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: **73263** | Service: **DTV** | Call Sign: **WMHT** | Channel: **25 (UHF)**

File Number: **0000027901**

FRN: **0006595441** | Date Submitted: **08/02/2018**

Applicant Information

Applicant Name, Type, and Contact Information

Applicant	Address	Phone	Email	Applicant Type
WMHT EDUCATIONAL TELECOMMUNICATIONS Doing Business As: WMHT	ROBERT ALTMAN 4 GLOBAL VIEW TROY, NY 12180 United States	+1 (518) 880-3400	raltman@wmht.org	Not-for-Profit

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 Cummings *Director of Technology* *WMHT Educational Telecommunications*	Robert Cummings 4 Global View Troy, NY 12180 United States	+1 (518) 880-3474	bcummings@wmht.org

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.	Yes
Briefly describe transition plan	Replace IOT Transmitter and associated equipment. AUX antenna and transmission line, add combiner for WTEN. Replace main transmission line to combiner, combiner and shared transmission line to antenna. Add AC and electric to transmitter room.

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	Paragon
	Year	2005
	Type	Inductive Output Tube
	IOT Power Type	Two
	Power Capacity	50 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	THU9evo
	Transmitter Type	Solid State
	Solid State Cooling	Liquid Cooled
	Solid State Power capacity	31 kW
	Justification for New Transmitter	Cost of re-tuning and replacing exciters exceeds cost of new transmitter.

Primary 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	Unsure of new electrical requirements
HVAC Service	Does the replacement transmitter require HVAC Service?	Yes
	Type	Heating and Cooling
	Size	30 tons
	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

Primary Transmitter

Other Transmitter Cost Not Listed

Name	Description
MASK Filter	Channel Change requires new mask filter (prior cut for Channel 34)

Interim Transmitter

New Transmitter Costs

Section	Question	Response
New Transmitter	Use	Interim
	Description of Use	N/A
	Change Type	Purchase
	Manufacturer	
	Model	THUevo
	Transmitter Type	Solid State
	Solid State Cooling	Liquid Cooled
	Solid State Power capacity	15.5 kW
	Justification for New Transmitter	need to have a transmitter to use while the existing transmitter room and transmission system /combiner is rebuilt for the new channel due to room constraints

Interim 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	300 kVA
	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?	Yes
	Type	Heating and Cooling
	Size	20 tons
	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
Inside RF System	Is an additional interior RF system required to support this interim transmitter?	Yes

Interim Transmitter

Other Transmitter Cost Not Listed

Information not provided.

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?	Yes
	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	Bottom
	Polarization	Horizontal
	Type	Broadband Panel
	Number of Stations Supported	4
	Number of Panels	60
	Design power capacity in use	100.0 %
	Lower Limit	470.00 MHz

Upper Limit	698.00 MHz
Other Antenna Type	N/A
ERP: (Effective Radiated Power)	105.0 kW
Manufacturer	Dielectric
Model	TUD-05-12 /60H-1-B
Year	2005

Facility ID's and Call Signs of all stations with whom the antenna is shared.

Facility ID	Call Sign
11970	WXXA-TV
73264	WCWN
73942	WRGB
74422	WTEN

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?	Yes
	Type	New
	Number of channels supported	3
	Frequencies of channels supported	RF channel
	Frequency	N/A

Enter a list of RF channel numbers.

RF Channel Number
24
22
25

Primary Antenna

Other Antenna Cost Not Listed

Information not provided.

