



(REFERENCE COPY - Not for submission)

# FCC Form 399: Reimbursement Request

Facility **4318** | Service: **DTV** | Call **WNMU** | Channel: **8 (High VHF)**  
ID: | Sign:  
File **0000026956**  
Number:  
FRN: **0002735751** | Date **02/01**  
Submitted: **/2021**

## Applicant Information Applicant Name, Type, and Contact Information

Applicant	Address	Phone	Email	Applicant Type
<b>BOARD OF TRUSTEES, NORTHERN MICHIGAN UNIVERSITY</b> Doing Business As: BOARD OF TRUSTEES, NORTHERN MICHIGAN UNIVERSITY	Mr. Eric Smith WNMU (TV) 1401 PRESQUE ISLE DRIVE MARQUETTE, MI 49855 United States	+1 (906) 227- 1314	esmith@nmu. edu	Government Entity

## Reimbursement Contact Name and Information

Applicant	Address	Phone	Email
[Confidential]			

## Preparer Contact Name and Information

Applicant	Address	Phone	Email
<b>Benjamin Pidek</b> <i>Consulting Engineer</i> <i>Mid-State</i> <i>Consultants</i>	6197 Miller Rd., Suite 1 Swartz Creek, MI 48473 United States	+1 (810) 226- 0750	bpidek@mscon. 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	WNMU must replace its main and auxiliary antenna and main and auxiliary transmitter in order to move it its new channel. See attached narrative for a more detailed explanation.

**Transmitters**

Section	Question	Response
<b>Transmitter Related Expenses</b>	Do you have transmitter related expenses?	Yes

**Primary  
Transmitter**

**Existing Transmitter Information**

<b>Section</b>	<b>Question</b>	<b>Response</b>
<b>Existing Transmitter Description</b>	Type of change	Purchase New
	Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is this transmitter currently shared with another station?	No
	Is this transmitter currently in operating condition?	Yes
<b>Existing Transmitter Manufacturer and Type</b>	Manufacturer	
	Model	Platinum PTCD10P1i
	Year	2009
	Type	Solid State
	Solid State Cooling	Air Cooled
	Solid State Power Capacity	2.26 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	VAXTE-4
	Transmitter Type	Solid State
	Solid State Cooling	Air Cooled
	Solid State Power capacity	2.8 kW
	Justification for New Transmitter	Current transmitter is no longer supported by the manufacturer except for maintenance. Available parts are in limited supply and in some cases are no longer available. Manufacturer says it cannot be re-tuned.

**Primary Transmitter**

**Other Transmitter Costs**

Section	Question	Response
Electrical Service	Service Entrance (3 phases 800A 208V)	No
	Switchgear (industrial 800 amp)	Yes

	Transformer (480V)	No
	Power	N/A
	Rigid Conduit and Wiring	No
	Size	N/A
	Length	N/A
	Other Electrical Service	Yes
	Description	Necessary conduit, wiring and fuse disconnects as quoted by electrical contractor.
<b>HVAC Service</b>	Does the replacement transmitter require HVAC Service?	Yes
	Type	Cooling Only
	Size	5 tons
	Other Size	N/A
<b>Transmitter Building Addition/Modification or Leasehold Improvement</b>	Does the Transmitter Building require an addition, modification, other leasehold improvement?	No
	Size	N/A
<b>Channel 14 Costs</b>	Is an RF Consulting Engineer needed?	N/A
	Is a channel 14 Mask Filer needed?	N/A
	Is additional field engineering time needed?	N/A
	Number of Days	N/A

**Primary Transmitter**

**Other Transmitter Cost Not Listed**

Name	Description
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**Transmitter Bldg. Rearrangement**

Equipment racks will need to be moved in the transmitter building in order to make space for the new transmitter. HVAC ducting will also need to be rerouted.

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**Antennas**

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

**Primary  
Antenna**

**Existing Antenna Information**

Section	Question	Response
<b>Existing Antenna Description</b>	Type of change	Purchase New
	Antenna Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is the existing antenna shared with another station or stations?	No
	Is the existing antenna directional?	No
	Is antenna in operating condition?	Yes
	Is antenna located on or in close proximity to an antenna farm?	No
<b>Existing Antenna Manufacturer and Type</b>	Class	Full Power
	Mounting	Top 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) .....	15.4 kW



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Manufacturer	
Model	ATW9V3- HTO-13-R
Year	2009

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**Primary  
Antenna**

**New Antenna Costs**

Section	Question	Response
<b>New Antenna Description</b>	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?	No
	Will antenna be located on or in close proximity to an antenna farm?	No
<b>New Antenna Manufacturer and Types</b>	Class	Full Power
	Mounting	Top Mount
	Antenna position in stack	Not in Stack
	Polarization	Horizontal
	Type	Slotted Coaxial
	Number of Stations Supported	N/A
	Number of Panels/Bays	N/A
	Lower Limit	N/A
	Upper Limit	N/A
	Design power capacity in use	N/A
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power)	15.6 kW
	Manufacturer	
Model	THV-9A8-R	

Year	2019
Justification for New Antenna	Existing main antenna is a coaxial slot antenna that is channel specific and cannot be reused on the new channel.

