



(REFERENCE COPY - Not for submission)

FCC Form 399: Reimbursement Request

Facility **71428** | Service: **DTV** | Call **WCIU-TV** | Channel: **23 (UHF)**
 ID: | Sign:
 File **0000028286**
 Number:
 FRN: **0009562265** | Date **08/30**
 Submitted: **/2017**

Applicant Information

Applicant Name, Type, and Contact Information

| Applicant | Address | Phone | Email | Applicant Type |
|--|---|-------------------|-------------------|---------------------|
| WCIU-TV LIMITED PARTNERSHIP | Norman Shapiro | +1 (312) 705-2600 | NSHAPIRO@wciu.com | Limited Partnership |
| Doing Business As: WCIU-TV LIMITED PARTNERSHIP | 26 NORTH HALSTED STREET CHICAGO, IL 60661 United States | | | |

Reimbursement Contact Information

Reimbursement Contact Name and Information

| Applicant | Address | Phone | Email |
|----------------|---------|-------|-------|
| [Confidential] | | | |

Preparer Contact Information

Preparer Contact Name and Information

| Applicant | Address | Phone | Email |
|--|---------|-------|-------|
| The Preparer is same as the reimbursement contact. | | | |

Broadcaster Information and Transition Plan

| Question | Response |
|----------|----------|
|----------|----------|

| | |
|---|--|
| <p>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.</p> | <p>Yes</p> |
| <p>Briefly describe transition plan</p> | <p>WCIU broadcasts from Willis Tower in Chicago, IL. WCIU plans operate on the Aux antenna and transmitter while the Main antenna and transmitter are replaced. Once replaced, the Aux antenna and transmitter will be replaced.</p> |

Transmitters

| Section | Question | Response |
|--|--|------------|
| <p>Transmitter Related Expenses</p> | <p>Do you have transmitter related expenses?</p> | <p>Yes</p> |

**Auxiliary
Transmitter****Add Transmitter Information**

| Section | Question | Response |
|---|--|---------------------------|
| Existing Transmitter Description | Type of change | Purchase New |
| | Use | Auxiliary (Backup) |
| | Description of Use | Backup and Maintenance |
| | Ownership | Owned |
| | Owner | N/A |
| | Site | N/A |
| | Is this transmitter currently shared with another station? | No |
| | Is this transmitter currently in operating condition? | Yes |
| Existing Transmitter Manufacturer and Type | Manufacturer | |
| | Model | TDU2 8K00LV |
| | Year | 2006 |
| | Type | Solid State |
| | Solid State Cooling | Liquid Cooled |
| | Solid State Power Capacity | 8 kW |

**Auxiliary
Transmitter****New Transmitter Costs**

| Section | Question | Response |
|------------------------|---|---|
| New Transmitter | Use | Auxiliary (Backup) |
| | Change Type | Purchase New |
| | Is this a request for upgraded equipment? | No |
| | Manufacturer | |
| | Model | THU9-EVO |
| | Transmitter Type | Solid State |
| | Solid State Cooling | Liquid Cooled |
| | Solid State Power capacity | 9.8 kW |
| | Justification for New Transmitter | The current mask filter is channel-specific and must be replaced. The current transmitter is no longer supported by the manufacturer and as a result, is unable to be returned. |

**Auxiliary
Transmitter****Other Transmitter Costs**

| Section | Question | Response |
|---------------------------|---------------------------------------|----------|
| 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 | 4 inches |
| | Length | 200.0 feet |
| | Other Electrical Service | No |
| | Description | N/A |
| HVAC Service | Does the replacement transmitter require HVAC Service? | No |
| | Type | 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 leasehold improvement? | No |
| | Size | N/A |
| Channel 14 Costs | Is an RF Consulting Engineer needed? | N/A |
| | Is a channel 14 Mask Filer needed? | N/A |
| | Is additional field engineering time needed? | N/A |
| | Number of Days | N/A |

Auxiliary Transmitter

Other Transmitter Cost Not Listed

| Name | Description |
|---------------------------------|---|
| State and City Taxes | State and city taxes are required for equipment that is purchased, but not services. |
| Transmitter Installation | Willis Tower has unique labor requirements. Standard transmitter installation practices are not allowed due to labor agreements. Only building electrical and plumbing contractors may perform any electric or plumbing work related to the installation. |
| Structural Modifications | As a result of the Structural Analysis, modifications may be required. |

Structural Analysis

WCIU's transmission facility is located on floor 101 of Willis Tower. Willis Tower requires a detailed analysis of all equipment loads with respect to the structural aspects of the building.

