .05 | .005 | .001 | .055 | | |

| Physical Properties | | | |
|----------------------|-------|---------|-------|
| Property | YIELD | TENSILE | ELONG |
| Mill Test | 72.6 | 94.3 | 21.2 |
| Internal Test Head | | | |
| Internal Test Middle | | | |
| Internal Test Tail | | | |

EDI863 458840



PACKING LIST

JF Fabricators

7315 Millbrook Road

Harrisburg, NC 28075

Ship to: SKY CLIMBER

Bill to: SKY CLIMBER

Date: 6/29/17

| Part # | Description | Quantity | Job ID |
|---------------|----------------|----------|---------------|
| 1 X 4 ½ X 22' | FLAT BAR | 4 | WESTON SQUARE |
| JUMP WELDMENT | | 3 | |
| REBAR | #10 X 25' LONG | 3 | |
| | | | |
| | | | |
| | | | |
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| | | | |
| | | | |
| | | | |
| | | | Total Weight. |

CONSTRUCTION

6.2.1 CONSTRUCTION INSPECTIONS



July 24, 2017

To Whom it May Concern,

This letter is to confirm that the tower modification for BU# 876325 Weston Square per the CCI drawing dated 2/10/17 was installed in accordance with industry standards and contract documents including modification drawings and specifications, state and local regulations, OSHA, and Engineering standards.

Please contact me if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Thomas S. Warchol".

Tom Warchol
General Manager
Sky Climber Telecom

1800 Pittsburgh Drive

Delaware, OH 43015

Phone: 740.203.3900 Fax: 740.203.3901

www.skyclimber.com

6.2.2 FOUNDATION INSPECTIONS



July 24, 2017

To Whom it May Concern,

This letter is to confirm that the Foundation rebar installation for BU# 876325 Weston Square per the CCI drawing dated 2/10/17 was installed in accordance with industry standards and contract documents including modification drawings and specifications, state and local regulations, OSHA, and Engineering standards.

Please contact me if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Thomas S. Warchol". The signature is written in a cursive style.

Tom Warchol
General Manager
Sky Climber Telecom

1800 Pittsburgh Drive

Delaware, OH 43015

Phone: 740.203.3900 Fax: 740.203.3901

www.skyclimber.com

6.2.8 ON SITE COLD GALVANIZING VERIFICATION



July 24, 2017

This letter is to confirm that paint applied ZRC 95% minimum cold galvanizing was used for the structural modification at 876325 Weston Square.



Thomas S. Warchol

Tom Warchol
General Manager
Sky Climber Tower Solutions

1800 Pittsburgh Drive
Delaware, OH 43015
Phone: 740.203.3900 Fax:
740.203.3901 www.skyclimber.com

MODIFICATION OF AN EXISTING 110' MONOPOLE

ROHN #34738SW

BU #876325; WESTON SQUARE

92 WESTON STREET
HARTFORD, CONNECTICUT 06103
HARTFORD COUNTY

LAT: 41° 47' 12.3", LONG: -72° 39' 44.42"

APP: 366958 REV. 4; WO: 1354293

PROJECT CONTACTS

STRUCTURE OWNER:
CROWN CASTLE
MOD PM: DAN VADNEY AT DAN.VADNEY@CROWNCASTLE.COM
PH: (518) 373-3810
MOD CM: JASON DAMICO AT JASON.DAMICO@CROWNCASTLE.COM
PH: (980) 209-0104
ENGINEER OF RECORD:
PJF/NOJ@PJFWEB.COM

THIS PROJECT INCLUDES THE FOLLOWING ITEMS

BOLTED FLANGE JUMPS
REMOVE AND REPLACE STEP BOLTS AS REQUIRED
SHAFT REINFORCING
FOUNDATION AUGMENTATION: DRILLED-IN GROUTED REBAR

| WIND DESIGN DATA | |
|--|--------------------------------|
| REFERENCE STANDARD | ANSI/TIA-222-G-2-2009 |
| LOCAL CODE | 2016 CONNECTICUT BUILDING CODE |
| ULTIMATE WIND SPEED (3-SECOND GUST) | 125 MPH |
| CONVERTED NOMINAL WIND SPEED (3-SECOND GUST) | 97 MPH |
| ICE THICKNESS | 1.0 IN |
| ICE WIND SPEED | 50 MPH |
| SERVICE WIND SPEED | 60 MPH |
| RISK CATEGORY | II |
| EXPOSURE CATEGORY | C |
| Kel | 1.0 |

SHEET INDEX

| SHEET NUMBER | DESCRIPTION |
|--------------|----------------------------|
| T-1 | TITLE SHEET |
| T-2 | MI CHECKLIST |
| S-1 | GENERAL NOTES |
| S-2A | FORGBOLT™ DETAILS |
| S-2B | NEKSENV™ BOLT DETAIL |
| S-2C | ALAX ONE-SIDE™ BOLT DETAIL |
| S-3 | MONOPOLE PROFILE |
| S-4 | DRILLED IN REBAR DETAILS |
| S-5 | BOLTED FLANGE JUMP DETAILS |

GC'S AS-BUILT
7/24/17
JOHN LAWRENCE

QUALIFIED ENGINEERING SERVICES ARE AVAILABLE FROM PAUL J. FORD & COMPANY TO ASSIST CONTRACTORS IN CLASS IV RIGGING PLAN REVIEWS. FOR REQUESTED QUALIFIED ENGINEERING SERVICES, PLEASE CONTACT RIGGING@PJFWEB.COM.

THE ASSOCIATED FAILING SA W/O NUMBER FOR THIS PROJECT IS 1332240

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 (860) 789-7011.



PJF PAUL J. FORD & COMPANY
250 E Broad St, Ste 600 - Columbus, OH 43215
Phone 614.221.6679 www.pauljford.com

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

MODIFICATION OF AN EXISTING 110' MONOPOLE
BU #876325; WESTON SQUARE
HARTFORD, CONNECTICUT

| | | | |
|--------------|------------------|-------------|----------|
| PROJECT NO: | 3317-0411-001710 | DATE: | 5-9-2017 |
| DRAWN BY: | BLM | CHECKED BY: | JKK |
| DESIGNED BY: | LG | | |
| TITLE SHEET | | | |
| T-1 | | | |

- MODIFICATION INSPECTION NOTES**
- GENERAL**
 - 1.1. THE MODIFICATION INSPECTION WILL BE A VISUAL INSPECTION OF THE ABOVE DESCRIBED WORK AND A REVIEW OF THE CONTRACT DOCUMENTS TO VERIFY THE MODIFICATION IS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND THE MODIFICATION AS DESIGNED BY THE ARCHITECT AND ENGINEER. THE MODIFICATION SHALL BE IN ACCORDANCE WITH THE MODIFICATION DRAWINGS AS DESIGNED BY THE ARCHITECT AND ENGINEER. THE MODIFICATION SHALL BE IN ACCORDANCE WITH THE MODIFICATION DRAWINGS AS DESIGNED BY THE ARCHITECT AND ENGINEER.
 - 1.2. THE MODIFICATION INSPECTION WILL BE CONDUCTED BY THE ARCHITECT AND ENGINEER AT THE PROJECT SITE AT THE TIME OF THE MODIFICATION WORK. THE MODIFICATION INSPECTION WILL BE CONDUCTED BY THE ARCHITECT AND ENGINEER AT THE PROJECT SITE AT THE TIME OF THE MODIFICATION WORK.
 - 1.3. THE MODIFICATION INSPECTION WILL BE CONDUCTED BY THE ARCHITECT AND ENGINEER AT THE PROJECT SITE AT THE TIME OF THE MODIFICATION WORK. THE MODIFICATION INSPECTION WILL BE CONDUCTED BY THE ARCHITECT AND ENGINEER AT THE PROJECT SITE AT THE TIME OF THE MODIFICATION WORK.
 - 1.4. THE MODIFICATION INSPECTION WILL BE CONDUCTED BY THE ARCHITECT AND ENGINEER AT THE PROJECT SITE AT THE TIME OF THE MODIFICATION WORK. THE MODIFICATION INSPECTION WILL BE CONDUCTED BY THE ARCHITECT AND ENGINEER AT THE PROJECT SITE AT THE TIME OF THE MODIFICATION WORK.
 - 1.5. THE MODIFICATION INSPECTION WILL BE CONDUCTED BY THE ARCHITECT AND ENGINEER AT THE PROJECT SITE AT THE TIME OF THE MODIFICATION WORK. THE MODIFICATION INSPECTION WILL BE CONDUCTED BY THE ARCHITECT AND ENGINEER AT THE PROJECT SITE AT THE TIME OF THE MODIFICATION WORK.
 - GENERAL CONTRACTOR**
 - 2.1. THE GENERAL CONTRACTOR IS REQUIRED TO CONTACT THE ARCHITECT AND ENGINEER AT LEAST 14 DAYS BEFORE THE MODIFICATION WORK BEGINS TO OBTAIN A SCHEDULE TO CONDUCT ON-SITE INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS.
 - 2.2. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COLLECTING ALL OF THE CONTRACT DOCUMENTS, INCLUDING THE MODIFICATION DRAWINGS, AND PROVIDING THEM TO THE ARCHITECT AND ENGINEER AT THE PROJECT SITE AT THE TIME OF THE MODIFICATION WORK.
 - 2.3. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COLLECTING ALL OF THE CONTRACT DOCUMENTS, INCLUDING THE MODIFICATION DRAWINGS, AND PROVIDING THEM TO THE ARCHITECT AND ENGINEER AT THE PROJECT SITE AT THE TIME OF THE MODIFICATION WORK.
 - 2.4. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COLLECTING ALL OF THE CONTRACT DOCUMENTS, INCLUDING THE MODIFICATION DRAWINGS, AND PROVIDING THEM TO THE ARCHITECT AND ENGINEER AT THE PROJECT SITE AT THE TIME OF THE MODIFICATION WORK.
 - GENERAL CONTRACTOR**
 - 3.1. THE GENERAL CONTRACTOR IS REQUIRED TO CONTACT THE ARCHITECT AND ENGINEER AT LEAST 14 DAYS BEFORE THE MODIFICATION WORK BEGINS TO OBTAIN A SCHEDULE TO CONDUCT ON-SITE INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS.
 - 3.2. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COLLECTING ALL OF THE CONTRACT DOCUMENTS, INCLUDING THE MODIFICATION DRAWINGS, AND PROVIDING THEM TO THE ARCHITECT AND ENGINEER AT THE PROJECT SITE AT THE TIME OF THE MODIFICATION WORK.
 - 3.3. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COLLECTING ALL OF THE CONTRACT DOCUMENTS, INCLUDING THE MODIFICATION DRAWINGS, AND PROVIDING THEM TO THE ARCHITECT AND ENGINEER AT THE PROJECT SITE AT THE TIME OF THE MODIFICATION WORK.
 - 3.4. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COLLECTING ALL OF THE CONTRACT DOCUMENTS, INCLUDING THE MODIFICATION DRAWINGS, AND PROVIDING THEM TO THE ARCHITECT AND ENGINEER AT THE PROJECT SITE AT THE TIME OF THE MODIFICATION WORK.
 - 3.5. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COLLECTING ALL OF THE CONTRACT DOCUMENTS, INCLUDING THE MODIFICATION DRAWINGS, AND PROVIDING THEM TO THE ARCHITECT AND ENGINEER AT THE PROJECT SITE AT THE TIME OF THE MODIFICATION WORK.
 - RECOMMENDATIONS**
 - 4.1. THE ARCHITECT AND ENGINEER WILL REVIEW THE MODIFICATION WORK AND MAKE ANY NECESSARY RECOMMENDATIONS TO THE GENERAL CONTRACTOR.
 - 4.2. THE ARCHITECT AND ENGINEER WILL REVIEW THE MODIFICATION WORK AND MAKE ANY NECESSARY RECOMMENDATIONS TO THE GENERAL CONTRACTOR.
 - 4.3. THE ARCHITECT AND ENGINEER WILL REVIEW THE MODIFICATION WORK AND MAKE ANY NECESSARY RECOMMENDATIONS TO THE GENERAL CONTRACTOR.
 - 4.4. THE ARCHITECT AND ENGINEER WILL REVIEW THE MODIFICATION WORK AND MAKE ANY NECESSARY RECOMMENDATIONS TO THE GENERAL CONTRACTOR.
 - 4.5. THE ARCHITECT AND ENGINEER WILL REVIEW THE MODIFICATION WORK AND MAKE ANY NECESSARY RECOMMENDATIONS TO THE GENERAL CONTRACTOR.
 - CHANGELIST OR CHANGE ORDER**
 - 5.1. THE ARCHITECT AND ENGINEER WILL REVIEW THE MODIFICATION WORK AND MAKE ANY NECESSARY RECOMMENDATIONS TO THE GENERAL CONTRACTOR.
 - 5.2. THE ARCHITECT AND ENGINEER WILL REVIEW THE MODIFICATION WORK AND MAKE ANY NECESSARY RECOMMENDATIONS TO THE GENERAL CONTRACTOR.
 - 5.3. THE ARCHITECT AND ENGINEER WILL REVIEW THE MODIFICATION WORK AND MAKE ANY NECESSARY RECOMMENDATIONS TO THE GENERAL CONTRACTOR.
 - 5.4. THE ARCHITECT AND ENGINEER WILL REVIEW THE MODIFICATION WORK AND MAKE ANY NECESSARY RECOMMENDATIONS TO THE GENERAL CONTRACTOR.
 - 5.5. THE ARCHITECT AND ENGINEER WILL REVIEW THE MODIFICATION WORK AND MAKE ANY NECESSARY RECOMMENDATIONS TO THE GENERAL CONTRACTOR.
 - MODIFICATION INSPECTIONS**
 - 6.1. THE MODIFICATION INSPECTION WILL BE CONDUCTED BY THE ARCHITECT AND ENGINEER AT THE PROJECT SITE AT THE TIME OF THE MODIFICATION WORK.
 - 6.2. THE MODIFICATION INSPECTION WILL BE CONDUCTED BY THE ARCHITECT AND ENGINEER AT THE PROJECT SITE AT THE TIME OF THE MODIFICATION WORK.
 - 6.3. THE MODIFICATION INSPECTION WILL BE CONDUCTED BY THE ARCHITECT AND ENGINEER AT THE PROJECT SITE AT THE TIME OF THE MODIFICATION WORK.
 - 6.4. THE MODIFICATION INSPECTION WILL BE CONDUCTED BY THE ARCHITECT AND ENGINEER AT THE PROJECT SITE AT THE TIME OF THE MODIFICATION WORK.
 - 6.5. THE MODIFICATION INSPECTION WILL BE CONDUCTED BY THE ARCHITECT AND ENGINEER AT THE PROJECT SITE AT THE TIME OF THE MODIFICATION WORK.
 - PHOTOGRAPHS**
 - 7.1. THE ARCHITECT AND ENGINEER WILL REQUIRE THE GENERAL CONTRACTOR TO PROVIDE PHOTOGRAPHS OF THE MODIFICATION WORK AT THE PROJECT SITE AT THE TIME OF THE MODIFICATION WORK.
 - 7.2. THE ARCHITECT AND ENGINEER WILL REQUIRE THE GENERAL CONTRACTOR TO PROVIDE PHOTOGRAPHS OF THE MODIFICATION WORK AT THE PROJECT SITE AT THE TIME OF THE MODIFICATION WORK.
 - 7.3. THE ARCHITECT AND ENGINEER WILL REQUIRE THE GENERAL CONTRACTOR TO PROVIDE PHOTOGRAPHS OF THE MODIFICATION WORK AT THE PROJECT SITE AT THE TIME OF THE MODIFICATION WORK.
 - 7.4. THE ARCHITECT AND ENGINEER WILL REQUIRE THE GENERAL CONTRACTOR TO PROVIDE PHOTOGRAPHS OF THE MODIFICATION WORK AT THE PROJECT SITE AT THE TIME OF THE MODIFICATION WORK.
 - 7.5. THE ARCHITECT AND ENGINEER WILL REQUIRE THE GENERAL CONTRACTOR TO PROVIDE PHOTOGRAPHS OF THE MODIFICATION WORK AT THE PROJECT SITE AT THE TIME OF THE MODIFICATION WORK.
 - INSPECTION AND TESTING**
 - 8.1. THE ARCHITECT AND ENGINEER WILL REQUIRE THE GENERAL CONTRACTOR TO PROVIDE INSPECTION AND TESTING REPORTS OF THE MODIFICATION WORK AT THE PROJECT SITE AT THE TIME OF THE MODIFICATION WORK.
 - 8.2. THE ARCHITECT AND ENGINEER WILL REQUIRE THE GENERAL CONTRACTOR TO PROVIDE INSPECTION AND TESTING REPORTS OF THE MODIFICATION WORK AT THE PROJECT SITE AT THE TIME OF THE MODIFICATION WORK.
 - 8.3. THE ARCHITECT AND ENGINEER WILL REQUIRE THE GENERAL CONTRACTOR TO PROVIDE INSPECTION AND TESTING REPORTS OF THE MODIFICATION WORK AT THE PROJECT SITE AT THE TIME OF THE MODIFICATION WORK.
 - 8.4. THE ARCHITECT AND ENGINEER WILL REQUIRE THE GENERAL CONTRACTOR TO PROVIDE INSPECTION AND TESTING REPORTS OF THE MODIFICATION WORK AT THE PROJECT SITE AT THE TIME OF THE MODIFICATION WORK.
 - 8.5. THE ARCHITECT AND ENGINEER WILL REQUIRE THE GENERAL CONTRACTOR TO PROVIDE INSPECTION AND TESTING REPORTS OF THE MODIFICATION WORK AT THE PROJECT SITE AT THE TIME OF THE MODIFICATION WORK.

