

(REFERENCE COPY - Not for submission)

FCC Form 399: Reimbursement Request

Facility 68581 Service: DTV Call KTVD Channel: 31 (UHF)

Sign:

ID:

File **0000027983**

Number:

FRN: **0001887363** Date **12/26**

Submitted: /2019

Applicant Information

Applicant Name, Type, and Contact Information

Applicant	Address	Phone	Email	Applicant Type
MULTIMEDIA HOLDINGS CORPORATION	Law Department TEGNA Inc. 8350 Broad Street, Suite 2000 Tysons, VA 22107 United States	+1 (703) 873- 6600	lawdept@tegna. com	Corporation

Reimbursement Contact Name and Information Reimbursement Contact Information

Applicant	Address	Phone	Email	
[Confidential]				

Preparer Contact Information

Preparer Contact Name and Information

Gary Davis	Applicant	Address	Phone	Email
	Regional Head of Technology and Operations	8350 Broad Street Suite 2000 Tysons, VA 22102	` ,	•

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	KTVD will be moving to channel 31 from channel 19. It plans to repurpose the current broadband antenna and transmission line. It requires a new combiner port and a new transmitter. It would cost more to re-tune the existing TX than to purchase a new.

Transmitters

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

Auxiliary Transmitter

Existing Transmitter Information

Section	Question	Response
Existing Transmitter Description	Type of change	Purchase New
	Use	Auxiliary (Backup)
	Description of Use	Low Power Backup transmitter
	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 and Type	Manufacturer	
	Model	Ranger
	Year	2003
	Туре	Solid State
	Solid State Cooling	Air Cooled
	Solid State Power Capacity	1 kW

Auxiliary Transmitter

New Transmitter Costs

Section	Question	Response
New Transmitter	Use	Auxiliary (Backup)
	Change Type	Purchase New
	Is this a request for upgraded equipment?	No
	Manufacturer	
	Model	UAXTE 2R37
	Transmitter Type	Solid State
	Solid State Cooling	Air Cooled
	Solid State Power capacity	1.2 kW
	Justification for New Transmitter	The old transmitter cannot be re-tuned.

Auxiliary Transmitter

Other Transmitter Costs

	Response
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	100.0 feet
Other Electrical Service	Yes
	Switchgear (industrial 800 amp) Transformer (480V) Power Rigid Conduit and Wiring Size Length

	Description	Additional electrical services required for transmitter installation.
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

Auxiliary
Transmitter Unformation not provided.

Other Transmitter Cost Not Listed

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	PWR 60 P2
	Year	2007
	Туре	Inductive Output Tube
	IOT Power Type	Two
	Power Capacity	60 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?	Yes
	Manufacturer	
	Model	ULXT 60
	Transmitter Type	Solid State
	Solid State Cooling	Liquid Cooled
	Solid State Power capacity	51 kW
	Justification for New Transmitter	It will cost more to re- tune the old transmitter with interim transmitter lease pricing than purchasing a new one.

Primary Transmitter

Other Transmitter Costs

Question	Response
Service Entrance (3 phases 800A 208V)	No
Switchgear (industrial 800 amp)	No
Transformer (480V)	No
Power	N/A
Rigid Conduit and Wiring	Yes
Size	3 inches
	Service Entrance (3 phases 800A 208V) Switchgear (industrial 800 amp) Transformer (480V) Power Rigid Conduit and Wiring

	Length	100.0 feet
	Other Electrical Service	Yes
	Description	Additional electrical services required for transmitter installation, including heat exchangers, transformers, cooling pumps, etc.
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?	Yes
	Size	100.0 square feet
Channel 14 Costs	Is an RF Consulting Engineer needed?	N/A
	Is a channel 14 Mask Filer needed?	N/A
	Is additional field engineering time needed?	N/A
	Number of Days	N/A

Primary Transmitter

Other Transmitter Cost Not Listed

Name	Description
Transmitter installation	Transmitter installation
Combiner Install and Testing	Combiner Install and Testing

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	Retune Existing
	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?	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?	No
Existing Antenna	Class	Full Power
Manufacturer and Type	Mounting	Top Mount
	Antenna position in stack	Тор
	Polarization	Horizontal
	Туре	Broadband Panel
	Number of Stations Supported	2
	Number of Panels	48
	Design power capacity in use	50.0 %
	Lower Limit	470.00 MH

Upper Limit	860.00 MHz
Other Antenna Type	N/A
ERP: (Effective Radiated Power)	1000.0 kW
Manufacturer	Dielectric
Model	TUC-C4SP- 12/48U-4-T
Year	2008

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

Facility ID	Call Sign
47903	KCNC-TV

Primary Antenna

Adjustment to Existing Antenna

Section	Question	Response
Sweep Test of Existing Antenna	Do you need a sweep test of existing antenna?	Yes

Primary Antenna

Other Antenna Costs

Section	Question	Response
Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	Yes
	Туре	Additional Module
	Number of channels supported	3
	Frequencies of channels supported	RF channel
	Frequency	N/A

Enter a list of RF channel numbers.

