

Federal Communications Commission

(REFERENCE COPY - Not for submission)

FCC Form 399: Reimbursement Request

Facility ID: File Number:	35703 000002	Service: DTV 27693	Call Sign:	KTVU	Channel: 31 (UHF)
FRN: 000	5795067	Date Submitted:	01/25 /2021		

Applicant Applicant Name, Type, and Contact Information

Information	Applicant	Address	Phone	Email	Applicant Type
	FOX TELEVISION STATIONS, LLC	Ann West Bobeck 400 N. CAPITOL STREET, NW SUITE 890 WASHINGTON, DC 20001 United States	+1 (202) 824-6503	ann. bobeck@fox. com	Limited Liability Company

Reimbursement Contact Name and Information Reimbursement Contact Information

Applicant	Address	Phone	Email
[Confidential]			

Contact InformationApplicantAddressPhoneDennis WallaceDennis Wallace+1 (20)Managing Partner1282 Smallwood7589Meintel, Sgrignoli & Wallace, LLCDrive	
Managing Partner1282 Smallwood7589Meintel, Sgrignoli &Drive	2) 251 Dennie
Waldorf, MD 20603 United States	2) 251- Dennis. Wallace@mswdtv.com

Broadcaster	Question	Response	
Information and Transition Plan	Will the station be sharing equipment with another broadcast television station or stations (e.g., a shared antenna, co-location on a tower, use of the same transmitter room, multiple transmitters feeding a combiner, etc.)? If yes, enter the facility ID's of the other stations and click 'prefill' to download those stations' licensing information.	Yes	
	Briefly describe transition plan	KTVU will continue to use the existing master UHF Main and Upper Aux antennas at Sutro Tower. New Combiners for both antennas are required. Main TX will be retuned. Aux transmitter replaced. Sutro tower modifications are required.	

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

Auxiliary	Existing Transmitter Information			
Transmitter	Section	Question	Response	
	Existing Transmitter Description	Type of change	Purchase New	
		Use	Auxiliary (Backup)	
		Description of Use	Aux 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	DHD60P2	
		Year	2009	
		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-30	
		Transmitter Type	Solid State	
		Solid State Cooling	Liquid Cooled	
		Solid State Power capacity	14 kW	
		Justification for New Transmitter	Existing Diamond Aux transmitter is obsolete and no longer supported by its manufacturer. Replacement required.	

Auxiliary Other Transmitter Costs

Transmitter	Section	Question	Response
	Electrical Service	Service Entrance (3 phases 800A 208V)	No
		Switchgear (industrial 800 amp)	No
		Transformer (480V)	Yes
		Power	300 kVA
		Rigid Conduit and Wiring	Yes
		Size	3 inches
		Length	200.0 feet

	Other Electrical Service	Yes
	Description	Aux Transmitter Electrical Installation
HVAC Service	Does the replacement transmitter require HVAC Service?	Yes
	Туре	Cooling Only
	Size	30 tons
	Other Size	N/A
Transmitter Building Addition/Modification or Leasehold Improvement	Does the Transmitter Building require an addition, modification, other leashold improvement?	Yes
	Size	1000.0 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

Other Transmitter Cost Not Listed

Auxiliary Transmitter

Name	Description
Site Survey	Transmitter site survey
Transmitter Heat Exchanger Coolant Piping	Labor, access, wall coring and ceiling tile replacement required to install cooling line
Removal of Existing Equipment	Removal of Existing Equipment
Transmitter Installation Planning and Installation Drawings	Develop transmitter room layout. Prepare installation drawings
Remote Control Wiring	Wire up existing remote control to new transmitter

Seismic Engineering and Modifications	Seismic engineering analysis and modifications to comply with SF requirements

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	PWR60D2	
		Year	2009	
		Туре	Inductive Output Tube	
		IOT Power Type	Two	
		Power Capacity	60 kW	

Existing Transmitter Information

Primary	New Transmitter Costs			
Transmitter	Section	Question	Response	
	New Transmitter	Use	Primary (Main)	
		Change Type	Purchase New	
		Is this a request for upgraded equipment?	No	
		Manufacturer		
		Model	ULXTE-72	
		Transmitter Type	Solid State	
		Solid State Cooling	Liquid Cooled	
		Solid State Power capacity	47.2 kW	
		Justification for New Transmitter	Re-tuning of existing transmitter not possible due to vendor unable to secure parts and perform re- tuning.	

