

# TOWER-POST MODIFICATION SPECIAL INSPECTION GUYED TOWER



Lees Summit
ATC Site # 306030

# PREPARED FOR:



# PREPARED BY:

Kyle Sellers, E.I., C.A.W.I.
Project Manager
SGS Towers

# DATE:

October 10, 2018





### SI REPORT SUMMARY

American Tower Corporation CLIENT: DATE AT SITE: Thursday, October 4, 2018 SITE NAME: Lees Summit ATC PROJECT#: OAA713535\_C6\_13 SITE NUMBER: ATC Site # 306030 TOWER TYPE: GUYED TOWER ADDRESS: 111 Sw Hook Road TOWER HEIGHT: Cloudy, 52°F, Wind 14 MPH E Lees Summit, Missouri, 64082-4305 WEATHER: LEAD: SUPPORT: James Benkis Dominic Brevig

# PROJECT SUMMARY:

Subject: TOWER-POST MODIFICATION SPECIAL INSPECTION

Location: 111 Sw Hook Road

Lees Summit, Missouri, 64082-4305 Lat: 38.86509 °N Long: 94.3771 °W

Structure: **GUYED 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: Paul Martin

Construction Manager KS & Western MO

Paul.Martin@americantower.com

(816)-591-5592

Engineer of Record: Michael Deese, P.E.

Professional Engineer

American Tower

3500 Regency Parkway, STE 100. Cary, NC 27518

(919) 468-0112

General Contractor: Brian Teasdale

TowerMRL, Inc.

3452 Rothamer Rd. (608) 556-7781

# SUPPLEMENTAL INFORMATION

Appendix A - Special Inspection Checklist

Appendix B - Closeouts



# SI REPORT CHECKLIST

CLIENT:	American Tower Corporation	DATE AT SITE:	Thursday, October 4, 2018
SITE NAME:	Lees Summit	ATC PROJECT#:	OAA713535_C6_13
SITE NUMBER	ATC Site # 306030	TOWER TYPE:	GUYED TOWER
ADDRESS:	111 Sw Hook Road	TOWER HEIGHT:	298'
	Lees Summit, Missouri, 64082-43	WEATHER:	Cloudy, 52°F, Wind 14 MPH E
LEAD:	James Benkis	SUPPORT:	Dominic Brevig

# PROJECT

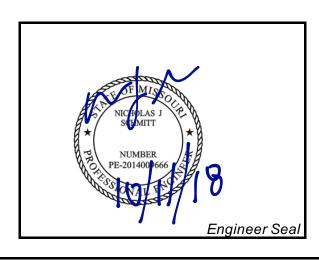
Subject: TOWER-POST MODIFICATION SPECIAL INSPECTION

Structure: **GUYED TOWER** 

**Inspection Approvals:** 

(Inspector to initial inspection approvals below)

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





# **PHOTO SUMMARY**

CLIENT:	American Tower Corporation	DATE AT SITE:	Thursday, October 4, 2018
SITE NAME:	Lees Summit	ATC PROJECT#:	OAA713535_C6_13
SITE NUMBER:	ATC Site # 306030	TOWER TYPE:	GUYED TOWER
ADDRESS:	111 Sw Hook Road	TOWER HEIGHT:	298'
	Lees Summit, Missouri, 64082-4305	WEATHER:	Cloudy, 52°F, Wind 14 MPH E
LEAD:	James Benkis	SUPPORT:	Dominic Brevia

# Inspection Item Description

Design Drawing Reference Page: A-1, A-2, A-3, A-4, A-5, F-1, F-2, F-3, TP-7, TP-15,

Install Mid-Panel Horizontals. 167' & 180' to 220'.

Note: Center Bolt Holes were Field Drilled.

Note: Center Plates were Installed Different Than Designed.

Note: Center Bolts did not Sit Flush.

Note: Double Punched Holes were Observed.

See Below for EOR Approvals.

Re-Tension All Guy Wires.



















TOWER-POST MODIFICATION SPECIAL INSPECTION



CLIENT: American Tower Corporation DATE AT SITE: Thursday, October 4, 2018 SITE NAME: Lees Summit ATC PROJECT#: OAA713535\_C6\_13 SITE NUMBER: ATC Site # 306030 TOWER TYPE: **GUYED TOWER** ADDRESS: 111 Sw Hook Road TOWER HEIGHT: 298' Lees Summit, Missouri, 64082-4305 WEATHER: Cloudy, 52°F, Wind 14 MPH E LEAD: James Benkis SUPPORT: Dominic Brevig

# APPENDIX A SI Checklist

BRIFECTION RELIGION DOCUMENT  OCCUMENTATION AND SITE WIST CONDUCTED BY ALL ATCAP  SPECIAL RESPECTION AND ARBEITATION AND SITE WIST CONDUCTED BY ALL ATCAP  SPECIAL RESPECTION AND ARBEITATION AND SITE WIST CONDUCTED BY ALL ATCAP  AND ARBEIT RESPECTION A VERRECATION AND ARBEITATION AND SITE WIST CONDUCTED BY ALL ATCAP  AND ARBEIT RESPECTION A VERRECATION AND ARBEITATION AND SITE WIST CONDUCTED BY ALL ATCAP  AND ARBEIT RESPECTION A VERRECATION AND ARBEITATION ARBEIT	SPECIAL INSPECTION CHECKLIST							
	DESCRIPTION	INSPECTION TESTING REQUIRED	RESPONSIBILITY	PRE CX	SI REVIEW REQUIRED PRE CX DURING CX POST CX		INSPECTION PERIODIC	INSPECTION FREQUENCY PERIODIC CONTINUOUS
9	DOCUMENTATION AND SITE VISIT CONDUCTED BY AN ATCAPPROVED SPECIAL PASPECTION AS REQUISED BY ATCANDITHER ANTIPORTES HAVING JANISOCTION HEISTCTION PARAMETIES TO FOLLOW ATCS STANDARD SPECIFICATION FOR WHILESS TOWER STREET	4	8			4		
	GC SHALL SUBMIT DRAWINGS TO SI FOR INCLUSION IN SI REPORT	۷,	00	۲,				
9	MTRANDOR MILL CEPTERCATIONS FOR SUPPLED MATERIALS OC SHALL SUPPLY SI WITH REPORTS TO BE INCLUDED IN SI REPORT WHEN REGUIRED BY ATC	4	8	٩.				
9	NEPECTIONAND REPORT OF STRUCTURAL WELDING PEPEOPMED DURING PROJECT COMPLETED BY A CWIAND INCLUDED WITHIN SI REPORT		GC / TA					
	VISUAL DISERRATION AND APPROVIAL OFFICIADATION ENDIVATION, REBARRALIZEMENT, CASHASHICHRIGHEGHENIA PACERBANT, AND AMEMIR TRANSPITE AND ANDHOR PLACEMENT - TO BE SI APPROVED PRICER TO CONCRETE POUR AND DOCUMENTED IN THE SI RECHET		8					
9	PULL TESTING OF INSTALLED ANCHORS TO BE COMPLETED AND DOCUMENTED IN SI REPORT		GC / TA					
	CONDRITE MX DESIGN, SLUMP TEST, COMPRESSME TESTING, AND SAMPLE GATHERMO TECHNOLIES ARE TO BE PROVIDED FOR RICLUSIAN IT HE SERVICET. SE MALL VIBEP CONCRETE PAUCIMENT AS REQUIRED BY THE DESIGNATIONALITIES RESPECTION FROUGHETS WANGED COM PRINCUS)		GC/ TA					
et un sero i	ANDIONIBAR BRIBEDAENT, HOLE SZE, EPOXYGROUT TYPE, INSTALLATION TEMPERATURE AND INSTALLATION SHALL BE VERRED BY THE SLAND INCLUDED IN THE SLIBEPORT		GC / SI					
NE CURRED)	BASE PLATE GROUTING TYPE AND PLACEMENT SHALL BE CONFIRMED BY THE SLAND INCLUDED IN THE SLREPORT		GC/SI					
ME CULARIO)	EXCAVATION, FEL. SLOPE, GRADE AND OTHER EARTHWORK REQUIREMENTS PER PLANS SHALL BE VERFIED BY THE SLAND INCLUDED IN THE SLAREPORT		GC/TA					
ME QUIRED)	CONTRACTOR SWALL PROVIDE AN INDEPENDENT THIRD PARTY CERTIFIED INSPECTION WHICH PROVIDES TEST RESULTS FOR COMPACTION TEST OF SOLS IN PLACE TO ASTM STANDARDS.		GC/TA					
ME CLUSHED)	CO SHALL PROVIDE DOCUMENTATION SHOWNED THAT THE GROUND HIS SYSTEM SHALL HAVE A RESURBED BE SISTANCE TO THE GROUND OF HOT MORE THAN THE RECOMMENDED TO OHNER FIRS THE ATC CONSTRUCTION SPECIFICATION UNDER SECTION 2.15 HIS DOCUMENTATION HAS IT BE AN INDEPENDENT CERT FIG.ATION.		00					
REQUIRED)	ISSUL (DISERVATION AND APPROVIA, OF STEEL COMETRICTION TO DISERSECIONED BY HIS SI. RESPECTION TO RELIZIES VERFEXATION OF NEW COMETRICTION OR INCORPORT, DISTRICTION OF EXISTING CONSTRUCTION FIRE DIGMEDISED PLANS. DETAILED VERFEXATION SHALL BE RALLIZION OR SERSPORT.	4	SI			4	<	
RE QUIRED)	SI SHALL VERIFY WITH GC ALL COLD GALVANIZATION TYPE AND APPLICATION AND INCLUDE SUMMARY IN SI REPORT	4	000			<	<,	
REQUIRED)	GC SHALL PROVIDE SEEVDENCE OF PROPER GUY TENSIONING AND TOWER PLANS PER PLANS. SESHALL VEREY AND INCLUDE PLANE AND TENSION REPORTING INSTREPORT.	4	96			4	<	
	GC SHALL SUBNITYAS BUILTEDRAWINGS NUICATRIO ANY APPROVED CHANGES TO ENGINEERED PLANS TO SI FOR APPROVALIREVIEW AND INCLUSION IN SI REPORT	4	30			4		
	SI SHALL SUBMIT AS-BUILTE DRAWWGS INDICATING ANY APPROVED CHANGES TO ENGINEERED PLANS WITHIN SI REPORT	4	SI			<		
	SI SHALL COMPLETE THA INSPECTION AND PROVIDE SEPARATE THA INSPECTION DOCUMENTATION TO ATC OM		SI					
PHOTOGRAPHS PO BE INCLUDED WITH	PHOTOGRAPHIC EVIDENCE OF SPECIAL INSPECTION, ON SITE REMEDIATION, AND ITEMS FALANG INSPECTION & REQUIRING FOLLOW UP TO BE INCLUDED WITHIN THE SI REPORT. COMPLETE PHOTOLOG IS TO BE SUBMITTED WITHIN SI REPORT.	4	GC / SI			<		
NOTE SPECIAL INSPECTIONS ME INTENDED TO BE A COLLISIONATIVE EFFORT BETWEEN CE AND S. WHENEVER POSSIBLE OF 5TO PROVIDE SWITH PHOTOGRAPHIC ON OTHER ACCEPTABLE ENDEWING OF PROPER INSTALLATION F PERCOIC INSPECTION PRECIDENCY IS ACCEPTABLE. THE GLAND SI SHALL WORK TO COMPALE ENDEWING OF PROPER CONSTRUCTION AND LIMIT THE NUMBER OF SISTE VISITS REQUIRED.	EVER POSSIBLE GC IS TO PROVIDE SI WITH PHOTOGRAPHIC OR OTHER ACCEPTABLE EVIDENCE C IRED.	JE PROPERINSTALLATIO	M IF PERIODIC INSP	ECTION FR	EQUENCY IS AC	CEPTABLE TI	# GC AND	21 SHWTT
TABLE SEY.  SI. ATC. APPROVISED SPECIAL MASPECTOR CX. CONSTRUCTION  GC. GARGINAL CONTRACTOR  CM. CONSTRUCTION MANAGER  ATC. AMERICAN TOWNER CORPORATION  ATC. AMERICAN TOWNER CORPORATION								

Ensure all relevant checklist items are addressed within report submittals



CLIENT: American Tower Corporation DATE AT SITE: Thursday, October 4, 2018 SITE NAME: Lees Summit ATC PROJECT#: OAA713535\_C6\_13 SITE NUMBER: ATC Site # 306030 TOWER TYPE: **GUYED TOWER** ADDRESS: 111 Sw Hook Road TOWER HEIGHT: 298' Lees Summit, Missouri, 64082-4305 WEATHER: Cloudy, 52°F, Wind 14 MPH E LEAD: James Benkis SUPPORT: Dominic Brevig

# APPENDIX B Closeouts

Ensure all relevant checklist items are addressed within report submittals

September 27th, 2018

To whom it may concern,

ZRC Cold Galvanizing Compound was used to treat the modified areas on the tower at site **306030 Lees Summit MO**. The installation of the galvanizing was performed per the specification given to us by ATC. Two coats have been installed at all locations where welding, grinding or drill took place. Below is the label of the product used.

