WILL COUNTY, ILLINOIS
PURCHASING DEPARTMENT

JENNIFER BERTINO-TARRANT
WILL COUNTY EXECUTIVE

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302 N. Chicago Street
Joliet, IL 60432

2025-78 Radio Tower Painting

Addendum #1 – May 27, 2025

We have received the following questions regarding this Project:

Question #1: Can you please send us the most recent tower inspection as mentioned in the invitation to bid?

Answer #1: Attached please find the most recent tower inspection.

Question #2: If a tower design and/or recent structural analysis is available, could you please provide it to prospective bidders? Such will assist us in estimating material quantities and labor time.

Answer #2: This request cannot be fulfilled as it is not available.

Question #3: Can you please confirm that the contractor is required to participate in a Federal-DOL recognized apprenticeship?

Answer #3: The following requirements must be met per the Will County Purchasing Ordinance:

- Compliance with all provisions of the Illinois Prevailing Wage Act, including wages, medical and hospitalization insurance and retirement for those trades as covered in the act.
- Participation in apprenticeship and training programs approved and registered with the United States Department of Labor's Bureau of Apprenticeship and Training.

MidAmerica Towers.com

3482 Keith Bridge Rd
Suite 302
Cumming, GA 30041

815-693-1565 phone

August 2022

Will County Radio
Frankfort, IL
ASR: 1245556

SUBJECT: **TOWER MAINTENANCE INSPECTION**
Frankfort, IL
200' Rohn SSVMW Self Supporting Tower

Per your request MidAmerica Towers, Inc. (MTI) has completed a TIA/EIA Tower Maintenance Inspection of the existing 200' self-support tower owned by Will County and located in Frankfort, IL.

Both the maintenance inspection and this report were completed per the requirements of **Annex J: Maintenance and Condition Assessment Procedures** of the TIA/EIA-222-G standard. The standard recommends routine inspection of self-support towers on a maximum of 5-year intervals. Shorter intervals are recommended for Class III (Public Safety) Structures and after severe wind and/or ice storms or other extreme conditions. **MidAmerica Towers suggests yearly tower site inspections.**

Limitations and/or exceptions should be noted for this inspection:

- Subsurface items were not excavated for inspection or otherwise verified

Commentary

The inspected tower is a 200' Rohn SSVMW self-supporting tower originally designed for microwave antennas as a common Carrier microwave repeater with a link antenna toward Chicago, IL. (6 repeater UHX10 dishes with one UHX8 antenna feeding the local exchange). The design criteria of when this tower was design in the 80's has changed drastically, and it is important to inspect the tower regularly and have a current structural analysis of all apparatuses currently mounting onto the tower.

The tower is in decent shape, however, there are a few things towers this age could have, and this tower does need attention:

1. **Pipe legs can have interior rot**, it is important to inspect weep holes for debris and clogs. A simple "bang" on each leg with a 4lb hammer towards the top of the section will reveal any loose rusting material falling, which indicates inter rusting. No interior tube rusting was found on this site.
2. **Galvanized structural material can bleed a slight rust** color indicating the galvanization is wearing. This tower has little indication of galvanization issues however, the galvanizing shows age and should be coated with a superior quality self-etching coating such as this product from Anchor paint (which has stood the test of time). https://anchorpaint.com/product/flexi-coat-aviation-coatings-aa4515/
3. **Cable ladders and lighting conduit usually will rust** before structural steel. There is a considerable amount of rusting of these components on this tower and it is suggested to coat them while coating the tower.

4. Hardware such as bolts, washers and nuts can rust. There is a considerable amount of rusting of these components on this tower and it is suggested to coat them while coating the tower.
5. **Safety climb systems can wear, rust, or become outdated.** The safety climb system on this tower is a rail type system, it is highly unlikely a tower climber will have the slide needed to utilize this system. This, along with age I suggest changing the safety climb system out with a newer stainless steel cable system which is the industry standard.
6. **Anchor bolt rot**. Recently there has been tower failures due to anchor bolt rot between the tower foundation and base section due to grout trapping water (which on a pipe leg tower drains down the inside and exits through drain holes in the grout). It is my suggestion a section of grout be removed to reveal the anchor bolts that have been buried since the tower was erected and inspected for rust.

