WJXT-DT & WCWJ-DT

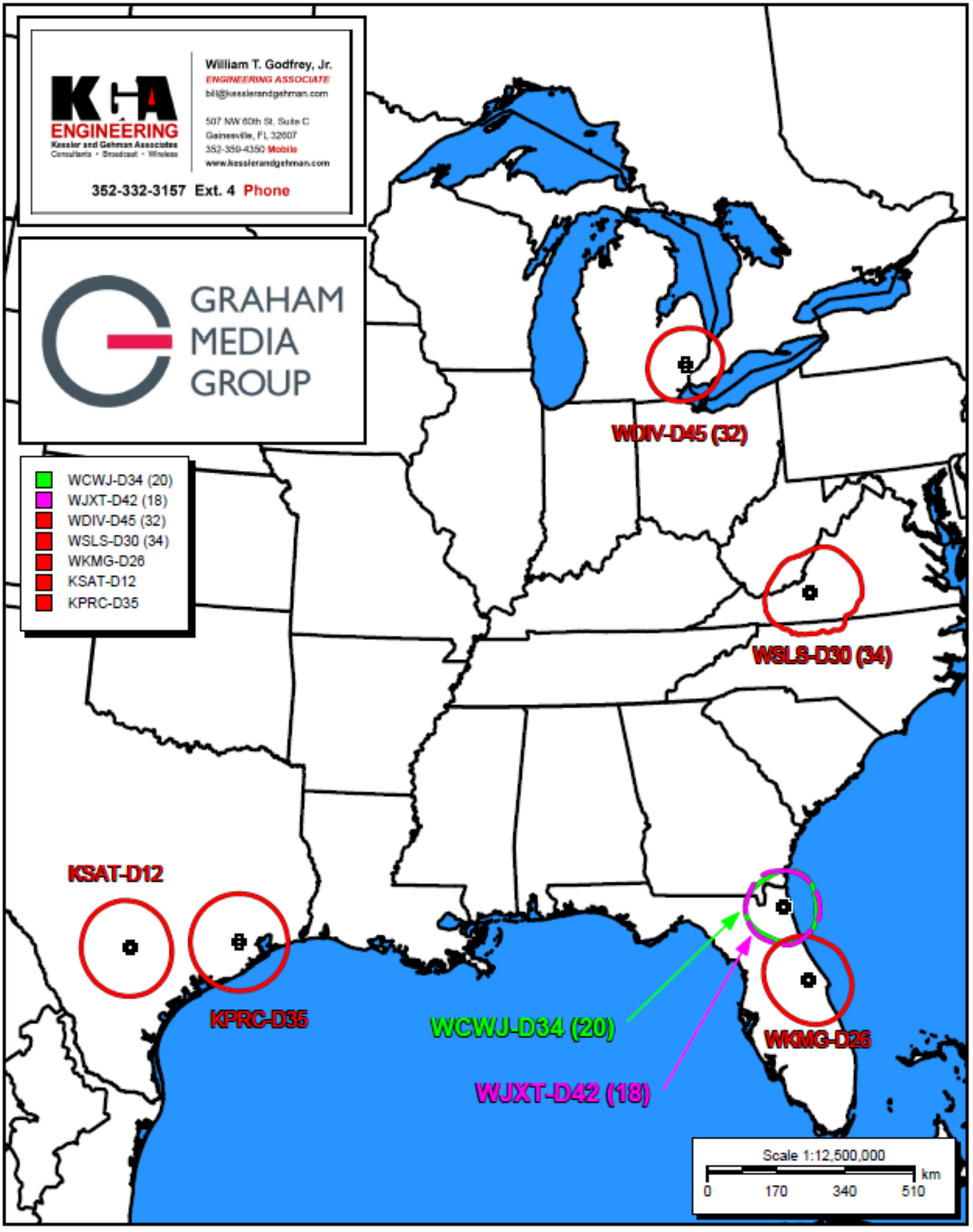
Repack

Jacksonville, FL

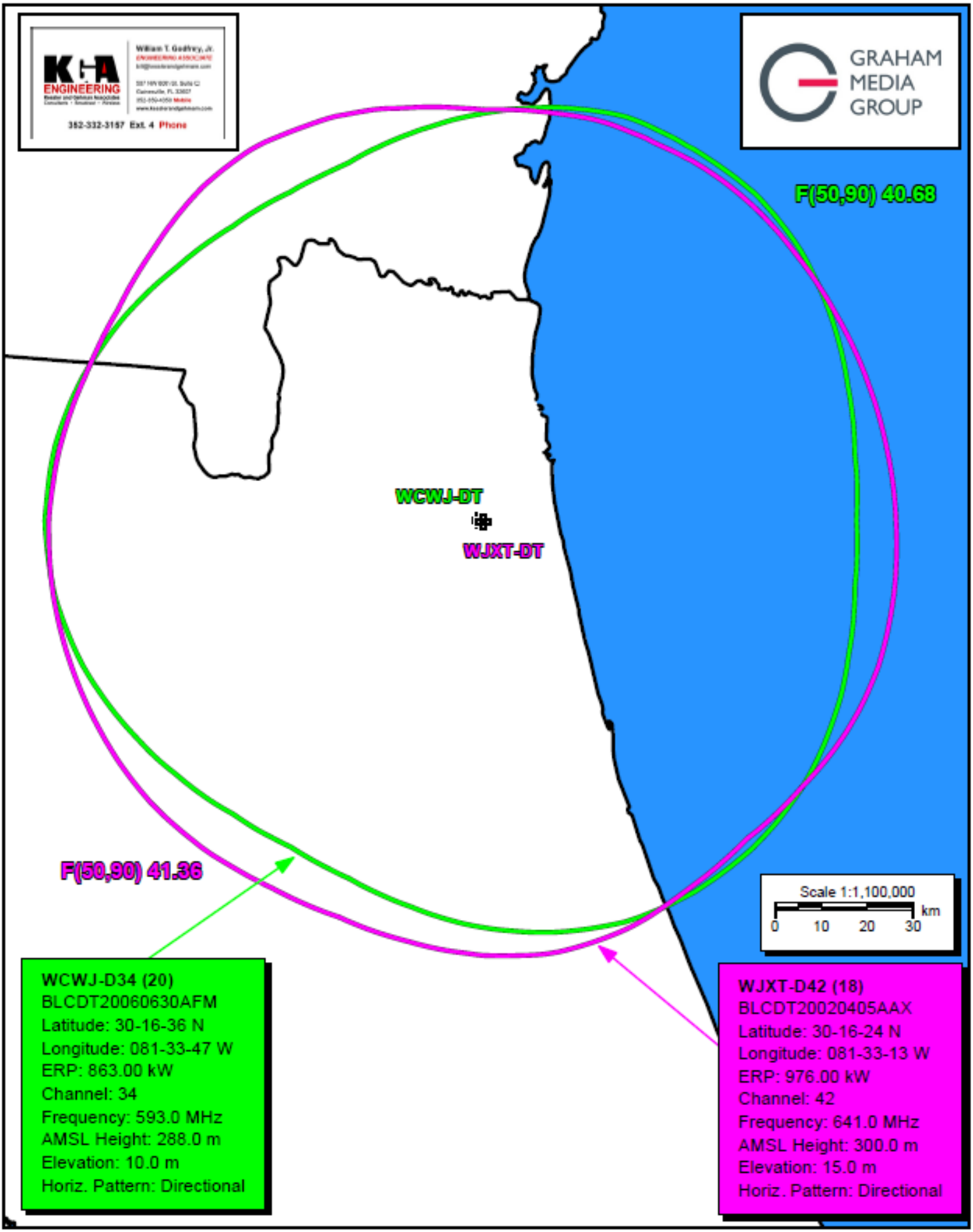
Phase 7 (Both)

GRAHAM MEDIA GROUP

FEDERAL COMMUNICATIONS COMMISSION · USA ·



Graham Media Group Repack (4 of 7 Stations)



Graham Media Group Repack (WCWJ & WJXT)

WCWJ-DT *Repack*

Channel 34 to 20

Jacksonville, FL

Phase 7

GRAHAM MEDIA GROUP

FEDERAL COMMUNICATIONS COMMISSION · USA ·

FEDERAL COMMUNICATIONS COMMISSION
445 12th Street, SW
Washington, DC 20554

February 8, 2017

IMPORTANT CHANNEL ASSIGNMENT INFORMATION

GRAHAM MEDIA GROUP, FLORIDA. INC.
ELIZABETH RYDER
545 E JOHN CARPENTER FREEWAY
SUITE 700
IRVING, TX 75062

This letter provides advance notice that the station referenced below **has been reassigned to a new channel** in the repacking process associated with the broadcast television spectrum incentive auction. The Congressionally-mandated auction involves a repacking or reorganization of the television bands. As part of the repacking, some stations are being reassigned to new post-auction channels. Although the repacking is not yet effective, its final results have been determined and will be announced publicly as soon as the auction closes. Reassigned stations will then be required to transition to their post-auction channels. Please carefully review the information in the Broadcast Transition Procedures Public Notice that describes the steps that you must take in order to implement this channel change. *See Incentive Auction Task Force and Media Bureau Announce Procedures for the Post-Incentive Auction Broadcast Transition*, Public Notice, DA 17-106 (rel. Jan. 27, 2017) (https://apps.fcc.gov/edocs_public/attachmatch/DA-17-106A1.pdf) (Broadcast Transition Procedures Public Notice).

Below is technical information about the station's post-auction channel and the transition phase the station has been assigned:

Facility ID:	29712
Community of License:	JACKSONVILLE, FL
Call Sign:	WCWJ
Service:	DT
Pre-Auction Channel:	34
Post-Auction Channel:	20
Antenna Coordinates (NAD83):	30° 16' 36.87" N 81° 33' 46.32"
ERP (kW):	636
HAAT (m):	282.5
RCAMSL (m):	288
Antenna ID:	71837
Antenna Pattern Type:	DA
Reference Azimuth (DEG):	0
Transition Phase:	7

The purpose of this letter is to provide you with information as early as possible concerning your channel assignment and transition phase assignment so that you can begin planning for the channel change now, even though Auction 1000 has not closed, and so that you are able to meet the construction deadline for your station's transition phase listed above. The station's construction deadline will be the phase completion date for the station's assigned phase and will be included in the Auction 1000 Closing and Channel Reassignment Public

WCWJ-DT Repack – Channel 34 to 20

Jacksonville, Florida

PHASE 7


United Stat
Newton Rd
Newton Rd
Southwind Villas

ANSI/TIA-222-G-2005
APPROVED: AUGUST 2, 2005
REAFFIRMED: DECEMBER 20, 2012
REAFFIRMED: AUGUST 3, 2016

TIA STANDARD

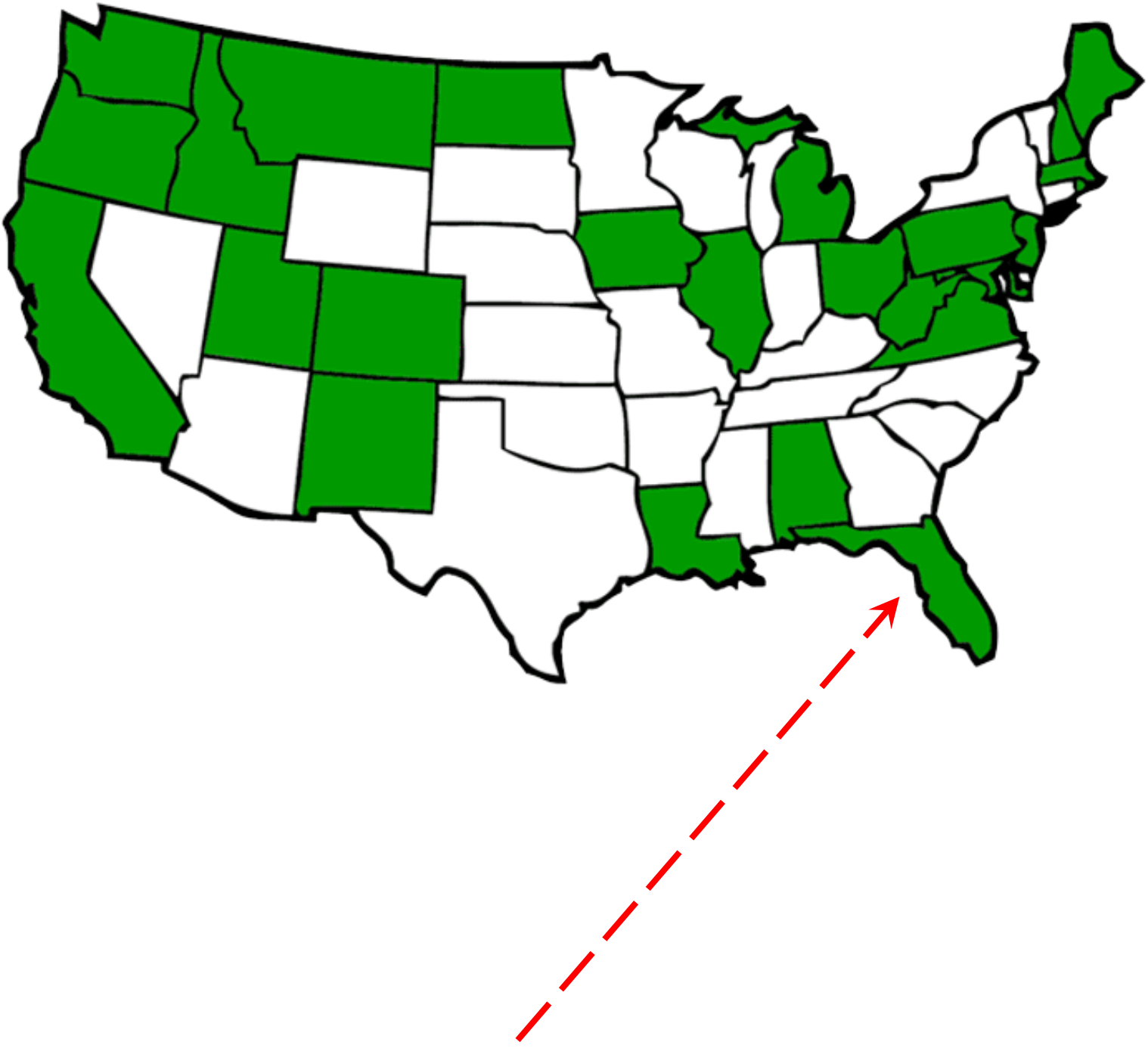
Structural Standard for Antenna Supporting Structures and Antennas

TIA-222-G
(Revision of TIA-222-F)

