

(REFERENCE COPY - Not for submission)

FCC Form 399: Reimbursement Request

Facility 74176 Service: DTV Call WVVA Channel: 17 (UHF)

ID:

Sign:

File **0000027484**

Number:

FRN: **0018223693** Date **12/19**

Submitted: /2019

Applicant Information

Applicant Name, Type, and Contact Information

Applicant	Address	Phone	Email	Applicant Type
WVVA LICENSE, LLC Doing Business As: WVVA LICENSE, LLC	P.O. BOX 909 QUINCY, IL 62306 United States	+1 (217) 223-5100	bdreasler@quincyinc. 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
Tony zumMallen QCommunications, LLC	Tony zumMallen 705B SE Melody LN #314 Lees Summit, MO 64063 United States	+1 (816) 729- 1177	tony@qcom1. com

Broadcaster Information and Transition Plan

Question	Response
Will the station be sharing equipment with another broadcast television station or stations (e.g., a shared antenna, co-location on a tower, use of the same transmitter room, multiple transmitters feeding a combiner, etc.)? If yes, enter the facility ID's of the other stations and click 'prefill' to download those stations' licensing information.	No
Briefly describe transition plan	Transition from ch 46 to ch 17 and will need an antenna, transmitter and associated gear and systems. The station will need an interim transmitter and antenna system to provide continuous service during the transition.

Transmitters

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

Primary Transmitter

Existing Transmitter Information

Section	Question	Response
Existing Transmitter Description	Type of change	Purchase New
	Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is this transmitter currently shared with another station?	No
	Is this transmitter currently in operating condition?	Yes
Existing Transmitter	Manufacturer	
Manufacturer and Type	Model	Power CD
	Year	2006
	Туре	Inductive Output Tube
	IOT Power Type	Two
	Power Capacity	60 kW

Primary Transmitter

New Transmitter Costs

Section	Question	Response
New Transmitter	Use	Primary (Main)
	Change Type	Purchase New
	Is this a request for upgraded equipment?	Yes
	Manufacturer	
	Model	ULXTE-72
	Transmitter Type	Solid State
	Solid State Cooling	Liquid Cooled
	Solid State Power capacity	47.2 kW
	Justification for New Transmitter	IOT transmitter is not tunable per the manufacturer.

Primary Transmitter

Other Transmitter Costs

Section	Question	Response
Electrical Service	Service Entrance (3 phases 800A 208V)	Yes
	Switchgear (industrial 800 amp)	Yes
	Transformer (480V)	Yes
	Power	300 kVA
	Rigid Conduit and Wiring	Yes
	Size	2 inches
	Length	400.0 feet
	Other Electrical Service	No
	Description	N/A

Does the replacement transmitter require HVAC Service?	Yes
Туре	Cooling Only
Size	25 tons
Other Size	N/A
Does the Transmitter Building require an addition, modification, other leashold improvement?	No
Size	N/A
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
	Type Size Other Size Does the Transmitter Building require an addition, modification, other leashold improvement? Size Is an RF Consulting Engineer needed? Is a channel 14 Mask Filer needed? Is additional field engineering time needed?

Primary Transmitter

Other Transmitter Cost Not Listed

Name	Description
Disconnect existing Transmitter	Disconnect transmitter and components from existing configuration and move within building to make way for new facilities.
Securirty - Site	This site requires security once the new transmission line and equipment arrive on site to be installed. Estimated length of 4-6 weeks.
Transmitter - Training	Transmitter training - offsite - 1 week in duration at mfg site.
Sales Tax Equipment-Main TX	Sales tax for equipment- Main transmitter- per quote
Site Survey - TX	Site survey and report are required to be performed before the new transmitter and components installation plan can be finalized.

Interim Transmitter

New Transmitter Costs

Section	Question	Response
New Transmitter	Use	Interim
	Description of Use	N/A
	Change Type	Purchase
	Manufacturer	
	Model	ULXTE-30
	Transmitter Type	Solid State
	Solid State Cooling	Air Cooled
	Solid State Power capacity	19.2 kW
	Justification for New Transmitter	Interim facility is required to avoid station silence during transition, no aux facility to use for interim operation. Extended silent period during transition to new channel is unreasonable. 10-5-18 - AMENDED 399 TO REFLECT TX CHANGE DUE TO ENGR MOD.

Interim Transmitter

Other Transmitter Costs

Section Question	Response
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Electrical Service	Service Entrance (3 phases 800A 208V)	No
	Switchgear (industrial 800 amp)	Yes
	Transformer (480V)	No
	Power	N/A
	Rigid Conduit and Wiring	Yes
	Size	2 inches
	Length	400.0 feet
	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
Inside RF System	Is an additional interior RF system required to support this interim transmitter?	Yes

