

(REFERENCE COPY - Not for submission)

FCC Form 399: Reimbursement Request

Facility 16817 Service: DTV Call WTVS Channel: 20 (UHF)

02/18

ID:

Sign:

File **0000027891**

Number:

FRN: **0002770360** Date

Submitted: /2020

Applicant Information

Applicant Name, Type, and Contact 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 Contact Information

Preparer Contact Name and 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 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	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

s 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	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	Visionary DT Dual HP25SDW
	Year	1999
	Туре	Inductive Output Tube
	IOT Power Type	Two
	Power Capacity	60 kW

Primary Transmitter

New Transmitter Costs

Section	Question	Response
New Transmitter	Use	Primary (Main)
	Change Type	Purchase New
	Is this a request for upgraded equipment?	Yes
	Manufacturer	
	Model	ULXTE-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 Transmitter

Other Transmitter Costs

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 Transmitter

Other Transmitter Cost Not Listed

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

Antennas

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

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

New Antenna Costs

Section	Question	Response
New Antenna Description	Use	Primary (Main)
	Description of Use	N/A
	Change Type	Purchase New
	Is this a request for upgraded equipment?	Yes
	Ownership	Owned
	Owner	N/A
	Is antenna shared?	No
	Is antenna directional?	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)	345.0 kW
	Manufacturer	

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 on invoice

Other Antenna Costs

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

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	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	Class	Full Power
Manufacturer and Type	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	
Luctification for New Antonna	
Justification for New Antenna Candelab will need extensive upgrades for repack of 3 stations 1 in phase 3 two in phase 8	

Interim Antenna

Other Antenna Costs

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 channel
	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 Antenna

Other Antenna Cost Not Listed

Name	Description
combiner installation	installation of combiner by manufacture

Transmission ^{Seffien}	Question	Response
Transmission Line Related Expenses	Do you have transmission line related expenses?	Yes

Primary Transmission Line

Existing Transmission Line

n 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 Line Manufacturer and Type	Manufacturer	
	Туре	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 Transmission

New Transmission Line

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	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

Primary
Other Transmission Line Expenses Not Listed
Transmission Line tion not provided.

Interim

New Transmission Line

Transmissio	n Line Section	Question	Response
New Transmission Line Costs		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 loine tion 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

Existing Tower Description	Type of change Tower Use Description of Use Ownership	Modify Existing Primary (Main) N/A
Description	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	Do you have a tower registration number?	Yes
Structure Registration	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

Structure Type	GTOWER - Guyed Structure Used for Communication Purposes
Tower Owner	American Tower, LLC
Date 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
6056	WRCJ-FM	FM
72123	WWJ-TV	DTV
74211	WMYD	DTV

Other Types of Users

Users
WHNE-LD
W292DK
W224CC
W268CN
W232CA
T-Mobil

Primary Tower

Tower Modification Costs

Section Question	Response
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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

Primary Tower

Tower Rigging Costs

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

Primary Tower

Other Tower Expenses Not Listed

Information not provided.

Outside Professional

Section	Question	Response
al 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 Services	Prepare and file Form FCC Construction Permit Application	Yes
	For Auxiliary Facility	No
	For Main Facility	Yes
	Prepare and file Form FCC License to Cover Application	Yes
		1

	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 Professional

Other Professional Services Expenses Not Listed

al 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

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	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

Other Expenses Not Listed

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

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 Co Justificati
Primary Transmitter ULXTE-60	\$1,710,219.00	\$1,127,152.93		\$992,902.32	
UHF - Liquid Cooled Solid State Transmitter 35 - 50 kW	\$1,473,000.00	\$948,652.93	GatesAir Quote Q-80362	\$859,166.47	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
HVAC ice shield	\$1,500.00	\$1,500.00	American tower charge	\$0.00	N/A
electrical Sub panel	\$1,700.00	\$1,700.00	American Tower Charge	\$833.34	X
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
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

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
Other Building Addition Size: 1500.0	\$5,000.00	\$5,000.00	American Tower Charge	\$3,750.00	N/A
Sub-total	\$1,710,219.00	\$1,127,152.93	N/A	\$992,902.32	N/A
Total for all systems	\$3,882,207.55	\$2,994,191.48	N/A	\$2,093,445.11	N/A

