

(REFERENCE COPY - Not for submission)

FCC Form 399: Reimbursement Request

Facility 53114 Service: DTV Call WDIV-TV Channel: 32 (UHF)

ID: Sign:

11/06

ID: File **0000027867**

Number:

FRN: **0002161123** Date

Submitted: /2019

Applicant Information

Applicant Name, Type, and Contact Information

Applicant	Address	Phone	Email	Applicant Type
GRAHAM MEDIA GROUP, MICHIGAN, INC. Doing Business As: GRAHAM MEDIA GROUP, MICHIGAN, INC.	Marcus Williams 550 WEST LAFAYETTE BOULEVARD DETROIT, MI 48226 United States	+1 (313) 222- 0581	MARCUS@WDIV. COM	Corporation

Reimbursement Contact Name and Information Reimbursement Contact 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 NW 60 Street, Suite D 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	Install new main dual transmitter and main antenna while using licensed AUX facility during tower work and throughout the assigned phase. Map and analyze tower; design and modify tower. Install new AUX antenna and AUX transmitter post-transition.

Transmitters

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

Auxiliary Transmitter

Existing 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	
Manufacturer and Type	Model	Diamond
	Year	2005
	Туре	Solid State
	Solid State Cooling	Air Cooled
	Solid State Power Capacity	7.5 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	UAXTE- 12R44
	Transmitter Type	Solid State
	Solid State Cooling	Air Cooled
	Solid State Power capacity	7.2 kW
	Justification for New Transmitter	The manufacturer of the existing transmitter advises that the transmitter cannot be retuned 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)	No
	Transformer (480V)	No
	Power	N/A
	Rigid Conduit and Wiring	No

	Size	N/A
	Length	N/A
	Other Electrical Service	Yes
	Description	Disconnect existing transmitter for removal and connect new transmitter after installation.
HVAC Service	Does the replacement transmitter require HVAC Service?	No
	Туре	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
Transmittor

Other Transmitter Cost Not Listed

Transmitter 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	
Manufacturer and Type	Model	SigmaCD
	Year	2008
	Туре	Inductive Output Tube
	IOT Power Type	Three
	Power Capacity	80 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?	Yes
	Manufacturer	
	Model	ULXTED-100
	Transmitter Type	Solid State
	Solid State Cooling	Liquid Cooled
	Solid State Power capacity	63.4 kW
	Justification for New Transmitter	The existing 80 kW IOT transmitter configuration is equivalent to a magic tee dual transmission system and not the single ULXTE. Therefore, WDIV is budgeting for the ULXTED model. The next step up is a ULXTED-100 which WDIV is budgeting for (see attached)

Primary Transmitter

Other Transmitter Costs

Section	Question	Response
Electrical Service	Service Entrance (3 phases 800A 208V)	Yes
	Switchgear (industrial 800 amp)	Yes
	Transformer (480V)	Yes
	Power	300 kVA
	Rigid Conduit and Wiring	Yes
	Size	3 inches
	Length	100.0 feet
	Other Electrical Service	No
	Description	N/A
HVAC Service	Does the replacement transmitter require HVAC Service?	No
	Туре	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	0.0 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
Additional Interior RF System	Interior RF System Existing Transmitter to Interim Transmission line

Standby Exciter and Switch	Standby Exciter with Automatic Change Over Switch
Installation	Installation

Antennas

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

Existing 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 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?	No
Existing Antenna	Class	Full Power
Manufacturer and Type	Mounting	Side Mount
	Antenna position in stack	Not in Stack
	Polarization	Horizontal
	Туре	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)	973.0 kW

Manufacturer	
Model	TFU-18DSC
Year	2005

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?	No
New Antenna	Class	Full Power
Manufacturer and Types	Mounting	Side Mount
	Antenna position in stack	Not in Stack
	Polarization	Horizontal
	Туре	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)	973.0 kW
	Manufacturer	
	Model	TFU-18DSC- R CT3

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

Other Antenna Costs

Section	Question	Response
Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	
	Туре	
	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	6 1/8 inches inches
Side Mount Brackets	Do you require the separate purchase of side mount brackets for a high power antenna?	Yes
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?	Yes
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Other Antenna Cost Not Listed

