

Federal Communications Commission

(REFERENCE COPY - Not for submission)

FCC Form 399: Reimbursement Request

Facility	16817	Service: DTV	Call	WTVS	Channel: 20 (UHF)
ID:			Sign:		
File	000002	7891			
Number:					
FRN: 00	02770360	Date	04/21		
		Submitted:	/2020		

Applicant Name, Type, and Contact Information

Applicant Information

Applicant	Address	Phone	Email	Applicant Type
DETROIT EDUCATIONAL TELEVISION FOUNDATION Doing Business As: WTVS	John Mark RILEY BROADCASTCAST CENTER 1 CLOVER COURT WIXOM, MI 48393 United States	+1 (248) 305- 3788	jmark@dptv. org	Not-for- Profit

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
	John Mark VP Engineering Detroit Educational Television Foundation	John Mark 1 Clover Court Wixom, MI 48393 United States	+1 (248) 305- 3760	jmark@dptv. org

Broadcaster	Question	Response
Information and Transition Plan	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	3 stations Install and operate from a new side mount Broadband Antenna installed before implementation of Phase 3 due to WMYD early transition. Install new transmitter filters coax and antenna to operate on post transition assigned frequency of channel 20

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			
	Manufacturer and Type	Model	Visionary DT Dual HP25SDW		
		Year	1999		
		Туре	Inductive Output Tube		
		IOT Power Type	Two		
		Power Capacity	60 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	ULXTE-60		
		Transmitter Type	Solid State		
		Solid State Cooling	Liquid Cooled		
		Solid State Power capacity	38 kW		
		Justification for New Transmitter	Current Transmitter Manufacture no longer in business Parts unavailable SS transmitter lower cost than IOT See Attached		

Primary	Other Transmitter Costs				
Transmitter	Section	Question	Response		
	Electrical Service	Service Entrance (3 phases 800A 208V)	No		
		Switchgear (industrial 800 amp)	Yes		
		Transformer (480V)	No		
		Power	N/A		
		Rigid Conduit and Wiring	Yes		

	Size	2 inches
	Length	200.0 feet
	Other Electrical Service	Yes
	Description	Generator replacement Electrical installation for Transmitter
HVAC Service	Does the replacement transmitter require HVAC Service?	Yes
	Туре	Cooling Only
	Size	10 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	1500.0 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 Name

tter	Name	Description
	Internal Transmission Line	Internal Transmission Line
	10 ton Heating and cooling unit	antenna combiner room heating and cooling
	HVAC ice shield	protection for external portion of HVAC
	electrical Sub panel	power distribution for new combiner room

Antennas Section		Question	Response
Antenna Rela	ated 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	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)	600.0 kW	

	Manufacturer	
	Model	TFU- 18GBH-R04
	Year	1999

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 Manufacturer and Types	Class	Full Power	
		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)	345.0 kW	
		Manufacturer		
			1	

Model	TFU- 24GTH-VP R 06
Year	2019
Justification for New Antenna	Current antenna does not support new channel Vertical upgrade will be a separate line item or invoice

Primary Other Antenna Costs

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?	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
AntennaOther Antenna Cost Not ListedInformation not provided.

Interim	New Antenna Costs			
Antenna	Section	Question	Response	
	New Antenna Description	Use	Interim	
		Description of Use	N/A	
		Change Type	Purchase New	
		Ownership	Leased	
		Owner	American Tower	
		Is antenna shared?	Yes	
		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	Side Mount	
		Antenna position in stack	Not in Stack	
		Polarization	Elliptical	
		Туре	Broadband Slot	
		Number of Stations Supported	3	
		Number of Panels/Bays	24	
		Lower Limit	470.00 MHz	
		Upper Limit	698.00 MHz	
		Design power capacity in use	100.0 %	
		Other Antenna Type	N/A	
		ERP: (Effective Radiated Power)	60.0 kW	
		Manufacturer		
		Model	TFU-24WB /VP	

Year	2018
Justification for New Antenna	Candelabra will need extensive upgrades for repack of 3 stations 1 in phase 3 two in phase 8

Interim Other Antenna Costs

Antenna

Section	Question	Response
Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	Yes
	Туре	New
	Number of channels supported	3
	Frequencies of channels supported	RF channe
	Frequency	N/A
	Do you need a combiner output splitter /switcher for dual feed lines?	No
Elbow Complex	Do you require the separate purchase of the Elbow Complex?	Yes
	Broadband or Single Channel?	В
	Feed Line Size	7 3/16 inches
Side Mount Brackets	Do you require the separate purchase of side mount brackets for an antenna?	Yes
Pattern Scatter Analysis	Do you require separate purchase of pattern scatter analysis for a side mount high or medium power antenna?	No
Sweep Test	Do you require the sweep testing of transmission line and antenna?	Yes

Enter a list of RF channel numbers.

