

Federal Communications Commission

#### (REFERENCE COPY - Not for submission)

# FCC Form 399: Reimbursement Request

Facility <b>69271</b>	Service: DTV	Call Sign:	WEKW-TV	Channel: 18 (UHF)
File 0000 Number:	027760	-		
FRN: 002189511	5 Date Submitted:	09/24 /2020		

# Applicant Name, Type, and Contact Information

### Information

Applicant	Address	Phone	Email	Applicant Type
NEW HAMPSHIRE PUBLIC BROADCASTING Doing Business As: NEW HAMPSHIRE PUBLIC BROADCASTING	Dawn DeAngelis 268 MAST ROAD DURHAM, NH 03824 United States	+1 (603) 868- 4304	ddeangelis@nhpbs. org	Not-for- Profit

#### Reimbursement Contact Name and Information Reimbursement Contact Information

Applicant	Address	Phone	Email
[Confidential]			

## Preparer Preparer Contact Name and Information

Contact Information	Applicant	Address	Phone	Email
	<b>Ryan Wilhour</b> ConsultingEngineer Kessler and Gehman Associates, Inc.	507 NW 60th ST STE D Gainesville, FL 32607 United States	+1 (352) 332-3157	ryan@kesslerandgehman. com

Broadcaster	Question	Response
Information and Transition Plan	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 transmitter, antenna and transmission line. Acquire interim antenna and line for continued operation during construction and duration of the assigned phase. Map and analyze tower; design and implement modifications if required.

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

Auxiliary	Add Transmitter Informat	ion				
Fransmitter	Section	Question	Response			
	Existing Transmitter Description	Type of change	Purchase New			
		Use	Auxiliary (Backup)			
		Description of Use	Auxiliary			
		Ownership	Owned			
		Owner	N/A			
		Site	N/A			
		Is this transmitter currently shared with another station?	No			
		Is this transmitter currently in operating condition?	Yes			
	Existing Transmitter	Manufacturer				
	Manufacturer and Type	Model	NV7250			
		Year	2002			
		Туре	Solid State			
		Solid State Cooling	Liquid Cooled			
		Solid State Power Capacity	4 kW			

Auxiliary	New Transmitter Costs		
Transmitter	Section	S Uuestion Uuse Change Type Is this a request for upgraded equipment? Manufacturer Model Transmitter Type Solid State Cooling Solid State Power capacity Justification for New Transmitter	Response
	New Transmitter	Use	Auxiliary (Backup)
		Change Type	Purchase New
		Is this a request for upgraded equipment?	No
		Manufacturer	
	Model	MPTV-PRLX- U3	
	Transmitter Type	Solid State	
		Solid State Cooling	Liquid Cooled
		Solid State Power capacity	5 kW
		Justification for New Transmitter	The manufacturer of the existing transmitter advises that the transmitter cannot be retuned to the assigned channel. See attachment.

Auxiliary Transmitter	Other Transmitter Costs	
	Section	
	Electrical Service	Se

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

	Size	2 inches
	Length	100.0 feet
	Other Electrical Service	No
	Description	N/A
HVAC Service	Does the replacement transmitter require HVAC Service?	No
	Туре	N/A
	Size	N/A
	Other Size	N/A
Transmitter Building Addition/Modification or Leasehold Improvement	Does the Transmitter Building require an addition, modification, other leashold improvement?	No
	Size	N/A
Channel 14 Costs	Is an RF Consulting Engineer needed?	N/A
	Is a channel 14 Mask Filer needed?	N/A
	Is additional field engineering time needed?	N/A
	Number of Days	N/A

# Auxiliary Other Transmitter Cost Not Listed

Transmitter Information not provided.

Primary	Existing Transmitter Infor	ng Transmitter Information			
Transmitter	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	AT7105K0		
		Year	2011		
		Туре	Solid State		
		Solid State Cooling	Air Cooled		
		Solid State Power Capacity	5 kW		

**Existing Transmitter Information** 

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	MPTV-PRLX- U3		
		Transmitter Type	Solid State		
		Solid State Cooling	Liquid Cooled		
		Solid State Power capacity	5 kW		
		Justification for New Transmitter	The manufacturer of the existing transmitter advises that the transmitter cannot be re- tuned to the assigned channel. See attachment.		

