



(REFERENCE COPY - Not for submission)

# FCC Form 399: Reimbursement Request

Facility **25932** | Service: **DTV** | Call **WHRO-TV** | Channel: **31 (UHF)** |  
ID:  
File **0000027736**  
Number:  
FRN: **0002062511** | Date **02/11**  
Submitted: **/2021**

## Applicant Information

### Applicant Name, Type, and Contact Information

Applicant	Address	Phone	Email	Applicant Type
Hampton Roads Educational Telecommunications Association, Inc.	Chris G. Gunnufsen 5200 HAMPTON BOULEVARD NORFOLK, VA 23508 United States	+1 (757) 889-9394	chris.gunnufsen@whro.org	Not-for-Profit

## Reimbursement Contact Information

### Reimbursement Contact Name and Information

Applicant	Address	Phone	Email
[Confidential]			

## Preparer Contact Information

### Preparer Contact Name and Information

Applicant	Address	Phone	Email
The Preparer is same as the reimbursement contact.			

## Broadcaster Information and Transition Plan

Question	Response
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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	The transition plan is being handled by the Owner of the Tower, American Tower Corporation. The tower is complicated due to the total number of broadcasters collocated on the tower. There will be a Wide Band interim antenna side mounted on the tower 987'

## Transmitters

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

**Primary  
Transmitter**

**Existing Transmitter Information**

Section	Question	Response
<b>Existing Transmitter Description</b>	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
<b>Existing Transmitter Manufacturer and Type</b>	Manufacturer	
	Model	DCX Millenium
	Year	2001
	Type	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?	No
	Manufacturer	
	Model	HPTV PRLX- U36
	Transmitter Type	Solid State
	Solid State Cooling	Liquid Cooled
	Solid State Power capacity	58 kW
	Justification for New Transmitter	The Channels are to Far apart for Re- tuning. Channel 16 Pre and Channel 31 post Repacking. This has been verified with Hitachi Comark LLC. Manufacturer of the existing channel 16 antenna. The IOT Transmitters has been replaced by the Parallax SS

**Primary  
Transmitter**

**Other Transmitter Costs**

Section	Question	Response
<b>Electrical Service</b>	Service Entrance (3 phases 800A 208V)	No
	Switchgear (industrial 800 amp)	Yes
	Transformer (480V)	Yes
	Power	500 kVA
	Rigid Conduit and Wiring	Yes
	Size	4 inches
	Length	300.0 feet
	Other Electrical Service	Yes
	Description	Installation of Transmitter Electrical systems
<b>HVAC Service</b>	Does the replacement transmitter require HVAC Service?	Yes
	Type	Cooling Only
	Size	15 tons
	Other Size	N/A
<b>Transmitter Building Addition/Modification or Leasehold Improvement</b>	Does the Transmitter Building require an addition, modification, other leasehold improvement?	Yes
	Size	4500.0 square feet
<b>Channel 14 Costs</b>	Is an RF Consulting Engineer needed?	N/A
	Is a channel 14 Mask Filer needed?	N/A
	Is additional field engineering time needed?	N/A
	Number of Days	N/A

Primary Transmitter	Other Transmitter Cost Not Listed
	Information not provided.

**Antennas**

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

**Primary  
Antenna**

**Existing Antenna Information**

Section	Question	Response
<b>Existing Antenna Description</b>	Type of change	Lease 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?	Yes
	Is antenna in operating condition?	Yes
	Is antenna located on or in close proximity to an antenna farm?	Yes
<b>Existing Antenna Manufacturer and Type</b>	Class	Full Power
	Mounting	Top Mount
	Antenna position in stack	Bottom
	Polarization	Horizontal
	Type	Slotted Coaxial
	Number of Stations Supported	N/A
	Number of Panels	N/A
	Design power capacity in use	N/A
	Lower Limit	N/A
	Upper Limit	N/A
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power)	1000.0 kW
	Manufacturer	



Model	TFU- 24GBH-R 08SP
Year	2000

**Primary  
Antenna**

**New Antenna Costs**

Section	Question	Response
<b>New Antenna Description</b>	Use	Primary (Main)
	Description of Use	N/A
	Change Type	Lease New
	Is this a request for upgraded equipment?	Yes
	Ownership	Leased
	Owner	American Tower LLC
	Is antenna shared?	Yes
	Is antenna directional?	No
	Will antenna be located on or in close proximity to an antenna farm?	Yes
<b>New Antenna Manufacturer and Types</b>	Class	Full Power
	Mounting	Top Mount
	Antenna position in stack	Not in Stack
	Polarization	Elliptical
	Type	Broadband Panel
	Number of Stations Supported	4
	Number of Panels/Bays	70
	Lower Limit	470.00 MHz
	Upper Limit	700.00 MHz
	Design power capacity in use	41.0 %
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power) .....	1950.0 kW
	Manufacturer	

Model	PEP70E-05-2-T
Year	2019
Justification for New Antenna	Combining Stations to reduce load and Total FCC Costs

## Primary Antenna

### Other Antenna Costs

Section	Question	Response
<b>Combiner for Shared Antenna</b>	Do you need a Combiner for a Shared Antenna?	Yes
	Type	New
	Number of channels supported	4
	Frequencies of channels supported	RF channel
	Frequency	N/A
	Do you need a combiner output splitter /switcher for dual feed lines?	Yes
<b>Elbow Complex</b>	Do you require the separate purchase of the Elbow Complex?	Yes
	Broadband or Single Channel?	Broadband
	Feed Line Size	8 3/16 inches inches
<b>Side Mount Brackets</b>	Do you require the separate purchase of side mount brackets for a high power antenna?	
<b>Pattern Scatter Analysis</b>	Do you require separate purchase of pattern scatter analysis for a side mount high or medium power antenna?	No
<b>Sweep Test</b>	Do you require the sweep testing of transmission line and antenna?	Yes

Enter a list of RF channel numbers.

RF Channel Number
20
16
31
33

Primary  
Antenna

Other Antenna Cost Not Listed

Name	Description
Combiner Installation	ATC Estimated Costs for line item 3-C-2

**Interim  
Antenna**

**New Antenna Costs**

Section	Question	Response
<b>New Antenna Description</b>	Use	Interim
	Description of Use	N/A
	Change Type	Purchase New
	Ownership	Leased
	Owner	American Tower Corp
	Is antenna shared?	Yes
	Is antenna directional?	Yes
	Will antenna be located on or in close proximity to an antenna farm?	Yes
<b>New Antenna Manufacturer and Type</b>	Class	Full Power
	Mounting	Side Mount
	Antenna position in stack	Not in Stack
	Polarization	Elliptical
	Type	Broadband Slot
	Number of Stations Supported	5
	Number of Panels/Bays	24
	Lower Limit	482.00 MHz
	Upper Limit	590.00 MHz
	Design power capacity in use	75.0 %
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power) .....	60.0 kW
	Manufacturer	
	Model	SBBEP- 24C160

Year	2018
Justification for New Antenna	Complex antenna structure with multiple stations trying to remain on the air during the transition to new channels. See American Tower Plan.

