

(REFERENCE COPY - Not for submission)

# FCC Form 399: Reimbursement Request

**69271** Service: **DTV** Call **WEKW-TV** Channel: 18 (UHF) Facility Sign:

ID:

File 0000027760

Number:

FRN: **0021895115** Date 10/06

> Submitted: /2020

#### **Applicant** Information

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

#### **Preparer Contact Name and Information**

Applicant	Address	Phone	Email
Ryan Wilhour 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 Information and Transition Plan

Question	Response
Will the station be sharing equipment with another broadcast television station or stations (e.g., a shared antenna, co-location on a tower, use of the same transmitter room, multiple transmitters feeding a combiner, etc.)? If yes, enter the facility ID's of the other stations and click 'prefill' to download those stations' licensing information.	Yes
Briefly describe transition plan	Replace 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**

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

# Auxiliary Transmitter

#### **Add Transmitter Information**

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 Transmitter

#### **New Transmitter Costs**

Section	Question	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	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	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 Transmitter **Other Transmitter Cost Not Listed** 

**Transmitter** Information not provided.

# 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	AT7105K0
	Year	2011
	Туре	Solid State
	Solid State Cooling	Air Cooled
	Solid State Power Capacity	5 kW

# Primary Transmitter

#### **New Transmitter Costs**

Section	Question	Response
New Transmitter	Use	Primary (Main)
	Change Type	Purchase New
	Is this a request for upgraded equipment?	Yes
	Manufacturer	
	Model	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.

#### 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 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	Class	Full Power
Manufacturer and Type	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

#### **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	
	Polarization	Horizontal
	Туре	
	Number of Stations Supported	N/A
	Number of Panels/Bays	N/A
	Lower Limit	N/A
	Upper Limit	Full Power  Top Mount  Not in Stack  Horizontal  Slotted Coaxial  N/A  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 has not been performance tested on the assigned channel. The station will use existing if possible. ERP is from 1% expansion.

#### **Other Antenna Costs**

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

#### **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?	No
	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	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 Antenna

#### **Other Antenna Costs**

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 Antenna

**Other Antenna Cost Not Listed** 

Information not provided.

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

# Primary Transmission Line

#### **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
	Owner	N/A
	Site	N/A
	Is the existing transmission line shared with another station or stations?	No
	Is Transmission Line in operating condition?	Yes
Existing Transmission	Manufacturer	
Line Manufacturer and Type	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 Transmission Line

#### **New Transmission Line**

New Transmission Line
Costs

Question	Response
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

Justification for New Transmission Line	The line might be compatible with the assigned channel. A new line is included in case the performance is unacceptable on the assigned channel. The station will utilize the existing line
	existing line if the sweep
	tests confirm acceptable

performance.

Other Transmission Line Expenses Not Listed Primary

Transmission loine tion not provided.

#### **New Transmission Line**

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Transmission	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.

Interim Other Transmission Line Expenses Not Listed Transmission Line tion not provided.

#### Tower Equipment And Rigging Costs

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

#### Primary Tower

#### **Existing Tower**

Section	Question	Response
Existing Tower Description	Type of change	Modify Existing
	Tower Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Is this tower consider Complex?	No
	Is this tower currently shared with any other stations?	Yes
	One or more FM, AM or TV radio broadcaster(s)	Yes
	Others Types of Users	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
	ASR Number	
Coordinates (NAD83 ( North American Datum of 1983))	Latitude (NAD83)	43° 01' 59.9" N-
	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 fee

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
48413	WVMA-CD	DTV
46334	WKKN	FM
36834	WKNE	FM

#### Other Types of Users

Users	
12 mwave dishes	

#### Primary Tower

# **Tower Modification Costs**

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

are needed: Reinforcements needed	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

# Primary Tower

# Other Tower Expenses Not Listed

Information not provided.

Outside Professional

Section	Question	Response
Services Costs Outside Project 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 or personnel trained in such services.

#### Outside Professional

# Other Professional Services Expenses Not Listed

I 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 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?	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.

