



(REFERENCE COPY - Not for submission)

# FCC Form 399: Reimbursement Request

Facility **71023** | Service: **DTV** | Call **KTNW** | Channel: **22 (UHF)** |  
ID: | Sign:  
File **0000028348**  
Number:  
FRN: **0001563949** | Date **08/16**  
Submitted: **/2017**

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

Applicant	Address	Phone	Email	Applicant Type
<b>WASHINGTON STATE UNIVERSITY</b> Doing Business As: WASHINGTON STATE UNIVERSITY	Murrow Public Media. Jackson Hall rm 382, P.O. BOX 642530 PULLMAN, WA 99164 United States	+1 (509) 335- 6585	doug. krehbiel@wsu. edu	Government Entity

## 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>Martin L. Gibbs</b> <i>FCC Planning Engineer</i> <i>Washington State University Murrow Public Media</i>	2710 Crimson Way Richland, WA 99354 United States	+1 (509) 948- 1496	m. gibbs@wsu. edu

**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.	No
Briefly describe transition plan	Replace analog antenna at top of tower with new antenna; install new transmitter. This will allow parallel operation during the testing phase without additional expenses for temporary facilities. Ref: Attachment 1

**Transmitters**

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

**Primary  
Transmitter**

**Existing Transmitter Information**

Section	Question	Response
<b>Existing Transmitter Description</b>	Type of change	Purchase New
	Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is this transmitter currently shared with another station?	No
	Is this transmitter currently in operating condition?	Yes
<b>Existing Transmitter Manufacturer and Type</b>	Manufacturer	
	Model	Magnum
	Year	2003
	Type	Solid State
	Solid State Cooling	Air Cooled
	Solid State Power Capacity	2 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	THU9-EVO
	Transmitter Type	Solid State
	Solid State Cooling	Liquid Cooled
	Solid State Power capacity	4.9 kW
	Justification for New Transmitter	Larcan Magnum transmitter is no longer supported and has many obsolete parts. Current manufacturer does not have documentation for re-tune. In addition, a higher TPO is necessary to support the proposed antenna. Ref: Attachment 1

**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)	No

	Power	N/A
	Rigid Conduit and Wiring	Yes
	Size	2 inches
	Length	25.0 feet
	Other Electrical Service	Yes
	Description	Branch panel with disconnect
<b>HVAC Service</b>	Does the replacement transmitter require HVAC Service?	No
	Type	N/A
	Size	N/A
	Other Size	N/A
<b>Transmitter Building Addition/Modification or Leasehold Improvement</b>	Does the Transmitter Building require an addition, modification, other leasehold improvement?	No
	Size	N/A
<b>Channel 14 Costs</b>	Is an RF Consulting Engineer needed?	N/A
	Is a channel 14 Mask Filer needed?	N/A
	Is additional field engineering time needed?	N/A
	Number of Days	N/A

**Primary Transmitter**      **Other Transmitter Cost Not Listed**  
Information not provided.

**Antennas**

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

**Primary  
Antenna**

**Existing Antenna Information**

Section	Question	Response
<b>Existing Antenna Description</b>	Type of change	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	Side Mount
	Antenna position in stack	Not in Stack
	Polarization	Horizontal
	Type	Slotted Coaxial
	Number of Stations Supported	N/A
	Number of Panels	N/A
	Design power capacity in use	N/A
	Lower Limit	N/A
	Upper Limit	N/A
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power) .....	47.6 kW

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Manufacturer	
Model	TLP-8L
Year	2003

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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	Full Power
	Mounting	Side Mount
	Antenna position in stack	Not in Stack
	Polarization	Horizontal
	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)	29.5 kW
	Manufacturer	
Model	SFN-3030-2	

Year	2018
Justification for New Antenna	Old antenna cannot be returned from channel 38 to channel 22. Ref: Attachment 1

**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?	No
	Broadband or Single Channel?	N/A
	Feed Line Size	N/A
<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?	No

**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

**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	Flexible Air
	Diameter	1 5/8 inches
	Other Diameter	N/A
	Segment Length	N/A
	Other Segment Length	N/A
	Number of parallel runs	1
	Length	120 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	Flexible Air
	Diameter	1 5/8 inches
	Other Diameter	N/A
	Segment Length	N/A
	Other Segment Length	N/A
	Number of parallel runs	1
	Length	140 feet per run
	Justification for New Transmission Line	Enable parallel operation during testing period. Ref: Attachment 1

**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**

**Add Tower**

Section	Question	Response
Existing Tower Description	Type of change	Modify Existing
	Tower Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Is this tower consider Complex?	No
	Is this tower currently shared with any other stations?	No
	One or more FM, AM or TV radio broadcaster(s)	N/A
	Others Types of Users	N/A
	Is tower documented for structural analysis?	Yes
	Is tower compliant with Rev G?	Unknown
Existing Tower Structure Registration	Do you have a tower registration number?	No
	ASR Number	
Coordinates (NAD83 (North American Datum of 1983))	Latitude (NAD83)	46° 06' 12.8" N-
	Longitude (NAD83)	119° 07' 44.6" W-
	Overall Structure Height	62.00 feet
	Support Structure Height	62.00 feet
	Ground Elevation Above Mean Sea Level (AMSL)	2182.00 feet

Structure Type	UTOWER - Unguyed - Free Standing Tower
Tower Owner	Washington State University
Date Constructed	06/02/2003

**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**

<b>Section</b>	<b>Question</b>	<b>Response</b>
<b>Outside Project Management Services</b>	Do you require outside project management services?	Yes
	Number of Hours	400
	Explanation	Planning and coordination of project to assure adherence to Phase 1 schedule. See Attachment 1
<b>Outside RF consulting Engineering Services</b>	Perform engineering study for new channel assignment and antenna development	Yes
	Prepare engineering section of Form FCC Construction Permit Application	Yes
	For Auxiliary Facility	No
	For Main Facility	Yes
	Prepare engineering section of Form FCC License to Cover Application	Yes
	For Auxiliary Facility	No
	For Main Facility	Yes
	Prepare request for Special Temporary Authority	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	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	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	Yes
<b>RF Field Engineering Services</b>	Comprehensive coverage verification via field study	No
	RF exposure measurements	Yes
	Additional Field Engineering Service	No
	Number of Days	N/A
	Justification	N/A

**Outside  
Professional  
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	Yes
	BLM or NFS Coordination	No
	FCC Construction Permit Minor Change	No
	FCC License to Cover Application	No
	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**

Information not provided.