Interim Transmitter

Other Transmitter Cost Not Listed

Name	Description	
Sales Tax-EQ	Est sales tax for equipment per quote	

Antennas

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

Existing Antenna Information

Section	Question	Response
Existing Antenna Description	Type of change	Purchase New
	Antenna Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is the existing antenna shared with another station or stations?	No
	Is the existing antenna directional?	No
	Is antenna in operating condition?	Yes
	Is antenna located on or in close proximity to an antenna farm?	No
Existing Antenna	Class	Full Power
Manufacturer and Type	Mounting	Top Mount
	Antenna position in stack	Not in Stack
	Polarization	Horizontal
	Туре	Other
	Number of Stations Supported	N/A
	Number of Panels	N/A
	Design power capacity in use	N/A
	Lower Limit	N/A
	Upper Limit	N/A
	Other Antenna Type	Omni- Directional
	ERP: (Effective Radiated Power)	1000.0 kW

Manufacturer	
Model	TFU-24JTH- R-04
Year	2006

New Antenna Costs

Section	Question	Response
New Antenna Description	Use	Primary (Main)
	Description of Use	N/A
	Change Type	Purchase New
	Is this a request for upgraded equipment?	Yes
	Ownership	Owned
	Owner	N/A
	Is antenna shared?	No
	Is antenna directional?	No
	Will antenna be located on or in close proximity to an antenna farm?	No
New Antenna	Class	Full Power
Manufacturer and Types	Mounting	Top Mount
	Antenna position in stack	Not in Stack
	Polarization	Elliptical
	Туре	Broadband Slot
	Number of Stations Supported	1
	Number of Panels/Bays	18
	Lower Limit	470.00 MHz
	Upper Limit	698.00 MHz
	Design power capacity in use	100.0 %
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power)	545.0 kW
	Manufacturer	

Model	TFU18-JTT /VP-R04
Year	2017
Justification for New Antenna	Existing antenna is not tunable to new channel assignment. Adding Vertical component to Primary antenna and do not know of any upgraded pricing as of time of filing.

Other Antenna Costs

Section	Question	Response
Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	No
	Туре	
	Number of channels supported	N/A
	Frequencies of channels supported	N/A
	Frequency	N/A
	Do you need a combiner output splitter /switcher for dual feed lines?	N/A
Elbow Complex	Do you require the separate purchase of the Elbow Complex?	Yes
	Broadband or Single Channel?	Broadband
	Feed Line Size	6 1/8 inches inches

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

Other Antenna Cost Not Listed

Information not provided.

Interim Antenna

New Antenna Costs

Section	Question	Response
New Antenna Description	Use	Interim
	Description of Use	N/A
	Change Type	Purchase New
	Ownership	Owned
	Owner	N/A
	Is antenna shared?	No
	Is antenna directional?	Yes
	Will antenna be located on or in close proximity to an antenna farm?	No
New Antenna	Class	Full Power
Manufacturer and Type	Mounting	Side Mount
	Antenna position in stack	Not in Stack
	Polarization	Horizontal
	Туре	Broadband Slot
	Number of Stations Supported	1
	Number of Panels/Bays	8
	Lower Limit	470.00 MHz
	Upper Limit	698.00 MHz
	Design power capacity in use	100.0 %
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power)	300.0 kW
	Manufacturer	
	Model	TFU-8WB-R
	Year	2017

Justification for New Antenna	Interim
	facility is
	required to
	avoid
	prolonged
	_
	period of
	station
	silence
	during
	transition,
	and station
	currently has
	no aux
	facility to use
	for interim
	operation.
	Extended
	silent period
	during
	transition to
	new channel
	is
	unreasonable.
	annousenable.

Interim Antenna

Other Antenna Costs

Section	Question	Response
Elbow Complex	Do you require the separate purchase of the Elbow Complex?	Yes
	Broadband or Single Channel?	В
	Feed Line Size	4 1/16 inches
Side Mount Brackets	Do you require the separate purchase of side mount brackets for an antenna?	Yes
Pattern Scatter Analysis	Do you require separate purchase of pattern scatter analysis for a side mount high or medium power antenna?	Yes
Sweep Test	Do you require the sweep testing of transmission line and antenna?	Yes

Interim Antenna

Other Antenna Cost Not Listed

Name	Description
FREIGHT-MFG EQ	FREIGHT FROM MFG TO STAGING

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

Primary Transmission Line

Existing Transmission Line

n Line Section	Question	Response
Existing Transmission Line Description	Type of change	Purchase New
	Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is the existing transmission line shared with another station or stations?	No
	Is Transmission Line in operating condition?	Yes
Existing Transmission	Manufacturer	
Line Manufacturer and Type	Туре	Rigid
	Diameter	6 1/8 inches
	Other Diameter	N/A
	Segment Length	19 1/2 inches
	Other Segment Length	N/A
	Number of parallel runs	1
	Length	176 feet per run

Primary Transmission_s

New Transmission Line

Section	Question	Response
New Transmission Line Costs	Use	Primary (Main)
	Description of Use	N/A
	Change Type	Purchase New
	Is this a request for upgraded equipment?	No
	Туре	Rigid
	Diameter	6 1/8 inches
	Other Diameter	N/A
	Segment Length	19 1/2 inches
	Other Segment Length	N/A
	Number of parallel runs	1
	Length	176 feet per run
	Justification for New Transmission Line	Existing line will not operate on new channel assignment per Dielectric sweep test.

Primary

Other Transmission Line Expenses Not Listed

Transmission	Name	Description
	Disconnect existing Interior RF components	Disconnect interior RF transmission line and filters from existing configuration and move within the building to make way for new facilities.

