

(REFERENCE COPY - Not for submission)

FCC Form 399: Reimbursement Request

25932 Service: DTV WHRO-TV Channel: 31 (UHF) Facility Call Sign:

File 0000027736

Number:

ID:

FRN: 0002062511 Date 07/07

> 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 Name and Information Reimbursement Contact Information

Applicant	Address	Phone	Email
[Confidential]			

Preparer Contact Information

Preparer Contact Name and Information

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

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	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

Transmitters

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

Wide Band interim antenna side mounted

on the tower 987'

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	
Manufacturer and Type	Model	DCX Millenium
	Year	2001
	Туре	Inductive Output Tube
	IOT Power Type	Two
	Power Capacity	60 kW

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

Other Transmitter Costs

Section	Question	Response
Electrical Service	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
HVAC Service	Does the replacement transmitter require HVAC Service?	Yes
	Туре	Cooling Only
	Size	25 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

Other Transmitter Cost Not Listed

Name	Description
Primary Transmitter - Demo Old Duct Work	Primary Transmitter - Demo Old Duct Work

Antennas

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

Primary Antenna

Existing Antenna Information

Section	Question	Response
Existing Antenna Description	Type of change	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
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)	1000.0 kW
	Manufacturer	

Model	TFU- 24GBH-R 08SP
Year	2000

Primary Antenna

New Antenna Costs

Section	Question	Response
New Antenna Description	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
New Antenna Manufacturer and Types	Class	Full Power
	Mounting	Top Mount
	Antenna position in stack	Not in Stack
	Polarization	Elliptical
	Туре	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
Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	Yes
	Туре	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
Elbow Complex	Do you require the separate purchase of the Elbow Complex?	Yes
	Broadband or Single Channel?	Broadband
	Feed Line Size	8 3/16 inches inches
Side Mount Brackets	Do you require the separate purchase of side mount brackets for a high power antenna?	
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	
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

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

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
Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	Yes
	Туре	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
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	
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
Interim Antenna - New Combiner Installation	Interim Antenna - New Combiner Installation

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	Type of change	Lease New
Line Description	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
Existing Transmission Line Manufacturer and Type	Manufacturer	
	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	1307 feet per run

Primary Transmission

New Transmission Line

n Line Section	Question	Response
New Transmission Line Costs	Use	Primary (Main)
	Description of Use	N/A
	Change Type	Lease New
	Is this a request for upgraded equipment?	No
	Туре	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

rimary

Other Transmission Line Expenses Not Listed

Primary			
Transmission	n Line Name	Description	
	Combiner system	Combiner system for shared Broadband antenna	
	Primary Transmission Line - Nitrogen Generator	Primary Transmission Line - Nitrogen Generator	
	Primary Transmission Line - Other Parts	Primary Transmission Line - Other Parts	

New Transmission Line

Interim	
Transmission	1

n Line Section	Question	Response
New Transmission Line	Use	Interim
Costs	Description of Use	N/A
	Change Type	Purchase New
	Туре	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

Other Transmission Line Expenses Not Listed

n Line	Description
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.
Interim Transmission Line - Nitrogen Generator	Interim Transmission Line - Nitrogen Generator
Interim Transmission Line - Other Parts	Interim Transmission Line - Other Parts
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.

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	Do you have a tower registration number?	Yes
Structure Registration	ASR Number	1057874
Coordinates (NAD83 (Latitude (NAD83)	36° 48' 31.8" N-
North American Datum of 1983))	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
82574	WTPC-TV	DTV
9762	WGNT	DTV
47401	WTKR	DTV
67077	WPXV-TV	DTV
40759	WTVZ-TV	DTV
25940	WHRO-FM	FM
25932	WHRO-TV	DTV
25933	WHRV	FM

Primary Tower

Tower Modification Costs

Section	Question	Response
Engineering Study	Please what type of engineering study is required, if any:	Study needed for tower with candelabra
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?	Yes

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

Costs associated with American Tower Corporation This is a very complicated site and wil require Project manageme from all Broadcaste collocated on the towe Est is base on Previous conversion to digital in 2001 Outside RF consulting Engineering Services Perform engineering study for new channel assignment and antenna development Prepare engineering section of Form FCC Construction Permit Application Yes	Section	Question	Response
Explanation This is for the project manageme costs associated with American Tower Corporation This is a very complicate site and will require Project manageme from all Broadcaste collocated on the towe Est is base on Previous conversion to digital in 2001 Outside RF consulting Engineering Services Perform engineering study for new channel assignment and antenna development Prepare engineering section of Form FCC Construction Permit Application This is for the project manageme from the project manageme from all broadcaste collocated on the towe Est is base on Previous conversion to digital in 2001 Ves			Yes
the project manageme costs associated with American Tower Corporation This is a very complicate site and wil require Project manageme from all Broadcaste collocated on the towe Est is base on Previous conversion to digital in 2001 Outside RF consulting Engineering Services Perform engineering study for new channel assignment and antenna development Prepare engineering section of Form FCC Construction Permit Application Yes		Number of Hours	770
Engineering Services assignment and antenna development Prepare engineering section of Form FCC Construction Permit Application Yes		Explanation	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
Construction Permit Application	=		Yes
			Yes
For Auxiliary Facility No		For Auxiliary Facility	No
For Main Facility Yes		For Main Facility	Yes
Prepare engineering section of Form FCC License to Cover Application Yes			Yes
For Auxiliary Facility No		For Auxiliary Facility	No
For Main Facility Yes		For Main Facility	Yes

