Approved by OMB (Office of Management and Budget) 3060-1178

Federal Communications Commission

(REFERENCE COPY - Not for submission)

FCC Form 399: Reimbursement Request

Facility ID: **57840** | Service: **DTV** | Call Sign: **WSLS-TV** | Channel: **34 (UHF)**

File Number: **0000027856**

FRN: **0025636598** | Date Submitted: **04/20/2020**

Applicant Information

Applicant Name, Type, and Contact Information

Applicant	Address	Phone	Email	Applicant Type
GRAHAM MEDIA GROUP, VIRGINIA, LLC 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
William T Godfrey , Jr. . *Consulting Engineers Kessler and Gehman Associates, Inc.*	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
Existing Transmitter Description	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
Existing Transmitter Manufacturer and Type	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
HVAC Service	Does the replacement transmitter require HVAC Service?	No
	Type	N/A
	Size	N/A
	Other Size	N/A
Transmitter Building Addition/Modification or Leasehold Improvement	Does the Transmitter Building require an addition, modification, other leashold improvement?	No
	Size	N/A
Channel 14 Costs	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
Existing Transmitter Description	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
Existing Transmitter Manufacturer and Type	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.
HVAC Service	Does the replacement transmitter require HVAC Service?	No
	Type	N/A
	Size	N/A
	Other Size	N/A
Transmitter Building Addition/Modification or Leasehold Improvement	Does the Transmitter Building require an addition, modification, other leashold improvement?	Yes
	Size	700.0 square feet
Channel 14 Costs	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
Ice Bridge	Ice Bridge

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

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
Combiner for Shared Antenna	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
Elbow Complex	Do you require the separate purchase of the Elbow Complex?	No
	Broadband or Single Channel?	N/A
	Feed Line Size	N/A
Side Mount Brackets	Do you require the separate purchase of side mount brackets for a high power antenna?	No
Pattern Scatter Analysis	Do you require separate purchase of pattern scatter analysis for a side mount high or medium power antenna?	Yes
Sweep Test	Do you require the sweep testing of transmission line and antenna?	No

Auxiliary Antenna

Other Antenna Cost Not Listed

Name	Description
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
Sweep test of existing antenna	Sweep test of existing antenna

Primary Antenna

Existing Antenna Information

Section	Question	Response
Existing Antenna Description	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
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)	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
Combiner for Shared Antenna	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
Elbow Complex	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
Side Mount Brackets	Do you require the separate purchase of side mount brackets for a high power antenna?	
Pattern Scatter Analysis	Do you require separate purchase of pattern scatter analysis for a side mount high or medium power antenna?	No
Sweep Test	Do you require the sweep testing of transmission line and antenna?	Yes

Primary Antenna

Other Antenna Cost Not Listed

Name	Description
Troubleshoot Antenna	Troubleshoot Antenna
Mounting Support Pole	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
Existing Transmission Line Description	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
Existing Transmission Line Manufacturer and Type	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
New Transmission Line Costs	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
Other	Other

Transmission Line Layout	Transmission Line Layout Prior to Mobilization

Outside Professional Services Costs

Section	Question	Response
Outside Project Management Services	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.
Outside RF consulting Engineering Services	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
Attorney and Other Outside Consulting Services	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
RF Field Engineering Services	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
Other Engineering Services	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.
Other Legal Services	Other Legal Services related to the DTV Repack
Architectural and Engineering	Architectural and Engineering for New Transmission Facility. See Quote attached to Osborn inv 29014

Other Expenses

Section	Question	Response
AM Pattern Disturbance	Is an Impact Study needed?	No
	Is Remediation needed?	No
Facility Expenses	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
Permit and Filing Costs	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
Other Miscellaneous Expenses	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
Heavy equipment rentals	Required for Decom
Tax	Tax
Site fence modifications	Site fence modifications