RF Channel Number	
19	
31	
35	

Primary Antenna

Other Antenna Cost Not Listed

Name	Description
Mask Filter	New mask filter required for new channel.

Auxiliary Antenna

Existing Antenna Information

Section	Question	Response
Existing Antenna Description	Type of change	Retune Existing
	Antenna Use	Auxiliary (Backup)
	Description of Use	AUX Antenna
	Ownership	Owned
	Owner	N/A
	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?	No
Existing Antenna	Class	Full Power
Manufacturer and Type	Mounting	Side Mount
	Antenna position in stack	Not in Stack

Polarization	Horizontal
Туре	Broadband Panel
Number of Stations Supported	2
Number of Panels	36
Design power capacity in use	50.0 %
Lower Limit	470.00 MHz
Upper Limit	860.00 MHz
Other Antenna Type	N/A
ERP: (Effective Radiated Power)	987.0 kW
Manufacturer	Dielectric
Model	TUA-C3-12 /36-1-S
Year	2008

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

Facility ID	Call Sign
47903	KCNC-TV

Auxiliary Antenna

Adjustment to Existing Antenna

Section	Question	Response
Sweep Test of Existing Antenna	Do you need a sweep test of existing antenna?	Yes

Auxiliary Antenna

Other Antenna Costs

Section	Question	Response
Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	Yes

Туре	Additional Module
Number of channels supported	3
Frequencies of channels supported	RF channel
Frequency	N/A

Enter a list of RF channel numbers.

RF Channel Number		
19		
31		
35		

Auxiliary Antenna

Other Antenna Cost Not Listed

Name	Description	
Mask Filter	New mask filter required for new channel.	

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

Primary Existing Transmission Line Transmission Line

Section Section	Question	Response
Existing Transmission Line Description	Type of change	Utilize Existing
	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?	Yes
	Is Transmission Line in operating condition?	Yes
Existing Transmission	Manufacturer	Dielectric
Line Manufacturer and Type	Туре	Rigid
	Diameter	8 3/16 inches
	Other Diameter	N/A
	Segment Length	Broadband
	Other Segment Length	N/A
	Number of parallel runs	2
	Length	1000 feet per run

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

Facility ID	Call Sign
47903	KCNC-TV

Other Transmission Line Expenses Not Listed

Transmission	Name Description	
	TX Line Sweep	Sweep required to verify post-transition channel measures well on existing line.
	Miscellaneous Parts	Miscellaneous Parts

Auxi Tran

ry			
nissio	n Line Section	Question	Response
	Existing Transmission Line Description	Type of change	Utilize Existing
		Use	Auxiliary (Backup)
		Description of Use	AUX Line
		Ownership	Owned
		Owner	N/A
	Site	N/A	
		Is the existing transmission line shared with another station or stations?	Yes
Existing Transmission Line Manufacturer and Type		Is Transmission Line in operating condition?	Yes
		Manufacturer	Dielectric
		Туре	Rigid
	Diameter	8 3/16 inches	
		Other Diameter	N/A
	Segment Length	Broadband	
		Other Segment Length	N/A

Number of parallel runs	2
Length	1000 feet per run

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

Facility ID	Call Sign
47903	KCNC-TV

Auxiliary

Other Transmission Line Expenses Not Listed

Transmission	ndine	Description
	TX Line Sweep	Sweep required to verify post-transition channel measures well on existing line.

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	Owned
	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?	No
	Is tower compliant with Rev G?	Unknown
Existing Tower Structure	Do you have a tower registration number?	Yes
Registration	ASR Number	1058328
Coordinates (NAD83 (North American Datum of 1983))	Latitude (NAD83)	39° 43' 50.6" N-
	Longitude (NAD83)	105° 13' 55.6" W-
	Overall Structure Height	734.24 feet
	Support Structure Height	620.40 feet
	Ground Elevation Above Mean Sea Level (AMSL)	7115.40 fee

Structure Type	TOWER - Free Standing or Guyed Structure
Tower Owner	LAKE CEDAR GROUP, L. L.C.
Date Constructed	06/01/2009

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
47903	KCNC-TV	DTV

Primary Tower

Tower Modification Costs

Section	Question	Response
Engineering Study	Please what type of engineering study is required, if any:	Study needed for undocumented /poorly 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**

Information not provided.

