ADDENDUM NO 2
2026-F
DECOMMISSIONING AND REMOVING CUMORAH HILL AND JAIL TOWERS

NOTICE TO CONTRACTORS

1. See attached Safety and TIA Inspection Reports

Safety Report of Colombia County Sheriff's Office Tower
ASRN 1200484

By

Common Ground Electronics, LLC

March 8, 2013

On March 4, 2013 Common Ground Electronics began performing data line upgrades and grounding augmentations on the tower. While climbing the tower structural issues were discovered which were deemed unsafe:

1. Several sections of the tower were installed upside down. The condensation drain holes in the bracing members were facing upwards resulting in water being collected rather than drained thru these holes. As tower members are hollow, the collected water is causing the tower to rust from the inside out.

2. Rusty spots and rust discolorations were discovered in many of the diagonal and vertical members.

3. Tower has misaligned sections caused by improper construction or damage during assembly.

4. At approximately the 180 foot level up until approximately the 340 foot level one of three support legs starts to curve in an "s" shape. This curve drastically decreases the overall structural integrity of the tower. At the time of the climb, Common Ground Electronics noticed one bracing member deformed due to this curvature.

5. At approximately the 340 foot level several members in the same section were discovered which had unacceptable levels of rust especially where a water hose clamp bonded a copper braid to one the cross members (note photo one). The level of rust coupled with the close proximity of the members has created a weak area in the tower at a critical point. If one of the members fails several others would likely follow causing the tower to collapse.

Common Ground Electronics has deemed this tower unsafe to climb; the tower also poses a threat to the surrounding area, especially as the county fuel depot is located within the fail zone of the tower. Common Ground Electronics strongly recommends this tower be replaced promptly and that personnel be restricted from the area as much as possible. While no estimate can be provided on when a failure could happen there will be an increased likelihood of failure during storm or hurricane season. Please refer to photos included in report for examples of tower damage.

Kelley Rosenlund
Common Ground Electronics, LLC
3146 NW 182 St
Newberry, Florida 32669
O 352 275 5131
F 480 275 3226

1. *At Approximately 340 Feet.*

2. *At Approximately 340 Feet.*

3. *At Approximately 340 Feet.*

4. *Note Deformed Member*

5. *Tower Base*

September 30, 2013

Lawrence Wilson
Columbia County Central Comm.
(386) 758-1125 x1576 Office
(386) 623-3616 Cell
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Tower Engineering Professionals
10014 N Dale Mabry Hwy, Ste. 101
Tampa, FL 33618
(910) 622-0111

Subject: Maintenance and Condition Assessment Report

Client Designation:	**Site Number:**	Unknown
	Site Name:	Columbia County Jail
Engineering Firm Designation:	**TEP Project Number:**	94941-9234
Site Data:	**550 US 41 South,** **Lake City, Columbia County, FL 32055** **Latitude N *30° 13' 8.8"*, Longitude W *82° 38' 41.1"*** **406.5 Foot – Guyed Tower**	

Dear Mr. Wilson,

Tower Engineering Professionals (TEP) completed a periodic inspection for the above referenced site. The onsite investigation was performed by Ryan Beckley and Cory Dunbar of TEP during the September 13, 2013 site visit. The inspection was in accordance with the ANSI/TIA-222-G-2005 Annex J: Maintenance and Condition Assessment (Normative), including all addendums (addendums TIA-222-G-1 2007 and TIA 222-G-2 2009), the checklist is pages 2 thru 7 of this report.

Observations and recommendations are listed herein. The inspection included observation of tower members, bolted connections, and foundations above grade. For the purpose of this inspection, the tower legs were named by letter according to the magnetic azimuth defined by a line from the center of tower to the leg. "A" leg is the leg closest to magnetic north, followed clockwise by "B" and "C." Guy wires were numbered from the ground up. Guy wires 1 thru 6 are at 84.88-ft, 165.21-ft, 225.46-ft, 285.71-ft, 345.96-ft, and 406.21-ft elevation respectively.

Thank you for the opportunity to provide this service for you. If you have any questions or comments, please contact our office.

Sincerely,
Tower Engineering Professionals, Inc. (TEP)

Andrew T. Haldane, P.E., C.W.I.
Executive Vice-President

ANSI/TIA-222-G MAINTENANCE AND CONDITION ASSESSMENT

A. STRUCTURE CONDITION

A.1. Damaged members (legs and bracing)			
☐ Okay	☐ Possible Improvement	☒ Needs Repair	☐ Not Applicable
Notes: Several damaged members. See report for locations and recommendations.			
A.2. Loose members			
☒ Okay	☐ Possible Improvement	☐ Needs Repair	☐ Not Applicable
Notes:			
A.3. Missing members			
☒ Okay	☐ Possible Improvement	☐ Needs Repair	☐ Not Applicable
Notes:			
A.4. Climbing facilities, platforms, catwalks – all secure			
☒ Okay	☐ Possible Improvement	☐ Needs Repair	☐ Not Applicable
Notes:			
A.5. Loose and/or missing bolts and/or nut locking devices			
☒ Okay	☐ Possible Improvement	☐ Needs Repair	☐ Not Applicable
Notes:			
A.6. Visible cracks in welded connections			
☒ Okay	☐ Possible Improvement	☐ Needs Repair	☐ Not Applicable
Notes:			

B. FINISH

B.1. Paint and/or galvanizing condition			
☐ Okay	☐ Possible Improvement	☒ Needs Repair	☐ Not Applicable
Notes: B-leg, section 19 at 366-ft. See report for locations and recommendations.			
B.2. Rust and/or corrosion condition including mounts and accessories			
☐ Okay	☐ Possible Improvement	☒ Needs Repair	☐ Not Applicable
Notes: Several areas of corrosion. See report for locations and recommendations.			
B.3. FAA or ICAO color marking conditions			
☐ Okay	☐ Possible Improvement	☐ Needs Repair	☒ Not Applicable
Notes: Color marking is not required per FAA Advisory Circular AC 70/7460-IK, Chapter 3.36, if tower is equipped with a flashing white daytime lighting system.			
B.4. Water collection in members (to be remedied, e.g., unplug drain holes, etc.)			
☐ Okay	☐ Possible Improvement	☒ Needs Repair	☐ Not Applicable
Notes: Water collection in several members. See report for locations and recommendations.			