New Transmission Line

Interim Transmission

n Line Section	Question	Response
New Transmission Line Costs	Use	Interim
	Description of Use	N/A
	Change Type	Purchase New
	Туре	Flexible Air
	Diameter	4 inches
	Segment Length	N/A
	Other Segment Length	
	Number of parallel runs	1
	Length	200 feet per run
	Justification for New Transmission Line	Interim facility is required to avoid prolonged period of station silence during transition, and station currently has no aux facility to use for interim operation. Extended silent period during transition to new channel is unreasonable.

Other Transmission Line Expenses Not Listed

Transmission loine tion not provided.

Tower Equipment And Rigging Costs

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

Primary Tower

Existing Tower

Section	Question	Response
Existing Tower Description	Type of change	Modify Existing
	Tower Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Is this tower consider Complex?	Terrain Constrained
	Is this tower currently shared with any other stations?	No
	One or more FM, AM or TV radio broadcaster(s)	N/A
	Others Types of Users	N/A
	Is tower documented for structural analysis?	Yes
	Is tower compliant with Rev G?	Unknown
Existing Tower Structure	Do you have a tower registration number?	Yes
Registration	ASR Number	1254053
Coordinates (NAD83 (North American Datum of	Latitude (NAD83)	37° 15' 21.1" N-
1983))	Longitude (NAD83)	081° 10' 53.3" W-
	Overall Structure Height	166.66 feet
	Support Structure Height	124.34 feet

Ground Elevation Above Mean Sea Level (AMSL)	3669.25 feet
Structure Type	TOWER - Free Standing or Guyed Structure
Tower Owner	WVVA Television, Inc.
Date Constructed	09/18/2006

Primary Tower

Tower Modification Costs

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

Primary Tower

Tower Rigging Costs

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

Primary Tower

Other Tower Expenses Not Listed

Information not provided.

Outside Professional

Section	Question	Response
Services Costs Outside Project Management Services	Do you require outside project management services?	Yes
	Number of Hours	934
	Explanation	Scope & significance of project (QMI has multiple stations repacked) require outside management services to augment existing internal personnel to assist turnkey management of and ensure timely and safe execution of channel relocation.
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	4
	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	No
	For Main Facility	Yes
	Prepare and file Form FCC License to Cover Application	Yes
	For Auxiliary Facility	No
	For Main Facility	Yes
	Prepare request for Special Temporary Authority	Yes
	Quantity	4
	NEPA Section 106 environmental review	No
	Environmental Assessment	No
	ASR Modification	No
	FAA Consultation (including preparation of FAA Form 7460)	No
	Negotiation of Lease and other Matter for Shared Locations	No
	Prepare or Review FCC Form 399 for Reimbursement	Yes
	Address transition timing and coordination issues w/ other stations and wireless providers	Yes
RF Field Engineering Services	Comprehensive coverage verification via field study	Yes

RF exposure measurements	No
Additional Field Engineering Service	No
Number of Days	N/A
Justification	N/A

Outside Professional

Other Professional Services Expenses Not Listed

Services Costs	Description
Quarterly reporting	Preparation and submittal of the FCC required quarterly report 387 by PM and attorney.
General Repack Legal Services	See atached Memo - QMI INIvoice Memo for Shared Legal Expenses (Matter 104411 00054) for Form 399
Vendor Travel expenses	Vendor Travel expenses for working in the field on behalf of the station for the Repack project

Other Expenses

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

Other Expenses Not Listed

Expenses Information not provided.

Cost Information

Transmitters

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

	Predetermined	Estimated	Estimated Cost		Actual Cost
Interim Transmitter ULXTE-30	\$1,209,017.76	\$1,060,074.90	Justification	\$442,095.75	Justification
Sales Tax- EQ	\$35,824.70	\$35,824.70	Sales tax- INTERIM TX per Gates Q- 73720	\$11,941.38	N/A
UHF inside RF system including switching	\$147,500.00	\$140,000.00	N/A	N/A	N/A
2" Rigid Conduit and Wiring (Cost per foot)	\$10,400.00	\$10,000.00	N/A	\$0.00	N/A
Switchgear - industrial 800 amp	\$38,200.00	\$36,300.00	N/A	\$35,440.09	N/A
UHF - Air Cooled Solid State Transmitter 19.2 kW	\$640,593.06	\$640,593.06	This is to amend the 399 Interim TX to more closely replicate the existing station contour during the interim operations that was paid on 3-28-18.	\$197,357.14	N/A

UHF - Air Cooled Solid State Transmitter 10 - 12 kW	\$336,500.00	\$197,357.14	***System Notice: Estimate adjusted and locked because line has been superseded. ***	\$197,357.14	N/A
Primary Transmitter ULXTE-72	\$1,809,088.75	\$1,749,431.03		\$1,398,807.29	
Transformer 3 phase /480v - 300 KVA	\$36,800.00	\$35,000.00	N/A	\$11,644.49	N/A
Service entrance 3 phase/800 amp/208 volt	\$14,400.00	\$13,700.00	N/A	N/A	N/A
UHF - Liquid Cooled Solid State Transmitter 35 - 50 kW	\$1,473,000.00	\$1,402,246.71	Actual costs per invoices from GatesAir	\$1,290,137.65	N/A
2" Rigid Conduit and Wiring (Cost per foot)	\$10,400.00	\$10,000.00	N/A	N/A	N/A
25 Ton	\$91,500.00	\$87,000.00	N/A	N/A	N/A