Please refer to the following additional attachments for more detailed information regarding this inspection:

1. Site Map
2. Photos
3. TIA/EIA Structural Inspection Checklist
4. Tower Plumb & Twist Table

Based upon the field inspection conducted on **August 6, 2022,** the following non-conforming items were identified:

Category	Item #	Issue	Status & Recommendation	Photo #
Tower	1	Safety Climb	Missing top support, substandard system – we suggest replacing with new.	Issue 1
Tower	2	Tower Corrosion	Tower needs painting to prevent further corrosion.	Issue 2
Tower	3	Grounding @ base	We suggest cad-welding main tower grounds	Issue 3
Tower	4	Grout	We suggest re-grouting tower legs	Issue 4
Tower	5	Anchor bolt inspection	We suggest pulling grout, inspecting anchor bolts then re-grouting	Issue 5
Tower	6	Wi-Fi clamps	Un Standardized clamps were used for WI fi antennas, we suggest they be changed out with Valmont pucks.	Issue 6
Tower	7	Wi-Fi Quality of work	We suggest the Wi-Fi work be cleaned up and un-used equipment be removed	Issue 7
Tower	8	Hawks Nest	We suggest monitoring the hawk's nest	Issue 8
Site Area	9	Weeds	We suggest a weed control program be implemented whereas you are not just killing existing weeds but sterilizing the ground for future growth. .	Issue 9
Tower	10	Equipment removal	We suggest removing unused equipment from the tower	Issue 10
Tower	11	Missing step bolts x 12	There are missing step bolts, we suggest installing new step bolts in all missing spaces	Issue 11

It is the professional opinion of MidAmerica Towers, Inc. that the above listed items be addressed.

We appreciate the opportunity to collaborate with you on this project. If you have any questions and/or concerns, please feel free to give us a call.

Sincerely,

MidAmerica Towers, Inc.
Jay Panozzo
Inspection Manager

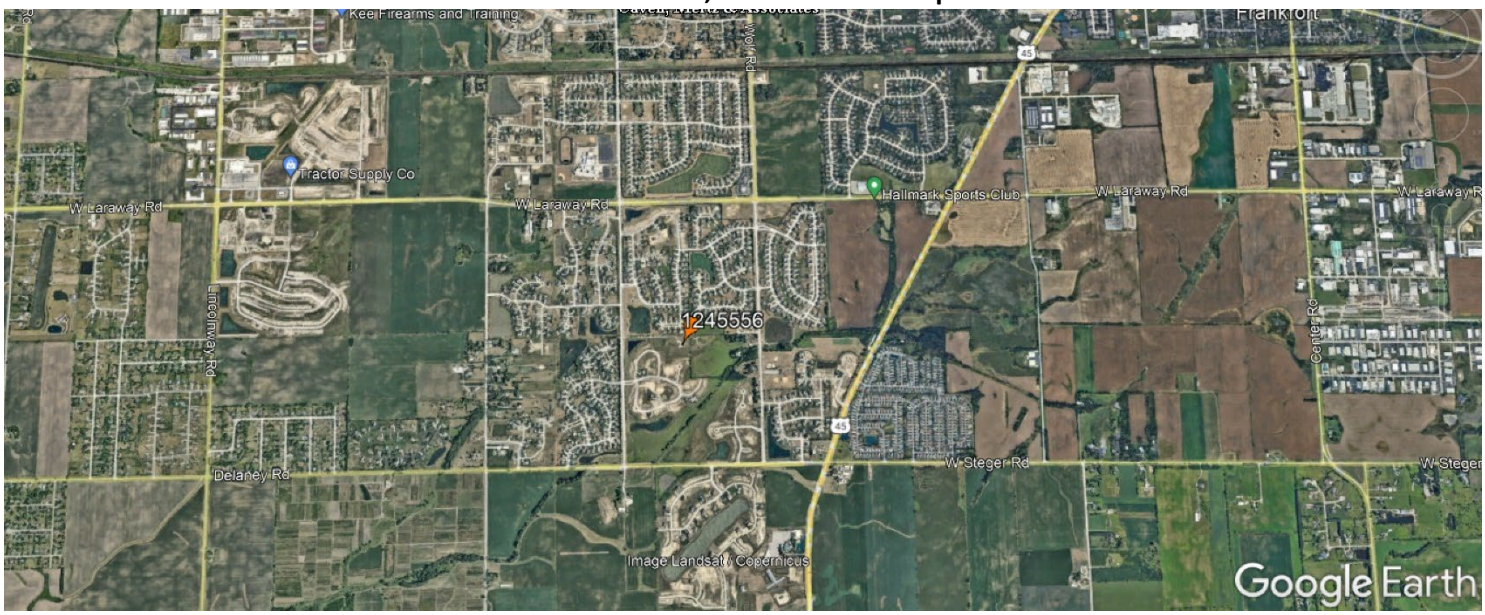
Keel Firearms and Training
Tractor Supply Co
W Laraway Rd
W Laraway Rd
Hallmark Sports Club
W Laraway Rd
Frankfort
Wolf Rd
Center Rd
Lincoln Hwy Rd
Delaney Rd
W Steger Rd
W Steger
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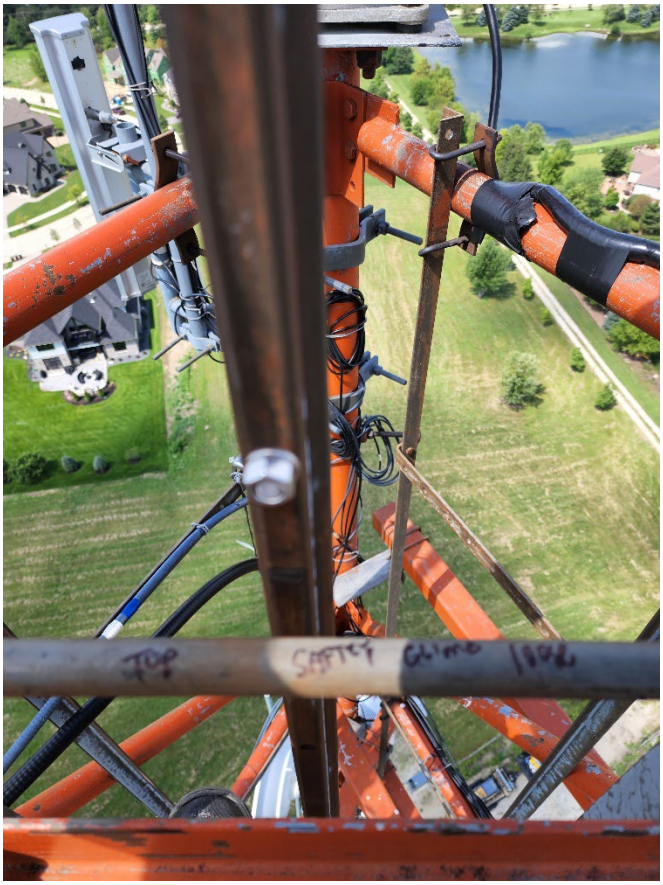
Image Landsat / Copernicus
Google Earth