C. LIGHTING

C.1. Conduit, junction boxes, and fasteners (weather tight and secure)			
☒ Okay	☐ Possible Improvement	☐ Needs Repair	☐ Not Applicable
Notes:			
C.2. Drains and vents openings (unobstructed)			
☒ Okay	☐ Possible Improvement	☐ Needs Repair	☐ Not Applicable
Notes:			
C.3. Wiring Condition			
☒ Okay	☐ Possible Improvement	☐ Needs Repair	☐ Not Applicable
Notes:			
C.4. Light lenses			
☒ Okay	☐ Possible Improvement	☐ Needs Repair	☐ Not Applicable
Notes:			
C.5. Bulb condition			
☐ Okay	☐ Possible Improvement	☒ Needs Repair	☐ Not Applicable
Notes: See report for detailed lighting information.			
C.6.a. Controllers functioning (Flasher)			
☐ Okay	☐ Possible Improvement	☒ Needs Repair	☐ Not Applicable
Notes: See report for detailed lighting information.			
C.6.b. Controllers functioning (Photo control)			
☒ Okay	☐ Possible Improvement	☐ Needs Repair	☐ Not Applicable
Notes: See item C.6.a.			
C.6.c. Controllers functioning (Alarms)			
☐ Okay	☐ Possible Improvement	☐ Needs Repair	☒ Not Applicable
Notes: Did not verify			

D. GROUNDING

D.1. Connections			
☐ Okay	☐ Possible Improvement	☒ Needs Repair	☐ Not Applicable
Notes: Improper grounding hardware for waterfall grounding at all anchors.			
D.2. Corrosion			
☐ Okay	☐ Possible Improvement	☒ Needs Repair	☐ Not Applicable
Notes: Current grounding hardware is corroded for waterfall ground at anchor C, guy level 3.			
D.3. Lightning protection (secured to structure)			
☒ Okay	☐ Possible Improvement	☐ Needs Repair	☐ Not Applicable
Notes:			

E. ANTENNAS AND LINES

E.1. Antenna condition			
☐ Okay	☒ Possible Improvement	☐ Needs Repair	☐ Not Applicable
Notes: Junction box missing housing panel. See report for locations and recommendations.			
E.2. Mount and/or ice shield condition (bent, loose, and/or missing members)			
☒ Okay	☐ Possible Improvement	☐ Needs Repair	☐ Not Applicable
Notes:			
E.3. Feed line condition (flanges, seals, dents, jacket damage, grounding, etc.)			
☒ Okay	☐ Possible Improvement	☐ Needs Repair	☐ Not Applicable
Notes:			
E.4. Hanger condition (snap-ins, bolt on, kellum grips, etc.)			
☐ Okay	☐ Possible Improvement	☒ Needs Repair	☐ Not Applicable
Notes: Surface corrosion on several coax support block bolts. See report for locations and recommendations.			
E.5. Secured to structure			
☐ Okay	☒ Possible Improvement	☐ Needs Repair	☐ Not Applicable
Notes: Several unsecure coax cables. See report for locations and recommendations.			

F. OTHER APPURTENANCES (WALKWAYS, PLATFORMS, SENSORS, FLOODLIGHTS, ETC.)

F.1. Condition			
☐ Okay	☐ Possible Improvement	☐ Needs Repair	☒ Not Applicable
Notes:			
F.2. Secured to structure			
☐ Okay	☐ Possible Improvement	☐ Needs Repair	☒ Not Applicable
Notes:			

G. INSULATOR CONDITION

G.1. Cracking and chipping			
☐ Okay	☐ Possible Improvement	☐ Needs Repair	☒ Not Applicable
Notes:			
G.2. Cleanliness of insulators			
☐ Okay	☐ Possible Improvement	☐ Needs Repair	☒ Not Applicable
Notes:			
G.3. Spark gaps set properly			
☐ Okay	☐ Possible Improvement	☐ Needs Repair	☒ Not Applicable
Notes:			
G.4. Isolation transformer condition			
☐ Okay	☐ Possible Improvement	☐ Needs Repair	☒ Not Applicable
Notes:			
G.5. Bolts and connection secure			
☐ Okay	☐ Possible Improvement	☐ Needs Repair	☒ Not Applicable
Notes:			

H. GUYS

H.1. Strand condition (corrosion, breaks, nicks, kinks, etc.)			
☒ Okay	☐ Possible Improvement	☐ Needs Repair	☐ Not Applicable
Notes:			
H.2.a. Guy Hardware Conditions (Turnbuckles or equivalent (secure and safety properly applied))			
☐ Okay	☐ Possible Improvement	☒ Needs Repair	☐ Not Applicable
Notes: Incorrect configuration of all figures 8 safety wires. See report for locations and recommendations.			
H.2.b. Guy Hardware Conditions (Cable thimbles properly in place (if required))			
☒ Okay	☐ Possible Improvement	☐ Needs Repair	☐ Not Applicable
Notes:			
H.2.c. Guy Hardware Conditions (Service sleeves properly in place (if required))			
☐ Okay	☐ Possible Improvement	☐ Needs Repair	☒ Not Applicable
Notes: Anchors are in a fenced enclosure.			
H.2.d.i. Guy Hardware Conditions (Cable connectors (*end fittings*) (Cable clamps applied properly and bolts tight)			
☐ Okay	☐ Possible Improvement	☐ Needs Repair	☒ Not Applicable
Notes:			
H.2.d.ii. Guy Hardware Conditions (Cable connectors (*end fittings*) (Wire serving properly applied))			
☐ Okay	☐ Possible Improvement	☒ Needs Repair	☐ Not Applicable
Notes: Several locations of missing wire serving. See report for locations and recommendations.			
H.2.d.iii. Guy Hardware Conditions (Cable connectors (*end fittings*) (No signs of slippage or damaged strands))			
☒ Okay	☐ Possible Improvement	☐ Needs Repair	☐ Not Applicable
Notes:			
H.2.d.iv. Guy Hardware Conditions (Cable connectors (Preformed wraps – properly applied, fully wrapped, & sleeve in place))			
☐ Okay	☐ Possible Improvement	☒ Needs Repair	☐ Not Applicable
Notes: Several locations of missing end sleeves on perform. Surface corrosion on preform ends. See report for locations and recommendations.			
H.2.d.v. Guy Hardware Conditions (Cable connectors (*end fittings*) (Poured sockets secure and showing no separation))			
☐ Okay	☐ Possible Improvement	☐ Needs Repair	☒ Not Applicable
Notes:			
H.2.d.vi. Guy Hardware Conditions (Cable connectors (Shackles, bolts, pins, and cotter pins secure and in good condition))			
☐ Okay	☐ Possible Improvement	☒ Needs Repair	☐ Not Applicable
Notes: Surface corrosion on cotter pins. See report for locations and recommendations.			
H.3. Guy tensions			
☐ Okay	☐ Possible Improvement	☒ Needs Repair	☐ Not Applicable
Notes: Guy tensions are not within the allowable limits. See report for locations and recommendations.			
H.4. Measure guy tensions			
☒ Okay	☐ Possible Improvement	☐ Needs Repair	☐ Not Applicable
Notes:			
H.5. Record temperature, wind speed and wind direction			
☒ Okay	☐ Possible Improvement	☐ Needs Repair	☐ Not Applicable
Notes: September 13 2013, 90°F, 3 mph (WNW)			