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

	Size	1.25 inches
	Length	100.0 feet
	Other Electrical Service	No
	Description	N/A
HVAC Service	Does the replacement transmitter require HVAC Service?	No
	Туре	N/A
	Size	N/A
	Other Size	N/A
Transmitter Building Addition/Modification or Leasehold Improvement	Does the Transmitter Building require an addition, modification, other leashold improvement?	No
	Size	N/A
Channel 14 Costs	Is an RF Consulting Engineer needed?	N/A
	Is a channel 14 Mask Filer needed?	N/A
	Is additional field engineering time needed?	N/A
	Number of Days	N/A

Primary Transmitter	Other Transmitter Cost Not Listed			
	Name	Description		
	Additional Interior RF System	Interior RF System Existing Transmitter to Interim Transmission line		
	Standby Exciter and Switch	Standby Exciter with Automatic Change Over Switch		

Antennas Section		Question	Response
Antenna Rela	ated Expenses	Do you have antenna related expenses?	Yes

Primary	Existing Antenna Information				
Antenna	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	Broadband Panel		
		Number of Stations Supported	1		
		Number of Panels	48		
		Design power capacity in use	35.0 %		
		Lower Limit	470.00 MHz		
		Upper Limit	860.00 MHz		
		Other Antenna Type	N/A		
		ERP: (Effective Radiated Power)	112.0 kW		

Manufacturer	
Model	9551310- 4660
Year	2002

Primary	New Antenna Costs				
Antenna	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 Manufacturer and Types	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/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)	66.0 kW		
		Manufacturer			
		Model	TBD		

Year	2018
Justification for New Antenna	This is a
	large
	change in
	channels
	from 49 to
	18 and the
	existing
	primary
	broadband
	antenna ha
	not been
	performance
	tested on
	the
	assigned
	channel.
	The station
	will use
	existing if
	possible.
	ERP is from
	1%
	expansion.

# Primary Other Antenna Costs

Antenna					
	Section	Question	Response		
	Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	No		
		Туре			
		Number of channels supported	N/A		
		Frequencies of channels supported	N/A		
		Frequency	N/A		
		Do you need a combiner output splitter /switcher for dual feed lines?	N/A		
	Elbow Complex	Do you require the separate purchase of the Elbow Complex?	Yes		
		Broadband or Single Channel?	Single Channel		

	Feed Line Size	4 1/16 inches inches
Side Mount Brackets	Do you require the separate purchase of side mount brackets for a high power antenna?	No
Pattern Scatter Analysis	Do you require separate purchase of pattern scatter analysis for a side mount high or medium power antenna?	No
Sweep Test	Do you require the sweep testing of transmission line and antenna?	Yes

# Primary Other Antenna Cost Not Listed

Antenna Informatio

Information not provided.

Interim	New Antenna Costs				
Antenna	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?	No		
		Will antenna be located on or in close proximity to an antenna farm?	No		
	New Antenna Manufacturer and Type	Class	Full Power		
		Mounting	Side Mount		
		Antenna position in stack	Not in Stack		
		Polarization	Horizontal		
		Туре	Slotted Coaxial		
		Number of Stations Supported	N/A		
		Number of Panels/Bays	N/A		
		Lower Limit	N/A		
		Upper Limit	N/A		
		Design power capacity in use	N/A		
		Other Antenna Type	N/A		
		ERP: (Effective Radiated Power)	112.0 kW		
		Manufacturer			
		Model	TBD		
		Year	2018		

Justification for New Antenna	An interim
	antenna is
	necessary
	to keep
	station on
	the air
	during
	primary
	antenna
	replacement
	and for the
	duration of
	the
	assigned
	phase.
	Station will
	attempt to
	rent if
	renting is
	available at
	time of
	acquisition.

## Interim

#### **Other Antenna Costs**

#### Antenna

Section	Question	Response
Elbow Complex	Do you require the separate purchase of the Elbow Complex?	Yes
	Broadband or Single Channel?	S
	Feed Line Size	3 1/8 inches
Side Mount Brackets	Do you require the separate purchase of side mount brackets for an 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

# Interim Other Antenna Cost Not Listed

Antenna Information not provided.

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

Transmission Line Existin	Existing Transmission Line			
	n Line Section	Question	Response	
	Existing Transmission Line Description	Type of change	Purchase New	
		Use	Primary (Main)	
		Description of Use	N/A	
		Ownership	Owned	
Existing Transmission Line Manufacturer and Type		Owner	N/A	
		Site	N/A	
		Is the existing transmission line shared with another station or stations?	No	
		Is Transmission Line in operating condition?	Yes	
	Manufacturer			
		Туре	Rigid	
		Diameter	4 1/16 inches	
		Other Diameter	N/A	
		Segment Length	19 3/4 inches	
		Other Segment Length	N/A	
		Number of parallel runs	1	
		Length	475 feet per run	

Primary	New Transmission Line		
Transmission	on 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
		Туре	Rigid
		Diameter	4 1/16 inches
		Other Diameter	N/A
		Segment Length	20 inches
		Other Segment Length	N/A
		Number of parallel runs	1
		Length	480 feet per run
			1

Justification for New Transmission Line

Other Transmission Line Expenses Not Listed Transmission

Interim	New Transmission Line		
Transmissio	n Line Section	Question	Response
	New Transmission Line Costs	Use	Interim
		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	380 feet per run
		Justification for New Transmission Line	An interim transmission line is necessary to keep station on the air during primary line replacement. Station will attempt to rent if renting is available at time of acquisition.