SECTS AS-BUILT
7/24/17
JOHN LAWRENCE



| MI CHECKLIST | CONSTRUCTION INSPECTIONS AND TESTING REQUIRED COMPLETED BY DATE |
|--|---|
| PRE-CONSTRUCTION | |
| FOUNDATION INSPECTION | X |
| CONCRETE STRENGTH AND SLUMP TESTS | X |
| BASE PLATE ANCHOR BOLT VERIFICATION | X |
| BARTHOLMEUS PHOTO DOCUMENTATION OF EXCAVATION | X |
| ON-SITE QUALITY ASSURANCE VERIFICATION | X |
| POST-CONSTRUCTION | |
| INSPECTOR SIGNATURE OF RECORD DRAWINGS | X |
| POST-INSTALLATION AND/OR TIGHTENING VERIFICATION | X |
| PHOTOGRAPHS | X |
| ADDITIONAL TESTING AND INSPECTIONS: | |
| ADDITIONAL TESTING AND INSPECTIONS: | |
| ADDITIONAL TESTING AND INSPECTIONS: | |
| ADDITIONAL TESTING AND INSPECTIONS: | |

MODIFICATION OF AN EXISTING 110' MONOPOLE
BU #876325; WESTON SQUARE HARTFORD, CONNECTICUT

PROJECT NO: 3517-2431 001 7700
DRAWN BY: BLS
DESIGNED BY: L.B.
CHECKED BY: JFC
DATE: 2/24/2017

MI CHECKLIST

T-2

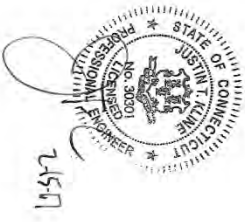
PAUL J. FORD & COMPANY
250 E Broad St, Ste 600 - Columbus, OH 43215
Phone 614.221.6675 www.pauljford.com

CROWN CASTLE
3630 TORINGDON WAY, SUITE 300, CHARLOTTE, NC 28277
PH: (724) 416-2000

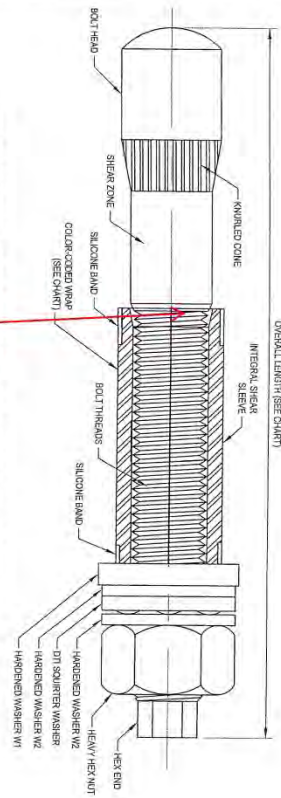
1. GENERAL NOTES
 - 1.1. THE MONOPOLE STRUCTURE IN ITS EXISTING CONDITION MUST HAVE THE STRUCTURAL CAPACITY TO CARRY ALL OF THE PROPOSED AND EXISTING LOADS FROM THE SYSTEMS COMPLETELY AND SUCCESSFULLY INSTALLED.
 - 1.2. THESE DRAWINGS HAVE BEEN PREPARED FROM INFORMATION PROVIDED BY CROWN CASTLE. THE INFORMATION PROVIDED HAS NOT BEEN RE-ADVERTED BY THE ENGINEER. FABRICATION AND INSTALLATION CONTRACTORS SHALL VERIFY ALL LENGTHS AND QUANTITIES. LENGTH AND QUANTITIES SHOULD BE INTERPRETED FROM TOOLS AND MEASUREMENTS. THE CONTRACTOR SHALL COORDINATE WITH THE PROJECT DRAWINGS AND THEIR FIELD REPRESENTATIVES AND REVISIONS BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL IMMEDIATELY REPORT ANY AND ALL DISCREPANCIES TO THE FOR AND CROWN CASTLE BEFORE PROCEEDING WITH THE WORK. ANY REVISIONS SHOULD BE MADE TO THE PROJECT DRAWINGS AND THE CONTRACTOR SHALL IMMEDIATELY REPORT ANY AND ALL DISCREPANCIES TO THE FOR AND CROWN CASTLE BEFORE PROCEEDING WITH THE WORK.
 - 1.3. MATERIALS, QUANTITIES, STRENGTHS OR SIZES INDICATED BY THE DRAWINGS OR SPECIFICATIONS ARE NOT IN AGREEMENT WITH THESE NOTES. THE BETTER QUALITY MATERIALS ARE TO BE USED UNLESS OTHERWISE SPECIFIED.
 - 1.4. THIS STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE INSTALLATION OF THE REPAIRING 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 WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO THE AGENCY FOR THE PROTECTION OF THE MONOPOLE AND ITS COMPONENT PARTS DURING FIELD WORK. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROJECT DRAWINGS AND THESE NOTES. CLAIMING CLAIMS AND RESOLVE CLAIMS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN AND SHALL MEET WITHIN 100 DAYS OF THE DATE OF COMPLETION OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE MONOPOLE AND ITS COMPONENT PARTS DURING FIELD WORK. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROJECT DRAWINGS AND THESE NOTES. CLAIMING CLAIMS AND RESOLVE CLAIMS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN AND SHALL MEET WITHIN 100 DAYS OF THE DATE OF COMPLETION OF THE WORK.
 - 1.5. OBSERVATION VISITS TO THE SITE BY CROWN CASTLE AND/OR THE FOR SHALL NOT INCLUDE INSPECTING OF THE PROTECTIVE MEASURES OR THE CONSTRUCTION PROGRESS. ANY SURVEY SERVICES PERFORMED BY THE FOR DURING CONSTRUCTION ARE SOLELY FOR THE PURPOSE OF ACHIEVING GENERAL COMPLIANCE WITH ALL APPLICABLE REGULATIONS AND STANDARDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE MONOPOLE AND ITS COMPONENT PARTS DURING FIELD WORK. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROJECT DRAWINGS AND THESE NOTES. CLAIMING CLAIMS AND RESOLVE CLAIMS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN AND SHALL MEET WITHIN 100 DAYS OF THE DATE OF COMPLETION OF THE WORK.
 - 1.6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE MONOPOLE AND ITS COMPONENT PARTS DURING FIELD WORK. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROJECT DRAWINGS AND THESE NOTES. CLAIMING CLAIMS AND RESOLVE CLAIMS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN AND SHALL MEET WITHIN 100 DAYS OF THE DATE OF COMPLETION OF THE WORK.
 - 1.7. DOCUMENTS, ANY AND ALL SUBSTITUTIONS MUST BE PROPERLY APPROVED AND AUTHORIZED BY WRITING BY CROWN CASTLE AND INSTALLED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE MONOPOLE AND ITS COMPONENT PARTS DURING FIELD WORK. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROJECT DRAWINGS AND THESE NOTES. CLAIMING CLAIMS AND RESOLVE CLAIMS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN AND SHALL MEET WITHIN 100 DAYS OF THE DATE OF COMPLETION OF THE WORK.
 - 1.8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE MONOPOLE AND ITS COMPONENT PARTS DURING FIELD WORK. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROJECT DRAWINGS AND THESE NOTES. CLAIMING CLAIMS AND RESOLVE CLAIMS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN AND SHALL MEET WITHIN 100 DAYS OF THE DATE OF COMPLETION OF THE WORK.
 - 1.9. ANY EXISTING ATTACHMENTS AND/OR PROJECTIONS ON THE POLE THAT MAY INTERFERE WITH THE INSTALLATION OF THE REPAIRING SYSTEM MUST BE REMOVED AND BE RE-INSTALLED AS REQUIRED AFTER THE REPAIRING IS SUCCESSFULLY COMPLETED. THE CONTRACTOR SHALL IDENTIFY AND REMOVE ANY AND ALL EXISTING ATTACHMENTS AND/OR PROJECTIONS ON THE POLE THAT MAY INTERFERE WITH THE INSTALLATION OF THE REPAIRING SYSTEM. THE CONTRACTOR SHALL IDENTIFY AND REMOVE ANY AND ALL EXISTING ATTACHMENTS AND/OR PROJECTIONS ON THE POLE THAT MAY INTERFERE WITH THE INSTALLATION OF THE REPAIRING SYSTEM. THE CONTRACTOR SHALL IDENTIFY AND REMOVE ANY AND ALL EXISTING ATTACHMENTS AND/OR PROJECTIONS ON THE POLE THAT MAY INTERFERE WITH THE INSTALLATION OF THE REPAIRING SYSTEM.
 - 1.10. MONOPOLE REPAIRING SYSTEM, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE MONOPOLE AND ITS COMPONENT PARTS DURING FIELD WORK. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROJECT DRAWINGS AND THESE NOTES. CLAIMING CLAIMS AND RESOLVE CLAIMS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN AND SHALL MEET WITHIN 100 DAYS OF THE DATE OF COMPLETION OF THE WORK.
 - 1.11. FOR STANDING CROWN PARTS SEE THE MOST RECENT VERSION OF THE CO APPROVED REPAIRING COMPONENTS CATALOGUE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE MONOPOLE AND ITS COMPONENT PARTS DURING FIELD WORK. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROJECT DRAWINGS AND THESE NOTES. CLAIMING CLAIMS AND RESOLVE CLAIMS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN AND SHALL MEET WITHIN 100 DAYS OF THE DATE OF COMPLETION OF THE WORK.
 - 1.12. ALL EQUIPMENTS FOR THE REPAIR, REPAIRING, RELOCATION OR MODIFICATION OF THE STEEL CLIMB AND/OR ANY OF THE MONOPOLE CLIMBING FACILITIES SHALL BE CO APPROVED EQUIPMENT FOR THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE MONOPOLE AND ITS COMPONENT PARTS DURING FIELD WORK. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROJECT DRAWINGS AND THESE NOTES. CLAIMING CLAIMS AND RESOLVE CLAIMS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN AND SHALL MEET WITHIN 100 DAYS OF THE DATE OF COMPLETION OF THE WORK.
 - 1.13. PHONE: 607-296-2131 EMAIL: JLF@JLF@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. AT THE AMERICAN WELDING SOCIETY (AWS)
 - 2.1.2. SPECIFICATION FOR STRUCTURAL STEEL CONSTRUCTION A572
 - 2.1.3. CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES
 - 2.1.4. AT THE AMERICAN WELDING SOCIETY (AWS)
 - 2.1.5. AT THE AMERICAN WELDING SOCIETY (AWS)
 - 2.1.6. AT THE AMERICAN WELDING SOCIETY (AWS)
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 - 2.2. STRUCTURAL STEEL JOISTS SHALL BE INSTALLED AND TIGHTENED TO THE PRESCRIBED CONDITION ACCORDING TO THE REQUIREMENTS OF THE AISC SPECIFICATION FOR STRUCTURAL STEEL JOISTS WITH HIGH STRENGTH BOLTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE MONOPOLE AND ITS COMPONENT PARTS DURING FIELD WORK. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROJECT DRAWINGS AND THESE NOTES. CLAIMING CLAIMS AND RESOLVE CLAIMS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN AND SHALL MEET WITHIN 100 DAYS OF THE DATE OF COMPLETION OF THE WORK.
 - 2.3. ALL WELDING CONNECTIONS SHALL BE MADE BY WELDERS CERTIFIED BY AWS. CONTRACTOR SHALL IDENTIFY WELDERS CERTIFICATION AND QUALIFICATION DOCUMENTATION TO CROWN CASTLE FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
 - 2.4. STRUCTURAL STEEL PARTS SHALL COMPLY WITH THE AISC SPECIFICATION FOR STRUCTURAL STEEL PARTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE MONOPOLE AND ITS COMPONENT PARTS DURING FIELD WORK. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROJECT DRAWINGS AND THESE NOTES. CLAIMING CLAIMS AND RESOLVE CLAIMS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN AND SHALL MEET WITHIN 100 DAYS OF THE DATE OF COMPLETION OF THE WORK.
 - 2.5. SURFACES DAMAGED DURING TRANSPORTATION OR ERECTION AND REPAIR, AS WELL AS FIELD WELDING, SHALL BE REPAIRED TO THE ORIGINAL CONDITION PRIOR TO THE PROCEEDING WITH THE WORK.
 - 2.6. NO WELDING SHALL BE DONE TO THE EXISTING STRUCTURE WITHOUT THE PRIOR APPROVAL AND SUPERVISION OF THE TESTING AGENCY.
 - 2.7. IMPORTANT COATING AND WELDING SAFETY GUIDELINES: THE CONTRACTOR SHALL FOLLOW ALL CROWN CASTLE COATING, WELDING, FIRE PROTECTION AND SAFETY GUIDELINES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN A COPY OF THE CURRENT CROWN CASTLE COATING, WELDING, FIRE PROTECTION AND SAFETY GUIDELINES FROM THE TESTING AGENCY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE MONOPOLE AND ITS COMPONENT PARTS DURING FIELD WORK. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROJECT DRAWINGS AND THESE NOTES. CLAIMING CLAIMS AND RESOLVE CLAIMS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN AND SHALL MEET WITHIN 100 DAYS OF THE DATE OF COMPLETION OF THE WORK.
 - 2.8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE MONOPOLE AND ITS COMPONENT PARTS DURING FIELD WORK. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROJECT DRAWINGS AND THESE NOTES. CLAIMING CLAIMS AND RESOLVE CLAIMS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN AND SHALL MEET WITHIN 100 DAYS OF THE DATE OF COMPLETION OF THE WORK.
 - 2.9. INSPECTING AGENCY SHALL CLOSELY AND CONTINUOUSLY MONITOR THIS ACTIVITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE MONOPOLE AND ITS COMPONENT PARTS DURING FIELD WORK. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROJECT DRAWINGS AND THESE NOTES. CLAIMING CLAIMS AND RESOLVE CLAIMS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN AND SHALL MEET WITHIN 100 DAYS OF THE DATE OF COMPLETION OF THE WORK.
 - 2.10. WELDING PERMITS DURING CONSTRUCTION SHALL BE OBTAINED FROM THE TESTING AGENCY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE MONOPOLE AND ITS COMPONENT PARTS DURING FIELD WORK. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROJECT DRAWINGS AND THESE NOTES. CLAIMING CLAIMS AND RESOLVE CLAIMS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN AND SHALL MEET WITHIN 100 DAYS OF THE DATE OF COMPLETION OF THE WORK.
3. BASE PLATE GROUT - NOT REQUIRED
4. EDUCATION WORK - NOT REQUIRED