**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 and Type | Manufacturer | |
| | Model | CTT-U- CXIC2R |
| | Year | 2009 |
| | Type | Inductive Output Tube |
| | IOT Power Type | Two |
| | Power Capacity | 50 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 | THU9-EVO |
| | Transmitter Type | Solid State |
| | Solid State Cooling | Liquid Cooled |
| | Solid State Power capacity | 55 kW |
| | Justification for New Transmitter | The current mask filter that is channel-specific and must be replaced. The current transmitter is no longer supported by the manufacturer and as a result, is unable to be retuned. The cost of a replacement IOT exceeds the cost of a solid state. |

**Primary
Transmitter**

Other Transmitter Costs

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

| | | |
|--|---|--------------|
| 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 | 4 inches |
| | Length | 300.0 feet |
| | Other Electrical Service | No |
| | Description | N/A |
| HVAC Service | Does the replacement transmitter require HVAC Service? | Yes |
| | Type | Cooling Only |
| | Size | 10 tons |
| | Other Size | N/A |
| Transmitter Building Addition/Modification or Leasehold Improvement | Does the Transmitter Building require an addition, modification, other leasehold improvement? | No |
| | Size | N/A |
| Channel 14 Costs | Is an RF Consulting Engineer needed? | N/A |
| | Is a channel 14 Mask Filer needed? | N/A |
| | Is additional field engineering time needed? | N/A |
| | Number of Days | N/A |

Primary Transmitter

Other Transmitter Cost Not Listed

| Name | Description |
|---------------------------------|--|
| Structural Modifications | As a result of the Structural Analysis, modifications may be required. |

| | |
|---------------------------------|---|
| Transmitter Installation | Willis Tower has unique labor requirements. Standard transmitter installation practices are not allowed due to labor agreements. Only building electrical and plumbing contractors may perform any electric or plumbing work related to the installation. |
| Structural Analysis | WCIU's transmission facility is located on floor 101 of Willis Tower. Willis Tower requires a detailed analysis of all equipment loads with respect to the structural aspects of the building. |
| State and City Taxes | State and city taxes are required for equipment that is purchased, but not services. |

Antennas

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

**Auxiliary
Antenna****Add Antenna Information**

| Section | Question | Response |
|---|---|--|
| Existing Antenna Description | Type of change | Retune Existing |
| | Antenna Use | Auxiliary (Backup) |
| | Description of Use | Willis Tower NE Master AUX Antenna |
| | Ownership | Leased |
| | Owner | BRE Broadcast, LLC |
| | Site | N/A |
| | Is this antenna currently shared with any other stations? | Yes |
| | Is this antenna directional? | Yes |
| | Is antenna in operating condition? | Yes |
| | Is antenna located on or in close proximity to an antenna farm? | Yes |
| Existing Antenna Manufacturer and Type | Class | Full Power |
| | Mounting | Top Mount |
| | Antenna position in stack | Not in Stack |
| | Polarization | Horizontal |
| | Type | Broadband Panel |
| | Number of Stations Supported | 8 |

| | |
|--|------------|
| Number of Panels | 24 |
| Design power capacity in use | 100.0 % |
| Lower Limit | 470.00 MHz |
| Upper Limit | 699.00 MHz |
| Other Antenna Type | N/A |
| ERP: (Effective Radiated Power) | 2500.0 kW |
| Manufacturer | RFS |
| Model | PHP24C |
| Year | 1999 |

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

| Facility ID | Call Sign |
|-------------|-----------|
| 48772 | WPWR-TV |
| 10802 | WTTW |
| 22211 | WFLD |
| 47905 | WMAQ-TV |
| 70119 | WSNS-TV |
| 71428 | WCIU-TV |
| 72115 | WGN-TV |
| 73226 | WLS-TV |

Auxiliary Antenna

Adjustment to Existing Antenna

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

**Auxiliary
Antenna**

Other Antenna Costs

| Section | Question | Response |
|------------------------------------|--|---------------------------|
| Combiner for Shared Antenna | Do you need a Combiner for a Shared Antenna? | Yes |
| | Type | New |
| | Number of channels supported | 7 |
| | Frequencies of channels supported | Upper and lower frequency |
| | Frequency | 470.0 MHz - 610.0 MHz |

**Auxiliary
Antenna**

Other Antenna Cost Not Listed

Information not provided.

