

ATC TOWER INSPECTION FORM



SECTION A - SITE INFORMATION

ATC Site Number	: 306035	ATC Site Name, State	: Unity Village MO 2
Site Address	: 2150 NW LOWENSTEIN	Number of Compounds	:
City/State	: Lees Summit, MO 64081	Date of Inspection	: 2/19/20
Contractor Name	: TOWER ENGINEERING PROFESSIONAL	Tower Elevation Photo	: Unity Village MO 2 (306035) 143.JPG
Inspection Completed By	: Sky Rimmille, Max Wagner	SC Tagged Out?	: Yes

SECTION B - TOWER INFORMATION

Structure Type	: Self-Supporting	# of Tower Legs	: 3
Tower Height	: 189'	Safety Climb Installed?	: Yes      Location: AB Face
Overall Structure Height	: 189.54'	Safety Climb Manuf.	: DBI Sala      Climbing Facil. Ladder
Tower Manufacturer	: CNR	AM Detuning ?	: No

SECTION C - SITE INFORMATION CATEGORIES

SECTION A - Site Information	SECTION G - Safety Comments
SECTION B - Tower Information	SECTION H - Grounding Comments
SECTION C - Tower Information Summary Comments	SECTION I - Guy Anchors & Wires Comments
SECTION D - Summary of Deficiencies	SECTION J - AM Detuning Comments
SECTION E - Tower Foundation Comments	SECTION K - Compliance
SECTION F - Tower Structure Comments	

SECTION D- SUMMARY OF OBSERVATIONS

<b>Instructions: List Comments in Sections E through J as applicable. Section D Summary will automatically populate.</b>	
1. Surface corrosion observed on TOWER LEG member(s) at 55', 74', and 104', A and B Leg. The corroded item has not	Photos: Unity Village MO 2 (306035) 214.JPG
2. Tower Twist/Plumb measurements lie outside of allowable ranges determined by the calculations contained in this ATC	Photos: Unity Village MO 2 (306035)
3. The DBI Sala (Strandvise) safety climb system installed to 189', on AB Face is recommended for replacement due to	Photos: Unity Village MO 2 (306035)
4. Tower base grounding was observed to be inadequate, there are currently (1) installed properly. [CUT GROUNDING AT	Photos: Unity Village MO 2 (306035)
5. Tower base grounding was observed to be inadequate, there are currently (0) installed properly.	Photos: Unity Village MO 2 (306035)
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SECTION E - TOWER FOUNDATION

<b>Instructions</b> <b>Tower base</b> should be visually inspected for spalling and cracking of the concrete. The soil surrounding the tower base foundation should be inspected for evidence of settlement. Any such settlement or movement should be noted. <b>Base drains (if present)</b> should be clear of any obstructions. Penetrate drain with object to ensure drains functioning. <b>Base insulators (if present)</b> - The porcelain surface should be wiped clean with a soft cloth to remove any salt deposits or other foreign substance. A check should be made for any evidence of deterioration or cracks in the porcelain surface. <b>All discrepancies <u>must</u> be marked with masking tape and magic marker.</b> <b>All discrepancies <u>must</u> be noted and photographed and numbered.</b>  Is tower center pin in place? Is tower center pin free of corrosion? Are all base plate bolts, nuts, and washers present? Is the tower foundation in good condition? (No cracking, spalling, or settling) Is the concrete tower base free from standing water? Are base drains clear and free flowing? (Drains required only under tubular legs.) Is porcelain surface of base insulators in good condition? (No deterioration or cracking) Is the soil around the foundation in good condition? (No settling or movement)	<div>If any comments exceed one row please expand the row height so that all of the text is visible. To expand rows automatically, click the Select All button, then click AutoFit Row Height in the Cells/Format box.</div>
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Instructions

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**Corrosion** - If corrosion is observed, the source should be determined and noted.

