



(REFERENCE COPY - Not for submission)

FCC Form 399: Reimbursement Request

Facility **43169** | Service: **DTV** | Call **WMAW-TV** | Channel: **28 (UHF)**
ID: | Sign:
File **000026656**
Number:
FRN: **0001739002** | Date **08/23**
Submitted: **/2018**

Applicant Information

Applicant Name, Type, and Contact Information

Applicant	Address	Phone	Email	Applicant Type
MISSISSIPPI AUTHORITY FOR EDUCATIONAL TV	Scott Colwell 3825 RIDGEWOOD ROAD JACKSON, MS 39211 United States	+1 (601) 432- 6367	Scott. Colwell@mpbonline. org	Government Entity

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
Robert Gehman <i>ConsultingEngineer</i> <i>Kessler and Gehman</i> <i>Associates, Inc.</i>	Robert Gehman 507 NW 60 Street Suite D Gainesville, FL 32607 United States	+1 (352) 332-3157	bob@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 transmitter using existing antenna and line.

Transmitters

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

**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 CD3200P2
	Year	2010
	Type	Inductive Output Tube
	IOT Power Type	Two
	Power Capacity	46 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	TBD
	Transmitter Type	Inductive Output Tube
	IOT Power Type	Two
	Power capacity	35.7 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.

**Primary
Transmitter**

Other Transmitter Costs

Section	Question	Response
Electrical Service	Service Entrance (3 phases 800A 208V)	No
	Switchgear (industrial 800 amp)	Yes
	Transformer (480V)	Yes
	Power	150 kVA
	Rigid Conduit and Wiring	Yes

	Size	3 inches
	Length	100.0 feet
	Other Electrical Service	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 leasehold 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

Primary Transmitter

Other Transmitter Cost Not Listed

Name	Description
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

**Primary
Antenna****Existing Antenna Information**

Section	Question	Response
Existing Antenna Description	Type of change	Retune Existing
	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?	No
	Is antenna in operating condition?	Yes
	Is antenna located on or in close proximity to an antenna farm?	No
Existing Antenna Manufacturer and Type	Class	Full Power
	Mounting	Top Mount
	Antenna position in stack	Not in Stack
	Polarization	Horizontal
	Type	Broadband Panel
	Number of Stations Supported	1
	Number of Panels	56
	Design power capacity in use	60.0 %
	Lower Limit	470.00 MHz

Upper Limit	692.00 MHz
Other Antenna Type	N/A
ERP: (Effective Radiated Power)	880.0 kW
Manufacturer	Dielectric
Model	TUF-O4-14 /56H-1-T
Year	2007

**Primary
Antenna**

Adjustment to Existing Antenna

Section	Question	Response
Sweep Test of Existing Antenna	Do you need a sweep test of existing antenna?	Yes

**Primary
Antenna**

Other Antenna Costs

Section	Question	Response
Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	No
	Type	
	Number of channels supported	N/A
	Frequencies of channels supported	N/A
	Frequency	

**Primary
Antenna**

Other Antenna Cost Not Listed

Information not provided.

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

Primary Transmission Line
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
	Type	Rigid
	Diameter	6 1/8 inches
	Other Diameter	N/A
	Segment Length	Broadband
	Other Segment Length	N/A
	Number of parallel runs	1
	Length	1100 feet per run

**Primary
Transmission
Line** **Other Transmission Line Expenses Not Listed**

Name	Description
Sweep Line	Sweep line to verify performance on the assigned channel
Transmission Line Segments	5 Line segments

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	Yes
	Is tower documented for structural analysis?	No
	Is tower compliant with Rev G?	No
Existing Tower Structure Registration	Do you have a tower registration number?	Yes
	ASR Number	1041037
Coordinates (NAD83 (North American Datum of 1983))	Latitude (NAD83)	32° 08' 19.0" N-
	Longitude (NAD83)	089° 05' 36.0" W-
	Overall Structure Height	1059.04 feet
	Support Structure Height	1000.64 feet
	Ground Elevation Above Mean Sea Level (AMSL)	629.91 feet
	Structure Type	TOWER - Free Standing or Guyed Structure

Tower Owner	MISSISSIPPI AUTHORITY FOR EDUCATIONAL TELEVISION
Date Constructed	01/03/2005

**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
43188	WMAW-FM	FM

Other Types of Users

Users
WMAW microwave

Primary Tower

Tower Modification Costs

Section	Question	Response
Engineering Study	Please what type of engineering study is required, if any:	No study needed
Tower Reinforcements	Please select whether tower reinforcements are needed:	No 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 Services Costs

