



(REFERENCE COPY - Not for submission)

# FCC Form 399: Reimbursement Request

Facility **69114** | Service: **DTV** | Call **WUNE-TV** | Channel: **36 (UHF)** |  
ID: | Sign:  
File **0000027167**  
Number:  
FRN: **0001910066** | Date **11/21**  
Submitted: **/2018**

## Applicant Information

### Applicant Name, Type, and Contact Information

Applicant	Address	Phone	Email	Applicant Type
<b>University of North Carolina</b>	PO Box 27709 RESEARCH	+1 (919)	fcc_notice@unctv. org	Government Entity
Doing Business As:	TRIANGLE	549-		
UNIVERSITY OF	PARK, NC 27709	7000		
NORTH CAROLINA	United States			

## Reimbursement Contact Information

### Reimbursement Contact Name and Information

Applicant	Address	Phone	Email
[Confidential]			

## Preparer Contact Information

### Preparer Contact Name and Information

Applicant	Address	Phone	Email
<b>Donald Smith , Smith .</b>	Donald Smith	+1 (919)	dsmith@unctv.
<i>Director of New Technologies</i>	10 T.W. Alexander	549-7025	org
<i>Compliance &amp; Planning</i>	Drive		
<i>University of North Carolina</i>	Research Triangle		
<i>Center for Public Television</i>	Park, NC 27709		
	United States		

**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	The transition plan is to construct an interim facility at the existing site. The interim facility would be used when operation on the new channel begins. After that the necessary changes would be made to the primary transmission system.

**Transmitters**

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

**Auxiliary  
Transmitter****Add Transmitter Information**

Section	Question	Response
<b>Existing Transmitter Description</b>	Type of change	Purchase New
	Use	Auxiliary (Backup)
	Description of Use	Backup to Main
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is this transmitter currently shared with another station?	No
	Is this transmitter currently in operating condition?	Yes
<b>Existing Transmitter Manufacturer and Type</b>	Manufacturer	
	Model	LU2500ATD
	Year	2008
	Type	Solid State
	Solid State Cooling	Air Cooled
	Solid State Power Capacity	2.5 kW

**Auxiliary  
Transmitter**

**New Transmitter Costs**

Section	Question	Response
<b>New Transmitter</b>	Use	Auxiliary (Backup)
	Change Type	Purchase New
	Is this a request for upgraded equipment?	No
	Manufacturer	
	Model	ULXTE-10
	Transmitter Type	Solid State
	Solid State Cooling	Liquid Cooled
	Solid State Power capacity	6 kW
	Justification for New Transmitter	The transmitter support company has indicated that they may be able to provide re-channelization proposals for some models. At this time they have failed to provide a proposal. See attachment for further details.

**Auxiliary  
Transmitter**

**Other Transmitter Costs**

Section	Question	Response
<b>Electrical Service</b>	Service Entrance (3 phases 800A 208V)	No
	Switchgear (industrial 800 amp)	No
	Transformer (480V)	Yes

	Power	150 kVA
	Rigid Conduit and Wiring	Yes
	Size	2 inches
	Length	120.0 feet
	Other Electrical Service	Yes
	Description	Electrical feed disconnects and other items necessary to meet electrical code requirements
<b>HVAC Service</b>	Does the replacement transmitter require HVAC Service?	No
	Type	N/A
	Size	N/A
	Other Size	N/A
<b>Transmitter Building Addition/Modification or Leasehold Improvement</b>	Does the Transmitter Building require an addition, modification, other leasehold improvement?	No
	Size	N/A
<b>Channel 14 Costs</b>	Is an RF Consulting Engineer needed?	N/A
	Is a channel 14 Mask Filer needed?	N/A
	Is additional field engineering time needed?	N/A
	Number of Days	N/A

**Auxiliary Transmitter**      **Other Transmitter Cost Not Listed**  
Information not provided.

**Primary  
Transmitter**

**Existing Transmitter Information**

Section	Question	Response
<b>Existing Transmitter Description</b>	Type of change	Purchase New
	Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is this transmitter currently shared with another station?	No
	Is this transmitter currently in operating condition?	Yes
<b>Existing Transmitter Manufacturer and Type</b>	Manufacturer	
	Model	DHD45P2
	Year	2001
	Type	Solid State
	Solid State Cooling	Air Cooled
	Solid State Power Capacity	10.5 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?	No
	Manufacturer	
	Model	ULXTE-72
	Transmitter Type	Solid State
	Solid State Cooling	Liquid Cooled
	Solid State Power capacity	44 kW
	Justification for New Transmitter	The transmitter manufacturer has indicated that components necessary to modify the transmitter for operation on its new channel are no longer available and it will not be able to provide re-channelization services for the transmitter. See attached letter

