

Federal Communications Commission

(REFERENCE COPY - Not for submission)

FCC Form 399: Reimbursement Request

Facility 7 ID: File Number:	74112 000002	Service: DTV 7117	Call Sign:	WTOG	Channel: 19 (UHF)
FRN: 0028	930774	Date	06/07		
		Submitted:	/2019		

Applicant Name, Type, and Contact Information

Information

Applicant	Address	Phone	Email	Applicant Type
CBS OPERATIONS INC. Doing Business As: CBS OPERATIONS INC.	Daniel G. Ryson 1725 DESALES ST NW SUITE 501 WASHINGTON, DC 20036 United States	+1 (202) 457-4505	dryson@cbs. com	Corporation

Reimbursement Contact Name and Information Reimbursement Contact Information

Applicant	Address	Phone	Email
[Confidential]			

Preparer	Preparer Contact Name and Information				
Contact Information	Applicant	Address	Phone	Email	
	Daniel G Ryson CBS	Daniel G. Ryson 1725 DeSales Street NW Suite 501 Washington, DC 20036 United States	+1 (202) 457-4074	dryson@cbs.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	Temporarily move to an interim site with a broadband antenna. Install a broadband transmitter capable of operating on pre and post transition channels for use when present site is rebuilt with new antenna, transmission line, and transmitter equipment.

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

Primary	Existing Transmitter Information				
Transmitter	Section	Question	Response		
	Existing Transmitter Description	Type of change	Purchase New		
		Use	Primary (Main)		
		Description of Use	N/A		
		Ownership	Owned		
		Owner	N/A		
		Site	N/A		
		Is this transmitter currently shared with another station?	No		
		Is this transmitter currently in operating condition?	Yes		
	Existing Transmitter Manufacturer and Type	Manufacturer			
		Model	DCX		
		Year	2001		
		Туре	Inductive Output Tube		
		IOT Power Type	Two		
		Power Capacity	50 kW		

Existing Transmitter Information

Primary	New Transmitter Costs				
Transmitter	Section	Question	Response		
	New Transmitter	Use	Primary (Main)		
		Change Type	Purchase New		
		Is this a request for upgraded equipment?	Yes		
		Manufacturer			
		Model	ULXTED-80		
		Transmitter Type	Solid State		
		Solid State Cooling	Liquid Cooled		
		Solid State Power capacity	50.6 kW		
		Justification for New Transmitter	Comark will not re-tune any IOT transmitter (see Attachment 1). Proposed "upgraded" transmitter (see Attachment 15) costs more than "non- upgraded" transmitter (see Attachment 3) which is basis for reimbursement.		

Primary Transmitter	Other Transmitter Costs				
	Section	Question	Response		
	Electrical Service	Service Entrance (3 phases 800A 208V)	Yes		
		Switchgear (industrial 800 amp)	Yes		
		Transformer (480V)	Yes		

Other Transmitter Costs

	Power	500 kVA
	Rigid Conduit and Wiring	Yes
	Size	2 inches
	Length	200.0 feet
	Other Electrical Service	Yes
	Description	100 linear feet of 4- inch conduit.
HVAC Service	Does the replacement transmitter require HVAC Service?	Yes
	Туре	Cooling Only
	Size	15 tons
	Other Size	N/A
Transmitter Building Addition/Modification or Leasehold Improvement	Does the Transmitter Building require an addition, modification, other leashold improvement?	Yes
	Size	3200.0 square feet
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.

Interim Transmitter	New Transmitter Costs				
	Section	Question	Response		
	New Transmitter	Use	Interim		
		Description of Use	N/A		
		Change Type	Purchase		
		Manufacturer			
		Model	ULXTE-60		
		Transmitter Type	Solid State		
		Solid State Cooling	Liquid Cooled		
		Solid State Power capacity	30 kW		
		Justification for New Transmitter	Interim transmitter and site required while main tower is reinforced and main site is rebuilt. Broadband PAs specified. See Statement 2.		

Interim 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		

Other Transmitter Costs

	Rigid Conduit and Wiring	Yes
	Size	3 inches
	Length	100.0 feet
	Other Electrical Service	No
	Description	N/A
HVAC Service	Does the replacement transmitter require HVAC Service?	No
	Туре	N/A
	Size	N/A
	Other Size	N/A
Transmitter Building Addition/Modification or Leasehold Improvement	Does the Transmitter Building require an addition, modification, other leashold improvement?	No
	Size	N/A
Channel 14 Costs	Is an RF Consulting Engineer needed?	N/A
	Is a channel 14 Mask Filer needed?	N/A
	Is additional field engineering time needed?	N/A
	Number of Days	N/A
Inside RF System	Is an additional interior RF system required to support this interim transmitter?	Yes

Interim Other Transmitter Cost Not Listed

Transmitter Information not provided.