Please contact me at the mobile number below if there are any questions regarding this letter.



Thanks. Brian Teasdale

Project Manager TowerMRL, Inc. (608) 556-7781 Mobile Site# Site Name : 306030 : Lees Summit MO Contractor Name : Tower MRL : Brent Alderman Completed By

9/20/18

Date

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AMERICAN TOWER

Page

# PRE GUY TENSION MEASUREMENTS

Rev 5.7 (03/03/15)

\*Note - Cable sizes must be measured with Guy Cable Measuring Tool. Photos of size and tension measurements are required. If all cable sizes at one elevation are the same for all legs, photos of size measurements of only one leg are required.

Temperature (°F)	90
Wind Speed (MPH)	10
Wind Direction	SW

Guy Level	Elev. (Ft.)	Dist. To Anchor	Guy Attachment	# of Strands	Are cables EHS or BS?	*See Note ahove		Paint Color on Dead- End Grip (If	"GP/Left	" column *See No.	for Guy l		Dead-End Grip color for this size/str	Stre (adjus	Break ngth ted for np.)	Tension	5%-17%
		(Ft.)	Type	Several designation (Co.)		Size	Photo#	visible)	GP / Left	Photo#	Right	Photo#	cable	GP / Left	Right	Left	Right
1	48	118	Guy Pull-Off	7 Strand	EHS	7/16	1		1955	A1				12.4%		OK	
2	108	118	Guy Pull-Off	7 Strand	EHS	7/16			2000	A2				11.4%		OK	
3	168	118	Stabilizer	7 Strand	EHS	7/16			1865	A3L	1925	A3R		9.9%	10.2%	OK	OK
4	226	118	Guy Pull-Off	7 Strand	EHS	9/16			3505	A4				10.6%		OK	
5	285	118	Stabilizer	7 Strand	EHS	9/16			3430	A5L	3605	A5R		10.2%	10.7%	OK	OK
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7					i i												
8																	
9						Ų.	3					8					
10						£ 2			ž.		- 8					¥	

Guy Level	Elev. (Ft.)	Dist. To Anchor	Guy Attachment	# of Strands	Are all cables EHS	measure	e Size ment *See above	Paint Color on Dead- End Grip (If	Measure "GP/Left Off	" colum		uy Pull-	Dead-End Grip color for this	Stre	ted for	Tongion 50/ 170/	
		(Ft.)	Type		or BS?	Size	Photo#	visible)	GP / Left	Photo#	Right	Photo#	size/str cable	GP / Left	Right	Left	Right
1	48	118	Guy Pull-Off	7 Strand	EHS	7/16			2080	B1				13.2%		OK	
2	108	118	Guy Pull-Off	7 Strand	EHS	7/16			1910	B2				10.9%		OK	
3	168	118	Stabilizer	7 Strand	EHS	7/16			1935	B3L	1990	B3R		10.3%	10.6%	OK	ОК
4	226	118	Guy Pull-Off	7 Strand	EHS	9/16			3615	B4				11.0%		OK	
5	285	118	Stabilizer	7 Strand	EHS	9/16			3270	B5L	3650	B5R		9.7%	10.9%	OK	OK
6																	
7																	
8																	
9																	
10																	

Guy Level	Elev. (Ft.)	Dist. To Anchor	Guy Attachment	# of Strands	Are cables EHS or BS?	measure	le Size ment *See above	Paint Color on Dead- End Grip (If	"GP/Lef	Measured Tension (L "GP/Left" column for Off *See N			Dead-End Grip color for this size/str	% of Stre (adjust tem	ted for	Tension	5%-17%
		(Ft.)	Type			Size	Photo#	visible)	GP / Left	Photo#	Right	Photo#	cable	GP / Left	Right	Left	Right
1	48	118	Guy Pull-Off	7 Strand	EHS	7/16			2100	C1				13.3%		OK	
2	108	118	Guy Pull-Off	7 Strand	EHS	7/16			2000	C2		Ĭ Ĭ		11.4%		OK	
3	168	118	Stabilizer	7 Strand	EHS	7/16			2625	C3L	2425	C3R		13.9%	12.9%	OK	OK
4	226	118	Guy Pull-Off	7 Strand	EHS	9/16			3780	C4				11.5%		OK	
5	285	118	Stabilizer	7 Strand	EHS	9/16			3880	C5L	3385	C5R		11.6%	10.1%	OK	OK
6																	
7						î î						ĵ					

: 306030 Site # Rev 5.7 (03/03/15) Site Name : Lees Summit MO

Contractor Name
Completed By
Date : Tower MRL : Brent Alderman : 9/20/18

# **3-SIDED TOWER TWIST AND PLUMB**

	Face Width (Ft)	Elevation (Ft)
4th Taper Change OR Top of Tower	3.00	300.00
3rd Taper Change OR Top of Tower		
2nd Taper Change OR Top of Tower		
1st Taper Change OR Top of Tower		
Page of tower (Pottom of steel)*	3.00	0.00

Temp (°F)	90
Wind Speed	10
Direction	

\*For a GT w/ a tapered base, enter the face width at the top of the taper into Cell G14.

										.,					
		OBSER	VED LEG DISPL	ACEMEN	TS					CALCU	LATED	TWIST	CALCU	LATED OF-PLUM	OUT- B
Data Point	Mast Elev. * See Note (Ft)	A - Face Width (In)	Leg Width (In)	D1**	i1	D2	i2	D3	i3	d (ln)	е	a (Deg)	x (In)	y (ln)	r (ln)
1	48.00	41.76	3.50	0.00		0.00		0.00		0.00	0.00	0.00	0.00	0.00	0.00
2	108.00	48.96	3.50	0.00		0.00		0.50		0.29	0.01	0.59	-0.51	-0.29	0.58
3	168.00	56.16	3.50	0.00		0.00		0.00		0.00	0.00	0.00	0.00	0.00	0.00
4	226.00	63.12	3.50	0.00		0.00		0.00		0.00	0.00	0.00	0.00	0.00	0.00
5	285.00	70.20	3.50	0.25		0.25		0.25		0.44	0.01	0.62	0.00	0.00	0.00
6															



1221 Avenida Acaso Suite E Camarillo CA 93012 USA

www.straightpoint-inc.com

35085/35086

0.5

#### **CERTIFICATE OF CALIBRATION Instrument Details:** 15447 Certificate number: Load cell serial number: 26677 Load cell model: COLT5T Manufacturer: Straightpoint (UK) Ltd W.L.L: 5000.00 kg Accuracy 3% FSR 68° F Temperature at time of test: Date of Calibration test: 04.12.2017 **Test Machine Details:** Test machine number: SP15 Test machine capacity: 5 Tonne Calibrated in: Apr-17 Calibrated by: R + H Testing Standard: BS EN ISO 7500-1:2004/ASTM E4-14

SI No	Wire Rope Dia(mm)	WLL (lbs)	Cons	Туре	Zero load (lbs)	5% WLL (lbs)	30% WLL (lbs)	50% WLL (lbs)	75% WLL (lbs)	100% WLL (lbs)
1	15/64" / 6mm	1055	7x19	WRC	0.000	50	320	530	785	1055
2	5/16" / 8 mm	1985	7x19	WRC	0.000	95	595	995	1495	1985
3	23/64" / 9 mm	2205	6X36	WC	0.000	110	665	1100	1645	2210
4	25/64" / 10 mm	2650	7X19	WSC	0.000	140	795	1340	1990	2655
5	15/32" / 12 mm	4080	7X19	WSC	0.000	200	1205	2030	3040	4070
6	15/32" / 12 mm	4035	6X36	WC	0.000	200	1195	2000	3005	4015
7	35/64" / 14 mm	6155	7X19	WRC	0.000	310	1850	3080	4645	6165
8	5/8" / 16 mm	6614	7X19	WSC	0.000	330	1980	3300	4960	6600
9	45/64" / 18 mm	9040	6X36	IWRC	0.000	450	2665	4450	6720	8945
10	25/32" / 20mm	11025	7X19	WSC	0.000	540	3215	5375	8095	10830
11	55/64" / 22 mm	11025	6X36	<b>IWRC</b>	0.000	540	3285	5485	8285	11060
12	55/64" / 22 mm	11025	6X36	WC	0.000	550	3370	5610	8465	11310
13	15/16" / 24mm	11025	6X36	IWRC	0.000	520	3220	5435	8140	10875

Certificate Number:

Class:

# **EC Declaration of Conformity**

On behalf of Straightpoint UK Ltd, I declare that the above CE marked item of equipment complies with the European Directive 2006/42/EC of the European Parliament and of the council on machinery, and amending Directive 94/16/EC(c). Due congnisance has been given to the essential health & safety requirements as applicable to this equipment and laid down in Schedule 2 Part 1 of the Supply of Machinery (Safety) Regulations 2008 (SI 2008 No 1597).

### Name and address of Manufacturer of repairer:

Straightpoint (UK) Ltd, Unit 9 Dakota Park, Downley Road, Havant, Hampshire, UK, PO9 2NJ

Name, position and qualification of person who carried out the test examination:

Josh Young, appointed tester.

I certify on behalf of the company or person named above that the items described herein were tested and thereafter visually examined and were found to be free from cracks, flaws or other defects.

This calibration doe not constitute a LOLER inspection

Signed:	Mil.	Date:	4/12/17.
	/		

Details

RE: Closeouts Review/ ATC 306030 site

To: Naveen Senthil, bteasdale@towermrl.com, Cc: Kent Ramey, Melissa, Jesse Stenner & 1 more

Please see approval from Engineering: (Please note it is approval for 2 sites listed)

Paul,

These outdated certs are approved after seeing the approval from the manufacturer.

Best

Tyler Ferguson, EI Structural Engineer I **American Tower Corporation** 3500 Regency Parkway, Suite 100 Cary, NC 27518

From: Paul Martin

Sent: Friday, September 28, 2018 12:34 PM To: PMI < PMI@americantower.com>

Subject: FW: Closeouts Review/ ATC 306030 site

PMI- will you approve the Calibration cert is dated for 4/2017 from the GC?

I sent this request yesterday. I now have the info from the manufacturer.

Can you approve this for both of these sites? The GC had completed both of these with the outdated Calibrations. Going forward they will have units that are calibrated.