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	Power	N/A		
		Rigid Conduit and Wiring	No		

	Size	N/A
	Length	N/A
	Other Electrical Service	No
	Description	N/A
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			
	Name	Description		
	Removal of Existing Equipment	Removal of existing primary transmitter		
	RF System	RF System switch, freight, tax		

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

Existing Antenna Information

Primary

Antenna	Section	Question	Response
	Existing Antenna Description	Type of change	Retune Existing
		Antenna Use	Primary (Main)
		Description of Use	N/A
		Ownership	Leased
		Owner	Sutro Tower Inc.
		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?	Yes
	Existing Antenna Manufacturer and Type	Class	Full Power
		Mounting	Top Mount
		Antenna position in stack	Тор
		Polarization	Elliptical
		Туре	Broadband Panel
		Number of Stations Supported	3
		Number of Panels	60
		Design power capacity in use	100.0 %

Lower Limit	500.00 MHz
Upper Limit	656.00 MHz
Other Antenna Type	N/A
ERP: (Effective Radiated Power)	775.0 kW
Manufacturer	Dielectric
Model	TUM-C5SP- 14/60H-2-T- R
Year	2009

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

Facility ID	Call Sign
25452	KPIX-TV
58912	KPJK

Primary Adjustment to Existing Antenna

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

Primary Other Antenna Costs

Antenna

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

Enter a list of RF channel numbers.

RF Channel Number
31
27
29

Primary Antenna

Other Antenna Cost Not Listed

Name	Description
Sutro Tower Fees	Sutro Tower Fees associated with Aux Antenna System. See Spreadsheet
Sutro Tower Antenna and Combiner Monitor System	KTVU allocated costs for Sutro Tower Antenna and Combiner. Power Monitoring System. See Spreadsheet.

Auxiliary Existing Antenna Information

Antenna Section Question Response **Existing Antenna** Type of change Retune Description Existing Antenna Use Auxiliary (Backup) Description of Use Upper Aux Antenna Sutro Ownership Leased Owner Sutro Tower Inc. Site N/A Is the existing antenna shared with another Yes station or stations? 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	Top Mount
	Antenna position in stack	Тор
	Polarization	Horizontal
	Туре	Broadband Panel
	Number of Stations Supported	3
	Number of Panels	40
	Design power capacity in use	100.0 %
	Lower Limit	500.00 MHz
	Upper Limit	656.00 MHz
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power)	428.0 kW
	Manufacturer	Dielectric
	Model	TUA-C4SP- 12/40U-1-S
	Year	2009

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

Facility ID	Call Sign
58912	KPJK
25452	KPIX-TV

Adjustment to Existing Antenna Auxiliary Antenna Section

Question

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

Auxiliary Other Antenna Costs

Antenna

Antenna

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

Enter a list of RF channel numbers.

RF Channel Number

312729

Auxiliary Other Antenna Cost Not Listed

Name Description Sutro Tower Fees Sutro Tower Fees associated with Main Antenna. See Spreadsheet.

Interim New Antenna Costs

Antenna	Section	Question	Response
	New Antenna Description	Use	Interim
		Description of Use	N/A

Change Type	Rent Temporary
Ownership	Leased
Owner	Peter Eckmann Broadcast Consultants Inc.
Is antenna shared?	No
Is antenna directional?	Yes
Will antenna be located on or in close proximity to an antenna farm?	Yes
Class	Full Power
Mounting	Side Mount
Antenna position in stack	Not in Stack
Polarization	Horizontal
Туре	Broadband Panel
Number of Stations Supported	1
Number of Panels/Bays	12
Lower Limit	572.00 MHz
Upper Limit	578.00 MHz
Design power capacity in use	100.0 %
Other Antenna Type	N/A
ERP: (Effective Radiated Power)	470.0 kW
Manufacturer	
Model	TUP-C3-4-1
Year	1999

New Antenna Manufacturer and Type

Justification for New Antenna	This is a
	temporary
	leased
	antenna to
	allow KTVU
	to transition
	to its post-
	repack
	channel
	while the
	permanent
	antenna is
	being
	configured
	to support
	permanent
	operation.
	See
	attached
	Sutro Tower
	quote.

Interim Other Antenna Costs

Antenna

Section	Question	Response
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 an 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

Interim Other Antenna Cost Not Listed

Antenna Information not provided.

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

Existing Transmission Line Primary Existing Transmission

sior	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
Existing Transmission Line Manufacturer and Type	Is the existing transmission line shared with another station or stations?	No	
		Is Transmission Line in operating condition?	Yes
	-	Manufacturer	Dielectric
	Туре	Rigid	
	Diameter	6 1/8 inches	
		Other Diameter	N/A
		Segment Length	20 inches
		Other Segment Length	N/A
		Number of parallel runs	1
		Length	120 feet per run

Primary Other Transmission Line Expenses Not Listed

Transmission	n Line	Description
	RF Optimization	Optimize line from transmitter room to combiner input