Components

Actual Information Description	File Name	
UHF - Liquid Cooled Solid State Transmitter 35 - 50 kW	Component Description: Amount:	RIGID TRANSMISSION LINE - COPPER \$618.75
	Component Description:	A. Transmitter
	Amount:	\$316,217.64
	Component Description:	CONTRACT AMOUNT
	Amount:	\$14,350.71

Component Description: 2nd PROGRESS

INVOICE FOR THE TRANSMITTER REPLACEMENT

PROJECT

Amount: \$7,392.79

Component Description:

Amount:

OTHER

\$40.69

Component Description: 3rd progress invoice

for the transmitter replacement

Amount: \$10,871.75

Component Description: ULXTE-60

Transmitter

Amount: \$185,777.40

Component Description: BPME6-UH, BPME

6-1/8" Flanged

Amount: \$7,679.10

Component Description: ULXTE-60

Transmitter

Amount: \$316,217.64

10 ton Heating and cooling

unit

Component Description:

Amount:

Completed the

installation of one

\$19,219.00

HVAC ice shield

Information not provided.

electrical Sub panel		
	Component Description:	WTVS-110-1st Primary Transmitter - Electrical Sub
	Amount:	Panel \$833.34
10 Ton system	Information not provided.	
Switchgear - industrial 800 amp	Information not provided.	
2" Rigid Conduit and Wiring (Cost per foot)	Component Description: Amount:	Broadcast Repack \$416.50
	Component Description: Amount:	25% deposit for this component \$208.34
Other Electrical Service: Generator replacement Electrical installation for Transmitter	Component Description:	Remove and replace (1) 150 KW generator
	Amount:	\$27,223.00
	Component Description:	Remove and replace (1) 150kw generator
	Amount:	\$81,669.00
	Component Description:	25% deposit on component
	Amount:	\$416.67

Other -- Building Addition

Size: 1500.0

Component Description: 25% downpayment

on component

Amount: \$1,250.00

Component Description: WTVS-110-1st

Primary Transmitter

- Building Addition, 1,500 sq. ft.

Amount: \$2,500.00

Cost Information

Antennas

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

Description Interim Antenna TFU-24WB /VP	Predetermined Cost Estimate \$259,664.75	Estimated Cost \$243,134.75	Estimated Cost Justification	Actual Cost \$189,151.92	Actual Cost Justification
combiner installation	\$8,333.00	\$8,333.00	Per American Tower Project cost estimation	\$6,249.83	а
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, broadband, at antenna input, per 7 3/16. feedline (if needed)	\$16,850.00	\$6,000.00	N/A	\$2,500.00	N/A
New combiner, cost per channel (without antenna)	\$84,200.00	\$80,000.00	N/A	\$57,500.17	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	American Tower cost estimate and PO #13-1652	\$120,401.75	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	\$2,500.17	Х
Primary Antenna TFU- 24GTH-VP- R 06	\$308,530.00	\$293,100.00		\$203,123.24	
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
UHF - High 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
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	\$5,760.00	N/A
Sub-total	\$568,194.75	\$536,234.75	N/A	\$392,275.16	N/A

Total for	\$3,882,207.55	\$2,994,191.48	N/A	\$2,093,445.11	N/A
all systems					

Components

Actual Information Description	File Name	
combiner installation	Component Description:	25% downpayment on component
	Amount:	\$2,083.33
	Component Description: Amount:	WTVS-280-Interim Antenna - Combiner Installation
Side mount brackets for	Information not provided.	\$4,166.50
high power antennas (if not included in antenna base cost)		
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" \$1,666.67
	Component Description:	25% downpayment for compenent
	Amount:	\$833.33

New combiner, cost per channel (without antenna)

Component Description: 25% downpayment

on component

Amount: \$19,166.67

Component Description: WTVS-280-Interim

Antenna - New

Combiner

Amount: \$38,333.50

Component Description: PARTIAL

PAYMENT FOR

NEW COMBINER

Amount: N/A

UHF - High Power, Side Mount, basic slot antenna, 24 bay,, 60 - 65 kW input, elliptically or circularly polarized