	Prepare request for Special Temporary Authority	Yes
	Quantity	1
	Do you have Distributed Transmission System engineering services?	N/A
	Critical Facility	N/A
	Terrain-Shielded Facility	N/A
Attorney and Other Outside Consulting	Prepare and file Form FCC Construction Permit Application	Yes
Services	For Auxiliary Facility	No
	For Main Facility	Yes
	Prepare and file Form FCC License to Cover Application	Yes
	For Auxiliary Facility	No
	For Main Facility	Yes
	Prepare request for Special Temporary Authority	Yes
	Quantity	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
RF Field Engineering Services	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

Other Professional Services Expenses Not Listed

Services Costs	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
AM Pattern Disturbance	Is an Impact Study needed?	No
	Is Remediation needed?	No
Facility Expenses	Name	N/A
	Other Distributed Transmission System Expenses Not listed	N/A
	Name	N/A
	Is Notification of a Medical Facility required as a result of DTV broadcasting?	Yes
Permit and Filing Costs	Local Zoning	Yes
	Non-zoning permits	Yes
	BLM or NFS Coordination	Yes
	FCC Construction Permit Minor Change	No
	FCC License to Cover Application	Yes
	FCC Special Temporary Authority Application	Yes
Other Miscellaneous Expenses	Does this relocation require paying Disposal Costs (for equipment and other waste, net of any salvage value)?	Yes
	Does this relocation require Equipment Delivery or Handling Charges not otherwise included in individual item costs?	Yes
	Does this relocation require Equipment Storage?	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
Special Insurance Rider	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
Comark System Design and Site Survey	Cost associated with Hitachi Comark to do a site visit and design for the Transmitter installation
ATC One Time Tower Rental	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
Grading Road	The Gravel Road Will be destroyed during the repacking andwill require several Gradings during the process due to the complexity of the site and total number of broadcasters impacted
Public Hearing	Cost associated with Public hearings that might be required due to the repacking process and proximity of houses located around the tower
Site Security	Site Security Company during construction for theft prevention and vandalism

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	Cost Justification	Actual Cost	Actual Cost Justification
Primary Transmitter HPTV PRLX- U36	\$2,201,596.06	\$2,551,551.39		\$1,976,620.39	
Primary Transmitter - Demo Old Duct Work	\$1,717.39	\$1,717.39	Please see WHRO-TV Primary Transmitter - Demo Old Duct Work Budget Revision Justification Letter.pdf	\$1,717.39	N/A
Other Building Addition Size: 1500.0	\$3,478.67	\$3,478.67	Please see American Tower WHRO Main Norfolk Tall Tower 10152 Customer Project Cost Estimation.	\$3,478.67	N/A
25 Ton system	\$91,500.00	\$12,734.33	Please see American Tower WHRO Main Norfolk Tall Tower 10152 Customer Project Cost Estimation.	\$12,734.33	N/A

Switchgear - industrial 800 amp	\$38,200.00	\$36,300.00	N/A	\$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.
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
Other Electrical Service: Installation of Transmitter Electrical systems	\$200,000.00	\$200,000.00	N/A	\$0.00	N/A

UHF -	\$1,788,000.00	\$1,992,120.00	Includes	\$1,958,690.00	N/A
Liquid			342,120		
Cooled			dollars for		
Solid State			the RFS 6		
Transmitter			pole filter		
52 - 61 kW			and		
			switches to		
			change		
			from the		
			interim		
			antenna to		
			the main		
			antenna		
Sub-total	\$2,201,596.06	\$2,551,551.39	N/A	\$1,976,620.39	N/A
Total for all systems	\$6,805,726.06	\$4,765,103.05	N/A	\$3,636,602.59	N/A

Components

Actual Information Description	File Name	
Primary Transmitter - Demo Old Duct Work	Component Description: Amount:	Sheet Metal \$1,717.39
Other Building Addition Size: 1500.0	Component Description: Amount:	1. WHRO-TV-110- 1st Primary Transmitter - Building Addition, 1500 sq. ft. \$3,478.67
25 Ton system	Component Description: Amount:	CAPITAL CONTRIBUTION - NORFOLK TALL TOWER \$12,734.33
Other Electrical Service: Installation of Transmitter Electrical systems	Information not provided.	

4" Rigid Conduit and Wiring (Cost per foot)	Information not provided.	
Transformer 3 phase/480v - 500 KVA	Component Description:	ANNUAL PREVENTIVE MAINTENANCE M-
	Amount:	F 8am TO 5pm \$276,401.00
	Component Description: Amount:	Invoice to be resubmitted to LMS. N/A
Switchgear - industrial 800	Information not provided.	IV/A
amp UHF - Liquid Cooled Solid		
State Transmitter 52 - 61 kW	Component Description:	Parallax 58kW Liquid Cooled Digital Transmitter
	Amount:	\$881,410.50
	Component Description:	Parallax 58kW Liquid Cooled
	Amount:	Digital Transmitter \$979,345.00
	Component Description:	Invoice to be
	Amount:	resubmitted to LMS. N/A
	Component Description:	Parallax 58kW
	Amount:	liquid cooled digital \$97,934.50
	Component Description:	Invoice to be
	Amount:	resubmitted to LMS. N/A