5. GALVANIZED STEEL - NOT REQUIRED
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SCTS AS-BUILT
 7/24/17
 JOHN LAWRENCE

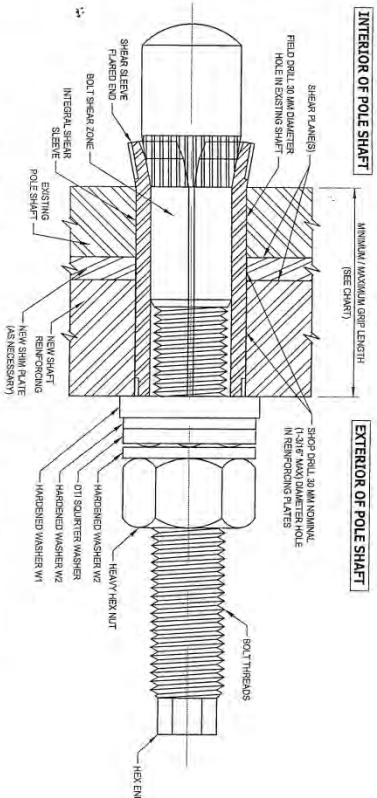


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| <p style="font-size: 2em; font-weight: bold;">S-1</p> | <p style="font-size: 1.2em; font-weight: bold;">MODIFICATION OF AN EXISTING 110' MONOPOLE</p> <p style="font-weight: bold;">BU #876325; WESTON SQUARE HARTFORD, CONNECTICUT</p> | <p style="font-size: 1.2em; font-weight: bold;">PAUL J. FORD & COMPANY</p> <p>250 E Broad St. Ste 600 • Columbus, OH 43216 Phone 614.221.6679 www.pauljford.com</p> <p style="font-size: 1.2em; font-weight: bold;">CROWN CASTLE</p> <p>3530 TORINGDON WAY, SUITE 300, CHARLOTTE, NC 28277 PH: (704) 416-2000</p> |
| <p>PROJECT NO: 326712461 001 0710</p> <p>DRAWN BY: B.M.S.</p> <p>CHECKED BY: J.C.C.</p> <p>DATE: 2/5/2017</p> | | <p>Copyright © 2017 Paul J. Ford and Company. All Rights Reserved. This document and the data contained herein, is proprietary to Paul J. Ford and Company, and may not be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of Paul J. Ford and Company. All other trademarks are the property of their respective owners.</p> |



PRE-INSTALLED FORGBOlT™ ASSEMBLY DETAIL **1** S-2A

THIS STYLE USED



INSTALLED FORGBOlT™ ASSEMBLY DETAIL **2** S-2A

| 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 | |
| 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 "Square" DTI that is compatible with a M20-PC8.8 bolt.

FOLLOW ALL MANUFACTURER / DISTRIBUTOR RECOMMENDATIONS FOR INSTALLATION, TIGHTENING, AND INSPECTION

- INSTALLATION NOTES:
- FIELD DRILL HOLES TO 30 MM DIAMETER.
 - SELECT CORRECT BOLT SIZE FOR INSTALLATION GRIP (REFER TO PLANS).
 - INSERT BOLT ASSEMBLY THROUGH HOLES IN SHAFT REINFORCING PLATES AND SEAT THE HARDENED WASHER W/1 FLUSH AGAINST OUTSIDE OF PLATE.
 - HAND TIGHTEN NUT TO FINGER TIGHT.
 - TIGHTEN NUT TO PRE-TENSIONED CONDITION AND UNTIL DTI SHOWS PROPER INDICATION.
 - PROPERLY DOCUMENT AND INSPECT BOLT TIGHTENING PER PLAN REQUIREMENTS.
- BOLT HOLE NOTES:
- ALL SHOP-DRILLED HOLES SHALL BE NOMINAL 30 MM DIAMETER. THE MAXIMUM SHOP-DRILLED HOLE DIAMETER PERMITTED IS 1.316".
 - ALL FIELD-DRILLED HOLES SHALL BE NOMINAL 30 MM DIAMETER. THE MAXIMUM FIELD-DRILLED HOLE DIAMETER PERMITTED IS 30 MM.

BOLT TIGHTENING AND INSPECTION NOTES:

- ALL STRUCTURAL BOLTS SHALL BE INSTALLED AND TIGHTENED TO THE PRE-TENSIONED CONDITION ACCORDING TO THE REQUIREMENTS OF THE AISC SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS, DEC. 31, 2009.
- ALL STRUCTURAL BOLTS SHALL BE INSPECTED ACCORDING TO THE REQUIREMENTS OF THE AISC SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS, DEC. 31, 2009.

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

CONTAINS PROPRIETARY INFORMATION PATENT PENDING

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

**SCS AS-BUILT
7/24/17
JOHN LAWRENCE**



PAUL J. FORD & COMPANY
250 E Broad St, Ste 400, Columbus, OH 43215
Phone 614.221.6679 www.pauljford.com

CROWN CASTLE
3550 TORRINGTON WAY, SUITE 300, CHARLOTTE, NC 28277
PH: (724) 416 2000

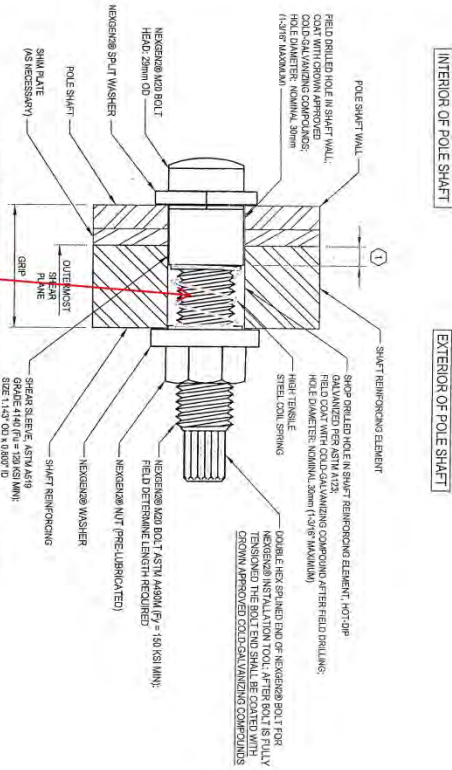
MODIFICATION OF AN EXISTING 110' MONOPOLE
BU #876325; WESTON SQUARE
HARTFORD, CONNECTICUT

PROJECT No: 3751-2451-001-0720
DRAWN BY: BMS
DESIGNED BY: L.G.
CHECKED BY: J.K.C.
DATE: 2/16/2017

**FORGBOlT™
DETAILS**

S-2A

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.



TYPICAL NEXGEN2™ BOLT DETAIL
 1
 S-2B

THIS STYLE NOT USED ON THIS SITE

SCFS AS-BUILT 7/24/17
 JOHN LAWRENCE

FOLLOW ALL MANUFACTURER / DISTRIBUTOR RECOMMENDATIONS FOR INSTALLATION, TIGHTENING, AND INSPECTION

BOLT HOLE NOTES:

- ALL SHOP-DRILLED HOLES SHALL BE NOMINAL 30 MM DIAMETER. THE MAXIMUM SHOP-DRILLED HOLE DIAMETER PERMITTED IS 1.318".
- ALL FIELD-DRILLED HOLES SHALL BE NOMINAL 30 MM DIAMETER. THE MAXIMUM FIELD-DRILLED HOLE DIAMETER PERMITTED IS 30 MM.

BOLT TIGHTENING AND INSPECTION NOTES:

- 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 8.2. 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 PILES 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.
- 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.
- 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 THISTLED OFF AND COATED WITH CHROMIUM APPROVED COLD-GALVANIZING COMPOUND.

| PART NUMBER | BOLT LENGTH | SLEEVE LENGTH | MIN GRIP RANGE | MAX GRIP RANGE |
|-------------|-------------|---------------|----------------|----------------|
| M20x36 | M20x56 | 11/16" | 1 5/16" | 1 7/16" |
| M20x48 | M20x65 | 1 3/16" | 1 7/8" | 2 1/4" |
| M20x57 | M20x95 | 1 5/8" | 1 7/8" | 2 1/4" |
| M20x68 | M20x135 | 2" | 2 1/4" | 2 11/16" |
| M20x86 | M20x135 | 2 7/16" | 2 11/16" | 3 3/4" |
| M20x127 | M20x165 | 3" | 3 3/4" | 5" |
| M20x212 | M20x250 | 4" | 5" | 8 5/16" |

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

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

DISTRIBUTOR CONTACT DETAILS:
 ALLFASTENERS
 15401 COMMERCE PARK DR.
 BROOKPARK, OHIO 44112
 PHONE: 440-232-6060
 E-MAIL: SALES@ALLFASTENERS.COM

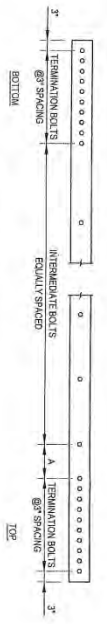


2/15/17

| | | | |
|--|---|--|---|
| <p>PROJECT No. 3757-0431-001-0700 DRAWN BY: BIAS DESIGNED BY: J.C. CHECKED BY: J.C. DATE: 2-6-2017</p> | <p>MODIFICATION OF AN EXISTING 110' MONOPOLE BU #876325; WESTON SQUARE HARTFORD, CONNECTICUT</p> | <p>PAUL J. FORD & COMPANY 250 E Broad St, Ste 600 Columbus, OH 43215 Phone 614.221.6679 www.pauljford.com</p> | <p>CROWN CASTLE 5630 THORNDON WAY, SUITE 300, CHARLOTTE, NC 28277 Ph: (724) 416-2200</p> |
| | | <p>S-2B</p> | <p>NEXGEN2™ BOLT DETAIL</p> |

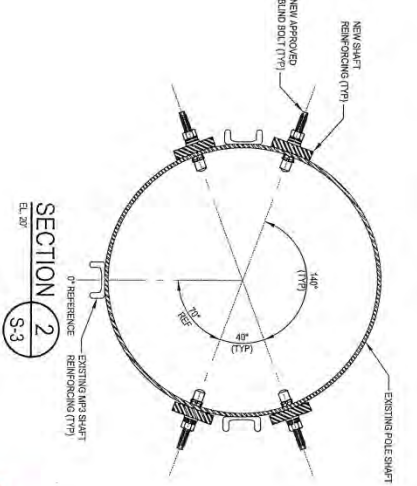
| BOTTOM ELEVATION | TOP ELEVATION | PLATE / BOLT SPACING | ELEMENT LENGTH | ELEMENT QUANTITY | APPROXIMATE BOLT QUANTITY | APPROXIMATE TERMINATION BOLT QUANTITY | TERMINATION BOLT (TOP) | MAXIMUM INTERMEDIATE BOLT SPACING | ESTIMATED TOTAL STEEL WEIGHT |
|------------------|---------------|----------------------|----------------|------------------|---------------------------|---------------------------------------|------------------------|-----------------------------------|------------------------------|
| 4'-6" | 25'-5" | 7x 11/2, 25' x 25' | 25' | 4 | 23 | 32 | 5 | 5' | 1341 LBS |
| 1341 LBS | | | | | | | | | |

- NOTES:
- 1) ALL STEEL SHALL BE HOT DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123. ALL NEW STEEL PLATE STEEL REINFORCING WARE SHALL BE GALVANIZED AFTER FABRICATION. THE COATING SHALL BE 200 GRAMS PER SQ. METER (0.0075 LB PER SQ. FT.) MINIMUM. ALL NEW STEEL SHALL BE GALVANIZED AFTER FABRICATION.
 - 2) ALL REINFORCING SHALL BE A572 GR 50.
 - 3) BOLTS SHALL BE EXPOSURE GRADE. TERMINATION BOLTS SHALL BE 3/4" DIA. A193.
 - 4) HOLES FOR BOLTS ARE 3mm UNLESS NOTED OTHERWISE.
 - 5) ALL SPACING SHALL BE AS SHOWN.
 - 6) FOR PLATES STARTING AT 4' FROM THE BOTTOM OF THE PLATE SHALL BEGIN AT THE PROPOSED ELEVATION + 3". NORMAL PLATE ELEMENTS SHALL BE PLACED SUCH THAT THERE IS NO GAPS BETWEEN THE ACTUAL LENGTH OF THE SPAN AND THE PROPOSED OVERALL LENGTH OF THE SPAN FROM THE BOTTOM OF THE PLATE TO THE TOP OF THE PLATE.