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

Auxiliary					
Antenna	Section	Question	Response		
	Existing Antenna Description	Type of change	Purchase New		
		Antenna Use	Auxiliary (Backup)		
		Description of Use	Emergency Only		
		Ownership	Owned		
		Owner	N/A		
		Site	N/A		
		Is this antenna currently shared with any other stations?	No		
		Is this antenna directional?	No		
		Is antenna in operating condition?	Yes		
		Is antenna located on or in close proximity to an antenna farm?	No		
	Existing Antenna	Class	Full Power		
	Manufacturer and Type	Mounting	Side Mount		
		Antenna position in stack	Not in Stack		
		Polarization	Horizontal		
		Туре	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)	298.0 kW		

Add Antenna Information

Manufacturer	
Model	SW-16
Year	1988

Auxiliary	New Antenna Costs			
Antenna	Section	Question	Response	
	New Antenna Description	Use	Auxiliary (Backup)	
		Description of Use	Auxiliary (Post Transition)	
		Change Type	Purchase New	
		Is this a request for upgraded equipment?	Yes	
		Ownership	Owned	
		Owner	N/A	
		Is antenna shared?	No	
		Is antenna directional?	No	
		Will antenna be located on or in close proximity to an antenna farm?	No	
	New Antenna	Class	Full Power	
	Manufacturer and Types	Mounting	Side Mount	
		Antenna position in stack	Not in Stack	
		Polarization	Elliptical	
		Туре	Slotted Coaxial	
		Number of Stations Supported	N/A	
		Number of Panels/Bays	N/A	
		Lower Limit	N/A	
		Upper Limit	N/A	
		Design power capacity in use	N/A	
		Other Antenna Type	N/A	
		ERP: (Effective Radiated Power)	298.0 kW	
		Manufacturer		

Model	TFU- 24DSC-R O4
Year	2019
Justification for New Antenna	Existing auxiliary antenna is narrowband and not suitable for use on channel 19.

Other Antenna Costs

Auxiliary Antenna

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

Sweep	Test
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Auxiliant Other Antenna Cost Not Listed

AuxiliaryOther Antenna CostAntennaInformation not provided.

Primary	Existing Antenna Information			
Antenna	Section	Question	Response	
	Existing Antenna Description	Type of change	Purchase New	
		Antenna Use	Primary (Main)	
		Description of Use	N/A	
		Ownership	Owned	
		Owner	N/A	
		Site	N/A	
		Is the existing antenna shared with another station or stations?	No	
		Is the existing antenna directional?	No	
		Is antenna in operating condition?	Yes	
		Is antenna located on or in close proximity to an antenna farm?	No	
	Existing Antenna	Class	Full Power	
	Manufacturer and Type	Mounting	Top Mount	
		Antenna position in stack	Bottom	
		Polarization	Horizontal	
		Туре	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)	550.0 kW	

Manufacturer	
Model	TFU-30E
Year	1987

Primary	New Antenna Costs			
Antenna	Section	Question	Response	
	New Antenna Description	Use	Primary (Main)	
		Description of Use	N/A	
		Change Type	Purchase New	
		Is this a request for upgraded equipment?	Yes	
		Ownership	Owned	
		Owner	N/A	
		Is antenna shared?	No	
		Is antenna directional?	No	
		Will antenna be located on or in close proximity to an antenna farm?	No	
	New Antenna	Class	Full Power	
	Manufacturer and Types	Mounting	Top Mount	
		Antenna position in stack	Not in Stack	
		Polarization	Elliptical	
		Туре	Slotted Coaxial	
		Number of Stations Supported	N/A	
		Number of Panels/Bays	N/A	
		Lower Limit	N/A	
		Upper Limit	N/A	
		Design power capacity in use	N/A	
		Other Antenna Type	N/A	
		ERP: (Effective Radiated Power)	700.0 kW	
		Manufacturer		
			1	

Model	TFU-27ETT /VP-R O6
Year	2019
Justification for New Antenna	Present owned antenna is narrowband and will not work on post- transition channel.

Other Antenna Costs

Primary Antenna

Section	Question	Response
Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	No
	Туре	
	Number of channels supported	N/A
	Frequencies of channels supported	N/A
	Frequency	N/A
	Do you need a combiner output splitter /switcher for dual feed lines?	N/A
Elbow Complex	Do you require the separate purchase of the Elbow Complex?	Yes
	Broadband or Single Channel?	Single Channel
	Feed Line Size	8 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?	No

Sweep Test	Do you require the sweep testing of	Yes
	transmission line and antenna?	

Primary	Other Antenna Cost Not Listed	
Antenna	Name	Description
	Mounting Adapter	Five foot Mounting Adapter allows antenna to mount onto tower top plate.