**Primary
Antenna**

Existing Antenna Information

| Section | Question | Response |
|---|--|--------------------|
| Existing Antenna Description | Type of change | Purchase New |
| | Antenna Use | Primary (Main) |
| | Description of Use | N/A |
| | Ownership | Owned |
| | Owner | N/A |
| | Site | N/A |
| | Is the existing antenna shared with another station or stations? | No |
| | Is the existing antenna directional? | Yes |
| | Is antenna in operating condition? | Yes |
| | Is antenna located on or in close proximity to an antenna farm? | Yes |
| Existing Antenna Manufacturer and Type | Class | Full Power |
| | Mounting | Side Mount |
| | Antenna position in stack | Not in Stack |
| | Polarization | Elliptical |
| | Type | Slotted Coaxial |
| | Number of Stations Supported | N/A |
| | Number of Panels | N/A |
| | Design power capacity in use | N/A |
| | Lower Limit | N/A |
| | Upper Limit | N/A |
| | Other Antenna Type | N/A |
| | ERP: (Effective Radiated Power) | 550.0 kW |

| | |
|--------------|-----------------------------|
| Manufacturer | |
| Model | TFU-10DSC /VP-R CT170 |
| Year | 2009 |

**Primary
Antenna**

New Antenna Costs

| Section | Question | Response |
|---|--|-----------------|
| New Antenna Description | Use | Primary (Main) |
| | Description of Use | N/A |
| | Change Type | Purchase New |
| | Is this a request for upgraded equipment? | No |
| | Ownership | Owned |
| | Owner | N/A |
| | Is antenna shared? | No |
| | Is antenna directional? | Yes |
| | Will antenna be located on or in close proximity to an antenna farm? | Yes |
| New Antenna Manufacturer and Types | Class | Full Power |
| | Mounting | Side Mount |
| | Antenna position in stack | Not in Stack |
| | Polarization | Elliptical |
| | Type | Slotted Coaxial |
| | Number of Stations Supported | N/A |
| | Number of Panels/Bays | N/A |
| | Lower Limit | N/A |
| | Upper Limit | N/A |
| | Design power capacity in use | N/A |
| | Other Antenna Type | N/A |
| | ERP: (Effective Radiated Power) | 503.0 kW |
| Manufacturer | | |

| | |
|-------------------------------|--|
| Model | TFU-10DSC /VP-R CT170 |
| Year | 2019 |
| Justification for New Antenna | The current WCIU main antenna is a slot antenna designed for channel 27. An equivalent replacement antenna is being proposed for channel 23. |

**Primary
Antenna**

Other Antenna Costs

| Section | Question | Response |
|------------------------------------|---|----------|
| Combiner for Shared Antenna | Do you need a Combiner for a Shared Antenna? | No |
| | Type | |
| | 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? | No |
| | Broadband or Single Channel? | N/A |
| | Feed Line Size | N/A |
| Side Mount Brackets | Do you require the separate purchase of side mount brackets for 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? | No |

**Primary
Antenna**

Other Antenna Cost Not Listed

| Name | Description |
|-----------------------------|--|
| State and City Taxes | State and city taxes are required for equipment that is purchased, but not services. |

| Transmission Line | Section | Question | Response |
|-------------------|------------------------------------|----------|---|
| | Transmission Line Related Expenses | | Do you have transmission line related expenses? |

Primary Transmission Line
Existing Transmission Line

| Section | Question | Response |
|--|--|------------------|
| Existing Transmission Line Description | Type of change | Utilize Existing |
| | Use | Primary (Main) |
| | Description of Use | N/A |
| | Ownership | Owned |
| | Owner | N/A |
| | Site | N/A |
| | Is the existing transmission line shared with another station or stations? | No |
| | Is Transmission Line in operating condition? | Yes |
| Existing Transmission Line Manufacturer and Type | Manufacturer | Dielectric |
| | Type | Rigid |
| | Diameter | 6 1/8 inches |
| | Other Diameter | N/A |
| | Segment Length | Other |
| | Other Segment Length | 10 feet |
| | Number of parallel runs | 1 |
| | Length | 270 feet per run |

Primary Transmission Line **Other Transmission Line Expenses Not Listed**
 Information not provided.