Component Description: 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

Amount: \$97,901.75

Component Description: PARTIAL

PAYMENT ON UHF HIGH POWER SIDE MOUNT ANTENNA

N/A

Amount:

Component Description: WTVS-280-Interim

Antenna - UHF High Power Side Mount,

E-POL

Amount: \$22,500.00

Sweep test of existing antenna

Component Description: WTVS-280-Interim

Antenna - Sweep

Test

Amount: \$833.33

Component Description: WTVS-280-Interim

Antenna - Sweep

Test

Amount: \$1,666.84

Component Description:	WTVS-210-Primary Antenna - Elbow
Amount:	Complex, 6 1/8" \$5,386.50
Component Description:	WTVS-210-Primary Antenna - Elbow
Amount:	Complex, 6 1/8" \$5,386.50
Component Description:	UHF - High Power
	Top Mount
Amount:	\$93,295.12
Component Description:	UHF - High Power Top Mount
Amount:	\$93,295.12
	MTV0 040 P :
Component Description:	WTVS-210-Primary Antenna - Sweep Test
Amount:	\$2,046.67
Component Description:	WTVS-210-Primary
	Antenna - Sweep
Amount:	Test \$2,880.00
Amount: Component Description:	
	Amount: Component Description: Amount: Component Description: Amount: Component Description: Amount: Amount:

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	\$331,335.00	\$105,200.00		\$78,755.25	
Rigid Transmission Line - copper, 7 3 /16" broadband	\$331,335.00	\$105,200.00	N/A	\$78,755.25	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	\$335,600.00	N/A	\$254,926.87	N/A
Total for all systems	\$3,882,207.55	\$2,994,191.48	N/A	\$2,093,445.11	N/A

Actual Information	
Description	File Name

copper, 7 3/16" broadband	Component Description:	WTVS-380-Interim
	Component Decempor	Transmission Line -
		Rigid, Copper, 7 3
		/16"
	Amount:	\$52,503.50
	Component Description:	PARTIAL
		PAYMENT FOR
		RIGID
		TRANSMISSION
	Amount:	LINE \$26,251.75
	Amount.	Ψ20,201.70
Rigid Transmission Line -		
	Component Description:	WTVS-310-Primary
		Transmission Line -
		Rigid, Copper, 6 1 /8"
	Amount:	,8 \$88,085.81
	Amount.	φοο,υου.ο ι
	Component Description:	WTVS-310-Primary
		Transmission Line -
		Rigid, Copper, 6 1
		/8"
	Amount:	\$88,085.81

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 Primary Tower GTOWER	Predetermined Cost Estimate \$605,300.00	Estimated Cost \$575,000.00	Estimated Cost Justification	Actual Cost \$280,976.24	Actual Cost Justification
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	\$3,000.00	N/A
Complex Tower (includes, for example, those with candelabras and/or stacked antennas)	\$421,000.00	\$400,000.00	N/A	\$263,376.24	N/A
Sub-total	\$605,300.00	\$575,000.00	N/A	\$280,976.24	N/A
Total for all systems	\$3,882,207.55	\$2,994,191.48	N/A	\$2,093,445.11	N/A

Actual Information	
Description	File Name

Tower mapping for an undocumented/poorly documented tower and preparation of documentation necessary for tower load study

Component Description: Broadcast Tower

Mapping Detroit
OakPark Broadcast

Repack Line 2

Amount: \$8,267.00

Component Description: Broadcast structural

Amount: \$6,333.00

Component Description: TOWER MAPPING

& STRUCTURAL ENGINEERING

Amount: N/A

Minor tower reinforcement /modifications

Component Description: WTVS-410-

Existing Primary
Tower - Minor

Tower

Reinforcement

/Modifications

Amount: \$2,000.00

Component Description: 25% downpayment

on component

Amount: \$1,000.00

Complex Tower (includes, for example, those with candelabras and/or stacked antennas)

