Approved by OMB (Office of Management and Budget) 3060-1178

Federal Communications Commission

(REFERENCE COPY - Not for submission)

FCC Form 399: Reimbursement Request

Facility ID: **65919** | Service: **DTS** | Call Sign: **WHKY-TV** | Channel: **14 (UHF)**

File Number: **0000029026**

FRN: **0001712819** | Date Submitted: **07/21/2017**

Applicant Information

Applicant Name, Type, and Contact Information

Applicant	Address	Phone	Email	Applicant Type
LONG COMMUNICATIONS, LLC. Doing Business As: LONG COMMUNICATIONS, LLC.	Jeff Long 526 MAIN AVENUE SE HICKORY, NC 28602 United States	+1 (828) 322-1290	JLONG@WHKY.COM	Limited Liability Company

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
Thomas Edmund Long , Jr . *Director of Engineering* *Long Communications, LLC*	WHKY 526 Main Ave SE Hickory, NC 28602 United States	+1 (828) 324-5265	tlongjr@whky.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	WHKY-TV is a 2-site DTS system. The DTS1 facility will operate with an interim channel 40 antenna during its transition at it's studio tower. The DTS2 facility operate with the current antenna using a new transmission line during its transition.

Transmitters

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

Primary Transmitter

Existing Transmitter Information

Section	Question	Response
Existing Transmitter Description	Type of change	Purchase New
	Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Owner	N/A
	Site	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	NE710
	Year	1999
	Type	Solid State
	Solid State Cooling	Air Cooled
	Solid State Power Capacity	0.8 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	TMU9
	Transmitter Type	Solid State
	Solid State Cooling	Liquid Cooled
	Solid State Power capacity	1.2 kW
	Justification for New Transmitter	Current 0.8 KW transmitter will not tune from ch 40 to ch 14

Primary 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	75.0 feet
	Other Electrical Service	Yes

	Description	Support for cooling system and outside equipment
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 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	5

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	Sigma Plus
	Year	2006
	Type	Inductive Output Tube
	IOT Power Type	Other
	Other IOT Power Type	4
	Power Capacity	70 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	SCx9000
	Transmitter Type	Solid State
	Solid State Cooling	Liquid Cooled
	Solid State Power capacity	70 kW
	Justification for New Transmitter	Current transmitter is a Harris IOT running 4 IOT's that can make up to 70 kW DTV. Transmitter can make full power running only 2 of the 4 tubes. Transmitter is set up to run 2 or 4 tubes only.

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	4 inches
	Length	100.0 feet
	Other Electrical Service	Yes
	Description	Cooling system and control wiring.
HVAC Service	Does the replacement transmitter require HVAC Service?	Yes
	Type	Cooling Only
	Size	20 tons
	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	10

Primary Transmitter

Other Transmitter Cost Not Listed

Information not provided.

Interim Transmitter

New Transmitter Costs

Section	Question	Response
New Transmitter	Use	Interim
	Description of Use	N/A
	Change Type	Purchase
	Manufacturer	
	Model	SCx9000
	Transmitter Type	Solid State
	Solid State Cooling	Liquid Cooled
	Solid State Power capacity	15 kW
	Justification for New Transmitter	Need transmitter to operate during the transfer time from channel 40 to 14 at the main studio into a current channel 40 antenna that is on the studio tower. See problems with transfer to channel 14.

Interim Transmitter

Other Transmitter Costs

Section	Question	Response
Electrical Service	Service Entrance (3 phases 800A 208V)	Yes
	Switchgear (industrial 800 amp)	Yes

	Transformer (480V)	Yes
	Power	300 kVA
	Rigid Conduit and Wiring	Yes
	Size	4 inches
	Length	175.0 feet
	Other Electrical Service	Yes
	Description	Replacement of the current 208 volt feed to the studio. The 480 feed was removed at the end of analog transmission. We will have to feed the 208 volt feed from the 480 feed.
HVAC Service	Does the replacement transmitter require HVAC Service?	Yes
	Type	Cooling Only
	Size	20 tons
	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	30

Inside RF System	Is an additional interior RF system required to support this interim transmitter?	Yes

Interim Transmitter

Other Transmitter Cost Not Listed

Information not provided.

Antennas

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

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	Circular
	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)	18.0 kW

Manufacturer	
Model	ALP12L4-CSBR-40
Year	2011

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	Side Mount
	Antenna position in stack	Not in Stack
	Polarization	Horizontal
	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)	10.2 kW
	Manufacturer	

	Model	ALP8L4-HSBR-14
	Year	2018
	Justification for New Antenna	Existing antenna will not function on new channel and cannot be retuned.