Other Transmission Line Expenses Not Listed Transmission

Tower	Section	Question	Response
Equipment And Rigging Costs	Tower Equipment or Rigging Costs Changes	Do you have tower equipment or rigging costs changes?	Yes

Primary Tower	Section	Question	Response
	Existing Tower Description	Type of change	Modify Existing
		Tower Use	Primary (Main)
		Description of Use	N/A
		Ownership	Owned
		Is this tower consider Complex?	No
		Is this tower currently shared with any other stations?	Yes
		One or more FM, AM or TV radio broadcaster(s)	Yes
		Others Types of Users	Yes
		Is tower documented for structural analysis?	No
		Is tower compliant with Rev G?	Yes
	Existing Tower Structure Registration	Do you have a tower registration number?	No
Coordinates (I		ASR Number	
	Coordinates (NAD83 ( North American Datum of	Latitude (NAD83)	43° 01' 59.9" N-
	1983))	Longitude (NAD83)	072° 22' 02.0" W-
		Overall Structure Height	499.99 feet
		Support Structure Height	455.05 feet
		Ground Elevation Above Mean Sea Level (AMSL)	1517.04 feet

Structure Type	TOWER - Free Standing or Guyed Structure
Tower Owner	New Hampshire Public Broadcasting
Date Constructed	01/01/1967

#### 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
48440	WEVN	FM
46334	WKKN	FM
48413	WVMA-CD	DTV
36834	WKNE	FM

#### Other Types of Users

Users

12 mwave dishes

# Primary Tower Modification Costs

Tower

Section	Question	Response
Engineering Study	Please what type of engineering study is required, if any:	Study needed for undocumented /poorly documented tower

Tower Reinforcements	Please select whether tower reinforcements are needed:	Major Reinforcements needed
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Primary Tower	Tower Rigging Costs					
	Section	Question	Response			
	Tower Rigging Costs	Complex Tower	N/A			
	Helicopter Services Required	Are helicopter services required?	No			

#### Other Tower Expenses Not Listed

Primary Tower Information not provided.

Outside	Section	Question	Response
Professional	Management Services	Do you require outside project management services?	Yes
		Number of Hours	40
		Explanation	It will be necessary to schedule and coordinate multiple vendors, complete progress reports, and update Schedule 399. Station does not have available personnel or personnel trained in project management for such complex projects.
	Outside RF consulting Engineering Services	Perform engineering study for new channel assignment and antenna development	Yes
		Prepare engineering section of Form FCC Construction Permit Application	Yes
		For Auxiliary Facility	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	No
	FAA Consultation (including preparation of FAA Form 7460)	No
	Negotiation of Lease and other Matter for Shared Locations	No
	Prepare or Review FCC Form 399 for Reimbursement	Yes
	Address transition timing and coordination issues w/ other stations and wireless providers	Yes
RF Field Engineering Services	Comprehensive coverage verification via field study	Yes
	RF exposure measurements	No
	Additional Field Engineering Service	Yes

Number of Days	6
Justification	It will be necessary to survey the site, plan the equipment, develop specifications for purchasing, and oversee multiple vendor RF projects. Station does not have available personnel trained in such services.

# Outside Other Professional Services Expenses Not Listed

Professional	Services Costs	Description	
	Other Legal Services	Legal services not specifically listed under Outside Professional Services	
	Other Engineering Services	Engineering services not specifically listed under Outside Professional Services	

Other	Section	Question	Response
Expenses	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?	No
		Does this relocation require the Development and Airing of an Announcement regarding an upcoming channel change?	Yes
		Does this relocation require MVPD Notification of a Channel Change?	Yes

# Other Expenses Not Listed

**Expenses** Information not provided.

#### Transmitters

#### Cost Information

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 MPTV-PRLX- U3	\$744,879.73	\$407,748.96		\$182,114.02	
Additional Interior RF System	\$140,000.00	\$140,000.00	N/A	N/A	N/A
1.25" Rigid Conduit and Wiring	\$929.73	\$929.73	See attached / uploaded PDF files that are Home Depot receipts and Needham Electric Supply invoices.	\$894.79	N/A
Transformer 3 phase /480v - 150 KVA	\$25,550.00	\$24,300.00	N/A	N/A	N/A
Switchgear - industrial 800 amp	\$38,200.00	\$36,300.00	N/A	N/A	N/A
UHF - Liquid Cooled Solid State Transmitter 4.9 . 6.5 kW	\$273,500.00	\$180,770.00	See attached / uploaded PDF file titled "Comark S10543-1 v200127jgv1. pdf"	\$180,770.00	N/A