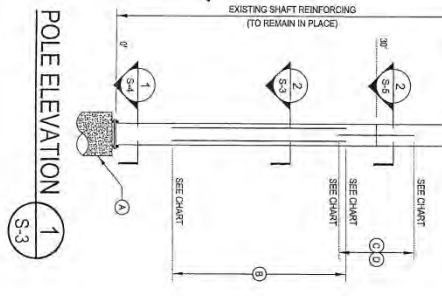


CUSTOM BOLTED BAR DETAIL

NOTE: 4" DIMENSION MAY VARY, NOT TO EXCEED MAXIMUM INTERMEDIATE BOLT SPACING



SECTION 2

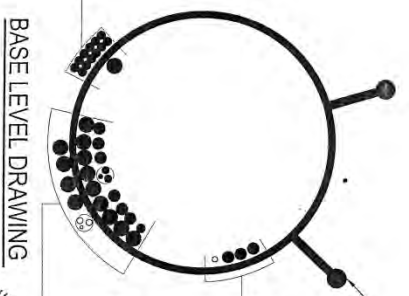


POLE ELEVATION 1

| SHAFT SECTION | SECTION LENGTH (FT) | PLATE THICKNESS (IN) | LAP SPACE (IN) | DIAMETER ABOVE PLATE (IN) | DIAMETER AT BOTTOM (IN) | ROLE GRADE (ft) | ROLE SHAPE |
|---------------|---------------------|----------------------|----------------|---------------------------|-------------------------|-----------------|------------|
| 1 | 20.00 | 0.2500 | 24.000 | 24.000 | 24.000 | 42 | ROUND |
| 2 | 30.00 | 0.3750 | 24.000 | 24.000 | 24.000 | 42 | ROUND |
| 3 | 30.00 | 0.3750 | 30.000 | 30.000 | 30.000 | 42 | ROUND |
| 4 | 30.00 | 0.5000 | 30.000 | 30.000 | 30.000 | 42 | ROUND |

NOTE: DIMENSIONS SHOWN DO NOT INCLUDE GALVANIZING TOLERANCES

| ELEVATION | TOWER MODIFICATION DESCRIPTION | REFERENCE SHEETS |
|-----------------|--|------------------|
| 0 | INSTALL NEW SHAFT IN REAR IF EXISTING CHASSIS FOUNDATION | S-4 |
| 0'-4" TO 29'-0" | INSTALL NEW SHAFT REINFORCING | S-3 |
| 30' | REMOVE STEP BOLTS AS REQUIRED FOR MODIFICATION WITH THIS. SEE NOTE 1.4 ON S-1. | S-1 & S-3 |



BASE LEVEL DRAWING

SCTS AS-BUILT
7/24/17
JOHN LAWRENCE



2.15.17

| | |
|--------------|-------------------|
| PROJECT NO: | 31517-0401-DW-770 |
| DRAWN BY: | BAAS |
| DESIGNED BY: | L.S. |
| CHECKED BY: | BAAS |
| DATE: | 5/31/2017 |

S-3

MONOPOLE PROFILE

MODIFICATION OF AN EXISTING 110' MONOPOLE
BU #876325; WESTON SQUARE
HARTFORD, CONNECTICUT

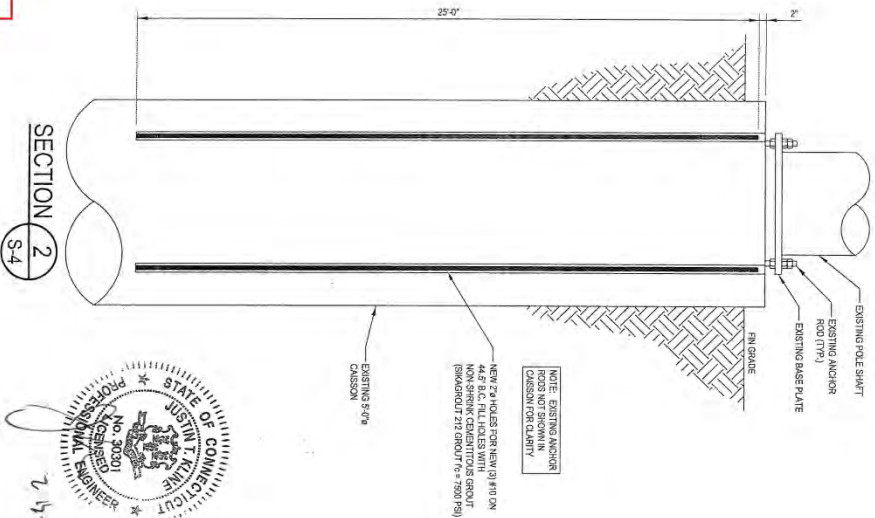
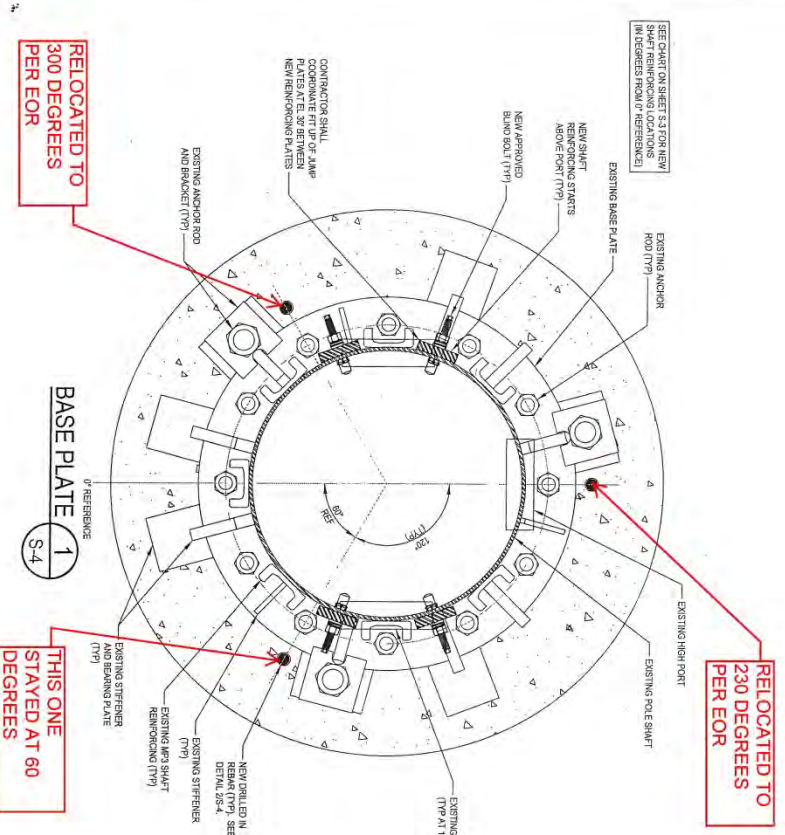
PAUL J. FORD & COMPANY
250 E Broad St, Ste 600 - Columbus, OH 43215
Phone 614.221.6679 www.pauljford.com

CROWN CASTLE
3630 TORINGDON WAY, SUITE 300, CHARLOTTE, NC 28277
PH. (724) 416-2000

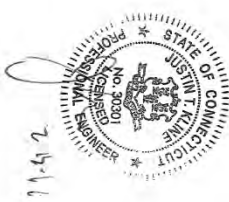
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BASE SPECIFICATIONS

| | |
|-------------|-------------------------------------|
| BASE PLATE | 4 1/2" x 7" THK. FPM/SKSI |
| ANCHOR RODS | (1) 1/2" x 6" A500 GR. B.C. 35 B.C. |

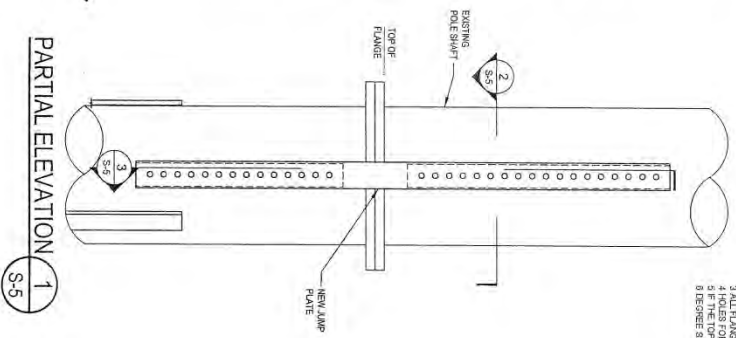


SCTS AS-BUILT
7/24/17
JOHN LAWRENCE

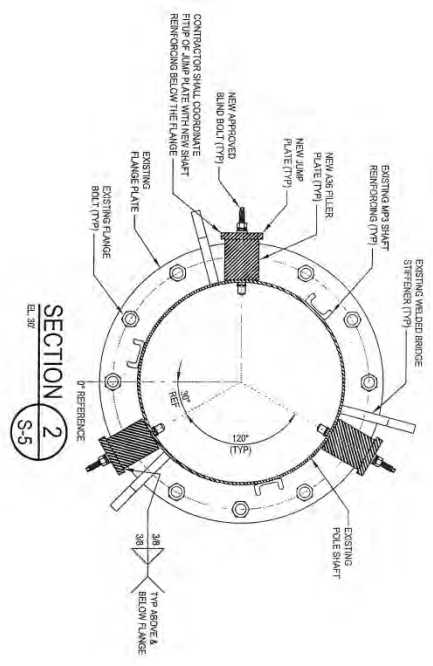


| | | | | | | | | | | | | | |
|-------------------------------------|--|---|---|-----------|--------|--------------|------|-------------|------|-------|-----------|--|--|
| S-4 | <p>MODIFICATION OF AN EXISTING 110' MONOPOLE</p> <p>BU #876325; WESTON SQUARE HARTFORD, CONNECTICUT</p> | <p>PAUL J. FORD & COMPANY</p> <p>250 E Broad St, Ste 600 Columbus, OH 43215 Phone 614.221.6679 www.pauljford.com</p> <p>CROWN CASTLE</p> <p>3630 TORINGDON WAY, SUITE 300, CHARLOTTE, NC 28277 PH: (724) 416-2000</p> | <p>Copyright © 2017 by Paul J. Ford and Company All Rights Reserved. This document is the data developed herein, is proprietary to Paul J. Ford and Company, and is not to be reproduced or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of Paul J. Ford and Company. Paul J. Ford and Company, its agents, and its employees shall not be held liable for any damages of any kind resulting from the use of this document.</p> | | | | | | | | | | |
| <p>DRILLED IN REBAR DETAILS</p> | <table border="0"> <tr> <td>PROJECT No:</td> <td>3167-0451 (001) TMO</td> </tr> <tr> <td>DRAWN BY:</td> <td>B.A.S.</td> </tr> <tr> <td>DESIGNED BY:</td> <td>L.B.</td> </tr> <tr> <td>CHECKED BY:</td> <td>#/CC</td> </tr> <tr> <td>DATE:</td> <td>2-16-2017</td> </tr> </table> | PROJECT No: | 3167-0451 (001) TMO | DRAWN BY: | B.A.S. | DESIGNED BY: | L.B. | CHECKED BY: | #/CC | DATE: | 2-16-2017 | | |
| PROJECT No: | 3167-0451 (001) TMO | | | | | | | | | | | | |
| DRAWN BY: | B.A.S. | | | | | | | | | | | | |
| DESIGNED BY: | L.B. | | | | | | | | | | | | |
| CHECKED BY: | #/CC | | | | | | | | | | | | |
| DATE: | 2-16-2017 | | | | | | | | | | | | |

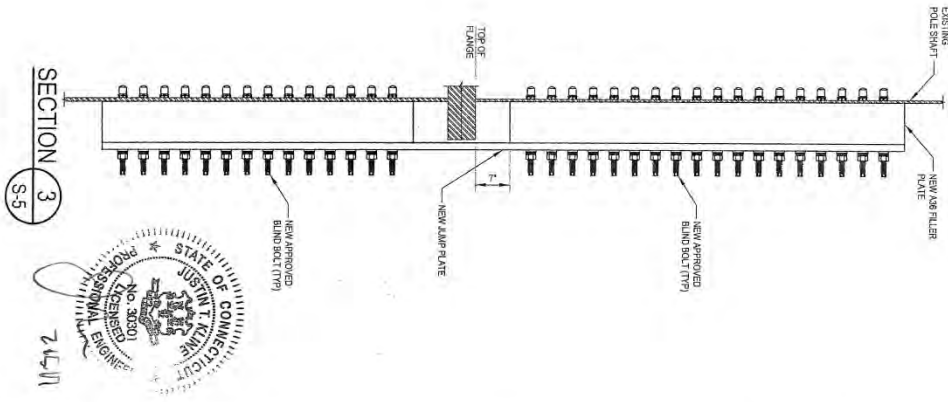
| NEW BOLTED FLANGE REINFORCING FOR SHFT ELEVATION | | | | | | | | | | | | | | | | |
|--|------------|------------|----------|-------------------------|------------|------------|----------|----------------------------|------------|------------|----------|----------------------|-----------------|----------------|------------------------|-------------------|
| SINGLE JUMP PLATE | | | | SINGLE TOP FLANGE PLATE | | | | SINGLE BOTTOM FLANGE PLATE | | | | BOLTS PER JUMP PLATE | | WELD | | |
| QTY | DEPTH (IN) | WIDTH (IN) | THK (IN) | QTY | DEPTH (IN) | WIDTH (IN) | THK (IN) | QTY | DEPTH (IN) | WIDTH (IN) | THK (IN) | TOP BOLT QTY | BOTTOM BOLT QTY | TOTAL BOLT QTY | TOTAL WELD LENGTH (IN) | WELD FLANGE (LBS) |
| 3 | 36 | 48 | 270 | 6 | 1 | 118 | 1/8 | 5 | 0 | 57 | 4/8 | 5 | 5 | 6 | 45 | 2100 |
| NOTES: 1. NEW FLANGE JUMP STEEL REINFORCING SHALL BE GALVANAIZED AS FOLLOWS: APPLY A MINIMUM OF TWO COATS OF ZINC/ALUMINUM RICH GALVANIZING COMPOUND. FULL THICKNESS PER COAT SHALL BE: NET 3.0 MILS. (30%) 1.5 MILS. APPLY PER TWO COATS OF ZINC/ALUMINUM RICH GALVANIZING COMPOUND. CONTACT SPEC A 11-800-837-2725 FOR PRODUCT INFORMATION. 2. ALL FABRICATED PARTS SHALL BE SHOWN WITH 30% ZINC/ALUMINUM RICH GALVANIZING COMPOUND. 3. ALL FABRICATED PARTS SHALL BE SHOWN WITH 30% ZINC/ALUMINUM RICH GALVANIZING COMPOUND. 4. HOLE FOR THE BOLTS ARE 3/8" UNLESS NOTED OTHERWISE. 5. THE TOP OR BOTTOM BOLTS ARE NOT LISTED. THE QUANTITIES ARE INCLUDED IN THE SHFT REINFORCING QMNT. 6. BEFORE FABRICATION, THE DIMENSIONS FROM TOP OF FLANGE, REINFORCEMENT, AND THE DOWNWARD SIDE. | | | | | | | | | | | | | | | | |



CONTRACTOR TO SEE ORIGINAL MANUFACTURER DOCUMENTS FOR EXISTING POLE INFORMATION, EXISTING FLANGE PLATE INFORMATION AND FLANGE BOLT INFORMATION.