**Primary Antenna**

**Other Antenna Costs**

Section	Question	Response
<b>Combiner for Shared Antenna</b>	Do you need a Combiner for a Shared Antenna?	
	Type	
	Number of channels supported	N/A
	Frequencies of channels supported	N/A
	Frequency	N/A
	Do you need a combiner output splitter /switcher for dual feed lines?	N/A
<b>Elbow Complex</b>	Do you require the separate purchase of the Elbow Complex?	Yes
	Broadband or Single Channel?	Single Channel
	Feed Line Size	4 1/16 inches inches
<b>Side Mount Brackets</b>	Do you require the separate purchase of side mount brackets for a high power antenna?	

<b>Pattern Scatter Analysis</b>	Do you require separate purchase of pattern scatter analysis for a side mount high or medium power antenna?	No
<b>Sweep Test</b>	Do you require the sweep testing of transmission line and antenna?	Yes

**Primary  
Antenna**

**Other Antenna Cost Not Listed**

Information not provided.

**Interim  
Antenna**

**New Antenna Costs**

Section	Question	Response
<b>New Antenna Description</b>	Use	Interim
	Description of Use	N/A
	Change Type	Purchase New
	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
<b>New Antenna Manufacturer and Type</b>	Class	Full Power
	Mounting	Side Mount
	Antenna position in stack	Not in Stack
	Polarization	Horizontal
	Type	Broadband Slot
	Number of Stations Supported	1
	Number of Panels/Bays	8
	Lower Limit	174.00 MHz
	Upper Limit	216.00 MHz
	Design power capacity in use	20.0 %
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power)	20.0 kW
	Manufacturer	
	Model	TLS-V8BB
	Year	2019

Justification for New Antenna	WNMU will need an interim facility for operation while it changes out the antenna on the main facility. Lower mounting on the tower requires higher ERP antenna in order to replicate coverage.
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**Interim Antenna**

**Other Antenna Costs**

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

**Interim 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**      **Add 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 this transmission currently shared with any other stations?	No
	Is Transmission Line in operating condition?	Yes
Existing Transmission Line Manufacturer and Type	Manufacturer	ERI
	Type	Rigid
	Diameter	Other
	Other Diameter	4 inches
	Segment Length	19 1/2 inches
	Other Segment Length	N/A
	Number of parallel runs	1
	Length	1030 feet per run

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

Name	Description
<b>Primary Line - Additional Transmission Line Parts</b>	Additional parts needed in order to reuse existing line

**Interim Transmission Line**      **New Transmission Line**

Section	Question	Response
<b>New Transmission Line Costs</b>	Use	Interim
	Description of Use	N/A
	Change Type	Purchase New
	Type	Flexible Air
	Diameter	3 inches
	Segment Length	N/A
	Other Segment Length	
	Number of parallel runs	1
	Length	1000 feet per run



Justification for New Transmission Line

WNMU has been assigned Phase 9 for construction which will be during the winter months in Michigan. It will need to construct the new facility in the previous year and will need trans line for the interim facility while it waits for its testing date.

**Other Transmission Line Expenses Not Listed**

**Interim  
Transmission  
Line**

Name	Description
Interim Transmission Line-Nitrogen Regulator Kit	Interim Transmission Line-Nitrogen Regulator Kit

**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**

**Add Tower**

Section	Question	Response
<b>Existing Tower Description</b>	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
<b>Existing Tower Structure Registration</b>	Is tower compliant with Rev G?	Yes
	Do you have a tower registration number?	Yes
<b>Coordinates (NAD83 ( North American Datum of 1983))</b>	ASR Number	1023010
	Latitude (NAD83)	46° 21' 10.0" N-
	Longitude (NAD83)	087° 51' 15.0" W-
	Overall Structure Height	1100.71 feet
	Support Structure Height	999.99 feet
	Ground Elevation Above Mean Sea Level (AMSL)	1499.98 feet

Structure Type	TOWER - Free Standing or Guyed Structure
Tower Owner	BOARD OF TRUSTEES OF NORTHERN MICHIGAN UNIVERSITY DBA = WNMU TV FM
Date Constructed	10/09/1972

**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
49572	WNMU-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:	Major Reinforcements needed

**Primary Tower**

**Tower Rigging Costs**

Section	Question	Response
Tower Rigging Costs	Complex Tower	N/A

<b>Helicopter Services Required</b>	Are helicopter services required?	Yes
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**Primary Tower**

**Other Tower Expenses Not Listed**

<b>Name</b>	<b>Description</b>
<b>PE Review of Rigging Plan</b>	Professional Engineering review of proposed rigging plan as required by ANSI /ASEE A10.48 and ANSI/TIA 322 standards.
<b>Interim Antenna Rigging</b>	Rigging necessary for installation of interim antenna and transmission line.

