

(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>04/11</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	TBD
	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)	Yes
	Power	150 kVA
	Rigid Conduit and Wiring	Yes

	Size	3 inches
	Length	100.0 feet
	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)	Yes

	Transformer (480V)	Yes
	Power	150 kVA
	Rigid Conduit and Wiring	Yes
	Size	3 inches
	Length	100.0 feet
	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?	Yes
	Type	Heating and Cooling
	Size	10 tons
	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
Additional Interior RF System	Interior RF System Existing Transmitter to Interim Transmission line
Transmitter Remote Control	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?	No
	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	Horizontal
	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)	65.0 kW
	Manufacturer	
	Model	TBD

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?	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?	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?	Yes
<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?	Yes

**Auxiliary  
Antenna**

**Other Antenna Cost Not Listed**

Information not provided.

**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**

Information not provided.

**Outside  
Professional Services Costs**

Section	Question	Response
<b>Outside Project Management Services</b>	Do you require outside project management services?	Yes
	Number of Hours	200
	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	Yes
	Environmental Assessment	Yes
	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	Yes
	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>Architectural and Engineering</b>	Architectural and Engineering for New Transmission Facility. See Quote attached to Osborn inv 29014
<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

## 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

<b>Other Expenses</b>	<b>Other Expenses Not Listed</b>
	Information not provided.



## 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>\$2,866,400.00</b>	<b>\$2,069,200.00</b>		<b>\$979,958.25</b>	
Additional Interior RF System	<i>\$140,000.00</i>	\$140,000.00	N/A	\$750.00	N/A
10 Ton system	\$60,500.00	\$57,500.00	N/A	N/A	N/A
Transformer 3 phase /480v - 150 KVA	\$25,550.00	\$24,300.00	N/A	N/A	N/A
Switchgear - industrial 800 amp	\$38,200.00	\$36,300.00	N/A	N/A	N/A
Transmitter Remote Control	<i>\$19,950.00</i>	\$19,950.00	N/A	\$19,950.00	N/A
3" Rigid Conduit and Wiring (Cost per foot)	\$5,200.00	\$4,900.00	N/A	N/A	N/A
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	\$500.00	See attached Osborn Engineering Quote and summary page for additional details.

Other -- Building Addition Size: 700.0	<b>\$50,000.00</b>	\$50,000.00	Need pad for new heat exchangers and beam supplies and also need ice shield.	\$23,758.25	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

Two IOT system (50 kW)	\$954,000.00	\$935,000.00	***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 TBD</b>	<b>\$194,950.00</b>	<b>\$185,500.00</b>		<b>\$80,565.01</b>	
Transformer 3 phase /480v - 150 KVA	\$25,550.00	\$24,300.00	N/A	N/A	N/A
3" Rigid Conduit and Wiring (Cost per foot)	\$5,200.00	\$4,900.00	N/A	N/A	N/A
UHF - Air Cooled Solid State Transmitter 1 - 2.5 kW	\$126,000.00	\$120,000.00	N/A	\$80,565.01	N/A
Switchgear - industrial 800 amp	\$38,200.00	\$36,300.00	N/A	N/A	N/A
<b>Sub-total</b>	<b>\$3,061,350.00</b>	<b>\$2,254,700.00</b>	<b>N/A</b>	<b>\$1,060,523.26</b>	<b>N/A</b>
<b>Total for all systems</b>	<b>\$6,018,061.00</b>	<b>\$4,741,860.00</b>	<b>N/A</b>	<b>\$1,918,186.46</b>	<b>N/A</b>

## Components

Actual Information Description	File Name
Additional Interior RF System	<div> <b>Component Description:</b> Developed a Solution for Transmitter &amp; Mask Filter on New Channel - Also See attached "KGA Quote" </div> <div> <b>Amount:</b> \$750.00 </div>
10 Ton system	Information not provided.
Transformer 3 phase /480v - 150 KVA	Information not provided.
Switchgear - industrial 800 amp	Information not provided.
Transmitter Remote Control	<div> <b>Component Description:</b> Bohn inv #200249 Remote Control UL20190118jgv1 </div> <div> <b>Amount:</b> \$19,950.00 </div>
3" Rigid Conduit and Wiring (Cost per foot)	Information not provided.