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	6 1/8 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

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	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)	950.0 kW

Manufacturer	
Model	ATW25HS3-HSWC-40H
Year	2009

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	Side Mount
	Antenna position in stack	Not in Stack
	Polarization	Horizontal
	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)	537.0 kW
	Manufacturer	

	Model	ATW18HS3-HTWC-14H
	Year	2018
	Justification for New Antenna	Existing antenna will not function on new channel and cannot be retuned.

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	6 1/8 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

Primary Antenna

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	Rent Temporary
	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 Type	Class	Full Power
	Mounting	Top Mount
	Antenna position in stack	Not in Stack
	Polarization	Horizontal
	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)	600.0 kW
	Manufacturer	
	Model	ATW16H3-HSP5-14
	Year	2004

	Justification for New Antenna	This is the former channel 14 main antenna located at the WHKY-TV studio location that will be employed as an interim antenna for the transition to channel 14.

Interim Antenna

Other Antenna Costs

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

Interim Antenna

Other Antenna Cost Not Listed

Information not provided.

Transmission Line

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

Primary Transmission Line

Existing 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	2
	Is the existing transmission line shared with another station or stations?	No
	Is Transmission Line in operating condition?	Yes
Existing Transmission Line Manufacturer and Type	Manufacturer	
	Type	Waveguide
	Diameter	N/A
	Other Diameter	N/A
	Segment Length	N/A
	Other Segment Length	N/A
	Number of parallel runs	1
	Length	750 feet per run

Primary Transmission Line

New 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	Waveguide
	Diameter	N/A
	Other Diameter	N/A
	Segment Length	N/A
	Other Segment Length	N/A
	Number of parallel runs	1
	Length	750 feet per run
	Justification for New Transmission Line	The the frequency cutoff for the existing WR1500 waveguide is channel 18 and the waveguide is not usable at channel 14.

Primary Transmission Line

Other Transmission Line Expenses Not Listed

No information not provided.

Primary Transmission Line

Existing 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 the existing transmission line shared with another station or 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

Primary Transmission Line

New 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	6 1/8 inches
	Other Diameter	N/A
	Segment Length	20 inches
	Other Segment Length	N/A
	Number of parallel runs	1
	Length	250 feet per run
	Justification for New Transmission Line	Length of line for channel 40 was wrong for channel 14 per ERI table. Need 20 foot sections for channel 14.

Primary Transmission Line

Other Transmission Line Expenses Not Listed

Information not provided.

Interim Transmission Line

New Transmission Line

Section	Question	Response
New Transmission Line Costs	Use	Interim
	Description of Use	N/A
	Change Type	Lease New
	Type	Rigid
	Diameter	7 3/16 inches
	Segment Length	20'
	Other Segment Length	
	Number of parallel runs	1
	Length	560 feet per run
	Justification for New Transmission Line	This is the existing transmission line at the WHKY-TV studio that will be utilized for the interim transmitting antenna mounted on the studio tower.

Interim Transmission Line

Other Transmission Line Expenses Not Listed

Information not provided.

Interim Transmission Line

New Transmission Line

Section	Question	Response
New Transmission Line Costs	Use	Interim

Description of Use	N/A
Change Type	Purchase New
Type	Flexible Air
Diameter	5 inches
Segment Length	N/A
Other Segment Length	
Number of parallel runs	1
Length	750 feet per run
Justification for New Transmission Line	Interim antenna system is necessary to ensure uninterrupted service during transition to Channel 14. Implementation delays are anticipated due to land mobile protection issues.

Interim Transmission Line

Other Transmission Line Expenses Not Listed

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	Modify Existing
	Tower Use	Primary (Main)
	Description of Use	N/A
	Ownership	Leased
	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?	Yes
	Is tower compliant with Rev G?	Yes
Existing Tower Structure Registration	Do you have a tower registration number?	Yes
	ASR Number	1005065
Coordinates (NAD83 (North American Datum of 1983))	Latitude (NAD83)	35° 17' 15.0" N-
	Longitude (NAD83)	080° 41' 44.0" W-
	Overall Structure Height	1246.70 feet
	Support Structure Height	1197.49 feet
	Ground Elevation Above Mean Sea Level (AMSL)	715.21 feet

Structure Type	TOWER - Free Standing or Guyed Structure
Tower Owner	Central Piedmont Community College
Date Constructed	08/01/1992

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
10645	WTVI	DTV
53970	WRFX	FM
69436	WFAE	FM

Other Types of Users

Users
ENG Microwave

Primary Tower

Tower Modification Costs

Section	Question	Response
Engineering Study	Please what type of engineering study is required, if any:	Study needed for documented tower
Tower Reinforcements	Please select whether tower reinforcements are needed:	Minor Reinforcements needed

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.