**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	2 inches
	Length	120.0 feet
	Other Electrical Service	Yes
	Description	Electrical feed disconnects and other items necessary to meet electrical code requirements
<b>HVAC Service</b>	Does the replacement transmitter require HVAC Service?	No
	Type	N/A
	Size	N/A
	Other Size	N/A
<b>Transmitter Building Addition/Modification or Leasehold Improvement</b>	Does the Transmitter Building require an addition, modification, other leasehold improvement?	No
	Size	N/A
<b>Channel 14 Costs</b>	Is an RF Consulting Engineer needed?	N/A
	Is a channel 14 Mask Filer needed?	N/A
	Is additional field engineering time needed?	N/A
	Number of Days	N/A

**Primary  
Transmitter**

**Other Transmitter Cost Not Listed**

Information not provided.



**Antennas**

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

**Auxiliary  
Antenna****Add Antenna Information**

Section	Question	Response
<b>Existing Antenna Description</b>	Type of change	Purchase New
	Antenna Use	Auxiliary (Backup)
	Description of Use	Backup to Main
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is this antenna currently shared with any other stations?	No
	Is this antenna directional?	Yes
	Is antenna in operating condition?	Yes
	Is antenna located on or in close proximity to an antenna farm?	No
<b>Existing Antenna Manufacturer and Type</b>	Class	Full Power
	Mounting	Side Mount
	Antenna position in stack	Not in Stack
	Polarization	Horizontal
	Type	Slotted Coaxial
	Number of Stations Supported	N/A
	Number of Panels	N/A
	Design power capacity in use	N/A
	Lower Limit	N/A
	Upper Limit	N/A
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power) .....	63.0 kW

Manufacturer	
Model	ATW8G4- HSS-17
Year	1986

## Auxiliary Antenna

### New Antenna Costs

Section	Question	Response
New Antenna Description	Use	Auxiliary (Backup)
	Description of Use	Interim Facility and Eventual Auxiliary
	Change Type	Purchase New
	Is this a request for upgraded equipment?	No
	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 Manufacturer and Types	Class	Full Power
	Mounting	Side Mount
	Antenna position in stack	Not in Stack
	Polarization	Elliptical
	Type	Slotted Coaxial
	Number of Stations Supported	N/A
	Number of Panels/Bays	N/A
	Lower Limit	N/A
	Upper Limit	N/A
	Design power capacity in use	N/A
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power)	1000.0 kW

Manufacturer	
Model	SAA20-ATW_C2-G500-ES6R-36
Year	2019
Justification for New Antenna	The antenna can only operate on channel 17. The replacement antenna will be initially used as part of the interim facility during the transition. Following the transition it will become a permanent auxiliary antenna.

## Auxiliary Antenna

### Other Antenna Costs

Section	Question	Response
<b>Combiner for Shared Antenna</b>	Do you need a Combiner for a Shared Antenna?	No
	Type	
	Number of channels supported	N/A
	Frequencies of channels supported	N/A
	Frequency	N/A
	Do you need a combiner output splitter /switcher for dual feed lines?	N/A

<b>Elbow Complex</b>	Do you require the separate purchase of the Elbow Complex?	Yes
	Broadband or Single Channel?	Single Channel
	Feed Line Size	6 1/8 inches inches
<b>Side Mount Brackets</b>	Do you require the separate purchase of side mount brackets for a high power antenna?	Yes
<b>Pattern Scatter Analysis</b>	Do you require separate purchase of pattern scatter analysis for a side mount high or medium power antenna?	Yes
<b>Sweep Test</b>	Do you require the sweep testing of transmission line and antenna?	Yes

## Auxiliary Antenna

### Other Antenna Cost Not Listed

Information not provided.

