



(REFERENCE COPY - Not for submission)

# FCC Form 399: Incentive Auction Relocation Reimbursement Fund System

File Number: **0000027842** | FRN: **0001842491** | Facility ID: **74070**  
Repack Channel: **19 (UHF)** | Entity: **Broadcaster** | Filing Status: **Submitted**  
Date Submitted: **05/10/2019**

## Applicant Information

### Applicant Name, Type, and Contact Information

Applicant	Address	Phone	Email	Applicant Type
<b>WSOC TELEVISION, LLC</b> Doing Business As: WSOC TELEVISION, LLC	Director of Engineering /Operations 1901 North Tryon Street CHARLOTTE, NC 28206 United States	+1 (704) 335-4732	ted.hand@coxinc.com	Limited Liability Company

## Reimbursement Contact Information

### Reimbursement Contact Name and Information

Applicant	Address	Phone	Email
[Confidential]			

## Preparer Contact Information

### Preparer Contact Name and Information

Applicant	Address	Phone	Email
<b>Ted Hand</b> <i>Director of Engineering Operations</i> <i>WSOC Television, LLC</i>	Ted Hand 1901 North Tryon Street Charlotte, NC 28206 United States	+1 (704) 335-4732	ted.hand@coxinc.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	WSOC will install main transmitter first while operating on the auxiliary transmitter /antenna, then install the auxiliary system.

**Transmitters**

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

**Auxiliary  
Transmitter****Existing Transmitter Information**

<b>Section</b>	<b>Question</b>	<b>Response</b>
<b>Existing Transmitter Description</b>	Type of change	Purchase New
	Use	Auxiliary (Backup)
	Description of Use	backup to main
	Ownership	Owned
	Owner	
	Site	
	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	DHD60P2
	Year	2009
	Type	Solid state
	IOT Power Type	
	Description	
	Power capacity	
	Solid State Cooling	Air
	Solid State Power Capacity	15 kw
	Other Transmitter Type	

**Auxiliary  
Transmitter**

**New Transmitter Costs**

Section	Question	Response
<b>New Transmitter</b>	Use	Auxiliary (Backup)
	Description of Use	Auxiliary to Main
	Change Type	Purchase New
	Is this a request for upgraded equipment?	No
	Manufacturer	
	Model	ULXTE-30
	Transmitter Type	Solid state
	IOT Power Type	
	Other	
	Power capacity	
	Solid State Cooling	Liquid
	Solid State Power Capacity	19.2 kw
	Other Transmitter Type	
Justification for New Transmitter	Current transmitter will not tune to channel 19	

**Auxiliary  
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)	No
	Power	

	Rigid Conduit and Wiring	Yes
	Size	2 inches
	Length	250.0 feet
	Other Electrical Service	Yes
	Description	Wiring for water pumps and mask filter blowers
<b>HVAC Service</b>	Does the replacement transmitter require HVAC Service?	No
	Type	
	Size	
	Other Size	
<b>Transmitter Building Addition/Modification or Leasehold Improvement</b>	Does the Transmitter Building require an addition, modification, other leasehold improvement?	No
	Size	
<b>Channel 14 Costs</b>	Is an RF Consulting Engineer needed?	
	Is a channel 14 Mask Filer needed?	
	Is additional field engineering time needed?	
	Number of Days	

**Auxiliary Transmitter**

**Other Transmitter Cost Not Listed**

Name	Description
<b>Combiner</b>	Use to combine WSOC Aux with WAXN Aux. Shared with WAXN-TV
<b>Coax Switch</b>	Coaxial switch use to switch from main to aux

**Primary  
Transmitter**

**Existing Transmitter Information**

Section	Question	Response
<b>Existing Transmitter Description</b>	Type of change	Purchase New
	Use	Primary (Main)
	Description of Use	
	Ownership	Owned
	Owner	
	Site	
	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	CD3200P2 Sigma
	Year	1999
	Type	Inductive Output Tube
	IOT Power Type	Three
	Description	
	Power capacity	55 kw
	Solid State Cooling	
	Solid State Power Capacity	
	Other Transmitter Type	

**Primary  
Transmitter**

**New Transmitter Costs**

Section	Question	Response
<b>New Transmitter</b>	Use	Primary (Main)
	Description of Use	
	Change Type	Purchase New
	Is this a request for upgraded equipment?	Yes
	Manufacturer	
	Model	ULXTE-72
	Transmitter Type	Solid state
	IOT Power Type	
	Other	
	Power capacity	
	Solid State Cooling	Liquid
	Solid State Power Capacity	47.2 kw
	Other Transmitter Type	
Justification for New Transmitter	Current transmitter is tuned for channel 34 and will not be tuned to channel 19	