Auxiliary Antenna

Add Antenna Information

Section	Question	Response
Existing Antenna Description	Type of change	Purchase New
	Antenna Use	Auxiliary (Backup)
	Description of Use	WMHT Aux Antenna
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is this antenna currently shared with any other stations?	No
	Is this 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	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)	19.0 kW

Manufacturer	
Model	DCA
Year	2005

Auxiliary Antenna

New Antenna Costs

Section	Question	Response
New Antenna Description	Use	Auxiliary (Backup)
	Description of Use	Aux antenna
	Change Type	Purchase New
	Is this a request for upgraded equipment?	Yes
	Ownership	Owned
	Owner	N/A
	Is antenna shared?	Yes
	Is antenna directional?	Yes
	Will antenna be located on or in close proximity to an antenna farm?	No
New Antenna Manufacturer and Types	Class	Full Power
	Mounting	Side Mount
	Antenna position in stack	Not in Stack
	Polarization	Horizontal
	Type	Broadband Panel
	Number of Stations Supported	2
	Number of Panels/Bays	24
	Lower Limit	512.00 MHz
	Upper Limit	600.00 MHz
	Design power capacity in use	50.0 %
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power)	20.0 kW
	Manufacturer	

	Model	TU Deltastar
	Year	2017
	Justification for New Antenna	WMHT aux is for channel 34 only, WTEN does not have an aux antenna or back up facility needed for repack transition

Auxiliary Antenna

Other Antenna Costs

Section	Question	Response
Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	Yes
	Type	New
	Number of channels supported	2
	Frequencies of channels supported	Upper and lower frequency
	Frequency	530.0 MHz - 542.0 MHz
	Do you need a combiner output splitter /switcher for dual feed lines?	Yes
Elbow Complex	Do you require the separate purchase of the Elbow Complex?	Yes
	Broadband or Single Channel?	Broadband
	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

Auxiliary 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?	Yes

Auxiliary Transmission Line

Add Transmission Line

Section	Question	Response
Existing Transmission Line Description	Type of change	Purchase New
	Use	Auxiliary (Backup)
	Description of Use	Aux transmission line
	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	
	Type	Rigid
	Diameter	6 1/8 inches
	Other Diameter	N/A
	Segment Length	19 1/2 inches
	Other Segment Length	N/A
	Number of parallel runs	0
	Length	347 feet per run

Auxiliary Transmission Line

New Transmission Line

Section	Question	Response
New Transmission Line Costs	Use	Auxiliary (Backup)
	Description of Use	new channel tx line
	Change Type	Purchase New
	Is this a request for upgraded equipment?	Yes
	Type	Rigid
	Diameter	6 1/8 inches
	Other Diameter	N/A
	Segment Length	Broadband
	Other Segment Length	N/A
	Number of parallel runs	0
	Length	550 feet per run
	Justification for New Transmission Line	existing tx line for channel 34 only. WTEN does not have an aux or back up needed for repack /transition

Auxiliary Transmission Line

Other Transmission Line Expenses Not Listed

Information not provided.

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?	Yes
	Is Transmission Line in operating condition?	Yes
Existing Transmission Line Manufacturer and Type	Manufacturer	
	Type	Rigid
	Diameter	8 3/16 inches
	Other Diameter	N/A
	Segment Length	19 1/2 inches
	Other Segment Length	N/A
	Number of parallel runs	0
	Length	600 feet per run

Facility ID's and Call Signs of all stations with whom the transmission line is shared.

Facility ID	Call Sign
74422	WTEN
11970	WXXA-TV

73264	WCWN
73942	WRGB

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	8 3/16 inches
	Other Diameter	N/A
	Segment Length	Broadband
	Other Segment Length	N/A
	Number of parallel runs	0
	Length	600 feet per run
	Justification for New Transmission Line	Existing transmission line does not support all the new channels assigned by the repack

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?	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?	Unknown
	Is tower compliant with Rev G?	Unknown
Existing Tower Structure Registration	Do you have a tower registration number?	No
	ASR Number	
Coordinates (NAD83 (North American Datum of 1983))	Latitude (NAD83)	42° 37' 31.3" N-
	Longitude (NAD83)	074° 00' 36.7" W-
	Overall Structure Height	499.01 feet
	Support Structure Height	495.07 feet
	Ground Elevation Above Mean Sea Level (AMSL)	1780.82 feet

Structure Type	TOWER - Free Standing or Guyed Structure
Tower Owner	Capital Region Broadcasters, LLC
Date Constructed	05/31/2002