## Interim Antenna

### Other Antenna Costs

Section	Question	Response
<b>Combiner for Shared Antenna</b>	Do you need a Combiner for a Shared Antenna?	Yes
	Type	New
	Number of channels supported	5
	Frequencies of channels supported	RF channel
	Frequency	N/A
	Do you need a combiner output splitter /switcher for dual feed lines?	Yes
<b>Elbow Complex</b>	Do you require the separate purchase of the Elbow Complex?	Yes
	Broadband or Single Channel?	B
	Feed Line Size	7 3/16 inches
<b>Side Mount Brackets</b>	Do you require the separate purchase of side mount brackets for an antenna?	Yes

<b>Pattern Scatter Analysis</b>	Do you require separate purchase of pattern scatter analysis for a side mount high or medium power antenna?	No
<b>Sweep Test</b>	Do you require the sweep testing of transmission line and antenna?	Yes

**Enter a list of RF channel numbers.**

RF Channel Number
16
20
31
32
33

**Interim  
Antenna**

**Other Antenna Cost Not Listed**

Name	Description
Interim Tower Rental	One time tower rental during repack line item 1-B-1

**Transmission Line**

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



**Primary**  
**Transmission Line**

**Existing Transmission Line**

Section	Question	Response
<b>Existing Transmission Line Description</b>	Type of change	Lease New
	Use	Primary (Main)
	Description of Use	N/A
	Ownership	Leased
	Owner	American Tower LLC
	Site	N/A
	Is the existing transmission line shared with another station or stations?	No
	Is Transmission Line in operating condition?	Yes
<b>Existing Transmission Line Manufacturer and Type</b>	Manufacturer	
	Type	Rigid
	Diameter	6 1/8 inches
	Other Diameter	N/A
	Segment Length	19 1/2 inches
	Other Segment Length	N/A
	Number of parallel runs	1
	Length	1307 feet per run

**Primary**  
**Transmission Line**

**New Transmission Line**

Section	Question	Response
<b>New Transmission Line Costs</b>	Use	Primary (Main)
	Description of Use	N/A
	Change Type	Lease New
	Is this a request for upgraded equipment?	No
	Type	Rigid
	Diameter	8 3/16 inches
	Other Diameter	N/A
	Segment Length	Broadband
	Other Segment Length	N/A
	Number of parallel runs	2
	Length	1350 feet per run
	Justification for New Transmission Line	Part of a shared Broadband antenna system

**Primary**  
**Transmission Line**

**Other Transmission Line Expenses Not Listed**

Name	Description
<b>Combiner system</b>	Combiner system for shared Broadband antenna

**Interim**  
**Transmission Line**

**New Transmission Line**

Section	Question	Response
<b>New Transmission Line Costs</b>	Use	Interim
	Description of Use	N/A
	Change Type	Purchase New
	Type	Rigid
	Diameter	8 3/16 inches
	Segment Length	Broadband
	Other Segment Length	
	Number of parallel runs	1
	Length	1100 feet per run
	Justification for New Transmission Line	Single run Dielectric 8-3/16" Digitline with 950 ft vertical plus 150 ft. run equals 1100 ft. total; Includes nitrogen generator plus 200' of vertical run to get to the combiner network in ATC owned building located in the compound total WHRO 1300

Interim  
Transmission Line

Other Transmission Line Expenses Not Listed

Name	Description
Transmission line interim	200 Ft of 6 1/8 " line to connect to the Wibeband Interim antenna located in the ATC building approx 200 ft away.
Elbows	3 Elbows are needed to connect a new sections of 6 1/8' line to the interim broadband antenna located in American Tower owned building.

**Tower  
Equipment  
And  
Rigging  
Costs**

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

**Primary  
Tower**

**Existing Tower**

Section	Question	Response
Existing Tower Description	Type of change	Modify Existing
	Tower Use	Primary (Main)
	Description of Use	N/A
	Ownership	Leased
	Is this tower consider Complex?	Candelabra
	Is this tower currently shared with any other stations?	Yes
	One or more FM, AM or TV radio broadcaster(s)	Yes
	Others Types of Users	No
	Is tower documented for structural analysis?	Yes
	Is tower compliant with Rev G?	Yes
Existing Tower Structure Registration	Do you have a tower registration number?	Yes
	ASR Number	1057874
Coordinates (NAD83 ( North American Datum of 1983))	Latitude (NAD83)	36° 48' 31.8" N-
	Longitude (NAD83)	076° 30' 11.3" W-
	Overall Structure Height	1258.84 feet
	Support Structure Height	1254.91 feet
	Ground Elevation Above Mean Sea Level (AMSL)	22.97 feet

Structure Type	GTOWER - Guyed Structure Used for Communication Purposes
Tower Owner	American Towers, LLC
Date Constructed	02/03/2006

**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
25932	WHRO-TV	DTV
67077	WPXV-TV	DTV
9762	WGNT	DTV
82574	WTPC-TV	DTV
40759	WTVZ-TV	DTV
47401	WTKR	DTV
25933	WHRV	FM
25940	WHRO-FM	FM

**Primary  
Tower**

**Tower Modification Costs**

Section	Question	Response
<b>Engineering Study</b>	Please what type of engineering study is required, if any:	Study needed for tower with candelabra
<b>Tower Reinforcements</b>	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

Name	Description
Tower Permit Drawing Package	Tower Permit Drawing Package
Tower Construction Project Management	Tower Construction Project Management

**Outside  
Professional Services Costs**

Section	Question	Response
<b>Outside Project Management Services</b>	Do you require outside project management services?	Yes
	Number of Hours	770
	Explanation	This is for the project management costs associated with American Tower Corporation. This is a very complicated site and will require Project management from all Broadcasters collocated on the tower. Est is based on Previous conversion to digital in 2001
<b>Outside RF consulting Engineering Services</b>	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	1
	Do you have Distributed Transmission System engineering services?	N/A
	Critical Facility	N/A
	Terrain-Shielded Facility	N/A
<b>Attorney and Other Outside Consulting Services</b>	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
	For Auxiliary Facility	No
	For Main Facility	Yes
	Prepare request for Special Temporary Authority	Yes
	Quantity	1
	NEPA Section 106 environmental review	Yes
	Environmental Assessment	Yes
	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
<b>RF Field Engineering Services</b>	Comprehensive coverage verification via field study	Yes

RF exposure measurements	Yes
Additional Field Engineering Service	No
Number of Days	N/A
Justification	N/A

Outside Professional Services Costs

Other Professional Services Expenses Not Listed

Name	Description
Migratory Bird Assessment	Tower located in a migratory Bird Path
RF System Test	Testing of the combiner to ensure all one (1) frequencies are tuned for optimal patterns.
Site Coordination Meeting	Site coordination meetings with all broadcasters, contractors and vendors involved with the site deliveries and construction. This cost is for travel and logistics expenses accrued.
Ground and Building Drawing Package	Ground & Building A&E Permit Drawing Package

## Other Expenses

Section	Question	Response
<b>AM Pattern Disturbance</b>	Is an Impact Study needed?	No
	Is Remediation needed?	No
<b>Facility Expenses</b>	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
<b>Permit and Filing Costs</b>	Local Zoning	Yes
	Non-zoning permits	Yes
	BLM or NFS Coordination	Yes
	FCC Construction Permit Minor Change	No
	FCC License to Cover Application	Yes
	FCC Special Temporary Authority Application	Yes
<b>Other Miscellaneous Expenses</b>	Does this relocation require paying Disposal Costs (for equipment and other waste, net of any salvage value)?	Yes
	Does this relocation require Equipment Delivery or Handling Charges not otherwise included in individual item costs?	Yes
	Does this relocation require Equipment Storage?	Yes
	Does this relocation require the Development and Airing of an Announcement regarding an upcoming channel change?	Yes
	Does this relocation require MVPD Notification of a Channel Change?	Yes