**Primary  
Antenna**

**Existing Antenna Information**

Section	Question	Response
<b>Existing Antenna Description</b>	Type of change	Purchase New
	Antenna Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is the existing antenna shared with another station or stations?	No
	Is the existing antenna directional?	Yes
	Is antenna in operating condition?	Yes
	Is antenna located on or in close proximity to an antenna farm?	No
<b>Existing Antenna Manufacturer and Type</b>	Class	Full Power
	Mounting	Top Mount
	Antenna position in stack	Not in Stack
	Polarization	Elliptical
	Type	Slotted Coaxial
	Number of Stations Supported	N/A
	Number of Panels	N/A
	Design power capacity in use	N/A
	Lower Limit	N/A
	Upper Limit	N/A
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power)	100.0 kW

Manufacturer	
Model	ATW19HS5-ETC2-1
Year	1994



Primary  
Antenna

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?	Yes
	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	Elliptical
	Type	Slotted Coaxial
	Number of Stations Supported	N/A
	Number of Panels/Bays	N/A
	Lower Limit	N/A
	Upper Limit	N/A
	Design power capacity in use	N/A
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power) .....	1000.0 kW
	Manufacturer	

Model	SAA23- ATW_C2- E500-ET6R- 36
Year	2019
Justification for New Antenna	The antenna is a single channel slotted pylon style antenna. It cannot operate on a channel other than what it was designed, channel 17. The only viable option is to replace the antenna.

## Primary Antenna

### Other Antenna Costs

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

	Feed Line Size	6 1/8 inches inches
<b>Side Mount Brackets</b>	Do you require the separate purchase of side mount brackets for a high power antenna?	No
<b>Pattern Scatter Analysis</b>	Do you require separate purchase of pattern scatter analysis for a side mount high or medium power antenna?	No
<b>Sweep Test</b>	Do you require the sweep testing of transmission line and antenna?	Yes

**Primary  
Antenna**

**Other Antenna Cost Not Listed**

Information not provided.

**Transmission Line**

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

**Auxiliary**      **Add Transmission Line**  
**Transmission Line**

Section	Question	Response
<b>Existing Transmission Line Description</b>	Type of change	Purchase New
	Use	Auxiliary (Backup)
	Description of Use	Backup to Main
	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
<b>Existing Transmission Line Manufacturer and Type</b>	Manufacturer	
	Type	Rigid
	Diameter	6 1/8 inches
	Other Diameter	N/A
	Segment Length	19 1/2 inches
	Other Segment Length	N/A
	Number of parallel runs	1
	Length	210 feet per run

**Auxiliary**  
**Transmission Line**

**New Transmission Line**

Section	Question	Response
<b>New Transmission Line Costs</b>	Use	Auxiliary (Backup)
	Description of Use	Interim and backup to main
	Change Type	Purchase New
	Is this a request for upgraded equipment?	No
	Type	Rigid
	Diameter	6 1/8 inches
	Other Diameter	N/A
	Segment Length	20 inches
	Other Segment Length	N/A
	Number of parallel runs	1
	Length	210 feet per run
	Justification for New Transmission Line	The existing transmission line has a stick length of 19-1/2 feet, a length that is inconsistent with operations on channel 36. The only option is to replace the transmission line.

Auxiliary	Other Transmission Line Expenses Not Listed
Transmission Line	Information not provided.

**Tower Equipment And Rigging Costs**

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

**Primary Tower**

**Existing Tower**

Section	Question	Response
Existing Tower Description	Type of change	Move Equipment
	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?	No
	One or more FM, AM or TV radio broadcaster(s)	N/A
	Others Types of Users	N/A
	Is tower documented for structural analysis?	Yes
	Is tower compliant with Rev G?	Yes
Existing Tower Structure Registration	Do you have a tower registration number?	Yes
	ASR Number	1014575
Coordinates (NAD83 (North American Datum of 1983))	Latitude (NAD83)	36° 03' 50.0" N-
	Longitude (NAD83)	081° 50' 32.0" W-
	Overall Structure Height	449.14 feet
	Support Structure Height	400.26 feet
	Ground Elevation Above Mean Sea Level (AMSL)	4606.24 feet



	Structure Type	TOWER - Free Standing or Guyed Structure
	Tower Owner	UNIVERSITY OF NORTH CAROLINA
	Date Constructed	01/01/1990

**Primary  
Tower**

**Tower Rigging Costs**

Section	Question	Response
Tower Rigging Costs	Complex Tower	N/A
Helicopter Services Required	Are helicopter services required?	No

**Primary  
Tower**

**Other Tower Expenses Not Listed**

Information not provided.