Site Map



issue 1, top safety climb support missing, this is a non-standard anti climb, and we suggest replacing with a newer model

issue 2 – paint condition poor

Paint condition poor

Paint condition is poor, galvanized rust bleed & hardware rust is plentiful

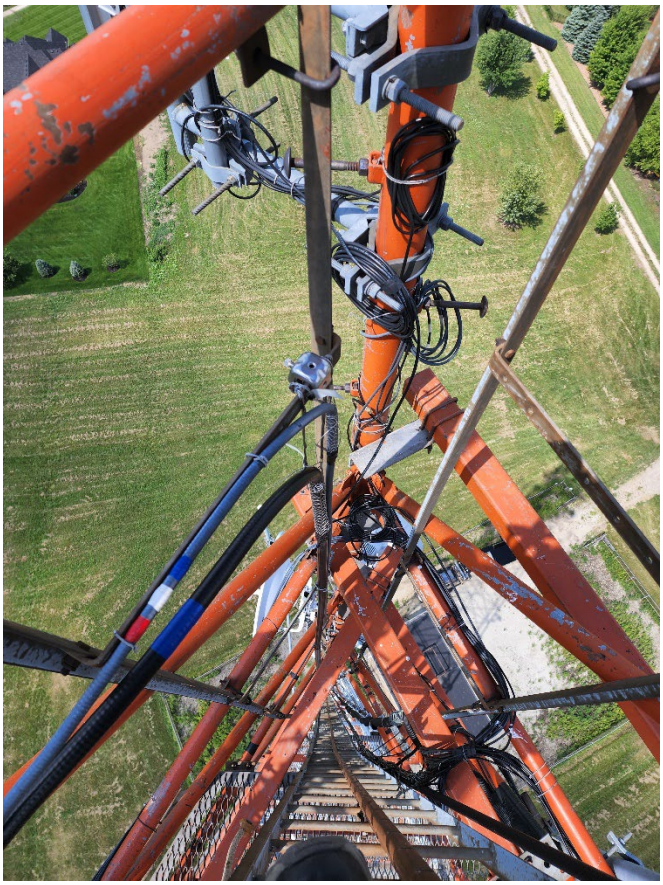
Issue 3 – base grounds needs to be cadweled