- 1. REDEV MOD: #90341 LIBERAL KS (AT&T) OAA710327 C3 05
- 2. REDEV MOD: #306030 LEES SUMMIT MO (AT&T) OAA713535 C3 11

Thanks,

**Paul Martin** 

Construction Manager KS & Western MO American Tower Corporation 816-591-5592 Mobile

paul.martin@americantower.com

Go Green! Please think about our environment before printing this email.

**Paul Martin** 

Construction Manager KS & Western MO American Tower Corporation 816-591-5592 Mobile

paul.martin@americantower.com
Go Green! Please think about our environment before printing this email.

From: Naveen Senthil [mailto:naveen.senthil@sgstowers.com]

Sent: Friday, September 28, 2018 11:25 AM

To: bteasdale@towermrl.com

Cc: Paul Martin; Kent Ramey; Melissa; Jesse Stenner; Inspections

Subject: Re: Closeouts Review/ ATC 306030 site





ATC TOWER SERVICES
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112

# 306030 - LEES SUMMIT, MISSOURI

COA: 2006031326

298 FT GUYED TOWER MODIFICATIONS

AS-BUILT SIGN-OFF						
DESCRIPTION	SIGNATURE	DATE				
CONTRACTOR NAME						
CONTRACTOR REPRESENTATIVE (PRINT NAME)						
CONTRACTOR REPRESENTATIVE (SIGNATURE)						
REDEVELOPMENT P.M. (PRINT NAME)						
REDEVELOPMENT P.M. (SIGNATURE)						

PROJECT SUMMARY	PROJECT DESCRIPTION	SHEET	SHEET TITLE	REV.
	THE MODIFICATIONS PRESENTED ON THESE DRAWINGS	B-1	BILL OF MATERIALS	0
ATC PROJECT NUMBER: OAA713535_C6_13	ARE BASED ON THE RECOMMENDATIONS OUTLINED IN THE STRUCTURAL ANALYSIS COMPLETED UNDER ENGINEERING	IGN	IBC GENERAL NOTES	0
		SIC	SPECIAL INSPECTION CHECKLIST	0
CUSTOMER: AT&T MOBILITY	PROJECT NUMBER OAA713535_C3_11 DATED 04/20/18. SATISFACTORY COMPLETION OF THE WORK INDICATED ON	A-1	MODIFICATION PROFILE	
	THESE DRAWINGS WILL RESULT IN THE STRUCTURE MEETING THE REQUIREMENTS OF THE SPECIFICATIONS UNDER WHICH THE STRUCTURAL WAS COMPLETED.	A-2	MID-PANEL HORIZONTAL INSTALLATION DETAILS	0
CUSTOMER SITE NAME: LEES SUMMIT, MO		A-3	MID-PANEL HORIZONTAL INSTALLATION DETAILS	0
		A-4	GUY WIRE TENSION CHART	0
CUSTOMER SITE NUMBER: KS4019		A-5	GUY WIRE RETENSIONING AND STANDARD SAFETY WIRE DETAILS	0
		F-1	HORIZONTAL & MID-PANEL HORIZONTAL FABRICATION DETAILS	0
SITE ADDRESS: LEES OUNDATE MO 04000		F-2	MID-PANEL HORIZONTAL WELDMENT FABRICATION DETAILS	0
LEES SUMMIT, MO 64082		F-3	MID-PANEL HORIZONTAL FABRICATION DETAILS	0
		TP-7	7% TENSION PLATE FABRICATION DETAILS	0
DATE: 05/01/18		TP-15	15% TENSION PLATE FABRICATION DETAILS	0
GEOGRAPHIC COORDINATES: 38.86509167 -94.3771				

# **REDLINED – Built Per Print**



ATC TOWER SERVICES 3500 REGENCY PARKWAY SUITE 100 CARY, NC 27518 PHONE: (919) 468-0112 COA: 2006031326

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. TITLE 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. OR THACTOR'S) MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OF ANY DISCREPANCIES. ANY PIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION ON FILE WITH AMERICAN TOWER.

ı	REV.	DESCRIPTION	BY	DATE
l	△_	FIRST ISSUE	KIR	05/01/18
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l	$\square$			
l	$\square$		_	

ATC SITE NUMBER:

306030

ATC SITE NAME:
LEES SUMMIT

MISSOURI

SITE ADDRESS: 111 SW HOOK ROAD LEES SUMMIT, MO 64082

RAWN BY:	KIR
PPROVED BY:	FB/KCI
ATE DRAWN:	05/01/18
TC JOB NO:	OAA713535_C6_13

**COVER** 

SHEET NUMBER:

COVER

REVISION:

# **REDLINED – Built Per Print**

			Copyright © 2018 ATC IP LLC, All Rights Reserved
$\dashv$			ahts Re
	AMERICAN TOW	ED®	All Rig
************	ATC TOWER SERVICE		LLC, ,
	3500 REGENCY PARKWA SUITE 100	Y	CIP
	CARY, NC 27518 PHONE: (919) 468-0112		18 AT
	COA: 2006031326		© 20.
	THESE DRAWINGS AND/OR THE ACCOMPANYING AS INSTRUMENTS OR SERVICE ARE THE EXCLUS	IVE PROPERTY	right
	OF AMERICAN TOWER. THEIR USE AND PUBLICAT RESTRICTED TO THE ORIGINAL SITE FOR WHICH PREPARED. ANY USE OR DISCLOSURE OTHER TH	THEY ARE IAN THAT WHICH	Copy
000000000000000000000000000000000000000	RELATES TO AMERICAN TOWER OR THE SPECIFIL STRICTLY PROHIBITED. TITLE TO THESE DOCUME REMAIN THE PROPERTY OF AMERICAN TOWER W.	ENTS SHALL /HETHER OR NOT	
	THE PROJECT IS EXECUTED. NEITHER THE ARCH ENGINEER WILL BE PROVIDING ON-SITE CONSTR OF THIS PROJECT. CONTRACTOR(S) MUST VERIF	UCTION REVIEW Y ALL	
	DIMENSIONS AND ADVISE AMERICAN TOWER OF DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS SUPERSEDED BY THE LATEST VERSION ON FILE	DRAWING IS	
	TOWER.		
	REV. DESCRIPTION E	3Y DATE (IR05/01/18_	
	ATC SITE NUMBER:		
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	SITE ADDRESS:		
	111 SW HOOK ROAD LEES SUMMIT, MO 64082	2	
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	DRAWN BY: KIR		
	APPROVED BY: FB/KCI		
	DATE DRAWN: 05/01/18  ATC JOB NO: 0AA713535_C6_13		
	BILL OF MATERIAL	_s	
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# **BILL OF MATERIALS**

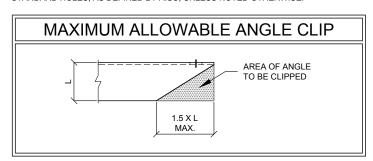
<b>ΥΤΙΤΙΛΔΙΙ</b> Γ	QUANTITY	PART				PART	WEIGHT	
	PROVIDED	NUMBER	DESCRIPTION	LENGTH	SHEET LIST	WEIGHT	(lb)	NOTES
			MID-PANEL HORIZONTAL MATERIAL & HARDWARE - EL: 167'-0"				,	
6	6	306030-1	L2" X 2" X 1/4"	3'-7 3/4"	A-2, F-1	12.2	73	
3	3	306030-2	PL 1/4" X 3"	1'-3"	A-2, F-1	3.3	10	
6	6	306030-3	L2" X 2" X 1/4"	1'-9"	A-2, F-1	5.9	35	
6	6	306030-4	L2" X 2" X 1/4"	1'-9"	A-2, F-1	5.9	35	
3	4		BOLT, 5/8"Ø ASTM A490	2 1/4"				HHN / WITH MAGNI 565 COATING
21	22		BOLT, 5/8"Ø ASTM A490	2 1/2"				HHN / WITH MAGNI 565 COATING
6	7		BOLT, 5/8"Ø ASTM A490	2 3/4"				HHN / WITH MA GNI 565 COATING
30	32		LOCK WASHER, 5/8"Ø					GALVANIZED
30	32		FLAT WASHER, 5/8"Ø					GALVANIZED [SPACERS]
			MID-PANEL HORIZONTAL MATERIAL & HARDWARE - SECTION 11					
27	27	306030-5	MID-PANEL HORIZONTAL WELDMENT	3'-8"	A-3, F-3	8.8	238	
2	2	306030-6	PL 1/4" X 3 1/2"	1'-3"	A-3, F-3	3.9	8	
4	4	306030-7	L 1 1/2" X 1 1/2" X 1/4"	1'-9"	A-3, F-3	5.9	24	
		10-05 (IS (IS + 0+0)-0) (III-05-05-0) (III-10-05-05-03-03-0) (II-05-05-05-05-05-05-05-05-05-05-05-05-05-			(III)			
31	33		BOLT, 3/8"Ø SAE GRADE 5	1 3/4"				HHN-LKW-FW/ GALVANIZED
60	63		BOLT, 1/2"Ø ASTM A325	1 1/2"				HHN-LKW-FW/GALVANIZED
			MID-PANEL HORIZONTAL MATERIAL & HARDWARE - SECTION 12					
28	28	306030-5	MID-PANEL HORIZONTAL WELDMENT	3'-8"	A-3, F-3	8.8	246	
2	2	306030-6	PL 1/4" X 3 1/2"	1'-3"	A-3, F-3	3.9	8	
4	4	306030-7	L 1 1/2" X 1 1/2" X 1/4"	1'-9"	A-3, F-3	5.9	24	
32	34		BOLT, 3/8"Ø SAE GRADE 5	1 3/4"				HHN-LKW-FW/ GALVANIZED
60	63		BOLT, 1/2"Ø ASTM A325	1 1/2"				HHN-LKW-FW/ GALVANIZED
00 HB HB + B + B HB HB HB + B HB HB HB + B +								
	(( <u>n</u> ))							
ST								
96								
REDL	INES							
Discrepan	cies Noted							
Show "	3 f							
					TOTAL WE	EIGHT (lb)	701	PAGE 1 OF 1

### 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 REQUIRED PERMITS.
- 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.
- 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
- 2. 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

- 1. 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.
- 4. 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 MANUFACTURERS 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

1/2"	BOLTS UP TO AND INCLUDING 2.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
5/8"	BOLTS UP TO AND INCLUDING 2.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
3/4"	BOLTS UP TO AND INCLUDING 3.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
7/8"	BOLTS UP TO AND INCLUDING 3.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1"	BOLTS UP TO AND INCLUDING 4.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/8"	BOLTS UP TO AND INCLUDING 4.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/4"	BOLTS UP TO AND INCLUDING 5.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-3/8"	BOLTS UP TO AND INCLUDING 5.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/2"	BOLTS UP TO AND INCLUDING 6.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT

### BOLT LENGTHS OVER FOUR DIAMETERS BUT NOT EXCEEDING EIGHT DIAMETERS

1/2	BOLTS 2.23 TO 4.0 INCH LENGTH	TIZ TURN BETUND 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.
- 2012 INTERNATIONAL BUILDING CODE.
- ACI 318: AMERICAN CONCRETE INSTITUTE, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, 318, LATEST EDITION.
- 4. CRSI: CONCRETE REINFORCING STEEL INSTITUTE, MANUAL OF STANDARD PRACTICE, LATEST EDITION.
- 5. 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 2012, 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 2012, SECTION 1704, UNLESS THE FABRICATOR IS APPROVED BY THE BUILDING OFFICIAL TO PERFORM SUCH WORK WITHOUT THE SPECIAL INSPECTIONS.



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SITE ADDRESS: 111 SW HOOK ROAD LEES SUMMIT, MO 64082



DRAWN BY: KIR

APPROVED BY: FB/KCI

DATE DRAWN: 05/01/18

ATC JOB NO: OAA713535\_C6\_13

**IBC GENERAL NOTES** 

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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.



