



(REFERENCE COPY - Not for submission)

# FCC Form 399: Reimbursement Request

Facility **22211** | Service: **DTV** | Call **WFLD** | Channel: **31 (UHF)**  
ID: | Sign:  
File **0000027829**  
Number:  
FRN: **0005795067** | Date **07/11**  
Submitted: **/2017**

## Applicant Information Applicant Name, Type, and Contact Information

Applicant	Address	Phone	Email	Applicant Type
<b>FOX TELEVISION STATIONS, LLC</b>	Joseph M. Di Scipio 400 N. CAPITOL STREET, NW SUITE 890 WASHINGTON, DC 20001 United States	+1 (202) 824-6522	JDISCIPIO@21CF.COM	Limited Liability Company

## Reimbursement Contact Name and Information

Applicant	Address	Phone	Email
[Confidential]			

## Preparer Contact Name and Information

Applicant	Address	Phone	Email
<b>Dennis Wallace</b> <i>Managing Partner</i> <i>Meintel, Sgrignoli &amp; Wallace, LLC</i>	Dennis Wallace 1282 Smallwood Drive Suite 372 Waldorf, MD 20603 United States	+1 (202) 251-7589	Dennis. Wallace@mswdtv.com

**Broadcaster  
Information  
and  
Transition  
Plan**

Question	Response
Will the station be sharing equipment with another broadcast television station or stations (e.g., a shared antenna, co-location on a tower, use of the same transmitter room, multiple transmitters feeding a combiner, etc.)? If yes, enter the facility ID's of the other stations and click 'prefill' to download those stations' licensing information.	Yes
Briefly describe transition plan	WFLD plans to install interim facilities in cooperation with other stations at Willis Tower, replace existing antennna, transmission line, and Transmitter. Complex site on top of Willis Tower. The building is still working on transition plan for the site.

**Transmitters**

Section	Question	Response
<b>Transmitter Related Expenses</b>	Do you have transmitter related expenses?	Yes

**Primary  
Transmitter**

**Existing Transmitter Information**

<b>Section</b>	<b>Question</b>	<b>Response</b>
<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	CD2200P3
	Year	1999
	Type	Inductive Output Tube
	IOT Power Type	Three
	Power Capacity	75 kW

**Primary  
Transmitter**

**New Transmitter Costs**

Section	Question	Response
<b>New Transmitter</b>	Use	Primary (Main)
	Change Type	Purchase New
	Is this a request for upgraded equipment?	No
	Manufacturer	
	Model	Paragon
	Transmitter Type	Inductive Output Tube
	IOT Power Type	Three
	Power capacity	75 kW
	Justification for New Transmitter	New transmitter required as existing unit is obsolete and no longer supported by manufacturer

**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	300 kVA
	Rigid Conduit and Wiring	Yes
	Size	3 inches

	Length	400.0 feet
	Other Electrical Service	Yes
	Description	IOT Transmitter Electrical Installation Costs Willis Tower
<b>HVAC Service</b>	Does the replacement transmitter require HVAC Service?	Yes
	Type	Cooling Only
	Size	50 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	1000.0 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**

<b>Name</b>	<b>Description</b>
<b>Remote Control Wiring</b>	Wire up existing remote control to new transmitter
<b>Remove Existing Main Transmitter</b>	Remove existing main transmitter from Willis Tower

**Interim  
Transmitter**

**New Transmitter Costs**

Section	Question	Response
<b>New Transmitter</b>	Use	Interim
	Description of Use	N/A
	Change Type	Purchase
	Manufacturer	
	Model	THU9EVO-40
	Transmitter Type	Solid State
	Solid State Cooling	Liquid Cooled
	Solid State Power capacity	60 kW
	Justification for New Transmitter	Interim transmitter will be required to operate interim facilities while building is changing out antennas and other stations make changes.