Outside Professional

Section	Question	Response
Services Costs Outside Project Management Services	Do you require outside project management services?	Yes
	Number of Hours	200
	Explanation	Fewer PM tasks are needed & OES & 399 work are needed, so the PM total has been reduced to \$150x200hrs (\$30000), a new OES component has been created & funded with part of the \$ removed from PM, & "Prepare & or review reimbursement form" has been increased
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	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
Attorney and Other Outside Consulting	Prepare and file Form FCC Construction Permit Application	Yes
Services	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	Yes
	FAA Consultation (including preparation of FAA Form 7460)	Yes
	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	Yes
	RF exposure measurements	Yes
	Additional Field Engineering Service	Yes

Number of Days	10
Justification	\$2,500 per site visit including expenses x 10 days. It is necessary to survey the site, plan the equipment, develop specifications for purchasing, & oversee multiple vendor RF projects. Station does not have available personnel trained in such services.

Outside Professional

Other Professional Services Expenses Not Listed

Services Costs	Description
Other Legal Services	Other Legal Services related to the DTV Repack
Pre filing site review	outside engineering to review all facilitues
Other Engineering Services	Fewer PM tasks are needed & OES & 399 work are needed, so the PM total has been reduced to \$150x200hrs(\$30000), a new OES component has been created & funded with part of the \$ removed from PM, & "Prepare & or review reimbursement form" has been increased

Other Expenses

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

Other Expenses Not Listed

Expenses 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 Cos
Primary Transmitter ULXT 60	\$1,363,664.02	\$1,363,364.02		\$1,263,565.17	
Combiner Install and Testing	\$16,465.00	\$16,465.00	Combiner Install & Testing	\$16,465.00	N/A
Transmitter installation	\$18,345.45	\$18,345.45	Transmitter installation	\$18,345.45	N/A
Other Building Addition Size: 100.0	\$25,000.00	\$25,000.00	New pad required for heat exchangers, transformers, pumps, etc. Equipment must also be shielded.	\$301.42	N/A
Other Electrical Service: Additional electrical services required for transmitter installation, including heat exchangers, transformers, cooling pumps, etc.	\$122,153.30	\$122,153.30	See Encore Electric Quote. The total is 50 cents higher than originally thought due to the "cents" being lopped off on the vendor's quote.	\$121,891.33	N/A
3" Rigid Conduit and Wiring (Cost per foot)	\$5,200.00	\$4,900.00	N/A	N/A	N/A

UHF - Liquid Cooled Solid State Transmitter 51 kW	\$1,176,500.27	\$1,176,500.27	See attached GatesAir quotes and invoices. Also, see Dielectric LLC quotes and invoices. Also, Majestic Rigging and Transportation invoices & quotes.	\$1,106,561.97	The Actual Cost exceeds the Estimated Cost due in part to the inclusion of the Combiner & RF System in this category, as well as sales tax.
Auxiliary Transmitter UAXTE 2R37	\$153,600.00	\$124,332.10		\$96,832.10	
Other Electrical Service: Additional electrical services required for transmitter installation.	\$25,000.00	\$25,000.00	Additional electrical services required for transmitter installation.	N/A	N/A
2" Rigid Conduit and Wiring (Cost per foot)	\$2,600.00	\$2,500.00	N/A	N/A	N/A
UHF - Air Cooled Solid State Transmitter 1 - 2.5 kW	\$126,000.00	\$96,832.10	See attached GatesAir invoices GO10004858- 1 and US0322514, with corresponding Quotes and Change Orders.	\$96,832.10	N/A
Sub-total	\$1,517,264.02	\$1,487,696.12	N/A	\$1,360,397.27	N/A

Total for all	\$2,636,529.44	\$2,625,665.55	N/A	\$1,629,753.24	N/A
systems					

Components

Actual Information Description	File Name	
Combiner Install and Testing	Component Description: Amount:	H and D 47443 v190628jgv1 \$16,465.00
Transmitter installation	Component Description: Amount:	Gates inv #US0321815 Stage 1 Filter line install UL20190416jgv1 \$18,345.45
Other Building Addition Size: 100.0	Component Description: Amount:	Inv 148630459 KTVD Equipment rental UL20180601jgv1 \$301.42

Other Electrical Service: Additional electrical services required for transmitter installation, including heat exchangers, transformers, cooling pumps, etc.

