

(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 **04/13**

Submitted: /2018

Applicant Information

Applicant Name, Type, and Contact Information

Applicant	Address	Phone	Email	Applicant Type
WASHINGTON STATE UNIVERSITY 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 Name and Information Reimbursement Contact Information

Applicant	Address	Phone	Email
[Confidential]			

Preparer Contact Information

Preparer Contact Name and Information

Applicant	Address	Phone	Email
Martin L. Gibbs FCC Planning Engineer Washington State University Murrow Public Media	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
Transmitter Related Expenses	Do you have transmitter related expenses?	Yes

Primary Transmitter

Existing Transmitter Information

Section	Question	Response
Existing Transmitter Description	Type of change	Purchase New
	Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is this transmitter currently shared with another station?	No
	Is this transmitter currently in operating condition?	Yes
Existing Transmitter	Manufacturer	
Manufacturer and Type	Model	Magnum
	Year	2003
	Туре	Solid State
	Solid State Cooling	Air Cooled
	Solid State Power Capacity	2 kW

Primary Transmitter

New Transmitter Costs

Section	Question	Response
New Transmitter	Use	Primary (Main)
	Change Type	Purchase New
	Is this a request for upgraded equipment?	No
	Manufacturer	
	Model	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	
Electrical Service	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
HVAC Service	Does the replacement transmitter require HVAC Service?	No
	Туре	N/A
	Size	N/A
	Other Size	N/A
Transmitter Building Addition/Modification or Leasehold Improvement	Does the Transmitter Building require an addition, modification, other leashold improvement?	No
	Size	N/A
Channel 14 Costs	Is an RF Consulting Engineer needed?	N/A
	Is a channel 14 Mask Filer needed?	N/A
	Is additional field engineering time needed?	N/A
	Number of Days	N/A

Primary Transmitter **Other Transmitter Cost Not Listed**

Transmitter 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
Existing Antenna Description	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
Existing Antenna	Class	Full Power
Manufacturer and Type	Mounting	Side Mount
	Antenna position in stack	Not in Stack
	Polarization	Horizontal
	Туре	Slotted Coaxial
	Number of Stations Supported	N/A
	Number of Panels	N/A
	Design power capacity in use	N/A
	Lower Limit	N/A
	Upper Limit	N/A
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power)	47.6 kW

Manufacturer	
Model	TLP-8L
Year	2003

Primary Antenna

New Antenna Costs

Section	Question	Response
New Antenna Description	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
New Antenna	Class	Full Power
Manufacturer and Types	Mounting	Side Mount
	Antenna position in stack	Not in Stack
	Polarization	Horizontal
	Туре	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 retuned from channel 38 to channel 22. Ref: Attachment

Primary Antenna

Other Antenna Costs

Section	Question	Response
Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	No
	Туре	
	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
Elbow Complex	Do you require the separate purchase of the Elbow Complex?	No
	Broadband or Single Channel?	N/A
	Feed Line Size	N/A
Side Mount Brackets	Do you require the separate purchase of side mount brackets for a high power antenna?	No
Pattern Scatter Analysis	Do you require separate purchase of pattern scatter analysis for a side mount high or medium power antenna?	No
Sweep Test	Do you require the sweep testing of transmission line and antenna?	No

Primary Antenna

Other Antenna Cost Not Listed

Transmission ^{Seffien}	Question	Response
Transmission Line Related Expenses	Do you have transmission line related expenses?	Yes

Primary Transmission Se

Existing Transmission Line

n Line Section	Question	Response
Existing Transmission Line Description	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
Existing Transmission	Manufacturer	
Line Manufacturer and Type	Туре	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 Transmi

New Transmission Line

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

Primary Other Transmission Line Expenses Not Listed

Transmission loine tion 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	Do you have a tower registration number?	No
Registration	ASR Number	
Coordinates (NAD83 (North American Datum of	Latitude (NAD83)	46° 06' 12.8" N-
1983))	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 fee

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
Engineering Study	Please what type of engineering study is required, if any:	Study needed for documented tower
Tower Reinforcements	Please select whether tower reinforcements are needed:	Minor Reinforcements needed

Primary Tower

Tower Rigging Costs

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

Primary Tower

Other Tower Expenses Not Listed

Outside Professional

Section	Question	Response
Services Costs Outside Project Management Services	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
Outside RF consulting Engineering Services	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
Attorney and Other Outside Consulting Services	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
RF Field Engineering Services	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
Outside
Professional Services Expenses Not Listed
Professional Services ©qstsided.