Cost Information

Antennas

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Interim Antenna SBB-EPD- 24 C160	\$440,476.60	\$312,725.93		\$252,142.59	
Interim Antenna - New Combiner Installation	\$9,681.60	\$9,681.60	Please see American Tower WHRO Main Norfolk Tall Tower 10152 Customer Project Cost Estimation.	\$9,681.60	N/A
Interim Tower Rental	\$57,600.00	\$57,600.00	Interim antenna Tower rental during repack	\$57,600.00	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
Elbow complex, broadband, at antenna input, per 7 3/16. feedline (if needed)	\$16,850.00	\$5,851.20	Please see WHRO American Tower quote Main Norfolk Tall Tower 10152	\$5,851.20	N/A

New combiner, cost per channel (without antenna)	\$84,200.00	\$56,494.80	see Estimated Cost Justification WHRO-TV- 280-Interim Antenna - New Combiner v0	\$56,494.80	Combiner 25 % payment
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
UHF - High Power, Side Mount, basic slot antenna, 24 bay,, 60 - 65 kW input, directional,, elliptically or circularly polarized	\$116,265.00	\$116,265.00	Please see American Tower WHRO Main Norfolk Tall Tower 10152 Customer Project Cost Estimation.	\$116,265.00	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
Primary Antenna PEP70E-05- 2-T	\$1,339,213.33	\$421,883.33		\$270,665.96	
Elbow complex, broadband, at antenna input, per 8 3/16. feedline (if needed)	\$18,950.00	\$12,000.00	N/A	\$10,021.66	N/A
Combiner output splitting /switching for dual feed lines, if applicable	\$126,000.00	\$126,000.00	N/A	\$0.00	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	\$180,054.33	N/A

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	\$65,589.98	N/A
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	\$5,000.00	N/A
Sub-total	\$1,779,689.93	\$734,609.26	N/A	\$522,808.55	N/A
Total for all systems	\$6,805,726.06	\$4,765,103.05	N/A	\$3,636,602.59	N/A

Components

Actual Information Description	File Name	
Interim Antenna - New Combiner Installation	Component Description:	25. WHRO-TV-280- Interim Antenna - New Combiner
	Amount:	Installation \$9,681.60

Interim Tower Rental		
	Component Description:	26. WHRO-TV-280- Interim Antenna -
	Amount:	Interim Tower Renta \$14,400.00
	Component Description:	23. WHRO-TV-280-
		Interim Antenna - Interim Tower Rental
	Amount:	\$28,800.00
	Component Description:	Invoice to be
	Amount:	resubmitted to LMS. N/A
	Component Description:	Invoice to be
	Amount:	resubmitted to LMS. N/A
	Component Description:	23. WHRO-TV-280-
		Interim Antenna - Interim Tower
	Amount:	Rental \$14,400.00
Side mount brackets for high power antennas (if not included in antenna	Information not provided.	

Elbow complex, broadband, at antenna input, per 7 3/16. feedline (if needed)

Component Description: 24. WHRO-TV-280-

Interim Antenna - 7 3/16" Broadband Elbow Complex

Amount: \$2,851.20

Component Description: 3. WHRO-TV-280-

Interim Antenna - 7 3/16" Broadband Elbow Complex

Amount: \$1,000.00

Component Description: 3. WHRO-TV-280-

Interim Antenna - 7 3/16" Broadband Elbow Complex

Amount: \$2,000.00

New combiner, cost per channel (without antenna)

Component Description: 21. WHRO-TV-280-

Interim Antenna -New Combiner

Amount: \$11,000.00

Component Description: 21. WHRO-TV-280-

Interim Antenna -New Combiner

Amount: \$22,000.00

Component Description: 23. WHRO-TV-280-

Interim Antenna -New Combiner \$23,494.80

Amount: \$23,494.80

Component Description: Invoice to be

resubmitted to LMS.

Amount: N/A

Component Description: Invoice to be

resubmitted to LMS.

Sweep test of existing antenna

Component Description: 22. WHRO-TV-280-

Interim Antenna -

Sweep Test

Amount: \$4,166.66

Component Description: Invoice to be

resubmitted to LMS.

Amount: N/A

Component Description: Invoice to be

resubmitted to LMS.

Amount: N/A

Component Description: 22. WHRO-TV-280-

Interim Antenna -

Sweep Test

Amount: \$2,083.33

UHF - High Power, Side Mount, basic slot antenna, 20. WHRO-TV-280-**Component Description:** 24 bay,, 60 - 65 kW input, Interim Antenna directional,, elliptically or **UHF High Power** circularly polarized Side Mount, Directional, E-POL Amount: \$15,000.00 **Component Description:** 20. WHRO-TV-280-Interim Antenna-**UHF High Power** Side Mount, Directional, E-POL \$30,000.00 Amount: **Component Description:** 22. WHRO-TV-280-Interim Antenna -**UHF High Power** Side Mount, Directional, E-POL Amount: \$71,265.00 **Component Description:** Invoice to be resubmitted to LMS. Amount: N/A **Component Description:** Invoice to be

resubmitted to LMS.

N/A

Combiner output splitting /switching for dual feed lines, if applicable

Information not provided.