INODESTION DOCUMENT	PERSONAL	INSPECTION TESTING	DESCRIPTION IN	SI REVIEW REQUIRED		RED	INSPECTIO	TION FREQUENCY	
INSPECTION DOCUMENT	DESCRIPTION	REQUIRED	RESPONSIBILITY	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	<b>*</b>					
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			<b>*</b>	<b>*</b>		
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

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ATC TOWER SERVICES 3500 REGENCY PARKWAY SUITE 100 **CARY, NC 27518** PHONE: (919) 468-0112 COA: 2006031326

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REV.	DESCRIPTION	BY	DATE
$\triangle_{-}$	FIRST ISSUE	KIR	05/01/18
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ATC SITE NUMBER:

306030

ATC SITE NAME: LEES SUMMIT

MISSOURI

SITE ADDRESS: 111 SW HOOK ROAD LEES SUMMIT, MO 64082

DRAWN BY:	KIR
APPROVED BY:	FB/KCI
DATE DRAWN:	05/01/18
ATC JOB NO:	OAA713535_C6_13

SPECIAL INSPECTION **CHECKLIST** 

SHEET NUMBER:

REVISION

SIC

# REDLINED – Built Per Print

AMERICAN TOWER®

ATC TOWER SERVICES 3500 REGENCY PARKWAY SUITE 100 CARY, NC 27518 PHONE: (919) 468-0112

COA: 2006031326

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DATE DRAWN: 05/01/18

ATC JOB NO: OAA713535\_C6\_13

MODIFICATION PROFILE

SHEET NUMBER:

A-1

0

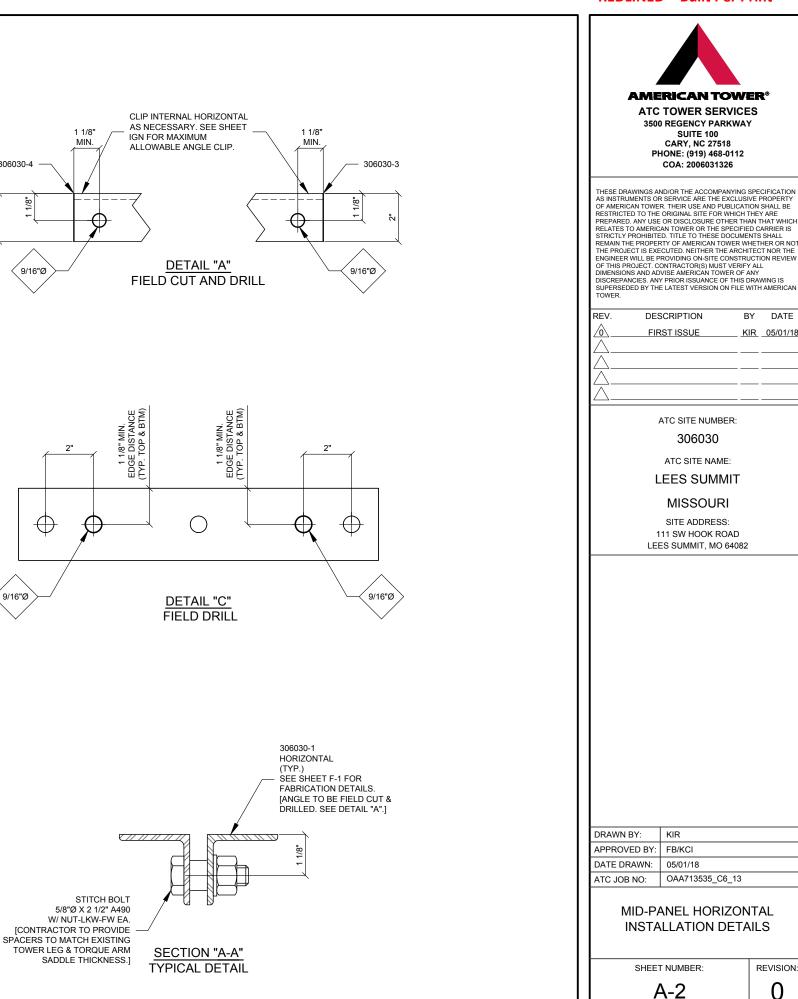
REVISION

BY DATE

KIR 05/01/18

REVISION

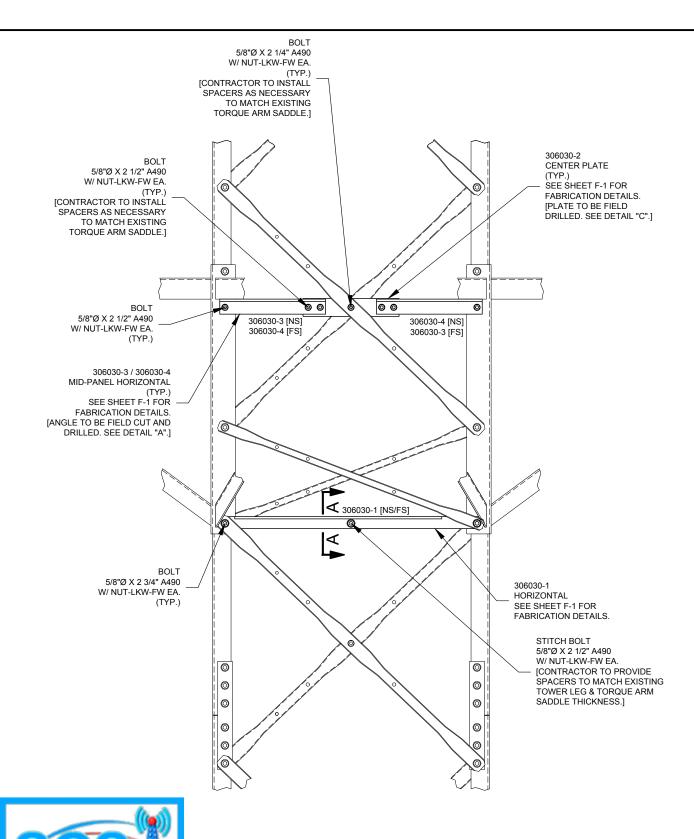
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306030-4

9/16"Ø

( 9/16"Ø





**REDLINES** 

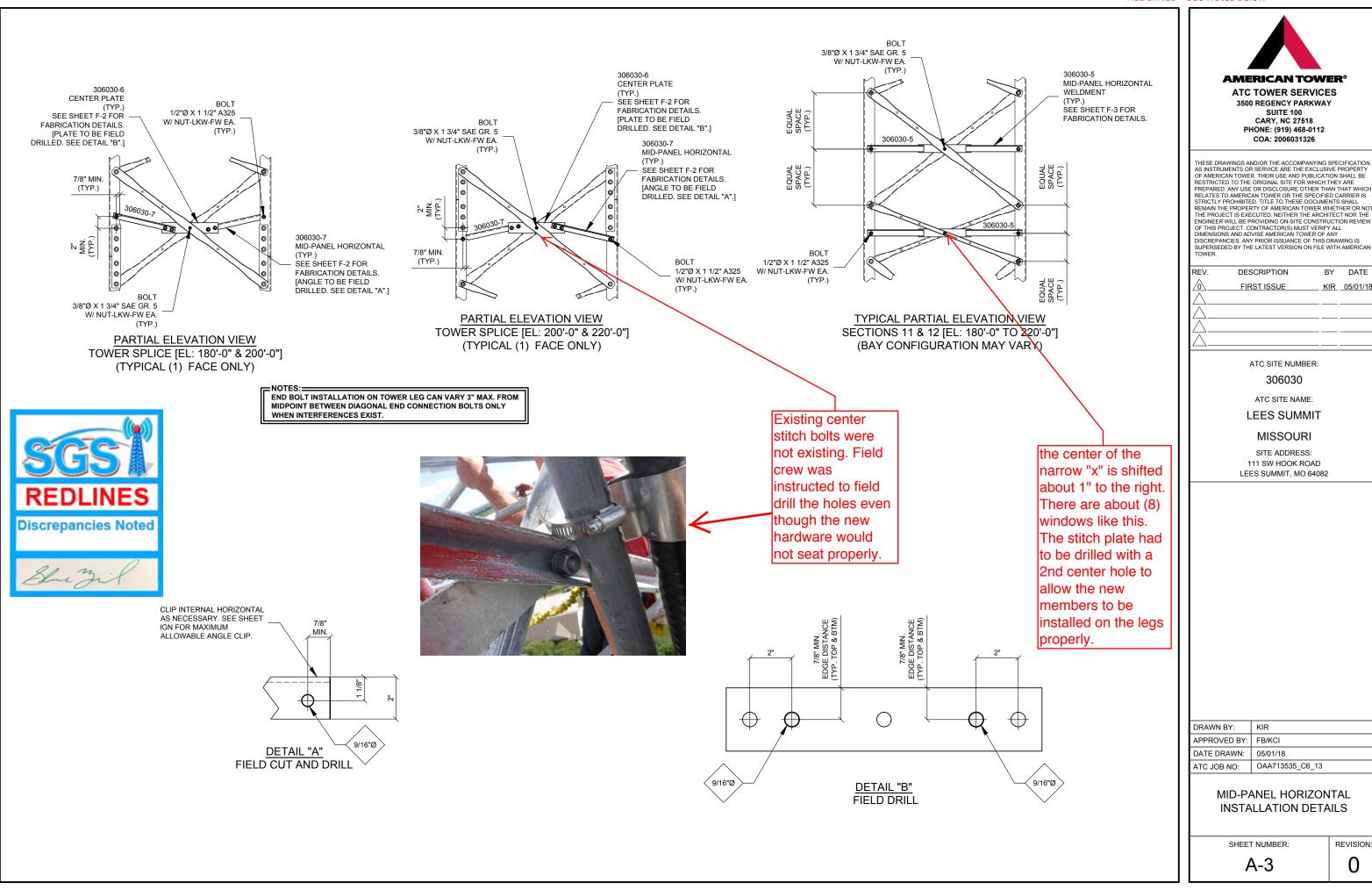
Discrepancies Noted

PARTIAL ELEVATION VIEW SECTION 10 [EL: 162'-0" TO 180'-0"]

MID-PANEL HORIZONTAL INSTALLATION ON TOWER LEG CAN VARY NO MORE THAN 3" FROM MIDPOINT BETWEEN DIAGONAL END CONNECTION BOLTS TO AVOID TORQUE ARM INTERFERENCE.

REAM EXISTING CENTER BOLT HOLE IN DIAGONALS AS NECESSARY. CONTRACTOR TO ADD SPACERS TO MATCH LEG AND/OR SADDLE

THICKNESS AS NECESSARY.