Interim	New Antenna Costs			
Antenna	Section	Question	Response	
	New Antenna Description	Use	Interim	
		Description of Use	N/A	
		Change Type	Rent Temporary	
		Ownership	Leased	
		Owner	Florida West Coast Public Broadcasting, Inc.	
		Is antenna shared?	No	
		Is antenna directional?	No	
		Will antenna be located on or in close proximity to an antenna farm?	No	
	New Antenna Manufacturer and Type	Class	Full Power	
		Mounting	Top Mount	
		Antenna position in stack	Bottom	
		Polarization	Horizontal	
		Туре	Broadband Panel	
		Number of Stations Supported	1	
		Number of Panels/Bays	12	
		Lower Limit	470.00 MHz	
		Upper Limit	713.00 MHz	
		Design power capacity in use	0.0 %	
		Other Antenna Type	N/A	
		ERP: (Effective Radiated Power)	417.0 kW	
		Manufacturer		

Model	TUP-05-12- 60-1
Year	2006
Justification for New Antenna	Renting Existing Antenna.

Interim Other Antenna Costs

Antenn	а

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	Other Antenna Cost Not Listed	
Antenna	Name	Description
	Test Adapter	Test adapter for detailed measurement of interim antenna and line.

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

Auxiliary	Add Transmission Line			
Transmissio	n Line Section	Question	Response	
	Existing Transmission Line Description	Type of change	Purchase New	
		Use	Auxiliary (Backup)	
		Description of Use	Backup	
		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	Manufacturer		
	Line Manufacturer and Type	Туре	Rigid	
		Diameter	8 3/16 inches	
		Other Diameter	N/A	
		Segment Length	20 inches	
		Other Segment Length	N/A	
		Number of parallel runs	1	
		Length	1000 feet per run	

Auxiliary	New Transmission Line		
Transmissio	New Transmission Line Costs	Question	Response
		Use	Auxiliary (Backup)
		Description of Use	Backup
		Change Type	Purchase New
		Is this a request for upgraded equipment?	No
		Туре	Rigid
		Diameter	8 3/16 inches
		Other Diameter	N/A
		Segment Length	20 inches
		Other Segment Length	N/A
		Number of parallel runs	1
		Length	1000 feet per run
		Justification for New Transmission Line	Please see Statement 2.

Other Transmission Line Expenses Not Listed Auxiliary Other Transmission Transmission

Primary	Existing Transmission Line			
Transmissio	on Line Section	Question	Response	
	Existing Transmission Line Description	Type of change	Purchase New	
		Use	Primary (Main)	
		Description of Use	N/A	
		Ownership	Owned	
		Owner	N/A	
		Site	N/A	
		Is the existing transmission line shared with another station or stations?	No	
		Is Transmission Line in operating condition?	Yes	
	Existing Transmission	Manufacturer		
	Line Manufacturer and Type	Туре	Waveguide	
		Diameter	N/A	
		Other Diameter	N/A	
		Segment Length	N/A	
		Other Segment Length	N/A	
		Number of parallel runs	1	
		Length	1492 feet per run	

Existing Transmission Line

Primary	New Transmission Line			
Transmissio	on Line Section	Question	Response	
	New Transmission Line Costs	Use	Primary (Main)	
		Description of Use	N/A	
		Change Type	Purchase New	
		Is this a request for upgraded equipment?	No	
		Туре	Rigid	
		Diameter	8 3/16 inches	
		Other Diameter	N/A	
		Segment Length	20 inches	
		Other Segment Length	N/A	
		Number of parallel runs	1	
		Length	1540 feet per run	
		Justification for New Transmission Line	Present waveguide will not work on post- transition channel and must be removed to reduce tower windloading. (Line Length reduced from 1600 to 1540 feet after 3/2019 site survey)	

Primary Other Transmission Line Expenses Not Listed

Other Transmission Transmission

Interim	New Transmission Line	ew Transmission Line		
Transmissio	Section	Question	Response	
	New Transmission Line	Use	Interim	
	Costs	Description of Use	N/A	
		Change Type	Purchase New	
		Туре	Rigid	
		Diameter	6 1/8 inches	
		Segment Length	20'	
		Other Segment Length		
		Number of parallel runs	1	
		Length	100 feet per run	
		Justification for New Transmission Line	Required for interconnect to interim antenna.	

Other Transmission Line Expenses Not Listed Transmission

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

Auxiliary	Add Tower			
Tower	Section	Question	Response	
	Existing Tower Description	Type of change	Modify Existing	
		Tower Use	Auxiliary (Backup)	
		Description of Use	Interim	
		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	No	
		Is tower documented for structural analysis?	Unknown	
		Is tower compliant with Rev G?	Unknown	
	Existing Tower Structure	Do you have a tower registration number?	Yes	
	Registration	ASR Number	1211242	
	Coordinates (NAD83 (North American Datum of 1983))	Latitude (NAD83)	27° 50' 51.5" N-	
		Longitude (NAD83)	082° 15' 49.4" W-	
		Overall Structure Height	1571.83 feet	
		Support Structure Height	1451.10 feet	
		Ground Elevation Above Mean Sea Level (AMSL)	76.11 feet	

Structure Type	TOWER - Free Standing or Guyed Structure
Tower Owner	Florida West Coast Public Broadcasting Inc.
Date Constructed	12/07/1999

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
21808	WEDU	DTV

Auxiliary Tower Modification Costs

Tower

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

Auxiliary Tower Rigging Costs

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

Auxiliary	Other Tower Expenses Not Listed		
Tower	Name	Description	
	Rent	Monthly Rental Fee for existing Tower, Antenna, Line, and Transmitter Room.	

