

(REFERENCE COPY - Not for submission)

FCC Form 399: Reimbursement Request

Facility 66781 Service: DTV Call KIRO-TV Channel: 23 (UHF)

ID: Sign:

11/25

ID: File

0000028117

Number:

FRN: **0014361620** Date

Submitted: /2019

Applicant Information

Applicant Name, Type, and Contact Information

Applicant	Address	Phone	Email	Applicant Type
KIRO-TV, INC. Doing Business As: KIRO-TV, INC.	Chief Engineer 2807 THIRD AVENUE SEATTLE, WA 98121 United States	+1 (206) 728-7777	knealey@kiro7. com	Corporation

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
Keith Nealey Director Of Engineering KIRO TV INC KIRO-TV, Inc.	Keith Nealey 2807 Third Avenue Seattle, WA 98121 United States	+1 (206) 728- 7808	knealey@kiro7. 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.	No
Briefly describe transition plan	Phase 1: Raise Aux Antenna & extend current aux transmission line to help match existing coverage using current Main TX on CH-39. Phase 2: Install new main antenna, reuse existing transmission line, install new Main&Aux transmitters, go live on CH 23.

Transmitters

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

Auxiliary Transmitter

Add Transmitter Information

Section	Question	Response
Existing Transmitter Description	Type of change	Purchase New
	Use	Auxiliary (Backup)
	Description of Use	Aux Transmitter & emergency backup
	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	DHD60-P2
	Year	2004
	Туре	Solid State
	Solid State Cooling	Air Cooled
	Solid State Power Capacity	14 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	ULXTE-24
	Transmitter Type	Solid State
	Solid State Cooling	Liquid Cooled
	Solid State Power capacity	16.1 kW
	Justification for New Transmitter	Current Gates transmitter cannot be re-tuned- see Gates supporting doc-(Gates Air Channel Change Notice KIRO AUX) for details.

Auxiliary Transmitter

Other Transmitter Costs

Section	Question	Response
Electrical Service	Service Entrance (3 phases 800A 208V)	No
	Switchgear (industrial 800 amp)	No
	Transformer (480V)	Yes
	Power	150 kVA
	Rigid Conduit and Wiring	Yes

	Size	3 inches
	Length	240.0 feet
	Other Electrical Service	Yes
	Description	Electrician will remove existing service connection and dispose. New transforme conduits and heat exchanger feeds will be installe for new Aux. See Schneider proposal Queen Anne for cost detail
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 Other Transmitter Cost Not Listed

Transmitter Information not provided.

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	Sigma CD- 40P1
	Year	1999
	Туре	Inductive Output Tube
	IOT Power Type	Two
	Power Capacity	28.2 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?	Yes
	Manufacturer	
	Model	ULXTE-50
	Transmitter Type	Solid State
	Solid State Cooling	Liquid Cooled
	Solid State Power capacity	31.7 kW
	Justification for New Transmitter	Current transmitter cannot be retuned to channel 23. See attached supporting docs from Gates and Comark to substantiate solid state vs. IOT. See Gates Air Main Transmitter quote (ULXTE-50 Main TX) for cost breakdowns.

Primary Transmitter

Other Transmitter Costs

Section	Question	Response
---------	----------	----------

Electrical Service	Service Entrance (3 phases 800A 208V)	No
	Switchgear (industrial 800 amp)	No
	Transformer (480V)	Yes
	Power	150 kVA
	Rigid Conduit and Wiring	Yes
	Size	4 inches
	Length	100.0 feet
	Other Electrical Service	Yes
	Description	Electrician will remove existing electrical and install new transformer, conduits, and heat exchanger feeds for primary transmitter. See quote from Schneider for cost breakdowns.
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

Is a channel 14 Mask Filer needed?	N/A
Is additional field engineering time needed?	N/A
Number of Days	N/A

Other Transmitter Cost Not Listed

Primary
Transmitter Information not provided.