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
11970	WXXA-TV	DTV
73266	WMHT-FM	FM
73264	WCWN	DTV
74422	WTEN	DTV
73942	WRGB	DTV
73363	WNYT	DTV

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 Services Costs

Section	Question	Response
Outside Project Management Services	Do you require outside project management services?	Yes
	Number of Hours	500
	Explanation	We are a PBS station with only one engineer and may need assistance throughout the repack process. After reviewing the time spent last year, we need to increase the amount for project management (not using an outside engineer)
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 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	No
	Quantity	N/A
	NEPA Section 106 environmental review	No
	Environmental Assessment	No
	ASR Modification	Yes
	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	Yes
	RF exposure measurements	Yes
	Additional Field Engineering Service	No

	Number of Days	N/A
	Justification	N/A

Outside Professional Services Costs

Other Professional Services Expenses Not Listed

Name	Description
In house project management and time	Unable to hire a consultant for the repack so we are doing the project management and work in house

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?	No
Permit and Filing Costs	Local Zoning	No
	Non-zoning permits	No
	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
Rigging	For new main combiner and transmission line
Facility Heat	The facility has been heated by the WMHT and WTEN tube transmitters excess heat. Now that they are being replaced by solid state transmitters, there will no longer be any heat in the building without adding a new heat system.

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
Interim Transmitter THUevo	**$1,022,000.00**	**$738,255.36**		**$211,500.88**	
UHF - Liquid Cooled Solid State Transmitter 14.2 - 20 kW	$684,000.00	$416,955.36	Interim transmitter needed to stay on the air while main transmitter replaced and transmission line /combiner replaced, tested, etc.	$104,068.38	N/A
Switchgear - industrial 800 amp	$38,200.00	$36,300.00	N/A	N/A	N/A
Transformer 3 phase /480v - 300 KVA	$36,800.00	$35,000.00	N/A	N/A	N/A
20 Ton system	$115,500.00	$110,000.00	N/A	$107,432.50	N/A
UHF inside RF system including switching	$147,500.00	$140,000.00	N/A	$0.00	N/A
Primary Transmitter THU9evo	**$1,144,000.00**	**$971,165.00**		**$319,734.56**	

UHF - Liquid Cooled Solid State Transmitter 21 - 31 kW	$947,000.00	$782,165.00	N/A	$212,302.06	N/A
Other Electrical Service: Unsure of new electrical requirements	***$0.00***	$0.00	N/A	N/A	N/A
30 Ton system	$166,000.00	$158,000.00	Existing 'custom' air conditioner will need to be removed to make room for the new equipment	$107,432.50	N/A
MASK Filter	***$31,000.00***	$31,000.00	N/A	N/A	N/A
Sub-total	$2,166,000.00	$1,709,420.36	N/A	$531,235.44	N/A
Total for all systems	$4,110,316.00	$2,319,380.36	N/A	$780,936.28	N/A

Components

Actual Information Description	File Name	
UHF - Liquid Cooled Solid State Transmitter 14.2 - 20 kW	**Component Description:** **Amount:**	25% down payment 15.5 kW /14.5 kW of MD Transmitter System $104,068.38
Switchgear - industrial 800 amp	Information not provided.	
Transformer 3 phase/480v - 300 KVA	Information not provided.	

20 Ton system	**Component Description:** **Amount:**	N/A N/A
	Component Description: **Amount:**	Interim Transmitter Replacement AC Unit Libert#1 - includes Labor , Materials and Subcontractors $107,432.50
UHF inside RF system including switching	Information not provided.	
UHF - Liquid Cooled Solid State Transmitter 21 - 31 kW	**Component Description:** **Amount:**	25% down of the main transmitter- PO and Quote also attached $196,481.32
	Component Description: **Amount:**	Detailed drawing - comprehensive coverage field study $15,820.74
Other Electrical Service: Unsure of new electrical requirements	Information not provided.	
30 Ton system	**Component Description:** **Amount:**	Primary Transmitter Replacement AC Unit $107,432.50
MASK Filter	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 TUD-05-12 /60H-1-B	**$1,019,140.00**	**$61,470.00**		**$5,760.00**	
Pattern scatter analysis for side mount high/med power antennas (if not included in antenna base cost)	$5,260.00	$0.00	N/A	N/A	N/A
Elbow complex, broadband, at antenna input, per 8 3/16. feedline (if needed)	$18,950.00	$6,000.00	1/3 of the cost of $18,000	N/A	N/A
Combiner output splitting /switching for dual feed lines, if applicable	$126,000.00	$0.00	N/A	N/A	N/A
New combiner, cost per channel (without antenna)	$84,200.00	$53,335.00	1/3 of the cost	N/A	N/A