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

**Component Description:**

WSLS Osborn inv  
#29669 Prof Srvs  
through 7-29-18  
UL20180726jgv1

**Amount:**

\$60,252.10

**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

Other -- Building  
Addition Size: 700.0

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

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

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

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>
	<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>
Two IOT system (50 kW)	<div> <b>Component Description:</b> Inv: WSLS THU9EVO-24 transmitter 25% down pmt UL20180312 </div> <div> <b>Amount:</b> \$233,750.00 </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> <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>

Transformer 3 phase /480v - 150 KVA	Information not provided.
3" Rigid Conduit and Wiring (Cost per foot)	Information not provided.
UHF - Air Cooled Solid State Transmitter 1 - 2.5 kW	<div> <div> <b>Component Description:</b>   <b>Amount:</b> </div> <div> R&amp;S inv  #9500092025 TMU9-  3 Aux TX 25 pct final  pmt UL20190117jgv1  \$20,141.25 </div> </div> <div> <div> <b>Component Description:</b>   <b>Amount:</b> </div> <div> Inv: WSLS TMU9-3  aux transmitter 25%  down pmt  UL20180313  \$20,141.25 </div> </div> <div> <div> <b>Component Description:</b>   <b>Amount:</b> </div> <div> R&amp;S inv  #9500092027 TMU9-  3 Aux TX 50 pct DP  upon delivery  UL20190117jgv1  \$40,282.51 </div> </div>
Switchgear - industrial 800 amp	Information not provided.



**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
<b>Primary Antenna TFU-30DSC /VP-R C170</b>	<b>\$491,966.00</b>	<b>\$443,549.00</b>		<b>\$344,319.30</b>	
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.	\$11,144.70	N/A
UHF - High Power Top Mount (200-1000 kW), One station antenna , elliptically or circularly polarized	\$289,500.00	\$240,000.00	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%).	\$220,592.70	N/A
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	\$2,880.00	N/A
<b>Auxiliary Antenna TBD</b>	<b>\$213,940.00</b>	<b>\$147,216.00</b>		<b>\$42,969.00</b>	

UHF - Lower Power Side Mount, One station antenna - medium power (50- 200 kW), horizontally polarized	\$89,400.00	\$85,000.00	N/A	\$6,346.00	N/A
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	N/A	N/A
Side mount brackets for high power antennas (if not included in antenna base cost)	\$23,150.00	\$22,000.00	N/A	\$5,107.00	N/A
Pattern scatter analysis for side mount high/med power antennas (if not included in antenna base cost)	\$5,260.00	\$5,000.00	N/A	\$2,700.00	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>	\$705,906.00	\$590,765.00	N/A	\$387,288.30	N/A
<b>Total for all systems</b>	\$6,018,061.00	\$4,741,860.00	N/A	\$1,918,186.46	N/A

## Components

Actual Information	
Description	File Name
Mounting Support Pole	<div> <div>Component Description:</div> <div>WSLS Die inv #MAN00607 Mt pole mod 45 pct pmt 2 UL20181105jgv2</div> </div> <div> <div>Amount:</div> <div>\$26,557.20</div> </div> <div> <div>Component Description:</div> <div>Inv MAN00430 WSLS Support pole 45 perc pmt 2 UL20180713jgv1</div> </div> <div> <div>Amount:</div> <div>\$46,800.00</div> </div> <div> <div>Component Description:</div> <div>WSLS Die inv #MAN00606 Mt pole mod 45 pct pmt 1 UL20181105jgv2</div> </div> <div> <div>Amount:</div> <div>\$26,557.20</div> </div>

Side mount brackets for high power antennas (if not included in antenna base cost)	<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>
Elbow complex, single channel, at antenna input, per 4 1/16. feedline (if needed)	<p><b>Component Description:</b> Inv MAN00325 WSLS Elbow Complex UL20180423jg</p> <p><b>Amount:</b> \$5,572.35</p> <p><b>Component Description:</b> Inv MAN00430 WSLS Elbox comp 45 perc pmt 2 UL20180713jgv1</p> <p><b>Amount:</b> \$5,572.35</p>
UHF - High Power Top Mount (200-1000 kW), One station antenna , elliptically or circularly polarized	<p><b>Component Description:</b> Inv MAN00325 WSLS TFU-30DSC VP-R C170 etc Main Antenna UL20180423jg</p> <p><b>Amount:</b> \$140,030.10</p> <p><b>Component Description:</b> Inv MAN00430 WSLS Main ant 45 perc pmt 2 UL20180713jgv1</p> <p><b>Amount:</b> \$80,562.60</p>
Sweep test of existing antenna	<p><b>Component Description:</b> Inv MAN00430 WSLS Sweep tests 45 perc pmt 2 UL20180713jgv1</p> <p><b>Amount:</b> \$2,880.00</p>