**Other  
Expenses**

**Other Expenses Not Listed**

Name	Description
<b>Comark System Design and Site Survey</b>	Cost associated with Hitachi Comark to do a site visit and design for the Transmitter installation
<b>ATC One Time Tower Rental</b>	ATC have 3 repack customers, one non repacked customer and one new customer on the Norfolk TT. The interim Main side mount antenna will allow the broadcasters to minimize their OTA disruption, maintain their coverage contour, complete in safe manner
<b>Grading Road</b>	The Gravel Road Will be destroyed during the repacking and will require several Gradings during the process due to the complexity of the site and total number of broadcasters impacted
<b>Public Hearing</b>	Cost associated with Public hearings that might be required due to the repacking process and proximity of houses located around the tower
<b>Site Security</b>	Site Security Company during construction for theft prevention and vandalism
<b>Special Insurance Rider</b>	Special insurance rider will need to be purchased by WHRO for the Homes located within 1000' ft of the tower. WHRO owns all of the property surrounding the tower America Tower Leases only a small portion of the ground space, Anchor point Base and Buildin

Cost  
Information

Transmitters

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Primary Transmitter HPTV PRLX- U36	\$2,212,700.00	\$2,638,621.00		\$1,860,755.50	
Other -- Building Addition Size: 4500.0	<i>\$52,000.00</i>	\$52,000.00	Walls have to be removed to install the new transmitter. This includes removing a mezzanine to mount and install the magic Tee and Mask filter.	\$0.00	N/A

15 Ton system	\$55,800.00	\$53,000.00	The new transmitter, CIF and Magic Tee will need to be located in a room that does not have AC at this time. A new AC will be needed to keep the CIF, magic tee, Combiner and temperature from Overheating and drifting in power.	N/A	N/A
4" Rigid Conduit and Wiring (Cost per foot)	\$30,300.00	\$28,800.00	After Digital conversion in 2009 all conduits and switch gear was removed that connected to the analog transmitter.	\$0.00	N/A

Transformer 3 phase /480v - 500 KVA	\$48,400.00	\$276,401.00	This is to replace the existing 3 wire 600 KVA Clean source UPS with a 4 wire 500KVA Clean Source UPS from Pillar Formerly Active Power	\$0.00	The Existing 3 wire 600 Kva UPS from Active power is not compatible with any solid state transmitter. The replacement is a 4 wire 500 kva UPS from Active power a division of Pillar power systems.
Switchgear - industrial 800 amp	\$38,200.00	\$36,300.00	N/A	\$0.00	N/A
UHF - Liquid Cooled Solid State Transmitter 52 - 61 kW	\$1,788,000.00	\$1,992,120.00	Includes 342,120 dollars for the RFS 6 pole filter and switches to change from the interim antenna to the main antenna	\$1,860,755.50	N/A
Other Electrical Service: Installation of Transmitter Electrical systems	\$200,000.00	\$200,000.00	N/A	\$0.00	N/A
<b>Sub-total</b>	\$2,212,700.00	\$2,638,621.00	N/A	\$1,860,755.50	N/A

<b>Total for all systems</b>	\$6,635,411.53	\$4,403,186.86	N/A	\$2,663,998.16	N/A
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## Components

<b>Actual Information</b>	
<b>Description</b>	<b>File Name</b>
Other -- Building Addition Size: 4500.0	Information not provided.
15 Ton system	Information not provided.
4" Rigid Conduit and Wiring (Cost per foot)	Information not provided.
Transformer 3 phase/480v - 500 KVA	<div> <b>Component Description:</b> Invoice to be resubmitted to LMS. </div> <div> <b>Amount:</b> N/A </div>
Switchgear - industrial 800 amp	Information not provided.



UHF - Liquid Cooled Solid State Transmitter 52 - 61 kW	<table> <tr> <td data-bbox="722 174 1029 208"><b>Component Description:</b></td><td data-bbox="1161 174 1378 286">Parallax 58kW Liquid Cooled Digital Transmitter</td></tr> <tr> <td data-bbox="722 297 831 331"><b>Amount:</b></td><td data-bbox="1161 297 1310 331">\$881,410.50</td></tr> <tr> <td data-bbox="722 432 1029 465"><b>Component Description:</b></td><td data-bbox="1161 432 1378 544">Parallax 58kW Liquid Cooled Digital Transmitter</td></tr> <tr> <td data-bbox="722 555 831 589"><b>Amount:</b></td><td data-bbox="1161 555 1310 589">\$979,345.00</td></tr> <tr> <td data-bbox="722 689 1029 723"><b>Component Description:</b></td><td data-bbox="1161 689 1331 801">Invoice to be resubmitted to LMS.</td></tr> <tr> <td data-bbox="722 813 831 846"><b>Amount:</b></td><td data-bbox="1161 813 1209 846">N/A</td></tr> <tr> <td data-bbox="722 947 1029 981"><b>Component Description:</b></td><td data-bbox="1161 947 1331 1059">Invoice to be resubmitted to LMS.</td></tr> <tr> <td data-bbox="722 1070 831 1104"><b>Amount:</b></td><td data-bbox="1161 1070 1209 1104">N/A</td></tr> </table>	<b>Component Description:</b>	Parallax 58kW Liquid Cooled Digital Transmitter	<b>Amount:</b>	\$881,410.50	<b>Component Description:</b>	Parallax 58kW Liquid Cooled Digital Transmitter	<b>Amount:</b>	\$979,345.00	<b>Component Description:</b>	Invoice to be resubmitted to LMS.	<b>Amount:</b>	N/A	<b>Component Description:</b>	Invoice to be resubmitted to LMS.	<b>Amount:</b>	N/A
<b>Component Description:</b>	Parallax 58kW Liquid Cooled Digital Transmitter																
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<b>Component Description:</b>	Invoice to be resubmitted to LMS.																
<b>Amount:</b>	N/A																
<b>Component Description:</b>	Invoice to be resubmitted to LMS.																
<b>Amount:</b>	N/A																
Other Electrical Service: Installation of Transmitter Electrical systems	Information not provided.																

**Cost  
Information**

**Antennas**

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
<b>Interim Antenna SBBEP- 24C160</b>	<b>\$374,530.00</b>	<b>\$236,766.33</b>		<b>\$130,449.99</b>	
New combiner, cost per channel (without antenna)	\$84,200.00	\$48,333.00	Shared Costs with other Broadcasters being repacked see American Tower Project Costs Estimate. Microsoft Excel Document WHRO IM Norfolk Tall Tower 10152 Repack Cost Estimates	\$33,000.00	Combiner 25 % payment

UHF - High Power, Side Mount, basic slot antenna, 24 bay,, 60 - 65 kW input, directional,, elliptically or circularly polarized	<b>\$60,000.00</b>	\$60,000.00	the original number of 235,000 has been reduced to 60,000 due to the number of Broadcasters using the Broadband antenna. See American Tower Project Costs Est. Microsoft Excel Document: WHRO IM Norfolk Tall Tower 10152 Repack Cost Estimates	\$45,000.00	N/A
Elbow complex, broadband, at antenna input, per 7 3/16. feedline (if needed)	\$16,850.00	\$4,000.00	Please see WHRO American Towers Customer Project Cost Estimation	\$3,000.00	N/A
Interim Tower Rental	<b>\$57,600.00</b>	\$57,600.00	Interim antenna Tower rental during repack	\$43,200.00	N/A

Side mount brackets for high power antennas (if not included in antenna base cost)	\$23,150.00	\$8,500.00	Shared cost with Other Broadcasters being repacked See WHRO IM Norfolk Tall Tower 10152 Repack Cost Estimates	\$0.00	N/A
Combiner output splitting /switching for dual feed lines, if applicable	\$126,000.00	\$50,000.00	Shared Costs See American Tower document: WHRO IM Norfolk Tall Tower 10152 Repack Cost Estimates plus 10,000.00 as shared installation Costs line item 3-C-2	\$0.00	25 percent payment on combiners
Sweep test of existing antenna	\$6,730.00	\$8,333.33	Shared expense with Other Broadcasters Being repacked See American Tower Document: WHRO IM Norfolk Tall Tower 10152 Repack Cost Estimates	\$6,249.99	25 percent payment for sweep tests
<b>Primary Antenna PEP70E-05-2-T</b>	<b>\$1,339,213.33</b>	<b>\$421,883.33</b>		<b>\$217,112.49</b>	