Primary	Add Tower			
Tower	Section	Question	Response	
	Existing Tower	Type of change	Modify Existing	
	Description	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?	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?	Unknown	
		Is tower compliant with Rev G?	No	
	Existing Tower Structure Registration	Do you have a tower registration number?	Yes	
		ASR Number	1030952	
	Coordinates (NAD83 (North American Datum of 1983))	Latitude (NAD83)	27° 49' 47.1" N-	
		Longitude (NAD83)	082° 15' 58.3" W-	
		Overall Structure Height	1574.13 feet	
		Support Structure Height	1451.75 feet	
		Ground Elevation Above Mean Sea Level (AMSL)	74.80 feet	
		Structure Type	GTOWER - Guyed Structure Used for Communication Purposes	
		Tower Owner	American Towers LLC	
		Date Constructed	02/01/2018	

Primary Tower	Tower Modification Costs			
	Section	Question	Response	
	Engineering Study	Please what type of engineering study is required, if any:	Study needed for undocumented /poorly documented tower	
	Tower Reinforcements	Please select whether tower reinforcements are needed:	Major Reinforcements needed	

Tower Rigging Costs Primary Tower

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

Other Tower Expenses Not Listed Primary Tower

Name	Description
Tower Permit Packages	Construction drawings for tower, ground and building. Required for local permits.

Outside	Section	Question	Response
Professional	Services Costs Outside Project Management Services	Do you require outside project management services?	Yes
		Number of Hours	250
		Explanation	Company lacks sufficient internal resources.
	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	No
		For Main Facility	Yes
		Prepare request for Special Temporary Authority	Yes
		Quantity	1
		Do you have Distributed Transmission System engineering services?	N/A
		Critical Facility	N/A
		Terrain-Shielded Facility	N/A
	Attorney and Other Outside Consulting Services	Prepare and file Form FCC Construction Permit Application	No
		For Auxiliary Facility	N/A
		For Main Facility	N/A
		Prepare and file Form FCC License to Cover Application	No

	For Auxiliary Facility	N/A
	For Main Facility	N/A
	Prepare request for Special Temporary Authority	No
	Quantity	N/A
	NEPA Section 106 environmental review	Yes
	Environmental Assessment	Yes
	ASR Modification	Yes
	FAA Consultation (including preparation of FAA Form 7460)	No
	Negotiation of Lease and other Matter for Shared Locations	No
	Prepare or Review FCC Form 399 for Reimbursement	No
	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	Yes
	Additional Field Engineering Service	No
	Number of Days	N/A
	Justification	N/A

Outside Other Professional Services Expenses Not Listed Professional Services roopstsided.

Other	Section	Question	Response
Expenses	AM Pattern Disturbance	Is an Impact Study needed?	No
		Is Remediation needed?	No
	Facility Expenses	Name	N/A
		Other Distributed Transmission System Expenses Not listed	N/A
		Name	N/A
		Is Notification of a Medical Facility required as a result of DTV broadcasting?	Yes
	Permit and Filing Costs	Local Zoning	Yes
		Non-zoning permits	Yes
		BLM or NFS Coordination	No
		FCC Construction Permit Minor Change	No
		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?	No
		Does this relocation require the Development and Airing of an Announcement regarding an upcoming channel change?	No
		Does this relocation require MVPD Notification of a Channel Change?	Yes

Other Expenses Not Listed

Expenses Information not provided.

Transmitters

Cost Information

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justificatior
Interim Transmitter ULXTE-60	\$1,125,250.00	\$1,135,082.22		\$681,468.47	
3" Rigid Conduit and Wiring (Cost per foot)	\$5,200.00	\$5,000.00	N/A	N/A	N/A
UHF - Liquid Cooled Solid State Transmitter 21 - 31 kW	\$947,000.00	\$977,574.60	Includes Attachment 21 Items A,B, E and change orders shown in Attachment 22. Does not include RF Accessories, Step-Down transformer, and shipping shown elsewhere.	\$633,859.80	N/A
Transformer 3 phase /480v - 150 KVA	\$25,550.00	\$9,007.62	See Attachment 21, Item D	\$6,543.38	N/A
UHF inside RF system including switching	\$147,500.00	\$143,500.00	Includes Attachment 21 Item C. There will also be some labor involved to install switching and transmission line.	\$41,065.29	N/A