Name	Description
TLSCR	TLSCR

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?	No
Existing Antenna	Class	Full Power
Manufacturer and Type	Mounting	Top Mount
	Antenna position in stack	Not in Stack
	Polarization	Elliptical
	Туре	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)	872.0 kW

Manufacturer	
Model	TFU-27ETT VP R4C130
Year	2008

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?	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?	No
New Antenna	Class	Full Power
Manufacturer and Types	Mounting	Top Mount
	Antenna position in stack	Not in Stack
	Polarization	Elliptical
	Туре	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)	720.0 kW
	Manufacturer	
	Model	TFU-23ETT /VP-R 4C130

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

Other Antenna Costs

Section	Question	Response
Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	No
	Туре	
	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	6 1/8 inches inches
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?	No

Sweep Test	Do you require the sweep testing of	Yes
	transmission line and antenna?	

Other Antenna Cost Not Listed

Information not provided.

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

Primary Transmission

Existing Transmission Line

Section .	Question	Response
Existing Transmission Line Description	Type of change	Utilize Existing
	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	Dielectric
	Туре	Rigid
	Diameter	8 3/16 inches
	Other Diameter	N/A
	Segment Length	Broadband
	Other Segment Length	N/A
	Number of parallel runs	1
	Length	1232 feet per run

Primary Transmission

Other Transmission Line Expenses Not Listed

n Naime	Description
Sweep Tests	Sweep tests to confirm line is acceptable on assigned channel.
Miscellaneous Parts	Miscellaneous Parts

Auxiliary Transmissio

Existing Transmission Line

Section 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 the existing transmission line shared with another station or stations?	No
	Is Transmission Line in operating condition?	Yes
Existing Transmission	Manufacturer	Dielectric
Line Manufacturer and Type	Туре	Rigid
	Diameter	6 1/8 inches
	Other Diameter	N/A
	Segment Length	19 3/4 inches
	Other Segment Length	N/A
	Number of parallel runs	1
	Length	1110 feet per run

Auxiliary Transmission

Other Transmission Line Expenses Not Listed

n Line	Description
Sweep Tests	Sweep tests to verify operation on assigned channel

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?	No
	Is this tower currently shared with any other stations?	Yes
	One or more FM, AM or TV radio broadcaster(s)	Yes
	Others Types of Users	No
	Is tower documented for structural analysis?	Yes
	Is tower compliant with Rev G?	Yes
Existing Tower Structure	Do you have a tower registration number?	Yes
Registration	ASR Number	1000830
Coordinates (NAD83 (North American Datum of 1983))	Latitude (NAD83)	42° 28' 58.0" N-
	Longitude (NAD83)	083° 12' 19.0" W-
	Overall Structure Height	1062.98 fee
	Support Structure Height	980.96 feet
	Ground Elevation Above Mean Sea Level (AMSL)	685.69 feet

Structure Type	TOWER - Free Standing or Guyed Structure
Tower Owner	Graham Media Group, Michigan, Inc.
Date Constructed	01/01/1988

FM, AM or TV radio broadcasters. Facility ID's, Call Signs and Services of other broadcast stations with whom the tower is shared

Facility ID	Call Sign	Service
9618	WXYT-FM	FM

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:	Minor Reinforcements needed

Primary Tower

Tower Rigging Costs

Section	Question	Response
Tower Rigging Costs	Complex Tower	N/A
Helicopter Services Required	Are helicopter services required?	No

Primary Tower

Other Tower Expenses Not Listed

Information not provided.

Outside Professional

Section	Question	Response
Services Costs Outside Project Management Services	Do you require outside project management services?	Yes
	Number of Hours	600
	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	No

	Quantity	N/A
	Do you have Distributed Transmission System engineering services?	N/A
	Critical Facility	N/A
	Terrain-Shielded Facility	N/A
Attorney and Other Outside Consulting	Prepare and file Form FCC Construction Permit Application	Yes
Services	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	1
	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	Yes
	Additional Field Engineering Service	Yes

Number of Days	30
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

Other Professional Services Expenses Not Listed

I Services Costs	Description
Other Legal Services	Other Legal Services related to the DTV Repack
Other Engineering Services	Fewer Project Management "PM" tasks are required & Other Engineering Services "OES" are required, therefore the 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 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	No
	FCC License to Cover Application	No
	FCC Special Temporary Authority Application	No
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 Not Listed