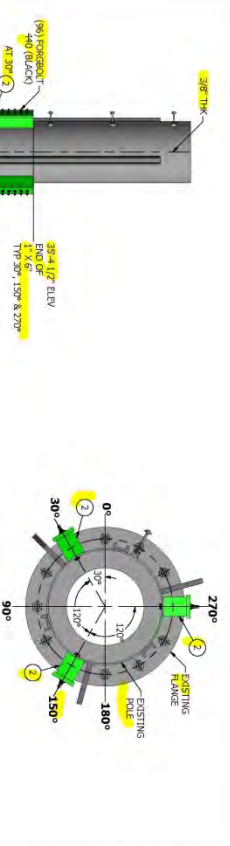
SCTS AS-BUILT
7/24/17
JOHN LAWRENCE



| | | | | | |
|-----|-----------------------------------|--|--|--|--|
| S-5 | BOLTED FLANGE JUMP DETAILS | MODIFICATION OF AN EXISTING 110' MONOPOLE BU #876325; WESTON SQUARE HARTFORD, CONNECTICUT | | PAUL J. FORD & COMPANY 250 E Broad St, Ste 600-Columbus, OH 43215 Phone 614.221.6679 www.pauljford.com | CROWN CASTLE 3630 TORINGDON WAY, SUITE 300, CHARLOTTE, NC 28277 PH: (724)416-2000 |
| | | PROJECT No: 35172401.001.070 DRAWN BY: BMS DESIGNED BY: JCF CHECKED BY: JCF DATE: 2/4/2017 | PROJECT No: 35172401.001.070 DRAWN BY: BMS DESIGNED BY: JCF CHECKED BY: JCF DATE: 2/4/2017 | | |

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NOTE:
 1. MODIFICATION & FABRICATION DETAILS PER: PRODUCT # 1929759001 000/27000 REV. 05/26/2017
 2. ALL UNITS SKILLED IN EXISTING MONOROLE SHALL BE CLEANED AND TOUCHED UP WITH BLACK PAINT TO MATCH GALVANIZED.
 3. ALL HOLES DRILLED IN EXISTING MONOROLE SHALL BE CLEANED AND TOUCHED UP WITH BLACK PAINT TO MATCH GALVANIZED.
 4. SET FOR SHEETS S3 THRU S5 FOR MORE DETAIL.
 5. NEW REBAR HOLE DIA = 2"
 6. THE FINISH SHALL BE HOT-DIP GALVANIZED PER ASTM A123 DECIMALS +/- .010
 7. TO FABRICATE, DRILL AND GALVANIZE PER ASTM A123 DECIMALS +/- .010



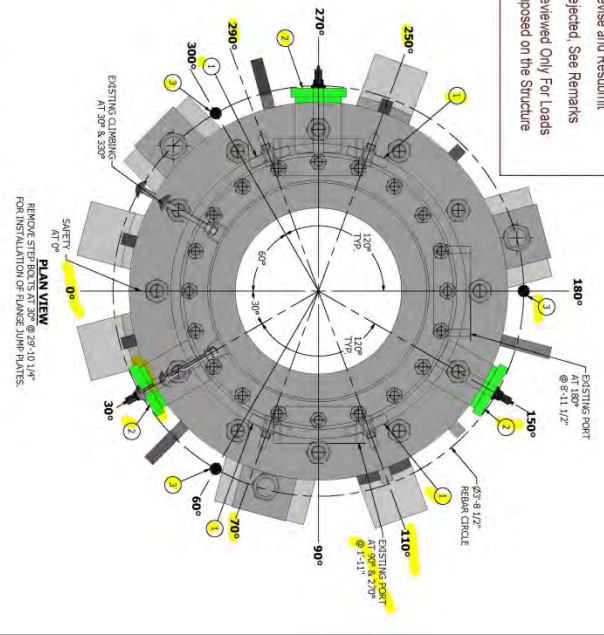
PAUL J. FORD AND COMPANY
 STRUCTURAL ENGINEERS
 Columbus, Ohio · Orlando, Florida · Atlanta, Georgia

Corrections or comments made on this document do not relieve the contractor from compliance with the requirements of the drawings and specifications. This document was reviewed for general conformance to the design requirements in accordance with the information given in the contract documents. The contractor is responsible for confirming and correlating all quantities and dimensions, fabrication processes and techniques of construction, coordination of the work with other trades and the satisfactory performance of his work.

By: **KAT** Date: **05/26/2017**

Reviewed No exceptions taken
 Reviewed Make Noted Corrections
 Revised and Resubmit
 Rejected See Remarks
 Reviewed Only For Loads Imposed on the Structure

| ITEM NO. | QTY. | PART NUMBER | DESCRIPTION | MATERIAL | WT. EA. | EXT. WT. |
|----------|------|--------------------|--|--------------|---------|----------|
| 1 | 4 | CG-CR-060510027 #1 | PLATE 1/4" X 1/2" X 20" 0" | A572-60AS | 39 | 1316 |
| 2 | 1 | JUMP WELDMENT | WELDMENT, BAR/COE STEELER | (CALC) | 99 | 2862 |
| 3 | 3 | RE-10 | REBAR #10 X 20 FT | A615-60AS | 108 | 324 |
| 4 | 3 | REBAR/CT 3/8" | REBAR/CT 3/8" 14 FT - 2 1/4" (20 REB. ROD) | (CALC) | 1 | 32 |
| 5 | 3 | REBAR/CT 3/8" | REBAR/CT 3/8" 30 FT - 8 1/2" (10 REB. ROD) | (CALC) | 1 | 90 |
| | | | | TOTAL WEIGHT | | 4810 |



WESTON SQUARE

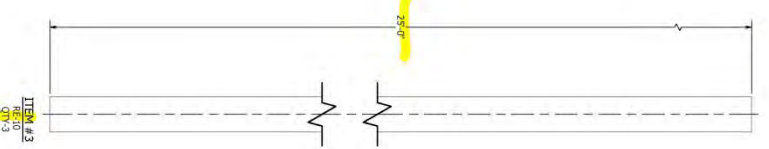
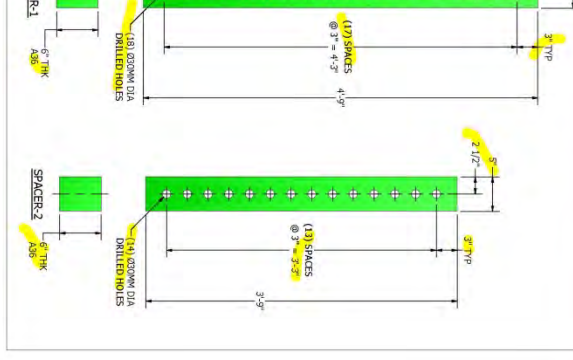
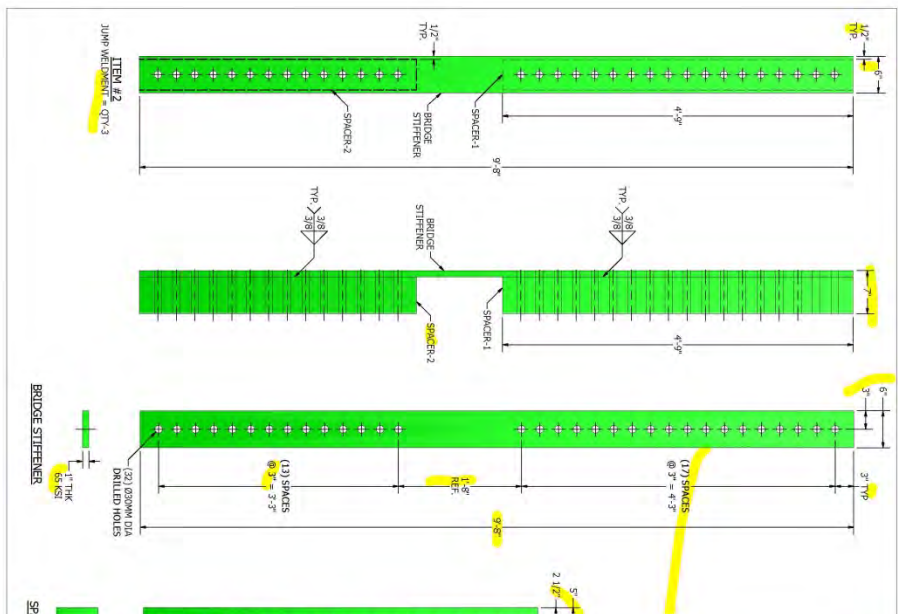
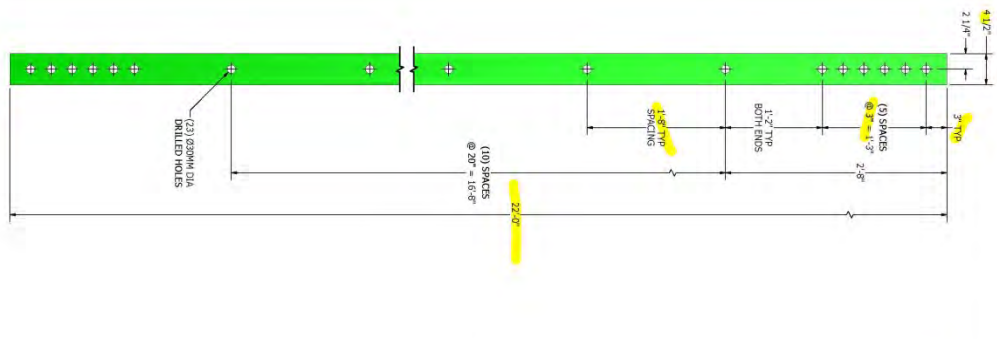
PROJECT INFORMATION
 WESTON SQUARE
 90 WESTON STREET
 HARTFORD, CONNECTICUT 06103

ENGINEER OF RECORD: STAMP/SEAL
 DATE: 05/26/17
 DRAWN BY: SSM
 CHECKED BY: SPM
 # REVISION DATE

SC-01 GENERAL ASSY. FOR FLANGE ELEV. & SC-02 PARTS & DIMENSIONAL DETAILS
 SHEET NUMBER: SC-01

Corrections or comments made on this document do not relieve the contractor from compliance with the requirements of the drawings and specifications. This document was reviewed for general conformance to the design requirements in accordance with the information given in the contract documents. The contractor is responsible for confirming and correlating all quantities and dimensions of construction, coordination of the work with other trades and the satisfactory performance of this work.

| | | | |
|-------------------------------------|--|--------------------------|------------------------|
| By: | KAT | Date: | 05/26/2017 |
| <input checked="" type="checkbox"/> | Reviewed | <input type="checkbox"/> | No exceptions taken |
| <input type="checkbox"/> | Reviewed | <input type="checkbox"/> | Make Noted Corrections |
| <input type="checkbox"/> | Revise and Resubmit | <input type="checkbox"/> | Rejected. See Remarks |
| <input type="checkbox"/> | Reviewed Only For Loads Imposed on the Structure | <input type="checkbox"/> | |



| | | | |
|--------------------------------|-----------------------|----------------|---|
| ENGINEER OF RECORD: STAMPAISEL | SITE NUMBER: BU876325 | DATE: 05/17/17 | PROJECT INFORMATION: WESTON SQUARE |
| DRAWN BY: PJP | DESIGNED BY: PJP | REVISION: # | 32 WESTON STREET, HARTFORD, CONNECTICUT 06103 |
| CHECKED BY: PJP | DATE: 05/17/17 | REVISION: # | 32 WESTON STREET, HARTFORD, CONNECTICUT 06103 |
| DATE: 05/17/17 | REVISION: # | REVISION: # | 32 WESTON STREET, HARTFORD, CONNECTICUT 06103 |

SPYGLASS
 2800 INDUSTRIAL DRIVE
 BOSTON, MA 02124
 TEL: 617.552.3300
 WWW.SPYGLASS.COM

SHEET NUMBER: SC-02

Punchlist BU # 876325 - Weston Square



Status Complete

| Project Information | Project Contacts | | Punchlist Issuance # | Date | Visit | Structural Impact To Capacity Yes # of Punchlist Items 8 |
|---------------------|----------------------|----------------------------------|----------------------|-----------|--------|---|
| | MI Vendor | Engineered Tower Solutions, PLLC | 1 | 7/20/2017 | OnSite | |
| | MI On-site Inspector | Hunter Thomas, E.I | | | | |
| | MI WO # | 1402804 | | | | |
| | General Contractor | Skyclimber Wind Solutions, LLC | | | | |
| | Crown POC | Dan Vadney | | | | |
| | EOR | Paul J. Ford and Co | | | | |
| | BU | 876325 | | | | |
| | Site Name | Weston Square | | | | |

8 Punchlist Item(s)
 NonConformance Impact to Capacity (Shall Be Provided by EOR) New Overall Structure Capacity Rating: -

| MI Checklist Documents | Documentation Complete / Documentation Missing | | | | Status |
|--|--|----------------|--------------------|--------------------------|----------|
| | Require | Date Submitted | Requirement Waived | Date Compliance Verified | |
| PRE-CONSTRUCTION | | | | | |
| EOR Approved Shop Drawings | Required | 7/31/2017 | N/A | 7/31/2017 | Complete |
| Foundations Inspection | Required | 7/31/2017 | N/A | 7/31/2017 | Complete |
| Fabricator Certified Weld Inspection | Required | 7/31/2017 | N/A | 7/31/2017 | Complete |
| Material Test Report (MTR) | Required | 7/31/2017 | N/A | 7/31/2017 | Complete |
| Fabricator NDE Report | N/A | N/A | N/A | - | N/A |
| NDE Insp. Report of Monopole Base Plate | N/A | N/A | N/A | - | N/A |
| Packing Slips | Required | 7/31/2017 | N/A | 7/31/2017 | Complete |
| Additional Pre-Construction Inspections | N/A | N/A | N/A | - | N/A |
| CONSTRUCTION | | | | | |
| Foundation Inspections | Required | 7/31/2017 | N/A | 7/31/2017 | Complete |
| Post-Installed Anchor Rod Verification | N/A | N/A | N/A | - | N/A |
| Base Plate Grout Verification | N/A | N/A | N/A | - | N/A |
| Contractor's Certified Weld Inspection | N/A | N/A | N/A | - | N/A |
| Hot Work Permit | N/A | N/A | N/A | - | N/A |
| On-Site Cold Galvanizing Verification | Required | 7/31/2017 | N/A | 7/31/2017 | Complete |
| Guy Wire Tension Report | N/A | N/A | N/A | - | N/A |
| GC As-Built Drawings | Required | 7/31/2017 | N/A | 7/31/2017 | Complete |
| Additional Construction Inspections | N/A | N/A | N/A | - | N/A |
| POST-CONSTRUCTION | | | | | |
| Construction Compliance Verification | Required | 7/31/2017 | N/A | 7/31/2017 | Complete |
| Post-Installed Anchor Rod Pull-Out Testing | N/A | N/A | N/A | - | N/A |
| Additional Post-Construction Inspections | N/A | N/A | N/A | - | N/A |
| MI Checklist Comments | | | | | |