I. CONCRETE FOUNDATIONS

I.1.a. Ground condition (Settlement, movement or earth cracks)			
☒Okay	☐Possible Improvement	☐Needs Repair	☐Not Applicable
Notes:			
I.1.b. Ground condition (Erosion)			
☒Okay	☐Possible Improvement	☐Needs Repair	☐Not Applicable
Notes:			
I.1.c. Ground condition (Site condition (standing water, drainage, trees, etc.))			
☒Okay	☐Possible Improvement	☐Needs Repair	☐Not Applicable
Notes:			
I.2.a. Anchorage condition (Nuts and/or nut locking device (tightened))			
☒Okay	☐Possible Improvement	☐Needs Repair	☐Not Applicable
Notes:			
I.2.b. Anchorage condition (Grout condition)			
☒Okay	☐Possible Improvement	☐Needs Repair	☐Not Applicable
Notes:			
I.2.c. Anchorage condition (Anchorages and/or anchor rod condition)			
☒Okay	☐Possible Improvement	☐Needs Repair	☐Not Applicable
Notes:			
I.3.a. Concrete condition (Cracking, spalling, or splitting)			
☒Okay	☐Possible Improvement	☐Needs Repair	☐Not Applicable
Notes:			
I.3.b. Concrete condition (Chipped or broken concrete)			
☒Okay	☐Possible Improvement	☐Needs Repair	☐Not Applicable
Notes:			
I.3.c. Concrete condition (Honeycombing)			
☒Okay	☐Possible Improvement	☐Needs Repair	☐Not Applicable
Notes:			
I.3.d. Concrete condition (Low spots to collect moisture)			
☒Okay	☐Possible Improvement	☐Needs Repair	☐Not Applicable
Notes:			

J. GUYED MAST ANCHORS

J.1. Settlement, movement or earth cracks			
☒ Okay	☐ Possible Improvement	☐ Needs Repair	☐ Not Applicable
Notes:			
J.2. Backfill heaped over concrete for water shedding			
☒ Okay	☐ Possible Improvement	☐ Needs Repair	☐ Not Applicable
Notes:			
J.3. Anchor rod condition below earth (Maintain required structural capacity of anchor during exploration.)			
☐ Okay	☐ Possible Improvement	☐ Needs Repair	☒ Not Applicable
Notes: Not within scope of work			
J.4. Corrosion control measures (galvanizing, coating, concrete encasement, cathodic protection systems, etc.)			
☐ Okay	☐ Possible Improvement	☐ Needs Repair	☒ Not Applicable
Notes: Not within scope of work			
J.5. Anchor heads clear of earth			
☒ Okay	☐ Possible Improvement	☐ Needs Repair	☐ Not Applicable
Notes:			

K. TOWER ALIGNMENT

K.1. Tower Plumb and Twist			
☐ Okay	☐ Possible Improvement	☒ Needs Repair	☐ Not Applicable
Notes: Tower twist was NOT within ANSI/TIA-222-G-2005 recommended limits.			

EXECUTIVE SUMMARY

Photograph	Observations and Recommendations
  	**A.1. Damaged members (legs and bracing)** **Observation:** • Bend in tower base pin. • Dented top girt, 1-½"Ø x 16 gauge tube of section 12 on the AB face at 245-ft **Recommendation:** • No action required for tower base pin. • Replace 1-½"Ø x 16 gauge tube.