## **GUY WIRE TENSION CHART FOR NORTH GUY ANCHOR "A"**

	GU	Y WIRE D	ATA												MEAS	URED G	UY WIRE	E TENSIO	N IN PO	UNDS								
GUY WIRE	GUY ELEV.	GUY ANCHOR RADIUS	GUY AN		ITIAL VSION %	TENSION DELTA DUE TO TEMP.	0° F	5° F	10° F	15° F	20° F	25° F	30° F	35° F	40° F	45° F	50° F	55° F	60° F	65° F	70° F	75° F	80° F	85° F	90° F	95° F	100° F	105° F
SIZE	(FT)	(FT)	(+/- FT)	LEG		(LBS/DEG)	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS
9/16" EHS	285.0	218.0	-11.0	Α	7 %	11.85	3161	3102	3043	2983	2924	2865	2806	2746	2687	2628	2569	2509	2450	2391	2331	2272	2213	2154	2094	2035	1976	1917
9/16" EHS	226.0	218.0	-11.0	Α	15 %	15.48	6179	6101	6024	5946	5869	5792	5714	5637	5560	5482	5405	5327	5250	5173	5095	5018	4940	4863	4786	4708	4631	4554
7/16" EHS	168.0	218.0	-11.0	Α	15 %	12.32	3859	3797	3736	3674	3613	3551	3489	3428	3366	3305	3243	3182	3120	3058	2997	2935	2874	2812	2751	2689	2627	2566
7/16" EHS	108.0	218.0	-11.0	Α	10 %	15.76	3026	2947	2868	2789	2710	2632	2553	2474	2395	2316	2238	2159	2080	2001	1922	1844	1765	1686	1607	1528	1450	1371
7/16" EHS	48.0	218.0	-11.0	A	10 %	18.72	3203	3110	3016	2923	2829	2735	2642	2548	2454	2361	2267	2174	2080	1986	1893	1799	1706	1612	1518	1425	1331	1237

# GUY WIRE TENSION CHART FOR SOUTHEAST GUY ANCHOR "B"

	GU	Y WIRE D	ATA												MEAS	URED G	UY WIRI	E TENSIO	N IN PO	UNDS								
GUY WIRE	ELEV.	GUY ANCHOR RADIUS	GUY AI		IITIAL NSION %	TENSION DELTA DUE TO TEMP.	0° F	5° F	10° F	15° F	20° F	25° F	30° F	35° F	40° F	45° F	50° F	55° F	60° F	65° F	70° F	75° F	80° F	85° F	90° F	95° F	100° F	105° F
SIZE	(FT)	(FT)	(+/- FT)	LEG		(LBS/DEG)	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS
9/16" EHS	285.0	218.0	6.0	В	7 %	11.85	3161	3102	3043	2983	2924	2865	2806	2746	2687	2628	2569	2509	2450	2391	2331	2272	2213	2154	2094	2035	1976	1917
9/16" EHS	226.0	218.0	6.0	В	15 %	15.48	6179	6101	6024	5946	5869	5792	5714	5637	5560	5482	5405	5327	5250	5173	5095	5018	4940	4863	4786	4708	4631	4554
7/16" EHS	168.0	218.0	6.0	В	15 %	12.32	3859	3797	3736	3674	3613	3551	3489	3428	3366	3305	3243	3182	3120	3058	2997	2935	2874	2812	2751	2689	2627	2566
7/16" EHS	108.0	218.0	6.0	В	10 %	15.76	3026	2947	2868	2789	2710	2632	2553	2474	2395	2316	2238	2159	2080	2001	1922	1844	1765	1686	1607	1528	1450	1371
7/16" EHS	48.0	218.0	6.0	В	10 %	18.72	3203	3110	3016	2923	2829	2735	2642	2548	2454	2361	2267	2174	2080	1986	1893	1799	1706	1612	1518	1425	1331	1237

# GUY WIRE TENSION CHART FOR SOUTHWEST GUY ANCHOR "C"

	GU	Y WIRE C	ATA												MEAS	URED G	UY WIRE	TENSIO	N IN PO	UNDS								
GUY WIRE	ELEV.	GUY ANCHOR RADIUS	GUY AN		UTIAL NSION %	TENSION DELTA DUE TO TEMP.	0° F	5° F	10° F	15° F	20° F	25° F	30° F	35° F	40° F	45° F	50° F	55° F	60° F	65° F	70° F	75° F	80° F	85° F	90° F	95° F	100° F	105° F
SIZE	(FT)	(FT)	(+/- FT)	LEG	N H	(LBS/DEG)	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS	LBS
9/16" EHS	285.0	218.0	-5.0	С	7 %	11.85	3161	3102	3043	2983	2924	2865	2806	2746	2687	2628	2569	2509	2450	2391	2331	2272	2213	2154	2094	2035	1976	1917
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7/16" EHS	48.0	218.0	-5.0	С	10 %	18.72	3203	3110	3016	2923	2829	2735	2642	2548	2454	2361	2267	2174	2080	1986	1893	1799	1706	1612	1518	1425	1331	1237



NOTES: -

THE MAXIMUM DEVIATION FROM THE DESIGN INITIAL TENSIONS ARE:

- 1. ±10% FOR GUYS < 1" DIAMETER, OF THE INITIAL TENSIONS SPECIFIED ON THIS TEMPERATURE/TENSION CHART.
- ±5% FOR GUYS > 1" DIAMETER, OF THE INITIAL TENSIONS SPECIFIED ON THIS TEMPERATURE/TENSION CHART.

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		ATC SITE NUMBER:		

306030

ATC SITE NAME:

LEES SUMMIT

MISSOURI

SITE ADDRESS: 111 SW HOOK ROAD LEES SUMMIT, MO 64082

DRAWN BY:	KIR
APPROVED BY:	FB/KCI
DATE DRAWN:	05/01/18
ATC JOB NO:	OAA713535_C6_13

GUY WIRE TENSION CHART

SHEET NUMBER:

REVISION:

A-4

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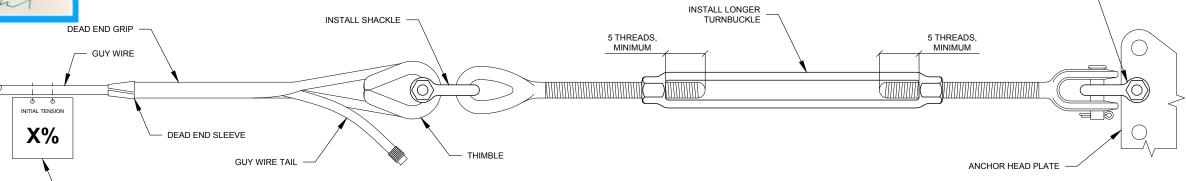


# NOTES:

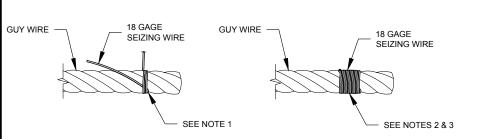
- TO OBTAIN CORRECT GUY WIRE TENSIONS, IT MAY BE NECESSARY TO REPLACE THE DEAD END GRIP (PREFORM) OF SOME GUY WIRES DUE TO EXISTING OVER-CONTRACTED TURNBUCKLES.
- IF EXISTING TURNBUCKLE IS ALREADY FULLY EXTENDED, THE COMBINATION OF SHACKLES AND A LONGER TURNBUCKLE AS SHOWN MAY BE USED TO PROVIDE REQUIRED ADJUSTMENT. ALTERNATIVELY, IF THE EXISTING GUY WIRE TAIL IS LONG ENOUGH, THE DEAD END GRIP (PREFORM) MAY BE REINSTALLED TO INCREASE THE OVERALL LENGTH OF THE GUY WIRE.
- IF REMOVAL OF EXISTING DEAD END GRIP (PREFORM) IS REQUIRED, IT CANNOT BE REUSED.
- 4. IF EXISTING GUY WIRE GROUNDING IS REMOVED DURING MODIFICATION INSTALLATION, IT MUST BE RECONNECTED AFTER THE COMPLETION OF THE TOWER MODIFICATIONS. IF ORIGINAL GROUNDING IS BROKEN OR DAMAGED AND CANNOT BE RECONNECTED, GUY WIRE GROUNDING IS TO BE REPAIRED OR REPLACED.

INSTALL SHACKLE

5. CONTRACTOR TO INSTALL TENSION PLATES SHOWING A PERCENTAGE VALUE EQUAL TO THE INITIAL TENSION PERCENTAGE ON ANY WIRE RETENSIONED EITHER ABOVE OR BELOW THE STANDARD 10% INITIAL TENSION.



ALLOWED GUY WIRE TERMINATION MODIFICATION TO RETENSION GUY WIRES

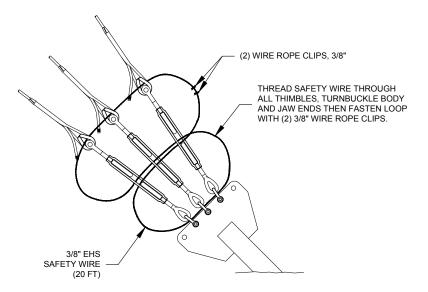


SEE NOTE #5.

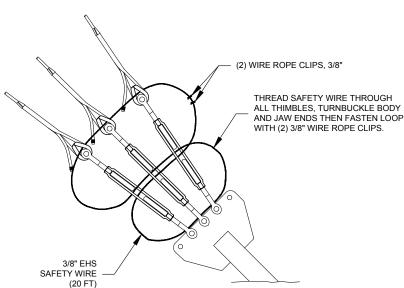
# SEIZING WIRE INSTALLATION TYPICAL DETAIL

### SEIZING WIRE INSTALLATION:

- 1. LAY ONE END OF THE SEIZING WIRE IN THE GROOVE BETWEEN TWO STRANDS IN THE GUY WIRE AND WRAP THE OTHER END TIGHTLY OVER THE PORTION IN THE GROOVE.
- 2. CONTINUE TWISTING WITH PLIERS TO TAKE UP SLACK AND TIGHTEN. WRAP SEIZING WIRE AROUND GUY WIRE FOR A WIDTH EQUAL TO THE GUY WIRE DIAMETER.
- 3. WRAP SEIZING WIRE TIGHTLY AGAINST SERVING, WINDING TWISTED WIRE INTO KNOT BEFORE CUTTING OFF ENDS OF THE WIRE. POUND KNOT SNUGLY AGAINST THE GUY WIRE.



TYPICAL SAFETY WIRE INSTALLATION DETAIL W/ SHACKLES



TYPICAL SAFETY WIRE INSTALLATION
DETAIL W/O SHACKLES

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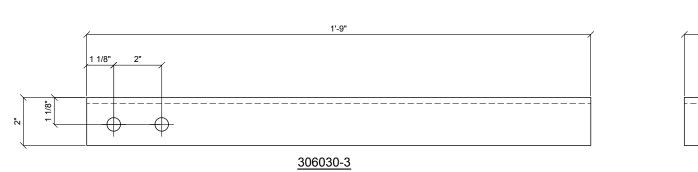
ATC JOB NO: OAA713535\_C6\_13

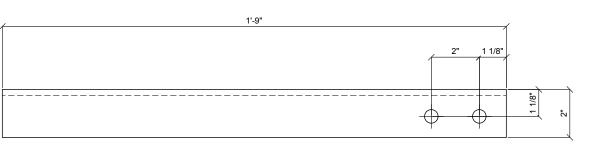
GUY WIRE RETENSIONING AND STANDARD SAFETY WIRE DETAILS

SHEET NUMBER:

A-5

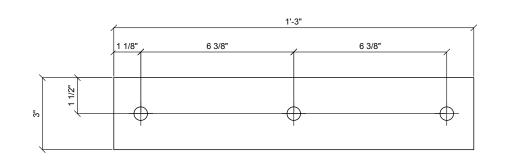
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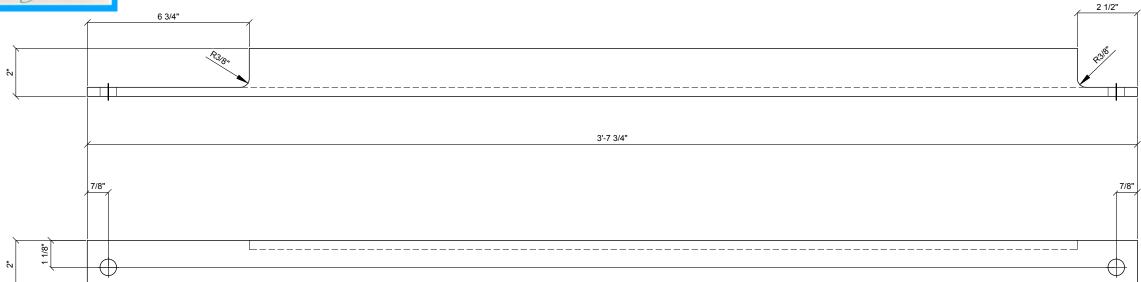