Existing Transmission Line

Auxiliary Transmission

n Section	Question	Response
Existing Transmission Line Description	Type of change	Utilize Existing
	Use	Auxiliary (Backup)
	Description of Use	Aux Line to Combiner
	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 Type	Manufacturer	Dielectric
	Туре	Rigid
	Diameter	6 1/8 inches
	Other Diameter	N/A
	Segment Length	20 inches
	Other Segment Length	N/A
	Number of parallel runs	1
	Length	120 feet per run

Auxiliary Other Transmission Line Expenses Not Listed

Transmission	n Line	Description
	RF Optimization	Optimize transmission line from transmitter to combiner input

New Transmission Line

Interim Transmission Line

n Line Section	Question	Response
New Transmission Line	Use	Interim
Costs	Description of Use	N/A
	Change Type	Purchase New
	Туре	Rigid
	Diameter	6 1/8 inches
	Segment Length	20'
	Other Segment Length	
	Number of parallel runs	1
	Length	100 feet pe run
	Justification for New Transmission Line	Interim facility to facilitate transitioning to repack channel until final facility is ready. See attached quotation from Sutro Tower.

Transformers 2 Broadband RF Transformers	Fransformers	2 Broadband RF Transformers
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Tower	Section	Question	Response
Equipment And Rigging Costs	Tower Equipment or Rigging Costs Changes	Do you have tower equipment or rigging costs changes?	Yes

marv	Existing	Tower
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Primary	Existing Tower			
Tower	Section	Question	Response	
Existing Tower Description	-	Type of change	Modify Existing	
		Tower Use	Primary (Main)	
		Description of Use	N/A	
		Ownership	Leased	
		Is this tower consider Complex?	Candelabra	
		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	Yes	
		Is tower documented for structural analysis?	Yes	
		Is tower compliant with Rev G?	Yes	
	Existing Tower Structure	Do you have a tower registration number?	Yes	
	Registration	ASR Number	1001289	
	Coordinates (NAD83 (North American Datum of	Latitude (NAD83)	37° 45' 19.0" N-	
1983))	Longitude (NAD83)	122° 27' 10.0" W-		
		Overall Structure Height	976.69 feet	
		Support Structure Height	779.85 feet	
		Ground Elevation Above Mean Sea Level (AMSL)	833.98 feet	

Structure Type	TOWER - Free Standing or Guyed Structure
Tower Owner	SUTRO TOWER INC
Date Constructed	03/27/1998

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
58912	KPJK	DTV
51429	KFSF-DT	DTV
35703	KTVU	DTV
35500	KQED	DTV
71586	KCNS	DTV
69619	KBCW	DTV
65526	KRON-TV	DTV
25452	KPIX-TV	DTV
34470	KGO-TV	DTV

Other Types of Users

Users

Multi User Site

Primary Tower Modification Costs

Tower

Section

Question

Engineering Study	Please what type of engineering study is required, if any:	No study needed
Tower Reinforcements	Please select whether tower reinforcements are needed:	No reinforcements needed

Primary Tower Section

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

Primary Tower Mame

Name	Description
Sutro Tower Feasibility Studies	Fees for Sutro tower to conduct feasibility studies on repack. KTVU Allocated Costs. See Spreadsheet.
Sutro Tower Fees	Tower Mapping and analysis fees. KTVU Allocated costs. See Spreadsheet.

Outside	Section	Question	Response
Professional	Services Costs Outside Project Management Services	Do you require outside project management services?	Yes
		Number of Hours	850
		Explanation	Sutro Tower Project Management Fees. And KTVU Outside Project Manager for internal KTVU Facilities. See Spreadsheet.
	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	Yes
	ASR Modification	No
	FAA Consultation (including preparation of FAA Form 7460)	No
	Negotiation of Lease and other Matter for Shared Locations	Yes
	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	20

Justification	RF Engineering Supervision of KTVU Transmitter and Combiner Installation projects.

Other Professional Services Expenses Not Listed Description Legal Fees - Local SF KTVU Allocated share of local legal fees associated with City of SF. See Spreadsheet. Prepare and File FCC Progress Report Prepare and file FCC Quarterly Progress Reports See quote from vendor.

Other	Section	Question	Response
Expenses	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	Yes
		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

Other	Other Expenses Not Listed	
Expenses	Expenses Name Description	Description
	Sales Tax	Sutro Tower Estimated KTVU allocation of sales tax. See Spreadsheet.