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
Primary Transmitter THU9EVO-24	**$2,788,205.49**	**$1,312,505.49**		**$1,147,889.99**	
Transmitter Remote Control	***$20,485.50***	$20,485.50	See invoices and quotes	$19,950.00	N/A
Ice Bridge	***$6,458.00***	$6,458.00	See attached /uploaded PDF file titled "Mtn Valley 3858 v191210jgv1.pdf"	$6,458.00	N/A
Other -- Building Addition Size: 700.0	***$68,711.99***	$68,711.99	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.	$68,711.99	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.	***$100,000.00***	$100,000.00	N/A	$57,665.00	See attached Osborn Engineering Quote and summary page for additional details.
Transformer 3 phase /480v - 150 KVA	$25,550.00	$24,300.00	N/A	$4,120.00	N/A
UHF - Liquid Cooled Solid State Transmitter 35 - 50 kW	$1,473,000.00	$718,800.00	$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.	$718,800.00	N/A
Additional Interior RF System	***$140,000.00***	$140,000.00	N/A	$38,435.00	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
Auxiliary Transmitter TMU9	**$164,200.00**	**$116,865.01**		**$89,505.01**	
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
Sub-total	$2,952,405.49	$1,429,370.50	N/A	$1,237,395.00	N/A
Total for all systems	$6,098,361.09	$3,367,978.35	N/A	$2,571,912.22	N/A

Components

Actual Information Description	File Name

Transmitter Remote Control	**Component Description:**	Bohn inv #200249 Remote Control UL20190118jgv1
	Amount:	$19,950.00
	Component Description:	Bohn 200190 v190911pmv1
	Amount:	$535.50
Ice Bridge	**Component Description:**	Mtn Valley 3858 v191210jgv1
	Amount:	$6,458.00
Other -- Building Addition Size: 700.0	**Component Description:**	Inv 1034840 WSLS Professional Services UL20180511jgv1
	Amount:	$494.50
	Component Description:	Lionberger 1333-01 v190628jgv1
	Amount:	$44,801.00
	Component Description:	Airgas 9091902591 v200304pmv1
	Amount:	$122.82
	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

Component Description:	Airgas 9964478430 v200304pmv1
Amount:	$29.92
Component Description:	Osborn inv #25404R Facility Building Survey and Condition Assessment UL20190205jgv4
Amount:	$5,375.00
Component Description:	Osborn inv #25404R Facility Elec Survey and Condition Assessment UL20190411jgv6
Amount:	$11,825.93

Other Electrical Service: Additional electrical service needed for the new transmitter and RF plumbing installation.	**Component Description:** **Amount:**	R&S 9500084015 v190528jgv1 $57,165.00
	Component Description: **Amount:**	Osborn inv #25404 Facility Elec Survey and Condition Assessment UL20181203jgOsborn inv #25404R Facility Elec Survey and Condition Assessment UL20190205jgv4 $6,450.93
	Component Description: **Amount:**	WSLS Osborn inv #29669 Prof Srvs through 7-29-18 UL20180726jgv1 $60,252.10
	Component Description: **Amount:**	Developed a Solution for Electrical and HVAC on New Channel - Also See attached "KGA Quote" $500.00
Transformer 3 phase /480v - 150 KVA	**Component Description:** **Amount:**	R&S 9500085911 v190528jgv1 $4,120.00

UHF - Liquid Cooled Solid State Transmitter 35 - 50 kW	**Component Description:**	R&S inv #9500092024 THU9EVO-24 transmitter 50 pct pmt 2 UL20190111jgv1 ... applied to correct THU9EVO-24 component on 190124
	Amount:	$467,500.00
	Component Description:	R&S 9500094125 v200304pmv1
	Amount:	$1,550.00
	Component Description:	R&S 9500100009 v200326pmv2
	Amount:	$16,000.00
	Component Description:	R&S inv #9500092026 THU9EVO-24 transmitter 25 pct final pmt UL20190111jgv1 ... applied to correct THU9EVO-24 component on 190124
	Amount:	$233,750.00

Additional Interior RF System	**Component Description:**	R&S 9500086411 v190528jgv1
	Amount:	$11,300.00
	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 inv #9500092053 Ext Heat Exchanger on Station Load UL20190418jgv1
	Amount:	$10,050.00
	Component Description:	Developed a Solution for Transmitter & Mask Filter on New Channel - Also See attached "KGA Quote"
	Amount:	$750.00

