

Federal Communications Commission

(REFERENCE COPY - Not for submission)

FCC Form 399: Reimbursement Request

Facility	73982	Service: DTV	Call	WSBK-TV	Channel: 21 (UHF)
ID:			Sign:		
File	000002	7826			
Number:					
FRN: 002	21079769	Date	10/19		
		Submitted:	/2020		

Applicant Name, Type, and Contact Information

Information

Applicant	Address	Phone	Email	Applicant Type
CBS TELEVISION LICENSES LLC Doing Business As: CBS TELEVISION LICENSES LLC	Daniel G. Ryson 2020 M. St., NW - Licensing DEPT Washington, DC 20036 United States	+1 (202) 457- 4505	dryson@cbs. com	Limited Liability Company

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	
	Daniel G. Ryson Director of Spectrum Management ViacomCBS	Daniel G. Ryson 2020 M. St., NW - Licensing DEPT Washington, DC 20036 United States	+1 (202) 457- 4074	dryson@cbs. 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	American Tower will build an interim site in Needham, MA with broadband ant and tx bldg to be used by WSBK-TV and all stations listed above. Main site will be built in Needham Heights, MA

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

Primary	Existing Transmitter Information				
Transmitter	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	Diamond		
		Year	2002		
		Туре	Solid State		
		Solid State Cooling	Air Cooled		
		Solid State Power Capacity	7 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?	Yes		
		Manufacturer			
		Model	UAXTE-24		
		Transmitter Type	Solid State		
		Solid State Cooling	Air Cooled		
		Solid State Power capacity	14.4 kW		
		Justification for New Transmitter	Existing transmitter cannot be re-tuned to the new channel.		

Primary Other Transmitter Costs

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

	Description	Surge suppressor and 75 kVa transformer. Required by primary transmitter. See Exhibit 1 Item D.
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 Other Transmitter Cost Not Listed

Transmitter Information not provided.

Interim	New Transmitter Costs				
Transmitter	Section	Question	Response		
	New Transmitter	Use	Interim		
		Description of Use	N/A		
		Change Type	Purchase		
		Manufacturer			
		Model	UAXTE-32 WB		
		Transmitter Type	Solid State		
		Solid State Cooling	Air Cooled		
		Solid State Power capacity	15.36 kW		
		Justification for New Transmitter	Interim transmitter needed while construction at the main site is in progress. A wideband transmitter is required for interim operation on both channels 39 and 21. See Exhibit 25.		

Interim Transmitter Other Transmitter Costs Section Question Response Electrical Service Service Entrance (3 phases 800A 208V) Yes Switchgear (industrial 800 amp) Yes Yes

	Power	500 kVA
	Rigid Conduit and Wiring	Yes
	Size	2 inches
	Length	200.0 feet
	Other Electrical Service	Yes
	Description	Transformer and surge suppressor required for transmitter operation. See Exhibit 7, Item D.
HVAC Service	Does the replacement transmitter require HVAC Service?	Yes
	Туре	Cooling Only
	Size	20 tons
	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
Inside RF System	Is an additional interior RF system required to support this interim transmitter?	No

Other Transmitter Cost Not Listed

Interim Transmitter

Name

Description

4 Inch Conduit	100' L/F of 4" conduit and larger conductor to power new transmitters, HVAC, Air handlers and house power. The existing power supply is for the additional power demands of the new repack equipment. See Exhibit 3.
Channel Change Services	Interim Transmitter Channel Change Services
Emergency Generator	Primary site has an emergency generator. This cost replicates backup power at the interim site.
New Sub Panels	4 new sub panels at approximately 200 amps each, to power each additional transmitter, house power, HVAC, and ancillary equipment. See Exhibit 3.
Transmitter Electrical	Install Electrical for transmitter, pumps, racks, transformer, etc.

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

Primary	Existing Antenna Information		
Antenna	Section	Question	Response
	Existing Antenna Description	Type of change	Lease New
Description		Antenna Use	Primary (Main)
		Description of Use	N/A
		Ownership	Leased
		Owner	American Tower
		Site	N/A
		Is the existing antenna shared with another station or stations?	Yes
Existing Antenna Manufacturer and Type		Is the existing antenna directional?	No
		Is antenna in operating condition?	Yes
		Is antenna located on or in close proximity to an antenna farm?	No
	-	Class	Full Power
	Manufacturer and Type	Mounting	Top Mount
		Antenna position in stack	Тор
		Polarization	Horizontal
		Туре	Broadband Panel
		Number of Stations Supported	4
		Number of Panels	99
		Design power capacity in use	87.0 %
		Lower Limit	470.00 MHz
		Upper Limit	698.00 MHz
		Other Antenna Type	N/A
		ERP: (Effective Radiated Power)	135.0 kW

Manufacturer	
Model	TAD- 24UDA-5 /60-MR
Year	1999

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

Facility ID	Call Sign
72098	WGBX-TV
25456	WBZ-TV
65684	WCVB-TV

Antenna	Section	Question	Response
	New Antenna	Use	Primary (Main)
	Description	Description of Use	N/A
		Change Type	Lease New
		Is this a request for upgraded equipment?	Yes
		Ownership	Leased
		Owner	American Tower Corporation
		Is antenna shared?	Yes
		Is antenna directional?	No
New Antenna Manufacturer and Types		Will antenna be located on or in close proximity to an antenna farm?	No
	Class	Full Power	
	Mounting	Top Mount	
	Antenna position in stack	Not in Stack	
	Polarization	Elliptical	
	Туре	Broadband Panel	
		Number of Stations Supported	4
		Number of Panels/Bays	56
		Lower Limit	470.00 MHz
		Upper Limit	608.00 MHz
		Design power capacity in use	99.0 %
		Other Antenna Type	N/A
		ERP: (Effective Radiated Power)	92.2 kW
		Manufacturer	

Model	TUM-AP-O4- 14/56H-2-T
Year	2020
Justification for New Antenna	Top Mount 14 bay Broadband antenna required to accommodate the new repack frequencies. This antenna will be a four- sided assembly mast. In use power capacity is unknown. Pre- transition antenna has 120 panels. See Exhibit 2.

Primary Other Antenna Costs

Antenna Section Question Response **Combiner for Shared** Do you need a Combiner for a Shared Yes Antenna Antenna? Туре New Number of channels supported 4 Frequencies of channels supported RF channel N/A Frequency Do you need a combiner output splitter No /switcher for dual feed lines? **Elbow Complex** Yes Do you require the separate purchase of the Elbow Complex? Broadband or Single Channel? Broadband

	Feed Line Size	8 3/16 inches inches
Side Mount Brackets	Do you require the separate purchase of side mount brackets for a high power antenna?	No
Pattern Scatter Analysis	Do you require separate purchase of pattern scatter analysis for a side mount high or medium power antenna?	No
Sweep Test	Do you require the sweep testing of transmission line and antenna?	Yes

Enter a list of RF channel numbers.

RF Channel Number
20
21
32
33

Primary Antenna

Other Antenna Cost Not Listed

Name	Description
Combiner Installation	Installation cost of the new dual chain combiner with 8 modules; replacing existing combiner. See Exhibit 2.