Antennas

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

Add Antenna Information

Section	Question	Response
Existing Antenna Description	Type of change	Purchase New
	Antenna Use	Auxiliary (Backup)
	Description of Use	Aux Backup
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is this antenna currently shared with any other stations?	No
	Is this antenna directional?	Yes
	Is antenna in operating condition?	Yes
	Is antenna located on or in close proximity to an antenna farm?	No
Existing Antenna Manufacturer and Type	Class	Class A
	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)	1000.0 kW

Manufacturer	
Model	TFU- 32DSC C164
Year	2004

New Antenna Costs

Section	Question	Response
New Antenna Description	Use	Auxiliary (Backup)
	Description of Use	Aux Antenna
	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?	No
New Antenna	Class	Class A
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)	715.0 kW
	Manufacturer	
		1

antenna		
Justification for New Antenna Current Aux antenna	Model	
antenna	Year	2019
retuned to Ch-23. KIRO will require new Dielectric antenna to meet repack	Justification for New Antenna	cannot be retuned to Ch-23. KIRO will require new Dielectric antenna to meet repack assignment. See KIRO AUX Dielectric quote for costs and

Other Antenna Costs

Section	Question	Response
Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	
	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?	Yes
	Broadband or Single Channel?	Single Channel

	Feed Line Size	6 1/8 inches inches
Side Mount Brackets	Do you require the separate purchase of side mount brackets for a high power antenna?	Yes
Pattern Scatter Analysis	Do you require separate purchase of pattern scatter analysis for a side mount high or medium power antenna?	Yes
Sweep Test	Do you require the sweep testing of transmission line and antenna?	Yes

Other Antenna Cost Not Listed

Name	Description
Antenna Support Brackets	Custom Support Brackets for Aux Antenna
Freight Charges	Freight Charges for Aux Antenna
Dielectric Custom Flanges	Custom Flanges to connect new Aux Antenna with current Transmission line

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?	No
Existing Antenna	Class	Class A
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)	1000.0 kW

Manufacturer	
Model	TFU- 32DSC C164
Year	1999

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?	No
New Antenna	Class	Class A
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)	715.0 kW
	Manufacturer	

Model	TFU-26JSC
	/R C164
Year	2018
Justification for New Antenna	Current
	MAIN
	antenna
	cannot be
	retuned to
	Ch-23. KIRO
	will require
	TFU-26JSC
	/R C164 to
	meet repack
	assignments.
	See
	Dielectric
	MAIN ANT
	quote for
	cost details

Other Antenna Costs

Section	Question	Response
Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	
	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?	Yes
	Broadband or Single Channel?	Single Channel
	Feed Line Size	6 1/8 inches inches

Side Mount Brackets	Do you require the separate purchase of side mount brackets for a high power antenna?	Yes
Pattern Scatter Analysis	Do you require separate purchase of pattern scatter analysis for a side mount high or medium power antenna?	Yes
Sweep Test	Do you require the sweep testing of transmission line and antenna?	Yes

Other Antenna Cost Not Listed

Name	Description
Main Antenna Freight	Primary antenna Freight charges.
Dielectric Custom Flanges	Custom flanges needed to connect current transmission lines to new main antenna
Main antenna Support Brackets	Custom support brackets needed for new primary antenna installation.

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

Primary Transmission

Existing Transmission Line

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?	No
	Is Transmission Line in operating condition?	Yes
Existing Transmission Line Manufacturer and	Manufacturer	Dielectric
Line Manufacturer and Type	Туре	Rigid
	Diameter	6 1/8 inches
	Other Diameter	N/A
	Segment Length	20 inches
	Other Segment Length	N/A
	Number of parallel runs	27
	Length	20 feet pe

Other Transmission Line Expenses Not Listed

Primary

Transmission loimetion not provided.