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

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

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	**$495,086.00**	**$566,175.50**		**$479,846.20**	
Mounting Support Pole	***$163,016.00***	$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
Troubleshoot Antenna	***$3,120.00***	$3,120.00	See attached /uploaded PDF file titled "Velocitel 412574 v191210jgv1.pdf"	$3,120.00	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	$371,469.00	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%).	$351,121.30	Please see invoices and quotes
Side mount brackets for high power antennas (if not included in antenna base cost)	$23,150.00	$9,787.50	***System Notice: Estimate adjusted and locked because line has been superseded. ***	$9,787.50	N/A
Auxiliary Antenna TLP-24H(C)VP	**$222,039.00**	**$57,798.00**		**$49,369.00**	

Sweep test of existing antenna	***$3,200.00***	$3,200.00	N/A	$3,200.00	N/A
UHF Lower Power Side Mount, One station antenna-medium power 50-200 kW, horizontally polarized	***$11,629.00***	$11,629.00	N/A	$4,550.00	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 - High Power, Side Mount, basic slot antenna, 8 - 10 kW input, directional,, elliptically or circularly polarized	***$0.00***	$0.00	N/A	$0.00	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
Sub-total	$717,125.00	$623,973.50	N/A	$529,215.20	N/A
Total for all systems	$6,098,361.09	$3,367,978.35	N/A	$2,571,912.22	N/A

Components

Actual Information Description	File Name

Mounting Support Pole	**Component Description:**	WSLS Die inv #MAN00607 Mt pole mod 45 pct pmt 2 UL20181105jgv2
	Amount:	$26,557.20
	Component Description:	Inv MAN00430 WSLS Support pole 45 perc pmt 2 UL20180713jgv1
	Amount:	$46,800.00
	Component Description:	WSLS Die inv #MAN00606 Mt pole mod 45 pct pmt 1 UL20181105jgv2
	Amount:	$26,557.20
Troubleshoot Antenna	**Component Description:**	Velocitel 412574 v191210jgv1
	Amount:	$3,120.00

Elbow complex, single channel, at antenna input, per 4 1/16. feedline (if needed)	**Component Description:** **Amount:**	Die 325012 v190723pmv1 $1,238.30
	Component Description: **Amount:**	Inv MAN00430 WSLS Elbox comp 45 perc pmt 2 UL20180713jgv1 $5,572.35
	Component Description: **Amount:**	Inv MAN00325 WSLS Elbow Complex UL20180423jg $5,572.35
Sweep test of existing antenna	**Component Description:** **Amount:**	Inv MAN00430 WSLS Sweep tests 45 perc pmt 2 UL20180713jgv1 $2,880.00
	Component Description: **Amount:**	Die 354022 v190918jgv3 $640.00
UHF - High Power Top Mount (200-1000 kW), One station antenna , elliptically or circularly polarized	**Component Description:** **Amount:**	Die 345005 v190723pmv1 $6,330.00
	Component Description: **Amount:**	Die 286003 v200115pmv6 $29,735.00

Component Description:	Die 325012 v190723pmv1
Amount:	$742.80
Component Description:	R&S inv #9500092053 Main ant to RF Switch connection comps UL20190418jgv1
Amount:	$16,280.00
Component Description:	Inv MAN00325 WSLS TFU-30DSC VP-R C170 etc Main Antenna UL20180423jg
Amount:	$140,030.10
Component Description:	Die 286003 v190819jgv2
Amount:	N/A
Component Description:	Invoice is being applied to another component at the request of RFAS v200324jg
Amount:	N/A
Component Description:	Inv MAN00430 WSLS Main ant 45 perc pmt 2 UL20180713jgv1
Amount:	$80,562.60
Component Description:	ERI WSLS-015 v190912pmv1
Amount:	$77,440.80

	Component Description: **Amount:**	Die 286003 v190925pmv4 $29,735.00
Side mount brackets for high power antennas (if not included in antenna base cost)	**Component Description:** **Amount:**	Inv MAN00430 WSLS Side mt brckts 45 perc pmt 2 UL20180713jgv1 $9,787.50
Sweep test of existing antenna	**Component Description:** **Amount:**	Die 624027 v191127pmv3 $3,200.00
UHF Lower Power Side Mount, One station antenna-medium power 50-200 kW, horizontally polarized	**Component Description:** **Amount:**	Die 624027 v191127pmv3 ($394.00)
	Component Description: **Amount:**	Die 624027 v191127pmv3 $11,629.00
	Component Description: **Amount:**	Die 624027 v191127pmv3 ($4,131.50)
	Component Description: **Amount:**	Die 624027 v191127pmv3 ($2,553.50)