<p>UHF - Lower Power Side Mount, One station antenna - medium power (50-200 kW), horizontally polarized</p>	<table> <tr> <td data-bbox="694 100 1101 324"><b>Component Description:</b></td><td data-bbox="1101 100 1428 324">Die inv #274004 TLP-24 aux ant test transition pmt 2 UL20190125jgv1</td></tr> <tr> <td data-bbox="694 324 1101 414"><b>Amount:</b></td><td data-bbox="1101 324 1428 414">\$788.00</td></tr> <tr> <td data-bbox="694 414 1101 638"><b>Component Description:</b></td><td data-bbox="1101 414 1428 638">Die inv #274004 TLP-24 aux ant pmt 2 UL20190125jgv1</td></tr> <tr> <td data-bbox="694 638 1101 683"><b>Amount:</b></td><td data-bbox="1101 638 1428 683">\$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>Sweep test of existing antenna</p>	<p>Information not provided.</p>								
<p>Side mount brackets for high power antennas (if not included in antenna base cost)</p>	<table> <tr> <td data-bbox="694 795 1101 1019"><b>Component Description:</b></td><td data-bbox="1101 795 1428 1019">Die inv #274004 TLP-24 aux ant brackets pmt 2 UL20190125jgv1</td></tr> <tr> <td data-bbox="694 1019 1101 1108"><b>Amount:</b></td><td data-bbox="1101 1019 1428 1108">\$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>Pattern scatter analysis for side mount high/med power antennas (if not included in antenna base cost)</p>	<table> <tr> <td data-bbox="694 1131 1101 1355"><b>Component Description:</b></td><td data-bbox="1101 1131 1428 1355">Die inv #274004 TLP-24 aux ant scatter analysis pmt 2 UL20190125jgv1</td></tr> <tr> <td data-bbox="694 1355 1101 1444"><b>Amount:</b></td><td data-bbox="1101 1355 1428 1444">\$2,700.00</td></tr> </table>	<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 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="694 1467 1101 1691"><b>Component Description:</b></td><td data-bbox="1101 1467 1428 1691">Inv: WSLS TLP-24H (C)VP aux antenna 50 percent down pmt UL20180316</td></tr> <tr> <td data-bbox="694 1691 1101 1780"><b>Amount:</b></td><td data-bbox="1101 1691 1428 1780">\$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	\$51,840.00		\$49,459.50	
Rigid Transmission Line - copper, 6 1/8"	\$54,540.00	\$51,840.00	N/A	\$49,459.50	N/A
Auxiliary Transmission Line	\$6,400.00	\$6,400.00		\$0.00	
Sweep Tests	<i>\$6,400.00</i>	\$6,400.00	N/A	N/A	N/A
Sub-total	\$60,940.00	\$58,240.00	N/A	\$49,459.50	N/A
Total for all systems	\$6,018,061.00	\$4,741,860.00	N/A	\$1,918,186.46	N/A

Components

Actual Information Description	File Name
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Rigid Transmission Line - copper, 6 1/8"	<div> <b>Component Description:</b>            Inv MAN00430            WSLS Trans line 45            perc pmt 2            UL20180713jgv1         </div> <div> <b>Amount:</b>            \$20,643.53         </div>
	<div> <b>Component Description:</b>            Die inv #202001            Nitrogen generator            UL20181102jgv1         </div> <div> <b>Amount:</b>            \$8,172.44         </div>
	<div> <b>Component Description:</b>            Inv MAN00325            WSLS            Transmission Line            UL20180423jg         </div> <div> <b>Amount:</b>            \$20,643.53         </div>
Sweep Tests	Information not provided.