Amount:

Elbow complex, broadband, at antenna 4. WHRO-TV-210-**Component Description:** input, per 8 3/16. feedline Primary Antenna - 8 (if needed) 3/16" Broadband **Elbow Complex** Amount: \$3,000.00 **Component Description:** 4. WHRO-TV-210-Primary Antenna - 8 3/16" Broadband **Elbow Complex** Amount: \$6,000.00 **Component Description:** 5. WHRO-TV-210-Primary Antenna - 8 3/16" Broadband **Elbow Complex** Amount: \$1,021.66 **Component Description:** Invoice to be

resubmitted to LMS.

Amount: N/A

Component Description: Invoice to be

resubmitted to LMS.

Amount: N/A

Combiner output splitting /switching for dual feed lines, if applicable

Information not provided.

UHF - High Power Top Mount (200-1000 kW), Four Station broadband panel antenna, elliptically or circularly polarized

Component Description: CAPITAL

> **CONTRIBUTION -**NORFOLK TALL

TOWER

Amount: \$49,537.50

Component Description: 2. WHRO-TV-210-

> Primary Antenna -**UHF High Power** Top Mount, 4 Station Broadband,

E-POL

Amount: \$31,441.83

Component Description: CAPITAL

> **CONTRIBUTION -NORFOLK TALL**

TOWER

Amount: \$99,075.00

Component Description: Invoice to be

resubmitted to LMS.

Amount: N/A

Component Description: Invoice to be

resubmitted to LMS.

Combiner Installation		
	Component Description:	2. WHRO-TV-210-
		Primary Antenna -
		Combiner
		Installation
	Amount:	\$6,666.66
		4 -3,
	Component Description:	2. WHRO-TV-210-
	Component Besonption.	Primary Antenna -
		Combiner
		Installation
	Amount:	\$3,333.33
	Allount	ψ0,000.00
	Component Description:	Invoice to be
		resubmitted to LMS.
	Amount:	N/A
	Component Description:	Invoice to be
		resubmitted to LMS.
	Amount:	N/A

New combiner, cost per channel (without antenna)		
manner (without antenna)	Component Description:	1. WHRO-TV-210-
		Primary Antenna -
		New Combiner
	Amount:	\$33,000.00
	Component Description:	3. WHRO-TV-210-
		Primary Antenna -
		New Combiner
	Amount:	\$16,089.98
	Component Description:	Invoice to be
		resubmitted to LMS.
	Amount:	N/A
	Component Description:	1. WHRO-TV-210-
	Compension Decempes	Primary Antenna -
		New Combiner
	Amount:	\$16,500.00
	Component Description:	Invoice to be
		resubmitted to LMS.
	Amount:	N/A
Sweep test of existing		
antenna	Component Description:	4. WHRO-TV-210-
		Primary Antenna -
		Sweep Test
	Amount:	\$5,000.00

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	\$499,772.02	\$203,372.02		\$176,077.82	
Transmission line interim	\$0.00	\$0.00	these costs are included in the Interim Transmission Line - Rigid Transmission Line budget category	\$0.00	N/A
Interim Transmission Line - Other Parts	\$29,750.32	\$29,750.32	Please see Estimated Cost Justification WHRO-TV- 380-Interim Transmission Line - Other Parts v0	\$29,750.32	N/A
Interim Transmission Line - Nitrogen Generator	\$2,391.00	\$2,391.00	Please see American Tower WHRO Main Norfolk Tall Tower 10152 Customer Project Cost Estimation at 50% of the cost, per the vendor	\$2,391.00	N/A

Elbows	\$28,730.70	\$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 origina quote
Rigid Transmission Line - copper, 8 3 /16" broadband	\$438,900.00	\$142,500.00	see WHRO American Tower quote Main Norfolk Tall Tower 10152, second section - Norfolk Tall Tower 10152	\$142,500.00	N/A
Primary Transmission Line	\$1,162,746.37	\$359,889.37		\$359,889.37	
Rigid Transmission Line - copper, 8 3 /16" broadband	\$1,077,300.00	\$274,443.00	Please see Estimated Cost Justification WHRO-TV- 310-Primary Transmission Line - 8 3_16_ Broadband Rigid Copper v0	\$274,443.00	N/A
Primary Transmission Line - Other Parts	\$7,321.22	\$7,321.22	Please see Estimated Cost Justification WHRO-TV- 310-Primary Transmission Line - Other Parts v0	\$7,321.22	N/A

Primary Transmission Line - Nitrogen Generator \$2,391.00 \$2,391.00 Please see American Tower WHRO Main Norfolk Tall Tower 10152 Customer Project Cost Estimation at 50% of the cost, per the vendor \$75,734.15 \$75,734.15 Please see WHRO 1931009 Order Confirmation - Primary Transmission Line - Combiner System \$75,734.15 N/A Sub-total \$1,662,518.39 \$563,261.39 N/A \$535,967.19 N/A Total for all systems \$6,805,726.06 \$4,765,103.05 N/A \$3,636,602.59 N/A						
Sub-total \$1,662,518.39 \$563,261.39 N/A \$3,636,602.59 N/A Total for all \$6,805,726.06 \$4,765,103.05 N/A \$3,636,602.59 N/A	Transmission Line - Nitrogen	\$2,391.00	\$2,391.00	American Tower WHRO Main Norfolk Tall Tower 10152 Customer Project Cost Estimation at 50% of the cost, per the	\$2,391.00	N/A
Total for all \$6,805,726.06 \$4,765,103.05 N/A \$3,636,602.59 N/A		\$75,734.15	\$75,734.15	WHRO 1931009 Order Confirmation - Primary Transmission Line - Combiner	\$75,734.15	N/A
¥-,,	Sub-total	\$1,662,518.39	\$563,261.39	N/A	\$535,967.19	N/A
		\$6,805,726.06	\$4,765,103.05	N/A	\$3,636,602.59	N/A