August 2005

TELECOMMUNICATIONS INDUSTRY ASSOCIATION
tiaonline.org

222-G State Adoption



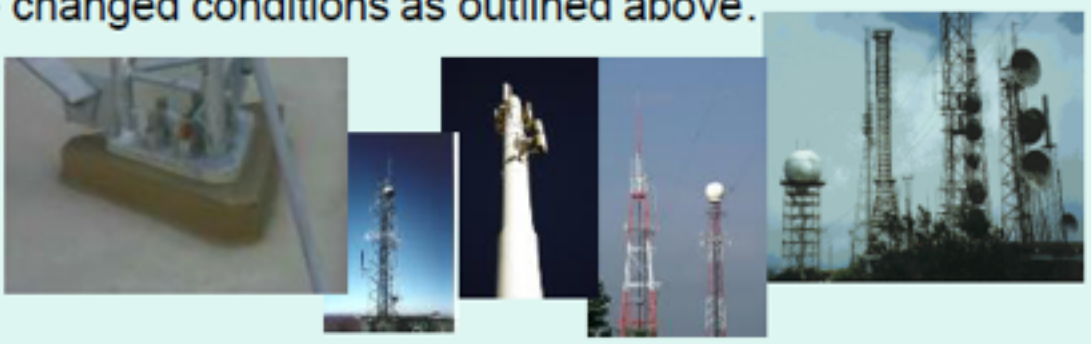
ANSI/TIA-222-G Explained

Existing Structures - Defined

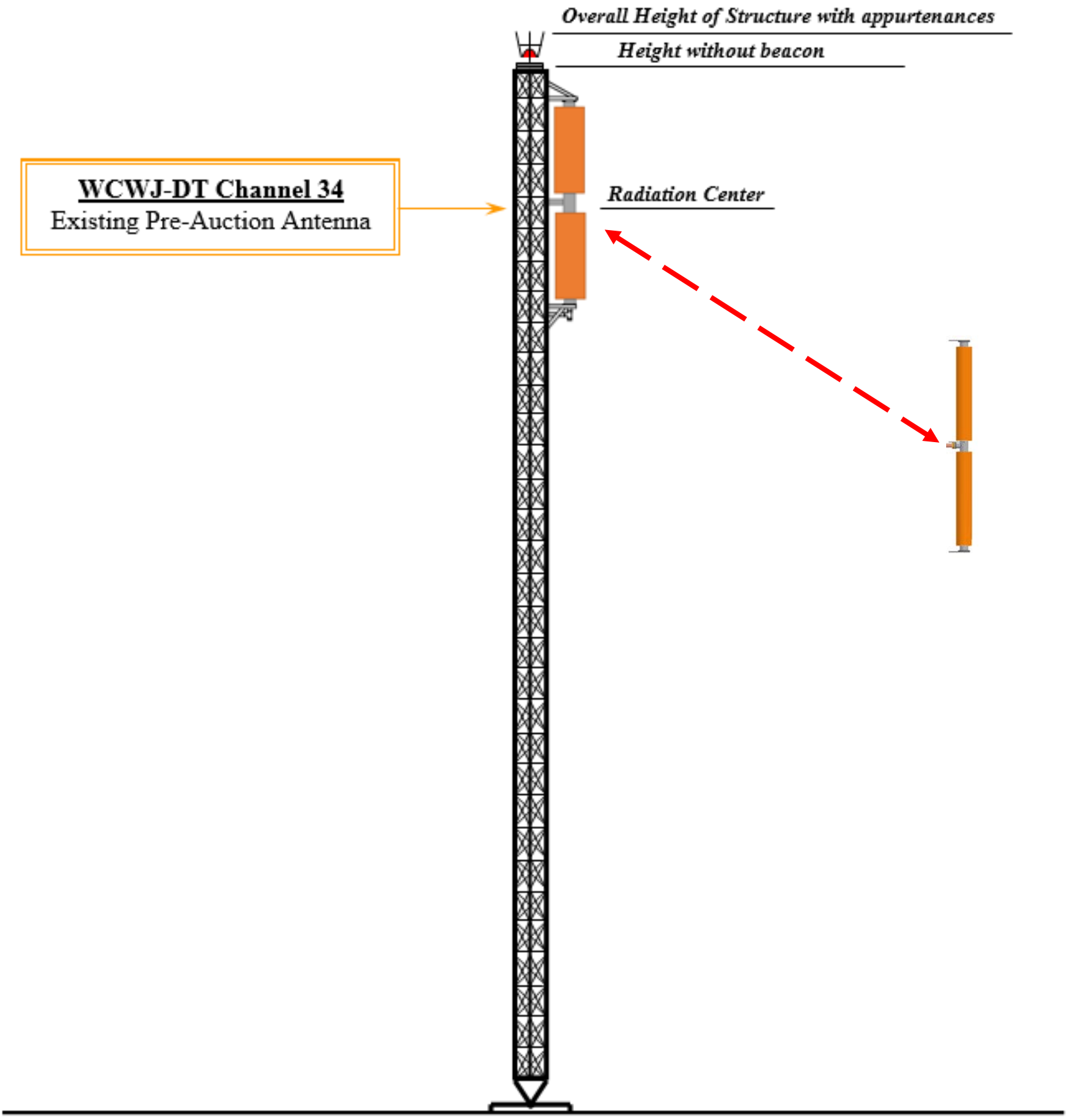
As a minimum, existing structures shall be analyzed in accordance with this Standard, regardless of the standard used for the design of the original structure, under any of the following conditions:

- a change in type, size, or number of appurtenances such as antennas, transmission lines, platforms, ladders, etc.
- a structural modification, excepting maintenance, is made to the structure
- a change in serviceability requirements
- a change in the classification of the structure to a higher class in accordance with Table 2-1.

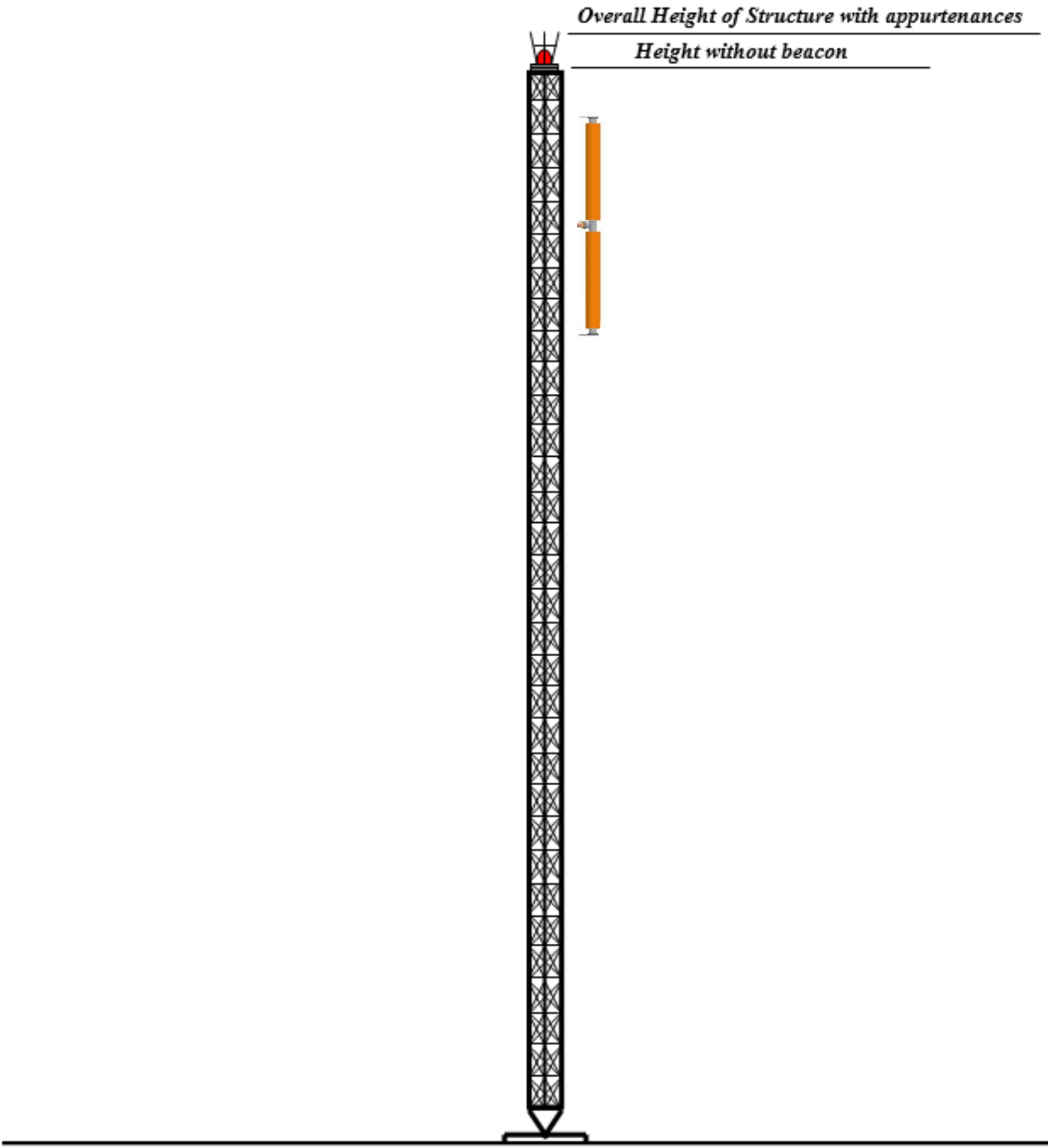
Note: Existing structures need not be re-analyzed for each revision of this Standard unless there are changed conditions as outlined above.



WCWJ-DT ELEVATION VIEW



WCWJ-DT ELEVATION VIEW



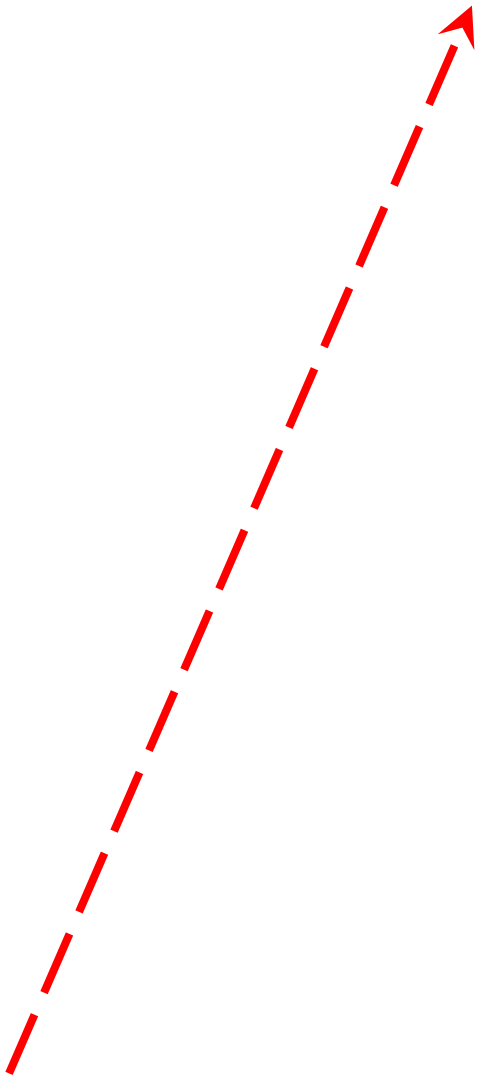
New Standards for Broadcast Structures ANSI/EIA/TIA-222-G

JOHN WAHBA, PH.D., PE
Radian Communication Services
Oakville, ON, Canada

DAVID BRINKER, PE
Rohn Industries, Inc.
Peoria, IL

MARK MALOUF, PE
Malouf Engineering Intl.
Richardson, TX

JOHN ERICHSEN, PE
Valmont Communications
Plymouth, IN



Rigorous Structural Analysis Report

GRAHAM MEDIA GROUP

Graham Media Group - WCWJ-TV - CW17 Tower Site

Owner: Graham Media Group

Jacksonville, Florida

March 31, 2017

MEI PROJECT ID: FL05074G-17V1

MALOUF ENGINEERING INTL., INC.

STRUCTURAL CONSULTANTS

17950 PRESTON ROAD, SUITE 720 ▪ DALLAS, TEXAS 75252 ▪ TEL. 972-783-2578 FAX 972-783-2583

www.maloufengineering.com

TIA ASCE ACEC MEMBER

MALOUF ENGINEERING INTL., INC.

STRUCTURAL CONSULTANTS

March 31, 2017

Mr. Michael Englehaupt
Graham Media Group
Chicago, IL 60601

RIGOROUS STRUCTURAL ANALYSIS

Structure/Make/Model:	910 ft **Guyed Tower**		Stainless Inc. / G-8.0	
Client/Site Name/#:	**Graham Media Group**		**WCWJ-TV - CW17 Tower**	
Owner/Site Name/#:	Graham Media Group		WCWJ-TV - CW17 Tower	
MEI Project ID:	**FL05074G-17V0**			
Location:	9117 Hogan Rd Jacksonville, FL 32216		Duval County FCC #1025608	
	LAT	30-16-37.0 N	LON	81-33-46.0 W

EXECUTIVE SUMMARY:

Malouf Engineering Int'l (MEI), as requested, has performed a rigorous structural analysis of the above mentioned structure to assess the impact of the existing configuration as noted in Table 1.

Based on the stress analysis performed, the existing structure **is NOT in conformance** with the Int'l Building Code (IBC) / ANSI/TIA-**222-G** Standard for the loading considered under the criteria listed and referenced in the report sections – tower rated at 174.1% - Girts.

The addition of the proposed changed condition as noted in Table 1 is structurally NOT acceptable.

Due to the extensive modifications required, the new more stringent code requirement triggered by the proposed changes, and the tower condition and age, we recommend a new replacement tower or an alternate tower site be used for the proposed new loading considered.

MEI appreciates the opportunity of providing our continuing professional services to you. If you have any questions or need further assistance on this or other projects please contact us.

Respectfully submitted,

MALOUF ENGINEERING INT'L, INC.

Analysis performed by:

Krishna Manda, PE
Sr. Project Engineer

Reviewed & Approved by:

E. Mark Malouf, PE
Florida #41758
972-783-2578 ext. 106
mmalouf@maloufengineering.com

E. MARK MALOUF LICENSE No. 41758 STATE OF FLORIDA PROFESSIONAL ENGINEER

4/5/2017

5. ANALYSIS RESULTS

The results of the structural stress analysis based on data available and with the previous listed criteria, indicated the following:

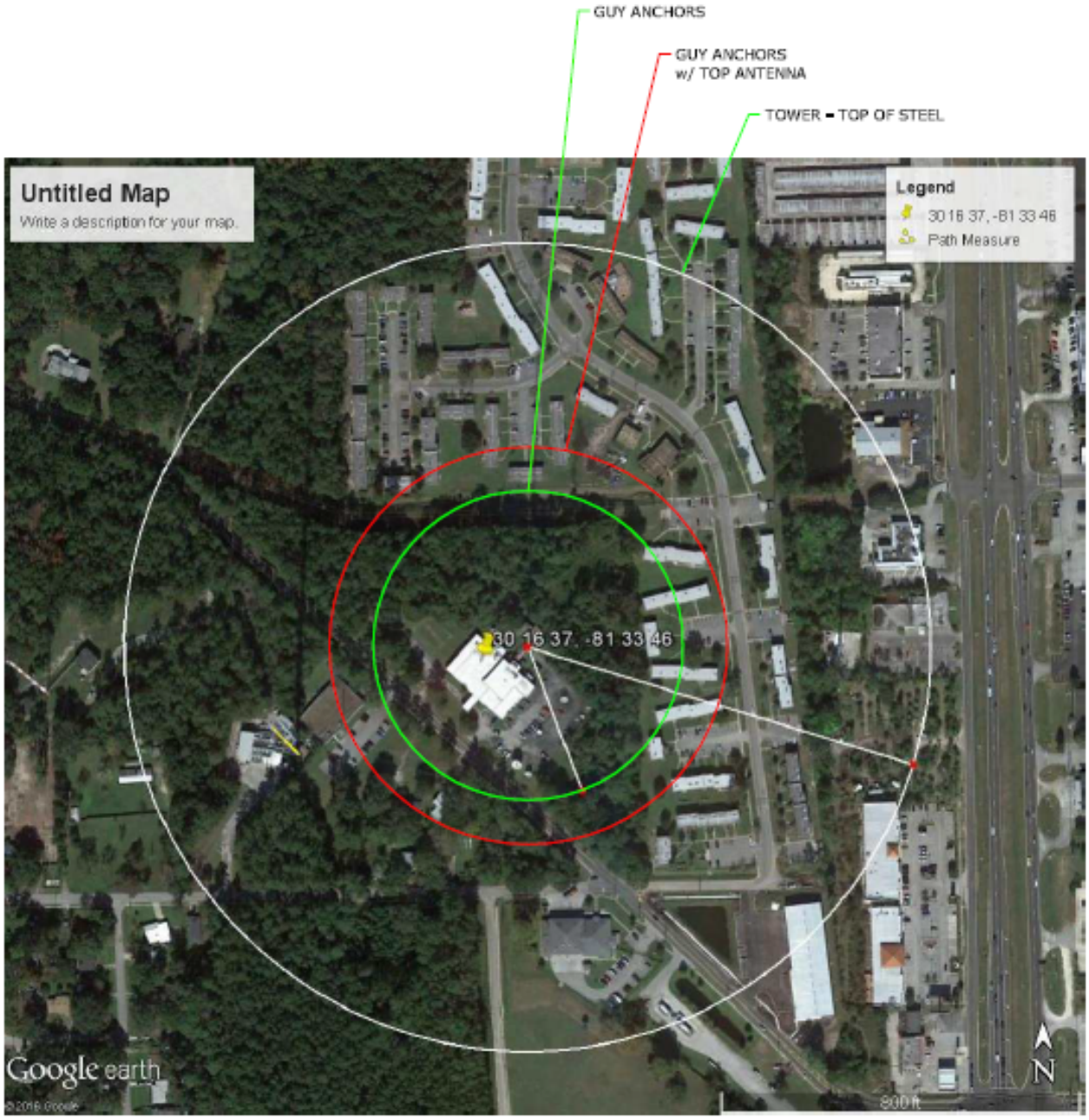
Table 2: Stress Analysis Results

Component Type	Maximum Stress Ratio	Controlling Elev. (ft) / Component	Pass/Fail	Comment
GUY WIRES	102.0%	775.417	Fail	
LEGS	105.0%	758.75 - 733.75	Fail	
	106.9%	733.75 - 708.75	Fail	
	122.4%	708.75 - 683.75	Fail	
	128.0%	683.75 - 675.417	Fail	
	133.7%	675.417 - 667.083	Fail	
	139.3%	667.083 - 658.75	Fail	
	128.4%	658.75 - 650.417	Fail	
	133.8%	650.417 - 642.083	Fail	
	138.4%	642.083 - 633.75	Fail	
	140.3%	633.75 - 625.417	Fail	
	135.5%	625.417 - 617.083	Fail	
	130.1%	617.083 - 608.75	Fail	
	125.0%	608.75 - 583.75	Fail	
	112.9%	583.75 - 558.75	Fail	
	105.7%	558.75 - 533.75	Fail	
	110.0%	533.75 - 508.75	Fail	
	119.0%	508.75 - 500.417	Fail	
	105.7%	492.083 - 483.75	Fail	
	105.6%	483.75 - 475.417	Fail	
	113.3%	475.417 - 467.083	Fail	
	120.9%	467.083 - 458.75	Fail	
	121.6%	458.75 - 450.417	Fail	
	119.5%	450.417 - 442.083	Fail	
	117.2%	442.083 - 433.75	Fail	
	106.8%	433.75 - 425.417	Fail	
	139.1%	425.417 - 417.083	Fail	
	137.2%	417.083 - 408.75	Fail	
	135.7%	408.75 - 383.75	Fail	
	134.5%	383.75 - 358.75	Fail	
	134.9%	358.75 - 350.417	Fail	
	102.6%	350.417 - 342.083	Fail	
	103.5%	342.083 - 333.75	Fail	
	113.3%	333.75 - 325.417	Fail	
	115.0%	325.417 - 317.083	Fail	
	117.0%	317.083 - 308.75	Fail	
	109.5%	250.417 - 242.083	Fail	
	106.2%	242.083 - 233.75	Fail	
	103.1%	233.75 - 208.75	Fail	

(Results continue on next page.)

Table 3: Stress Analysis Results - Cont'd

Component Type	Maximum Stress Ratio	Controlling Elev. (ft) / Component	Pass/Fail	Comment
Diagonals	134.6%	900.479 - 892.083	Fail	
	126.9%	892.083 - 883.75	Fail	
	107.2%	883.75 - 858.75	Fail	
	104.5%	808.75 - 800.417	Fail	
	127.0%	800.417 - 792.083	Fail	
	142.3%	792.083 - 783.75	Fail	
	103.7%	783.75 - 775.417	Fail	Bolts Control
	107.5%	708.75 - 683.75	Fail	
	118.6%	683.75 - 675.417	Fail	
	104.8%	658.75 - 650.417	Fail	Bolts Control
	110.5%	650.417 - 642.083	Fail	
	107.8%	642.083 - 633.75	Fail	
	102.1%	625.417 - 617.083	Fail	
	100.9%	558.75 - 533.75	Fail	
	128.4%	533.75 - 508.75	Fail	
	127.5%	508.75 - 500.417	Fail	
Horizontals	135.4%	883.75 - 858.75	Fail	
	103.6%	833.75 - 808.75	Fail	
	103.4%	758.75 - 733.75	Fail	
	138.6%	708.75 - 683.75	Fail	
	129.1%	558.75 - 533.75	Fail	
	167.5%	533.75 - 508.75	Fail	
	101.7%	408.75 - 383.75	Fail	
	100.7%	383.75 - 358.75	Fail	
Top Girts	**174.1%**	**892.083 - 883.75**	Fail	
	160.7%	883.75 - 858.75	Fail	
	128.6%	808.75 - 800.417	Fail	
	131.0%	767.083 - 758.75	Fail	
	121.7%	758.75 - 733.75	Fail	
	100.0%	708.75 - 683.75	Fail	
	106.6%	633.75 - 625.417	Fail	Bolts Control
	129.1%	617.083 - 608.75	Fail	
	114.4%	608.75 - 583.75	Fail	
	143.0%	533.75 - 508.75	Fail	
	171.1%	508.75 - 500.417	Fail	
	109.5%	425.417 - 417.083	Fail	
	106.9%	417.083 - 408.75	Fail	
Top Guy Pull-Off	56.5%	775.417 - 767.083	Pass	Bolts Control
Base Fdn	69.3%	Bearing	Pass	
GuyAnchor Fdn	77.8%	Shear	Pass	
Guy Anchor Shaft	113.1%	Tension	Fail	Outer Anchor Shaft



101 PLAN: TOWER INFLUENCE ZONE

SCALE: NOT TO SCALE

03/27/2017

MALOUF ENGINEERING INTERNATIONAL, INC.
17950 PRESTON ROAD SUITE 720
DALLAS, TEXAS 75252-5635
972-783-2578 (fax: 2583)
www.maloufengineering.com

GRAHAM MEDIA GROUP

910' GUYED MAST - WCWJ-TV-CW17 TOWER

TOWER CLASSIFICATION

MEI PROJECT ID	SHEET NUMBER	REV.
FL05074G-17V1	**C01**	0

From: Bill Harland [mailto:bharland@eriinc.com]
Sent: Wednesday, May 03, 2017 5:03 PM
To: William T. Godfrey, Jr.
Cc: Dave Benco
Subject: RE: New WCWJ Tower (***Important***), Jacksonville, FL estimate to replace ASRN 1025608

Bill,

With the information we have we are working on an estimate for replacing the existing WCWJ tower. The real issues are that it only has 37% guy radius and this eliminates the ability to actually design and build what would be a Class III structure. To meet Class III would require either more land or guy easements to allow a greater guy radius. I should have an update from Engineering later this week regarding progress.

Thank you,
Bill Harland
ELECTRONICS RESEARCH, INC.
+1 812 925-4020x214 (direct)
+1 812 455-1823 (cell)
bharland@eriinc.com

GUY WIRE RADIUS LIMITATIONS

- Site should be of sufficient size to accommodate a guy radius, from the tower base to the outer anchor heads, of 80% of the overall tower height.
- As the guy radius is reduced, the downward pulling force of the guy system is increased as a result of the sharper angle of the guy relative to the structure; therefore, tower loading fail thresholds decrease.
- Increased downward forces require stronger and heavier guy systems.
- As the radius decreases, the guy tensioning and breaking strength must increase.
- Increased guy tensioning significantly increases compression of the tower legs.
- A 37% guy system designed for 222-G compromises the tower's ability to support the required load and cannot be built.

945' GUYED WCWJ TOWER
ASR #1025608

EXISTING 37% GUYING = 3.6 ACRES TOTAL

STANDARD 80% GUYING = 17.0 ACRES TOTAL

K&A ENGINEERING

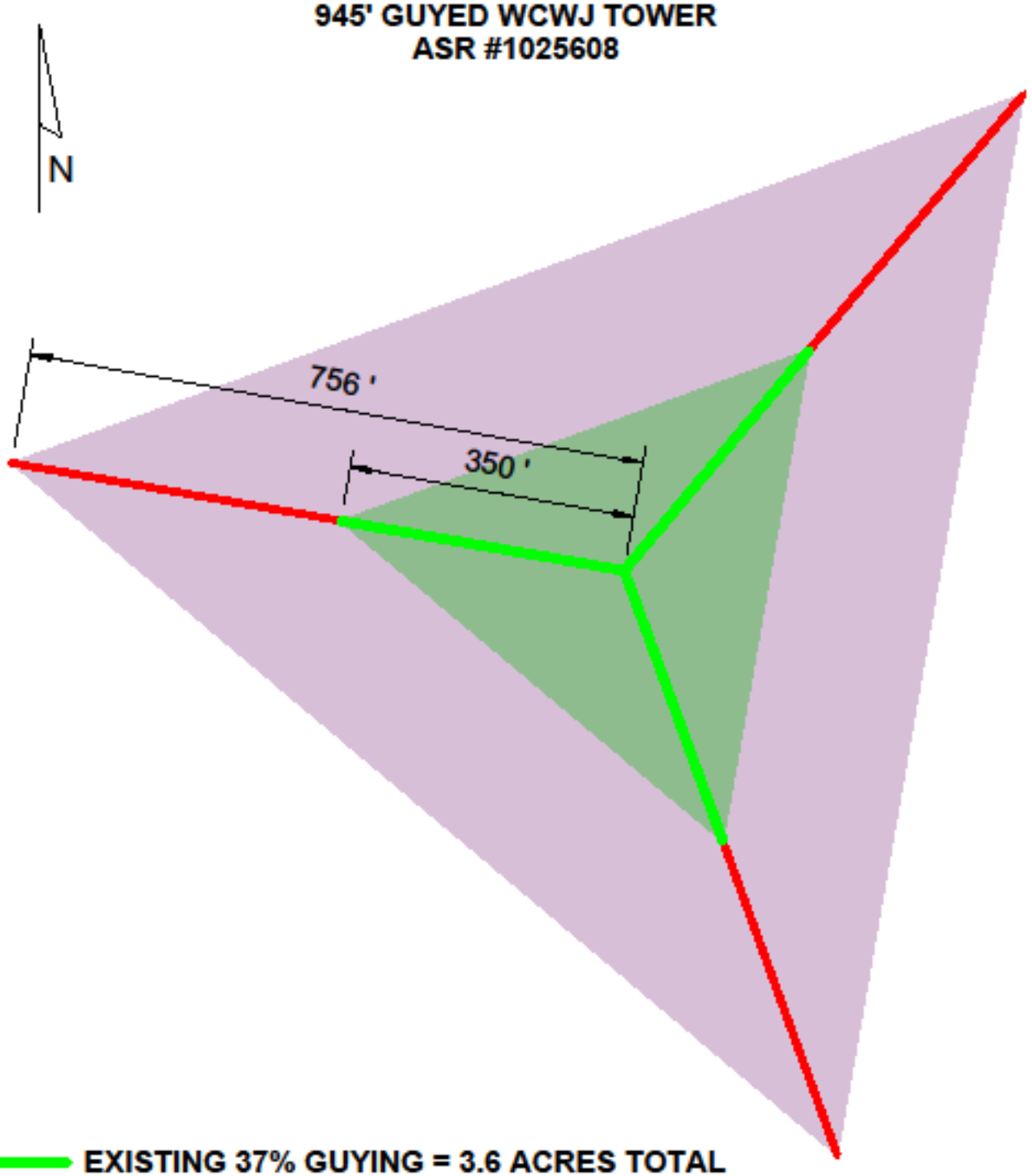
Kessler and Gehman Associates, Inc.
Consultants • Broadcast • Wireless
507 NW 60th St., Suite C
Gainesville, FL 32607
(352) 332-3157 Phone
www.kesslerandgehman.com

GRAHAM MEDIA GROUP

WCWJ - JACKSONVILLE, FL

20170525 **EXHIBIT 1**

945' GUYED WCWJ TOWER
ASR #1025608



EXISTING 37% GUYING = 3.6 ACRES TOTAL

STANDARD 80% GUYING = 17.0 ACRES TOTAL

K&A ENGINEERING

Kessler and Gehman Associates, Inc.
Consultants • Broadcast • Wireless
507 NW 60th St., Suite C
Gainesville, FL 32607
(352) 332-3157 Phone
www.kesslerandgehmen.com

GRAHAM MEDIA GROUP

WCWJ - JACKSONVILLE, FL

20170525 **EXHIBIT 2**

945' GUYED WCWJ TOWER
ASR #1025608

EXISTING 37% GUYING = 3.6 ACRES TOTAL

STANDARD 80% GUYING = 17.0 ACRES TOTAL

N

K&A ENGINEERING

Kessler and Gehman Associates, Inc.
Consultants • Broadcast • Wireless
507 NW 60th St., Suite C
Gainesville, FL 32607
(352) 332-3157 Phone
www.kesslerandgehmen.com

GRAHAM MEDIA GROUP

WCWJ - JACKSONVILLE, FL

20170525 **EXHIBIT 3**

ELECTRONICS RESEARCH, INC. ERI®

AISC CERTIFIED FABRICATOR

Proposal

Submitted to:

Graham Media Group
161 N. Clark Street
Suite 2900
Chicago, IL 60601

Attn: Mike Englehaupt

by:

Electronics Research, Inc.

Bill Harland
Vice President of Marketing

PHONE: +1 (812) 925-6000, Ext. 214
FAX: +1 (812) 925-4030

bharland@eriinc.com

This document includes pages 1 of 14 and is governed by the terms and conditions contained herein. Upon customer acceptance, order is subject to final review and written acceptance by ERI at our main business office. Unless otherwise stated in the body of this quotation, freight charges are not included and will be added to the final invoice. Also, unless listed separately in the body of this quotation, prices do not include any state, local, or other taxes or duties.

Proposal Number: 20170502-284

Date: May 2, 2017
Valid Through: June 14, 2017
FOB Plants of Origin / Ex Works Factories
Reference: TV WCWJ CH 20 Tower Replacement Estimate

Payment Terms: 50% payment with order
50% of equipment prior to shipment
40% of services prior to mobilization
10% of services upon substantial completion

Please ***complete*** the Purchaser's Acceptance block, ***scan*** this document along with your deposit check and ***e-mail*** to: peggy@eriinc.com or ***FAX*** to: 812-925-4030. Please ***remit*** down payment to the address below, attn: Accounts Receivable.

Purchaser's Acceptance:

Please accept our order for the products and services contained in this proposal.

Signature_____

Name_____

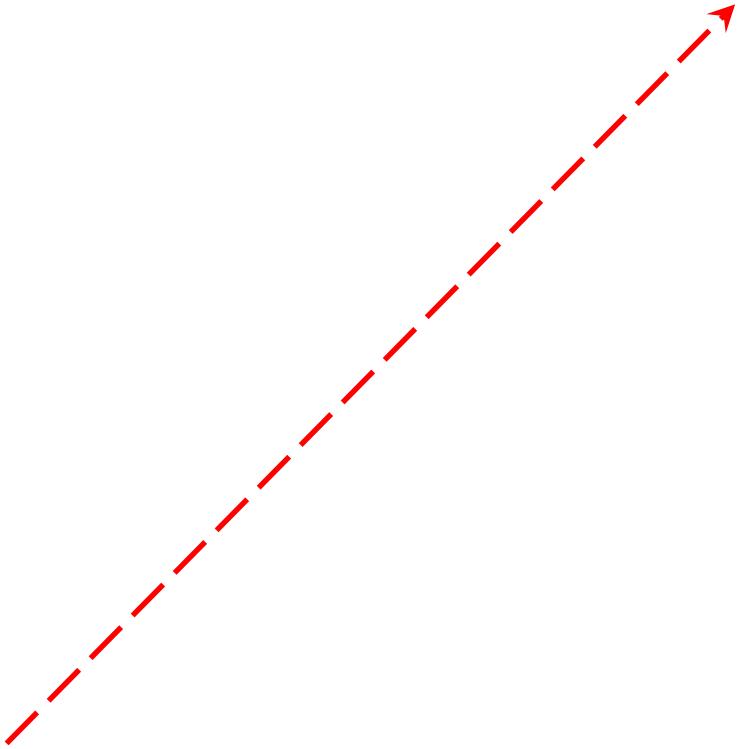
Title_____

P.O. Number_____

Item	Qty	Part #	Description	Unit Price	Extended

Includes mobilization to site.
Tower erection and appurtenance installation.
Final plumb and tension.
Clean up and demobilization.
Weather days charged at 50% of standard day rate.