## 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
<b>Primary Tower TOWER</b>	<b>\$1,485,600.00</b>	<b>\$1,127,970.00</b>		<b>\$231,325.56</b>	
Complex Tower (includes, for example, those with candelabras and/or stacked antennas)	\$421,000.00	\$400,000.00	N/A	\$105,688.50	N/A
Structural engineering tower load study for well documented tower	\$12,600.00	\$27,970.00	The tower studies and modifications have turned out to be more complicated than originally anticipated (20180815jgv1)	\$27,970.00	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	\$700,000.00	N/A	\$97,667.06	N/A
<b>Sub-total</b>	<b>\$1,485,600.00</b>	<b>\$1,127,970.00</b>	<b>N/A</b>	<b>\$231,325.56</b>	<b>N/A</b>
<b>Total for all systems</b>	<b>\$6,018,061.00</b>	<b>\$4,741,860.00</b>	<b>N/A</b>	<b>\$1,918,186.46</b>	<b>N/A</b>

## Components

Actual Information		
Description	File Name	
Complex Tower (includes, for example, those with candelabras and/or stacked antennas)	<b>Component Description:</b>	ERI inv #WSLS-001-1 Ant and line install 50 pct pmt 1 UL20181127jgv2
	<b>Amount:</b>	\$105,688.50
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>	Develop an Upgrade or Replacement solution for Tower - Also See Attached "KGA Quote"
	<b>Amount:</b>	\$750.00
	<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>	Coordinate Tower Modifications - Also See Attached "KGA Quote"
	<b>Amount:</b>	\$1,250.00

	<b>Component Description:</b>	Inv: WSLS Tower Data Collection UL20180402
	<b>Amount:</b>	\$2,720.00
	<b>Component Description:</b>	WSLS Malouf inv #1805084V3 Structural Analysis UL20180815jg v1
	<b>Amount:</b>	\$3,500.00
	<b>Component Description:</b>	Inv 1805084V1 WSLS Mod Design and Structural Analysis UL20180424jg v1
	<b>Amount:</b>	\$7,500.00
Serious tower reinforcement/modifications	<b>Component Description:</b>	ERI inv #WSLS-001 Tower work 50 perc pmt 1 UL20181101jgv1
	<b>Amount:</b>	\$20,642.50
	<b>Component Description:</b>	ERI inv #WSLS-TV- 003 Tower mods 50 pct pay 1 UL20181102jgv1
	<b>Amount:</b>	\$54,360.00
	<b>Component Description:</b>	WSLS ERI inv #WSLS-002 Tower work 50 perc dp UL20180731jgv2
	<b>Amount:</b>	\$22,664.56

**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>\$509,075.00</b>	<b>\$515,600.00</b>		<b>\$189,589.84</b>	
Other Legal Services	<i>\$1,000.00</i>	\$1,000.00	Other Legal Services related to the DTV Repack	\$277.65	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.	\$100,215.00	N/A
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

Additional Field Engineering Service, 45 Days	<b>\$90,000.00</b>	\$90,000.00	N/A	\$23,600.00	N/A
RF Exposure Measurements	\$21,050.00	\$20,000.00	N/A	N/A	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
Environmental Assessment, if triggered by NEPA Section 106 review or for certain structures over 450 feet	\$10,520.00	\$10,000.00	N/A	N/A	N/A
NEPA Section 106 environmental review, if needed	\$6,310.00	\$6,000.00	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	\$31,600.00	\$30,000.00	The majority of the PM hours and \$ has been moved to OES and the "Prepare and or review reimbursement form" components.	\$26,749.25	N/A

Prepare and or review reimbursement form	\$2,630.00	\$10,000.00	The station continues to need assistance preparing and submitting its Actual Cost invoices, and the \$10,000 Estimated Cost reflects that.	\$9,230.90	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>	\$509,075.00	\$515,600.00	N/A	\$189,589.84	N/A
<b>Total for all systems</b>	\$6,018,061.00	\$4,741,860.00	N/A	\$1,918,186.46	N/A