Primary Transmitter ULXTED-80	\$1,645,510.00	\$1,566,190.00		\$430,923.86	
UHF - Liquid Cooled Solid State Transmitter 50.6 kW	\$1,388,470.00	\$1,388,470.00	See Statement 2A and Attachment 3. Comparable IOT pricing is less expensive than solid state transmitter being proposed.	\$430,923.86	N/A
Other Building Addition Size: 3200.0	\$91,200.00	\$91,200.00	2 story building with tiltup walls to match existing broadcast facility. Includes galvanized stairs, steel doors, and concrete block walls for separate tenant suites. See Attachments 5 and 6.	N/A	N/A
Other Electrical Service: 100 linear feet of 4- inch conduit.	\$3,840.00	\$3,840.00	100' L/F of 4" conduit and larger conductor to adequately bring an additional 500 KVA power needed for the new transmitters, HVAC, Air handlers, and house power. See Attachment 5.	N/A	N/A

2" Rigid Conduit and Wiring (Cost per foot)	\$5,200.00	\$2,000.00	This cost includes 200 L /F of 2" conduit and conductor to adequately supply the HVAC, Airhandlers and House power. The existing power supply is inadequate for the additional power demands of the new repack equipment. See Attachment 5.	N/A	N/A
Transformer 3 phase /480v - 500 KVA	\$48,400.00	\$18,400.00	Install 500 KVA transformer to support transmitter, heat exchangers and other equipment on the new repack frequency into the broadband antenna. See Attachment 5.	N/A	N/A

Switchgear - industrial 800 amp	\$38,200.00	\$14,400.00	New Switchgear required accommodating additional repack equipment. This switch is used with the addition of the 500 KVA transformer installation. This space does lacks required power for multiple transmitters. See Attachment 6.	N/A	N/A
Service entrance 3 phase/800 amp/208 volt	\$14,400.00	\$5,480.00	Pro rata cost. See Attachment 5.	N/A	N/A
15 Ton system	\$55,800.00	\$42,400.00	See Attachment 5.	N/A	N/A
Sub-total	\$2,770,760.00	\$2,701,272.22	N/A	\$1,112,392.33	N/A
Total for all systems	\$5,849,724.11	\$4,699,388.83	N/A	\$1,434,613.48	N/A

Actual Information Description	File Name
3" Rigid Conduit and Wiring (Cost per foot)	Information not provided.

UHF - Liquid Cooled Solid State Transmitter 21 - 31 kW	Component Description:	Invoice is for transmitter down payment originally based on Attachment 21 items A, B, C, D, E. The portion
	Amount:	shown here is the split appropriate for items A&B only. \$310,446.81
	Component Description:	Invoice is for transmitter down payment originally based on Attachment 21 items A, B, C, D, E. The portion shown here is the split appropriate for items A&B only. \$323,412.99

150 KVA		
	Component Description:	Invoice is for
		transmitter down
		payment originall
		based on
		Attachment 21
		items A, B, C, D,
		E. The portion
		shown here is the
		split appropriate
		for items D only.
		(Fractional cent
		rounded up to
		assure split cost
		equals total
		invoice.)
	Amount:	\$3,338.62
	Component Description:	Invoice is for
		transmitter down
		payment original
		based on
		Attachment 21
		items A, B, C, D,
		E. The portion
		shown here is the
		split appropriate
		for items D only.

UHF inside RF system		
including switching	Component Description:	Invoice is for transmitter down payment originally based on Attachment 21 items A, B, C, D, E. The portion shown here is the split appropriate for item C only.
	Amount:	\$20,112.63
	Component Description:	Invoice is for transmitter down payment originally based on Attachment 21 items A, B, C, D, E. The portion shown here is the split appropriate for item C only. \$20,952.66
UHF - Liquid Cooled Solid State Transmitter 50.6 kW		
	Component Description:	Invoice is for main transmitter down payment originally based on Attachment 2, which has since been superseded by Attachment 2A. See Statement 2.
	Amount:	\$430,923.86
Other Building Addition Size: 3200.0	Information not provided.	
Other Electrical Service: 100 linear feet of 4-inch conduit.	Information not provided.	
2" Rigid Conduit and Wiring (Cost per foot)	Information not provided.	

Transformer 3 phase/480v - 500 KVA	Information not provided.
Switchgear - industrial 800 amp	Information not provided.
Service entrance 3 phase /800 amp/208 volt	Information not provided.
15 Ton system	Information not provided.