RF Channel Number		
21		
43		
44		

Interim

Other Antenna Cost Not Listed

Antenna

Name	Description
Ice Shield for new Side-Mount Antenna Interim	Ice shield to protect interim antenna
combiner installation	installation of combiner by manufacture

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

ransmissio	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 Manufacture Type		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	1200 feet per run

Primary Existing Transmission Line

Primary	New Transmission Line			
Transmissio	n 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	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	1200 feet per run	
		Justification for New Transmission Line	Cannel reassignment is forbidden channel on current coax	

Other Transmission Line Expenses Not Listed Transmission

Interim	New Transmission Line			
Transmissio	n Line Section	Question	Response	
	New Transmission Line	Use	Interim	
	Costs	Description of Use	N/A	
		Change Type	Purchase New	
		Туре	Rigid	
		Diameter	7 3/16 inches	
		Segment Length	Broadband	
		Other Segment Length		
		Number of parallel runs	1	
		Length	995 feet per run	
		Justification for New Transmission Line	no current interim coax cost for coax, 3 elbows and nitrogen generator for pressurization of line	

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

Existing Tower

Primary	Existing 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?	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	Yes	
		Is tower documented for structural analysis?	No	
		Is tower compliant with Rev G?	Yes	
	Existing Tower Structure Registration	Do you have a tower registration number?	Yes	
		ASR Number	1003429	
	Coordinates (NAD83 (Latitude (NAD83)	42° 26' 52.5" N-	
	North American Datum of 1983))	Longitude (NAD83)	083° 10' 23.1" W-	
		Overall Structure Height	1086.93 feet	
		Support Structure Height	1012.13 feet	
		Ground Elevation Above Mean Sea Level (AMSL)	662.07 feet	

St	tructure Type	GTOWER - Guyed Structure Used for Communication Purposes
Тс	ower Owner	American Tower, LLC
Da	ate Constructed	06/11/1999

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
72123	WWJ-TV	DTV
74211	WMYD	DTV
6056	WRCJ-FM	FM

Other Types of Users

Users	
WHNE-LD	
W292DK	
W224CC	
W268CN	
W232CA	
T-Mobil	

Primary	Tower Modification Costs		
Tower	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:	Minor Reinforcements needed

Tower Rigging Costs Primary Tower

Section	Question	Response
Tower Rigging Costs	Complex Tower	Candelabra
Helicopter Services Required	Are helicopter services required?	Yes

Other Tower Expenses Not Listed

Primary Tower Information not provided.

Outside Professional	Section	Question	Response
	Services Costs Outside Project Management Services	Do you require outside project management services?	Yes
		Number of Hours	690
		Explanation	Project management fees charged by tower owner
	Outside RF consulting Engineering Services	Perform engineering study for new channel assignment and antenna development	Yes
		Prepare engineering section of Form FCC Construction Permit Application	Yes
		For Auxiliary Facility	No
		For Main Facility	Yes
		Prepare engineering section of Form FCC License to Cover Application	Yes
		For Auxiliary Facility	No
		For Main Facility	Yes
		Prepare request for Special Temporary Authority	Yes
		Quantity	2
		Do you have Distributed Transmission System engineering services?	N/A
		Critical Facility	N/A
		Terrain-Shielded Facility	N/A
	Attorney and Other Outside Consulting	Prepare and file Form FCC Construction Permit Application	Yes
	Services	For Auxiliary Facility	No
		For Main Facility	Yes
		Prepare and file Form FCC License to Cover Application	Yes

	For Auxiliary Facility	No
	For Main Facility	Yes
	Prepare request for Special Temporary Authority	Yes
	Quantity	2
	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	Yes
	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	Yes
	Additional Field Engineering Service	No
	Number of Days	N/A
	Justification	N/A

Outside Other Professional Services Expenses Not Listed Professional Services Costs Description

ofessional	Services Costs	Description
	Site Coordination meeting	Coordination meeting of tenants tower owner and all contractors and vendors involved with the deliveries and construction. Travel and Logistical expenses incurred
	RF System Test	RF System Test