Components

Actual Information Description	File Name	
Transmission line interim	Component Description: Amount:	Invoice to be resubmitted to LMS. N/A
	Component Description: Amount:	Invoice to be resubmitted to LMS. N/A

Interim Transmission Line - Other Parts		
	Component Description:	WHRO-TV-380- Interim
		Transmission Line -
	Amount:	Other Parts \$11.62
	7 1110 21111	¥
	Component Description:	RIGID
		TRANSMISSION LINE
	Amount:	\$29,738.70
		·
nterim Transmission Line Nitrogen Generator		
,	Component Description:	21. WHRO-TV-380- Interim
		Transmission Line -
	A	Nitrogen Generator
	Amount:	\$2,391.00
Elbows		
	Component Description:	Invoice to be
	Amount:	resubmitted to LMS. N/A
	Component Description:	item 1
		R0004542501 field
	Amount:	Flange 5 at 287.30 \$1,436.50
	, and diffe	ψ1,που.ου
	Component Description:	Invoice to be
		resubmitted to LMS.
	Amount:	N/A
	Component Description:	Invoice to be
	Document Bookington.	
		resubmitted to LMS.

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: 27. WHRO-TV-380-

Interim

Transmission Line -8 3/16" Broadband Rigid Copper

Amount: \$76,500.00

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: 24. WHRO-TV-380-

Interim

Transmission Line -8 3/16" Broadband Rigid Copper

Amount: \$44,000.00

Rigid Transmission Line - copper, 8 3/16" broadband

Component Description: 5. WHRO-TV-310-

Primary

Transmission Line -8 3/16" Broadband Rigid Copper

Amount: \$110,335.50

Component Description: 6. WHRO-TV-310-

Primary

Transmission Line -8 3/16" Broadband Rigid Copper

Amount: \$108,939.75

Component Description: Invoice to be

resubmitted to LMS.

Amount: N/A

Component Description: 5. WHRO-TV-310-

Primary

Transmission Line -8 3/16" Broadband Rigid Copper

Amount: \$55,167.75

Component Description: Invoice to be

resubmitted to LMS.

Primary Transmission Line Other Parts		
Officer Parits	Component Description:	4291-08 Nucalgon
		Nubrite
	Amount:	\$11.62
	Component Description:	XFMR 6-50 /6-75
		UHF 3 ST
	Amount:	\$7,242.40
	Component Description:	O-RING BUNA
	Amount:	\$67.20
Primary Transmission Line		
- Nitrogen Generator	Component Description:	20. WHRO-TV-310- Primary
		Transmission Line -
		Nitrogen Generator
	Amount:	\$2,391.00
Combiner system		
	Component Description:	RIGID
		TRANSMISSION
		LINE
	Amount:	\$75,734.15

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
Primary Tower GTOWER	\$686,725.83	\$509,591.83		\$494,416.81	
Tower Construction Project Management	\$27,500.00	\$27,500.00	Please see Estimated Cost Justification WHRO-TV- 410-Existing Primary Tower - Tower Construction Project Management v0	\$23,974.99	N/A
Tower Permit Drawing Package	\$4,700.00	\$4,700.00	Please see American Towers Customer Project Cost Estimation	\$4,700.00	N/A
Tower Helicopter Lift	\$55,525.83	\$55,525.83	Please see American Tower WHRO Main Norfolk Tall Tower 10152 Customer Project Cost Estimation	\$55,525.83	N/A

Structural	\$20,000.00	\$20,000.00	Part of the	\$14,600.00	this
engineering			total tower		included
tower load			rebuild with 4		structura
study for a			other		and towe
documented			broadcasters		mapping
tower with			American		for
candelabra			Tower		structura
			Document		
			WHRO IM		
			Norfolk Tall		
			Tower 10152		
			Repack Cost		
			Estimates		
Minor tower	\$158,000.00	\$79,953.33	please see	\$79,953.33	N/A
reinforcement			Estimated		
/modifications			Cost		
			Justification		
			WHRO-TV-		
			410-Existing		
			Primary Tower		
			- Minor		
			Reinforcement		
			Modifications		
			v0		
Complex	\$421,000.00	\$321,912.67	please see	\$315,662.66	N/A
Tower	, , , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , , ,	Estimated	*,	-
(includes, for			Cost		
example,			Justification		
those with			WHRO-TV-		
candelabras			410-Existing		
and/or			Primary Tower		
stacked			- Tower		
antennas)			Rigging v0		
Sub-total	\$686,725.83	\$509,591.83	N/A	\$494,416.81	N/A
Total for all systems	\$6,805,726.06	\$4,765,103.05	N/A	\$3,636,602.59	N/A

