

(REFERENCE COPY - Not for submission)

FCC Form 399: Reimbursement Request

Facility 4318 Service: DTV Call WNMU Channel: 8 (High VHF)

ID: File Sign: **0000026956**

Number:

FRN: **0002735751** Date **08/16**

Submitted: /2021

Applicant Information

Applicant Name, Type, and Contact Information

Applicant	Address	Phone	Email	Applicant Type
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 Reimbursement Contact Information

Applicant	Address	Phone	Email
[Confidential]			

Preparer Contact Information

Preparer Contact Name and Information

Applicant	Address	Phone	Email
Benjamin Pidek Consulting Engineer Mid-State Consultants	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
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	
Manufacturer and Type	Model	Platinum PTCD10P1i
	Year	2009
	Туре	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

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i i

Primary Transmitter

Other Transmitter Cost Not Listed

Nan	ne	Description

Transmitter Blo	lg. Rearrangement
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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.

Antennas

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

Existing Antenna Information

Section	Question	Response
Existing Antenna Description	Type of change	Purchase New
	Antenna Use	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
	Туре	Slotted Coaxial
	Number of Stations Supported	N/A
	Number of Panels	N/A
	Design power capacity in use	N/A
	Lower Limit	N/A
	Upper Limit	N/A
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power)	15.4 kW

Manufacturer	
Model	ATW9V3- HTO-13-R
Year	2009

New Antenna Costs

Section	Question	Response
New Antenna Description	Use	Primary (Main)
	Description of Use	N/A
	Change Type	Purchase New
	Is this a request for upgraded equipment?	No
	Ownership	Owned
	Owner	N/A
	Is antenna shared?	No
	Is antenna directional?	No
	Will antenna be located on or in close proximity to an antenna farm?	No
New Antenna	Class	Full Power
Manufacturer and Types	Mounting	Top Mount
	Antenna position in stack	Not in Stack
	Polarization	Horizontal
	Туре	Slotted Coaxial
	Number of Stations Supported	N/A
	Number of Panels/Bays	N/A
	Lower Limit	N/A
	Upper Limit	N/A
	Design power capacity in use	N/A
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power)	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.

Other Antenna Costs

Question	Response
Do you need a Combiner for a Shared Antenna?	
Туре	
Number of channels supported	N/A
Frequencies of channels supported	N/A
Frequency	N/A
Do you need a combiner output splitter /switcher for dual feed lines?	N/A
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
Do you require the separate purchase of side mount brackets for a high power antenna?	
	Do you need a Combiner for a Shared Antenna? Type Number of channels supported Frequencies of channels supported Frequency Do you need a combiner output splitter /switcher for dual feed lines? Do you require the separate purchase of the Elbow Complex? Broadband or Single Channel? Feed Line Size Do you require the separate purchase of side mount brackets for a high power

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

Other Antenna Cost Not Listed

Information not provided.

Interim Antenna

New Antenna Costs

Section	Question	Response
New Antenna Description	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
New Antenna	Class	Full Power
Manufacturer and Type	Mounting	Side Mount
	Antenna position in stack	Not in Stack
	Polarization	Horizontal
	Туре	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

Interim Antenna

Other Antenna Costs

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

Interim Antenna

Other Antenna Cost Not Listed

Information not provided.

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

Primary Transmission

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
	Туре	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 Transmissi

Other Transmission Line Expenses Not Listed

sioi	Naine	Description
	Primary Line - Additional Transmission Line Parts	Additional parts needed in order to reuse existing line
	Primary Transmission Line - Dehydrator	Primary Transmission Line - Dehydrator

Interim Transmission

New Transmission Line

on Section	Question	Response
New Transmission Line	Use	Interim
Costs	Description of Use	N/A
	Change Type	Purchase New
	Туре	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
JUSTINGATION FOR TRANSPORTED LINE	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 Transmiss

sior	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
Existing Tower Description	Type of change	Modify Existing
	Tower Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Is this tower consider Complex?	No
	Is this tower currently shared with any other stations?	Yes
	One or more FM, AM or TV radio broadcaster(s)	Yes
	Others Types of Users	No
	Is tower documented for structural analysis?	Yes
	Is tower compliant with Rev G?	Yes
Existing Tower Structure	Do you have a tower registration number?	Yes
Registration	ASR Number	1023010
Coordinates (NAD83 (North American Datum of 1983))	Latitude (NAD83)	46° 21' 10.0 N-
	Longitude (NAD83)	087° 51' 15.0" W-
	Overall Structure Height	1100.71 fee
	Support Structure Height	999.99 feet
	Ground Elevation Above Mean Sea Level (AMSL)	1499.98 fee