Auxiliary Transmission

Add Transmission Line

n Line Section	Question	Response
Existing Transmission Line Description	Type of change	Utilize Existing
	Use	Auxiliary (Backup)
	Description of Use	Aux Transmission line
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is this transmission currently shared with any other stations?	No
	Is Transmission Line in operating condition?	Yes
Existing Transmission	Manufacturer	Dielectric
Line Manufacturer and Type	Туре	Rigid
	Diameter	6 1/8 inches
	Other Diameter	N/A
	Segment Length	20 inches
	Other Segment Length	N/A
	Number of parallel runs	16
	Length	20 feet per run

Auxiliary Other Transmission Line Expenses Not Listed

Transmission Line

ΛI	IV	Transmi	iccion	Extension
Αl	JA	iransin	ISSION	Extension

9 Transmission line extensions to raise current Aux antenna for better coverage prior to transition.

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

Existing Tower	I .	
	Type of change	Modify Existing
Description	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?	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?	Yes
Existing Tower	Do you have a tower registration number?	Yes
Structure Registration	ASR Number	1011408
Coordinates (NAD83 (Latitude (NAD83)	47° 37' 58.9" N-
North American Datum of 1983))	Longitude (NAD83)	122° 21' 23.9" W-
	Overall Structure Height	607.93 feet
	Support Structure Height	529.85 feet
	Ground Elevation Above Mean Sea Level (AMSL)	399.93 feet

Structure Type	GTOWER - Guyed Structure Used for Communication Purposes
Tower Owner	IWG Towers Assets II, LLC
Date Constructed	07/22/1957

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:	Serious 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?	No
	Number of Hours	N/A
	Explanation	N/A
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	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	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	No
	Quantity	N/A
	NEPA Section 106 environmental review	Yes
	Environmental Assessment	Yes
	ASR Modification	No
	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	No
RF Field Engineering Services	Comprehensive coverage verification via field study	Yes
	RF exposure measurements	Yes
	Additional Field Engineering Service	No
	Number of Days	N/A
	Justification	N/A

Outside Professional

Other Professional Services Expenses Not Listed

I Services Costs	Description
DTV Medical Notifications	Hire external service to conduct Medical Notifications related to repack

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	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

Other Expenses Not Listed

Name	Description
Merrill Weiss Group	Perform RF studies pre and post repack. Assist with CPO applications.

Cost Information

Transmitters

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

Description Primary Transmitter ULXTE-50	Predetermined Cost Estimate \$1,182,590.23	Estimated Cost \$1,180,840.23	Estimated Cost Justification	Actual Cost \$1,126,946.02	Actual Cost Justification
UHF - Liquid Cooled Solid State Transmitter 31.7 kW	\$1,134,990.23	\$1,134,990.23	10/15/18: Added Gates Air Change Order Q- 7725. Increased ULXTE-50- primary transmitter Cost \$8827.93- See Gates Air CO Q- 77525 & Gates Air CO Justification for details	\$1,062,983.89	N/A
4" Rigid Conduit and Wiring (Cost per foot)	\$10,100.00	\$9,600.00	New main conduit runs. See Schneider Proposal Queen Anne for cost details.	N/A	N/A
Transformer 3 phase /480v - 150 KVA	\$25,550.00	\$24,300.00	N/A	\$2,460.27	N/A

Other	\$11,950.00	\$11,950.00	Labor to	\$61,501.86	Includes
Electrical			remove		cost of
Service:			existing		150KVA
Electrician			electrical		480V
will remove			feeds and		transforme
existing			install new		conduit ar
electrical			for primary		wiring.
and install			transmitter.		
new			SEE		
transformer,			Schneider		
conduits,			Proposal		
and heat			Queen		
exchanger			Anne for		
feeds for			cost details.		
primary					
transmitter.					
See quote					
from					
Schneider					
for cost					
breakdowns.					
Auxiliary	\$733,980.00	\$679,329.46		\$540,498.55	
Transmitter					
ULXTE-24					
Transformer	\$25,550.00	\$24,300.00	N/A	\$0.00	N/A
3 phase					
/480v - 150					
KVA					
3" Rigid	\$12,480.00	\$11,760.00	N/A	N/A	N/A
- 3 -					
Conduit and					
=					
Conduit and					

Other	\$11,950.00	\$11,950.00	Labor to	N/A	N/A
Electrical			remove		
Service:			existing		
Electrician			electrical		
will remove			feed		
existing			equipment.		
service			Installation		
connections			labor for		
and			new		
dispose.			transformer		
New			and heat		
transformer			exchanger		
conduits			feeds. See		
and heat			Schneider		
exchanger			Proposal		
feeds will			Queen		
be installed			Anne for		
for new			details		
Aux. See					
Schneider					
proposal					
Queen					
Anne for					
cost details.					