**Interim  
Transmitter**

**Other Transmitter Costs**

Section	Question	Response
<b>Electrical Service</b>	Service Entrance (3 phases 800A 208V)	No
	Switchgear (industrial 800 amp)	No
	Transformer (480V)	Yes
	Power	500 kVA

	Rigid Conduit and Wiring	Yes
	Size	3 inches
	Length	300.0 feet
	Other Electrical Service	Yes
	Description	Interim Transmitter Electrical Installation - Willis Tower
<b>HVAC Service</b>	Does the replacement transmitter require HVAC Service?	Yes
	Type	Cooling Only
	Size	50 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	1000.0 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
<b>Inside RF System</b>	Is an additional interior RF system required to support this interim transmitter?	Yes

**Other Transmitter Cost Not Listed**

**Interim Transmitter**

Name	Description
<b>Willis Tower Fees</b>	Fees to Willis Tower for Interim Transmitter Installation & Operation

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**Remove existing equipment**

Removal of existing equipment in interim transmitter area

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**Antennas**

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

**Auxiliary  
Antenna****Existing Antenna Information**

<b>Section</b>	<b>Question</b>	<b>Response</b>
<b>Existing Antenna Description</b>	Type of change	Purchase New
	Antenna Use	Auxiliary (Backup)
	Description of Use	Licensed Aux Antenna
	Ownership	Leased
	Owner	Willis Tower
	Site	N/A
	Is the existing antenna shared with another station or stations?	Yes
	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	Circular
	Type	Broadband Panel
	Number of Stations Supported	2
	Number of Panels	24
	Design power capacity in use	100.0 %
	Lower Limit	572.00 MHz
	Upper Limit	578.00 MHz
	Other Antenna Type	N/A

ERP: (Effective Radiated Power) .....	475.0 kW
Manufacturer	
Model	PHP24C
Year	1999

**Facility ID's and Call Signs of  
all stations with whom the  
antenna is shared.**

Facility ID	Call Sign
47905	WMAQ-TV
22211	WFLD

**Auxiliary  
Antenna**

**New Antenna Costs**

Section	Question	Response
<b>New Antenna Description</b>	Use	Auxiliary (Backup)
	Description of Use	Aux Antenna
	Change Type	Purchase New
	Is this a request for upgraded equipment?	No
	Ownership	Leased
	Owner	Willis Tower
	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 Types</b>	Class	Full Power
	Mounting	Top Mount
	Antenna position in stack	Bottom
	Polarization	Elliptical
	Type	Broadband Panel
	Number of Stations Supported	2
	Number of Panels/Bays	24
	Lower Limit	470.00 MHz
	Upper Limit	600.00 MHz
	Design power capacity in use	100.0 %
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power) .....	475.0 kW
	Manufacturer	
Model	PEP24	

Year	2018
Justification for New Antenna	Replacement of Aux Antenna as needed to move antennas on top of building.

## Auxiliary 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	2
	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	6 1/8 inches inches
<b>Side Mount Brackets</b>	Do you require the separate purchase of side mount brackets for a high power 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?	Yes
<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
29
24

**Auxiliary Antenna**

**Other Antenna Cost Not Listed**

Name	Description
Willis Tower Fees	Aux Antenna Fees

**Primary  
Antenna**

**Existing Antenna Information**

Section	Question	Response
<b>Existing Antenna Description</b>	Type of change	Purchase New
	Antenna Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is the existing antenna shared with another station or stations?	No
	Is the existing antenna directional?	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	Middle
	Polarization	Elliptical
	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

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Manufacturer	
Model	ATW14H3H- ETC2-31H
Year	1999