Total Price	$2,586,115.00
Net Package Price	$2,586,115.00
Estimated Freight	Not Included
Grand Total	$2,586,115.00



Federal Communications Commission

Licensing and Management System

Applications Authorizations Facilities

DTV Legal STA Application

General Information

** indicates required field*

Application Description

Description of the application(255 characters max.) is visible only to you and is not part of the submitte
your Applications workspace.

Requesting a Waiver of Section 73.3700(b)(1)
(i)

A station granted a waiver under this "unable to construct" standard will be allowed to file an application for a construction permit for an alternate channel or expanded facilities during the first priority filing window described below.

WJXT-DT *Repack*

Channel 42 to 18

Jacksonville, FL

Phase 7

GRAHAM MEDIA GROUP

FEDERAL COMMUNICATIONS COMMISSION · USA ·

FEDERAL COMMUNICATIONS COMMISSION
445 12th Street, SW
Washington, DC 20554

February 8, 2017

IMPORTANT CHANNEL ASSIGNMENT INFORMATION

GRAHAM MEDIA GROUP, FLORIDA. INC.
MICHAEL P BEDER
ONE CITYCENTER
850 TENTH STREET, NW
WASHINGTON, DC 20004

This letter provides advance notice that the station referenced below **has been reassigned to a new channel** in the repacking process associated with the broadcast television spectrum incentive auction. The Congressionally-mandated auction involves a repacking or reorganization of the television bands. As part of the repacking, some stations are being reassigned to new post-auction channels. Although the repacking is not yet effective, its final results have been determined and will be announced publicly as soon as the auction closes. Reassigned stations will then be required to transition to their post-auction channels. Please carefully review the information in the Broadcast Transition Procedures Public Notice that describes the steps that you must take in order to implement this channel change. *See Incentive Auction Task Force and Media Bureau Announce Procedures for the Post-Incentive Auction Broadcast Transition*, Public Notice, DA 17-106 (rel. Jan. 27, 2017) (https://apps.fcc.gov/edocs_public/attachmatch/DA-17-106A1.pdf) (Broadcast Transition Procedures Public Notice).

Below is technical information about the station's post-auction channel and the transition phase the station has been assigned:

Facility ID:	53116
Community of License:	JACKSONVILLE, FL
Call Sign:	WJXT
Service:	DT
Pre-Auction Channel:	42
Post-Auction Channel:	18
Antenna Coordinates (NAD83):	30° 16' 24.87" N 81° 33' 12.33"
ERP (kW):	587
HAAT (m):	294
RCAMSL (m):	300
Antenna ID:	41583
Antenna Pattern Type:	DA
Reference Azimuth (DEG):	0
Transition Phase:	7

The purpose of this letter is to provide you with information as early as possible concerning your channel assignment and transition phase assignment so that you can begin planning for the channel change now, even though Auction 1000 has not closed, and so that you are able to meet the construction deadline for your station's transition phase listed above. The station's construction deadline will be the phase completion date for the station's assigned phase and will be included in the Auction 1000 Closing and Channel Reassignment Public


WJXT-DT

WCWJ-DT & WJXT-DT

Repack Plan

Jacksonville, FL

Phase 7 (Both)

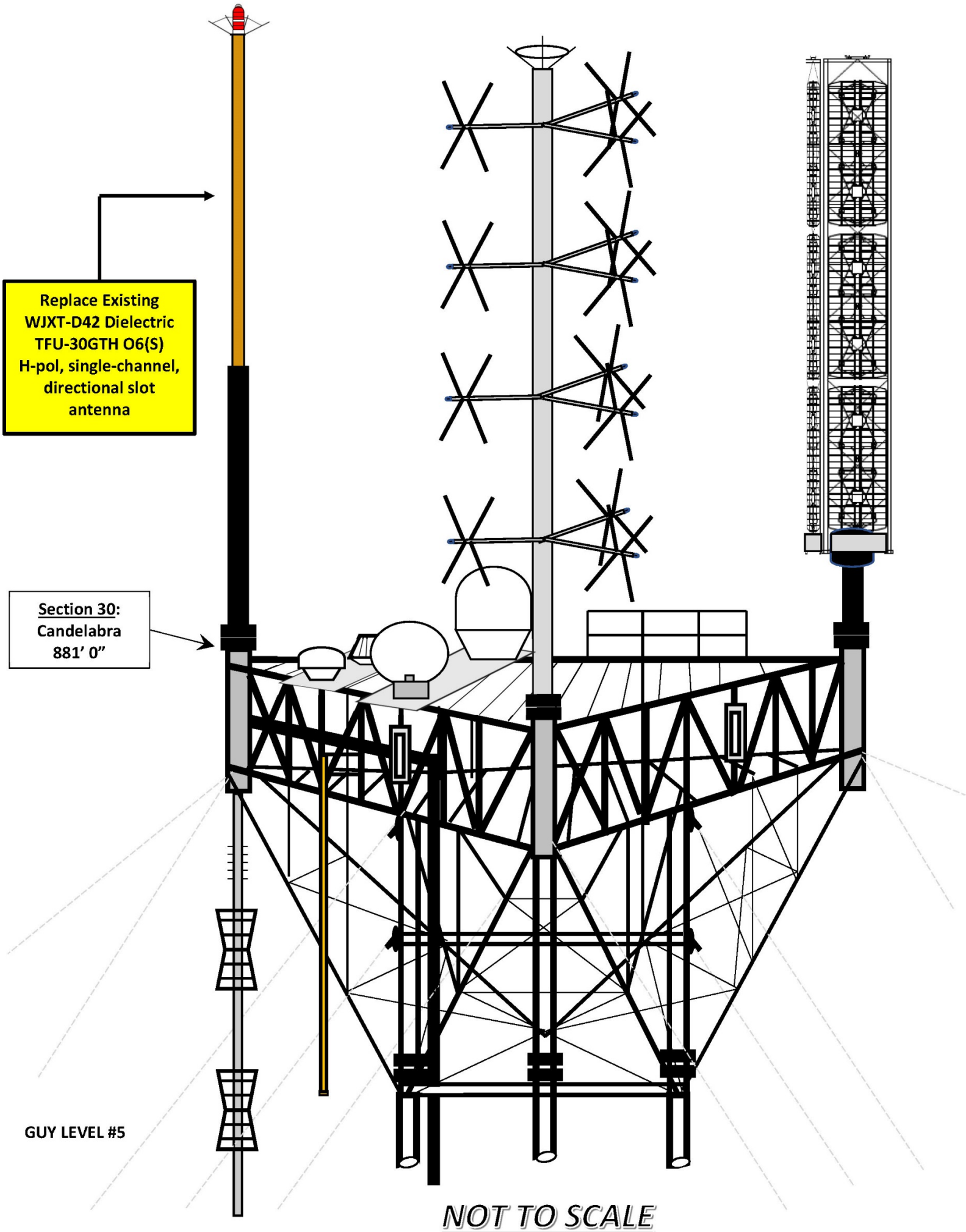
GRAHAM MEDIA GROUP

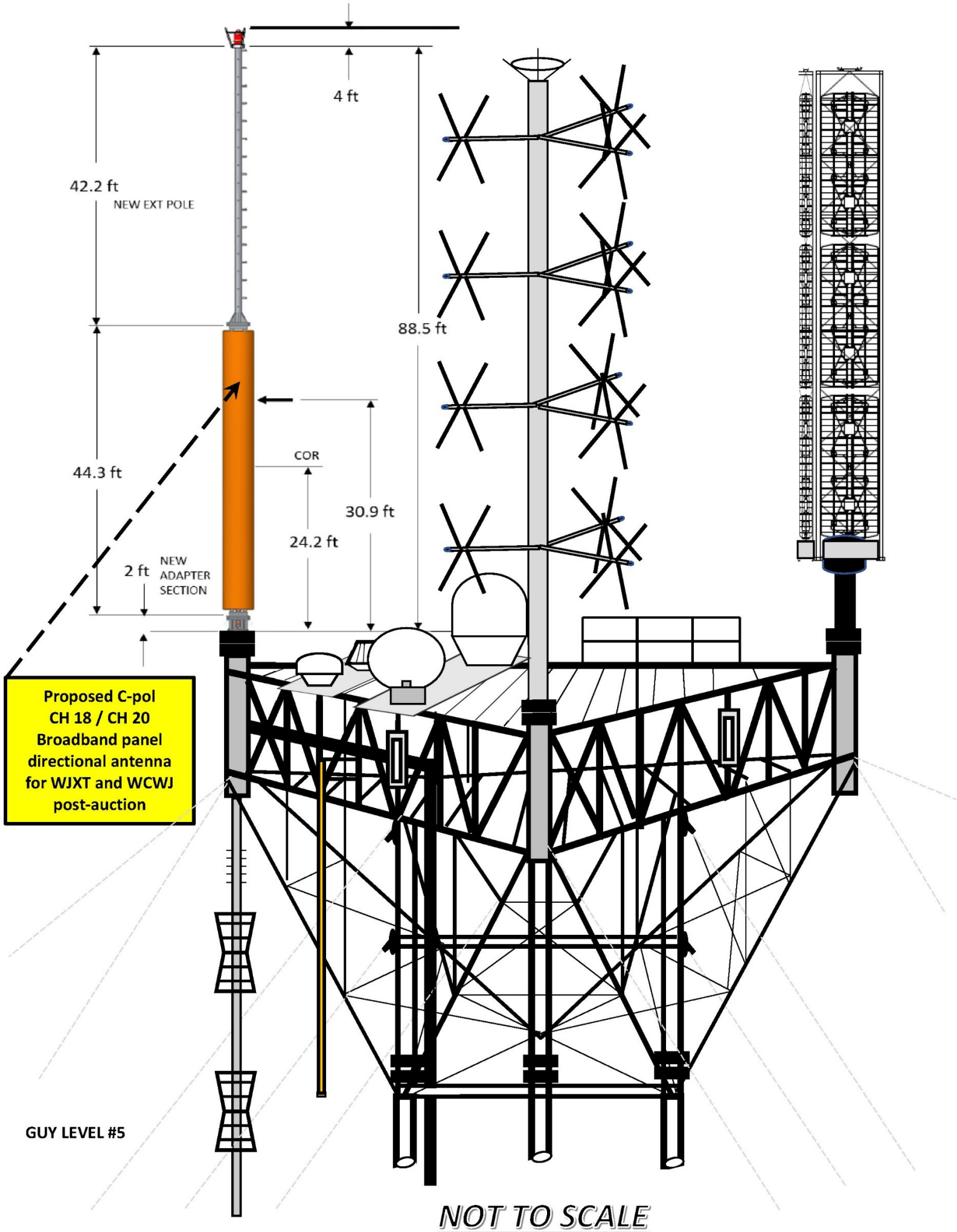
FEDERAL COMMUNICATIONS COMMISSION · USA ·

KGA ENGINEERING

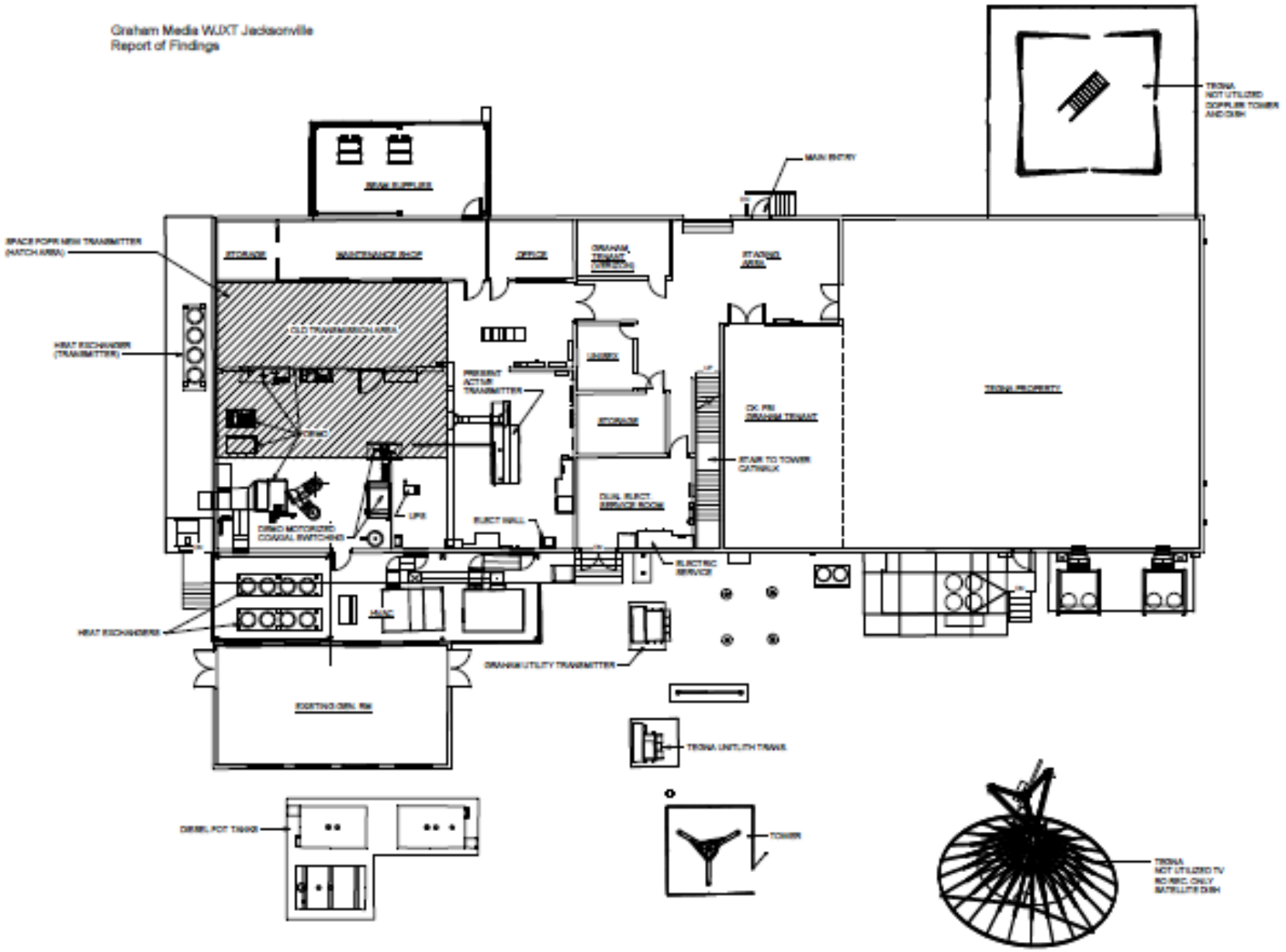
Kessler and Gehman Associates, Inc.
Consultants • Broadcast • Wireless
507 NW 60th St., Suite D
Gainesville, FL 32607
(352) 332-3157 **Phone**
www.kesslerandgehman.com