Expenses 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
Primary Transmitter ULXTED-100	\$2,254,511.70	\$2,260,635.61		\$2,059,992.00	
Installation	\$1,758.00	\$1,758.00	Fire extinguisher system work	\$1,758.00	N/A
Standby Exciter and Switch	\$25,000.00	\$25,000.00	N/A	N/A	N/A
Additional Interior RF System	\$75,000.00	\$75,000.00	N/A	N/A	N/A
Other Building Addition Size: 0.0	\$24,051.00	\$24,051.00	See uploaded PDF titled "WDIV Transmitter Building Preparation for Repack Cost v2.pdf" No building size increase is needed; only building modifications.	N/A	N/A
3" Rigid Conduit and Wiring (Cost per foot)	\$5,200.00	\$4,900.00	N/A	N/A	N/A
Transformer 3 phase /480v - 300 KVA	\$36,800.00	\$35,000.00	N/A	N/A	N/A

Switchgear - industrial 800 amp	\$38,200.00	\$36,300.00	N/A	N/A	N/A
UHF - Liquid Cooled Solid State Transmitter 63.4 kW	\$2,034,102.70	\$2,034,102.70	See attached GatesAir quote for ULXTED-100	\$2,033,710.09	N/A
Service entrance 3 phase/800 amp/208 volt	\$14,400.00	\$24,523.91	Please see attached invoices and quotes	\$24,523.91	N/A
Auxiliary Transmitter UAXTE- 12R44	\$247,516.02	\$247,516.02		\$239,952.02	
UHF - Air Cooled Solid State Transmitter 7.2 kW	\$242,516.02	\$242,516.02	See attached quote	\$239,952.02	N/A
Other Electrical Service: Disconnect existing transmitter for removal and connect new transmitter after installation.	\$5,000.00	\$5,000.00	N/A	N/A	N/A
Sub-total	\$2,502,027.72	\$2,508,151.63	N/A	\$2,299,944.02	N/A
Total for all	\$4,014,402.33	\$4,197,891.24	N/A	\$2,815,284.51	N/A

Components

Actual Information Description	File Name	
Installation	Component Description: Amount:	MFE 112032 v190805jgv2 \$270.00
	Component Description: Amount:	MFE 111915 v190805jgv2 \$1,488.00
Standby Exciter and Switch	Information not provided.	
Additional Interior RF System	Information not provided.	
Other Building Addition Size: 0.0	Information not provided.	
3" Rigid Conduit and Wiring (Cost per foot)	Information not provided.	
Transformer 3 phase/480v - 300 KVA	Information not provided.	
Switchgear - industrial 800 amp	Information not provided.	
UHF - Liquid Cooled Solid State Transmitter 63.4 kW	Component Description: Amount:	Gates US0328131 v190919pmv1 \$683,116.43
	Component Description:	Gates JW30004541-2 v190523jgv2
	Amount: Component Description:	\$678,034.23 Gates inv
	Amount:	#JW30004541-1 1 third dp Prim TX UL2018116jgv1 \$672,559.43

Service entrance 3 phase 800 amp/208 volt	Component Description:	Talbot 10237-01
	Amount:	v190919pmv1 \$22,679.91
	Component Description:	Talbot 3894-01
	Amount:	v190705jgv1 \$1,844.00
JHF - Air Cooled Solid		
State Transmitter 7.2 kW	Component Description:	Gates inv
		#JW30004542-1 1
		third dp Aux TX UL2018119jgv1
	Amount:	\$80,838.67
	Component Description:	Gates US0329684
		v190919pmv1
	Amount:	\$78,274.68
	Component Description:	Gates
		JW30004542-2
	Amount	v190529jgv1
	Amount:	\$80,838.67
Other Electrical Service: Disconnect existing ransmitter for removal and connect new transmitter	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).

