From: Carolyn Seeley <cseeley@empiretelecomm.com>

Sent: Monday, March 30, 2020 3:00 PM

To: CSC-DL Siting Council

Subject: RE: Council Extension Letter for EM-AT&T-043-160520 (Prestige Park Road, East Hartford)

Good Afternoon,

Please see attached Post Mod Inspection Report. Please let me know if you need anything else.

Thank you,
Carolyn Seeley
Site Acquisition Supervisor

16 Esquire Road | Billerica, MA 01862

Mobile: 339-234-8397

Email: cseeley@empiretelecomm.com
Website: www.EmpireTelecomm.com

<u>Disclaimer:</u> This E-Mail is intended only for the use of the individual or entity to which it is addressed, and may contain information that is privileged, confidential and exempt from disclosure under applicable law. If you have received this communication in error, please do not distribute it and delete the original message. Unless expressly stated in this e-mail, nothing in this message or any attachment should be construed as a digital or electronic signature.



TOWER-POST MODIFICATION SPECIAL INSPECTION SS TOWER

EHFR Prestige Park 302473



PREPARED FOR:



PREPARED BY:

Evan Stanfield Project Assistant Tower Engineering Professionals

DATE:

March 24, 2020





SI REPORT SUMMARY

CLIENT: American Tower Corporation DATE AT SITE: Wednesday, March 18, 2020 EHFR Prestige Park ATC PROJECT#: OAA745293 SITE NAME: SITE NUMBER: 302473 TOWER TYPE: SS TOWER ADDRESS: 310 Prestige Park Road TOWER HEIGHT: 150' East Hartford, CT 06108 Sunny 54 degrees, wind 4mph WEATHER: Hannah Childers, CWI LEAD: SUPPORT: None

PROJECT SUMMARY:

Subject: TOWER-POST MODIFICATION SPECIAL INSPECTION

Location: 310 Prestige Park Road

East Hartford, CT 06108

Lat: 41.78833333 °N Long: 72.60055556 °W

Structure: SS TOWER

Purpose: The purpose of this special inspection report is to ensure that the proposed construction and or

construction activities have been completed and undertaken per design and meet all required

Codes, Specifications, and Guidelines.

PARTICIPATION PERSONNEL

ATC Representatives: lan Culbert

Construction Manager

10 Presidential Way, Woburn, MA 01801

(781) 926-7805

Engineer of Record: Eshe Kaushal Modi, P.E.

Structural Engineer

American Tower Corporation

3500 Regency Parkway, Suite 100, Cary, NC 27518

(919) 466-5307

General Contractor: Ryan Hubert

Project Manager

Structural Components

(207) 450-2369

SUPPLEMENTAL INFORMATION

Appendix A - Special Inspection Checklist



SI REPORT CHECKLIST

| CLIENT: | American Tower Corporation | DATE AT SITE: | Wednesday, March 18, 2020 |
|------------|----------------------------|---------------|-----------------------------|
| SITE NAME: | EHFR Prestige Park | ATC PROJECT#: | OAA745293 |
| SITE NUMBE | 302473 | TOWER TYPE: | SS TOWER |
| ADDRESS: | 310 Prestige Park Road | TOWER HEIGHT: | 150' |
| | East Hartford, CT 06108 | WEATHER: | Sunny 54 degrees, wind 4mph |
| LEAD: | Hannah Childers, CWI | SUPPORT: | None |

PROJECT

Subject: TOWER-POST MODIFICATION SPECIAL INSPECTION

Structure: **SS TOWER Inspection Approvals:**

(Inspector to initial inspection approvals below)

| | TOWER-POST MODIFICATION SI |
|------|---|
| H.C. | Fit-up of materials |
| H.C. | Material grade, shape, fabrication, placement |
| H.C. | Verification of proper material coating |
| H.C. | Structural weld verification |
| H.C. | Structural bolting / Expansion bolting verification |
| N/A | Guy tension verification |
| H.C. | Full installation verifications per design |

Passing MI Report 3/26/2020 Hannah Childers, CWI ng Report

X Passing Report

___ Passing as Noted Report

___ Failing Report

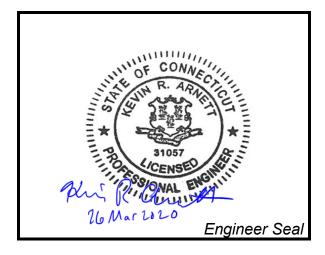
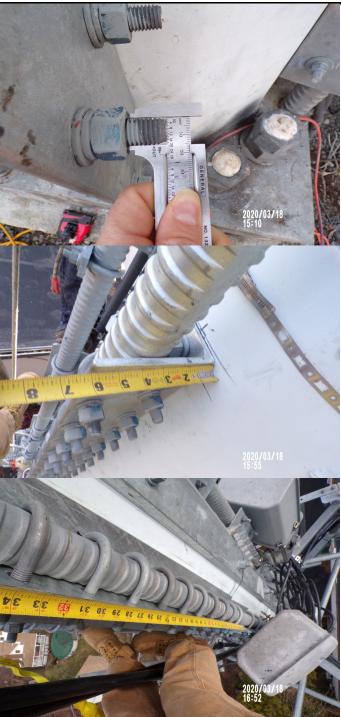




PHOTO SUMMARY

CLIENT: American Tower Corporation DATE AT SITE: Wednesday, March 18, 2020 SITE NAME: EHFR Prestige Park ATC PROJECT#: OAA745293 SITE NUMBER: 302473 TOWER TYPE: SS TOWER ADDRESS: 310 Prestige Park Road TOWER HEIGHT: 150' East Hartford, CT 06108 WEATHER: Sunny 54 degrees, wind 4mph LEAD: Hannah Childers, CWI SUPPORT: None



DYWIDAG bar installation

A-2 thru A-3a

New DYWIDAG bars were installed to the tower from an elevation of -7.5-ft. to 22.5-ft. This was completed in accordance with the modification drawings dated April 17, 2019, except as noted.

Note:

The spacing of brackets around portholes exceeds the 30-in. specified maximum.

DYWIDAG bars are offset on flats 4 & 10 due to portholes.

The top of the new DYWIDAG rods measures 21'-11" rather than 22'-6" as specified.

Blind bolts have been cut at the flat 11 plate weldment behind the DYWIDAG bar.

These issues were approved by the engineer of record. Please see the end of this report for correspondence.

TOWER-POST MODIFICATION SPECIAL INSPECTION



PHOTO SUMMARY

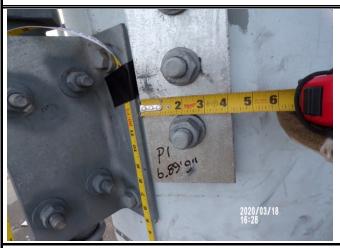
| CLIENT: | American Tower Corporation | DATE AT SITE: | Wednesday, March 18, 2020 |
|--------------|----------------------------|---------------|-----------------------------|
| SITE NAME: | EHFR Prestige Park | ATC PROJECT#: | OAA745293 |
| SITE NUMBER: | 302473 | TOWER TYPE: | SS TOWER |
| ADDRESS: | 310 Prestige Park Road | TOWER HEIGHT: | 150' |
| | East Hartford, CT 06108 | WEATHER: | Sunny 54 degrees, wind 4mph |
| LEAD: | Hannah Childers, CWI | SUPPORT: | None |

Reinforcement plate installation

A-4 thru A-4b

New reinforcement plates were installed to the tower from an elevation of 90-ft to 120-ft. This was completed in accordance with the modification drawings dated April 17, 2019, except as noted. All issues were approved by the engineer of record.

Plate 1 on flats 1, 7, & 10 are installed from 89'-8.5" to 109'-2.5". Plate 1 on flat 4 is installed from 90'-1" to 106'-6". Shims are installed to offset the horizontal tower seam weld. A 1/16" deep gouge was observed on a flat plate.





Flange bolt replacement

Δ-1

Existing flange bolts from 90-ft to 120-ft were replaced with new A490 flange bolts.



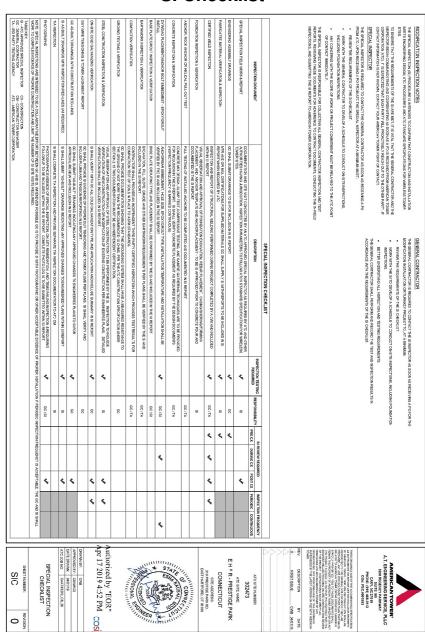


TOWER-POST MODIFICATION SPECIAL INSPECTION



CLIENT: **American Tower Corporation** DATE AT SITE: Wednesday, March 18, 2020 SITE NAME: EHFR Prestige Park ATC PROJECT#: OAA745293 SITE NUMBER: 302473 TOWER TYPE: SS TOWER ADDRESS: 310 Prestige Park Road TOWER HEIGHT: 150' WEATHER: East Hartford, CT 06108 Sunny 54 degrees, wind 4mph LEAD: Hannah Childers, CWI SUPPORT: None

APPENDIX A SI Checklist



Ensure all relevant checklist items are addressed within report submittals



TEST REPORT

WORK ORDER LOT NUMBER F95413 4171810 SALES ORDER / RLS 109875 / 1

ArcelorMittal Cleveland Inc. 3060 Eggers Ave Cleveland, OH 44105



SOLD TO

000523-000

OLYMPIC STEEL C/O Julie Edwards

CUSTOMER P.O. 323345/3

CUSTOMER PART 306584-17

46,270 LBS

COILS LADING NO 1 03016510 SHIPMENT DATE 08/14/2018

SPECIFICATION

0.5000 Min -0.0000/ +0.0220 X 60.0000 + 1.5000 ME(IN) ID 30.0/30.0 OD 60.0/66.4 (IN) CL WT 36000/48000 (LBS) Hot Band Prime High Strength Low Alloy Inclusion Shape Contro

Painted agricultural equipment EXP

CERTIFICATION REQUIREMENTS

ASTM A 1018 16a (09/01/2016) HSLAS-F Gr50 Lim A for conversion to A572 Gr50

| Chem | ical | (Wei | ah | 1%1 |
|-------|------|------|-----|------|
| OHGHI | loai | AACI | 411 | 1/0/ |

| C | Mn | P | S | Si | Cu | Ni | Cr | Mo | Sn | Al |
|------|------|-------|-------|------|------|------|------|------|-------|-------|
| 0.07 | 1.16 | 0.017 | 0.002 | 0.02 | 0.04 | 0.02 | 0.05 | 0.01 | 0.002 | 0.045 |

Cb Ti Sb Ca B N 0.003 0.042 0.0051 <.0001 0.016 0.001 0.0026

Origin - Made and Melted in USA

Mechanical

987909

T-Yld PSI T-Ten PSI T-Elong 63200 80300

This Test Report shall not be reproduced except in full without the written approval of this laboratory. Test results are prepared in accordance with DIN EN 10204:2005 Type 3.1.

Test results marked with an asterisk(*) were provided by a 3rd party accredited laboratory.

I certify that the material listed herein has been inspected and tested in accordance with the methods prescribed in the governing specifications and based upon the results of such inspection and testing

Margaret Krolikowski **QA** Manager

Maryet M Two lands

had been approved for conformance to the specifications.



CUSTOMER PURCHASE ORDER NUMBER

US-ML-ST PAUL 1678 RED ROCK ROAD SAINT PAUL, MN 55119 USA

493108

CERTIFIED MATERIAL TEST REPORT Page 1/1 CUSTOMER SHIP TO CUSTOMER BILL TO GRADE SHAPE / SIZE DOCUMENT ID: DYWIDAG SYSTEMS INTL USA INC DYWIDAG SYSTEMS INTL USA INC GR80DED Continuous Thread Bar / 63M LH 0000029878 320 MARMON DR 320 MARMON DR BOLINGBROOK,IL 60440-3078 BOLINGBROOK,IL 60440-3078 LENGTH WEIGHT HEAT/BATCH USA USA 60'04" 44.419 LB 62149329/02 SALES ORDER CUSTOMER MATERIAL Nº SPECIFICATION / DATE or REVISION 7358635/000010 B63W06010 A BILL OF LADING DATE 1332-0000069523 04/19/2019

| HEMICAL COMPOSITION C Mn % % 0.37 1.39 | P % 0.012 | \$ 0.023 | Si % 0.25 | Çu % 0.24 | Ni % 0.12 | Çr % 0.19 | Mo % 0.018 | Sn 0.027 | V % 0.054 | Nb % 0.002 | |
|---|-----------------|------------------|-----------------|-------------------|-----------------|-----------------|--------------------|-------------|------------------|------------------|--|
| CHANICAL PROPERTIES YS PSI 81936 | N | YS APa 665 | ¥ | TS 'SI 2656 | U M 84 | TS Pa 46 | G/1 Inc 8.00 | h | Elo: % 6.2 | , | |

MECHANICAL PROPERTIES Ib/f 16.900

COMMENTS / NOTES

Material 100% melted and rolled in the USA. Manufacturing processes for this steel, which may include scrap melted in an electric arc furnace and hot rolling, have been performed at Gerdau St. Paul Mill, 1678 Red Rock Road, Saint Paul, Minnesota, USA. All product produced from strand cast billets. Silicon killed (deoxidized) steel. No weld repairmen performed. Steel not exposed to mercury or any liquid alloy which is liquid at ambient temperatures during processing or while in Gerdau St. Paul Mills possession. Any modification to this certification as provided by Gerdau-St. Paul Mill without the expressed written consent of Gerdau St. Paul Mill negates the validity of this test report. This report shall not be reproduced except in full, without the expressed written consent of Gerdau St. Paul Mill. Gerdau St. Paul Mill is not responsible for the inability of this material to meet specific applications.

> 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 billets, was melted and manufactured in the USA. CMTR complies with EN 10204 3.1.

BHASKAR YALAMANCHILI

QUALITY DIRECTOR

Phone: (409) 267-1071 Email: Bhaskar, Yalamanchili@gerdau.com

ALEA BRANDENBURG

QUALITY ASSURANCE MGR.

Phone: (651) 731-5662 Email: Alea.Brandenburg@gerdau.com

DYWIDAG-SYSTEMS INTERNATIONAL



SHIP-TO ADDRESS:

Metro Site Fabricators, LLC

Email invoices: acatlahan@metrositellc.com

180 Industrial Park Blvd COMMERCE, GA 30529

Contact: Scott Ledford, Christy~A/P

Phone No.:

Dywidag Systems International USA, Inc.

DSI - North Central Division

320 Marmon Drive

Bolingbrook, IL. 60440-0951 Phone No: 630-739-1100

Fax No.: 630-739-5517

E-Mail: dsiamerica@dsiamerica.com

Job No.

J130585 - Metrosite Bars # 20 grade 80

Department

PTE25

Shipment Method

Customer Pick Up

Carrier

Customer Pickup

Your Reference:

metrosite # 20 grade 80

PO16479

External Document No.

Ship Ticket ST490244

Order No.

CO155186

Customer No.

C004013

Contact

Mauro Barbosa

Document Date June 18, 2019

Shipment Date June 18, 2019

Page No.

1

| Pos. | Quantity | Unit | Description | Item No. | Location | Backorder |
|-------------|----------|---|-------------|----------|----------|-----------|
| Pos. Qua | 80 | 80 pieces #20(63MM) THREADBAR® x 30 GRADE 80 | | B63W CUT | NC | |
| Net Weight: | | 40,080. | 00 lbs | | | |
| Gross Weigh | nt: | 40.080.0 | 00 lbs | | | |

act. delivery date:

Packing Slip



From:

888.859.6060 Allfasteners Cleveland 959 Lake Road Medina OH 44256

From Warehouse:

Bill To: Ship To: 8251 (1)

10

Angie Callahan Metro Site Fabricators LLC Metro Site Fabricators LLC 180 Industrial Park Blvd 585 Pritchett Road Commerce GA 30529 Lula GA 30529 **UNITED STATES**

Order Contact: Ship Contact: 706 335 7045

Reference:

UNITED STATES

| Pickup Date | e Order | Cust PO | | Ship Via | (| Carrier | Weight | Packages |
|-------------|--------------|-------------------|-------------|----------------------------|--------------------|--------------------|------------|-------------|
| 7/10/2019 | S000024 | 382 16613 | | | | | 252.48 | 1 |
| CO Num | Line/Release | Item | U/M | Qty Ordered | Qty Backordered | Qty Shipped | Package ID | Picklist Id |
| S000024382 | 1- 0 | 2NG2068 | EA | 96.000 | 0.000 | 96.000 | 1 | 31035 |
| | Description | : | | | | | | |
| | | M20 x 68 Grip Len | gth NexGen2 | 2 TM Structural | Bolt Assembly N | Magni 24/Box | | |
| S000024382 | 2-0 | 2NG2212 | EA | 36.000 | 0.000 | 36.000 | 1 | 31035 |
| | Description | : | | | | | | |

M20 x 212 Grip Length NexGen2TM Structural Bolt Assembly Magni 10/Box

ALL ITEMS MUST BE CHECKED BEFORE UNLOADING. ANY DISCREPANCIES MUST BE REPORTED WITHIN 7 DAYS.



Certification Report July 2019

Metro Site Fabricators LLC

PO: 16613

SO: 24382

New York

69 Orchard Street Ramsey, New Jersey 07446 Tel 800 577 3171 Fax 201 783 8840 Cleveland

959 Lake Road Medina, Ohio 44256 Tel 888 859 6060 Fax 440 232 6062 Los Angeles

5450 W 83rd Street Los Angeles, California 90045 Tel 310 410 5007 Fax 866 553 7702 Nebraska

806 8th Street Gothenburg, Nebraska 69138 Tel 855 330 2210 Fax 308 537 3500





Product Certificate of Conformance

| AF Lot #: | 8973 | | | | | | | | Part #: | 2NG20 | 2NG2068 | | | |
|-------------------|------------------------------|---------------------------------------|------|--------------|-----|-------|-----------|------|---------|----------|---------|------|-----|------|
| | | | l g | Test Results | | | | | | | 3 | | | |
| | | | Pro | Proof Load | | | | | Wedg | e Tensil | le Test | | | |
| | | | (| Mpa) | . 1 | Hardn | ess (HF | RC) | | (psi) | | | | |
| | | | | Spec | | | Spec Spec | | pec | Sample | | Spec | San | nple |
| Lot Number | Component Part Number | Description | Min | Sample | Min | Max | Α | В | Min | A | В | | | |
| 22581 | 2NG20135A490M | M20 x 135 NexGen2™ Structural Bolt | | | 33 | 38 | Pass | Pass | 150000 | Pass | Pass | | | |
| 41002 | 2HHNM2025G2HM | M20-2.50 Heavy Hex Nut Grade 2H | 1165 | Pass | 24 | 36 | Pass | Pass | | | 8 9 | | | |
| 770749 | 14SLSS134M | 1 3/4" Shear Sleeve | -/ | A Production | 24 | 33 | Pass | Pass | | | | | | |
| 54179 | 2NG2SWH | M20 NexGen2™ Collapsible Split Washer | 20 | | 23 | 34 | Pass | Pass | | | S 93 | | | |
| 51974 | 2NG2CWM | M20 Solid Collar Washer | | | 23 | 34 | Pass | Pass | | | 1 | | | |



Product Certificate of Conformance

| AF Lot #: | 8265 | | | | | | | | Part#: | 2NG22: | 12 |
|-------------------|------------------------------|---------------------------------------|------|----------|-------|---------|---------|-------|--------|---------|--------|
| | | | | 15 | 153 | | Test Re | sults | 19 | | |
| | | | Pro | of Load | | | | | Wedg | e Tensi | e Test |
| | | | (| Mpa) | Hardn | ess (HF | (C) | | (psi) | | |
| | | | | pec Spec | | | San | nple | Spec | San | nple |
| Lot Number | Component Part Number | Description | Min | Sample | Min | Max | Α | В | Min | Α | В |
| 25417 | 2NG 20250A490M | M20 x 250 NexGen2™ Structural Bolt | - | 72 | 33 | 38 | Pass | Pass | 150000 | Pass | Pass |
| 41002 | 2HHNM2025G2HM | M20-2.50 Heavy Hex Nut Grade 2H | 1165 | Pass | 24 | 36 | Pass | Pass | | 8 9 | |
| 794353 | 14SLSS400M | 4" Shear Sleeve | | | 24 | 33 | Pass | Pass | | | |
| 54179 | 2NG 2S WH | M20 NexGen2™ Collapsible Split Washer | 9 | | 23 | 34 | Pass | Pass | | | |
| 51974 | 2NG2CWM | M20 Solid Collar Washer | | | 23 | 34 | Pass | Pass | | | |

New York

69 Orchard Street Ramsey, New Jersey 07446 Tel 800 577 3171 Fax 201 783 8840 Cleveland

959 Lake Road Medina, Ohio 44256 Tel 888 859 6060 Fax 440 232 6062 Los Angeles

5450 W 83rd Street Los Angeles, California 90045 Tel 310 410 5007 Fax 866 553 7702 Nebraska

806 8th Street Gothenburg, Nebraska 69138 Tel 855 330 2210 Fax 308 537 3500

NUCOR STEEL TUSCALOOSA, INC.

MILL TEST CERTIFICATE Nucor Steel Tuscaloosa, Inc.

