

(REFERENCE COPY - Not for submission)

# FCC Form 399: Reimbursement Request

Facility	<b>57840</b>	Service:	<b>DTV</b>	Call	<b>WSLS-TV</b>	Channel:	<b>34 (UHF)</b>
ID:				Sign:			
File	<b>0000027856</b>						
Number:							
FRN:	<b>0025636598</b>	Date	<b>11/27</b>				
		Submitted:	<b>/2019</b>				

## Applicant Information

### Applicant Name, Type, and Contact Information

Applicant	Address	Phone	Email	Applicant Type
<b>GRAHAM MEDIA GROUP, VIRGINIA, LLC</b> Doing Business As: d/b/a WSLS-TV	Ricky Williams 401 Third Street SW Roanoke, VA 24011 United States	+1 (540) 512-1542	rwilliams@wsls.com	Limited Liability Company

## Reimbursement Contact Information

### Reimbursement Contact Name and Information

Applicant	Address	Phone	Email
[Confidential]			

## Preparer Contact Information

### Preparer Contact Name and Information

Applicant	Address	Phone	Email
<b>William T Godfrey , Jr. .</b> <i>Consulting Engineers Kessler and Gehman Associates, Inc.</i>	William T. Godfrey, Jr. Kessler and Gehman Associates, Inc. 507-D NW 60th Street Gainesville, FL 32607 United States	+1 (352) 332-3157	jeff@kesslerandgehman.com

**Broadcaster  
Information  
and  
Transition  
Plan**

Question	Response
Will the station be sharing equipment with another broadcast television station or stations (e.g., a shared antenna, co-location on a tower, use of the same transmitter room, multiple transmitters feeding a combiner, etc.)? If yes, enter the facility ID's of the other stations and click 'prefill' to download those stations' licensing information.	No
Briefly describe transition plan	Replace main and aux transmitters. Replace old analog antenna system with new antenna system designed for assigned channel. Operate existing main through assigned phase. Replace aux antenna and line. Map and analyze tower; design and modify if needed.

**Transmitters**

Section	Question	Response
Transmitter Related Expenses	Do you have transmitter related expenses?	Yes

**Auxiliary  
Transmitter****Add Transmitter Information**

Section	Question	Response
<b>Existing Transmitter Description</b>	Type of change	Purchase New
	Use	Auxiliary (Backup)
	Description of Use	Auxiliary
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is this transmitter currently shared with another station?	No
	Is this transmitter currently in operating condition?	Yes
<b>Existing Transmitter Manufacturer and Type</b>	Manufacturer	
	Model	Diamond
	Year	2007
	Type	Solid State
	Solid State Cooling	Air Cooled
	Solid State Power Capacity	1.8 kW

**Auxiliary  
Transmitter****New Transmitter Costs**

Section	Question	Response
New Transmitter	Use	Auxiliary (Backup)
	Change Type	Purchase New
	Is this a request for upgraded equipment?	No
	Manufacturer	
	Model	TMU9
	Transmitter Type	Solid State
	Solid State Cooling	Air Cooled
	Solid State Power capacity	1.8 kW
	Justification for New Transmitter	The manufacturer of the existing transmitter advises that the transmitter cannot be re- tuned to the assigned channel. See attachment.

**Auxiliary  
Transmitter****Other Transmitter Costs**

Section	Question	Response
Electrical Service	Service Entrance (3 phases 800A 208V)	No
	Switchgear (industrial 800 amp)	Yes
	Transformer (480V)	No
	Power	N/A
	Rigid Conduit and Wiring	No

	Size	N/A
	Length	N/A
	Other Electrical Service	No
	Description	N/A
<b>HVAC Service</b>	Does the replacement transmitter require HVAC Service?	No
	Type	N/A
	Size	N/A
	Other Size	N/A
<b>Transmitter Building Addition/Modification or Leasehold Improvement</b>	Does the Transmitter Building require an addition, modification, other leasehold improvement?	No
	Size	N/A
<b>Channel 14 Costs</b>	Is an RF Consulting Engineer needed?	N/A
	Is a channel 14 Mask Filer needed?	N/A
	Is additional field engineering time needed?	N/A
	Number of Days	N/A

**Auxiliary Transmitter**      **Other Transmitter Cost Not Listed**  
Information not provided.

**Primary  
Transmitter**

**Existing Transmitter Information**

Section	Question	Response
<b>Existing Transmitter Description</b>	Type of change	Purchase New
	Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is this transmitter currently shared with another station?	No
	Is this transmitter currently in operating condition?	Yes
<b>Existing Transmitter Manufacturer and Type</b>	Manufacturer	
	Model	Sigma
	Year	2007
	Type	Inductive Output Tube
	IOT Power Type	Two
	Power Capacity	30 kW

**Primary  
Transmitter**

**New Transmitter Costs**

Section	Question	Response
New Transmitter	Use	Primary (Main)
	Change Type	Purchase New
	Is this a request for upgraded equipment?	No
	Manufacturer	
	Model	THU9EVO-24
	Transmitter Type	Solid State
	Solid State Cooling	Liquid Cooled
	Solid State Power capacity	37 kW
	Justification for New Transmitter	The manufacturer of the existing IOT transmitter advises that the transmitter cannot be re-tuned to the assigned channel. Therefore, a new Rohde & Schwarz THU9EVO-24 is being purchased.

**Primary  
Transmitter**

**Other Transmitter Costs**

Section	Question	Response
Electrical Service	Service Entrance (3 phases 800A 208V)	No
	Switchgear (industrial 800 amp)	No

	Transformer (480V)	Yes
	Power	150 kVA
	Rigid Conduit and Wiring	No
	Size	N/A
	Length	N/A
	Other Electrical Service	Yes
	Description	Additional electrical service needed for the new transmitter and RF plumbing installation.
<b>HVAC Service</b>	Does the replacement transmitter require HVAC Service?	No
	Type	N/A
	Size	N/A
	Other Size	N/A
<b>Transmitter Building Addition/Modification or Leasehold Improvement</b>	Does the Transmitter Building require an addition, modification, other leasehold improvement?	Yes
	Size	700.0 square feet
<b>Channel 14 Costs</b>	Is an RF Consulting Engineer needed?	N/A
	Is a channel 14 Mask Filer needed?	N/A
	Is additional field engineering time needed?	N/A
	Number of Days	N/A

**Primary Transmitter**

**Other Transmitter Cost Not Listed**

Name	Description
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<b>Additional Interior RF System</b>	Interior RF System Existing Transmitter to Interim Transmission line
<b>Transmitter Remote Control</b>	Modification of the transmitter Remote Control system is required for it to interface with the new transmitters.

**Antennas**

Section	Question	Response
Antenna Related Expenses	Do you have antenna related expenses?	Yes

**Auxiliary  
Antenna****Add Antenna Information**

Section	Question	Response
Existing Antenna Description	Type of change	Purchase New
	Antenna Use	Auxiliary (Backup)
	Description of Use	Auxiliary
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is this antenna currently shared with any other stations?	No
	Is this antenna directional?	Yes
	Is antenna in operating condition?	Yes
	Is antenna located on or in close proximity to an antenna farm?	Yes
Existing Antenna Manufacturer and Type	Class	Full Power
	Mounting	Side Mount
	Antenna position in stack	Not in Stack
	Polarization	Horizontal
	Type	Slotted Coaxial
	Number of Stations Supported	N/A
	Number of Panels	N/A
	Design power capacity in use	N/A
	Lower Limit	N/A
	Upper Limit	N/A
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power) .....	65.0 kW

Manufacturer	
Model	TLP-24H
Year	2001

**Auxiliary  
Antenna**

**New Antenna Costs**

Section	Question	Response
New Antenna Description	Use	Auxiliary (Backup)
	Description of Use	Auxiliary
	Change Type	Purchase New
	Is this a request for upgraded equipment?	Yes
	Ownership	Owned
	Owner	N/A
	Is antenna shared?	No
	Is antenna directional?	Yes
	Will antenna be located on or in close proximity to an antenna farm?	Yes
New Antenna Manufacturer and Types	Class	Full Power
	Mounting	Side Mount
	Antenna position in stack	Not in Stack
	Polarization	Elliptical
	Type	Slotted Coaxial
	Number of Stations Supported	N/A
	Number of Panels/Bays	N/A
	Lower Limit	N/A
	Upper Limit	N/A
	Design power capacity in use	N/A
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power)	8.6 kW
	Manufacturer	
	Model	TLP-24H(C) VP

Year	2018
Justification for New Antenna	The existing primary antenna is a single channel slotted coaxial which cannot accommodate the assigned channel.