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)	No
	Others Types of Users	Yes
	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?	No
	ASR Number	
Coordinates (NAD83 (North American Datum of 1983))	Latitude (NAD83)	35° 39' 28.5" N-
	Longitude (NAD83)	081° 24' 23.3" W-
	Overall Structure Height	190.00 feet
	Support Structure Height	190.00 feet
	Ground Elevation Above Mean Sea Level (AMSL)	1742.00 feet
	Structure Type	LTOWER - Lattice Tower
	Tower Owner	Long Communications, LLC
	Date Constructed	01/01/2005

Other Types of Users

Users
FM Trans W272DU
Duke Energy

Primary Tower

Tower Modification Costs

Section	Question	Response
Engineering Study	Please what type of engineering study is required, if any:	Study needed for documented tower
Tower Reinforcements	Please select whether tower reinforcements are needed:	No reinforcements needed

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.

Interim Tower

Tower Construction Costs

Section	Question	Response
Construct New Tower	Use	Interim
	Description of Use	N/A
	Height	487.00 feet
	Justification for New Tower	This is the current studio tower. No new tower construction or modifications are expected.

Interim Tower

Tower Rigging Costs

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

Interim 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	Station does not have internal resources to make changes needed for the channel moves at three sites. Will rely on outside services for this project.
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	0

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	2
	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	Yes
	Prepare or Review FCC Form 399 for Reimbursement	Yes
	Address transition timing and coordination issues w/ other stations and wireless providers	No
RF Field Engineering Services	Comprehensive coverage verification via field study	Yes
	RF exposure measurements	No
	Additional Field Engineering Service	Yes
	Number of Days	60
	Justification	Channel 14 DTS with land mobile

Outside Professional Services Costs

Other Professional Services Expenses Not Listed

Information not provided.

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	Yes
	Name	DTS Field measurements
	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	Yes
	FCC License to Cover Application	Yes
	FCC Special Temporary Authority Application	Yes
Other Miscellaneous Expenses	Does this relocation require paying Disposal Costs (for equipment and other waste, net of any salvage value)?	Yes
	Does this relocation require Equipment Delivery or Handling Charges not otherwise included in individual item costs?	Yes
	Does this relocation require Equipment Storage?	Yes
	Does this relocation require the Development and Airing of an Announcement regarding an upcoming channel change?	Yes
	Does this relocation require MVPD Notification of a Channel Change?	Yes

Other Expenses

Other Expenses Not Listed

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
Interim Transmitter SCx9000	**$1,291,435.00**	**$1,231,800.00**		**$0.00**	
Other Electrical Service: Replacement of the current 208 volt feed to the studio. The 480 feed was removed at the end of analog transmission. We will have to feed the 208 volt feed from the 480 feed.	***$40,000.00***	$40,000.00	Replace current 208 volt feed to studio with 480 feed. Replacement of power transformer and switch gear, wire.	N/A	N/A
Other -- HVAC Service Type: C Size:20 (Other)	***$55,000.00***	$55,000.00	Add additional 20 ton system to building for cooling of solid state transmitter	N/A	N/A
UHF inside RF system including switching	$147,500.00	$140,000.00	N/A	N/A	N/A
Additional field engineering time, 10-30 days	$63,100.00	$60,000.00	N/A	N/A	N/A

Transformer 3 phase/480v - 300 KVA	$36,800.00	$35,000.00	N/A	N/A	N/A
Switchgear - industrial 800 amp	$38,200.00	$36,300.00	N/A	N/A	N/A
4" Rigid Conduit and Wiring (Cost per foot)	$17,675.00	$16,800.00	N/A	N/A	N/A
Service entrance 3 phase/800 amp /208 volt	$14,400.00	$13,700.00	N/A	N/A	N/A
Channel 14 Mask Filter	$189,500.00	$180,000.00	N/A	N/A	N/A
RF Consulting Engineer	$5,260.00	$5,000.00	N/A	N/A	N/A
UHF - Liquid Cooled Solid State Transmitter 14.2 - 20 kW	$684,000.00	$650,000.00	N/A	N/A	N/A
Primary Transmitter TMU9	**$342,260.00**	**$331,175.00**		**$0.00**	
Channel 14 -- Additional field engineering time, 5 days	***$10,000.00***	$10,000.00	Provide engineering for channel 14, land mobile problems.	N/A	N/A
2" Rigid Conduit and Wiring (Cost per foot)	$1,950.00	$1,875.00	N/A	N/A	N/A
UHF - Liquid Cooled Solid State Transmitter 1.2 kW	***$105,000.00***	$105,000.00	N/A	N/A	N/A

