



(REFERENCE COPY - Not for submission)

FCC Form 399: Reimbursement Request

Facility **69300** | Service: **DTS** | Call **WUNF-TV** | Channel: **20 (UHF)** |
ID: | Sign:
File **0000033807**
Number:
FRN: **0001910066** | Date **09/09**
Submitted: **/2018**

Applicant Information

Applicant Name, Type, and Contact Information

Applicant	Address	Phone	Email	Applicant Type
University of North Carolina	PO Box 14900 Research	+1 (919)	fcc_notice@unctv. org	Government Entity
Doing Business As:	Triangle Park,	549-		
University of North Carolina	NC 27709 United States	7000		

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
Donald Smith	Donald Smith	+1 (919)	dsmith@unctv.
<i>Director of New Technologies</i>	10 T.W. Alexander	549-7025	org
<i>Compliance & 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		WUNF-TV is a DTS station with 2 sites. The transition plan for WUNF-TV is to construct a new facility at a different site for site #1 due to issues outlined in the unable to construct waiver request. Site #2 will be constructed at the existing site.

Transmitters

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 - Site 1
	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 and Type	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
New Transmitter	Use	Auxiliary (Backup)
	Change Type	Purchase New
	Is this a request for upgraded equipment?	No
	Manufacturer	
	Model	ULXTE-30
	Transmitter Type	Solid State
	Solid State Cooling	Liquid Cooled
	Solid State Power capacity	16 kW
	Justification for New Transmitter	A different site is having to be used due to the inability to construct the new channel facility at the existing channel 25 site.#1.

**Auxiliary
Transmitter****Other Transmitter Costs**

Section	Question	Response
Electrical Service	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	100.0 feet
	Other Electrical Service	Yes
	Description	Electrical feed disconnects and other items necessary to meet electrical code requirements
HVAC Service	Does the replacement transmitter require HVAC Service?	No
	Type	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 leasehold 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**
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	2
	Is this transmitter currently shared with another station?	No
	Is this transmitter currently in operating condition?	Yes
Existing Transmitter Manufacturer and Type	Manufacturer	
	Model	LU250
	Year	2003
	Type	Solid State
	Solid State Cooling	Air Cooled
	Solid State Power Capacity	0.25 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	TAUD-250
	Transmitter Type	Solid State
	Solid State Cooling	Air Cooled
	Solid State Power capacity	0.25 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.

**Primary
Transmitter**

Other Transmitter Costs

Section	Question	Response
Electrical Service	Service Entrance (3 phases 800A 208V)	No
	Switchgear (industrial 800 amp)	No
	Transformer (480V)	No
	Power	N/A

	Rigid Conduit and Wiring	Yes
	Size	2 inches
	Length	15.0 feet
	Other Electrical Service	Yes
	Description	Electrical feed disconnects and other items necessary to meet electrical code requirements
HVAC Service	Does the replacement transmitter require HVAC Service?	No
	Type	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 leasehold 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

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	1
	Is this transmitter currently shared with another station?	No
	Is this transmitter currently in operating condition?	Yes
Existing Transmitter Manufacturer and Type	Manufacturer	
	Model	DCX-2
	Year	1996
	Type	Inductive Output Tube
	IOT Power Type	Two
	Power Capacity	40 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	ULXTE-100
	Transmitter Type	Solid State
	Solid State Cooling	Liquid Cooled
	Solid State Power capacity	53.5 kW
	Justification for New Transmitter	A different site is having to be used due to the inability to construct the new channel facility at the existing channel 25 site.#1.