<u>306030-3</u> MID-PANEL HORIZONTAL <u>306030-4</u> MID-PANEL HORIZONTAL





306030-2 CENTER PLATE



306030-1 HORIZONTAL

PART NO.	DESCRIPTION	LENGTH	NOTES	BLK WT	GALV WT
306030-1	L 2" X 2" X 1/4"	3'-7 3/4"	SAW CUT ONLY	11.6#	12.2#
306030-2	PL 1/4" X 3"	1'-3"		3.2#	3.3#
306030-3	L 2" X 2" X 1/4"	1'-9"		5.6#	5.9#
306030-4	L 2" X 2" X 1/4"	1'-9"		5.6#	5.9#



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MID-PANEL HORIZONTAL WELDMENT FABRICATION DETAILS

SHEET NUMBER:

**REDLINES** 

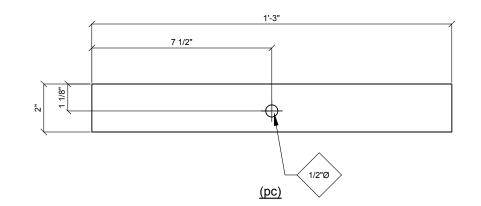
Discrepancies Noted

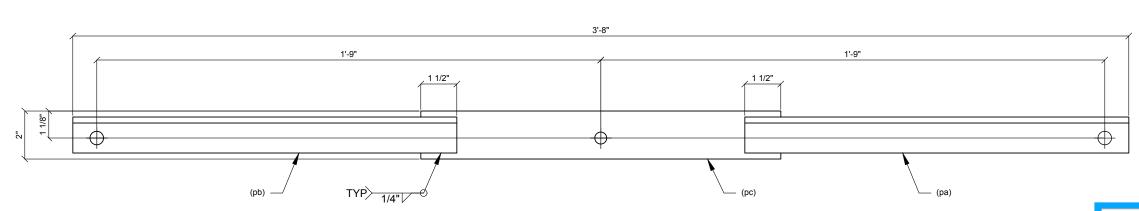
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REVISION:



<u>(pb)</u>

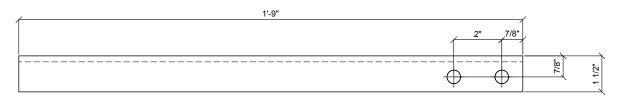




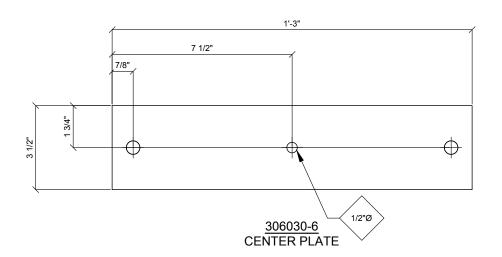
306030-5 MID-PANEL HORIZONTAL WELDMENT

MATERIAL: A36		FINISH: GALVANIZED	HOLES: 9/16"	Ø U.N.O.	GALV WT:	8.8#
PART NO.	QTY	DESCRIPTION	LENGTH	NOTES		<b>BLK WT</b>
306030-5	1	MID-PANEL HORIZONTAL WELDMENT	3'-8"			8.4#
(pa)	1	L 1 1/2" X 1 1/2" X 1/4"	1'-4"			3.1#
(pb)	1	L 1 1/2" X 1 1/2" X 1/4"	1'-4"			3.1#
(pc)	1	PL 1/4" X 2"	1'-3"			2.1#

<u>(pa)</u>



306030-7 MID-PANEL HORIZONTAL





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MID-PANEL HORIZONTAL FABRICATION DETAILS

SHEET NUMBER:

F-3

0

REVISION:

306030-7 L 1 1/2" X 1 1/2" X 1/4" 1'-9" 5.6# 5.9# 306030-6 PL 1/4" X 3 1/2" 1'-3" 3.7# 3.9# DESCRIPTION PART NO. LENGTH NOTES **GALV WT BLK WT** MATERIAL: A36 FINISH: GALVANIZED HOLES: 9/16"Ø U.N.O.

# **REDLINED – Built Per Print** ATC TOWER SERVICES 3500 REGENCY PARKWAY SUITE 100 CARY, NC 27518 PHONE: (919) 468-0112 COA: 2006031326 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. TITLE TO THESE DOCUMENTS SHALL REMAIN THE PROPERTY OF AMERICAN TOWER WHETHER OR NOT THE PROJECT IS EXECUTED. NEITHER THE ARCHITECT NOR THE PROJECT WILL BE PROVIDING ON A USET CONSTRUCTION TOWER OF SEVIEW. 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. DESCRIPTION FIRST ISSUE ATC SITE NUMBER: 306030 ATC SITE NAME: LEES SUMMIT MISSOURI SITE ADDRESS: 111 SW HOOK ROAD LEES SUMMIT, MO 64082 DRAWN BY: KIR APPROVED BY: FB/KCI DATE DRAWN: 05/01/18 ATC JOB NO: OAA713535\_C6\_13 **REDLINES**

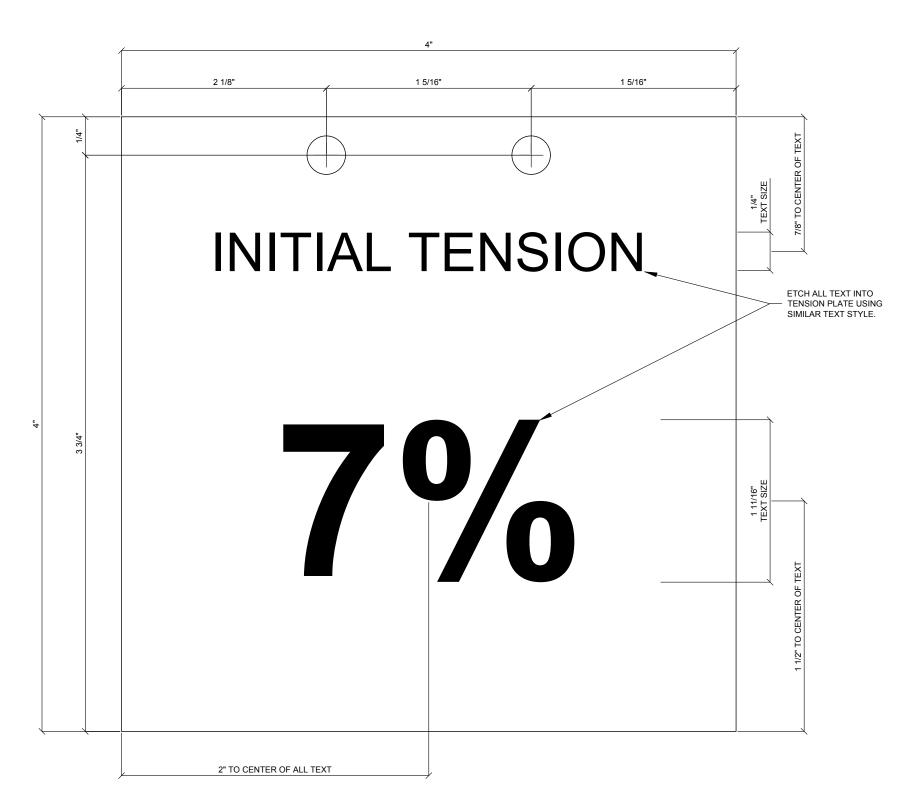
# 7% TENSION PLATE FABRICATION DETAILS

SHEET NUMBER:

Discrepancies Noted

TP-7

REVISION:



TP-7 TENSION PLATE

TP-7	PL 1/16" X 4"	0'-4"		0.3#	N/A
PART NO.	DESCRIPTION	LENGTH	NOTES	BLK WT	GALV WT
MATERIAL: STAINLESS STEEL		FINISH: N/A		HOLES: 5/	16"Ø





ATC TOWER SERVICES 3500 REGENCY PARKWAY SUITE 100 **CARY, NC 27518** PHONE: (919) 468-0112 COA: 2006031326

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REV.	DESCRIPTION	BY	DATE
$\triangle$ _	FIRST ISSUE	KIR	05/01/18
$\overline{\wedge}$			

ATC SITE NUMBER: 306030

ATC SITE NAME:

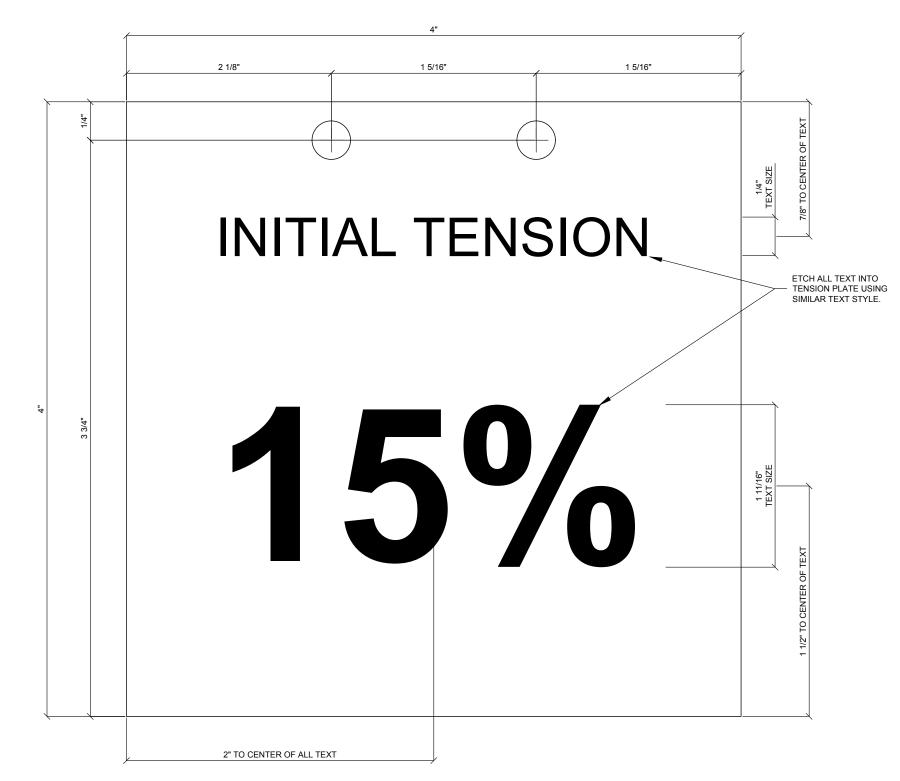
LEES SUMMIT

MISSOURI

SITE ADDRESS: 111 SW HOOK ROAD LEES SUMMIT, MO 64082







TENSION PLATE

PL 1/16" X 4" N/A PART NO. **DESCRIPTION** LENGTH **NOTES** BLK WT GALV WT **MATERIAL: STAINLESS STEEL** FINISH: N/A HOLES: 5/16"Ø

15% TENSION PLATE **FABRICATION DETAILS** 

SHEET NUMBER:

KIR

APPROVED BY: FB/KCI DATE DRAWN: | 05/01/18 ATC JOB NO: OAA713535\_C6\_13

DRAWN BY:

TP-15

REVISION:

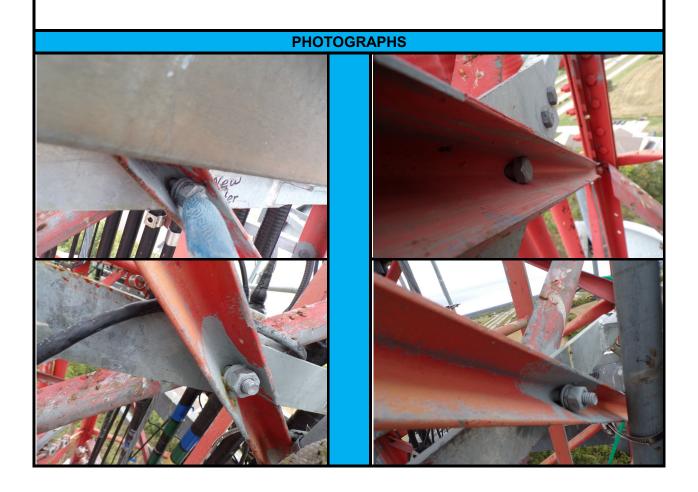
# **PUNCH ITEM 1**

SECTION/HEIGHT	PANEL	LEG	FACE	DRAWING PG#
Section 11-12	TYP	N/A	TYP	A-3

# **DISCREPANCY:**

Middle Connection bolt did not sit flush.