Combiner Installation	\$13,333.33	\$13,333.33	Per station combiner installation costs	\$9,999.99	N/A
New combiner, cost per channel (without antenna)	\$84,200.00	\$66,000.00	N/A	\$49,500.00	N/A
UHF - High Power Top Mount (200-1000 kW), Four Station broadband panel antenna, elliptically or circularly polarized	\$1,090,000.00	\$198,150.00	This is the per cost per station with 4 station total using the BBA	\$148,612.50	N/A
Elbow complex, broadband, at antenna input, per 8 3/16. feedline (if needed)	\$18,950.00	\$12,000.00	N/A	\$9,000.00	N/A
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	N/A	N/A
Combiner output splitting /switching for dual feed lines, if applicable	\$126,000.00	\$126,000.00	N/A	\$0.00	N/A
<b>Sub-total</b>	\$1,713,743.33	\$658,649.66	N/A	\$347,562.48	N/A
<b>Total for all systems</b>	\$6,635,411.53	\$4,403,186.86	N/A	\$2,663,998.16	N/A

## Components

Actual Information	
Description	File Name
New combiner, cost per channel (without antenna)	<b>Component Description:</b> 21. WHRO-TV-280-Interim Antenna - New Combiner
	<b>Amount:</b> \$22,000.00
	<b>Component Description:</b> 21. WHRO-TV-280-Interim Antenna - New Combiner
	<b>Amount:</b> \$11,000.00
	<b>Component Description:</b> Invoice to be resubmitted to LMS.
	<b>Amount:</b> N/A
	<b>Component Description:</b> Invoice to be resubmitted to LMS.
	<b>Amount:</b> N/A

UHF - High Power, Side Mount, basic slot antenna, 24 bay,, 60 - 65 kW input, directional,, elliptically or circularly polarized	<b>Component Description:</b>  <b>Amount:</b>	20. WHRO-TV-280-Interim Antenna - UHF High Power Side Mount, Directional, E-POL \$15,000.00
	<b>Component Description:</b>  <b>Amount:</b>	20. WHRO-TV-280-Interim Antenna- UHF High Power Side Mount, Directional, E-POL \$30,000.00
	<b>Component Description:</b>  <b>Amount:</b>	Invoice to be resubmitted to LMS. N/A
	<b>Component Description:</b>  <b>Amount:</b>	Invoice to be resubmitted to LMS. N/A
Elbow complex, broadband, at antenna input, per 7 3/16. feedline (if needed)	<b>Component Description:</b>  <b>Amount:</b>	3. WHRO-TV-280-Interim Antenna - 7 3/16" Broadband Elbow Complex \$2,000.00
	<b>Component Description:</b>  <b>Amount:</b>	3. WHRO-TV-280-Interim Antenna - 7 3/16" Broadband Elbow Complex \$1,000.00

Interim Tower Rental	<div data-bbox="699 174 1374 365"> <p><b>Component Description:</b> 23. WHRO-TV-280-Interim Antenna - Interim Tower Rental</p> <p><b>Amount:</b> \$14,400.00</p> </div> <div data-bbox="699 477 1374 667"> <p><b>Component Description:</b> 23. WHRO-TV-280-Interim Antenna - Interim Tower Rental</p> <p><b>Amount:</b> \$28,800.00</p> </div> <div data-bbox="699 779 1374 880"> <p><b>Component Description:</b> Invoice to be resubmitted to LMS.</p> <p><b>Amount:</b> N/A</p> </div> <div data-bbox="699 992 1374 1093"> <p><b>Component Description:</b> Invoice to be resubmitted to LMS.</p> <p><b>Amount:</b> N/A</p> </div>
Side mount brackets for high power antennas (if not included in antenna base cost)	Information not provided.
Combiner output splitting /switching for dual feed lines, if applicable	Information not provided.



Sweep test of existing antenna		
	<b>Component Description:</b>	22. WHRO-TV-280-Interim Antenna - Sweep Test
	<b>Amount:</b>	\$4,166.66
	<b>Component Description:</b>	22. WHRO-TV-280-Interim Antenna - Sweep Test
	<b>Amount:</b>	\$2,083.33
	<b>Component Description:</b>	Invoice to be resubmitted to LMS.
	<b>Amount:</b>	N/A
	<b>Component Description:</b>	Invoice to be resubmitted to LMS.
	<b>Amount:</b>	N/A

Combiner Installation		
	<b>Component Description:</b>	2. WHRO-TV-210-Primary Antenna - Combiner
	<b>Amount:</b>	Installation \$6,666.66
	<b>Component Description:</b>	2. WHRO-TV-210-Primary Antenna - Combiner
	<b>Amount:</b>	Installation \$3,333.33
	<b>Component Description:</b>	Invoice to be resubmitted to LMS.
	<b>Amount:</b>	N/A
	<b>Component Description:</b>	Invoice to be resubmitted to LMS.
	<b>Amount:</b>	N/A

New combiner, cost per channel (without antenna)		
	<b>Component Description:</b>	1. WHRO-TV-210-Primary Antenna - New Combiner
	<b>Amount:</b>	\$16,500.00
	<b>Component Description:</b>	1. WHRO-TV-210-Primary Antenna - New Combiner
	<b>Amount:</b>	\$33,000.00
	<b>Component Description:</b>	Invoice to be resubmitted to LMS.
	<b>Amount:</b>	N/A
	<b>Component Description:</b>	Invoice to be resubmitted to LMS.
	<b>Amount:</b>	N/A

UHF - High Power Top Mount (200-1000 kW), Four Station broadband panel antenna, elliptically or circularly polarized		
	<b>Component Description:</b>	CAPITAL CONTRIBUTION - NORFOLK TALL TOWER
	<b>Amount:</b>	\$49,537.50
	<b>Component Description:</b>	CAPITAL CONTRIBUTION - NORFOLK TALL TOWER
	<b>Amount:</b>	\$99,075.00
	<b>Component Description:</b>	Invoice to be resubmitted to LMS.
	<b>Amount:</b>	N/A
	<b>Component Description:</b>	Invoice to be resubmitted to LMS.
	<b>Amount:</b>	N/A