## Auxiliary Antenna

### Other Antenna Costs

Section	Question	Response
<b>Combiner for Shared Antenna</b>	Do you need a Combiner for a Shared Antenna?	
	Type	
	Number of channels supported	N/A
	Frequencies of channels supported	N/A
	Frequency	N/A
	Do you need a combiner output splitter /switcher for dual feed lines?	N/A
<b>Elbow Complex</b>	Do you require the separate purchase of the Elbow Complex?	No
	Broadband or Single Channel?	N/A
	Feed Line Size	N/A
<b>Side Mount Brackets</b>	Do you require the separate purchase of side mount brackets for a high power antenna?	No
<b>Pattern Scatter Analysis</b>	Do you require separate purchase of pattern scatter analysis for a side mount high or medium power antenna?	Yes
<b>Sweep Test</b>	Do you require the sweep testing of transmission line and antenna?	No

**Auxiliary  
Antenna**

**Other Antenna Cost Not Listed**

Name	Description
Sweep test of existing antenna	Sweep test of existing antenna
UHF Lower Power Side Mount, One station antenna-medium power 50-200 kW, horizontally polarized	UHF Lower Power Side Mount, One station antenna-medium power 50-200 kW, horizontally polarized

**Primary  
Antenna**

**Existing Antenna Information**

Section	Question	Response
<b>Existing Antenna Description</b>	Type of change	Purchase New
	Antenna Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is the existing antenna shared with another station or stations?	No
	Is the existing antenna directional?	Yes
	Is antenna in operating condition?	Yes
	Is antenna located on or in close proximity to an antenna farm?	Yes
<b>Existing Antenna Manufacturer and Type</b>	Class	Full Power
	Mounting	Side Mount
	Antenna position in stack	Not in Stack
	Polarization	Horizontal
	Type	Slotted Coaxial
	Number of Stations Supported	N/A
	Number of Panels	N/A
	Design power capacity in use	N/A
	Lower Limit	N/A
	Upper Limit	N/A
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power) .....	1000.0 kW



Manufacturer	
Model	TFU-30DSC-R-C170
Year	2006

Primary  
Antenna

New Antenna Costs

Section	Question	Response
New Antenna Description	Use	Primary (Main)
	Description of Use	N/A
	Change Type	Purchase New
	Is this a request for upgraded equipment?	Yes
	Ownership	Owned
	Owner	N/A
	Is antenna shared?	No
	Is antenna directional?	Yes
	Will antenna be located on or in close proximity to an antenna farm?	Yes
New Antenna Manufacturer and Types	Class	Full Power
	Mounting	Top Mount
	Antenna position in stack	Not in Stack
	Polarization	Elliptical
	Type	Slotted Coaxial
	Number of Stations Supported	N/A
	Number of Panels/Bays	N/A
	Lower Limit	N/A
	Upper Limit	N/A
	Design power capacity in use	N/A
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power)	930.0 kW
	Manufacturer	
	Model	TFU-30DSC /VP-R C170

Year	2018
Justification for New Antenna	The existing primary antenna is a single channel slot which cannot accommodate the assigned channel. The proposed antenna is e-pol which is considered an upgrade with a 15% delta in costs according to manufacturer. However, the 399 is budgeted for h-pol.

## Primary Antenna

### Other Antenna Costs

Section	Question	Response
<b>Combiner for Shared Antenna</b>	Do you need a Combiner for a Shared Antenna?	No
	Type	
	Number of channels supported	N/A
	Frequencies of channels supported	N/A
	Frequency	N/A
	Do you need a combiner output splitter /switcher for dual feed lines?	N/A
<b>Elbow Complex</b>	Do you require the separate purchase of the Elbow Complex?	Yes
	Broadband or Single Channel?	Single Channel

	Feed Line Size	4 1/16 inches inches
<b>Side Mount Brackets</b>	Do you require the separate purchase of side mount brackets for a high power antenna?	Yes
<b>Pattern Scatter Analysis</b>	Do you require separate purchase of pattern scatter analysis for a side mount high or medium power antenna?	No
<b>Sweep Test</b>	Do you require the sweep testing of transmission line and antenna?	Yes

## Primary Antenna

### Other Antenna Cost Not Listed

Name	Description
<b>Mounting Support Pole</b>	Required for top mounting main antenna (first priority station)

**Transmission Line**

Section	Question	Response
Transmission Line Related Expenses	Do you have transmission line related expenses?	Yes

**Auxiliary Transmission Line****Add Transmission Line**

Section	Question	Response
Existing Transmission Line Description	Type of change	Utilize Existing
	Use	Auxiliary (Backup)
	Description of Use	Auxiliary
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is this transmission currently shared with any other stations?	No
	Is Transmission Line in operating condition?	Yes
Existing Transmission Line Manufacturer and Type	Manufacturer	ERI
	Type	Flexible Air
	Diameter	Other
	Other Diameter	2 1/4 inches
	Segment Length	N/A
	Other Segment Length	N/A
	Number of parallel runs	1
	Length	200 feet per run

Auxiliary  
Transmission Line

Other Transmission Line Expenses Not Listed

Name	Description
Sweep Tests	Sweep test to verify performance on assigned channel.

**Primary**  
**Transmission Line**

**Existing Transmission Line**

Section	Question	Response
<b>Existing Transmission Line Description</b>	Type of change	Purchase New
	Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is the existing transmission line shared with another station or stations?	No
	Is Transmission Line in operating condition?	Yes
<b>Existing Transmission Line Manufacturer and Type</b>	Manufacturer	
	Type	Rigid
	Diameter	4 1/16 inches
	Other Diameter	N/A
	Segment Length	19 1/2 inches
	Other Segment Length	N/A
	Number of parallel runs	1
	Length	225 feet per run

**Primary  
Transmission Line**

**New Transmission Line**

Section	Question	Response
<b>New Transmission Line Costs</b>	Use	Primary (Main)
	Description of Use	N/A
	Change Type	Purchase New
	Is this a request for upgraded equipment?	No
	Type	Rigid
	Diameter	6 1/8 inches
	Other Diameter	N/A
	Segment Length	20 inches
	Other Segment Length	N/A
	Number of parallel runs	1
	Length	270 feet per run
	Justification for New Transmission Line	New longer line for top mount antenna must be larger diameter to achieve assigned ERP. This must be done to recover lost coverage area since the station will receive in excess of 1% interference.



Primary Transmission Line	Other Transmission Line Expenses Not Listed
Information not provided.	

**Tower  
Equipment  
And  
Rigging  
Costs**

Section	Question	Response
Tower Equipment or Rigging Costs Changes	Do you have tower equipment or rigging costs changes?	Yes

**Primary  
Tower**

**Existing Tower**

Section	Question	Response
Existing Tower Description	Type of change	Modify Existing
	Tower Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Is this tower consider Complex?	Terrain Constrained
	Is this tower currently shared with any other stations?	No
	One or more FM, AM or TV radio broadcaster(s)	N/A
	Others Types of Users	N/A
	Is tower documented for structural analysis?	Yes
	Is tower compliant with Rev G?	No
Existing Tower Structure Registration	Do you have a tower registration number?	Yes
	ASR Number	1024381
Coordinates (NAD83 ( North American Datum of 1983))	Latitude (NAD83)	37° 12' 03.3" N-
	Longitude (NAD83)	080° 08' 52.8" W-
	Overall Structure Height	242.78 feet
	Support Structure Height	170.93 feet

	Ground Elevation Above Mean Sea Level (AMSL)	3720.10 feet
	Structure Type	TOWER - Free Standing or Guyed Structure
	Tower Owner	Graham Media Group, Virginia, LLC
	Date Constructed	01/01/1980

**Primary Tower**

**Tower Modification Costs**

Section	Question	Response
Engineering Study	Please what type of engineering study is required, if any:	Study needed for documented tower
Tower Reinforcements	Please select whether tower reinforcements are needed:	Serious Reinforcements needed

**Primary Tower**

**Tower Rigging Costs**

Section	Question	Response
Tower Rigging Costs	Complex Tower	Terrain constrained
Helicopter Services Required	Are helicopter services required?	No

**Primary Tower**

**Other Tower Expenses Not Listed**

Name	Description
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<b>Transmission Line Layout</b>	Transmission Line Layout Prior to Mobilization
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**Outside  
Professional Services Costs**

Section	Question	Response
<b>Outside Project Management Services</b>	Do you require outside project management services?	Yes
	Number of Hours	500
	Explanation	It will be necessary to schedule and coordinate multiple vendors, complete progress reports, and update Schedule 399. Station does not have available personnel or personnel trained in project management for such complex projects.
<b>Outside RF consulting Engineering Services</b>	Perform engineering study for new channel assignment and antenna development	Yes
	Prepare engineering section of Form FCC Construction Permit Application	Yes
	For Auxiliary Facility	Yes
	For Main Facility	Yes
	Prepare engineering section of Form FCC License to Cover Application	Yes
	For Auxiliary Facility	Yes
	For Main Facility	Yes
	Prepare request for Special Temporary Authority	Yes

	Quantity	2
	Do you have Distributed Transmission System engineering services?	N/A
	Critical Facility	N/A
	Terrain-Shielded Facility	N/A
<b>Attorney and Other Outside Consulting Services</b>	Prepare and file Form FCC Construction Permit Application	Yes
	For Auxiliary Facility	Yes
	For Main Facility	Yes
	Prepare and file Form FCC License to Cover Application	Yes
	For Auxiliary Facility	Yes
	For Main Facility	Yes
	Prepare request for Special Temporary Authority	Yes
	Quantity	2
	NEPA Section 106 environmental review	No
	Environmental Assessment	No
	ASR Modification	Yes
	FAA Consultation (including preparation of FAA Form 7460)	Yes
	Negotiation of Lease and other Matter for Shared Locations	No
	Prepare or Review FCC Form 399 for Reimbursement	Yes
	Address transition timing and coordination issues w/ other stations and wireless providers	Yes
<b>RF Field Engineering Services</b>	Comprehensive coverage verification via field study	Yes
	RF exposure measurements	No
	Additional Field Engineering Service	Yes

Number of Days	45
Justification	It will be necessary to survey the site, plan the equipment, develop specifications for purchasing, and oversee multiple vendor RF projects. Station does not have available personnel or personnel trained in such services.