Components

Actual Information	
Description	File Name

Tower Construction Project	
Management	

Component Description: 11. WHRO-TV-410-

> **Existing Primary** Tower-Tower Construction Project

Management

Amount: \$3,593.75

Component Description: 12. WHRO-TV-410-

> **Existing Primary** Tower-Tower Construction Project

Management

Amount: \$18,584.37

Component Description: 11. WHRO-TV-410-

> **Existing Primary** Tower - Tower Construction Project

Management \$1,796.87

Amount:

Tower Permit Drawing Package		
-ackage	Component Description:	9. WHRO-TV-410-
		Existing Primary
		Tower - Tower
		Permit Drawing
		Package
	Amount:	\$1,175.00
	Component Description:	9. WHRO-TV-410-
		Existing Primary
		Tower - Tower
		Permit Drawing
		Package
	Amount:	\$2,350.00
	Component Description:	11. WHRO-TV-410-
		Existing Primary
		Tower - Tower
		Permit Drawing
		Package
	Amount:	\$1,175.00
Tower Helicopter Lift		
	Component Description:	10. WHRO-TV-410-
	·	Existing Primary
		Tower - Helicopter
		Lift
	Amount:	\$55,525.83

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: \$2,737.50

Component Description: 6. WHRO-TV-410-

Existing Primary
Tower - Tower
Load Study for
Documented
Tower with
Candelabra

Amount: \$5,475.00

Component Description: 7. WHRO-TV-410-

Existing Primary
Tower - Tower
Load Study for
Documented
Tower with
Candelabra

Amount: \$6,387.50

Component Description: Invoice to be

resubmitted to

LMS.

Amount: N/A

Component Description: Invoice to be

resubmitted to

LMS.

Minor tower reinforcement /modifications

Component Description: 7. WHRO-TV-410-

Existing Primary
Tower - Minor
Reinforcement
/Modifications

Amount: \$12,500.00

Component Description: 7. WHRO-TV-410-

Existing Primary
Tower - Minor
Reinforcement
/Modifications

Amount: \$25,000.00

Component Description: 8. WHRO-TV-410-

Existing Primary
Tower - Minor
Reinforcement
/Modifications
\$42,453,33

Amount: \$42,453.33

Component Description: Invoice to be

resubmitted to

LMS.

Amount: N/A

Component Description: Invoice to be

resubmitted to

LMS.

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

Component Description: 8. WHRO-TV-410-

Existing Primary
Tower - Tower
Rigging, Complex

Tower

Amount: \$40,416.70

Component Description: 8. WHRO-TV-410-

Existing Primary
Tower - Tower
Rigging, Complex

Tower

Amount: \$80,833.42

Component Description: 9. WHRO-TV-410-

Existing Primary Tower - Tower Rigging, Complex

Tower

Amount: \$194,412.54

Component Description: Invoice to be

resubmitted to

LMS.

Amount: N/A

Component Description: Invoice to be

resubmitted to

LMS.

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 Co
Outside Professional Services	\$302,265.85	\$233,724.18		\$71,302.87	
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.	\$47,461.20	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	\$2,105.00	\$800.00	Shared cost of	N/A	N/A
modification (prepare FCC Form 854)			the Broadcasters being repacked		
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
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	\$5,260.00	\$5,000.00	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	\$250.00	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
Perform engineering study for new channel assignment and antenna development	\$7,360.00	\$7,000.00	N/A	\$5,550.00	N/A
Address transition timing and coordination issues w/ other stations and wireless	\$2,630.00	\$3,333.33	The estimated cost has been adjusted to include all invoices submitted for reimbursement at this time.	\$3,333.33	N/A
Prepare and or review reimbursement form	\$2,630.00	\$2,500.00	N/A	N/A	N/A
Prepare request for Special Temporary Authorization	\$2,050.00	\$2,850.00	The estimated cost has been adjusted to include all invoices submitted for reimbursement at this time.	\$2,850.00	N/A

Sub-total	\$302,265.85	\$233,724.18	Estimates N/A	\$71,302.87	N/A
			DocWHRO IM Norfolk Tall Tower 10152 Repack Cost		
			in a bird migration mitigation ATC		
Migratory Bird Assessment	\$500.00	\$500.00	estimated costs for being	\$437.49	N/A
			Repack Cost Estimates		
			Tower 10152		
			Doc WHRO IM Norfolk Tall		
			antenna ATC		
			using the		
			broadcaster		
			the volume of		
			network due to		
			checks on Combiner		
			systems		
RF System Test	\$5,000.00	\$5,000.00	Perform	\$5,000.00	N/A
			at this time.		
			reimbursement		
			submitted for		
			invoices		
···· · g			include all		
Meeting			adjusted to		
Site Coordination	\$2,895.85	\$2,895.85	The estimated cost has been	\$2,895.85	N/A
a					
			packages		them
			Main antenna		remov
			Cover the interim and		Zeroed but I ca
			stations.		been
			Broadcast		which h
			package for 4		Perm
Package			Drawing		Zonin
Drawing			Construction		Non
Building			Generate the		were u

Components

Actual Information Description	File Name	
Project management of the transition	Component Description: Amount:	12. WHRO-TV- 510-Project Management \$2,370.00
	Component Description:	13. WHRO-TV- 510-Project Management
	Amount:	\$2,370.00
	Component Description:	Project Management
	Amount:	\$1,511.25
	Component Description:	Project Management
	Amount:	\$9,261.25
	Component Description:	Project Management
	Amount:	\$4,376.20
	Component Description:	Project Management
	Amount:	\$3,118.05
	Component Description:	Project Management
	Amount:	\$3,511.40

Component Description: Project
Management

Amount: \$38.75

Component Description: Invoice to be

resubmitted to LMS.