<p>Elbow complex, broadband, at antenna input, per 8 3/16. feedline (if needed)</p>	<table> <tr> <td data-bbox="691 98 1114 331"> <p><b>Component Description:</b></p> <p><b>Amount:</b></p> </td><td data-bbox="1114 98 1426 331"> <p>4. WHRO-TV-210- Primary Antenna - 8 3/16" Broadband Elbow Complex \$3,000.00</p> </td></tr> <tr> <td data-bbox="691 331 1114 564"> <p><b>Component Description:</b></p> <p><b>Amount:</b></p> </td><td data-bbox="1114 331 1426 564"> <p>4. WHRO-TV-210- Primary Antenna - 8 3/16" Broadband Elbow Complex \$6,000.00</p> </td></tr> <tr> <td data-bbox="691 564 1114 797"> <p><b>Component Description:</b></p> <p><b>Amount:</b></p> </td><td data-bbox="1114 564 1426 797"> <p>Invoice to be resubmitted to LMS. N/A</p> </td></tr> <tr> <td data-bbox="691 797 1114 1030"> <p><b>Component Description:</b></p> <p><b>Amount:</b></p> </td><td data-bbox="1114 797 1426 1030"> <p>Invoice to be resubmitted to LMS. N/A</p> </td></tr> </table>	<p><b>Component Description:</b></p> <p><b>Amount:</b></p>	<p>4. WHRO-TV-210- Primary Antenna - 8 3/16" Broadband Elbow Complex \$3,000.00</p>	<p><b>Component Description:</b></p> <p><b>Amount:</b></p>	<p>4. WHRO-TV-210- Primary Antenna - 8 3/16" Broadband Elbow Complex \$6,000.00</p>	<p><b>Component Description:</b></p> <p><b>Amount:</b></p>	<p>Invoice to be resubmitted to LMS. N/A</p>	<p><b>Component Description:</b></p> <p><b>Amount:</b></p>	<p>Invoice to be resubmitted to LMS. N/A</p>
<p><b>Component Description:</b></p> <p><b>Amount:</b></p>	<p>4. WHRO-TV-210- Primary Antenna - 8 3/16" Broadband Elbow Complex \$3,000.00</p>								
<p><b>Component Description:</b></p> <p><b>Amount:</b></p>	<p>4. WHRO-TV-210- Primary Antenna - 8 3/16" Broadband Elbow Complex \$6,000.00</p>								
<p><b>Component Description:</b></p> <p><b>Amount:</b></p>	<p>Invoice to be resubmitted to LMS. N/A</p>								
<p><b>Component Description:</b></p> <p><b>Amount:</b></p>	<p>Invoice to be resubmitted to LMS. N/A</p>								
<p>Sweep test of existing antenna</p>	<p>Information not provided.</p>								
<p>Combiner output splitting /switching for dual feed lines, if applicable</p>	<p>Information not provided.</p>								

Cost  
Information

Transmission Line

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Interim Transmission Line	\$503,230.70	\$157,097.70		\$67,436.50	
Rigid Transmission Line - copper, 8 3 /16" broadband	\$438,900.00	\$92,767.00	The remaining costs are covered by other broadcasters collocated on the same tower that will be repacked Per American Tower Document WHRO IM Norfolk Tall Tower 10152 Repack Cost Estimates	\$66,000.00	N/A
Elbows	<i>\$28,730.70</i>	\$28,730.70	Elbows to connect the vertical run to the interim antenna 3 Total @ 1930.00 each per Dielectric Quote	\$1,436.50	Includes additional items not in the original quote

Transmission line interim	<b>\$35,600.00</b>	\$35,600.00	200 Ft of 6 1/8" line to connect to the interim antenna per American Tower Document WHRO IM Norfolk Tall Tower 10152 Repack Cost Estimates	\$0.00	N/A
<b>Primary Transmission Line</b>	<b>\$1,121,300.00</b>	<b>\$264,671.00</b>		<b>\$165,503.25</b>	
Rigid Transmission Line - copper, 8 3/16" broadband	\$1,077,300.00	\$220,671.00	N/A	\$165,503.25	N/A
Combiner system	<b>\$44,000.00</b>	\$44,000.00	N/A	\$0.00	N/A
<b>Sub-total</b>	\$1,624,530.70	\$421,768.70	N/A	\$232,939.75	N/A
<b>Total for all systems</b>	\$6,635,411.53	\$4,403,186.86	N/A	\$2,663,998.16	N/A

## Components

Actual Information Description	File Name
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Rigid Transmission Line -  
copper, 8 3/16" broadband

**Component Description:**

24. WHRO-TV-380-  
Interim  
Transmission Line  
- 8 3/16""  
Broadband Rigid  
Copper

**Amount:**

\$22,000.00

**Component Description:**

24. WHRO-TV-380-  
Interim  
Transmission Line  
- 8 3/16"  
Broadband Rigid  
Copper

**Amount:**

\$44,000.00

**Component Description:**

Invoice to be  
resubmitted to  
LMS.

**Amount:**

N/A

**Component Description:**

Invoice to be  
resubmitted to  
LMS.

**Amount:**

N/A

**Component Description:**

Invoice to be  
resubmitted to  
LMS.

**Amount:**

N/A



Elbows	<div data-bbox="715 174 1374 327"> <p><b>Component Description:</b> item 1 R0004542501 field Flange 5 at 287.30</p> <p><b>Amount:</b> \$1,436.50</p> </div> <div data-bbox="715 434 1321 586"> <p><b>Component Description:</b> Invoice to be resubmitted to LMS.</p> <p><b>Amount:</b> N/A</p> </div> <div data-bbox="715 694 1321 846"> <p><b>Component Description:</b> Invoice to be resubmitted to LMS.</p> <p><b>Amount:</b> N/A</p> </div> <div data-bbox="715 954 1321 1106"> <p><b>Component Description:</b> Invoice to be resubmitted to LMS.</p> <p><b>Amount:</b> N/A</p> </div>
Transmission line interim	<div data-bbox="715 1240 1321 1393"> <p><b>Component Description:</b> Invoice to be resubmitted to LMS.</p> <p><b>Amount:</b> N/A</p> </div> <div data-bbox="715 1500 1321 1653"> <p><b>Component Description:</b> Invoice to be resubmitted to LMS.</p> <p><b>Amount:</b> N/A</p> </div>

Rigid Transmission Line - copper, 8 3/16" broadband	<b>Component Description:</b>		5. WHRO-TV-310- Primary Transmission Line - 8 3/16" Broadband Rigid Copper
	<b>Amount:</b>		\$110,335.50
	<b>Component Description:</b>		5. WHRO-TV-310- Primary Transmission Line - 8 3/16" Broadband Rigid Copper
	<b>Amount:</b>		\$55,167.75
	<b>Component Description:</b>		Invoice to be resubmitted to LMS.
	<b>Amount:</b>		N/A
	<b>Component Description:</b>		Invoice to be resubmitted to LMS.
	<b>Amount:</b>		N/A
Combiner system	Information not provided.		

## Cost Information

### Tower Equipment and Rigging Costs

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
<b>Primary Tower GTOWER</b>	<b>\$610,887.50</b>	<b>\$281,887.50</b>		<b>\$175,878.24</b>	
Tower Construction Project Management	<i>\$7,187.50</i>	\$7,187.50	Please see American Towers Customer Project Cost Estimation	\$5,390.62	N/A
Complex Tower (includes, for example, those with candelabras and/or stacked antennas)	\$421,000.00	\$200,000.00	Shared cost of the broadcasters that are going to be repacked per American Tower Document WHRO IM Norfolk Tall Tower 10152 Repack Cost Estimates	\$121,250.12	N/A
Structural engineering tower load study for a documented tower with candelabra	\$20,000.00	\$20,000.00	Part of the total tower rebuild with 4 other broadcasters American Tower Document WHRO IM Norfolk Tall Tower 10152 Repack Cost Estimates	\$8,212.50	this included structural and tower mapping for structural

Tower Permit Drawing Package	<b>\$4,700.00</b>	\$4,700.00	Please see American Towers Customer Project Cost Estimation	\$3,525.00	N/A
Minor tower reinforcement /modifications	\$158,000.00	\$50,000.00	Shared cost with Other Broadcasters that are being repacked per ATC document WHRO IM Norfolk Tall Tower 10152 Repack Cost Estimates	\$37,500.00	N/A
<b>Sub-total</b>	\$610,887.50	\$281,887.50	N/A	\$175,878.24	N/A
<b>Total for all systems</b>	\$6,635,411.53	\$4,403,186.86	N/A	\$2,663,998.16	N/A