Pattern scatter analysis for side mount high/med power antennas (if not included in antenna base cost)	**Component Description:** **Amount:**	Die 624027 v191127pmv3 ($1,350.00)
	Component Description: **Amount:**	Die inv #274004 TLP-24 aux ant scatter analysis pmt 2 UL20190125jgv1 $2,700.00
UHF - High Power, Side Mount, basic slot antenna, 8 - 10 kW input, directional,, elliptically or circularly polarized	**Component Description:** **Amount:**	Die 624027 v191015pmv1 N/A
UHF - Lower Power Side Mount, One station antenna - medium power (50-200 kW), horizontally polarized	**Component Description:** **Amount:**	Die inv #274004 TLP-24 aux ant pmt 2 UL20190125jgv1 $5,558.00
	Component Description: **Amount:**	Die inv #274004 TLP-24 aux ant test transition pmt 2 UL20190125jgv1 $788.00
Side mount brackets for high power antennas (if not included in antenna base cost)	**Component Description:** **Amount:**	Die inv #274004 TLP-24 aux ant brackets pmt 2 UL20190125jgv1 $5,107.00

UHF - Lower Power Side Mount, One station antenna - medium power (50-200 kW), horizontally polarized	**Component Description:**	Inv: WSLS TLP-24H (C)VP aux antenna 50 percent down pmt UL20180316
	Amount:	$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**		**$51,985.94**	
Rigid Transmission Line - copper, 6 1/8"	$54,540.00	$54,046.94	N/A	$51,985.94	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	$51,985.94	N/A
Total for all systems	$6,098,361.09	$3,367,978.35	N/A	$2,571,912.22	N/A

Components

Actual Information Description	File Name
Rigid Transmission Line - copper, 6 1/8"	**Component Description:** Die 341010 v190905pmv2 **Amount:** $343.70 **Component Description:** Die 286003 v200115pmv6 **Amount:** $3,900.04 **Component Description:** Die 286003 v200115pmv6 **Amount:** ($3,093.30)

	Component Description: Varney 61865 v200325pmv2 **Amount:** $1,376.00 **Component Description:** Die 286003 v190819jgv2 **Amount:** N/A **Component Description:** Inv MAN00325 WSLS Transmission Line UL20180423jg **Amount:** $20,643.53 **Component Description:** Die 286003 v190925pmv4 **Amount:** $3,900.04 **Component Description:** Die inv #202001 Nitrogen generator UL20181102jgv1 **Amount:** $8,172.44 **Component Description:** Die 341010 v190731pmv1 **Amount:** $343.70 **Component Description:** Inv MAN00430 WSLS Trans line 45 perc pmt 2 UL20180713jgv1 **Amount:** $20,643.53
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 Justificatio
Primary Tower TOWER	**$1,512,447.70**	**$418,344.51**		**$323,743.20**	
Other	***$20,347.70***	$20,347.70	See attached / uploaded PDF file titled "ERI WSLS-015A v200304pmv1.pdf"	$20,347.70	N/A
Serious tower reinforcement /modifications	$1,052,000.00	$157,549.81	See attached / uploaded file titled, "ERI WSLS-TV-003B v200304pmv1"	$157,549.81	N/A
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.
Transmission Line Layout	***$6,500.00***	$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	$108,875.69	N/A
Sub-total	$1,512,447.70	$418,344.51	N/A	$323,743.20	N/A
Total for all systems	$6,098,361.09	$3,367,978.35	N/A	$2,571,912.22	N/A

Components

Actual Information Description	File Name	
Other	**Component Description:** **Amount:**	ERI WSLS-015A v200304pmv1 $20,347.70