**Primary  
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	2 inches
	Length	250.0 feet
	Other Electrical Service	Yes
	Description	Wiring for water pumps and mask filter blowers
<b>HVAC Service</b>	Does the replacement transmitter require HVAC Service?	Yes
	Type	Cooling Only
	Size	15 tons
	Other Size	
<b>Transmitter Building Addition/Modification or Leasehold Improvement</b>	Does the Transmitter Building require an addition, modification, other leasehold improvement?	Yes
	Size	320.0 square feet
<b>Channel 14 Costs</b>	Is an RF Consulting Engineer needed?	
	Is a channel 14 Mask Filer needed?	
	Is additional field engineering time needed?	
	Number of Days	

**Primary Transmitter**

**Other Transmitter Cost Not Listed**

<b>Name</b>	<b>Description</b>
<b>RF Equipment</b>	RF elbows, hangers, flanges, hardware kits
<b>RF Hanging Supplies</b>	Equipment to hang new mask filters and wave guide



<b>Plumbing Supplies</b>	Plumbing supplies for liquid cooled transmitter
<b>Distilled Water</b>	Distilled water for cooling system

**Antennas**

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

**Primary  
Antenna**

**Existing Antenna Information**

Section	Question	Response
<b>Existing Antenna Description</b>	Type of change	Purchase New
	Antenna Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is the existing antenna shared with another station or stations?	No
	Is the existing antenna directional?	No
	Is antenna in operating condition?	Yes
	Is antenna located on or in close proximity to an antenna farm?	No
<b>Existing Antenna Manufacturer and Type</b>	Class	Full Power
	Mounting	Top-mount stacked
	Antenna position in stack	Bottom
	Polarization	Horizontal
	Type	Broadband Panel
	Number of Stations Supported	1
	Number of Panels	48
	Design power capacity in use	65.0 %
	Lower Limit	470.00 MHz
	Upper Limit	608.00 MHz
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power)	1000.00 kW

Manufacturer	
Model	TQP-0412-1
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?	No
	Will antenna be located on or in close proximity to an antenna farm?	No
<b>New Antenna Manufacturer and Type</b>	Class	Full Power
	Mounting	Top-mount stacked
	Antenna position in stack	Bottom
	Polarization	Horizontal
	Type	Broadband Panel
	Number of Stations Supported	1
	Number of Panels/Bays	48
	Lower Limit	470.00 MHz
	Upper Limit	608.00 MHz
	Design power capacity in use	100.0 %
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power) .....	1000.00 kW
Manufacturer		

Model	TFU-31EBT /VP-R
Year	2019
Justification for New Antenna	Current antenna will not tune to channel 19. Current antenna will not support top mounted WAXN's 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
<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?	No
<b>Sweep Test</b>	Do you require the sweep testing of transmission line and antenna?	Yes

**Primary  
Antenna**

**Other Antenna Cost Not Listed**

Information not provided.

**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	backup to main
	Ownership	Owned
	Owner	N/A
	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
	Segment Length	19 1/2 '
	Other Segment Length	
	Number of parallel runs	1
	Length	585 feet per run

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

Facility ID	Call Sign
12793	WAXN-TV

**Auxiliary  
Transmission  
Line**      **New Transmission Line**

Section	Question	Response
<b>New Transmission Line Costs</b>	Use	Auxiliary (Backup)
	Description of Use	backup to main
	Change Type	Purchase New
	Is this a request for upgraded equipment?	No
	Type	Rigid
	Diameter	6 1/8 inches
	Segment Length	20'
	Other Segment Length	
	Number of parallel runs	1
	Length	585 feet per run
	Justification for New Transmission Line	current line will not work at new channel 19

**Auxiliary  
Transmission  
Line**      **Other Transmission Line Expenses Not Listed**

Information not provided.

**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	7 3/16 inches
	Segment Length	19 ½ '
	Other Segment Length	
	Number of parallel runs	1
	Length	1050 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
	Segment Length	20'
	Other Segment Length	
	Number of parallel runs	1
	Length	1050 feet per run
	Justification for New Transmission Line	Current line is 19 1/2' and will not work for new channel 19

**Primary  
Transmission  
Line**      **Other Transmission Line Expenses Not Listed**

Information not provided.