Antennas

Cost Information

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Interim Antenna TUP-05-12- 60-1	\$374,144.11	\$11,099.11		\$11,099.11	
Interim antenna rental and installation - Cost will depend on antenna size and height and /or complexity of tower.	\$115,500.00	\$0.00	Antenna Rental Cost included in Tower Rent.	N/A	N/A
UHF - High Power Top Mount (200-1000 kW), One station antenna, horizontally polarized	\$247,000.00	\$0.00	Renting an existing but unused antenna.	N/A	N/A
Sweep test of existing antenna	\$6,730.00	\$6,185.00	Please see estimates in Attachment 34 (preliminary measurement) and Attachment 36 (final measurement).	\$6,185.00	N/A

Test Adapter	\$4,914.11	\$4,914.11	See Attachment 30 for quote. Also Includes shipping shown in invoice 237003, Attachment 33B.	\$4,914.11	Includes shipping.
Primary Antenna TFU-27ETT VP-R O6	\$323,090.00	\$228,388.00		\$109,385.10	
UHF - High Power Top Mount (200-1000 kW), One station antenna , elliptically or circularly polarized	\$289,500.00	\$196,795.00	See Attachment 13 Line 1 minus \$29,175 for non- reimbursable V-Pol contribution and \$500 for a portion of the Mounting Adapter change order. Please see Attachment 42 for more information.	\$88,782.75	N/A
Mounting Adapter	\$11,610.00	\$11,610.00	Please see the Statement in Attachment 42 for information regarding a Change Order impacting this cost category.	\$11,610.00	N/A
Sweep test of existing antenna	\$6,730.00	\$6,400.00	See Attachment 13 - Line item 24	\$2,880.00	N/A

Elbow complex, single channel, at antenna input, per 8 3/16. feedline (if needed)	\$15,250.00	\$13,583.00	See Attachment 13 Line Item 3	\$6,112.35	N/A
Auxiliary Antenna TFU- 24DSC-R O4	\$269,180.00	\$144,575.00		\$3,275.00	
Side mount brackets for high power antennas (if not included in antenna base cost)	\$23,150.00	\$16,425.00	See Attachment 16 Line Item 3. This is for the comparable Dielectric TFU- 16DSC-R O4 antenna, not the upgraded Dielectric TFU- 24DSC-R O4 antenna (Attachment 19) that we're installing.	N/A	N/A
UHF - Lower Power Side Mount, One station antenna 200-500 kW, elliptically or circularly polarized	\$227,000.00	\$115,725.00	See Attachment 16 Line Item 1. This is for the comparable Dielectric TFU- 16DSC-R O4 H-Pol antenna, not the upgraded (due to higher gain) Dielectric TFU- 24DSC-R O4 antenna (Attachment 19) that we're installing.	N/A	N/A

Sweep test of existing antenna	\$6,730.00	\$3,275.00	Auxiliary and Interim antenna were measured at the same time so measurement cost was split 50/50 between cost categories. See Attachment 38.	\$3,275.00	N/A
Elbow complex, single channel, at antenna input, per 6 1/8. feedline (if needed)	\$12,300.00	\$9,150.00	See Attachment 16 Line Item 4. This is for the comparable Dielectric TFU- 16DSC-R O4 antenna, not the upgraded Dielectric TFU- 24DSC-R O4 antenna (Attachment 19) that we're installing.	N/A	N/A
Sub-total	\$966,414.11	\$384,062.11	N/A	\$123,759.21	N/A
Total for all systems	\$5,849,724.11	\$4,699,388.83	N/A	\$1,434,613.48	N/A

Actual Information Description	File Name
Interim antenna rental and installation - Cost will depend on antenna size and height and/or complexity of tower.	Information not provided.

UHF - High Power Top Mount (200-1000 kW), One station antenna, horizontally polarized	Information not provided.	
Sweep test of existing		
antenna		
	Component Description:	Interim and Aux
		antenna and line
		were measured in
		the same trip so
		measurement cost
		was divided
		between cost
		categories. (Note:
		The company
		name includes an
		ampersand that
		Form won't
		accept.)
	Amount:	\$3,275.00
	Component Description:	See Attachment
		34 for quotation
	Amount:	\$2,910.00
Test Adapter		
	Component Description:	Test adapter for 7-
		inch line. Required
		to determine that
		WEDU antenna
		and transmission
		line are viable and
		do not need to be
		replaced.
	Amount:	\$4,914.11
UHF - High Power Top		
Mount (200-1000 kW), One	Component Description:	Primary Antenna
station antenna, elliptically		Minus V-Pol down
or circularly polarized		payment. See
		Attachment 13 for
		quote.

	Component Description: Amount:	Mounting Adapte Down Payment. See Exhibit 13 fo quote. \$11,610.00
Sweep test of existing antenna	Component Description:	Sweep Test dow payment. See Attachment 13 fo quote.
	Amount:	\$2,880.00
Elbow complex, single channel, at antenna input, per 8 3/16. feedline (if needed)	Component Description:	Elbow Complex down payment. See Attachment 13 for quote.
	Amount:	\$6,112.35
Side mount brackets for high power antennas (if not included in antenna base cost)	Information not provided.	
UHF - Lower Power Side Mount, One station antenna 200-500 kW, elliptically or circularly polarized	Information not provided.	