Issue 4 Grout needs repair

Issue 5 Anchor bolt inspection, water could be getting trapped

Issue 6 – wi fi clamps should be Valmont Pucks or cross over clamps

Issue 6 wi fi clamps should be replaced



Issue 7 – wi fi quality, poorly supported wires, many unused

Issue 8 – hawks Nest @ 90', monitor as needed

Issue 8 Hawks nest @ 90' Climbing leg

Issue 9 Weed Control needed, not just periodic spraying but a full soil neutralization program with quarterly sprays

Issue 9 Weed Control

Issue 10 – removal of old equipment (mounts, tie backs, cables etc.)

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TIA/EIA-222-G MAINTENANCE INSPECTION CHECKLIST

MTI Job No.	2022-8-6	Inspection Date	8/6/2022
Client Name	Will County	Tower Type	Self-Support
Site Name	Frankfort	Tower Height	200'
Site Address	South Owens Rd, 1 mile south of Laraway Rd	Manufacturer	Rohn - SSVMW
Site City, State	Frankfort, IL	Wind	5 MPH
Inspection By	Jay Panozzo	Temperature (F)	78°F

Item	Condition	Notes
I. Tower Conditions		
A. Members		
1 Bent Members	OK	
2 Loose Members	OK	
3 Missing Members	OK	
4 Climbing Facilities, Platforms, Catwalks - All secure	**Issue 1**	Top support missing on safety climb. Several step bolts missing.
5 Loose/Missing Bolts	OK	
6 Visible Cracks in welded connections	OK	
B. Finish		
1 Paint and/or galvanizing	**Issue 2**	Recommend painting the tower with Anchor paint. https://anchorpaint.com/product/flexi-coat-aviation-coatings-aa4515/
2 Rust and/or corrosion	**Issue 2**	Minor to major conduit and tower corrosion is occurring in areas. Recommended that all rust scale is coated wit anchor zinc dust paint. https://anchorpaint.com/product/zinc-dust-primer-1716/
3 FAA or ICAO color marking condition	**Issue 2**	Tower FAILS FAA color match
4 Water collection in members	OK	
C. Lighting		
1 Conduit, junction boxes and fasteners weather tight and secure	**Issue 2**	Minor to major conduit and tower corrosion is occurring in areas. Recommended that all rust scale is coated wit anchor zinc dust paint. https://anchorpaint.com/product/zinc-dust-primer-1716/
2 Drains and vents open	OK	
3 Wiring condition	OK	
4 Controllers functioning		
a. Flasher	OK	
b. Photo Control	OK	
c. Alarms	NA	
5 Light Lenses	OK	
6 Bulb Conditions	OK	
D. Grounding		
1 Connections checked and secure	**Issue 3**	Tower main base connections should be cadweled
2 Corrosion observed	OK	
3 Lightning protection secure	OK	
E. Tower Base Foundation		
1 Ground Conditions		
a. Settlements or movements	OK	
b. Erosion	OK	
c. Site Conditions (Standing water, drainage, trees, etc..)	OK	

Item	Condition	Notes
2 Base Conditions		
a. Nuts & lock nuts tight	OK	
b. Grout condition	**Issue 4**	Grout is cracked and/or missing. We suggest this be repaired.
3 Concrete Conditions		
a. Cracking, spalling, or splitting	OK	
b. Chipped or broken concrete	OK	
c. Honeycombing	OK	
d. Low spots to collect moisture	OK	
e. Anchor-bolt corrosion	Issue 5	We suggest an ancho bolt inspection be performed.
F. Tower Alignment and Twist and Plumb	OK	

II. **Guyed Towers**

A. Anchors

1 Settlement, movement, or earth cracks	NA	
2 Backfill heaped over concrete for water shedding	NA	
3 Anchor rod condition below earth	NA	
4 Corrosion control measures	NA	
5 Grounding	NA	
6 Anchor head clear of earth	NA	

B. Tower Guys

1 Strand

a. Type (1x7 EHS, 1x19 BS, etc.)	NA	
b. Size	NA	
c. Breaking Strength	NA	
d. Elevation	NA	
e. Condition (corrosion, breaks, nicks, kinks, etc..)	NA	