# **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 MPTV-PRLX- U3	\$744,879.73	\$407,748.96		\$182,114.02	
Standby Exciter and Switch	\$25,000.00	\$25,000.00	N/A	N/A	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
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.         \$128.89         N/A           UHF - Air Cooled Solid State Transmitter 4 - 6 kW         \$236,500.00         \$128.89         N/System Notice: Estimate adjusted and locked because line has been superseded.         \$320.34         N/A           3'' Rigid Conduit and Wiring (Cost per foot)         \$5,200.00         \$320.34         Notice: Estimate adjusted and locked because line has been superseded.         \$220,951.00           2'' Rigid Conduit and Wiring (Cost per foot)         \$2,500.00         \$2,500.00         N/A         N/A         N/A           2'' Rigid (Cost per foot)         \$2,500.00         \$2,500.00         N/A         N/A         N/A           2'' Rigid (Cost per foot)         \$25,550.00         \$24,300.00         N/A         N/A         N/A           3 phase (ABO) - 150 (KVA)         \$38,200.00         \$36,300.00         N/A         N/A         N/A           Switchgear - Industrial 800 amp         \$38,200.00         \$36,300.00         N/A         N/A         N/A						
Cooled Solid State Transmitter         Notice: Estimate adjusted and locked because line has been superseded.           4 - 6 kW         \$5,200.00         \$320.34         ***System sazo.34 N/A Notice: Estimate adjusted and locked because line has been superseded.         Notice: Estimate adjusted and locked because line has been superseded.           Auxiliary Transmitter MPTV-PRLX-U3         \$339,850.00         \$295,680.00         \$220,951.00           2" Rigid Conduit and Wiring (Cost per foot)         \$2,600.00         \$2,500.00         N/A         N/A         N/A           2" Rigid (Cost per foot)         \$25,550.00         \$24,300.00         N/A         N/A         N/A           480v - 150 KVA         \$38,200.00         \$36,300.00         N/A         N/A         N/A	Conduit and	\$929.73	\$929.73	attached / uploaded PDF files that are Home Depot receipts and Needham Electric Supply	\$894.79	N/A
Conduit and Wiring (Cost per foot)  Auxiliary	Cooled Solid State Transmitter	\$236,500.00	\$128.89	Notice: Estimate adjusted and locked because line has been superseded.	\$128.89	N/A
Transmitter MPTV-PRLX- U3  2" Rigid \$2,600.00 \$2,500.00 N/A N/A N/A Conduit and Wiring (Cost per foot)  Transformer \$25,550.00 \$24,300.00 N/A N/A 3 phase /480v - 150 KVA  Switchgear \$38,200.00 \$36,300.00 N/A N/A N/A N/A - industrial	Conduit and Wiring (Cost per	\$5,200.00	\$320.34	Notice: Estimate adjusted and locked because line has been superseded.	\$320.34	N/A
Conduit and Wiring (Cost per foot)  Transformer \$25,550.00 \$24,300.00 N/A N/A N/A N/A 3 phase /480v - 150 KVA  Switchgear \$38,200.00 \$36,300.00 N/A N/A N/A N/A - industrial	Transmitter MPTV-PRLX-	\$339,850.00	\$295,680.00		\$220,951.00	
3 phase /480v - 150 KVA  Switchgear \$38,200.00 \$36,300.00 N/A N/A N/A - industrial	Conduit and Wiring (Cost per	\$2,600.00	\$2,500.00	N/A	N/A	N/A
- industrial	3 phase /480v - 150	\$25,550.00	\$24,300.00	N/A	N/A	N/A
	- industrial	\$38,200.00	\$36,300.00	N/A	N/A	N/A