**Outside Professional Services Costs**

Section	Question	Response
<b>Outside Project Management Services</b>	Do you require outside project management services?	Yes
	Number of Hours	595
	Explanation	WNMU requires the aid of outside project management services in order to fulfill the requirements of the repack. WNMU does not have sufficient resource capacity and expertise in house to handle reimbursement related tasks
<b>Outside RF consulting Engineering Services</b>	Perform engineering study for new channel assignment and antenna development	Yes
	Prepare engineering section of Form FCC Construction Permit Application	Yes
	For Auxiliary Facility	No
	For Main Facility	Yes
	Prepare engineering section of Form FCC License to Cover Application	Yes
	For Auxiliary Facility	No
	For Main Facility	Yes
	Prepare request for Special Temporary Authority	Yes
	Quantity	1

	Do you have Distributed Transmission System engineering services?	N/A
	Critical Facility	N/A
	Terrain-Shielded Facility	N/A
<b>Attorney and Other Outside Consulting Services</b>	Prepare and file Form FCC Construction Permit Application	Yes
	For Auxiliary Facility	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	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	Yes
	Prepare or Review FCC Form 399 for Reimbursement	Yes
Address transition timing and coordination issues w/ other stations and wireless providers	Yes	
<b>RF Field Engineering Services</b>	Comprehensive coverage verification via field study	Yes
	RF exposure measurements	No
	Additional Field Engineering Service	Yes
	Number of Days	26

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Justification
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Installation, testing, and other field engineering work required for repack
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**Outside  
Professional  
Services  
Costs**

**Other Professional Services Expenses Not Listed**

Name	Description
Site Survey	GatesAir performed a site survey to access changes to facility as necessary to transition to new channel including, power and HVAC requirements, available transmitter room space and existing antenna and transmission line RF characteristics at new channel.

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**Other Expenses**

Section	Question	Response
<b>AM Pattern Disturbance</b>	Is an Impact Study needed?	No
	Is Remediation needed?	No
<b>Facility Expenses</b>	Name	N/A
	Other Distributed Transmission System Expenses Not listed	N/A
	Name	N/A
	Is Notification of a Medical Facility required as a result of DTV broadcasting?	Yes
<b>Permit and Filing Costs</b>	Local Zoning	No
	Non-zoning permits	No
	BLM or NFS Coordination	No
	FCC Construction Permit Minor Change	No
	FCC License to Cover Application	No
	FCC Special Temporary Authority Application	No
<b>Other Miscellaneous Expenses</b>	Does this relocation require paying Disposal Costs (for equipment and other waste, net of any salvage value)?	Yes
	Does this relocation require Equipment Delivery or Handling Charges not otherwise included in individual item costs?	Yes
	Does this relocation require Equipment Storage?	Yes
	Does this relocation require the Development and Airing of an Announcement regarding an upcoming channel change?	Yes
	Does this relocation require MVPD Notification of a Channel Change?	Yes



**Other  
Expenses**

**Other Expenses Not Listed**

<b>Name</b>	<b>Description</b>
<b>Performance Bond</b>	NMU typically follows AIA contract guidelines which requires on a project of this magnitude that construction bonds be required as part of the bid process. Bonds are necessary to ensure project completion and to protect necessary down payments.
<b>Employee Time, Travel and Per Diem</b>	Time and travel expenses needed by NMU employees to work on the transition to a new channel.

**Cost Information**

**Transmitters**

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
<b>Primary Transmitter VAXTE-4</b>	<b>\$270,950.00</b>	<b>\$266,882.27</b>		<b>\$138,251.30</b>	
Transmitter Bldg. Rearrangement	<i>\$50,000.00</i>	\$50,000.00	N/A	\$98.76	N/A
5 Ton system	\$20,250.00	\$25,582.27	Please see Johnson Controls proposal 1-13RJPRF	\$25,581.26	N/A
Other Electrical Service: Necessary conduit, wiring and fuse disconnects as quoted by electrical contractor.	<i>\$10,000.00</i>	\$10,000.00	N/A	\$1,945.00	N/A
High VHF - Air Cooled Solid State Transmitter 1.1 . 4.4 kW	\$152,500.00	\$145,000.00	N/A	\$110,626.28	N/A
Switchgear - industrial 800 amp	\$38,200.00	\$36,300.00	N/A	N/A	N/A
<b>Sub-total</b>	<b>\$270,950.00</b>	<b>\$266,882.27</b>	N/A	<b>\$138,251.30</b>	N/A
<b>Total for all systems</b>	<b>\$2,161,290.52</b>	<b>\$2,014,885.19</b>	N/A	<b>\$1,170,989.34</b>	N/A

**Components**

Actual Information	
Description	File Name

Transmitter Bldg.  
Rearrangement

**Component Description:** Fabrication and install of new outside air  
**Amount:** \$3,500.00

**Component Description:** Labor and material for installation  
**Amount:** \$9,000.00

**Component Description:** Invoice moved to 1st Primary Transmitter - Other Electrical Service Category  
**Amount:** N/A

**Component Description:** SKELETON 10OZ CAULK GUN DRIP FREE 3  
**Amount:** \$94.76

**Component Description:** LOC TITE FOAM GPS AND CRCKS 12-OZ  
**Amount:** \$4.00

**Component Description:** ELY TOWNSHIP TOWER SITE  
**Amount:** \$3,500.00

5 Ton system	<p><b>Component Description:</b> Key pick up <b>Amount:</b> \$2,498.99</p> <p><b>Component Description:</b> Demo existing three supply <b>Amount:</b> \$23,082.27</p>
Other Electrical Service: Necessary conduit, wiring and fuse disconnects as quoted by electrical contractor.	<p><b>Component Description:</b> Electrical for HVAC and Television equipment <b>Amount:</b> \$1,945.00</p>
High VHF - Air Cooled Solid State Transmitter 1.1 . 4.4 kW	<p><b>Component Description:</b> A. Transmitter <b>Amount:</b> \$35,170.15</p> <p><b>Component Description:</b> Downpayment only for channel 8 transmitter <b>Amount:</b> \$35,170.17</p> <p><b>Component Description:</b> VAXTE-4R44 Transmitter per Quote Q-81435 <b>Amount:</b> \$40,285.96</p>
Switchgear - industrial 800 amp	Information not provided.