Add Punchlist Item Create PDF

| | | | | | | |
|----------------------------|--|-------|---------------|------------------------|--|---|
| Nonconformance # 1 | MI Vendor | | | Crown | Final Crown Approval | |
| | Nonconformance | | | | Crown Approval By | |
| | Issue Description | | | | Enter Name of Crown Approver | |
| | Scratched/chipped galvanized surface was observed at the following locations: • Flat plate 1, 2, 3, and 4 at 70°, 110°, 250°, and 290° from 4'-6" to 26'-6". • Flange bypass at 30° from 34'-6" to 35'-5" and 110° from 30'-9" to 31'-6" | | | GC Correction Required | MI Vendor | |
| | Section/Height/Elev | Panel | Leg | | Face/Flat | Status of Correction |
| | 4'-6" - 26'-6", 30'-9" - 31'-6" | | | Flat 1, 2, 3, 4 | Conformance | Non-Onsite Verification * Must be Crown Approved |
| |  | | | Rejected |  | |
| | MI Comments: | | | Capacity Impact As Is | | |
| | EOR Comments: | | | N/A | | |
| | Crown Comments: | | | EOR Feedback By | | |
| | | | Ryan Ferrante | | | |
| Enter Comments | | | | | | |
| Apply two coats cold galv. | | | | | | |
| Skyclimber to cold galv. | | | | | | |

| Nonconformance # 2 | <table border="1"> <tr><th>MI Vendor</th></tr> <tr><td>Nonconformance</td></tr> <tr><td>Issue Description</td></tr> <tr><td>20 mm ForgBolts installed on flange bypass were varying lengths of 3-3/4" and 6" (measured from the flat plate to the edge of the bolt. Color coded grip lengths could not be verified as the color code is scraped off.</td></tr> <tr> <th>Section/Height/Elev</th> <th>Panel</th> <th>Leg</th> <th>Face/Flat</th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </table> | | | | MI Vendor | Nonconformance | Issue Description | 20 mm ForgBolts installed on flange bypass were varying lengths of 3-3/4" and 6" (measured from the flat plate to the edge of the bolt. Color coded grip lengths could not be verified as the color code is scraped off. | Section/Height/Elev | Panel | Leg | Face/Flat | | | | | <table border="1"> <tr><th>Crown</th></tr> <tr><td>GC Correction Required</td></tr> <tr><td>EOR</td></tr> <tr><td>Rejected</td></tr> <tr><td>Capacity Impact As Is</td></tr> <tr><td>N/A</td></tr> <tr><td>EOR Feedback By</td></tr> <tr><td>Ryan Ferrante</td></tr> </table> | Crown | GC Correction Required | EOR | Rejected | Capacity Impact As Is | N/A | EOR Feedback By | Ryan Ferrante | <table border="1"> <tr><th>Final Crown Approval</th></tr> <tr><td>Crown Approval By</td></tr> <tr><td>Enter Name of Crown Approver</td></tr> <tr><th>MI Vendor</th></tr> <tr><td>Status of Correction</td></tr> <tr><td>Conformance</td></tr> <tr><td>Type of Verification</td></tr> <tr><td>Non-Onsite Verification</td></tr> <tr><td>* Must be Crown Approved</td></tr> </table> | Final Crown Approval | Crown Approval By | Enter Name of Crown Approver | MI Vendor | Status of Correction | Conformance | Type of Verification | Non-Onsite Verification | * Must be Crown Approved |
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| Section/Height/Elev | Panel | Leg | Face/Flat | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Crown | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GC Correction Required | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EOR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rejected | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacity Impact As Is | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| N/A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EOR Feedback By | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ryan Ferrante | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Crown Approval By | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Enter Name of Crown Approver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Nonconformance # 3 | <table border="1"> <tr><th>MI Vendor</th></tr> <tr><td>Nonconformance</td></tr> <tr><td>Issue Description</td></tr> <tr><td>Flange bypass filler plate at 150° from 25'-8" to 29'-5" and 30'-8" to 35'-5" is not flush with tower. The maxin pole face to inside edge of the modification plate was 5/8".</td></tr> <tr> <th>Section/Height/Elev</th> <th>Panel</th> <th>Leg</th> <th>Face/Flat</th> </tr> <tr> <td>25'-8" - 29'-5", 30'-8" - 35'-5"</td> <td></td> <td></td> <td></td> </tr> </table> | | | | MI Vendor | Nonconformance | Issue Description | Flange bypass filler plate at 150° from 25'-8" to 29'-5" and 30'-8" to 35'-5" is not flush with tower. The maxin pole face to inside edge of the modification plate was 5/8". | Section/Height/Elev | Panel | Leg | Face/Flat | 25'-8" - 29'-5", 30'-8" - 35'-5" | | | | <table border="1"> <tr><th>Crown</th></tr> <tr><td>GC Correction Required</td></tr> <tr><td>EOR</td></tr> <tr><td>Rejected</td></tr> <tr><td>Capacity Impact As Is</td></tr> <tr><td>N/A</td></tr> <tr><td>EOR Feedback By</td></tr> <tr><td>Ryan Ferrante</td></tr> </table> | Crown | GC Correction Required | EOR | Rejected | Capacity Impact As Is | N/A | EOR Feedback By | Ryan Ferrante | <table border="1"> <tr><th>Final Crown Approval</th></tr> <tr><td>Crown Approval By</td></tr> <tr><td>Enter Name of Crown Approver</td></tr> <tr><th>MI Vendor</th></tr> <tr><td>Status of Correction</td></tr> <tr><td>Conformance</td></tr> <tr><td>Type of Verification</td></tr> <tr><td>Non-Onsite Verification</td></tr> <tr><td>* Must be Crown Approved</td></tr> </table> | Final Crown Approval | Crown Approval By | Enter Name of Crown Approver | MI Vendor | Status of Correction | Conformance | Type of Verification | Non-Onsite Verification | * Must be Crown Approved |
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| Crown | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GC Correction Required | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EOR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Capacity Impact As Is | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| N/A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EOR Feedback By | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ryan Ferrante | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Nonconformance # 4 | <table border="1"> <tr><th>MI Vendor</th></tr> <tr><td>Nonconformance</td></tr> <tr><td>Issue Description</td></tr> <tr><td>Squirter washer not engaged jump plate at 30° at 34'-9".</td></tr> <tr> <th>Section/Height/Elev</th> <th>Panel</th> <th>Leg</th> <th>Face/Flat</th> </tr> <tr> <td>34'-9"</td> <td></td> <td></td> <td></td> </tr> </table> | | | | MI Vendor | Nonconformance | Issue Description | Squirter washer not engaged jump plate at 30° at 34'-9". | Section/Height/Elev | Panel | Leg | Face/Flat | 34'-9" | | | | <table border="1"> <tr><th>Crown</th></tr> <tr><td>GC Correction Required</td></tr> <tr><td>EOR</td></tr> <tr><td>Rejected</td></tr> <tr><td>Capacity Impact As Is</td></tr> <tr><td>N/A</td></tr> <tr><td>EOR Feedback By</td></tr> <tr><td>Ryan Ferrante</td></tr> </table> | Crown | GC Correction Required | EOR | Rejected | Capacity Impact As Is | N/A | EOR Feedback By | Ryan Ferrante | <table border="1"> <tr><th>Final Crown Approval</th></tr> <tr><td>Crown Approval By</td></tr> <tr><td>Enter Name of Crown Approver</td></tr> <tr><th>MI Vendor</th></tr> <tr><td>Status of Correction</td></tr> <tr><td>Conformance</td></tr> <tr><td>Type of Verification</td></tr> <tr><td>Non-Onsite Verification</td></tr> <tr><td>* Must be Crown Approved</td></tr> </table> | Final Crown Approval | Crown Approval By | Enter Name of Crown Approver | MI Vendor | Status of Correction | Conformance | Type of Verification | Non-Onsite Verification | * Must be Crown Approved |
|---|---|-----|-----------|--------------|----------------|----------------|--|--|--|-------|-----|-----------|--------|--|--|--|---|-------|------------------------|-----|----------|-----------------------|-----|-----------------|---------------|--|----------------------|-------------------|------------------------------|-----------|----------------------|-------------|----------------------|-------------------------|--------------------------|
| | MI Vendor | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Nonconformance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Issue Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Section/Height/Elev | Panel | Leg | Face/Flat | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 34'-9" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Crown | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GC Correction Required | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EOR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rejected | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacity Impact As Is | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| N/A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EOR Feedback By | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ryan Ferrante | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Status of Correction | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Nonconformance # 5 | <table border="1"> <tr><th colspan="4">MI Vendor</th></tr> <tr><td colspan="4">Nonconformance</td></tr> <tr><td colspan="4">Issue Description</td></tr> <tr><td colspan="4">The step pegs on the right side 290" modification plate are not centered with the left side pegs on the flange jump at 30'. The step pegs on the right are approximately 6" above the desired center location.</td></tr> <tr> <th>Section/Height/Elev</th> <th>Panel</th> <th>Leg</th> <th>Face/Flat</th> </tr> <tr> <td>30'</td> <td></td> <td></td> <td></td> </tr> </table> | | | | MI Vendor | | | | Nonconformance | | | | Issue Description | | | | The step pegs on the right side 290" modification plate are not centered with the left side pegs on the flange jump at 30'. The step pegs on the right are approximately 6" above the desired center location. | | | | Section/Height/Elev | Panel | Leg | Face/Flat | 30' | | | | <table border="1"> <tr><th>Crown</th></tr> <tr><td>EOR Feedback Requested</td></tr> </table> | Crown | EOR Feedback Requested | <table border="1"> <tr><th colspan="2">Final Crown Approval</th></tr> <tr><td colspan="2">Crown Approval By</td></tr> </table> | Final Crown Approval | | Crown Approval By | |
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| 30' | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Ryan Ferrante | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MI Vendor | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 3-7" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| GC Correction Required | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Ryan Ferrante | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| EOR Comments: <input type="text"/> | | | | Reinstall or seek Crown approval. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Nonconformance # 7 | <table border="1"> <tr><th colspan="4">MI Vendor</th></tr> <tr><td colspan="4">Nonconformance</td></tr> <tr><td colspan="4">Issue Description</td></tr> <tr><td colspan="4">Modification jump plates at 30' measure PL 6-1/4"x1" instead of PL 6"x1".</td></tr> <tr> <th>Section/Height/Elev</th> <th>Panel</th> <th>Leg</th> <th>Face/Flat</th> </tr> <tr> <td>30'</td> <td></td> <td></td> <td></td> </tr> </table> | | | | MI Vendor | | | | Nonconformance | | | | Issue Description | | | | Modification jump plates at 30' measure PL 6-1/4"x1" instead of PL 6"x1". | | | | Section/Height/Elev | Panel | Leg | Face/Flat | 30' | | | | <table border="1"> <tr><th>Crown</th></tr> <tr><td>EOR Feedback Requested</td></tr> </table> | Crown | EOR Feedback Requested | <table border="1"> <tr><th colspan="2">Final Crown Approval</th></tr> <tr><td colspan="2">Crown Approval By</td></tr> </table> | Final Crown Approval | | Crown Approval By | |
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| Ryan Ferrante | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MI Vendor | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Status of Correction | Type of Verification | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Conformance | EOR/Crown Approved | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Correction Photo (additional photos uploaded to WO) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MI Comments: <input type="text"/> | | | | Enter Comments | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EOR Comments: <input type="text"/> | | | | Enter Comments | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Crown Comments: <input type="text"/> | | | | EOR to review and accept or provide detail for fix | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | |
|--------------------|--|-------|-----|-----------|--|----------------------|---|----------------------|----------------|--|
| Nonconformance # 8 | MI Vendor | | | | Crown | Final Crown Approval | | | | |
| | Nonconformance | | | | | Crown Approval By | | | | |
| | Issue Description | | | | EOR Feedback Requested | | | | | |
| | <i>The spacer plate on the lower side of the flange jumps at 30' is touching the flange stiffener.</i> | | | | MI Vendor | | | | | |
| | Section/Height/Elev | Panel | Leg | Face/Flat | EOR | | Status of Correction | Type of Verification | | |
| | 30' | | | | EOR Approved - No Capacity Impact Capacity Impact As Is No Capacity Impact EOR Feedback By Ryan Ferrante | | Conformance | EOR/Crown Approved | | |
| |  | | | | | | Correction Photo <i>(additional photos uploaded to WO)</i> | | | |
| | MI Comments: | | | | | | | | Enter Comments | |
| | EOR Comments: | | | | | | | | Enter Comments | |
| | Crown Comments: | | | | EOR to review and accept or provide detail for fix | | | | | |

POST-CONSTRUCTION

6.3.1 MI INSPECTOR REDLINE OR RECORD DRAWING(S)

MODIFICATION OF AN EXISTING 110' MONOPOLE

ROHN #34738SW
 BU #876325; WESTON SQUARE

92 WESTON STREET
 HARTFORD, CONNECTICUT 06103
 HARTFORD COUNTY

LAT: 41° 47' 12.3", LONG: -72° 39' 44.42"
 APP: 366958 REV. 4; WO: 1354293

PROJECT CONTACTS

STRUCTURE OWNER:
 CROWN CASTLE
 MOD PM: DAN VADNEY AT DAN.VADNEY@CROWNCASTLE.COM
 PH: (618) 373-5510
 MOD CM: JASON DAMICO AT JASON.DAMICO@CROWNCASTLE.COM
 PH: (860) 209-6104
 ENGINEER OF RECORD:
 P.F.MCD@P.F.WEB.COM

WIND DESIGN DATA

| | |
|--|--------------------------------|
| REFERENCE STANDARD | ANSI/TIA-222-G-2-2009 |
| LOCAL CODE | 2016 CONNECTICUT BUILDING CODE |
| ULTIMATE WIND SPEED (3-SECOND GUST) | 125 MPH |
| CONVERTED NOMINAL WIND SPEED (3-SECOND GUST) | 97 MPH |
| ICE THICKNESS | 1.0 IN |
| ICE WIND SPEED | 50 MPH |
| SERVICE WIND SPEED | 60 MPH |
| RISK CATEGORY | II |
| EXPOSURE CATEGORY | C |
| Kz1 | 1.0 |

THIS PROJECT INCLUDES THE FOLLOWING ITEMS

BOLTED FLANGE JUMPS
 REMOVE AND REPLACE STEEL BOLTS AS REQUIRED
 SHAFT REINFORCING
 FOUNDATION AUGMENTATION: DRILLED-IN, GROUTED REBAR

ETS REDLINE DRAWINGS

Victoria McKee
 8/1/2017

SHEET INDEX

| SHEET NUMBER | DESCRIPTION |
|--------------|----------------------------|
| T-1 | TITLE SHEET |
| T-2 | MI CHECKLIST |
| S-1 | GENERAL NOTES |
| S-2A | FORGSOUL™ DETAILS |
| S-2B | NEGENZ™ BOLT DETAIL |
| S-2C | AMW ONE-SIDE™ BOLT DETAIL |
| S-3 | MONOPOLE PROFILE |
| S-4 | DRILLED IN REBAR DETAILS |
| S-5 | BOLTED FLANGE JUMP DETAILS |

QUALIFIED ENGINEERING SERVICES ARE AVAILABLE FROM PAUL J. FORD & COMPANY TO ASSIST CONTRACTORS IN CLASS IV RIGGING PLAN REVIEWS. FOR REQUESTED QUALIFIED ENGINEERING SERVICES, PLEASE CONTACT RIGGING@P.F.WEB.COM.

THE ASSOCIATED FILING SA NO NUMBER FOR THIS PROJECT IS 1332240
 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) 786-0111.