## Components

Actual Information Description	File Name
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Other Legal Services	<div> <div>Component Description:</div> <div>Covington inv #60836450 Legal services thru 190131 UL20190308jgv1</div> </div> <div> <div>Amount:</div> <div>\$106.65</div> </div>
	<div> <div>Component Description:</div> <div>Covington inv #60827770 Legal services thru 181130 UL20190308jgv1</div> </div> <div> <div>Amount:</div> <div>\$102.60</div> </div>
	<div> <div>Component Description:</div> <div>C&amp;B inv #60836450 Various legal UL20190405jgv1</div> </div> <div> <div>Amount:</div> <div>\$106.65</div> </div>
	<div> <div>Component Description:</div> <div>WSLS Covington inv #60812707 Review and file 2018 Q2 Progress Report UL20181019jgv1</div> </div> <div> <div>Amount:</div> <div>\$68.40</div> </div>
Other Engineering Services	<div> <div>Component Description:</div> <div>Inv 947-75 WSLS Actual Cost UL20180705jgv1</div> </div> <div> <div>Amount:</div> <div>\$1,687.50</div> </div>
	<div> <div>Component Description:</div> <div>KGA inv #947-134 Actual Cost invoices Sept 18 UL20190212jgv1</div> </div> <div> <div>Amount:</div> <div>\$125.00</div> </div>

<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 #947-150 OES by WTG Dec 2018 UL20190308jgv1
<b>Amount:</b>	\$5,225.00

<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

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

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

	<b>Component Description:</b>	KGA inv #947-116 Site Visit Dec 2018 UL20190212jgv1
	<b>Amount:</b>	\$5,400.00
	<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 inv #947-136 Actual Cost invoices Nov 18 UL20190212jgv1
	<b>Amount:</b>	\$2,775.00
	<b>Component Description:</b>	KGA inv #947-148 OES by WTG 181022-181031 UL20190308jgv1
	<b>Amount:</b>	\$1,600.00
Architectural and Engineering	<b>Component Description:</b>	Osborn inv #29014 Prof Srvs thru 4-27- 18 UL20181105jgv1
	<b>Amount:</b>	\$8,967.04

Additional Field Engineering Service, 45 Days	<table> <tr> <td data-bbox="691 98 1114 398"> <b>Component Description:</b>     <b>Amount:</b> </td><td data-bbox="1114 98 1426 398"> KGA inv #947-69 Field Eng Services UL20190212jgv1 \$3,800.00 </td></tr> <tr> <td data-bbox="691 398 1114 698"> <b>Component Description:</b>     <b>Amount:</b> </td><td data-bbox="1114 398 1426 698"> KGA inv #167-60 Site visit UL20190308jgv1 \$5,400.00 </td></tr> <tr> <td data-bbox="691 698 1114 999"> <b>Component Description:</b>     <b>Amount:</b> </td><td data-bbox="1114 698 1426 999"> Inv: WSLs R&amp;S manufacturer visit UL20180316 \$1,800.00 </td></tr> <tr> <td data-bbox="691 999 1114 1384"> <b>Component Description:</b>          <b>Amount:</b> </td><td data-bbox="1114 999 1426 1384"> Additional Field Engineering Services (On Site Equipment inventory &amp; facilities survey) - Also see Attached "KGA Quote" \$5,400.00 </td></tr> <tr> <td data-bbox="691 1384 1114 1684"> <b>Component Description:</b>     <b>Amount:</b> </td><td data-bbox="1114 1384 1426 1684"> KGA inv #947-38 GatesAir manufacturer visit UL20181211jgv2 \$1,800.00 </td></tr> <tr> <td data-bbox="691 1684 1114 1917"> <b>Component Description:</b>     <b>Amount:</b> </td><td data-bbox="1114 1684 1426 1917"> KGA inv #947-49 Site visit UL20181204jgv2 \$5,400.00 </td></tr> </table>	<b>Component Description:</b>     <b>Amount:</b>	KGA inv #947-69 Field Eng Services UL20190212jgv1 \$3,800.00	<b>Component Description:</b>     <b>Amount:</b>	KGA inv #167-60 Site visit UL20190308jgv1 \$5,400.00	<b>Component Description:</b>     <b>Amount:</b>	Inv: WSLs R&S manufacturer visit UL20180316 \$1,800.00	<b>Component Description:</b>          <b>Amount:</b>	Additional Field Engineering Services (On Site Equipment inventory & facilities survey) - Also see Attached "KGA Quote" \$5,400.00	<b>Component Description:</b>     <b>Amount:</b>	KGA inv #947-38 GatesAir manufacturer visit UL20181211jgv2 \$1,800.00	<b>Component Description:</b>     <b>Amount:</b>	KGA inv #947-49 Site visit UL20181204jgv2 \$5,400.00
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<b>Component Description:</b>     <b>Amount:</b>	KGA inv #947-49 Site visit UL20181204jgv2 \$5,400.00												
RF Exposure Measurements	Information not provided.												