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

Amount: \$27,500.00

Component Description: WTVS-410-

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

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	\$177,430.00	\$173,425.00		\$80,279.70	
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 - 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	\$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
Project management of the transition	\$109,020.00	\$109,175.00	Quote Widelity Project Management and ATC PO 13-1647 permit filing services	\$73,099.45	N/A
Prepare and or review reimbursement form	\$2,630.00	\$2,500.00	N/A	\$1,707.75	N/A
Address transition timing and coordination issues w/ other stations and wireless	\$2,630.00	\$2,500.00	N/A	\$300.00	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 engineering section of FCC Form 2100 (main), Construction Permit Application	\$3,155.00	\$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
Prepare request for Special Temporary Authorization	\$4,100.00	\$3,000.00	N/A	N/A	N/A
Site Coordination meeting	\$2,500.00	\$2,500.00	N/A	\$1,875.00	N/A
Sub-total	\$177,430.00	\$173,425.00	N/A	\$80,279.70	N/A
Total for all systems	\$3,882,207.55	\$2,994,191.48	N/A	\$2,093,445.11	N/A

Actual Information	
Description	File Name

RF Exposure		
Measurements	Component Description:	WTVS-580-Field
		Engineering
		Service - Rf
		Exposure
		Measurements
	Amount:	\$1,666.67
	Component Description:	25% down
		payment for
		component
	Amount:	\$833.33
FAA consultant, including		
cost of preparing FAA	Component Description:	FCC repack
Form 7460 (Notice of		Review of WTVS
Proposed Construction), if		399
needed for height increase	Amount:	\$75.00
	Component Description:	FCC repack:
		Analysis of WTVS
	A	impact
	Amount:	\$225.00
ASR modification (prepare	Information not provided.	
FCC Form 854)		
Attorney Fees - Prepare and File request for Special Temporary Authorization	Information not provided.	

Attorney Fees - Negotiation of lease and other matters		
or shared locations	Component Description:	Television
or shared locations		Repacking
		Services-WTVS
	Amount:	\$90.00
	Component Description:	Invoice for legal
		services
	Amount:	\$90.00
	Component Description:	Television
		Repacking
		Services - WTVS
	Amount:	\$60.00
	Component Description:	Television
		Repacking
		Services - WTVS
	Amount:	\$90.00
	Component Description:	Legal Services -
	Component Boompton.	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:	Television Repacking Services
	Amount:	\$90.00
Project management of the transition		D. i. i.
	Component Description:	Project
		Management
	A	ΦO 770 4F

Amount:

\$3,779.45

Component Description: Project

Management

Amount:

\$2,590.10

Component Description:

Project Management

Amount:

\$2,411.75

Component Description:

Project

Amount:

Management \$4,210.05

Component Description: Project

Management

Amount:

\$4,221.70

Component Description: Project

Management

Amount:

\$2,962.90

Component Description: Project

Management

Amount:

\$8,134.35

Component Description: Project

Management

Amount:

\$2,802.70

Component Description: PO Line 1 - NTP

Billable - Project

Mgmt

Amount: \$9,480.00

Component Description:

Project

Amount: \$4,760.70

Management \$4,760.70

Component Description: Project

Management

Amount: \$3,166.55

Component Description: Project

Management

Amount: \$5,909.75

Component Description: Project

Management

Amount: \$4,170.20

Component Description: Please deny this

component

Amount: N/A

Component Description: 25% downpayment

for work being done by American

Tower

Amount: \$1,250.00

Component Description: Project

Management

Amount: \$3,642.90

Component Description: Project

Management

Amount: \$4,064.85

Component Description: CONSULTING

WORK WITH STAFF TO CREATE A REPACK FACT

SHEET.

Amount: \$450.00

	Component Description: Amount:	WTVS-510-Project Management \$2,500.00
	Component Description: Amount:	Project Management \$2,591.50
Prepare and or review reimbursement form	Component Description:	Legal services to
	Amount:	prepare and review reimbursement form in addition to review & filing reports \$1,617.75
	Component Description: Amount:	Legal services \$90.00
Address transition timing and coordination issues w/ other stations and wireless	Component Description: Amount:	Legal Services \$300.00
Perform engineering study for new channel assignment and antenna development	Information not provided.	
Prepare engineering section of FCC Form 2100 (main), 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.	