PROJECT No. 387840101710
 DRAWN BY: BMS
 DESIGNED BY: LG
 CHECKED BY: JKC
 DATE: 2-9-2017

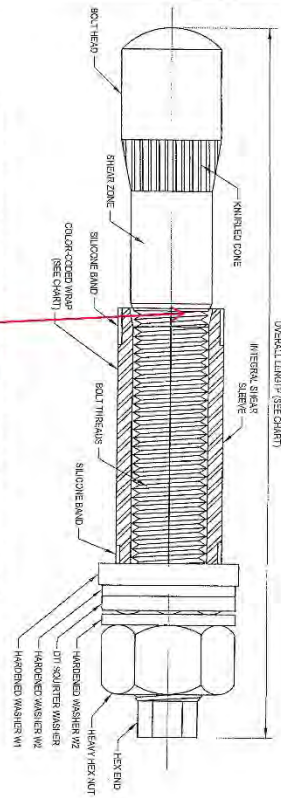
TITLE SHEET
 T-1

MODIFICATION OF AN EXISTING 110' MONOPOLE
 BU #876325; WESTON SQUARE
 HARTFORD, CONNECTICUT

P.F. PAUL J. FORD & COMPANY
 250 E Broad St, Ste 500 Columbus, OH 43215
 Phone 614.221.6679 www.pauljford.com

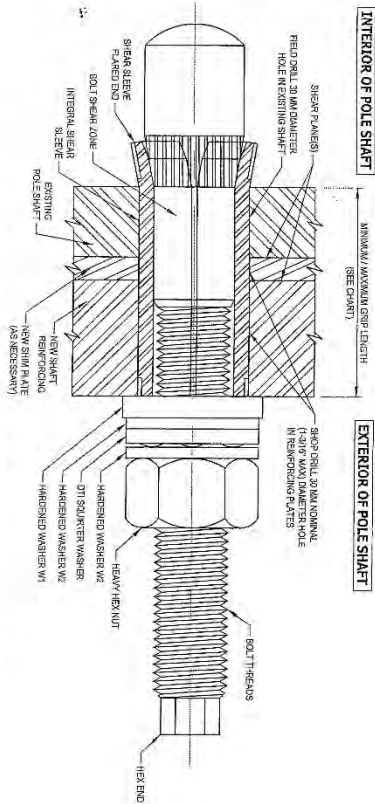
CROWN CASTLE
 3833 TORINGDON WAY, SUITE 500, CHARLOTTE, NC 28277
 PH: (724) 416-2200

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PRE-INSTALLED FORGBOlT™ ASSEMBLY DETAIL **1** S-2A

THIS STYLE USED



INSTALLED FORGBOlT™ ASSEMBLY DETAIL **2** S-2A

| 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 (lbs) Each | Grip Range (inch) | Comment | Color Code |
| 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 "Squitter" DTI that is compatible with a M20-PC8.8 bolt.

FOLLOW ALL MANUFACTURER / DISTRIBUTOR RECOMMENDATIONS FOR INSTALLATION, TIGHTENING, AND INSPECTION

- INSTALLATION NOTES:
1. FIELD DRILL HOLES TO 30 MM DIAMETER.
 2. SELECT CORRECT BOLT SIZE FOR INSTALLATION GSEP (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 1.3916".
 2. ALL FIELD-DRILLED HOLES SHALL BE NOMINAL 30 MM DIAMETER. THE MAXIMUM FIELD-DRILLED HOLE DIAMETER PERMITTED IS 30 MM.

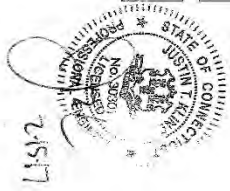
BOLT TIGHTENING AND INSPECTION NOTES:

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.

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

CONTAINS PROPRIETARY INFORMATION PATENT PENDING

DISTRIBUTOR CONTACT:
PRECISION TOWER PRODUCTS
PHONE: 888-828-4857
LET'S REDLINE DRAWINGS
Victoria McKee
8/1/2017



PAUL J. FORD & COMPANY
250 E Broad St, Ste 400 Columbus, OH 43216
Phone 614.221.6679 www.pauljford.com

CROWN CASTLE
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PH: (724) 418 2200

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MODIFICATION OF AN EXISTING 110' MONOPOLE
BU #876325; WESTON SQUARE
HARTFORD, CONNECTICUT

PROJECT NO.: 3917-FA31-001-7700
DRAWN BY: BMS
DESIGNED BY: LG
CHECKED BY: SAC
DATE: 2/18/2017

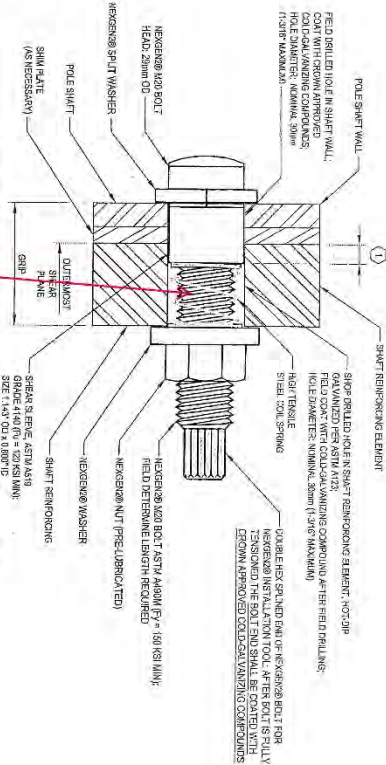
S-2A
FORGBOlT™
DETAILS

ETS REDLINE DRAWINGS
 Victoria McKee
 8/11/2017

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.

INTERIOR OF POLE SHAFT

EXTERIOR OF POLE SHAFT



TYPICAL NEXGEN2™ BOLT DETAIL

1
S-2B

THIS STYLE NOT USED ON THIS SITE

FOLLOW ALL MANUFACTURER / DISTRIBUTOR RECOMMENDATIONS FOR INSTALLATION, TIGHTENING, AND INSPECTION

BOLT HOLE NOTES:

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

BOLT TIGHTENING AND INSPECTION NOTES:

- ALL NEXGEN2® BOLT ASSEMBLIES SHALL BE INSTALLED AND TIGHTENED TO THE PRETENSIONED CONDITION ACCORDING TO THE REQUIREMENTS OF SECTION 9.2.3 OF THE AISC SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS, DEC. 31, 2005. PER SECTION 9.2.3, ALL FASTENER ASSEMBLIES SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS IN AISC SECTION 9.1 WITHOUT SEVERING THE SPUN END AND WITH WASHERS POSITIONED AS REQUIRED IN AISC SECTION 9.2. PER REQUIREMENTS IN SECTION 9.1, PRIOR TO BOLT PRETENSIONING, THE JOINT SHALL FIRST BE COMPACTED TO THE SLUG-TIGHT CONDITION. SLUG TIGHT IS THE CONDITION THAT EXISTS WHEN ALL OF THE PILES 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 SLUG TIGHT CONDITION IS ACHIEVED, THEN THE BOLT ASSEMBLY CAN BE TIGHTENED TO THE PRETENSIONED CONDITION.
- 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, 2005. NOTE THAT COMPLETE INSPECTION OF ALL NEXGEN2® BOLT ASSEMBLIES IS REQUIRED IN ADDITION TO ROUTINE OBSERVATION.
- 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 SLIPER PLACEMENT AND THE LIBRICATION; AND THE CONTRACTOR'S TENSIONING PROCEDURE. THE BOLT INSPECTOR SHALL PROVIDE COMPLETE DOCUMENTATION OF ALL BOLTS AFTER TIGHTENING CLEARLY SHOWING THAT THE DOUBLE HEX SPUN END OF THE BOLTS HAVE BEEN THREADED OFF AND COATED WITH CHROMIUM APPROVED COLD-DIPALUMINIZING COMPOUND.

| PART NUMBER | BOLT LENGTH | SLEEVE LENGTH | MIN GRIP RANGE | MAX GRIP RANGE |
|-------------|-------------|---------------|----------------|----------------|
| M20x36 | M20x55 | 11 1/8" | 1 5/8" | 1 7/8" |
| M20x48 | M20x65 | 1 3/16" | 1 7/8" | 2 1/4" |
| M20x57 | M20x85 | 1 5/8" | 1 7/8" | 2 1/4" |
| M20x68 | M20x135 | 2" | 2 1/4" | 2 11/16" |
| M20x86 | M20x135 | 2 7/16" | 2 11/16" | 3 3/4" |
| M20x127 | M20x165 | 3" | 3 3/4" | 5" |
| M20x212 | M20x250 | 4" | 5" | 8 5/16" |

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

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

DISTRIBUTOR CONTACT DETAILS:
 ALLFASTENERS
 13401 COMMERCE PARK DR.
 BROOKPARK, OHIO 44112
 PHONE: 440-232-8050
 E-MAIL: SALES@ALLFASTENERS.COM



PAUL J. FORD & COMPANY
 250 E Broad St, Ste 600, Columbus, OH 43215
 Phone 614.221.6679 www.pauljford.com

CROWN CASTLE
 3530 THORNTON WAY, SUITE 300, CHARLOTTE, NC 28217
 PH: (774) 416-2000

MODIFICATION OF AN EXISTING 110' MONOPOLE
 BU #876325; WESTON SQUARE
 HARTFORD, CONNECTICUT

PROJECT No. 37112401.001.0700
 DRAWN BY: BMS
 DESIGNED BY: JGC
 CHECKED BY: JGC
 DATE: 2/16/2017

NEXGEN2™ BOLT
 DETAIL

S-2B

| CL. COUNT | 11' |
|-----------|-----|
| CL. COUNT | 11' |
| CL. COUNT | 11' |
| CL. COUNT | 11' |

| FLAT / SPACER | ELEMENT LENGTH | APPROXIMATE ELEMENT QUANTITY | APPROXIMATE TERMINATION BOLTS | TERMINATION BOLT(S) DOP | MAXIMUM INTERMEDIATE SPACING | ESTIMATED TOTAL STEEL WEIGHT |
|---------------|----------------|------------------------------|-------------------------------|-------------------------|------------------------------|------------------------------|
| 15'-5" | 23' | 4 | 23 | 5" | 23" | 194 LBS. |
| 23' | 23' | 4 | 23 | 5" | 23" | 194 LBS. |
| TOTAL | | | | | | 388 LBS. |

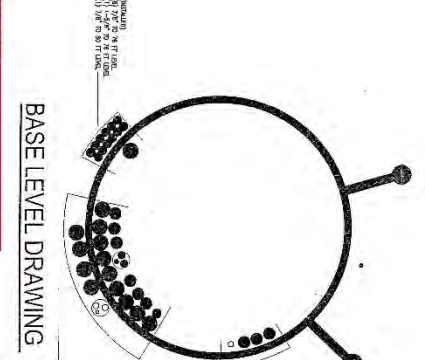
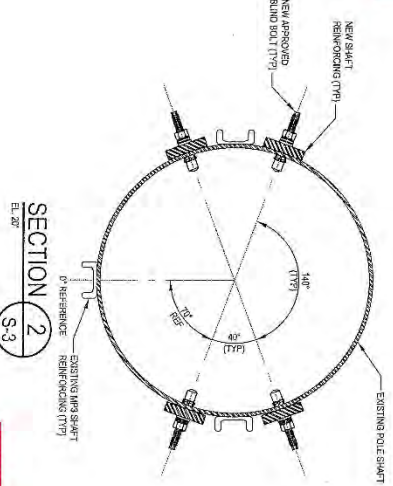
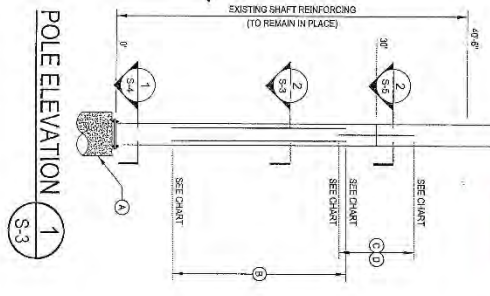
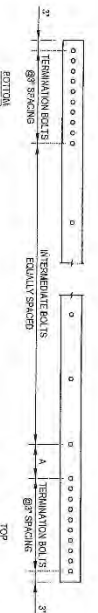
- NOTES:
- 1) ALL STEEL SHALL BE PER PERMANENT AFTER EROSION & ACCORDING WITH ASTM A572, AT TERMINAL & ALL INTERMEDIATE PLATE STEEL REINFORCING WARE SHALL BE GALVANIZED TO PREVENT CORROSION. THE MINIMUM THICKNESS OF TWO COATS OF ZINC COATING AND COLD GALVANIZING COMPOUND FURNISHING SHALL BE 0.015 IN. ALL REINFORCING SHALL BE 40% MANDREL BEND.
 - 2) WELDS SHALL BE EXCORROSION RESISTANT. TERMINATION WELDS SHALL BE 3/16" PLATE WELDS.
 - 3) WELDS SHALL BE EXCORROSION RESISTANT. TERMINATION WELDS SHALL BE 3/16" PLATE WELDS.
 - 4) WELDS SHALL BE EXCORROSION RESISTANT. TERMINATION WELDS SHALL BE 3/16" PLATE WELDS.
 - 5) ALL STEEL SHALL BE ASTM A572.
 - 6) ALL BOLTS ARE TO BE 3/4" DIA. DO NOT EXCEED 12" ON CENTER.
 - 7) FOR PLATES STARTING AT THE BOTTOM OF THE FLAT PLATE SHALL BE GALVANIZED TO PREVENT CORROSION. THE TOP OF THE FLAT PLATE SHALL BE GALVANIZED TO PREVENT CORROSION. THERE IS NO MORE THAN 1/2" DIFFERENCE BETWEEN THE ACTUAL OVERALL LENGTH OF THE SPREAD FROM THE BOTTOM OF THE FLAT TO THE TOP OF THE PLATE.

