

**Recognizing Cost-Savings Opportunities  
for Mobile Network Operators Through  
Wireless Infrastructure Engineering &  
Maintenance  
TIF/GTI Partnership**

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# What is TIF?

The **42<sup>nd</sup>** GTI WORKSHOP

## MISSION STATEMENT

The mission of TIF is to uplift the telecommunications industry by providing timely support and education to the public, lawmakers, and industry stakeholders through the promotion of quality, safety, efficiency, and workforce development.



# TIF

TELECOMMUNICATIONS  
INDUSTRY FOUNDATION

Uplifting Through Education

TIFONLINE.ORG

# Who We Support

## Government Agencies

- OSHA
- US Department of Education
- FCC
- FWS
- FAA

## Standards Bodies

- TIA

## Industry Organizations

- WIA
- NATE
- FOA
- GTI



# Published Content

The **42<sup>nd</sup>** GTI WORKSHOP

10 White Papers

60+ Planning Advisory Notices

30+ Podcast Episodes

15+ Videos



# Key Learning Opportunities

## Big Challenges Require Holistic Solutions

### • Roles & Responsibilities (PAN)

- ✓ Roles & Responsibilities are critical for safe & quality installations: Mobile Network Operators, Structure Owners, Manufacturers, Engineers, General Contractors

### • Appearance Installation Impact to Climbing Facilities and Antenna Supporting Structures (WP)

## Where does the quality process break down?

### End Users:

- Accountability
- Facilitate communication

### Engineers:

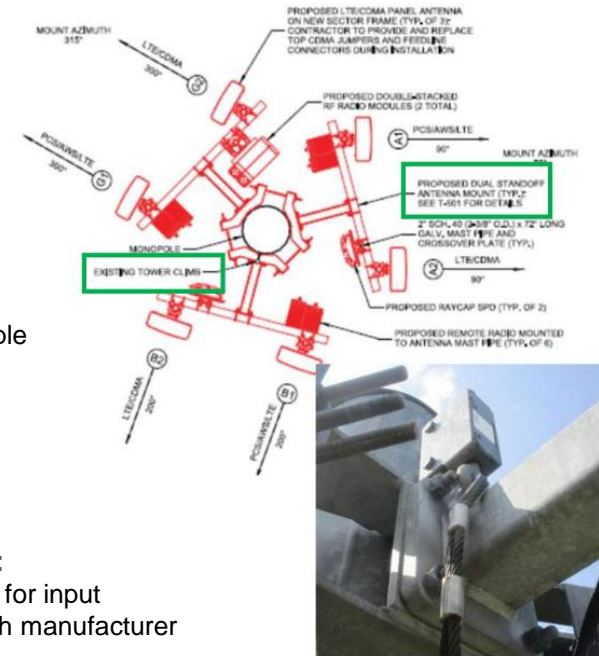
- Constructability
- Availability to General Contractors
- Coordination between multiple engineering firms

### Manufacturers:

- Assembly instructions
- Equivalent parts

### General Contractors:

- Engage Engineer of Record for input
- Effective communication with manufacturer



## Establish Engineering Consistency & Best Practices

- **Building-Mounted Structures in the Telecommunications Industry (WP)**



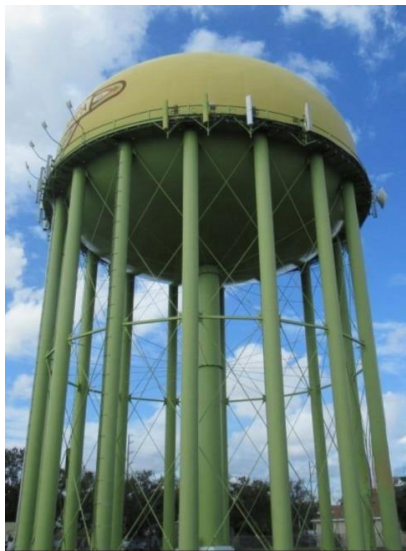
- **Mount Analysis: Recommended Best Practices (WP)**
- **Reliability of Telecommunications Structures (WP)**
- **Drone Mappings in the Telecommunications Industry (WP)**



## Understanding and Consistent Application of Existing Codes & Standards

- **ANSI/TIA-222-I (PAN)**

- ✓ “Structural Standard for Antenna Supporting Structures, Antennas and Small Wind Turbine Support Structures”



- **Applying the Concept of Intended Use (video)**

- **Post Installation Inspection & Post Modification Inspection (PAN)**
- **Maintenance & Condition Assessment Programs (PAN)**



**Example 2:** Bolts missing from primary connection between mount standoff and collar connection to supporting structure.

## Engineering Consistency & Process Efficiency Leading to Cost-Transformation

- **How Data-Driven Structural Engineering, Best Practices, and Collaboration Can Transform Wireless Construction, Alteration, and Maintenance (WP)**
  - ✓ Establishing clarity in all stakeholder roles and responsibilities and accountability, paired with controlled vendor management allows for:
    - **Improved quality & project efficiency**
    - **Cost savings**
    - **Risk mitigation**



# Working Together

- **Promote efficient and cost-effective 5G-Advanced global infrastructure deployments using wireless structural engineering best practices and standards**
- **Exchange information to address common challenges and concerns related to wireless infrastructure deployment, maintenance, and conditioning**
- **TIF offers best practices for telecommunications infrastructure including wireless structural engineering, maintenance, and manufacturing for the benefit of the industry**

**Learn More:** [www.tifonline.org](http://www.tifonline.org)

*Thank you*