**Outside  
Professional Services Costs**

Section	Question	Response
<b>Outside Project Management Services</b>	Do you require outside project management services?	Yes
	Number of Hours	120
	Explanation	The transmission site is owned by the State of North Carolina. The state requires a project designer to submit plans for the project for review and approval. this is very similar to the local permitting process but done on the state level
<b>Outside RF consulting Engineering Services</b>	Perform engineering study for new channel assignment and antenna development	Yes
	Prepare engineering section of Form FCC Construction Permit Application	Yes
	For Auxiliary Facility	Yes
	For Main Facility	Yes
	Prepare engineering section of Form FCC License to Cover Application	Yes
	For Auxiliary Facility	Yes
	For Main Facility	Yes
	Prepare request for Special Temporary Authority	Yes

	Quantity	1
	Do you have Distributed Transmission System engineering services?	N/A
	Critical Facility	N/A
	Terrain-Shielded Facility	N/A
<b>Attorney and Other Outside Consulting Services</b>	Prepare and file Form FCC Construction Permit Application	Yes
	For Auxiliary Facility	Yes
	For Main Facility	Yes
	Prepare and file Form FCC License to Cover Application	Yes
	For Auxiliary Facility	Yes
	For Main Facility	Yes
	Prepare request for Special Temporary Authority	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	No
	Prepare or Review FCC Form 399 for Reimbursement	Yes
	Address transition timing and coordination issues w/ other stations and wireless providers	Yes
<b>RF Field Engineering Services</b>	Comprehensive coverage verification via field study	No
	RF exposure measurements	No
	Additional Field Engineering Service	No

	Number of Days	N/A
	Justification	N/A

**Outside Professional Services Costs**      **Other Professional Services Expenses Not Listed**

Name	Description
<b>Additional Legal Expenses</b>	Legal expenses for non-catalog advice and review, including transition status reports and other miscellaneous legal needs.

## Other Expenses

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

<b>Other Expenses</b>	<b>Other Expenses Not Listed</b>
	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
<b>Primary Transmitter ULXTE-72</b>	<b>\$1,554,870.00</b>	<b>\$548,600.00</b>		<b>\$141,245.19</b>	
Other Electrical Service: Electrical feed disconnects and other items necessary to meet electrical code requirements	<i>\$15,000.00</i>	\$15,000.00	Estimate for non-categorized items necessary to meet electrical code requirements	N/A	N/A
2" Rigid Conduit and Wiring (Cost per foot)	\$3,120.00	\$3,000.00	N/A	N/A	N/A
Transformer 3 phase /480v - 150 KVA	\$25,550.00	\$24,300.00	N/A	\$1,958.60	N/A
Switchgear - industrial 800 amp	\$38,200.00	\$36,300.00	N/A	N/A	N/A

UHF - Liquid Cooled Solid State Transmitter 35 - 50 kW	\$1,473,000.00	\$470,000.00	The estimated cost is for the approved GatesAir ULXTE-20 transmitter.  The transmitter purchase has been upgraded to a ULXTE- 72. It is understood that the station is responsible for the upgrade portion of the purchase price.	\$139,286.59	N/A
<b>Auxiliary Transmitter ULXTE-10</b>	<b>\$327,070.00</b>	<b>\$312,200.00</b>		<b>\$85,547.98</b>	
Other Electrical Service: Electrical feed disconnects and other items necessary to meet electrical code requirements	<b>\$24,900.00</b>	\$24,900.00	Estimate for non- categorized items necessary to meet electrical code requirements	N/A	N/A
2" Rigid Conduit and Wiring (Cost per foot)	\$3,120.00	\$3,000.00	N/A	N/A	N/A



Transformer 3 phase /480v - 150 KVA	\$25,550.00	\$24,300.00	N/A	N/A	N/A
UHF - Liquid Cooled Solid State Transmitter 4.9 . 6.5 kW	\$273,500.00	\$260,000.00	N/A	\$85,547.98	N/A
<b>Sub-total</b>	\$1,881,940.00	\$860,800.00	N/A	\$226,793.17	N/A
<b>Total for all systems</b>	\$2,665,072.50	\$1,662,514.19	N/A	\$531,695.78	N/A

## Components

Actual Information	
Description	File Name
Other Electrical Service: Electrical feed disconnects and other items necessary to meet electrical code requirements	Information not provided.
2" Rigid Conduit and Wiring (Cost per foot)	Information not provided.
Transformer 3 phase/480v - 150 KVA	<p><b>Component Description:</b> FCC Portion 50% Transformer, see Quote Line 17. Purchase Order for all 11 sites.</p> <p><b>Amount:</b> \$1,958.60</p>
Switchgear - industrial 800 amp	Information not provided.