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**Primary  
Antenna**

**New Antenna Costs**

Section	Question	Response
<b>New Antenna Description</b>	Use	Primary (Main)
	Description of Use	N/A
	Change Type	Purchase New
	Is this a request for upgraded equipment?	No
	Ownership	Owned
	Owner	N/A
	Is antenna shared?	No
	Is antenna directional?	Yes
	Will antenna be located on or in close proximity to an antenna farm?	Yes
	<b>New Antenna Manufacturer and Types</b>	Class
Mounting		Top Mount
Antenna position in stack		Top
Polarization		Elliptical
Type		Slotted Coaxial
Number of Stations Supported		N/A
Number of Panels/Bays		N/A
Lower Limit		N/A
Upper Limit		N/A
Design power capacity in use		N/A
Other Antenna Type		N/A
ERP: (Effective Radiated Power) .....		859.0 kW
Manufacturer		

Model	ATW13H3-ETC2-24H
Year	2018
Justification for New Antenna	New antenna required for new channel. Slot antenna.

**Primary Antenna**

**Other Antenna Costs**

Section	Question	Response
<b>Combiner for Shared Antenna</b>	Do you need a Combiner for a Shared Antenna?	No
	Type	
	Number of channels supported	N/A
	Frequencies of channels supported	N/A
	Frequency	N/A
	Do you need a combiner output splitter /switcher for dual feed lines?	N/A
<b>Elbow Complex</b>	Do you require the separate purchase of the Elbow Complex?	Yes
	Broadband or Single Channel?	Single Channel
	Feed Line Size	7 3/16 inches inches
<b>Side Mount Brackets</b>	Do you require the separate purchase of side mount brackets for a high power antenna?	No
<b>Pattern Scatter Analysis</b>	Do you require separate purchase of pattern scatter analysis for a side mount high or medium power antenna?	Yes

<b>Sweep Test</b>	Do you require the sweep testing of transmission line and antenna?	Yes
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**Primary  
Antenna**

**Other Antenna Cost Not Listed**

<b>Name</b>	<b>Description</b>
<b>Willis Tower Fees New Antenna</b>	New Antenna Fees - Willis Tower

**Transmission  
Line**

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

**Auxiliary  
Transmission  
Line**

**Existing Transmission Line**

Section	Question	Response
<b>Existing Transmission Line Description</b>	Type of change	Purchase New
	Use	Auxiliary (Backup)
	Description of Use	Licensed Aux
	Ownership	Leased
	Owner	Willis Tower
	Site	N/A
	Is the existing transmission line shared with another station or stations?	Yes
	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	20 inches
	Other Segment Length	N/A
	Number of parallel runs	2
	Length	400 feet per run

**Facility ID's and Call Signs of all stations with whom the transmission line is shared.**

Facility ID	Call Sign
47905	WMAQ-TV

**Auxiliary  
Transmission  
Line**

**New Transmission Line**

Section	Question	Response
<b>New Transmission Line Costs</b>	Use	Auxiliary (Backup)
	Description of Use	Licensed Aux
	Change Type	Purchase New
	Is this a request for upgraded equipment?	No
	Type	Rigid
	Diameter	6 1/8 inches
	Other Diameter	N/A
	Segment Length	19 3/4 inches
	Other Segment Length	N/A
	Number of parallel runs	2
	Length	400 feet per run
	Justification for New Transmission Line	Replacement of Aux Antenna Transmission Line.

**Auxiliary  
Transmission  
Line**

**Other Transmission Line Expenses Not Listed**

Name	Description
<b>Willis Tower Fees</b>	Willis Tower Fees for Aux Transmission Line
<b>Transmission Line Layout</b>	Develop Transmission line layout and installation drawings

**Primary  
Transmission  
Line**

**Existing Transmission Line**

Section	Question	Response
<b>Existing Transmission Line Description</b>	Type of change	Purchase New
	Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is the existing transmission line shared with another station or stations?	No
	Is Transmission Line in operating condition?	Yes
<b>Existing Transmission Line Manufacturer and Type</b>	Manufacturer	
	Type	Rigid
	Diameter	8 3/16 inches
	Other Diameter	N/A
	Segment Length	20 inches
	Other Segment Length	N/A
	Number of parallel runs	1
	Length	400 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	Purchase New
	Is this a request for upgraded equipment?	No
	Type	Rigid
	Diameter	7 3/16 inches
	Other Diameter	N/A
	Segment Length	19 3/4 inches
	Other Segment Length	N/A
	Number of parallel runs	1
	Length	400 feet per run
	Justification for New Transmission Line	Current Transmission line lengths not compatible with new channel. New Antenna Installation requires new transmission line.