Other Expenses

Section	Question	Response
AM Pattern Disturbance	Is an Impact Study needed?	No
	Is Remediation needed?	No
Facility Expenses	Name	N/A
	Other Distributed Transmission System Expenses Not listed	N/A
	Name	N/A
	Is Notification of a Medical Facility required as a result of DTV broadcasting?	Yes
Permit and Filing Costs	Local Zoning	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
Other Miscellaneous Expenses	Does this relocation require paying Disposal Costs (for equipment and other waste, net of any salvage value)?	Yes
	Does this relocation require Equipment Delivery or Handling Charges not otherwise included in individual item costs?	Yes
	Does this relocation require Equipment Storage?	Yes
	Does this relocation require the Development and Airing of an Announcement regarding an upcoming channel change?	Yes
	Does this relocation require MVPD Notification of a Channel Change?	Yes

Other Expenses Not Listed

Expenses Information not provided.

Transmitters

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Primary Transmitter THU9-EVO	\$287,225.00	\$273,700.00		\$0.00	
Other Electrical Service: Branch panel with disconnect	\$13,075.00	\$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
Sub-total	\$287,225.00	\$273,700.00	N/A	\$0.00	N/A
Total for all systems	\$755,425.00	\$722,790.00	N/A	\$8,143.38	N/A

Components

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
Primary Antenna SFN- 3030-2	\$50,000.00	\$50,000.00		\$0.00	
UHF - High Power, Side Mount, basic slot antenna, 30 kW input, directional,, horizontally polarized	\$50,000.00	\$50,000.00	N/A	N/A	N/A
Sub-total	\$50,000.00	\$50,000.00	N/A	\$0.00	N/A
Total for all systems	\$755,425.00	\$722,790.00	N/A	\$8,143.38	N/A

Components

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
Primary Transmission Line	\$4,620.00	\$4,340.00		\$0.00	
Flexible Air Transmission Line - dielectric, 1 5 /8"	\$4,620.00	\$4,340.00	N/A	N/A	N/A
Sub-total	\$4,620.00	\$4,340.00	N/A	\$0.00	N/A
Total for all systems	\$755,425.00	\$722,790.00	N/A	\$8,143.38	N/A

Components

Tower Equipment and Rigging Costs

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Primary Tower UTOWER	\$254,800.00	\$242,000.00		\$0.00	
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
Sub-total	\$254,800.00	\$242,000.00	N/A	\$0.00	N/A
Total for all systems	\$755,425.00	\$722,790.00	N/A	\$8,143.38	N/A

Components

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
Outside Professional Services	\$109,230.00	\$103,750.00		\$8,143.38	
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	\$3,155.00	\$3,000.00	N/A	\$920.00	N/A
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	\$5,260.00	\$5,000.00	N/A	\$0.00	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	\$0.00	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

Perform engineering study for new channel assignment and antenna development	\$7,360.00	\$7,000.00	N/A	\$1,840.00	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
Prepare and or review reimbursement form	\$2,630.00	\$2,500.00	N/A	N/A	N/A
Project management of the transition	\$63,200.00	\$60,000.00	N/A	\$5,383.38	N/A
Sub-total	\$109,230.00	\$103,750.00	N/A	\$8,143.38	N/A
Total for all systems	\$755,425.00	\$722,790.00	N/A	\$8,143.38	N/A

Components

Actual Information		
Description	File Name	

Dana and a saint a saint a said		
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	Component Description: Amount:	prepare engineering section of Form 2100, construction permit application. Portion of wages allocated during 3rd quarter 2017 \$230.00
	Component Description:	prepare engineering section of Form 2100, construction permit application. wages during 2nd qtr 2017
	Amount:	\$690.00
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	Information not provided.	
RF Exposure Measurements	Information not provided.	
Attorney Fees -Prepare and File FCC Form 2100 (main), License to Cover Application	Information not provided.	
Prepare engineering section of FCC Form 2100 (main), License to Cover Application	Information not provided.	
Perform engineering study for new channel assignment and antenna development	Component Description:	Engineering Study portion of 2nd quarter wages.
	Amount:	\$1,840.00
Address transition timing and coordination issues w/ other stations and wireless	Information not provided.	
Prepare and or review reimbursement form	Information not provided.	