UHF - Liquid	\$684,000.00	\$631,319.46	10/15/18: Added	\$540,498.55	N/A
Cooled			Change		
Solid State			Order Q-		
Transmitter			77533.		
14.2 - 20 kW			Decreases		
20			Aux TX		
			cost by		
			-\$471.75.		
			See Gates		
			Air CO and		
			CO Aux TX		
			Justification		
			for details.		
			Estimated		
			Cost above		
			reduced		
			-\$471.75.		
			Aux		
			transmitter		
			for		
			emergency		
			backup.		
			See Gates		
			KIRO Aux		
			TX quote		
			for details.		
Sub-total	\$1,916,570.23	\$1,860,169.69	N/A	\$1,667,444.57	N/A
Total for all systems	\$3,892,925.73	\$3,663,422.69	N/A	\$1,948,465.57	N/A

Components

Actual Information		
Description	File Name	

UHF - Liquid Cooled Solid State Transmitter 31.7 kW	Component Description:	1/3 payment for
	Component Description:	KIRO Main
		Transmitter
	Amount:	\$337,010.75
	Component Description:	Second (1/3) payment for KIRO Main Transmitter
	Amount:	\$342,413.66
	Component Description:	KIRO Main transmitter Invoice 4 of 4 (after change order Q-
	Amount:	77525) \$88,356.27
	Component Description:	KIRO Main transmitter invoice 3 of 4 (after change order Q-
	Amount:	77525) \$295,203.21
4" Rigid Conduit and Wiring (Cost per foot)	Information not provided.	
Transformer 3 phase/480v - 150 KVA		
	Component Description:	1/3 payment for KIRO Main
	Amount:	Electrical \$2,460.27
	Component Description:	Second (1/3) payment for KIRO Main TX
		Transformer
	Amount:	\$2,460.27

Other Electrical Service: Electrician will remove existing electrical and install new transformer, conduits, and heat exchanger feeds for primary transmitter. See quote from Schneider for cost breakdowns.	Component Description: Amount:	KIRO Main Transmitter Electrical work (Includes 150KVA Transformer) \$61,501.86
Transformer 3 phase/480v - 150 KVA	Component Description:	1/3 payment for KIRO Aux transmitter
	Amount:	Transformer \$1,408.79
	Component Description:	Second (1/3) payment for KIRO Aux transformer.
	Amount:	\$1,408.79
3" Rigid Conduit and Wiring (Cost per foot)	Information not provided.	
Other Electrical Service: Electrician will remove existing service connections and dispose. New transformer conduits and heat exchanger feeds will be installed for new Aux. See Schneider proposal Queen Anne for cost details.	Information not provided.	

UHF - Liquid Cooled Solid State Transmitter 14.2 - 20 kW

Component Description: Second (1/3)

payment for KIRO Aux Transmitter

Amount: \$189,651.51

Component Description: Final (1/3)

payment for KIRO Aux Transmitter

Amount: \$161,038.28

Component Description: First 1/3 payment

for KIRO Aux Transmitter. Change order details included in

attachment

Amount: \$189,808.76

Component Description: 1/3 down payment

for KIRO Aux Transmitter

Amount: \$188,399.97

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 TFU-26JSC /R C164	\$205,396.25	\$203,063.75		\$184,014.00	
Main Antenna Freight	\$17,500.00	\$17,500.00	See Dielectric MAIN Antenna quote for cost details on Freight.	\$15,210.00	N/A
Elbow complex, single channel, at antenna input, per 6 1/8. feedline (if needed)	\$12,300.00	\$10,297.50	See Dielectric MAIN ANT quote for elbow cost details.	\$9,268.20	N/A
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	\$5,760.00	N/A
Main antenna Support Brackets	\$21,750.00	\$21,750.00	See Dielectric MAIN ANT quote for support bracket cost details.	\$19,575.00	N/A