**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	300 kVA
	Rigid Conduit and Wiring	Yes

	Size	2 inches
	Length	200.0 feet
	Other Electrical Service	Yes
	Description	Electrical feed disconnects and other items necessary to meet electrical code requirements Estimate for non-categorized items necessary to meet electrical code requirements
HVAC Service	Does the replacement transmitter require HVAC Service?	No
	Type	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 leasehold 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	Other Transmitter Cost Not Listed
Transmitter	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
Existing Antenna Description	Type of change	Purchase New
	Antenna Use	Auxiliary (Backup)
	Description of Use	Auxiliary - Site 1
	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
Existing Antenna Manufacturer and Type	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)	113.5 kW

Manufacturer	
Model	TFU-16DSB-M
Year	2003

Auxiliary Antenna

New Antenna Costs

Section	Question	Response
New Antenna Description	Use	Auxiliary (Backup)
	Description of Use	Auxiliary
	Change Type	Purchase New
	Is this a request for upgraded equipment?	Yes
	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)	915.0 kW
	Manufacturer	

Model	TFU-22DSC C170
Year	2019
Justification for New Antenna	A different site is having to be used due to the inability to construct the new channel facility at the existing channel 25 site.#1.

Auxiliary Antenna

Other Antenna Costs

Section	Question	Response
Combiner for Shared Antenna	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
Elbow Complex	Do you require the separate purchase of the Elbow Complex?	Yes
	Broadband or Single Channel?	Single Channel
	Feed Line Size	7 3/16 inches inches

Side Mount Brackets	Do you require the separate purchase of side mount brackets for a high power 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

Auxiliary Antenna

Other Antenna Cost Not Listed

Information not provided.

Primary Antenna

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	2
	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
Existing Antenna Manufacturer and Type	Class	Full Power
	Mounting	Side Mount
	Antenna position in stack	Not in Stack
	Polarization	Horizontal
	Type	Other
	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	Narrowband Panel
	ERP: (Effective Radiated Power)	1.5 kW

Manufacturer	
Model	4DR-8-2HW
Year	2003

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?	Yes
	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	Horizontal
	Type	Broadband Panel
	Number of Stations Supported	1
	Number of Panels/Bays	4
	Lower Limit	470.00 MHz
	Upper Limit	862.00 MHz
	Design power capacity in use	25.0 %
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power)	1.35 kW
	Manufacturer	

Model	2x2 750 10325
Year	2019
Justification for New Antenna	The current antenna is designed to operate on channel 25 plus or minus one or two channels. The antenna will not operate properly on channel 20.

Primary Antenna

Other Antenna Costs

Section	Question	Response
Combiner for Shared Antenna	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
Elbow Complex	Do you require the separate purchase of the Elbow Complex?	No
	Broadband or Single Channel?	N/A
	Feed Line Size	N/A
Side Mount Brackets	Do you require the separate purchase of side mount brackets for 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
Antenna**

Other Antenna Cost Not Listed

Information not provided.

**Primary
Antenna**

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	1
	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
Existing Antenna Manufacturer and Type	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	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)	125.0 kW

Manufacturer	
Model	ATW12HS4- ESC170- 25S
Year	2010

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	TFU-19ETT /VP-R C170
Year	2019
Justification for New Antenna	A different site is having to be used due to the inability to construct the new channel facility at the existing channel 25 site.#1.

Primary Antenna

Other Antenna Costs

Section	Question	Response
Combiner for Shared Antenna	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
Elbow Complex	Do you require the separate purchase of the Elbow Complex?	Yes
	Broadband or Single Channel?	Single Channel
	Feed Line Size	7 3/16 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?	Yes
Sweep Test	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
Existing Transmission Line Description	Type of change	Purchase New
	Use	Auxiliary (Backup)
	Description of Use	Site #1 Emergency Auxiliary Part 1
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is this transmission currently shared with any other stations?	No
	Is Transmission Line in operating condition?	Yes
Existing Transmission Line Manufacturer and Type	Manufacturer	
	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 **New Transmission Line**
Transmission Line

Section	Question	Response
New Transmission Line Costs	Use	Auxiliary (Backup)
	Description of Use	Auxiliary
	Change Type	Purchase New
	Is this a request for upgraded equipment?	No
	Type	Rigid
	Diameter	7 3/16 inches
	Other Diameter	N/A
	Segment Length	19 1/2 inches
	Other Segment Length	N/A
	Number of parallel runs	1
	Length	650 feet per run
	Justification for New Transmission Line	A different site is having to be used due to the inability to construct the new channel facility at the existing channel 25 site.#1.