Section	Question	Response
<p>Outside Project Management Services</p>	<p>Do you require outside project management services?</p>	<p>Yes</p>
	<p>Number of Hours</p>	<p>191</p>
	<p>Explanation</p>	<p>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.</p>
<p>Outside RF consulting Engineering Services</p>	<p>Perform engineering study for new channel assignment and antenna development</p>	<p>Yes</p>
	<p>Prepare engineering section of Form FCC Construction Permit Application</p>	<p>Yes</p>
	<p>For Auxiliary Facility</p>	<p>No</p>
	<p>For Main Facility</p>	<p>Yes</p>
	<p>Prepare engineering section of Form FCC License to Cover Application</p>	<p>Yes</p>
	<p>For Auxiliary Facility</p>	<p>No</p>
	<p>For Main Facility</p>	<p>Yes</p>
	<p>Prepare request for Special Temporary Authority</p>	<p>No</p>

	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 Services	Prepare and file Form FCC Construction Permit Application	Yes
	For Auxiliary Facility	No
	For Main Facility	Yes
	Prepare and file Form FCC License to Cover Application	Yes
	For Auxiliary Facility	No
	For Main Facility	Yes
	Prepare request for Special Temporary Authority	No
	Quantity	N/A
	NEPA Section 106 environmental review	No
	Environmental Assessment	No
	ASR Modification	No
	FAA Consultation (including preparation of FAA Form 7460)	No
	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	No
	RF exposure measurements	No
	Additional Field Engineering Service	Yes

Number of Days	13
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 Legal Services	Other Legal Services related to the DTV Repack

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	No
	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**

Other Expenses Not Listed

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 TBD	\$1,162,950.00	\$1,593,970.00		\$0.00	
Switchgear - industrial 800 amp	\$38,200.00	\$36,300.00	N/A	N/A	N/A
Two IOT system (35.7 kW)	\$954,000.00	\$1,388,470.00	The purchase price of the new transmitter is based on a Proposal from Comark for a 50 kW MSDC IOT as suggested by the FCC. See attachment.	N/A	N/A
Transformer 3 phase /480v - 150 KVA	\$25,550.00	\$24,300.00	N/A	N/A	N/A
3" Rigid Conduit and Wiring (Cost per foot)	\$5,200.00	\$4,900.00	N/A	N/A	N/A
Additional Interior RF System	<i>\$140,000.00</i>	\$140,000.00	N/A	N/A	N/A
Sub-total	\$1,162,950.00	\$1,593,970.00	N/A	\$0.00	N/A

Total for all systems	\$1,789,788.00	\$1,779,070.00	N/A	\$12,255.68	N/A
------------------------------	----------------	----------------	-----	-------------	-----

Components

Information not provided.

Cost Information

Antennas

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Primary Antenna TUF-O4-14 /56H-1-T	\$266,030.00	\$18,100.00		\$0.00	
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	N/A	N/A
Elbow complex, single channel, at antenna input, per 6 1/8. feedline (if needed)	\$12,300.00	\$11,700.00	N/A	N/A	N/A
UHF - High Power Top Mount (200-1000 kW), One station antenna, horizontally polarized	\$247,000.00	\$0.00	N/A	N/A	N/A
Sub-total	\$266,030.00	\$18,100.00	N/A	\$0.00	N/A
Total for all systems	\$1,789,788.00	\$1,779,070.00	N/A	\$12,255.68	N/A

Components

Information not provided.

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	\$25,600.00	\$25,600.00		\$0.00	
Transmission Line Segments	<i>\$19,200.00</i>	\$19,200.00	N/A	N/A	N/A
Sweep Line	<i>\$6,400.00</i>	\$6,400.00	N/A	N/A	N/A
Sub-total	\$25,600.00	\$25,600.00	N/A	\$0.00	N/A
Total for all systems	\$1,789,788.00	\$1,779,070.00	N/A	\$12,255.68	N/A

Components

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	\$210,500.00	\$20,000.00		\$0.00	
Tall Tower (greater than 500')	\$210,500.00	\$20,000.00	Rigging to replace elbow complex and assist with tuning if necessary.	N/A	N/A
Sub-total	\$210,500.00	\$20,000.00	N/A	\$0.00	N/A
Total for all systems	\$1,789,788.00	\$1,779,070.00	N/A	\$12,255.68	N/A

Components

Information not provided.