**Tower Equipment And Rigging Costs**

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

**Primary Tower**

**Existing Tower**

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?	No
	Is this tower currently shared with any other stations?	Yes
	One or more FM, AM or TV radio broadcaster(s)	Yes
	Others Types of Users	No
	Is tower documented for structural analysis?	Yes
	Is tower compliant with Rev G?	Yes
Existing Tower Structure Registration	Do you have a tower registration number?	Yes
	ASR Number	1004745
Coordinates (NAD83 (North American Datum of 1983))	Latitude (NAD83)	35° 15' 42.0" N-
	Longitude (NAD83)	080° 43' 37.0" W-
	Overall Structure Height	1082.01 feet
	Support Structure Height	970.13 feet
	Ground Elevation Above Mean Sea Level (AMSL)	855.96 feet

Structure Type	TOWER - Free Standing or Guyed Structure
Tower Owner	IWG Towers Assets II, LLC
Date Constructed	01/31/2000

**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
12793	WAXN-TV	DTV

**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 documented tower
<b>Tower Reinforcements</b>	Please select whether tower reinforcements are needed:	Minor Reinforcements needed

**Primary  
Tower**

**Tower Rigging Costs**

Section	Question	Response
<b>Tower Rigging Costs</b>	Complex Tower	N/A
<b>Helicopter Services Required</b>	Are helicopter services required?	No

**Primary  
Tower**

**Other Tower Expenses Not Listed**

Information not provided.

**Outside Professional Services Costs**

Section	Question	Response
<b>Outside Project Management Services</b>	Do you require outside project management services?	Yes
	Number of Hours	25
	Explanation	Project Manager to coordinate crew and materials on site. Design interior RF design
<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	No
	Prepare request for Special Temporary Authority	No
	Quantity	N/A
	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	No
	Quantity	N/A
	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	No
	Prepare or Review FCC Form 399 for Reimbursement	Yes
	Address transition timing and coordination issues w/ other stations and wireless providers	No
<b>RF Field Engineering Services</b>	Comprehensive coverage verification via field study	Yes
	RF exposure measurements	Yes
	Additional Field Engineering Service	Yes
	Number of Days	2
	Justification	Combined Auxiliary antenna will have to be field tuned

**Outside Professional Services Costs**      **Other Professional Services Expenses Not Listed**  
Information not provided.

**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	No
	Non-zoning permits	No
	BLM or NFS Coordination	No
	FCC Construction Permit Minor Change	Yes
	FCC License to Cover Application	Yes
	FCC Special Temporary Authority Application	No
<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**

<b>Name</b>	<b>Description</b>
<b>Equipment Rental</b>	Rent of forklift & scissor Lift to move heavy equipment and work above floor level

**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>Primary Transmitter ULXTE-72</b>	<b>\$1,684,500.00</b>	<b>\$2,012,700.00</b>		<b>\$1,966,617.72</b>	
Distilled Water	<i>\$1,300.00</i>	\$1,300.00	N/A	\$637.50	N/A
Plumbing Supplies	<i>\$3,200.00</i>	\$3,200.00	N/A	\$2,803.03	N/A
RF Hanging Supplies	<i>\$6,500.00</i>	\$6,500.00	N/A	\$3,139.19	N/A
RF Equipment	<i>\$55,000.00</i>	\$55,000.00	Transmitter reject loads would not fit within the room and had to be moved to another room needing additional transmission lines, elbows, hangers and flanges	\$51,732.75	N/A

Other Electrical Service: Wiring for water pumps and mask filter blowers	<i>\$56,000.00</i>	\$56,000.00	Based on actual quote. Changed conduit estimate to \$0. Reduced Transformer from \$41,000 to \$6100. Overall electrical cost are lower than first estimated. Changed from \$51482 to \$55000 due to change in mask filter setup.	\$55,724.00	N/A
2" Rigid Conduit and Wiring (Cost per foot)	\$6,500.00	\$0.00	Cost lowered here but added to overall electrical cost	N/A	N/A

UHF - Liquid Cooled Solid State Transmitter 35 - 50 kW	\$1,434,000.00	\$1,850,000.00	Extra submission in transmitter line account. When removed, this will go down	\$1,819,005.14	The sub total is more than the Estimated Cost because the payment for \$497,967.16 has been requested twice. The last item (#5) needs to be deleted. Thank you Ted H.
Transformer 3 phase /480v - 500 KVA	\$47,100.00	\$6,100.00	Cost lowered by \$41,000. Some added back to Overall electrical cost	\$6,100.00	N/A
15 Ton system	\$54,300.00	\$14,000.00	Cost to move a HVAC unit. Shared cost with WAXN- TV 12793	\$13,288.00	N/A
Other -- Building Addition Size: 320.0	<i>\$20,600.00</i>	\$20,600.00	N/A	\$14,188.11	N/A
<b>Auxiliary Transmitter ULXTE-30</b>	<b>\$694,500.00</b>	<b>\$654,864.87</b>		<b>\$555,111.13</b>	
Coax Switch	<i>\$4,700.00</i>	\$4,700.00	N/A	N/A	N/A
Combiner	<i>\$7,300.00</i>	\$7,300.00	This is half the cost. Shared with WAXN-TV	\$7,297.50	N/A