Standby Exciter and SwitchS22,000.00N/AN/AN/A3' Rigid Conduit and Wirng foot)S5,200.00\$320.34***System Notice: Estimate adjusted and locked because line has been superseded. .***\$320.34N/AUHF - Air Cooled Solid State Transmitter <b>4</b> - 6 kW\$236,500.00\$128.89***System Notice: Estimate adjusted adjusted adjusted adjusted adjusted adjusted adjusted adjusted superseded. .***\$128.89N/ACooled Solid State Transmitter <b>717</b> \$339,850.00\$295,680.00\$220,951.00X/A2' Rigid Conduit and Wiring (Cost per foot)\$2,600.00\$2,500.00N/AN/AN/A1' Rigid Conduit and Viring (Cost per foot)\$2,500.00\$2,500.00N/AN/AN/AUHF - tigiud Cooled Solid State Transmitter Transmitter (Cost per foot)\$2,500.00S2,500.00N/AN/AN/AUHF - tigiud Cooled Solid State tigiud (Cost per foot)\$273,500.00\$23,580.00N/AN/AN/AUHF - tigiud Cooled Solid State Transmitter Transmitter Transmitter and statial 800.00\$36,300.00N/AN/AN/ASwitchgear 800 amp\$38,200.00\$36,300.00N/AN/AN/A						
Conduit and Wring (Cost per toot)Notice: Estimate adjusted and locked because line has been superseded. ***Notice: State Paster superseded. ***UHF - Air Cooled Solid State Transmitter <b>4</b> - 6 kW\$236,500.00 \$236,500.00\$128.89 \$226,550.00 \$295,680.00***System Notice: Estimate adjusted and locked because line has been superseded. ***\$128.89 N/AAuxilliary Transmitter Merty-PRLX-\$339,850.00 \$295,680.00\$225,000 \$225,680.00\$220,951.002" Rigid Cooled Cool at and Viring (Cost per foot)\$2,600.00 \$2,500.00\$2,500.00 \$2,500.00N/AN/A1\$2,600.00 \$2,500.00\$2,500.00 \$2,500.00N/AN/AN/AUHF - Liquid Cooled Solid State Transmitter ransmitter ransmitter sphase (480v - 150 KVA\$220,951.00N/AUHF - Liquid Cooled Solid State Transmitter ransmitter ransmitter sphase (480v - 150 KVA\$232,580.00N/AN/AUHF - Liquid Cooled Solid State Transmitter ransmitter ransmitter ransmitter ransmitter ransmitter ransmitter ransmitter ransmitter sphase (480v - 150 KVA\$232,580.00N/AN/AN/AUHF - Liquid Cooled Solid State Transmitter ransmi	Exciter and	\$25,000.00	\$25,000.00	N/A	N/A	N/A
Cooled Solid State Transmitter 4 - 6 kWNotice: Estimate adjusted and locked because line has been superseded. ***Auxiliary Transmitter MPTV-PRLX- U3\$339,850.00 \$2395,680.00\$220,951.00 \$220,951.002" Rigid Conduit and Wiring (Cost per foot)\$2,600.00 \$2,500.00\$2,500.00 \$2,500.00N/AN/AN/ATransformer 3 phase (A80V - 150)\$25,550.00 \$24,300.00N/AN/AN/AN/AUHF - Liquid Cooled Solid State Transmitter Transmitter 4.9 . 6.5 kW\$38,200.00 \$36,300.00N/AN/AN/A	Conduit and Wiring (Cost per	\$5,200.00	\$320.34	Notice: Estimate adjusted and locked because line has been superseded.	\$320.34	N/A
Transmitter MPTV-PRLX- U3S2,600.00S2,500.00N/AN/AN/A2' Rigid Conduit and Wiring (Cost per toot)\$2,600.00\$2,500.00N/AN/AN/ATransformer 3 phase (480v - 150 KVA\$25,550.00\$24,300.00N/AN/AN/AUHF - Liquid Cooled solid State Transmitter 4.9.6.5 kW\$273,500.00\$232,580.00N/A\$220,951.00N/ASwitchgear - industrial\$38,200.00\$36,300.00N/AN/AN/AN/A	Cooled Solid State Transmitter	\$236,500.00	\$128.89	Notice: Estimate adjusted and locked because line has been superseded.	\$128.89	N/A
Conduit and Wiring (Cost per foot)Second Second Second Second Seco	Transmitter MPTV-PRLX-	\$339,850.00	\$295,680.00		\$220,951.00	
3 phase /480v - 150 KVA       \$273,500.00       \$232,580.00       N/A       \$220,951.00       N/A         Liquid Cooled Solid State Transmitter 4.9 . 6.5 kW       \$232,580.00       N/A       \$220,951.00       N/A         Switchgear - industrial       \$38,200.00       \$36,300.00       N/A       N/A       N/A	Conduit and Wiring (Cost per	\$2,600.00	\$2,500.00	N/A	N/A	N/A
Liquid Cooled Solid State Transmitter 4.9 . 6.5 kW Switchgear \$38,200.00 \$36,300.00 N/A N/A N/A	3 phase /480v - 150	\$25,550.00	\$24,300.00	N/A	N/A	N/A
- industrial	Liquid Cooled Solid State Transmitter	\$273,500.00	\$232,580.00	N/A	\$220,951.00	N/A
	Switchgear	\$38,200.00	\$36,300.00	N/A	N/A	N/A