	Predetermined	Estimated	Estimated Cost		Actual Cost
Description	Cost Estimate	Cost	Justification	Actual Cost	Justification
Primary Antenna TFU-23ETT /VP-R 4C130	\$308,530.00	\$297,383.00		\$118,248.84	
UHF - High Power Top Mount (200- 1000 kW), One station antenna, elliptically or circularly polarized	\$289,500.00	\$275,000.00	N/A	\$108,176.49	N/A
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	\$2,880.00	N/A
Elbow complex, single channel, at antenna input, per 6 1/8. feedline (if needed)	\$12,300.00	\$15,983.00	The \$3,600.00 "Elbow 6- 75 DIGIT 90 DEG 9 X 18" line item is being applied to this component, in addition to the \$12,383.00 Elbow Complex line item.	\$7,192.35	N/A

Auxiliary Antenna TFU-18DSC- R CT3	\$284,404.00	\$287,131.00		\$171,090.00	
TLSCR	\$1,964.00	\$1,964.00	N/A	\$883.80	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	N/A	N/A
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	\$5,760.00	N/A
UHF - High Power, Side Mount, basic slot antenna, 973 kW input, directional,, horizontally polarized	\$235,000.00	\$235,000.00	N/A	\$134,471.70	N/A

Elbow	\$12,300.00	\$16,767.00	The	\$14,206.50	N/A
complex,			\$2,420.00		
single			Trans Test		
channel, at			and		
antenna			\$1,964.00		
input, per 6			Fixed		
1/8.			Flange line		
feedline (if			items are		
needed)			being		
			applied to		
			this		
			component,		
			in addition		
			to the		
			\$12,383.00		
			Elbow		
			Complex		
			line item.		
Side mount brackets for high power antennas (if not included in antenna base cost)	\$23,150.00	\$22,000.00	N/A	\$15,768.00	N/A
Sub-total	\$592,934.00	\$584,514.00	N/A	\$289,338.84	N/A
Total for all systems	\$4,014,402.33	\$4,197,891.24	N/A	\$2,815,284.51	N/A

Actual Information	
Description	File Name

UHF - High Power Top Mount (200-1000 kW), One station antenna, elliptically or circularly polarized

Component Description: Die inv #MAN00799

Primary fixed flange

pmt 1

UL20190313jgv1

\$1,255.50

Component Description: Die inv #MAN00799

Amount:

Primary fixed flange

pmt 1

UL20190313jgv1

Amount: \$1,195.20

Component Description: Die inv #MAN00799

Primary ant pmt 1 UL20190313jgv1

Amount: \$102,095.55

Component Description: Die inv #MAN00799

Primary trans test

pmt 1

UL20190313jgv1

Amount: \$2,469.60

Component Description: Die inv #MAN00799

Primary reducer

pmt 1

UL20190313jgv1

Amount: \$1,160.64

Sweep test of existing antenna

Component Description: Die inv #MAN00799

Primary sweep pmt 1 UL20190313jgv1

Amount: \$2,880.00

Elbow complex, single channel, at antenna input, per 6 1/8. feedline (if	Component Description:	Die inv #MAN00799 Primary elbow pmt
needed)	Amount:	1 UL20190313jgv1 \$1,620.00
	Component Description:	Die inv #MAN00799
	Amount:	Primary elbow complex pmt 1 UL20190313jgv1 \$5,572.35
TLSCR	Component Description:	Die MAN01318
	Amount:	v190919pmv1 \$883.80
Pattern scatter analysis for side mount high/med power antennas (if not included in antenna base cost)	Information not provided.	
Sweep test of existing antenna	Common and Donoring tions	Di- MANO4040
	Component Description:	Die MAN01318 v190919pmv1
	Amount:	\$2,880.00
	Component Description:	Die inv #MAN00798
		Aux ant sweep pmt 1 UL20190314jgv1
	Amount:	\$2,880.00

UHF - High Power, Side Mount, basic slot antenna, 973 kW input, directional,, horizontally polarized

Component Description:

Die MAN01318 v190919pmv1 \$67,235.85

Amount:

Die inv #MAN00798

Aux ant pmt 1 UL20190314jgv1

Amount:

\$67,235.85

Elbow complex, single channel, at antenna input, per 6 1/8. feedline (if needed)

Component Description:

Component Description:

Die MAN01318 v190919pmv1

Amount:

\$1,089.00

Component Description:

Die MAN01318 v190919pmv1

Amount:

\$5,572.35

Component Description:

Die inv #MAN00798

Aux ant elbow complex pmt 1 UL20190314jgv1

Amount:

Amount:

\$5,572.35

Component Description: Die inv #MAN00798

Aux ant trans test

pmt 1

UL20190314jgv1

\$1,089.00

Component Description:

Die inv #MAN00798 Aux ant fixed flange

pmt 1

\$883.80

UL20190314jgv1

Amount:

Side mount brackets for high power antennas (if not included in antenna base cost)