**Outside Professional Services Costs**

**Other Professional Services Expenses Not Listed**

Name	Description
<b>Other Engineering Services</b>	Fewer Project Management "PM" tasks are required & Other Engineering Services "OES" are required, therefore the PMthe PM total has been reduced to 600 hrs (\$90,000 at \$150/hr), & a new OES category has been created & funded with the money removed from PM.
<b>Other Legal Services</b>	Other Legal Services related to the DTV Repack
<b>Architectural and Engineering</b>	Architectural and Engineering for New Transmission Facility. See Quote attached to Osborn inv 29014

## Other Expenses

Section	Question	Response
<b>AM Pattern Disturbance</b>	Is an Impact Study needed?	No
	Is Remediation needed?	No
<b>Facility Expenses</b>	Name	N/A
	Other Distributed Transmission System Expenses Not listed	N/A
	Name	N/A
	Is Notification of a Medical Facility required as a result of DTV broadcasting?	Yes
<b>Permit and Filing Costs</b>	Local Zoning	No
	Non-zoning permits	Yes
	BLM or NFS Coordination	No
	FCC Construction Permit Minor Change	Yes
	FCC License to Cover Application	Yes
	FCC Special Temporary Authority Application	Yes
<b>Other Miscellaneous Expenses</b>	Does this relocation require paying Disposal Costs (for equipment and other waste, net of any salvage value)?	Yes
	Does this relocation require Equipment Delivery or Handling Charges not otherwise included in individual item costs?	Yes
	Does this relocation require Equipment Storage?	Yes
	Does this relocation require the Development and Airing of an Announcement regarding an upcoming channel change?	Yes
	Does this relocation require MVPD Notification of a Channel Change?	Yes



**Other  
Expenses**

**Other Expenses Not Listed**

Name		Description	
Tax		Tax	
Heavy equipment rentals		Required for Decom	

## Cost Information

### Transmitters

Where no predetermined cost estimate is available, any estimate provided will also become the predetermined cost (displayed in italics).

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
<b>Primary Transmitter THU9EVO-24</b>	<b>\$2,781,594.75</b>	<b>\$1,288,344.75</b>		<b>\$1,123,729.25</b>	
Transmitter Remote Control	<i>\$20,485.50</i>	\$20,485.50	See invoices and quotes	\$19,950.00	N/A
Additional Interior RF System	<i>\$140,000.00</i>	\$140,000.00	N/A	\$38,435.00	N/A
Other -- Building Addition Size: 700.0	<i>\$68,559.25</i>	\$68,559.25	Need concrete pad for new heat exchangers which also require cable trays, conduit and an ice shield due to extreme weather conditions atop the mountain.	\$68,559.25	See attached Osborn Engineering Quote and summary page for additional details.
Other Electrical Service: Additional electrical service needed for the new transmitter and RF plumbing installation.	<i>\$100,000.00</i>	\$100,000.00	N/A	\$57,665.00	See attached Osborn Engineering Quote and summary page for additional details.

UHF - Liquid Cooled Solid State Transmitter 35 - 50 kW	\$1,473,000.00	\$701,250.00	\$701,250 is the difference between \$233,750 invoice 9500076219 (which was Forwarded For Payment) for the originally specified IOT transmitter and the remaining balance due for the new THU9EVO- 24 transmitter.	\$701,250.00	N/A
Transformer 3 phase /480v - 150 KVA	\$25,550.00	\$24,300.00	N/A	\$4,120.00	N/A
Two IOT system (50 kW)	\$954,000.00	\$233,750.00	***System Notice: Estimate adjusted and locked because line has been superseded. ***This is the cost for a new 2- tube, DCX Paragon-2 MSDC-IOT digital UHF transmitter from the most recent Comark price list.	\$233,750.00	N/A

<b>Auxiliary Transmitter TMU9</b>	<b>\$164,200.00</b>	<b>\$116,865.01</b>		<b>\$89,505.01</b>	
Switchgear - industrial 800 amp	\$38,200.00	\$36,300.00	N/A	\$8,940.00	N/A
UHF - Air Cooled Solid State Transmitter 1 - 2.5 kW	\$126,000.00	\$80,565.01	N/A	\$80,565.01	N/A
<b>Sub-total</b>	<b>\$2,945,794.75</b>	<b>\$1,405,209.76</b>	<b>N/A</b>	<b>\$1,213,234.26</b>	<b>N/A</b>
<b>Total for all systems</b>	<b>\$6,021,241.95</b>	<b>\$3,261,244.05</b>	<b>N/A</b>	<b>\$2,443,436.68</b>	<b>N/A</b>

## Components

Actual Information	
Description	File Name
Transmitter Remote Control	<p><b>Component Description:</b> Bohn inv #200249 Remote Control UL20190118jgv1</p> <p><b>Amount:</b> \$19,950.00</p> <p><b>Component Description:</b> Bohn 200190 v190911pmv1</p> <p><b>Amount:</b> \$535.50</p>

Additional Interior RF  
System

**Component Description:** R&S inv  
#9500092053 Ext  
Heat Exchanger on  
Station Load  
UL20190418jgv1  
**Amount:** \$10,050.00

**Component Description:** R&S 9500102206  
v190625jgv1  
**Amount:** \$11,560.00

**Component Description:** R&S inv  
#9500092053 CH 30  
Main TX to Magic T  
input  
UL20190418jgv1  
**Amount:** \$4,775.00

**Component Description:** R&S 9500086411  
v190528jgv1  
**Amount:** \$11,300.00

**Component Description:** Developed a Solution  
for Transmitter &  
Mask Filter on New  
Channel - Also See  
attached "KGA Quote"  
**Amount:** \$750.00

Other -- Building  
Addition Size: 700.0

**Component Description:** Inv 1034840 WSL  
Professional Services  
UL20180511jgv1  
**Amount:** \$494.50

**Component Description:** Lionberger 1333-01  
v190628jgv1  
**Amount:** \$44,801.00

**Component Description:** Osborn inv #25404R  
Facility Elec Survey  
and Condition  
Assessment  
UL20190411jgv6  
**Amount:** \$11,825.93

**Component Description:** Osborn inv #25404R  
Facility Building  
Survey and Condition  
Assessment  
UL20190205jgv4  
**Amount:** \$5,375.00

**Component Description:** Osborn inv #29392 In  
house printing  
UL20181101jgv1  
**Amount:** \$246.00

**Component Description:** Osborn inv #28226  
Prof Srvs 1-27-18 to 2-  
23-18  
UL20181101jgv1  
**Amount:** \$11,191.82

Other Electrical Service:  
Additional electrical  
service needed for the  
new transmitter and RF  
plumbing installation.