Amount: N/A

Component Description: Invoice to be

resubmitted to

LMS.

Amount: N/A

Component Description: 12. WHRO-TV-

510-Project Management

Amount: \$4,740.00

Component Description: Project

Management

Amount: \$740.00

Component Description: Invoice to be

resubmitted to

LMS.

Amount: N/A

Component Description: Project

Management

Amount: \$1,125.00

Component Description: Project

Management

Amount: \$2,986.05

Component Description: Project Management Amount: \$6,899.15 **Component Description: Project** Management Amount: \$778.75 **Component Description:** Project Management **Amount:** \$3,635.35 **Component Description:** Invoice to be resubmitted to LMS. Amount: N/A Information not provided. RF Exposure Measurements Comprehensive coverage Information not provided. verification via field study, if needed FAA consultant, including Information not provided. cost of preparing FAA Form 7460 (Notice of Proposed Construction), if needed for height increase ASR modification (prepare Information not provided. FCC Form 854) Environmental Assessment, Information not provided. if triggered by NEPA Section 106 review or for certain structures over 450 feet NEPA Section 106 Information not provided. environmental review, if needed Attorney Fees - Prepare and Information not provided. File request for Special **Temporary Authorization**

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.	
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	Information not provided.	
Prepare engineering section of FCC Form 2100 (main), License to Cover Application	Component Description:	Confirm and revise final operating constants
	Amount:	\$250.00
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	Information not provided.	

Perform engineering study for new channel assignment and antenna development

Component Description: 14. WHRO-TV-

530-RF Eng -Engineering Study for New Channel Assignment

Amount: \$1,250.00

Component Description: 14. WHRO-TV-

530-RF Eng -Engineering Study for New Channel Assignment

Amount: \$2,500.00

Component Description: develop final

operating constants, preparation of engineering portions of FCC application for license to cover.

Amount: \$550.00

Component Description: 15. WHRO-TV-

530-RF Eng -

Engineering Study for New Channel Assignment

\$1,250.00

Component Description: Invoice to be

resubmitted to

LMS.

Amount: N/A

Amount:

Component Description: Invoice to be

resubmitted to

LMS.

other stations and wireless Amount:	590-Transition Timing and
Amount:	
Amount:	
Amount:	Coordination
Amount:	Issues
	\$1,250.00
Component Description	n: 14. WHRO-TV-
	590-Transition
	Timing and
	Coordination
	Issues
Amount:	\$1,458.33
Component Description	n: 13. WHRO-TV-
The state of the	590-Transition
	Timing and
	Coordination
	Issues
Amount:	\$625.00
Component Description	n: Invoice to be
i i	resubmitted to
	LMS.
Amount:	N/A
Component Description	n: Invoice to be
Component Secondaries	resubmitted to
	LMS.
Amount:	N/A

reimbursement form

Prepare request for Special
Temporary Authorization

Component Description: Develop technical

parameters for side-mount interim

antenna

Amount: \$850.00

Component Description: Develop

parameters for final repack CH-31 configuration

Amount: \$1,175.00

Component Description: Develop technical

parameters for auxiliary antenna

on repack

Amount: \$825.00

Ground and Building Drawing Package

Component Description: Invoice to be

resubmitted to

LMS.

Amount: N/A

Component Description: Invoice to be

resubmitted to

LMS.

Amount: N/A

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: 10. WHRO-TV-

590-Ground and Building Drawing

Package

Amount: \$1,175.00

Site Coordination Meeting **Component Description:** 15. WHRO-TV-590-Site Coordination Meeting \$625.00 Amount: **Component Description:** 15. WHRO-TV-590-Site Coordination Meeting \$1,250.00 Amount: **Component Description:** 16. WHRO-TV-590-Site Coordination Meeting Amount: \$1,020.85 **Component Description:** Invoice to be resubmitted to LMS. Amount: N/A

Component Description: Invoice to be

resubmitted to

LMS.

RF System Test		
	Component Description:	17. WHRO-TV-
		580-Field
		Engineering
		Service - RF
		System Test
	Amount:	\$1,250.00
	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

Migratory Bird Assessmen		
	Component Description:	16. WHRO-TV-
		590-Migratory Bird
		Assessment
	Amount:	\$145.83
	Component Description:	16. WHRO-TV-
		590-Migratory Bird
		Assessment
	Amount:	\$291.66
	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		\$35,486.78	
Site Security	\$16,200.00	\$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	\$500.00	\$500.00	Costs associated with Public hearing materials sent to surrounding homes, newspapers ETC.	N/A	N/A
Grading Road	\$4,500.00	\$4,500.00	Regrading drive access to the site for at least 1 year	N/A	N/A