Other Electrical Service: Wiring for water pumps and mask filter blowers	<i>\$10,000.00</i>	\$10,000.00	N/A	N/A	N/A
2" Rigid Conduit and Wiring (Cost per foot)	\$6,500.00	\$6,250.00	N/A	N/A	N/A
UHF - Liquid Cooled Solid State Transmitter 14.2 - 20 kW	\$666,000.00	\$626,614.87	N/A	\$547,813.63	N/A
<b>Sub-total</b>	\$2,379,000.00	\$2,667,564.87	N/A	\$2,521,728.85	N/A
<b>Total for all systems</b>	\$4,162,258.00	\$4,648,357.37	N/A	\$3,375,759.64	N/A

## Components

Actual Information	
Description	File Name
Distilled Water	<p><b>Component Description:</b> Distilled Water for cleaning and cooling of transmitter... corrected invoice date</p> <p><b>Amount:</b> \$637.50</p>

Plumbing Supplies

**Component Description:** Plumbing supplies, concrete anchors, threaded rod, unistrut, pipe clamps

**Amount:** \$1,554.10

**Component Description:** Struct washer, copper pipe, anchors, pipe cutter

**Amount:** \$601.09

**Component Description:** Anchors Concrete, pipe cutter vise

**Amount:** \$647.84

RF Hanging Supplies

**Component Description:** Cleaner used to clean copper pipes after soldering

**Amount:** \$88.60

**Component Description:** 1 5/8" pipe clamps for coolant pipes to transmitter

**Amount:** \$406.27

**Component Description:** Copper Elbows Coolant Pipes 1 1/2"

**Amount:** \$139.43

**Component Description:** Transfer Pump used to fill coolant system of transmitter

**Amount:** \$298.81



**Component Description:** Unistrut Channel Washers 3/8"  
**Amount:** \$61.84

**Component Description:** Copper Elbows  
Coolant pipes 1 1/2"  
**Amount:** \$278.85

**Component Description:** Unistrut Channel Washers 3/8"  
**Amount:** \$92.76

**Component Description:** Unistrut stands,  
connecting plates  
**Amount:** \$457.75

**Component Description:** see attached letter  
Grainger 110718.  
pdf  
**Amount:** \$1,018.13

**Component Description:** Channel washers  
Unistrut 3/8"  
**Amount:** \$30.92

**Component Description:** Cleaner  
Degreaser used to  
clean copper pipes  
after soldering  
**Amount:** \$265.83

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RF Equipment

**Component Description:** Freight of RF parts  
- WSOC (Main)  
**Amount:** \$1,212.62

**Component Description:** Pipe Clamps & strut angles  
**Amount:** \$415.70

**Component Description:** WSOC-TV 74070.  
\$270.00 parts plus  
\$18.72 freight  
**Amount:** \$288.72

**Component Description:** Transmission line,  
flange adapters,  
line hangers to  
move WSOC  
current Auxiliary  
Transmitter to  
make room for  
new WSOC Main  
transmitter  
**Amount:** \$4,204.87

**Component Description:** WSOC inside T/L  
7 3/16" and  
hangers  
**Amount:** \$10,659.84

**Component Description:** RF sample cables  
**Amount:** \$1,630.70

**Component Description:** RF parts for  
WSOC-TV 74070  
Parts were  
\$3492.00 plus  
\$109.57 for freight  
**Amount:** \$3,601.57