**Cost Information**

**Antennas**

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
<b>Interim Antenna TLS-V8BB</b>	<b>\$106,730.00</b>	<b>\$106,400.00</b>		<b>\$77,148.13</b>	
High VHF - High Power Side Mount One Station horizontally polarized	<i>\$100,000.00</i>	\$100,000.00	N/A	\$70,748.13	N/A
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	\$6,400.00	N/A
<b>Primary Antenna THV-9A8-R</b>	<b>\$341,300.00</b>	<b>\$340,696.00</b>		<b>\$277,259.18</b>	
Elbow complex, single channel, at antenna input, per 4 1/16. feedline (if needed)	\$9,570.00	\$9,296.00	Please see Dielectric quote 700079CMZ-1, plus actual shipping costs on invoices	\$9,231.10	N/A
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	\$6,400.00	N/A
High VHF - High Power Top Mount One Station horizontally polarized	<i>\$325,000.00</i>	\$325,000.00	N/A	\$261,628.08	N/A

<b>Sub-total</b>	\$448,030.00	\$447,096.00	N/A	\$354,407.31	N/A
<b>Total for all systems</b>	\$2,161,290.52	\$2,014,885.19	N/A	\$1,170,989.34	N/A

## Components

Actual Information	
Description	File Name
High VHF - High Power Side Mount One Station horizontally polarized	<b>Component Description:</b> WNMU-280-Interim Antenna - High VHF High Power Side Mount Single Station, H-POL <b>Amount:</b> \$30,724.43
	<b>Component Description:</b> WNMU-280-Interim Antenna - High VHF High Power Side Mount Single Station, H-POL <b>Amount:</b> \$33,225.30
	<b>Component Description:</b> WNMU-280-Interim Antenna - High VHF High Power Side Mount Single Station, H-POL <b>Amount:</b> \$6,798.40

Sweep test of existing antenna	<p><b>Component Description:</b> WNMU-280-Interim Antenna - Sweep Test</p> <p><b>Amount:</b> \$2,880.00</p>
	<p><b>Component Description:</b> WNMU-280-Interim Antenna - Sweep Test</p> <p><b>Amount:</b> \$640.00</p>
	<p><b>Component Description:</b> WNMU-280-Interim Antenna - Sweep Test</p> <p><b>Amount:</b> \$2,880.00</p>
Elbow complex, single channel, at antenna input, per 4 1/16. feedline (if needed)	<p><b>Component Description:</b> WNMU-210-Primary Antenna - Elbow Complex</p> <p><b>Amount:</b> \$4,154.30</p>
	<p><b>Component Description:</b> WNMU-210-Primary Antenna - Elbow Complex</p> <p><b>Amount:</b> \$4,183.20</p>
	<p><b>Component Description:</b> WNMU-210-Primary Antenna - Elbow Complex</p> <p><b>Amount:</b> \$893.60</p>

Sweep test of existing antenna	<p><b>Component Description:</b> WNMU-210-Primary Antenna - Sweep Test</p> <p><b>Amount:</b> \$640.00</p>
	<p><b>Component Description:</b> WNMU-210-Primary Antenna - Sweep Test</p> <p><b>Amount:</b> \$2,880.00</p>
	<p><b>Component Description:</b> WNMU-210-Primary Antenna - Sweep Test</p> <p><b>Amount:</b> \$2,880.00</p>
High VHF - High Power Top Mount One Station horizontally polarized	<p><b>Component Description:</b> UHF - High Power Top Mount</p> <p><b>Amount:</b> \$118,638.00</p>
	<p><b>Component Description:</b> UHF HIGH POWER TOP MOUNT</p> <p><b>Amount:</b> \$117,742.08</p>
	<p><b>Component Description:</b> UHF - HIGH POWER TOP MOUNT</p> <p><b>Amount:</b> \$25,248.00</p>



**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
<b>Interim Transmission Line</b>	<b>\$59,415.55</b>	<b>\$41,760.62</b>		<b>\$41,760.62</b>	
Flexible Air Transmission Line - dielectric, 3"	\$59,000.00	\$41,345.07	Estimated Cost Justification WNMU-380-Interim Transmission Line - 3 Flexible Air Dielectric V0	\$41,345.07	N/A
Interim Transmission Line-Nitrogen Regulator Kit	<i>\$415.55</i>	\$415.55	Please see WNMU Interim Transmission Line-Nitrogen Regulator Kit Budget Revision Justification Letter	\$415.55	N/A
<b>Primary Transmission Line</b>	<b>\$11,854.75</b>	<b>\$11,854.75</b>		<b>\$10,385.61</b>	
Primary Line - Additional Transmission Line Parts	<i>\$11,854.75</i>	\$11,854.75	Please see Dielectric quote 700079CMZ-1, plus actual shipping costs on invoices	\$10,385.61	N/A
<b>Sub-total</b>	<b>\$71,270.30</b>	<b>\$53,615.37</b>	N/A	<b>\$52,146.23</b>	N/A