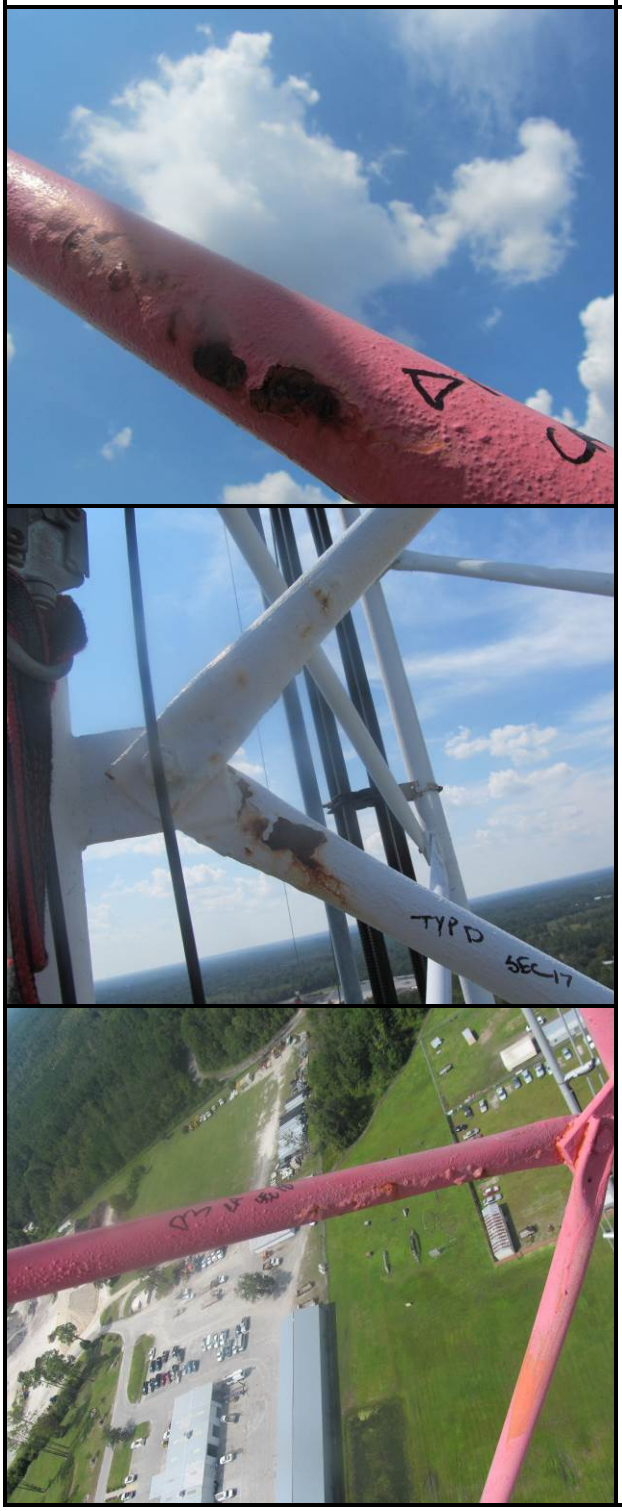
EXECUTIVE SUMMARY

Photograph	Observations and Recommendations
 	**A.1. Damaged members (legs and bracing)** **Observation:** Corrosion through member at the following locations: • A-B Face, bottom girt, section 1 at 5-ft. • B-C Face. bottom girt, section 1 at 5-ft. **Recommendation:** Replace 1-½"Ø x 16 gauge tube.
	**B.1. Paint and/or galvanizing condition** **Observation:** Surface abrasions at the following locations: • B-leg, section 19 at 366-ft. **Recommendation:** Clean areas of surface corrosion and coat with at least two brush coats of ZRC cold galvanizing compound or approved equivalent.

EXECUTIVE SUMMARY

Photograph	Observations and Recommendations
	**B.2. Rust and/or corrosion condition including mounts and accessories** **Observation:** Surface corrosion at the following locations: • C-A face, 5th diagonal in section 1 at 15-ft • B-C face, 7th diagonal in section 1 at 20-ft • C-A face, bottom girt in section 5 at 85-ft • C-A face, 3rd diagonal in section 5 at 93-ft • All faces, top girt in section 5 at 105-ft • C-A face, 8th diagonal in section 5 at 104-ft • Side light housing, section 6 at 106-ft • B leg, flanges at sections 7/8 at 125-ft • C leg, flanges at sections 9/10 at 165-ft • A-B face, 3rd diagonal in section 10 at 191-ft • B leg, flanges at sections 10/11 at 205-ft • B-C face, 2nd diagonal in section 11 at 209-ft • A leg, flanges at sections 11/12 at 225-ft • A-C face, bottom girt in section 12 at 226-ft • B-C face, 5th diagonal in section 12 at 236-ft • C-A face, 6th diagonal in section 12 at 239-ft • A-B face, 7th diagonal in section 12 at 241-ft • C-A face, top girt in section 12 at 245-ft • All diagonals throughout section 13 starting at 246-ft • All legs, flanges at sections 13/14 at 266-ft • All diagonals throughout section 14 starting at 266-ft • A leg, top flange in section 14 at 286-ft • C-A face, 1st diagonal in section 15 at 287-ft • A leg, top flange in section 15 at 306-ft • A-B face, bottom girt in section 16 at 306-ft • C-A face, 1st diagonal in section 16 at 307-ft • B leg, mount connection bolts in section 16 at 308-ft • B leg, mount connection bolts in section 16 at 309-ft • B-C face, 6th diagonal in section 16 at 320-ft **Recommendation:** Clean areas of surface corrosion and coat with at least two brush coats of ZRC cold galvanizing compound or approved equivalent. Coordinate repair of members with EOR if material loss is found.

EXECUTIVE SUMMARY

Photograph	Observations and Recommendations
	**B.2. Rust and/or corrosion condition including mounts and accessories** **Observation:** Surface corrosion at the following locations: • B-C face, 8th diagonal in section 16 at 325-ft • B-C face, top girt in section 16 at 326-ft • All diagonals throughout section 17 starting at 326-ft • All legs, flanges at sections 17/18 at 346-ft • Coax connection bolt, section 18 at 348-ft • All faces, 3rd diagonal in section 18 at 352-ft • B leg, mount connection bolts in section 18 at 353-ft • B leg, mount connection bolts in section 18 at 354-ft • C-A face, 4th diagonal in section 18 at 354-ft • A-B face, 6th diagonal in section 18 at 359-ft • A-B face, 8th diagonal in section 18 at 364-ft • A-B face, 1st diagonal in section 19 at 367-ft • C-A face, 1st diagonal in section 19 at 367-ft • B-C face, 7th diagonal in section 19 at 382-ft • C-A face, 8th diagonal in section 19 at 385-ft • All legs, flanges at sections 19/20 at 386-ft • B-C face, 3rd diagonal in section 20 at 392-ft • C-A face, 4th diagonal in section 20 at 394-ft • B-C face, 6th diagonal in section 20 at 400-ft • A-B face, 8th diagonal in section 20 at 405-ft • B leg, top flange in section 20 at 406-ft • C leg, top flange in section 20 at 406-ft • Bottom of lightning rod at 405-ft **Recommendation:** Clean areas of surface corrosion and coat with at least two brush coats of ZRC cold galvanizing compound or approved equivalent. Coordinate repair of members with EOR if material loss is found.