UHF - Liquid Cooled Solid State Transmitter 35 - 50 kW	<p><b>Component Description:</b></p> <p>50% FCC Portion Transmitter &amp; Installation. Installation included w /Transmitter on Form 399. Transformer separate 399 line item. Purchase Order for all 11 eleven sites.</p> <p><b>Amount:</b></p> <p>\$139,286.59</p>
Other Electrical Service: Electrical feed disconnects and other items necessary to meet electrical code requirements	Information not provided.
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	<p><b>Component Description:</b></p> <p>50% Aux Transmitter &amp; Installation. Installation included w /Transmitter on Form 399. Purchase Order for all 11 sites.</p> <p><b>Amount:</b></p> <p>\$85,547.98</p>

## Cost Information

### Antennas

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
<b>Primary Antenna SAA23-ATW_C2-E500-ET6R-36</b>	<b>\$308,530.00</b>	<b>\$190,918.00</b>		<b>\$86,409.00</b>	
Elbow complex, single channel, at antenna input, per 6 1/8. feedline (if needed)	\$12,300.00	\$11,700.00	N/A	N/A	N/A
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	N/A	N/A
UHF - High Power Top Mount (200-1000 kW), One station antenna , elliptically or circularly polarized	\$289,500.00	\$172,818.00	See RFS Antenna Change Narrative with Quotes	\$86,409.00	N/A
<b>Auxiliary Antenna SAA20-ATW_C2-G500-ES6R-36</b>	<b>\$170,639.50</b>	<b>\$168,299.50</b>		<b>\$61,599.75</b>	

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
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	N/A	N/A
Elbow complex, single channel, at antenna input, per 6 1/8. feedline (if needed)	\$12,300.00	\$11,700.00	N/A	N/A	N/A
UHF - High Power, Side Mount, basic slot antenna, 1000 kW input, directional,, elliptically or circularly polarized	<b>\$123,199.50</b>	\$123,199.50	See attached RFS Antenna Change Narrative with Quotes	\$61,599.75	N/A
<b>Sub-total</b>	<b>\$479,169.50</b>	<b>\$359,217.50</b>	<b>N/A</b>	<b>\$148,008.75</b>	<b>N/A</b>

<b>Total for all systems</b>	\$2,665,072.50	\$1,662,514.19	N/A	\$531,695.78	N/A
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## Components

<b>Actual Information</b>	
<b>Description</b>	<b>File Name</b>
Elbow complex, single channel, at antenna input, per 6 1/8. feedline (if needed)	Information not provided.
Sweep test of existing antenna	Information not provided.
UHF - High Power Top Mount (200-1000 kW), One station antenna , elliptically or circularly polarized	<p><b>Component Description:</b> 50% Primary Antenna included in Inv &amp; PO Line 5. Invoice &amp; Purchase Order are for 10 sites.</p> <p><b>Amount:</b> \$86,409.00</p>
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.
Sweep test of existing antenna	Information not provided.
Elbow complex, single channel, at antenna input, per 6 1/8. feedline (if needed)	Information not provided.

UHF - High Power, Side Mount, basic slot antenna, 1000 kW input, directional,, elliptically or circularly polarized	<b>Component Description:</b>  <b>Amount:</b>	50% Auxilliary Antenna included in Inv & PO Line 5. Invoice & Purchase Order are for 10 sites. \$61,599.75
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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
Auxiliary Transmission Line	\$42,420.00	\$41,261.59		\$20,630.80	
Rigid Transmission Line - copper, 6 1/8"	\$42,420.00	\$41,261.59	See attached RFS Antenna Change Narrative with Pricing	\$20,630.80	N/A
Sub-total	\$42,420.00	\$41,261.59	N/A	\$20,630.80	N/A
Total for all systems	\$2,665,072.50	\$1,662,514.19	N/A	\$531,695.78	N/A

Components

Actual Information	
Description	File Name
Rigid Transmission Line - copper, 6 1/8"	<div><div>Component Description:</div><div>50% Auxilliary Transmission Line included in Inv &amp; PO Line 5. Invoice &amp; Purchase Order are for 10 sites.</div><div>Amount:</div><div>\$20,630.80</div></div>

Cost  
Information

Tower Equipment and Rigging Costs

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Primary Tower TOWER	\$84,200.00	\$233,467.10		\$116,733.55	
Short Tower (less than 500')	\$84,200.00	\$233,467.10	See attached RFS Antenna Change Narrative with Pricing	\$116,733.55	N/A
Sub-total	\$84,200.00	\$233,467.10	N/A	\$116,733.55	N/A
Total for all systems	\$2,665,072.50	\$1,662,514.19	N/A	\$531,695.78	N/A

Components

Actual Information	
Description	File Name



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Short Tower (less than 500')

**Component Description:**

50% Primary  
/Short Tower  
Installation for  
Primary Antenna  
included in Inv &  
PO Line 6.  
Invoice &  
Purchase Order  
are for 10 sites.