Component Description: KTVD Encore Elec

inv #43123 Electrical work UL20180806jg v2

Amount: \$92,949.50

Component Description: Gates US0328257

v191007pmv1 \$28,916.10

Component Description: Amazon 30622

v190611pmv1

Amount: \$262.00

Component Description: Amazon 31165

v190611pmv1

Amount: \$25.73

3" Rigid Conduit and Wiring (Cost per foot)

Information not provided.

Amount:

Amount:

Amount:

UHF - Liquid Cooled Solid State Transmitter 51 kW

Component Description: Majestic 630000097

v190530pmv1 \$1,760.00

Component Description: Die 325036

v190820pmv2

Amount: \$250.00

Component Description: Majestic 1203232

v190923pmv1 \$2,050.00

Component Description: Majestic 1203333

v190923pmv1 \$1,642,50

Amount: \$1,642.50

v191219pmv5

Amount: \$13,184.24

Component Description: Die 242072

v190820pmv2

Amount: \$7,325.00

Component Description: Die 323010

v191025pmv4

Amount: \$36.00

Component Description: Majestic HN-

630000622 v190923pmv1

Amount: N/A

Component Description: Die 323010

v190712pmv1

Amount: \$127.20

Component Description: Die 332003

v190712pmv1

Amount: \$125.00

Component Description: Amazon 31900

v190530pmv1

Amount: \$52.56

Component Description: Die 323010

v190712pmv1

Amount: \$1,402.80

Component Description: Die 323010

v191025pmv4

Amount: \$14,028.00

v190917pmv3

Amount: \$3,500.00

Component Description: Gates inv

#US0320805

Various transmitter

parts

UL20190416jgv1

Amount: \$2,042.67

Component Description: Die 323010

v190712pmv1

Amount: \$274.05

Component Description: Inv GO10004699-1

KTVD ULXT-60 transmitter 50 percent down payment

UL20180424jg v1

Amount: \$390,798.01

Component Description: Die 235024

v191025pmv4

Amount: \$6,592.12

Component Description: Transmitter

/Components-

GatesAir

Amount: \$422,226.60

Component Description: Deposit on

Transmitter

Amount: \$144,324.64

v191025pmv4

Amount: \$6,592.12

Component Description: Die 323010

v191025pmv4

Amount: \$672.00

Component Description: Die 332003

v190712pmv1

Amount: \$104.64

Component Description: Die 242072

v190712pmv1

Amount: \$7,325.00

Component Description: Die 332003

v190820pmv2

Amount: \$1,250.00

Component Description: Inv MAN00269

KTVD Combiner and RF System 45 percent down

payment

UL20180424jg v1

\$92,291.63

Component Description: Die 323010

v190712pmv1

Amount: \$67.20

Amount:

Component Description: Die 323010

v191025pmv4

Amount: \$276.00

v1900820pmv2

Amount: N/A

Component Description: Die 325036

v190712pmv1

Amount: \$25.00

Component Description: Die 323010

v190712pmv1

Amount: \$3.60

Component Description: Die 323010

v190712pmv1

Amount: \$27.60

Component Description: Inv MAN00386

KTVD Combiner and RF System 45 percent payment 2 UL20180424jg v1

Amount: \$92,291.63

Component Description: Die 332003

v190712pmv1

Amount: \$280.00

Component Description: Die 323010

v190712pmv1

Amount: \$350.00

Component Description: Gates inv

Amount:

#US0320664

Various transmitter

parts

UL20190416jgv1

\$3,017.61

v191025pmv4

Amount: \$1,272.00

Component Description: Majestic HN-

630000252 v190923pmv1

Amount: N/A

Component Description: Inv US0307626

KTVD ULXT-60 TX change order

UL20180515jgv1

Amount: \$23,246.71

Component Description: Inv US0307804

KTVD ULXT-60 TX

balance due UL20180515jgv2

Amount: \$456,327.97

Component Description: Majestic HN-

630000532 v190923pmv1

Amount: N/A

Component Description: Die 332003

v190820pmv2

Amount: \$2,800.00

Other Electrical Service: Additional electrical services required for transmitter installation. Information not provided.

2" Rigid Conduit and Wiring (Cost per foot)

Information not provided.