Transmitters

Cost Information

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 ULXTE-72	\$1,639,776.77	\$1,299,402.07		\$1,299,402.07	
RF System	\$137,754.77	\$137,754.77	RF System switch, freight and tax. Supports both primary and aux transmitters.	\$137,754.77	N/A
Removal of Existing Equipment	\$29,022.00	\$29,022.00	N/A	\$29,022.00	N/A
UHF - Liquid Cooled Solid State Transmitter 35 - 50 kW	\$1,473,000.00	\$1,132,625.30	N/A	\$1,132,625.30	N/A
Auxiliary Transmitter ULXTE-30	\$2,137,126.73	\$2,134,726.73		\$1,849,692.81	
Seismic Engineering and Modifications	\$26,230.00	\$26,230.00	Seismic Engineering Studies and Modifications to TX Room. See Spreadsheet.	N/A	N/A
Remote Control Wiring	\$3,500.00	\$3,500.00	Wire up remote control to new aux transmitter	N/A	N/A

Transmitter Installation Planning and Installation Drawings	\$50,000.00	\$50,000.00	Transmitter Room layout planning and development of installation drawings. Detail Seismic anchors and transmission line attachments. 3-D Scanning of existing room and equipment layout. CAD layout of new equipment in room.	\$0.00	N/A
Removal of Existing Equipment	\$35,000.00	\$35,000.00	Remove existing equipment - Aux	\$22,140.00	N/A
Transmitter Heat Exchanger Coolant Piping	\$65,863.00	\$65,863.00	N/A	\$65,813.00	N/A
Site Survey	\$7,884.00	\$7,884.00	Site Survey required prior to transmitter install	\$0.00	N/A
Other Building Addition Size: 1000.0	\$522,540.00	\$522,540.00	Transmitter room modifications. Includes electrical, demo, abatement. See Wadleigh Quotes attached to all invoices.	\$522,540.00	N/A

Other Electrical Service: Aux Transmitter Electrical Installation	\$110,000.00	\$110,000.00	Electrical Installation of new Aux Transmitter at Sutro Tower. Estimate from Wadleigh	\$12,447.00	N/A
3" Rigid Conduit and Wiring (Cost per foot)	\$10,400.00	\$9,800.00	Catalog	N/A	N/A
UHF - Liquid Cooled Solid State Transmitter 14 kW	\$769,252.93	\$769,252.93	GatesAir revised quote number Q- 79711	\$727,096.01	Revised quote Q79711 captures increased costs from original quote
Other HVAC Service Type: C Size:30 (Other)	\$499,656.80	\$499,656.80	Turnkey purchase and install of two 15 ton HVAC units. Includes HVAC, install, testing, disposal of old refrigerant. Also all necessary roofing and iron work.	\$499,656.80	See Wadleigh Group Ind PO 0419 18 attached t all invoices. Cost includes a equipmen install, testing, disposal c old refrigerant etc.
Transformer 3 phase /480v - 300 KVA	\$36,800.00	\$35,000.00	Catalog	N/A	N/A
Sub-total	\$3,776,903.50	\$3,434,128.80	N/A	\$3,149,094.88	N/A
Total for all	\$8,375,202.00	\$7,559,201.30	N/A	\$3,558,295.67	N/A

Components

Actual Information Description	File Name	
RF System	Component Description: Amount:	RF System switch, freight and tax. Supports both primary and aux transmitters. \$137,754.77
Removal of Existing Equipment	Component Description: Amount:	Removal of existing primary transmitter/de- install \$29,022.00
UHF - Liquid Cooled Solid State Transmitter 35 - 50 kW	Component Description:	Primary Transmitter turnkey. Includes RF system, electrical, installation and proof, freight and CA tax. \$1,132,625.30
Seismic Engineering and Modifications	Information not provided.	
Remote Control Wiring	Information not provided.	
Transmitter Installation Planning and Installation Drawings	Information not provided.	
Removal of Existing Equipment	Component Description: Amount:	Aux transmitter equipment removal \$22,140.00

Transmitter Heat Exchanger Coolant Piping	Component Description: Amount:	Labor, access, wall coring, ceiling tile replacement required to install cooling line \$53,755.00
	Component Description:	Final 21% Pipe fitting
	Amount:	\$10,558.00
	Component Description:	Final progress payment. Remove ceiling tile for piping install.
	Amount:	Replace tiles. \$1,500.00
Site Survey		
	Component Description:	Transmitter Site
	Amount:	Survey \$7,884.00

Other Building Addition		
Size: 1000.0	Component Description:	Progress paymen on electrical work required for new transmitter space.
	Amount:	\$152,980.94
	Component Description:	Progress paymen
		on electrical work for new transmitte
	Amount:	space. \$144,239.17
	Component Description:	Progress paymen
		on electrical work required for new transmitter space.
	Amount:	\$139,868.29
	Component Description:	Scaffold, demo, abatement of old
	Amount:	transmitter space \$58,510.00
	Component Description:	Scaffold, demo, abatement of old
	Amount:	transmitter space \$26,941.60
Other Electrical Service: Aux Transmitter Electrical		
Installation	Component Description:	Electrical and lighting required for new transmission
		space. New transmitter room layout created
		several dark spots with insufficient lighting.
		\$12,447.00