Interim New Antenna Costs			
Antenna	Section	Question	Response
	New Antenna	Use	Interim
	Description	Description of Use	N/A
		Change Type	Lease New
	Ownership	Leased	
		Owner	American Tower Corporation
		Is antenna shared?	Yes
		Is antenna directional?	Yes
		Will antenna be located on or in close proximity to an antenna farm?	No
New Antenna Manufacturer and Type	Class	Full Power	
	Manufacturer and Type	Mounting	Top Mount
	Antenna position in stack	Bottom	
	Polarization	Elliptical	
	Туре	Broadband Panel	
	Number of Stations Supported	5	
		Number of Panels/Bays	56
		Lower Limit	470.00 MHz
		Upper Limit	650.00 MHz
	Design power capacity in use	99.0 %	
	Other Antenna Type	N/A	
	ERP: (Effective Radiated Power)	99.2 kW	
		Manufacturer	
		Model	TUM-AP-O4- 14/56H-2-T 14

Year	2018
Justification for New Antenna	Top Mount 14
	bay
	Broadband
	antenna
	required to
	accommodate
	the new
	repack
	frequencies.
	This antenna
	will be a four-
	sided
	assembly
	mast. In use
	power
	capacity is
	unknown.
	See Exhibit 3

Interim	Other Antenna Costs			
Antenna	Section	Question	Response	
	Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	Yes	
		Туре	New	
		Number of channels supported	5	
		Frequencies of channels supported	Upper and lower frequency	
		Frequency	470.0 MHz - 650.0 MHz	
		Do you need a combiner output splitter /switcher for dual feed lines?	No	
	Elbow Complex	Do you require the separate purchase of the Elbow Complex?	Yes	
		Broadband or Single Channel?	В	
		Feed Line Size	7 3/16 inches	

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?	Yes

Other Antenna Cost Not Listed

Interim Antenna

Name	Description
Combiner Installation	Installation of combiner; Single chain of 5 high power constant impedance waveguide modules, and/or dual chains of 5 directiona filter modules per Dielectric layout. required for broadband antenna system. See Exhibit 3.
Tower Rent	One-time tower rental during repack. See Exhibit 3.

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

Existing Transmission Line Primary Existing Transmission

missio	n Line Section	Question	Response
	Existing Transmission Line Description	Type of change	Utilize Existing
		Use	Primary (Main)
		Description of Use	N/A
		Ownership	Leased
		Owner	American Tower Corporation
		Site	N/A
		Is the existing transmission line shared with another station or stations?	Yes
		Is Transmission Line in operating condition?	Yes
	Existing Transmission Line Manufacturer and Type	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	1
		Length	1440 feet per run

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

Facility ID	Call Sign
72098	WGBX-TV
25456	WBZ-TV
65684	WCVB-TV

Other Transmission Line Expenses Not Listed Transmission Line Descript

onName	Description
Nitrogen Generator	Nitrogen Generator. See Exhibit 14.
Transmission Line	Transmission Line from Transmitter to Combiner. See Exhibit 44.

Interim New Transmission Line

Transmission

nsmissio	Section	Question	Response
	New Transmission Line Costs	Use	Interim
		Description of Use	N/A
		Change Type	Lease New
		Туре	Rigid
		Diameter	8 3/16 inches
		Segment Length	Broadband
		Other Segment Length	
		Number of parallel runs	2
		Length	1250 feet per run
		Justification for New Transmission Line	Two (2) 8-inch broadband rigid transmission lines, six (6) elbows (3

	each line).
	Because this
	line size is an
	upgrade, we
	will only seek
	reimbursement
	for 7-inch line.

Other Transmission Line Expenses Not Listed Transmission

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

Auxiliary	Add Tower			
Tower	Section	Question	Response	
	Existing Tower Description	Type of change	Modify Existing	
		Tower Use	Auxiliary (Backup)	
		Description of Use	Interim	
		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	No	
		Is tower documented for structural analysis?	Unknown	
		Is tower compliant with Rev G?	Unknown	
	Existing Tower	Do you have a tower registration number?	Yes	
	Structure Registration	ASR Number	1004233	
	Coordinates (NAD83 (North American Datum of 1983))	Latitude (NAD83)	42° 18' 10.7" N-	
		Longitude (NAD83)	071° 13' 04.9" W-	
		Overall Structure Height	1200.77 feet	
		Support Structure Height	1101.04 feet	
		Ground Elevation Above Mean Sea Level (AMSL)	150.92 feet	
		Structure Type	GTOWER - Guyed	

	Structure Used for Communication Purposes
Tower Owner	American Towers, LLC
Date Constructed	04/19/2005

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
73238	WLVI	DTV
23439	WBOS	FM
6463	WFXT	DTV
1901	WBZ-FM	FM
26897	WWBX	FM
9639	WBGB	FM

Auxiliary Tower Modification Costs

Tower

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

Auxiliary Tower Tower Rigging Costs Question Response Tower Rigging Costs Complex Tower Candelabra

Auxiliary Tower	Other Tower Expenses Not Listed		
	Name	Description	
	Tower Permit Packages	Tower and ground equipment drawing package. Required for local approvals. See Exhibit 3.	
	Construction Management	Nine hours on Modification project management and fifteen hours for RF installation project management for a total of twenty days. See Exhibit 3.	

Primary	Existing Tower			
Tower	Section	Question	Response	
	Existing Tower	Type of change	Modify Existing	
	Description	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	No	
		Is tower documented for structural analysis?	Yes	
		Is tower compliant with Rev G?	Unknown	
	Existing Tower Structure Registration	Do you have a tower registration number?	Yes	
		ASR Number	1003433	
	Coordinates (<u>NAD83</u> (North American Datum of 1983))	Latitude (NAD83)	42° 18' 37.0" N-	
		Longitude (NAD83)	071° 14' 12.0" W-	
		Overall Structure Height	1296.24 feet	
		Support Structure Height	1192.24 feet	
		Ground Elevation Above Mean Sea Level (AMSL)	152.89 feet	
		Structure Type	GTOWER - Guyed Structure Used for Communication Purposes	
		Tower Owner	American Tower, LLC	
		Date Constructed	01/01/1957	

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
72099	WGBH-TV	DTV
65684	WCVB-TV	DTV
25456	WBZ-TV	DTV
18783	WYDN	DTV
10542	WKLB-FM	FM
72098	WGBX-TV	DTV
68241	WBUR-FM	FM

Primary Tower Modification Costs

Tower

Tower

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

Primary Tower Rigging Costs

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

Primary	Other Tower Expenses Not Listed		
Tower	Name	Description	
	Construction Management	(44) hours on Modification project management and RF installation project management. See Exhibit 14.	
	Site Coordination Meetings	Coordination and transition planning with all parties onsite. See Exhibit 14.	
	Install TX Line In TX Room	Install transmission line between transmitter and combiner.	
	Tower Permit Packages	Construction drawing packages for tower, building, and ground. See Exhibit 14.	

Outside Professional	Section	Question	Response
	Services Costs Outside Project Management Services	Do you require outside project management services?	Yes
		Number of Hours	250
		Explanation	Company lacks internal resources.
	Outside RF consulting Engineering Services	Perform engineering study for new channel assignment and antenna development	Yes
		Prepare engineering section of Form FCC Construction Permit Application	Yes
		For Auxiliary Facility	No
		For Main Facility	Yes
		Prepare engineering section of Form FCC License to Cover Application	Yes
		For Auxiliary Facility	No
		For Main Facility	Yes
		Prepare request for Special Temporary Authority	Yes
		Quantity	1
		Do you have Distributed Transmission System engineering services?	N/A
		Critical Facility	N/A
		Terrain-Shielded Facility	N/A
	Attorney and Other Outside Consulting Services	Prepare and file Form FCC Construction Permit Application	No
		For Auxiliary Facility	N/A
		For Main Facility	N/A
		Prepare and file Form FCC License to Cover Application	No
		For Auxiliary Facility	N/A

	For Main Facility	N/A
	Prepare request for Special Temporary Authority	No
	Quantity	N/A
	NEPA Section 106 environmental review	No
	Environmental Assessment	No
	ASR Modification	No
	FAA Consultation (including preparation of FAA Form 7460)	No
	Negotiation of Lease and other Matter for Shared Locations	Yes
	Prepare or Review FCC Form 399 for Reimbursement	No
	Address transition timing and coordination issues w/ other stations and wireless providers	Yes
RF Field Engineering Services	Comprehensive coverage verification via field study	No
	RF exposure measurements	No
	Additional Field Engineering Service	No
	Number of Days	N/A
	Justification	N/A

Outside Other Professional Services Expenses Not Listed

Professional	Services Costs	Description
	RF System Test	Testing of the combiner to ensure all frequencies are tuned for optimal patterns. See Exhibits 2 and 3.
	Site Coordination Meeting	Site coordination meetings with all broadcasters, contractors and vendors involved with the site deliveries and construction. This cost is for travel and logistics expenses accrued. (See Exhibit 2.)