Auxiliary Transmission Line **Add Transmission Line**

| Section | Question | Response |
|---|--|------------------------|
| Existing Transmission Line Description | Type of change | Utilize Existing |
| | Use | Auxiliary (Backup) |
| | Description of Use | Backup and Maintenance |
| | Ownership | Owned |
| | Owner | N/A |
| | Site | N/A |
| | Is this transmission currently shared with any other stations? | No |
| | Is Transmission Line in operating condition? | Yes |
| Existing Transmission Line Manufacturer and Type | Manufacturer | Andrew |
| | Type | Flexible Air |
| | Diameter | 5 inches |
| | Other Diameter | N/A |
| | Segment Length | N/A |
| | Other Segment Length | N/A |
| | Number of parallel runs | 1 |
| | Length | 80 feet per run |

Auxiliary Transmission Line **Other Transmission Line Expenses Not Listed**

| Name | Description |
|------|-------------|
|------|-------------|

Willis AUX Antenna

Due to the change in location of the Willis AUX combiner room, it is estimated that we will need to add approx. 40' of line to the existing line to reach the new combiner room.

Tower Equipment And Rigging Costs

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

Auxiliary Tower

Add Tower

| Section | Question | Response |
|--|---|------------------------|
| Existing Tower Description | Type of change | Modify Existing |
| | Tower Use | Auxiliary (Backup) |
| | Description of Use | Backup and Maintenance |
| | Ownership | Leased |
| | Is this tower consider Complex? | Located on Building |
| | Is this tower currently shared with any other stations? | Yes |
| | One or more FM, AM or TV radio broadcaster(s) | Yes |
| | Others Types of Users | Yes |
| | Is tower documented for structural analysis? | Yes |
| | Is tower compliant with Rev G? | No |
| Existing Tower Structure Registration | Do you have a tower registration number? | Yes |
| | ASR Number | 1032960 |
| Coordinates (NAD83 (North American Datum of 1983)) | Latitude (NAD83) | 41° 52' 44.0" N- |
| | Longitude (NAD83) | 087° 38' 08.0" W- |
| | Overall Structure Height | 1722.09 feet |
| | Support Structure Height | 1435.35 feet |

| | |
|--|----------------------------|
| Ground Elevation Above Mean Sea Level (AMSL) | 595.14 feet |
| Structure Type | BMAST - Building with Mast |
| Tower Owner | 233 Broadcast, LLC |
| Date Constructed | 09/30/2012 |

**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 |
|-------------|-----------|---------|
| 10802 | WTTW | DTV |
| 9617 | WBBM-TV | DTV |
| 9613 | WBBM-FM | FM |
| 47905 | WMAQ-TV | DTV |
| 70119 | WSNS-TV | DTV |
| 73228 | WLS-FM | FM |
| 32334 | WJYS | DTV |
| 28621 | WJMK | FM |
| 10801 | WFMT | FM |
| 48772 | WPWR-TV | DTV |
| 53971 | WEBG | FM |
| 73226 | WLS-TV | DTV |
| 51165 | WGCI-FM | FM |
| 6377 | WTMX | FM |
| 72115 | WGN-TV | DTV |
| 71283 | WCFS-FM | FM |

| | | |
|-------|---------|-----|
| 22211 | WFLD | DTV |
| 10981 | WCPX-TV | DTV |
| 70042 | WLIT-FM | FM |
| 74178 | WKSC-FM | FM |

Other Types of Users

| Users |
|----------------|
| LM Land Mobile |
| LD TV Services |
| FX FM Services |

Auxiliary 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 |

Auxiliary Tower

Tower Rigging Costs

| Section | Question | Response |
|------------------------------|-----------------------------------|---------------------|
| Tower Rigging Costs | Complex Tower | Located on Building |
| Helicopter Services Required | Are helicopter services required? | Yes |

Auxiliary Tower

Other Tower Expenses Not Listed

Information not provided.