<b>Total for all systems</b>	\$2,161,290.52	\$2,014,885.19	N/A	\$1,170,989.34	N/A
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## Components

Actual Information	
Description	File Name
Flexible Air Transmission Line - dielectric, 3"	<b>Component Description:</b> WNMU-380-Interim Transmission Line - 3" Flexible Air Dielectric <b>Amount:</b> \$16,821.98
	<b>Component Description:</b> WNMU-380-Interim Transmission Line - 3" Flexible Air Dielectric <b>Amount:</b> \$18,168.61
	<b>Component Description:</b> OTHER <b>Amount:</b> \$2,632.00
	<b>Component Description:</b> WNMU-380-Interim Transmission Line - 3" Flexible Air Dielectric <b>Amount:</b> \$3,722.48
Interim Transmission Line-Nitrogen Regulator Kit	<b>Component Description:</b> Nitrogen Regulator Kit <b>Amount:</b> \$415.55

Primary Line - Additional  
Transmission Line Parts

**Component Description:** WNMU-310-  
Primary  
Transmission Line  
- Additional  
Transmission Line  
Parts

**Amount:** \$1,996.70

**Component Description:** WNMU-310-  
Primary  
Transmission Line  
- Additional  
Transmission Line  
Parts

**Amount:** \$3,054.28

**Component Description:** WNMU-310-  
Primary  
Transmission Line  
- Additional  
Transmission Line  
Parts

**Amount:** \$5,334.63

**Cost Information**

**Tower Equipment and Rigging Costs**

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
<b>Primary Tower TOWER</b>	<b>\$866,350.00</b>	<b>\$834,250.00</b>		<b>\$495,364.00</b>	
Tower Helicopter Lift	<i>\$114,750.00</i>	\$114,750.00	Please see WNMU FDH Infrastructure Services, LLC quote P18_231409_001A	\$114,750.00	N/A
Tall Tower (greater than 500')	\$210,500.00	\$200,000.00	N/A	\$171,475.00	N/A
Structural engineering tower load study for well documented tower	\$12,600.00	\$12,000.00	N/A	\$12,000.00	N/A
Major tower reinforcement /modifications	\$421,000.00	\$400,000.00	N/A	\$197,014.00	N/A
PE Review of Rigging Plan	<i>\$7,500.00</i>	\$7,500.00	N/A	N/A	N/A
Interim Antenna Rigging	<i>\$100,000.00</i>	\$100,000.00	N/A	\$125.00	N/A
<b>Sub-total</b>	<b>\$866,350.00</b>	<b>\$834,250.00</b>	<b>N/A</b>	<b>\$495,364.00</b>	<b>N/A</b>
<b>Total for all systems</b>	<b>\$2,161,290.52</b>	<b>\$2,014,885.19</b>	<b>N/A</b>	<b>\$1,170,989.34</b>	<b>N/A</b>

**Components**

**Actual Information****Description****File Name**

Tower Helicopter Lift

**Component Description:** Field services final  
PMT 10%**Amount:** \$11,475.00**Component Description:** Construction Srvcs**Amount:** \$68,850.00**Component Description:** STNLCN STNL  
Construction**Amount:** \$34,425.00

Tall Tower (greater than 500')

**Component Description:** WNMU-410-  
Existing Primary  
Tower - Tower  
Rigging, Tall Tower  
**Amount:** \$10,847.10

**Component Description:** Field Services  
Final PMT  
**Amount:** \$31,427.00

**Component Description:** Field Services  
Down PMT  
**Amount:** \$31,427.00

**Component Description:** WNMU-410-  
Existing Primary  
Tower - Tower  
Rigging, Tall Tower  
**Amount:** \$51,423.90

**Component Description:** WNMU-410-  
Existing Primary  
Tower - Tower  
Rigging, Tall  
Tower  
**Amount:** \$46,200.00

**Component Description:** ZEP AP CLEAN &  
DEGREASE 32OZ  
**Amount:** \$105.00

**Component Description:** Regular Portable  
Toilet  
**Amount:** \$150.00

Structural engineering  
tower load study for well  
documented tower

**Component Description:** Engineering  
services  
**Amount:** \$1,500.00

**Component Description:** STNLSA STNL  
Structural Analysis  
**Amount:** \$2,750.00

**Component Description:** 002 Engineering  
**Amount:** \$2,500.00

**Component Description:** 001 Engineering  
**Amount:** \$2,500.00

**Component Description:** STNLSA STNL  
Structural Analysis  
**Amount:** \$2,750.00

Major tower reinforcement /modifications	<p><b>Component Description:</b> WNMU-410- Existing Primary Tower - Major Tower Reinforcement /Modifications</p> <p><b>Amount:</b> \$118,208.40</p>
	<p><b>Component Description:</b> WNMU-410- Existing Primary Tower - Major Tower Reinforcement /Modifications</p> <p><b>Amount:</b> \$19,701.40</p>
	<p><b>Component Description:</b> WNMU-410- Existing Primary Tower - Major Tower Reinforcement /Modifications</p> <p><b>Amount:</b> \$59,104.20</p>
PE Review of Rigging Plan	Information not provided.
Interim Antenna Rigging	<p><b>Component Description:</b> Regular Portable Toilet</p> <p><b>Amount:</b> \$125.00</p>