## Components

Actual Information	
Description	File Name
Tower Construction Project Management	<b>Component Description:</b>
	11. WHRO-TV-410-Existing Primary Tower-Tower Construction Project Management
	<b>Amount:</b>
	\$3,593.75
	<b>Component Description:</b>
	11. WHRO-TV-410-Existing Primary Tower - Tower Construction Project Management
	<b>Amount:</b>
	\$1,796.87

Complex Tower (includes, for example, those with candelabras and/or stacked antennas)		
	<b>Component Description:</b>	8. WHRO-TV-410-Existing Primary Tower - Tower Rigging, Complex Tower
	<b>Amount:</b>	\$40,416.70
	<b>Component Description:</b>	8. WHRO-TV-410-Existing Primary Tower - Tower Rigging, Complex Tower
	<b>Amount:</b>	\$80,833.42
	<b>Component Description:</b>	Invoice to be resubmitted to LMS.
	<b>Amount:</b>	N/A
	<b>Component Description:</b>	Invoice to be resubmitted to LMS.
	<b>Amount:</b>	N/A

Structural engineering tower load study for a documented tower with candelabra

**Component Description:**

6. WHRO-TV-410-Existing Primary Tower - Tower Load Study for Documented Tower with Candelabra  
**Amount:** \$5,475.00

**Component Description:**

6. WHRO-TV-410-Existing Primary Tower - Tower Load Study for Documented Tower with Candelabra  
**Amount:** \$2,737.50

**Component Description:**

Invoice to be resubmitted to LMS.  
**Amount:** N/A

**Component Description:**

Invoice to be resubmitted to LMS.  
**Amount:** N/A

Tower Permit Drawing Package	<b>Component Description:</b>	9. WHRO-TV-410-Existing Primary Tower - Tower Permit Drawing Package
	<b>Amount:</b>	\$1,175.00
	<b>Component Description:</b>	9. WHRO-TV-410-Existing Primary Tower - Tower Permit Drawing Package
	<b>Amount:</b>	\$2,350.00
Minor tower reinforcement /modifications	<b>Component Description:</b>	7. WHRO-TV-410-Existing Primary Tower - Minor Reinforcement /Modifications
	<b>Amount:</b>	\$25,000.00
	<b>Component Description:</b>	7. WHRO-TV-410-Existing Primary Tower - Minor Reinforcement /Modifications
	<b>Amount:</b>	\$12,500.00
	<b>Component Description:</b>	Invoice to be resubmitted to LMS.
	<b>Amount:</b>	N/A
	<b>Component Description:</b>	Invoice to be resubmitted to LMS.
	<b>Amount:</b>	N/A

## Cost Information

### Outside Professional Services

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
<b>Outside Professional Services</b>	<b>\$300,620.00</b>	<b>\$229,895.00</b>		<b>\$25,957.84</b>	
Ground and Building Drawing Package	<i>\$11,000.00</i>	\$11,000.00	Cost to Generate the Construction Drawing package for 4 Broadcast stations. Cover the interim and Main antenna packages	\$3,525.00	All of these were under Non Zoning Permit which have been Zeroed out but I can't remove them.
Site Coordination Meeting	<i>\$1,250.00</i>	\$1,250.00	Complex tower rebuild multiple Broadcaster involvement ATC Doc WHRO IM Norfolk Tall Tower 10152 Repack Cost Estimates	\$1,875.00	Complex tower with many broadcast to coordinate WTKR, WGNT, WTVZ-TV WHRO-TV



RF System Test	<b>\$5,000.00</b>	\$5,000.00	Perform systems checks on Combiner network due to the volume of broadcaster using the antenna ATC Doc WHRO IM Norfolk Tall Tower 10152 Repack Cost Estimates	\$3,750.00	N/A
Migratory Bird Assessment	<b>\$500.00</b>	\$500.00	estimated costs for being in a bird migration mitigation ATC DocWHRO IM Norfolk Tall Tower 10152 Repack Cost Estimates	\$437.49	N/A
RF Exposure Measurements	\$21,050.00	\$6,500.00	Shared Expense	N/A	N/A
Comprehensive coverage verification via field study, if needed	\$84,200.00	\$80,000.00	N/A	N/A	N/A
FAA consultant, including cost of preparing FAA Form 7460 (Notice of Proposed Construction), if needed for height increase	\$2,105.00	\$700.00	To reimburse American Tower if needed	N/A	N/A

ASR modification (prepare FCC Form 854)	\$2,105.00	\$800.00	Shared cost of the Broadcasters being repacked	N/A	N/A
Environmental Assessment, if triggered by NEPA Section 106 review or for certain structures over 450 feet	\$10,520.00	\$3,500.00	Per ATC Doc WHRO IM Norfolk Tall Tower 10152 Repack Cost Estimates	N/A	N/A
NEPA Section 106 environmental review, if needed	\$6,310.00	\$2,000.00	Per ATC Doc WHRO IM Norfolk Tall Tower 10152 Repack Cost Estimates	N/A	N/A
Attorney Fees - Prepare and File request for Special Temporary Authorization	\$3,680.00	\$3,500.00	N/A	N/A	N/A
Attorney Fees - Negotiation of lease and other matters for shared locations	\$4,210.00	\$4,000.00	N/A	N/A	N/A
Attorney Fees - Prepare and File FCC Form 2100 (main), License to Cover Application	\$2,365.00	\$2,250.00	N/A	N/A	N/A

Address transition timing and coordination issues w/ other stations and wireless	\$2,630.00	\$2,500.00	N/A	\$1,875.00	N/A
Prepare request for Special Temporary Authorization	\$2,050.00	\$1,500.00	N/A	N/A	N/A
Prepare and or review reimbursement form	\$2,630.00	\$2,500.00	N/A	N/A	N/A
Perform engineering study for new channel assignment and antenna development	\$7,360.00	\$7,000.00	N/A	\$3,750.00	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 engineering section of FCC Form 2100 (main), License to Cover Application	\$1,580.00	\$1,500.00	N/A	N/A	N/A
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	\$5,260.00	\$5,000.00	N/A	N/A	N/A

Project management of the transition	\$121,660.00	\$85,895.00	Shared Expense via American Tower Doc WHRO IM Norfolk Tall Tower 10152 Repack Cost Estimates. Also see Widelity Strategic Support Quote.	\$10,745.35	N/A
<b>Sub-total</b>	\$300,620.00	\$229,895.00	N/A	\$25,957.84	N/A
<b>Total for all systems</b>	\$6,635,411.53	\$4,403,186.86	N/A	\$2,663,998.16	N/A

## Components

Actual Information	
Description	File Name

Ground and Building  
Drawing Package

**Component Description:** 10. WHRO-TV-  
590-Ground and  
Building Drawing  
Package  
**Amount:** \$1,175.00

**Component Description:** 10. WHRO-TV-  
590-Ground and  
Building Drawing  
Package  
**Amount:** \$2,350.00

**Component Description:** Invoice to be  
resubmitted to  
LMS.  
**Amount:** N/A

**Component Description:** Invoice to be  
resubmitted to  
LMS.  
**Amount:** N/A

**Component Description:** Invoice to be  
resubmitted to  
LMS.  
**Amount:** N/A

**Component Description:** Invoice to be  
resubmitted to  
LMS.  
**Amount:** N/A

Site Coordination Meeting		
	<b>Component Description:</b>	15. WHRO-TV-590-Site Coordination Meeting
	<b>Amount:</b>	\$1,250.00
	<b>Component Description:</b>	15. WHRO-TV-590-Site Coordination Meeting
	<b>Amount:</b>	\$625.00
	<b>Component Description:</b>	Invoice to be resubmitted to LMS.
	<b>Amount:</b>	N/A
	<b>Component Description:</b>	Invoice to be resubmitted to LMS.
	<b>Amount:</b>	N/A