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	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?	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 Not Listed

Other Expenses

Name	Description
tower owner permits	Permits for combiner room electrical and construction permits
Employee time	Employee's time spent working on paperwork accounting, transmitter work, and supervision
Interim antenna connection	Coax, switches, forward/reverse power meters to interconnect with interim antenna
Interim antenna tower lease	Tower rental space for interim antenna
Lift equipment rental	fork lift and/or crane for lifting heavy equipment
Site Security	Due to high value equipment stored outside additional security measures needed

Transmitters

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 Cc Justificat
Primary Transmitter ULXTE-60	\$1,714,194.27	\$1,131,128.20	Justification	\$1,077,190.26	Justinuat
electrical Sub panel	\$1,700.00	\$1,700.00	American Tower Charge	\$833.34	Х
HVAC ice shield	\$1,500.00	\$1,500.00	American tower charge	\$0.00	N/A
10 ton Heating and cooling unit	\$19,219.00	\$19,219.00	see Justifying Quote WTVS Kropf Mechanical Service Company	\$19,219.00	N/A
Internal Transmission Line	\$576.00	\$576.00	Please see Primary Transmitter - Internal Transmission Line Revision Justification Cover Letter	N/A	N/A
Other Building Addition Size: 1500.0	\$8,399.27	\$8,399.27	see Estimated Cost Justification WTVS-110-1st Primary Transmitter - Building Addition, 1,500 sq. ft. v0	\$6,524.42	N/A
UHF - Liquid Cooled Solid State Transmitter 35 - 50 kW	\$1,473,000.00	\$948,652.93	GatesAir Quote Q-80362	\$940,679.99	N/A

Total for all systems	\$4,132,284.46	\$3,264,991.02	N/A	\$2,366,742.62	N/A
Sub-total	\$1,714,194.27	\$1,131,128.20	N/A	\$1,077,190.26	N/A
10 Ton system	\$38,900.00	\$15,864.00	Replace 5 ton unit with 10 ton unit due to increased heat load of transmitter Available wall space will not support 2 5 ton units	\$0.00	N/A
Other Electrical Service: Generator replacement Electrical installation for Transmitter	\$127,500.00	\$127,500.00	Electrical costs for 230KW generator and installation replacement due to inadequate power for new transmitter also transmitter electrical installation and decommissioning cost	\$109,308.67	N/A
Switchgear - industrial 800 amp	\$38,200.00	\$6,050.00	American tower charge	\$0.00	N/A
2" Rigid Conduit and Wiring (Cost per foot)	\$5,200.00	\$1,667.00	American tower charge	\$624.84	N/A

Components

Actual Information	
Description	File Name

electrical Sub panel	Component Description:	WTVS-110-1st Primary Transmitter
	Amount:	- Electrical Sub Panel \$833.34
HVAC ice shield	Information not provided.	
10 ton Heating and cooling unit	Component Description: Amount:	Completed the installation of one \$19,219.00
Internal Transmission Line	Information not provided.	
Other Building Addition Size: 1500.0	Component Description:	CAPITAL CONTRIBUTION - DETROIT - OAK PARK
	Amount:	\$2,730.82
	Component Description: Amount:	1/4" MIP X CLOSE \$43.60
	Component Description:	WTVS-110-1st Primary Transmitter - Building Addition, 1,500 sq. ft.
	Amount:	\$2,500.00
	Component Description:	25% downpayment on component
	Amount:	\$1,250.00
UHF - Liquid Cooled Solid State Transmitter 35 - 50	Component Description:	RIGID
kW	Component Description:	TRANSMISSION LINE - COPPER
	Amount:	\$618.75

Component Description: Amount:	A. Transmitter \$316,217.64
Component Description: Amount:	CONTRACT AMOUNT \$14,350.71
Component Description: Amount:	ULXTE-60 Transmitter \$185,777.41
Component Description: Amount:	2nd PROGRESS INVOICE FOR THE TRANSMITTER REPLACEMENT PROJECT \$7,392.79
Component Description: Amount:	Cushion Clamp Strut Mount \$26.60
Component Description: Amount:	CHANNEL JOINER FITTINGS \$77.16
Component Description: Amount:	Cushion Clamp Strut Mount \$79.80
Component Description: Amount:	STRUT CHANNEL \$727.92
Component Description: Amount:	Transmitter \$80,602.03