2 Guy Hardware

a. Turnbuckles	NA	
b. Cable thimbles in place (if req'd)	NA	
c. Service sleeves in place (if req'd)	NA	
d. Cable connectors end fittings	NA	
i. Cable clamps applied properly and bolts tight	NA	
ii. Preformed wraps-properly applied, fully wrapped, and sleeve in place	NA	
iii. Wire serving properly applied	NA	
iv. Strandvices secure	NA	
v. Poured sockets secure and showing no signs of separation	NA	
vi. Connector-Cable connection (should show no sign of damaged cable or slippage)	NA	
e. Shackles, bolts, pins, and cotter pins secure and in good condition.	NA	

3 Guy Tensions

a. Compare Tension to design requirements	NA	
b. Check Tensions by acceptable methods	NA	
c. Record tensions and weather conditions	NA	

Item	Condition	Notes

III. **Antennas and Feedlines**

A. Antenna Mounts and Antennas

1 Members (mounting and stabilizing)

a. Bent, broken, or cracked	OK	
b. Loose -	ISSUE 6	Wi-Fi mounts secured with substandard clamps, suggest crossovers be utilized. https://www.sitepro1.com/store/cart.php?m=product_detail&p=1999
c. Missing	OK	
d. Loose and/or missing bolts	OK	
2 Adjustments secure and locked	OK	

3 Elements

a. Bent, broken, cracked or bullet damaged	OK	
b. Loose	OK	
c. Missing	OK	
d. Loose or missing fasteners	OK	
4 Corrosion condition	OK	
5 Radomes and/or cover conditions	OK	

B. Feedlines (waveguide, coax,

etc….) 1 Hangers and supports

a. Condition	OK	
b. Quality	**Issue 7**	Much all the Wi-Fi antenna cabling is hap-hazordly installed and needs to be neatly re-supported.
c. Corrosion condition	OK	
2 Flanges and seals (check integrity)	OK	

3 Line Condition

a. Dents	OK	
b. Abrasions	OK	
c. Holes	OK	
d. Leaks	OK	
e. Jacket condition	OK	

4 Grounds

a. Top ground strap bonded	OK	
b. Bottom ground strap bonded	OK	

5 Feedline support

a. Properly attached	**Issue 7**	Much all the Wi-Fi antenna cabling is poorly installed and needs to be neatly re-supported.
b. Loose and/or missing bolts	OK	
c. Members straight and undamaged	OK	

ADDITIONAL NOTES:

#8	Hawks are starting to build a nest at the rest platform 1/3 of the way up. Recommended to be removed or monitor.
#9	Issue 8 – weed control is needed. Proper management not only kills existing weeds but creates a situation where the ground is sterile.
#10	Remove un-used hardware
#11	Install missing step bolts
#12	

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TOWER PLUMB & TWIST VERIFICATION - TRIANGULAR TOWER
MEASUREMENTS & CALCULATIONS

Project #:	2022-8-6	Date:	8/6/2022	Tower Type:	Self-Support	Tower Owner:	Will County
Site Name:	Frankfort	Wind:	W 5MPH	Tower Height:	220	Client:	Will County
Location:	Frankfort, IL	Temp:	70F	Tower Vendor:	Rohn SSVMW	Inspector(s):	Jay Panozzo

		FIELD MEASUREMENTS									CALCULATIONS					
		SETUP 1 - A LEG			SETUP 2 – B LEG			SETUP 3 - C LEG			TWIST			OUT-OF-PLUMB		
Sighted Elev. On Tower (feet)	Tower Face Width (ft)	Distance 1 To Tower (feet)	Measured Angle 1 (seconds)	D1 (inches)	Distance 2 To Tower (feet)	Measured Angle 2 (seconds)	D2 (inches)	Distance 3 To Tower (feet)	Measured Angle 2 (seconds)	D3 (inches)	d (inches)	e (inches)	"Twist" α (°)	x (inches)	y (inches)	"Plumb Dist." r (inches)
0	-	-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	0.000
20	25	325.0	0	0.000	325.0	0	0.000	323.0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
60		325.0	0	0.000	325.0	0	0.000	323.0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100		325.0	0	0.000	325.0	0	0.000	323.0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
140		325.0	0	0.000	325.0	0	0.000	323.0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
180		325.0	0	0.000	325.0	0	0.000	323.0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
200	8	325.0	0	0.000	325.0	0	0.000	323.0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000