Note: Pre-Approval for Field Drilled Holes.

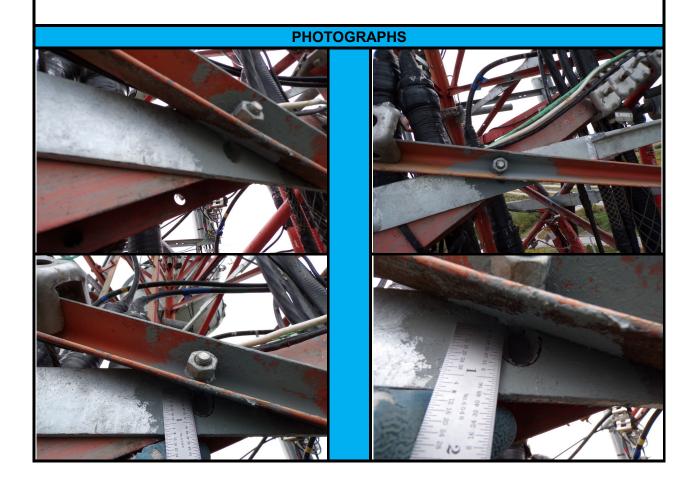


# **PUNCH ITEM 2**

SECTION/REIGHT	PANEL	LEG	FACE	DRAWING PG#
Section 11-12	5	N/A	AC	A-2

# **DISCREPANCY:**

Double Punched Hole was observed at the location above.



# Paul Martin

RE: Closeouts Review/ ATC 306030 site

To: Kyle Sellers, Cc: Naveen Senthil & 3 more



Please see approval.

# Good Morning Paul,

The bolt configuration is acceptable.

Please let me know if you have any questions.

# Thank you,

Kevin Swiercz Structural Engineer I American Tower Corporation 3500 Regency Parkway Suite 100 Cary, NC 27518

# **Brian Teasdale**

**From:** Brian Teasdale

**Sent:** Friday, September 21, 2018 8:30 AM

To: Paul Martin; Kent Ramey; Melissa; Kyle Sellers

**Cc:** Jesse Stenner

Subject: RE: CREW ONSITE & CM: REDEV MOD: #306030 LEES SUMMIT MO (AT&T) OAA713535 C3 11

Thanks,

\*\*\*\*\*\* Going forward, Please send all invoices to the EMAIL address called out below. \*\*\*\*\*

\*\*\*\*\* Please note the new mailing address below. \*\*\*\*\*\*

Brian Teasdale Project Manager



3452 Rothamer Rd.

Cottage Grove, Wi 53527 Direct: (608) 478-2620 Mobile (608) 556-7781 Fax: (608) 244-3427

Email: BTeasdale@TowerMRL.com

Invoicing Email: AP\_Tower@TowerMRL.com

Website: www.towermrl.com

From: Paul Martin <Paul.Martin@AmericanTower.com>

Sent: Friday, September 21, 2018 8:25 AM

To: Brian Teasdale <a href="mailto:bteasdale@towermrl.com">bteasdale@towermrl.com</a>; Kent Ramey <a href="mailto:kent@metrositellc.com">kent@metrositellc.com</a>; Melissa

<Melissa@metrositellc.com>; Kyle Sellers <kyle.sellers@sgstowers.com>

Cc: Jesse Stenner < Jesse. Stenner@americantower.com>

Subject: RE: CREW ONSITE & CM: REDEV MOD: #306030 LEES SUMMIT MO (AT&T) OAA713535 C3 11

# **EOR Comment for PMI:**

Paul,

Yes, that is close. For this application, this is approved.

Nathan Haselden, E.I. Structural Engineer II

**American Tower Corporation** 

From: Paul Martin

Sent: Thursday, September 20, 2018 6:13 PM

To: Nathan Haselden; PMI

Subject: RE: CREW ONSITE & CM: REDEV MOD: #306030 LEES SUMMIT MO (AT&T) OAA713535 C3 11

Importance: High

Hello,

See the attached photo.... I think its barely or under 15/16". Your thoughts?

### **Paul Martin**

Construction Manager KS & Western MO

# **American Tower Corporation**

816-591-5592 Mobile

paul.martin@americantower.com

Go Green! Please think about our environment before printing this email.

### **Paul Martin**

Construction Manager KS & Western MO

### **American Tower Corporation**

816-591-5592 Mobile

paul.martin@americantower.com

Go Green! Please think about our environment before printing this email.

**From:** Brian Teasdale [mailto:bteasdale@towermrl.com]

**Sent:** Thursday, September 20, 2018 4:51 PM **To:** Paul Martin; Kent Ramey; Melissa; Kyle Sellers

Cc: Jesse Stenner; Brian Teasdale

Subject: RE: CREW ONSITE & CM: REDEV MOD: #306030 LEES SUMMIT MO (AT&T) OAA713535 C3 11

Paul,

Sorry about the delay. Yes, the hole spacing was verified and the crew is wrapping up the P&T right now. Must relocate some of the pre-forms due to the turnbuckles being out of room.

Thanks,

\*\*\*\*\*\* Going forward, Please send all invoices to the EMAIL address called out below. \*\*\*\*\*\*

\*\*\*\*\*\* Please note the new mailing address below. \*\*\*\*\*\*

Brian Teasdale Project Manager



3452 Rothamer Rd. Cottage Grove, Wi 53527 Direct: (608) 478-2620 Mobile (608) 556-7781 Fax: (608) 244-3427

Email: BTeasdale@TowerMRL.com

Invoicing Email: AP Tower@TowerMRL.com

Website: www.towermrl.com

From: Paul Martin < Paul. Martin@AmericanTower.com>

Sent: Thursday, September 20, 2018 4:47 PM

To: Brian Teasdale < <a href="mailto:bteasdale@towermrl.com">bteasdale@towermrl.com</a>; Kent Ramey < <a href="mailto:kent@metrositellc.com">kent@metrositellc.com</a>; Melissa

<Melissa@metrositellc.com>; Kyle Sellers <kyle.sellers@sgstowers.com>

Cc: Jesse Stenner < <u>Jesse.Stenner@americantower.com</u>>; Brent Alderman < <u>balderman@towermrl.com</u>> Subject: RE: CREW ONSITE & CM: REDEV MOD: #306030 LEES SUMMIT MO (AT&T) OAA713535 C3 11

Brian?

### **Paul Martin**

Construction Manager KS & Western MO

## **American Tower Corporation**

816-591-5592 Mobile

paul.martin@americantower.com

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From: Paul Martin

**Sent:** Thursday, September 20, 2018 11:15 AM **To:** Brian Teasdale; Kent Ramey; Melissa; Kyle Sellers

Cc: Jesse Stenner; Brent Alderman

Subject: RE: CREW ONSITE & CM: REDEV MOD: #306030 LEES SUMMIT MO (AT&T) OAA713535 C3 11

Hello TowerMRL,

Did we get this verified?

Will the crew be done today? If, so please alert me once they leave.

Thanks,

### **Paul Martin**

Construction Manager KS & Western MO

# **American Tower Corporation**

816-591-5592 Mobile

paul.martin@americantower.com

Go Green! Please think about our environment before printing this email.

From: Brian Teasdale [mailto:bteasdale@towermrl.com]

**Sent:** Wednesday, September 19, 2018 3:33 PM **To:** Paul Martin; Kent Ramey; Melissa; Kyle Sellers

Cc: Jesse Stenner: Brent Alderman

Subject: RE: CREW ONSITE & CM: REDEV MOD: #306030 LEES SUMMIT MO (AT&T) OAA713535 C3 11

Brent,

See below. Please get a measurement of the distance from the new hole center to the existing hole center. Shoot that back ASAP.

Thanks,

\*\*\*\*\* Going forward, Please send all invoices to the EMAIL address called out below. \*\*\*\*\*

\*\*\*\*\* Please note the new mailing address below. \*\*\*\*\*

Brian Teasdale Project Manager



3452 Rothamer Rd. Cottage Grove, Wi 53527 Direct: (608) 478-2620 Mobile (608) 556-7781

Fax: (608) 244-3427

Email: BTeasdale@TowerMRL.com

Invoicing Email: AP Tower@TowerMRL.com

Website: www.towermrl.com

From: Paul Martin < Paul. Martin@AmericanTower.com>

Sent: Wednesday, September 19, 2018 3:28 PM

To: Brian Teasdale <a href="mailto:bteasdale@towermrl.com">bteasdale@towermrl.com</a>; Kent Ramey <a href="mailto:kent@metrositellc.com">kent@metrositellc.com</a>; Melissa

< Melissa@metrositellc.com >; Kyle Sellers < kyle.sellers@sgstowers.com >

Cc: Jesse Stenner < <u>Jesse.Stenner@americantower.com</u>>; Brent Alderman < <u>balderman@towermrl.com</u>> Subject: RE: CREW ONSITE & CM: REDEV MOD: #306030 LEES SUMMIT MO (AT&T) OAA713535 C3 11

TOWERMRL- See EOR Response. Please confirm with me we can clear this distance.

Paul,

As long as the new center-center of the bolt holes is 15/16" or greater, then this is approved.

Nathan Haselden, E.I. Structural Engineer II

**American Tower Corporation** 

From: Paul Martin

Sent: Wednesday, September 19, 2018 4:00 PM

To: PMI

Subject: CREW ONSITE & CM: REDEV MOD: #306030 LEES SUMMIT MO (AT&T) OAA713535 C3 11

Importance: High

Hello PMI/ Nathan,

Can you review please as the crew is on the tower now.

- IMG105= PROPOSED NEW HOLE- might be slightly farther from existing hole
- IMG1045= OVERALL new horizontal clamped to tower using the existing hole for example to show where the horizontal would connect to the legs if left as is
- IMG1046= close-up of right side of clamped horizontal as is
- IMG1049= close-up of left side of clamped horizontal as is

Thanks,

# **Paul Martin**

Construction Manager KS & Western MO

**American Tower Corporation** 

816-591-5592 Mobile

paul.martin@americantower.com

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### **Paul Martin**

Construction Manager KS & Western MO

**American Tower Corporation** 

816-591-5592 Mobile

paul.martin@americantower.com

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From: Brian Teasdale [mailto:bteasdale@towermrl.com]

Sent: Wednesday, September 19, 2018 2:42 PM

To: Brian Teasdale; Paul Martin; Kent Ramey; Melissa; Kyle Sellers

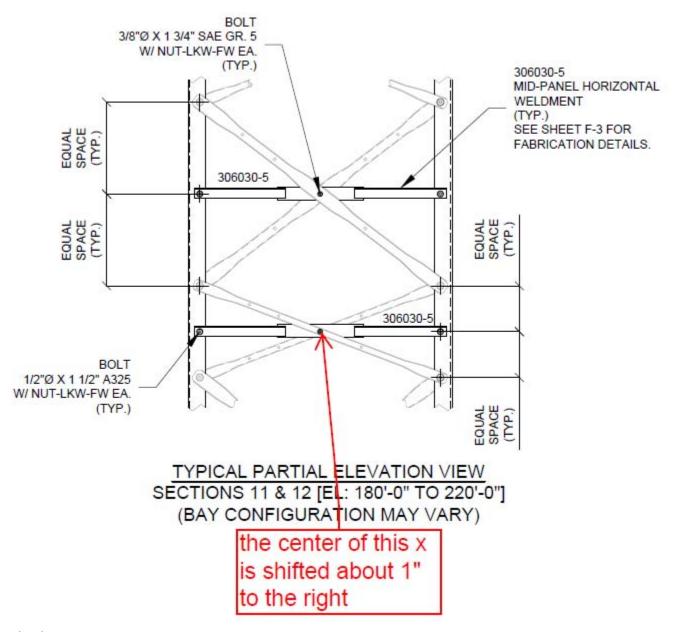
Cc: Jesse Stenner; Brent Alderman

Subject: RE: CREW ONSITE & CM: REDEV MOD: #306030 LEES SUMMIT MO (AT&T) OAA713535 C3 11

Importance: High

## Paul,

We have another issue on (1) face of the tower from elevations 180' - 220'. The smaller "X's" have a screwed-up center location, about (8) of them total. They are shifted to the right about 1". See the attached. The only way to correct this would be to drill a new 3/8" center hole into the pre-fabricated horizontal member, there would be about 1" of material between the edges of the new hole and the existing hole. Please let me know as soon as you can as we have a crew onsite.