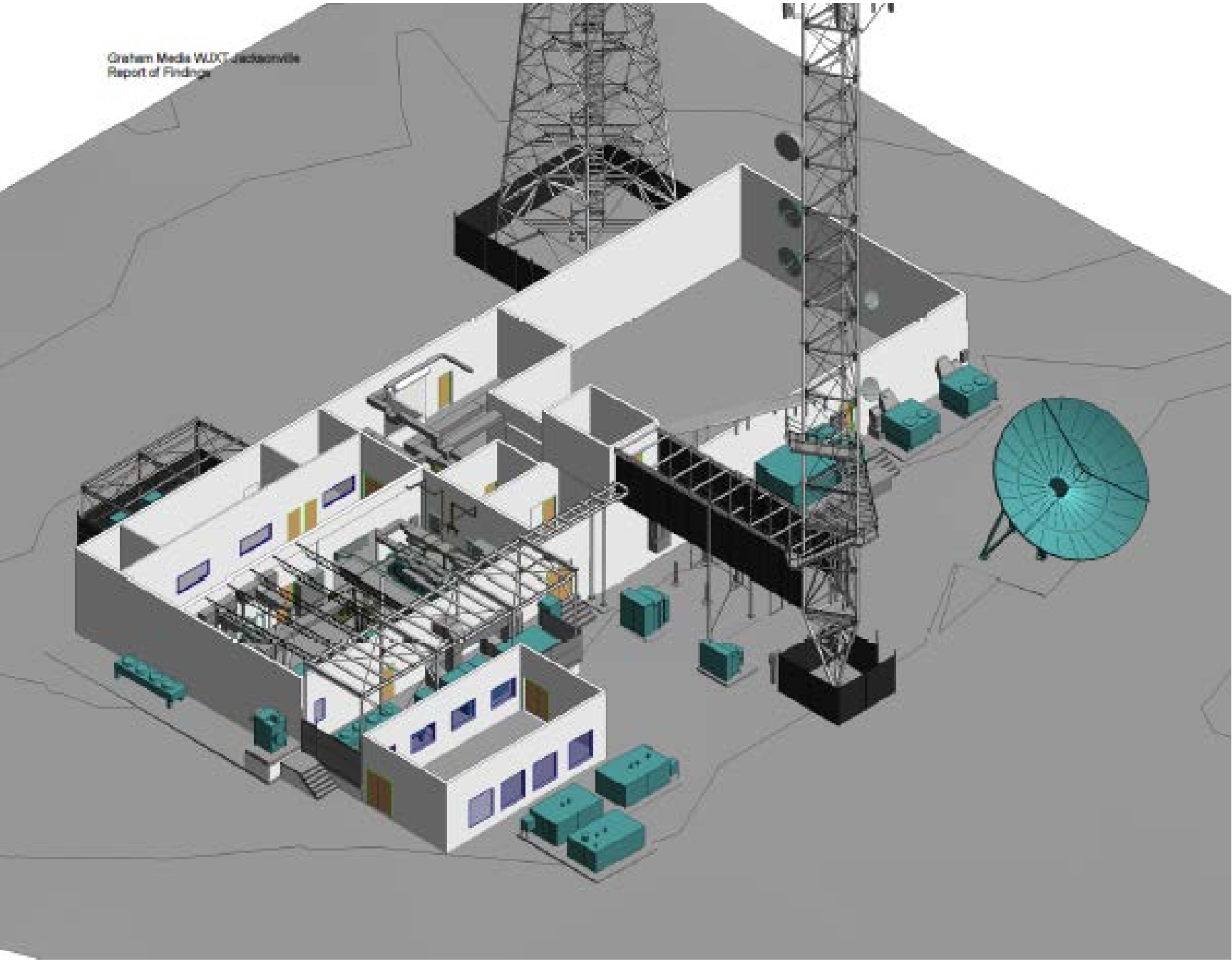
Graham Media Group
Jacksonville, FL WJXT WCWJ
20170521 **Exhibit 1**


Replace Existing
WJXT-D42 Dielectric
TFU-30GTH O6(S)
H-pol, single-channel,
directional slot
antenna
Section 30:
Candelabra
881' 0"
GUY LEVEL #5
NOT TO SCALE


4 ft
42.2 ft
NEW EXT POLE
88.5 ft
44.3 ft
COR
30.9 ft
24.2 ft
2 ft
NEW ADAPTER SECTION
Proposed C-pol CH 18 / CH 20 Broadband panel directional antenna for WJXT and WCWJ post-auction
GUY LEVEL #5
NOT TO SCALE

Graham Media WJXT Jacksonville
Report of Findings





WCWJ-DT

Budget for Total Estimated Costs to Repack

GRAHAM MEDIA GROUP

FEDERAL COMMUNICATIONS COMMISSION · USA ·

Schedule 381 Certification

File Number: 0000003571 | Submit Date: 07/08/2015 | Call Sign: WCWJ | Facility ID: 29712 | FRN: 0002161107 | State: Florida | City: JACKSONVILLE
Service: DTV | Purpose: Schedule 381 Certification | Status: Received | Status Date: 07/08/2015 | Filing Status: Active

Schedule 381

Section	Question	Response
Database Certification	License File Number:	BLCDT-20060630AFM
	Licensee hereby certifies that it has reviewed its license authorization/construction permit and underlying Database Technical Information for its Eligible Facility as reflected in File Number BLCDT-20060630AFM and	it is accurate and complete to the best of its knowledge
Information on Licensed Facility	Transmitter Make:	Harris
	Transmitter Model:	CD3140P2CF
	Transmitter Maximum Power Output:	34.0
	Transmitter Type:	Tube
Licensee's Primary Antenna	Antenna Type:	Slot
	Is the licensee's primary antenna capable of operating over multiple channels (e.g., broadband)?	No
	Is the licensee's primary antenna shared?	No
	Antenna Location:	Side Mount
Licensee's Primary Transmission Line	Transmission Line Type:	Rigid
	Section Lengths:	19.50 feet
Antenna Support Structure	Year of last structural analysis conducted on the structure:	2008
	Under what structural standard was the last structural analysis conducted:	Other
	Does the licensee own this antenna support structure:	Yes

BUDGET FOR TOTAL ESTIMATED COSTS TO REPACK WCWJ(DT)

TRANSMITTERS AND IN-BUILDING EXPENSES		
RETUNE EXISTING TRANSMITTER *(**NOTE**: Most IOTs cannot be retuned)*		
UHF – Inductive Output Tube (IOT) Transmitter		
Single IOT system (30 kW)	N/A	-
Two IOT system (60 kW)	N/A	-
Three IOT system (90 kW)	N/A	-
IOT replacement tube with accessories (price per tube)	N/A	-
UHF and VHF – minor banding issues	N/A	-
New Mask Filter *(for transmitters being retuned)*		
1.5 kW mask filter	N/A	-
3 kW mask filter	N/A	-
7 kW mask filter	N/A	-
10 kW mask filter	N/A	-
30 kW mask filter	N/A	-
60 kW mask filter	N/A	-
90 kW mask filter	N/A	-
New Exciter *(for transmitters being retuned)*		
Single frequency agile exciter	N/A	-
Dual exciter system with change over	N/A	-
NEW TRANSMITTER *(prices include mask filter and exciter)*		
UHF – IOT Transmitter		
Single IOT system (30 kW)	N/A	-
Two IOT system (60 kW)	N/A	-
Three IOT system (90 kW)	N/A	-
UHF – Air Cooled Solid State Transmitter		
1 – 2.5 kW (Replace 1.8 kW air-cooled solid state)	$120,000.00	Existing B/U
4 - 6 kW	N/A	-
10 – 12 kW	N/A	-
15 kW	N/A	-
20 kW (New transmitter at alternate site while tower is replaced)	$555,000.00	Temp Main
UHF – Liquid Cooled Solid State Transmitter		
4.9 – 6.5 kW	N/A	-
8.2 -13 kW	N/A	-
14.2 -20 kW	N/A	-
21 -31 kW (Replace 34 kW IOT - IOTs not in production - air cooled does not go above 20 kW TPO)	$900,000.00	MAIN
35 -50 kW	N/A	-
52 -61 kW	N/A	-
68.5 -75 kW	N/A	-
86.8 – 106 kW	N/A	-
High VHF – Air Cooled Solid State Transmitter		
1.1 – 4.4 kW	N/A	-
6.5 – 12.5 kW	N/A	-
16.6 – 20.7 kW	N/A	-
24.5 kW	N/A	-
High VHF – Liquid Cooled Solid State Transmitter		
3.3 – 6.5 kW	N/A	-
8.5 – 12.5 kW	N/A	-
16.6 – 20.7 kW	N/A	-
24.5 – 31.6 kW	N/A	-
48.0 kW	N/A	-
62.0 kW	N/A	-
OTHER TRANSMITTER EXPENSES		
Combiners for Shared (Broadband Panel) Antenna (UHF/VHF)		
New combiner, cost per channel (without antenna)	N/A	-
Adding a module to existing combiner (without antenna)	N/A	-
Combiner output splitting/switching for dual feed lines, if applicable	N/A	-

Electrical Service		
Service entrance 3 phase/800 amp/208 volt (Required at alt site and exisitng site)	$27,400.00	Main & Temp
Switchgear – industrial 800 amp	N/A	-
Transformer 3 phase/480v – 150 KVA	N/A	-
Transformer 3 phase/480v – 300 KVA	N/A	-
Transformer 3 phase/480v – 500 KVA	N/A	-
2" Rigid Conduit and Wiring (Cost per foot) (Required at alt site and exisitng site)	$10,000.00	Main & Temp
3" Rigid Conduit and Wiring (Cost per foot)	N/A	-
4" Rigid Conduit and Wiring (Cost per foot)	N/A	-
HVAC Service - Cooling Only		
5 Ton system	N/A	-
10 Ton system (Additional HVAC at alternate site while tower is replaced)	$37,000.00	Temp Main
15 Ton system	N/A	-
25 Ton system	N/A	-
50 Ton system	N/A	-
HVAC Service - Heating & Cooling		
10 Ton system	N/A	-
15 Ton system	N/A	-
20 Ton system	N/A	-
30 Ton system	N/A	-
50 Ton system	N/A	-
Transmission Building Addition		
Approx. 600-1500 square foot addition	N/A	-
ANTENNA		
UHF – High Power Top Mount (200-1000 kW)		
One station antenna, horizontally polarized	N/A	-
One station antenna, -with V polarization or C polarization elliptically or circularly polarized	N/A	-
Two station broadband panel antenna with combiner, horizontally polarized	N/A	-
Two station broadband panel antenna, elliptically or circularly polarized	N/A	-
Four station broadband panel antenna with combiner, horizontally polarized	N/A	-
Four station broadband panel antenna, elliptically or circularly polarized	N/A	-
UHF – Lower Power Side Mount		
One station: 200-500 kW, horizontally polarized	N/A	-
One station: 200-500 kW, elliptically or circularly polarized	N/A	-
One station antenna – medium power (50-200 kW), horizontally polarized	N/A	-
Class A single station antenna – basic	N/A	-
Class A broadband panel (cost per panel)	N/A	-
Class A broadband panel (multiple channel array - example 4 panel complete array)	N/A	-
UHF – Broadband Slot, Side Mount		
8 bay, 5 kW input, directional, horizontally polarized	N/A	-
8 bay, 20 kW input, directional, horizontally polarized	N/A	-
8 bay, 20 kW input, directional, elliptically or circularly polarized	N/A	-
16 bay, 8 - 10 kW input, directional, horizontally polarized	N/A	-
16 bay, 16 kW input, directional, horizontally polarized	N/A	-
16 bay, 40 kW input, directional, horizontally polarized	N/A	-
16 bay, 40 kW input, directional, elliptically or circularly polarized	N/A	-
24 bay, 15 kW input, directional, horizontally polarized	N/A	-
24 bay, 60 kW input, directional, horizontally polarized	N/A	-
24 bay, 60 kW input, directional, elliptically or circularly polarized	N/A	-
32 bay, 16 kW input, directional, horizontally polarized	N/A	-
32 bay, 32 kW input, directional, horizontally polarized	N/A	-
32 bay, 60 - 65 kW input, directional, horizontally polarized (Alt tower + New tower or else downtime)	$400,000.00	Main & Temp
UHF – Broadband Panel, Side Mount Aux/Interim		
10 kW input, low gain, horizontally polarized	N/A	-
45 kW input, low gain, horizontally polarized (Replace existing AUX antenna - not licensed but STA)	$135,000.00	Replace Aux
High-VHF		
One station antenna – top mount, horizontally polarized	N/A	-
One station antenna – top mount, with V polarization or C polarization elliptically or circularly polarized	N/A	-
One station antenna – side mount, horizontally polarized	N/A	-
One station antenna – side mount, elliptically or circularly polarized	N/A	-
Shared broadband panel antenna – 5 station, w/V pol or C pol elliptically or circularly polarized	N/A	-

High-VHF, Low Power		
Class A basic slot antenna – side mount	N/A	-
Class A basic slot antenna – side mount, elliptically or circularly polarized	N/A	-
Class A broadband panel (cost per panel)	N/A	-
Class A broadband panel (multiple channel array - example 4 panel complete array)	N/A	-
Other		
Sweep test of transmission line and existing antenna	$6,400.00	-
Elbow complex, single channel, at antenna input, per 3-1/8" feedline (if needed)	N/A	-
Elbow complex, broadband, at antenna input, per 3-1/8" feedline (if needed)	N/A	-
Elbow complex, single channel, at antenna input, per 4-1/16" feedline (if needed)	N/A	-
Elbow complex, broadband, at antenna input, per 4-1/16" feedline (if needed)	N/A	-
Elbow complex, single channel, at antenna input, per 6-1/8" feedline (if needed)	N/A	-
Elbow complex, broadband, at antenna input, per 6-1/8" feedline (if needed)	$13,000.00	Temp Main
Elbow complex, single channel, at antenna input, per 7-3/16" feedline (if needed)	N/A	-
Elbow complex, broadband, at antenna input, per 7-3/16" feedline (if needed)	N/A	-
Elbow complex, single channel, at antenna input, per 8-3/16" feedline (if needed)	N/A	-
Elbow complex, broadband, at antenna input, per 8-3/16" feedline (if needed)	N/A	-
Side mount brackets for high power antennas (if not included in antenna base cost)	$22,000.00	-
Pattern scatter analysis for side mount high/med power antennas (if not included in antenna base cost)	$5,000.00	-
Note: For stacked antennas, the cost of the bottom antenna will likely be doubled due to the increased cost c	N/A	-
TRANSMISSION LINE		
Flexible Transmission Line - Line Diameter		
7/8" foam dielectric (ft)	N/A	-
1 5/8" foam dielectric (ft)	N/A	-
7/8" air dielectric (ft)	N/A	-
1 5/8" air dielectric (ft)	N/A	-
3" air dielectric (ft)	N/A	-
4" air dielectric (ft)	N/A	-
5" air dielectric (ft)	N/A	-
Rigid Transmission Line – copper - Line Diameter		
3 1/8" (ft)	N/A	-
4 1/16" (ft)	N/A	-
6 1/8" (ft) (Needed at Alt Site while tower is built and can't be used at new tower or else downtime)	$192,000.00	Temp Main
7 3/16" (ft)	N/A	-
8 3/16" (ft)	N/A	-
3 1/8" broadband (ft)	N/A	-
4 1/16" broadband (ft)	N/A	-
6 1/8" broadband (ft)	N/A	-
7 3/16" broadband (ft)	N/A	-
8 3/16" broadband (ft)	N/A	-
TOWER EQUIPMENT AND RIGGING		
Existing Towers		
Mapping for undocumented/poorly documented twr & prep of documentation required for twr load study	$16,000.00	-
Structural engineering tower load study for documented tower	$5,000.00	-
Structural engineering tower load study for a documented tower with candelabra	N/A	-
Minor tower reinforcement/modifications (see Fig. 2 for sample minor modifications)	N/A	-
Major tower reinforcement/modifications (see Fig. 2 for sample major modifications)	N/A	-
Serious tower reinforcement/modifications (see Fig. 2 for sample serious modifications)	N/A	-
New Towers – Cost includes constructing a new tower, priced per foot.		
New tower between 1000' and 1500' without elevator, presumptive soil conditions (ft) (See ERI Quote)	$2,586,115.00	-
New tower between 1500' and 2000' without elevator, presumptive soil conditions (ft)	N/A	-
Tower Rigging		
Tall Tower (greater than 500')	$400,000.00	-
Short Tower (less than 500')	N/A	Main & Temp
Complex Tower (includes, for example, those with candelabras and/or stacked antennas)	N/A	-
Helicopter Lift (e.g., for a rooftop tower, complex tower, tall structure, or terrain constrained location requirin	N/A	-