Serious tower reinforcement/modifications	**Component Description:**	ERI WSLS-TV-003B v200304pmv1
	Amount:	$7,225.50
	Component Description:	Site Res 249553 v190711jgv1
	Amount:	$2,580.00
	Component Description:	ERI WSLS-TV-003A v190912pmv1
	Amount:	$50,077.25
	Component Description:	ERI inv #WSLS-TV-003 Tower mods 50 pct pay 1 UL20181102jgv1
	Amount:	$54,360.00
	Component Description:	ERI inv #WSLS-001 Tower work 50 perc pmt 1 UL20181101jgv1
	Amount:	$20,642.50
	Component Description:	WSLS ERI inv #WSLS-002 Tower work 50 perc dp UL20180731jgv2
	Amount:	$22,664.56
Structural engineering tower load study for well documented tower	**Component Description:**	WSLS Malouf inv #1805084V4 Structural Analysis UL20180816jg v1
	Amount:	$7,000.00

Component Description:	Inv 1805084V1 WSLS Mod Design and Structural Analysis UL20180424jg v1
Amount:	$7,500.00
Component Description:	Malouf 1905084V0 v191120gv2
Amount:	$2,500.00
Component Description:	Develop an Upgrade or Replacement solution for Tower - Also See Attached "KGA Quote"
Amount:	$750.00
Component Description:	Inv: WSLS Tower Data Collection UL20180402
Amount:	$2,720.00
Component Description:	Coordinate Tower Modifications - Also See Attached "KGA Quote"
Amount:	$1,250.00
Component Description:	Coordinate Tower mapping & analyses - Also See Attached "KGA Quote"
Amount:	$750.00
Component Description:	Inv: WSLS Structural Analysis UL20180305
Amount:	$4,500.00

	Component Description:	WSLS Malouf inv #1805084V3 Structural Analysis UL20180815jg v1
	Amount:	$3,500.00
Transmission Line Layout	**Component Description:**	ERI 52482 v190912pmv1
	Amount:	$6,500.00
Complex Tower (includes, for example, those with candelabras and/or stacked antennas)	**Component Description:**	ERI inv #WSLS-001-1 Ant and line install 50 pct pmt 1 UL20181127jgv2
	Amount:	$105,688.50
	Component Description:	Flash 90214863 v190910pmv1
	Amount:	$384.05
	Component Description:	Flash 90215019 v190910pmv1
	Amount:	$1,603.14
	Component Description:	Vert Tech 5000 v200304pmv1
	Amount:	$1,200.00

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 Co Justificat
Outside Professional Services	**$568,301.70**	**$549,306.70**		**$292,959.74**	
Architectural and Engineering	***$68,350.00***	$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	***$11,554.20***	$11,554.20	Other Legal Services related to the DTV Repack	$11,447.55	N/A
Other Engineering Services	***$186,652.50***	$186,652.50	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.	$170,782.50	N/A

Additional Field Engineering Service, 45 Days	***$90,000.00***	$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	$625.00	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
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
Address transition timing and coordination issues w/ other stations and wireless	$2,630.00	$2,500.00	N/A	N/A	N/A

Prepare and or review reimbursement form	$2,630.00	$30,000.00	The cost estimate includes the initial 399 amendment, anticipated subsequent 399 amendments, and ongoing Actual Cost invoice prep and submission by KGA.	$29,038.40	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.	$27,949.25	N/A
Sub-total	$568,301.70	$549,306.70	N/A	$292,959.74	N/A
Total for all systems	$6,098,361.09	$3,367,978.35	N/A	$2,571,912.22	N/A

Components

Actual Information Description	File Name	
Architectural and Engineering	**Component Description:**	Osborn inv #29014 Prof Srvs thru 4-27-18 UL20181105jgv1
	Amount:	$8,967.04
Other Legal Services		

Component Description:	Covington inv #60827770 Legal services thru 181130 UL20190308jgv1
Amount:	$102.60
Component Description:	C&B 60847118 v190610pmv1
Amount:	$71.10
Component Description:	Cov 60850674 v190810jgv1
Amount:	$3,122.10
Component Description:	Cov 60859434 v191015jgv1
Amount:	$213.30
Component Description:	C&B 60842539 v190704jgv1
Amount:	$71.10
Component Description:	Cov 60855208 v191015jgv1
Amount:	$1,944.90
Component Description:	Cov 60867435 v191223jgv1
Amount:	$3,765.15
Component Description:	Covington inv #60836450 Legal services thru 190131 UL20190308jgv1
Amount:	$106.65