**Component Description:** WSOC-TV 74070  
\$508.50 parts cost  
plus \$83.08 freight  
**Amount:** \$591.58

**Component Description:** RF parts for  
WSOC TV 74070  
1098.00 plus  
358.17 frieght  
**Amount:** \$1,456.17

**Component Description:** RF Parts for  
WSOC-TV 74070  
**Amount:** \$544.30

**Component Description:** RF parts for  
WSOC-TV 74070  
6301.80 plus  
175.49 for freight  
**Amount:** \$6,477.29

**Component Description:** WSOC-TV 74070  
\$8046.00 parts  
cost plus \$217.14  
freight  
**Amount:** \$8,263.14

**Component Description:** WSOC 74070  
Parts costs  
2772.00 plus  
freight of 91.90  
**Amount:** \$2,863.90

**Component Description:** RF Equipment,  
Hangers, Elbows,  
Hardware Kits,  
Flangeds  
**Amount:** \$6,769.85

**Component Description:** Elbow & anchor  
for WSOC Main  
install  
**Amount:** \$2,752.50

<p>Other Electrical Service: Wiring for water pumps and mask filter blowers</p>	<p><b>Component Description:</b> Final payment for WSOC transmitter electrical work</p> <p><b>Amount:</b> \$2,574.10</p>
	<p><b>Component Description:</b> 35% payment on PO CPG11681. Invoice # 13395</p> <p><b>Amount:</b> \$18,018.70</p>
	<p><b>Component Description:</b> Electrical work during install of WSOC-TV transmitter</p> <p><b>Amount:</b> \$30,889.20</p>
	<p><b>Component Description:</b> Payment for additional AC breakers and unistrut ADDED QUOTE PER MSG 1994016</p> <p><b>Amount:</b> \$1,752.00</p>
	<p><b>Component Description:</b> Payment for installing Mask Filter cooling fans ADDED QUOTE PER MSG 1993914</p> <p><b>Amount:</b> \$2,490.00</p>
<p>2" Rigid Conduit and Wiring (Cost per foot)</p>	<p>Information not provided.</p>

UHF - Liquid Cooled Solid State Transmitter 35 - 50 kW	<p><b>Component Description:</b> 1/3 down payment of WSOC-TV MAIN transmitter</p> <p><b>Amount:</b> \$497,967.16</p>
	<p><b>Component Description:</b> WSOC Main Payment</p> <p><b>Amount:</b> \$37,211.61</p>
	<p><b>Component Description:</b> 1/3 Down payment due prior to shipment</p> <p><b>Amount:</b> \$453,899.62</p>
	<p><b>Component Description:</b> Re-submit of invoice &amp; quote. Incorrect amount entered the first time. This is corrected amount.</p> <p><b>Amount:</b> \$497,967.16</p>
	<p><b>Component Description:</b> Down Payment for WSOC Main Transmitter</p> <p><b>Amount:</b> \$497,967.16</p>
	<p><b>Component Description:</b> Invoice 3 of 3 for WSOC main Transmitter</p> <p><b>Amount:</b> \$331,959.59</p>
Transformer 3 phase/480v - 500 KVA	<p><b>Component Description:</b> 480 VAC to 240 VAC, 300 KVA transformer for WSOC transmitter install</p> <p><b>Amount:</b> \$6,100.00</p>

15 Ton system	<p><b>Component Description:</b> Cost to move a HVAC Condenser, includes new concrete pad and ice bridge. ADDED CO PER MSG 1991307</p> <p><b>Amount:</b> \$13,288.00</p>
Other -- Building Addition Size: 320.0	<p><b>Component Description:</b> Metal doors for building addition - WSOC Share</p> <p><b>Amount:</b> \$1,821.11</p> <p><b>Component Description:</b> Building Addition Shared cost with WAXN-TV 12793</p> <p><b>Amount:</b> \$12,367.00</p>
Coax Switch	Information not provided.
Combiner	<p><b>Component Description:</b> 1/2 of the invoice amount. shared with WAXN 12793</p> <p><b>Amount:</b> \$7,297.50</p>
Other Electrical Service: Wiring for water pumps and mask filter blowers	Information not provided.
2" Rigid Conduit and Wiring (Cost per foot)	Information not provided.

UHF - Liquid Cooled Solid  
State Transmitter 14.2 - 20  
kW

**Component Description:** WSOC AUX TX  
2nd payment  
**Amount:** \$192,203.04

**Component Description:** Re-submit with PO  
& Invoice  
**Amount:** \$208,871.62

**Component Description:** WSOC AUX TX  
3rd payment  
**Amount:** \$146,738.97

**Component Description:** 1/3 down payment  
of WSOC-TV AUX  
transmitter minus  
the estimated  
freight (1/3 of  
\$7700, \$2566.67)  
**Amount:** \$206,304.95

**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 TUP-04-12-1 (S)</b>	<b>\$6,550.00</b>	<b>\$4,185.00</b>		<b>\$4,185.00</b>	
Sweep test of existing antenna	\$6,550.00	\$4,185.00	***System Notice: Estimate adjusted and locked because line has been superseded. ***Dummy enter per Jeff Newman 202-418-2046	\$4,185.00	Actual is lower than estimated
<b>Primary Antenna TFU-31EBT /VP-R</b>	<b>\$260,550.00</b>	<b>\$641,562.50</b>		<b>\$540,311.19</b>	
UHF - High Power Top Mount (200-1000 kW), One station antenna, horizontally polarized	\$240,500.00	\$625,000.00	Based on actual quote from Dielectric LLC	\$531,859.06	N/A
Sweep test of existing antenna	\$6,550.00	\$4,180.00	N/A	\$2,880.00	N/A



Elbow complex, single channel, at antenna input, per 7 3/16. feedline (if needed)	\$13,500.00	\$12,382.50	N/A	\$5,572.13	N/A
<b>Sub-total</b>	\$267,100.00	\$645,747.50	N/A	\$544,496.19	N/A
<b>Total for all systems</b>	\$4,162,258.00	\$4,648,357.37	N/A	\$3,375,759.64	N/A