Sub-total	\$1,084,729.73	\$703,428.96	N/A	\$403,065.02	N/A
Total for all systems	\$2,354,899.73	\$1,926,312.46	N/A	\$456,198.22	N/A

#### Components

Actual Information Description	File Name	
Additional Interior RF System	Information not provided.	
1.25" Rigid Conduit and Wiring	Component Description: Amount:	Needham S5324411.003 v200325jgv1 \$346.68
	Component Description:	HD 3488 00062 37440 v200325jgv1
	Amount: Component Description:	\$28.56 Needham S5324411.002 v200325jgv1
	Amount:	\$353.44
	Component Description: Amount:	HD 3488 00061 59545 v200325jgv1 \$29.08
	Component Description:	HD 3403 00061 72225
	Amount:	v200325jgv1 \$8.10

	Component Description:	HD 3488 00051 92976
	Amount:	v200325jgv1 \$22.15
	Component Description:	HD 3488 00001 50763
	Amount:	v200228jgv1 \$106.78
	Component Description:	HD 3488 00062 46466 v200325jgv1
	Amount:	\$34.94
Transformer 3 phase/480v - 150 KVA	Information not provided.	
Switchgear - industrial 800 amp	Information not provided.	
UHF - Liquid Cooled Solid State Transmitter 4.9 . 6.5 kW	Component Description: Amount:	Comark S10543- v200403jgv1 \$9,038.50
	Component Description:	Comark S10543-
	Amount:	v200127jgv1 \$90,385.00
	Component Description:	Comark S10543-
	Amount:	v200403jgv1 \$81,346.50

3" Rigid Conduit and Wiring (Cost per foot)	Component Description:	Invoice is being applied to a
	Amount:	different component N/A
	Component Description:	HD 3488 00062 18481 v200304jgv1
	Amount:	\$320.34
UHF - Air Cooled Solid		
State Transmitter 4 - 6 kW	Component Description:	Support Base for backup TX heat exchanger - preparation for new transmitter
	Amount:	installation \$53.48
	Component Description:	Needham inv #S4909377.002 Parts to move exist TX heat exch to make space for the new TX v190501jgv2 \$75.41
2" Rigid Conduit and Wiring (Cost per foot)	Information not provided.	
Transformer 3 phase/480v - 150 KVA	Information not provided.	

UHF - Liquid Cooled Solid State Transmitter 4.9 . 6.5 kW	Component Description:	Comark S10544-2
		v200403jgv1
	Amount:	\$104,661.00
	Component Description:	Comark S10544-1
		v200127jgv1
	Amount:	\$116,290.00
Switchgear - industrial 800 amp	Information not provided.	

#### Antennas

### Cost Information

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 TBD	\$132,140.00	\$125,800.00		\$0.00	
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
Side mount brackets for high power antennas (if not included in antenna base cost)	\$23,150.00	\$22,000.00	N/A	N/A	N/A
Elbow complex, single channel, at antenna input, per 3 1/8. feedline (if needed)	\$7,600.00	\$7,400.00	N/A	N/A	N/A
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	N/A	N/A