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

Helicopter Services	Are helicopter services required?	Yes
Required		

Primary Tower

Other Tower Expenses Not Listed

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

Outside Professional

Section	Question	Response
Services Costs Outside Project Management Services	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
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	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
Attorney and Other Outside Consulting	Prepare and file Form FCC Construction Permit Application	Yes
Services	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
RF Field Engineering Services	Comprehensive coverage verification via field study	Yes
	RF exposure measurements	No
	Additional Field Engineering Service	Yes
	Number of Days	26

Justification	Installation,
	testing, and
	other field
	engineering
	work required
	for repack

Outside Professional

Other Professional Services Expenses Not Listed

al Services Costs	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.

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

Name	Description
Performance Bond	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.
Employee Time, Travel and Per Diem	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
Primary Transmitter VAXTE-4	\$270,950.00	\$279,382.27		\$153,975.36	
Switchgear - industrial 800 amp	\$38,200.00	\$36,300.00	N/A	N/A	N/A
Transmitter Bldg. Rearrangement	\$50,000.00	\$50,000.00	N/A	\$98.76	N/A
5 Ton system	\$20,250.00	\$38,082.27	Please see Estimated Cost Justification WNMU- 110-1st Primary Transmitter - 5 Ton System HVAC v0	\$37,805.32	N/A
Other Electrical Service: Necessary conduit, wiring and fuse disconnects as quoted by electrical contractor.	\$10,000.00	\$10,000.00	N/A	\$5,445.00	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
Sub-total	\$270,950.00	\$279,382.27	N/A	\$153,975.36	N/A

Total for all	\$2,166,131.33	\$2,032,226.00	N/A	\$1,223,801.06	N/A
systems					

Components

Actual Information Description	File Name
Switchgear - industrial 800 amp	Information not provided.

Transmitter Bldg. Rearrangement

Component Description: LOC TITE FOAM

GPS AND CRCKS

12-OZ

Amount: \$4.00

Component Description: Invoice moved to

correct budget

category.

Amount: N/A

Component Description: Invoice moved to

correct budget

category.

Amount: N/A

Component Description: Invoice moved to

1st Primary

Transmitter - Other Electrical Service

Category

Amount: N/A

Component Description: Invoice moved to

correct budget

category.

Amount: N/A

Component Description: SKELETON 10OZ

CAULK GUN DRIP

FREE 3

Amount: \$94.76

5 Ton system		
	Component Description:	Key pick up
	Amount:	\$2,223.05
	Component Description:	HVAC
	Amount:	\$9,000.00
	Component Description:	HVAC
	Amount:	\$3,500.00
	Component Description:	Demo existing
	Amount:	three supply \$23,082.27
	Component Description:	HVAC
	Amount:	\$3,500.00
Other Electrical Service: Necessary conduit, wiring		
and fuse disconnects as	Component Description:	Electrical for HVAC and Television
contractor.	Amount:	equipment \$1,945.00
	Component Description:	ELY Township
	- Simponom Sadaripinam	Tower Site
	Amount:	\$3,500.00

High VHF - Air Cooled Solid State Transmitter 1.1 . 4.4 kW

Component Description: A. Transmitter **Amount:** \$35,170.15

Component Description: VAXTE-4R44

Transmitter per Quote Q-81435

Amount: \$40,285.96

Component Description: Downpayment only

for channel 8

transmitter \$35,170.17

Amount:

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
Interim Antenna TLS-V8BB	\$106,730.00	\$106,400.00		\$77,148.13	
High VHF - High Power Side Mount One Station horizontally polarized	\$100,000.00	\$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
Primary Antenna THV-9A8-R	\$341,300.00	\$340,696.00		\$277,259.18	
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
High VHF - High Power Top Mount One Station horizontally polarized	\$325,000.00	\$325,000.00	N/A	\$261,628.08	N/A
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	\$6,400.00	N/A

Sub-total	\$448,030.00	\$447,096.00	N/A	\$354,407.31	N/A
Total for all systems	\$2,166,131.33	\$2,032,226.00	N/A	\$1,223,801.06	N/A