### Components

Actual Information	
Description	File Name
Sweep test of existing antenna	<p><b>Component Description:</b> Reimbursement for Engineering Contract work.</p> <p><b>Amount:</b> \$4,185.00</p>
UHF - High Power Top Mount (200-1000 kW), One station antenna, horizontally polarized	<p><b>Component Description:</b> WSOC Main Antenna, TL, EC, Eng (second 45% payment)</p> <p><b>Amount:</b> \$265,929.53</p> <p><b>Component Description:</b> Down payment of antenna/TL, elbow complex MSG 2122577</p> <p><b>Amount:</b> \$265,929.53</p>

<p>Sweep test of existing antenna</p>	<p><b>Component Description:</b> Item #21 Repack sweep Redo requested 5/9/18 per Natasha Lamothe</p> <p><b>Amount:</b> \$2,880.00</p>
<p>Elbow complex, single channel, at antenna input, per 7 3/16. feedline (if needed)</p>	<p><b>Component Description:</b> Down payment of elbow complex ADDED QUOTE</p> <p><b>Amount:</b> \$5,572.13</p>

**Cost Information**

**Transmission Line**

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
<b>Primary Transmission Line</b>	<b>\$297,150.00</b>	<b>\$289,800.00</b>		<b>\$90,435.15</b>	
Rigid Transmission Line - copper, 7 3/16"	\$297,150.00	\$289,800.00	N/A	\$90,435.15	N/A
<b>Auxiliary Transmission Line</b>	<b>\$115,245.00</b>	<b>\$112,320.00</b>		<b>\$29,442.50</b>	
Rigid Transmission Line - copper, 6 1/8"	\$115,245.00	\$112,320.00	N/A	\$29,442.50	N/A
<b>Sub-total</b>	<b>\$412,395.00</b>	<b>\$402,120.00</b>	N/A	<b>\$119,877.65</b>	N/A
<b>Total for all systems</b>	<b>\$4,162,258.00</b>	<b>\$4,648,357.37</b>	N/A	<b>\$3,375,759.64</b>	N/A

**Components**

Actual Information	
Description	File Name

Rigid Transmission Line - copper, 7 3/16"	<p><b>Component Description:</b> Item #20 Extra 7-75 T/L redo requested 5/9/18 per Natasha Lamothe ADDED QUOTE</p> <p><b>Amount:</b> \$5,872.50</p>
Rigid Transmission Line - copper, 7 3/16"	<p><b>Component Description:</b> Down payment transmission line (Item 4) ADDED QUOTE</p> <p><b>Amount:</b> \$84,562.65</p>
Rigid Transmission Line - copper, 6 1/8"	<p><b>Component Description:</b> WSOC share of AUX TL</p> <p><b>Amount:</b> \$29,442.50</p>

**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 TOWER</b>	<b>\$370,800.00</b>	<b>\$356,000.00</b>		<b>\$119,552.50</b>	
Minor tower reinforcement /modifications	\$153,500.00	\$125,000.00	N/A	N/A	N/A
Tall Tower (greater than 500')	\$205,000.00	\$200,000.00	This is half the cost. The other half is on WAXN-TV's form.	\$113,115.00	N/A
Structural engineering tower load study for well documented tower	\$12,300.00	\$31,000.00	Based on actually quote from Tower Engineering Company, Seattle, WA	\$6,437.50	N/A
<b>Sub-total</b>	<b>\$370,800.00</b>	<b>\$356,000.00</b>	N/A	<b>\$119,552.50</b>	N/A
<b>Total for all systems</b>	<b>\$4,162,258.00</b>	<b>\$4,648,357.37</b>	N/A	<b>\$3,375,759.64</b>	N/A

**Components**

Actual Information	
Description	File Name
Minor tower reinforcement /modifications	Information not provided.

<p>Tall Tower (greater than 500')</p>	<p><b>Component Description:</b> 30% down payment on WSOC tower work (Aux)</p> <p><b>Amount:</b> \$19,102.20</p> <p><b>Component Description:</b> 30% down payment on WSOC Tower work (Main)</p> <p><b>Amount:</b> \$94,012.80</p>
<p>Structural engineering tower load study for well documented tower</p>	<p><b>Component Description:</b> Climbing &amp; drawings for tower modification</p> <p><b>Amount:</b> \$6,437.50</p>