Transformer 3 phase/480v - 150 KVA	$25,550.00	$24,300.00	N/A	N/A	N/A
Other Electrical Service: Support for cooling system and outside equipment	***$5,000.00***	$5,000.00	Cooling system wiring for control and pumps systems	N/A	N/A
RF Consulting Engineer	$5,260.00	$5,000.00	N/A	N/A	N/A
Channel 14 Mask Filter	$189,500.00	$180,000.00	N/A	N/A	N/A
Primary Transmitter SCx9000	**$2,421,960.00**	**$2,305,900.00**		**$0.00**	
Other Electrical Service: Cooling system and control wiring.	***$25,000.00***	$25,000.00	Provide control and cooling system wiring for new transmitter.	N/A	N/A
Additional field engineering time, 10-30 days	$63,100.00	$60,000.00	N/A	N/A	N/A
Channel 14 Mask Filter	$189,500.00	$180,000.00	N/A	N/A	N/A
RF Consulting Engineer	$5,260.00	$5,000.00	N/A	N/A	N/A
4" Rigid Conduit and Wiring (Cost per foot)	$10,100.00	$9,600.00	N/A	N/A	N/A
Transformer 3 phase/480v - 300 KVA	$36,800.00	$35,000.00	N/A	N/A	N/A

Switchgear - industrial 800 amp	$38,200.00	$36,300.00	N/A	N/A	N/A
Other -- HVAC Service Type: C Size:20 (Other)	***$55,000.00***	$55,000.00	provide 20 ton air conditioning system fro cooling of solid state transmitter	N/A	N/A
UHF - Liquid Cooled Solid State Transmitter 68.5 - 75 kW	$1,999,000.00	$1,900,000.00	N/A	N/A	N/A
Sub-total	$4,055,655.00	$3,868,875.00	N/A	$0.00	N/A
Total for all systems	$6,294,115.00	$5,797,685.00	N/A	$0.00	N/A

Components

Information not provided.

Cost Information

Antennas

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Interim Antenna ATW16H3-HSP5-14	**$369,230.00**	**$351,400.00**		**$0.00**	
Sweep test of existing antenna	$6,730.00	$6,400.00	N/A	N/A	N/A
Interim antenna rental and installation - Cost will depend on antenna size and height and /or complexity of tower.	$115,500.00	$110,000.00	N/A	N/A	N/A
UHF - High Power Top Mount (200-1000 kW), One station antenna, horizontally polarized	$247,000.00	$235,000.00	N/A	N/A	N/A
Primary Antenna ALP8L4-HSBR-14	**$132,440.00**	**$130,100.00**		**$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 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, 10 kW input, directional,, horizontally polarized	***$85,000.00***	$85,000.00	The Form 399 did not populate this field. This is the estimated cost of the main antenna for WHKY-TV DTS2.	N/A	N/A
Sweep test of existing antenna	$6,730.00	$6,400.00	N/A	N/A	N/A
Primary Antenna ATW18HS3-HTWC-14H	**$282,440.00**	**$280,100.00**		**$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
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, 537 kW input, directional,, horizontally polarized	***$235,000.00***	$235,000.00	The Form 399 catalog did not populate this field. This is the estimated cost of the new antenna for WHKY-TV DTS1.	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
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
Sub-total	$784,110.00	$761,600.00	N/A	$0.00	N/A
Total for all systems	$6,294,115.00	$5,797,685.00	N/A	$0.00	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
Interim Transmission Line	**$162,400.00**	**$0.00**		**$0.00**	
Rigid Transmission Line - copper, 7 3/16"	$162,400.00	$0.00	Using Old line on tower that was used for channel 14 analog.	N/A	N/A
Interim Transmission Line	**$78,750.00**	**$75,000.00**		**$0.00**	
Flexible Air Transmission Line - dielectric, 5"	$78,750.00	$75,000.00	N/A	N/A	N/A
Primary Transmission Line	**$324,375.00**	**$324,375.00**		**$0.00**	
Waveguide Transmission Line - " 1 parallel runs 750 feet	***$324,375.00***	$324,375.00	Replacement of WR1500 waveguide with EWG-1800 elliptical waveguide for channel 14. See attached quote.	N/A	N/A
Primary Transmission Line	**$50,500.00**	**$48,000.00**		**$0.00**	