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	No
		Non-zoning permits	Yes
		BLM or NFS Coordination	No
		FCC Construction Permit Minor Change	No
		FCC License to Cover Application	No
		FCC Special Temporary Authority Application	Yes
	Other Miscellaneous Expenses	Does this relocation require paying Disposal Costs (for equipment and other waste, net of any salvage value)?	No
		Does this relocation require Equipment Delivery or Handling Charges not otherwise included in individual item costs?	Yes
		Does this relocation require Equipment Storage?	No
		Does this relocation require the Development and Airing of an Announcement regarding an upcoming channel change?	No
		Does this relocation require MVPD Notification of a Channel Change?	Yes

Other Expenses Not Listed

Other Expenses	Other Expenses Not Listed				
	Name	Description			
	Ice Shield for HVAC	Ice protection for HVAC compressor units near tower in areas prone to ice and snow. See Exhibit 3.			
	Public Hearing	Public hearing to alter height of primary tower by changing top antenna. See Exhibit 2.			
	Site Coordination Meeting	Site coordination meetings with all broadcasters, contractors and vendors involved with the site deliveries and construction. This cost is for travel and logistics expenses accrued. See Exhibits 2 and 3.			
	Site Security	Site security for installation and storage of Transmission line and materials for 30 days X 12 hours. These materials are a high risk of theft due to the material makeup such as copper, brass and aluminum. (See Exhibit 3.)			
	Deinstall Old Transmitter	Complete removal and deinstallation of existing WSBK transmitter. See Exhibit 1 Item F.			
	Asbestos and Lead Paint Testing	Asbestos testing, removal and abatement for walls which could contain lead paint and /or the flooring may contain asbestos, because of the age of the facility and the era when the original construction took place. (See Exhibit 3.)			
	Building Partition	This cost is to provide permitting for building partition and electrical service installation in the shared space. This install is to provide security for broadcasters and sufficient power for transmitters. See Exhibit 3.			

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 Cos Justificatio
Interim Transmitter UAXTE-32 WB	\$1,090,820.31	\$1,004,780.31		\$756,966.02	
Transmitter Electrical	\$60,478.00	\$60,478.00	Install electrical for GatesAir UAXTE-32 transmitter, pumps, heat exchangers, transformer, racks, etc. See Exhibits 18 (for initial UAXTE-16) and 23 (for additional work required by UAXTE-32 transmitter).	\$60,478.00	N/A
New Sub Panels	\$10,000.00	\$10,000.00	Four new 200 amp sub panels to power additional transmitter, house power, HVAC, and ancillary equipment. See Exhibit 3.	\$7,500.00	N/A
Emergency Generator	\$103,857.00	\$103,857.00	Cost includes the connection fee and an assumed 7-months of rent at \$551/month for interim operation. Please see lease provided as Exhibit 32.	\$100,000.00	N/A

Channel Change Services	\$21,422.83	\$21,422.83	Transmitter was ordered on pre- transition channel but due to construction delays was needed on post- transition channel. Thus, channel change is believed appropriate. See Exhibit 47 for quote.	\$21,422.83	N/A
4 Inch Conduit	\$1,920.00	\$1,920.00	100' L/F of 4" conduit and larger conductor for 500 KVA power needed for the new transmitters, HVAC, Air handlers and house power. The existing power supply is for the additional power demands of the new repack equipment. See Exhibit 3.	\$1,440.00	N/A
Other HVAC Service Type: C Size:20 (Other)	\$22,000.00	\$22,000.00	Two 20 ton HVAC units required to maintain operational temperatures for repack transmitters. This is to supplement existing HVAC units already in place. See Exhibit 3.	\$16,500.00	N/A
Other Electrical Service:	\$4,226.37	\$4,226.37	Transformer and surge suppressor.	\$4,226.37	N/A

Transformer and surge suppressor required for transmitter operation. See Exhibit 7, Item D.			Required for proper operation of transmitter. See Exhibit 7 Item D.		
2" Rigid Conduit and Wiring (Cost per foot)	\$5,200.00	\$1,000.00	200 L/F of 2" conduit and conductor to adequately supply the HVAC, Air handlers and House power. The existing power supply is inadequate for the additional power demands of the new repack equipment. See Exhibit 3.	\$750.00	N/A
Transformer 3 phase /480v - 500 KVA	\$48,400.00	\$9,200.00	Install additional power, 500 KVA transformer, for new tenant space so customer can operate transmitter, heat exchangers and other equipment on the new repack frequency into the broadband antenna. See Exhibit 3.	\$6,900.00	N/A
Switchgear - industrial 800 amp	\$38,200.00	\$7,260.00	Switchgear accommodates repack equipment and support the new 500 KVA transformer. The	\$5,445.00	N/A

			existing service does not have sufficient capacity to support multiple transmitters. See Exhibit 3.		
Service entrance 3 phase/800 amp/208 volt	\$14,400.00	\$2,700.00	New Switchgear required for the additional repack equipment. The switch will support the new 500 KVA transformer. The existing service does not have sufficient capacity to support multiple transmitters. See Exhibit 3.	\$2,055.00	N/A
UHF - Air Cooled Solid State Transmitter 15.36 kW	\$513,363.19	\$513,363.19	Includes UAXTE- 16 (\$247,352.92) plus transmitter field upgrade to UAXTE-32 (\$266,010.27). Includes transformer and installation but not freight or tax. See Explanation in Exhibit 25.	\$282,895.90	N/A
UHF - Air Cooled Solid State Transmitter 7.68 kW	\$247,352.92	\$247,352.92	***System Notice: Estimate adjusted and locked because line has been superseded. ***Originally proposed UAXTE-12R44 is said to be incapable of operating on both pre- transition and	\$247,352.92	Corrected metadata (invoice and due dates) March 1, 2018.

			post-transition channels. See Exhibit 12 for justification. See also Exhibit 7 Items A, B, C, and E.		
Primary Transmitter UAXTE-24	\$261,930.23	\$261,930.23		\$254,799.01	
UHF - Air Cooled Solid State Transmitter 14.4 kW	\$161,634.06	\$161,634.06	Please see Exhibit 1 for non- upgraded transmitter quotation. This estimate is for Exhibit 1 items A, B, C, and D minus the down paymenbt shown in another (locked) cost category. Upgrade estimate is Exhibit 34.	\$154,502.84	N/A
Other Electrical Service: Surge suppressor and 75 kVa transformer. Required by primary transmitter. See Exhibit 1 Item D.	\$5,552.76	\$5,552.76	75 KVA transformer and parallel surge suppressor. Required for proper operation of the transmitter.	\$5,552.76	N/A
UHF - Air Cooled Solid State Transmitter 7.2 kW	\$94,743.41	\$94,743.41	***System Notice: Estimate adjusted and locked because line has been superseded. ***Primary transmitter required for repack. See	\$94,743.41	N/A

			Exhibit 1, items A, B, C, and E.		
Sub-total	\$1,352,750.54	\$1,266,710.54	N/A	\$1,011,765.03	N/A
Total for all systems	\$5,197,834.14	\$2,286,604.14	N/A	\$1,661,511.37	N/A

Components

Actual Information Description	File Name	
Transmitter Electrical	Component Description:	Work completed minus 10% retainage. See Exhibit 19. The form won't permit entry of ampersand in
	Amount:	company name. \$19,773.00
	Component Description:	Work completed to increase power capacity for larger (but not upgraded) interim transmitter. See quote in Exhibit 29. The form won't permit entry of ampersand in company name.
	Amount:	\$16,508.00

	Component Description:	Work completed for original interim transmitter electrical. Invoice is for 10% retainage deducted earlier. See Exhibit 35. The form won't permit entry of ampersand in company name. \$4,397.00
	Component Description:	Work completed for original interim transmitter electrical minus 10% retainage. See Exhibit 30. The form won't permit entry of ampersand in company name.
	Amount:	\$19,800.00
New Sub Panels	Component Description: Amount:	Invoice is 25% Down Payment for \$115,297.75 ATC total estimated cost. (See Exhibit 3). This amount is 25% of Electrical Sub Panels, Exhibit 3, 3-C-6. \$2,500.00