Auxiliary **Other Transmission Line Expenses Not Listed**
Transmission Line

Information not provided.

**Primary
Transmission Line**

Add Transmission 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	1
	Is this transmission currently shared with any other stations?	No
	Is Transmission Line in operating condition?	Yes
Existing Transmission Line Manufacturer and Type	Manufacturer	
	Type	Rigid
	Diameter	8 3/16 inches
	Other Diameter	N/A
	Segment Length	19 1/2 inches
	Other Segment Length	N/A
	Number of parallel runs	1
	Length	400 feet per run

Primary **New Transmission Line**
Transmission 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
	Type	Rigid
	Diameter	7 3/16 inches
	Other Diameter	N/A
	Segment Length	19 1/2 inches
	Other Segment Length	N/A
	Number of parallel runs	1
	Length	830 feet per run
	Justification for New Transmission Line	A different site is having to be used due to the inability to construct the new channel facility at the existing channel 25 site.#1.

Primary **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

Add Tower

Section	Question	Response
Existing Tower Description	Type of change	Move Equipment
	Tower Use	Primary (Main)
	Description of Use	N/A
	Ownership	Leased
	Is this tower consider Complex?	Candelabra
	Is this tower currently shared with any other stations?	Yes
	One or more FM, AM or TV radio broadcaster(s)	Yes
	Others Types of Users	No
	Is tower documented for structural analysis?	Unknown
	Is tower compliant with Rev G?	Unknown
Existing Tower Structure Registration	Do you have a tower registration number?	Yes
	ASR Number	1023079
Coordinates (NAD83 (North American Datum of 1983))	Latitude (NAD83)	35° 13' 20.0" N-
	Longitude (NAD83)	082° 32' 58.0" W-
	Overall Structure Height	721.78 feet
	Support Structure Height	672.56 feet
	Ground Elevation Above Mean Sea Level (AMSL)	3425.16 feet

	Structure Type	TOWER - Free Standing or Guyed Structure
	Tower Owner	Capstar Radio Operating Company
	Date Constructed	09/01/1997

**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
70149	WYCW	DTV
59818	WMYI	FM

**Primary
Tower**

Tower Rigging Costs

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

**Primary
Tower**

Other Tower Expenses Not Listed

Information not provided.

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?	No
	Is tower compliant with Rev G?	Unknown
Existing Tower Structure Registration	Do you have a tower registration number?	No
	ASR Number	
Coordinates (NAD83 (North American Datum of 1983))	Latitude (NAD83)	35° 28' 25.0" N-
	Longitude (NAD83)	083° 19' 23.0" W-
	Overall Structure Height	98.00 feet
	Support Structure Height	98.00 feet
	Ground Elevation Above Mean Sea Level (AMSL)	2421.00 feet
	Structure Type	TOWER - Free Standing or Guyed Structure

	Tower Owner	University of North Carolina
	Date Constructed	06/07/2012

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
Outside Project Management Services	Do you require outside project management services?	Yes
	Number of Hours	250
	Explanation	Because the transmission site is leased by the State of North Carolina, it is subject to various state construction project rules. One rule is the hiring of a designer to create submittals for project review and approval by the state.
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	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	2

	Do you have Distributed Transmission System engineering services?	Yes
	Critical Facility	1
	Terrain-Shielded Facility	10
Attorney and Other Outside Consulting Services	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
RF Field Engineering Services	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
Microwave License Preparation	Licensing of microwave system
Additional Legal Expenses	Legal expenses for non-catalog advice and review, including transition status reports and other miscellaneous legal needs.
Microwave Frequency Study	Microwave system frequency search for available frequencies.
Microwave PCN	Prior coordination notices for microwave system construction to extend program content distribution to the replacement site.