Cost Information

Outside Professional Services

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Outside Professional Services	\$91,158.00	\$88,400.00		\$12,255.68	
Other Legal Services	<i>\$10,000.00</i>	\$10,000.00	N/A	\$0.00	N/A
Additional Field Engineering Service, 13 Days	<i>\$26,000.00</i>	\$26,000.00	N/A	\$4,405.68	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 - Prepare and File FCC Form 2100 (main), Construction Permit Application	\$5,260.00	\$5,000.00	N/A	\$0.00	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	\$2,500.00	N/A	\$2,500.00	N/A

Perform engineering study for new channel assignment and antenna development	\$7,360.00	\$7,000.00	N/A	\$2,750.00	N/A
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	\$3,155.00	\$3,000.00	N/A	\$2,000.00	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
Project management of the transition	\$30,178.00	\$28,650.00	N/A	\$600.00	N/A
Sub-total	\$91,158.00	\$88,400.00	N/A	\$12,255.68	N/A
Total for all systems	\$1,789,788.00	\$1,779,070.00	N/A	\$12,255.68	N/A

Components

Actual Information	
Description	File Name

Other Legal Services	<p>Component Description: WMAW GSB inv #667584 DTV Repack legal services UL20180823jgv1</p> <p>Amount: \$150.00</p> <p>Component Description: WMAW GSB inv #670598 DTV Repack legal services UL20180823jgv1</p> <p>Amount: \$120.00</p> <p>Component Description: WMAW GSB inv #664826 DTV Repack legal services UL20180823jgv1</p> <p>Amount: \$90.00</p> <p>Component Description: WMAW GSB inv #662020 DTV Repack legal services UL20180823jgv1</p> <p>Amount: \$750.00</p>
Additional Field Engineering Service, 13 Days	<p>Component Description: KGA inv #139-285 On site survey split evenly between WMAB WMAE WMAW UL20180814jgv1</p> <p>Amount: \$4,405.68</p>
Attorney Fees -Prepare and File FCC Form 2100 (main), License to Cover Application	Information not provided.

<p>Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application</p>	<p>Component Description: WMAW GSB inv #662020 DTV Repack legal services CP App UL20180823jgv1</p> <p>Amount: \$49.50</p>
<p>Address transition timing and coordination issues w/ other stations and wireless</p>	<p>Information not provided.</p>
<p>Prepare and or review reimbursement form</p>	<p>Component Description: WMAW KGA inv #139-284 Prepare and or review 399 UL20180813jgv1</p> <p>Amount: \$2,500.00</p>
<p>Perform engineering study for new channel assignment and antenna development</p>	<p>Component Description: WMAW KGA inv #139-282 New channel assignment UL20180809jgv1</p> <p>Amount: \$2,750.00</p>
<p>Prepare engineering section of FCC Form 2100 (main), Construction Permit Application</p>	<p>Component Description: WMAW KGA inv #139-282 CP App UL20180809jgv1</p> <p>Amount: \$2,000.00</p>
<p>Prepare engineering section of FCC Form 2100 (main), License to Cover Application</p>	<p>Information not provided.</p>

Project management of the transition

Component Description: WMAW KGA inv
#139-294 2018Q1
387
UL20180810jgv1
Amount: \$150.00

Component Description: WMAW KGA inv
#139-291 2017Q4
387
UL20180809jgv1
Amount: \$150.00

Component Description: WMAW KGA inv
#139-288 2017Q3
387
UL20180810jgv1
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 Cost Justification
Other Expenses	\$33,550.00	\$33,000.00		\$0.00	
MVPD Notification of Channel Change	<i>\$2,000.00</i>	\$2,000.00	N/A	N/A	N/A
Equipment Delivery and Handling Charges	<i>\$10,000.00</i>	\$10,000.00	N/A	N/A	N/A
DTV Medical Facility Notification	\$11,550.00	\$11,000.00	N/A	N/A	N/A
Disposal Costs (for equipment and other waste, net of any salvage value)	<i>\$5,000.00</i>	\$5,000.00	N/A	N/A	N/A
Equipment Storage	<i>\$5,000.00</i>	\$5,000.00	N/A	N/A	N/A
Develop and air announcement of upcoming channel change	<i>\$0.00</i>	\$0.00	N/A	N/A	N/A
Sub-total	\$33,550.00	\$33,000.00	N/A	\$0.00	N/A
Total for all systems	\$1,789,788.00	\$1,779,070.00	N/A	\$12,255.68	N/A

Components

Information not provided.

Cost Information **Grand Total**

	Predetermined Cost Estimate	Estimated Cost	Actual Cost
Total for all systems	\$1,789,788.00	\$1,779,070.00	\$12,255.68

Reimbursement Status

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

Certification	Section	Question	Response
	Submission of Estimated Expenses Statements	<p>WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND /OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a) (1), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503), AND ANY FALSE STATEMENTS COULD SUBJECT THIS ENTITY TO LIABILITY UNDER THE FALSE CLAIMS ACT.</p>	
		<ol style="list-style-type: none"> 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.

<p>8. The above-named entity certifies that it is in full compliance with all statutes, rules, regulations and governmental requirements for which compliance is a pre-requisite for obtaining the payments herein requested.</p>	
<p>I declare, under penalty of perjury, that I am an authorized representative of the above-named applicant for the Authorization(s) specified above.</p>	<p>Jeffrey C Gehman <i>Engineering Associate</i></p> <p>08/23/2018</p>

Attachments