Disconnect existing Transmitter	\$20,000.00	\$20,000.00	Disconnect transmitter and components from existing configuration and move within building to make way for new facilities.	N/A	N/A
Securirty - Site	\$17,500.00	\$17,500.00	This site requires security once the new transmission line and equipment arrive on site to be installed. Estimated length of 4-6 weeks.	N/A	N/A
Transmitter - Training	\$3,300.00	\$3,300.00	Transmitter training - offsite - 1 week in duration at mfg site.	N/A	N/A
Sales Tax Equipment- Main TX	\$78,988.75	\$78,988.75	est sales tax for main tx equipment per quote Q- 73721	\$26,329.58	N/A

Total for all systems	\$4,873,783.01	\$4,108,765.93	N/A	\$2,305,762.74	N/A
Sub-total	\$3,018,106.51	\$2,809,505.93	N/A	\$1,840,903.04	N/A
			\$12,055		
			totaling		
			20924		
			84797 PO		
			20818; Q-		
			83542 PO		
			20742; Q-		
			82564 PO		
			20727; Q-		
			82352 PO		
			change orders: Q-		
			added		
			\$44,640.57, PLUS the		
800 amp					
			#73721, Line C totals		
Switchgear - industrial	\$38,200.00	\$56,695.57	Per Quote	\$56,695.57	N/A
			finalized.		
			plan can be		
			installation		
			components		
			and		
			transmitter		
			new		
			before the		
			performed		
			to be		
17			are required		
- TX	\$25,000.00	\$25,000.00	Site survey and report	\$14,000.00	

Components

Actual Information	
Description	File Name

Sales Tax-EQ		
	Component Description:	WVVA- GATES-
		INTERIM-SALES TAX-INV
		GO10004797-1
	Amount:	\$11,941.38
UHF inside RF system including switching	Information not provided.	
2" Rigid Conduit and Wiring (Cost per foot)	Information not provided.	
Switchgear - industrial 800		
amp	Component Description:	Interim Switch and
		Load addition per
		Quote Q-80535.
		Includes freight of
	Amount:	\$878.03
	Amount:	\$32,108.43
	Component Description:	WVVA-GATES-
		INTERIM ELEC-
		INV GO10004797-
		1 LINE C.
	Amount:	\$1,665.83
	Component Description:	WVVA-GATES
		INT 2ND INV
		GO10004797-2
		ULXTE-30 LINE C
	Amount:	\$1,665.83
UHF - Air Cooled Solid		
State Transmitter 19.2 kW	Component Description:	WVVA-GATES-
		INV 2ND INV
		GO10004797-2
		LINES A B AND
		D- q-73720

JHF - Air Cooled Solid State Transmitter 10 - 12 kW	Component Description: Amount:	WVVA-GATES- INTERIM TX INV- GO10004797-1 LINES A,B AND D. \$197,357.14
	Amount.	Ψ107,007.14
Transformer 3 phase/480v - 300 KVA	Component Description:	WVVA - Gates Air
	Component Description.	- Electrical - INV US0322512 Line D - PO 20027 Q-
		73721
	Amount:	\$3,881.49
	Component Description:	WVVA-Gates-
		Main-Elec- INV GO10004796-1,
	Amount:	LINE D \$3,881.50
	Component Description:	WVVA GATES
		MAIN 2ND INV GO10004796-2-
	Amount:	LINE D \$3,881.50
Service entrance 3 phase /800 amp/208 volt	Information not provided.	

UHF - Liquid Cooled Solid		
State Transmitter 35 - 50 kW	Component Description:	Gates Air INV #3 -
		US0322512 Llne
		items A and B;
		change order Q-
		77979, PO 20339
	Amount:	\$327,750.35
	Component Description	WVVA-Gates-
	Component Description:	MAIN-TX - INV
		GO10004796-1
		LINE- A, B and E
	Amount:	\$420,064.70
		V
	Component Description:	WVVA-GATES
		MAIN- 2ND INV
		GO10004796-2 -
		LINE A B E AND
		CHANGE ORDER
		TO MASK Q-77979
	Amount:	\$436,245.43
	Component Description:	WVVA - Gates -
	Component Description.	Main TX - INV
		US0331604 - PO
		20027 Q-73721
		Lines A and E.
		Plus Freight
		\$13762.82
	Amount:	\$106,077.17
2" Rigid Conduit and Wiring (Cost per foot)	Information not provided.	
25 Ton system	Information not provided.	
Disconnect existing Transmitter	Information not provided.	
Securirty - Site	Information not provided.	
Transmitter - Training	Information not provided.	
	l .	