UHF - Lower Power, Side Mount, Class A, basic slot antenna, 715 kW input, directional,, horizontally	\$145,275.00	\$145,275.00	New primary antenna for repack. See Dielectric MAIN ANTENNA quote for cost details.	\$130,747.50	N/A
Dielectric Custom Flanges	\$1,841.25	\$1,841.25	Custom flanges and transmission lines needed to connect current transmission line to new antenna. See Dielectric Main antenna quote,(Line 23) for costs and verifications.	\$3,453.30	Flange hat to be custom made and fitted at greater cost than originally anticipate on quote the attach antenna to feed line.
Auxiliary Antenna TFU-26JSC /R C164	\$205,396.25	\$204,736.25		\$92,007.00	
Dielectric Custom Flanges	\$1,841.25	\$1,841.25	Custom flanges to connect the new TFU Aux antenna to current 61 /8" transmission line.	\$1,726.65	N/A

Freight Charges	\$17,500.00	\$17,500.00	Freight charges for aux antenna- see Dielectric Aux antenna quote for details	\$7,605.00	N/A
Antenna Support Brackets	\$21,750.00	\$21,750.00	Custom antenna support brackets for Aux antenna-see Dielectric aux antenna quote for details.	\$9,787.50	N/A
Elbow complex, single channel, at antenna input, per 6 1/8. feedline (if needed)	\$12,300.00	\$11,970.00	See Dielectric AUX antenna for cost details	\$4,634.10	N/A
UHF - Lower Power, Side Mount, Class A, basic slot antenna, 715 kW input, directional,, horizontally polarized	\$145,275.00	\$145,275.00	See Dielectric Aux antenna quote for details	\$65,373.75	N/A
	\$6,730.00	\$6,400.00	N/A	\$2,880.00	N/A
Sweep test of existing antenna	ψ0,730.00				

Total for all	\$3,892,925.73	\$3,663,422.69	N/A	\$1,948,465.57	N/A
systems					

Components

Actual Information Description	File Name	
Main Antenna Freight		
	Component Description:	Dielectric 45% Main Antenna
	Amount:	Freight \$7,605.00
	Component Description:	45 percent charge for Main antenna Freight
	Amount:	\$7,605.00
	Component Description	Dielectric 45%
	Component Description:	Main Antenna
		Freight (prior to ship portion)
	Amount:	\$7,605.00

Elbow complex, single channel, at antenna input, **Component Description:** 45 percent down per 6 1/8. feedline (if payment for KIRO needed) Main antenna Elbow complex Amount: \$4,634.10 **Component Description:** 45 percent 'prior to ship' payment for KIRO Main antenna Elbow complex **Amount:** \$4,634.10 **Component Description:** 45 percent down payment for KIRO Main antenna Elbow complex Amount: \$4,634.10 Sweep test of existing antenna **Component Description:** 45 percent payment for sweep of main antenna Amount: \$2,880.00 **Component Description:** 45 percent 'prior to ship' payment for sweep of main antenna Amount: \$2,880.00 **Component Description:** 45 percent payment for sweep