	Component Description:	Invoice is 50% Down Payment for \$230,591.50 ATC total estimated cost. (See Exhibit 3). This amount is 50% of Electrical Sub Panels, Exhibit 3, 3-C-6. \$5,000.00
Emergency Generator		
	Component Description:	Generator Connection Fee. Please see lease provided as Exhibit 32.
	Amount:	\$100,000.00
Channel Change Services	Component Description: Amount:	Interlock Wire \$907.58
	Component Description:	Channel change services. Interim TX ordered on pre- transition channel but due to delays was needed on post-transition channel. \$20,515.25
4 Inch Conduit		

	Component Description:	Invoice is 50% Down Payment for \$230,591.50 ATC total estimated cost. (See Exhibit 3). This amount is 50% of 4-inch rigid conduit, Exhibit 3, 3-C-1. \$960.00
	Component Description:	Invoice is 25% Down Payment for \$115,297.75 ATC total estimated cost. (See Exhibit 3). This amount is 25% of 4-inch rigid conduit, Exhibit 3, 3-C-1. \$480.00
Other HVAC Service Type: C Size:20 (Other)	Component Description:	Invoice is 50% Down Payment for \$230,591.50 ATC total estimated cost. (See Exhibit 3). This amount is 50% of 20-Ton HVAC, Exhibit 3, 3- C-2.
	Amount: Component Description:	\$11,000.00 Invoice is 25% Down Payment for \$115,297.75 ATC total estimated cost. (See Exhibit 3). This amount is 25% of 20-Ton HVAC, Exhibit 3, 3- C-2.
	Amount:	\$5,500.00

Other Electrical Service: Transformer and surge suppressor required for transmitter operation. See Exhibit 7, Item D.	Component Description:	Invoice is for Balance Due on Interim Transmitter, including item D - Electrical. This invoice is split between this category and the transmitter category. \$4,226.37
2" Rigid Conduit and Wiring (Cost per foot)	Component Description:	Invoice is 25% Down Payment for \$115,297.75 ATC total estimated cost. (See Exhibit 3). This amount is 25% of 2-inch rigid conduit, Exhibit 3, 3-C-1. \$250.00
	Component Description:	Invoice is 50% Down Payment for \$230,591.50 ATC total estimated cost. (See Exhibit 3). This amount is 50% of 2-inch rigid conduit, Exhibit 3, 3-C-1. \$500.00
Transformer 3 phase/480v - 500 KVA		

	Component Description:	Invoice is 25% Down Payment for \$115,297.75 ATC total estimated cost. (See Exhibit 3). This amount is 25% of 500 KVA Transformer, Exhibit 3, 3-C-1. \$2,300.00
	Component Description:	Invoice is 50% Down Payment for \$230,591.50 ATC total estimated cost. (See Exhibit 3). This amount is 50% of 500 KVA Transformer, Exhibit 3, 3-C-1. \$4,600.00
Switchgear - industrial 800		
amp	Component Description:	Invoice is 50% Down Payment for \$230,591.50 ATC total estimated cost. (See Exhibit 3). This amount is 50% of Switch Gear, Exhibit 3, 3- C-1.
	Amount:	\$3,630.00
	Component Description:	Invoice is 25% Down Payment for \$115,297.75 ATC total estimated cost. (See Exhibit 3). This amount is 25% of Switch Gear, Exhibit 3, 3- C-1.
	Amount:	\$1,815.00

Component Description:	Invoice is 50% Down Payment for \$230,591.50 ATC
	total estimated cost. (See Exhibit 3). This amount is 50% of Service
	Entrance, Exhibit 3, 3-C-1.
Amount:	\$1,370.00
Component Description:	Invoice is 25% Down Payment for \$115,297.75 ATC total estimated
	cost. (See Exhibit 3). This amount is 25% of Service Entrance, Exhibit 3, 3-C-1.
Amount:	\$685.00
Component Description:	Invoice is installation, proof,
	freight, and parts for base portion of
	interim transmitter. This cost is
	installation and parts only. Please see Exhibit 40A.
Amount:	\$16,885.63
Component Description:	Interim Transmitter
	Upsize Progress Payment. See quote and statement in
	Exhibit 41 and justification in Exhibit 25. Freight
	listed separately.
	Amount: Component Description: Amount: Component Description:

	Component Description: Amount:	\$0 Requested amount because invoice was inadvertently uploaded to incorrect category. See Exhibit 31A. N/A
	Component Description: Amount:	Interim Transmitter Upsize Progress Payment. See quote in Exhibit 22 and justification in Exhibit 25. \$88,670.09
	Component Description:	Down Payment for transmitter size increase. See quote in Exhibit 22 and explanation in Exhibit 25A. \$100,494.27
UHF - Air Cooled Solid State Transmitter 7.68 kW	Component Description: Amount:	Interim Transmitter Progress Payment. \$89,185.78
	Component Description: Amount:	WSBK Interim Transmitter Down Payment. \$91,252.45

	Component Description: Amount:	Invoice is for remainder due on interim transmitter. This invoice is split between this cost category and transmitter electrical. \$66,914.69
UHF - Air Cooled Solid State Transmitter 14.4 kW	Component Description: Amount:	Primary transmitter payment #3. Electrical costs shown separately. Please see Exhibit 39A. \$51,926.96
	Component Description: Amount:	Invoice is 100% for a transmitter upgrade that is not reimbursable under FCC policy. Please see Exhibit 31A. N/A
	Component Description: Amount:	This is the primary transmitter payment #2. Cost excludes upgrade shown in Exhibit 31A. Please see Exhibit 38A. \$86,597.83

	Component Description:	Primary Transmitter Payment Four. This cost is for Installation and Proof of Performance. Please see Exhibit 40. \$15,978.05
	Component Description: Amount:	Primary Transmitter Payment Four. This cost is for interlock wire. Please see Exhibit 40. \$907.58
	Component Description: Amount:	Invoice is for Primary TX Install, Proof, Freight, and Old TX Removal. This cost is for Install and Proof. \$15,978.05
Other Electrical Service: Surge suppressor and 75 kVa transformer. Required by primary transmitter. See Exhibit 1 Item D.	Component Description: Amount:	Final 1/3 of primary transmitter electrical devices. Please see Exhibit 39A. \$1,850.92
	Component Description:	2/3 of the primary transmitter electrical devices. Please see Exhibit 38A.
	Amount:	\$3,701.84

UHF - Air Cooled Solid		
State Transmitter 7.2 kW	Component Description:	WSBK Primary
		Transmitter Down
		Payment. See
		Exhibit 8.
	Amount:	\$94,743.41

Antennas

Cost Information

)
Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Interim Antenna TUM-AP- O4-14/56H- 2-T 14	\$252,167.00	\$289,447.00		\$168,767.25	
UHF - High Power Top Mount Five Station broadband panel antenna elliptically or circularly polarized	\$76,787.00	\$76,787.00	New Antenna and assembly mast. Stack will be placed directly onto existing center tower section and require a short pedestal of height. See Exhibit 15.	\$62,417.25	N/A
Combiner Installation	\$10,000.00	\$10,000.00	Installation of combiner; Single chain of 5 high power constant impedance waveguide modules, and /or dual chains of 5 directional filter modules per Dielectric layout. See Exhibit 15.	\$5,250.00	N/A
Tower Rent	\$57,600.00	\$57,600.00	One-time interim tower rental for repack period.	\$43,200.00	N/A

Elbow complex, broadband, at antenna input, per 7 3/16. feedline (if needed)	\$16,850.00	\$6,660.00	Two (2) Elbow complex for the input of the new Broadband antenna. See Exhibit 14.	\$5,400.00	N/A
New combiner, cost per channel (without antenna)	\$84,200.00	\$135,400.00	Dual chains of mask filter /combiner modules per Dielectric layout. Includes input power dividers and output switching to allow transmitter alignment /testing not otherwise available. Eliminates need for mask filter. See Exhibit 15.	\$50,250.00	N/A
Sweep test of existing antenna	\$6,730.00	\$3,000.00	RF system testing for two (2) lines and one (1) antenna. See Exhibit 3.	\$2,250.00	N/A
Primary Antenna TUM-AP- O4-14/56H- 2-T	\$1,211,130.00	\$244,000.00		\$170,581.87	
Combiner Installation	\$11,250.00	\$11,250.00	Installation of dual chain combiner. See Exhibit 14.	\$6,562.50	N/A
Elbow	\$18,950.00	\$10,000.00	Elbow	\$6,750.00	N/A

Sub-total	\$1,463,297.00	\$533,447.00	N/A	\$339,349.12	N/A
Sweep test of existing antenna	\$6,730.00	\$5,000.00	RF System Testing. See Exhibit 2.	\$3,750.00	N/A
UHF - High Power Top Mount (200-1000 kW), Four Station broadband panel antenna, elliptically or circularly polarized	\$1,090,000.00	\$126,250.00	TUM-AP-O4- 14/56H-2-T Top Mount 14 bay Broadband antenna, with 56 elements total, required to accommodate the new repack frequencies. This antenna will be a four- sided assembly mast. See Exhibit 14.	\$97,269.37	N/A
New combiner, cost per channel (without antenna)	\$84,200.00	\$91,500.00	Constant impedance waveguide modules, and /or dual chains of 4 directional filter modules per Dielectric layout. Eliminates need for transmitter mask filter. See Exhibit 14.	\$56,250.00	N/A
broadband, at antenna input, per 8 3/16. feedline (if needed)			top mount antenna being used for repacked stations aux antenna. See Exhibit 14.		