**Component Description:** R&S 9500084015  
v190528jgv1  
**Amount:** \$57,165.00

**Component Description:** Developed a Solution  
for Electrical and  
HVAC on New  
Channel - Also See  
attached "KGA Quote"  
**Amount:** \$500.00

**Component Description:** Osborn inv #25404  
Facility Elec Survey  
and Condition  
Assessment  
UL20181203jgOsborn  
inv #25404R Facility  
Elec Survey and  
Condition  
Assessment  
UL20190205jgv4  
**Amount:** \$6,450.93

**Component Description:** WSLS Osborn inv  
#29669 Prof Srvs  
through 7-29-18  
UL20180726jgv1  
**Amount:** \$60,252.10

UHF - Liquid Cooled Solid State Transmitter 35 - 50 kW	<div> <b>Component Description:</b> R&amp;S inv #9500092024 THU9EVO-24 transmitter 50 pct pmt 2 UL20190111jgv1 ... applied to correct THU9EVO-24 component on 190124 </div> <div> <b>Amount:</b> \$467,500.00 </div>
Transformer 3 phase /480v - 150 KVA	<div> <b>Component Description:</b> R&amp;S inv #9500092026 THU9EVO-24 transmitter 25 pct final pmt UL20190111jgv1 ... applied to correct THU9EVO-24 component on 190124 </div> <div> <b>Amount:</b> \$233,750.00 </div>
Transformer 3 phase /480v - 150 KVA	<div> <b>Component Description:</b> R&amp;S 9500085911 v190528jgv1 </div> <div> <b>Amount:</b> \$4,120.00 </div>



Two IOT system (50 kW)	<div> <div> <b>Component Description:</b>  R&amp;S inv  #9500092026  THU9EVO-24  transmitter 25 pct final  pmt UL20190111jgv1 </div> <div> <b>Amount:</b>  \$233,750.00 </div> </div> <div> <div> <b>Component Description:</b>  R&amp;S inv  #9500092024  THU9EVO-24  transmitter 50 pct pmt  2 UL20190111jgv1 </div> <div> <b>Amount:</b>  \$467,500.00 </div> </div> <div> <div> <b>Component Description:</b>  Inv: WSLS THU9EVO-  24 transmitter 25%  down pmt  UL20180312 </div> <div> <b>Amount:</b>  \$233,750.00 </div> </div>
Switchgear - industrial 800 amp	<div> <div> <b>Component Description:</b>  R&amp;S inv  #9500092053 WSLS  Aux TX  UL20190418jgv1 </div> <div> <b>Amount:</b>  \$8,940.00 </div> </div>

UHF - Air Cooled Solid State Transmitter 1 - 2.5 kW	<b>Component Description:</b>	R&S inv
		#9500092025 TMU9-
		3 Aux TX 25 pct final
		pmt UL20190117jgv1
	<b>Amount:</b>	\$20,141.25
	<b>Component Description:</b>	Inv: WSLS TMU9-3
		aux transmitter 25%
		down pmt
		UL20180313
	<b>Amount:</b>	\$20,141.25
	<b>Component Description:</b>	R&S inv
		#9500092027 TMU9-
		3 Aux TX 50 pct DP
		upon delivery
		UL20190117jgv1
	<b>Amount:</b>	\$40,282.51

Cost  
Information

Antennas

Where no predetermined cost estimate is available, any estimate provided will also become the predetermined cost (displayed in italics).

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Primary Antenna TFU-30DSC /VP-R C170	\$491,966.00	\$558,570.34		\$476,726.20	
Mounting Support Pole	<i>\$163,016.00</i>	\$163,016.00	Required for top mount support (refer to attached quote). The site's access road cannot accommodate the 70' top mount pole, which required cutting it in half; see attached Change Order included with Dielectric inv MAN00606	\$99,914.40	N/A
Side mount brackets for high power antennas (if not included in antenna base cost)	\$23,150.00	\$21,750.00	N/A	\$9,787.50	N/A

Elbow complex, single channel, at antenna input, per 4 1/16. feedline (if needed)	\$9,570.00	\$12,383.00	Elbow complex is actually 6-1/8". See attached Dielectric quote.	\$12,383.00	N/A
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	\$3,520.00	N/A
UHF - High Power Top Mount (200-1000 kW), One station antenna , elliptically or circularly polarized	\$289,500.00	\$355,021.34	Recognizing that e-pol is an upgrade, the station is budgeting for "h-pol only" which Dielectric said is a 15% delta. Therefore, the estimated cost for an h-pol antenna is only \$240,000 instead of the estimated cost of \$275,000 for an e-pol antenna (15%).	\$351,121.30	Please see invoices and quotes
<b>Auxiliary Antenna TLP-24H(C) VP</b>	<b>\$222,039.00</b>	<b>\$57,798.00</b>		<b>\$49,369.00</b>	

UHF Lower Power Side Mount, One station antenna-medium power 50-200 kW, horizontally polarized	<b>\$11,629.00</b>	\$11,629.00	N/A	\$4,550.00	N/A
Sweep test of existing antenna	<b>\$3,200.00</b>	\$3,200.00	N/A	\$3,200.00	N/A
UHF - High Power, Side Mount, basic slot antenna, 8 - 10 kW input, directional,, elliptically or circularly polarized	<b>\$0.00</b>	\$0.00	N/A	\$0.00	N/A
Pattern scatter analysis for side mount high/med power antennas (if not included in antenna base cost)	\$5,260.00	\$2,700.00	N/A	\$1,350.00	N/A

UHF - Lower Power Side Mount, One station antenna - medium power (50- 200 kW), horizontally polarized	\$89,400.00	\$6,346.00	***System Notice: Estimate adjusted and locked because line has been superseded. ***	\$6,346.00	N/A
Side mount brackets for high power antennas (if not included in antenna base cost)	\$23,150.00	\$5,107.00	***System Notice: Estimate adjusted and locked because line has been superseded. ***	\$5,107.00	N/A
UHF - Lower Power Side Mount, One station antenna - medium power (50- 200 kW), horizontally polarized	\$89,400.00	\$28,816.00	***System Notice: Estimate adjusted and locked because line has been superseded. ***	\$28,816.00	N/A
<b>Sub-total</b>	\$714,005.00	\$616,368.34	N/A	\$526,095.20	N/A
<b>Total for all systems</b>	\$6,021,241.95	\$3,261,244.05	N/A	\$2,443,436.68	N/A

## Components

**Actual Information**  
**Description**

**File Name**

Mounting Support Pole	<div data-bbox="699 174 1342 405"> <p><b>Component Description:</b> WSLs Die inv #MAN00606 Mt pole mod 45 pct pmt 1 UL20181105jgv2</p> <p><b>Amount:</b> \$26,557.20</p> </div> <div data-bbox="699 512 1342 743"> <p><b>Component Description:</b> WSLs Die inv #MAN00607 Mt pole mod 45 pct pmt 2 UL20181105jgv2</p> <p><b>Amount:</b> \$26,557.20</p> </div> <div data-bbox="699 851 1374 1041"> <p><b>Component Description:</b> Inv MAN00430 WSLS Support pole 45 perc pmt 2 UL20180713jgv1</p> <p><b>Amount:</b> \$46,800.00</p> </div>
Side mount brackets for high power antennas (if not included in antenna base cost)	<div data-bbox="699 1180 1361 1370"> <p><b>Component Description:</b> Inv MAN00430 WSLS Side mt brckts 45 perc pmt 2 UL20180713jgv1</p> <p><b>Amount:</b> \$9,787.50</p> </div>

Elbow complex, single channel, at antenna input, per 4 1/16. feedline (if needed)	<div> <b>Component Description:</b> <div> Inv MAN00325  WSLS Elbow  Complex  UL20180423jg </div> </div> <div> <b>Amount:</b> <div>\$5,572.35</div> </div>
	<div> <b>Component Description:</b> <div> Die 325012  v190723pmv1 </div> </div> <div> <b>Amount:</b> <div>\$1,238.30</div> </div>
	<div> <b>Component Description:</b> <div> Inv MAN00430  WSLS Elbox comp  45 perc pmt 2  UL20180713jgv1 </div> </div> <div> <b>Amount:</b> <div>\$5,572.35</div> </div>
Sweep test of existing antenna	<div> <b>Component Description:</b> <div> Die 354022  v190918jgv3 </div> </div> <div> <b>Amount:</b> <div>\$640.00</div> </div>
	<div> <b>Component Description:</b> <div> Inv MAN00430  WSLS Sweep tests  45 perc pmt 2  UL20180713jgv1 </div> </div> <div> <b>Amount:</b> <div>\$2,880.00</div> </div>
UHF - High Power Top Mount (200-1000 kW), One station antenna , elliptically or circularly polarized	<div> <b>Component Description:</b> <div> Die 345005  v190723pmv1 </div> </div> <div> <b>Amount:</b> <div>\$6,330.00</div> </div>
	<div> <b>Component Description:</b> <div> Die 325012  v190723pmv1 </div> </div> <div> <b>Amount:</b> <div>\$742.80</div> </div>



<b>Component Description:</b>	ERI WSLS-015 v190912pmv1
<b>Amount:</b>	\$77,440.80

<b>Component Description:</b>	Die 286003 v190819jgv2
<b>Amount:</b>	N/A

<b>Component Description:</b>	Inv MAN00325 WSLS TFU-30DSC VP-R C170 etc Main Antenna UL20180423jg
<b>Amount:</b>	\$140,030.10

<b>Component Description:</b>	Inv MAN00430 WSLS Main ant 45 perc pmt 2 UL20180713jgv1
<b>Amount:</b>	\$80,562.60