Nucor Steel Tuscaloosa, Inc. 1700 HOLT RD N.E. Tuscaloosa, AL 35404-1000 800 800-8204 customerservice@nucortusk.com

| Load Number | Tally | Mill Order Number | PO NO Line | NO | Part Number | Certificate Number | Prepared | | | | | |
|--------------|-----------------------|-------------------|--------------|-------|--|--------------------|------------------|--|--|--|--|--|
| T225508 | 00000000875595 | N-175355-001 | ATL-7417876 | 01 | | S87559501-1 | 08/21/2019 05:51 | | | | | |
| Grade | | | | Custo | Customer: | | | | | | | |
| Quality Plan | e 00 IN x 96.000 I | | | Ship | CKNER METALS SUWANEE GA TO: ckner SUWANEE GA | | | | | | | |

| Shipped Item | Heat/Slab Number | Certified By | С | Mn | Р | S | Si | Cu | Ni | Cr | Мо | Cb | V | ΑΊ | Ti | N2 | В | Ca | Sn | CEV | ACI |
|-----------------|---------------------|-----------------|------|------|-------|-------|------|------|------|------|-------|-------|-------|-------|-------|-------|--------|--------|----|------|-----|
| 9H1304DA | B9U4932-04 *** | B9U4932 | 0.20 | 1.37 | 0.011 | 0.004 | 0.03 | 0.14 | 0.05 | 0.06 | 0.020 | 0.036 | 0.056 | 0.024 | 0.001 | 0.008 | 0.0002 | 0.0016 | | 0.47 | |
| 9H13O5DA | B9U4932-03 *** | B9U4932 | 0.20 | 1.37 | 0.011 | 0.004 | 0.03 | 0.14 | 0.05 | 0.06 | 0.020 | 0.036 | 0.056 | 0.024 | 0.001 | 0.008 | 0.0002 | 0.0016 | | 0.47 | |

| Shipped | Certified | Heat/Slab | Yield | Tensile | Y/T | ELONGA | TION % | Bend | Hard | | Charpy | Impacts | (ft-1b | s) | | Shea | ar % | | Test |
|----------|------------|----------------|-------|---------|------|--------|--------|------|------|------|--------|---------|--------|-----|---|------|------|-----|------|
| Item | Ву | Number | ksi | ksi | % | 2" | 8" | OK? | НВ | Size | mm 1 | 2 | 3 | Avg | 1 | 2 | 3 | Avg | Temp |
| 9H13O4DA | S9H1306FTT | B9U4932-04 *** | 73.7 | 93.6 | 78.7 | 35.5 | | | | | | | | | | | | | |
| 9H13O4DA | S9H1307FTT | B9U4932-04 *** | 73.3 | 93.6 | 78.3 | 38.0 | | | | | | | | | | | | | |
| 9H1305DA | S9H1306FTT | B9U4932-03 *** | 73.7 | 93.6 | 78.7 | 35.5 | | | | | | | | | | | | | |
| 9H1305DA | S9H1307FTT | B9U4932-03 *** | 73.3 | 93.6 | 78.3 | 38.0 | · | | | | | | | | | | | | |

Items: 2 PCS: 2 Weight: 13068 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. Yield strength is determined by the 0.2% offset method unless otherwise noted. Manufactured to a fully killed fine grain practice. ISO 9001:2015 Registered, PED Certified

'***' indicates Heats melted and Manufactured in the U.S.A.

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

1 July 10



Certification Report January 2020

Metro Site Fabricators LLC

PO: 17576

SO: 34734





Product Certificate of Conformance

| AF Lot #: | 11022 | | | | | | | | Part#: | 2NG204 | 48 |
|------------|------------------------------|---------------------------------------|------|-----------------|-----|-------|---------|--------|--------|-------------------|--------|
| | | | | | | | Test Re | esults | | | |
| | | | | of Load Mpa) | _ | Hardn | ess (HF | RC) | Wedg | e Tensil (psi) | e Test |
| | | | : | Spec | Sį | ec | San | nple | Spec | San | nple |
| Lot Number | Component Part Number | Description | Min | Sample | Min | Max | Α | В | Min | Α | В |
| 26799 | 2NG 2009 5A 490M | M20 x 95 NexGen2™ Structural Bolt | | | 33 | 38 | Pass | Pass | 150000 | Pass | Pass |
| 51627 | 2HHNM2025G2HM | M20-2.50 Heavy Hex Nut Grade 2H | 1165 | Pass | 24 | 36 | Pass | Pass | | | |
| 10309 | 14SLSS1316M | 1-3/16 Shear Sleeve | | | 24 | 33 | Pass | Pass | | | |
| 54179 | 2NG2SWH | M20 NexGen2™ Collapsible Split Washer | | | 23 | 34 | Pass | Pass | | | |
| 4117 | 2NG2CWM | M20 Solid Collar Washer | | | 23 | 34 | Pass | Pass | | | |



CERTIFICATE OF INSPECTION

: A490 STRUCTURE BOLT, TYPE 1 HD MARK: A490 & JH

:JH14021503035 REPORT NO

1/1

2014/03/12 REPORT DATE BOLT LOT NO B326913P1 BOLT MATERIAL BOLT HEAT NO SAE 4140H :2N858

NUT LOTNO

NUT MATERIAL NUT HEAT NO WASHER LOT NO WASHER MATERIAL

WASHER HEAT NO ASSEMBLY LOT NO

BOLT MFR. DATE 2014/1/22

NUT MFR. DATE

WASHER MFR, DATE

QUANTITY BOLT MFR. NITT MER. WASHER MER.

ORDER NUMBER

PART NUMBER

DESCRIPTION

FINISH

:U16746

498434

:990.0

:1-8X3-3/4 NC

:H.T. PLAIN

BOLT DIMENSIONAL INSPECTION SPECIFICATION: ASME B18.2.6 2014/02/08 ASME B18.18.2M INSPECTION SAMPLING STANDARD CHARACTERISTIC TEST VALUE TEST METHOD STANDARD SAMPLE REJ WIDTH ACROSS CORNERS JIS B1071 45.62-47.65 46.46-46.53 mm WIDTH ACROSS FLATS JIS B1071 40.01-41.27 40.45-40.48 mm JIS B1071 15.02-15.92 15.68-15.70 0 HEIGHT BODY DIA JIS B1071 24.79-25.95 25.28-25.30 0 mm RODY LENGTH MIN 47 93 44 23 44 26 IIS R1071 mm. 0 GRIP LENGTH 46.40-49.38 JIS B1071 MAX 50.80 mont LENGTH JIS B1071 90.43-95.25 94,42-94,46 0 mm ASME BL3 NONE PASS THREAD N/A 0 BOLT MECHANICAL INSPECTION INSPECTION: 2014/02/08 SAMPLING STANDARD SPECIFICATION: ASTM A490 ASTM F1470 TEST METHOD STANDARD SAMPLE REJ CHARACTERISTIC UNIT TEST VALUE ACC CORE HARDNESS 33.0.39.0 ASTM PROS HRC 36-36 a 150.0-173.0 TENSILE STRENGTH ASTM F606 164-165 ksi ASTM F606 MIN 120.0 PASS 8 BOLT MECHANICAL INSPECTION 2014/02/08 SPECIFICATION: SAE J121-APR97 SAMPLING STANDARD : ASTM F1470 STANDARD TEST METHOD CHARACTERISTIC UNIT TEST VALUE SAMPLE ACC REJ DECARBURIZED NONE N/A SAE J121 PASS G. BOLT APPEARANCE INSPECTION INSPECTION: 2014/02/08 SPECIFICATION: ASTM A490 SAMPLING STANDARD CHARACTERISTIC TEST METHOD STANDARD TEST VALUE ACC REJ UNII MAGNETIC PARTICLE ASTM A490 NONE N/A PASS 125 125 0 BOLT APPEARANCE INSPECTION SPECIFICATION: ASTM F788/F788M INSPECTION : SAMPLING STANDARD : 2014/8/2/09 ASTM F788/ CHARACTERISTIC TEST METHOD VALUE ACC REJ N/A GENERAL WORKMANSHIP - MARKING VISION CHEMICAL ANALYSIS HEAT NO C-x100 MN-x100 P-x1000 S-x1000 SI-x100 CU-x100 NI-x100 CR-x100 MO-x100 AL-x1000 B-x10000 V-x100

*Inspection for head bursts was conducted in accordance with the requirements of section 9 of ASTM A490.



40

80

BOLT MARKING

Remark: 1 Lab is accredited according to ISO/IEC17025 requirements. This certificate is valid with signature of Wen-Da Tsai.

2. This test certificate is responsible for designated samples only. This test certificate only relates to the items listed and tested, it's not allowed to be partially used.

102

- 3. The above composition is quoted from original mill certs which is not in the scope of Lab Accreditation.
- 4. This test certificate in accordance with EN 10204 type 3.1.

16

- 5. Unless specified by the customer, the latest version of the testing specs was used.
- 6.Quality System conforms to ISO 9001 requirements and certified by TUV.





Certified Material Test Report to BS EN 10204-2004 3.1 FOR ASME SA194/ ASTM A194-14 GRADE 2H HVY HEX NUTS

MFG LOT NUMBER: 5114690003

QNTY SHIPPED:

75.600MPCS

SAMPLE SIZE :

ACC. TO ASME B18 . 18 . 1 - 11

SIZE & DESCRIPTION: 1-8+0.024"(HDG)

FINISH:H.T.HOT DIP GAL PER ASTM A153-09/ASTM F2329-13

STEEL PROPERTIES:

STEEL GRADE:

SWRCH45K

SIZE: 38mm

HEAT NO:

331605625

| CHE | MISTRY | COMP | OSITION: |
|-----|--------|------|----------|
| | | | |

| CHEMIST | C % | Mn % | P % | S% | Si % | Cr % | Ni % | Cu % | Mo % | OTHERS |
|-----------|------|------|-------|-------|------|------|------|------|------|--------|
| SPE: | MIN | MAX | MAX | MAX | MAX | | | | | |
| 20 4 20 F | 0.40 | 1.00 | 0.04 | 0.05 | 0.40 | | | | | |
| TEST: | 0.45 | 0.7 | 0.014 | 0.008 | 0.17 | 0 - | | | | |

| DIMENSIONAL INSPECTIONS | 3 | SPECIFICATION: | ASME/ANSI B18.2.2 | - 2010 | |
|--------------------------|------------------|---------------------|--------------------|------------|--------|
| CHARACTERISTICS | TEST METHOD | SPECIFIED | ACTUAL RESULT | ACC. | REJ. |
| ************ | *********** | ********** | ********* | ***** | ****** |
| APPEARANCE | ASTM F812-12 | | PASSED | 100 | 0 |
| WIDTH A/F | 1.575"-1.625" | | 1.591"-1.613" | 32 | 0 |
| WIDTH A/C | 1.796"-1.876" | | 1.834"-1.861" | 32 | 0 |
| THREAD | ASME B1.1-03 | | PASSED | 8 | 0 |
| HEIGHT | 0.956"-1.012" | | 0.976"-0.995" | 32 | 0 |
| MARK | 2HZN LM | | PASSED | 100 | 0 |
| HDG THICKNISS A | ASTM A153-09/AST | M F2329-13 min:43ur | 63UM-77UM | 20 | 0 |
| MECHANICAL PROPERTIES: | TO 1-1/2" in | SPECIF | ICATION: ASME SA19 | 4/ ASTM A1 | 94-14 |
| CHARACTERISTICS | TEST METHOD | SPECIFIED | ACTUAL RESULT | ACC. | REJ. |
| ************ | ********** | ********* | *********** | ****** | ****** |
| HARDNESS | ASTM E18-12 | 24-35HRC | HRC29-30 | 5 | 0 |
| PROOF LOAD | ASTM F606-11 | MIN106000LBF | 106000LBF | 5 | 0 |
| HARDNESS AFTER 24H AT 54 | 10°C ASTM A194 M | IN 89 HRB | HRB 93-97 | 5 | 0 |
| TEMPERING TEMPERATURE | Min455°C | · · | PASSED(520°C) | | |
| MACROETCH | ASTM E381-12 | S1/R1/C1~S4/R4/C4 | S2/R2/C2 | 5 | 0 |

PARTS ARE MANUFACTURED AND TESTED IN ACCORDANCE WITH ASME SA194/ ASTM A194-14 ALL TESTS IN ACCORDANCE WITH THE METHODS PRESCRIBED SPECIFICATION. WE CERTIFY THAT THIS DATA IS A TRUE REPRESENTATION OF INFORMATION PROVIDED BY THE MATERIAL SUPPLIER AND OUR TESTING LABORATORY.

All parts meet the requirements of FQA and records of compliance are on file.

Maker's ISO#00109Q211593R0M/3302



Report of Chemical and Physical Properties

Allfasteners USA - Branch 0

959 Lake Road MEDINA, OH

44256

Purchase Order: P9874

Certificate #: 758,808

Quantity: 500 Lot Number: GTR18538174B-024

Part #: DHW0010000 Heat Number: 17500894

Description: 1 Hardened Washer F436

Chemical Analysis

C Mn P S Si Cr

0.46 0.71 0.009 0.016 0.21

Mechanical Properties

Core Hardness 39 - 44 HRC

Grade Marking ASTM F436(11) Type 1

We hereby certify that the above data is a true copy of the data furnished to us by the producing mill or the data resulting from tests performed in approved laboratories.

David Biss
Quality Manager



Report of Chemical and Physical Properties

Issued To: Allfasteners USA - Branch 0

959 Lake Road

MEDINA, OH

44256

Purchase Order: P2301

Certificate #: 699,420

Lot Number: 1706347 Quantity: 1,000

Si

0.2

Heat Number: J740000690

Description: 1 Helical Med Split L/W

Mn

0.54

C

0.64

Chemical Analysis

Mo В Ni

Cu

Mechanical Properties

42.0 - 43.5 HRC Hardness (Core)

0.012

0.006

We hereby certify that the above data is a true copy of the data furnished to us by the producing mill or the data resulting from tests performed in approved laboratories.

Quality Manager



NUCOR CORPORATION NUCOR STEEL SOUTH CAROLINA

Sold To:

27893

Merchant Bar Quality

9/16" (.5625) Round

F1554-07a gr 55, S1, A307 gr 55

9/16" (.5625) Round 30' A307-55

ATLANTA ROD MFG CO INC PO BOX 435 LAVONIA, GA 30553 (706) 356-4446 Fax: (706) 356-1842

Mill Certification 12/12/2019

MTR #: C1-486229
300 Steel Mill Road
DARLINGTON, SC 29540
(843) 393-5841
Fax: (843) 395-8701

ATLANTA ROD MFG CO INC
144 SCHOKBETON RD
PO BOX 435
LAVONIA. GA 2005

| LAVONIA, GA 30553 (706) 356-4446 Fax: (706) 356-1842 | ĺ | |
|--|-------------|-----------------|
| | Sales Order | 322357.2 |
| | Part Number | 30000563360DES0 |
| | Lot# | DL1910613902 |
| | | |

Heat #

B.L. Number

Load Number

Customer Part #

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed above and that it satisfies those requirements.

Roll Date: 10/28/2019

Customer P.O.

Product Group

Grade Size

Product

Description

Customer Spec

Melt Date: 10/25/2019

A307-55, F1554 GR 55, S1

Qty Shipped LBS: 10,152

Qty Shipped Pcs: 400

Melt Date: 10/25/2019

C Mn 0.22%

0.83%

V 0.0380%

Si 0.19%

S 0.022%

P 0.006%

Cu 0.33%

Cr 0.09%

Ni 0.11%

Mo 0.025%

Cb 0.003% CE1554 0.38%

CE1554: CE per F1554 GR55, S1

Roll Date: 10/28/2019

Yield 1: 61,000psi

Yield 2: 61,000psi

Tensile 1: 82,000psi

Tensile 2: 82,000psi

Reduction of Area #2: 54.64%

Elongation: 23% in 8"(% in 203.3mm)

Elongation 22% in 8"(% in 203.3mm)

DL19106139

C1-803668

C1-486229

Reduction Ratio 197.3:1

Specification Comments:

MINIO FACEL FORT

Reduction of Area: 56.01%

WELDING OR WELD REPAIR WAS NOT PERFORMED ON THIS MATERIAL
 MELTED AND MANUFACTURED IN THE USA
 MERCURY, RADIUM, OR ALPHA SOURCE MATERIALS IN ANY FORM HAVE NOT BEEN USED IN THE PRODUCTION OF THIS MATERIAL

H Alm

WARNING: This product can expose you to chemicals including nickel and nickel compounds, which are known to the State of California to cause

Test Certificate cancer. For more information go to www.P65Warnings.ca.gov. Form TC1: Revision 4: Date 6 Feb 2019 12400 Highway 43 North, Axis, Alabama 36505, US Shipping Manifest: AR293432 Mill Order No. 41-578468-01 Customer P.O.No.:V17853-54495 Ship Date: 16 Aug 19 | Cert No: 081734885 Customer: LEECO STEEL PRODUCTS, INC. Product Description: ASTM A572(18) 65/M450 Cert Date: 16 Aug19 (Page 1 of 1)

1011 WARRENVILLE ROAD SUITE 500 LISLE Size: 1.250 X 96.00 X 480.0 (IN) IL 60532 Charpy Impact Tests BDWTT Tensiles: Tst Tst Tst Tested Pieces: Abs. Energy(FTLB) % Shear %RA Elong % 2in 8in Hardness Tmp %Shr Tst Siz YS Avg Tmp Dir 2 3 Tst Piece 2 3 Avg Piece Dir (KSI) (KSI) Loc

Dimensions ld ld 30 1.252 (DISCRT) 100 A04 W9H524 T 71 99

Chemical Analysis ORGN Cr002 Heat Mo Tot Al C Cu .005 .092 ld .13 .14 W9H524

KILLED STEEL
MERCURY 1S NOT A METALLURGICAL COMPONENT OF THE STEEL AND NO MERCURY WAS INTENTIONALLY ADDED DURING THE MANUFACTURE
OF THIS PRODUCT. OF THIS PRODUCT.

MTR EN 10204:2004 INSPECTION CERTIFICATE 3.1 COMPLIANT
100% MELTED AND MANUFACTURED IN THE USA.

NO WELD REPAIR HAS BEEN PERFORMED ON THIS MATERIAL.
PRODUCTS SHIPPED:
W9H524

A04

PCES: 2, LBS: 32670

125096480A572-65

Cust Part #:

PO 17611

WE HEREBY CERTIFY THAT THIS MATERIAL WAS Justin Ward TESTED IN ACCORDANCE WITH, AND MEETS THE SENIOR METALLURGIST - PRODUCT REQUIREMENTS OF, THE APPROPRIATE SPECIFICATION



Test Certificate

WARNING: This product can expose you to chemicals including nickel and nickel compounds, which are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Form TC1: Revision 4: Date 6 Feb 2019

12400 Highway 43 North, Axis, Alabama 36505, US

Customer: LEECO STEEL PRODUCTS, INC. 1011 WARRENVILLE ROAD SUITE 500 LISLE IL 60532

Customer P.O.No.:TD1176P-54527 Mill Order No. 41-583604-02 Shipping Manifest: AR297407 Product Description: ASTM A572(18) 65/M450 Ship Date: 21 Oct 19 Cert No: 081744176 T3; MAX 0.05% SI, .45% CEV (AWS) Cert Date: 21 Oct19 (Page 1 of 1) LCVN 15 FT-LBS @ -20F / A673-P

Size: 0.750 X 96.00 X 240.0 (IN)

| | | | | | OIZC. | 0.700 | 7 00.00 7 | · 2-10. | 0 (114) | | | | | | | | | | | | |
|--------|--------|----------------|-----|-------|-------|---------|-----------|---------|----------|-----|------|-----|-----|-----|-------|-----|----------|------|-----|-------------|----------|
| | Tested | Pieces: | | | - | Tensile | s: | | | | | | (| Cha | rpy I | mpa | ct Tests | ; | | | 1 |
| Heat | Piece | Piece | Tst | YS | UTS | %RA | Elong % | | Hardness | Abs | . Er | erg | • | | % | She | | Tst | Tst | Tst | BDWTT |
| ld | ld | Dimensions | Loc | (KSI) | (KSI) | | 2in 8in | Dir | | 1 | 2 | 3 | Avg | 1 | 2 | 3 | Avg | Tmp | Dir | Siz (mm) | Tmp %Shr |
| W9J667 | D27 | 0.751 (DISCRT) | L | 74 | 87 | | 39 | Т | | 64 | 57 | 90 | 70 | | | | | -22F | L | 10. | |
| | | | T | 74 | 87 | | 40 | T | | | | | | | | | | | | | |

Heat Chemical Analysis ld P 1.007 Cr **Mo** .037 Ti B N Cev ORGI .001 W9.1667 16 16

KILLED STEEL

MERCURY IS NOT A METALLURGICAL COMPONENT OF THE STEEL AND NO MERCURY WAS INTENTIONALLY ADDED DURING THE MANUFACTURE OF THIS PRODUCT.

CEV = C + (MN+SI)/6 + (CR+MO+V)/5 + (NI+CU)/15

MTR EN 10204:2004 INSPECTION CERTIFICATE 3.1 COMPLIANT 100% MELTED AND MANUFACTURED IN THE USA NO WELD REPAIR HAS BEEN PERFORMED ON THIS MATERIAL.

PRODUCTS SHIPPED:

D27 W9J667

PCES: 8, LBS: 39208

WE HEREBY CERTIFY THAT THIS MATERIAL WAS TESTED IN ACCORDANCE WITH, AND MEETS THE REQUIREMENTS OF, THE APPROPRIATE SPECIFICATION

Justin Ward SENIOR METALLURGIST - PRODUCT

Cust Part #: 075096240A572-65



Test Certificate

WARNING: This product can expose you to chemicals including nickel and nickel compounds, which are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

12400 Highway 43 North, Axis, Alabama 36505, US

Customer: LEECO STEEL PRODUCTS, INC. 1011 WARRENVILLE ROAD SUITE 500 LISLE IL 60532

Form TC1: Revision 4: Date 6 Feb 2019 Customer P.O.No.:TD1215P-54527 Mill Order No. 41-590368-01 Shipping Manifest: AR300392 Ship Date: 25 Dec 19 | Cert No: 081751752 Product Description: ASTM A572(18) 65/M450 T3; MAX 0.05% SI, .45% CEV (AWS) Cert Date: 25 Dec19 (Page 1 of 1) LCVN 15 FT-LBS @ -20F / A673-P

Size: 0.375 X 96.00 X 240.0 (IN)

| | | | | | OIZC. | 0.070 | / 00. | 00 / | 2-10.1 | 3 (114) | | | | | | | | | | | | |
|--------|--------|----------------|-----|-------|-------|---------|-------|------|--------|----------|----|-------|------|---------|-----|-----|------|----------|------|-----|-------------|----------|
| | Tested | Pieces: | | | - | Tensile | s: | | | | | | | (| Cha | rpy | Impa | ct Tests | ; | | | 1 |
| Heat | Piece | Piece | Tst | YS | UTS | %RA | Elong | | | Hardness | Ab | s. Er | nerg | y(FTLB) | | % | She | ear | Tst | Tst | Tst | BDWTT |
| ld | ld | Dimensions L | Loc | (KSI) | (KSI) | | 2in | 8in | Dir | | 1 | 2 | 3 | Avg | 1 | 2 | 3 | Avg | Tmp | Dir | Siz (mm) | Tmp %Shr |
| W9L738 | D54 | 0.375 (DISCRT) | L | 75 | 92 | | 31 | | T | | 19 | 66 | 18 | 34 | | | | | -22F | L | 7.5 | |
| | | | Т | 70 | 91 | | 32 | | Т | | | | | | | | | | | | | I |

Heat Chemical Analysis ld .006 Cr **Mo** .036 V Ti B N Cev ORGI .003 W9I 738 16 15

KILLED STEEL

MERCURY IS NOT A METALLURGICAL COMPONENT OF THE STEEL AND NO MERCURY WAS INTENTIONALLY ADDED DURING THE MANUFACTURE

OF THIS PRODUCT. CEV = C + (MN+SI)/6 + (CR+MO+V)/5 + (NI+CU)/15

MTR EN 10204:2004 INSPECTION CERTIFICATE 3.1 COMPLIANT
100% MELTED AND MANUFACTURED IN THE USA
CHARPY FULL SIZE EQUIVALENT = ABSORBED ENERGY AVG X 10 / TEST SIZE IN MM

NO WELD REPAIR HAS BEEN PERFORMED ON THIS MATERIAL.