**Amount:**

\$75,169.93

**Component Description:**

50% Primary  
/Short Tower  
Installation for  
Auxilliary  
Antenna included  
in Inv & PO Line  
6. Invoice &  
Purchase Order  
are for 10 sites.

**Amount:**

\$41,563.62

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## Cost Information

### Outside Professional Services

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
<b>Outside Professional Services</b>	<b>\$86,275.00</b>	<b>\$82,750.00</b>		<b>\$5,746.91</b>	
Additional Legal Expenses	<i>\$24,500.00</i>	\$24,500.00	Preliminary estimate for legal expenses for non-catalog advice and review including transition status reports and other miscellaneous legal needs.	\$3,396.91	N/A
FAA consultant, including cost of preparing FAA Form 7460 (Notice of Proposed Construction), if needed for height increase	\$2,105.00	\$2,000.00	N/A	N/A	N/A
ASR modification (prepare FCC Form 854)	\$2,105.00	\$2,000.00	N/A	N/A	N/A
Attorney Fees - Prepare and File request for Special Temporary Authorization	\$3,680.00	\$3,500.00	N/A	N/A	N/A

Attorney Fees - Prepare and File FCC Form 2100 (main), License to Cover Application	\$2,365.00	\$2,250.00	N/A	N/A	N/A
Attorney Fees - Aux Antenna, prepare and File Form 2100 Construction Permit or License Application	\$4,210.00	\$4,000.00	N/A	N/A	N/A
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	\$5,260.00	\$5,000.00	N/A	N/A	N/A
Prepare request for Special Temporary Authorization	\$2,050.00	\$1,500.00	N/A	N/A	N/A
RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, License to Cover Application	\$1,580.00	\$1,500.00	N/A	N/A	N/A

Prepare engineering section of FCC Form 2100 (main), License to Cover Application	\$1,580.00	\$1,500.00	N/A	N/A	N/A
RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, Construction Permit Application	\$2,105.00	\$2,000.00	N/A	N/A	N/A
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	\$3,155.00	\$3,000.00	N/A	\$1,687.50	N/A
Perform engineering study for new channel assignment and antenna development	\$7,360.00	\$7,000.00	N/A	\$662.50	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	\$18,960.00	\$18,000.00	N/A	\$0.00	N/A

Prepare and or review reimbursement form	\$2,630.00	\$2,500.00	N/A	N/A	N/A
<b>Sub-total</b>	\$86,275.00	\$82,750.00	N/A	\$5,746.91	N/A
<b>Total for all systems</b>	\$2,665,072.50	\$1,662,514.19	N/A	\$531,695.78	N/A

## Components

Actual Information Description	File Name
Additional Legal Expenses	<p><b>Component Description:</b> Outside Professional Services Additional Legal Expenses Legal services benefit entire FCC Repack project across 10 of 11 Call Signs/Facility IDs, 3378.88/10 equal 337.89 as outlined on page 1 of invoice.</p> <p><b>Amount:</b> \$337.89</p> <p><b>Component Description:</b> Outside Professional Services Additional Legal Expenses</p> <p><b>Amount:</b> \$33.70</p> <p><b>Component Description:</b> Outside Professional Services Additional Legal Expenses</p> <p><b>Amount:</b> \$505.50</p>

<b>Component Description:</b>	Outside Professional Services Additional Legal Expenses Legal services benefit entire FCC Repack project across all 11 Call Signs/Facility IDs, 175.00/11 equal 15.90 as outlined on page 1 of invoice.
<b>Amount:</b>	\$15.90

<b>Component Description:</b>	Outside Professional Services Additional Legal Expenses Invoice applies to all 11 repack stations, amount requested reflects portion payable per Station: \$70.00/11 as indicated on page 1 of Invoice
<b>Amount:</b>	\$6.37

<b>Component Description:</b>	Outside Professional Services Additional Legal Expenses Legal services benefit entire FCC Repack project across all 11 Call Signs/Facility IDs, 3472.00/11 equal 315.63 as outlined on page 1 of invoice.
<b>Amount:</b>	\$315.63