Components

Actual Information Description	File Name	
	i iio itaiiio	
High VHF - High Power Side		
Mount One Station horizontally polarized	Component Description:	WNMU-280-
nonzonially polarized		Interim Antenna -
		High VHF High
		Power Side
		Mount Single
		Station, H-POL
	Amount:	\$30,724.43
	Component Description:	WNMU-280-
		Interim Antenna -
		High VHF High
		Power Side
		Mount Single
		Station, H-POL
	Amount:	\$6,798.40
		MAIN II 000
	Component Description:	WNMU-280-
		Interim Antenna -
		High VHF High
		Power Side
		Mount Single
	A	Station, H-POL
	Amount:	\$33,225.30

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

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

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
Interim Transmission Line	\$59,415.55	\$41,760.62		\$41,760.62	
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	\$415.55	\$415.55	Please see WNMU Interim Transmission Line- Nitrogen Regulator Kit Budget Revision Justification Letter	\$415.55	N/A
Primary Transmission Line	\$14,907.87	\$14,907.87		\$13,438.73	
Primary Line - Additional Transmission Line Parts	\$11,854.75	\$11,854.75	Please see Dielectric quote 700079CMZ- 1, plus actual shipping costs on invoices	\$10,385.61	N/A

Primary Transmission Line -	\$3,053.12	\$3,053.12	Please see RF Specialities	\$3,053.12	N/A
Dehydrator			proposal RFMQ26482 and email justification		
Sub-total	\$74,323.42	\$56,668.49	N/A	\$55,199.35	N/A
Total for all systems	\$2,166,131.33	\$2,032,226.00	N/A	\$1,223,801.06	N/A

Components

Actual Information		
Description	File Name	
Flexible Air Transmission		
Line - dielectric, 3"		
	Component Description:	OTHER
	Amount:	\$2,632.00
	Component Description:	WNMU-380-
		Interim
		Transmission Line - 3" Flexible Air
		Dielectric
	Amount:	\$16,821.98
	Component Description:	WNMU-380-
		Interim
		Transmission Line
		- 3" Flexible Air
		Dielectric
	Amount:	\$18,168.61
	Component Description:	WNMU-380-
		Interim
		Transmission Line
		- 3" Flexible Air
		Dielectric
	Amount:	\$3,722.48

Interim Transmission Line- Nitrogen Regulator Kit	Component Description:	Nitrogen Regulator Kit
	Amount:	\$415.55
Primary Line - Additional		
Transmission Line Parts	Component Description:	WNMU-310-
		Primary
		Transmission Line
		- Additional
		Transmission Line
		Parts
	Amount:	\$5,334.63
	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
Primary Transmission Line -		
Dehydrator	Component Description:	TSI WDH2-5U-15-
		120 Waveguide
	Amount:	\$3,053.12

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 C
Primary Tower TOWER	\$866,350.00	\$834,250.00		\$495,469.00	
Interim Antenna Rigging	\$100,000.00	\$100,000.00	N/A	\$125.00	N/A
PE Review of Rigging Plan	\$7,500.00	\$7,500.00	N/A	N/A	N/A
Major tower reinforcement /modifications	\$421,000.00	\$400,000.00	N/A	\$197,014.00	N/A
Structural engineering tower load study for well documented tower	\$12,600.00	\$12,000.00	N/A	\$12,000.00	N/A
Tall Tower (greater than 500')	\$210,500.00	\$200,000.00	N/A	\$171,580.00	N/A
Tower Helicopter Lift	\$114,750.00	\$114,750.00	Please see WNMU FDH Infrastructure Services, LLC quote P18_231409_001A	\$114,750.00	N/A
Sub-total	\$866,350.00	\$834,250.00	N/A	\$495,469.00	N/A
Total for all systems	\$2,166,131.33	\$2,032,226.00	N/A	\$1,223,801.06	N/A

Components

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

Structural engineering tower load study for well documented tower

Component Description: Engineering

services

Amount: \$1,500.00

Component Description: 001 Engineering

Amount: \$2,500.00

Component Description: 002 Engineering

Amount: \$2,500.00

Component Description: STNLSA STNL

Structural Analysis

Amount: \$2,750.00

Component Description: STNLSA STNL

Structural Analysis

Amount: \$2,750.00

Tall Tower (greater than 500')

Component Description: WNMU-410-

Existing Primary
Tower - Tower

Rigging, Tall Tower

Amount: \$10,847.10

Component Description: WNMU-410-

Existing Primary
Tower - Tower
Rigging, Tall
Tower

Amount: \$46,200.00

Component Description: Field Services

Final PMT \$31,427.00

Component Description: Regular Portable

Toilet

Amount: \$150.00

Amount:

Component Description: Tall Tower **Amount:** \$105.00

Component Description: ZEP AP CLEAN &

DEGREASE 320Z

Amount: \$105.00

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

Tower Helicopter Lift

Component Description: Construction Srvcs
Amount: \$68,850.00

Component Description: Field services final
PMT 10%
Amount: \$11,475.00

Component Description: STNLCN STNL
Construction

\$34,425.00

Amount:

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 C
Outside Professional Services	\$258,458.56	\$175,359.89		\$142,025.19	
Site Survey	\$15,300.00	\$15,300.00	N/A	\$15,289.50	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 - 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
Project management of the transition	\$94,010.00	\$99,675.00	Please see attached Widelity Strategics Support Quote	\$95,075.80	N/A
Additional Field Engineering Service, 26 Days	\$25,818.56	\$25,818.56	The estimated cost has been adjusted to include all invoices submitted for reimbursement at this time.	\$25,818.56	N/A

Comprehensive coverage verification via	\$84,200.00	\$516.33	Please see WNMU Outside Professional	\$516.33	see submitt invoice
ield study, if			Services-		IIIVOIC
needed			Engineering -		
leeded			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		
=AA	\$2,105.00	\$2,000.00	N/A	N/A	N/A
consultant,	Ψ2,103.00	Ψ2,000.00	14/74	IV/A	14/7
ncluding cost					
of preparing					
FAA Form					
7460 (Notice of					
Proposed					
Construction),					
f needed for					
neight increase					
ASR	\$2,105.00	\$2,000.00	N/A	N/A	N/A
modification					
prepare FCC					
Form 854)					
Attorney Fees -	\$4,210.00	\$1,300.00	The estimated	\$1,300.00	Please
Negotiation of			cost has been		submit
ease and other			adjusted to		invoic
matters for			include all		
shared			invoices		
ocations			submitted for		
			reimbursement		
			at this time.		
Prepare and or	\$2,630.00	\$2,500.00	N/A	\$525.00	N/A
review					
eimbursement					

Sub-total	\$258,458.56	\$175,359.89	N/A	\$142,025.19	N/A
Total for all systems	\$2,166,131.33	\$2,032,226.00	N/A	\$1,223,801.06	N/A

Components

File Name	
Component Description: Amount:	Field Service \$15,289.50
Component Description: Amount:	WNMU-550- Attorney - Special Temporary Authorization \$300.00
Component Description: Amount:	WNMU-550- Attorney - License to Cover Application (Main) \$200.00
	Component Description: Amount: Component Description: Amount: Component Description:

Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	Component Description:	Invoice to be removed, it's non-reimbursable.
	Amount:	N/A
	Component Description:	WNMU-550- Attorney - Construction Perm
	Amount:	Application (Main) \$100.00
	Component Description:	Professional Services
	Amount:	\$800.00
	Component Description:	Professional
	Amount:	Services \$600.00
Prepare request for Special Temporary Authorization	Information not provided.	
Prepare engineering section of FCC Form 2100 (main), License to Cover Application	Component Description:	Preparation of Application for License to Cover
	Amount:	Repack \$225.00
Prepare engineering section of FCC Form 2100	Component Description:	FCC Repack of
(main), Construction		. So hopaun ui

Perform engineering study for new channel WNMU-530-RF **Component Description:** assignment and antenna Eng - Engineering development Study for New Channel Assignment Amount: \$675.00 **Component Description:** FCC Repack of **WNMU** \$450.00 Amount: Address transition timing Information not provided. and coordination issues w/ other stations and wireless Project management of the transition **Component Description:** 4/2/19 Office Amount: \$3,559.10 **Component Description:** Project Management Amount: \$1,258.75 **Component Description:** Project management Amount: \$9,467.50 **Component Description:** Project Management \$4,266.70 Amount: **Component Description:** Project Management \$15,749.80 Amount: **Component Description:** Project Management

Amount:

\$930.00

Component Description: Project

Management

Amount:

\$2,208.75

Component Description: Project

Management

Amount: \$3,835.00

Component Description: Project

Management

Amount: \$465.00

Component Description: Project

management

Amount: \$5,827.65

Component Description: Project

Management

Amount: \$2,183.70

Component Description: Project

Management

Amount: \$13,464.15

Component Description:

Project

Management Amount:

\$2,907.85

Project

Component Description:

Management

\$3,837.50 Amount:

Component Description:

Project

Management Amount:

\$1,990.00

Component Description: Project

Management

Amount:

\$3,580.45

Component Description: Project

Management

Amount:

\$4,063.35

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: Project

Management

Amount: \$12,094.30

Component Description: WNMU-510-Project

Management

Amount: \$400.00

Component Description: Repack Status

Review and Conference Call

Amount: \$300.00

Component Description: WNMU-510-Project

Management

Amount: \$100.00

Component Description: Review and

Response to
Dielectric
Questions

Regarding Main and Interim Antennas

Amount: \$225.00

Component Description: Project

Management

Amount: \$86.25

Component Description: WNMU-510-Project

Management

Amount: \$200.00

Component Description: Review of Stainless

Tower Study and Discussion on Results with NMU

Amount: \$225.00

Additional Field Engineering Service, 26		Au: M TV
Days	Component Description:	Attic Mount TV
•		Antenna
	Amount:	\$74.85
	Component Description:	Repack travel
		expenses
	Amount:	\$860.88
	Component Description:	Repack travel
		expenses
	Amount:	\$926.81
	Component Description:	Electrician
		Coordinate
	Amount:	\$7,228.47
	Component Description:	TRAVEL
	Amount:	\$10,342.56
	Component Description:	Procedure Patch
		panel
	Amount:	\$2,170.43
	Component Description:	Drive Madison
	Amount:	\$4,214.56
Comprehensive coverage verification via field study,	Component Description:	bladeRF 2.0 micro
if needed	Amount:	\$516.33
FAA consultant, including cost of preparing FAA Form 7460 (Notice of Proposed Construction), if	Information not provided.	
needed for height increase	Information and was ideal	
ASR modification (prepare FCC Form 854)	Information not provided.	

Attorney Fees -Negotiation of lease and other matters for shared locations

Component Description: Email exchange

with Eric Smith

Amount: \$100.00

Component Description: Professional

Services

Amount: \$300.00

Component Description: Professional

Services

Amount: \$100.00

Component Description: Draft and File Form

323-E

Amount: \$300.00

Component Description: Professional

Services

Amount: \$200.00

Component Description: Professional

Services

Amount: \$100.00

Component Description: Professional

Services

Amount: \$200.00

Prepare and or review reimbursement form

Component Description: Professional

Services

Amount: \$100.00

Component Description: WNMU-590-

Prepare/Review

Reimbursement

Form

Amount: \$100.00

Component Description: Attorney Prepare

and Review

Reimbursement

Form

Amount: \$100.00

Component Description: WNMU-550-

Prepare/Review Reimbursement

Form

Amount: \$225.00

Cost Information

Other Expenses

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

	Predetermined	Estimated	Estimated Cost		Actual Cost
Description	Cost Estimate	Cost	Justification	Actual Cost	Justification
Other Expenses	\$248,019.35	\$239,469.35		\$22,724.85	
Employee Time, Travel and Per Diem	\$109,045.00	\$109,045.00	N/A	\$69.60	N/A
Performance Bond	\$83,104.00	\$83,104.00	N/A	N/A	N/A
MVPD Notification of Channel Change	\$2,500.00	\$2,500.00	N/A	\$2,125.00	N/A
Develop and air announcement of upcoming channel change	\$5,000.00	\$5,000.00	N/A	N/A	N/A
Equipment Storage	\$14,430.00	\$14,430.00	Estimated Cost Justification WNMU- 610- Equipment Storage V0	\$14,430.00	N/A
DTV Medical Facility Notification	\$11,550.00	\$3,000.00	N/A	\$2,231.25	N/A
Disposal Costs (for equipment and other waste, net of any salvage value)	\$20,000.00	\$20,000.00	N/A	\$1,478.65	N/A

Equipment Delivery and Handling Charges	\$2,390.35	\$2,390.35	Please see Estimated Cost Justification WNMU- 610- Equipment Delivery V0	\$2,390.35	N/A
Sub-total	\$248,019.35	\$239,469.35	N/A	\$22,724.85	N/A
Total for all systems	\$2,166,131.33	\$2,032,226.00	N/A	\$1,223,801.06	N/A