EXECUTIVE SUMMARY

Photograph	Observations and Recommendations
  	**B.4. Water collection in members (to be remedied, e.g., unplug drain holes, etc.)** **Observation:** Clogged weep holes at the following locations: • B leg, section 4 at 65-ft • C leg, section 4 at 65-ft • B leg, section 9 at 166-ft • C led, section 9 at 166-ft • A leg, section 10 at 186-ft • B leg, section 10 at 186-ft • B leg, section 12 at 226-ft • B leg, section 15 at 286-ft • B leg, section 20 at 387-ft • C leg, section 20 at 387-ft No weep holes present due to inverted installation of sections at the following locations: • Section 3 at 45-ft • Section 5 at 85-ft • Section 6 at 105-ft • Section 7 at 125-ft • Section 16 at 306-ft **Recommendation:** Un-clog current weep holes and/or drill new weep holes in the specified locations. Perform leg scoping to ensure there is no internal corrosion due to clogged wee weep holes.

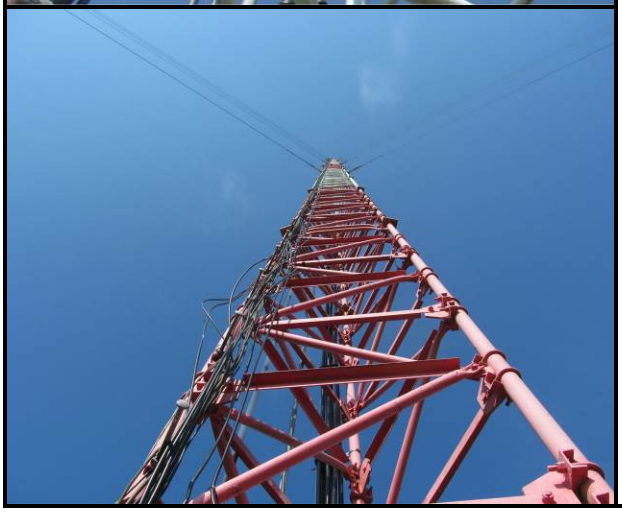
EXECUTIVE SUMMARY

Photograph	Observations and Recommendations
	**C.5. Bulb condition** **Observation:** Tower light system temporarily out of service. **Recommendation:** Service electrical system and replace any damaged or nonoperational equipment.
	**C.6.a. Controllers functioning (Flasher)** **Observation:** Tower light system temporarily out of service. **Recommendation:** Service electrical system and replace any damaged or nonoperational equipment.
	**D.1.Connections** **Observation:** Improper grounding hardware for waterfall grounding at all anchors **Recommendation:** Replace existing waterfall grounding hardware with correct grounding fasteners.

EXECUTIVE SUMMARY

Photograph	Observations and Recommendations
	**D.1.Connections (continued)** **Observation:** Improper grounding hardware for waterfall grounding at all anchors **Recommendation:** Replace existing waterfall grounding hardware with correct grounding fasteners.
	**D.2. Corrosion** **Observation:** Surface corrosion on Anchor C, guy level 3 waterfall grounding Crosby. **Recommendation:** Refer to D.1. Connections recommendation for same hardware.
	**E.1. Antenna condition** **Observation:** No housing panel on disconnected junction box at 138-ft. **Recommendation:** Remove disconnected equipment.

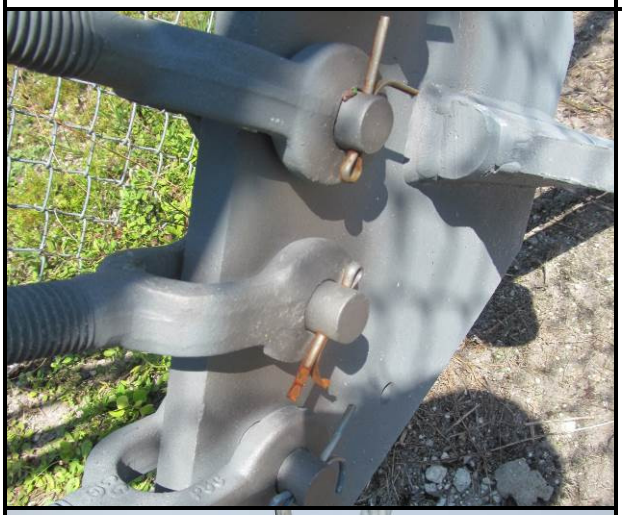
EXECUTIVE SUMMARY

Photograph	Observations and Recommendations
	**E.4. Hanger condition (snap-ins, bolt on, kellum grips, etc.)** **Observation:** Surface corrosion on coax support block bolts throughout the tower. **Recommendation:** Clean areas of surface corrosion and coat with at least two brush coats of ZRC cold galvanizing compound or approved equivalent.
 	**E.5. Secured to structure** **Observation:** Tower fasteners for the following coaxial cables: • Coax # 10-11 mounted to tower using wire ties • Coax # 1-9, 12-15 mounted to tower using zip ties Coax # 1-19 wrapping around climbing leg at section 1. **Recommendation:** Secure coax at section 1 to tower away from the climbing leg. No action required for specified tower fasteners.

EXECUTIVE SUMMARY

Photograph	Observations and Recommendations
	**H.2.a Guy hardware conditions (turnbuckles or equivalent (secure and safety properly applied)** **Observation:** Incorrect configuration of all figure 8 safety wires. Safety wire does not route through turnbuckle jaw adjacent the anchor head. **Recommendation:** Re-configure the safety wire as shown in Appendix D.
	**H.2.d.ii. Guy Hardware Conditions (Cable connectors (end fittings)(Wire serving properly applied))** **Observation:** No wire serving on the tower or ground sides for all guy levels, (typical). **Recommendation:** Install wire serving to all guy levels on the tower and ground sides.
	**H.2.d.iv. Guy Hardware Conditions (Cable connectors (Preformed wraps – properly applied, fully wrapped, & sleeve in place))** **Observation:** No end sleeves on the tower or ground sides for all guy levels, (typical). **Recommendation:** Install end sleeves on preform wraps to prevent unraveling to all guy levels on the tower and ground sides.

EXECUTIVE SUMMARY

Photograph	Observations and Recommendations
  	**<u>H.2.d.vi. Guy Hardware Conditions (Cable connectors (Shackles, bolts, pins, and cotter pins, secure and in good condition))</u>** **Observation:** Surface corrosion at the following locations: • Anchor shackle cotter pins, all guy levels (Typical) • Anchor C, guy level 3 waterfall grounding crosby Screw pin shackles used (typical) are for temporary load applications. **Recommendation:** Clean areas of surface corrosion and coat with at least two brush coats of ZRC cold galvanizing compound or approved equivalent. Coordinate repair of members with EOR if material loss is found. Mouse all existing screw pin shackles with a galvanized annealed wired to prevent pin from turning as shown in appendix D.