	Component Description:	BPME6-UH, BPM 6-1/8" Flanged
	Amount:	\$7,679.10
	Component Description:	OTHER
	Amount:	\$40.69
	Component Description:	ULXTE-60
		Transmitter
	Amount:	\$316,217.64
	Component Description:	3rd progress invoid
		for the transmitter
		replacement
	Amount:	\$10,871.75
2" Rigid Conduit and Wiring (Cost per foot)		
wining (Cost per loot)	Component Description:	25% deposit for th
		component
	Amount:	\$208.34
	Component Description:	Broadcast Repack
	Amount:	\$416.50
Switchgear - industrial 800 amp	Information not provided.	

Other Electrical Service: Generator replacement Electrical installation for Transmitter	Component Description: Amount:	Remove and replace (1) 150kw generator \$81,669.00
	Component Description:	Remove and replace (1) 150 KW
	Amount:	generator \$27,223.00
	Component Description:	25% deposit on
	component Description.	component
	Amount:	\$416.67
10 Ton system	Information not provided.	

Antennas

Cost Information

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

	Predetermined	Estimated	Estimated Cost		Actual Cost
Description Interim Antenna TFU-24WB /VP	Cost Estimate \$268,038.89	Cost \$253,463.22	Justification	Actual Cost \$243,771.00	Justification
combiner installation	\$15,962.33	\$15,962.33	see Estimated Cost Justification WTVS-280- Interim Antenna - Combiner Installation v0	\$15,962.33	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
New combiner, cost per channel (without antenna)	\$84,200.00	\$81,954.33	see Estimated Cost Justification WTVS-280- Interim Antenna - New Combiner v0	\$81,954.33	N/A

Ice Shield for new Side- Mount Antenna Interim	\$744.81	\$744.81	Please see American Towers LLC Project Cost	\$744.81	N/A
UHF - High Power, Side Mount, basic slot antenna, 24 bay,, 60 - 65 kW input, elliptically or circularly polarized	\$120,401.75	\$120,401.75	Estimation American Tower cost estimate and PO #13-1652	\$136,516.20	The actual amount reimbursed for invoice 460199507 is \$15,000 (not \$97,901.75)
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	\$3,333.33	Х
Elbow complex, broadband, at antenna input, per 7 3/16. feedline (if needed)	\$16,850.00	\$6,000.00	N/A	\$5,260.00	N/A
Primary Antenna TFU- 24GTH-VP- R 06	\$308,530.00	\$293,100.00		\$203,123.24	

	\$4,132,284.46	\$3,264,991.02	N/A	\$2,366,742.62	N/A
Sub-total	\$576,568.89	\$546,563.22	N/A	\$446,894.24	N/A
Elbow complex, single channel, at antenna input, per 6 1/8. feedline (if needed)	\$12,300.00	\$11,700.00	N/A	\$10,773.00	N/A
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	\$5,760.00	N/A
Power Top Mount (200-1000 kW), One station antenna , elliptically or circularly polarized	\$289,500.00	\$275,000.00	N/A	\$186,590.24	N/A

Components

Actual Information	
Description	File Name

combiner installation		
	Component Description:	WTVS-280-Interim Antenna - Combiner Installation
	Amount:	\$9,712.50
	Component Description:	25% downpayment on component
	Amount:	\$2,083.33
	Component Description:	WTVS-280-Interim Antenna - Combiner Installation
	Amount:	\$4,166.50
Side mount brackets for high power antennas (if not included in antenna base cost)	Information not provided.	
New combiner, cost per channel (without antenna)	Component Description:	WTVS-280-Interim Antenna - New
	Amount:	Combiner \$24,454.16
	Component Description:	PARTIAL PAYMENT FOR NEW COMBINER
	Amount:	N/A
	Component Description:	25% downpayment
	Amount:	on component \$19,166.67
	Component Description:	WTVS-280-Interim Antenna - New

WTVS-280-Interim Antenna - Ice Shield \$744.81
WTVS-280-Interim Antenna - UHF High Power Side Mount, E-POL \$16,114.45
PARTIAL PAYMENT ON UHF HIGH POWER SIDE MOUNT ANTENNA N/A
WTVS-280-Interim Antenna - UHF High Power Side Mount, E-POL \$22,500.00
CAPITAL CONTRIBUTION - DETROIT - OAK PARK T1 MI / 282678 / ASSET#282678- BT1 / OAA711327 / FID 1003429 / WTVS Channel 20 Phase 8 / MILESTONE 1 / BROADCAST REPACK / TAX ID: 65-0723837 \$97,901.75