<b>Component Description:</b>	R&S inv #9500092053 Main ant to RF Switch connection comps UL20190418jgv1
<b>Amount:</b>	\$16,280.00

<b>Component Description:</b>	Die 286003 v19104pmv5
<b>Amount:</b>	\$29,735.00

<b>Component Description:</b>	Die 286003 v190925pmv4
<b>Amount:</b>	\$29,735.00

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<p>UHF Lower Power Side Mount, One station antenna-medium power 50-200 kW, horizontally polarized</p>	<table> <tr> <td><b>Component Description:</b></td><td>Die 624027 v191127pmv3</td></tr> <tr> <td><b>Amount:</b></td><td>(\$4,131.50)</td></tr> <tr> <td><b>Component Description:</b></td><td>Die 624027 v191127pmv3</td></tr> <tr> <td><b>Amount:</b></td><td>(\$2,553.50)</td></tr> <tr> <td><b>Component Description:</b></td><td>Die 624027 v191127pmv3</td></tr> <tr> <td><b>Amount:</b></td><td>(\$394.00)</td></tr> <tr> <td><b>Component Description:</b></td><td>Die 624027 v191127pmv3</td></tr> <tr> <td><b>Amount:</b></td><td>\$11,629.00</td></tr> </table>	<b>Component Description:</b>	Die 624027 v191127pmv3	<b>Amount:</b>	(\$4,131.50)	<b>Component Description:</b>	Die 624027 v191127pmv3	<b>Amount:</b>	(\$2,553.50)	<b>Component Description:</b>	Die 624027 v191127pmv3	<b>Amount:</b>	(\$394.00)	<b>Component Description:</b>	Die 624027 v191127pmv3	<b>Amount:</b>	\$11,629.00
<b>Component Description:</b>	Die 624027 v191127pmv3																
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<b>Amount:</b>	\$11,629.00																
<p>Sweep test of existing antenna</p>	<table> <tr> <td><b>Component Description:</b></td><td>Die 624027 v191127pmv3</td></tr> <tr> <td><b>Amount:</b></td><td>\$3,200.00</td></tr> </table>	<b>Component Description:</b>	Die 624027 v191127pmv3	<b>Amount:</b>	\$3,200.00												
<b>Component Description:</b>	Die 624027 v191127pmv3																
<b>Amount:</b>	\$3,200.00																
<p>UHF - High Power, Side Mount, basic slot antenna, 8 - 10 kW input, directional,, elliptically or circularly polarized</p>	<table> <tr> <td><b>Component Description:</b></td><td>Die 624027 v191015pmv1</td></tr> <tr> <td><b>Amount:</b></td><td>N/A</td></tr> </table>	<b>Component Description:</b>	Die 624027 v191015pmv1	<b>Amount:</b>	N/A												
<b>Component Description:</b>	Die 624027 v191015pmv1																
<b>Amount:</b>	N/A																
<p>Pattern scatter analysis for side mount high/med power antennas (if not included in antenna base cost)</p>	<table> <tr> <td><b>Component Description:</b></td><td>Die 624027 v191127pmv3</td></tr> <tr> <td><b>Amount:</b></td><td>(\$1,350.00)</td></tr> <tr> <td><b>Component Description:</b></td><td>Die inv #274004 TLP-24 aux ant scatter analysis pmt 2 UL20190125jgv1</td></tr> <tr> <td><b>Amount:</b></td><td>\$2,700.00</td></tr> </table>	<b>Component Description:</b>	Die 624027 v191127pmv3	<b>Amount:</b>	(\$1,350.00)	<b>Component Description:</b>	Die inv #274004 TLP-24 aux ant scatter analysis pmt 2 UL20190125jgv1	<b>Amount:</b>	\$2,700.00								
<b>Component Description:</b>	Die 624027 v191127pmv3																
<b>Amount:</b>	(\$1,350.00)																
<b>Component Description:</b>	Die inv #274004 TLP-24 aux ant scatter analysis pmt 2 UL20190125jgv1																
<b>Amount:</b>	\$2,700.00																

<p>UHF - Lower Power Side Mount, One station antenna - medium power (50-200 kW), horizontally polarized</p>	<table> <tr> <td data-bbox="697 174 1007 208"><b>Component Description:</b></td><td data-bbox="1141 174 1374 327">Die inv #274004 TLP-24 aux ant test transition pmt 2 UL20190125jgv1</td></tr> <tr> <td data-bbox="697 338 807 365"><b>Amount:</b></td><td data-bbox="1141 338 1238 365">\$788.00</td></tr> <tr> <td data-bbox="697 477 1007 510"><b>Component Description:</b></td><td data-bbox="1141 477 1374 584">Die inv #274004 TLP-24 aux ant pmt 2 UL20190125jgv1</td></tr> <tr> <td data-bbox="697 595 807 622"><b>Amount:</b></td><td data-bbox="1141 595 1259 622">\$5,558.00</td></tr> </table>	<b>Component Description:</b>	Die inv #274004 TLP-24 aux ant test transition pmt 2 UL20190125jgv1	<b>Amount:</b>	\$788.00	<b>Component Description:</b>	Die inv #274004 TLP-24 aux ant pmt 2 UL20190125jgv1	<b>Amount:</b>	\$5,558.00
<b>Component Description:</b>	Die inv #274004 TLP-24 aux ant test transition pmt 2 UL20190125jgv1								
<b>Amount:</b>	\$788.00								
<b>Component Description:</b>	Die inv #274004 TLP-24 aux ant pmt 2 UL20190125jgv1								
<b>Amount:</b>	\$5,558.00								
<p>Side mount brackets for high power antennas (if not included in antenna base cost)</p>	<table> <tr> <td data-bbox="697 763 1007 797"><b>Component Description:</b></td><td data-bbox="1141 763 1337 916">Die inv #274004 TLP-24 aux ant brackets pmt 2 UL20190125jgv1</td></tr> <tr> <td data-bbox="697 927 807 954"><b>Amount:</b></td><td data-bbox="1141 927 1259 954">\$5,107.00</td></tr> </table>	<b>Component Description:</b>	Die inv #274004 TLP-24 aux ant brackets pmt 2 UL20190125jgv1	<b>Amount:</b>	\$5,107.00				
<b>Component Description:</b>	Die inv #274004 TLP-24 aux ant brackets pmt 2 UL20190125jgv1								
<b>Amount:</b>	\$5,107.00								
<p>UHF - Lower Power Side Mount, One station antenna - medium power (50-200 kW), horizontally polarized</p>	<table> <tr> <td data-bbox="697 1095 1007 1128"><b>Component Description:</b></td><td data-bbox="1141 1095 1378 1247">Inv: WSLS TLP-24H (C)VP aux antenna 50 percent down pmt UL20180316</td></tr> <tr> <td data-bbox="697 1258 807 1285"><b>Amount:</b></td><td data-bbox="1141 1258 1273 1285">\$28,816.00</td></tr> </table>	<b>Component Description:</b>	Inv: WSLS TLP-24H (C)VP aux antenna 50 percent down pmt UL20180316	<b>Amount:</b>	\$28,816.00				
<b>Component Description:</b>	Inv: WSLS TLP-24H (C)VP aux antenna 50 percent down pmt UL20180316								
<b>Amount:</b>	\$28,816.00								

Cost  
Information

Transmission Line

Where no predetermined cost estimate is available, any estimate provided will also become the predetermined cost (displayed in italics).

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Primary Transmission Line	\$54,540.00	\$54,046.94		\$53,703.24	
Rigid Transmission Line - copper, 6 1/8"	\$54,540.00	\$54,046.94	N/A	\$53,703.24	N/A
Auxiliary Transmission Line	\$6,400.00	\$6,400.00		\$0.00	
Sweep Tests	\$6,400.00	\$6,400.00	N/A	N/A	N/A
Sub-total	\$60,940.00	\$60,446.94	N/A	\$53,703.24	N/A
Total for all systems	\$6,021,241.95	\$3,261,244.05	N/A	\$2,443,436.68	N/A

Components

Actual Information Description	File Name
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Rigid Transmission Line -  
copper, 6 1/8"

**Component Description:** Die 341010  
v190905pmv2  
**Amount:** \$343.70

**Component Description:** Die 286003  
v190819jgv2  
**Amount:** N/A

**Component Description:** Die 286003  
v191002pmv5  
**Amount:** \$3,900.04

**Component Description:** Inv MAN00325  
WSLS  
Transmission Line  
UL20180423jg  
**Amount:** \$20,643.53

**Component Description:** Die 286003  
v190925pmv4  
**Amount:** \$3,900.04

**Component Description:** Inv MAN00430  
WSLS Trans line 45  
perc pmt 2  
UL20180713jgv1  
**Amount:** \$20,643.53

**Component Description:** Die 341010  
v190731pmv1  
**Amount:** \$343.70

**Component Description:** Die inv #202001  
Nitrogen generator  
UL20181102jgv1  
**Amount:** \$8,172.44

Sweep Tests	Information not provided.
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Cost  
Information

Tower Equipment and Rigging Costs

Where no predetermined cost estimate is available, any estimate provided will also become the predetermined cost (displayed in italics).