Rigid Transmission Line - copper, 6 1/8"	$50,500.00	$48,000.00	N/A	N/A	N/A
Sub-total	$616,025.00	$447,375.00	N/A	$0.00	N/A
Total for all systems	$6,294,115.00	$5,797,685.00	N/A	$0.00	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
Interim Tower	**$84,200.00**	**$0.00**		**$0.00**	
New tower	***$0.00***	$0.00	Existing tower will be employed with no modifications expected to be required.	N/A	N/A
Short Tower (less than 500')	$84,200.00	$0.00	No new rigging work is expected for existing studio tower and antenna to be used for interim facility.	N/A	N/A
Primary Tower TOWER	**$381,100.00**	**$362,000.00**		**$0.00**	
Tall Tower (greater than 500')	$210,500.00	$200,000.00	N/A	N/A	N/A
Minor tower reinforcement /modifications	$158,000.00	$150,000.00	N/A	N/A	N/A
Structural engineering tower load study for well documented tower	$12,600.00	$12,000.00	N/A	N/A	N/A
Primary Tower LTOWER	**$96,800.00**	**$92,000.00**		**$0.00**	

Short Tower (less than 500')	$84,200.00	$80,000.00	N/A	N/A	N/A
Structural engineering tower load study for well documented tower	$12,600.00	$12,000.00	N/A	N/A	N/A
Sub-total	$562,100.00	$454,000.00	N/A	$0.00	N/A
Total for all systems	$6,294,115.00	$5,797,685.00	N/A	$0.00	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	**$238,035.00**	**$228,250.00**		**$0.00**	
Additional Field Engineering Service, 60 Days	***$60,000.00***	$60,000.00	Additional field engineering required due to land mobile interference issues and DTS requirements.	N/A	N/A
Comprehensive coverage verification via field study, if needed	$84,200.00	$80,000.00	In order for the DTS system to operate with minimal mutual interference, it is necessary to verify coverage via field study work.	N/A	N/A
Attorney Fees - Prepare and File request for Special Temporary Authorization	$7,360.00	$7,000.00	N/A	N/A	N/A

Attorney Fees - Negotiation of lease and other matters for shared locations	$4,210.00	$4,000.00	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	$0.00	$0.00	This a critical non-terrain shielded DTS facility.	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
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	N/A	N/A
Perform engineering study for new channel assignment and antenna development	$7,360.00	$7,000.00	N/A	N/A	N/A
Prepare and or review reimbursement form	$2,630.00	$2,500.00	N/A	N/A	N/A
Project management of the transition	$39,500.00	$37,500.00	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

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
Sub-total	$238,035.00	$228,250.00	N/A	$0.00	N/A
Total for all systems	$6,294,115.00	$5,797,685.00	N/A	$0.00	N/A

Components

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
Other Expenses	**$38,190.00**	**$37,585.00**		**$0.00**	
MVPD Notification of Channel Change	***$2,500.00***	$2,500.00	N/A	N/A	N/A
Develop and air announcement of upcoming channel change	***$2,500.00***	$2,500.00	Development and airing of channel change announcements to ensure uninterrupted service to the public.	N/A	N/A
Equipment Storage	***$2,500.00***	$2,500.00	N/A	N/A	N/A
Disposal Costs (for equipment and other waste, net of any salvage value)	***$2,500.00***	$2,500.00	N/A	N/A	N/A
FCC Filing Fees - Special Temporary Authorization request	$195.00	$190.00	N/A	N/A	N/A
FCC Filing Fees - Form 2100 license to cover application	$335.00	$325.00	N/A	N/A	N/A

Other Distributed Transmission System Expenses Not listed, Name: DTS Field measurements	***$10,000.00***	$10,000.00	DTS Field measurements are included as part of comprehensive coverage verification costs. But will be required as part of this project. We will need to develop null points to protect reception of the station.	N/A	N/A
FCC Filing Fees - Form 2100 minor change CP application	$1,110.00	$1,070.00	N/A	N/A	N/A
Equipment Delivery and Handling Charges	***$5,000.00***	$5,000.00	N/A	N/A	N/A
DTV Medical Facility Notification	$11,550.00	$11,000.00	N/A	N/A	N/A
Sub-total	$38,190.00	$37,585.00	N/A	$0.00	N/A
Total for all systems	$6,294,115.00	$5,797,685.00	N/A	$0.00	N/A

Components

Information not provided.

Cost Information

Grand Total

	Predetermined Cost Estimate	Estimated Cost	Actual Cost
Total for all systems	$6,294,115.00	$5,797,685.00	$0.00

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	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 above-named applicant for the Authorization(s) specified above.	**Jeffrey B Long** *Member-Manager* 07/21/2017

Attachments

Information not provided.