ATC One Time Tower Rental	\$57,600.00	\$57,600.00	Rental Fee associated with repacking for the Interim antenna	N/A	N/A
Comark System Design and Site Survey	\$15,300.00	\$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 designand Survey quote.
Special Insurance Rider	\$2,500.00	\$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
MVPD Notification of Channel Change	\$500.00	\$500.00	N/A	N/A	N/A

\$335.00 \$11,550.00 \$172,930.00	\$325.00 \$11,000.00 \$172,365.00	N/A N/A	N/A \$6,750.00 \$35,486.78	N/A N/A
\$335.00	\$325.00	N/A	N/A	N/A
\$195.00	\$190.00	N/A	N/A	N/A
\$1,750.00	\$1,750.00	N/A	\$0.00	N/A
\$5,000.00	\$5,000.00	N/A	\$750.00	N/A
\$2,000.00	\$2,000.00	N/A	N/A	N/A
\$3,500.00	\$3,500.00	N/A	N/A	N/A
\$12,500.00	\$12,500.00	N/A	\$10,257.44	N/A
\$24,000.00	\$24,000.00	N/A	\$2,429.34	N/A
\$15,000.00	\$15,000.00	N/A	N/A	N/A
	\$24,000.00 \$12,500.00 \$3,500.00 \$5,000.00 \$1,750.00	\$24,000.00 \$24,000.00 \$12,500.00 \$3,500.00 \$3,500.00 \$2,000.00 \$2,000.00 \$5,000.00 \$1,750.00	\$24,000.00 \$24,000.00 N/A \$12,500.00 \$12,500.00 N/A \$3,500.00 \$3,500.00 N/A \$2,000.00 \$2,000.00 N/A \$1,750.00 \$1,750.00 N/A	\$24,000.00 \$24,000.00 N/A \$2,429.34 \$12,500.00 \$12,500.00 N/A \$10,257.44 \$3,500.00 \$3,500.00 N/A N/A \$5,000.00 \$5,000.00 N/A \$750.00 \$1,750.00 \$1,750.00 N/A \$0.00

Components

Actual Information Description	File Name	
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	Component Description: Amount:	System Design Service / Site Survey \$15,300.00
	Component Description:	Invoice to be resubmitted to LMS.
	Amount:	N/A
Special Insurance Rider	Information not provided.	
MVPD Notification of Channel Change	Information not provided.	
Develop and air announcement of upcoming channel change	Information not provided.	
Equipment Storage		
	Component Description:	19. WHRO-TV- 610-Equipment Storage
	Amount:	\$2,429.34
Equipment Delivery and Handling Charges	Component Description: Amount:	19. WHRO-TV- 610-Equipment Delivery and Handling \$1,666.66

Component Description: Freight and

Shipping \$2,835.00

Amount: \$2,835.00

Component Description: 19. WHRO-TV-

610-Equipment Delivery and Handling

Amount: \$3,333.33

Component Description: Dielectric Freight

Charges for invoice 637004.
Cover letter for Dielectric
Shipping is located in the Attachments

Amount: \$41.86

Component Description: Invoice to be

resubmitted to

LMS.

Amount: N/A

Component Description: FREIGHT AND

SHIPPING

Amount: \$304.51

Component Description: ATC MS1 1-A-4

at 25% of total

Amount: N/A

Component Description: FREIGHT AND

SHIPPING

Amount: \$84.83

	Component Description: Amount:	FREIGHT AND SHIPPING \$1,991.25
Disposal Costs (for equipment and other waste, net of any salvage value)	Information not provided.	
BLM or NFS Coordination	Information not provided.	
Non-zoning permits	Component Description:	18. WHRO-TV- 610-Non-Zoning Permits
	Amount:	\$187.50
	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
	Component Description:	18. WHRO-TV- 610-Non-Zoning Permits
	Amount:	\$187.50

	Component Description: Amount:	ATC MS2 item 3- D-1 Tower Permit additional 50% payment 25% remaining N/A
	Component Description: Amount:	18. WHRO-TV- 610-Non-Zoning Permits \$375.00
Land Zarian		
Local Zoning	Component Description:	Invoice to be resubmitted to LMS.
	Amount:	N/A
	Component Description:	ATC MS2 item 1- A-3 permit costs Additional 50% payment 25% remaining
	Amount:	N/A
FCC Filing Fees - Special Temporary Authorization request	Information not provided.	
FCC Filing Fees - Form 2100 license to cover application	Information not provided.	
DTV Medical Facility Notification	Component Description:	Medical
	Amount:	notification Mailing \$3,750.00
	Component Description:	Medical Notification
	Amount:	\$3,000.00

Cost Information

Grand Total

	Predetermined Cost Estimate	Estimated Cost	Actual Cost
Total for all systems	\$6,805,726.06	\$4,765,103.05	\$3,636,602.59

Reimbursem	entestatus	Response
	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

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. Chris Gunnar Gunnufsen Vice President Technology

07/07/2021

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. Chris Gunnar Gunnufsen Vice President Technology

07/07/2021

Section Question Response

Submission of Final Allocation or Accounting Information 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 and represents that he /she is authorized to submit this TV Broadcaster Relocation Fund Reimbursement Form on behalf of the above-named entity. The abovenamed entity acknowledges that all certifications and attached documentation are considered material representations.
- 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.

- 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 abovenamed applicant for the Authorization(s) specified above. Chris Gunnar Gunnufsen Vice President Technology

07/07/2021

Attachments