**Cost Information**

**Outside Professional Services**

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
<b>Outside Professional Services</b>	<b>\$256,670.87</b>	<b>\$173,572.20</b>		<b>\$108,095.65</b>	
Site Survey	<i>\$15,300.00</i>	\$15,300.00	N/A	\$15,289.50	N/A
Additional Field Engineering Service, 26 Days	<i>\$24,030.87</i>	\$24,030.87	The estimated cost has been adjusted to include all invoices submitted for reimbursement at this time.	\$24,030.87	Please see submitted invoice
Comprehensive coverage verification via field study, if needed	\$84,200.00	\$516.33	Please see WNMU Outside Professional Services- Engineering - Comprehensive Coverage Verification via Field Study Budget Revision Justification Letter. The estimated cost has been adjusted to include all invoices submitted for reimbursement at this time	\$516.33	see submitted invoice

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	\$300.00	N/A
Attorney Fees - Negotiation of lease and other matters for shared locations	\$4,210.00	\$1,300.00	The estimated cost has been adjusted to include all invoices submitted for reimbursement at this time.	\$1,300.00	Please submit invoice
Attorney Fees - Prepare and File FCC Form 2100 (main), License to Cover Application	\$2,365.00	\$2,250.00	N/A	\$200.00	N/A
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	\$5,260.00	\$5,000.00	N/A	\$900.00	N/A

Prepare request for Special Temporary Authorization	\$2,050.00	\$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	\$225.00	N/A
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	\$3,155.00	\$3,000.00	N/A	\$750.00	N/A
Perform engineering study for new channel assignment and antenna development	\$7,360.00	\$7,000.00	N/A	\$1,125.00	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	\$525.00	N/A
Project management of the transition	\$94,010.00	\$99,675.00	Please see attached Widelity Strategics Support Quote	\$62,933.95	N/A
<b>Sub-total</b>	<b>\$256,670.87</b>	<b>\$173,572.20</b>	<b>N/A</b>	<b>\$108,095.65</b>	<b>N/A</b>

<b>Total for all systems</b>	\$2,161,290.52	\$2,014,885.19	N/A	\$1,170,989.34	N/A
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## Components

Actual Information	
Description	File Name
Site Survey	<p><b>Component Description:</b> Field Service</p> <p><b>Amount:</b> \$15,289.50</p>
Additional Field Engineering Service, 26 Days	<p><b>Component Description:</b> Electrician Coordinate</p> <p><b>Amount:</b> \$7,228.47</p>
	<p><b>Component Description:</b> Procedure Patch panel</p> <p><b>Amount:</b> \$2,170.43</p>
	<p><b>Component Description:</b> Drive Madison</p> <p><b>Amount:</b> \$4,214.56</p>
	<p><b>Component Description:</b> TRAVEL</p> <p><b>Amount:</b> \$10,342.56</p>
	<p><b>Component Description:</b> Attic Mount TV Antenna</p> <p><b>Amount:</b> \$74.85</p>
Comprehensive coverage verification via field study, if needed	<p><b>Component Description:</b> bladeRF 2.0 micro</p> <p><b>Amount:</b> \$516.33</p>

<p>FAA consultant, including cost of preparing FAA Form 7460 (Notice of Proposed Construction), if needed for height increase</p>	<p>Information not provided.</p>				
<p>ASR modification (prepare FCC Form 854)</p>	<p>Information not provided.</p>				
<p>Attorney Fees - Prepare and File request for Special Temporary Authorization</p>	<table> <tr> <td data-bbox="694 521 1013 555"><b>Component Description:</b></td> <td data-bbox="1145 521 1356 674"> <p>WNMU-550- Attorney - Special Temporary Authorization</p> </td> </tr> <tr> <td data-bbox="694 685 815 719"><b>Amount:</b></td> <td data-bbox="1145 685 1244 719"> <p>\$300.00</p> </td> </tr> </table>	<b>Component Description:</b>	<p>WNMU-550- Attorney - Special Temporary Authorization</p>	<b>Amount:</b>	<p>\$300.00</p>
<b>Component Description:</b>	<p>WNMU-550- Attorney - Special Temporary Authorization</p>				
<b>Amount:</b>	<p>\$300.00</p>				

<p>Attorney Fees - Negotiation of lease and other matters for shared locations</p>	<p><b>Component Description:</b> Email exchange with Eric Smith</p> <p><b>Amount:</b> \$100.00</p>
	<p><b>Component Description:</b> Professional Services</p> <p><b>Amount:</b> \$200.00</p>
	<p><b>Component Description:</b> Draft and File Form 323-E</p> <p><b>Amount:</b> \$300.00</p>
	<p><b>Component Description:</b> Professional Services</p> <p><b>Amount:</b> \$100.00</p>
	<p><b>Component Description:</b> Professional Services</p> <p><b>Amount:</b> \$100.00</p>
	<p><b>Component Description:</b> Professional Services</p> <p><b>Amount:</b> \$200.00</p>
	<p><b>Component Description:</b> Professional Services</p> <p><b>Amount:</b> \$300.00</p>
<p>Attorney Fees -Prepare and File FCC Form 2100 (main), License to Cover Application</p>	<p><b>Component Description:</b> WNMU-550- Attorney - License to Cover Application (Main)</p> <p><b>Amount:</b> \$200.00</p>