<b>Component Description:</b>	Outside Professional Services Additional Legal Expenses
<b>Amount:</b>	\$67.40

<b>Component Description:</b>	Outside Professional Services Additional Legal Expenses
<b>Amount:</b>	\$67.40

<b>Component Description:</b>	Outside Professional Services Additional Legal Expenses
<b>Amount:</b>	\$70.00

<b>Component Description:</b>	Outside Professional Services Additional Legal ExpensesLegal services benefit entire FCC Repack project across all 11 Call Signs /Facility IDs, 959.50 /11 equal 87.22 as outlined on page 1 of invoice.
<b>Amount:</b>	\$87.22

<b>Component Description:</b>	Outside Professional Services Additional Legal Expenses Invoice applies to all 11 repack stations, amount requested reflects portion payable per Station: \$245.00/11 as indicated on page 1 of Invoice
<b>Amount:</b>	\$22.27

<b>Component Description:</b>	Outside Professional Services Additional Legal Expenses
<b>Amount:</b>	\$70.00

<b>Component Description:</b>	Outside Professional Services Additional Legal Expenses
<b>Amount:</b>	\$70.00

<b>Component Description:</b>	Outside Professional Services Additional Legal Expenses
<b>Amount:</b>	\$35.00



<b>Component Description:</b>	Outside Professional Services Additional Legal Expenses Legal services benefit entire FCC Repack project across all 11 Call Signs/Facility IDs, 368.00/11 equal 33.46 as outlined on page 1 of invoice.
<b>Amount:</b>	\$33.46

<b>Component Description:</b>	Outside Professional Services Additional Legal Expenses
<b>Amount:</b>	\$35.00

<b>Component Description:</b>	Outside Professional Services Additional Legal Expenses Legal services benefit entire FCC Repack project across all 11 Call Signs/Facility IDs, 168.50/11 equal 15.31 as outlined on page 1 of invoice.
<b>Amount:</b>	\$15.31

<b>Component Description:</b>	Outside Professional Services Additional Legal Expenses Legal services benefit entire FCC Repack project across all 11 Call Signs/Facility IDs, 323.00/11 equal 29.36 as outlined on page 1 of invoice.
<b>Amount:</b>	\$29.36

<b>Component Description:</b>	Outside Professional Services Additional Legal Expenses
<b>Amount:</b>	\$539.20

<b>Component Description:</b>	Outside Professional Services Additional Legal Expenses Legal services benefit entire FCC Repack project across all 11 Call Signs/Facility IDs, 402.00/11 equal 36.55 as outlined on page 1 of invoice.
<b>Amount:</b>	\$36.55

<b>Component Description:</b>	Outside Professional Services Additional Legal Expenses
<b>Amount:</b>	\$245.40

<b>Component Description:</b>	Outside Professional Services Additional Legal Expenses Legal services benefit entire FCC Repack project across all 11 Call Signs/Facility IDs, 572.90/11 equal 52.08 as outlined on page 1 of invoice.
<b>Amount:</b>	\$52.08

<b>Component Description:</b>	Outside Professional Services Additional Legal Expenses Legal services benefit entire FCC Repack project across all 11 Call Signs/Facility IDs, 315.00/11 equal 28.64 as outlined on page 1 of invoice.
<b>Amount:</b>	\$28.64

<b>Component Description:</b>	Outside Professional Services Additional Legal Expenses Legal services benefit entire FCC Repack project across all 11 Call Signs/Facility IDs, 2594.40/11 equal 235.85 as outlined on page 1 of invoice.
<b>Amount:</b>	\$235.85

<b>Component Description:</b>	Outside Professional Services Additional Legal Expenses Legal services benefit entire FCC Repack project across all 11 Call Signs/Facility IDs, 350.00/11 equal 31.82 as outlined on page 1 of invoice.
<b>Amount:</b>	\$31.82

<b>Component Description:</b>	Outside Professional Services Additional Legal Expenses
<b>Amount:</b>	\$69.55

<b>Component Description:</b>	Outside Professional Services Additional Legal Expense Legal services benefit entire FCC Repack project across all 11 Call Signs/Facility IDs, 67.40/11 equal 6.13 as outlined on page 1 of invoice.
<b>Amount:</b>	\$6.13

	<p><b>Component Description:</b></p> <p>Outside Professional Services Additional Legal Expenses Legal services benefit entire FCC Repack project across all 11 Call Signs/Facility IDs, 2059.90/11 equal 187.27 as outlined on page 1 of invoice.</p> <p><b>Amount:</b></p> <p>\$187.27</p>
	<p><b>Component Description:</b></p> <p>Outside Professional Services Additional Legal Expenses Legal services benefit entire FCC Repack project across all 11 Call Signs/Facility IDs, 1617.10/11 equal 147.01 as outlined on page 1 of invoice.</p> <p><b>Amount:</b></p> <p>\$147.01</p>
FAA consultant, including cost of preparing FAA Form 7460 (Notice of Proposed Construction), if needed for height increase	Information not provided.
ASR modification (prepare FCC Form 854)	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	Information not provided.