EXECUTIVE SUMMARY

Photograph	Observations and Recommendations
  	**H.3. Guy tensions** **Observation:** Guy wire tensions are NOT within the allowable limits as defined by ANSI/TIA-222-G-2005 Section 13.3.2. See Appendix A for details. **Recommendation:** Re-tension guy wires into the TIA specified range.

EXECUTIVE SUMMARY

Photograph	Observations and Recommendations
  	**K.1. Tower Plumb and Twist** **Observation:** Tower Twist is NOT within the allowable limits as defined by ANSI/TIA-222-G-2005 Sections 13.3.3 and 13.3.4. See Appendix A and B for details. **Recommendation:** Re-plumb tower into the TIA specified range.

APPENDIX A: GUY TENSIONS

Table A-1 (Assumed Initial Tension is 10% of Breaking Strength)

Guy Path	Guy #	Measured Guy Size (diameter in inches)	Measured Tension converted to 60°F (lbs)	Initial Tension @ 60°F -10% (lbs)	Initial Tension @ 60°F +10% (lbs)	Results
A	**1**	**1/2 X 7**	**3540**	**2421**	**2959**	**13.17% HIGH**
	2	**1/2 X 7**	**3600**	**2421**	**2959**	**13.37% HIGH**
	3	**1/2 X 7**	**2280**	**2421**	**2959**	**8.49% LOW**
	4	1/2 X 7	2740	2421	2959	10.20% OK
	5	**1/2 X 7**	**2360**	**2421**	**2959**	**8.79% LOW**
	6	1/2 X 7	2520	2421	2959	9.37% OK
B	**1**	**1/2 X 7**	**3620**	**2421**	**2959**	**13.46% HIGH**
	2	**1/2 X 7**	**3450**	**2421**	**2959**	**12.82% HIGH**
	3	1/2 X 7	2540	2421	2959	9.43% OK
	4	1/2 X 7	2540	2421	2959	9.45% OK
	5	**1/2 X 7**	**2150**	**2421**	**2959**	**7.99% LOW**
	6	1/2 X 7	2530	2421	2959	9.42% OK
C	**1**	**1/2 X 7**	**3530**	**2421**	**2959**	**13.14% HIGH**
	2	**1/2 X 7**	**3580**	**2421**	**2959**	**13.29% HIGH**
	3	1/2 X 7	2540	2421	2959	9.45% OK
	4	1/2 X 7	2450	2421	2959	9.10% OK
	5	1/2 X 7	2680	2421	2959	9.95% OK
	6	1/2 X 7	2500	2421	2959	9.31% OK

Note: Initial tensions on existing guy wires were assumed to be 10 percent of breaking strength because the latest structural analysis was not provided to TEP. If initial tensions were set to a different percentage than specified, TEP should be notified to provide a report revision.