PRODUCTS SHIPPED: W9L738

PCES: 7, LBS: 17150

> WE HEREBY CERTIFY THAT THIS MATERIAL WAS TESTED IN ACCORDANCE WITH, AND MEETS THE REQUIREMENTS OF, THE APPROPRIATE SPECIFICATION

SENIOR METALLURGIST - PRODUCT

Justin Ward

(P)

037096240A572-65 Cust Part #:







Product Certificate of Conformance

| AF Lot #: | 11722 |] | | | | | | | Part #: | 2NG204 | 48 |
|------------|-----------------------|---------------------------------------|--------|-----------------|-----|-------|---------|--------|---------|-------------------|---------|
| | | | | | | Ž, | Test Re | esults | | | |
| | | | 150.00 | of Load Mpa) | 1 | lardn | ess (HI | RC) | Wedg | e Tensil (psi) | le Test |
| | | | | Spec | SI | oec | San | nple | Spec | San | nple |
| Lot Number | Component Part Number | Description | Min | Sample | Min | Max | Α | В | Min | Α | В |
| 26799 | 2NG 20095A490M | M20 x 95 NexGen2™ Structural Bolt | İ. | | 33 | 38 | Pass | Pass | 150000 | Pass | Pass |
| 51627 | 2HHNM2025G2HM | M20-2.50 Heavy Hex Nut Grade 2H | 1165 | Pass | 24 | 36 | Pass | Pass | | | Ĵ |
| 10309 | 14SLSS1316M | 1-3/16 Shear Sleeve | Ĭ. | | 24 | 33 | Pass | Pass | | | |
| 54179 | 2NG2SWH | M20 NexGen2™ Collapsible Split Washer | | | 23 | 34 | Pass | Pass | | | |
| 4117 | 2NG2CWM | M20 Solid Collar Washer | SR | | 23 | 34 | Pass | Pass | 63 8 | | 54 |







Product Certificate of Conformance

| AF Lot #: | 9729 | <u> </u> | | | | | | | Part #: | 2NG20 | 60 |
|------------|-----------------------|---|------|-----------------|-----|-------|---------|-------|-------------|-------------------|---------|
| 3 | | | | 1.00-2 | , | | Test Re | sults | CO Print to | | |
| | | | | of Load Mpa) | | Hardn | ess (HI | RC) | Wedg | e Tensil (psi) | le Test |
| | | 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | | Spec | S | oec | San | nple | Spec | San | nple |
| Lot Number | Component Part Number | Description | Min | Sample | Min | Max | Α | В | Min | Α | В |
| 39312 | 2NG 20060A490M | M20 x 60 NexGen2™ Structural Bolt | 38 | 8 3 | 33 | 38 | Pass | Pass | 150000 | Pass | Pass |
| 3373340001 | 2HHNM2025G2HM | M20-2.50 Heavy Hex Nut Grade 2H | 1165 | Pass | 24 | 36 | Pass | Pass | | | |
| 5195 | 2NG2ECWM | Extended Collar | 26 | 8 8 | 24 | 33 | Pass | Pass | 8 9 | | 8 |
| 775354 | 2NG2CW20 | M20 NexGen2™ Collapsible Split Washer | .00 | | 23 | 34 | Pass | Pass | 8 | | 8 |
| N/A | #N/A | #N/A | 98 | | 23 | 34 | #N/A | #N/A | | | 3 |



Wrought Washer Mfg., Inc 1901 Chicory Road Mount Pleasant, WI 53403

Certificate Of Conformance

Customer Part Rev Level:

Customer PO No: SB004845

Line No: 1

Revision:

Date:

Certification To: SLSB LLC/St. Louis Screw & Bolt

2000 Access Blvd. Madison, IL 62060

USA

Part Info

PO No Revision:

Customer Part No: 018129

Part Name: 5/8"REG L/W 1060 HOT DIP GALV

Quantity: 43,200

Supplier:

Master Unit No(s): M009073

Piece List:

Tracking No(s): S058017

Wrought Washer Mfg., Inc. Part No: 018129

Heat Code(s): 64000 Shipper No: WW02390

Job No(s): T27319021

Supplier

Heat No

64000

Attachment

64000

We hereby certify that the subject parts conform to the purchase order and any applicable specification indicated above. We further certify that all hardening and/or plating meet full purchase order specification requirements.

We hereby certify that all statutory requirements as to American Production and Labor Standards and all conditions of purchase applicable to the transaction have been complied with and that the subject parts were manufactured in the USA.

Paul J. Sopplink

Signature

Date



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

INSPECTION CERTIFICATE

Job No: 31392-S **Job Information** Certified Date: 10/14/19

Customer: ST LOUIS SCREW & BOLT CO Ship To: ST LOUIS

Customer Part No:

Shipped Qty: 32,400 Customer PO No: SB001814

Lot Number: 31392-S-190518

Part Information

Part No: A563 5/8-11 +0.020 DH HHN HDG BLUE DYE

Description: ASTM A563 HHN, Grade DH, Hot Dipped Galv, Blue Dye

Manufactured Quantity: 151,223

Applicable Specifications

| Specification | Amend | Specification | Amend |
|----------------|-------|-------------------|-------|
| ASME B1.1 | 2003 | ASME B18.2.2 | 2015 |
| ASME B18.2.6 | 2011 | ASME B18.2.6M | 2012 |
| ASTM A563 | 2015 | ASTM F2329/F2329M | 2015 |
| ASTM F606/606M | 2016 | ASTM F812 | 2017 |

Test Results

Test No: 20706 Test: A563 DH Mechanical Properties

| Sample Inspection 28.45 1,202 33,900 Pass Pass Certified Chemical Analysis | | |
|--|---------|--------|
| Certified Chemical Analysis | | Pass |
| | | |
| Heat No Grade Manufacturer Origin C Mn P S Si Cr Ni | leat No | Cu |
| 190518 1045 Alton Steel Inc. USA 0.4300 0.7000 0.010 0.0220 0.1900 0.1390 0.0770 | 190518 | 0.1900 |

Notes

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

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

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

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

OFFICIAL SEAL EAN E MARGHERIO

10/14/19

Thorsen Chris - Supervisor Quality

Date



CERTIFIED MILL TEST REPORT

Alton Steel Test Lab #5 Cut Street Alton, IL, 62002-9011 (618) 463-4490 Ext 2486 (618) 463-4491 (Fax)

BILL TO

Unytite, Inc.
One Unytite Drive
Peru II 61354

SHIP TO

Unytite, Inc. 325 Civic Road

aSalle, IL 61301

| | | | Peru, I | L 0130 | 4 | | | | | | L | _asalle, iL | - 01301 | | | | | | | | | | | |
|-----------------------------------|--|--------------------------|-----------|--------|----------|------------|----------------------------|---------------|--|---------------|-------------------------|-------------|----------|------------|---------|---------|--------|------------------|--|--|--|--|--|--|
| Date ASI Ord N ASI Ord L | | 08/09/2019 | | | | | P008538-5 B1045SC0.8750 | | | | Specifications SAE 1045 | | | | | | | | | | | | | |
| Item Des Steel Bar, | • | ed, 0.8750 | , 25' 0 " | • | | | | | | | • | | Strand | Cast, RR = | 81.49:1 | | | | | | | | | |
| Heat # | | | | | СНЕ | MICAL | ANAL | YSIS T | EST ME | THODS | Yield PS | | sile PSI | % Elonç | gation | % ROA | Be | nd Test | | | | | | |
| Heat # | С | Mn | Р | S | Si | Cu | Ni | Cr | Мо | Sn | Al | Nb/Cb | ٧ | В | Ti | N | Pb | Ca | | | | | | |
| 190518 | 0.43 | 0.70 | 0.010 | 0.022 | 0.19 | 0.19 | 0.077 | 0.139 | 0.028 | 0.008 | 0.003 | 0.024 | 0.006 | 0.0003 | 0.0008 | 0.0109 | 0.0038 | 0.0012 | | | | | | |
| 190519 | 0.43 | 0.73 | 0.009 | 0.022 | 0.22 | 0.19 | 0.079 | 0.124 | 0.031 | 0.008 | 0.003 | 0.026 | 0.006 | 0.0003 | 0.0009 | 0.0111 | 0.0040 | 0.0010 | | | | | | |
| | • | • | J | OMIN | Y HAR | DENA | BLITY U | SING A | ASTM A- | 255 CA | LCULAT | ED FRO | M CHEN | /ICAL D |) | | | | | | | | | |
| Heat # 190518 190519 | GS 8 | DI 1.33 | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | SPEC | IAL TES | T RESUL | TS | | | | | | | | | | | | | |
| | | AS | TM E-45 | Method | A | | ASTM E-4 | 45 Metho C | od SAE | J422 | ASTM E | E-381 | Char | ру | | Hardnes | s | CE | | | | | | |
| Heat # | TA | тв то | C TD | HA I | нв но | HD | S | 0 | s | 0 | S R | С | | | RC | RB BH | IN BHN | 2 | | | | | | |
| 190518 190519 | | | | | | | | Decarb | 2 o: 0. 1 | 1 005 1 | 1 1 | 1 | | | | | | | | | | | | |
| | | | | | | | | Decarb | o: 0. | 005 | | | | | | | | | | | | | | |
| | | | | | | | | ADDI | TIONAL | СОММЕ | NTS | | | | | | | | | | | | | |
| RMS 021 CWA 11-0 |)58 | | | | | | | | | | | | | | | | | | | | | | | |
| ed st | No mercury, lead, radium, of alpha containing material or equipment is used or deliberately added in the production of this steel. No weld or weld repairs were performed on this material. This Steel is 100% Electric Arc Furnace Melted and Rolled in the U.S.A. Material qualifies as NAFTA origination. Subscribed and sworn to before me, a Notary Public, in and for the | | | | | | | | Alteration or reproduction of this report, except in full, is not allowed without written approval by a representative of Alton Steel Incorporated. I hereby certify that the above tests are correct as contained in the records of ALTON STEEL INCORPORATED | | | | | | | | | | | | | | | |
| U. | | | | | | | | | | | | | | | | | | | | | | | | |
| | | d and swoi Madison, S | | | Notary F | Public, in | and for th | e | | Qualit | y Leader: | Josh Levi | | | | | | 0.0012 0.0010 | | | | | | |
| thi | s | | Day of | | | | | _ | | | | 1525 | 1 | | | | | | | | | | | |
| M | y commi | ssion expi | res | | | | | | | | Z | and the | we | | | | | | | | | | | |
| 1) | lotary Pu | ıblic) | | | | _ | | | | | 1 | | | | | | | | | | | | | |



Wrought Washer Mfg., Inc 1901 Chicory Road Mount Pleasant, WI 53403

Certificate Of Conformance

Customer Part Rev Level:

Attachment

Customer PO No: SB004649

Line No: 2

Revision:

Date: 1/22/2020

Certification To: SLSB LLC/St. Louis Screw & Bolt

2000 Access Blvd. Madison, IL 62060

USA

Part Info

PO No Revision:

Customer Part No: AAWG062

Part Name: 5/8 S MARK HDG-PAILS-[P] / ASTM F436-19

Quantity: 150,800

Supplier:

Master Unit No(s): M011755 M011757 M011760 M011791

Piece List:

Tracking No(s): S105479

.Wrought Washer Mfg., Inc. Part No: 067285

Heat Code(s): 295004

Shipper No: WW03265

Job No(s): PL 'ORDER 2133 HT ORDER 1456

further certify that all hardening and/or plating meet full purchase order specification requirements.

Heat No

Supplier Heat No Nucor Steel 295004

Nucor Steel 295004 295004

We hereby certify that the subject parts conform to the purchase order and any applicable specification indicated above. We

We hereby certify that all statutory requirements as to American Production and Labor Standards and all conditions of purchase applicable to the transaction have been complied with and that the subject parts were manufactured in the USA.

Savil How

1/22/2020

Signature

Date

METALLURGICAL TESTING CERTIFICATION

D081400

4537 South Nucor Road Crawfordsville, IN 47933-0907

Certificate Number: 846151 Date Issued: 10/03/2019

Page: 1 of 2

Order Number: 320843 - 0009 HOT ROLLED PICKLED & OILED Order Dimensions: 0.1220 in X 53.2500 in

HRPO, MILL, J403 1035

ASTM A568-17A SAE J403-14 1035

Coil Number 2440605.000

TAIL Rockwell B:

Part Number 42,380 LBS

Release Order:

ЫТ 53207

Cust PO Number:

Customer Address: 2100 S BAY ST

MILWAUKEE H3567

Customer Name: WROUGHT WASHER MFG INC

824128-60 TONS Weight:

CHEMICAL ANALYSIS

Si Cu Sn Ni CrМо Al 0.006 0.255 0.092 0.006 0.062 0.073 0.026 0.033 0.008 0.005 0.001 0.002 <0.0005 0.001

We hereby certify the above is correct as contained in the records of the corporation melted and rolled in the USA

QF-0261 04/01/2019

1-800-777-0950 MTR IND INQUIRIES@NUCOR.COM

NUCOR QUALITY ASSURANCE

Standard Heat Treating, LLC

Certification

Order No.: 230100

Date: 12/10/2019

Entry Date: 12/05/2019

Page: 1 of 1

To:

Wrought Washer Mfg., Inc 2100 South Bay Street

Purchase Order No.: 1456

Packing List No.:

Milwaukee

WI 53207

Material: 1034 1

Standard Heat Treating certifies the listed results of inspection and testing to accurately reflect the processes performed and data obtained as a result of our heat treatment of the specified product.

| Quantity | Part | Number / P | Pounds | | | |
|-----------------|----------------------|-------------|--------------|--------|-------|--|
| 405,632 | 0172 S126 S130 | 249, S1261: | 29, S126876, | 12891 | | |
| Insp. Type | Scale | Minimum | Maximum | Number | Other | |
| ustomer Requ | iirement | s: | | | | |
| aoronno, i rode | | | | | | |

Austentized, quenched and tempered to obtain a hardness of 38-40 HRC.

Processed in the USA.

5757 W. Ogden Ave Cicero

Alternate signature may include James Perkne (Dir., Customer Service) or Efrain Santoyo (Dir., Production) or Walter Santoyo (Plant Manager).

60804

John Christ

Quality Manager

Standard Heat Treating, LLC

Phone: (708)447-7504 Fax: (708)780-5106



Metro Site Fabricators, LLC 180 Industrial Park Boulevard Commerce, GA 30529 United States of America

Ph: 706-335-7045

Fax: 706-335-7056

Pack List

Number: 22780

03/03/20 Date: 02 Mar 20

To

American Tower Corporation PO Box 2009 Woburn, MA 01801 United States of America Ship To

lan Culbert STRUCTURAL COMPONENTS 310 PRESTIGE PARK RD EAST HARTFORD, CT.06108 United States of America

Ph: 877-778-2938

Fax: 781-926-7849 ap

Ph: 207-450-2369

| 60 Days | - | | | | |
|----------------|----------------------|---------------------------------------|---|--------------|---------|
| Quantity | Description | | | 高条条条约 | |
| | 1 Part: PRESTIGE PA | | Rev: | | |
| е | | | | | |
| | Job: 21246 | | -l.CULBERT Line: 1 | | |
| | | Job Bill o | f Materials | | |
| <u>Job</u> | Job Part Number | Material | <u>Description</u> | Make Qty | Qty_Per |
| 21246 21246 | | MILLING FLAT BAR | -10-14-14-14-14-14-14-14-14-14-14-14-14-14- | | 1.00 |
| 21246 | | MS02-625-250-4375 | 5/8 X2-1/2 IW X4-3/8 IL U-BOLT | | 171.00 |
| 21246 | | MS01-625-SHHN-HDG | 5/8 STR HVY HXNT A563-DH HDG | | 342.00 |
| 21246 21246 | | MS01-625-SFLW-HDG | 5/8 STR FLAT WASHER F436-1 HDG | | 342.00 |
| 21246 | | MS01-625-LKW-HDG MS01-M20-60-BB-MC | 5/8" LOCK WASHER HDG | | 342.00 |
| 21246 | | MS01-750-SP-HDG | M20 X 60 BLIND BOLT, MC | | 105.00 |
| 21246 | | MS184-N | 3/4 STEP PEG, HDG U-BOLT BRKT | | 15.00 |
| 21246 | | MS01-100-375-A490-MC | STEP PEG BRCKT 1-3/16 HOLE HDG | | 29.00 |
| 21246 | | MS01-100-SHHN-MC | 1" X 3-3/4" BOLT A490-MAGNI | | 13.00 |
| 21246 | | MS01-100-S/1/1N-MC | 1" STR HVY HEX NUT A490-MAGNI 1" LOCK WASHER MAGNI | | 13.00 |
| 21246 | | MS01-100-SFLW-MC | 1" STR FLAT WASHER A490-MAGNI | | 13.00 |
| 21246 | | DSI-#20 30' HDG | DSI #20 ROD 30' GR75 HDG | | 13.00 |
| 21246 | | MS01-M20-68-BB-MC | M20 X 135 BLIND BOLT, MC | | 4.00 |
| 21246 | | MS01-M20-48-BB-MC | M20 X 95 BLIND BOLT, MC | | 4.00 |
| 21246-1 | BR-20C | (MOO! MEO 10 DD 100) | L6" X 3-1/2" X 3/8" X 1'-0" | 22 | 104.00 |
| 21246-2 | TB-20C-12 | | L6" X 3-1/2" X 3/8" X 3'-6-3/4 | 8 | |
| 21246-3 | 302473-1 | | PL-1-1/4" X 4" X 16'-4" | 1 | |
| 21246-4 | 302473-2 | | TERMINATION WELDMENT | 1 | |
| 21246-5 | 302473-3 | | PLATE WELDMENT | 3 | |
| 21246-6 | 302473-4 | | PLATE WELDMENT | 3 | |
| 21246-7 | 302473-5 | | PL 1" X 2-1/2" X 2'-1-1/2" | 3 | |
| | [DON - 3/2/2020 4:26 | 2-25 DM | | | |

127904

(ES) PAGE 1

CMC STEEL ALABAMA 101 S 50TH STREET BIRMINGHAM AL 35212-3525

CERTIFIED MILL TEST REPORT For additional copies call 800-637-3227

We hereby certify that the test results presented here are accurate and conform to the reported grade specification

Marcus W. McCluney - CMC Steel Al

Quality Assurance Manager

1SERIES-BPS®

HEAT NO.:1055756 S | Siskin Steel & Supply Siskin Steel & Supply Co Delivery#: 82531377 SECTION: ANG 6 X 3 1/2×3/8 40'0" A36/52950 O н BOL#: 72692498 GRADE: ASTM A36-14/A529-14 Gr 50 L 1901 Riverfront Pkwy 620 John Dodd Rd **CUST PO#: 75466** D **ROLL DATE: 10/03/2018** Chattanooga TN P | Spartanburg SC CUST P/N: 127904 MELT DATE: 09/27/2018 US 37408-1037 US 29303-0000 DLVRY LBS / HEAT: 9360.000 LB Cert. No.: 82531377 / 055756B148 4237563671 8645999988 T DLVRY PCS / HEAT: 20 EA O 4237562734 0

| Characteristic | Value | Characteristic | Value | Characteristic Value |
|-------------------------|---------|------------------------------|---------|---|
| c | 0.15% | Elongation test 1 | 25% | |
| Mn | 0.77% | Elongation Gage Lgth test 1 | 8IN | |
| P | 0.014% | Yield to tensile ratio test1 | 0.71 | |
| S | 0.026% | Yield Strength test 2 | 51.6ksi | |
| Si | 0.17% | Tensile Strength test 2 | 73.0ksi | |
| Cu | 0.29% | Elongation test 2 | 27% | |
| Cr | 0.12% | Elongation Gage Lgth test 2 | 8IN | |
| Ni | 0.14% | Yield to tensile ratio test2 | 0.71 | |
| Mo | 0.042% | | | The Following is true of the material represented by this MTR: |
| V | 0.024% | | | 'Material is fully killed |
| Сь | 0.001% | | | *100% melted and rolled in the USA |
| Sn | 0.011% | | | *EN10204:2004 3.1 compliant |
| В | 0.0003% | | | *Contains no weld repair |
| Ti | 0.001% | | | *Contains no Mercury contamination |
| N | 0.0078% | | | *Manufactured in accordance with the letest version |
| Carbon Eq A6 | 0.34% | | | of the plant quality manual |
| Carbon Eq A529 | 0.37% | | | "Meets the "Buy America" requirements of 23 CFR635.410 |
| | | | | *Warning: This product can expose you to chemicals which are |
| Yield Strength test 1 | 52.4ksi | | | known to the State of California to cause cancer, birth defects |
| Tensile Strength test 1 | 73.6ksi | | | or other reproductive harm. For more information go |
| BAADKO . | | | | to www.P65Warnings.ca.gov |

REMARKS:

ALSO MEETS ASTM GRADE A36 REV 08, A529-50, A572-2015-50, 709-36, A709-50, A992, AASHTO GRADE M270-36, M270-50, CSA G40.21-04 GRADE 44W, 50WASME SA-36 2008A ADDEND A.