	Component Description:	C&B inv #60836450 Various legal UL20190405jgv1
	Amount:	$106.65
	Component Description:	Cov 60872956 v200305pmv2
	Amount:	$1,982.25
	Component Description:	WSLS Covington inv #60812707 Review and file 2018 Q2 Progress Report UL20181019jgv1
	Amount:	$68.40
Other Engineering Services		
	Component Description:	KGA inv #947-117 2018 Q4 387 UL20190212jgv1
	Amount:	$300.00
	Component Description:	KGA inv #947-151 OES by WTG Jan 2019 UL20190308jgv1
	Amount:	$2,725.00
	Component Description:	KGA inv #947-150 OES by WTG Dec 2018 UL20190308jgv1
	Amount:	$5,225.00
	Component Description:	KGA 947-186 v190614pmv1
	Amount:	$2,152.50

Component Description:	KGA inv #947-148 OES by WTG 181022-181031 UL20190308jgv1
Amount:	$1,600.00
Component Description:	KGA 947-269 v200202jgv1
Amount:	$4,357.50
Component Description:	KGA 947-270 v200202jgv1
Amount:	$7,977.50
Component Description:	KGA 947-267 v200202jgv1
Amount:	$8,012.50
Component Description:	KGA 947-185 v190614pmv1
Amount:	$3,135.00
Component Description:	KGA 947-188 v190614pmv1
Amount:	$6,427.50
Component Description:	KGA 947-204 v191015jgv1
Amount:	$7,375.00
Component Description:	KGA 947-266 v200202jgv1
Amount:	$2,432.50
Component Description:	KGA 947-265 v200202jgv1
Amount:	$2,535.00

Component Description:	KGA 947-187 v190614pmv1
Amount:	$4,155.00
Component Description:	KGA inv #947-149 OES by WTG Nov 2018 UL20190308jgv1
Amount:	$5,350.00
Component Description:	KGA 947-185 v190704jgv1
Amount:	$3,135.00
Component Description:	KGA inv #947-135 Actual Cost invoices Oct 18 UL20190212jgv1
Amount:	$100.00
Component Description:	KGA 947-188 v190704jgv1
Amount:	$6,427.50
Component Description:	KGA inv #947-116 Site Visit Dec 2018 UL20190212jgv1
Amount:	$5,400.00
Component Description:	KGA inv #947-104 Actual Cost invs 180607 - 180905 UL20180720jgv1
Amount:	$2,227.50

Component Description:	Inv 947-88 WSLS OES Jan18 - Jun18 UL20180720jgv1
Amount:	$44,325.00
Component Description:	KGA 947-187 v190704jgv1
Amount:	$4,155.00
Component Description:	KGA inv #947-137 Actual Cost invoices Dec 18 UL20190212jgv1
Amount:	$975.00
Component Description:	KGA 947-271 v200202jgv1
Amount:	$487.50
Component Description:	KGA 947-186 v190704jgv1
Amount:	$2,152.50
Component Description:	KGA inv #947-113 OES Jul18 - Oct18 UL20180720jgv1
Amount:	$27,400.00
Component Description:	KGA inv #947-136 Actual Cost invoices Nov 18 UL20190212jgv1
Amount:	$2,775.00
Component Description:	Inv 947-75 WSLS Actual Cost UL20180705jgv1
Amount:	$1,687.50

Component Description:	KGA inv #947-134 Actual Cost invoices Sept 18 UL20190212jgv1
Amount:	$125.00
Component Description:	KGA 947-268 v200202jgv1
Amount:	$21,520.00

Additional Field Engineering Service, 45 Days	**Component Description:**	KGA inv #167-60 Site visit UL20190308jgv1
	Amount:	$5,400.00
	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 #947-38 GatesAir manufacturer visit UL20181211jgv2
	Amount:	$1,800.00
	Component Description:	Inv: WSLS R&S manufacturer visit UL20180316
	Amount:	$1,800.00
	Component Description:	KGA inv #947-49 Site visit UL20181204jgv2
	Amount:	$5,400.00