Component Description: Die MAN01318

v190919pmv1

Amount: \$7,884.00

Component Description: Die inv #MAN00798

Aux ant side mt brackets pmt 1 UL20190314jgv1

Amount: \$7,884.00

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	\$22,575.61	\$22,575.61		\$19,703.45	
Sweep Tests	\$6,400.00	\$6,400.00	N/A	\$3,660.35	N/A
Miscellaneous Parts	\$16,175.61	\$16,175.61	N/A	\$16,043.10	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	\$28,975.61	\$28,975.61	N/A	\$19,703.45	N/A
Total for all systems	\$4,014,402.33	\$4,197,891.24	N/A	\$2,815,284.51	N/A

Actual Information Description	File Name	
Sweep Tests		
	Component Description:	Inv WDIV161202
		WDIV Line sweep
		UL20180423 v2
	Amount:	\$3,660.35

Miscellaneous Parts		
	Component Description:	Die ST579006
		v191009pmv2
	Amount:	\$550.62
	Component Description:	Die 594028
		v191018pmv1
	Amount:	\$2,344.00
	Component Description:	Die ST594028
		v191024pmv1
	Amount:	\$140.64
	Component Description:	Die ST592013
		v190923pmv1
	Amount:	\$216.84
	Component Description:	Die 592013
		v190923pmv1
	Amount:	\$3,614.00
	Component Description:	Die 579006
		v190923pmv1
	Amount:	\$9,177.00
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
Primary Tower TOWER	\$381,100.00	\$562,000.00		\$140,210.00	
Structural engineering tower load study for well documented tower	\$12,600.00	\$12,000.00	N/A	\$6,000.00	N/A
Minor tower reinforcement /modifications	\$158,000.00	\$150,000.00	N/A	N/A	N/A

Tall Tower	\$210,500.00	\$400,000.00	Rigging	\$134,210.00	N/A
(greater than			must be		
500')			done twice since		
			WDIV has		
			a licensed		
			AUX		
			facility.		
			First		
			rigging for		
			post-		
			auction		
			AUX build-		
			out while		
			main		
			operates		
			as interim.		
			Second		
			rigging for		
			post-		
			auction		
			Main build-		
			out while		
			AUX		
			operates		
			on post-		
			auction		
			after		
			assigned		
			phase.		
Sub-total	\$381,100.00	\$562,000.00	N/A	\$140,210.00	N/A
Total for all	\$4,014,402.33	\$4,197,891.24	N/A	\$2,815,284.51	N/A

Actual Information			
Description	File Name		

Structural engineering cower load study for well	Component Description:	Inv: WDIV
documented tower		Structural Analysis
		UL20180329 2 of 2
	Amount:	\$1,000.00
	Component Description:	Inv: WDIV
		Structural Analysis
		UL20180329 1 of 2
	Amount:	\$5,000.00
Minor tower reinforcement (modifications	Information not provided.	
Tall Tower (greater than		
500')	Component Description:	CTC inv #2093 Aux
		and Prim ant install
		pmt 1
		UL20190308jgv1
	Amount:	\$134,210.00

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 Cos Justificatio
Outside Professional Services	\$370,815.00	\$376,250.00		\$63,225.10	
Other Engineering Services	\$60,000.00	\$60,000.00	Fewer Project Management "PM" tasks are required & Other Engineering Services "OES" are required, therefore the 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.	\$22,445.00	N/A
Other Legal Services	\$10,000.00	\$10,000.00	Need	\$2,037.60	N/A
Additional Field Engineering Service, 30 Days	\$60,000.00	\$60,000.00	N/A	\$6,800.00	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	N/A	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	N/A	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	\$3,680.00	\$3,500.00	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
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	\$3,000.00	N/A	\$3,000.00	N/A

Perform engineering study for new channel assignment and antenna development	\$7,360.00	\$7,000.00	N/A	\$7,000.00	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	\$20,000.00	The Estimated Cost reflects the station's ongoing need for outside assistance with preparation and submission of its Actual Cost Repack invoices.	\$14,722.50	N/A
Project management of the transition	\$94,800.00	\$90,000.00	The added complexity of dual mobilization for tower rigging as well as the complexity of this project. \$60,000 has been moved from PM to the Other Engineering Services component (181116jg)	\$7,220.00	N/A