Order - 16872993

Page 1/1

CUSTOMER PURCHASE ORDER NUMBER

US-ML-CHARLOTTE 6601 LAKEVIEW ROAD CHARLOTTE, NC 28269 USA

7290970

CUSTOMER SHIP TO KLOECKNER METALS US 3775 S NAMASCO CT HWY 23 SUWANEE,GA 30024 USA

77849

CUSTOMER BILL TO KLOECKNER METALS CORPORATION 500 COLONIAL CENTER PKWY ROSWELL,GA 30076-8853

CERTIFIED MATERIAL TEST REPORT

GRADE SHAPE / SIZE DOCUMENT ID: GGMULTI Round Bar / 3/4" 0000000000 LENGTH WEIGHT HEAT / BATCH 20'00" 9,612 LB **54161110/**02

401

SALES ORDER CUSTOMER MATERIAL N° SPECIFICATION / DATE or REVISION 6707137/000020 MB34RND20A36 ASME SA36, ASTM A529-14 ASTM A6-17, A36-14, A572-15 ASTM A709-17, AASHTO M270-15 BILL OF LADING DATE CSA G40.20-13/G40.21-13 1321-0000057240 07/10/2018

| CHEMICAL COMI C % 0.15 | POSITION Mn % 0.71 | P % 0.012 | \$ % 0.037 | Si % 0.20 | Си % 0.35 | Ni % 0.39 | Cr % 0.15 | Mo % 0.070 | V % 0.004 | Nb % 0.007 | | |
|---------------------------------|-----------------------------|-----------------|------------------|-----------------|-----------------|-----------------|-----------------|------------------|-----------------|------------------|--|--|
| MECHANICAL PR Elon | | G | i/L nch | Ţ | JTS PSI | U7 M1 | S | YS PSI | | YS MPa | | |

25.00 GEOMETRIC CHARACTERISTICS 56.00

COMMENTS / NOTES

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

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

BHASKAR YALAMANCHILI QUALITY DIRECTOR Phone: (409) 267-1071 Email: Bhaskar. Yalamanchili@gerdau.com

Rachel Warren

QUALITY ASSURANCE REP.

Phone: (704) 596-0361 EX3039 Email: Rachel.Webster@gerdau.com





Metro Site Fabricators, LLC 180 Industrial Park Boulevard Commerce, GA 30529 United States of America

Ph: 706-335-7045 Fax: 706-335-7056

Pack List

Number: 22780 Date: 03-Mar-20

То

American Tower Corporation PO Box 2009 Woburn, MA 01801 United States of America Ship To

lan Culbert STRUCTURAL COMPONENTS 310 PRESTIGE PARK RD EAST HARTFORD, CT 06108 United States of America

Ph: 877-778-2938 Fax: 781-926-7849 ap Ph: 207-450-2369

| rms | | Ship Via | | | |
|------------|----------------------|----------------------|--------------------------------|----------|---------|
| et 60 Days | | | | | |
| Quantity | Description | | | | |
| | 1 Part: PRESTIGE PA | RK CT 302473 | Rev: | | |
| ea | a PROVIDE MATERIAL | | | | |
| | Job: 21246 | PO: 55555 | 1-I.CULBERT Line: 1 | | |
| | | Job Bil | l of Materials | | |
| <u>Job</u> | Job Part Number | <u>Material</u> | <u>Description</u> | Make Qty | Qty Per |
| 21246 | | MILLING FLAT BAR | | | 1.00 |
| 21246 | | MS02-625-250-4375 | 5/8 X2-1/2 IW X4-3/8 IL U-BOLT | | 171.00 |
| 21246 | | MS01-625-SHHN-HDG | 5/8 STR HVY HXNT A563-DH HDG | | 342.00 |
| 21246 | | MS01-625-SFLW-HDG | 5/8 STR FLAT WASHER F436-1 HDG | | 342.00 |
| 21246 | | MS01-625-LKW-HDG | 5/8" LOCK WASHER HDG | | 342.00 |
| 21246 | | MS01-M20-60-BB-MC | M20 X 60 BLIND BOLT, MC | | 105.00 |
| 21246 | | MS01-750-SP-HDG | 3/4 STEP PEG, HDG U-BOLT BRKT | | 15.00 |
| 21246 | | MS184-N | STEP PEG BRCKT 1-3/16 HOLE HDG | | 29.00 |
| 21246 | | MS01-100-375-A490-MC | 1" X 3-3/4" BOLT A490-MAGNI | | 13.00 |
| 21246 | | MS01-100-SHHN-MC | 1" STR HVY HEX NUT A490-MAGNI | | 13.00 |
| 21246 | | MS01-100-LKW-MC | 1" LOCK WASHER MAGNI | | 13.00 |
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| 21246 | | DSI-#20 30' HDG | DSI #20 ROD 30' GR75 HDG | | 4.00 |
| 21246 | | MS01-M20-68-BB-MC | M20 X 135 BLIND BOLT, MC | | 4.00 |
| 21246 | | MS01-M20-48-BB-MC | M20 X 95 BLIND BOLT, MC | | 104.00 |
| 21246-1 | BR-20C | | L6" X 3-1/2" X 3/8" X 1'-0" | 22 | |
| 21246-2 | TB-20C-12 | | L6" X 3-1/2" X 3/8" X 3'-6-3/4 | 8 | |
| 21246-3 | 302473-1 | | PL-1-1/4" X 4" X 16'-4" | 1 | |
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| 21246-5 | 302473-3 | | PLATE WELDMENT | 3 | |
| 21246-6 | 302473-4 | | PLATE WELDMENT | 3 | |
| 21246-7 | 302473-5 | | PL 1" X 2-1/2" X 2'-1-1/2" | 3 | |
| | [DON - 3/2/2020 4:26 | ·35 DM1 | | | |

DYWIDAG BAR INSTALLATION VERIFICATION



Structural Components, LLC 1870 W 64th Lane, Unit A Denver, CO 80221

March 23, 2020

Voice: 720-304-8839

Fax: 720-489-3764

Ryan Hubert 1870 W 64th Lane, Unit A Denver, CO 80221 Office: (508) 210-4340

Mobile: (207) 450-2369

Rhubert@StructuralComponents.net

RE: Dywidag Placement

Customer: American Tower Corporation

Site # 302473

Site Name: EHFR Prestige Park CT

Scope of Work:

- Install (4) dywidag reinforcement bars from -7.5' to 22.5'.

Dear Mr. Culbert,

This letter is to inform you that the Dywidag modification work performed on the above referenced project was completed in accordance with the contract documents prepared by the Engineer of Record, Esha Kaushal Modi, PE, CT, ATC, 302473 EHFR Prestige Park CT, 150 ft Monopole Modification, OAA745293_C6_06 dated 4/17/2019. Please see the attached report for field verification of the Dywidag placement.

We at Structural Components appreciate the opportunity to work with American Tower Corporation. Please let us know is you have any questions.

Ryan Hubert

Project Manager

Ryan Halet



REQUIRED SCOPE OF WORK

| | 1870 W 64th Lane, Unit A | Denver, CO 80221 | PH: 720-489-3764 |
|------------|------------------------------|------------------|---------------------------|
| CLIENT: | American Tower Corporation | DATE AT SITE: | 3/10/2020 |
| SITE (ID): | 302473 EHFR Prestige Park CT | TOWER TYPE: | Monopole |
| ADDRESS: | 310 Prestige Park Road | TOWER HEIGHT: | 150ft |
| | East Hartford, CT 06108 | WEATHER: | Overcast, 50°F, calm wind |

Core Holes

(4) 3" Ø Holes Minimum 7.5' Depth



















REQUIRED SCOPE OF WORK

| | 1870 W 64th Lane, Unit A | Denver, CO 80221 | PH: 720-489-3764 |
|------------|------------------------------|------------------|---------------------------|
| CLIENT: | American Tower Corporation | DATE AT SITE: | 3/12/2020 |
| SITE (ID): | 302473 EHFR Prestige Park CT | TOWER TYPE: | Monopole |
| ADDRESS: | 310 Prestige Park Road | TOWER HEIGHT: | 150ft |
| | East Hartford, CT 06108 | WEATHER: | Overcast, 50°F, calm wind |

Dywidag Rods

Hilti RE-500 used as dywidag adhesive per the modification drawings.











ON-SITE COLD GALVANIZATION VERIFICATION



Structural Components, LLC 1870 W 64th Lane Unit A Denver, CO 80221

Fax: 720-489-3764

March 19, 2020

Voice: 720-304-8839

Ryan Hubert 1870 W 64th Lane Unit A Denver, CO 80221 Office: (508) 210-4340

Mobile: (207) 450-2369

Rhubert@StructuralComponents.net

RE: On-Site Cold Galvanizing Verification Customer: American Tower Corporation

Site # 302473

Site Name: E H F R Prestige Park

Scope of Work:

- Install (4) dywidag reinforcement bars from -7.5' to 22.5'.
- Install (3) plate reinforcements from 110.0' to 120.0'.
- Install (4) plate reinforcements from 90.0' to 110.0'.

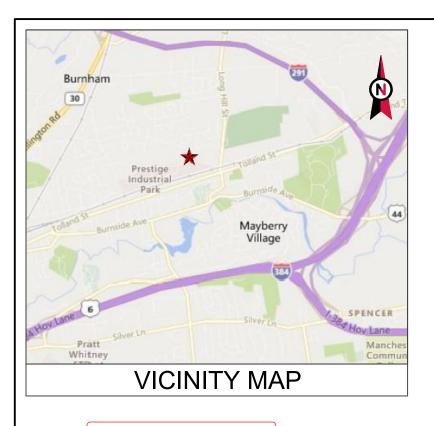
All cut, drilled, welded surfaces on site were painted with (2) coats of Cold Galvanizing Compounds, 95% ZRC applied by paint brush. Pictures were taken throughout the process and upon completion.

Ryan Hubert Project Manager

Ryan Hulet



MI INSPECTOR RECORD AND GC AS-BUILT DRAWINGS





SITE NAME: E H F R - PRESTIGE PARK

SITE NUMBER: 302473

ATC PROJECT NUMBER: OAA745293 C6 06

SITE ADDRESS: 310 PRESTIGE PARK RD.

EAST HARTFORD, CT

06108



LOCATION MAP

GC As-Builts Structural Components Ryan Hubert

3.23.2020

Passing MI Report Tuesday, March 24, 2020 Hannah Childers, CWI

150 FT MONOPOLE MODIFICATIONS

PROJECT TEAM PROJECT DESCRIPTION SHEET SHEET TITLE REV. B-1 BILL OF MATERIALS 0 **TOWER OWNER IBC GENERAL NOTES** IGN 0 THE MODIFICATIONS PRESENTED ON THESE DRAWINGS ARE BASED ON THE RECOMMENDATIONS OUTLINED IN THE STRUCTURAL ANALYSIS COMPLETED UNDER ENGINEERING PROJECT NUMBER OAA745293 C3 03 DATED 01/30/19. SPECIAL INSPECTION CHECKLIST AMERICAN TOWER SIC 0 SATISFACTORY COMPLETION OF THE WORK INDICATED ON THESE DRAWINGS SITE PLAN 10 PRESIDENTAL WAY C-101 0 WILL RESULT IN THE STRUCTURE MEETING THE REQUIREMENTS OF THE SPECIFICATIONS UNDER WHICH THE STRUCTURAL WAS COMPLETED. WOBURN, MA 01801 MODIFICATION PROFILE A-1 0 A-2 **FOUNDATION DETAILS** 0 **ENGINEERED BY** A-3 REINFORCEMENT INSTALLATION DETAILS 0 **COMPLIANCE CODE** REINFORCEMENT INSTALLATION DETAILS (CONT'D) ATC TOWER SERVICES A-3A 0 3500 REGENCY PARKWAY, SUITE 100 #20SB #20 STEP BOLT BRACKET INSTALLATION DETAILS 0 ALL WORK SHALL BE PREFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS CARY, NC 27518 PLATE WELDMENT INSTALLATION DETAILS A-4 0 ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE A-4A PLATE WELDMENT INSTALLATION DETAILS (CONT'D) 0 CARRIER INFORMATION PLATE WELDMENT INSTALLATION DETAILS (CONT'D) A-4B 0 CARRIER: AT&T MOBILITY . ANSI/TIA/EIA: STRUCTURAL STANDARDS (222-G EDITION) **FPSB** FLAT PLATE STEP BOLT BRACKET FABRICATION & INSTALLATION DETAILS 0 CARRIER SITE NAME: FAST HARTFORD 2. INTERNATIONAL BUILDING CODE (2015 IBC) F-1 PLATE FABRICATION DETAILS 0 3. CONNECTICUT STATE BUILDING CODE (2018) F-2 TERMINATION WELDMENT FABRICATION DETAILS 0 CARRIER SITE NUMBER: CT1002/ FA#10034965 F-3 PLATE WELDMENT FABRICATION DETAILS 0 F-4 PLATE WELDMENT FABRICATION DETAILS 0 PROJECT LOCATION **GEOGRAPHIC COORDINATES** LATITUDE: 41.78833333 LONGITUDE: -72 60055556 Call before you dig.



A.T. ENGINEERING SERVICE, PLLC 3500 REGENCY PARKWAY SUITE 100 CARY, NC 27518 PHONE: (919) 468-0112

COA: PEC.0001553

THESE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATION AS INSTRUMENTS OR SERVICE ARE THE EXCLUSIVE PROPERTY OF AMERICAN TOWER. THEIR USE AND PUBLICATION SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AMERICAN TOWER OR THE SPECIFIED CARRIER IS STRICTLY PROHIBITED. THIE TO THESE DOCUMENTS SHALL REMAIN THE PROPERTY OF AMERICAN TOWER WHETHER OR NOT THE PROJECT IS EXECUTED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION REVIEW OF THIS PROJECT. CONTRACTOR(S) MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OF ANY DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION ON FILE WITH AMERICAN TOWER.

| l | REV | . DESCRIPTION | BY | DATE |
|---|------------------------|---------------|-----|----------|
| l | ◬ | FIRST ISSUE | CWB | 04/01/19 |
| l | | | | |
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| | | | | |

ATC SITE NUMBER:

302473

ATC SITE NAME:

EHFR-PRESTIGE PARK

CONNECTICUT

SITE ADDRESS: 310 PRESTIGE PARK RD. EAST HARTFORD, CT 06108

| RAWN BY: | CWB |
|-------------|-----------------|
| PPROVED BY: | CDW/KCI |
| ATE DRAWN: | 04/01/19 |
| TC JOB NO: | OAA745293_C6_06 |

COVER

SHEET NUMBER:

COVER

REVISION

BILL OF MATERIALS

| | QUANTITY PROVIDED | PART NUMBER | DESCRIPTION | LENGTH | SHEET LIST | PART WEIGHT | WEIGHT (lb) | NOTES |
|---|----------------------|----------------------|--|------------|--|----------------|----------------|---------------------------------|
| | | | DYWIDAG RENFORCEMENT MATERIAL & HARDWARE | | | | | |
| 4 | 4 | DYD-20-ATR-30 | #20 ALL THREAD ROD 30' | 30'-0" | A-3 | 501.0 | 2004 | GALVANIZED |
| 22 | 22 | BR-20C | L 6" X 3 1/2" X 3/8" | 1'-0" | A-3 | 12.3 | 271 | CONCENTRIC |
| 8 | 8 | TB-20C-12 | L 6" X 3 1/2" X 3/8" | 3'-6 3/4" | A-3 | 43.8 | 1 | CONCENTRIC |
| | - | | | | | | | |
| 150 | 158 | UB-580-3125 | U-BOLT ASSEMBLIES FOR #20 ROD | | | | | GALVANIZED |
| 100 | 105 | NG-0625-0875-A490 | NEXGEN2 BLIND BOLT ASSEMB., M20 W/ SPRING SLEEVE, A490 | | | | | ALLFASTENERS - 2NG2060 |
| 10 | 15 | #20SB | STEP BOLT WELDMENT | 0'-7 1/4" | #20SB | 2.5 | 38 | |
| | | | PLATE REINFORCEMENT MATERIAL & HARDWARE | | | | | |
| 1 | 1 | 302473-1 | PL 1 1/4" X 4" | 16'-4" | A-4, A-4A, F-1 | 291.8 | 292 | GC As-Builts |
| 1 | 1 | 302473-2 | TERMINATION WELDMENT | 8'-8 3/16" | A-4, A-4A, F-2 | 183.6 | 184 | |
| 3 | 3 | 302473-3 | PLATE WELDMENT | 20'-0" | A-4, A-4A, F-3 | 375.5 | 1127 | Structural Components |
| 3 | 3 | 302473-4 | PLATE WELDMENT | 10'-0" | A-4, A-4A, F-4 | 239.3 | 718 | Ryan Hubert |
| 3 | 3 | 302473-5 | PL 1" X 2 1/2" | 2'-1 1/2" | A-4, A-4A, F-1 | 19.0 | 57 | 3.23.2020 |
| 12 | 13 | UB-580-3125 | U-BOLT ASSEMBLIES FOR #20 ROD | | | | | GALVANIZED L |
| 99 | 104 | NG-1438-1875-A490 | NEXGEN2 BLIND BOLT ASSEMB., M20 W/ SPRING SLEEVE, A490 | | | | | ALLFASTENERS - 2NG2048 |
| 3 | 4 | NG-2250-2688-A490 | NEXGEN2 BLIND BOLT ASSEMB., M20 W/ SPRING SLEEVE, A490 | | | | | ALLFASTENERS - 2NG2068 |
| 24 | 29 | FPSB | FLAT PLATE STEP BOLT WELDMENT | 0'-7 1/4" | FPSB | 2.0 | 58 | |
| <u> </u> | 29 | FFOD | FLAT FLATE STEF BOLT WELDWENT | 0-7 174 | FFOD | 2.0 | 36 | |
| | | | FLANGE BOLTS | | | | | |
| 12 | 13 | BK-1000-375-A490-MAC | BOLT, 1"Ø A490 W/ HHN-LKW-FW, MAGNI 565 COATING | 3 3/4" | | | | ALLFASTENERS - 2STB01334A490M-A |
| | | | | | | | | |
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| | | | | | TOTAL WE | IGHT (lb) | 5,099 | PAGE 1 OF 1 |



A.T. ENGINEERING SERVICE, PLLC 3500 REGENCY PARKWAY SUITE 100 CARY, NC 27518 PHONE: (919) 468-0112 COA: PEC.0001553

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ATC SITE NUMBER:

302473

ATC SITE NAME:

E H F R - PRESTIGE PARK

CONNECTICUT

SITE ADDRESS: 310 PRESTIGE PARK RD. EAST HARTFORD, CT 06108

Passing MI Report Tuesday, March 24, 2020 Hannah Childers, CWI

| DRAWN BY: | CWB |
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| APPROVED BY: | CDW/KCI |
| DATE DRAWN: | 04/01/19 |
| ATC JOB NO: | OAA745293_C6_06 |
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BILL OF MATERIALS

SHEET NUMBER:

REVISION:

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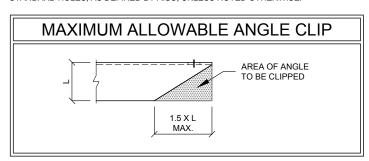
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GENERAL

- ALL WORK TO BE COMPLETED PER APPLICABLE LOCAL, STATE, FEDERAL CODES AND ORDINANCES AND COMPLY WITH ATC MASTER SPECIFICATIONS FOR WIRELESS TOWER SITES. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND ABIDING BY ALL PEOLIDED DEDMITS.
- ALL WORK INDICATED ON THESE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS EXPERIENCED IN TOWER AND FOUNDATION CONSTRUCTION.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IMMEDIATELY OF ANY INSTALLATION INTERFERENCES. ALL NEW WORK SHALL ACCOMMODATE EXISTING CONDITIONS. DETAILS NOT SPECIFICALLY SHOWN ON THE DRAWINGS SHALL FOLLOW SIMILAR DETAILS FOR THIS JOB.
- 4. ANY SUBSTITUTIONS SHALL CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS, AND SHOULD BE SIMILAR TO THOSE SHOWN. ALL SUBSTITUTIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
- 5. ANY MANUFACTURED DESIGN ELEMENTS SHALL CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS AND SHOULD BE SIMILAR TO THOSE SHOWN. THESE DESIGN ELEMENTS MUST BE STAMPED BY AN ENGINEER PROFESSIONALLY REGISTERED IN THE STATE OF THE PROJECT, AND SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO FABRICATION.
- 6. ALL WORK SHALL BE DONE IN ACCORDANCE WITH LOCAL CODES AND OSHA SAFETY REGULATIONS.
- 7. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND EXECUTION OF ALL MISCELLANEOUS SHORING, BRACING, TEMPORARY SUPPORTS, ETC. NECESSARY, PER ANSI/TIA-322 AND ANSI/ASSE A10.48, TO PROVIDE A COMPLETE AND STABLE STRUCTURE AS SHOWN ON THESE DRAWINGS.
- 8. CONTRACTOR'S PROPOSED INSTALLATION SHALL NOT INTERFERE, NOR DENY ACCESS TO. ANY EXISTING OPERATIONAL AND SAFETY EQUIPMENT.

STRUCTURAL STEEL

- ALL DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AISC SPECIFICATIONS, LATEST EDITION.
- ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED
 AFTER FABRICATION PER ASTM A123. EXPOSED STEEL HARDWARE AND ANCHOR
 BOLTS SHALL BE GALVANIZED PER ASTM A153 OR B695.
- 3. ALL U-BOLTS SHALL BE ASTM A36 OR EQUIVALENT, WITH LOCKING DEVICE, UNLESS NOTED OTHERWISE
- 4. FIELD CUT EDGES, EXCEPT DRILLED HOLES, SHALL BE GROUND SMOOTH.
- ALL FIELD CUT SURFACES, FIELD DRILLED HOLES & GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.
- ALL STRUCTURAL STEEL EMBEDDED IN THE CONCRETE SHALL BE APPLIED WITH (2)
 BRUSHED COATS OF POLYGUARD CA-14 MASTIC OR EQUIVALENT. REFER TO THE
 MANUFACTURER SPECIFICATIONS FOR SURFACE PREPARATION AND APPLICATION.
 APPLICATION OF POLYGUARD 400 WRAP IS NOT ESSENTIAL.
- 7. CONTRACTOR SHALL PERFORM WORK ON ONLY ONE (1) TOWER FACE AND REPLACE/REINFORCE ONE (1) BOLT/MEMBER AT A TIME.
- ALL FIELD DRILLED HOLES TO BE USED FOR FIELD BOLTING INSTALLATION SHALL BE STANDARD HOLES, AS DEFINED BY AISC, UNLESS NOTED OTHERWISE.