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 | Leased |
| | Is this tower consider Complex? | Located on Building |
| | Is this tower currently shared with any other stations? | Yes |
| | One or more FM, AM or TV radio broadcaster(s) | Yes |
| | Others Types of Users | Yes |
| | Is tower documented for structural analysis? | No |
| | Is tower compliant with Rev G? | No |
| Existing Tower Structure Registration | Do you have a tower registration number? | Yes |
| | ASR Number | 1032959 |
| Coordinates (NAD83 (North American Datum of 1983)) | Latitude (NAD83) | 41° 52' 44.1" N- |
| | Longitude (NAD83) | 087° 38' 10.2" W- |
| | Overall Structure Height | 1729.97 feet |
| | Support Structure Height | 1435.35 feet |
| | Ground Elevation Above Mean Sea Level (AMSL) | 595.14 feet |
| | Structure Type | BTWR - Building with Tower |

| | | |
|--|------------------|--------------------------|
| | Tower Owner | 233 Broadcast, LLC |
| | Date Constructed | 01/01/2002 |

**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 |
|-------------|-----------|---------|
| 73228 | WLS-FM | FM |
| 71425 | WWME-CD | DTV |
| 10801 | WFMT | FM |
| 71283 | WCFS-FM | FM |
| 10802 | WTTW | DTV |
| 72115 | WGN-TV | DTV |
| 70119 | WSNS-TV | DTV |
| 9617 | WBBM-TV | DTV |
| 22211 | WFLD | DTV |
| 28621 | WJMK | FM |
| 168662 | WMEU-CD | DTV |
| 66978 | WEDE-CD | DTV |
| 70042 | WLIT-FM | FM |
| 6377 | WTMX | FM |
| 9613 | WBBM-FM | FM |
| 48772 | WPWR-TV | DTV |
| 47905 | WMAQ-TV | DTV |

Other Types of Users

| Users |
|-------|
|-------|

LD TV Services

FX FM Services

LM Land Mobile

**Primary
Tower**

Tower Modification Costs

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

**Primary
Tower**

Tower Rigging Costs

| Section | Question | Response |
|-------------------------------------|-----------------------------------|---------------------|
| Tower Rigging Costs | Complex Tower | Located on Building |
| Helicopter Services Required | Are helicopter services required? | No |

**Primary
Tower**

Other Tower Expenses Not Listed

Information not provided.

Outside Professional Services Costs

| Section | Question | Response |
|--|--|---|
| Outside Project Management Services | Do you require outside project management services? | No |
| | Number of Hours | N/A |
| | Explanation | N/A |
| Outside RF consulting Engineering Services | Perform engineering study for new channel assignment and antenna development | Yes |
| | Prepare engineering section of Form FCC Construction Permit Application | Yes |
| | For Auxiliary Facility | 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 |
| 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 | 1 |
| | 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 | Yes |
| | 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 Professional Services Costs **Other Professional Services Expenses Not Listed**
Information not provided.

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? | 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**

Other Expenses Not Listed

| Name | Description |
|---------------------------------------|--|
| Combiner Room Construction | See attached Willis Tower Budget Overview for EAST Tower RFS Systems. Willis Tower estimates \$90,000 for the Combiner Room Construction for the EAST Tower AUX antenna. WCIU's portion, \$12,857.14 |
| Cylinder Entry Port Resoration | See attached Willis Tower Budget Overview for EAST Tower RFS Systems. Willis Tower estimates \$150,000 for the Cylinder Entry Port Restoration for the EAST Tower AUX antenna. WCIU's portion, \$25,000. |
| East Pole Material Disposal | See attached Willis Tower Budget Overview for EAST Tower RFS Systems. Willis Tower estimates \$80,000 for the East Pole Material Disposal for the EAST Tower AUX antenna. WCIU's portion, \$13,333.33. |
| Equipment Storage | See attached Willis Tower Budget Overview for EAST Tower RFS Systems. Willis Tower estimates \$2,000 for the Equipment Storage for the EAST Tower AUX antenna. WCIU's portion, \$333.33. |
| Transmission Line Installation | See attached Willis Tower Budget Overview for EAST Tower RFS Systems. Willis Tower estimates \$125,000 for the Transmission Line Installation of the EAST Tower AUX antenna. WCIU's portion, \$20,833. |
| Transmission Line Removal | See attached Willis Tower Budget Overview for EAST Tower RFS Systems. Willis Tower estimates \$250,000 for the Transmission Line Removal of the EAST Tower AUX antenna. WCIU's portion, \$41,666.67. |
| RF Safety Coordination | See attached Willis Tower Budget Overview for EAST Tower RFS Systems. Willis Tower estimates \$100,000 for the RF Safety Coordination of the EAST Tower AUX antenna. WCIU's portion, \$16,666.67. |
| Outside Project Management | See attached Willis Tower Budget Overview for EAST Tower RFS Systems. Willis Tower estimates \$95,000 for the Outside Project Management of the EAST Tower AUX antenna. WCIU's portion, \$15,833. |