**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>\$151,660.00</b>	<b>\$163,700.00</b>		<b>\$18,393.10</b>	
Additional Field Engineering Service, 2 Days	<i>\$17,500.00</i>	\$17,500.00	N/A	N/A	N/A
RF Exposure Measurements	\$20,500.00	\$20,000.00	N/A	N/A	N/A
Comprehensive coverage verification via field study, if needed	\$81,900.00	\$80,000.00	N/A	N/A	N/A
Attorney Fees - Prepare and File FCC Form 2100 (main), License to Cover Application	\$2,305.00	\$2,250.00	N/A	N/A	N/A
Attorney Fees - Aux Antenna, prepare and File Form 2100 Construction Permit or License Application	\$4,100.00	\$4,000.00	N/A	\$3,056.70	N/A
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	\$5,120.00	\$5,000.00	N/A	\$4,813.40	N/A

RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, License to Cover Application	\$1,535.00	\$1,500.00	N/A	N/A	N/A
RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, Construction Permit Application	\$2,050.00	\$2,000.00	N/A	N/A	N/A
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	\$3,070.00	\$3,000.00	N/A	N/A	N/A
Perform engineering study for new channel assignment and antenna development	\$7,170.00	\$22,200.00	Actual Engineering Cost. See attached.	\$10,523.00	Actual is less than Estimated. This invoice is for work with WSOC and WAXN. Requesting 50% for WSOC
Prepare and or review reimbursement form	\$2,560.00	\$2,500.00	N/A	N/A	N/A



Project management of the transition	\$3,850.00	\$3,750.00	N/A	N/A	N/A
<b>Sub-total</b>	\$151,660.00	\$163,700.00	N/A	\$18,393.10	N/A
<b>Total for all systems</b>	\$4,162,258.00	\$4,648,357.37	N/A	\$3,375,759.64	N/A

## Components

Actual Information	
Description	File Name
Additional Field Engineering Service, 2 Days	Information not provided.
RF Exposure Measurements	Information not provided.
Comprehensive coverage verification via field study, if needed	Information not provided.
Attorney Fees -Prepare and File FCC Form 2100 (main), License to Cover Application	Information not provided.

Attorney Fees - Aux  
Antenna, prepare and File  
Form 2100 Construction  
Permit or License  
Application

**Component Description:** Full payment of  
invoice for legal  
services for  
WSOC-TV repack.  
**Amount:** \$1,336.30

**Component Description:** Re-submit of  
invoice after  
removal of non-  
reimbursable item.  
New amount  
requested  
**Amount:** \$299.20

**Component Description:** Full payment of  
invoice for legal  
services for  
WSOC-TV repack.  
**Amount:** \$419.80

**Component Description:** Full payment of  
invoice for legal  
services for  
WSOC-TV repack.  
**Amount:** \$1,421.20

<p>Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application</p>	<p><b>Component Description:</b> Full payment of invoice for legal services for WSOC-TV repack.</p> <p><b>Amount:</b> \$1,933.50</p> <p><b>Component Description:</b> Full payment of invoice for legal services for WSOC-TV repack.</p> <p><b>Amount:</b> \$358.10</p> <p><b>Component Description:</b> Full Payment of invoice for legal services for WSOC-TV repack. #The is a redo, correcting the wrong amount of invoice 5/8/18 #</p> <p><b>Amount:</b> \$2,521.80</p>
<p>RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, License to Cover Application</p>	<p>Information not provided.</p>
<p>RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, Construction Permit Application</p>	<p>Information not provided.</p>
<p>Prepare engineering section of FCC Form 2100 (main), Construction Permit Application</p>	<p>Information not provided.</p>
<p>Perform engineering study for new channel assignment and antenna development</p>	<p><b>Component Description:</b> Requesting 50% of invoice WSOC</p> <p><b>Amount:</b> \$10,523.00</p>

Prepare and or review reimbursement form	Information not provided.
Project management of the transition	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>\$77,353.00</b>	<b>\$70,095.00</b>		<b>\$51,711.35</b>	
Equipment Rental	<i>\$50,000.00</i>	\$50,000.00	N/A	\$48,436.35	N/A
MVPD Notification of Channel Change	<i>\$7,500.00</i>	\$7,500.00	N/A	N/A	N/A
Develop and air announcement of upcoming channel change	<i>\$1,100.00</i>	\$1,100.00	N/A	N/A	N/A
Equipment Delivery and Handling Charges	<i>\$0.00</i>	\$0.00	N/A	\$0.00	N/A
Disposal Costs (for equipment and other waste, net of any salvage value)	<i>\$3,500.00</i>	\$3,500.00	N/A	N/A	N/A
FCC Filing Fees - Form 2100 license to cover application	\$333.00	\$325.00	N/A	N/A	N/A
DTV Medical Facility Notification	\$11,250.00	\$4,000.00	N/A	\$3,275.00	N/A