PAINT

 AS REQUIRED, CLEAN AND PAINT PROPOSED STEEL ACCORDING TO FAA ADVISORY CIRCULAR AC 70/7460-1L.

WELDING

- ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.
- ALL WELDS SHALL BE INSPECTED VISUALLY. IF DIRECTED BY ENGINEER OF RECORD, 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE (100% IF REJECTABLE DEFECTS ARE FOUND) TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. REPAIR ALL WELDS AS NECESSARY.
- 3. INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
- ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, UNLESS NOTED OTHERWISE.
- ALL WELDING ON LATTICE TOWERS SHALL BE DONE WITH E70XX ELECTRODES. ALL WELDING ON POLE STRUCTURES SHALL BE DONE WITH E80XX ELECTRODES UNLESS NOTED OTHERWISE.
- 6. PRIOR TO FIELD WELDING GALVANIZED MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING 1/2" BEYOND ALL FIELD WELD SURFACES. AFTER WELD AND WELD INSPECTION IS COMPLETE, REPAIR ALL GROUND AND WELDED SURFACES WITH ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANI JEACTURERS RECOMMENDATIONS

BOLT TIGHTENING PROCEDURE

- STRUCTURAL CONNECTIONS TO BE ASSEMBLED AND INSPECTED IN ACCORDANCE WITH RCSC SPECIFICATIONS.
- FLANGE BOLTS SHALL BE INSTALLED AND TIGHTENED USING DIRECT TENSION INDICATING (DTI)
 SQUIRTER WASHERS. DTI SQUIRTER WASHERS ARE TO BE INSTALLED AND ORIENTED / TIGHTENED PER
 MANUFACTURER SPECIFICATIONS TO ACHIEVE DESIRED LEVEL OF BOLT PRE-TENSION.
- 3. IN LIEU OF USING DTI SQUIRTER WASHERS, FLANGE BOLTS MAY BE TIGHTENED USING AISC / RCSC "TURN-OF-THE-NUT" METHOD, PENDING APPROVAL BY THE ENGINEER OF RECORD (EOR). TIGHTEN FLANGE BOLTS USING THE CHART BELOW:

BOLT LENGTHS UP TO AND INCLUDING FOUR DIAMETERS

| | | I O AIND INTOLODING | , I OOK DIAME I LIKE | • | |
|-----|--------------|----------------------|----------------------|------------------|------------|
| 1/2 | " BOLTS UP | TO AND INCLUDING 2.0 | INCH LENGTH +1 | /3 TURN BEYOND S | SNUG TIGHT |
| 5/8 | " BOLTS UP | TO AND INCLUDING 2.5 | 5 INCH LENGTH +1. | /3 TURN BEYOND S | NUG TIGHT |
| 3/4 | " BOLTS UP | TO AND INCLUDING 3.0 | INCH LENGTH +1 | /3 TURN BEYOND S | NUG TIGHT |
| 7/8 | " BOLTS UP | TO AND INCLUDING 3.5 | 5 INCH LENGTH +1 | /3 TURN BEYOND S | NUG TIGHT |
| 1" | BOLTS UP | TO AND INCLUDING 4.0 | INCH LENGTH +1 | /3 TURN BEYOND S | NUG TIGHT |
| 1-1 | /8" BOLTS UP | TO AND INCLUDING 4.5 | 5 INCH LENGTH +1. | /3 TURN BEYOND S | NUG TIGHT |
| 1-1 | /4" BOLTS UP | TO AND INCLUDING 5.0 | INCH LENGTH +1 | /3 TURN BEYOND S | NUG TIGHT |
| 1-3 | /8" BOLTS UP | TO AND INCLUDING 5.5 | 5 INCH LENGTH +1. | /3 TURN BEYOND S | NUG TIGHT |
| 1-1 | /2" BOLTS UP | TO AND INCLUDING 6.0 | INCH LENGTH +1 | /3 TURN BEYOND S | NUG TIGHT |

BOLT LENGTHS OVER FOUR DIAMETERS BUT NOT EXCEEDING EIGHT DIAMETERS

| 1/2 | BOL 13 2.23 TO 4.0 INCH LENGTH | + 1/2 TURN BE TUND SNUG TIGHT |
|--------|--------------------------------|-------------------------------|
| 5/8" | BOLTS 2.75 TO 5.0 INCH LENGTH | +1/2 TURN BEYOND SNUG TIGHT |
| 3/4" | BOLTS 3.25 TO 6.0 INCH LENGTH | +1/2 TURN BEYOND SNUG TIGHT |
| 7/8" | BOLTS 3.75 TO 7.0 INCH LENGTH | +1/2 TURN BEYOND SNUG TIGHT |
| 1" | BOLTS 4.25 TO 8.0 INCH LENGTH | +1/2 TURN BEYOND SNUG TIGHT |
| 1-1/8" | BOLTS 4.75 TO 9.0 INCH LENGTH | +1/2 TURN BEYOND SNUG TIGHT |
| 1-1/4" | BOLTS 5.25 TO 10.0 INCH LENGTH | +1/2 TURN BEYOND SNUG TIGHT |
| 1-3/8" | BOLTS 5.75 TO 11.0 INCH LENGTH | +1/2 TURN BEYOND SNUG TIGHT |
| 1-1/2" | BOLTS 6.25 TO 12.0 INCH LENGTH | +1/2 TURN BEYOND SNUG TIGHT |

SPLICE BOLTS SUBJECT TO DIRECT TENSION SHALL BE INSTALLED AND TIGHTENED AS PER SECTION
 8.2.1 OF THE AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING A325 OR A490 BOLTS", LOCATED IN
 THE AISC MANUAL OF STEEL CONSTRUCTION. THE INSTALLATION PROCEDURE IS PARAPHRASED AS
 FOLLOWS:

FASTENERS SHALL BE INSTALLED IN PROPERLY ALIGNED HOLES AND TIGHTENED BY ONE OF THE METHODS DESCRIBED IN SUBSECTION 8.2.1 THROUGH 8.2.4.

8.2.1 TURN-OF-NUT PRETENSIONING

BOLTS SHALL BE INSTALLED IN ALL HOLES OF THE CONNECTION AND BROUGHT TO A SNUG TIGHT CONDITION AS DEFINED IN SECTION 8.1, UNTIL ALL THE BOLTS ARE SIMULTANEOUSLY SNUG TIGHT AND THE CONNECTION IS FULLY COMPACTED. FOLLOWING THIS INITIAL OPERATION ALL BOLTS IN THE CONNECTION SHALL BE TIGHTENED FURTHER BY THE APPLICABLE AMOUNT OF ROTATION SPECIFIED ABOVE. DURING THE TIGHTENING OPERATION THERE SHALL BE NO ROTATION OF THE PART NOT TURNED BY THE WRENCH. TIGHTENING SHALL PROGRESS

 ALL OTHER BOLTED CONNECTIONS SHALL BE BROUGHT TO A SNUG TIGHT CONDITION AS DEFINED IN SECTION 8.1 OF THE SPECIFICATION.

ALL BOLT HOLES SHALL BE ALIGNED TO PERMIT INSERTION OF THE BOLTS WITHOUT UNDUE DAMAGE TO THE THREADS. BOLTS SHALL BE PLACED IN ALL HOLES WITH WASHERS POSITIONED AS REQUIRED AND NUTS THREADED TO COMPLETE THE ASSEMBLY. COMPACTING THE JOINT TO THE SNUG-TIGHT CONDITION SHALL PROGRESS SYSTEMATICALLY FROM THE MOST RIGID PART OF THE JOINT. THE SNUG-TIGHTENED CONDITION IS THE TIGHTNESS THAT IS ATTAINED WITH A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF AN IRONWORKER USING AN ORDINARY SPUD WRENCH TO BRING THE CONNECTED PLIES INTO FIRM CONTACT.

APPLICABLE CODES AND STANDARDS

- ANSI/TIA: STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES, 222-G EDITION.
- 2. 2018 CONNECTICUT STATE BUILDING CODE.
- 2015 INTERNATIONAL BUILDING CODE.
- ACI 318: AMERICAN CONCRETE INSTITUTE, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, 318-02.
- 5. CRSI: CONCRETE REINFORCING STEEL INSTITUTE, MANUAL OF STANDARD PRACTICE. LATEST EDITION.
- AISC: AMERICAN INSTITUTE OF STEEL CONSTRUCTION, MANUAL OF STEEL
 CONSTRUCTION, LATEST EDITION.
- AWS: AMERICAN WELDING SOCIETY D1.1, STRUCTURAL WELDING CODE, LATEST EDITION.

SPECIAL INSPECTION

- A QUALIFIED INDEPENDENT TESTING LABORATORY, EMPLOYED BY THE OWNER, SHALL PERFORM INSPECTION AND TESTING IN ACCORDANCE WITH IBC 2015, SECTION 1704 AS REQUIRED BY PROJECT SPECIFICATIONS FOR THE FOLLOWING CONSTRUCTION WORK:
 - a) STRUCTURAL WELDING (CONTINUOUS INSPECTION OF FIELD WELD ONLY)
 - b) HIGH STRENGTH BOLTS (PERIODIC INSPECTION OF A325 EXTENSION FLANGE BOLTS TO BE TIGHTENED PER "TURN-OF-THE-NUT" METHOD)
- 2. THE INSPECTION AGENCY SHALL SUBMIT INSPECTION AND TEST REPORTS TO THE BUILDING DEPARTMENT, THE ENGINEER OF RECORD, AND THE OWNER IN ACCORDANCE WITH IBC 2015, SECTION 1704, UNLESS THE FABRICATOR IS APPROVED BY THE BUILDING OFFICIAL TO PERFORM SUCH WORK WITHOUT THE SPECIAL INSPECTIONS.

GC As-Builts Structural Components Ryan Hubert 3.23.2020

Passing MI Report Tuesday, March 24, 2020 Hannah Childers, CWI



AMERICAN TOWER®

A.T. ENGINEERING SERVICE, PLLC

3500 REGENCY PARKWAY

SUITE 100

CARY, NC 27518

PHONE: (919) 468-0112

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ATC SITE NUMBER:

302473

ATC SITE NAME:

E H F R - PRESTIGE PARK

CONNECTICUT

SITE ADDRESS: 310 PRESTIGE PARK RD. EAST HARTFORD, CT 06108

DRAWN BY: CWB

APPROVED BY: CDW/KCI

DATE DRAWN: 04/01/19

ATC JOB NO: OAA745293_C6_06

IBC GENERAL NOTES

SHEET NUMBER:

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REVISION

MODIFICATION INSPECTION NOTES

THE SPECIAL INSPECTION (SI) PROCEDURE IS INTENDED TO CONFIRM THAT CONSTRUCTION AND INSTALLATION MEETS ENGINEERING DESIGN, ATC PROCEDURES AND ATC STANDARD SPECIFICATIONS FOR WIRELESS TOWER

TO ENSURE THAT THE REQUIREMENTS OF THE SI ARE MET, IT IS VITAL THAT THE GENERAL CONTRACTOR AND THE INSPECTOR BEGIN COMMUNICATING AND COORDINATING AS SOON AS A PO IS RECEIVED FROM AMERICAN TOWER CORPORATION (ATC.) IT IS EXPECTED THAT EACH PARTY WILL PROACTIVELY REACH OUT TO THE OTHER PARTY IF CONTACT INFORMATION IS NOT KNOWN, CONTACT YOUR AMERICAN TOWER POINT OF CONTACT.

SPECIAL INSPECTOR

THE SPECIAL INSPECTOR IS REQUIRED TO CONTACT THE GENERAL CONTRACTOR AS SOON AS RECEIVING A PO FROM ATC. UPON RECEIVING A PO FROM ATC THE SPECIAL INSPECTOR AT A MINIMUM MUST:

- REVIEW THE REQUIREMENTS OF THE SI CHECKLIST.
- WORK WITH THE GENERAL CONTRACTOR TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS.
- . ANY CONCERNS WITH THE SCOPE OF WORK OR PROJECT COMMITMENT MUST BE RELAYED TO THE ATC POINT OF CONTACT IMMEDIATELY.

THE SPECIAL INSPECTOR IS RESPONSIBLE FOR COLLECTING ALL GENERAL CONTRACTOR INSPECTION AND TEST REPORTS, REVIEWING THESE DOCUMENTS FOR ADHERENCE TO CONTRACT DOCUMENTS, CONDUCTING THE IN-FIELD INSPECTIONS, AND SUBMITTING THE SI REPORT TO AMERICAN TOWER CORPORATION.

GENERAL CONTRACTOR

THE GENERAL CONTRACTOR IS REQUIRED TO CONTACT THE SI INSPECTOR AS SOON AS RECEIVING A PO FOR THE MODIFICATION INSTALLATION OR TURNKEY PROJECT TO, AT A MINIMUM:

- REVIEW THE REQUIREMENTS OF THE SI CHECKLIST
- WORK WITH THE SI TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS.
- BETTER UNDERSTAND ALL INSPECTION AND TESTING REQUIREMENTS.

THE GENERAL CONTRACTOR SHALL PERFORM AND RECORD THE TEST AND INSPECTION RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE SI CHECKLIST.

> **Passing MI Report** Tuesday, March 24, 2020 Hannah Childers, CWI

GC As-Builts Structural Components Ryan Hubert 3.23.2020

| | SPECIAL INSPECTION CHECKLIST | | | | | | | |
|---|--|--------------------|-----------------|----------|--------------|----------------|----------|-------------|
| INSPECTION DOCUMENT | DESCRIPTION | INSPECTION TESTING | RESPONSIBILITY | s | REVIEW REQUI | EVIEW REQUIRED | | N FREQUENCY |
| INGI ESTION DOSCIMENT | DESCRIPTION | REQUIRED | KEOI ONOIBIEITT | PRE CX | DURING CX | POST CX | PERIODIC | CONTINUOUS |
| SPECIAL INSPECTION FIELD WORK & REPORT | DOCUMENTATION AND SITE VISIT CONDUCTED BY AN ATC APPROVED SPECIAL INSPECTOR AS REQUIRED BY ATC AND OTHER AUTHORITIES HAVING JURISDICTION. INSPECTION PARAMETERS TO FOLLOW ATC'S STANDARD SPECIFICATION FOR WIRELESS TOWER SITES. | • | SI | | | • | | |
| ENGINEERING ASSEMBLY DRAWINGS | GC SHALL SUBMIT DRAWINGS TO SI FOR INCLUSION IN SI REPORT | ✓ | GC | * | | | | |
| FABRICATED MATERIAL VERIFICATION & INSPECTION | MTR AND OR MILL CERTIFICATIONS FOR SUPPLIED MATERIALS GC SHALL SUPPLY SI WITH REPORTS TO BE INCLUDED IN SI REPORT WHEN REQUIRED BY ATC | * | SI | * | | | | |
| CERTIFIED WELD INSPECTION | INSPECTION AND REPORT OF STRUCTURAL WELDING PERFORMED DURING PROJECT COMPLETED BY A CWI AND INCLUDED WITHIN SI REPORT | • | GC / TA | * | • | * | • | |
| FOUNDATION INSPECTION & VERIFICATION | VISUAL OBSERVATION AND APPROVAL OF FOUNDATION EXCAVATION, REBAR PLACEMENT, CASING/SHORING/FORMING PLACEMENT, AND ANCHOR TEMPLATE AND ANCHOR PLACEMENT - TO BE SI APPROVED PRIOR TO CONCRETE POUR AND DOCUMENTED IN THE SI REPORT | | SI | | | | | |
| ANCHOR, ROCK ANCHOR OR HELICAL PULL-OUT TEST | PULL TESTING OF INSTALLED ANCHORS TO BE COMPLETED AND DOCUMENTED IN SI REPORT | | GC / TA | | | | | |
| CONCRETE INSPECTION & VERIFICATION | CONCRETE MIX DESIGN, SLUMP TEST, COMPRESSIVE TESTING, AND SAMPLE GATHERING TECHNIQUES ARE TO BE PROVIDED FOR INCLUSION IN THE SI REPORT. SI SHALL VERIFY CONCRETE PLACEMENT AS REQUIRED BY THE DESIGN DOCUMENTS (INSPECTION FREQUENCY IS MARKED CONTINUOUS) | | GC / TA | | | | | |
| DYWIDAG PLACEMENT/ANCHOR BOLT EMBEDMENT - EPOXY/GROUT INSTALL | ANCHOR/BAR EMBEDMENT, HOLE SIZE, EPOXY/GROUT TYPE, INSTALLATION TEMPERATURE AND INSTALLATION SHALL BE VERIFIED BY THE SI AND INCLUDED IN THE SI REPORT | • | GC / SI | | * | | | ✓ |
| BASE PLATE GROUT INSPECTION & VERIFICATION | BASE PLATE GROUTING TYPE AND PLACEMENT SHALL BE CONFIRMED BY THE SI AND INCLUDED IN THE SI REPORT | | GC / SI | | | | | |
| EARTHWORK INSPECTION & VERIFICATION | EXCAVATION, FILL, SLOPE, GRADE AND OTHER EARTHWORK REQUIREMENTS PER PLANS SHALL BE VERIFIED BY THE SI AND INCLUDED IN THE SI REPORT | | GC / TA | | | | | |
| COMPACTION VERIFICATION | CONTRACTOR SHALL PROVIDE AN INDEPENDENT THIRD PARTY CERTIFIED INSPECTION WHICH PROVIDES TEST RESULTS FOR COMPACTION TEST OF SOILS IN PLACE TO ASTM STANDARDS. | | GC / TA | | | | | |
| GROUND TESTING & VERIFICATION | GC SHALL PROVIDE DOCUMENTATION SHOWING THAT THE GROUNDING SYSTEM SHALL HAVE A MEASURED RESISTANCE TO THE GROUND OF NOT MORE THAN THE RECOMMENDED 10 OHMS. PER THE ATC CONSTRUCTION SPECIFICATION UNDER SECTION 2.15 THIS DOCUMENTATION MUST BE AN INDEPENDENT CERTIFICATION. | | GC | | | | | |
| STEEL CONSTRUCTION INSPECTION & VERIFICATION | VISUAL OBSERVATION AND APPROVAL OF STEEL CONSTRUCTION TO BE PERFORMED BY THE SI. INSPECTION TO INCLUDE VERIFICATION OF NEW CONSTRUCTION OR MODIFICATION OF EXISTING CONSTRUCTION PER ENGINEERED PLANS. DETAILED VERIFICATION SHALL BE INCLUDED IN SI REPORT. | * | SI | | | * | * | |
| ON-SITE COLD GALVANIZING VERIFICATION | SI SHALL VERIFY WITH GC ALL COLD GALVANIZATION TYPE AND APPLICATION AND INCLUDE SUMMARY IN SI REPORT | ✓ | GC | | | * | • | |
| GUY WIRE TENSIONING & TOWER ALIGNMENT REPORT | GC SHALL PROVIDE SI EVIDENCE OF PROPER GUY TENSIONING AND TOWER PLUMB PER PLANS. SI SHALL VERIFY AND INCLUDE PLUMB AND TENSION REPORTING IN SI REPORT. | | GC | | | | | |
| GC AS-BUILT DRAWINGS WITH CONSTRUCTION RED-LINES | GC SHALL SUBMIT "AS-BUILT" DRAWINGS INDICATING ANY APPROVED CHANGES TO ENGINEERED PLANS TO SI FOR APPROVAL/REVIEW AND INCLUSION IN SI REPORT | • | GC | | | * | | |
| SI AS-BUILT DRAWINGS WITH INSPECTION RED-LINES (AS REQUIRED) | SI SHALL SUBMIT "AS-BUILT" DRAWINGS INDICATING ANY APPROVED CHANGES TO ENGINEERED PLANS WITHIN SI REPORT | ✓ | SI | | | • | | |
| TIA INSPECTION | SI SHALL COMPLETE TIA INSPECTION AND PROVIDE SEPARATE TIA INSPECTION DOCUMENTATION TO ATC CM | | SI | | | | | |
| PHOTOGRAPHS | PHOTOGRAPHIC EVIDENCE OF SPECIAL INSPECTION, ON SITE REMEDIATION, AND ITEMS FAILING INSPECTION & REQUIRING FOLLOW UP TO BE INCLUDED WITHIN THE SI REPORT. COMPLETE PHOTO LOG IS TO BE SUBMITTED WITHIN SI REPORT. | • | GC / SI | | | * | | |

NOTE: SPECIAL INSPECTIONS ARE INTENDED TO BE A COLLABORATIVE EFFORT BETWEEN GC AND SI. WHENEVER POSSIBLE GC IS TO PROVIDE SI WITH PHOTOGRAPHIC OR OTHER ACCEPTABLE EVIDENCE OF PROPER INSTALLATION IF PERIODIC INSPECTION FREQUENCY IS ACCEPTABLE. THE GC AND SI SHALL WORK TO COMPILE EVIDENCE OF PROPER CONSTRUCTION AND LIMIT THE NUMBER OF SI SITE VISITS REQUIRED.