Cost Information

Transmitters

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

| Description | Predetermined Cost Estimate | Estimated Cost | Estimated Cost Justification | Actual Cost | Actual Cost Justification |
|--|-----------------------------|-----------------------|---|---------------|---------------------------|
| Primary Transmitter THU9-EVO | \$2,069,170.13 | \$1,497,407.35 | | \$0.00 | |
| Structural Analysis | <i>\$5,500.00</i> | \$5,500.00 | Willis Tower requires loading studies for equipment that exceeds normal tenant office loads, such as broadcast equipment. Actual costs to be determined once final equipment selection has been made. | N/A | N/A |
| UHF - Liquid Cooled Solid State Transmitter 52 - 61 kW | \$1,788,000.00 | \$1,221,537.22 | N/A | N/A | N/A |
| Switchgear - industrial 800 amp | \$38,200.00 | \$36,300.00 | N/A | N/A | N/A |
| 4" Rigid Conduit and Wiring (Cost per foot) | \$30,300.00 | \$28,800.00 | N/A | N/A | N/A |
| 10 Ton system | \$38,900.00 | \$37,000.00 | N/A | N/A | N/A |

| | | | | | |
|--------------------------|----------------------------|--------------|---|-----|-----|
| State and City Taxes | <i>\$118,270.13</i> | \$118,270.13 | State and city taxes are required for equipment that is purchased, but not services. | N/A | N/A |
| Structural Modifications | <i>\$20,000.00</i> | \$20,000.00 | Willis Tower requires loading studies for heavy equipment that is installed in the building. As a result, it is anticipated that additional reinforcement will be required. Actual costs to be determined once final equipment selection has been made. | N/A | N/A |

| | | | | | |
|---------------------------------------|---------------------|---------------------|---|---------------|-----|
| Transmitter Installation | <i>\$30,000.00</i> | \$30,000.00 | Willis Tower requires union labor for all electric and cooling connections. This is a general allowance to cover the additional labor fees for union labor to perform the transmitter installation and building water connections. | N/A | N/A |
| Auxiliary Transmitter THU9-EVO | \$616,554.82 | \$414,496.43 | | \$0.00 | |
| Structural Modifications | <i>\$12,500.00</i> | \$12,500.00 | Willis Tower requires loading studies for heavy equipment that is installed in the building. As a result, it is anticipated that additional reinforcement will be required. Actual costs to be determined once final equipment selection has been made. | N/A | N/A |

| | | | | | |
|---|---------------------------|-------------|--|-----|-----|
| 4" Rigid Conduit and Wiring (Cost per foot) | \$20,200.00 | \$19,200.00 | N/A | N/A | N/A |
| Transmitter Installation | <i>\$20,000.00</i> | \$20,000.00 | Willis Tower requires union labor for all electric and cooling connections. This is a general allowance to cover the additional labor fees for union labor to perform the transmitter installation and building water connections. | N/A | N/A |
| State and City Taxes | <i>\$26,654.82</i> | \$26,654.82 | State and city taxes are required for equipment that is purchased, but not services. | N/A | N/A |

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|---|-------------------|----------------|---|--------|-----|
| Structural Analysis | <i>\$4,500.00</i> | \$4,500.00 | Willis Tower requires loading studies for equipment that exceeds normal tenant office loads, such as broadcast equipment. Actual costs to be determined once final equipment selection has been made. | N/A | N/A |
| UHF - Liquid Cooled Solid State Transmitter 8.2 - 13 kW | \$494,500.00 | \$295,341.61 | N/A | N/A | N/A |
| Switchgear - industrial 800 amp | \$38,200.00 | \$36,300.00 | N/A | N/A | N/A |
| Sub-total | \$2,685,724.95 | \$1,911,903.78 | N/A | \$0.00 | N/A |
| Total for all systems | \$5,012,307.62 | \$3,319,205.64 | N/A | \$0.00 | N/A |

Components

Information not provided.