Attorney Fees - Aux Antenna, prepare and File Form 2100 Construction Permit or License Application	Information not provided.
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	Information not provided.
Prepare request for Special Temporary Authorization	Information not provided.
RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, License to Cover Application	Information not provided.
Prepare engineering section of FCC Form 2100 (main), License to Cover Application	Information not provided.
RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, Construction Permit Application	Information not provided.
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	<div> <div><b>Component Description:</b></div> <div>Outside Professional Services Engineering Section FCC Form 2100 Construction Permit Application Main/Primary</div> <div><b>Amount:</b></div> <div>\$1,687.50</div> </div>

Perform engineering study for new channel assignment and antenna development	<p><b>Component Description:</b></p> <p>Outside Professional Services Engineering Study New Channel Assignment Antenna Development</p> <p><b>Amount:</b></p> <p>\$662.50</p>
Address transition timing and coordination issues w/ other stations and wireless	Information not provided.
Project management of the transition	<p><b>Component Description:</b></p> <p>Outside Professional Services Project Management</p> <p><b>Amount:</b></p> <p>\$9,022.50</p>
Prepare and or review reimbursement form	Information not provided.

## Cost Information

### Other Expenses

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
<b>Other Expenses</b>	<b>\$91,068.00</b>	<b>\$85,018.00</b>		<b>\$13,782.60</b>	
Develop and air announcement of upcoming channel change	<i>\$2,000.00</i>	\$2,000.00	Preliminary estimate	N/A	N/A
Disposal Costs (for equipment and other waste, net of any salvage value)	<i>\$62,018.00</i>	\$62,018.00	See attached quotes for disposal of both transmitters	\$13,782.60	N/A
DTV Medical Facility Notification	\$11,550.00	\$5,500.00	Preliminary estimate of service	N/A	N/A
Equipment Delivery and Handling Charges	<i>\$10,000.00</i>	\$10,000.00	Preliminary estimate	N/A	N/A
MVPD Notification of Channel Change	<i>\$5,500.00</i>	\$5,500.00	Preliminary estimate of services	N/A	N/A
<b>Sub-total</b>	<b>\$91,068.00</b>	<b>\$85,018.00</b>	<b>N/A</b>	<b>\$13,782.60</b>	<b>N/A</b>
<b>Total for all systems</b>	<b>\$2,665,072.50</b>	<b>\$1,662,514.19</b>	<b>N/A</b>	<b>\$531,695.78</b>	<b>N/A</b>

### Components

Actual Information Description	File Name
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Develop and air announcement of upcoming channel change	Information not provided.
Disposal Costs (for equipment and other waste, net of any salvage value)	<div> <div> <b>Component Description:</b> </div> <div> 50% Remove Exist Main Transmitter. Purchase Order for all 11 sites. </div> </div> <div> <b>Amount:</b> </div> <div> \$13,782.60 </div>
DTV Medical Facility Notification	Information not provided.
Equipment Delivery and Handling Charges	Information not provided.
MVPD Notification of Channel Change	Information not provided.

<b>Cost Information</b>	<b>Grand Total</b>		
		<b>Predetermined Cost Estimate</b>	<b>Estimated Cost</b>
			<b>Actual Cost</b>
	<b>Total for all systems</b>	\$2,665,072.50	\$1,662,514.19
			\$531,695.78

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

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

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

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

I declare, under penalty of perjury, that I am an authorized representative of the above-named applicant for the Authorization(s) specified above.

**Donald Smith**  
*Director of Compliance and New Technologies*

11/21/2018

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

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

<p>8. The above-named entity acknowledges that overpayments or payments in error must be promptly refunded to the Commission.</p> <p>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.</p>	
<p>I declare, under penalty of perjury, that I am an authorized representative of the above-named applicant for the Authorization(s) specified above.</p>	<p><b>Robert Levin</b>  <i>Director of Finance and Administration</i></p> <p>11/21/2018</p>

## Attachments