SI - ATC APPROVED SPECIAL INSPECTOR CX - CONSTRUCTION

GC - GENERAL CONTRACTOR

CM - CONSTRUCTION MANAGER TA - 3RD PARTY TESTING AGENCY

ATC - AMERICAN TOWER CORPORATION





A.T. ENGINEERING SERVICE, PLLC 3500 REGENCY PARKWAY SUITE 100 **CARY, NC 27518** PHONE: (919) 468-0112 COA: PEC.0001553

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ATC SITE NUMBER: 302473

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EHFR-PRESTIGE PARK

CONNECTICUT

SITE ADDRESS: 310 PRESTIGE PARK RD. EAST HARTFORD, CT 06108

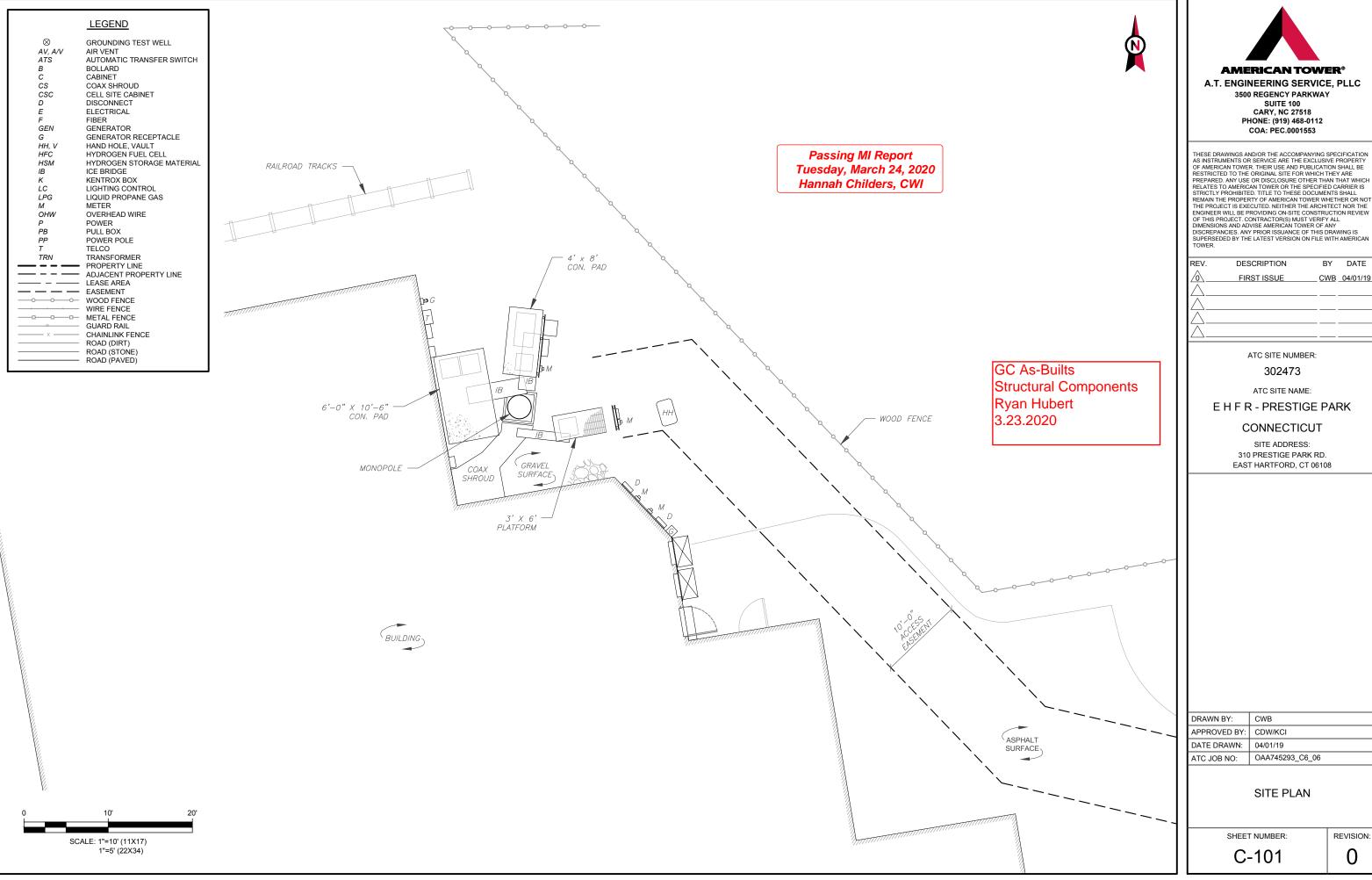
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SPECIAL INSPECTION **CHECKLIST**

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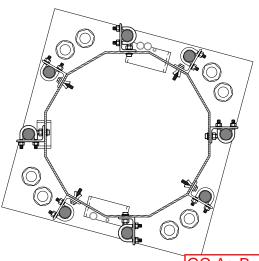
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| DATE DRAWN: | 04/01/19 |
| ATC JOB NO: | OAA745293_C6_06 |

Passing MI Report AT&T MOBILITY EL: 153.0' [PROPOSED] EL: 150.0' Tuesday, March 24, 2020 [TOP OF STRUCTURE] Hannah Childers, CWI A 3" long by 1/16" deep gouge is present in plate 2 on flat 1 below the upper termination bolts. SECTION 4 MOUNT MAY REQUIRE SUPPORT AND RE-MOUNTING DURING INSTALLATION. **INSTALL (4) PLATE REINFORCEMENTS** FROM EL: 90.0' TO 110.0'. AND EL: 110.0' INSTALL (3) PLATE REINFORCEMENTS [PL 1 1/4" X 5"] FROM EL: 110.0' TO 120.0' SEE SHEETS A-4 THRU A-4B FOR INSTALLATION DETAILS & UPGRADE 1"Ø FLANGE BOLTS WITH NEW 1"Ø X 3 3/4" A490 BOLTS [BK-1000-375-A490-MAG] SEE FLANGE BOLT INSTALLATION DETAIL. SECTION 3 shim plates were installed to avoid the horizontal tower seam weld. EL: 73.6' SECTION 2 EL: 35.7' SECTION 1 INSTALL (4) DYWIDAG #20 ALL THREAD RODS FROM EL: -7.5' TO 22.5'. SEE SHEETS A-2 TO A-3A FOR INSTALLATION DETAILS. EL: 0.0' [BOTTOM OF STRUCTURE] **TOWER ELEVATION VIEW**

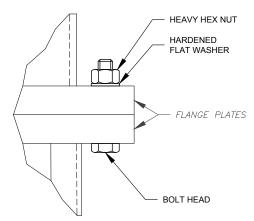
ADDITIONAL TOWER INFORMATION:

1. PRE-MOD MAPPING WAS COMPLETED FOR THIS PROJECT.



GC As-Builts Structural Components Ryan Hubert 3.23.2020

COAX DISTRIBUTION EXTERIOR ONLY



FLANGE BOLT INSTALLATION TYPICAL DETAIL

ALL FLANGE BOLTS SHALL BE TIGHTENED BY USING AISC/RCSC "TURN-OF-THE-NUT" METHODOLOGY. SEE SHEET IGN FOR DETAILS.

NOTES

- 1. PROPOSED AT&T MOBILITY COAX TO BE INSTALLED INSIDE MONOPOLE.
- . CONTACT AMERICAN TOWER FIELD OPERATIONS WHEN EXISTING EQUIPMENT INTERFERES WITH INSTALLATION OF MODIFICATIONS. ONCE APPROVED, EXISTING EQUIPMENT MAY BE TEMPORARILY MOVED DURING INSTALLATION & REINSTALLED TO THE ORIGINAL HEIGHT & LOCATION BY CONTRACTOR POST COMPLETION OF MODIFICATIONS.



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CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

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ATC SITE NUMBER:

302473

ATC SITE NAME:

E H F R - PRESTIGE PARK

CONNECTICUT

SITE ADDRESS: 310 PRESTIGE PARK RD. EAST HARTFORD, CT 06108

| RAWN BY: | CWB |
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| PPROVED BY: | CDW/KCI |
| ATE DRAWN: | 04/01/19 |
| TC JOB NO: | OAA745293_C6_06 |

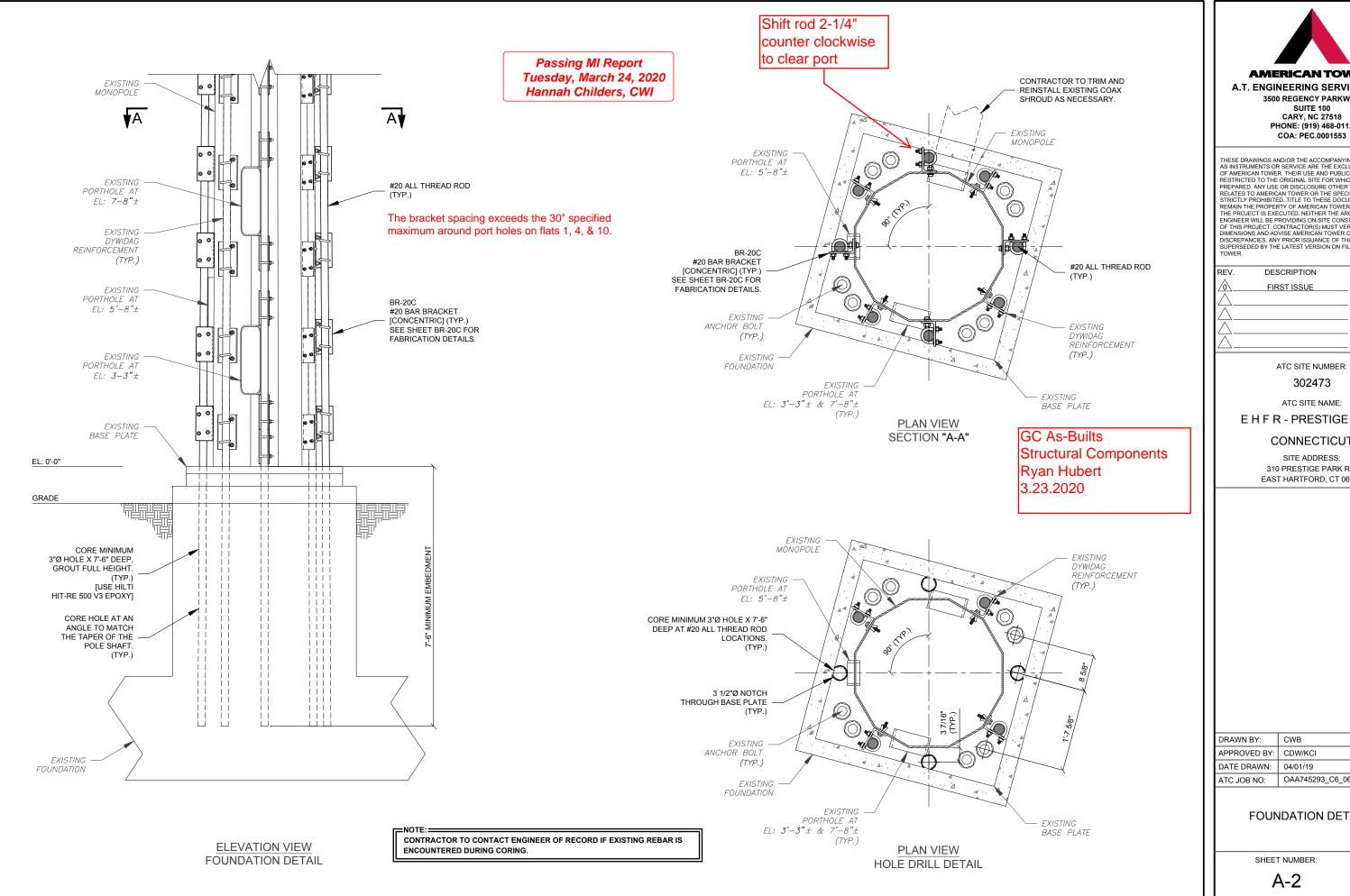
MODIFICATION PROFILE

SHEET NUMBER:

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EHFR-PRESTIGE PARK

CONNECTICUT

SITE ADDRESS: 310 PRESTIGE PARK RD. EAST HARTFORD, CT 06108

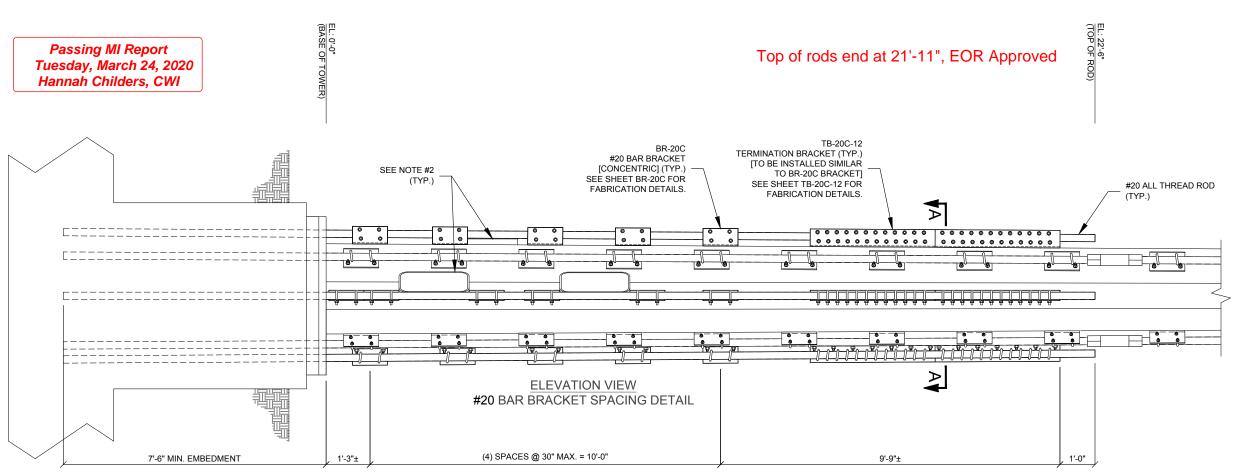
CWB CDW/KCI 04/01/19 OAA745293_C6_06

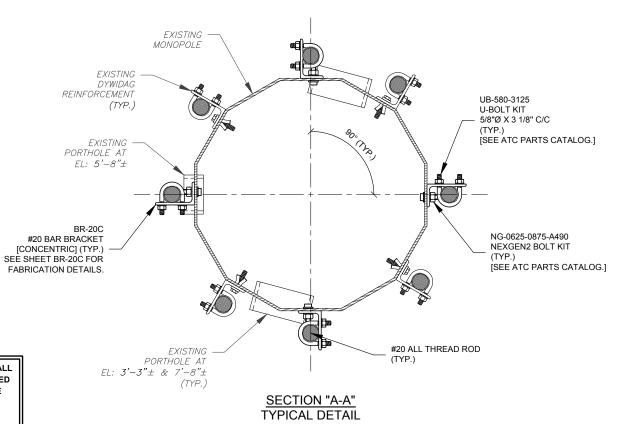
FOUNDATION DETAILS

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GC As-Builts Structural Components Ryan Hubert 3.23.2020



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| ATC JOB NO: | OAA745293_C6_06 |
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REINFORCEMENT **INSTALLATION DETAILS**

SHEET NUMBER:

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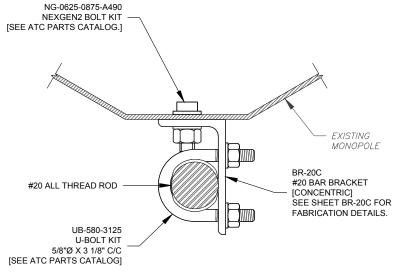
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REPLACE ANY EXISTING STEP BOLTS THAT INTERFERE WITH THE NEW #20 ALL THREAD ROD REINFORCEMENTS. THE NEW STEP BOLTS SHALL BE ATTACHED TO THE #20 ALL THREAD RODS IN THE SAME APPROXIMATE LOCATION. SEE SHEET #20SB FOR INSTALLATION DETAILS. 2. PLACE A BRACKET (BR-20C) DIRECTLY ABOVE AND BELOW ANY EXISTING

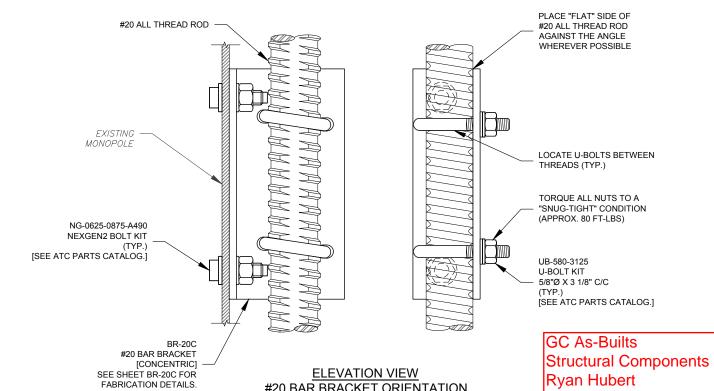
PORTHOLE AS REQUIRED.

3. SEE SHEET A-3A FOR #20 ALL THREAD ROD BRACKET INSTALLATION DETAILS.

Passing MI Report Tuesday, March 24, 2020 Hannah Childers, CWI



PLAN VIEW #20 BAR BRACKET ORIENTATION [CONCENTRIC]



#20 BAR BRACKET ORIENTATION

[CONCENTRIC]

3.23.2020



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ATC SITE NUMBER:

302473

ATC SITE NAME:

EHFR-PRESTIGE PARK

SITE ADDRESS: 310 PRESTIGE PARK RD. EAST HARTFORD, CT 06108

CONNECTICUT

DRAWN BY: CWB APPROVED BY: CDW/KCI DATE DRAWN: 04/01/19 ATC JOB NO: OAA745293_C6_06

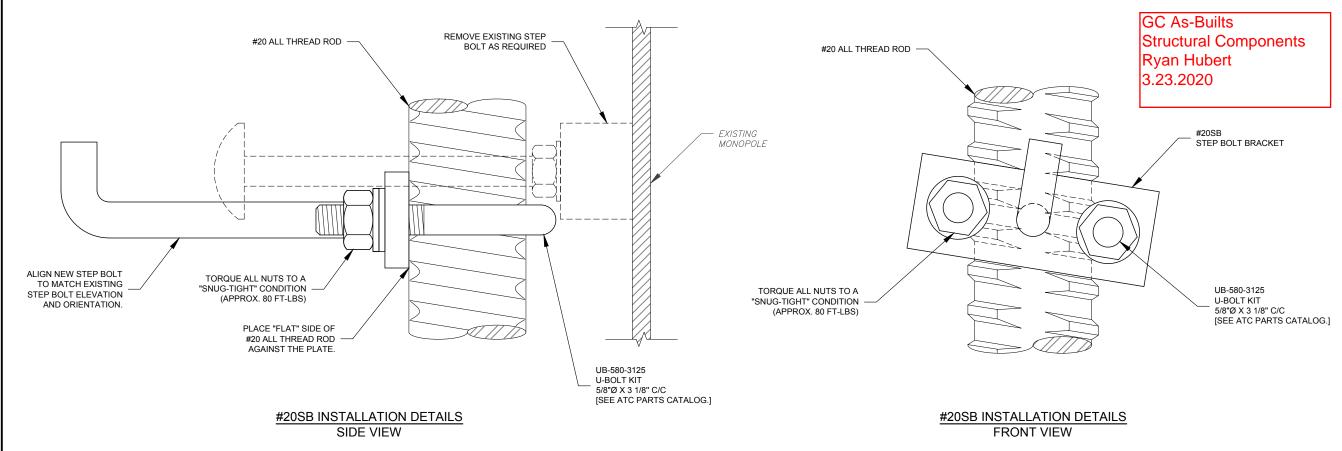
> REINFORCEMENT **INSTALLATION DETAILS** (CONT'D)

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STEP PEG SPACING IS NOT TO EXCEED 15" MAX. STAGGERED OR 30" MAX. ON ANY SINGLE SIDE OF THE DYWIDAG BAR.



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ATC SITE NUMBER:

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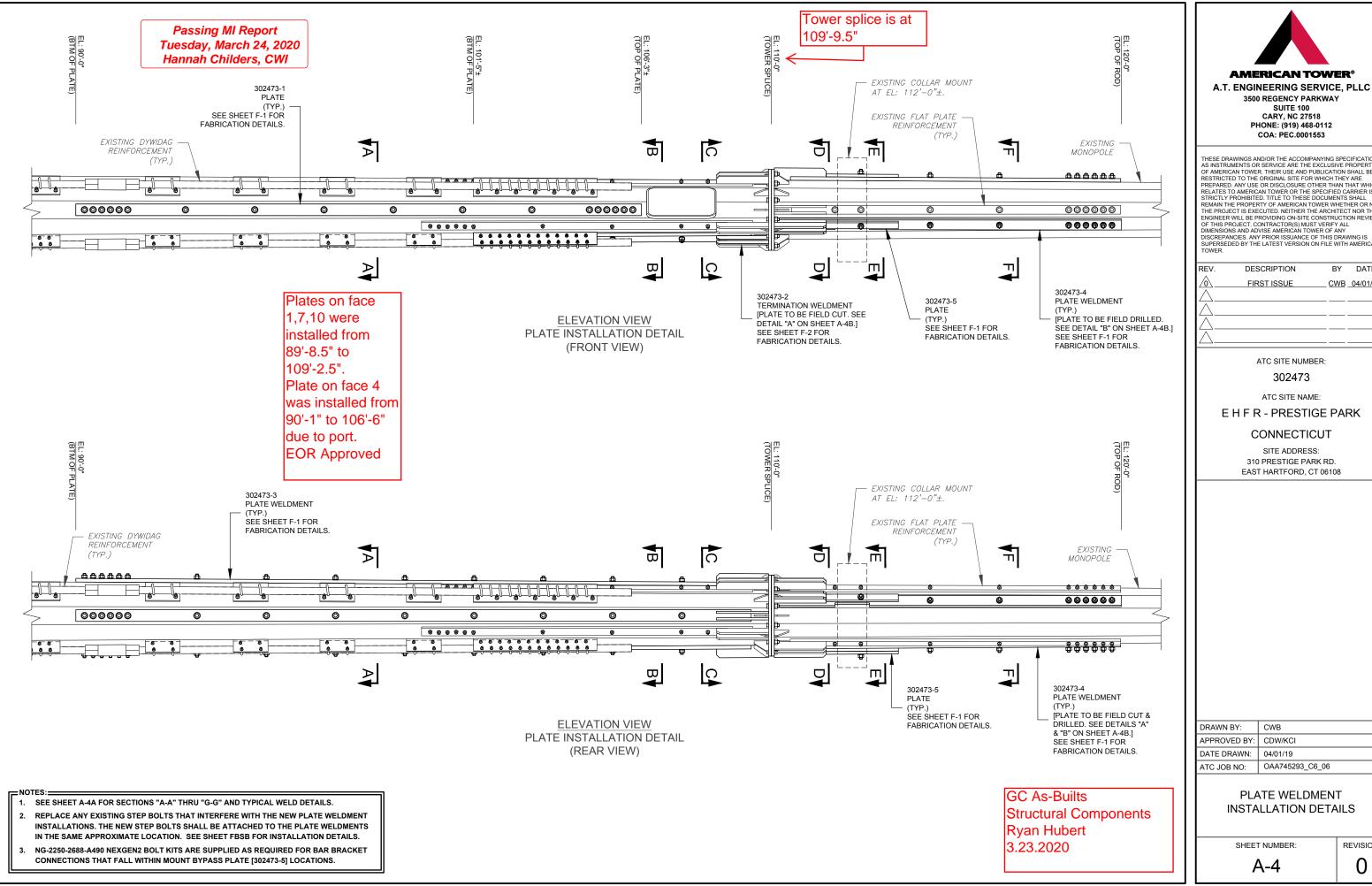
#20 STEP BOLT BRACKET INSTALLATION DETAILS