**Primary  
Transmission  
Line**

**Other Transmission Line Expenses Not Listed**

Name	Description
<b>Willis Tower Fees</b>	Willis Tower Fees - New Transmission Line



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**Transmission Line Layout Installation Drawings**

Develop and play transmission line layout and installation drawings

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**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?	Located on Building
	Is this tower currently shared with any other stations?	Yes
	One or more FM, AM or TV radio broadcaster(s)	Yes
	Others Types of Users	Yes
	Is tower documented for structural analysis?	Yes
	Is tower compliant with Rev G?	No
Existing Tower Structure Registration	Do you have a tower registration number?	Yes
	ASR Number	1032959
Coordinates (NAD83 ( North American Datum of 1983))	Latitude (NAD83)	41° 52' 44.1" N-
	Longitude (NAD83)	087° 38' 10.2" W-
	Overall Structure Height	1729.97 feet
	Support Structure Height	1435.35 feet

Ground Elevation Above Mean Sea Level (AMSL)	595.14 feet
Structure Type	BTWR - Building with Tower
Tower Owner	233 Broadcast, LLC
Date Constructed	01/01/2002

**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
73226	WLS-TV	DTV
74178	WKSC-FM	FM
70042	WLIT-FM	FM
48772	WPWR-TV	DTV
47905	WMAQ-TV	DTV
9617	WBBM-TV	DTV
22211	WFLD	DTV
10802	WTTW	DTV
10801	WFMT	FM
6377	WTMX	FM
53971	WEBG	FM
73228	WLS-FM	FM
12498	WGBO-DT	DTV
51165	WGCI-FM	FM
10981	WCPX-TV	DTV
71283	WCFS-FM	FM

60539	WXFT-DT	DTV
72115	WGN-TV	DTV
32334	WJYS	DTV
9613	WBBM-FM	FM
71425	WWME-CD	DTV
28621	WJMK	FM

### Other Types of Users

Users
Two Way
Microwave
Willis Tower

### 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:	Serious Reinforcements needed

### Primary Tower

#### Tower Rigging Costs

Section	Question	Response
<b>Tower Rigging Costs</b>	Complex Tower	Located on Building
<b>Helicopter Services Required</b>	Are helicopter services required?	Yes

**Primary  
Tower**

**Other Tower Expenses Not Listed**

Name	Description
<b>Willis Tower Structural Fees</b>	Willis Tower Fees Associated with Structural Changes to Rev G

**Outside Professional Services Costs**

Section	Question	Response
<b>Outside Project Management Services</b>	Do you require outside project management services?	Yes
	Number of Hours	1500
	Explanation	Outside Project Management to coordinate with Willis Tower, Antenna, Helicopter, Rigging, and Transmitter Replacements.
<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	Yes
	For Main Facility	Yes
	Prepare engineering section of Form FCC License to Cover Application	Yes
	For Auxiliary Facility	Yes
	For Main Facility	Yes
	Prepare request for Special Temporary Authority	Yes
	Quantity	2
	Do you have Distributed Transmission System engineering services?	N/A
	Critical Facility	N/A
	Terrain-Shielded Facility	N/A
<b>Attorney and Other Outside Consulting Services</b>	Prepare and file Form FCC Construction Permit Application	Yes
	For Auxiliary Facility	Yes