UHF - \$273,500.00 \$232,580.00 N/A \$220,951.00 N/A Liquid Cooled Solid State Transmitter 4.9 . 6.5 kW  Sub-total \$1,084,729.73 \$703,428.96 N/A \$403,065.02 N/A  Total for all \$2,354,899.73 \$1,926,537.46 N/A \$456,423.22 N/A						
Cooled Solid State Transmitter 4.9 . 6.5 kW  Sub-total \$1,084,729.73 \$703,428.96 N/A \$403,065.02 N/A	•	\$273,500.00	\$232,580.00	N/A	\$220,951.00	N/A
Transmitter 4.9 . 6.5 kW <b>Sub-total</b> \$1,084,729.73 \$703,428.96 N/A \$403,065.02 N/A	•					
4.9 . 6.5 kW <b>Sub-total</b> \$1,084,729.73 \$703,428.96 N/A \$403,065.02 N/A						
<b>Sub-total</b> \$1,084,729.73 \$703,428.96 N/A \$403,065.02 N/A						
	4.9 . 0.5 KVV					
Total for all \$2.254.900.72 \$4.026.527.46 N/A \$456.422.22 N/A	Sub-total	\$1,084,729.73	\$703,428.96	N/A	\$403,065.02	N/A
	Total for all	¢2 254 900 72	¢4 026 527 46	NI/A	¢456 422 22	NI/A
	systems					

#### Components

Joinponents		
Actual Information Description	File Name	
Standby Exciter and Switch	Information not provided.	
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 S10543-3 v200403jgv1 \$9,038.50
	Component Description: Amount:	Comark S10543-1 v200127jgv1 \$90,385.00
	Component Description: Amount:	Comark S10543-2 v200403jgv1 \$81,346.50
Additional Interior RF System	Information not provided.	
1.25" Rigid Conduit and Wiring		

Component Description: HD 3488 00062

37440

v200325jgv1

**Amount:** \$28.56

Component Description: Needham

S5324411.002

v200325jgv1

**Amount:** \$353.44

Component Description: HD 3488 00061

59545

v200325jgv1

**Amount:** \$29.08

Component Description: HD 3403 00061

72225

v200325jgv1

**Amount:** \$8.10

Component Description: HD 3488 00051

92976

v200325jgv1

**Amount:** \$22.15

Component Description: HD 3488 00001

50763

v200228jgv1

**Amount:** \$106.78

Component Description: HD 3488 00062

46466

v200325jgv1

**Amount:** \$34.94

	Component Description:  Amount:	Needham S5324411.003 v200325jgv1 \$346.68
UHF - Air Cooled Solid State Transmitter 4 - 6 kW	Component Description:  Amount:	Needham inv #S4909377.002 Parts to move exist TX heat exch to make space for the new TX v190501jgv2 \$75.41
	Component Description:  Amount:	Support Base for backup TX heat exchanger - preparation for new transmitter installation \$53.48
3" Rigid Conduit and Wiring (Cost per foot)	Component Description:	Invoice is being applied to a different component
	Amount:  Component Description:	N/A HD 3488 00062 18481 v200304jgv1
2" Rigid Conduit and Wiring (Cost per foot)	Amount:  Information not provided.	\$320.34
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: Comark S10544-2

v200403jgv1

**Amount:** \$104,661.00

Component Description: Comark S10544-1

v200127jgv1

**Amount:** \$116,290.00

#### **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 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	\$247,000.00	\$235,000.00	N/A	N/A	N/A
station antenna, horizontally polarized					

Total for all	\$2,354,899.73	\$1,926,537.46	N/A	\$456,423.22	N/A
systems					

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
	Amount:	panel antenna \$6,400.00

UHF - High Power Top Mount (200-1000 kW), One station antenna, horizontally polarized Information not provided.

#### **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	\$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	\$1,926,537.46	N/A	\$456,423.22	N/A

#### Components

Information not provided.

#### **Tower Equipment and Rigging Costs**

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Primary Tower TOWER	\$531,500.00	\$505,000.00		\$1,991.40	
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
Short Tower (less than 500')	\$84,200.00	\$80,000.00	N/A	N/A	N/A
Major tower reinforcement /modifications	\$421,000.00	\$400,000.00	N/A	N/A	N/A
Sub-total	\$531,500.00	\$505,000.00	N/A	\$1,991.40	N/A
Total for all systems	\$2,354,899.73	\$1,926,537.46	N/A	\$456,423.22	N/A

<b>Actual Information</b>		
Description	File Name	

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
		2 (rev)".
	Amount:	\$136.50
	Component Description:	Legal services
	Component Description.	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
Short Tower (less than 500')	Information not provided.	
Major tower reinforcement /modifications	Information not provided.	