INTERIM FACILITY		
Transmitter: *Stations may need an additional transmitter for interim use on either pre- or post-auction channels (see transmitter*		
Antenna		
Interim Antenna Rent & Installation	$110,000.00	INT
For replacement of existing auxiliary antennas see antenna section above		-
Transmission Line: *See transmission line section above*		
Tower Equipment & Rigging: *See tower equipment and rigging section above*		
Interior RF Systems: *Stations needing an additional transmitter for interim use may need an additional interior RF system*		
UHF inside RF system including switching	$140,000.00	Temp Main
VHF inside RF system including switching	N/A	-
SPECIAL CASES		
Channel 14		
Channel 14 - RF Consulting Engineer (to determine correct mask filter to avoid interference)	N/A	-
Channel 14 - Mask Filter	N/A	-
Channel 14 - Additional field eng time, 10-30 days (test for interference after mask filter is installed)	N/A	-
Distributed Transmission Services (DTS)		
DTS (Critical Facility): Operations having signal overlap between adj DTS sites not terrain-shielded	N/A	-
DTS (Terrain-shielded Facility): Operations that serve regions that are terrain blocked from each other	N/A	-
AM Pattern Disturbance		
AM - Impact study (Assess potential impact of tower construction or modification on AM radio stations)	$7,500.00	WKTZ-AM
AM - Remedy (price includes installing detuning apparatus or adjusting existing detuning apparatus)	N/A	-
MISCELLANEOUS EXPENSES		
DTV Medical Facility Notification		
Medical Facility Notification	$6,500.00	-
Other		
Obtain building permits from local zoning authorities	$75,000.00	-
Obtain local permits other than for zoning	$10,000.00	-
Coordinate with Bureau of Land Management and National Forest Service	N/A	-
Disposal cost (for equipment and other waste, if applicable)	$31,500.00	-
Equipment Delivery and Handling Charges	N/A	-
Equipment Storage	$50,000.00	-
Develop and air announcement of upcoming channel change	N/A	-
Notify MVPDs of channel change	N/A	-
Other miscellaneous expenses	$667,500.00	-
PROFESSIONAL SERVICES		
RF Consulting Engineer Fees		
Perform engineering study for new channel assignment and antenna development	$7,000.00	-
Prepare engineering section of Form 301 FCC Construction Permit Application - Expedited/Checklist	N/A	-
Prepare engineering section of Form 301 FCC Construction Permit Application - Standard	$3,000.00	-
Prepare engineering section of Form 302 FCC License to Cover Application, per antenna - Standard	$1,500.00	-
Prepare engineering section of Form 302 FCC License to Cover Application, per antenna - Changes	N/A	-
Prepare engineering section of FCC Form 2100, Construction Permit Application for an Auxiliary Antenna	$2,000.00	-
Prepare engineering section of FCC Form 2100, License to Cover Application for an Auxiliary Antenna	$1,500.00	-
Prepare request for Special Temporary Authorization	$1,500.00	-
RF Consulting Engineer Fees for Maximizing Station		
Expanded Facilities* - Perform engineering study for increased coverage and antenna development	$7,000.00	-
Expanded Facilities* - Prepare engineering section of Form 301 FCC CP Application - Standard	$3,000.00	-
Expanded Facilities* - Prepare engineering section of Form 302 FCC License Application - Standard	$1,500.00	-
Attorney Fees		
Prepare and File Form 301	$5,000.00	-
Prepare and File Form 302	$2,250.00	-
Prepare and File request for Special Temporary Authorization	$3,500.00	-
Prepare and File FCC Form 2100, Construction Permit or License Application for an Auxiliary Antenna	$2,000.00	-
Negotiation of Lease and other matters for Shared Locations	N/A	-
Attorney Fees related to Maximizing Station		
Expanded Facilities* - Prepare and File Form 301	$5,000.00	-
Expanded Facilities* - Prepare and File Form 302	$2,250.00	-
FCC Filing Fees		
Form 302 license	$325.00	-
Special Temporary Authorization	$190.00	-

Other Transition-Related Personnel Costs		
Project management of the transition	$22,100.00	-
Prepare and/or review reimbursement form	$2,500.00	-
Address transition timing and coordination issues with other stations and wireless	$2,500.00	-
Develop a solution for Transmitter & Mask Filter on New Channel; Upgrade and/or Replacement	$750.00	-
Develop a solution for Transmitter Electrical, HVAC and/or Architectural	$500.00	-
Coordinate Tower mapping & analyses	$750.00	-
Develop an Upgrade or Replacement solution for Tower	$750.00	-
Coordinate Tower Modifications	$3,000.00	-
On site Equipment Inventory & Facilities Survey	$5,400.00	-
CAS - Construction Administration Services	$83,750.00	-
CAS - On site Project Coordination Meeting	$5,400.00	-
CAS - On site Transmitter Contractor Oversight	$5,400.00	-
CAS - On site Antenna/Transmission Line Contractor Oversight	$5,400.00	-
CAS - On site General Construction Contractor Oversight	$5,400.00	-
CAS - On site Interim Inspection	$5,400.00	-
CAS - Other Site Visit(s) - Specify (Washington, D.C from May 30 - June 1 2017)	$10,800.00	-
Field Engineering Fees		
Comprehensive coverage verification via field study, if needed - FCC plus Mobile	$76,400.00	-
Comprehensive coverage verification via field study, if needed - Mobile-only	N/A	-
RF Exposure Measurements (post-construction measurements customarily have been conducted)	$20,000.00	-
Change in Structure Height Services: *Costs can be much higher for new towers*		
NEPA Section 106 environmental review, if needed (consideration of historic properties)	$6,000.00	-
Environmental Assessment, if triggered by NEPA Section 106 review or for certain structures over 450 feet	$10,000.00	-
ASR modification (prepare FCC Form 854)	$2,000.00	-
FAA consultant, including cost of preparing FAA Form 7460 (Notice of Proposed Construction)	$2,000.00	-
MVPD COSTS		
Equipment Costs		
New receive antenna – installed.	N/A	-
New receive antenna – hi-gain quad antenna, installed	N/A	-
New receive antenna – uninstalled	N/A	-
New receiver or other RF processing equipment (such as pre-amplifiers)	N/A	-
Coaxial cable – cost per foot (for MVPDs that install new receive antennas and/or receivers)	N/A	-
Structural or capacity augments for towers (*to meet new tower loading requirements)*	N/A	-
Tower rigging – two-man crew (price would include removal of existing antenna and transmission line, if nec	N/A	-
Professional Services		
Structural study of tower capacity (*to determine if additional support is necessary)*	N/A	-
MVPD - Engineering study (*to estimate receive strength of new channel assignments)*	N/A	-
TOTAL ESTIMATED PROJECT COST:	**$6,852,630.00**	

WJXT-DT

Budget for Total Estimated Costs to Repack

GRAHAM MEDIA GROUP

FEDERAL COMMUNICATIONS COMMISSION · USA ·

Schedule 381 Certification

File Number: 0000002907 | Submit Date: 07/02/2015 | Call Sign: WJXT | Facility ID: 53116 | FRN: 0002161107 | State: Florida | City: JACKSONVILLE
Service: DTV | Purpose: Schedule 381 Certification | Status: Received | Status Date: 07/02/2015 | Filing Status: Active

Schedule 381

Section	Question	Response
Database Certification	License File Number:	BLCDT-20020405AAX
	Licensee hereby certifies that it has reviewed its license authorization/construction permit and underlying Database Technical Information for its Eligible Facility as reflected in File Number BLCDT-20020405AAX and	it is accurate and complete to the best of its knowledge
Information on Licensed Facility	Transmitter Make:	Harris
	Transmitter Model:	CD3200P2
	Transmitter Maximum Power Output:	42.0
	Transmitter Type:	Tube
Licensee's Primary Antenna	Antenna Type:	Slot
	Is the licensee's primary antenna capable of operating over multiple channels (e.g., broadband)?	No
	Is the licensee's primary antenna shared?	No
	Antenna Location:	Candelbra
Licensee's Primary Transmission Line	Transmission Line Type:	Rigid
	Section Lengths:	19.50 feet
Antenna Support Structure	Year of last structural analysis conducted on the structure:	2013
	Under what structural standard was the last structural analysis conducted:	TIA 222-Revision G
	Does the licensee own this antenna support structure:	Yes

BUDGET FOR TOTAL ESTIMATED COSTS TO REPACK WJXT(DT)

TRANSMITTERS AND IN-BUILDING EXPENSES		
RETUNE EXISTING TRANSMITTER *(**NOTE**: Most IOTs cannot be retuned)*		
UHF – Inductive Output Tube (IOT) Transmitter		
Single IOT system (30 kW)	N/A	-
Two IOT system (60 kW)	N/A	-
Three IOT system (90 kW)	N/A	-
IOT replacement tube with accessories (price per tube)	N/A	-
UHF and VHF – minor banding issues	N/A	-
New Mask Filter *(for transmitters being retuned)*		
1.5 kW mask filter	N/A	-
3 kW mask filter	N/A	-
7 kW mask filter	N/A	-
10 kW mask filter	N/A	-
30 kW mask filter	N/A	-
60 kW mask filter	N/A	-
90 kW mask filter	N/A	-
New Exciter *(for transmitters being retuned)*		
Single frequency agile exciter	N/A	-
Dual exciter system with change over	N/A	-
NEW TRANSMITTER *(prices include mask filter and exciter)*		
UHF – IOT Transmitter		
Single IOT system (30 kW)	N/A	-
Two IOT system (60 kW)	N/A	-
Three IOT system (90 kW)	N/A	-
UHF – Air Cooled Solid State Transmitter		
1 – 2.5 kW	N/A	-
4 - 6 kW	N/A	-
10 – 12 kW	N/A	-
15 kW	N/A	-
20 kW	N/A	-
UHF – Liquid Cooled Solid State Transmitter		
4.9 – 6.5 kW	N/A	-
8.2 -13 kW	N/A	-
14.2 -20 kW	N/A	-
21 -31 kW (21.6 kW TPO Required - IOTs not in production - air cooled does not go above 20 kW TPO)	$900,000.00	INT (Alt site)
35 -50 kW (Replace 42 kW IOT - IOTs not in production - air cooled does not go above 20 kW TPO)	$1,400,000.00	MAIN
52 -61 kW	N/A	-
68.5 -75 kW	N/A	-
86.8 – 106 kW	N/A	-
High VHF – Air Cooled Solid State Transmitter		
1.1 – 4.4 kW	N/A	-
6.5 – 12.5 kW	N/A	-
16.6 – 20.7 kW	N/A	-
24.5 kW	N/A	-
High VHF – Liquid Cooled Solid State Transmitter		
3.3 – 6.5 kW	N/A	-
8.5 – 12.5 kW	N/A	-
16.6 – 20.7 kW	N/A	-
24.5 – 31.6 kW	N/A	-
48.0 kW	N/A	-
62.0 kW	N/A	-
OTHER TRANSMITTER EXPENSES		
Combiners for Shared (Broadband Panel) Antenna (UHF/VHF)		
New combiner, cost per channel (without antenna)	N/A	-
Adding a module to existing combiner (without antenna)	N/A	-
Combiner output splitting/switching for dual feed lines, if applicable	N/A	-

Electrical Service		
Service entrance 3 phase/800 amp/208 volt	$13,700.00	-
Switchgear – industrial 800 amp	N/A	-
Transformer 3 phase/480v – 150 KVA	N/A	-
Transformer 3 phase/480v – 300 KVA	N/A	-
Transformer 3 phase/480v – 500 KVA	N/A	-
2" Rigid Conduit and Wiring (Cost per foot)	$2,500.00	-
3" Rigid Conduit and Wiring (Cost per foot)	N/A	-
4" Rigid Conduit and Wiring (Cost per foot)	N/A	-
HVAC Service - Cooling Only		
5 Ton system	N/A	-
10 Ton system	N/A	-
15 Ton system	N/A	-
25 Ton system	N/A	-
50 Ton system	N/A	-
HVAC Service - Heating & Cooling		
10 Ton system	N/A	-
15 Ton system	N/A	-
20 Ton system	N/A	-
30 Ton system	N/A	-
50 Ton system	N/A	-
Transmission Building Addition		
Approx. 600-1500 square foot addition	$75,000.00	-
ANTENNA		
UHF – High Power Top Mount (200-1000 kW)		
One station antenna, horizontally polarized	$235,000.00	MAIN
One station antenna, -with V polarization or C polarization elliptically or circularly polarized	N/A	-
Two station broadband panel antenna with combiner, horizontally polarized	N/A	-
Two station broadband panel antenna, elliptically or circularly polarized	N/A	-
Four station broadband panel antenna with combiner, horizontally polarized	N/A	-
Four station broadband panel antenna, elliptically or circularly polarized	N/A	-
UHF – Lower Power Side Mount		
One station: 200-500 kW, horizontally polarized	N/A	-
One station: 200-500 kW, elliptically or circularly polarized	N/A	-
One station antenna – medium power (50-200 kW), horizontally polarized	N/A	-
Class A single station antenna – basic	N/A	-
Class A broadband panel (cost per panel)	N/A	-
Class A broadband panel (multiple channel array - example 4 panel complete array)	N/A	-
UHF – Broadband Slot, Side Mount		
8 bay, 5 kW input, directional, horizontally polarized	N/A	-
8 bay, 20 kW input, directional, horizontally polarized	N/A	-
8 bay, 20 kW input, directional, elliptically or circularly polarized	N/A	-
16 bay, 8 - 10 kW input, directional, horizontally polarized	N/A	-
16 bay, 16 kW input, directional, horizontally polarized	N/A	-
16 bay, 40 kW input, directional, horizontally polarized	N/A	-
16 bay, 40 kW input, directional, elliptically or circularly polarized	N/A	-
24 bay, 15 kW input, directional, horizontally polarized	N/A	-
24 bay, 60 kW input, directional, horizontally polarized	N/A	-
24 bay, 60 kW input, directional, elliptically or circularly polarized	N/A	-
32 bay, 16 kW input, directional, horizontally polarized	N/A	-
32 bay, 32 kW input, directional, horizontally polarized	N/A	-
32 bay, 60 - 65 kW input, directional, horizontally polarized	N/A	-
UHF – Broadband, Side Mount Aux/Interim		
10 kW input, low gain, horizontally polarized	N/A	-
45 kW input, low gain, horizontally polarized	$135,000.00	INT (Alt site)
High-VHF		
One station antenna – top mount, horizontally polarized	N/A	-
One station antenna – top mount, with V polarization or C polarization elliptically or circularly polarized	N/A	-
One station antenna – side mount, horizontally polarized	N/A	-
One station antenna – side mount, elliptically or circularly polarized	N/A	-
Shared broadband panel antenna – 5 station, w/V pol or C pol elliptically or circularly polarized	N/A	-