Sweep test of existing antenna	$6,730.00	$2,135.00	1/3 of the cost of $6400	$5,760.00	The estimate was for 30% down, this invoice is for 45% down
UHF - High Power Top Mount (200-1000 kW), Four Station broadband panel antenna, horizontally polarized	$778,000.00	$0.00	N/A	N/A	N/A
Auxiliary Antenna TU Deltastar	**$354,046.00**	**$126,750.00**		**$98,979.20**	
UHF – Broadband Panel, Side Mount Auxiliary /Interim, 20 horizontally polarized	***$95,006.00***	$95,006.00	Our current aux antenna is cut for channel 34 only (reference RF sweep) and will need to be replaced for our new channel	$78,069.60	N/A
Sweep test of existing antenna	$6,730.00	$6,400.00	N/A	$2,600.00	N/A
New combiner, cost per channel (without antenna)	$84,200.00	$0.00	N/A	N/A	N/A

Combiner output splitting /switching for dual feed lines, if applicable	$126,000.00	$0.00	N/A	N/A	N/A
Elbow complex, broadband, at antenna input, per 6 1/8. feedline (if needed)	$13,700.00	$7,024.00	required as per RF sweep	$6,321.60	N/A
Side mount brackets for high power antennas (if not included in antenna base cost)	$23,150.00	$13,320.00	required for new side mount aux antenna	$11,988.00	N/A
Pattern scatter analysis for side mount high/med power antennas (if not included in antenna base cost)	$5,260.00	$5,000.00	N/A	N/A	N/A
Sub-total	$1,373,186.00	$188,220.00	N/A	$104,739.20	N/A
Total for all systems	$4,110,316.00	$2,319,380.36	N/A	$780,936.28	N/A

Components

Actual Information Description	File Name

Pattern scatter analysis for side mount high/med power antennas (if not included in antenna base cost)	Information not provided.
Elbow complex, broadband, at antenna input, per 8 3/16. feedline (if needed)	Information not provided.
Combiner output splitting /switching for dual feed lines, if applicable	Information not provided.
New combiner, cost per channel (without antenna)	Information not provided.
Sweep test of existing antenna	**Component Description:** Repack Sweep includes 1 Field Engineer on site for 1 day, travel expenses and report 45% down **Amount:** $2,880.00 **Component Description:** 45% of the Repack Sweep includes 1 Field Engineer on-Site for the Day, Travel, Expenses and Report **Amount:** $2,880.00
UHF - High Power Top Mount (200-1000 kW), Four Station broadband panel antenna, horizontally polarized	Information not provided.

UHF – Broadband Panel, Side Mount Auxiliary /Interim, 20 horizontally polarized	**Component Description:** **Amount:** **Component Description:** **Amount:**	Part #400001434 45% down $39,034.80 Product 400001434 45% down $39,034.80
Sweep test of existing antenna	**Component Description:** **Amount:**	WMHT Aux System Sweep Test; 3 stations on invoice with WMHT subtotal- with letter discussing other 2 stations $2,600.00
New combiner, cost per channel (without antenna)	Information not provided.	
Combiner output splitting /switching for dual feed lines, if applicable	Information not provided.	
Elbow complex, broadband, at antenna input, per 6 1/8. feedline (if needed)	**Component Description:** **Amount:** **Component Description:** **Amount:**	Product # 40001436 - 45% down $3,160.80 Product #40001436 45% down $3,160.80