<p>Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application</p>	<p><b>Component Description:</b> Professional Services <b>Amount:</b> \$800.00</p>
<p>Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application</p>	<p><b>Component Description:</b> WNMU-550-Attorney - Construction Permit Application (Main) <b>Amount:</b> \$100.00</p>
<p>Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application</p>	<p><b>Component Description:</b> Professional Services <b>Amount:</b> \$600.00</p>
<p>Prepare request for Special Temporary Authorization</p>	<p>Information not provided.</p>
<p>Prepare engineering section of FCC Form 2100 (main), License to Cover Application</p>	<p><b>Component Description:</b> Preparation of Application for License to Cover Repack <b>Amount:</b> \$225.00</p>
<p>Prepare engineering section of FCC Form 2100 (main), Construction Permit Application</p>	<p><b>Component Description:</b> FCC Repack of WNMU <b>Amount:</b> \$750.00</p>

<p>Perform engineering study for new channel assignment and antenna development</p>	<p><b>Component Description:</b> WNMU-530-RF Eng - Engineering Study for New Channel Assignment <b>Amount:</b> \$675.00</p> <p><b>Component Description:</b> FCC Repack of WNMU <b>Amount:</b> \$450.00</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><b>Component Description:</b> Attorney Prepare and Review Reimbursement Form <b>Amount:</b> \$100.00</p> <p><b>Component Description:</b> Professional Services <b>Amount:</b> \$100.00</p> <p><b>Component Description:</b> WNMU-590- Prepare/Review Reimbursement Form <b>Amount:</b> \$100.00</p> <p><b>Component Description:</b> WNMU-550- Prepare/Review Reimbursement Form <b>Amount:</b> \$225.00</p>
<p>Project management of the transition</p>	



**Component Description:** Project  
Management  
**Amount:** \$13,464.15

**Component Description:** Project  
Management  
**Amount:** \$15,749.80

**Component Description:** Project  
Management  
**Amount:** \$86.25

**Component Description:** 4/2/19 Office  
**Amount:** \$3,559.10

**Component Description:** Project  
Management  
**Amount:** \$4,063.35

**Component Description:** Project  
Management  
**Amount:** \$12,094.30

**Component Description:** Project  
Management  
**Amount:** \$1,258.75

**Component Description:** Project  
Management  
**Amount:** \$4,266.70

**Component Description:** Project  
Management  
**Amount:** \$2,183.70

**Component Description:** WNMU-510-Project  
Management  
**Amount:** \$100.00

**Component Description:** WNMU-510-Project  
Management  
**Amount:** \$200.00

**Component Description:** Project  
Management  
**Amount:** \$2,907.85

**Component Description:** Main and Interim  
Antenna  
Construction  
Planning/Timing  
and Status Review  
**Amount:** \$450.00

**Component Description:** PO026623: Ship to  
E Smith SRV 906  
/227-1314  
**Amount:** \$1,400.00

**Component Description:** Repack Status  
Review and  
Conference Call  
**Amount:** \$300.00

**Component Description:** Review of Stainless  
Tower Study and  
Discussion on  
Results with NMU  
**Amount:** \$225.00

**Component Description:**

Review and  
Response to  
Dielectric  
Questions  
Regarding Main  
and Interim  
Antennas

**Amount:**

\$225.00

**Component Description:**

WNMU-510-Project  
Management

**Amount:**

\$400.00

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**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
<b>Other Expenses</b>	<b>\$248,019.35</b>	<b>\$239,469.35</b>		<b>\$22,724.85</b>	
Disposal Costs (for equipment and other waste, net of any salvage value)	<i>\$20,000.00</i>	\$20,000.00	N/A	\$1,478.65	N/A
Employee Time, Travel and Per Diem	<i>\$109,045.00</i>	\$109,045.00	N/A	\$69.60	N/A
Performance Bond	<i>\$83,104.00</i>	\$83,104.00	N/A	N/A	N/A
MVPD Notification of Channel Change	<i>\$2,500.00</i>	\$2,500.00	N/A	\$2,125.00	N/A
Develop and air announcement of upcoming channel change	<i>\$5,000.00</i>	\$5,000.00	N/A	N/A	N/A
Equipment Storage	<i>\$14,430.00</i>	\$14,430.00	Estimated Cost Justification WNMU-610-Equipment Storage V0	\$14,430.00	N/A

Equipment Delivery and Handling Charges	<b>\$2,390.35</b>	\$2,390.35	Please see Estimated Cost Justification WNMU-610-Equipment Delivery V0	\$2,390.35	N/A
DTV Medical Facility Notification	\$11,550.00	\$3,000.00	N/A	\$2,231.25	N/A
<b>Sub-total</b>	<b>\$248,019.35</b>	<b>\$239,469.35</b>	<b>N/A</b>	<b>\$22,724.85</b>	<b>N/A</b>
<b>Total for all systems</b>	<b>\$2,161,290.52</b>	<b>\$2,014,885.19</b>	<b>N/A</b>	<b>\$1,170,989.34</b>	<b>N/A</b>