	For Main Facility	Yes
	Prepare and file Form FCC License to Cover Application	Yes
	For Auxiliary Facility	Yes
	For Main Facility	Yes
	Prepare request for Special Temporary Authority	Yes
	Quantity	2
	NEPA Section 106 environmental review	No
	Environmental Assessment	No
	ASR Modification	No
	FAA Consultation (including preparation of FAA Form 7460)	No
	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

**Other Professional Services Expenses Not Listed**

**Outside Professional Services Costs**

Name	Description
Prepare and File FCC Progress Reports	Prepare and File FCC Progress Reports

**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	No
	FCC Construction Permit Minor Change	Yes
	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>Helicopter Lift Insurance</b>	Specialty Insurance for Helicopter Antenna Lifts
<b>Illinois and Chicago Sales Tax</b>	Estimated Sales tax on equipment.

**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
<b>Interim Transmitter THU9EVO-40</b>	<b>\$2,962,000.00</b>	<b>\$2,854,700.00</b>		<b>\$0.00</b>	
Transformer 3 phase/480v - 500 KVA	\$48,400.00	\$46,000.00	Catalog	N/A	N/A
50 Ton system	\$172,500.00	\$164,000.00	Catalog HVAC /Mechanical Mods - Willis Tower Space	N/A	N/A
Other -- Building Addition Size: 1000.0	<i>\$150,000.00</i>	\$150,000.00	Building Space Modifications for Interim Transmitter Space at Willis Tower Building.	N/A	N/A
UHF inside RF system including switching	\$147,500.00	\$140,000.00	Catalog	N/A	N/A
Willis Tower Fees	<i>\$250,000.00</i>	\$250,000.00	Willis Tower Fees for Interim transmitter installation	N/A	N/A
UHF - Liquid Cooled Solid State Transmitter 52 - 61 kW	\$1,788,000.00	\$1,700,000.00	Interim Transmitter	N/A	N/A

3" Rigid Conduit and Wiring (Cost per foot)	\$15,600.00	\$14,700.00	Catalog	N/A	N/A
Remove existing equipment	<i>\$250,000.00</i>	\$250,000.00	Remove existing equipment from interim transmitter space. Willis Tower Building	N/A	N/A
Other Electrical Service: Interim Transmitter Electrical Installation - Willis Tower	<i>\$140,000.00</i>	\$140,000.00	Interim Transmitter Electrical Installation Willis Tower Building	N/A	N/A
<b>Primary Transmitter Paragon</b>	<b>\$2,361,800.00</b>	<b>\$3,028,237.00</b>		<b>\$0.00</b>	
Other -- Building Addition Size: 1000.0	<i>\$250,000.00</i>	\$250,000.00	Modifications to building space for new transmitter. Willis Tower Building.	N/A	N/A
3" Rigid Conduit and Wiring (Cost per foot)	\$20,800.00	\$19,600.00	Catalog	N/A	N/A
50 Ton system	\$172,500.00	\$164,000.00	Modifications to HVAC /Mechanical Systems Willis Tower Building	N/A	N/A

Remove Existing Main Transmitter	<i>\$275,000.00</i>	\$275,000.00	Quote to remove existing equipment. Beam Supplies, HE Glycol, Etc. Down Elevator. Rigging, Labor Overtime on Weekends /Nights.	N/A	N/A
Switchgear - industrial 800 amp	\$38,200.00	\$36,300.00	Catalog	N/A	N/A
Transformer 3 phase/480v - 300 KVA	\$36,800.00	\$35,000.00	Catalog	N/A	N/A
Remote Control Wiring	<i>\$3,500.00</i>	\$3,500.00	Wire up existing remote control to new transmitter.	N/A	N/A
Three IOT system (75 kW)	\$1,415,000.00	\$2,094,837.00	Comark Quote 3 tube Paragon Transmitter.	N/A	N/A
Other Electrical Service: IOT Transmitter Electrical Installation Costs Willis Tower	<i>\$150,000.00</i>	\$150,000.00	Electrical Installation for new transmitter. Willis Tower Building.	N/A	N/A
<b>Sub-total</b>	\$5,323,800.00	\$5,882,937.00	N/A	\$0.00	N/A
<b>Total for all systems</b>	\$12,975,805.00	\$18,344,762.00	N/A	\$0.00	N/A