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Primary Tower TOWER	\$1,492,100.00	\$395,416.81		\$294,970.00	
Structural engineering tower load study for well documented tower	\$12,600.00	\$30,470.00	The tower studies and modifications have turned out to be more complicated than originally anticipated (20180815jgv1)	\$30,470.00	The initial tower study was performed, and a potential issue with the top plate on the tower was discovered which required additional analysis.
Serious tower reinforcement /modifications	\$1,052,000.00	\$154,969.81	N/A	\$150,324.31	N/A
Transmission Line Layout	<i>\$6,500.00</i>	\$6,500.00	N/A	\$6,500.00	N/A
Complex Tower (includes, for example, those with candelabras and/or stacked antennas)	\$421,000.00	\$203,477.00	N/A	\$107,675.69	N/A
Sub-total	\$1,492,100.00	\$395,416.81	N/A	\$294,970.00	N/A

<b>Total for all systems</b>	\$6,021,241.95	\$3,261,244.05	N/A	\$2,443,436.68	N/A
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## Components

Actual Information	
Description	File Name
Structural engineering tower load study for well documented tower	<b>Component Description:</b> WSLs Malouf inv #1805084V4 Structural Analysis UL20180816jg v1 <b>Amount:</b> \$7,000.00
	<b>Component Description:</b> Malouf 1905084V0 v191120gv2 <b>Amount:</b> \$2,500.00
	<b>Component Description:</b> Coordinate Tower Modifications - Also See Attached "KGA Quote" <b>Amount:</b> \$1,250.00
	<b>Component Description:</b> Develop an Upgrade or Replacement solution for Tower - Also See Attached "KGA Quote" <b>Amount:</b> \$750.00
	<b>Component Description:</b> Inv: WSLs Tower Data Collection UL20180402 <b>Amount:</b> \$2,720.00



<b>Component Description:</b>	Coordinate Tower mapping & analyses - Also See Attached "KGA Quote"
<b>Amount:</b>	\$750.00

<b>Component Description:</b>	Inv: WSLS Structural Analysis UL20180305
<b>Amount:</b>	\$4,500.00

<b>Component Description:</b>	Inv 1805084V1 WSLS Mod Design and Structural Analysis UL20180424jg v1
<b>Amount:</b>	\$7,500.00

<b>Component Description:</b>	WSLS Malouf inv #1805084V3 Structural Analysis UL20180815jg v1
<b>Amount:</b>	\$3,500.00

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Serious tower reinforcement/modifications	<b>Component Description:</b> WLSL ERI inv #WLSL-002 Tower work 50 perc dp UL20180731jgv2 <b>Amount:</b> \$22,664.56
	<b>Component Description:</b> Site Res 249553 v190711jgv1 <b>Amount:</b> \$2,580.00
	<b>Component Description:</b> ERI WSL- TV- 003A v190912pmv1 <b>Amount:</b> \$50,077.25
	<b>Component Description:</b> ERI inv #WLSL-TV- 003 Tower mods 50 pct pay 1 UL20181102jgv1 <b>Amount:</b> \$54,360.00
	<b>Component Description:</b> ERI inv #WLSL-001 Tower work 50 perc pmt 1 UL20181101jgv1 <b>Amount:</b> \$20,642.50
Transmission Line Layout	<b>Component Description:</b> ERI 52482 v190912pmv1 <b>Amount:</b> \$6,500.00

Complex Tower (includes, for example, those with candelabras and/or stacked antennas)		
	<b>Component Description:</b>	Flash 90215019
		v190910pmv1
	<b>Amount:</b>	\$1,603.14
	<b>Component Description:</b>	Flash 90214863
		v190910pmv1
	<b>Amount:</b>	\$384.05
	<b>Component Description:</b>	ERI inv #WSLS-001-
		1 Ant and line install
		50 pct pmt 1
		UL20181127jgv2
	<b>Amount:</b>	\$105,688.50

## Cost Information

### Outside Professional Services

Where no predetermined cost estimate is available, any estimate provided will also become the predetermined cost (displayed in italics).

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
<b>Outside Professional Services</b>	<b>\$527,595.00</b>	<b>\$503,600.00</b>		<b>\$228,904.84</b>	
Architectural and Engineering	<i>\$68,350.00</i>	\$68,350.00	Architectural and Engineering for New Transmission Facility. See Quote attached to Osborn inv 29014	\$8,967.04	N/A
Other Legal Services	<i>\$10,000.00</i>	\$10,000.00	Other Legal Services related to the DTV Repack	\$5,700.15	N/A
Other Engineering Services	<i>\$147,500.00</i>	\$147,500.00	Fewer Project Management "PM" tasks are required & Other Engineering Services "OES" are required, therefore the PM total has been reduced to 200 hrs (\$30,000 at \$150/hr), & the OES category has been funded with the money removed from PM.	\$123,460.00	N/A

Additional Field Engineering Service, 45 Days	<b>\$90,000.00</b>	\$90,000.00	N/A	\$23,600.00	N/A
Comprehensive coverage verification via field study, if needed	\$84,200.00	\$80,000.00	N/A	\$0.00	N/A
FAA consultant, including cost of preparing FAA Form 7460 (Notice of Proposed Construction), if needed for height increase	\$2,105.00	\$2,000.00	N/A	\$550.00	N/A
ASR modification (prepare FCC Form 854)	\$2,105.00	\$2,000.00	N/A	N/A	N/A
Attorney Fees - Prepare and File request for Special Temporary Authorization	\$7,360.00	\$7,000.00	N/A	N/A	N/A
Attorney Fees - Prepare and File FCC Form 2100 (main), License to Cover Application	\$2,365.00	\$2,250.00	N/A	N/A	N/A
Attorney Fees - Aux Antenna, prepare and File Form 2100 Construction Permit or License Application	\$4,210.00	\$4,000.00	N/A	N/A	N/A

Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	\$5,260.00	\$5,000.00	N/A	N/A	N/A
Prepare request for Special Temporary Authorization	\$4,100.00	\$3,000.00	N/A	N/A	N/A
RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, License to Cover Application	\$1,580.00	\$1,500.00	N/A	N/A	N/A
Prepare engineering section of FCC Form 2100 (main), License to Cover Application	\$1,580.00	\$1,500.00	N/A	N/A	N/A
RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, Construction Permit Application	\$2,105.00	\$2,000.00	N/A	N/A	N/A

Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	\$3,155.00	\$6,000.00	\$3,000 for the 1% expansion initial 90-day CP application and \$3,000 for expansion facilities in the 1st priority filing window pursuant to DA 17-106 where costs reasonably incurred in the 1st priority window for expanded facilities will be reimbursed.	\$6,000.00	N/A
Project management of the transition	\$79,000.00	\$30,000.00	The majority of the PM hours and \$ has been moved to OES and the "Prepare and or review reimbursement form" components.	\$27,349.25	N/A
Prepare and or review reimbursement form	\$2,630.00	\$25,000.00	The station continues to need assistance preparing and submitting its Actual Cost invoices, and the Estimated Cost reflects that.	\$19,278.40	Legal assistance beyond that originally anticipated has been required
Address transition timing and coordination issues w/ other stations and wireless	\$2,630.00	\$2,500.00	N/A	N/A	N/A

Perform engineering study for new channel assignment and antenna development	\$7,360.00	\$14,000.00	\$7,000 for the 1% expansion initial 90-day CP application and \$7,000 for expansion facilities in the 1st priority filing window pursuant to DA 17-106 where costs reasonably incurred in the 1st priority window for expanded facilities will be reimbursed.	\$14,000.00	N/A
<b>Sub-total</b>	\$527,595.00	\$503,600.00	N/A	\$228,904.84	N/A
<b>Total for all systems</b>	\$6,021,241.95	\$3,261,244.05	N/A	\$2,443,436.68	N/A

## Components

Actual Information	
Description	File Name
Architectural and Engineering	<p><b>Component Description:</b> Osborn inv #29014 Prof Srvs thru 4-27-18 UL20181105jgv1</p> <p><b>Amount:</b> \$8,967.04</p>
Other Legal Services	<p><b>Component Description:</b> Covington inv #60836450 Legal services thru 190131 UL20190308jgv1</p> <p><b>Amount:</b> \$106.65</p>



<b>Component Description:</b>	Covington inv #60827770 Legal services thru 181130 UL20190308jgv1
<b>Amount:</b>	\$102.60