Sales Tax Equipment-Main TX		140.074.0
	Component Description:	WVVA-Gates-
		Main-tx-sales-tax-
	Amazzata	GO10004796-1
	Amount:	\$26,329.58
Site Survey - TX		
	Component Description:	WVVA-SURVEY-
		INV-QC18-031
	Amount:	\$14,000.00
Switchgear - industrial 800		
amp	Component Description:	WVVA - Gates Air
		- RF Accessories -
		INV US0322512
		Line C - 3rd
		invoice - PO
		20027 - Q-73721
	Amount:	\$14,880.19
	Component Description:	WVVA change
		orders: Q-82352
		PO 20727; Q-
		82564 PO 20742;
		Q-83542 PO
		20818; Q-84797
		PO 20924
	Amount:	\$12,055.00
	Component Deceriations	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
	Component Description:	WVVA-Gates- Main-RF-INV
		GO10004796-1, LINE C
	Amount:	\$14,880.19
	Amount.	φ1 4 ,000.19
	Component Description:	WVVA GATES
	Joinpondin Boddiption.	2ND INV
		GO10004796-2
		LINE C

Antennas

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Interim Antenna TFU-8WB-R	\$616,817.50	\$90,952.50		\$47,152.50	
FREIGHT- MFG EQ	\$2,227.50	\$2,227.50	FREIGHT EQ MFG TO STAGING PER INVOICE-93049	\$2,227.50	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	N/A	N/A	N/A
Side mount brackets for high power antennas (if not included in antenna base cost)	\$23,150.00	\$22,000.00	N/A	N/A	N/A
Elbow complex, broadband, at antenna input, per 4 1/16. feedline (if needed)	\$10,950.00	\$10,400.00	N/A	N/A	N/A

Primary Antenna TFU18-JTT VP-R04	\$205,690.00	\$204,400.00		\$74,392.88	
UHF - Lower Power Side Mount, One station - 200-500 kW, horizontally polarized	\$189,500.00	\$20,216.25	***System Notice: Estimate adjusted and locked because line has been superseded.***	\$20,216.25	N/A
UHF - Lower Power Side Mount, One station - 200-500 kW, horizontally polarized	\$189,500.00	\$20,216.25	***System Notice: Estimate adjusted and locked because line has been superseded.***	\$20,216.25	N/A
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	\$0.00	N/A
Lower Power Side Mount, One station - 200-500 kW, horizontally polarized			Notice: Estimate adjusted and locked because line has been superseded. ***TOOL ERASED EST PRICE AND ALL PREVIOUS TRANSACTION FOR THE INTERIM ANTENNA		

Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	\$2,880.00	N/A
UHF - High Power Top Mount One Station antenna elliptically or circularly polarized	\$180,000.00	\$180,000.00	per Catalog of costs for replacement antenna. 399 tool did not populate a standard predetermined cost. Not sure why this is a standardized antenna replacement. Lowered to the Catalog min \$180,000	\$66,126.38	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	N/A	N/A	N/A
Elbow complex, broadband, at antenna input, per 6 1/8. feedline (if needed)	\$13,700.00	\$13,000.00	N/A	\$5,386.50	Per Changorders Q 82352, PC 20727 and 83542, PC 20924. Amount is substituting below the predetermination of \$13,700
Sub-total	\$822,507.50	\$295,352.50	N/A	\$121,545.38	N/A
Total for all systems	\$4,873,783.01	\$4,108,765.93	N/A	\$2,305,762.74	N/A

Components

Actual Information Description	File Name	
FREIGHT-MFG EQ		
	Component Description: Amount:	WVVA-DIE-ANT-INTERIM-SALES TAX- PER INV- 93049 LINE 19 - ADDED ORDER CONF 488001 \$2,227.50
Pattern scatter analysis for side mount high/med power antennas (if not included in antenna base cost)	Information not provided.	
Side mount brackets for high power antennas (if not included in antenna base cost)	Information not provided.	
Elbow complex, broadband, at antenna input, per 4 1/16. feedline (if needed)	Information not provided.	
UHF - Lower Power Side Mount, One station - 200-500 kW, horizontally polarized	Component Description:	WVVA-DIE-ANT- INV 93049 LINE 1
	Amount:	\$4,492.50
Sweep test of existing antenna	Information not provided.	
UHF - Lower Power Side Mount, One station - 200-500 kW, horizontally polarized	Component Description: Amount:	INTERIM ANT- LINE1 WVVA \$20,216.25

Mount, One station - 200-500 kW, horizontally polarized	Component Description:	WVVA-INTERIM ANT line 1- 2nd
	Amount:	45 percent inv \$20,216.25
Sweep test of existing antenna		
antenna	Component Description:	SWEEP MAIN ANT DEPOSIT INV 10
	Amount:	PERCENT WVVA \$640.00
	Component Description:	SWEEP MAIN
		ANTENNA DEPOSIT INV WVVA
	Amount:	\$2,240.00
UHF - High Power Top Mount One Station antenna	Component Description:	MAIN ANT
elliptically or circularly polarized	Component Description.	DEPOSIT 35 PERCENT INV WVVA
	Amount:	\$51,431.63
	Component Description:	MAIN ANTENNA DEPOSIT INV 10 PERCENT WVVA
	Amount:	\$14,694.75
Pattern scatter analysis for side mount high/med power antennas (if not included in antenna base cost)	Information not provided.	