Amount:

of main antenna

\$2,880.00

Main automa C		
Main antenna Support		
Brackets	Component Description:	45 percent down
		payment for KIRO
		main antenna
		mount brackets
	Amount:	\$9,787.50
	Component Description:	45 percent down
	Compension Decempes	payment for KIRO
		main antenna
		mount brackets
	Amount:	\$9,787.50
	Component Descriptions	AE novemble view to
	Component Description:	45 percent 'prior to ship' payment for
		KIRO main
		antenna mount
		brackets
	Amount:	\$9,787.50
UHF - Lower Power, Side		
Mount, Class A, basic slot	Component Description:	
,		45% navment for
antenna, 715 kW input,	Component Description.	45% payment for KIRO Main Ant.
antenna, 715 kW input, directional,, horizontally	Component Description.	45% payment for KIRO Main Ant. Invoice
antenna, 715 kW input, directional,, horizontally	Component Description.	KIRO Main Ant.
antenna, 715 kW input, directional,, horizontally polarized	Component Description.	KIRO Main Ant. Invoice
antenna, 715 kW input, directional,, horizontally	Component Description.	KIRO Main Ant. Invoice MAN00426. Cover
antenna, 715 kW input, directional,, horizontally	Component Description.	KIRO Main Ant. Invoice MAN00426. Cover letter for Vpol
antenna, 715 kW input, directional,, horizontally	Component Description.	KIRO Main Ant. Invoice MAN00426. Cover letter for Vpol reimbursement at (\$9517.50) removed and
antenna, 715 kW input, directional,, horizontally	Component Description.	KIRO Main Ant. Invoice MAN00426. Cover letter for Vpol reimbursement at (\$9517.50) removed and detailed in attached
antenna, 715 kW input, directional,, horizontally		KIRO Main Ant. Invoice MAN00426. Cover letter for Vpol reimbursement at (\$9517.50) removed and detailed in attached cover letter.
antenna, 715 kW input, directional,, horizontally	Amount:	KIRO Main Ant. Invoice MAN00426. Cover letter for Vpol reimbursement at (\$9517.50) removed and detailed in attached
antenna, 715 kW input, directional,, horizontally	Amount:	KIRO Main Ant. Invoice MAN00426. Cover letter for Vpol reimbursement at (\$9517.50) removed and detailed in attached cover letter. \$65,373.75
antenna, 715 kW input, directional,, horizontally		KIRO Main Ant. Invoice MAN00426. Cover letter for Vpol reimbursement at (\$9517.50) removed and detailed in attached cover letter.
antenna, 715 kW input, directional,, horizontally	Amount:	KIRO Main Ant. Invoice MAN00426. Cover letter for Vpol reimbursement at (\$9517.50) removed and detailed in attached cover letter. \$65,373.75

Dielectric Custom Flanges

Component Description: 45 percent 'prior to

ship' payment for

KIRO main antenna flange. Item number (5) RTLSCR675-20 & Line Item (6) RTT 675 . see attached

MAN01166 for

details

Amount: \$1,726.65

Component Description: 45 percent

payment for KIRO main antenna flange. Item number (5)

RTLSCR675-20 & Line Item (6) RTT 675 . see attached MAN 00426 for

details

Amount: \$1,726.65

Component Description: 45 percent

payment for KIRO main antenna flange. Item number (5)

RTLSCR675-20 & Line Item (6) RTT 675 . see attached MAN 00426 for

details

Amount: \$1,726.65

Dielectric Custom Flanges		
	Component Description: Amount:	45% Dielectric Aux Antenna Flange Item Numbers (RTLSCR675-20)- (RTT675) \$1,726.65
		• ,
	Component Description:	45% payment for KIRO Aux Flange- Line Item (5) RTLSCR675-20 & Line item (6) RTT675-See attached Invoice MAN00427 for details
	Amount:	\$1,726.65
Freight Charges		
	Component Description:	45% Payment for KIRO Aux antenna freight
	Amount:	\$7,605.00
	Component Description:	45% Dielectric Aux Antenna Freight Charges
	Amount:	\$7,605.00
Antenna Support Brackets		
	Component Description:	45% payment for KIRO Aux Mount brackets
	Amount:	\$9,787.50
	Component Description:	45% Dielectric Aux Antenna Custom
		Mounting Brackets