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REVISION:

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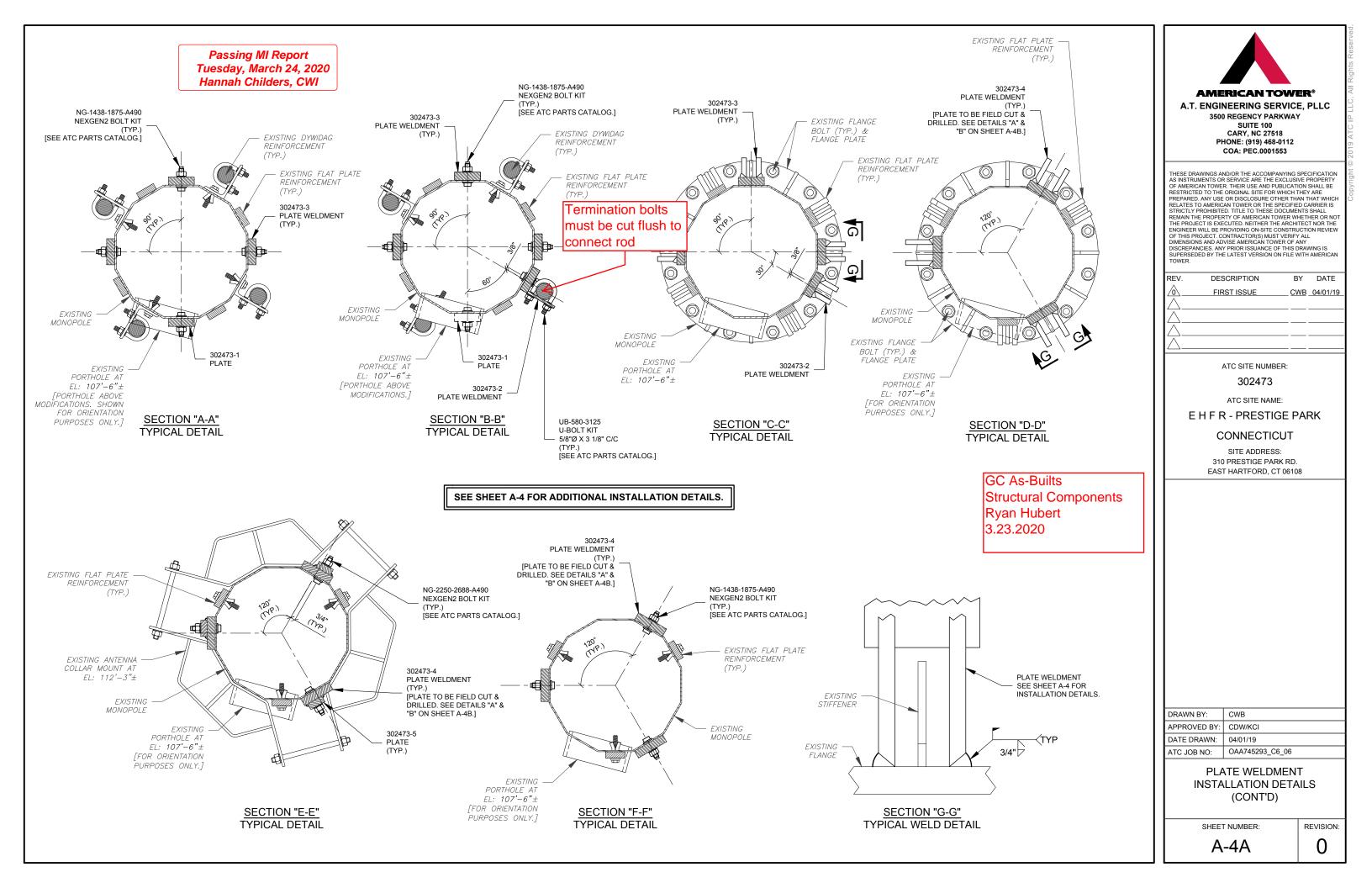
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310 PRESTIGE PARK RD. EAST HARTFORD, CT 06108

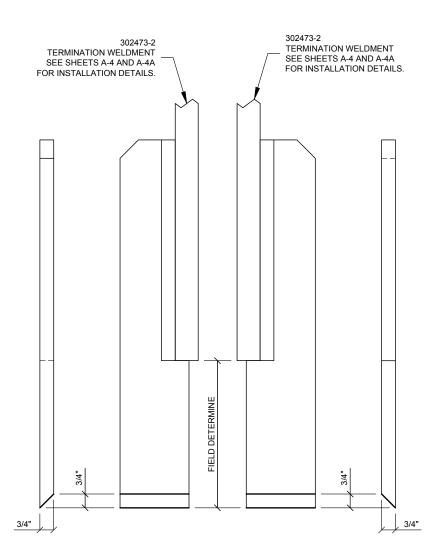
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INSTALLATION DETAILS

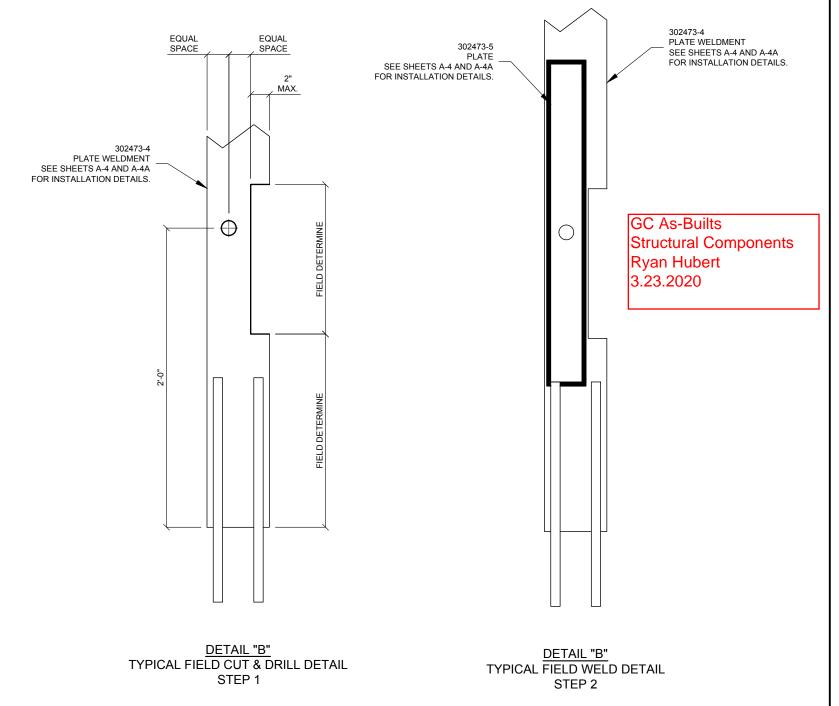
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DETAIL "A" FIELD CUT





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ATC SITE NUMBER:

302473

ATC SITE NAME:

E H F R - PRESTIGE PARK

CONNECTICUT

SITE ADDRESS: 310 PRESTIGE PARK RD. EAST HARTFORD, CT 06108

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DATE DRAWN: 04/01/19

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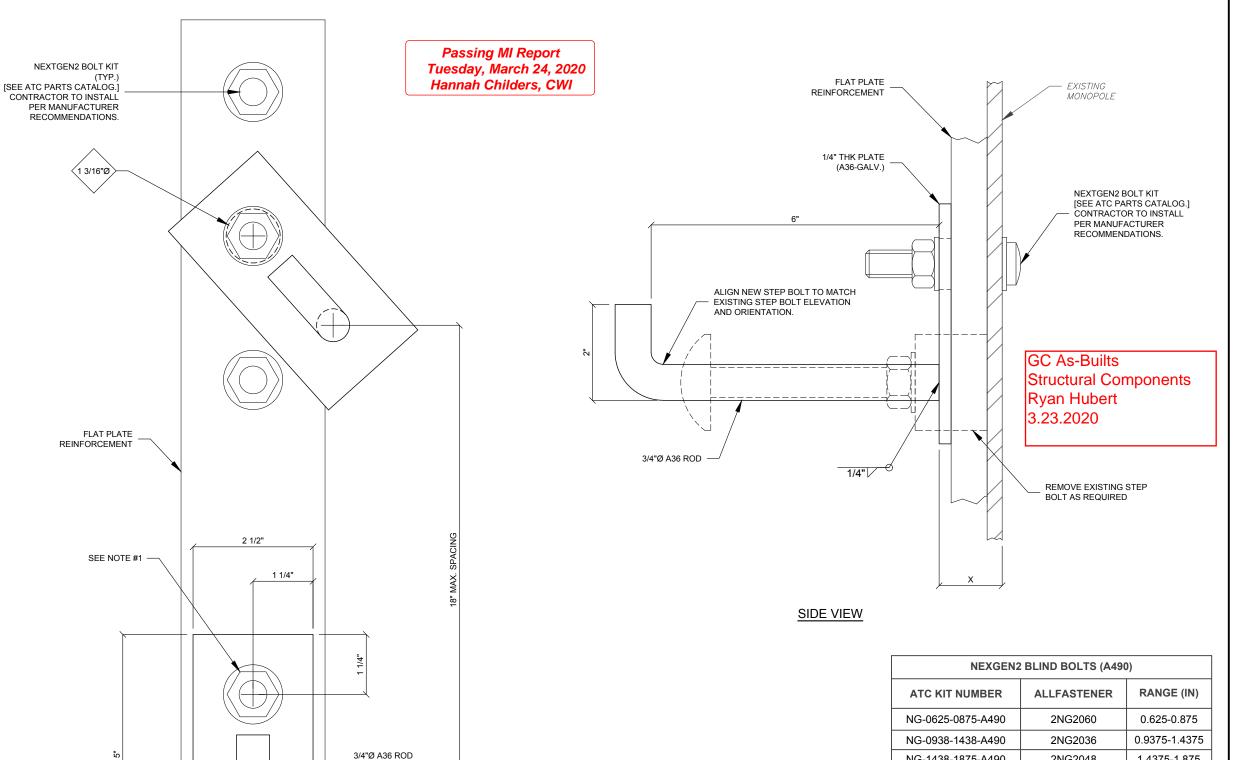
PLATE WELDMENT INSTALLATION DETAILS (CONT'D)

SHEET NUMBER:

REVISION:

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1/4" THK PLATE

(A36-GALV.)

FRONT VIEW

| NEXGEN2 BLIND BOLTS (A490) | | | | |
|----------------------------|-------------|---------------|--|--|
| ATC KIT NUMBER | ALLFASTENER | RANGE (IN) | | |
| NG-0625-0875-A490 | 2NG2060 | 0.625-0.875 | | |
| NG-0938-1438-A490 | 2NG2036 | 0.9375-1.4375 | | |
| NG-1438-1875-A490 | 2NG2048 | 1.4375-1.875 | | |
| NG-1875-2250-A490 | 2NG2057 | 1.875-2.25 | | |
| NG-2250-2688-A490 | 2NG2068 | 2.25-2.6875 | | |
| NG-2688-3750-A490 | 2NG2096 | 2.6875-3.75 | | |
| NG-3750-5000-A490 | 2NG2127 | 3.75-5 | | |
| NG-5000-8313-A490 | 2NG2212 | 5-8.3125 | | |

- 1. BLIND BOLT LENGTHS TO BE VERIFIED PRIOR TO FLAT PLATE AND STEP BOLT INSTALLATION. USE NEXGEN2 BLIND BOLT
- 2. STEP PEG SPACING IS NOT TO EXCEED 15" MAX. STAGGERED OR 30" MAX. ON ANY SINGLE SIDE OF THE FLAT PLATE.



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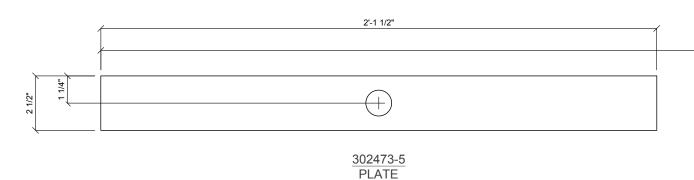
> FLAT PLATE STEP BOLT **BRACKET FABRICATION & INSTALLATION DETAILS**

> > SHEET NUMBER:

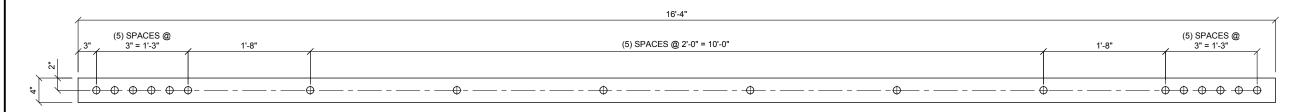
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302473-1 PLATE





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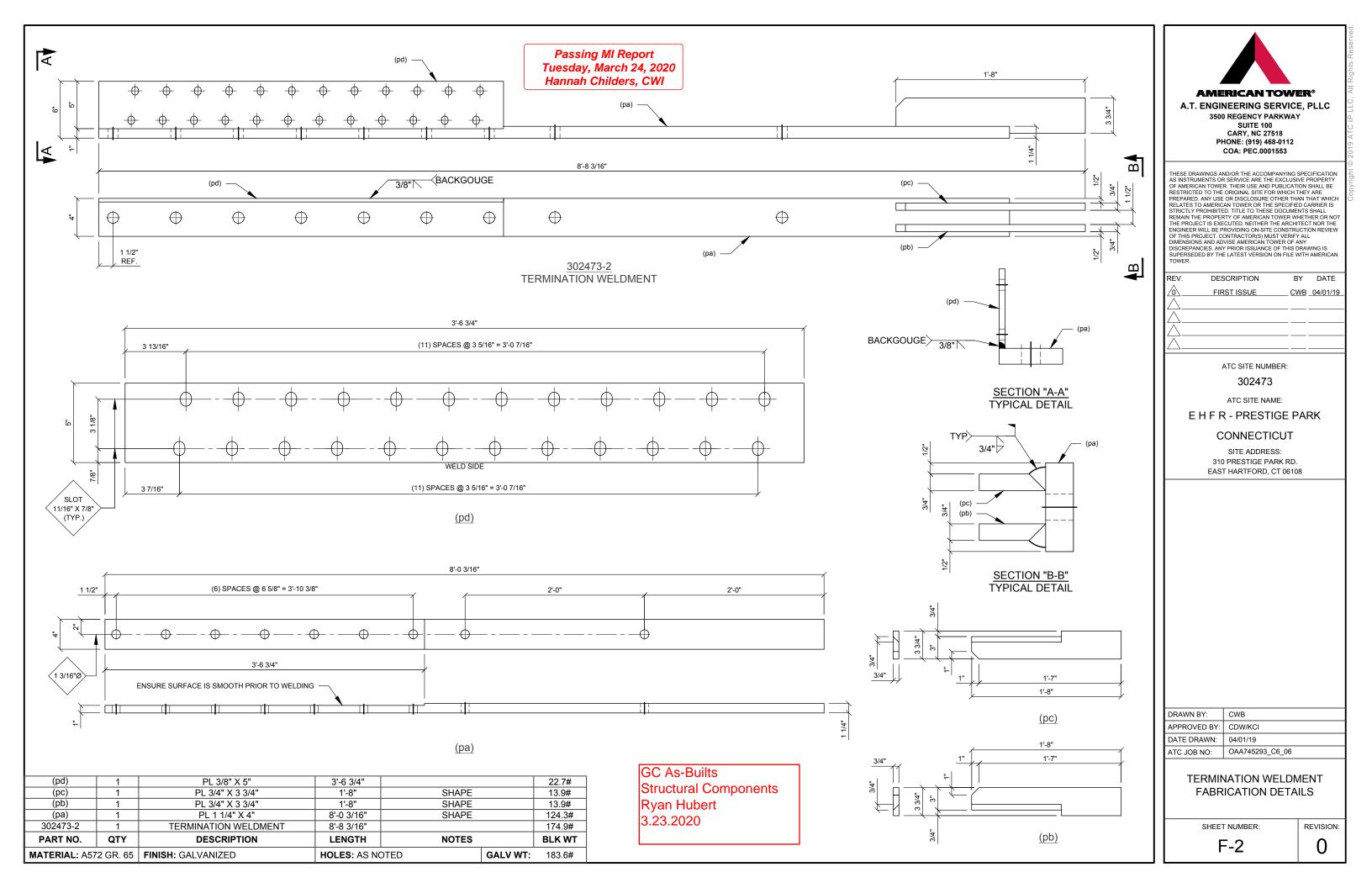
PLATE FABRICATION DETAILS

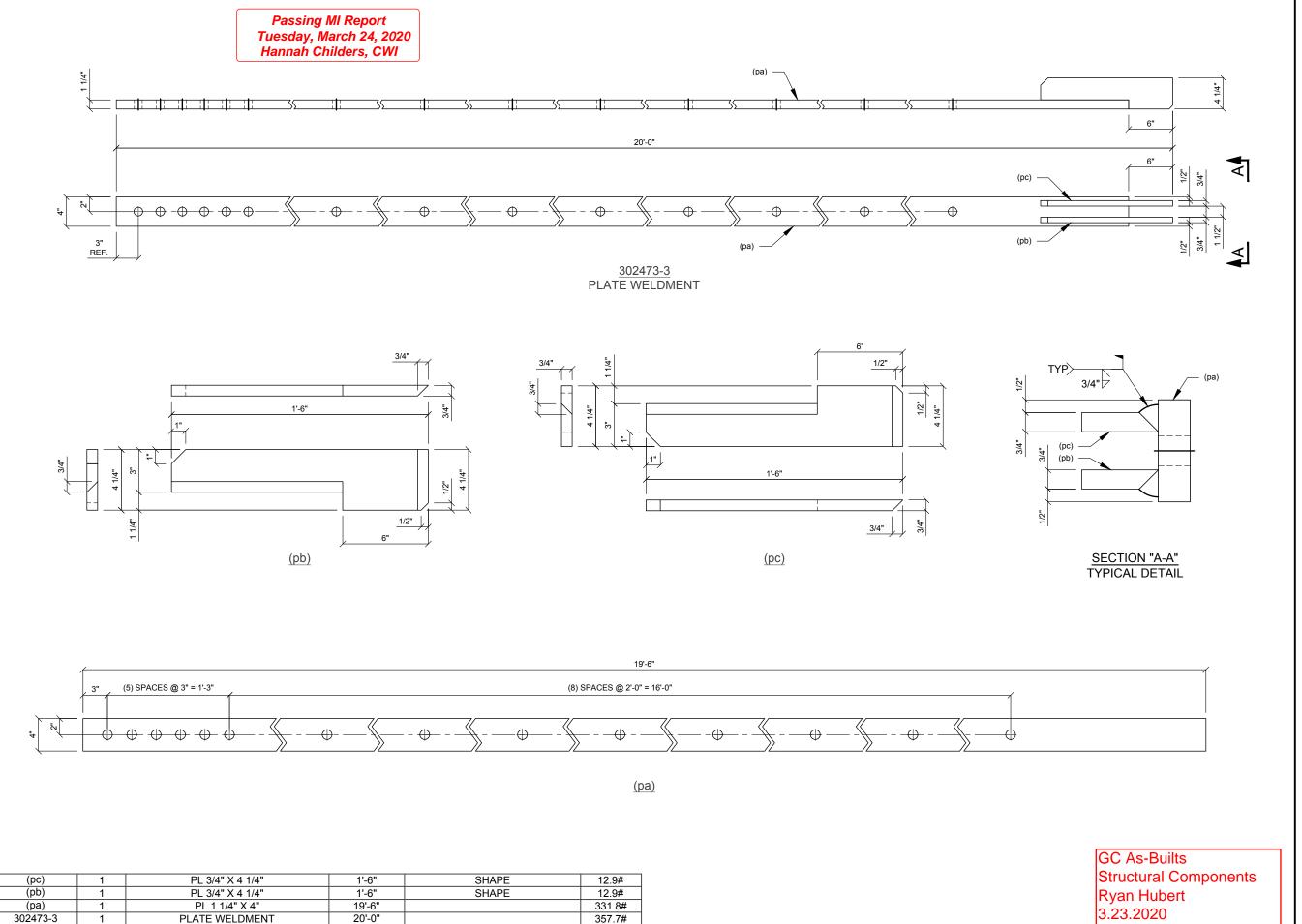
SHEET NUMBER:

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REVISION:





NOTES

BLK WT

375.5#

GALV WT:

LENGTH

HOLES: 1 3/16"Ø

PART NO.