Total for	\$5,197,834.14	\$2,286,604.14	N/A	\$1,661,511.37	N/A
all					
systems					

Components

Actual Information Description	File Name	
UHF - High Power Top Mount Five Station broadband panel antenna elliptically or circularly polarized	Component Description:	Invoice is 25% Down Payment for \$115,297.75 ATC total estimated cost. (See Exhibit 3). This amount is 25% of Interim Antenna, Exhibit 3, 3-B.
	Amount:	\$20,805.75
	Component Description:	Invoice is 50% Down Payment for \$230,591.50 ATC total estimated cost. (See Exhibit 3). This amount is 50% of Interim Antenna, Exhibit 3, 3-B. \$41,611.50
Combiner Installation		
	Component Description:	Invoice is 25% Down Payment for \$115,297.75 ATC total estimated cost. (See Exhibit 3). This amount is 25% of Interim Combiner Installation, Exhibit 3, 3-C-2.
	Amount:	\$1,750.00

	Component Description:	Invoice is 50% Down Payment for \$230,591.50 ATC total estimated cost. (See Exhibit 3). This amount is 50% of Interim Combiner Installation, Exhibit 3, 3-C-2. \$3,500.00
Tower Rent	Component Description:	Invoice is 50% Down Payment for \$230,591.50 ATC total estimated cost. (See Exhibit 3). This amount is 50% of Interim Tower Rent, Exhibit 3, 1-B-1. \$28,800.00
	Component Description:	Invoice is 25% Down Payment for \$115,297.75 ATC total estimated cost. (See Exhibit 3). This amount is 25% of Interim Tower Rent, Exhibit 3, 1-B-1. \$14,400.00
Elbow complex, broadband, at antenna input, per 7 3/16. feedline (if needed)		

	Component Description:	Invoice is 50% Down Payment for \$230,591.50 ATC total estimated cost. (See Exhibit 3). This amount is 50% of Interim Elbow Complex, Exhibit 3, 3-C-2. \$3,600.00
	Component Description:	Invoice is 25% Down Payment for \$115,297.75 ATC total estimated cost. (See Exhibit 3). This amount is 25% of Interim Elbow Complex, Exhibit 3, 3-C-2. \$1,800.00
New combiner, cost per channel (without antenna)	Component Description:	Invoice is 25% Down Payment for \$115,297.75 ATC total estimated cost. (See Exhibit 3). This amount is 25% of Interim Combiner, Exhibit 3, 3-C-1. \$16,750.00
	Component Description:	Invoice is 50% Down Payment for \$230,591.50 ATC total estimated cost. (See Exhibit 3). This amount is 50% of Interim Combiner, Exhibit 3, 3-C-1. \$33,500.00

Sweep test of existing		
antenna	Component Description:	Invoice is 25% Down Payment for \$115,297.75 ATC total estimated cost. (See Exhibit 3). This amount is 25% of Interim Antenna and Line Sweep Test, Exhibit 3, 3-C-2.
	Amount:	\$750.00
	Component Description:	Invoice is 50% Down Payment for \$230,591.50 ATC total estimated cost. (See Exhibit 3). This amount is 50% of Interim Antenna and Line Sweep Test, Exhibit 3, 3-C-2.
	Amount:	\$1,500.00
Combiner Installation	Component Description:	This invoice is the Milestone 2 progress payment for work done at the primary WSBK site. This item is the primary antenna. See Exhibit 42 item 3- C-2.
	Amount:	\$4,375.00

	Component Description:	This invoice is the Milestone 1 down payment for work done at the primary WSBK site. This item is the primary antenna. See Exhibit 36A item 3- C-2. \$2,187.50
Elbow complex, broadband, at antenna input, per 8 3/16. feedline (if needed)	Component Description:	This invoice is the Milestone 1 down payment for work done at the primary WSBK site. This item is the primary antenna elbow complex. See Exhibit 36A item 3- C-2. \$2,250.00
	Component Description:	This invoice is the Milestone 2 progress payment for work done at the primary WSBK site. This item is the primary antenna elbow complex. See Exhibit 42 item 3- C-2. \$4,500.00
New combiner, cost per channel (without antenna)		

Milestone 2 progress payment for work done at the primary WSBK site. This item is the primary antenna combiner. See Exhibit 42 item 3- C-1. \$37,500.00
nent Description: This invoice is the Milestone 1 down payment for work done at the primary WSBK site. This item is the primary antenna combiner. See Exhibit 36A item 3- C-1. \$18,750.00
nent Description: This invoice is the Milestone 2 down payment for work done at the primary WSBK site. This item is the primary antenna minus 75% of V-Pol costs. See Exhibit 42 item 3-B. \$60,116.25
) T

	Component Description:	This invoice is the Milestone 1 down payment for work done at the primary WSBK site. This item is the primary antenna. See Exhibit 36A item 3- B. \$37,153.12
Sweep test of existing		
antenna	Component Description:	This invoice is the Milestone 2 progress payment for work done at the primary WSBK site. This item is the sweep test of the primary antenna. See Exhibit 42 item 3- C-2.
	Amount:	\$2,500.00
	Component Description:	This invoice is the Milestone 1 down payment for work done at the primary WSBK site. This item is the sweep test of the primary antenna. See Exhibit 36A item 3- C-2.
	Amount:	\$1,250.00

Transmission Line

Cost Information

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cos Justificatio
Interim Transmission Line	\$997,500.00	\$84,900.00		\$48,281.25	
Rigid Transmission Line - copper, 8 3 /16" broadband	\$997,500.00	\$84,900.00	Material cost for two (2) 8 3 /16" Broadband rigid transmission lines, six (6) elbows (3 each line) and a nitrogen generator for pressurization control on the dual lines. Cost shared with other stations. See Exhibit 15.	\$48,281.25	N/A
Primary Transmission Line	\$13,597.34	\$13,597.34		\$10,597.34	
Transmission Line	\$10,597.34	\$10,597.34	Please see Exhibit 44. Includes freight.	\$10,597.34	N/A
Nitrogen Generator	\$3,000.00	\$3,000.00	Nitrogen Generator Upgrade. See Exhibit 14.	N/A	N/A
Sub-total	\$1,011,097.34	\$98,497.34	N/A	\$58,878.59	N/A
Total for all systems	\$5,197,834.14	\$2,286,604.14	N/A	\$1,661,511.37	N/A

Components

Actual Information Description	File Name	
Rigid Transmission Line -		
copper, 8 3/16" broadband	Component Description:	Invoice is 25% Down Payment for \$115,297.75 ATC total estimated cost. (See Exhibit 3). This amount is 25% of Interim Transmission Line, Exhibit 3, 3-A. This is the comparable 7-inch, not upgraded 8-inch line cost. Includes nitrogen generator. \$16,093.75
	Component Description:	Invoice is 50% Down Payment for \$230,591.50 ATC total estimated cost. (See Exhibit 3). This amount is 50% of Interim Transmission Line, Exhibit 3, 3-A. This is the comparable 7-inch, not upgraded 8-inch line cost. Includes nitrogen generator. \$32,187.50
Transmission Line	Component Description:	Transmission line between transmitter and combiner. Please see Exhibit 44.
	Amount:	\$10,597.34