Site Coordination meeting

Component Description:

WTVS-590-Site
Coordination
Meeting
\$1,250.00

Component Description:

25%
downpaymaent for this component

\$625.00

Amount:

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	\$247,328.80	\$246,778.80		\$92,084.82	
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
Interim antenna tower lease	\$65,148.39	\$65,148.39	American Tower cost estimate; DPTV WTVS-610- Interim Antenna Tower Lease Budget Increase Justification	\$43,200.00	N/A
Employee time	\$75,081.10	\$75,081.10	See Attachment	\$10,455.51	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
Develop and air announcement of upcoming channel change	\$5,000.00	\$5,000.00	N/A	N/A	N/A

Storage			covered storage for equipment and parts		
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
MVPD Notification of Channel Change	\$2,000.00	\$2,000.00	N/A	\$1,250.00	N/A
DTV Medical Facility Notification	\$11,550.00	\$11,000.00	N/A	\$3,750.00	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
Sub-total	\$247,328.80	\$246,778.80	N/A	\$92,084.82	N/A
Total for all systems	\$3,882,207.55	\$2,994,191.48	N/A	\$2,093,445.11	N/A

Actual Information Description	File Name
Site Security	Information not provided.
Lift equipment rental	Information not provided.

	Component Description:	WTVS-610-Interim Antenna Tower Lease
	Amount:	\$28,800.00
	Component Description:	25% downpayment
	Amount:	on this component \$14,400.00
Employee time		
	Component Description:	Project
		Management
	Amount:	\$5,558.54
	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
Develop and air announcement of upcoming channel change	Information not provided.	

Equipment Storage			
Equipment Storage			
	Component Description:	WTVS-610-	
		Equipment	
		Storage	
	Amount:	\$1,440.00	
	Component Description:	WTVS-610-	
		Equipment	
		Storage	
	Amount:	\$1,440.00	
Disposal Costs (for equipment and other waste, net of any salvage value)	Information not provided.		
Local Zoning	Information not provided.		
MVPD Notification of			
Channel Change	Component Description:	WTVS-610-MVPD	
		Notification	
	Amount:	\$1,250.00	
DTV Medical Facility Notification	Component Description: Amount:	Medical Notification \$3,750.00	
Interim antenna connection			
	Component Description:	50 Ohm 2 Way N	
		Power Divider from	
		500 MHz to 1,000	
		MHz rated at 10	
	Amount:	watts \$151.66	
	Amount.	φ131.00	
	Component Description:	#2 Acid brush 1/2"	
	Component Description:	#2 Acid brush 1/2" x 6"	

Component Description: 50 Ohm 2 Way N

Power Divider From 500 MHz to 1,000 MHz Rated

at 10 watts

Amount: \$583.04

Component Description: 18-8 stainless

steel hex head

screw

Amount: \$66.89

Component Description: Hoist block and

tackle

Amount: \$58.29

Component Description: N Male Right

Angle to N Male Right Angle Cable Using LMR-400 Coax and Times Connectors

Amount: \$875.12

Component Description: Switch WR1500 H

Plane 115 VAC 60000 SER

Amount: \$20,095.80

Component Description: Insulator

Conductor Adapter

4 1/16" Thin-Stand

Amount: \$336.84

Component Description: Clevis Hanger 1 1

/4 IN. 215LB Max

Load

Amount: \$66.73

Component Description: BPME4M-UH

BPME 4-1/16"

Flanged

Amount: \$7,032.75

Component Description: Hot-water hose,

medium-pressure

Amount: \$111.66

Component Description: Interim antenna

connection

Amount: \$315.53

Grand Total

	Predetermined Cost Estimate	Estimated Cost	Actual Cost
Total for all systems	\$3,882,207.55	\$2,994,191.48	\$2,093,445.11

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

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 abovenamed applicant for the Authorization(s) specified above. William
Carignan
Controller

02/18/2020

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).

- 1. The Authorized
 Person signing
 below certifies and
 represents that he
 /she is authorized to
 submit this TV
 Broadcaster
 Relocation Fund
 Reimbursement
 Form on behalf of
 the above-named
 entity.
- The above-named entity certifies that the statements in this form and attached documentation are true, complete, and correct.
- The above-named entity acknowledges that all certifications and attached documentation are considered material representations.

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

- 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.

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

Controller

02/18/2020

Attachments