Elbow complex, broadband, at antenna input, per 6 1/8. feedline (if needed)

Component Description: ELBOW -

DEPOSIT 10

PERCENT WVVA

Amount: \$1,197.00

Component Description: ELBOW MAIN

DEPOSIT INV 35

PERCENT WVVA

Amount: \$4,189.50

Transmission Line

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Interim Transmission Line	\$14,800.00	\$14,000.00		\$11,171.50	
Flexible Air Transmission Line - dielectric, 4"	\$14,800.00	\$14,000.00	N/A	\$11,171.50	N/A
Primary Transmission Line	\$48,052.00	\$65,577.50		\$5,307.75	
Rigid Transmission Line - copper, 6 1/8"	\$35,552.00	\$53,077.50	Actual costs per invoices.	\$5,307.75	N/A
Disconnect existing Interior RF components	\$12,500.00	\$12,500.00	Disconnect interior RF transmission line and filters from existing configuration and move within the building to make way for new facilities.	N/A	N/A
Sub-total	\$62,852.00	\$79,577.50	N/A	\$16,479.25	N/A
Total for all systems	\$4,873,783.01	\$4,108,765.93	N/A	\$2,305,762.74	N/A

Components

Actual Information		
Description	File Name	

Flexible Air Transmission
Line - dielectric, 4"

Component Description: INTERIM LINE

INV 45 PERCENT-

LINES 2 AND 18

Amount: \$5,027.18

Component Description: WVVA DIE-LINE-

EQ-INV 93049 LINES 2 AND 18-FINAL. TOOL ZEROED OUT INTERIM ANT

Amount: \$1,117.14

Component Description: WVVA- INTERIM

LINE - 2nd 45 percent inv- lines

2 and 18

Amount: \$5,027.18

Rigid Transmission Line -		
copper, 6 1/8"	Component Description:	MAN00091 Line
		#4: this request is
		for 35% of the
		main tx copper
		line. The first 10%
		already reimbursed under
		INV MAN00086.
	Amount:	\$18,577.13
	Component Description:	MAIN LINE -
		DEPOSIT 10
		PERCENT INV
		WVVA
	Amount:	\$5,307.75
	Component Description:	MAIN LINE
		DEPOSIT 35
		PERCENT INV
		WVVA
	Amount:	\$18,577.13
Disconnect existing Interior RF components	Information not provided.	

Tower Equipment and Rigging Costs

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Primary Tower TOWER	\$591,600.00	\$562,000.00		\$218,580.00	
Complex Tower (includes, for example, those with candelabras and/or stacked antennas)	\$421,000.00	\$400,000.00	N/A	\$213,660.00	N/A
Structural engineering tower load study for well documented tower	\$12,600.00	\$12,000.00	N/A	\$4,920.00	N/A
Minor tower reinforcement /modifications	\$158,000.00	\$150,000.00	N/A	N/A	N/A
Sub-total	\$591,600.00	\$562,000.00	N/A	\$218,580.00	N/A
Total for all systems	\$4,873,783.01	\$4,108,765.93	N/A	\$2,305,762.74	N/A

Components

Actual Information		
Description	File Name	

for example, those with		44.5-45
candelabras and/or stacked	Component Description:	11-27-19 WVVA - PCI - Main Install
antennas)		- INV 7729 -
		Proposal 19358-
		5A - See cover
		sheet for PO
		breakdown.
	Amount:	\$58,440.00
	Component Description	PCI - Interim
	Component Description:	Installation - INV
		7728 - Proposal #
		19356-5A - see
		cover sheet for
		PO breakdown.
	Amount:	\$25,835.00
	Component Description:	11-27-19 - WVVA
		- PCI - Tower
		Mods - INV 7727 -
		Proposal 19355- 5A. See cover
		sheet for PO
		breakdown.
	Amount:	\$129,385.00
Structural engineering tower		
load study for well documented tower	Component Description:	WVVA- TOWER
accumented tower		MAP - FORD INV
		206593
	Amount:	\$3,120.00
	Component Description:	WVVA-PJFORD
	,	ANALYSIS- INV
		206072
	Amount:	\$1,800.00

Outside Professional Services

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Co
Outside Professional Services	\$318,637.00	\$302,815.00		\$108,255.07	
Vendor Travel expenses	\$21,965.00	\$21,965.00	Reimbursable Vendor Travel expenses for working in the field on behalf of the station for the Repack project - see quote for estimated expenses. QC- 17010	\$7,689.41	N/A
General Repack Legal Services	\$10,000.00	\$10,000.00	See attached memo-QMI Repack Invoice Memo for Shared Legal Expenses (Matter 10441100054) for Form 399-	\$2,741.66	N/A
Quarterly reporting	\$7,000.00	\$7,000.00	Preparation and submittal of the FCC required quarterly report 387 by PM and attorney.	N/A	N/A