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RF System Test

**Component Description:** 17. WHRO-TV-  
580-Field  
Engineering  
Service - RF  
System Test

**Amount:** \$2,500.00

**Component Description:** 17. WHRO-TV-  
580-Field  
Engineering  
Service - RF  
System Test

**Amount:** \$1,250.00

**Component Description:** Invoice to be  
resubmitted to  
LMS.

**Amount:** N/A

**Component Description:** Invoice to be  
resubmitted to  
LMS.

**Amount:** N/A

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Migratory Bird Assessment	<b>Component Description:</b>	16. WHRO-TV-590-Migratory Bird Assessment
	<b>Amount:</b>	\$145.83
	<b>Component Description:</b>	16. WHRO-TV-590-Migratory Bird Assessment
	<b>Amount:</b>	\$291.66
	<b>Component Description:</b>	Invoice to be resubmitted to LMS.
	<b>Amount:</b>	N/A
	<b>Component Description:</b>	Invoice to be resubmitted to LMS.
	<b>Amount:</b>	N/A
RF Exposure Measurements	Information not provided.	
Comprehensive coverage verification via field study, if needed	Information not provided.	
FAA consultant, including cost of preparing FAA Form 7460 (Notice of Proposed Construction), if needed for height increase	Information not provided.	
ASR modification (prepare FCC Form 854)	Information not provided.	
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.	



Attorney Fees - Prepare and File request for Special Temporary Authorization	Information not provided.																
Attorney Fees - Negotiation of lease and other matters for shared locations	Information not provided.																
Attorney Fees -Prepare and File FCC Form 2100 (main), License to Cover Application	Information not provided.																
Address transition timing and coordination issues w/ other stations and wireless	<table> <tr> <td><b>Component Description:</b></td><td>13. WHRO-TV-590-Transition Timing and Coordination Issues</td></tr> <tr> <td><b>Amount:</b></td><td>\$625.00</td></tr> <tr> <td><b>Component Description:</b></td><td>13. WHRO-TV-590-Transition Timing and Coordination Issues</td></tr> <tr> <td><b>Amount:</b></td><td>\$1,250.00</td></tr> <tr> <td><b>Component Description:</b></td><td>Invoice to be resubmitted to LMS.</td></tr> <tr> <td><b>Amount:</b></td><td>N/A</td></tr> <tr> <td><b>Component Description:</b></td><td>Invoice to be resubmitted to LMS.</td></tr> <tr> <td><b>Amount:</b></td><td>N/A</td></tr> </table>	<b>Component Description:</b>	13. WHRO-TV-590-Transition Timing and Coordination Issues	<b>Amount:</b>	\$625.00	<b>Component Description:</b>	13. WHRO-TV-590-Transition Timing and Coordination Issues	<b>Amount:</b>	\$1,250.00	<b>Component Description:</b>	Invoice to be resubmitted to LMS.	<b>Amount:</b>	N/A	<b>Component Description:</b>	Invoice to be resubmitted to LMS.	<b>Amount:</b>	N/A
<b>Component Description:</b>	13. WHRO-TV-590-Transition Timing and Coordination Issues																
<b>Amount:</b>	\$625.00																
<b>Component Description:</b>	13. WHRO-TV-590-Transition Timing and Coordination Issues																
<b>Amount:</b>	\$1,250.00																
<b>Component Description:</b>	Invoice to be resubmitted to LMS.																
<b>Amount:</b>	N/A																
<b>Component Description:</b>	Invoice to be resubmitted to LMS.																
<b>Amount:</b>	N/A																
Prepare request for Special Temporary Authorization	Information not provided.																
Prepare and or review reimbursement form	Information not provided.																

Perform engineering study for new channel assignment and antenna development	<b>Component Description:</b> 14. WHRO-TV-530-RF Eng - Engineering Study for New Channel Assignment <b>Amount:</b> \$2,500.00
	<b>Component Description:</b> 14. WHRO-TV-530-RF Eng - Engineering Study for New Channel Assignment <b>Amount:</b> \$1,250.00
	<b>Component Description:</b> Invoice to be resubmitted to LMS. <b>Amount:</b> N/A
	<b>Component Description:</b> Invoice to be resubmitted to LMS. <b>Amount:</b> N/A
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.
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	Information not provided.

Project management of the transition

**Component Description:** 12. WHRO-TV-510-Project Management  
**Amount:** \$2,370.00

**Component Description:** 12. WHRO-TV-510-Project Management  
**Amount:** \$4,740.00

**Component Description:** Project Management  
**Amount:** \$3,635.35

**Component Description:** Invoice to be resubmitted to LMS.  
**Amount:** N/A

**Component Description:** Invoice to be resubmitted to LMS.  
**Amount:** N/A

**Component Description:** Invoice to be resubmitted to LMS.  
**Amount:** N/A

**Component Description:** Invoice to be resubmitted to LMS.  
**Amount:** N/A

Cost  
Information

Other Expenses

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Other Expenses	\$172,930.00	\$172,365.00		\$20,904.35	
Special Insurance Rider	<i>\$2,500.00</i>	\$2,500.00	Special insurance Rider to cover the costs of the homes that are within 2000 ft of the tower. ATC owes the tower WHRO Owns all the Land. ATC Lease the Base, Anchors and Building land from WHRO	N/A	N/A

Site Security	<b>\$16,200.00</b>	\$16,200.00	Very complicated site installation. lots o expensive materials lying around very easy to steal. The compound is gated but access under ditch area is possible	N/A	N/A
Public Hearing	<b>\$500.00</b>	\$500.00	Costs associated with Public hearing materials sent to surrounding homes, newspapers ETC.	N/A	N/A
Grading Road	<b>\$4,500.00</b>	\$4,500.00	Regrading drive access to the site for at least 1 year	N/A	N/A
ATC One Time Tower Rental	<b>\$57,600.00</b>	\$57,600.00	Rental Fee associated with repacking for the Interim antenna	N/A	N/A

Comark System Design and Site Survey	<b>\$15,300.00</b>	\$15,300.00	This is to visit the tower site location and design the transmitter installation locations and RF plumbing of the system.	\$15,300.00	See P3921E WHRO Site design and Survey quote.
Develop and air announcement of upcoming channel change	<b>\$15,000.00</b>	\$15,000.00	N/A	N/A	N/A
Equipment Storage	<b>\$24,000.00</b>	\$24,000.00	N/A	N/A	N/A
Disposal Costs (for equipment and other waste, net of any salvage value)	<b>\$3,500.00</b>	\$3,500.00	N/A	N/A	N/A
BLM or NFS Coordination	<b>\$2,000.00</b>	\$2,000.00	N/A	N/A	N/A
MVPD Notification of Channel Change	<b>\$500.00</b>	\$500.00	N/A	N/A	N/A
Equipment Delivery and Handling Charges	<b>\$12,500.00</b>	\$12,500.00	N/A	\$5,041.85	N/A
DTV Medical Facility Notification	\$11,550.00	\$11,000.00	N/A	N/A	N/A
Local Zoning	<b>\$1,750.00</b>	\$1,750.00	N/A	\$0.00	N/A

FCC Filing Fees - Form 2100 license to cover application	\$335.00	\$325.00	N/A	N/A	N/A
FCC Filing Fees - Special Temporary Authorization request	\$195.00	\$190.00	N/A	N/A	N/A
Non-zoning permits	\$5,000.00	\$5,000.00	N/A	\$562.50	Includes multiple broadcasters coordination
<b>Sub-total</b>	\$172,930.00	\$172,365.00	N/A	\$20,904.35	N/A
<b>Total for all systems</b>	\$6,635,411.53	\$4,403,186.86	N/A	\$2,663,998.16	N/A

## Components

Actual Information	
Description	File Name
Special Insurance Rider	Information not provided.
Site Security	Information not provided.
Public Hearing	Information not provided.
Grading Road	Information not provided.
ATC One Time Tower Rental	Information not provided.
Comark System Design and Site Survey	<div> <b>Component Description:</b> Invoice to be resubmitted to LMS.  <b>Amount:</b> N/A </div> <div> <b>Component Description:</b> System Design Service / Site Survey  <b>Amount:</b> \$15,300.00 </div>

Develop and air announcement of upcoming channel change	Information not provided.
Equipment Storage	Information not provided.
Disposal Costs (for equipment and other waste, net of any salvage value)	Information not provided.
BLM or NFS Coordination	Information not provided.
MVPD Notification of Channel Change	Information not provided.