Comprehensive coverage verification via field study, if needed	**Component Description:** **Amount:**	Partial Completion of Comprehensive coverage verification via field study - see "KGA Quote" for fixed price fee. $38,200.00
FAA consultant, including cost of preparing FAA Form 7460 (Notice of Proposed Construction), if needed for height increase	**Component Description:** **Amount:**	Inv 947-71 WSLS FAA 7460 UL20180531jgv1 $550.00
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	**Component Description:** **Amount:**	KGA 947-209 v191223jgv1 $625.00
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	**Component Description:** **Amount:** **Component Description:** **Amount:**	Engineering Portion of 1% Expansion CP application for Initial 90-Day Filing Window - Also see "KGA Quote". $3,000.00 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. $3,000.00

Perform engineering study for new channel assignment and antenna development	**Component Description:**	1% Expansion Engineering Studies and Coordination for Initial 90-CP application - Also see "KGA Quote".
	Amount:	$7,000.00
	Component Description:	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.
	Amount:	$7,000.00
Address transition timing and coordination issues w/ other stations and wireless	Information not provided.	
Prepare and or review reimbursement form	**Component Description:**	KGA inv #947-158 Actual Cost prep & submit by JG Feb 2019 UL20190308jgv1
	Amount:	$625.00
	Component Description:	KGA 947-203 v191015jgv1
	Amount:	$3,265.00

Component Description: KGA 947-245 v200202jgv1
Amount: $1,350.00

Component Description: KGA 947-167 v190704jgv1
Amount: $1,412.50

Component Description: KGA 947-172 v190704jgv1
Amount: $1,620.00

Component Description: KGA 947-233 v200124jgv2
Amount: $2,990.00

Component Description: KGA 947-176 v190704jgv1
Amount: $1,475.00

Component Description: KGA 947-197 v191015jgv1
Amount: $1,665.00

Component Description: KGA 947-220 v191223jgv1
Amount: $3,005.00

Component Description: KGA 947-208 v191015jgv1
Amount: $610.00

Component Description: KGA 947-232 v191206jgv1
Amount: $2,415.00

	Component Description:	Covington inv #60775905 Various legal UL20181120jgv3
	Amount:	$1,197.90
	Component Description:	Inv: WSLS Various legal UL20180329 rev'd 20180329jg
	Amount:	$1,197.90
	Component Description:	Covington inv #60781604 Various legal UL20181127jgv2
	Amount:	$1,070.00
	Component Description:	Prepared FCC 399 reimbursement form (Initial Filing) - Also see attached "KGA Quote"
	Amount:	$2,500.00
	Component Description:	Inv: WSLS Reimburse review etc UL20180305
	Amount:	$513.00
	Component Description:	KGA inv #947-138 Actual Cost prep & submit by JG Jan 2019 UL20190308jgv1
	Amount:	$3,325.00
Project management of the transition	**Component Description:**	Inv: WSLS 2017Q3 387 UL20180302
	Amount:	$300.00

Component Description:	Inv 60768465 WSLS Various legal UL20180514 jgv1
Amount:	$1,559.25
Component Description:	Inv 947-81 WSLS 2018Q2 387 UL20180713jgv1
Amount:	$300.00
Component Description:	KGA 947-193 v190718jgv1
Amount:	$300.00
Component Description:	KGA 947-163 v190704jgv1
Amount:	$300.00
Component Description:	KGA 947-210 v191223jgv1
Amount:	$300.00
Component Description:	Inv 947-65 WSLS Proj Mgt 2017 Aug - Dec UL20180625jgv2
Amount:	$20,190.00
Component Description:	KGA inv #947-81 Form 387 2018 Q2 UL20180720jgv1
Amount:	$300.00
Component Description:	Inv: WSLS 2017Q4 387 UL20180302
Amount:	$300.00

Component Description:	Inv 947-57 WSLS 2018Q1 387 UL20180622jgv1
Amount:	$300.00
Component Description:	KGA inv #947-109 Form 387 2018 Q3 UL20180720jgv1
Amount:	$300.00
Component Description:	Project Management - Also see attached "KGA Quote" Hours: 23-1/3 Rate: $150/hr Time Period: 8/1/17 - 8/31/17
Amount:	$3,500.00
Component Description:	KGA 947-211 v191223jgv1
Amount:	$300.00

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 Co Justificat
Other Expenses	**$287,141.20**	**$286,536.20**		**$136,613.14**	
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
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 - 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
DTV Medical Facility Notification	$11,550.00	$11,000.00	N/A	$3,750.00	N/A