Sweep test of existing antenna	Component Description:	WTVS-280-Interim Antenna - Sweep
	Amount:	Test \$833.16
	Component Description:	WTVS-280-Interim Antenna - Sweep
	Amount:	Test \$833.33
	Component Description:	WTVS-280-Interim Antenna - Sweep Test
	Amount:	\$1,666.84
Elbow complex, broadband, at antenna input, per 7 3/16. feedline (if needed)	Component Description:	WTVS-280-Interim Antenna - Elbow Complex,
	Amount:	Broadband, 7 3/16" \$2,760.00
	Component Description:	WTVS-280-Interim Antenna - Elbow Complex,
	Amount:	Broadband, 7 3/16" \$1,666.67
	Component Description:	25% downpayment
	Amount:	for compenent \$833.33

	-	
UHF - High Power Top Mount (200-1000 kW), One station antenna , elliptically or circularly polarized	Component Description: Amount:	UHF - High Power Top Mount \$93,295.12
	Component Description: Amount:	UHF - High Power Top Mount \$93,295.12
Sweep test of existing antenna	Component Description:	WTVS-210-Primary Antenna - Sweep Test
	Amount:	\$2,046.67
	Component Description:	25% downpayment on component
	Amount:	\$833.33
	Component Description:	WTVS-210-Primary Antenna - Sweep Test
	Amount:	\$2,880.00
Elbow complex, single channel, at antenna input, per 6 1/8. feedline (if needed)	Component Description:	WTVS-210-Primary Antenna - Elbow
	Amount:	Complex, 6 1/8" \$5,386.50
	Component Description:	WTVS-210-Primary Antenna - Elbow Complex, 6 1/8"
	Amount:	\$5,386.50

Transmission Line

Cost Information

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

Description Interim Transmission Line	Predetermined Cost Estimate \$331,335.00	Estimated Cost \$123,668.30	Estimated Cost Justification	Actual Cost \$123,668.30	Actual Cost Justification
Rigid Transmission Line - copper, 7 3 /16" broadband	\$331,335.00	\$123,668.30	see Estimated Cost Justification WTVS-380- Interim Transmission Line - Rigid, Copper, 7 3_16 v0	\$123,668.30	N/A
Primary Transmission Line	\$242,400.00	\$230,400.00		\$176,171.62	
Rigid Transmission Line - copper, 6 1/8"	\$242,400.00	\$230,400.00	N/A	\$176,171.62	N/A
Sub-total	\$573,735.00	\$354,068.30	N/A	\$299,839.92	N/A
Total for all systems	\$4,132,284.46	\$3,264,991.02	N/A	\$2,366,742.62	N/A

Components

Actual Information	
Description	File Name

Rigid Transmission Line - copper, 7 3/16" broadband	Component Description:	WTVS-380-Interim
		Transmission Line - Rigid, Copper, 7 3 /16"
	Amount:	\$44,913.05
	Component Description:	WTVS-380-Interim Transmission Line - Rigid, Copper, 7 3 /16"
	Amount:	\$52,503.50
	Component Description:	PARTIAL PAYMENT FOR RIGID TRANSMISSION LINE
	Amount:	\$26,251.75
Rigid Transmission Line -		
copper, 6 1/8"	Component Description:	WTVS-310-Primary Transmission Line - Rigid, Copper, 6 1 /8"
	Amount:	\$88,085.81
	Component Description:	WTVS-310-Primary Transmission Line -
		Rigid, Copper, 6 1 /8"
	Amount:	\$88,085.81

Tower Equipment and Rigging Costs

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
Primary Tower GTOWER	\$838,027.50	\$807,727.50		\$310,959.56	
Tower Helicopter Lift	\$232,727.50	\$232,727.50	Please see attached Dielectric Change Order 169750 and WTVS PO 13-1727	N/A	N/A
Tower mapping for an undocumented /poorly documented tower and preparation of documentation necessary for tower load study	\$26,300.00	\$25,000.00	N/A	\$14,600.00	Please remove \$14,600 entry for Tower Mapping & Structural Engineering as FCC did not like two invoices attached in one request.
Minor tower reinforcement /modifications	\$158,000.00	\$150,000.00	N/A	\$4,166.66	N/A
Complex Tower (includes, for example, those with candelabras and/or stacked antennas)	\$421,000.00	\$400,000.00	N/A	\$292,192.90	N/A
Sub-total	\$838,027.50	\$807,727.50	N/A	\$310,959.56	N/A