Comprehensive coverage verification via field study, if needed	\$84,200.00	\$80,000.00	N/A	N/A	N/A
Attorney Fees - Prepare and File request for Special Temporary Authorization	\$14,720.00	\$14,000.00	N/A	N/A	N/A
Attorney Fees - Prepare and File FCC Form 2100 (main), License to Cover Application	\$2,365.00	\$2,250.00	N/A	N/A	N/A
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	\$5,260.00	\$5,000.00	N/A	\$3,519.00	N/A
Prepare request for Special Temporary Authorization	\$8,200.00	\$6,000.00	N/A	N/A	N/A
Prepare engineering section of FCC Form 2100 (main), License to Cover Application	\$1,580.00	\$1,500.00	N/A	N/A	N/A
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	\$3,155.00	\$3,000.00	N/A	\$0.00	N/A

Perform engineering study for new channel assignment and antenna development	\$7,360.00	\$7,000.00	N/A	\$0.00	N/A
Address transition timing and coordination issues w/ other stations and wireless	\$2,630.00	\$2,500.00	N/A	N/A	N/A
Project management of the transition	\$147,572.00	\$140,100.00	N/A	\$94,305.00	N/A
Prepare and or review reimbursement form	\$2,630.00	\$2,500.00	N/A	N/A	N/A
Sub-total	\$318,637.00	\$302,815.00	N/A	\$108,255.07	N/A
Total for all systems	\$4,873,783.01	\$4,108,765.93	N/A	\$2,305,762.74	N/A

Components

Actual Information Description	File Name	
Vendor Travel expenses		
	Component Description:	WVVA - QCOMM - PM TRVL- JAN- JUN 19 - INV QC19- 063
	Amount:	\$6,240.00
	Component Description:	WVVA- PM-Travel exp -ltems- 1010,1014,1015 -
	Amount:	INV QC17-148 \$1,449.41

General Repack Legal Services

Component Description: WVVA-BROOKS-

OCT-19-

INV3959632

Amount: \$198.00

Component Description: WVVA Repack

Legal Services for period ending April 30, 2019. INV

3966163

Amount: \$156.00

Component Description: Brooks General

Repack Legal Services period ending June 30, 2017. \$266.45 is WVVA portion of total invoice.

Amount: \$266.45

Component Description: Brooks General

Repack Legal services for period ending May 31, 2017. \$190.85 is WVVA portion of total invoice.

Amount: \$190.85

Component Description: Brooks General

Repack legal services for period ending March 31, 2018. \$28.28 is WVVA portion of total invoice.

Amount: \$28.28

Component Description: Brooks General

Repack legal services for period ending December

31, 2017. \$40.28 is WVVA portion of total invoice

Amount: \$40.28

Component Description: Brooks- General

Repack Legal Services for period ending July 31, 2017. \$275.00 is WVVA portion of total invoice amount.

Amount: \$275.00

Component Description: Brooks General

Repack legal

services for period ending February 28, 2018. \$28.28 is WVVA portion of total invoice.

Amount: \$28.28

Component Description: Brooks General

Repack Legal Services for period ending August 31, 2017. \$177.86 is 1 /7th of total invoice which is WVVA

portion.

Amount: \$117.86

Component Description: Brooks General

Repack legal

services for period ending April 30, 2018. \$28.29 is WVVA portion of

total invoice

Amount: \$28.29

Component Description: Brooks General

Repack Legal Services for period ending January 31, 2018. \$35.36 is WVVA of total

invoice

Amount: \$35.36

Component Description: Brooks General

Repack Legal Services for period ending November 30, 2017. \$221.58 is WVVA portion of

total invoice.

Amount: \$221.58

Component Description: WVVA-BROOKS-

INV-3951200-

MAR18

Amount: \$49.50

Component Description: WVVA- BROOKS-

DEC18-INV3961877

Amount: \$198.00

Component Description: Brooks-WVVA-

General JULY17inv 3942230 - ONE SEVENTH SEE

 MEMO

Amount: \$275.00

Component Description: WVVA-BROOKS-

MAY18 -INV3953763

Amount: \$49.50

Component Description: WVVA - BROOKS

JULY18 INV 3955736

Amount: \$99.00

Component Description: Brooks-WVVA

General SEPT17

inv 3944708

Amount: \$90.64

Component Description: Brooks - General

Repack Legal for period ending October 31, 2017. \$322.29 is WVVA portion of total

invoice.

Amount: \$322.29

Component Description: WBNG-BROOKS

APRIL18 INV

3952583

Amount: \$99.00

Component Description: BROOKS-WVVA-

JAN-18 INV

3949058

Amount: \$49.50

Component Description: Brooks WVVA-

General -NOV17 inv 3946865 - first 6

are at 221.57

WVVA is the last of 7 and is at 221.58 to be to the penny for the inv. -10-16-ADDED BROOKS

MEMO

Amount: \$221.58

Component Description: Brooks-WVVA-

General OCT17 inv- first 6 are at 322.28 last 1 of 7 WVVA is at 322.32 to be to the penny for inv 3945578 -10-16 ADDED

MEMO

Amount: \$322.32

Component Description: Brooks-WVVA-

General-AUG17 inv

Amount: \$117.85

Component Description: WVVA BROOKS

AUG18 - INV 3957123

Amount: \$198.00

Component Description: Brooks-WVVA-

General JUNE17 inv 3941325 - ONE SEVENTH SEE

MEMO

Amount: \$266.44

	Component Description: Amount:	Brooks-General- MAY17-GEN INV 3940170 -ONE SEVENTH- SEE MEMO \$190.85
Quarterly reporting	Information not provided.	
Comprehensive coverage verification via field study, if needed	Information not provided.	
Attorney Fees - Prepare and File request for Special Temporary Authorization	Information not provided.	
Attorney Fees -Prepare and File FCC Form 2100 (main), License to Cover Application	Information not provided.	