**Damaged or faulty members** - A visual inspection must be made of the entire tower structure to determine if any of the members have been deformed or damaged. Any bowed, bent or damaged member/bolt should be noted as to part number, size, location on tower, nature and magnitude of deformation or damage.

**Do not remove any tower member for replacement unless authorized by ATC Engineering Dept - Signed/Sealed Construction Drawings are required if a**

**All discrepancies must be marked with masking tape and magic marker. All discrepancies must be noted and photographed before and after repair.**

Is the tower free of rust? (If "No", be specific in the comments below.)

Are all structural members straight and not damaged, bent, and/or missing?

Is the tower finish in good condition? (No obvious signs of cracking)

Comments:	
1. Surface corrosion observed on TOWER LEG member(s) at 55', 74', and 104', A and B Leg. The corroded item has not	Photos: Unity Village MO 2 (306035)
2. Tower Twist/Plumb measurements lie outside of allowable ranges determined by the calculations contained in this ATC	Photos: Unity Village MO 2 (306035)
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SECTION G - SAFETY

Instructions

Safety is paramount- Report anything that makes it unsafe to operate or maintain this tower to ATC immediately.

All discrepancies must be marked with masking tape and magic marker. All discrepancies must be noted and photographed before and after repair.

Is there a safety climb system?

Are all components of the safety climb system free of rust?

Is the cable free from kinks, fraying, broken wires or strands or other damage?

Is the climbing path free from obstructions allowing a clear path for the cable?

Is the cable secured by properly spaced cable guides?

Is the total system properly installed including the top connection? If No, correct and note.

Is the FCC and ATC signage apparent and placed properly.

Comments:	
1. The DBI Sala (Strandwise) safety climb system installed to 189', on AB Face is recommended for replacement due to	Photos: Unity Village MO 2 (306035)
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SECTION H - GROUNDING

Instructions

Connections - The connections above grade should be visually checked for loose fittings, ensure wires are snug in mechanical connections or well bonded with exothermic connections at the base of the tower.

Ground Wires - The ground wires at the base should be cad welded to each leg.

Take a photo of the grounding at the base and at each anchor.

All discrepancies must be marked with masking tape and magic marker. All discrepancies must be noted and photographed before and after repair.

Is the tower base properly grounded?

Are the guy cables and/or guy anchor heads properly grounded?

Are ground wires and connections in satisfactory condition?

Is the lightning rod mounted such that it is secured to the structure and not at risk of falling?

Comments:

1. Tower base grounding was observed to be inadequate, there are currently (1) installed properly. [CUT GROUNDING AT	Photos: Unity Village MO 2 (306035)
2. Tower base grounding was observed to be inadequate, there are currently (0) installed properly.	Photos: Unity Village MO 2 (306035)
3.	Photos:
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10.	Photos:

Instructions

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All discrepancies must be marked with masking tape and magic marker and must be noted and photographed.

	X
Are the guy cables & paths clear of brush, vegetation, fencing or any other obstruction?	X
Are the anchor heads and rods free from any bends and/or fractures?	X
Are the anchor heads and turnbuckle hardware free from soil build-up?	X
Are exposed guy anchor foundations free from cracking, weathering?	X
Do the turnbuckles have room for adjusting tensions? (Not fully extended or contracted?)	X
Are the anchor heads free of corrosion?	X
Is guy anchor rod laterally aligned?	X
Are guy wires free of broken strands or insulators?	X
Are the guy dampers secured and in good condition?	X
Are all shackles, clevises, thimbles, cotter pins, and Crosby clamps properly installed?	X
Are the dead-end grips in good condition?	X
Are the dead-end grip end-sleeves (ice-clips) installed?	X
Are guy wires and guy hardware free of corrosion?	X
Is each turnbuckle safety wire properly installed and secure? If not, make corrections.	X
Are guy wire connections in satisfactory condition?	X
Are guy attachment points to tower in good condition?	X

**Note - If anchor shafts show signs of heavy corrosion at any point, stop digging immediately and complete the remainder of the inspection.**

Comments:	
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SECTION J- AM DETUNING

Instructions

All discrepancies must be marked with masking tape and magic marker and must be noted and photographed.