Site fence modifications	***$6,334.00***	$6,334.00	See attached / uploaded PDF file titled "Powers Fence 5347 v200203jgv1. pdf"	$6,334.00	N/A
Tax	***$2,777.20***	$2,777.20	Tax	$2,777.20	N/A
Heavy equipment rentals	***$5,440.00***	$5,440.00	N/A	$5,440.00	N/A
MVPD Notification of Channel Change	***$2,000.00***	$2,000.00	N/A	$1,685.00	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	$6,396.26	N/A
Equipment Delivery and Handling Charges	***$50,000.00***	$50,000.00	N/A	$22,830.68	N/A
Disposal Costs (for equipment and other waste, net of any salvage value)	***$87,400.00***	$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
Non-zoning permits	***$10,000.00***	$10,000.00	N/A	N/A	N/A

Sub-total	$287,141.20	$286,536.20	N/A	$136,613.14	N/A
Total for all systems	$6,098,361.09	$3,367,978.35	N/A	$2,571,912.22	N/A

Components

Actual Information Description	File Name	
FCC Filing Fees - Special Temporary Authorization request	Information not provided.	
FCC Filing Fees - Form 2100 license to cover application	Information not provided.	
FCC Filing Fees - Form 2100 minor change CP application	Information not provided.	
DTV Medical Facility Notification	**Component Description:** **Amount:**	RF Notifications 1202 v191224jgv1 $3,750.00
Site fence modifications	**Component Description:** **Amount:**	Powers Fence 5347 v200420pmv2 $6,334.00
Tax	**Component Description:** **Amount:**	R&S 9500102206 v190625jgv1 $2,777.20
Heavy equipment rentals	**Component Description:** **Amount:**	R&S 9500102206 v190625jgv1 $5,440.00

MVPD Notification of Channel Change	**Component Description:** **Amount:**	KGA 947-168 v190704jgv1 $1,685.00
Develop and air announcement of upcoming channel change	Information not provided.	
Equipment Storage	**Component Description:** **Amount:** **Component Description:** **Amount:**	Die 650019 v191114pmv1 $6,205.00 PODS Z130000008776 v190916pmv1 $191.26
Equipment Delivery and Handling Charges	**Component Description:** **Amount:** **Component Description:** **Amount:** **Component Description:** **Amount:** **Component Description:** **Amount:**	Die 341010 v190905pmv2 $19,286.18 Die 201015 v190730pmv1 $102.00 Die 650019 v191114pmv1 $3,442.50 Die 341010 v190731pmv1 $19,286.18

Disposal Costs (for equipment and other waste, net of any salvage value)	**Component Description:** **Amount:**	R&S 9500102206 v190625jgv1 $6,810.00
	Component Description: **Amount:**	R&S 9500102206 v190625jgv1 $7,270.00
	Component Description: **Amount:**	R&S 9500102206 v190625jgv1 $21,320.00
	Component Description: **Amount:**	R&S inv #9500092053 Decommissioning Sigma UL20190418jgv1 $52,000.00
Non-zoning permits	Information not provided.	

Cost Information

Grand Total

	Predetermined Cost Estimate	Estimated Cost	Actual Cost
Total for all systems	$6,098,361.09	$3,367,978.35	$2,571,912.22

Reimbursement Status

Question	Response
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	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.	
	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. 2. The above-named entity acknowledges that all certifications and attached documentation are considered material representations. 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.	

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.

	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.	
	I declare, under penalty of perjury, that I am an authorized representative of the above-named applicant for the Authorization(s) specified above.	**Jeffrey C Gehman** *Engineering Associate* 04/20/2020

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 IMPRISIONMENT (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).	
	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. 2. The above-named entity certifies that the statements in this form and attached documentation are true, complete, and correct. 3. The above-named entity acknowledges that all certifications and attached documentation are considered material representations.	

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.

	8. The above-named entity acknowledges that overpayments or payments in error must be promptly refunded to the Commission. 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.	
	I declare, under penalty of perjury, that I am an authorized representative of the above-named applicant for the Authorization(s) specified above.	**Jeffrey C Gehman** *Engineering Associate* 04/20/2020

Attachments