(Cost per foot)		
UHF - Liquid Cooled Solid State Transmitter 14 kW		
	Component Description:	New attachment
		amount includes
		cover letter as
		requested by the
		reviewer. Auxiliary
		Transmitter
		GatesAir Inc 1/3
		down payment
		due.
	Amount:	\$217,786.60
	Component Description:	
	Component Description:	Progress payment on Aux transmitter
	Amount:	\$76,022.15
	Amount.	ψ <i>Γ</i> 0,022.13
	Component Description:	Progress payment
		Balance due on
		shipments to date
	Amount:	\$74,749.26
	Component Description:	New attachment
		includes a cover
		letter as requested
		by receiver.
		Auxiliary
		Transmitter
		ULXTE-30 1/3
		payment due
		before shipment
		(2nd payment
		made).
	Amount:	\$217,786.60
	Component Description:	Transmitter-
		Balance due on
		Shipments to date
	Amount:	\$140,751.40

Other HVAC Service Type: C Size:30 (Other)	Component Description:	Progress payment
		on HVAC. Turnkey purchase and
	Amount:	install. \$213,317.38
	Component Description:	Progress payment on turnkey HVAC
		purchase and install.
	Amount:	\$146,986.22
	Component Description:	Progress payment on turnkey install and purchase of HVAC.
	Amount:	\$139,353.20
Transformer 3 phase/480v - 300 KVA	Information not provided.	

Antennas

Cost Information

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Interim Antenna TUP-C3-4-1	\$305,000.00	\$36,500.00		\$0.00	
Interim antenna rental and installation - Cost will depend on antenna size and height and /or complexity of tower.	\$115,500.00	\$36,500.00	See attached Sutro Tower quote	N/A	N/A
UHF – Broadband Panel, Side Mount Auxiliary /Interim, 470 horizontally polarized	\$0.00	\$0.00	N/A	N/A	N/A
UHF - Lower Power Side Mount, One station - 200-500 kW, horizontally polarized	\$189,500.00	\$0.00	N/A	N/A	N/A

Primary Antenna TUM-C5SP- 14/60H-2-T- R	\$414,515.00	\$556,525.00		\$0.00	
Sutro Tower Antenna and Combiner Monitor System	\$96,125.00	\$96,125.00	Sutro Tower - KTVU allocated cost for antenna /combiner monitoring system. See Spreadsheet.	N/A	N/A
Sutro Tower Fees	\$82,500.00	\$82,500.00	Sutro Tower Project Fees. See Spreadsheet.	N/A	N/A
Pattern scatter analysis for side mount high/med power antennas (if not included in antenna base cost)	\$5,260.00	\$5,000.00	Catalog	N/A	N/A
Combiner output splitting /switching for dual feed lines, if applicable	\$126,000.00	\$120,000.00	Catalog	N/A	N/A
New combiner, cost per channel (without antenna)	\$84,200.00	\$233,500.00	Sutro Tower Estimate for KTVU Allocated costs for new Main Antenna combiner System	N/A	N/A

Sweep test of existing antenna	\$6,730.00	\$6,400.00	Catalog	N/A	N/A
Elbow complex, broadband, at antenna input, per 6 1/8. feedline (if needed)	\$13,700.00	\$13,000.00	Catalog	N/A	N/A
Auxiliary Antenna TUA-C4SP- 12/40U-1-S	\$235,890.00	\$252,400.00		\$0.00	
Sutro Tower Fees	\$0.00	\$0.00	N/A	N/A	N/A
Pattern scatter analysis for side mount high/med power antennas (if not included in antenna base cost)	\$5,260.00	\$5,000.00	Catalog	N/A	N/A
Elbow complex, broadband, at antenna input, per 6 1/8. feedline (if needed)	\$13,700.00	\$13,000.00	Catalog	N/A	N/A
Combiner output splitting /switching for dual feed lines, if applicable	\$126,000.00	\$120,000.00	Catalog	N/A	N/A

New combiner, cost per channel (without antenna)	\$84,200.00	\$108,000.00	Sutro Tower - KTVU Allocated cost esimate for Aux Antenna Combiner System.	N/A	N/A
Sweep test of existing antenna	\$6,730.00	\$6,400.00	Catalog	N/A	N/A
Sub-total	\$955,405.00	\$845,425.00	N/A	\$0.00	N/A
Total for all systems	\$8,375,202.00	\$7,559,201.30	N/A	\$3,558,295.67	N/A

Information not provided.