**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 THU9-EVO</b>	<b>\$287,225.00</b>	<b>\$273,700.00</b>		<b>\$0.00</b>	
Other Electrical Service: Branch panel with disconnect	<i>\$13,075.00</i>	\$13,075.00	N/A	N/A	N/A
2" Rigid Conduit and Wiring (Cost per foot)	\$650.00	\$625.00	N/A	N/A	N/A
UHF - Liquid Cooled Solid State Transmitter 4.9 . 6.5 kW	\$273,500.00	\$260,000.00	N/A	N/A	N/A
<b>Sub-total</b>	<b>\$287,225.00</b>	<b>\$273,700.00</b>	N/A	<b>\$0.00</b>	N/A
<b>Total for all systems</b>	<b>\$755,425.00</b>	<b>\$722,790.00</b>	N/A	<b>\$0.00</b>	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 SFN-3030-2</b>	<b>\$50,000.00</b>	<b>\$50,000.00</b>		<b>\$0.00</b>	
UHF - High Power, Side Mount, basic slot antenna, 30 kW input, directional,, horizontally polarized	<i>\$50,000.00</i>	\$50,000.00	N/A	N/A	N/A
<b>Sub-total</b>	<b>\$50,000.00</b>	<b>\$50,000.00</b>	<b>N/A</b>	<b>\$0.00</b>	<b>N/A</b>
<b>Total for all systems</b>	<b>\$755,425.00</b>	<b>\$722,790.00</b>	<b>N/A</b>	<b>\$0.00</b>	<b>N/A</b>

**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>\$4,620.00</b>	<b>\$4,340.00</b>		<b>\$0.00</b>	
Flexible Air Transmission Line - dielectric, 1 5/8"	\$4,620.00	\$4,340.00	N/A	N/A	N/A
<b>Sub-total</b>	<b>\$4,620.00</b>	<b>\$4,340.00</b>	N/A	<b>\$0.00</b>	N/A
<b>Total for all systems</b>	<b>\$755,425.00</b>	<b>\$722,790.00</b>	N/A	<b>\$0.00</b>	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 UTOWER</b>	<b>\$254,800.00</b>	<b>\$242,000.00</b>		<b>\$0.00</b>	
Structural engineering tower load study for well documented tower	\$12,600.00	\$12,000.00	N/A	N/A	N/A
Minor tower reinforcement /modifications	\$158,000.00	\$150,000.00	N/A	N/A	N/A
Short Tower (less than 500')	\$84,200.00	\$80,000.00	N/A	N/A	N/A
<b>Sub-total</b>	<b>\$254,800.00</b>	<b>\$242,000.00</b>	N/A	<b>\$0.00</b>	N/A
<b>Total for all systems</b>	<b>\$755,425.00</b>	<b>\$722,790.00</b>	N/A	<b>\$0.00</b>	N/A

**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>\$109,230.00</b>	<b>\$103,750.00</b>		<b>\$0.00</b>	
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	N/A	N/A
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	\$3,155.00	\$3,000.00	N/A	N/A	N/A
Project management of the transition	\$63,200.00	\$60,000.00	N/A	N/A	N/A
Prepare and or review reimbursement form	\$2,630.00	\$2,500.00	N/A	N/A	N/A
Address transition timing and coordination issues w/ other stations and wireless	\$2,630.00	\$2,500.00	N/A	N/A	N/A

Perform engineering study for new channel assignment and antenna development	\$7,360.00	\$7,000.00	N/A	N/A	N/A
RF Exposure Measurements	\$21,050.00	\$20,000.00	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
<b>Sub-total</b>	\$109,230.00	\$103,750.00	N/A	\$0.00	N/A
<b>Total for all systems</b>	\$755,425.00	\$722,790.00	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>\$49,550.00</b>	<b>\$49,000.00</b>		<b>\$0.00</b>	
MVPD Notification of Channel Change	<i>\$2,000.00</i>	\$2,000.00	N/A	N/A	N/A
Develop and air announcement of upcoming channel change	<i>\$3,000.00</i>	\$3,000.00	N/A	N/A	N/A
Equipment Storage	<i>\$4,000.00</i>	\$4,000.00	N/A	N/A	N/A
Equipment Delivery and Handling Charges	<i>\$25,000.00</i>	\$25,000.00	N/A	N/A	N/A
DTV Medical Facility Notification	\$11,550.00	\$11,000.00	N/A	N/A	N/A
Non-zoning permits	<i>\$2,000.00</i>	\$2,000.00	N/A	N/A	N/A
Disposal Costs (for equipment and other waste, net of any salvage value)	<i>\$2,000.00</i>	\$2,000.00	N/A	N/A	N/A
<b>Sub-total</b>	\$49,550.00	\$49,000.00	N/A	\$0.00	N/A
<b>Total for all systems</b>	\$755,425.00	\$722,790.00	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>	\$755,425.00	\$722,790.00	\$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>Marvin Marcelo</b> <i>General Manager</i></p> <p>08/16/2017</p>

**Attachments**