<b>Component Description:</b>	C&B 60847118 v190610pmv1
<b>Amount:</b>	\$71.10

<b>Component Description:</b>	Cov 60850674 v190810jgv1
<b>Amount:</b>	\$3,122.10

<b>Component Description:</b>	Cov 60859434 v191015jgv1
<b>Amount:</b>	\$213.30

<b>Component Description:</b>	C&B 60842539 v190704jgv1
<b>Amount:</b>	\$71.10

<b>Component Description:</b>	Cov 60855208 v191015jgv1
<b>Amount:</b>	\$1,944.90

<b>Component Description:</b>	C&B inv #60836450 Various legal UL20190405jgv1
<b>Amount:</b>	\$106.65

	<b>Component Description:</b> WSLs Covington inv #60812707 Review and file 2018 Q2 Progress Report UL20181019jgv1  <b>Amount:</b> \$68.40
Other Engineering Services	<b>Component Description:</b> KGA 947-187 v190614pmv1  <b>Amount:</b> \$4,155.00  <b>Component Description:</b> KGA inv #947-134 Actual Cost invoices Sept 18 UL20190212jgv1  <b>Amount:</b> \$125.00  <b>Component Description:</b> KGA inv #947-150 OES by WTG Dec 2018 UL20190308jgv1  <b>Amount:</b> \$5,225.00  <b>Component Description:</b> KGA inv #947-148 OES by WTG 181022-181031 UL20190308jgv1  <b>Amount:</b> \$1,600.00  <b>Component Description:</b> KGA 947-185 v190614pmv1  <b>Amount:</b> \$3,135.00  <b>Component Description:</b> KGA 947-188 v190614pmv1  <b>Amount:</b> \$6,427.50

<b>Component Description:</b>	KGA 947-204 v191015jgv1
<b>Amount:</b>	\$7,375.00

<b>Component Description:</b>	KGA 947-186 v190614pmv1
<b>Amount:</b>	\$2,152.50

<b>Component Description:</b>	KGA 947-186 v190704jgv1
<b>Amount:</b>	\$2,152.50

<b>Component Description:</b>	KGA inv #947-135 Actual Cost invoices Oct 18 UL20190212jgv1
<b>Amount:</b>	\$100.00

<b>Component Description:</b>	KGA inv #947-116 Site Visit Dec 2018 UL20190212jgv1
<b>Amount:</b>	\$5,400.00

<b>Component Description:</b>	Inv 947-75 WSLs Actual Cost UL20180705jgv1
<b>Amount:</b>	\$1,687.50

<b>Component Description:</b>	KGA inv #947-149 OES by WTG Nov 2018 UL20190308jgv1
<b>Amount:</b>	\$5,350.00

<b>Component Description:</b>	KGA 947-187 v190704jgv1
<b>Amount:</b>	\$4,155.00

<b>Component Description:</b>	KGA inv #947-113 OES Jul18 - Oct18 UL20180720jgv1
<b>Amount:</b>	\$27,400.00

<b>Component Description:</b>	KGA 947-185 v190704jgv1
<b>Amount:</b>	\$3,135.00

<b>Component Description:</b>	KGA inv #947-104 Actual Cost invs 180607 - 180905 UL20180720jgv1
<b>Amount:</b>	\$2,227.50

<b>Component Description:</b>	KGA inv #947-117 2018 Q4 387 UL20190212jgv1
<b>Amount:</b>	\$300.00

<b>Component Description:</b>	KGA 947-188 v190704jgv1
<b>Amount:</b>	\$6,427.50

<b>Component Description:</b>	KGA inv #947-151 OES by WTG Jan 2019 UL20190308jgv1
<b>Amount:</b>	\$2,725.00

<b>Component Description:</b>	KGA inv #947-136 Actual Cost invoices Nov 18 UL20190212jgv1
<b>Amount:</b>	\$2,775.00

<b>Component Description:</b>	Inv 947-88 WSLS OES Jan18 - Jun18 UL20180720jgv1
<b>Amount:</b>	\$44,325.00

<b>Component Description:</b>	KGA inv #947-137 Actual Cost invoices Dec 18 UL20190212jgv1
<b>Amount:</b>	\$975.00

Additional Field  
Engineering Service, 45  
Days

**Component Description:** KGA inv #167-60  
Site visit  
UL20190308jgv1  
**Amount:** \$5,400.00

**Component Description:** KGA inv #947-38  
GatesAir  
manufacturer visit  
UL20181211jgv2  
**Amount:** \$1,800.00

**Component Description:** Additional Field  
Engineering  
Services (On Site  
Equipment  
inventory & facilities  
survey) - Also see  
Attached "KGA  
Quote"  
**Amount:** \$5,400.00

**Component Description:** KGA inv #947-69  
Field Eng Services  
UL20190212jgv1  
**Amount:** \$3,800.00

**Component Description:** KGA inv #947-49  
Site visit  
UL20181204jgv2  
**Amount:** \$5,400.00

**Component Description:** Inv: WSLS R&S  
manufacturer visit  
UL20180316  
**Amount:** \$1,800.00

Comprehensive coverage verification via field study, if needed	<p><b>Component Description:</b></p> <p>Partial Completion of Comprehensive coverage verification via field study - see "KGA Quote" for fixed price fee.</p> <p><b>Amount:</b></p> <p>\$38,200.00</p>
FAA consultant, including cost of preparing FAA Form 7460 (Notice of Proposed Construction), if needed for height increase	<p><b>Component Description:</b></p> <p>Inv 947-71 WSLS FAA 7460 UL20180531jgv1</p> <p><b>Amount:</b></p> <p>\$550.00</p>
ASR modification (prepare FCC Form 854)	Information not provided.
Attorney Fees - Prepare and File request for Special Temporary Authorization	Information not provided.
Attorney Fees -Prepare and File FCC Form 2100 (main), License to Cover Application	Information not provided.
Attorney Fees - Aux Antenna, prepare and File Form 2100 Construction Permit or License Application	Information not provided.
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	Information not provided.
Prepare request for Special Temporary Authorization	Information not provided.

RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, License to Cover Application	Information not provided.
Prepare engineering section of FCC Form 2100 (main), License to Cover Application	Information not provided.
RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, Construction Permit Application	Information not provided.
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	<p><b>Component Description:</b> Expanded Facilities - Prepare engineering section of Form 301 FCC First Priority Filing Window CP Application to compensate for IX in excess of 1%. Reimbursable pursuant to DA 17-106.</p> <p><b>Amount:</b> \$3,000.00</p> <p><b>Component Description:</b> Engineering Portion of 1% Expansion CP application for Initial 90-Day Filing Window - Also see "KGA Quote".</p> <p><b>Amount:</b> \$3,000.00</p>
Project management of the transition	<p><b>Component Description:</b> Inv: WSLs 2017Q3 387 UL20180302</p> <p><b>Amount:</b> \$300.00</p>



<b>Component Description:</b>	Inv 947-81 WSLS 2018Q2 387 UL20180713jgv1
<b>Amount:</b>	\$300.00

<b>Component Description:</b>	KGA 947-193 v190718jgv1
<b>Amount:</b>	\$300.00

<b>Component Description:</b>	KGA inv #947-81 Form 387 2018 Q2 UL20180720jgv1
<b>Amount:</b>	\$300.00

<b>Component Description:</b>	Inv 60768465 WSLS Various legal UL20180514 jgv1
<b>Amount:</b>	\$1,559.25

<b>Component Description:</b>	Inv 947-65 WSLS Proj Mgt 2017 Aug - Dec UL20180625jgv2
<b>Amount:</b>	\$20,190.00

<b>Component Description:</b>	Inv 947-57 WSLS 2018Q1 387 UL20180622jgv1
<b>Amount:</b>	\$300.00

<b>Component Description:</b>	KGA inv #947-109 Form 387 2018 Q3 UL20180720jgv1
<b>Amount:</b>	\$300.00

<b>Component Description:</b>	KGA 947-163 v190704jgv1
<b>Amount:</b>	\$300.00

	<b>Component Description:</b>		Project Management - Also see attached "KGA Quote" Hours: 23-1/3 Rate: \$150/hr Time Period: 8/1/17 - 8/31/17
	<b>Amount:</b>		\$3,500.00
	<b>Component Description:</b>		Inv: WSLs 2017Q4 387 UL20180302
	<b>Amount:</b>		\$300.00
Prepare and or review reimbursement form	<b>Component Description:</b>		KGA inv #947-158 Actual Cost prep & submit by JG Feb 2019 UL20190308jgv1
	<b>Amount:</b>		\$625.00
	<b>Component Description:</b>		KGA 947-167 v190704jgv1
	<b>Amount:</b>		\$1,412.50
	<b>Component Description:</b>		KGA 947-172 v190704jgv1
	<b>Amount:</b>		\$1,620.00
	<b>Component Description:</b>		KGA 947-176 v190704jgv1
	<b>Amount:</b>		\$1,475.00
	<b>Component Description:</b>		KGA 947-197 v191015jgv1
	<b>Amount:</b>		\$1,665.00