**Note:** If the tower has a base insulator (decommissioned AM hot tower) the box next to the tower with a single wire feed is NOT an AM detuning device.

- Is there an AM Detuning system on the tower?
- Are the AM Detuning skirt wires securely attached to the tower?
- Are the AM Detuning wires in good condition? (Broken, sharp bends, etc)
- Is the AM Detuning box securely attached to the tower or other mounting system?
- Is the AM Detuning box in good condition? (Sealed, loose or missing hardware, etc)
- Is the exterior of the AM Detuning box free of rust and corrosion?
- Is the AM Detuning system properly grounded?

Comments:	
1.	Photos:
2.	Photos:
3.	Photos:
4.	Photos:
5.	Photos:

SECTION K - COMPLIANCE

By signing this report:

- I understand that this information and form are the sole property of American Tower Corporation (ATC) and may not be copied or shared without written permission from ATC.
- I certify that any conditions or items omitted in this report were observed to be in acceptable condition per the criteria specified in the ATC Standard of Care and my own professional experience and judgement.
- I certify this report to be accurate and complete to the best of my knowledge and belief.

Name : Ami Legin

Date : 3/2/20

Company : Tower Engineering Professionals



**Site #** : 306035  
**Site Name** : Unity Village MO 2  
**Contractor Name** : TOWER ENGINEERING PROFESSIONAL  
**Completed By** : Sky Rimmille, Max Wagner  
**Date** : 2/19/20

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## PRE-ADJUSTMENT: 3-SIDED TOWER TWIST AND PLUMB

	FW (Ft)	Elev (Ft)
4th Taper Change <b>OR</b> Top of Tower	0.00	0.00
3rd Taper Change <b>OR</b> Top of Tower	0.00	0.00
2nd Taper Change <b>OR</b> Top of Tower	0.00	0.00
1st Taper Change <b>OR</b> Top of Tower	1.77	189.00
Base of tower (Bottom of steel)*	17.00	0.00

Wind Speed	9
Direction	East

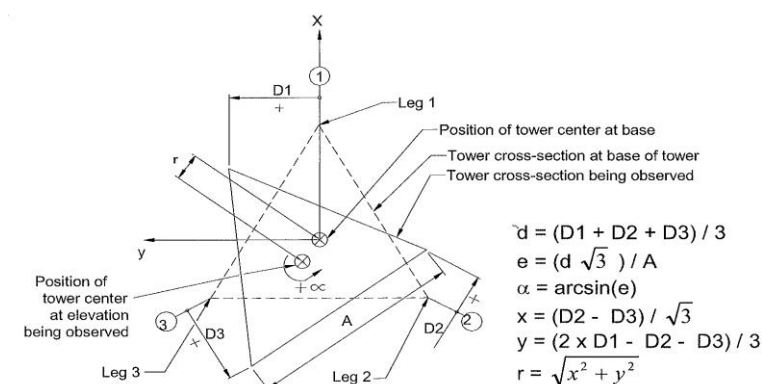
*\*For a GT w/ a tapered base, enter the face width at the top of the taper into Cell G14.*