High-VHF, Low Power		
Class A basic slot antenna – side mount	N/A	-
Class A basic slot antenna – side mount, elliptically or circularly polarized	N/A	-
Class A broadband panel (cost per panel)	N/A	-
Class A broadband panel (multiple channel array - example 4 panel complete array)	N/A	-
Other		
Sweep test of transmission line and existing antenna	$6,400.00	-
Elbow complex, single channel, at antenna input, per 3-1/8" feedline (if needed)	N/A	-
Elbow complex, broadband, at antenna input, per 3-1/8" feedline (if needed)	N/A	-
Elbow complex, single channel, at antenna input, per 4-1/16" feedline (if needed)	N/A	-
Elbow complex, broadband, at antenna input, per 4-1/16" feedline (if needed)	N/A	-
Elbow complex, single channel, at antenna input, per 6-1/8" feedline (if needed)	$11,700.00	-
Elbow complex, broadband, at antenna input, per 6-1/8" feedline (if needed)	N/A	-
Elbow complex, single channel, at antenna input, per 7-3/16" feedline (if needed)	N/A	-
Elbow complex, broadband, at antenna input, per 7-3/16" feedline (if needed)	N/A	-
Elbow complex, single channel, at antenna input, per 8-3/16" feedline (if needed)	N/A	-
Elbow complex, broadband, at antenna input, per 8-3/16" feedline (if needed)	N/A	-
Side mount brackets for high power antennas (if not included in antenna base cost)	$22,000.00	INT (Alt site)
Pattern scatter analysis for side mount high/med power antennas (if not included in antenna base cost)	N/A	-
Note: For stacked antennas, the cost of the bottom antenna will likely be doubled due to the increased cost c	N/A	-
TRANSMISSION LINE		
Flexible Transmission Line - Line Diameter		
7/8" foam dielectric (ft)	N/A	-
1 5/8" foam dielectric (ft)	N/A	-
7/8" air dielectric (ft)	N/A	-
1 5/8" air dielectric (ft)	N/A	-
3" air dielectric (ft)	N/A	-
4" air dielectric (ft)	N/A	-
5" air dielectric (ft)	N/A	-
Rigid Transmission Line – copper - Line Diameter		
3 1/8" (ft)	N/A	-
4 1/16" (ft)	$149,175.00	INT Alt Site
6 1/8" (ft)	$216,000.00	If Line is Bad
7 3/16" (ft)	N/A	-
8 3/16" (ft)	N/A	-
3 1/8" broadband (ft)	N/A	-
4 1/16" broadband (ft)	N/A	-
6 1/8" broadband (ft)	N/A	-
7 3/16" broadband (ft)	N/A	-
8 3/16" broadband (ft)	N/A	-
TOWER EQUIPMENT AND RIGGING		
Existing Towers		
Mapping for undocumented/poorly documented twr & prep of documentation required for twr load study	$25,000.00	-
Structural engineering tower load study for documented tower	N/A	-
Structural engineering tower load study for a documented tower with candelabra	$19,000.00	-
Minor tower reinforcement/modifications (see Fig. 2 for sample minor modifications)	N/A	-
Major tower reinforcement/modifications (see Fig. 2 for sample major modifications)	N/A	-
Serious tower reinforcement/modifications (see Fig. 2 for sample serious modifications)	$1,000,000.00	-
New Towers – Cost includes constructing a new tower, priced per foot.		
New tower between 1000' and 1500' without elevator, presumptive soil conditions (ft)	N/A	-
New tower between 1500' and 2000' without elevator, presumptive soil conditions (ft)	N/A	-
Tower Rigging		
Tall Tower (greater than 500')	N/A	-
Short Tower (less than 500')	N/A	-
Complex Tower (includes, for example, those with candelabras and/or stacked antennas)	$150,000.00	-
Helicopter Lift (e.g., for a rooftop tower, complex tower, tall structure, or terrain constrained location requirin	$388,000.00	-

INTERIM FACILITY		
Transmitter: *Stations may need an additional transmitter for interim use on either pre- or post-auction channels (see transmitter*		
Interim Antenna & Installation		
Interim Antenna Rent & Installation	$110,000.00	INT
For replacement of existing auxiliary antennas see antenna section above		-
Transmission Line: *See transmission line section above*		
Tower Equipment & Rigging: *See tower equipment and rigging section above*		
Interior RF Systems: *Stations needing an additional transmitter for interim use may need an additional interior RF system*		
UHF inside RF system including switching	$140,000.00	Main/INT
VHF inside RF system including switching	N/A	-
SPECIAL CASES		
Channel 14		
Channel 14 - RF Consulting Engineer (to determine correct mask filter to avoid interference)	N/A	-
Channel 14 - Mask Filter	N/A	-
Channel 14 - Additional field ENG time, 10-30 days (test for interference after mask filter is installed)	N/A	-
Distributed Transmission Services (DTS)		
DTS (Critical Facility): Operations having signal overlap between adj DTS sites not terrain-shielded	N/A	-
DTS (Terrain-shielded Facility): Operations that serve regions that are terrain blocked from each other	N/A	-
AM Pattern Disturbance		
AM - Impact study (Assess potential impact of tower construction or modification on AM radio stations)	$7,500.00	WKTZ-AM
AM - Remedy (price includes installing detuning apparatus or adjusting existing detuning apparatus)	N/A	-
MISCELLANEOUS EXPENSES		
DTV Medical Facility Notification		
Medical Facility Notification	$6,500.00	-
Other		
Obtain building permits from local zoning authorities	$50,000.00	-
Obtain local permits other than for zoning	$15,000.00	-
Coordinate with Bureau of Land Management and National Forest Service	N/A	-
Disposal cost (for equipment and other waste, if applicable)	$20,000.00	-
Equipment Delivery and Handling Charges	N/A	-
Equipment Storage	$10,000.00	-
Develop and air announcement of upcoming channel change	$100,000.00	-
Notify MVPDs of channel change	$5,000.00	-
Other miscellaneous expenses	N/A	-
PROFESSIONAL SERVICES		
RF Consulting Engineer Fees		
Perform engineering study for new channel assignment and antenna development	$7,000.00	-
Prepare engineering section of Form 301 FCC Construction Permit Application - Expedited/Checklist	N/A	-
Prepare engineering section of Form 301 FCC Construction Permit Application - Standard	$3,000.00	-
Prepare engineering section of Form 302 FCC License to Cover Application, per antenna - Standard	$1,500.00	-
Prepare engineering section of Form 302 FCC License to Cover Application, per antenna - Changes	N/A	-
Prepare engineering section of FCC Form 2100, Construction Permit Application for an Auxiliary Antenna	$2,000.00	-
Prepare engineering section of FCC Form 2100, License to Cover Application for an Auxiliary Antenna	$1,500.00	-
Prepare request for Special Temporary Authorization	$1,500.00	-
RF Consulting Engineer Fees for Maximizing Station		
Expanded Facilities* - Perform engineering study for increased coverage and antenna development	$7,000.00	-
Expanded Facilities* - Prepare engineering section of Form 301 FCC CP Application - Standard	$3,000.00	-
Expanded Facilities* - Prepare engineering section of Form 302 FCC License Application - Standard	$1,500.00	-
Attorney Fees		
Prepare and File Form 301	$5,000.00	-
Prepare and File Form 302	$2,250.00	-
Prepare and File request for Special Temporary Authorization	$3,500.00	-
Prepare and File FCC Form 2100, Construction Permit or License Application for an Auxiliary Antenna	$2,000.00	-
Negotiation of Lease and other matters for Shared Locations	N/A	-
Attorney Fees related to Maximizing Station		
Expanded Facilities* - Prepare and File Form 301	$5,000.00	-
Expanded Facilities* - Prepare and File Form 302	$2,250.00	-
FCC Filing Fees		
Form 302 license	$325.00	-
Special Temporary Authorization	$190.00	-

Other Transition-Related Personnel Costs		
Project management of the transition	$22,100.00	-
Prepare and/or review reimbursement form	$2,500.00	-
Address transition timing and coordination issues with other stations and wireless	$2,500.00	-
Develop a solution for Transmitter & Mask Filter on New Channel; Upgrade and/or Replacement	$750.00	-
Develop a solution for Transmitter Electrical, HVAC and/or Architectural	$500.00	-
Coordinate Tower mapping & analyses	$2,500.00	-
Develop an Upgrade or Replacement solution for Tower	$1,750.00	-
Coordinate Tower Modifications	$3,000.00	-
On site Equipment Inventory & Facilities Survey	$43,200.00	-
CAS: Construction Administration Services	$83,750.00	-
CAS: On-Site Project Coordination Meeting	$27,000.00	-
CAS: On-site Transmitter Contractor Oversight	$27,000.00	-
CAS: On-site Antenna/Transmission Line Contractor Oversight	$5,400.00	-
CAS: On-site General Construction Contractor Oversight	$27,000.00	-
CAS: On-site Interim Inspection	$43,200.00	-
CAS: Other Site Visit(s) - Specify	$27,000.00	-
Field Engineering Fees		
Comprehensive coverage verification via field study, if needed - FCC plus Mobile	$76,400.00	-
Comprehensive coverage verification via field study, if needed - Mobile-only	N/A	-
RF Exposure Measurements (post-construction measurements customarily have been conducted)	$20,000.00	-
Change in Structure Height Services: *Costs can be much higher for new towers*		
NEPA Section 106 environmental review, if needed (consideration of historic properties)	N/A	-
Environmental Assessment, if triggered by NEPA Section 106 review or for certain structures over 450 feet	N/A	-
ASR modification (prepare FCC Form 854)	$2,000.00	-
FAA consultant, including cost of preparing FAA Form 7460 (Notice of Proposed Construction)	$2,000.00	-
MVPD COSTS		
Equipment Costs		
New receive antenna – installed.	N/A	-
New receive antenna – hi-gain quad antenna, installed	N/A	-
New receive antenna – uninstalled	N/A	-
New receiver or other RF processing equipment (such as pre-amplifiers)	N/A	-
Coaxial cable – cost per foot (for MVPDs that install new receive antennas and/or receivers)	N/A	-
Structural or capacity augments for towers (*to meet new tower loading requirements)*	N/A	-
Tower rigging – two-man crew (price would include removal of existing antenna and transmission line, if nec	N/A	-
Professional Services		
Structural study of tower capacity (*to determine if additional support is necessary)*	N/A	-
MVPD - Engineering study (*to estimate receive strength of new channel assignments)*	N/A	-
TOTAL ESTIMATED PROJECT COST:	**$5,680,540.00**	

WCWJ Total Repack Budget Estimate: $6,852,630.00

WJXT Total Repack Budget Estimate: $5,680,540.00

COMBINED TOTAL REPACK BUDGET ESTIMATE: $12,533,170.00

WJXT-DT & WCWJ-DT

COLLOCATED

Budget for Total Estimated

Costs to Repack at WJXT Site

GRAHAM MEDIA GROUP

FEDERAL COMMUNICATIONS COMMISSION · USA ·

BUDGET FOR TOTAL ESTIMATED COSTS TO REPACK WJXT & WCWJ (COLLOCATE)

TRANSMITTERS AND IN-BUILDING EXPENSES		
RETUNE EXISTING TRANSMITTER *(**NOTE**: Most IOTs cannot be retuned)*		
UHF – Inductive Output Tube (IOT) Transmitter		
Single IOT system (30 kW)	N/A	-
Two IOT system (60 kW)	N/A	-
Three IOT system (90 kW)	N/A	-
IOT replacement tube with accessories (price per tube)	N/A	-
UHF and VHF – minor banding issues	N/A	-
New Mask Filter *(for transmitters being retuned)*		
1.5 kW mask filter	N/A	-
3 kW mask filter	N/A	-
7 kW mask filter	N/A	-
10 kW mask filter	N/A	-
30 kW mask filter	N/A	-
60 kW mask filter	N/A	-
90 kW mask filter	N/A	-
New Exciter *(for transmitters being retuned)*		
Single frequency agile exciter	N/A	-
Dual exciter system with change over	N/A	-
NEW TRANSMITTER *(prices include mask filter and exciter)*		
UHF – IOT Transmitter		
Single IOT system (30 kW)	N/A	-
Two IOT system (60 kW)	N/A	-
Three IOT system (90 kW)	N/A	-
UHF – Air Cooled Solid State Transmitter		
1 – 2.5 kW (Replace 1.8 kW air-cooled solid state)	$120,000.00	Replacement AUX WCWJ
4 - 6 kW	N/A	-
10 – 12 kW	N/A	-
15 kW	N/A	-
20 kW (New transmitter at alternate site not needed for WCWJ since tower dismantle N/A)	N/A	-
UHF – Liquid Cooled Solid State Transmitter		
4.9 – 6.5 kW	N/A	-
8.2 -13 kW	N/A	-
14.2 -20 kW	N/A	-
21 -31 kW (WJXT INT ALT Site: 21.6 kW TPO Required - air cooled does not go above 20 kW TPO)	$900,000.00	WJXT AUX
35 -50 kW (WJXT Main: Replace 42 kW IOT & WCWJ Main: Replace 34 kW IOT)	$2,800,000.00	WJXT/WCWJ
52 -61 kW	N/A	-
68.5 -75 kW	N/A	-
86.8 – 106 kW	N/A	-
High VHF – Air Cooled Solid State Transmitter		
1.1 – 4.4 kW	N/A	-
6.5 – 12.5 kW	N/A	-
16.6 – 20.7 kW	N/A	-
24.5 kW	N/A	-
High VHF – Liquid Cooled Solid State Transmitter		
3.3 – 6.5 kW	N/A	-
8.5 – 12.5 kW	N/A	-
16.6 – 20.7 kW	N/A	-
24.5 – 31.6 kW	N/A	-
48.0 kW	N/A	-
62.0 kW	N/A	-

OTHER TRANSMITTER EXPENSES		
Combiners for Shared (Broadband Panel) Antenna (UHF/VHF)		
New combiner, cost per channel (without antenna)	N/A	-
Adding a module to existing combiner (without antenna)	N/A	-
Combiner output splitting/switching for dual feed lines, if applicable	$240,000.00	WJXT/WCWJ
Electrical Service		
Service entrance 3 phase/800 amp/208 volt (For WJXT & WCWJ Mains - Alt site for WCWJ N/A)	$27,400.00	-
Switchgear – industrial 800 amp	N/A	-
Transformer 3 phase/480v – 150 KVA	N/A	-
Transformer 3 phase/480v – 300 KVA	N/A	-
Transformer 3 phase/480v – 500 KVA	N/A	-
2" Rigid Conduit and Wiring (Cost per foot) (For WJXT & WCWJ Mains - Alt site for WCWJ N/A)	$10,000.00	-
3" Rigid Conduit and Wiring (Cost per foot)	N/A	-
4" Rigid Conduit and Wiring (Cost per foot)	N/A	-
HVAC Service - Cooling Only		
5 Ton system	N/A	-
10 Ton system (Some costs at Interim Site) WJXT - GMG will pay to to have it moved back to WJXT)	$30,000.00	-
15 Ton system	N/A	-
25 Ton system	N/A	-
50 Ton system	N/A	-
HVAC Service - Heating & Cooling		
10 Ton system	N/A	-
15 Ton system	N/A	-
20 Ton system	N/A	-
30 Ton system	N/A	-
50 Ton system	N/A	-
Transmission Building Addition		
Approx. 600-1500 square foot addition	$75,000.00	-
ANTENNA		
UHF – High Power Top Mount (200-1000 kW)		
One station antenna, horizontally polarized	N/A	-
One station antenna, -with V polarization or C polarization elliptically or circularly polarized	N/A	-
Two station broadband panel antenna with combiner, horizontally polarized	N/A	-
Two station broadband panel antenna, elliptically or circularly polarized	$730,000.00	WJXT/WCWJ
Four station broadband panel antenna with combiner, horizontally polarized	N/A	-
Four station broadband panel antenna, elliptically or circularly polarized	N/A	-
UHF – Lower Power Side Mount		
One station: 200-500 kW, horizontally polarized	N/A	-
One station: 200-500 kW, elliptically or circularly polarized	N/A	-
One station antenna – medium power (50-200 kW), horizontally polarized	N/A	-
Class A single station antenna – basic	N/A	-
Class A broadband panel (cost per panel)	N/A	-
Class A broadband panel (multiple channel array - example 4 panel complete array)	N/A	-
UHF – Broadband Slot, Side Mount		
8 bay, 5 kW input, directional, horizontally polarized	N/A	-
8 bay, 20 kW input, directional, horizontally polarized	N/A	-
8 bay, 20 kW input, directional, elliptically or circularly polarized	N/A	-
16 bay, 8 - 10 kW input, directional, horizontally polarized	N/A	-
16 bay, 16 kW input, directional, horizontally polarized	N/A	-
16 bay, 40 kW input, directional, horizontally polarized	N/A	-
16 bay, 40 kW input, directional, elliptically or circularly polarized	N/A	-
24 bay, 15 kW input, directional, horizontally polarized	N/A	-
24 bay, 60 kW input, directional, horizontally polarized	N/A	-
24 bay, 60 kW input, directional, elliptically or circularly polarized	N/A	-
32 bay, 16 kW input, directional, horizontally polarized	N/A	-
32 bay, 32 kW input, directional, horizontally polarized	N/A	-
32 bay, 60 - 65 kW input, directional, horizontally polarized	N/A	-
UHF – Broadband Panel, Side Mount Aux/Interim		
10 kW input, low gain, horizontally polarized	N/A	-
45 kW input, low gain, horizontally polarized (WCWJ INT antenna N/A - operate on existing tower)	$135,000.00	WJXT INT