## Components

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>Primary Antenna ATW13H3-ETC2-24H</b>	<b>\$815,390.00</b>	<b>\$970,000.00</b>		<b>\$0.00</b>	
Elbow complex, single channel, at antenna input, per 7 3 /16. feedline (if needed)	\$13,900.00	\$35,000.00	Custom Elbow Complexes for Stack Antenna - Willis Tower Building	N/A	N/A
Sweep test of existing antenna	\$6,730.00	\$15,000.00	RF Sweep of Antenna System at Willis Tower Building	N/A	N/A
Pattern scatter analysis for side mount high/med power antennas (if not included in antenna base cost)	\$5,260.00	\$25,000.00	Pattern Study - Custom Willis Tower Building with shadowing of East/West Pylons.	N/A	N/A
Willis Tower Fees New Antenna	<i>\$500,000.00</i>	\$500,000.00	Willis Tower Building Fees for new antenna.	N/A	N/A

UHF - High Power Top Mount (200-1000 kW), One station antenna , elliptically or circularly polarized	\$289,500.00	\$395,000.00	Custom Three Station Stack Antenna designed for Willis Tower Building West Pylon.	N/A	N/A
<b>Auxiliary Antenna PEP24</b>	<b>\$1,427,040.00</b>	<b>\$1,595,500.00</b>		<b>\$0.00</b>	
Elbow complex, broadband, at antenna input, per 6 1/8. feedline (if needed)	\$13,700.00	\$13,000.00	Catalog	N/A	N/A
Side mount brackets for high power antennas (if not included in antenna base cost)	\$23,150.00	\$150,000.00	Custom Brackets for Outriggers Willis Tower Building	N/A	N/A
Sweep test of existing antenna	\$6,730.00	\$17,500.00	Willis Tower Building Aux Antenna Sweep and Optimization. Custom.	N/A	N/A
Pattern scatter analysis for side mount high/med power antennas (if not included in antenna base cost)	\$5,260.00	\$15,000.00	Custom Study - outrigger poles and pylons on aux antenna - Willis Tower Building.	N/A	N/A
Willis Tower Fees	<b>\$400,000.00</b>	\$400,000.00	Willis Tower Fees Aux Antenna	N/A	N/A

Combiner output splitting /switching for dual feed lines, if applicable	\$126,000.00	\$120,000.00	Catalog	N/A	N/A
New combiner, cost per channel (without antenna)	\$84,200.00	\$150,000.00	Custom Combiner for Aux Antenna; Willis Tower Building Installation Checkout, Sweep WFLD Share	N/A	N/A
UHF - High Power Top Mount (200- 1000 kW), Two Station broadband panel antenna, elliptically or circularly polarized	\$768,000.00	\$730,000.00	Catalog	N/A	N/A
<b>Sub-total</b>	\$2,242,430.00	\$2,565,500.00	N/A	\$0.00	N/A
<b>Total for all systems</b>	\$12,975,805.00	\$18,344,762.00	N/A	\$0.00	N/A

## Components

Information not provided.