## Components

Actual Information	
Description	File Name
Disposal Costs (for equipment and other waste, net of any salvage value)	<b>Component Description:</b> 20 Yd rolloff
	<b>Amount:</b> \$558.90
	<b>Component Description:</b> Delivery 20 yd open top
	<b>Amount:</b> \$250.00
	<b>Component Description:</b> 30 Yd rolloff
	<b>Amount:</b> \$419.75
	<b>Component Description:</b> Delivery 30 yd open top
	<b>Amount:</b> \$250.00

Employee Time, Travel and Per Diem	<p><b>Component Description:</b> Repack travel expenses-mileage to transmitter site</p> <p><b>Amount:</b> \$69.60</p>
Performance Bond	Information not provided.
MVPD Notification of Channel Change	<p><b>Component Description:</b> MVPD Notification Services</p> <p><b>Amount:</b> \$2,125.00</p>
Develop and air announcement of upcoming channel change	Information not provided.
Equipment Storage	<p><b>Component Description:</b> WNMU-610-Equipment Storage</p> <p><b>Amount:</b> \$14,430.00</p>
Equipment Delivery and Handling Charges	<p><b>Component Description:</b> Truck Driver per hour</p> <p><b>Amount:</b> \$2,095.00</p> <p><b>Component Description:</b> OTHER</p> <p><b>Amount:</b> \$295.35</p>
DTV Medical Facility Notification	<p><b>Component Description:</b> DTV Notification Service</p> <p><b>Amount:</b> \$2,231.25</p>

**Cost Information** **Grand Total**

	<b>Predetermined Cost Estimate</b>	<b>Estimated Cost</b>	<b>Actual Cost</b>
<b>Total for all systems</b>	\$2,161,290.52	\$2,014,885.19	\$1,170,989.34

**Reimbursement Status**

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

Certification	Section	Question	Response
	<p><b>Submission of Estimated Expenses Statements</b></p>	<p>WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND /OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a) (1), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503), AND ANY FALSE STATEMENTS COULD SUBJECT THIS ENTITY TO LIABILITY UNDER THE FALSE CLAIMS ACT.</p>	
		<ol style="list-style-type: none"> <li data-bbox="758 772 1053 1176">1. The Authorized Person signing below certifies that he /she is authorized to submit this TV Broadcaster Relocation Fund Reimbursement Form on behalf of the above-named entity.</li> <li data-bbox="758 1198 1037 1444">2. The above-named entity acknowledges that all certifications and attached documentation are considered material representations.</li> <li data-bbox="758 1467 1045 1747">3. The above-named entity acknowledges the submission of the information herein creates no obligation on the part of the government to pay any amount.</li> </ol>	



4. The above-named entity certifies that the equipment and services paid for with money from the TV Broadcaster Relocation Fund are necessary to change channels (broadcasters) or to continue to carry the signal of a broadcaster that changes channels (MVPD).
5. The above-named entity certifies that all payments from the TV Broadcaster Relocation Fund (Fund) received by the entity listed on this form will be used only for expenses that are eligible for reimbursement from the Fund.
6. The above-named entity certifies that it will maintain and provide to the Commission detailed records, including receipts, of all costs eligible for reimbursement actually incurred.
7. The above-named entity acknowledges that overpayments or payments in error must be promptly refunded to the Commission.

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.

**Eric L  
Smith**  
*General  
Manager*

02/01/2021

Certification	Section	Question	Response
	<p><b>Submission of Actual Cost Documentation Statements</b></p>	<p>WILLFUL FALSE, FRAUDULENT, OR FICTITIOUS STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND /OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a) (1), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503), AND ANY FALSE AND/OR FRAUDULENT STATEMENTS COULD SUBJECT THIS ENTITY TO LIABILITY UNDER THE FALSE CLAIMS ACT (U.S. CODE, TITLE 31, SECTIONS 3729-3733).</p>	
		<ol style="list-style-type: none"> <li>1. The Authorized Person signing below certifies and represents that he /she is authorized to submit this TV Broadcaster Relocation Fund Reimbursement Form on behalf of the above-named entity.</li> <li>2. The above-named entity certifies that the statements in this form and attached documentation are true, complete, and correct.</li> <li>3. The above-named entity acknowledges that all certifications and attached documentation are considered material representations.</li> </ol>	

4. The above-named entity acknowledges the submission of the information herein creates no obligation on the part of the government to pay any amount.
5. The above-named entity certifies that the equipment and services paid for with money from the TV Broadcaster Relocation Fund are necessary to change channels (full power and Class A stations) and/or otherwise modify a television station's facility as a result of the spectrum repack (LPTV/TV Translator stations); or to minimize service disruption resulting from a repacked television station (FM stations); or to continue to carry the signal of a broadcaster that changes channels (MVPD) .
6. The above-named entity certifies that all payments from the TV Broadcaster Relocation Fund (Fund) received by the entity listed on this form will be used only for expenses that are eligible for reimbursement from the Fund.
7. The above-named entity certifies that the cost information /documents submitted reflect costs actually incurred.

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.

**Eric L  
Smith**  
*General  
Manager*

02/01/2021

## Attachments