Component Description:	Interim and Aux antenna and line were measured in the same trip so measurement cost was divided between cost categories. (Note: The company name includes an
Amount:	name includes an ampersand that Form won't accept.) \$3,275.00
Information not provided.	
	Amount:

Transmission Line

Cost Information

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Interim Transmission Line	\$20,200.00	\$0.00		\$0.00	
Rigid Transmission Line - copper, 6 1/8"	\$20,200.00	\$0.00	Transmission Line Rent included in Tower Rent.	N/A	N/A
Primary Transmission Line	\$534,380.00	\$338,085.00		\$152,138.25	
Rigid Transmission Line - copper, 8 3 /16"	\$534,380.00	\$338,085.00	See Attachment 13, Line Item 4 and Attachment 39.	\$152,138.25	N/A
Auxiliary Transmission Line	\$347,000.00	\$338,000.00		\$0.00	
Rigid Transmission Line - copper, 8 3 /16"	\$347,000.00	\$338,000.00	Widelity Cost Catalog Price	N/A	N/A
Sub-total	\$901,580.00	\$676,085.00	N/A	\$152,138.25	N/A
Total for all systems	\$5,849,724.11	\$4,699,388.83	N/A	\$1,434,613.48	N/A

Actual Information	
Description	File Name

Rigid Transmission Line - copper, 6 1/8"	Information not provided.	
Rigid Transmission Line - copper, 8 3/16"	Component Description:	Primary Transmission Line. See Attachments 13 and 39 for quotes.
	Amount:	\$152,138.25
Rigid Transmission Line - copper, 8 3/16"	Information not provided.	

Tower Equipment and Rigging Costs

Cost Information

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cos Justificatio
Primary Tower GTOWER	\$667,200.00	\$649,500.00		\$0.00	
Tall Tower (greater than 500')	\$210,500.00	\$205,000.00	Cost Catalog Pricing.	N/A	N/A
Major tower reinforcement /modifications	\$421,000.00	\$409,500.00	Cost Catalog Pricing.	N/A	N/A
Tower mapping for an undocumented /poorly documented tower and preparation of documentation necessary for tower load study	\$26,300.00	\$25,600.00	Cost Catalog Pricing.	N/A	N/A
Tower Permit Packages	\$9,400.00	\$9,400.00	Generate construction drawings of tower, ground, and building for local permits. See Attachments 5 and 6.	N/A	N/A
Auxiliary Tower TOWER	\$368,000.00	\$157,500.00		\$34,416.57	

Rent	\$157,500.00	\$157,500.00	\$17,500 per month rental fee for existing tower, antenna, transmission line, and transmitter room. Based on presumed nine month construction period (May 2019 through Phase 7 transition in January, 2020).	\$34,416.57	N/A
Tall Tower (greater than 500')	\$210,500.00	\$0.00	No Rigging Necessary. Antenna and Line are existing.	N/A	N/A
Sub-total	\$1,035,200.00	\$807,000.00	N/A	\$34,416.57	N/A
Total for all systems	\$5,849,724.11	\$4,699,388.83	N/A	\$1,434,613.48	N/A

Actual Information Description	File Name
Tall Tower (greater than 500')	Information not provided.
Major tower reinforcement /modifications	Information not provided.
Tower mapping for an undocumented/poorly documented tower and preparation of documentation necessary for tower load study	Information not provided.

Rent		
Kont	Component Description:	June 2019 Ren
	Amount:	\$17,500.00
	Component Description:	May 2019 Rent
		(Partial Month)
	Amount:	\$16,916.57
Tall Tower (greater than 500')	Information not provided.	

Outside Professional Services

Cost Information

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cos Justificatic
Outside Professional Services	\$98,365.00	\$59,879.50		\$8,982.12	
RF Exposure Measurements	\$21,050.00	\$3,750.00	RF Exposure measurements to demonstrate RF fields are less than FCC limits. See Attachment 5.	N/A	N/A
ASR modification (prepare FCC Form 854)	\$2,105.00	\$167.00	See Attachment 5.	N/A	N/A
Environmental Assessment, if triggered by NEPA Section 106 review or for certain structures over 450 feet	\$10,520.00	\$1,250.00	See Attachment 5.	N/A	N/A
NEPA Section 106 environmental review, if needed	\$6,310.00	\$1,350.00	See Attachment 5.	N/A	N/A
Project management of the transition	\$39,500.00	\$37,500.00	Company lacks sufficient internal resources. See also Attachment 5.	\$2,132.12	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
Perform engineering study for new channel assignment and antenna development	\$7,360.00	\$5,000.00	See Attachment 5.	\$3,537.50	N/A
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	\$3,155.00	\$3,312.50	Additional engineering work and Construction Permit modification was required when initial site became unavailable. See Exhibits 20, 27, and 29.	\$3,312.50	Unexpect loss of main an interim si See Stateme 2.
RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, Construction Permit Application	\$2,105.00	\$2,050.00	Cost Catalog Pricing.	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