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	No
	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?	No
	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**

Other Expenses Not Listed

Name	Description
Microwave Electronics Mods	Parts necessary to modify frequencies of existing radios
Microwave L and A	Microwave System Antennas and Line

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 TAUD-250	\$16,080.00	\$16,065.00		\$0.00	
Other Electrical Service: Electrical feed disconnects and other items necessary to meet electrical code requirements	<i>\$3,000.00</i>	\$3,000.00	Estimate for non-categorized items necessary to meet electrical code requirements	N/A	N/A
2" Rigid Conduit and Wiring (Cost per foot)	\$390.00	\$375.00	N/A	N/A	N/A
UHF - Air Cooled Solid State Transmitter 0.25 kW	<i>\$12,690.00</i>	\$12,690.00	Manufacturer preliminary estimate	N/A	N/A
Primary Transmitter ULXTE-100	\$1,893,100.00	\$1,801,200.00		\$769,784.63	
UHF - Liquid Cooled Solid State Transmitter 52 - 61 kW	\$1,788,000.00	\$1,700,000.00	N/A	\$764,040.63	N/A

Other Electrical Service: Electrical feed disconnects and other items necessary to meet electrical code requirements Estimate for non- categorized items necessary to meet electrical code requirements	\$24,900.00	\$24,900.00	Estimate for non- categorized items necessary to meet electrical code requirements	N/A	N/A
Transformer 3 phase /480v - 300 KVA	\$36,800.00	\$35,000.00	N/A	\$5,744.00	N/A
Switchgear - industrial 800 amp	\$38,200.00	\$36,300.00	N/A	N/A	N/A
2" Rigid Conduit and Wiring (Cost per foot)	\$5,200.00	\$5,000.00	N/A	N/A	N/A
Auxiliary Transmitter ULXTE-30	\$737,050.00	\$701,700.00		\$191,101.19	

Other Electrical Service: Electrical feed disconnects and other items necessary to meet electrical code requirements	\$24,900.00	\$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)	\$2,600.00	\$2,500.00	N/A	N/A	N/A
UHF - Liquid Cooled Solid State Transmitter 14.2 - 20 kW	\$684,000.00	\$650,000.00	N/A	\$189,142.59	N/A
Transformer 3 phase /480v - 150 KVA	\$25,550.00	\$24,300.00	N/A	\$1,958.60	N/A
Sub-total	\$2,646,230.00	\$2,518,965.00	N/A	\$960,885.82	N/A
Total for all systems	\$4,362,738.00	\$4,088,608.00	N/A	\$975,855.85	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.

UHF - Air Cooled Solid State Transmitter 0.25 kW	Information not provided.
UHF - Liquid Cooled Solid State Transmitter 52 - 61 kW	<p>Component Description: 50% Primary Transmitter & Installation. Installation included w /Transmitter Cost on Form 399. Purchase Order is for all 11 Sites. Transformer on line 16 of quote is separate Form 399 Line Item.</p> <p>Amount: \$764,040.63</p>
Other Electrical Service: Electrical feed disconnects and other items necessary to meet electrical code requirements Estimate for non-categorized items necessary to meet electrical code requirements	Information not provided.
Transformer 3 phase/480v - 300 KVA	<p>Component Description: 50% Request for Transformer that is included on invoice with the cost for transmitter. Transformer has unique 399 Line Item. See line 16 of quote for detail cost. Purchase Order is for all 11 sites.</p> <p>Amount: \$5,744.00</p>
Switchgear - industrial 800 amp	Information not provided.

2" Rigid Conduit and Wiring (Cost per foot)	Information not provided.
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.
UHF - Liquid Cooled Solid State Transmitter 14.2 - 20 kW	<div> <div> Component Description: </div> <div> 50% Aux Transmitter & Installation. Installation included w /Transmitter on Form 399. Purchase Order is for all 11 sites. Transformer on line 16 of quote is separate Form 399 Line Item. </div> </div> <div> <div> Amount: </div> <div> \$189,142.59 </div> </div>
Transformer 3 phase/480v - 150 KVA	<div> <div> Component Description: </div> <div> 50% Transformer on line 16 of quote included w /cost of transmitter on invoice. Purchase Order includes all 11 sites. </div> </div> <div> <div> Amount: </div> <div> \$1,958.60 </div> </div>