Project management	of the
transition	

Component Description: project

management wages allocated during 3rd quarter

2017

Amount: \$1,334.00

Component Description: Project

management - wages for 1st quarter.

Amount: \$782.00

Component Description: Portion of wages

allocated to Project

Management during 4th quarter

2017

Amount: \$1,061.68

Component Description: Portion of 2nd

quarter wages allocated to general project management

Amount: \$2,205.70

Other Expenses

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

			Estimated		
Description	Predetermined Cost Estimate	Estimated Cost	Cost Justification	Actual Cost	Actual Cost Justification
Other Expenses	\$49,550.00	\$49,000.00		\$0.00	
MVPD Notification of Channel Change	\$2,000.00	\$2,000.00	N/A	N/A	N/A
DTV Medical Facility Notification	\$11,550.00	\$11,000.00	N/A	N/A	N/A
Equipment Delivery and Handling Charges	\$25,000.00	\$25,000.00	N/A	N/A	N/A
Equipment Storage	\$4,000.00	\$4,000.00	N/A	N/A	N/A
Non-zoning permits	\$2,000.00	\$2,000.00	N/A	N/A	N/A
Disposal Costs (for equipment and other waste, net of any salvage value)	\$2,000.00	\$2,000.00	N/A	N/A	N/A
Develop and air announcement of upcoming channel change	\$3,000.00	\$3,000.00	N/A	N/A	N/A
Sub-total	\$49,550.00	\$49,000.00	N/A	\$0.00	N/A
Total for all systems	\$755,425.00	\$722,790.00	N/A	\$8,143.38	N/A

Components

Grand Total

	Predetermined Cost Estimate	Estimated Cost	Actual Cost
Total for all systems	\$755,425.00	\$722,790.00	\$8,143.38

Reimbursem	entestiatus	Response
	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

Section Question Response

Submission of Estimated Expenses Statements

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND /OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a) (1), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503), AND ANY FALSE STATEMENTS COULD SUBJECT THIS ENTITY TO LIABILITY UNDER THE FALSE CLAIMS ACT.

- 1. The Authorized
 Person signing
 below certifies that he
 /she is authorized to
 submit this TV
 Broadcaster
 Relocation Fund
 Reimbursement
 Form on behalf of
 the above-named
 entity.
- 2. The above-named entity acknowledges that all certifications and attached documentation are considered material representations.
- 3. The above-named entity acknowledges the submission of the information herein creates no obligation on the part of the government to pay any amount.

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

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

I declare, under penalty of perjury, that I am an authorized representative of the abovenamed applicant for the Authorization(s) specified above. Denise
Crossler
Grant &
Contract

Specialist

04/13/2018

Section Question Response

Submission of Actual Cost Documentation Statements

WILLFUL FALSE, FRAUDULENT, OR FICTITIOUS STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND /OR IMPRISIONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a) (1), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503), AND ANY FALSE AND/OR FRAUDULENT STATEMENTS COULD SUBJECT THIS ENTITY TO LIABILITY UNDER THE FALSE CLAIMS ACT (U.S. CODE, TITLE 31, SECTIONS 3729-3733).

- 1. The Authorized
 Person signing
 below certifies and
 represents that he
 /she is authorized to
 submit this TV
 Broadcaster
 Relocation Fund
 Reimbursement
 Form on behalf of
 the above-named
 entity.
- The above-named entity certifies that the statements in this form and attached documentation are true, complete, and correct.
- The above-named entity acknowledges that all certifications and attached documentation are considered material representations.

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

- 8. The above-named entity acknowledges that overpayments or payments in error must be promptly refunded to the Commission.
- 9. The above-named entity certifies that it is in full compliance with all statutes, rules, regulations and governmental requirements for which compliance is a prerequisite for obtaining the payments herein requested.

I declare, under penalty of perjury, that I am an authorized representative of the abovenamed applicant for the Authorization(s) specified above. Denise Crossler Grant & Contract Specialist

04/13/2018

Attachments