FCC Filing Fees - Form 2100 minor change CP application	\$1,070.00	\$1,070.00	N/A	N/A	N/A
Equipment Storage	<i>\$2,600.00</i>	\$2,600.00	N/A	N/A	N/A
<b>Sub-total</b>	\$77,353.00	\$70,095.00	N/A	\$51,711.35	N/A
<b>Total for all systems</b>	\$4,162,258.00	\$4,648,357.37	N/A	\$3,375,759.64	N/A

### Components

Actual Information	
Description	File Name
Equipment Rental	<p><b>Component Description:</b> October 2018 Fork Lift Rental <b>Amount:</b> \$3,481.73</p> <p><b>Component Description:</b> monthly payment for forklift used at transmitter site <b>Amount:</b> \$3,487.61</p> <p><b>Component Description:</b> July 2018 Fork Lift Rental <b>Amount:</b> \$3,481.73</p> <p><b>Component Description:</b> June 2018 Scissor Lift Rental <b>Amount:</b> \$1,359.41</p> <p><b>Component Description:</b> January 2019 Fork Lift Rental <b>Amount:</b> \$3,481.73</p>

**Component Description:** December 2018  
Scissor Lift Rental  
**Amount:** \$1,059.11

**Component Description:** June 2018 rental  
of Fork Lift  
**Amount:** \$3,770.02

**Component Description:** February 2019  
Scissor Lift Rental  
**Amount:** \$1,058.21

**Component Description:** August 2018 Fork  
Lift Rental  
**Amount:** \$3,481.73

**Component Description:** December 2018  
Fork Lift Rental  
**Amount:** \$3,481.73

**Component Description:** February 2019  
Fork Lift Rental  
**Amount:** \$3,487.61

**Component Description:** July 2018 Scissor  
Lift Rental  
**Amount:** \$1,059.11

**Component Description:** Monthly rental  
payment for  
forklift used at  
transmitter site  
**Amount:** \$3,487.61

**Component Description:** November 2018  
Fork Lift Rental  
**Amount:** \$3,481.73

**Component Description:** August 2018  
Scissor Lift Rental  
**Amount:** \$1,059.11

**Component Description:** November 2018  
Scissor Lift Rental  
**Amount:** \$1,059.11

**Component Description:** September 2018  
Fork Lift Rental  
**Amount:** \$3,481.73

**Component Description:** January 2019  
Scissor Lift Rental  
**Amount:** \$1,059.11

**Component Description:** September 2018  
Scissor Lift Rental  
**Amount:** \$1,059.11

**Component Description:** October 2018  
Scissor Lift Rental  
**Amount:** \$1,059.11

MVPD Notification of Channel Change	Information not provided.
Develop and air announcement of upcoming channel change	Information not provided.
Equipment Delivery and Handling Charges	Information not provided.
Disposal Costs (for equipment and other waste, net of any salvage value)	Information not provided.
FCC Filing Fees - Form 2100 license to cover application	Information not provided.



DTV Medical Facility Notification	<p><b>Component Description:</b> Medical Notification - WSOC</p> <p><b>Amount:</b> \$3,275.00</p>
FCC Filing Fees - Form 2100 minor change CP application	Information not provided.
Equipment Storage	Information not provided.

Cost Information	Grand Total		
	Predetermined Cost Estimate	Estimated Cost	Actual Cost
Total for all systems	\$4,162,258.00	\$4,648,357.37	\$3,375,759.64

Construction Status	Question	Response
	Is construction complete?	No

Certification	Section	Question	Response
	<p><b>Submission of Estimated Expenses Statements</b></p>	<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.

8. The above-named entity certifies that it is in full compliance with all statutes, rules, regulations and governmental requirements for which compliance is a pre-requisite for obtaining the payments herein requested.

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

**Ted Hand**  
*Director of  
Engineering  
/Operations*

05/10/2019

Certification	Section	Question	Response
	<p><b>Submission of Actual Cost Documentation Statements</b></p>	<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> <p>1. The Authorized Person signing below certifies and represents that he /she is authorized to submit this TV Broadcaster Relocation Fund Reimbursement Form on behalf of the above-named entity. The above-named entity acknowledges that all certifications and attached documentation are considered material.</p> <p>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.</p>	

- 3.** 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).
- 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 certifies that the cost information /documents submitted reflect costs actually incurred.
- 6.** The above-named entity acknowledges that overpayments or payments in error must be promptly refunded to the Commission.
- 7.** The above-named entity certifies that it is in full compliance with all statutes, rules, regulations and governmental requirements for which compliance is a pre-requisite for obtaining the payments herein requested.

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

**Ted Hand**  
*Director of  
Engineering  
/Operations*

05/10/2019

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## Attachments