Sub-total	\$370,815.00	\$376,250.00	N/A	\$63,225.10	N/A
Total for all systems	\$4,014,402.33	\$4,197,891.24	N/A	\$2,815,284.51	N/A

Components		
Actual Information Description	File Name	
Other Engineering Services		
	Component Description:	KGA 947-189 v190614pmv1c
	Amount:	\$590.00
	Component Description:	KGA 947-192
	Amount:	v190614pmv1 \$1,652.50
	Component Description:	KGA inv #947-62 Other Eng Srvcs Aug - Dec 2017
	Amount:	UL20190226jgv2 \$7,665.00
	Component Description:	KGA 947-153 v190515pmv1
	Amount:	\$2,075.00
	Component Description:	KGA inv #947-62 Other Eng Srvcs Aug - Dec 2017
	Amount:	UL2018116jgv1 \$7,665.00
	Component Description:	KGA 947-154
	Amount:	v190515pmv1 \$225.00

Component Description: KGA 947-152

v190515pmv1

Amount: \$675.00

Component Description: KGA inv #947-114

Other Eng Srvcs July - Oct 2018 UL20190206jgv2

Amount: \$6,950.00

Component Description: KGA 947-190

Amount:

v190614pmv1 \$1,267.50

Component Description: KGA 947-155

v190515pmv1

Amount: \$675.00

Component Description: KGA 947-191

v190614pmv1

Amount: \$670.00

Other Legal Services

Component Description: Covington inv

#60776173 Various

legal

UL20190321jgv1

Amount: \$229.05

Component Description: C&B 60855206

v190918pmv1

Amount: \$177.75

Component Description: C&B 60774447

v190918pmv1

Amount: \$576.00

Component Description: Covington inv

#60836455 Legal services thru 190131

UL20190308jgv1

Amount: \$328.05

Component Description: Covington inv

#60773112 Various

legal

UL20190321jgv1

Amount: \$456.75

Component Description: Covington inv

#60827773 Legal services thru

181130

UL20190308jgv1

Amount: \$102.60

Component Description: C&B 60847121

v190610pmv1

Amount: \$71.10

Component Description: WDIV Covington inv

#60790165 Review and file Progress

Report

UL20181019jgv1

Amount: \$62.10

Component Description: WDIV Covington inv

#60812717 Review and file 2018 Q2 Progress Report UL20181019jgv1

Amount: \$34.20

Additional Field		
Engineering Service, 30 Days	Component Description:	Inv: WDIV Antenna
Dayo		Repurposing Study,
		Transmission Line
		Repurposing Study,
		Transmitter
		Repurposing Study
		& Parameter
		Review
		UL20180403
	Amount:	\$2,800.00
	Component Description:	Inv: WDIV Outside
		Prof Svcs 1) CAS
		planning
		procuremnt &
		oversight, coord twr
		mapping & analyses
		2) CAS planning
		procuremnt,
		oversight & develop
		an upgrade or
		replacement
		solution for twr 3)
		CAS planning
		procuremnt,
		oversight & coord
		twr mods
		UL20180403
	Amount:	\$2,750.00
	Component Description:	Inv: WDIV Addl Fld
		Eng Srv TX Mask
		Fltr Elec HVAC
		Solution
		UL20180403
	Amount:	\$1,250.00
RF Exposure Measurements	Information not provided.	
Comprehensive coverage verification via field study, if needed	Information not provided.	

FAA consultant, including cost of preparing FAA Form 7460 (Notice of Proposed Construction), if needed for height increase	Information not provided.
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.
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	Component Description: Amount:	Inv: WDIV Outside Prof Svcs - Prepare eng section of Form FCC Const Permit App for Main Facility UL20180403 \$3,000.00
	Allount.	φο,σσσ.σσ
Perform engineering study		
for new channel assignment and antenna development	Component Description:	Inv: WDIV Outside Prof Svcs - Perform eng study for new ch assignment and antenna development
	Amount:	UL20180403 \$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 947-159
		v190515pmv1
	Amount:	\$350.00
	Component Description:	KGA 947-164
		v190515pmv1
	Amount:	\$2,122.50
	Component Description:	KGA 947-202
		v190916jgv1
	Amount:	\$1,550.00
	Component Description:	KGA 947-206
		v190916jgv1