APPENDIX B: TOWER PLUMB AND TWIST MEASUREMENTS

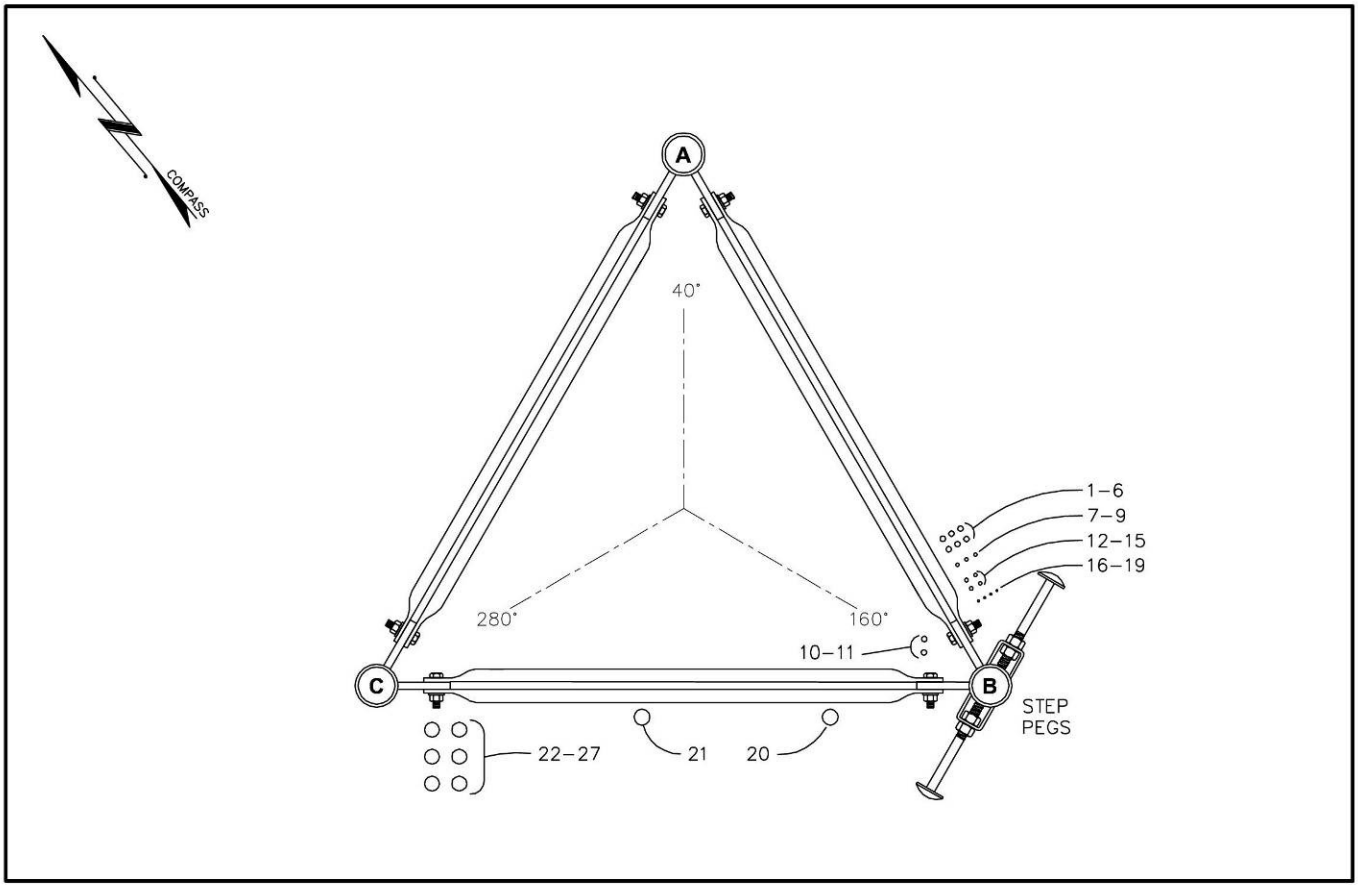
Table B-1: Tower Twist Measurements

	Reference Elevation (above conc.)	Twist with Respect To Base (°)	Allowable Twist with Respect To Base (°)	Relative Twist Between Reference Elevations (°)	Allowable Twist Between Reference Elevations (°)
	406.21-FT	**+8.88 NG**	± 5.00		
				+1.81 OK	± 3.01
	345.96-ft	**+7.07 NG**	± 5.00		
				-0.60 OK	± 3.01
	285.71-ft	**+7.68 NG**	± 5.00		
				-1.61 OK	± 3.01
	225.46-ft	**+9.29 NG**	± 5.00		
				0.88 OK	± 3.01
	165.21-ft	**+8.41 NG**	± 5.00		
				+1.81 OK	± 4.02
	84.88-ft	**+6.59 NG**	± 4.24		
				+6.59 NG	± 4.24
	0-ft	0.00	± 0.00		

Table B-2: Lateral Deflection Measurements

	Reference Elevation (above conc.)	Resultant Deflection (in)	Allowable Resultant Deflection (in) per TIA	Resultant Deflection Between Reference Elevations (in)	Allowable Deflection Between Reference Elevations (in) per TIA
	406.21-FT	+4.52 OK	± 12.19		
				1.65 OK	± 1.81
	345.96-ft	+2.88 OK	± 10.38		
				0.53 OK	± 1.81
	285.71-ft	+2.95 OK	± 8.57		
				0.810 OK	± 1.81
	225.46-ft	+2.85 OK	± 6.76		
				0.21 OK	± 1.81
	165.21-ft	+2.65 OK	± 4.96		
				0.60 OK	± 2.41
	84.88-ft	+2.30 OK	± 2.55		
				2.30 OK	± 2.55
	0-ft	0.00	± 0.00		

APPENDIX C: COAX CONFIGURATION
TRANSMISSION CABLES



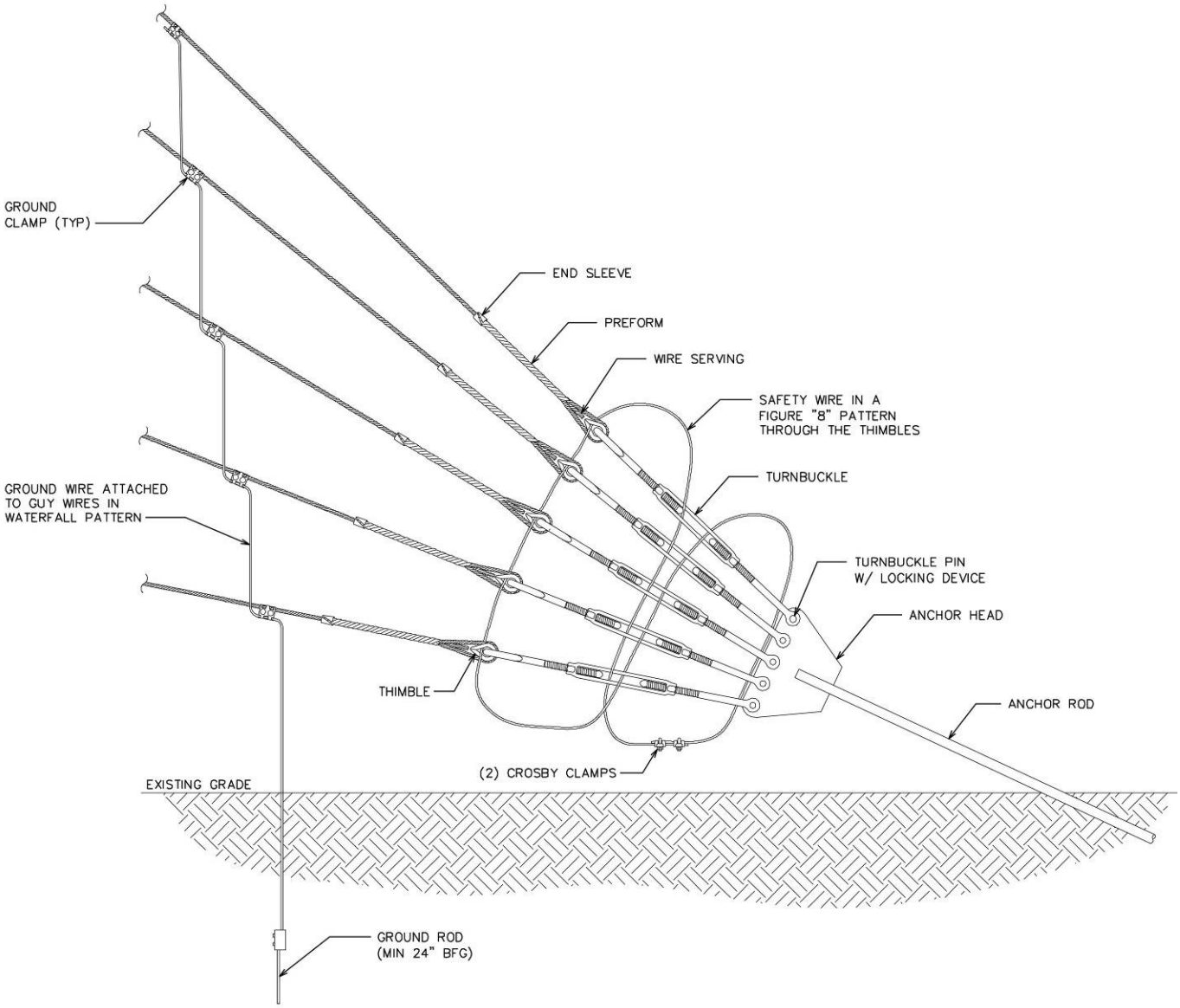
Coax #	Type/Size	Start Height	End Height	Antenna	Carrier	Notes
1	SM 3/8" Ø	5'-0"±	105'-2½"	1	Columbia County	
2	SM 3/8" Ø	5'-0"±	226'-9½"	4	Columbia County	
3	SM 3/8" Ø	5'-0"±	247'-2½"	5	Columbia County	
4	SM 3/8" Ø	5'-0"±	247'-2½"	5	Columbia County	
5	SM 3/8" Ø	5'-0"±	256'-10½"	6	Columbia County	
6	SM 3/8" Ø	5'-0"±	256'-10½"	6	Columbia County	
7	SM 1/4"Ø	5'-0"±	138'-4½"	2	Columbia County	
8	SM 1/4"Ø	5'-0"±	226'-9½"	4	Columbia County	
9	SM 1/4"Ø	5'-0"±	303'-1½"	7	Columbia County	
10	SM 3/8" Ø	5'-0"±	256'-10½"	6	Columbia County	Cut at antenna 6
11	SM 3/8" Ø	5'-0"±	303'-1½"	7	Columbia County	Cut at antenna 7
12	SM 1/4"Ø	5'-0"±	303'-1½"	7	Columbia County	
13	SM 1/4"Ø	5'-0"±	324'-2½"	9	Columbia County	
14	SM 1/4"Ø	5'-0"±	354'-3½"	12	Columbia County	
15	SM 1/4"Ø	5'-0"±	354'-2½"	12	Columbia County	