UHF - Lower Power Side Mount, One station antenna - medium power (50- 200 kW), horizontally polarized	\$89,400.00	\$85,000.00	N/A	N/A	N/A
Primary Antenna TBD	\$263,300.00	\$252,575.00		\$8,475.00	
Elbow complex, single channel, at antenna input, per 4 1/16. feedline (if needed)	\$9,570.00	\$9,100.00	N/A	N/A	N/A
Sweep test of existing antenna	\$6,730.00	\$8,475.00	The contractor needed to add adapters to connect to the existing line to perform the Sweep measurements. The adapters are in the quote.	\$8,475.00	t
UHF - High Power Top Mount (200-1000 kW), One station antenna, horizontally polarized	\$247,000.00	\$235,000.00	N/A	N/A	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.	
Side mount brackets for high power antennas (if not included in antenna base cost)	Information not provided.	
Elbow complex, single channel, at antenna input, per 3 1/8. feedline (if needed)	Information not provided.	
Sweep test of existing antenna	Information not provided.	
UHF - Lower Power Side Mount, One station antenna - medium power (50-200 kW), horizontally polarized	Information not provided.	
Elbow complex, single channel, at antenna input, per 4 1/16. feedline (if needed)	Information not provided.	
Sweep test of existing		
antenna	Component Description:	Adapters to facilitate Sweep tests
	Amount:	\$2,075.00
	Component Description:	Sweep of existing Myat broadband line and MCI panel antenna
	Amount:	\$6,400.00

Information not provided.

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

### **Transmission Line**

#### Cost Information

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	\$22,420.00	\$21,280.00		\$0.00	
Flexible Air Transmission Line - dielectric, 3"	\$22,420.00	\$21,280.00	N/A	N/A	N/A
Primary Transmission Line	\$68,160.00	\$64,800.00		\$0.00	
Rigid Transmission Line - copper, 4 1 /16"	\$68,160.00	\$64,800.00	N/A	N/A	N/A
Sub-total	\$90,580.00	\$86,080.00	N/A	\$0.00	N/A
Total for all systems	\$2,354,899.73	\$1,926,312.46	N/A	\$456,198.22	N/A

## Components

Information not provided.

## **Tower Equipment and Rigging Costs**

#### Cost Information

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	\$531,500.00	\$505,000.00		\$1,991.40	
Major tower reinforcement /modifications	\$421,000.00	\$400,000.00	N/A	N/A	N/A
Short Tower (less than 500')	\$84,200.00	\$80,000.00	N/A	N/A	N/A
Tower mapping for an undocumented /poorly documented tower and preparation of documentation necessary for tower load study	\$26,300.00	\$25,000.00	N/A	\$1,991.40	Tower Structural Analysis
Sub-total	\$531,500.00	\$505,000.00	N/A	\$1,991.40	N/A
Total for all systems	\$2,354,899.73	\$1,926,312.46	N/A	\$456,198.22	N/A

## Components

Actual Information Description	File Name
Major tower reinforcement /modifications	Information not provided.
Short Tower (less than 500')	Information not provided.

Tower mapping for an undocumented/poorly documented tower and preparation of documentation necessary for tower load study	Component Description:	Legal services related to Tower Structural Analysis. Please refer to attachment "Sheehan Tower (rev)".
	Amount:	\$354.90
	Component Description:	Structural Analysis for proposed
		antenna loading
	Amount:	\$1,500.00
	Component Description:	Legal services
		related to Tower
		Structural
		Analysis. Please
		refer to
		attachment
		"Sheehan Tower
		2 (rev)".
	Amount:	\$136.50

## **Outside Professional Services**

#### Cost Information

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	\$169,100.00	\$170,428.50		\$35,408.80	
Prepare and or review reimbursement form	\$2,630.00	\$9,293.50	The Estimated Cost includes Form 399 submissions including ongoing Actual Cost invoice prep and submission, and amendments as needed.	\$9,293.50	N/A
Other Engineering Services	\$20,870.00	\$20,870.00	N/A	\$3,320.00	N/A
Other Legal Services	\$15,000.00	\$15,000.00	N/A	\$6,906.00	N/A
Additional Field Engineering Service, 6 Days	\$12,000.00	\$12,000.00	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

Attorney Fees - Prepare and File request for Special Temporary Authorization	\$3,680.00	\$3,500.00	N/A	N/A	N/A
Attorney Fees - Prepare and File FCC Form 2100 (main), License to Cover Application	\$2,365.00	\$2,250.00	N/A	\$460.80	N/A
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	\$5,260.00	\$5,000.00	N/A	\$90.00	N/A
Prepare request for Special Temporary Authorization	\$2,050.00	\$1,500.00	N/A	\$1,457.50	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
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	\$3,155.00	\$3,855.00	See attached / uploaded PDF files titled " KGA Study & CP. pdf " and "KGA 211- 114 v200508jgv1. pdf"	\$3,855.00	N/A

Address transition timing and coordination issues w/ other stations and wireless	\$2,630.00	\$2,500.00	N/A	\$3,361.00	Prep Original Form 399. Includes additional consultation regarding reimbursable items.
Project management of the transition	\$6,320.00	\$6,160.00	N/A	\$3,415.00	N/A
Perform engineering study for new channel assignment and antenna development	\$7,360.00	\$7,000.00	N/A	\$3,250.00	N/A
Sub-total	\$169,100.00	\$170,428.50	N/A	\$35,408.80	N/A
Total for all systems	\$2,354,899.73	\$1,926,312.46	N/A	\$456,198.22	N/A