#### **Outside Professional Services**

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Outside Professional Services	\$169,100.00	\$170,653.50		\$35,633.80	
Prepare and or review reimbursement form	\$2,630.00	\$9,518.50	The Estimated Cost includes Form 399 submissions including ongoing Actual Cost invoice prep and submission, and amendments as needed.	\$9,518.50	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

Perform engineering study for new channel assignment and antenna development	\$7,360.00	\$7,000.00	N/A	\$3,250.00	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
Sub-total	\$169,100.00	\$170,653.50	N/A	\$35,633.80	N/A
Total for all systems	\$2,354,899.73	\$1,926,537.46	N/A	\$456,423.22	N/A

Actual Information Description	File Name	
Prepare and or review reimbursement form	Component Description: Amount:	KGA 211-135 v200713jgv1 \$565.00
	Component Description: Amount:	KGA 211-131 v200605pmv1 \$925.00
	Component Description: Amount:	KGA 211-145 v201006jgv1 \$225.00

Component Description: KGA 211-118

v200507jgv1

**Amount:** \$575.00

Component Description: KGA 211-101

v191115jgv1

**Amount:** \$175.00

Component Description: KGA 211-112

v200507jgv1

**Amount:** \$350.00

Component Description: KGA 211-110

v200127jgv1

**Amount:** \$125.00

Component Description: KGA 211-79

v190711jgv1

**Amount:** \$225.00

Component Description: KGA 211-91

v190916jgv1

**Amount:** \$175.00

Component Description: KGA 211-86

v190826jgv1

**Amount:** \$425.00

Component Description: KGA 211-63

v200211jgv1

**Amount:** \$775.00

Component Description: KGA 211-121

v200324jgv1

**Amount:** \$1,075.00

Component Description: KGA 211-141

v200924jgv1

**Amount:** \$225.00

Component Description: KGA 211-123

v200507jgv1

**Amount:** \$1,075.00

Component Description: KGA inv #211-71

Actual Cost invoices by RG March 2019 UL20190424jgv1

**Amount:** \$50.00

Component Description: KGA 211-81

Amount:

Amount:

Amount:

Amount:

Amount:

Amount:

**Component Description:** 

v190711jgv1 \$275.00

Component Description: KGA 211-129

v200507jgv1 \$875.00

Component Description: KGA 211-74

v190624jgv1 \$503.50

v191030jgv1 \$125.00

KGA 211-93

Component Description: KGA 211-54

v200210jgv1 \$530.00

Component Description: KGA 211-139

v200813jgv1 \$775.00 Other Engineering Services

Component Description: KGA 211-78

v190711jgv1

**Amount:** \$375.00

Component Description: KGA 211-108

v200210jgv1

**Amount:** \$425.00

Component Description: KGA 211-133

v200611jgv1

**Amount:** \$400.00

Component Description: KGA 211-55

v200210jgv1

**Amount:** \$265.00

Component Description: RF calculations for

new equipment

selection

**Amount:** \$265.00

Component Description: Prep and submit

actual cost invoices

**Amount:** \$530.00

Component Description: KGA 211-99

v191030jgv1

**Amount:** \$425.00

Component Description: KGA 211-76

v190624jgv1

**Amount:** \$900.00

Other Legal Services		
	Component Description:	Foster Garvey 2739594 v200207jgv1
	Amount:	\$210.00
	Component Description:	GSB 711243 v190624jgv1
	Amount:	\$120.00
	Component Description:	Foster Garvey 2748000 v200713jgv1
	Amount:	\$1,324.80
	Component Description:	Foster Garvey 2751850 v200528jgv1
	Amount:	\$5,011.20
	Component Description:	GSB 720206 v190826jgv1
	Amount:	\$240.00
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	Component Description:	Foster Garvey 2753292
Application	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
	Amount:	Repack for WEKW. \$119.25
	Component Description:	Legal services related to Quarterly report for WEKW
	Amount:	\$30.00
Prepare request for Special Temporary	Component Description:	KGA 211-115
Authorization	Amount:	v200217jgv2 \$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:	FCC CP application for main facility
	Amount:	\$2,000.00
	Component Description:	KGA 211-114 v200508jgv1
	Amount:	\$1,855.00