Equipment Delivery and Handling Charges	<div> <b>Component Description:</b> 19. WHRO-TV-610-Equipment Delivery and Handling</div> <div> <b>Amount:</b> \$1,666.66</div>
	<div> <b>Component Description:</b> 19. WHRO-TV-610-Equipment Delivery and Handling</div> <div> <b>Amount:</b> \$3,333.33</div>
	<div> <b>Component Description:</b> Dielectric Freight Charges for invoice 637004. Cover letter for Dielectric Shipping is located in the Attachments</div> <div> <b>Amount:</b> \$41.86</div>
	<div> <b>Component Description:</b> Invoice to be resubmitted to LMS.</div> <div> <b>Amount:</b> N/A</div>
	<div> <b>Component Description:</b> ATC MS1 1-A-4 at 25% of total</div> <div> <b>Amount:</b> N/A</div>
DTV Medical Facility Notification	Information not provided.

Local Zoning	<div> <div> <b>Component Description:</b>   <b>Amount:</b> </div> <div> Invoice to be resubmitted to LMS. N/A </div> </div> <div> <div> <b>Component Description:</b>   <b>Amount:</b> </div> <div> ATC MS2 item 1-A-3 permit costs Additional 50% payment 25% remaining N/A </div> </div>
FCC Filing Fees - Form 2100 license to cover application	Information not provided.
FCC Filing Fees - Special Temporary Authorization request	Information not provided.

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Non-zoning permits

**Component Description:** 18. WHRO-TV-  
610-Non-Zoning  
Permits  
**Amount:** \$375.00

**Component Description:** 18. WHRO-TV-  
610-Non-Zoning  
Permits  
**Amount:** \$187.50

**Component Description:** ATC MS2 item 3-  
D-1 Tower Permit  
additional 50%  
payment 25%  
remaining  
**Amount:** N/A

**Component Description:** 3-D-1 Tower  
Permits drawing  
package  
**Amount:** N/A

**Component Description:** 3-D-1 Ground and  
building permit  
package MS1 at  
25% of total  
**Amount:** N/A

**Component Description:** ATC MS2 3-D-1  
Ground and  
building Permit  
additional 50%  
payment 25%  
remaining  
**Amount:** N/A

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<b>Cost Information</b>	<b>Grand Total</b>		
		<b>Predetermined Cost Estimate</b>	<b>Estimated Cost</b>
			<b>Actual Cost</b>
	<b>Total for all systems</b>	\$6,635,411.53	\$4,403,186.86
			\$2,663,998.16

<b>Reimbursement Status</b>	<b>Question</b>	<b>Response</b>
	The facility has ceased operating on its pre-auction channel.	Yes
	Construction of final facilities or all necessary modifications are complete.	Yes
	All receipts for reimbursement have been submitted no further costs are expected to be incurred. Note this will lock the Form 399 from further editing and begin close-out procedures with the Fund Administrator.	No

Certification	Section	Question	Response
	Submission of Estimated Expenses Statements	<p>WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND /OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a) (1), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503), AND ANY FALSE STATEMENTS COULD SUBJECT THIS ENTITY TO LIABILITY UNDER THE FALSE CLAIMS ACT.</p>	
		<ol style="list-style-type: none"> <li>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.</li> <li>2. The above-named entity acknowledges that all certifications and attached documentation are considered material representations.</li> <li>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.</li> </ol>	

4. The above-named entity certifies that the equipment and services paid for with money from the TV Broadcaster Relocation Fund are necessary to change channels (broadcasters) or to continue to carry the signal of a broadcaster that changes channels (MVPD).
5. The above-named entity certifies that all payments from the TV Broadcaster Relocation Fund (Fund) received by the entity listed on this form will be used only for expenses that are eligible for reimbursement from the Fund.
6. The above-named entity certifies that it will maintain and provide to the Commission detailed records, including receipts, of all costs eligible for reimbursement actually incurred.
7. The above-named entity acknowledges that overpayments or payments in error must be promptly refunded to the Commission.

<p>8. The above-named entity certifies that it is in full compliance with all statutes, rules, regulations and governmental requirements for which compliance is a pre-requisite for obtaining the payments herein requested.</p>	
<p>I declare, under penalty of perjury, that I am an authorized representative of the above-named applicant for the Authorization(s) specified above.</p>	<p><b>Chris Gunnar Gunnufsen</b>  <i>Vice President Technology</i>  02/11/2021</p>

Certification	Section	Question	Response
	Submission of Actual Cost Documentation Statements	WILLFUL FALSE, FRAUDULENT, OR FICTITIOUS STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND /OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a) (1), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503), AND ANY FALSE AND/OR FRAUDULENT STATEMENTS COULD SUBJECT THIS ENTITY TO LIABILITY UNDER THE FALSE CLAIMS ACT (U.S. CODE, TITLE 31, SECTIONS 3729-3733).	
		<ol style="list-style-type: none"> <li>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.</li> <li>2. The above-named entity certifies that the statements in this form and attached documentation are true, complete, and correct.</li> <li>3. The above-named entity acknowledges that all certifications and attached documentation are considered material representations.</li> </ol>	



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

<p>8. The above-named entity acknowledges that overpayments or payments in error must be promptly refunded to the Commission.</p> <p>9. The above-named entity certifies that it is in full compliance with all statutes, rules, regulations and governmental requirements for which compliance is a prerequisite for obtaining the payments herein requested.</p>	
<p>I declare, under penalty of perjury, that I am an authorized representative of the above-named applicant for the Authorization(s) specified above.</p>	<p><b>Chris Gunnar Gunnufsen</b>  <i>Vice President Technology</i></p> <p>02/11/2021</p>

Certification	Section	Question	Response
	Submission of Final Allocation or Accounting Information Statements	<p>WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND /OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a) (1), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503), AND ANY FALSE STATEMENTS COULD SUBJECT THIS ENTITY TO LIABILITY UNDER THE FALSE CLAIMS ACT.</p>	
		<ol style="list-style-type: none"> <li>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 acknowledges that all certifications and attached documentation are considered material representations.</li> <li>2. The above-named entity acknowledges the submission of the information herein creates no obligation on the part of the government to pay any amount.</li> </ol>	

3. The above-named entity certifies that all costs identified as "actual costs" herein accurately represent the costs actually paid by the above-named entity, including any discounts, refunds, or rebates.
4. 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.
5. The above-named entity acknowledges that overpayments or payments in error must be promptly refunded to the Commission.
6. 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.

**Chris  
Gunnar  
Gunnufsen**  
*Vice  
President  
Technology*

02/11/2021

**Attachments**