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.
Environmental Assessment, if triggered by NEPA Section 106 review or for certain structures over 450 feet	Information not provided.
NEPA Section 106 environmental review, if needed	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	<table> <tr> <td><b>Component Description:</b></td><td>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.</td></tr> <tr> <td><b>Amount:</b></td><td>\$3,000.00</td></tr> </table>	<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.	<b>Amount:</b>	\$3,000.00												
<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.																
<b>Amount:</b>	\$3,000.00																
	<table> <tr> <td><b>Component Description:</b></td><td>Engineering Portion of 1% Expansion CP application for Initial 90-Day Filing Window - Also see "KGA Quote".</td></tr> <tr> <td><b>Amount:</b></td><td>\$3,000.00</td></tr> </table>	<b>Component Description:</b>	Engineering Portion of 1% Expansion CP application for Initial 90-Day Filing Window - Also see "KGA Quote".	<b>Amount:</b>	\$3,000.00												
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<b>Amount:</b>	\$3,000.00																
Project management of the transition	<table> <tr> <td><b>Component Description:</b></td><td>Inv: WSLs 2017Q3 387 UL20180302</td></tr> <tr> <td><b>Amount:</b></td><td>\$300.00</td></tr> <tr> <td><b>Component Description:</b></td><td>Inv 947-65 WSLs Proj Mgt 2017 Aug - Dec UL20180625jgv2</td></tr> <tr> <td><b>Amount:</b></td><td>\$20,190.00</td></tr> <tr> <td><b>Component Description:</b></td><td>Inv 947-81 WSLs 2018Q2 387 UL20180713jgv1</td></tr> <tr> <td><b>Amount:</b></td><td>\$300.00</td></tr> <tr> <td><b>Component Description:</b></td><td>Inv: WSLs 2017Q4 387 UL20180302</td></tr> <tr> <td><b>Amount:</b></td><td>\$300.00</td></tr> </table>	<b>Component Description:</b>	Inv: WSLs 2017Q3 387 UL20180302	<b>Amount:</b>	\$300.00	<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 947-81 WSLs 2018Q2 387 UL20180713jgv1	<b>Amount:</b>	\$300.00	<b>Component Description:</b>	Inv: WSLs 2017Q4 387 UL20180302	<b>Amount:</b>	\$300.00
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<b>Component Description:</b>	Inv: WSLs 2017Q4 387 UL20180302																
<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>	KGA inv #947-81 Form 387 2018 Q2 UL20180720jgv1
	<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>	Inv 947-57 WSLS 2018Q1 387 UL20180622jgv1
	<b>Amount:</b>	\$300.00
	<b>Component Description:</b>	Inv 60768465 WSLS Various legal UL20180514 jgv1
	<b>Amount:</b>	\$1,559.25
Prepare and or review reimbursement form	<b>Component Description:</b>	Covington inv #60781604 Various legal UL20181127jgv2
	<b>Amount:</b>	\$1,070.00



	<b>Component Description:</b>  <b>Amount:</b>	Covington inv #60775905 Various legal UL20181120jgv3 \$1,197.90
	<b>Component Description:</b>  <b>Amount:</b>	Inv: WSLS Various legal UL20180329 rev'd 20180329jg \$1,197.90
	<b>Component Description:</b>  <b>Amount:</b>	Prepared FCC 399 reimbursement form (Initial Filing) - Also see attached "KGA Quote" \$2,500.00
	<b>Component Description:</b>  <b>Amount:</b>	KGA inv #947-138 Actual Cost prep & submit by JG Jan 2019 UL20190308jgv1 \$3,325.00
	<b>Component Description:</b>  <b>Amount:</b>	Inv: WSLS Reimburse review etc UL20180305 \$513.00
	<b>Component Description:</b>  <b>Amount:</b>	KGA inv #947-158 Actual Cost prep & submit by JG Feb 2019 UL20190308jgv1 \$625.00
Address transition timing and coordination issues w/ other stations and wireless	Information not provided.	