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
Address transition timing and coordination issues w/other stations and wireless	Component Description:	Prep of original Form 399 for
	Amount:	reimbursement \$2,500.00
	Component Description:	Additional consultation regarding
	Amount:	reimbursable items. \$861.00
Project management of he transition		
	Component Description: Amount:	KGA 211-125 v200702jgv1 \$150.00
	Component Description:	KGA inv #211-38 Form 387 2017 Q4 UL20190301jgv2
	Amount:	\$225.00
	Component Description:	KGA 211-138 v200813jgv1
	Amount:	\$150.00
	Component Description:	KGA inv #211-40 Actual Cost
	Amount:	UL20190301jgv2 \$375.00

Component Description: One half the cost of

checks for the reimbursement bank account, shared between repack stations WEKW and WLED

**Amount:** \$25.00

Component Description: KGA 211-127

v200507jgv1

**Amount:** \$150.00

Component Description: KGA 211-117

v200206jgv1

**Amount:** \$150.00

Component Description: KGA 211-57

v200210jgv1

**Amount:** \$150.00

Component Description: KGA 211-97

v200210jgv1

**Amount:** \$150.00

Component Description: KGA 211-49

v200210jgv1

**Amount:** \$150.00

Component Description: KGA 211-126

v200702jgv1

**Amount:** \$150.00

Component Description: KGA 211-83

v190711jgv1

**Amount:** \$150.00

**Component Description:** Proj Mgmt 399

**Actual Cost invoices** 

**Amount:** \$300.00

Component Description: Prepare and submit

Sched 387

**Amount:** \$225.00

Component Description: KGA inv #211-33

Actual Cost UL20190301jgv2

**Amount:** \$300.00

Component Description: Prepare and submit

Sched 387

**Amount:** \$225.00

Component Description: KGA inv #211-69

Form 387 2019 Q1 UL20190424jgv1

**0.1** = 0.00

**Amount:** \$150.00

Component Description: Prep and submit

Form 387 3Q18

**Amount:** \$150.00

Component Description: Proj Mgmt for

3Q2017 Prog Rept

**Amount:** \$300.00

Component Description: KGA inv #211-31

Form 387 2017 Q3

UL20190301jgv2

**Amount:** \$300.00

Component Description: Prepare and submit

Sched 399 actual

charges

**Amount:** \$375.00

Component Description: KGA 211-52

v200210jgv1

**Amount:** \$150.00

Component Description: Preliminary design

of RF transmission

facilities for planning

**Amount:** \$315.00

Component Description: KGA inv #211-45

Form 387 2018 Q1 UL20190301jgv2

**Amount:** \$225.00

Component Description: KGA inv #211-43

Other Eng Srvcs UL20190301jgv2

**Amount:** \$315.00

Component Description: KGA 211-117

v200507jgv1

**Amount:** \$150.00

#### **Other Expenses**

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Other Expenses	\$83,550.00	\$83,000.00		\$7,258.00	
Develop and air announcement of upcoming channel change	\$0.00	\$0.00	N/A	N/A	N/A
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
Sub-total	\$83,550.00	\$83,000.00	N/A	\$7,258.00	N/A
Total for all systems	\$2,354,899.73	\$1,926,537.46	N/A	\$456,423.22	N/A

Actual Information			
Description	File Name		

announcement of upcoming channel change		
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

#### **Grand Total**

	Predetermined Cost Estimate	Estimated Cost	Actual Cost
Total for all systems	\$2,354,899.73	\$1,926,537.46	\$456,423.22

Reimbursem	enrestiatus	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

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. Jeffrey C Gehman Engineering Associate

10/06/2020

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. Jeffrey C Gehman Engineering Associate

10/06/2020

#### **Attachments**