Modification Jump plates at 30" measure PL 6-1/4"x1" instead of PL 6"x1", EOR Approved



CUSTOM BOLTED BAR DETAIL

NOTE: ALL DIMENSIONS WANT PART NOT TO EXCEED MAXIMUM INTERMEDIATE BOLT SPACING



ETS REDLINE DRAWINGS
Victoria McKee
8/1/2017

| SHAFT SECTION | SECTION LENGTH (FT) | PLATE THICKNESS (IN) | LAP SIZE (IN) | DIAMETER | GRADE | NOTE | ROLE |
|---------------|---------------------|----------------------|---------------|----------|-------|------|-------|
| 1 | 20.00 | 0.2500 | 24.000 | 74.000 | 42 | | ROUND |
| 2 | 30.00 | 0.3750 | 24.000 | 74.000 | 42 | | ROUND |
| 3 | 30.00 | 0.3750 | 30.000 | 30.000 | 42 | | ROUND |
| 4 | 30.00 | 0.3000 | 30.000 | 30.000 | 42 | | ROUND |

| ELEVATION | TOWER MODIFICATION DESCRIPTION | REFERENCE SHEETS |
|-----------------|---|------------------|
| 0' | INSTALL NEW BOLLARD IN EXISTING CHASSIS FOUNDATION | S-4 |
| 6'-6" TO 29'-6" | INSTALL NEW SHAFT REINFORCING | S-3 |
| 30' | REMOVE STEP BOLTS AS REQUIRED FOR INSTALL NEW BOLTED FLANGE PLATE | S-3 |
| 30' | INSTALL NEW BOLTED FLANGE PLATE | S-4, S-5, S-3 |

The step pegs on the right side 290" modification plate are not centered with the left side pegs on the flange jump at 30". The step pegs on the right are approximately 6" above the desired center location. EOR Approved



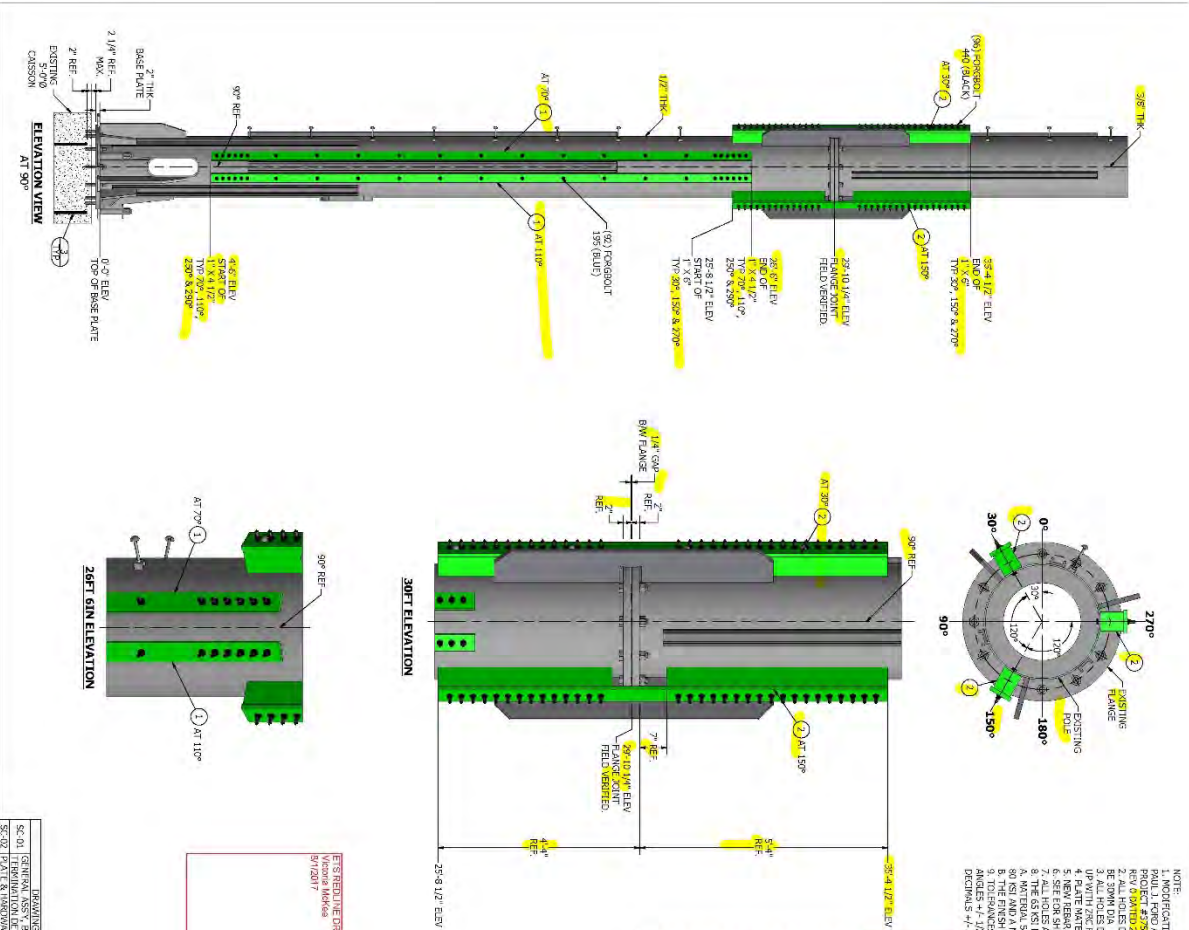
MONOPOLE PROFILE
S-3

MODIFICATION OF AN EXISTING 110' MONOPOLE
BU #876325; WESTON SQUARE
HARTFORD, CONNECTICUT

PAUL J. FORD & COMPANY
250 E Broad St, Ste 500 - Columbus, OH 43215
Phone 614.221.6679 www.pauljford.com

CROWN CASTLE
3630 TORINGDON WAY, SUITE 300, CHARLOTTE, NC 28277
PH: (704) 416-2000

8/1/2017 2:15:17 PM
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- NOTE:
1. MODIFICATION & FABRICATION DETAILS PER:
 - PROJECT NO. 15000000000000000000
 - REV. 05/26/2017
 2. ALL WELDS SHALL BE IN EXISTING MONOPOLE SHALL.
 3. ALL HOLES SHALL BE IN EXISTING MONOPOLE SHALL BE CLEANED AND TOUCHED UP WITH BLACK PAINT TO PREP GALVANIZED.
 4. NEW REBAR HOLE DIA = 2"
 5. SEE FOR SHEETS S3 THRU S5 FOR MORE DETAIL.
 6. THE 65 KSI MATERIAL SHALL CONFORM TO THE FOLLOWING:
 - A. MATERIAL SHALL BE ASTM A572 GRADE 50 HIGH STRENGTH (F50) OF
 - B. THE FINISH SHALL BE HOT-DIP GALVANIZED PER ASTM A123
 - C. TO FINISHES: FRACTURES 1/16"
 - D. DIMENSIONS 4'-0.00

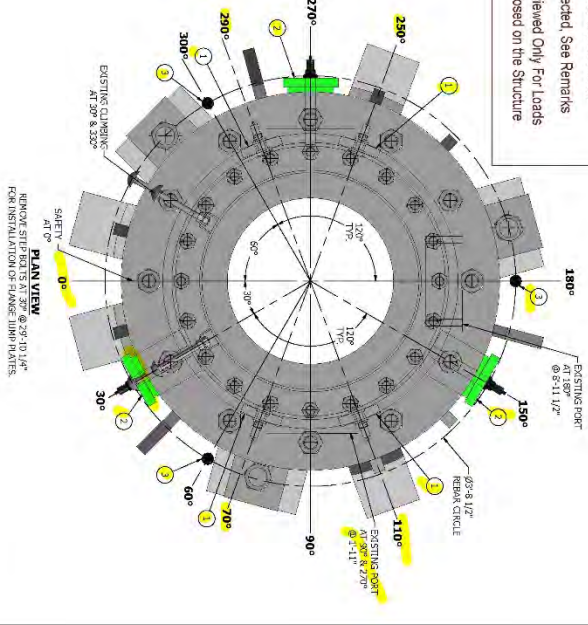
PAUL J. FORD AND COMPANY
STRUCTURAL ENGINEERS
 Columbus, Ohio · Orlando, Florida · Atlanta, Georgia

By: **KAT** Date: **05/26/2017**

Corrections or comments made on this document do not relieve the contractor from compliance with the requirements of the drawings and specifications. This document was reviewed for general compliance to the design requirements in accordance with the information given in the contract documents. The contractor is responsible for confirming and correlating all quantities and dimensions of construction, coordination of the work with other trades and the satisfactory performance of his work.

Reviewed No exceptions taken
 Reviewed Make Noted Corrections
 Revise and Resubmit
 Rejected, See Remarks
 Reviewed Only For Loads Imposed on the Structure

| ITEM NO. | QTY. | PART NUMBER | DESCRIPTION | MATERIAL | WT. EA. | EXT. WT. |
|----------|------|----------------------|---------------------------|----------|---------|----------|
| 1 | 4 | 05262017000000000000 | PLATE 1/4" X 12" X 22" 0" | A572-50 | 3.9 | 13.6 |
| 2 | 4 | 05262017000000000000 | WELDED REBAR STUDS | (GALV) | 9.94 | 28.92 |
| 3 | 2 | 05262017000000000000 | REBAR #10 2-1/2" DIA | A615-60 | 108 | 324 |
| 4 | 2 | 05262017000000000000 | REBAR #10 2-1/2" DIA | (GALV) | 1 | 32 |
| 5 | 2 | 05262017000000000000 | REBAR #10 2-1/2" DIA | (GALV) | 1 | 32 |
| | | | TOTAL WEIGHT | | | 4810 |



REVISIONS:

| NO. | DATE | DESCRIPTION |
|-------|----------|------------------------|
| SC-01 | 05/26/17 | ISSUE FOR CONSTRUCTION |

ENGINEER OF RECORD: STAMPSICAL

DATE: 05/26/17

DESIGNED BY: SSM

CHECKED BY: SSM

DATE: 05/26/17

REVISION:

PROJECT INFORMATION

WESTON SQUARE

BL1876325

57 WESTON STREET

HARTFORD, CONNECTICUT 06103

PAUL J. FORD AND COMPANY

STRUCTURAL ENGINEERS

1000 MARKET STREET, SUITE 1000

HARTFORD, CT 06103

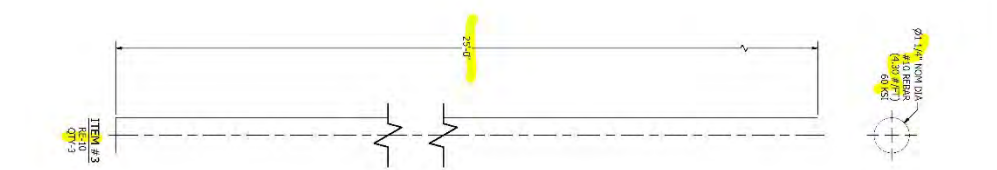
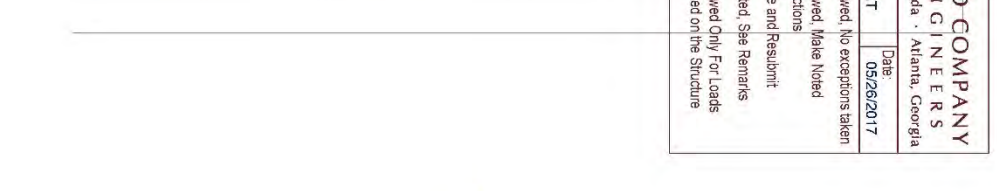
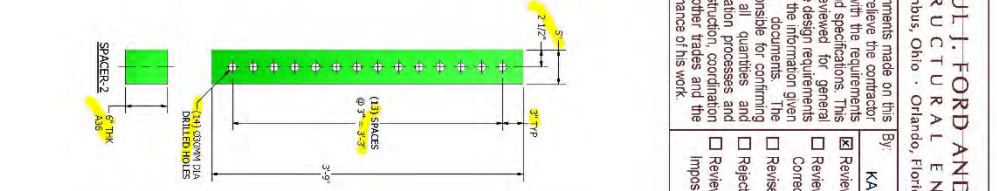
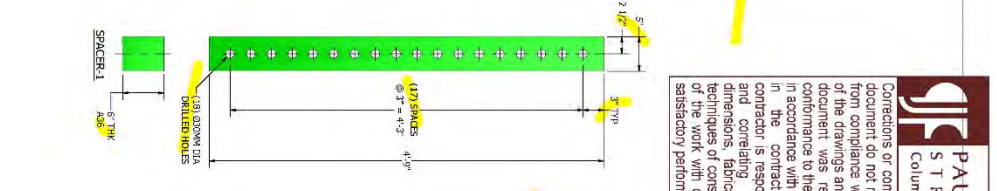
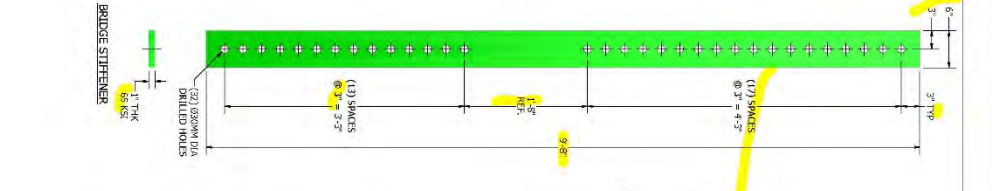
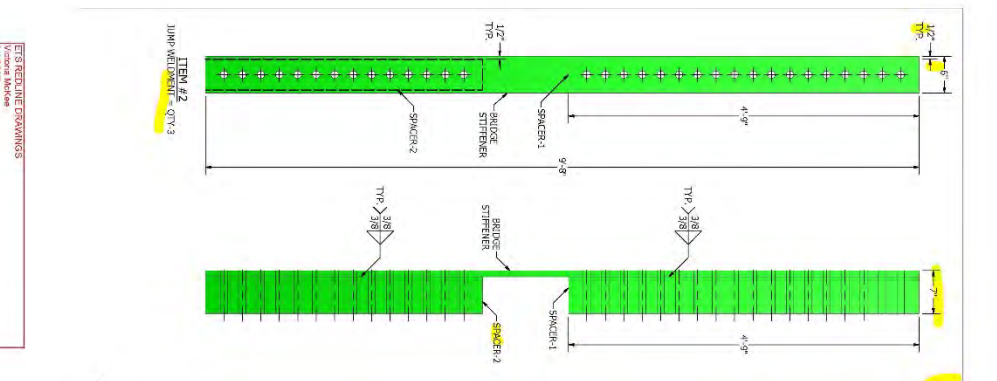
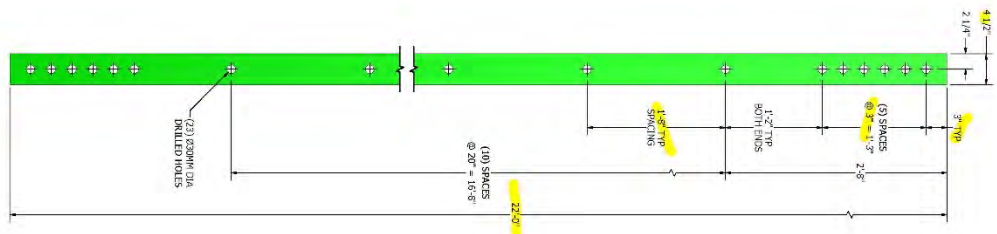
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SHEET NUMBER: SC-01

Corrections or comments made on this document do not relieve the contractor from compliance with the requirements of the drawings and specifications. This document was reviewed for general conformance to the design requirements in accordance with the information given in the contract documents. The contractor is responsible for confirming and correlating all quantities and dimensions, fabrication processes and techniques of construction, coordination of the work with other trades and the satisfactory performance of this work.

| | | | |
|-------------------------------------|--|--------------------------|------------------------|
| By: | KAT | Date: | 05/26/2017 |
| <input checked="" type="checkbox"/> | Reviewed | <input type="checkbox"/> | No exceptions taken |
| <input type="checkbox"/> | Reviewed | <input type="checkbox"/> | Make Noted Corrections |
| <input type="checkbox"/> | Revise and Resubmit | <input type="checkbox"/> | Rejected. See Remarks |
| <input type="checkbox"/> | Reviewed Only For Loads Imposed on the Structure | <input type="checkbox"/> | |



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 ETS
 1/2" DIA
 1/2" DIA

| | | | |
|-----------------------------|------------------|------------------|---|
| ENGINEER OF RECORD: STANLEY | SITE NUMBER: | REVISIONS: | PROJECT INFORMATION: |
| DATE: 05/26/2017 | DESIGNED BY: SPM | DATE: 05/26/2017 | WESTON SQUARE |
| CHECKED BY: PFE | DATE: 05/26/2017 | REVISION: | BU876325 |
| DATE: 05/26/2017 | REVISION: | | 32 WESTON STREET HARTFORD, CONNECTICUT 06103 |

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6.3.3 PHOTOGRAPHS