Prepare request for Special Temporary Authorization	\$2,050.00	\$1,500.00	N/A	N/A	N/A
Sub-total	\$98,365.00	\$59,879.50	N/A	\$8,982.12	N/A
Total for all systems	\$5,849,724.11	\$4,699,388.83	N/A	\$1,434,613.48	N/A

Actual Information Description	File Name	
RF Exposure Measurements	Information not provided.	
ASR modification (prepare FCC Form 854)	Information not provided.	
Environmental Assessment, if triggered by NEPA Section 106 review or for certain structures over 450 feet	Information not provided.	
NEPA Section 106 environmental review, if needed	Information not provided.	
Project management of the transition	Component Description: Amount:	Project Management. \$2,132.12
Address transition timing and coordination issues w/ other stations and wireless	Information not provided.	

Perform engineering study for new channel assignment	Component Description:	Study suitability of
and antenna development		WEDU antenna as
		primary. See Statement 2.
	Amount:	\$812.50
	Amount.	ψ012.00
	Component Description:	Evaluate ATC
		Riverview-1
	Amount:	antenna and site. \$937.50
	Amount.	4957.50
	Component Description:	Preliminary
		evaluation of
		WEDU site
	Amount:	suitability. \$725.00
	Anount.	ψ120.00
	Component Description:	Evaluate viability
		of existing
		Riverview-2 Site.
	Amount:	\$1,062.50
Prepare engineering section of FCC Form 2100 (main),		
Construction Permit	Component Description:	Prepare CP
Application		Engineering for Riverview-1 site.
	Amount:	\$1,387.50
	Component Description:	Complete
		Engineering for CP Mod back to
		Riverview-2 site.
	Amount:	\$800.00
	Component Description:	Preliminary
		· · · · · · · · · · · · · · · · ·
		Engineering for
		Engineering for CP at Riverview-2 site.

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), License to Cover Application	Information not provided.
Prepare request for Special Temporary Authorization	Information not provided.

Other Expenses

Cost Information

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Other Expenses	\$77,405.00	\$71,090.00		\$2,925.00	
Equipment Delivery and Handling Charges	\$24,925.00	\$24,925.00	See Attachments 2A and 21 (\$11,000 each) plus Attachment 43 (\$2,925).	\$2,925.00	N/A
Disposal Costs (for equipment and other waste, net of any salvage value)	\$30,000.00	\$30,000.00	Assorted disposal cost for equipment and other waste. For example, see Attachments 10 and 11.	N/A	N/A
MVPD Notification of Channel Change	\$1,000.00	\$1,000.00	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

DTV Medical Facility Notification	\$11,550.00	\$5,250.00	See Attachment 12.	N/A	N/A
Non-zoning permits	\$4,700.00	\$4,700.00	N/A	N/A	N/A
Local Zoning	\$4,700.00	\$4,700.00	N/A	N/A	N/A
Sub-total	\$77,405.00	\$71,090.00	N/A	\$2,925.00	N/A
Total for all systems	\$5,849,724.11	\$4,699,388.83	N/A	\$1,434,613.48	N/A

Actual Information Description	File Name	
Equipment Delivery and Handling Charges	Component Description: Amount:	Transport of Interim transmitter from storage to interim site. \$2,925.00
Disposal Costs (for equipment and other waste, net of any salvage value)	Information not provided.	
MVPD Notification of Channel Change	Information not provided.	
FCC Filing Fees - Special Temporary Authorization request	Information not provided.	
FCC Filing Fees - Form 2100 license to cover application	Information not provided.	
DTV Medical Facility Notification	Information not provided.	
Non-zoning permits	Information not provided.	
Local Zoning	Information not provided.	

Cost Information	Grand Total					
		Predetermined Cost Estimate	Estimated Cost	Actual Cost		
	Total for all systems	\$5,849,724.11	\$4,699,388.83	\$1,434,613.48		

Reimbursem	entestiatus	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.	
		 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. 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).
- 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.	Andrew J Siegel Assistant Secretary 06/07/2019

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 IMPRISIONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a) (1), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503), AND ANY FALSE AND/OR FRAUDULENT STATEMENTS COULD SUBJECT THIS ENTITY TO LIABILITY UNDER THE FALSE CLAIMS ACT (U.S. CODE, TITLE 31, SECTIONS 3729-3733).	
		 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).
- 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.

	The above-named entity acknowledges that overpayments or payments in error must be promptly refunded to the Commission. 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.	
an aut name	are, under penalty of perjury, that I am thorized representative of the above- d applicant for the Authorization(s) ied above.	Andrew J Siegel Assistant Secretary
		06/07/2019

Attachments