Components

Actual Information Description	File Name	
Employee Time, Travel and Per Diem	Component Description:	Repack travel expenses- mileage to
	Amount:	transmitter site \$69.60
Performance Bond	Information not provided.	
MVPD Notification of Channel Change	Component Description: Amount:	MVPD Notification Services \$2,125.00
Develop and air announcement of upcoming channel change	Information not provided.	
Equipment Storage		
	Component Description:	WNMU-610- Equipment Storage
	Amount:	\$14,430.00

DTV Medical Facility Notification	Component Description: Amount:	DTV Notification Service \$2,231.25
Disposal Costs (for equipment and other waste, net of any salvage value)	Component Description: Amount:	Delivery 30 yd open top \$250.00
	Component Description: Amount:	30 Yd rolloff \$419.75
	Component Description: Amount:	20 Yd rolloff \$558.90
	Component Description: Amount:	Delivery 20 yd open top \$250.00
Equipment Delivery and Handling Charges	Component Description: Amount:	OTHER \$295.35
	Component Description: Amount:	Truck Driver per hour \$2,095.00

Cost Information

Grand Total

	Predetermined Cost Estimate	Estimated Cost	Actual Cost
Total for all systems	\$2,166,131.33	\$2,032,226.00	\$1,223,801.06

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

Section Question Response

Submission of Estimated Expenses Statements

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND /OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a) (1), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503), AND ANY FALSE STATEMENTS COULD SUBJECT THIS ENTITY TO LIABILITY UNDER THE FALSE CLAIMS ACT.

- 1. The Authorized
 Person signing
 below certifies that he
 /she is authorized to
 submit this TV
 Broadcaster
 Relocation Fund
 Reimbursement
 Form on behalf of
 the above-named
 entity.
- 2. The above-named entity acknowledges that all certifications and attached documentation are considered material representations.
- 3. The above-named entity acknowledges the submission of the information herein creates no obligation on the part of the government to pay any amount.

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

8. The above-named entity certifies that it is in full compliance with all statutes, rules, regulations and governmental requirements for which compliance is a pre-requisite for obtaining the payments herein requested.

I declare, under penalty of perjury, that I am an authorized representative of the abovenamed applicant for the Authorization(s) specified above. Eric L Smith General Manager

08/16/2021

Section Question Response

Submission of Actual Cost Documentation Statements

WILLFUL FALSE, FRAUDULENT, OR FICTITIOUS STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND /OR IMPRISIONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a) (1), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503), AND ANY FALSE AND/OR FRAUDULENT STATEMENTS COULD SUBJECT THIS ENTITY TO LIABILITY UNDER THE FALSE CLAIMS ACT (U.S. CODE, TITLE 31, SECTIONS 3729-3733).

- 1. The Authorized
 Person signing
 below certifies and
 represents that he
 /she is authorized to
 submit this TV
 Broadcaster
 Relocation Fund
 Reimbursement
 Form on behalf of
 the above-named
 entity.
- The above-named entity certifies that the statements in this form and attached documentation are true, complete, and correct.
- The above-named entity acknowledges that all certifications and attached documentation are considered material representations.

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

- 8. The above-named entity acknowledges that overpayments or payments in error must be promptly refunded to the Commission.
- 9. The above-named entity certifies that it is in full compliance with all statutes, rules, regulations and governmental requirements for which compliance is a prerequisite for obtaining the payments herein requested.

I declare, under penalty of perjury, that I am an authorized representative of the abovenamed applicant for the Authorization(s) specified above. Eric L Smith General Manager

08/16/2021

Section Question Response

Submission of Final Allocation or Accounting Information 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 and represents that he /she is authorized to submit this TV Broadcaster Relocation Fund Reimbursement Form on behalf of the above-named entity. The abovenamed entity acknowledges that all certifications and attached documentation are considered material representations.
- 2. The above-named entity acknowledges the submission of the information herein creates no obligation on the part of the government to pay any amount.

- 3. The above-named entity certifies that all costs identified as "actual costs" herein accurately represent the costs actually paid by the above-named entity, including any discounts, refunds, or rebates.
- 4. 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.
- 5. The above-named entity acknowledges that overpayments or payments in error must be promptly refunded to the Commission.
- 6. The above-named entity certifies that it is in full compliance with all statutes, rules, regulations and governmental requirements for which compliance is a pre-requisite for obtaining the payments herein requested.

I declare, under penalty of perjury, that I am an authorized representative of the abovenamed applicant for the Authorization(s) specified above. Eric L Smith General Manager

08/16/2021

Attachments