# Components

Actual Information Description	File Name	
Prepare and or review reimbursement form	Component Description: Amount:	KGA 211-135 v200713jgv1 \$565.00
	Component Description: Amount:	KGA 211-118 v200507jgv1 \$575.00
	Component Description: Amount:	KGA 211-131 v200605pmv1 \$925.00

Component Description: Amount:	KGA 211-101 v191115jgv1 \$175.00
Component Description: Amount:	KGA 211-141 v200924jgv1 \$225.00
Component Description: Amount:	KGA 211-139 v200813jgv1 \$775.00
Component Description: Amount:	KGA 211-74 v190624jgv1 \$503.50
Component Description: Amount:	KGA 211-121 v200324jgv1 \$1,075.00
Component Description: Amount:	KGA 211-63 v200211jgv1 \$775.00
Component Description: Amount:	KGA 211-54 v200210jgv1 \$530.00
Component Description: Amount:	KGA 211-129 v200507jgv1 \$875.00
Component Description: Amount:	KGA 211-110 v200127jgv1 \$125.00

Component Description: Amount:	KGA 211-112 v200507jgv1 \$350.00
Component Description: Amount:	KGA 211-79 v190711jgv1 \$225.00
Component Description: Amount:	KGA 211-86 v190826jgv1 \$425.00
Component Description:	KGA inv #211-71 Actual Cost invoices by RG March 2019
Amount:	UL20190424jgv1 \$50.00
Component Description: Amount:	KGA 211-93 v191030jgv1 \$125.00
Component Description: Amount:	KGA 211-123 v200507jgv1 \$1,075.00
Component Description: Amount:	KGA 211-81 v190711jgv1 \$275.00
Component Description: Amount:	KGA 211-91 v190916jgv1 \$175.00

Other Engineering Services	Component Description: Amount: Component Description: Amount:	Prep and submit actual cost invoices \$530.00 KGA 211-78 v190711jgv1 \$375.00
	Component Description: Amount:	KGA 211-108 v200210jgv1 \$425.00
	Component Description: Amount:	KGA 211-133 v200611jgv1 \$400.00
	Component Description: Amount:	KGA 211-55 v200210jgv1 \$265.00
	Component Description: Amount:	RF calculations for new equipment selection \$265.00
	Component Description: Amount:	KGA 211-76 v190624jgv1 \$900.00
	Component Description: Amount:	KGA 211-99 v191030jgv1 \$425.00

Other Legal Services		
	Component Description:	Foster Garvey 2739594 v200207jgv1
	Amount:	\$210.00
	Component Description:	GSB 711243 v190624jgv1
	Amount:	\$120.00
	Component Description:	Foster Garvey 2751850 v200528jgv1
	Amount:	\$5,011.20
	Component Description:	GSB 720206 v190826jgv1
	Amount:	\$240.00
	Component Description:	Foster Garvey 2748000 v200713jgv1
	Amount:	\$1,324.80
Additional Field Engineering Service, 6 Days	Information not provided.	
Comprehensive coverage verification via field study, if needed	Information not provided.	
Attorney Fees - Prepare and File request for Special Temporary Authorization	Information not provided.	
Attorney Fees -Prepare and File FCC Form 2100 (main), License to Cover Application	Component Description:	Foster Garvey 2753292
Αμμισαιιστ	Amount:	v200608jgv1 \$460.80

Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	Component Description:	Legal services related to the 2100 Main CP application
	Amount:	for WEKW \$90.00
	Component Description:	4 items on invoice for various Legal services related to Repack for WEKW.
	Amount:	\$119.25
	Component Description:	Legal services related to Quarterly report for WEKW
	Amount:	\$30.00
Prepare request for Special Temporary Authorization	Component Description:	KGA 211-115 v200217jgv2
	Amount:	\$1,457.50
Prepare engineering section of FCC Form 2100 (main), License to Cover Application	Information not provided.	
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	Component Description:	KGA 211-114 v200508jgv1
	Amount:	\$1,855.00
	Component Description:	FCC CP application for main facility
	Amount:	\$2,000.00

Address transition timing and coordination issues w/ other stations and wireless	Component Description: Amount:	Prep of original Form 399 for reimbursement \$2,500.00
	Component Description: Amount:	Additional consultation regarding reimbursable items. \$861.00
Project management of the transition	Component Description:	KGA inv #211-45 Form 387 2018 Q1 UL20190301jgv2
	Amount:	\$225.00
	Component Description:	KGA inv #211-33 Actual Cost UL20190301jgv2
	Amount:	\$300.00
	Component Description: Amount:	KGA 211-138 v200813jgv1 \$150.00
	Component Description:	KGA inv #211-43 Other Eng Srvcs UL20190301jgv2
	Amount:	\$315.00
	Component Description:	KGA 211-126 v200702jgv1 \$150.00
	Amount:	φτου.υυ