Component Description: KGA 947-175

v190704jgv1 \$3,045.00

Amount: \$3,045.00

Component Description: KGA 947-217

v191106jgv1

Amount: \$2,020.00

Component Description: KGA 947-130

v190515pmv1

Amount: \$50.00

Component Description: KGA 947-171

v190704jgv1

Amount: \$95.00

Component Description: KGA 947-132

v190515pmv1

Amount: \$1,225.00

Component Description: KGA 947-131

v190515pmv1

Amount: \$150.00

Component Description: KGA 947-139

v190515pmv1

Amount: \$200.00

Component Description: KGA 947-196

v190916jgv1

Amount: \$665.00

Component Description: KGA 947-133

v190515pmv1

Amount: \$500.00

Component Description: Inv: WDIV Outside

Prof Svcs - Prepare and or Review Reimbursement Form UL20180403

Amount: \$2,500.00

Project management of the transition

Component Description: KGA inv #947-59

Actual Cost invs

180329

UL2018116jgv1

Amount: \$300.00

Component Description: KGA 947-200

v190916jgv1

Amount: \$300.00

Component Description: KGA 947-214

v191106jgv1

Amount: \$300.00

Component Description: Inv: WDIV 2017Q4

387 UL20180403

Amount: \$300.00

Component Description: Inv 947-21 WDIV

Project

Management

through Aug 2017 UL20180504jgv3

Amount: \$3,500.00

Component Description: KGA inv #947-82

Form 387 2018 Q2

UL2018116jgv1

Amount: \$300.00

Component Description: KGA 947-162

v190515jgv1

Amount: \$300.00

Component Description: KGA inv #947-56

Form 387 2018 Q1 UL2018116jgv1

Amount: \$300.00

Component Description: KGA inv #947-110

Form 387 2018 Q3

UL2018116jgv1

Amount: \$300.00

Component Description: Inv: WDIV 2017Q3

387 UL20180403

Amount: \$300.00

Component Description: KGA 947-118

v190515jgv1

Amount: \$300.00

Component Description: KGA inv #947-58

Actual Cost invs

180403

UL2018116jgv1

Amount: \$720.00

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	\$138,550.00	\$138,000.00		\$2,863.10	
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	\$25,000.00	\$25,000.00	N/A	N/A	N/A
Equipment Storage	\$25,000.00	\$25,000.00	N/A	N/A	N/A
DTV Medical Facility Notification	\$11,550.00	\$11,000.00	N/A	N/A	N/A
Disposal Costs (for equipment and other waste, net of any salvage value)	\$25,000.00	\$25,000.00	N/A	N/A	N/A
Equipment Delivery and Handling Charges	\$25,000.00	\$25,000.00	N/A	\$2,863.10	N/A
Non-zoning permits	\$25,000.00	\$25,000.00	N/A	N/A	N/A
Sub-total	\$138,550.00	\$138,000.00	N/A	\$2,863.10	N/A
Total for all systems	\$4,014,402.33	\$4,197,891.24	N/A	\$2,815,284.51	N/A

Actual Information Description	File Name	
MVPD Notification of Channel Change	Information not provided.	
Develop and air announcement of upcoming channel change	Information not provided.	
Equipment Storage	Information not provided.	
DTV Medical Facility Notification	Information not provided.	
Disposal Costs (for equipment and other waste, net of any salvage value)	Information not provided.	
Equipment Delivery and Handling Charges	Component Description: Amount:	Die 597044 v191018pmv2 \$469.70
	Component Description: Amount:	FRAZA L28672 v190924pmv1 \$1,370.58
	Component Description: Amount:	Die 580017 v191018pmv2 \$964.93
	Component Description: Amount:	Die ST580017 v191016pmv1 \$57.89
Non-zoning permits	Information not provided.	

Cost Information

Grand Total

	Predetermined Cost Estimate	Estimated Cost	Actual Cost
Total for all systems	\$4,014,402.33	\$4,197,891.24	\$2,815,284.51

Reimbursem	envestiatus	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

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 abovenamed applicant for the Authorization(s) specified above. Jeffrey C Gehman Engineering Associate

11/06/2019

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.
- The above-named entity certifies that the statements in this form and attached documentation are true, complete, and correct.
- 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 abovenamed applicant for the Authorization(s) specified above. Jeffrey C Gehman Engineering Associate

11/06/2019

Attachments