QTY

MATERIAL: A572 GR. 65 | FINISH: GALVANIZED

DESCRIPTION



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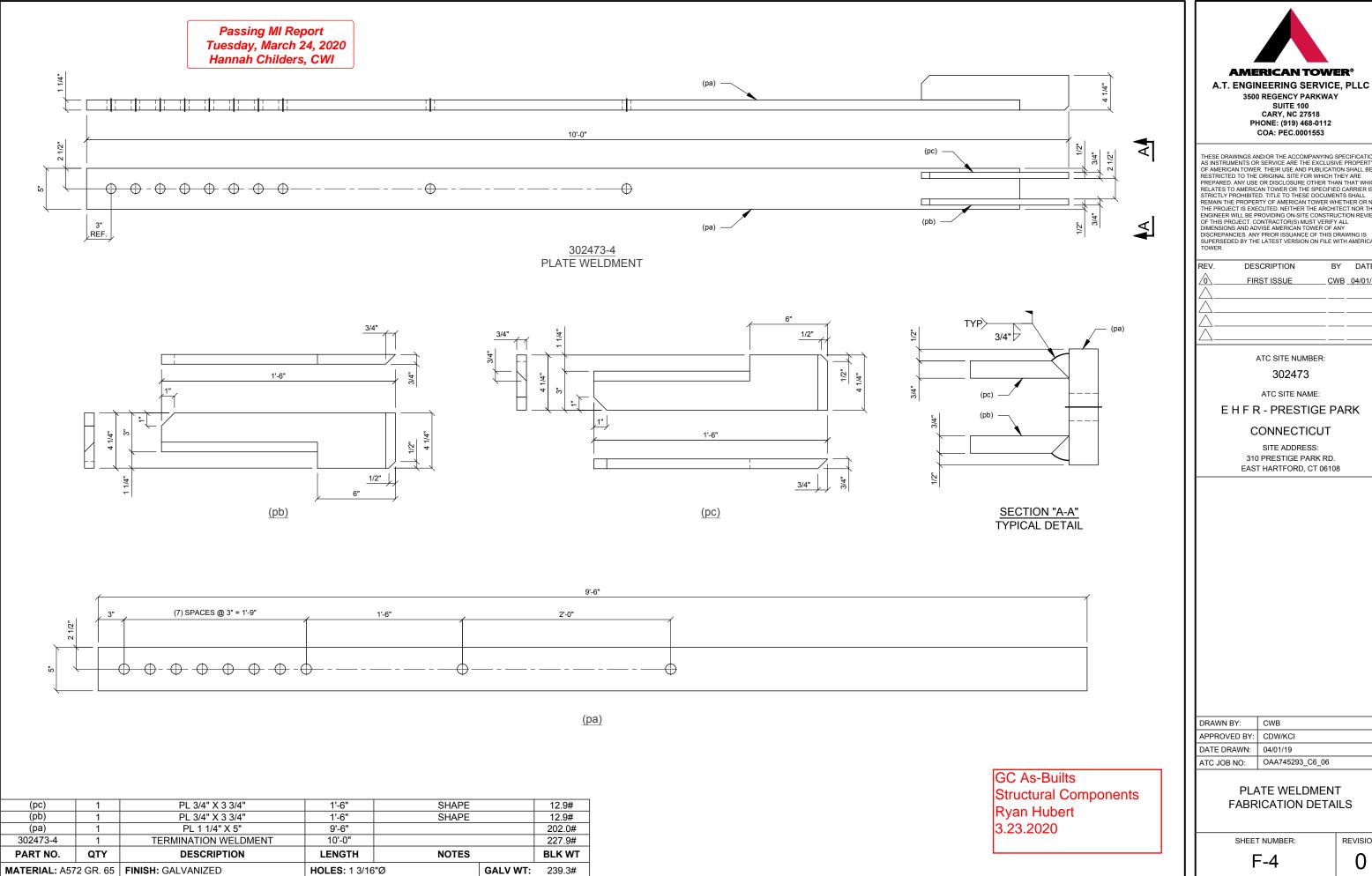
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| CDW/KCI |
| 04/01/19 |
| OAA745293_C6_06 |
| |

PLATE WELDMENT FABRICATION DETAILS

SHEET NUMBER:

F-3

REVISION





3500 REGENCY PARKWAY SUITE 100 CARY, NC 27518 PHONE: (919) 468-0112 COA: PEC.0001553

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| REV | . DESCRIPTION | BY | DATE |
|---------------------|---------------|-----|----------|
| \wedge | FIRST ISSUE | CWB | 04/01/19 |
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| I — , | | | |

EHFR-PRESTIGE PARK

310 PRESTIGE PARK RD. EAST HARTFORD, CT 06108

| DRAWN BY: | CWB |
|--------------|-----------------|
| APPROVED BY: | CDW/KCI |
| DATE DRAWN: | 04/01/19 |
| ATC JOB NO: | OAA745293_C6_06 |

FABRICATION DETAILS

REVISION: 0

CONSTRUCTION COMPLIANCE VERIFICATION



3/19/2019

RE: 302473 E H F R Prestige Park 310 Prestige Park Road East Hartford, CT 06108

Subject: Warranty Letter

To Whom It May Concern:

Structural Components warrants all labor performed and material installed at the abovementioned job site, in accordance with the contract, drawings, specifications, alterations and additions thereto, for a period of (1) one year from date of installation. This warranty does not include normal wear and tear, and/or product abuse.

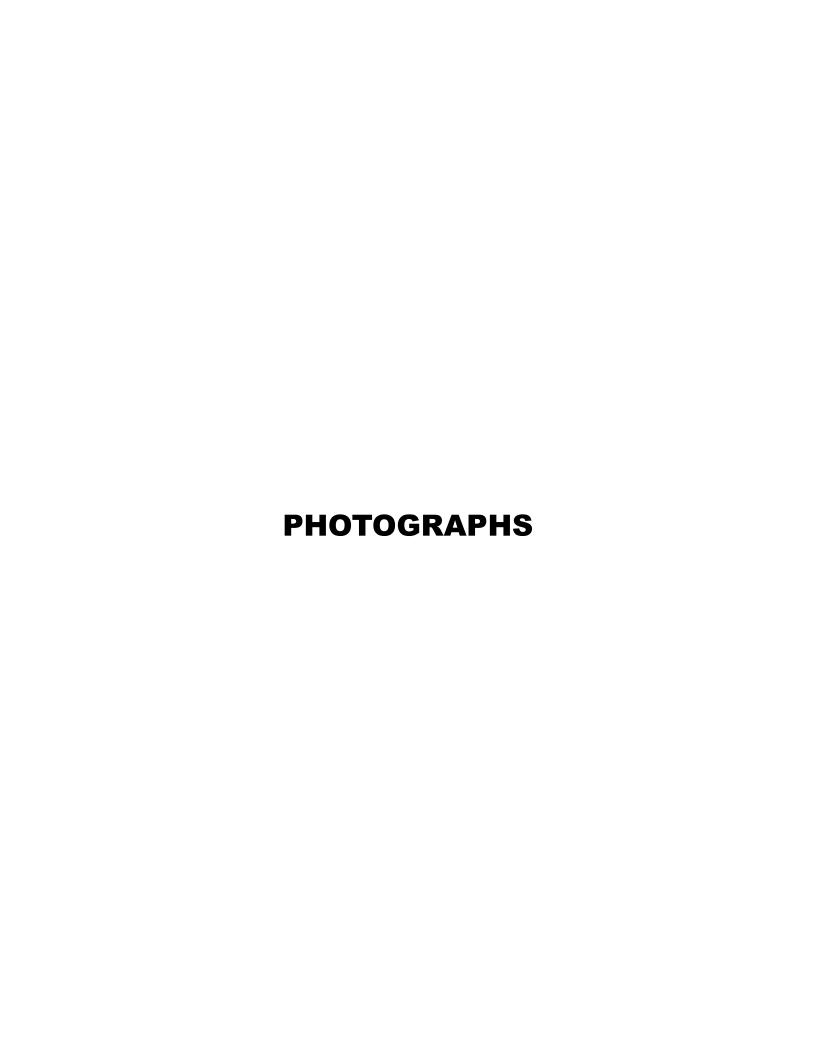
Structural Components will be provided the opportunity to have one of its representatives assess any damage identified to be caused by Structural Components employees and/or material installed by Structural Components. If said damage is judged to be the fault of Structural Components workmanship and/or material, Structural Components will at no cost to the Owner repair or replace defective material.

PRODUCT LIMITED WARRANTY. The Products shall perform in accordance with the Company's published limited warranty therefore (the "Limited Warranty"). In the event Customer reasonably determines that any of the Products may have failed to perform in accordance with such limited warranty, Customer acknowledges and agrees that its sole and exclusive remedy for the same shall be set forth in the Limited Warranty.

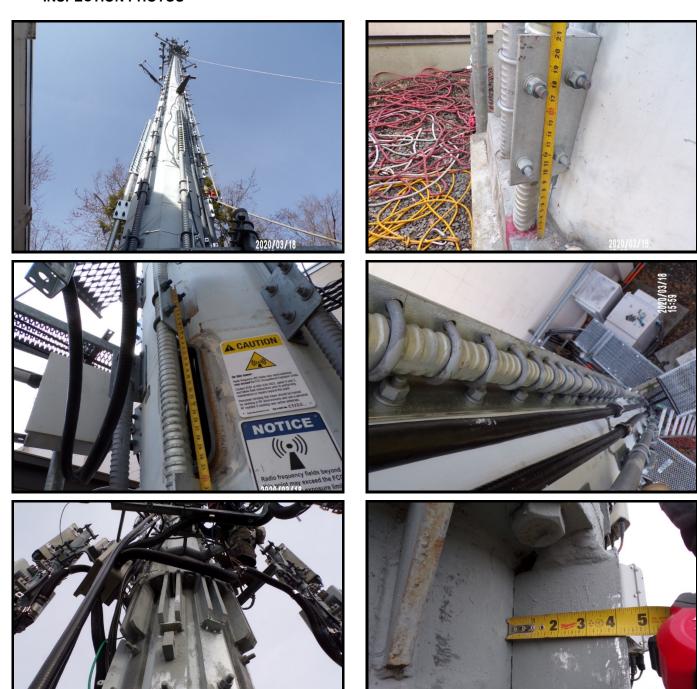
Sincerely,

Ryan Hubert Project Manager

Rym Hulet



INSPECTION PHOTOS



CONTRACTOR PHOTOGRAPHS

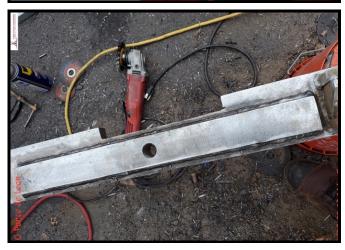












ENGINEER OF RECORD CORRESPONDENCE

From: Kingsley Igboanugo <kingsley.igboanugo@americantower.com>

Sent: Monday, March 23, 2020 5:10 PM

To: Christopher Jolly

Cc: Jon Rodgers; lan Culbert; PMI

Subject: RE: [EXTERNAL] EHFR Prestige Park, ATC# 302473, TEP# 68504 - MI Punchlist

This is approved.

From: Christopher Jolly < Christopher.Jolly@AmericanTower.com>

Sent: Monday, March 23, 2020 4:54 PM

To: Kingsley Igboanugo <kingsley.igboanugo@americantower.com>

Cc: Jon Rodgers < jon.rodgers@americantower.com>; lan Culbert < lan.Culbert@americantower.com>; PMI

<PMI@americantower.com>

Subject: RE: [EXTERNAL] EHFR Prestige Park, ATC# 302473, TEP# 68504 - MI Punchlist

Kingsley,

Please see below comments and respond.

Thanks,

Christopher Jolly, P.E. Structural Engineer III

American Tower Corporation

3500 Regency Parkway, Suite 100 Cary, NC 27518 (919) 466-5007

christopher.jolly@americantower.com

From: Ian Culbert < lan.Culbert@americantower.com>

Sent: Monday, March 23, 2020 4:45 PM
To: PMI <PMI@americantower.com>

Cc: Jon Rodgers < jon.rodgers@americantower.com >

Subject: FW: [EXTERNAL] EHFR Prestige Park, ATC# 302473, TEP# 68504 - MI Punchlist

Good Afternoon PMI,

Please see below from GC/PMI inspector regarding punch list item #4.

Thanks,

Ian Culbert

Construction Manager – East Region

American Tower Corporation

10 Presidential Way Woburn, MA 01801 781-926-7805 (Office) 603-401-9127 (Mobile)

Ian.Culbert@americantower.com



From: Ryan Hubert < rhubert@structuralcomponents.net >

Sent: Monday, March 23, 2020 4:43 PM

To: Ian Culbert < lan.Culbert@americantower.com>

Cc: Hannah Childers hchilders@tepgroup.net-; Lowell Scarrow lscarrow@structuralcomponents.net-; Fred Mansfield

<<u>fmansfield@metrositellc.com</u>>; Jon Rodgers <<u>jon.rodgers@americantower.com</u>>; Kent Ramey

<kent@metrositellc.com>; Scott Blake <Scott.Blake@AmericanTower.com>; Melissa Robinson

<mrobinson@metrositellc.com>; Suzanne Whitlock <suzanne@metrositellc.com>; Ashley Jones

<aiones@metrositellc.com>; Brittney Ballenger <bbs/>
ballenger@metrositellc.com>; Don Pruitt <don@metrositellc.com>;

Jeremy Tanner < <u>itanner@metrositellc.com</u>>; PMI < <u>PMI@tepgroup.net</u>>; Andrew Luter < <u>acluter@tepgroup.net</u>>

Subject: Re: [EXTERNAL] EHFR Prestige Park, ATC# 302473, TEP# 68504 - MI Punchlist

lan,

Could you please forward this onto PMI showing that the reason this plate ends at 106'-6" on flat 4 is due to the port hold obstruction that is noted on the drawings.

Thank you



On Mon, Mar 23, 2020 at 2:17 PM Hannah Childers https://www.ehenah.gov.net- wrote:

Can confirm, Ryan.

That was only on one flat (4) below the port hole. Note that plates begin at 89'-8.5" on flats **1, 7, and 10** and 90'-1" on flat **4.** I switched flats 4 and 10 below.





Thanks,

Hannah J. Childers, CWI

Project Lead . Tower Engineering Professionals, Inc. (www.tepgroup.net)

326 Tryon Road . Raleigh, NC 27603

Office: 919.661.6351 . Fax: 919.661.6350 . Mobile: 828.302.1955

On Mon, Mar 23, 2020 at 4:07 PM Ryan Hubert < rhubert@structuralcomponents.net wrote:

Hannah,

For punch item #4, I believe this plate ends at 106.5' due to the port. Can you please confirm and send through photos showing this face.

Thank you

Sent from my iPhone

> On Mar 23, 2020, at 1:59 PM, Ian Culbert < lan.Culbert@americantower.com wrote:

>

From: PMI <PMI@americantower.com>
Sent: Monday, March 23, 2020 3:53 PM

To: Jon Rodgers; Ian Culbert
Cc: Kingsley Igboanugo; PMI

Subject: RE: [EXTERNAL] EHFR Prestige Park, ATC# 302473, TEP# 68504 - MI Punchlist

Jon / lan,

Please see below responses to punch list issues.

Thanks,

Christopher Jolly, P.E.
Structural Engineer III

American Tower Corporation

3500 Regency Parkway, Suite 100 Cary, NC 27518 (919) 466-5007 christopher.jolly@americantower.com

From: Kingsley Igboanugo <kingsley.igboanugo@americantower.com>

Sent: Monday, March 23, 2020 8:56 AM **To:** PMI <PMI@americantower.com>

Subject: RE: [EXTERNAL] EHFR Prestige Park, ATC# 302473, TEP# 68504 - MI Punchlist

All Punch List are approved except #4.

Flat plates ending at 106.5' is not approved. They need to tell us if there are obstructions at the specified elevations, otherwise flat plates should be installed from 90-ft to 110-ft.

Please let me know if you any further questions.

Thanks,

Kingsley C. Igboanugo, PE

Structural Engineer III

American Tower Corporation

3500 Regency Parkway, Suite 100 Cary, NC 27518 919.466.5275 office 919.466.5415 fax

kingsley.igboanugo@americantower.com

TEXTING and DRIVING... It Can Wait. **Take the pledge** today and pass it on.

From: Jon Rodgers < jon.rodgers@americantower.com >

Sent: Friday, March 20, 2020 4:31 PM **To:** PMI < PMI@americantower.com>

Cc: lan Culbert <lan.Culbert@americantower.com>

Subject: FW: [EXTERNAL] EHFR Prestige Park, ATC# 302473, TEP# 68504 - MI Punchlist

Hi PMI,

Please review and advise on the punch items below.

Thanks,

Jon Rodgers

SR. Construction Manager

American Tower Corporation

10 Presidential Way Woburn, MA. 01801 (781)-926-7855 (Office) (617)-839-5143 (Mobile) jon.rodgers@americantower.com

From: Hannah Childers < hchilders@tepgroup.net>

Sent: Thursday, March 19, 2020 11:59 PM

To: Ryan Hubert < rhubert@structuralcomponents.net; Ian Culbert < lan.Culbert@americantower.com; Lowell Scarrow

- <lscarrow@structuralcomponents.net>; Fred Mansfield <fmansfield@metrositellc.com>; Jon Rodgers
- <jon.rodgers@americantower.com>; Kent Ramey <kent@metrositellc.com>; Scott Blake
- <<u>Scott.Blake@AmericanTower.com</u>>; Melissa Robinson <<u>mrobinson@metrositellc.com</u>>; Suzanne Whitlock
- <suzanne@metrositellc.com>; Ashley Jones <ajones@metrositellc.com>; Brittney Ballenger
- < <u>bballenger@metrositellc.com</u>>; Don Pruitt < <u>don@metrositellc.com</u>>; Jeremy Tanner < <u>jtanner@metrositellc.com</u>>; PMI
- <pmi@tepgroup.net>; Andrew Luter <acluter@tepgroup.net>

Subject: [EXTERNAL] EHFR Prestige Park, ATC# 302473, TEP# 68504 - MI Punchlist

All,

TEP inspected the mod at Prestige Park on 3/18/20. Please review the discrepancies below and let me know if you have any questions. The crew mentioned some EOR approvals for a few of these issues, so please forward all correspondence and we will update the punch list accordingly.

MI Summary:

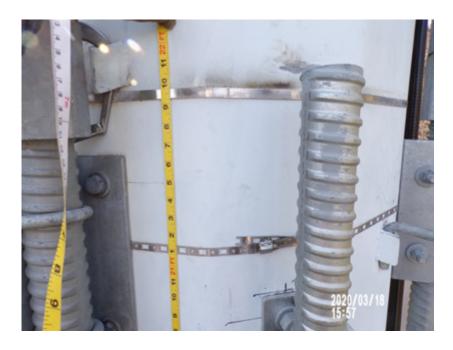
- 1. #20 bracket spacing exceeds the 30" specified maximum in the following locations:
 - a. Flat 1; 32" around the port hole at 4-ft
 - b. Flats 4 and 10; 36" and 37" around port holes. An extra bracket has been added at the base.



2. Dywidag bars are offset on flats 4 and 10 due to the portholes.



3. Top of new dywidag rods measures 21'-11" rather than 22'-6" as specified.



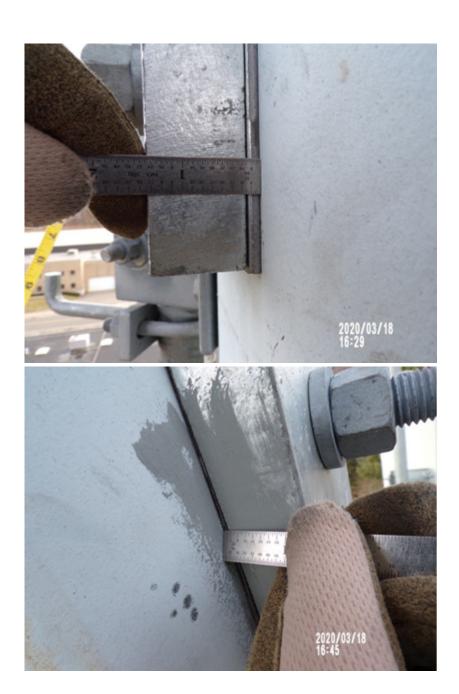
4. Plates begin at 89'-8.5" on flats 1, 4, and 7 and 90'-1" on flat 10 and end at 109'-2.5" and 106-6". Tower splice measures 109'-9.5".







5. Shims have been added behind the bottom half of plate 1 on all flats to avoid the horizontal tower weld seam on all flats. The shims stagger from 3/16" to 1/16" thick.



6. Blind bolts have been cut at the flat 11 plate weldment behind the dywidag bar.



7. A 3" long by 1/16" deep gouge is present in plate 2 on flat 1 below the upper termination bolts.



Thanks,

Hannah J. Childers, CWI

Project Lead . Tower Engineering Professionals, Inc. (<u>www.tepgroup.net</u>)

326 Tryon Road . Raleigh, NC 27603

Office: 919.661.6351 . Fax: 919.661.6350 . Mobile: 828.302.1955

From: Christopher Baker < Christopher.Baker@americantower.com>

Sent: Monday, March 9, 2020 12:41 PM **To:** PMI; Ian Culbert; Kingsley Igboanugo

Subject: RE: [EXTERNAL] Re: NTP - ATC Site #302473 E H F R - Prestige Park - Redev AT&T

Mobility

After talking to engineer again, decided that the weld will need to be 5/16" fillet all around after all, as 3/16" would fail. Sorry for the confusion.

Christopher Baker

Structural Designer I

American Tower Corporation

919-466-5295 office

christopher.baker@americantower.com

From: PMI <PMI@americantower.com> Sent: Friday, March 6, 2020 2:10 PM

To: Ian Culbert < Ian. Culbert@americantower.com>; PMI < PMI@americantower.com>; Kingsley Igboanugo

<kingsley.igboanugo@americantower.com>

Cc: Christopher Baker < Christopher.Baker@americantower.com>

Subject: RE: [EXTERNAL] Re: NTP - ATC Site #302473 E H F R - Prestige Park - Redev AT&T Mobility

@Kingsley Igboanugo,

This detail is a bit confusing to me. I imagine it is the ¾" weld listed on A4-A but could you please confirm?

Nathan Haselden, PE

Structural Engineer II

American Tower Corporation

(919) 466-5180 office

TEXTING and DRIVING... It Can Wait. Take the pledge today and pass it on.

nathan.haselden@americantower.com

From: Ian Culbert < Ian.Culbert@americantower.com>

Sent: Friday, March 6, 2020 11:17 AM

To: PMI <PMI@americantower.com>

Subject: FW: [EXTERNAL] Re: NTP - ATC Site #302473 E H F R - Prestige Park - Redev AT&T Mobility

Good Morning PMI,

Please see below. GC is looking for a weld detail for the flat plate.

Thanks,

Ian Culbert

Construction Manager – East Region

American Tower Corporation

10 Presidential Way Woburn, MA 01801 781-926-7805 (Office) 603-401-9127 (Mobile) lan.Culbert@americantower.com



From: Ryan Hubert < rhubert@structuralcomponents.net>

Sent: Friday, March 6, 2020 11:08 AM

To: Ian Culbert < Ian.Culbert@americantower.com>

Cc: Lowell Scarrow structuralcomponents.net; Fred Mansfield structuralcomponents.net; Fred Mansfield structuralcomponents; Fred Mansfield structuralcomponents; Fred Mansfield <a href="mailto

<<u>ion.rodgers@americantower.com</u>>; Kent Ramey <<u>kent@metrositellc.com</u>>; <u>acluter@tepgroup.net</u>; Scott Blake

<Scott.Blake@AmericanTower.com>; Melissa Robinson <mrobinson@metrositellc.com>; Suzanne Whitlock

<suzanne@metrositellc.com>; Ashley Jones <ajones@metrositellc.com>; Brittney Ballenger

<bballenger@metrositellc.com>; Don Pruitt <don@metrositellc.com>; Jeremy Tanner <jtanner@metrositellc.com>

Subject: [EXTERNAL] Re: NTP - ATC Site #302473 E H F R - Prestige Park - Redev AT&T Mobility

lan,

The flat plate that is being trimmed to fit behind the mount has an additional plate that needs to be welded to it. There is no weld detail in the mods for what is needed, please see the A-4B page of the attached mods. Could you please ask engineering for a weld detail.