<b>Component Description:</b>	KGA 947-203 v191015jgv1
<b>Amount:</b>	\$3,265.00

<b>Component Description:</b>	KGA 947-208 v191015jgv1
<b>Amount:</b>	\$610.00

<b>Component Description:</b>	Inv: WSLS Various legal UL20180329 rev'd 20180329jg
<b>Amount:</b>	\$1,197.90

<b>Component Description:</b>	Covington inv #60775905 Various legal UL20181120jgv3
<b>Amount:</b>	\$1,197.90

<b>Component Description:</b>	Prepared FCC 399 reimbursement form (Initial Filing) - Also see attached "KGA Quote"
<b>Amount:</b>	\$2,500.00

<b>Component Description:</b>	Covington inv #60781604 Various legal UL20181127jgv2
<b>Amount:</b>	\$1,070.00

<b>Component Description:</b>	Inv: WSLS Reimburse review etc UL20180305
<b>Amount:</b>	\$513.00

	<p><b>Component Description:</b> KGA inv #947-138 Actual Cost prep &amp; submit by JG Jan 2019 UL20190308jgv1</p> <p><b>Amount:</b> \$3,325.00</p>
Address transition timing and coordination issues w/ other stations and wireless	Information not provided.
Perform engineering study for new channel assignment and antenna development	<p><b>Component Description:</b> 1% Expansion Engineering Studies and Coordination for Initial 90-CP application - Also see "KGA Quote".</p> <p><b>Amount:</b> \$7,000.00</p> <p><b>Component Description:</b> Expanded Facilities - Performed engineering studies for increased coverage and antenna development in 1st Priority Filing Window to compensate for IX in excess of 1%. Reimbursable pursuant to DA 17-106.</p> <p><b>Amount:</b> \$7,000.00</p>

**Cost  
Information**

**Other Expenses**

Where no predetermined cost estimate is available, any estimate provided will also become the predetermined cost (displayed in italics).

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
<b>Other Expenses</b>	<b>\$280,807.20</b>	<b>\$280,202.20</b>		<b>\$126,529.14</b>	
Heavy equipment rentals	<i>\$5,440.00</i>	\$5,440.00	N/A	\$5,440.00	N/A
Tax	<i>\$2,777.20</i>	\$2,777.20	Tax	\$2,777.20	N/A
MVPD Notification of Channel Change	<i>\$2,000.00</i>	\$2,000.00	N/A	\$1,685.00	N/A
Develop and air announcement of upcoming channel change	<i>\$100,000.00</i>	\$100,000.00	It is expected that the station will spend at least \$100,000 developing and airing the required announcements.	N/A	N/A
Equipment Storage	<i>\$10,000.00</i>	\$10,000.00	N/A	\$6,396.26	N/A
Equipment Delivery and Handling Charges	<i>\$50,000.00</i>	\$50,000.00	N/A	\$22,830.68	N/A
Non-zoning permits	<i>\$10,000.00</i>	\$10,000.00	N/A	N/A	N/A
DTV Medical Facility Notification	\$11,550.00	\$11,000.00	N/A	N/A	N/A

FCC Filing Fees - Form 2100 minor change CP application	\$1,110.00	\$1,070.00	A minor change of CP application may be required after structural analysis results are received.	N/A	N/A
FCC Filing Fees - Form 2100 license to cover application	\$335.00	\$325.00	A license application may be required after structural analysis results are received which would require a CP mod application and then the license application.	N/A	N/A
FCC Filing Fees - Special Temporary Authorization request	\$195.00	\$190.00	An STA will be required for interim operation while the main facility is being built-out.	N/A	N/A
Disposal Costs (for equipment and other waste, net of any salvage value)	<b>\$87,400.00</b>	\$87,400.00	See attached Rohde Schwarz USA Quote & Invoice 9500092053 plus Rohde and Schwarz Quote No. 188820.0 (\$52,000 + 6,810 + \$7,270 + \$21,320)	\$87,400.00	N/A
<b>Sub-total</b>	\$280,807.20	\$280,202.20	N/A	\$126,529.14	N/A
<b>Total for all systems</b>	\$6,021,241.95	\$3,261,244.05	N/A	\$2,443,436.68	N/A

## Components

**Actual Information**  
**Description**

**File Name**

Heavy equipment rentals	<b>Component Description:</b> R&S 9500102206 v190625jgv1 <b>Amount:</b> \$5,440.00
Tax	<b>Component Description:</b> R&S 9500102206 v190625jgv1 <b>Amount:</b> \$2,777.20
MVPD Notification of Channel Change	<b>Component Description:</b> KGA 947-168 v190704jgv1 <b>Amount:</b> \$1,685.00
Develop and air announcement of upcoming channel change	Information not provided.
Equipment Storage	<b>Component Description:</b> PODS Z130000008776 v190916pmv1 <b>Amount:</b> \$191.26  <b>Component Description:</b> Die 650019 v191114pmv1 <b>Amount:</b> \$6,205.00

Equipment Delivery and Handling Charges	<b>Component Description:</b> Die 341010 v190905pmv2 <b>Amount:</b> \$19,286.18
	<b>Component Description:</b> Die 201015 v190730pmv1 <b>Amount:</b> \$102.00
	<b>Component Description:</b> Die 650019 v191114pmv1 <b>Amount:</b> \$3,442.50
	<b>Component Description:</b> Die 341010 v190731pmv1 <b>Amount:</b> \$19,286.18
Non-zoning permits	Information not provided.
DTV Medical Facility Notification	Information not provided.
FCC Filing Fees - Form 2100 minor change CP application	Information not provided.
FCC Filing Fees - Form 2100 license to cover application	Information not provided.
FCC Filing Fees - Special Temporary Authorization request	Information not provided.



Disposal Costs (for equipment and other waste, net of any salvage value)	<b>Component Description:</b> <b>Amount:</b>	R&S 9500102206 v190625jgv1 \$7,270.00
	<b>Component Description:</b> <b>Amount:</b>	R&S 9500102206 v190625jgv1 \$21,320.00
	<b>Component Description:</b> <b>Amount:</b>	R&S 9500102206 v190625jgv1 \$6,810.00
	<b>Component Description:</b> <b>Amount:</b>	R&S inv #9500092053 Decommissioning Sigma UL20190418jgv1 \$52,000.00

<b>Cost Information</b>	<b>Grand Total</b>		
		<b>Predetermined Cost Estimate</b>	<b>Estimated Cost</b>
			<b>Actual Cost</b>
	<b>Total for all systems</b>	\$6,021,241.95	\$3,261,244.05
			\$2,443,436.68

<b>Reimbursement Status</b>	<b>Question</b>	<b>Response</b>
	The facility has ceased operating on its pre-auction channel.	Yes
	Construction of final facilities or all necessary modifications are complete.	No
	All receipts for reimbursement have been submitted no further costs are expected to be incurred. Note this will lock the Form 399 from further editing and begin close-out procedures with the Fund Administrator.	No

Certification	Section	Question	Response
	Submission of Estimated Expenses Statements	<p>WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND /OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a) (1), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503), AND ANY FALSE STATEMENTS COULD SUBJECT THIS ENTITY TO LIABILITY UNDER THE FALSE CLAIMS ACT.</p>	
		<ol style="list-style-type: none"> <li>1. The Authorized Person signing below certifies that he /she is authorized to submit this TV Broadcaster Relocation Fund Reimbursement Form on behalf of the above-named entity.</li> <li>2. The above-named entity acknowledges that all certifications and attached documentation are considered material representations.</li> <li>3. The above-named entity acknowledges the submission of the information herein creates no obligation on the part of the government to pay any amount.</li> </ol>	

4. The above-named entity certifies that the equipment and services paid for with money from the TV Broadcaster Relocation Fund are necessary to change channels (broadcasters) or to continue to carry the signal of a broadcaster that changes channels (MVPD).
5. The above-named entity certifies that all payments from the TV Broadcaster Relocation Fund (Fund) received by the entity listed on this form will be used only for expenses that are eligible for reimbursement from the Fund.
6. The above-named entity certifies that it will maintain and provide to the Commission detailed records, including receipts, of all costs eligible for reimbursement actually incurred.
7. The above-named entity acknowledges that overpayments or payments in error must be promptly refunded to the Commission.

<p>8. The above-named entity certifies that it is in full compliance with all statutes, rules, regulations and governmental requirements for which compliance is a pre-requisite for obtaining the payments herein requested.</p>	
<p>I declare, under penalty of perjury, that I am an authorized representative of the above-named applicant for the Authorization(s) specified above.</p>	<p><b>Jeffrey C Gehman</b>  <i>Engineering Associate</i></p> <p>11/27/2019</p>

## Attachments