APPENDIX C: COAX CONFIGURATION (continued)

TRANSMISSION CABLES (CONTINUED)

Coax #	Type/Size	Start Height	End Height	Antenna	Carrier	Notes
16	SM 1/8"Ø	5'-0"±	27'-2"	N/A	Columbia County	Junction Box
17	SM 1/8"Ø	5'-0"±	27'-2"	N/A	Columbia County	Junction Box
18	SM 1/8"Ø	5'-0"±	27'-2"	N/A	Columbia County	Junction Box
19	SM 1/8"Ø	5'-0"±	27'-2"	N/A	Columbia County	Junction Box
20	MC 1 1/16"Ø	6'-0"±	27'-2"	N/A	Columbia County	Junction Box
21	MC 1 1/16"Ø	8'-0"±	406'-6 1/2"	N/A	Columbia County	Side Lights & Beacons
22	FH 7/8"	6'-0"±	308'-7 1/2"	8	Columbia County	
23	FH 7/8"	6'-0"±	325'-2 1/2"	10	Columbia County	
24	FH 7/8"	6'-0"±	348'-9 1/2"	11	Columbia County	
25	FH 7/8"	6'-0"±	368'-10 1/2"	13	Columbia County	
26	FH 7/8"	6'-0"±	386'-10 1/2"	14	Columbia County	
27	FH 7/8"	6'-0"±	402'-6 1/2"	15	Columbia County	

APPENDIX D: TYPICAL GUY ANCHOR CONFIGURATION



APPENDIX E: LONG TERM SCREW PIN SHACKLES

Crosby® Shackles

SCREW PIN SHACKLES PIN SECURITY

MOUSE SCREW PIN WHEN USED IN LONG TERM OR HIGH VIBRATION APPICATIONS

Mouse or Mouseing (screw pin shackle) is a secondary securement method used to secure screw pin from rotation or loosening. Annealed iron wire is looped through hole in collar of pin and around adjacent leg of shackle body with wire ends securely twisted together.

SHACKLES

ROUND PIN
Do not side load, do not use as a collector ring, always use cotter pin.

SCREW PIN
Use when picking and placing a load, tighten pin proior to each lift.

BOLT-TYPE
Use in permanent or long-term installations always use nut and cotter.

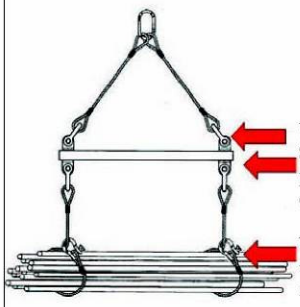
Shackles

CONNECTION OF SLINGS TO SHACKLES

Diameter of shackle must be greater than wire rope diameter if no thimble in eye.

Shackle must be large enough to avoid pinching of synthetic slings.

BOLT-TYPE SHACKLE



Use Bolt-Type Shackle when a permanent or long term connection

Use a screw pin shackles when it will be a temporary connection.

RIGGING PRACTICE SHACKLES

Screw pin shall be fully engaged.

If designed for a cotter pin, it shall be used and maintained.

Applied load should be centered in the bow to prevent side loading.

Multiple sling legs should not be applied to the pin.

If side loaded, the rated load shall be reduced according to Table 1, on page 80.

PHOTO LOG

Photo #	Description of Photograph
1	Gate signage
2-4	General compound
5-14	Shelter interior (lighting, equipment, etc.)
15-28	Full and partial tower elevation
29-34	Looking up tower legs and faces
35-36	Tower base
37-62	Section 1
63-76	Section 2
77-90	Section 3
91-107	Section 4 and guy level 1
108-128	Section 5
129-146	Section 6, side lights, and antennas
147-165	Section 7 and antennas
166-186	Section 8 and guy level 2
187-201	Section 9
202-216	Section 10
217-257	Section 11, guy level 3, side lights, and antennas
258-292	Section 12 and antennas
293-321	Section 13 and antennas
322-356	Section 14, guy level 4, and antennas
357-396	Section 15, side lights, and antennas
397-417	Section 16 and antennas
418-439	Section 17 and guy level 5
440-483	Section 18 and antennas
484-504	Section 19 and antennas
505-549	Section 20, guy level 6, lightning rod, and antennas
550-560	Top of tower
561-562	CCT equipment
563	Gate signage
564-638	A anchor
639-714	B anchor
715-818	C anchor

END OF ADDENDUM NO. 2

(Please acknowledge receipt of Addendums)