Perform engineering study for new channel assignment and antenna development	<table> <tr> <td data-bbox="687 96 1007 719"><b>Component Description:</b></td><td data-bbox="1007 96 1426 719">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.</td></tr> <tr> <td data-bbox="687 719 1007 808"><b>Amount:</b></td><td data-bbox="1007 719 1426 808">\$7,000.00</td></tr> <tr> <td data-bbox="687 808 1007 1099"><b>Component Description:</b></td><td data-bbox="1007 808 1426 1099">1% Expansion Engineering Studies and Coordination for Initial 90-CP application - Also see "KGA Quote".</td></tr> <tr> <td data-bbox="687 1099 1007 1200"><b>Amount:</b></td><td data-bbox="1007 1099 1426 1200">\$7,000.00</td></tr> </table>	<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.	<b>Amount:</b>	\$7,000.00	<b>Component Description:</b>	1% Expansion Engineering Studies and Coordination for Initial 90-CP application - Also see "KGA Quote".	<b>Amount:</b>	\$7,000.00
<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.								
<b>Amount:</b>	\$7,000.00								
<b>Component Description:</b>	1% Expansion Engineering Studies and Coordination for Initial 90-CP application - Also see "KGA Quote".								
<b>Amount:</b>	\$7,000.00								

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
Other Expenses	\$195,190.00	\$194,585.00		\$0.00	
MVPD Notification of Channel Change	\$2,000.00	\$2,000.00	N/A	N/A	N/A
Develop and air announcement of upcoming channel change	\$100,000.00	\$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	\$10,000.00	\$10,000.00	N/A	N/A	N/A
Equipment Delivery and Handling Charges	\$50,000.00	\$50,000.00	N/A	N/A	N/A
Disposal Costs (for equipment and other waste, net of any salvage value)	\$10,000.00	\$10,000.00	N/A	N/A	N/A
Non-zoning permits	\$10,000.00	\$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
<b>Sub-total</b>	\$195,190.00	\$194,585.00	N/A	\$0.00	N/A
<b>Total for all systems</b>	\$6,018,061.00	\$4,741,860.00	N/A	\$1,918,186.46	N/A

## Components

Information not provided.

Cost Information	Grand Total			
		Predetermined Cost Estimate	Estimated Cost	Actual Cost
	Total for all systems	\$6,018,061.00	\$4,741,860.00	\$1,918,186.46

Reimbursement Status	Question	Response
	The facility has ceased operating on its pre-auction channel.	No
	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>04/11/2019</p>



Certification	Section	Question	Response
	Submission of Actual Cost Documentation Statements	WILLFUL FALSE, FRAUDULENT, OR FICTITIOUS 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 AND/OR FRAUDULENT STATEMENTS COULD SUBJECT THIS ENTITY TO LIABILITY UNDER THE FALSE CLAIMS ACT (U.S. CODE, TITLE 31, SECTIONS 3729-3733).	
		<ol style="list-style-type: none"> <li>1. The Authorized Person signing below certifies and represents 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 certifies that the statements in this form and attached documentation are true, complete, and correct.</li> <li>3. The above-named entity acknowledges that all certifications and attached documentation are considered material representations.</li> </ol>	

4. The above-named entity acknowledges the submission of the information herein creates no obligation on the part of the government to pay any amount.
5. 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 (full power and Class A stations) and/or otherwise modify a television station's facility as a result of the spectrum repack (LPTV/TV Translator stations); or to minimize service disruption resulting from a repacked television station (FM stations); or to continue to carry the signal of a broadcaster that changes channels (MVPD) .
6. 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.
7. The above-named entity certifies that the cost information /documents submitted reflect costs actually incurred.

<p>8. The above-named entity acknowledges that overpayments or payments in error must be promptly refunded to the Commission.</p> <p>9. The above-named entity certifies that it is in full compliance with all statutes, rules, regulations and governmental requirements for which compliance is a prerequisite 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>04/11/2019</p>

## Attachments