UHF - Air Cooled Solid State Transmitter 1 - 2.5 kW

Component Description: Gates US0321035

v190918pmv1

Amount: \$984.13

Component Description: Gates US0322514

v190918pmv2

Amount: \$23,717.32

Component Description: Gates US0317124

v190918pmv1

Amount: \$27,875.58

Component Description: Gates inv

#GO10004858-1 Aux TX 50 pct pmt

1 UL20181030jgv1

Amount: \$44,168.95

Component Description: Gates US0321036

v190918pmv1

Amount: \$86.12

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
Primary Antenna TUC-C4SP- 12/48U-4-T	\$183,130.00	\$179,796.26		\$90,762.10	
Mask Filter	\$73,250.00	\$73,250.00	New mask filter required for new post- transition channel. See attached Dielectric quote.	N/A	N/A
Adding a module to existing combiner (without antenna)	\$84,200.00	\$82,146.26	3-channel manifold combiner required in order to repurpose existing broadband antenna and broadband transmission line. See attached Dielelctric quote.	\$82,146.24	N/A
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	N/A	N/A

Total for all systems	\$2,636,529.44	\$2,625,665.55	N/A	\$1,629,753.24	N/A
Sub-total	\$318,010.00	\$309,224.01	N/A	\$104,868.60	N/A
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	N/A	N/A
Adding a module to existing combiner (without antenna)	\$84,200.00	\$80,027.75	3-channel manifold combiner required in order to repurpose existing broadband antenna and broadband transmission line. See attached Dielelctric quote.	\$14,106.50	N/A
Elbow complex, broadband, at antenna input, per 8 3/16. feedline (if	\$18,950.00	\$18,000.00	N/A	N/A	N/A
Mask Filter	\$25,000.00	\$25,000.00	N/A	N/A	N/A
Auxiliary Antenna TUA-C3-12 /36-1-S	\$134,880.00	\$129,427.75		\$14,106.50	
complex, broadband, at antenna input, per 8 3/16. feedline (if needed)	\$18,950.00	\$18,000.00	N/A	\$8,615.86	N/A

Actual Information Description	File Name	
Mask Filter	Information not provided.	
Adding a module to existing combiner (without antenna)	Component Description: Amount:	Die MAN01015 v190806pmv1 \$37,673.12
	Component Description: Amount:	Die MAN01016 v190806pmv1 \$37,673.12
	Component Description: Amount:	Die 445002 v190503jgv2 \$6,800.00
	Component Description: Amount:	Die 235024 v190604pmv1 N/A
Sweep test of existing antenna	Information not provided.	

Elbow complex, broadband, at antenna **Component Description:** Die 499005 input, per 8 3/16. feedline v190610pmv1 (if needed) \$4,085.00 Amount: **Component Description:** Die ST563025 v190930pmv1 Amount: \$78.40 **Component Description:** Die ST499005 v190617jgv1 Amount: \$339.46 **Component Description:** Die 563025 v190930pmv1 Amount: \$1,960.00 **Component Description:** Die inv #US0320792 Swivel Hanger and tax UL20190405jgv1 Amount: \$2,153.00 Mask Filter Information not provided. Elbow complex, Information not provided. broadband, at antenna input, per 8 3/16. feedline

(if needed)

Adding a module to		
existing combiner (without antenna)	Component Description:	Electron D
antenna)		201812007
		v190507jgv2
	Amount:	\$14,106.50
	Component Description:	Die 235024
		v190604pmv1
	Amount:	\$65,921.25
	Component Description:	Electron D inv
		#201812007
		Manifold Aux
		Combiner Install
		UL20190402jgv1
	Amount:	\$14,106.50
Sweep test of existing antenna	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
Primary Transmission Line	\$7,069.76	\$7,069.76		\$669.76	
Miscellaneous Parts	\$669.76	\$669.76	N/A	\$669.76	N/A
TX Line Sweep	\$6,400.00	\$6,400.00	N/A	N/A	N/A
Auxiliary Transmission Line	\$6,400.00	\$6,400.00		\$0.00	
TX Line Sweep	\$6,400.00	\$6,400.00	N/A	N/A	N/A
Sub-total	\$13,469.76	\$13,469.76	N/A	\$669.76	N/A
Total for all systems	\$2,636,529.44	\$2,625,665.55	N/A	\$1,629,753.24	N/A

Actual Information Description	File Name	
Miscellaneous Parts		
	Component Description: Amount:	Die ST573039 v191007pmv1 \$25.76
	Component Description: Amount:	Die 573039 v191007pmv1 \$644.00
TX Line Sweep	Information not provided.	