**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
<b>Primary Transmission Line</b>	<b>\$316,000.00</b>	<b>\$415,000.00</b>		<b>\$0.00</b>	
Rigid Transmission Line - copper, 7 3/16"	\$116,000.00	\$215,000.00	Custom Transmission line fabrication required.	N/A	N/A
Willis Tower Fees	<i>\$175,000.00</i>	\$175,000.00	Willis Tower Fees Transmission Line	N/A	N/A
Transmission Line Layout Installation Drawings	<i>\$25,000.00</i>	\$25,000.00	Develop transmission line layout and installation drawings.	N/A	N/A
<b>Auxiliary Transmission Line</b>	<b>\$276,600.00</b>	<b>\$290,000.00</b>		<b>\$0.00</b>	
Rigid Transmission Line - copper, 6 1/8"	\$161,600.00	\$175,000.00	Custom transmission line fabrication required.	N/A	N/A
Willis Tower Fees	<i>\$95,000.00</i>	\$95,000.00	Willis Tower Fees Aux Transmission Line	N/A	N/A

Transmission Line Layout	<i>\$20,000.00</i>	\$20,000.00	Develop transmission line layout and installation drawings.	N/A	N/A
<b>Sub-total</b>	\$592,600.00	\$705,000.00	N/A	\$0.00	N/A
<b>Total for all systems</b>	\$12,975,805.00	\$18,344,762.00	N/A	\$0.00	N/A

### Components

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 BTWR</b>	<b>\$2,643,000.00</b>	<b>\$6,995,000.00</b>		<b>\$0.00</b>	
Structural engineering tower load study for a documented tower with candelabra	\$20,000.00	\$95,000.00	WFLD Share of Structural Engineering Studies for REV G. - Custom Study. City of Chicago Requirements.	N/A	N/A
Serious tower reinforcement /modifications	\$1,052,000.00	\$3,000,000.00	Estimate of WFLD Share of Structural Reinforcements Required for Willis Tower Building by City of Chicago for REV G.	N/A	N/A
Willis Tower Structural Fees	<i>\$250,000.00</i>	\$250,000.00	Willis Tower Building Fees	N/A	N/A
Complex Tower (includes, for example, those with candelabras and/or stacked antennas)	\$421,000.00	\$2,750,000.00	Tower Rigging Willis Tower Building	N/A	N/A
Tower Helicopter Lift	<i>\$900,000.00</i>	\$900,000.00	Multiple Helicopter Picks Required for WFLD.	N/A	N/A
<b>Sub-total</b>	<b>\$2,643,000.00</b>	<b>\$6,995,000.00</b>	N/A	<b>\$0.00</b>	N/A

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<b>Total for all systems</b>	\$12,975,805.00	\$18,344,762.00	N/A	\$0.00	N/A
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### **Components**

Information not provided.

**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>\$435,795.00</b>	<b>\$458,750.00</b>		<b>\$0.00</b>	
Prepare and or review reimbursement form	\$2,630.00	\$2,500.00	Catalog	N/A	N/A
Address transition timing and coordination issues w/ other stations and wireless	\$2,630.00	\$15,000.00	Coordination for Chicago Market and Willis Tower Building Testing and Transition End Dates	N/A	N/A
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	\$3,155.00	\$3,000.00	Catalog	N/A	N/A
RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, Construction Permit Application	\$2,105.00	\$2,000.00	Catalog	N/A	N/A

Prepare engineering section of FCC Form 2100 (main), License to Cover Application	\$1,580.00	\$1,500.00	Catalog	N/A	N/A
Prepare request for Special Temporary Authorization	\$4,100.00	\$3,000.00	Catalog	N/A	N/A
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	\$5,260.00	\$5,000.00	Catalog	N/A	N/A
Attorney Fees - Negotiation of lease and other matters for shared locations	\$4,210.00	\$35,000.00	Willis Tower Building Lease Modifications	N/A	N/A
Attorney Fees - Prepare and File request for Special Temporary Authorization	\$7,360.00	\$7,000.00	Catalog	N/A	N/A
Comprehensive coverage verification via field study, if needed	\$84,200.00	\$80,000.00	Catalog	N/A	N/A
RF Exposure Measurements	\$21,050.00	\$20,000.00	Catalog	N/A	N/A