Side mount brackets for high power antennas (if not included in antenna base cost)	**Component Description:** **Amount:** **Component Description:** **Amount:**	45% down on Product #400001435 $5,994.00 Product 400001435 45% down $5,994.00
Pattern scatter analysis for side mount high/med power antennas (if not included in antenna base cost)	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	**$0.00**	**$63,170.00**		**$0.00**	
Rigid Transmission Line - copper, 8 3 /16" broadband	$0.00	$63,170.00	existing transmission line does not support the new channel assignments, this represents 1 /3 of the cost of 189,500	N/A	N/A
Auxiliary Transmission Line	**$0.00**	**$42,105.00**		**$37,894.50**	
Rigid Transmission Line - copper, 6 1 /8" broadband	$0.00	$42,105.00	existing transmission line does not support the new channel assignment.	$37,894.50	N/A
Sub-total	$0.00	$105,275.00	N/A	$37,894.50	N/A
Total for all systems	$4,110,316.00	$2,319,380.36	N/A	$780,936.28	N/A

Components

Actual Information Description	File Name
Rigid Transmission Line - copper, 8 3/16" broadband	Information not provided.

Rigid Transmission Line - copper, 6 1/8" broadband	**Component Description:**	RTLSCR3-20 45% down
	Amount:	$1,399.28
	Component Description:	Product #RTLSCR3-20 45% down
	Amount:	$1,399.28
	Component Description:	Product #300006758 45% down.
	Amount:	$17,547.97
	Component Description:	Product 300006758 45% down; 1 penny rounding
	Amount:	$17,547.97

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	**$254,800.00**	**$80,670.00**		**$5,724.67**	
Structural engineering tower load study for well documented tower	$12,600.00	$4,000.00	1/3 of the cost of 12,000	$5,724.67	We realized that as we were putting up new equipment, we needed to review the tower to understand the stresses- the total amount is not greater than the budgeted amount
Minor tower reinforcement /modifications	$158,000.00	$50,000.00	1/3 of the cost of $150000	N/A	N/A
Short Tower (less than 500')	$84,200.00	$26,670.00	1/3 of the cost of $80000	N/A	N/A
Sub-total	$254,800.00	$80,670.00	N/A	$5,724.67	N/A
Total for all systems	$4,110,316.00	$2,319,380.36	N/A	$780,936.28	N/A

Components

Actual Information Description	File Name	
Structural engineering tower load study for well documented tower	**Component Description:** **Amount:**	Analysis of the 435' Guyed Tower for WTEN, WMHT and WCWN split evenly among the 3 stations $2,500.00
	Component Description: **Amount:**	Tower mapping of our shared transmission tower /facility $1,666.67
	Component Description: **Amount:**	Tower climb of shared transmission tower- invoice divided by the 3 stations $1,558.00
Minor tower reinforcement /modifications	Information not provided.	
Short Tower (less than 500')	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	**$264,230.00**	**$183,750.00**		**$35,283.27**	
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
ASR modification (prepare FCC Form 854)	$2,105.00	$0.00	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
Project management of the transition	$79,000.00	$7,500.00	N/A	$2,800.00	N/A
Prepare and or review reimbursement form	$2,630.00	$2,500.00	N/A	N/A	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
Perform engineering study for new channel assignment and antenna development	$7,360.00	$7,000.00	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	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
In house project management and time	***$45,000.00***	$45,000.00	Unable to get a local consultant, we are taking care of project management in house for main shared equipment as well as our interim /aux and main transmitters	$32,483.27	Cu Long ETV IV needs to be deleted
Sub-total	$264,230.00	$183,750.00	N/A	$35,283.27	N/A
Total for all systems	$4,110,316.00	$2,319,380.36	N/A	$780,936.28	N/A

Components

Actual Information Description	File Name
RF Exposure Measurements	Information not provided.