Transmission Line

Cost Information

	Predetermined	Estimated	Estimated Cost		Actual Cost
Description	Cost Estimate	Cost	Justification	Actual Cost	Justification
Interim Transmission Line	\$24,822.00	\$67,622.00		\$0.00	
Transformers	\$4,622.00	\$4,622.00	See attached Sutro Tower quote	N/A	N/A
Rigid Transmission Line - copper, 6 1/8"	\$20,200.00	\$63,000.00	See attached Sutro Tower quote	N/A	N/A
Primary Transmission Line	\$18,000.00	\$18,000.00		\$0.00	
RF Optimization	\$18,000.00	\$18,000.00	Optimization of line from transmitter to combiner	N/A	N/A
Auxiliary Transmission Line	\$18,000.00	\$18,000.00		\$0.00	
RF Optimization	\$18,000.00	\$18,000.00	Optimization of transmission line from transmitter to aux combiner input.	N/A	N/A
Sub-total	\$60,822.00	\$103,622.00	N/A	\$0.00	N/A
Total for all systems	\$8,375,202.00	\$7,559,201.30	N/A	\$3,558,295.67	N/A

Information not provided.

Tower Equipment and Rigging Costs

Cost Information

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Primary Tower TOWER	\$2,559,225.00	\$2,138,225.00		\$317,222.62	
Sutro Tower Feasibility Studies	\$0.00	\$0.00	Sutro Tower - KTVU Allocated costs for initial repack feasibility studies for Sutro Tower. See Spreadsheet. Included in the Sutro Tower Fees line.	N/A	N/A
Complex Tower (includes, for example, those with candelabras and/or stacked antennas)	\$421,000.00	\$0.00	N/A	N/A	N/A

Sutro Tower Fees	\$2,138,225.00	\$2,138,225.00	Sutro Tower - KTVU Allocated costs for tower mapping. See Spreadsheet. Revised based on current cost estimates	\$317,222.62	1.) subtotal overstated by Invoices 7959, 8009, 8058 and 8063. Revised inv's submitted totaling \$166,640.65. Previous submission of invoices totaling \$166,652.49 needs to be deleted. 2.) Revised new cost estimate \$250,000
Sub-total	\$2,559,225.00	\$2,138,225.00	N/A	\$317,222.62	N/A
Total for all systems	\$8,375,202.00	\$7,559,201.30	N/A	\$3,558,295.67	N/A

Actual Information Description	File Name	
Sutro Tower Feasibility Studies	Information not provided.	
Complex Tower (includes, for example, those with candelabras and/or stacked antennas)	Information not provided.	
Sutro Tower Fees		
	Component Description:	KTVU Share of
		Sutro Tower
		repack project.
	Amount:	\$126,115.75

KTVU share of spectrum repack costs for May 2020 \$150,082.41
Shared Spectrum repacking Costs- revised \$ amount and supporting invoice (Osborn Engineering) per request of reviewer \$14,930.20
Shared Spectrum repacking Costs- revised invoice date and Osborn Engineering quote for fixed fee portion of invoice along with along with remaining 69 invoices and support per request of reviewer. \$126,115.75
KTVU portion of repack costs- 2nd invoice received. Resubmitted per reviewer to include correct amount (3,339.18 vs 3,477.14). \$3,339.18

Component Description: Amount:	KTVU portion of repack costs- 7th invoice received /paid. \$3,752.29
Component Description: Amount:	KTVU share of repack and cladding related costs. \$37,272.17
Component Description:	KTVU portion of repack costs- 3rd invoice received /paid. Resubmitted per reviewer's request to correct \$ amt (14,930.20 vs 14,930.25) and include hours and rates per resource of Cooper White and Cooper invoice (see page 30 of attachment) \$14,930.20
Component Description: Amount:	Shared Spectrum repacking Costs- revised \$ amount and supporting invoices per request of reviewer. \$22,255.52
Component Description: Amount:	Shared Spectrum repacking Costs \$19,908.51

Component Description: Amount:	KTVU portion of repack costs- 4th invoice received /paid. \$22,267.36
Component Description: Amount:	Shared Spectrum repacking Costs \$13,849.68
Component Description:	KTVU portion of repack costs- 1st invoice received. Updated per reviewer to include correct amount on the invoice (126,115.75 vs. 126,198.84) \$126,115.75
Component Description: Amount:	KTVU portion of repack costs- 5th invoice received /paid. Resubmitted per reviewer for correct amt (3,551.50 vs. 3,554.46) \$3,551.50

Shared Spectrum repacking Costs- revised with supporting invoices (KGA and Cooper White and Cooper) per request of
reviewer. \$3,339.18
KTVU portion of repack costs- 6th
invoice received /paid. \$11,029.25