Total for all	\$4,132,284.46	\$3,264,991.02	N/A	\$2,366,742.62	N/A
systems					

Components

Actual Information Description	File Name	
Tower Helicopter Lift	Information not provided.	
Tower mapping for an undocumented/poorly documented tower and preparation of documentation necessary for tower load study	Component Description: Amount:	Broadcast structural \$6,333.00
	Component Description:	Broadcast Tower Mapping Detroit OakPark Broadcast Repack Line 2
	Amount:	\$8,267.00
	Component Description:	TOWER MAPPING & STRUCTURAL ENGINEERING
	Amount:	N/A

Component Description:	WTVS-410- Existing Primary Tower - Minor Tower Reinforcement
	Tower - Minor Tower
	Tower
	Reinforcement
	Kennoreenterit
	/Modifications
Amount:	\$1,166.66
Component Description:	25% downpayment
	on component
Amount:	\$1,000.00
Component Description:	WTVS-410-
	Existing Primary
	Tower - Minor
	Tower
	Reinforcement
	/Modifications
Amount:	\$2,000.00
	Component Description: Amount: Component Description:

Complex Tower (includes,		
for example, those with	Component Description:	WTVS-410-
candelabras and/or stacked		Existing Primary
antennas)		Tower - Tower
		Rigging, Complex
		Tower
	Amount:	\$28,816.66
	Component Description:	WTVS-410-
	Component Description.	Existing Primary
		Tower - Tower
		Rigging, Complex
		Tower
	Amount:	\$106,363.12
		÷,
	Component Description:	25% downpayment
		on component
	Amount:	\$13,750.00
	Component Description:	Tower Permit
		Drawing Package
	Amount:	\$9,400.00
	Component Description:	WTVS-410-
		Existing Primary
		Tower - Tower
		Rigging, Complex
		Tower
	Amount:	\$106,363.12
	Component Description:	WTVS-410-
		Existing Primary
		Tower - Tower
		Rigging, Complex
		Tower

Outside Professional Services

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 Justificatior
Outside Professional Services	\$182,430.00	\$178,725.00		\$101,284.63	
Attorney Fees - Prepare and File request for Special Temporary Authorization	\$7,360.00	\$7,000.00	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
Address transition timing and coordination issues w/ other stations and wireless	\$2,630.00	\$2,800.00	see Estimated Cost Justfication WTVS-590- Transition Timing and Coordination v0	\$2,800.00	N/A
Prepare and or review reimbursement form	\$2,630.00	\$2,500.00	N/A	\$1,707.75	N/A
RF System Test	\$5,000.00	\$5,000.00	Please see American Towers LLC Project Cost Estimation	\$3,333.33	N/A
RF Exposure Measurements	\$21,050.00	\$20,000.00	N/A	\$2,500.00	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	\$300.00	N/A
ASR modification (prepare FCC Form 854)	\$2,105.00	\$2,000.00	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	\$407.50	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 - Prepare and File FCC Form 2100 (main), Construction Permit Application	\$5,260.00	\$5,000.00	N/A	\$90.00	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

Prepare request for Special Temporary Authorization	\$4,100.00	\$3,000.00	N/A	\$1,050.00	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
Project management of the transition	\$109,020.00	\$109,175.00	Quote Widelity Project Management and ATC PO 13-1647 permit filing services	\$86,596.05	N/A
Site Coordination meeting	\$2,500.00	\$2,500.00	N/A	\$2,500.00	N/A
Sub-total	\$182,430.00	\$178,725.00	N/A	\$101,284.63	N/A
Total for all systems	\$4,132,284.46	\$3,264,991.02	N/A	\$2,366,742.62	N/A

Components

Actual Information Description	File Name
Attorney Fees - Prepare and File request for Special Temporary Authorization	Information not provided.
Perform engineering study for new channel assignment and antenna development	Information not provided.