Attorney Fees - Prepare and File FCC Form 2100 **Component Description: LEGAL MAY17** (main), Construction WVVA Permit Application \$453.00 **Amount: Component Description: LEGAL SEPT17** WVVA Amount: \$141.00 **Component Description: LEGAL JUNE17** WVVA Amount: \$359.00 **Component Description: LEGAL JULY17 WVVA Amount:** \$1,626.00 **Component Description:** LEGAL AUG17 **Amount:** \$470.00 **Component Description:** LEGAL 4-17-INV **Amount:** \$470.00 Prepare request for Information not provided. **Special Temporary** Authorization Prepare engineering Information not provided. section of FCC Form 2100 (main), License to Cover Application Prepare engineering section of FCC Form 2100 **Component Description: ENGR-CP-INV** (main), Construction **Amount:** \$1,970.00 Permit Application

Perform engineering study for new channel assignment and antenna development	Component Description: Amount:	ENGR NEW CH ASSIGN WVVA INV \$2,100.00
Address transition timing and coordination issues w/other stations and wireless	Information not provided.	

Project management of the transition

Component Description: WVVA-PM-AUG-

DEC18- INV QC19-

021

Amount: \$6,150.00

Component Description: WVVA-PM-

8THRU12-INV QC18-023

Amount: \$8,602.50

Component Description: WVVA - QCOMM

PM 4THRU7-180 INV QC18-065

Amount: \$3,015.00

Amount:

Component Description: WVVA-QCOMM

PM- JAN - JUN 19 -

INV QC19-063 \$50,250.00

Component Description: WVVA- PM-INV-

QC17-148 - PM from Mar thru Aug-17. Please delete previous INV QC17-135, submitted as it is a deposit invoice submitted prior to the FAQ 12/20/17.

Amount: \$18,412.50

Component Description: PM-WVVA

DEPOSIT INV

Amount: \$70,007.50

Component Description: WVVA-QCOMM-

PM 1THRU3-18 -INV QC18-051

Amount: \$7,875.00

Prepare and or review	Information not provided.
reimbursement form	

Other Expenses

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Co
Other Expenses	\$60,080.00	\$59,515.00		\$0.00	
MVPD Notification of Channel Change	\$5,000.00	\$5,000.00	Required FCC notification.	N/A	N/A
Develop and air announcement of upcoming channel change	\$15,000.00	\$15,000.00	Required FCC announcements and good will public relations must we upheld. The production airing and disseminating of these announcements are fundamental to our operations.	N/A	N/A
Equipment Storage	\$10,000.00	\$10,000.00	Expecting multiple staggered equipment deliveries from different vendors and need to store and stage new equipment prior to installation date. Anticipate from 6-24 months of storage time.	N/A	N/A

Total for all systems	\$4,873,783.01	\$4,108,765.93	N/A	\$2,305,762.74	N/A
Sub-total	\$60,080.00	\$59,515.00	N/A	\$0.00	N/A
DTV Medical Facility Notification	\$11,550.00	\$11,000.00	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
FCC Filing Fees - Special Temporary Authorization request	\$195.00	\$190.00	N/A	N/A	N/A
Disposal Costs (for equipment and other waste, net of any salvage value)	\$10,000.00	\$10,000.00	Rent 40 yard dumpster with multiple pickups. Estimated 6- months on site. Potential hazardous waste management issues.	N/A	N/A
Equipment Delivery and Handling Charges	\$8,000.00	\$8,000.00	Transport, forklift rental and handling fees from staging area to transmitter site.	N/A	N/A

Components

Information not provided.

Grand Total

	Predetermined Cost Estimate	Estimated Cost	Actual Cost
Total for all systems	\$4,873,783.01	\$4,108,765.93	\$2,305,762.74

Reimbursem	entestiatus	Response
au 	The facility has ceased operating on its pre- auction channel.	Yes
	Construction of final facilities or all necessary modifications are complete.	No
	All receipts for reimbursement have been submitted no further costs are expected to be incurred. Note this will lock the Form 399 from further editing and begin close-out procedures with the Fund Administrator.	No

Section Question Response

Submission of Estimated Expenses Statements

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

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

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

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

I declare, under penalty of perjury, that I am an authorized representative of the abovenamed applicant for the Authorization(s) specified above. BRADY
DREASLER
CORPORATE
DIRECTOR
OF
ENGINEERING

12/19/2019

Section Question Response

Submission of Actual Cost Documentation Statements

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

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

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

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

I declare, under penalty of perjury, that I am an authorized representative of the abovenamed applicant for the Authorization(s) specified above. BRADY
DREASLER
CORPORATE
DIRECTOR
OF
ENGINEERING

12/19/2019

Attachments