Component Description: Amount:	KGA inv #211-40 Actual Cost UL20190301jgv2 \$375.00
Component Description: Amount:	Proj Mgmt for 3Q2017 Prog Rept \$300.00
Component Description: Amount:	One half the cost of checks for the reimbursement bank account, shared between repack stations WEKW and WLED \$25.00
Component Description: Amount:	KGA 211-127 v200507jgv1 \$150.00
Component Description: Amount:	KGA 211-117 v200206jgv1 \$150.00
Component Description: Amount:	KGA 211-57 v200210jgv1 \$150.00
Component Description: Amount:	KGA 211-97 v200210jgv1 \$150.00
Component Description: Amount:	KGA 211-49 v200210jgv1 \$150.00

Component Description: Amount:	KGA 211-83 v190711jgv1 \$150.00
Component Description: Amount:	KGA inv #211-38 Form 387 2017 Q4 UL20190301jgv2 \$225.00
Component Description: Amount:	KGA inv #211-31 Form 387 2017 Q3 UL20190301jgv2 \$300.00
Component Description: Amount:	KGA 211-52 v200210jgv1 \$150.00
Component Description: Amount:	Preliminary design of RF transmission facilities for planning \$315.00
Component Description: Amount:	KGA 211-125 v200702jgv1 \$150.00
Component Description: Amount:	Prepare and submit Sched 399 actual charges \$375.00
Component Description: Amount:	KGA inv #211-69 Form 387 2019 Q1 UL20190424jgv1 \$150.00

	Component Description: Amount:	Proj Mgmt 399 Actual Cost invoices \$300.00
	Component Description: Amount:	KGA 211-117 v200507jgv1 \$150.00
	Component Description: Amount:	Prep and submit Form 387 3Q18 \$150.00
	Component Description: Amount:	Prepare and submit Sched 387 \$225.00
	Component Description: Amount:	Prepare and submit Sched 387 \$225.00
Perform engineering study for new channel assignment and antenna development	Component Description:	Engineering study for new channel assignment and
	Amount:	antenna development \$3,250.00

## **Other Expenses**

#### Cost Information

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	\$83,550.00	\$83,000.00		\$7,258.00	
Equipment Delivery and Handling Charges	\$60,000.00	\$60,000.00	N/A	N/A	N/A
Disposal Costs (for equipment and other waste, net of any salvage value)	\$10,000.00	\$10,000.00	N/A	N/A	N/A
DTV Medical Facility Notification	\$11,550.00	\$11,000.00	N/A	\$5,425.00	N/A
MVPD Notification of Channel Change	\$2,000.00	\$2,000.00	N/A	\$1,833.00	N/A
Develop and air announcement of upcoming channel change	\$0.00	\$0.00	N/A	N/A	N/A
Sub-total	\$83,550.00	\$83,000.00	N/A	\$7,258.00	N/A
Total for all systems	\$2,354,899.73	\$1,926,312.46	N/A	\$456,198.22	N/A

## Components

Actual Information
Description File Name

Equipment Delivery and Handling Charges	Information not provided.	
Disposal Costs (for equipment and other waste, net of any salvage value)	Information not provided.	
DTV Medical Facility Notification	Component Description:	KGA 211-106 v200210jgv1
	Amount:	\$5,425.00
MVPD Notification of		
Channel Change	Component Description:	KGA 211-107 v200210jgv1
	Amount:	\$1,833.00
Develop and air announcement of upcoming channel change	Information not provided.	

Cost	Grand Total			
Information		Predetermined Cost Estimate	Estimated Cost	Actual Cost
	Total for all systems	\$2,354,899.73	\$1,926,312.46	\$456,198.22

Reimbursem	entestiatus	Response
	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
	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.	
		<ol> <li>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> </ol>	
		2. The above-named entity acknowledges that all certifications and attached documentation are considered material representations.	
		<b>3.</b> 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.	Jeffrey C Gehman Engineering Associate 09/24/2020

Certification	Section	Question	Response
Certification	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).	
		<ol> <li>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> </ol>	
		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).
- 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.

	<ul> <li>The above-named entity acknowledges that overpayments or payments in error must be promptly refunded to the Commission.</li> <li>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.</li> </ul>	
an au name	lare, under penalty of perjury, that I am uthorized representative of the above- ed applicant for the Authorization(s) ified above.	Jeffrey C Gehman Engineering Associate
		09/24/2020

## Attachments