Address transition timing and coordination issues w/ other stations and wireless	Component Description: Amount:	Legal Services \$300.00
	Component Description: Amount:	WTVS-590- Transition Timing and Coordination \$2,500.00
Prepare and or review reimbursement form	Component Description: Amount:	Legal services \$90.00
	Component Description: Amount:	Legal services to prepare and review reimbursement form in addition to review & filing reports \$1,617.75
RF System Test	Component Description: Amount:	WTVS-590-RF System Test \$3,333.33
RF Exposure Measurements	Component Description: Amount:	WTVS-580-Field Engineering Service - Rf Exposure Measurements \$1,666.67
	Component Description:	25% down payment for component \$833.33
		¥000.00

FAA consultant, including cost of preparing FAA Form 7460 (Notice of Proposed Construction), if needed for height increase	Component Description: Amount:	FCC repack Review of WTVS 399 \$75.00
	Component Description: Amount:	FCC repack: Analysis of WTVS impact \$225.00
ASR modification (prepare FCC Form 854)	Information not provided.	
Attorney Fees - Negotiation of lease and other matters for shared locations	Component Description: Amount:	Television Repacking Services-WTVS \$90.00
	Component Description: Amount:	Invoice for legal services \$90.00
	Component Description:	Television Repacking Services - WTVS
		\$90.00
	Component Description: Amount:	Television Repacking Services - WTVS \$60.00
	Component Description:	Legal Services - Television Repacking Services - WTVS
	Amount:	\$77.50

Attorney Fees -Prepare and File FCC Form 2100 (main), License to Cover Application	Information not provided.	
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	Component Description: Amount:	Television Repacking Services \$90.00
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	Information not provided.	
Prepare request for Special Temporary Authorization	Component Description: Amount:	Preparation of STA Application for Operation \$1,050.00
Prepare engineering section of FCC Form 2100 (main), License to Cover Application	Information not provided.	
Project management of the transition	Component Description: Amount:	Project Management \$3,779.45
	Component Description: Amount:	Project Management \$8,134.35
	Component Description: Amount:	Project Management \$2,411.75
	Component Description: Amount:	project management \$1,152.50

Component Description: Amount:	Project Management \$4,210.05
Component Description: Amount:	project management \$4,293.90
Component Description: Amount:	Project management \$3,287.90
Component Description: Amount:	Project Management \$4,221.70
Component Description: Amount:	Project Management \$2,962.90
Component Description: Amount:	Project Management \$2,802.70
Component Description: Amount:	WTVS-510-Project Management \$1,250.00
Component Description: Amount:	PO Line 1 - NTP Billable - Project Mgmt \$9,480.00
Component Description: Amount:	Project Management \$4,170.20

Component Description: Amount:	CONSULTING WORK WITH STAFF TO CREATE A REPACK FACT SHEET. \$450.00
Component Description: Amount:	Project Management \$2,590.10
Component Description: Amount:	Project Management \$5,909.75
Component Description: Amount:	WTVS-510-Project Management \$2,500.00
Component Description: Amount:	Project Management \$2,591.50
Component Description: Amount:	Project Management \$4,064.85
Component Description: Amount:	Project Management \$4,760.70
Component Description: Amount:	Please deny this component N/A

	Component Description:	25% downpayment for work being done by American
	Amount:	Tower \$1,250.00
	Component Description:	Project Management
	Amount:	\$3,642.90
	Component Description:	Project
	Amount:	management \$3,512.30
	Component Description:	Project
	Amount:	Management \$3,166.55
Site Coordination meeting		
	Component Description:	WTVS-590-Site Coordination Meeting
	Amount:	\$625.00
	Component Description:	25% downpaymaent for
	Amount:	this component \$625.00
		WTVS-590-Site
	Component Description:	Coordination

Other Expenses

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
Other Expenses	\$247,328.80	\$246,778.80		\$130,574.01	
Site Security	\$5,000.00	\$5,000.00	N/A	N/A	N/A
Lift equipment rental	\$10,000.00	\$10,000.00	N/A	N/A	N/A
Equipment Storage	\$8,000.00	\$8,000.00	Outdoor covered storage for equipment and parts	\$2,880.00	N/A
Disposal Costs (for equipment and other waste, net of any salvage value)	\$25,000.00	\$25,000.00	N/A	N/A	N/A
Local Zoning	\$10,000.00	\$10,000.00	Permits and inspections	N/A	N/A
Interim antenna tower lease	\$65,148.39	\$65,148.39	American Tower cost estimate; DPTV WTVS-610- Interim Antenna Tower Lease Budget Increase Justification	\$57,600.00	N/A