Perform engineering study for new channel assignment and antenna development	\$7,360.00	\$7,000.00	Catalog	N/A	N/A
Attorney Fees - Prepare and File FCC Form 2100 (main), License to Cover Application	\$2,365.00	\$2,250.00	Catalog	N/A	N/A
Prepare and File FCC Progress Reports	<i>\$45,000.00</i>	\$45,000.00	Prepare and File FCC Progress Reports	N/A	N/A
Project management of the transition	\$237,000.00	\$225,000.00	Very large scope project management.	N/A	N/A
Attorney Fees - Aux Antenna, prepare and File Form 2100 Construction Permit or License Application	\$4,210.00	\$4,000.00	Catalog	N/A	N/A
RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, License to Cover Application	\$1,580.00	\$1,500.00	Catalog	N/A	N/A
<b>Sub-total</b>	\$435,795.00	\$458,750.00	N/A	\$0.00	N/A
<b>Total for all systems</b>	\$12,975,805.00	\$18,344,762.00	N/A	\$0.00	N/A

## **Components**

Information not provided.



**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
<b>Other Expenses</b>	<b>\$1,738,180.00</b>	<b>\$1,737,575.00</b>		<b>\$0.00</b>	
DTV Medical Facility Notification	\$11,550.00	\$11,000.00	Catalog	N/A	N/A
FCC Filing Fees - Form 2100 minor change CP application	\$1,110.00	\$1,070.00	Catalog	N/A	N/A
FCC Filing Fees - Special Temporary Authorization request	\$195.00	\$190.00	Catalog	N/A	N/A
Local Zoning	<i>\$35,000.00</i>	\$35,000.00	Estimate of WFLD Share of Chicago Zoning for new antennas.	N/A	N/A
FCC Filing Fees - Form 2100 license to cover application	\$335.00	\$325.00	N/A	N/A	N/A
Non-zoning permits	<i>\$150,000.00</i>	\$150,000.00	Building Permits, Electrical, and Mechanicals. Willis Tower Building City of Chicago	N/A	N/A

Develop and air announcement of upcoming channel change	<i>\$1,500.00</i>	\$1,500.00	N/A	N/A	N/A
Equipment Delivery and Handling Charges	<i>\$250,000.00</i>	\$250,000.00	Delivery and Logistics for Equipment to Willis Tower Building. Elevator and Freight Dock Considerations.	N/A	N/A
Equipment Storage	<i>\$45,000.00</i>	\$45,000.00	Equipment Storage off site until needed on site.	N/A	N/A
Helicopter Lift Insurance	<i>\$150,000.00</i>	\$150,000.00	Estimate Special Insurance Premium for Helicopter Lifts.	N/A	N/A
MVPD Notification of Channel Change	<i>\$5,000.00</i>	\$5,000.00	N/A	N/A	N/A
Illinois and Chicago Sales Tax	<i>\$938,490.00</i>	\$938,490.00	Estimated Chicago and Illinois Sales Tax on Equipment.	N/A	N/A
Disposal Costs (for equipment and other waste, net of any salvage value)	<i>\$150,000.00</i>	\$150,000.00	Disposal of Glycol, Transformer Oil, Old Antenna, etc. from Willis Tower Building.	N/A	N/A
<b>Sub-total</b>	\$1,738,180.00	\$1,737,575.00	N/A	\$0.00	N/A
<b>Total for all systems</b>	\$12,975,805.00	\$18,344,762.00	N/A	\$0.00	N/A

## **Components**

Information not provided.

**Cost Information** **Grand Total**

	<b>Predetermined Cost Estimate</b>	<b>Estimated Cost</b>	<b>Actual Cost</b>
<b>Total for all systems</b>	\$12,975,805.00	\$18,344,762.00	\$0.00

**Reimbursement Status**

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

Certification	Section	Question	Response
	<b>Submission of Estimated Expenses Statements</b>	<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>Joseph M. Di Scipio</b>  <i>SVP, Legal and FCC Compliance</i></p> <p>07/11/2017</p>

**Attachments**

Information not provided.