Outside Professional Services

Cost Information

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cos Justificatio
Outside Professional Services	\$385,809.50	\$400,944.50		\$69,187.17	
Prepare and File FCC Progress Report	\$32,727.50	\$32,727.50	Prepare and file FCC Progress Reports Quarterly. See quote attached.	N/A	N/A
Legal Fees - Local SF	\$22,667.00	\$22,667.00	Sutro Tower - Estimated KTVU Allocated costs - local legal fees. See Spreadsheet.	N/A	N/A
Additional Field Engineering Service, 20 Days	\$31,800.00	\$31,800.00	RF Engineer on site supervision of transmitter, transmission line, and combiner installations. See attached quote.	\$0.00	N/A
RF Exposure Measurements	\$21,050.00	\$20,000.00	Catalog	N/A	N/A
Comprehensive coverage verification via field study, if needed	\$84,200.00	\$80,000.00	Catalog	\$7,884.00	N/A

Environmental Assessment, if triggered by NEPA Section 106 review or for certain structures over 450 feet	\$10,520.00	\$10,000.00	Catalog	N/A	N/A
Attorney Fees - Prepare and File request for Special Temporary Authorization	\$7,360.00	\$7,000.00	Catalog	N/A	N/A
Attorney Fees - Negotiation of lease and other matters for shared locations	\$4,210.00	\$30,000.00	Legal Fees for Modification of lease with Sutro Tower for new channels, new combiner.	N/A	N/A
Attorney Fees - Prepare and File FCC Form 2100 (main), License to Cover Application	\$2,365.00	\$2,250.00	Catalog	N/A	N/A
Attorney Fees - Aux Antenna, prepare and File Form 2100 Construction Permit or License Application	\$4,210.00	\$4,000.00	Catalog	N/A	N/A
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	\$5,260.00	\$5,000.00	Catalog	N/A	N/A

Prepare request for Special Temporary Authorization	\$4,100.00	\$3,000.00	Catalog	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	Catalog	N/A	N/A
Prepare engineering section of FCC Form 2100 (main), License to Cover Application	\$1,580.00	\$1,500.00	Catalog	N/A	N/A
Prepare and or review reimbursement form	\$2,630.00	\$2,500.00	Catalog	N/A	N/A
Project management of the transition	\$134,300.00	\$127,500.00	Outside Project Management of transition of main and aux facilities.	\$61,303.17	N/A
RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, Construction Permit Application	\$2,105.00	\$2,000.00	Catalog	N/A	N/A

Total for all systems	\$8,375,202.00	\$7,559,201.30	N/A	\$3,558,295.67	N/A
Sub-total	\$385,809.50	\$400,944.50	N/A	\$69,187.17	N/A
Address transition timing and coordination issues w/ other stations and wireless	\$2,630.00	\$7,500.00	SFO Market / Daisy Chain Coordination for Testing and Transition Dates.	N/A	N/A
Perform engineering study for new channel assignment and antenna development	\$7,360.00	\$7,000.00	Catalog	N/A	N/A
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	\$3,155.00	\$3,000.00	Catalog	N/A	N/A

Actual Information Description	File Name	
Prepare and File FCC Progress Report	Information not provided.	
Legal Fees - Local SF	Information not provided.	
Additional Field Engineering Service, 20 Days	Component Description: Amount:	RF engineering \$16,500.00
RF Exposure Measurements	Information not provided.	

Comprehensive coverage verification via field study, if needed	Component Description: Amount:	Site Survey \$7,884.00
Environmental Assessment, if triggered by NEPA Section 106 review or for certain structures over 450 feet	Information not provided.	
Attorney Fees - Prepare and File request for Special Temporary Authorization	Information not provided.	
Attorney Fees - Negotiation of lease and other matters for shared locations	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.	
Prepare request for Special Temporary Authorization	Information not provided.	
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	Information not provided.	
Prepare and or review reimbursement form	Information not provided.	
Project management of the transition		

Component Description: Amount:	Project Management 1/1 /18 - 12/31/18 \$24,792.50
Component Description:	Project Management through 3/30/18. Progress payment on Transmission Space Alt Project Mmgt (quote included). \$3,028.43
Component Description: Amount:	Project Management services thru 7/27 /18 \$130.08
Component Description: Amount:	RF Consulting /Project Management 1/4 /18 - 12/31/18 includes variance sheet. \$594.02
Component Description: Amount:	Project Management/RF Consulting 1/1/19 - 12/31/19 \$6,110.00
Component Description: Amount:	RF Consulting /Project Management 1/5 /17 - 12/31/17 \$3,583.75

	Component Description:	RF Consulting /Project
		Management 1/1
		/19 - 12/31/19
	Amount:	\$1,077.08
	Component Description:	Project
		Management
		services thru 4/27
	Amount:	/18 \$16,715.70
	Amount.	φ10,715.70
	Component Description:	Project
		Management/RF
		Consulting 1/1/18 -
		3/4/18
	Amount:	\$21,326.25
	Component Descriptions	Drainet
	Component Description:	Project Management
		services thru 6/29
		/18
	Amount:	\$661.06
	Component Description:	Project
		Management
		services thru 3/30
	Amount:	/18
	Amount.	\$3,028.43
PE Consulting Engineer	Information not provided	
RF Consulting Engineer Fees- Aux Antenna:	Information not provided.	
Prepare engineering section		
of FCC Form 2100,		
Construction Permit		
Application		
	Information not provided	
Prepare engineering section of FCC Form 2100 (main),	Information not provided.	
Construction Permit		
Application		
· ·		

Perform engineering study for new channel assignment and antenna development	Information not provided.
Address transition timing and coordination issues w/ other stations and wireless	Information not provided.