Interim antenna connection	\$29,799.31	\$29,799.31	Please see Estimated Cost Justification WTVS-610- Interim Antenna Connection v0	\$29,799.31	N/A
Employee time	\$75,081.10	\$75,081.10	See Attachment	\$34,544.70	Please remove this component. It was resubmitted under outside professional services for repack
tower owner permits	\$750.00	\$750.00	N/A	\$750.00	N/A
MVPD Notification of Channel Change	\$2,000.00	\$2,000.00	N/A	\$1,250.00	N/A
Develop and air announcement of upcoming channel change	\$5,000.00	\$5,000.00	N/A	N/A	N/A
DTV Medical Facility Notification	\$11,550.00	\$11,000.00	N/A	\$3,750.00	N/A
Sub-total	\$247,328.80	\$246,778.80	N/A	\$130,574.01	N/A
Total for all systems	\$4,132,284.46	\$3,264,991.02	N/A	\$2,366,742.62	N/A

Components

Actual Information
Description File Name

Site Security	Information not provided.		
Lift equipment rental	Information not provided.		
Equipment Storage	Component Description: Amount:	WTVS-610- Equipment Storage \$1,440.00	
	Component Description: Amount:	WTVS-610- Equipment Storage \$1,440.00	
Disposal Costs (for equipment and other waste, net of any salvage value)	Information not provided.		
Local Zoning	Information not provided.		
Interim antenna tower lease	Component Description: Amount:	WTVS-610-Interim Antenna Tower Lease \$14,400.00	
	Component Description: Amount:	25% downpayment on this component \$14,400.00	
	Component Description: Amount:	WTVS-610-Interim Antenna Tower Lease \$28,800.00	
Interim antenna connection	Component Description:	18-8 stainless steel hex head	
		screw	

Component Description: Amount:	50 Ohm 2 Way N Power Divider from 500 MHz to 1,000 MHz rated at 10 watts \$151.66
Component Description: Amount:	#2 Acid brush 1/2" x 6" \$105.00
Component Description: Amount:	50 Ohm 2 Way N Power Divider From 500 MHz to 1,000 MHz Rated at 10 watts \$583.04
Component Description: Amount:	Hoist block and tackle \$58.29
Component Description: Amount:	N Male Right Angle to N Male Right Angle Cable Using LMR-400 Coax and Times Connectors \$875.12
Component Description: Amount:	Interim antenna connection \$315.53
Component Description: Amount:	Hot-water hose, medium-pressure \$111.66

Component Description: Amount:	Clevis Hanger 1 1 /4 IN. 215LB Max Load \$66.73
Component Description: Amount:	Insulator Conductor Adapter 4 1/16" Thin-Stand \$336.84
Component Description: Amount:	Switch WR1500 H Plane 115 VAC 60000 SER \$20,095.80
Component Description: Amount:	BPME4M-UH BPME 4-1/16" Flanged \$7,032.75

Employee time		
	Component Description:	Project
	Amount:	Management \$5,558.54
	Anount.	ψ0,000.04
	Component Description:	Employee Time
	Amount:	\$5,822.18
	Component Description:	review and submit
		form 399
	Amount:	\$18,267.01
	Component Description:	Project
		Management
	Amount:	\$4,896.97
	Component Description:	this component
	Amount:	should be removed \$450.00
tower owner permits		
	Component Description: Amount:	Building permit \$750.00
MVPD Notification of Channel Change		
Charmer Charige	Component Description:	WTVS-610-MVPD
	Amount:	Notification \$1,250.00
	Anount.	φτ, ∠ ΰΟ.ΟΟ
Develop and air announcement of upcoming channel change	Information not provided.	
DTV Medical Facility Notification		
	Component Description: Amount:	Medical Notification \$3,750.00

Cost Information	Grand Total			
		Predetermined Cost Estimate	Estimated Cost	Actual Cost
	Total for all systems	\$4,132,284.46	\$3,264,991.02	\$2,366,742.62

Reimbursem	enrestanus	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.	William Carignan <i>Controller</i> 04/21/2020

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.

8.	The above-named entity acknowledges that overpayments or payments in error must be promptly refunded to the Commission.	
9.	The above-named entity certifies that it is in full compliance with all statutes, rules, regulations and governmental requirements for which compliance is a prerequisite for obtaining the payments herein requested.	
an au name	are, under penalty of perjury, that I am thorized representative of the above- d applicant for the Authorization(s) ried above.	William Carignan Controller 04/21/2020

Attachments