Tower Equipment and Rigging Costs

Cost Information

			Estimated		
Description	Predetermined Cost Estimate	Estimated Cost	Cost Justification	Actual Cost	Actual Cost Justification
Auxiliary Tower GTOWER	\$604,000.00	\$90,180.00		\$62,126.25	
Structural engineering tower load study for well documented tower	\$12,600.00	\$4,380.00	Structural tower mapping to ensure the proper structural information is relayed to engineering for proposed repack equipment. Rigorous Structural analysis to access the structural capacity and modifications needed. See Exhibit 15.	\$3,326.25	N/A
Minor tower reinforcement /modifications	\$158,000.00	\$17,500.00	It is expected that the additional loads imposed on the tower by the new appurtenances required for the repack project will cause the tower to fail. The structural failure is expected to be in the minor	\$7,500.00	N/A

			category. See Exhibit 15.		
Complex Tower (includes, for example, those with candelabras and/or stacked antennas)	\$421,000.00	\$55,900.00	This candelabra is classified as complex structure. The cost includes the installation of the new antenna, two transmission lines and all the required tower brackets. See Exhibit 15.	\$42,000.00	N/A
Construction Management	\$3,000.00	\$3,000.00	9 hours on Modification project management and 15 hours for RF installation project management for a total of 20 days. See Exhibit 3.	\$2,250.00	N/A
Tower Permit Packages	\$9,400.00	\$9,400.00	Prepare tower, building, and ground drawings for local permits and approvals. Required to support required modifications needed for repack. See Exhibit 3.	\$7,050.00	N/A
Primary Tower GTOWER	\$621,765.00	\$138,175.00		\$98,450.62	
Install TX Line In TX	\$13,515.00	\$13,515.00	Please see quote in	\$13,515.00	N/A

Room			Exhibit 46		
Structural engineering tower load study for well documented tower	\$12,600.00	\$8,760.00	Structural mapping, analysis, and engineering needed to accommodate the repacked equipment. See Exhibit 14.	\$8,315.62	N/A
Minor tower reinforcement /modifications	\$158,000.00	\$25,000.00	Additional loads imposed on the tower by the new appurtenances required for the repack project will cause the tower to fail. The structural failure is expected to be in the minor category. See Exhibit 2.	\$18,750.00	N/A
Complex Tower (includes, for example, those with candelabras and/or stacked antennas)	\$421,000.00	\$74,250.00	Tower has stacked antennas and is thus a complex structure. (Disregard other parts of form would accept that answer.) Cost includes antenna installation, transmission lines and transmission line brackets. See Exhibit 14.	\$45,375.00	N/A
Construction Management	\$5,250.00	\$5,250.00	(44) hours on Modification	\$4,125.00	N/A

			project management and RF installation project management. See Exhibit 14.		
Site Coordination Meetings	\$2,000.00	\$2,000.00	Site coordination meetings with all broadcasters, contractors and vendors involved with the site deliveries and construction. This cost is for travel and logistics expenses accrued. See Exhibit 14 Line 1-B-1.	\$1,320.00	N/A
Tower Permit Packages	\$9,400.00	\$9,400.00	Generation of tower, building, and ground drawing packages required for local permits. See Exhibit 14, items 3-D- 1.	\$7,050.00	N/A
Sub-total	\$1,225,765.00	\$228,355.00	N/A	\$160,576.87	N/A
Total for all systems	\$5,197,834.14	\$2,286,604.14	N/A	\$1,661,511.37	N/A

Components

Actual Information	
Description	File Name

Structural engineering

tower load study for well		
documented tower	Component Description:	Invoice is 25% Down Payment for \$115,297.75 ATC total estimated cost. (See Exhibit 3). This amount is 25% of Tower Mapping (Exhibit 3, 3-A-1) and Structural Engineering (Exhibit 3, 3-A-1).
	Amount:	\$1,108.75
	Component Description:	Invoice is 50% Down Payment for \$230,591.50 ATC total estimated cost. (See Exhibit 3). This amount is 25% of Tower Mapping (Exhibit 3, 3-A-1) and Structural Engineering (Exhibit 3, 3-A-1). \$2,217.50
Minor tower reinforcement /modifications	Component Description:	Invoice is 50% Down Payment for \$230,591.50 ATC total estimated cost. (See Exhibit 3). This amount is 50% of Tower Reinforcement,
	Amount:	Exhibit 3, 3-A-2. \$5,000.00

	Component Description:	Invoice is 25% Down Payment for \$115,297.75 ATC total estimated cost. (See Exhibit 3). This amount is 25% of Tower Reinforcement, Exhibit 3, 3-A-2. \$2,500.00
Complex Tower (includes, for example, those with candelabras and/or stacked antennas)	Component Description: Amount:	Invoice is 50% Down Payment for \$230,591.50 ATC total estimated cost. (See Exhibit 3). This amount is 50% of Rigging, Exhibit 3, 3-C-1. \$28,000.00
	Component Description:	Invoice is 25% Down Payment for \$115,297.75 ATC total estimated cost. (See Exhibit 3). This amount is 25% of Rigging, Exhibit 3, 3-C-1. \$14,000.00
Construction Management		

	Component Description	Invoice is 25%
	Component Description:	Down Payment for
		\$115,297.75 ATC
		total estimated
		cost. (See Exhibit
		 This amount is of Interim
		Tower Construction
		Project
		Management,
		Exhibit 3, 3-D-1.
	Amount:	\$750.00
	Component Description:	Invoice is 50%
		Down Payment for \$230,591.50 ATC
		total estimated
		cost. (See Exhibit
		3). This amount is
		50% of Interim
		Tower Construction Project
		Management,
		Exhibit 3, 3-D-1.
	Amount:	\$1,500.00
Tower Permit Packages		
	Component Description:	Invoice is 50%
		Down Payment for
		\$230,591.50 ATC
		total estimated
		cost. (See Exhibit 3). This amount is
		50% of Tower and
		Building Permits,
		Exhibit 3, 3-D-1
		(\$4,700 plus
	Amount:	\$4,700). \$4,700.00
		÷ 1,1 00100

	Component Description:	Invoice is 25% Down Payment for \$115,297.75 ATC total estimated cost. (See Exhibit 3). This amount is 25% of Tower and Building Permits, Exhibit 3, 3-D-1 (\$4,700 plus \$4,700). \$2,350.00
Install TX Line In TX Room	Component Description: Amount:	Install transmission line between transmitter and combiner. Please see Exhibit 46A. \$13,515.00
Structural engineering tower load study for well documented tower	Component Description:	This invoice is the Milestone 2 down payment for work done at the primary WSBK site. This item is mapping and structural engineering. See Exhibit 42 item 3-A- 1.
	Amount:	\$5,543.75

	Component Description:	This invoice is the Milestone 1 down payment for work done at the primary WSBK site. This item is mapping and structural engineering. See Exhibit 36A item 3- A-1. \$2,771.87
Minor tower reinforcement /modifications	Component Description:	This invoice is the Milestone 2 progress payment for work done at the primary WSBK site. This item is the primary tower reinforcement. See Exhibit 42 item 3-A- 2. \$12,500.00
	Component Description:	This invoice is the Milestone 1 down payment for work done at the primary WSBK site. This item is the primary tower reinforcement. See Exhibit 36A item 3- A-2. \$6,250.00
Complex Tower (includes, for example, those with candelabras and/or stacked antennas)		

	Component Description:	This invoice is the Milestone 2 progress payment for work done at the primary WSBK site. This item is the primary tower reinforcement. See Exhibit 42 item 3-C- 1. \$30,250.00
	Amount.	φ30,230.00
	Component Description:	This invoice is the Milestone 1 down payment for work done at the primary WSBK site. This item is the primary tower reinforcement. See Exhibit 36A item 3- C-1.
	Amount:	\$15,125.00
Construction Management		
	Component Description:	This invoice is the Milestone 2 progress payment for work done at the primary WSBK site. This item is the construction project management. See Exhibit 42 item 3-D- 1.
	Amount:	1. \$2,750.00