High-VHF		
One station antenna – top mount, horizontally polarized	N/A	-
One station antenna – top mount, with V polarization or C polarization elliptically or circularly polarized	N/A	-
One station antenna – side mount, horizontally polarized	N/A	-
One station antenna – side mount, elliptically or circularly polarized	$207,000.00	VHF AUX
Shared broadband panel antenna – 5 station, w/V pol or C pol elliptically or circularly polarized	N/A	-
High-VHF, Low Power		
Class A basic slot antenna – side mount	N/A	-
Class A basic slot antenna – side mount, elliptically or circularly polarized	N/A	-
Class A broadband panel (cost per panel)	N/A	-
Class A broadband panel (multiple channel array - example 4 panel complete array)	N/A	-
Other		
Sweep test of transmission line and existing antenna	$6,400.00	-
Elbow complex, single channel, at antenna input, per 3-1/8" feedline (if needed)	N/A	-
Elbow complex, broadband, at antenna input, per 3-1/8" feedline (if needed)	$8,880.00	VHF Main
Elbow complex, single channel, at antenna input, per 4-1/16" feedline (if needed)	N/A	-
Elbow complex, broadband, at antenna input, per 4-1/16" feedline (if needed)	N/A	-
Elbow complex, single channel, at antenna input, per 6-1/8" feedline (if needed)	N/A	-
Elbow complex, broadband, at antenna input, per 6-1/8" feedline (if needed)	$26,000.00	-
Elbow complex, single channel, at antenna input, per 7-3/16" feedline (if needed)	N/A	-
Elbow complex, broadband, at antenna input, per 7-3/16" feedline (if needed)	N/A	-
Elbow complex, single channel, at antenna input, per 8-3/16" feedline (if needed)	N/A	-
Elbow complex, broadband, at antenna input, per 8-3/16" feedline (if needed)	N/A	-
Side mount brackets for high power antennas (if not included in antenna base cost)	$44,000.00	AUX (U&V)
Pattern scatter analysis for side mount high/med power antennas (if not included in antenna base cost)	N/A	-
Note: For stacked antennas, the cost of the bottom antenna will likely be doubled due to the increased cost c	N/A	-
TRANSMISSION LINE		
Flexible Transmission Line - Line Diameter		
7/8" foam dielectric (ft)	N/A	-
1 5/8" foam dielectric (ft)	N/A	-
7/8" air dielectric (ft)	N/A	-
1 5/8" air dielectric (ft)	N/A	-
3" air dielectric (ft)	N/A	-
4" air dielectric (ft)	$58,100.00	VHF INT SM
5" air dielectric (ft)	N/A	-
Rigid Transmission Line – copper - Line Diameter		
3 1/8" (ft)	N/A	-
4 1/16" (ft)	N/A	-
6 1/8" (ft)	$212,160.00	UHF INT Alt
7 3/16" (ft)	N/A	-
8 3/16" (ft)	N/A	-
3 1/8" broadband (ft)	N/A	-
4 1/16" broadband (ft)	N/A	-
6 1/8" broadband (ft) (Exising line not rated sufficinelty for both stations)	$246,415.00	WJXT/WCWJ
7 3/16" broadband (ft)	N/A	-
8 3/16" broadband (ft)	N/A	-
TOWER EQUIPMENT AND RIGGING		
Existing Towers		
Mapping for undocumented/poorly documented twr & prep of documentation required for twr load study	$25,000.00	-
Structural engineering tower load study for documented tower	N/A	-
Structural engineering tower load study for a documented tower with candelabra	$38,000.00	-
Minor tower reinforcement/modifications (see Fig. 2 for sample minor modifications)	N/A	-
Major tower reinforcement/modifications (see Fig. 2 for sample major modifications)	N/A	-
Serious tower reinforcement/modifications (see Fig. 2 for sample serious modifications)	$1,000,000.00	-
New Towers – Cost includes constructing a new tower, priced per foot.		
New tower between 1000' and 1500' without elevator, presumptive soil conditions (ft)	N/A	-
New tower between 1500' and 2000' without elevator, presumptive soil conditions (ft)	N/A	-
Tower Rigging		
Tall Tower (greater than 500')	N/A	-
Short Tower (less than 500')	N/A	-
Complex Tower (includes, for example, those with candelabras and/or stacked antennas)	$150,000.00	-
Helicopter Lift (e.g., for a rooftop tower, complex tower, tall structure, or terrain constrained location requirin	$388,000.00	-

INTERIM FACILITY		
Transmitter: *Stations may need an additional transmitter for interim use on either pre- or post-auction channels (see transmitter section*		
Interim Antenna & Installation		
Interim Antenna Rent & Installation	$220,000.00	INT (U&V)
For replacement of existing auxiliary antennas see antenna section above		-
Transmission Line: *See transmission line section above*		
Tower Equipment & Rigging: *See tower equipment and rigging section above*		
Interior RF Systems: *Stations needing an additional transmitter for interim use may need an additional interior RF system*		
UHF inside RF system including switching	$280,000.00	-
VHF inside RF system including switching	$75,000.00	-
SPECIAL CASES		
Channel 14		
Channel 14 - RF Consulting Engineer (to determine correct mask filter to avoid interference)	N/A	-
Channel 14 - Mask Filter	N/A	-
Channel 14 - Additional field ENG time, 10-30 days (test for interference after mask filter is installed)	N/A	-
Distributed Transmission Services (DTS)		
DTS (Critical Facility): Operations having signal overlap between adj DTS sites not terrain-shielded	N/A	-
DTS (Terrain-shielded Facility): Operations that serve regions that are terrain blocked from each other	N/A	-
AM Pattern Disturbance		
AM - Impact study (Assess potential impact of tower construction or modification on AM radio stations)	$7,500.00	WKTZ-AM
AM - Remedy (price includes installing detuning apparatus or adjusting existing detuning apparatus)	N/A	-
MISCELLANEOUS EXPENSES		
DTV Medical Facility Notification		
Medical Facility Notification	$6,500.00	-
Other		
Obtain building permits from local zoning authorities	$50,000.00	-
Obtain local permits other than for zoning	$15,000.00	-
Coordinate with Bureau of Land Management and National Forest Service	N/A	-
Disposal cost (for equipment and other waste, if applicable)	$20,000.00	-
Equipment Delivery and Handling Charges	N/A	-
Equipment Storage	$10,000.00	-
Develop and air announcement of upcoming channel change	$100,000.00	-
Notify MVPDs of channel change	$5,000.00	-
Other miscellaneous expenses	N/A	-
PROFESSIONAL SERVICES		
RF Consulting Engineer Fees		
Perform engineering study for new channel assignment and antenna development	$14,000.00	-
Prepare engineering section of Form 301 FCC Construction Permit Application - Expedited/Checklist	N/A	-
Prepare engineering section of Form 301 FCC Construction Permit Application - Standard	$6,000.00	-
Prepare engineering section of Form 302 FCC License to Cover Application, per antenna - Standard	$3,000.00	-
Prepare engineering section of Form 302 FCC License to Cover Application, per antenna - Changes	N/A	-
Prepare engineering section of FCC Form 2100, Construction Permit Application for an Auxiliary Antenna	$4,000.00	-
Prepare engineering section of FCC Form 2100, License to Cover Application for an Auxiliary Antenna	$3,000.00	-
Prepare request for Special Temporary Authorization	$3,000.00	-
RF Consulting Engineer Fees for Maximizing Station		
Expanded Facilities* - Perform engineering study for increased coverage and antenna development	$14,000.00	-
Expanded Facilities* - Prepare engineering section of Form 301 FCC CP Application - Standard	$6,000.00	-
Expanded Facilities* - Prepare engineering section of Form 302 FCC License Application - Standard	$3,000.00	-
Attorney Fees		
Prepare and File Form 301	$10,000.00	-
Prepare and File Form 302	$4,500.00	-
Prepare and File request for Special Temporary Authorization	$7,000.00	-
Prepare and File FCC Form 2100, Construction Permit or License Application for an Auxiliary Antenna	$4,000.00	-
Negotiation of Lease and other matters for Shared Locations	N/A	-
Attorney Fees related to Maximizing Station		
Expanded Facilities* - Prepare and File Form 301	$10,000.00	-
Expanded Facilities* - Prepare and File Form 302	$4,500.00	-
FCC Filing Fees		
Form 302 license	$650.00	-
Special Temporary Authorization	$380.00	-

Other Transition-Related Personnel Costs		
Project management of the transition	$44,200.00	-
Prepare and/or review reimbursement form	$5,000.00	-
Address transition timing and coordination issues with other stations and wireless	$5,000.00	-
Develop a solution for Transmitter & Mask Filter on New Channel; Upgrade and/or Replacement	$3,000.00	-
Develop a solution for Transmitter Electrical, HVAC and/or Architectural	$2,000.00	-
Coordinate Tower mapping & analyses	$5,000.00	-
Develop an Upgrade or Replacement solution for Tower	$3,500.00	-
Coordinate Tower Modifications	$6,000.00	-
On site Equipment Inventory & Facilities Survey	$86,400.00	-
CAS: Construction Administration Services	$167,500.00	-
CAS: On-Site Project Coordination Meeting	$54,000.00	-
CAS: On-site Transmitter Contractor Oversight	$54,000.00	-
CAS: On-site Antenna/Transmission Line Contractor Oversight	$10,800.00	-
CAS: On-site General Construction Contractor Oversight	$54,000.00	-
CAS: On-site Interim Inspection	$86,400.00	-
CAS: Other Site Visit(s) - Specify (Washington, D.C from May 30 - June 1 2017)	$54,000.00	-
Field Engineering Fees		
Comprehensive coverage verification via field study, if needed - FCC plus Mobile	$152,800.00	-
Comprehensive coverage verification via field study, if needed - Mobile-only	N/A	-
RF Exposure Measurements (post-construction measurements customarily have been conducted)	$20,000.00	-
Change in Structure Height Services: *Costs can be much higher for new towers*		
NEPA Section 106 environmental review, if needed (consideration of historic properties)	N/A	-
Environmental Assessment, if triggered by NEPA Section 106 review or for certain structures over 450 feet	N/A	-
ASR modification (prepare FCC Form 854)	$4,000.00	-
FAA consultant, including cost of preparing FAA Form 7460 (Notice of Proposed Construction)	$2,000.00	-
MVPD COSTS		
Equipment Costs		
New receive antenna – installed.	N/A	-
New receive antenna – hi-gain quad antenna, installed	N/A	-
New receive antenna – uninstalled	N/A	-
New receiver or other RF processing equipment (such as pre-amplifiers)	N/A	-
Coaxial cable – cost per foot (for MVPDs that install new receive antennas and/or receivers)	N/A	-
Structural or capacity augments for towers (*to meet new tower loading requirements)*	N/A	-
Tower rigging – two-man crew (price would include removal of existing antenna and transmission line, if nec	N/A	-
Professional Services		
Structural study of tower capacity (*to determine if additional support is necessary)*	N/A	-
MVPD - Engineering study (*to estimate receive strength of new channel assignments)*	N/A	-
TOTAL ESTIMATED PROJECT COST:	**$9,182,985.00**	

WCWJ Total Repack Budget Estimate: $6,852,630.00

WJXT Total Repack Budget Estimate: $5,680,540.00

COMBINED TOTAL REPACK BUDGET ESTIMATE: $12,533,170.00

COLLOCATED TOTAL REPACK BUDGET ESTIMATE: $9,182,985.00

TOTAL AMOUNT SAVED BY COLLOCATING: $3,350,185.00

Rigorous Structural Analysis Report

Graham Media Group - WJXT Channel 4 Tower Site

Owner: First Coast Tower Group (WTLV/WJXT) - WJXT Ch. 4 Tower

Jacksonville, Florida

May 15, 2017

MEI PROJECT ID: FL05028G-17V1

17950 PRESTON ROAD, SUITE 720 ▪ DALLAS, TEXAS 75252 ▪ TEL. 972-783-2578 FAX 972-783-2583

www.maloufengineering.com

MALOUF ENGINEERING INTL., INC.

STRUCTURAL CONSULTANTS

May 15, 2017

Mr. Michael Englehaupt
Graham Media Group
Chicago, IL 60601

RIGOROUS STRUCTURAL ANALYSIS

Structure/Make/Model:	882 ft **Guyed Tower**		Matthew J. Vlissides & Associates / Candelabra GT	
Client/Site Name/#:	**Graham Media Group**		**WJXT Channel 4 Tower**	
Owner/Site Name/#:	First Coast Tower Group (WTLV/WJXT)		WJXT Channel 4 Tower	
MEI Project ID:	**FL05028G-17V1**			
Location:	9830 Anders Blvd Jacksonville, FL 32246		Duval County FCC #1017604	
	LAT	30-16-25.0 N	LON	81-33-12.0 W

EXECUTIVE SUMMARY:

Malouf Engineering Int'l (MEI), as requested, has performed a rigorous structural analysis of the above mentioned structure to assess the impact of the changed condition as noted in Table 1.

Based on the stress analysis performed, the existing structure **is NOT in conformance** with the Florida Building Code / Int'l Building Code (IBC) / ANSI/TIA-**222-G** Standard for the loading considered under the criteria listed and referenced in the report sections – tower rated at 157.5% - Guy Anchor.

The implementation of the proposed changed condition as noted in Table 1 is structurally NOT acceptable.
The tower will require strengthening modifications to the 1 section of legs and to the candelabra diagonals and pedestal members and guy anchors in order to properly support the proposed loading considered. Please note the overstress is attributed to the proposed loading which significantly increased the tower stress.

MEI appreciates the opportunity of providing our continuing professional services to you. If you have any questions or need further assistance on this or other projects please contact us.

Respectfully submitted,

MALOUF ENGINEERING INT'L, INC.

Analysis performed by:

Krishna Manda, PE
Sr. Project Engineer

Reviewed & Approved by:

E. MARK MALOUF LICENSE No 41758 STATE OF FLORIDA PROFESSIONAL ENGINEER

E. Mark Malouf, PE
Florida #41758
972-783-2578 ext. 106
mmalouf@maloufengineering.com

5/15/2017

6. FINDINGS & RECOMMENDATIONS

- Based on the rigorous stress analysis results, the subject structure is **rated at 157.5%** of its support capacity (controlling component: Guy Anchor) with the proposed changed condition considered. Please refer to Table 3 and to Appendix 1 for more details of the analysis results.

- Based on the stress analysis performed, the existing structure **is NOT in conformance** with the FBC / IBC / ANSI/TIA **222**-G Standard for the loading considered under the criteria listed and referenced in the report sections.

- ***The installation of the proposed changed condition as noted in Table 1 is structurally NOT acceptable***. Please refer to Appendix 1 for Schematic Lines Layout.

- This tower is above its maximum support capacity for the appurtenances and loading criteria considered. Please note the overstress is attributed to the proposed loading which significantly increased the tower stress.

- Based on the analysis results and possible modification investigation, this structure would require the following estimated modifications in order to meet the previously noted requirements with the proposed changed condition:
    1. Modify leg members at elevations overstressed - 1 section -by strengthening and/or by mid-bracing, as required.
    2. Modify candelabra bracing members by strengthening or by replacement, as required.
    3. Re-work/Replace existing top antenna support pedestal to fit proposed ERI TV Antenna.
    4. Reinforce guy anchor foundation as required.

- The preliminary structural modification cost can be approximately estimated to vary between $300,000 to $375,000 which would include labor and materials.

Modification Design is Not within the scope of this report. The tower reinforcement design and detailing can be performed by MEI under a new consulting agreement.

GMG Requests:

1) *WCWJ Waiver – Unable to construct*

2) *Contingent Channel change applications*
   - *WJXT moves to Channel 20*
   - *WCWJ moves to Channel 18*

3) *Main UHF Broadband E-pol Antenna*

4) *Requested upgrades in lieu of building a new $2.6M tower for WCWJ*

5) *Solid State, Liquid Cooled Main Transmitter*

6) *Interim Broadband VHF C-pol Antenna*

7) *1,100 ft Broadband transmission line*

GRAHAM MEDIA GROUP

FEDERAL COMMUNICATIONS COMMISSION · USA ·