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
Primary Antenna 2x2 750 10325	\$15,130.00	\$14,800.00		\$0.00	
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	N/A	N/A
UHF - High Power, Side Mount, broadband panel, 4 bay,, 1 kW input, directional,, horizontally polarized	<i>\$8,400.00</i>	\$8,400.00	Manufacturer's estimated cost	\$0.00	N/A
Primary Antenna TFU-19ETT /VP-R C170	\$315,390.00	\$299,600.00		\$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

Elbow complex, single channel, at antenna input, per 7 3/16. feedline (if needed)	\$13,900.00	\$13,200.00	N/A	N/A	N/A
UHF - High Power Top Mount (200-1000 kW), One station antenna , elliptically or circularly polarized	\$289,500.00	\$275,000.00	N/A	N/A	N/A
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	N/A	N/A
Auxiliary Antenna TFU-22DSC C170	\$197,240.00	\$194,800.00		\$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 7 3/16. feedline (if needed)	\$13,900.00	\$13,200.00	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, Side Mount, basic slot antenna, 915 kW input, directional,, elliptically or circularly polarized	\$148,200.00	\$148,200.00	See attached quote	N/A	N/A
Sub-total	\$527,760.00	\$509,200.00	N/A	\$0.00	N/A
Total for all systems	\$4,362,738.00	\$4,088,608.00	N/A	\$975,855.85	N/A

Components

Information not provided.

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
Primary Transmission Line	\$240,700.00	\$229,080.00		\$0.00	
Rigid Transmission Line - copper, 7 3 /16"	\$240,700.00	\$229,080.00	N/A	N/A	N/A
Auxiliary Transmission Line	\$188,500.00	\$179,400.00		\$0.00	
Rigid Transmission Line - copper, 7 3 /16"	\$188,500.00	\$179,400.00	N/A	N/A	N/A
Sub-total	\$429,200.00	\$408,480.00	N/A	\$0.00	N/A
Total for all systems	\$4,362,738.00	\$4,088,608.00	N/A	\$975,855.85	N/A

Components

Information not provided.

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	\$421,000.00	\$400,000.00		\$0.00	
Complex Tower (includes, for example, those with candelabras and/or stacked antennas)	\$421,000.00	\$400,000.00	N/A	N/A	N/A
Primary Tower TOWER	\$84,200.00	\$10,000.00		\$0.00	
Short Tower (less than 500')	\$84,200.00	\$10,000.00	N/A	N/A	N/A
Sub-total	\$505,200.00	\$410,000.00	N/A	\$0.00	N/A
Total for all systems	\$4,362,738.00	\$4,088,608.00	N/A	\$975,855.85	N/A

Components

Information not provided.

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
Outside Professional Services	\$127,185.00	\$120,350.00		\$14,970.03	
Microwave PCN	<i>\$1,000.00</i>	\$1,000.00	Preliminary estimate of services	N/A	N/A
Microwave Frequency Study	<i>\$1,100.00</i>	\$1,100.00	Preliminary Estimate of Engineering Services	N/A	N/A
Additional Legal Expenses	<i>\$5,000.00</i>	\$5,000.00	Preliminary estimate for legal expenses for non-catalog advice and review including transition status reports and other miscellaneous legal needs.	\$1,472.53	N/A
Microwave License Preparation	<i>\$1,000.00</i>	\$1,000.00	Preliminary Estimate for Services	N/A	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
DTS Site RF Consulting Engineer - Terrain- shielded Facility	\$26,300.00	\$25,000.00	N/A	N/A	N/A
DTS Site RF Consulting Engineer - Critical Facility	\$8,420.00	\$8,000.00	N/A	N/A	N/A

Prepare request for Special Temporary Authorization	\$4,100.00	\$3,000.00	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
Perform engineering study for new channel assignment and antenna development	\$7,360.00	\$7,000.00	N/A	\$4,475.00	N/A
Prepare and or review reimbursement form	\$2,630.00	\$2,500.00	N/A	N/A	N/A
Address transition timing and coordination issues w/ other stations and wireless	\$2,630.00	\$2,500.00	N/A	N/A	N/A

Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	\$3,155.00	\$3,000.00	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
Project management of the transition	\$39,500.00	\$37,500.00	N/A	\$9,022.50	N/A
Sub-total	\$127,185.00	\$120,350.00	N/A	\$14,970.03	N/A
Total for all systems	\$4,362,738.00	\$4,088,608.00	N/A	\$975,855.85	N/A

Components

Actual Information	
Description	File Name
Microwave PCN	Information not provided.
Microwave Frequency Study	Information not provided.
Additional Legal Expenses	

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

Component Description:	Outside Professional Services Additional Legal Expenses Legal services benefit entire FCC Repack project across all 11 Call Signs/Facility IDs, 2059.90/11 for 187.27 as outlined on page 1 of invoice.
Amount:	\$187.27

Component Description:	Outside Professional Services Additional Legal Expenses
Amount:	\$868.70

	<p>Component Description: Outside Professional Services Additional Legal Expenses</p> <p>Amount: \$33.70</p> <p>Component Description: Outside Professional Services Additional Legal Expenses Legal services benefit entire FCC Repack project across all 11 Call Signs/Facility IDs, 1617.10/11 for \$147.01 as outlined on page 1 of invoice.</p> <p>Amount: \$147.01</p>
Microwave License Preparation	Information not provided.
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.
DTS Site RF Consulting Engineer - Terrain-shielded Facility	Information not provided.
DTS Site RF Consulting Engineer - Critical Facility	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.

Perform engineering study for new channel assignment and antenna development	<div> <div> Component Description: </div> <div> Outside Professional Services Engineering Study New Channel Assignment Antenna Development </div> </div> <div> Amount: </div> <div> <div> Component Description: </div> <div> Outside Professional Services Engineering Study New Channel Assignment Antenna Development </div> </div> <div> Amount: </div> <div> \$2,600.00 </div> <div> \$1,875.00 </div>
Prepare and or review reimbursement form	Information not provided.
Address transition timing and coordination issues w/ other stations and wireless	Information not provided.
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	Information not provided.
RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, Construction Permit Application	Information not provided.
Project management of the transition	<div> <div> Component Description: </div> <div> Outside Professional Services Project Management </div> </div> <div> Amount: </div> <div> \$9,022.50 </div>

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
Other Expenses	\$127,163.00	\$121,613.00		\$0.00	
Microwave L and A	<i>\$57,813.00</i>	\$57,813.00	See attached quote	N/A	N/A
Microwave Electronics Mods	<i>\$24,900.00</i>	\$24,900.00	Estimated costs for replacement microwave oscillators and filters.	N/A	N/A
MVPD Notification of Channel Change	<i>\$6,000.00</i>	\$6,000.00	Preliminary Service Estimate	N/A	N/A
DTV Medical Facility Notification	\$11,550.00	\$6,000.00	Preliminary Service Estimate	N/A	N/A
Disposal Costs (for equipment and other waste, net of any salvage value)	<i>\$24,900.00</i>	\$24,900.00	The decommissioning of site #1 is an unknown due to the current site access issues.	N/A	N/A
Develop and air announcement of upcoming channel change	<i>\$2,000.00</i>	\$2,000.00	N/A	N/A	N/A
Sub-total	\$127,163.00	\$121,613.00	N/A	\$0.00	N/A
Total for all systems	\$4,362,738.00	\$4,088,608.00	N/A	\$975,855.85	N/A

Components

Information not provided.

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

	Predetermined Cost Estimate	Estimated Cost	Actual Cost
Total for all systems	\$4,362,738.00	\$4,088,608.00	\$975,855.85

Reimbursement Status

Question	Response
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"> 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.

<p>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.</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>Donald Smith <i>Director of New Technologies Compliance & Planning</i></p> <p>09/09/2018</p>

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"> 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. 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) .
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>Robert Levin <i>Director of Finance and Administration</i></p> <p>09/09/2018</p>

Attachments