	Component Description:	This invoice is the Milestone 1 down payment for work done at the primary WSBK site. This item is the construction project management. See Exhibit 36A item 3- D-1. \$1,375.00
Site Coordination Meetings	Component Description:	This invoice is the Milestone 2 progress payment for work done at the primary WSBK site. This item is site coordination meetings. See Exhibit 42 item 1-A- 1. \$880.00
	Component Description:	This invoice is the Milestone 1 down payment for work done at the primary WSBK site. This item is site coordination meeetings. See Exhibit 36A item 1- A-1. \$440.00
Tower Permit Packages		

Component Description:	This invoice is the Milestone 2 progress payment for work done at the primary WSBK site. This item is the tower and building permit drawings. See Exhibit 42 item 3-D- 1.
Amount:	\$4,700.00
Component Description:	This invoice is the Milestone 1 down payment for work done at the primary WSBK site. This item is the tower and building permit drawings. See Exhibit 36A item 3- D-1.
Amount:	\$2,350.00

Outside Professional Services

Cost Information

			Estimated		
Description	Predetermined Cost Estimate	Estimated Cost	Cost Justification	Actual Cost	Actual Cost Justification
Outside Professional Services	\$70,485.00	\$91,460.00		\$34,432.50	
Site Coordination Meeting	\$2,000.00	\$2,000.00	Site coordination meetings with all broadcasters, contractors and vendors involved with the site deliveries and construction. This cost is for travel and logistics expenses accrued. (See Exhibit 14.)	N/A	N/A
Prepare engineering section of FCC Form 2100 (main), License to Cover Application	\$1,580.00	\$1,500.00	N/A	N/A	N/A
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	\$3,155.00	\$3,000.00	N/A	\$2,000.00	N/A

Perform engineering study for new channel assignment and antenna development	\$7,360.00	\$10,500.00	Perform engineering study for new channel assignment and antenna development. (See Exhibits 2 and 3.)	\$8,837.50	N/A
Address transition timing and coordination issues w/ other stations and wireless	\$2,630.00	\$4,500.00	Coordination and transition planning with all parties onsite. (See Exhibits 2 and 3)	\$3,375.00	N/A
Project management of the transition	\$39,500.00	\$56,460.00	Company lacks sufficient resources. Also includes American Tower project management. See Exhibits 2 and 3, 1-A- 1.	\$14,220.00	N/A
RF System Test	\$8,000.00	\$8,000.00	Testing of the combiner to ensure all frequencies are tuned for optimal patterns. (See Exhibits 2 and 3.)	\$6,000.00	N/A
Attorney Fees - Negotiation of lease and other matters for shared locations	\$4,210.00	\$4,000.00	N/A	N/A	N/A
Prepare request for	\$2,050.00	\$1,500.00	N/A	N/A	N/A

Special Temporary Authorization					
Sub-total	\$70,485.00	\$91,460.00	N/A	\$34,432.50	N/A
Total for all systems	\$5,197,834.14	\$2,286,604.14	N/A	\$1,661,511.37	N/A

Components

Actual Information Description	File Name				
Site Coordination Meeting	Information not provided.				
Prepare engineering section of FCC Form 2100 (main), License to Cover Application	Information not provided.				
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	Component Description: Amount:	Find "work around" to Canadian coordination. See Exhibit 13 for a revised invoice showing dates worked. \$550.00			
	Component Description: Amount:	Final interference study and CP Application - Engineering Section. \$1,450.00			
Perform engineering study for new channel assignment and antenna development	Component Description: Amount:	Preliminary Interference study of initial channel assignment. \$775.00			

Component Description:	This invoice is the Milestone 2 progress payment for work done at the primary WSBK site. This item is the primary antenna development. See Exhibit 42 item 1-A- 2.
Amount:	\$2,750.00
Component Description: Amount:	Prepare coverage map showing primary and interim antenna coverage options. \$187.50
Component Description:	Invoice is 50% Down Payment for \$230,591.50 ATC total estimated cost. (See Exhibit 3). This amount is 50% of Antenna Development Engineering, Exhibit 3, 1-A-2. \$2,500.00
Component Description:	Invoice is 25%
Amount:	Down Payment for \$115,297.75 ATC total estimated cost. (See Exhibit 3). This amount is 25% of Antenna Development Engineering, Exhibit 3, 1-A-2. \$1,250.00

	Component Description:	This invoice is the Milestone 1 down payment for work done at the primary WSBK site. This item is the primary antenna development. See Exhibit 36A item 1- A-2. \$1,375.00
Address transition timing and coordination issues w/ other stations and wireless	Component Description:	This invoice is the Milestone 1 down payment for work done at the primary WSBK site. This item is the project management for addressing transition timing. See Exhibit 36A item 1-A-1. \$500.00
	Component Description:	This invoice is the Milestone 2 progress payment for work done at the primary WSBK site. This item is the project management for addressing transition timing. See Exhibit 42 item 1-A-1. \$1,000.00

	Component Description:	Invoice is 50% Down Payment for \$230,591.50 ATC total estimated cost. (See Exhibit 3). This amount is 50% of Address Transition Timing, Exhibit 3, 1-A-1. \$1,250.00
	Component Description:	Invoice is 25% Down Payment for \$115,297.75 ATC total estimated cost. (See Exhibit 3). This amount is 25% of Address Transition Timing, Exhibit 3, 1-A-1. \$625.00
Project management of the transition	Component Description:	This invoice is the Milestone 2 progress payment for work done at the primary WSBK site. This item is the primary site project management. See Exhibit 42 item 1-A-
	Amount:	2. \$4,740.00

	Component Description:	This invoice is the Milestone 1 down payment for work done at the primary WSBK site. This item is the primary site project management. See Exhibit 36A item 1- A-2. \$2,370.00
	Anount	φ2,010.00
	Component Description:	Invoice is 25% Down Payment for \$115,297.75 ATC total estimated cost. (See Exhibit 3). This amount is 25% of Interim Site Project Management, Exhibit 3, 1-A-1. \$2,370.00
	Component Description:	Invoice is 50% Down Payment for \$230,591.50 ATC total estimated cost. (See Exhibit 3). This amount is 50% of Interim Site Project Management, Exhibit 3, 1-A-1. \$4,740.00
DE Suptom Tost		
RF System Test		

Component Description:	This invoice is the Milestone 2 progress payment for work done at the primary WSBK site. This item is the primary antenna RF System Test. See Exhibit 42 item 1-B- 1. \$2,750.00
Component Description:	Invoice is 25% Down Payment for \$115,297.75 ATC total estimated cost. (See Exhibit 3). This amount is 25% of RF System Test, Exhibit 3, 1- B-1. \$625.00
Component Description:	Invoice is 50% Down Payment for \$230,591.50 ATC total estimated cost. (See Exhibit 3). This amount is 50% of RF System Test, Exhibit 3, 1- B-1. \$1,250.00

	Component Description:	This invoice is the
		Milestone 1 down
		payment for work
		done at the
		primary WSBK
		site. This item is
		the primary
		antenna RF
		System Test. See
		Exhibit 36A item 1
		B-1.
	Amount:	\$1,375.00
Attorney Fees - Negotiation	Information not provided.	
of lease and other matters		
for shared locations		
Prepare request for Special	Information not provided.	
Temporary Authorization		

Other Expenses

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
Other Expenses	\$74,439.26	\$68,134.26		\$56,509.26	
Public Hearing	\$880.00	\$880.00	Public hearing cost (See Exhibits 2 and 14, line item 1-B-1.)	\$630.00	N/A
Ice Shield for HVAC	\$4,000.00	\$4,000.00	Ice protection for HVAC compressor split units placed in close proximity of tower in areas prone to ice and snow. See Exhibit 3.	\$3,000.00	N/A
Non-zoning permits	\$1,500.00	\$1,500.00	The cost of preparation and submission of the needed forms for permits required for electrical, building permits. (See Exhibits 2 and 3.)	\$1,125.00	N/A
FCC Filing Fees - Special Temporary Authorization request	\$195.00	\$190.00	N/A	N/A	N/A