Thanks,

\*\*\*\*\*\* Going forward, Please send all invoices to the EMAIL address called out below. \*\*\*\*\*\*

\*\*\*\*\*\* Please note the new mailing address below. \*\*\*\*\*\*

Brian Teasdale Project Manager



3452 Rothamer Rd.

Cottage Grove, Wi 53527 Direct: (608) 478-2620 Mobile (608) 556-7781 Fax: (608) 244-3427

Email: BTeasdale@TowerMRL.com

Invoicing Email: AP\_Tower@TowerMRL.com

Website: www.towermrl.com

From: Paul Martin < <a href="mailto:Paul.Martin@AmericanTower.com">Paul.Martin@AmericanTower.com</a> Sent: Wednesday, September 19, 2018 10:06 AM

To: Jesse Stenner < <a href="mailto:Jesse.Stenner@americantower.com">Jesse Stenner <a href="mailto:Jesse.Stenner@americantower.com">Jesse Stenner <a href="mailto:Jesse.Stenner@americantower.com">Jesse.Stenner@americantower.com</a>>; Brian Teasdale <a href="mailto:Jesse.Stenner@americantower.com">Jesse.Stenner@a

Importance: High

Brian,

Do you want to have your crew leader call Mike with AT&T?

### **Paul Martin**

Construction Manager KS & Western MO

American Tower Corporation

816-591-5592 Mobile

paul.martin@americantower.com

Go Green! Please think about our environment before printing this email.

From: Jesse Stenner

Sent: Wednesday, September 19, 2018 10:04 AM

To: Paul Martin; Brian Teasdale

Subject: RE: CREW ONSITE & CM: REDEV MOD: #306030 LEES SUMMIT MO (AT&T) OAA713535 C3 11

Paul,

I just got off the phone with Mike the AT&T tech. He stated that the dish's pointing to Harrisonville were active and the one pointing to Bluespings were inactive. I told him that I would give you his number in case you had any more specific questions. Mike can be reached at: 816.225.3125

Respectfully,

Jesse Stenner Field Operations Technician

American Tower Corporation

Kansas City Market (816) 518-5437 (Mobile)

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From: Paul Martin

Sent: Wednesday, September 19, 2018 8:53 AM

**To:** Brian Teasdale **Cc:** Jesse Stenner

Subject: RE: CREW ONSITE & CM: REDEV MOD: #306030 LEES SUMMIT MO (AT&T) OAA713535 C3 11

Importance: High

Hello Jesse,

Can you help us get in touch with AT&T's Tech ASAP to see if the dishes are active on this site please?!

### **Paul Martin**

Construction Manager KS & Western MO

**American Tower Corporation** 

816-591-5592 Mobile

paul.martin@americantower.com

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From: Brian Teasdale [mailto:bteasdale@towermrl.com]

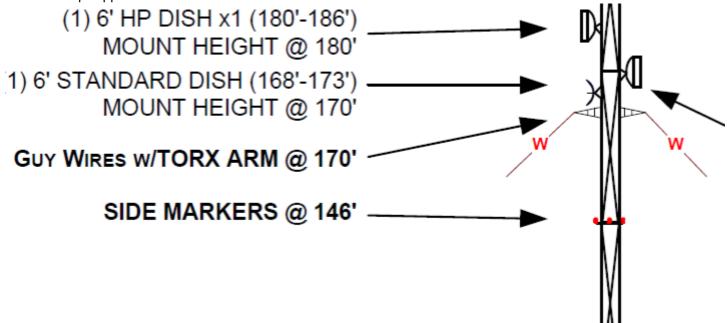
Sent: Wednesday, September 19, 2018 8:40 AM

**To:** Paul Martin **Cc:** Brian Teasdale

Subject: RE: CREW ONSITE & CM: REDEV MOD: #306030 LEES SUMMIT MO (AT&T) OAA713535 C3 11

### Paul,

Sorry for the delay on this. The crew was able to make what they had work. The tower geometry is different on all faces. Only issue they are having it determining if the (2) dishes are active. Can you contact the carrier and let us know. We will need to temp support them to install the new horizontal at that elevation.



Thanks,

\*\*\*\*\*\* Going forward, Please send all invoices to the EMAIL address called out below. \*\*\*\*\*

\*\*\*\*\* Please note the new mailing address below. \*\*\*\*\*\*

Brian Teasdale Project Manager



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Cottage Grove, Wi 53527 Direct: (608) 478-2620 Mobile (608) 556-7781 Fax: (608) 244-3427

Email: BTeasdale@TowerMRL.com

Invoicing Email: AP\_Tower@TowerMRL.com

Website: www.towermrl.com

From: Paul Martin < Paul. Martin@AmericanTower.com >

**Sent:** Monday, September 17, 2018 11:28 AM **To:** Brian Teasdale <a href="mailto:bteasdale@towermrl.com">bteasdale@towermrl.com</a>

Subject: FW: CREW ONSITE & CM: REDEV MOD: #306030 LEES SUMMIT MO (AT&T) OAA713535 C3 11

Brian See Engineering responses.

Did the crew get back to you with a list of missing/ short materials yet?

### **Paul Martin**

Construction Manager KS & Western MO

**American Tower Corporation** 

816-591-5592 Mobile

paul.martin@americantower.com

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From: Raymond Helvey

Sent: Monday, September 17, 2018 9:18 AM

To: PMI; Paul Martin

Subject: RE: CREW ONSITE & CM: REDEV MOD: #306030 LEES SUMMIT MO (AT&T) OAA713535 C3 11

Brian,

This should say one bay only not one face. The two configurations on the left are for the location of the splices. This was just missed.

Hope this helps. Sorry about the confusion.

# **Raymond Helvey**

Mgr Eng Structural Design

## **American Tower Corporation**

3500 Regency Parkway, Suite 100

Cary, NC 27518-7723

From: PMI

Sent: Monday, September 17, 2018 10:09 AM

**To:** Paul Martin; PMI **Cc:** Raymond Helvey

Subject: RE: CREW ONSITE & CM: REDEV MOD: #306030 LEES SUMMIT MO (AT&T) OAA713535 C3 11

Hey Ray,

See below and advise.

## Thanks,

# Brian Davies, E.I.

Structural Engineer II

**American Tower Corporation** 

3500 Regency Parkway, Suite 100

Cary, NC 27518

From: Paul Martin

Sent: Friday, September 14, 2018 4:36 PM

To: PMI

Subject: RE: CREW ONSITE & CM: REDEV MOD: #306030 LEES SUMMIT MO (AT&T) OAA713535 C3 11

Thanks Brian. I really appreciate your help diving into this. I am still waiting and asked the PM again for the tower photos.

### **Paul Martin**

Construction Manager KS & Western MO

**American Tower Corporation** 

816-591-5592 Mobile

paul.martin@americantower.com

Go Green! Please think about our environment before printing this email.

From: PMI

Sent: Friday, September 14, 2018 2:51 PM

To: Paul Martin; PMI

Subject: RE: CREW ONSITE & CM: REDEV MOD: #306030 LEES SUMMIT MO (AT&T) OAA713535 C3 11

#1: concern listed below about location and quantity of materials.

#2: concern is the X bracing does not have center holes already drilled and the bracing in not solid or round angles. It is the rounded angles/ "V" shaped. Should they hand drill those and is there a concern about the bolts/ washers not sitting flat in that angle? This is a typical installation. They will have to hand drill. I will have our CAD people look into the proper quantities and locations of the modifications and respond back by COB Monday.

# Brian Davies, E.I.

Structural Engineer II

# **American Tower Corporation**

3500 Regency Parkway, Suite 100

Cary, NC 27518

From: Paul Martin

Sent: Friday, September 14, 2018 3:14 PM

To: PMI

Subject: CREW ONSITE & CM: REDEV MOD: #306030 LEES SUMMIT MO (AT&T) OAA713535 C3 11

Importance: High

Hello,

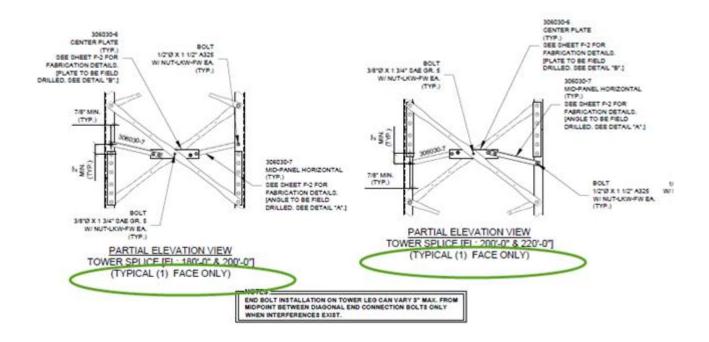
I met the crew on site and there were some questions about a couple of issues.

If someone is available for a call before I leave it would be most helpful.

#1: concern listed below about location and quantity of materials.

#2: concern is the X bracing does not have center holes already drilled and the bracing in not solid or round angles. It is the rounded angles/ "V" shaped. Should they hand drill those and is there a concern about the bolts/ washers not sitting flat in that angle?

I am leaving the prints off this email and will send them next.



# **Paul Martin**

Construction Manager KS & Western MO

**American Tower Corporation** 

816-591-5592 Mobile

paul.martin@americantower.com

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## Paul Martin @

RE: CREW ONSITE & CM: REDEV MOD: #306030 LEES SUMMIT MO (AT&T) OAA713535 C3 11

To: Brian Teasdale, Kent Ramey, Melissa, Kyle Sellers, Cc: Jesse Stenner



# EOR Comment for PMI:

Paul,

Yes, that is close. For this application, this is approved.

Nathan Haselden, E.I. Structural Engineer II

**American Tower Corporation** 

From: Paul Martin

Sent: Thursday, September 20, 2018 6:13 PM

To: Nathan Haselden; PMI

Subject: RE: CREW ONSITE & CM: REDEV MOD: #306030 LEES SUMMIT MO (AT&T) OAA713535 C3 11

Importance: High

Hello,

See the attached photo.... I think its barely or under 15/16". Your thoughts?

# **Paul Martin**

Construction Manager KS & Western MO

**American Tower Corporation** 

816-591-5592 Mobile

paul.martin@americantower.com

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# **Paul Martin**

Construction Manager KS & Western MO

**American Tower Corporation** 

816-591-5592 Mobile

paul.martin@americantower.com

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See More from Brian Teasdale