Comprehensive coverage verification via field study, if needed	Information not provided.
ASR modification (prepare FCC Form 854)	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.
Project management of the transition	**Component Description:** Electrical project management **Amount:** $2,800.00
Prepare and or review reimbursement form	Information not provided.
Address transition timing and coordination issues w/ other stations and wireless	Information not provided.
Perform engineering study for new channel assignment and antenna development	Information not provided.

Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	Information not provided.	
RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, Construction Permit Application	Information not provided.	
In house project management and time	**Component Description:** **Amount:**	all 3 employees on one invoice as requested $29,602.44
	Component Description: **Amount:**	Cu Long ETV IV total of 100 hours at $23.54 per hour $2,354.00
	Component Description: **Amount:**	all employees on one invoice per request $526.83

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	**$52,100.00**	**$52,045.00**		**$66,059.20**	
Facility Heat	***$6,625.00***	$6,625.00	1/3 cost of $19,875 for new facility heat system, shared cost with WTEN and WCWN. Due to heat for the facility was being supplied by the old tube transmitters excess heat which are no longer there	N/A	N/A
FCC Filing Fees - Form 2100 license to cover application	$335.00	$325.00	N/A	N/A	N/A
FCC Filing Fees - Special Temporary Authorization request	$195.00	$190.00	N/A	N/A	N/A

Disposal Costs (for equipment and other waste, net of any salvage value)	***$7,500.00***	$7,500.00	Unknown cost at this time	$56,352.00	N/A
Equipment Delivery and Handling Charges	***$10,000.00***	$10,000.00	Unknown cost at this time	$4,910.20	N/A
Develop and air announcement of upcoming channel change	***$2,000.00***	$2,000.00	need to let our viewers know of the channel change	N/A	N/A
MVPD Notification of Channel Change	***$2,000.00***	$2,000.00	N/A	N/A	N/A
Rigging	***$13,335.00***	$13,335.00	1/3 of the total cost of $40000	N/A	N/A
FCC Filing Fees - Form 2100 minor change CP application	$1,110.00	$1,070.00	N/A	N/A	N/A
Equipment Storage	***$9,000.00***	$9,000.00	We do not have any place to store the equipment as it received	$4,797.00	N/A
Sub-total	$52,100.00	$52,045.00	N/A	$66,059.20	N/A
Total for all systems	$4,110,316.00	$2,319,380.36	N/A	$780,936.28	N/A

Components

Actual Information Description	File Name
Facility Heat	Information not provided.
FCC Filing Fees - Form 2100 license to cover application	Information not provided.
FCC Filing Fees - Special Temporary Authorization request	Information not provided.
Disposal Costs (for equipment and other waste, net of any salvage value)	**Component Description:** Safe disposal of the mineral oil from Comark transmitter **Amount:** $2,813.48 **Component Description:** Dumpster Charge **Amount:** $1,900.00 **Component Description:** Decommission existing transmitter systems **Amount:** $54,452.00

Equipment Delivery and Handling Charges	**Component Description:** For moving transformer oil drums **Amount:** $340.20 **Component Description:** Rental of 1 four wheel drive forklift to move all the equipment old and new **Amount:** $1,450.00 **Component Description:** Rental of 1 four wheel drive forklift to move all the equipment new and old for the repack **Amount:** $1,450.00 **Component Description:** Rental of one four wheel drive forklift- to move all the equipment new and old for the repack **Amount:** $1,670.00
Develop and air announcement of upcoming channel change	Information not provided.
MVPD Notification of Channel Change	Information not provided.
Rigging	Information not provided.
FCC Filing Fees - Form 2100 minor change CP application	Information not provided.

Equipment Storage	**Component Description:**	Storage Containers for the Repack Equipment
	Amount:	$3,880.00
	Component Description:	Pallet Jack, Load Capacity 5000 lbs Manufacturer #12U125- to move the equipment
	Amount:	$917.00

Cost Information

Grand Total

	Predetermined Cost Estimate	Estimated Cost	Actual Cost
Total for all systems	$4,110,316.00	$2,319,380.36	$780,936.28

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	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.	**Robert Everett Cummings** *Director of Technology* 08/02/2018

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.	

Attachments