Elbow complex, single channel, at antenna input, per 6 1/8. feedline (if	Component Description:	45% Dielectric Aux
needed)		Antenna Elbow
,		complex
	Amount:	\$4,634.10
	Component Description:	45% payment for
		KIRO Aux Elbow
	Amount:	\$4,634.10
UHF - Lower Power, Side		
Mount, Class A, basic slot	Component Description:	45% payment for
antenna, 715 kW input, directional,, horizontally		KIRO Aux antenna.
polarized		See attached
polarizeu		Cover Letter,
		Change Order and
		Invoice MAN00427
		attached for details
	Amount:	\$65,373.75
Sweep test of existing		
antenna	Component Description:	45% Dielectric Aux
		Antenna Sweep
		Test
	Amount:	\$2,880.00
	Component Description:	45% payment for
	,	KIRO Aux sweep
	Amount:	\$2,880.00

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	\$0.00	\$0.00		\$0.00	
Auxiliary Transmission Line	\$20,973.00	\$20,973.00		\$0.00	
AUX Transmission Extension	\$20,973.00	\$20,973.00	9 20' Transmission lines to extend aux antenna prior to transition. see Dielectric Aux Trans Extension quote for details	\$0.00	N/A
Sub-total	\$20,973.00	\$20,973.00	N/A	\$0.00	N/A
Total for all systems	\$3,892,925.73	\$3,663,422.69	N/A	\$1,948,465.57	N/A

Components

Information not provided.

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 GTOWER	\$1,275,100.00	\$1,120,480.00		\$0.00	
Tall Tower (greater than 500')	\$210,500.00	\$200,000.00	Rigging and equipment to remove current Main&Aux antennas, transmission lines. Install new repack antennas and transmission lines.	N/A	N/A
Serious tower reinforcement /modifications	\$1,052,000.00	\$900,000.00	N/A	\$0.00	N/A
Structural engineering tower load study for well documented tower	\$12,600.00	\$20,480.00	TEC Engineering repack tower load study-see TEC Quote for details.	N/A	N/A
Sub-total	\$1,275,100.00	\$1,120,480.00	N/A	\$0.00	N/A
Total for all systems	\$3,892,925.73	\$3,663,422.69	N/A	\$1,948,465.57	N/A

Components

Information not provided.

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	\$161,930.00	\$154,250.00		\$0.00	
DTV Medical Notifications	\$7,500.00	\$7,500.00	Hire external company to perform DTV Medical notifications for Repack.	N/A	N/A
RF Exposure Measurements	\$21,050.00	\$20,000.00	N/A	N/A	N/A
Comprehensive coverage verification via field study, if needed	\$84,200.00	\$80,000.00	N/A	N/A	N/A
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/A
Environmental Assessment, if triggered by NEPA Section 106 review or for certain structures over 450 feet	\$10,520.00	\$10,000.00	N/A	N/A	N/A

NEPA Section 106 environmental review, if needed	\$6,310.00	\$6,000.00	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
Attorney Fees - Aux Antenna, prepare and File Form 2100 Construction Permit or License Application	\$4,210.00	\$4,000.00	N/A	\$0.00	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 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
Prepare engineering section of FCC Form 2100 (main), License to Cover Application	\$1,580.00	\$1,500.00	N/A	\$0.00	N/A

RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, Construction Permit Application	\$2,105.00	\$2,000.00	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
Prepare and or review reimbursement form	\$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
Sub-total	\$161,930.00	\$154,250.00	N/A	\$0.00	N/A
Total for all systems	\$3,892,925.73	\$3,663,422.69	N/A	\$1,948,465.57	N/A

Components

Actual Information Description	File Name
DTV Medical Notifications	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.	
Environmental Assessment, if triggered by NEPA Section 106 review or for certain structures over 450 feet	Information not provided.	
NEPA Section 106 environmental review, if needed	Information not provided.	
Attorney Fees -Prepare and File FCC Form 2100 (main), License to Cover Application	Component Description: Amount:	Legal reimbursement for various 399 and repack prep. Invoices have been consolidated in attachment \$2,250.00
Attorney Fees - Aux Antenna, prepare and File Form 2100 Construction Permit or License Application	Component Description: Amount:	Legal Invoice for KIRO repack prep and 399 submission \$4,000.00
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	Component Description: Amount:	Legal Invoices for KIRO 399,2100 and repack prep. \$5,000.00

RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, License to Cover Application	Information not provided.	
Prepare engineering section of FCC Form 2100 (main), License to Cover Application	Component Description: Amount:	Legal Invoice for 399 and repack \$1,500.00
RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, Construction Permit Application	Information not provided.	
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	Information not provided.	
Prepare and or review reimbursement form	Information not provided.	
Perform engineering study for new channel assignment and antenna development	Information not provided.	