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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 Primary Tower TOWER	Predetermined Cost Estimate \$394,800.00	Estimated Cost \$375,000.00	Estimated Cost Justification	Actual Cost \$31,372.90	Actual Cost Justification
Minor tower reinforcement /modifications	\$158,000.00	\$150,000.00	N/A	\$31,372.90	N/A
Tower mapping for an undocumented /poorly documented tower and preparation of documentation necessary for tower load study	\$26,300.00	\$25,000.00	N/A	N/A	N/A
Tall Tower (greater than 500')	\$210,500.00	\$200,000.00	N/A	N/A	N/A
Sub-total	\$394,800.00	\$375,000.00	N/A	\$31,372.90	N/A
Total for all systems	\$2,636,529.44	\$2,625,665.55	N/A	\$1,629,753.24	N/A

Actual Information	
Description	File Name

Minor tower reinforcement /modifications		
rnodifications	Component Description:	Majestic HN-
		630000622
		v190923pmv1
	Amount:	\$18,784.80
	Component Description:	Majestic HN-
		630000252
		v190923pmv1
	Amount:	\$2,230.80
	Component Description:	Majestic HN-
		630000532
		v190923pmv1
	Amount:	\$10,357.30
Tower mapping for an undocumented/poorly	Information not provided.	
documented tower and		
preparation of		
documentation necessary		
for tower load study		
Tall Tower (greater than 500')	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 C
Outside Professional Services	\$268,155.66	\$316,010.66		\$101,580.56	
Prepare engineering section of FCC Form 2100 (main), License to Cover Application	\$1,580.00	\$1,500.00	N/A	\$675.00	N/A
Project management of the transition	\$31,600.00	\$60,000.00	It will be necessary to schedule and coordinate multiple vendors, complete progress reports, and update Schedule 399s. Station does not have available personnel or personnel trained in project management for such complex projects.	\$57,736.51	See invoice
Prepare request for Special Temporary Authorization	\$4,100.00	\$3,000.00	N/A	\$3,000.00	N/A

Other	\$15,000.00	\$15,000.00	Fewer PM	\$3,250.00	N/A
Engineering			tasks are		
Services			needed &		
			OES & 399		
			work are		
			needed, so the		
			PM total has		
			been reduced		
			to \$150x200hrs		
			(\$30000), a		
			new OES		
			component		
			has been		
			created &		
			funded with		
			part of the \$		
			removed from		
			PM, &		
			"Prepare & or		
			review		
			reimbursement		
			form" has		
			been increased		
Pre filing site review	\$23,500.00	\$23,500.00	N/A	N/A	N/A
Other Legal	\$19,260.66	\$19,260.66	Other Legal	\$12,892.55	N/A
Services			Services		
			related to the		
			DTV Repack		

Additional Field Engineering Service, 10 Days	\$25,000.00	\$25,000.00	\$2,500 per site visit including expenses x 10 days. It is necessary to survey the site, plan the equipment, develop specifications for purchasing, & oversee multiple vendor RF projects. Station does not have available personnel trained in such services.	N/A	N/
RF Exposure Measurements	\$21,050.00	\$20,000.00	N/A	N/A	N
Comprehensive coverage verification via field study, if needed	\$84,200.00	\$80,000.00	N/A	N/A	N.
FAA consultant, including cost of preparing FAA Form 7460 (Notice of Proposed Construction), if needed for height increase	\$2,105.00	\$2,000.00	N/A	N/A	N
ASR modification (prepare FCC Form 854)	\$2,105.00	\$2,000.00	N/A	N/A	N

Attorney Fees - Prepare and File request for Special Temporary Authorization	\$7,360.00	\$7,000.00	N/A	N/A	N/A
Attorney Fees - Prepare and File FCC Form 2100 (main), License to Cover Application	\$2,365.00	\$2,250.00	N/A	N/A	N/A
Attorney Fees - Aux Antenna, prepare and File Form 2100 Construction Permit or License Application	\$4,210.00	\$4,000.00	N/A	N/A	N/A
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	\$5,260.00	\$5,000.00	N/A	N/A	N/A
RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, License to Cover Application	\$1,580.00	\$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	\$2,105.00	\$2,500.00	See attached / uploaded PDF file titled "Osborn 33860 v191226jgv1. pdf"	\$2,500.00	N/A
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	\$3,155.00	\$3,000.00	N/A	N/A	N/A
Perform engineering study for new channel assignment and antenna development	\$7,360.00	\$7,000.00	N/A	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
Prepare and or review reimbursement form	\$2,630.00	\$30,000.00	The cost estimate includes the initial 399 amendment, anticipated subsequent 399 amendments, and ongoing Actual Cost invoice prep and submission by KGA.	\$21,526.50	See invoices