Other Expenses

Cost Information

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cos Justificatic
Other Expenses	\$637,037.00	\$636,856.00		\$22,791.00	
Sales Tax	\$284,178.00	\$284,178.00	Sutro Tower and KTVU Estimate of KTVU Allocated Sales Tax and KTVU sales tax paid on its equipment purchases. See two attached Spreadsheets. Must add both together.	N/A	N/A
MVPD Notification of Channel Change	\$5,000.00	\$5,000.00	N/A	N/A	N/A
Develop and air announcement of upcoming channel change	\$1,500.00	\$1,500.00	N/A	N/A	N/A
Equipment Storage	\$15,000.00	\$15,000.00	Off Site Storage of KTVU equipment until ready on site.	N/A	N/A

FCC Filing Fees - Form 2100 minor change CP application	\$1,110.00	\$1,070.00	N/A	N/A	N/A
DTV Medical Facility Notification	\$11,550.00	\$11,424.00	N/A	\$11,424.00	N/A
Equipment Delivery and Handling Charges	\$78,469.00	\$78,469.00	Sutro Tower Estimate of KTVU allocated costs for equipment delivery, storage, and handling of combiner. See Spreadsheet.	N/A	N/A
Disposal Costs (for equipment and other waste, net of any salvage value)	\$11,367.00	\$11,367.00	Sutro Tower Estimate of KTVU Allocated costs for equipment removal / Disposal Combiner	\$11,367.00	N/A
Non-zoning permits	\$183,333.00	\$183,333.00	Sutro Tower Estimate of KTVU Allocated costs for building Permits. See Spreadsheet.	N/A	N/A
Local Zoning	\$45,000.00	\$45,000.00	Sutro Tower - Estimate of KTVU allocated costs for Zoning approvals.	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
Sub-total	\$637,037.00	\$636,856.00	N/A	\$22,791.00	N/A
Total for all systems	\$8,375,202.00	\$7,559,201.30	N/A	\$3,558,295.67	N/A

Actual Information Description	File Name	
Sales Tax	Information not provided.	
MVPD Notification of Channel Change	Information not provided.	
Develop and air announcement of upcoming channel change	Information not provided.	
Equipment Storage	Information not provided.	
FCC Filing Fees - Form 2100 minor change CP application	Information not provided.	
DTV Medical Facility Notification	Component Description: Amount:	DTV Notification of medical facilities \$11,424.00
Equipment Delivery and Handling Charges	Information not provided.	

Disposal Costs (for equipment and other waste, net of any salvage value)	Component Description:	Transfer and disposal of glyco and mineral oil.
	Amount:	\$11,367.00
Non-zoning permits	Information not provided.	
Local Zoning	Information not provided.	
FCC Filing Fees - Special Temporary Authorization request	Information not provided.	
FCC Filing Fees - Form 2100 license to cover application	Information not provided.	

Cost Information	Grand Total			
		Predetermined Cost Estimate	Estimated Cost	Actual Cost
	Total for all systems	\$8,375,202.00	\$7,559,201.30	\$3,558,295.67

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

Certification	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.	
		 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. 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).
- The above-named entity certifies that all payments from the TV Broadcaster Relocation Fund (Fund) received by the entity listed on this form will be used only for expenses that are eligible for reimbursement from the Fund.
- 6. The above-named entity certifies that it will maintain and provide to the Commission detailed records, including receipts, of all costs eligible for reimbursement actually incurred.
- 7. The above-named entity acknowledges that overpayments or payments in error must be promptly refunded to the Commission.

8. The above-named entity certifies that it is in full compliance with all statutes, rules, regulations and governmental requirements for which compliance is a pre-requisite for obtaining the payments herein requested.	
I declare, under penalty of perjury, that I am an authorized representative of the above- named applicant for the Authorization(s) specified above.	Angelo Servedio SVP Controller
	01/25/2021

Certification	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).	
		 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. 	
		2. The above-named entity certifies that the statements in this form and attached documentation are true, complete, and correct.	
		3. 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).
- 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.

	The above-named entity acknowledges that overpayments or payments in error must be promptly refunded to the Commission. 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.	
an au	are, under penalty of perjury, that I am thorized representative of the above- d applicant for the Authorization(s)	Angelo Servedio SVP
specif	ied above.	Controller
		01/25/2021

Attachments