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	\$107,560.00	\$99,750.00		\$5,000.00	
Merrill Weiss Group	\$32,825.00	\$32,825.00	RF studies pre-post repack. See Merrill Weiss group quote for specifics.	\$0.00	N/A
MVPD Notification of Channel Change	\$1,250.00	\$1,250.00	MVPD notifications - See "RF Notifications MVPD - Quote LS- 20190410-A. pdf" for quote	\$1,250.00	N/A
Develop and air announcement of upcoming channel change	\$15,000.00	\$15,000.00	Develop internal and external awareness campaign for repack.	N/A	N/A
Equipment Storage	\$5,000.00	\$5,000.00	up to 8 weeks antenna storage in Dielectric warehouse.	N/A	N/A
Equipment Delivery and Handling Charges	\$32,300.00	\$32,300.00	N/A	N/A	N/A

Disposal Costs (for	\$6,500.00	\$6,500.00	Costs to dispose of	N/A	N/A
equipment and			high voltage		
other waste,			cabinets,		
net of any			current		
salvage value)			transmitters,		
			transmission		
			line and		
			misc.		
			equipment related to		
			repack.		
		•			
Non-zoning	\$800.00	\$800.00	Seattle	N/A	N/A
permits			street closure		
			permits.		
			pomito.		
Local Zoning	\$2,000.00	\$2,000.00	Seattle local	N/A	N/A
			zoning-		
			Estimates		
			based on		
			previous projects in		
			this area.		
DTV Medical	\$11,550.00	\$3,750.00	See quote	\$3,750.00	N/A
Facility	ψ,σσσ.σσ	ψο,: σοισσ	"RF	ψο,: σσ.σσ	,, .
Notification			Notifications		
			Medical		
			Notifications		
			- Quote LS-		
			20190410-A.		
			pdf"		
FCC Filing	\$335.00	\$325.00	N/A	N/A	N/A
Fees - Form					
2100 license					
to cover					
application					
Sub-total	\$107,560.00	\$99,750.00	N/A	\$5,000.00	N/A
Total for all systems	\$3,892,925.73	\$3,663,422.69	N/A	\$1,948,465.57	N/A

Components

Actual Information		
Description	File Name	

Merrill Weiss Group		
	Component Description: Amount:	RF studies, FCC /Repack planning for KIRO TV. See attached cover letter with weiss quote, CMG PO 5505, WEISS INV 1217012-R \$18,885.00
	Component Description: Amount:	RF studies /planning, FCC repack planning- see attached cover letter, CMG PO & WEISS Invoice 1216012 \$13,664.00
MVPD Notification of Channel Change	Component Description: Amount:	MVPD Notification Mailing \$1,250.00
Develop and air announcement of upcoming channel change	Information not provided.	
Equipment Storage	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.	
Non-zoning permits	Information not provided.	
	Information not provided.	

DTV Medical Facility Notification	Component Description: Amount:	RF Notifications Mailings to medical facilities \$3,750.00
FCC Filing Fees - Form 2100 license to cover application	Information not provided.	

Grand Total

	Predetermined Cost Estimate	Estimated Cost	Actual Cost
Total for all systems	\$3,892,925.73	\$3,663,422.69	\$1,948,465.57

Reimbursem	enrestiatus	Response
	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. Keith Nealey Engineering Manager

11/25/2019

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. Keith
Nealey
Engineering
Manager

11/25/2019

Attachments