Sub-total	\$268,155.66	\$316,010.66	N/A	\$101,580.56	N/A
Total for all systems	\$2,636,529.44	\$2,625,665.55	N/A	\$1,629,753.24	N/A

omponents		
Actual Information Description	File Name	
Prepare engineering section of FCC Form 2100 (main), License to Cover Application	Component Description: Amount:	Osborn 33860 v191226jgv1 \$675.00
Project management of the transition	Component Description:	Inv 29216 KTVD Proj Mgt 180428- 180525
	Amount:	UL20180706jg v1 \$4,350.00
	Component Description:	Osborn 31150 v191223jgv1
	Amount:	\$2,475.00
	Component Description:	Osborn 31794 v191226jgv1
	Amount:	\$5,400.00
	Component Description:	Osborn 32836 v190613pmv1
	Amount:	\$1,200.00
	Component Description:	Osborn 34126
	Amount:	v191226jgv1 \$2,062.50

Component Description: Osborn 30488

v191223jgv1

Amount: \$675.00

Component Description: Osborn 35815

v191226jgv1

Amount: \$150.00

Component Description: Osborn 34596

v190730jgv1

Amount: \$1,425.00

Component Description: Osborn 35006

v191226jgv1

Amount: \$450.00

Component Description: Osborn 31613

v191226jgv1

Amount: \$1,650.00

Component Description: Osborn 30691

v191223jgv1

Amount: \$1,500.00

Component Description: Osborn 36192

Amount:

Amount:

v191226jgv1 \$2,765.00

Component Description: Osborn 32206

v191226jgv1 \$1,639.02

Component Description: Osborn 30011

v191223jgv1

Amount: \$1,350.00

Component Description: Osborn 33860

v191226jgv1

Amount: \$150.00

Osborn 33860

v191226jgv1

Amount: \$300.00

Component Description:

Component Description: Osborn 33860

v191226jgv1

Amount: \$300.00

Component Description: Osborn 33860

v191226jgv1

Amount: \$150.00

Component Description: Osborn 33860

v191226jgv1

Amount: \$4,987.50

Component Description: Osborn inv #28999

Proj mgt 180331-

180427

UL20190321jgv1

Amount: \$1,725.00

Component Description: Osborn inv #26018

Proj Mgt 170530-

170728

UL20181107jg v1

\$20,669.99

Component Description: Osborn inv #29838

Amount:

Proj mgt 180526-

180629

UL20190322jgv1

Amount: \$2,362.50

Prepare request for		
Special Temporary	Component Description:	Osborn 33860
Authorization		v191226jgv1
	Amount:	\$1,500.00
	Component Description:	Osborn 33860
		v191226jgv1
	Amount:	\$1,500.00
Other Engineering Services		
	Component Description:	Osborn 31150
		v191223jgv1
	Amount:	\$775.00
	Component Description:	Osborn inv #29838
		Other Eng Srvcs
		UL20190322jgv1
	Amount:	\$2,475.00
Pre filing site review	Information not provided.	
Other Legal Services		
	Component Description:	Covington
		60801032
		v190530jgv2
	Amount:	\$1,958.17
	Component Description:	Covington
		60801029
	Amazinti	v190712jgv2
	Amount:	\$144.71
	Component Description:	Covington inv
		#60796723 Various
		Legal
		UL20181024jgv1

Component Description: Covington

60801029

v190513pmv1

Amount: \$164.44

Component Description: Covington

60801029

v190508pmv1

Amount: \$164.44

Component Description: Covington

60801032

v190508pmv1

Amount: \$1,521.69

Component Description: Covington inv

#60805588 Various legal thru 180531 UL20190410jgv1

Amount: \$1,756.37

Component Description: Covington

60805585

v190513pmv1

Amount: \$4,655.68

Component Description: Covington

60805585

v190508pmv1

Amount: \$4,655.68

Component Description: Covington inv

#60808553 Various legal thru 180630 UL20190410jgv1

Amount: \$235.69

Additional Field Engineering Service, 10 Days	Information not provided.
RF Exposure Measurements	Information not provided.
Comprehensive coverage verification via field study, if needed	Information not provided.
FAA consultant, including cost of preparing FAA Form 7460 (Notice of Proposed Construction), if needed for height increase	Information not provided.
ASR modification (prepare FCC Form 854)	Information not provided.
Attorney Fees - Prepare and File request for Special Temporary Authorization	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	Information not provided.
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	Information not provided.
RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, License to Cover Application	Information not provided.