OBSERVED LEG DISPLACEMENTS										CALCULATED TWIST			CALCULATED OUT-OF-PLUMB		
Data Point	Mast Elev. * See Note (Ft)	A - Face Width (In)	Leg Width (In)	D1**	i1	D2	i2	D3	i3	d (In)	e	α (Deg)	x (In)	y (In)	r (In)
1	20.00	184.66	4.57	0.00	-0.38	0.00	-0.38	0.00	0.00	-0.58	-0.01	-0.31	-0.50	-0.29	0.58
2	40.00	165.32	4.35	0.00	-0.38	0.00	-0.38	0.00	-0.38	-0.83	-0.01	-0.50	0.00	0.00	0.00
3	60.00	145.98	4.05	0.06	-0.38	0.06	-0.38	0.00	-0.38	-0.69	-0.01	-0.47	0.07	0.04	0.08
4	80.00	126.64	3.83	0.13	-0.38	0.13	-0.38	0.00	-0.25	-0.48	-0.01	-0.38	0.00	0.00	0.00
5	100.00	107.30	3.70	0.25	-0.25	0.25	-0.25	0.13	-0.25	-0.07	0.00	-0.07	0.13	0.07	0.15
6	120.00	87.96	3.30	0.25	-0.13	0.25	-0.13	0.25	-0.25	0.13	0.00	0.15	0.11	0.07	0.13
7	140.00	68.62	3.05	0.50	-0.06	0.50	-0.06	0.25	-0.25	0.45	0.01	0.65	0.39	0.22	0.45
8	160.00	49.28	2.50	0.50	-0.06	0.50	-0.06	0.38	-0.13	0.47	0.02	0.95	0.14	0.08	0.16
9	180.00	29.94	1.85	0.75	-0.06	0.75	-0.06	0.63	0.00	0.62	0.04	2.05	0.03	0.02	0.04
10	189.00	21.24	1.50	1.00	0.00	1.00	0.00	0.75	0.00	0.69	0.06	3.21	0.11	0.06	0.13
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Comments

### Tower Plumb and Twist Measurements

The transit is to be set up on each leg azimuth at the base of the tower. The corresponding tower leg at the base of the tower is used to set the vertical baseline.



### \* Mast Elevation Note

For guyed towers, record data at each guy elevation **and** at all taper change elevations. For self-supporting towers, record data at each 20' section **and** at all taper change elevations.

### \*\* Displacement Note

"D" refers to direct

"i" refers to inverse

Unitless; values are fraction of leg displaced

Site # : 306035  
Site Name : Unity Village MO 2  
Contractor Name : TOWER ENGINEERING PROFESSIONAL  
Completed By : Sky Rimmille, Max Wagner  
Date : 2/19/20

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Tower Height Verification Form

TOTAL TOWER HEIGHT = GROUND TO HIGHEST APPURTENANCE (F+S+A) = 189.54 (feet)

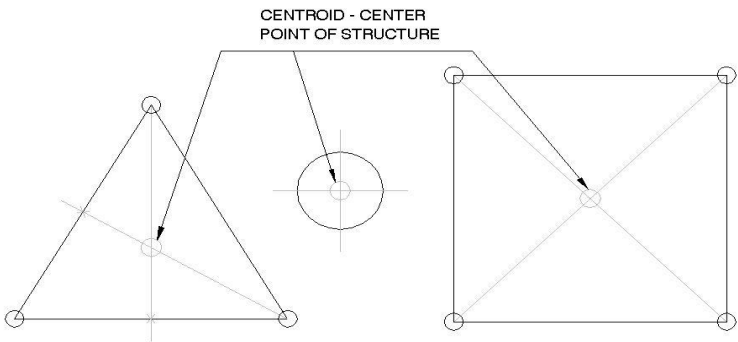
HEIGHT of FOUNDATION (F) = 0.54 (feet)  
(Measure from ground at center of tower to top of baseplate)

HEIGHT of STRUCTURE (S) = 189 (feet)  
(Measure from top of baseplate to top of structure)

HEIGHT of APPURTENANCE (A) = (feet)

HEIGHT with APPURTENANCE (F+S+A) = 189.54 (feet)

Distance From Centroid At Base Of Structure To Laser Tripod = (feet)



METHOD OF MEASUREMENT

- ☒ Tape Drop  
☐ Range Finder

(Accuracy to be within +/- 1' for structures Up to 100 feet. The accuracy is no better than +/- 1' for structures greater than 100 feet.) This method is generally used to validate existing distances only.

Range Finder Make and Model #  
Calibration Date  
Training Date

MEASUREMENT CERTIFICATION:

Company: Tower Engineering Professionals  
Print Name: Max Wagner  
Date: 02/19/20