DTV Medical Facility Notification	\$11,550.00	\$5,250.00	See Exhibit 5	N/A	N/A
Asbestos and Lead Paint Testing	\$1,800.00	\$1,800.00	Asbestos testing, removal and abatement for walls which could contain lead paint and /or the flooring may contain asbestos, because of the age of the facility and the era when the original construction took place. (See Exhibit 3.)	\$1,350.00	N/A
Site Security	\$3,600.00	\$3,600.00	Site security for installation and storage of Transmission line and materials for 30 days X 12 hours. These materials are a high risk of theft due to the material makeup such as copper, brass and aluminum. (See Exhibit 3.)	\$2,700.00	N/A
Site Coordination Meeting	\$1,760.00	\$1,760.00	Site coordination meetings with tower owner, all broadcasters,	N/A	N/A

			contractors and vendors involved with the site deliveries and construction. This cost is for travel and logistics expenses accrued. See Exhibit 2.		
MVPD Notification of Channel Change	\$1,000.00	\$1,000.00	N/A	N/A	N/A
Equipment Delivery and Handling Charges	\$30,254.26	\$30,254.26	This cost is for the material /equipment, delivery and offloading by transmitter manufacturer, and third party contractors. (See Exhibits 1, 2, 3, 7, 27, 28, 40A, and 41.)	\$30,254.26	asdf
Building Partition	\$1,800.00	\$1,800.00	This cost is to provide permitting for building partition and electrical service installation in the shared space. This install is to provide security for broadcasters and sufficient power for transmitters.	\$1,350.00	N/A

			See Exhibit 3.		
Deinstall Old Transmitter	\$16,100.00	\$16,100.00	Deinstall and remove old WSBK transmitter. See Exhibit 1 Item F.	\$16,100.00	N/A
Sub-total	\$74,439.26	\$68,134.26	N/A	\$56,509.26	N/A
Total for all systems	\$5,197,834.14	\$2,286,604.14	N/A	\$1,661,511.37	N/A

Components

Actual Information Description	File Name	
Public Hearing	Component Description:	This invoice is the Milestone 1 down payment for work done at the primary WSBK site. This item is the primary site public hearing. See Exhibit 36A item 1-B-1. \$110.00
	Component Description:	This invoice is the Milestone 2 progress payment for work done at the primary WSBK site. This item is the primary site public hearing. See Exhibit 42 item 1-B-1. \$220.00

	Component Description:	Invoice is 25% Down Payment for \$115,297.75 ATC total estimated cost. (See Exhibit 3). This amount is 25% of Public Hearing, Exhibit 3, 1-B-1. \$100.00
	Component Description:	Invoice is 50% Down Payment for \$230,591.50 ATC total estimated cost. (See Exhibit 3). This amount is 50% of Public Hearing, Exhibit 3, 1-B-1. \$200.00
Ice Shield for HVAC	Component Description:	Invoice is 25% Down Payment for \$115,297.75 ATC total estimated cost. (See Exhibit 3). This amount is 25% of HVAC Ice Shield, Exhibit 3, 3-C-6. \$1,000.00
	Component Description:	Invoice is 50% Down Payment for \$230,591.50 ATC total estimated cost. (See Exhibit 3). This amount is 50% of HVAC Ice Shield, Exhibit 3, 3-C-6. \$2,000.00

Component Description:	This invoice is the Milestone 1 down payment for work done at the primary WSBK site. This item is the primary building permits. See Exhibit 36A item 1-A-3. \$187.50
Component Description:	This invoice is the Milestone 2 progress payment for work done at the primary WSBK site. This item is the primary building permits. See Exhibit 42 item 1-A-3. \$375.00
Component Description:	Invoice is 25% Down Payment for \$115,297.75 ATC total estimated cost. (See Exhibit 3). This amount is 25% of Building Permits, Exhibit 3, 1-A-3. \$187.50

	Component Description:	Invoice is 50% Down Payment for \$230,591.50 ATC total estimated cost. (See Exhibit 3). This amount is 50% of Building Permits, Exhibit 3, 1-A-3. \$375.00
FCC Filing Fees - Special Temporary Authorization request	Information not provided.	
DTV Medical Facility Notification	Information not provided.	
Asbestos and Lead Paint Testing	Component Description:	Invoice is 25% Down Payment for \$115,297.75 ATC total estimated cost. (See Exhibit 3). This amount is 25% of Asbestos and Lead Paint Testing, Exhibit 3, 1-B-1. \$450.00
	Component Description:	Invoice is 50% Down Payment for \$230,591.50 ATC total estimated cost. (See Exhibit 3). This amount is 50% of Asbestos and Lead Paint Testing, Exhibit 3, 1-B-1. \$900.00
Site Security		

	Component Description:	Invoice is 50% Down Payment for \$230,591.50 ATC total estimated cost. (See Exhibit 3). This amount is 50% of Site Security, Exhibit 3, 1-B-1. \$1,800.00
	Component Description:	Invoice is 25% Down Payment for \$115,297.75 ATC total estimated cost. (See Exhibit 3). This amount is 25% of Site Security, Exhibit 3, 1-B-1. \$900.00
Site Coordination Meeting	Information not provided.	
MVPD Notification of Channel Change	Information not provided.	
Equipment Delivery and Handling Charges	Component Description:	Freight - Relocate Additional Interim Transmitter Components from storage to Interim Transmitter Site. Note: Form won't accept "&" in Vendor Name.
	Amount:	\$3,850.00

Component Description:	Invoice is installation, proof, freight, and parts for base portion of interim transmitter. This is transmitter freight. Please see Exhibit 40A. \$8,023.42
Component Description:	This invoice is the Milestone 2 progress payment for work done at the primary WSBK site. This item is the primary tower equipment and delivery. See Exhibit 42 item 1- A-4.
Amount:	\$2,750.00
Component Description:	Invoice is 25% Down Payment for \$115,297.75 ATC total estimated cost. (See Exhibit 3). This amount is 25% of Tower Equipment and Delivery Costs, Exhibit 3, 1-A-4. \$750.00

Component Description:	Invoice is 50% Down Payment for \$230,591.50 ATC total estimated cost. (See Exhibit 3). This amount is 50% of Tower Equipment and Delivery Costs, Exhibit 3, 1-A-4. \$1,500.00
Component Description: Amount:	Freight for interim transmitter upsize. See explanation and quote /statement in Exhibit 41. \$5,159.58
Component Description:	Freight - Relocate Interim Transmitter from storage to Interim Transmitter Site. Note: Form won't accept "&" in Vendor Name. \$1,050.00
Component Description:	Primary Transmitter Payment Four. This cost is for transmitter freight. Please see Exhibit 40. \$8,023.42

	Component Description:	This invoice is the Milestone 1 down payment for work done at the primary WSBK site. This item is the primary tower equipment and delivery. See Exhibit 36A item 1- A-4. \$1,375.00
	Component Description: Amount:	Invoice is for Primary TX Install, Proof, Freight, and Old TX Removal. This cost is for New TX Freight. \$5,796.26
Building Partition	Component Description:	Invoice is 50% Down Payment for \$230,591.50 ATC total estimated cost. (See Exhibit 3). This amount is 50% of Building Addition, Exhibit 3, 3-C-3. \$900.00
	Component Description:	Invoice is 25% Down Payment for \$115,297.75 ATC total estimated cost. (See Exhibit 3). This amount is 25% of Building Addition, Exhibit 3, 3-C-3. \$450.00

Deinstall Old Transmitter		
	Component Description:	Invoice is for
		Primary TX Install,
		Proof, Freight, and
		Old TX Removal.
		This cost is for Old
		TX Removal.
	Amount:	\$16,100.00

Cost	Grand Total			
Information		Predetermined Cost Estimate	Estimated Cost	Actual Cost
	Total for all systems	\$5,197,834.14	\$2,286,604.14	\$1,661,511.37

Reimbursem	entestiatus	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

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 912(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. 	
		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).

- 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.
- 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. Andrew J I declare, under penalty of perjury, that I am an authorized representative of the above-Siegel named applicant for the Authorization(s) Assistant specified above. Secretary 10/19/2020

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). 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. 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.
- 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 above- named applicant for the Authorization(s) specified above.	Andrew J Siegel Assistant Secretary 10/19/2020

Attachments