Component Description: Amount:	Osborn 33860 v191226jgv1 \$2,500.00
Information not provided.	
Information not provided.	
Information not provided.	
Component Description: Amount:	Osborn 34586 v190730jgv1 \$1,718.00
Component Description: Amount:	Osborn 31150 v191223jgv1 \$875.00
Component Description: Amount:	Osborn 35815 v191226jgv1 \$2,745.00
Component Description: Amount:	Osborn 35006 v191226jgv1 \$3,495.00
Component Description: Amount:	Osborn 36192 v191226jgv1 \$3,185.00
	Amount: Information not provided. Information not provided. Component Description: Amount: Component Description: Amount: Component Description: Amount: Component Description: Amount: Component Description: Amount:

Component Description: Osborn 30011

v191223jgv1

Amount: \$797.50

Component Description: Osborn 33860

v191226jgv1

Amount: \$1,327.50

Component Description: Osborn 33860

v191226jgv1

Amount: \$2,746.00

Component Description: Osborn 33860

v191226jgv1

Amount: \$1,000.00

Component Description: Osborn inv #28999

Amend 399 Form UL20190301jgv2

Amount: \$3,200.00

Component Description: Osborn inv #29838

Actual Cost

Invoices

UL20190322jgv1

Amount: \$437.50

Cost Information

Other Expenses

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Other Expenses	\$124,830.00	\$124,265.00		\$30,864.15	
MVPD Notification of Channel Change	\$6,000.00	\$6,000.00	40 hours at \$150 per hour to shoot, edit . write and produce promotional information.	\$1,865.00	N/A
Develop and air announcement of upcoming channel change	\$6,000.00	\$6,000.00	40 hours at \$150 per hour to shoot, edit. write and produce promotional information.	\$3,270.00	N/A
Equipment Storage	\$25,000.00	\$25,000.00	N/A	N/A	N/A
Equipment Delivery and Handling Charges	\$25,000.00	\$25,000.00	N/A	\$21,979.15	N/A
Disposal Costs (for equipment and other waste, net of any salvage value)	\$25,000.00	\$25,000.00	N/A	N/A	N/A
Non-zoning permits	\$25,000.00	\$25,000.00	N/A	N/A	N/A

Local Zoning	\$750.00	\$750.00	3 cents per \$100 of construction cost.	N/A	N/A
FCC Filing Fees - Special Temporary Authorization request	\$195.00	\$190.00	N/A	N/A	N/A
FCC Filing Fees - Form 2100 license to cover application	\$335.00	\$325.00	N/A	N/A	N/A
DTV Medical Facility Notification	\$11,550.00	\$11,000.00	N/A	\$3,750.00	N/A
Sub-total	\$124,830.00	\$124,265.00	N/A	\$30,864.15	N/A
Total for all systems	\$2,636,529.44	\$2,625,665.55	N/A	\$1,629,753.24	N/A

Actual Information Description	File Name	
MVPD Notification of Channel Change	Component Description: Amount:	Osborn 33860 v191226jgv1 \$1,865.00
Develop and air announcement of upcoming channel change	Component Description: Amount:	2C Media inv #203806 Creation of channel change announcement UL20181016jgv1 \$3,270.00
Equipment Storage	Information not provided.	
Equipment Delivery and Handling Charges		

Component Description: Die 523007

v190807pmv1

Amount: \$59.01

Component Description: Die 466005

V191219pmv1

Amount: \$4,485.00

Component Description: Die 459012

V191219pmv1

Amount: \$4,104.00

Component Description: Die 452006

v190806pmv1

Amount: \$764.93

Component Description: Die 235024

v191219pmv5

Amount: \$8,032.50

Component Description: Die 564024

v190930pmv1

Amount: \$383.43

Component Description: Die 235024

v191025pmv4

Amount: \$8,032.50

Component Description: Die 567025

v191007pmv1

Amount: \$363.27

Component Description: Die 235024

v190604pmv1

Amount: N/A

Component Description: Amount:	Die 323010 v191025pmv4 \$2,740.52
Component Description: Amount:	Die 332003 v190820pmv2 \$1,046.49
Information not provided.	
Component Description: Amount:	RF Notifications inv #1052 Medical Notifications UL20181029jg v1 \$3,750.00
	Amount: Component Description: Amount: Information not provided. Information not provided. Information not provided. Information not provided. Component Description:

Cost Information

Grand Total

	Predetermined Cost Estimate	Estimated Cost	Actual Cost
Total for all systems	\$2,636,529.44	\$2,625,665.55	\$1,629,753.24

Reimbursem	entestiatus	Response
The facility has ceased operating on its auction channel.	The facility has ceased operating on its pre- auction channel.	Yes
	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. Jeffrey C Gehman Engineering Associate

12/26/2019

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. Jeffrey C Gehman Engineering Associate

12/26/2019

Attachments