Cost Information

Antennas

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

| Description | Predetermined Cost Estimate | Estimated Cost | Estimated Cost Justification | Actual Cost | Actual Cost Justification |
|--|-----------------------------|---------------------|--|---------------|---------------------------|
| Primary Antenna TFU-10DSC/VP-R CT170 | \$185,705.06 | \$185,445.06 | | \$0.00 | |
| State and City Taxes | <i>\$16,181.06</i> | \$16,181.06 | State and city taxes are required for equipment that is purchased, but not services. | N/A | N/A |
| UHF - High Power, Side Mount, basic slot antenna, 503 kW input, directional,, elliptically or circularly polarized | <i>\$164,264.00</i> | \$164,264.00 | This is the cost of the current licensed antenna, but on channel 23. | N/A | N/A |
| Pattern scatter analysis for side mount high /med power antennas (if not included in antenna base cost) | \$5,260.00 | \$5,000.00 | N/A | N/A | N/A |
| Auxiliary Antenna PHP24C | \$487,453.81 | \$470,566.67 | | \$0.00 | |

| | | | | | |
|--|----------------------------|----------------|---|--------|-----|
| New combiner, cost per channel (without antenna) | \$84,200.00 | \$67,642.86 | N/A | N/A | N/A |
| UHF - High Power Top Mount Eight Station broadband panel antenna horizontally polarized | <i>\$396,523.81</i> | \$396,523.81 | Due to the complexities of channel changes, Willis must make major structural changes to the rooftop. As a result, the existing MAIN master antenna will be repurposed as an AUX. See attachment. All but WLS and WGN are participating | N/A | N/A |
| Sweep test of existing antenna | \$6,730.00 | \$6,400.00 | N/A | N/A | N/A |
| Sub-total | \$673,158.87 | \$656,011.73 | N/A | \$0.00 | N/A |
| Total for all systems | \$5,012,307.62 | \$3,319,205.64 | N/A | \$0.00 | N/A |

Components

Information not provided.

Cost Information

Transmission Line

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

| Description | Predetermined Cost Estimate | Estimated Cost | Estimated Cost Justification | Actual Cost | Actual Cost Justification |
|------------------------------------|-----------------------------|-----------------------|--|---------------|---------------------------|
| Primary Transmission Line | \$0.00 | \$0.00 | | \$0.00 | |
| Auxiliary Transmission Line | \$8,000.00 | \$8,000.00 | | \$0.00 | |
| Willis AUX Antenna | <i>\$8,000.00</i> | \$8,000.00 | Due to the relocation of the Willis Tower AUX antenna combiner room, WCIU is required to extend the existing 5" flex line 80' from the old combiner room to the new combiner room. (80'x\$100 /ft) | N/A | N/A |
| Sub-total | \$8,000.00 | \$8,000.00 | N/A | \$0.00 | N/A |
| Total for all systems | \$5,012,307.62 | \$3,319,205.64 | N/A | \$0.00 | N/A |

Components

Information not provided.

Cost Information

Tower Equipment and Rigging Costs

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

| Description | Predetermined Cost Estimate | Estimated Cost | Estimated Cost Justification | Actual Cost | Actual Cost Justification |
|--|------------------------------------|-----------------------|-------------------------------------|--------------------|----------------------------------|
| Primary Tower BTWR | \$605,300.00 | \$172,500.00 | | \$0.00 | |
| Complex Tower (includes, for example, those with candelabras and/or stacked antennas) | \$421,000.00 | \$85,000.00 | N/A | N/A | N/A |
| Minor tower reinforcement /modifications | \$158,000.00 | \$75,000.00 | N/A | N/A | N/A |
| Tower mapping for an undocumented /poorly documented tower and preparation of documentation necessary for tower load study | \$26,300.00 | \$12,500.00 | N/A | N/A | N/A |
| Auxiliary Tower BMAST | \$791,600.00 | \$325,001.33 | | \$0.00 | |
| Minor tower reinforcement /modifications | \$158,000.00 | \$75,000.00 | N/A | N/A | N/A |

| | | | | | |
|---|----------------|----------------|---|--------|-----|
| Tower Helicopter Lift | \$200,000.00 | \$200,000.00 | See attached Willis Tower Budget Overview for EAST Tower RFS Systems. Willis Tower estimates \$600,000 for the NE Decommission Lift of the EAST Tower AUX antenna. WCIU's portion, \$200,000. | N/A | N/A |
| Complex Tower (includes, for example, those with candelabras and/or stacked antennas) | \$421,000.00 | \$33,333.33 | See attached Willis Tower Budget Overview for EAST Tower RFS Systems. Willis Tower estimates \$200,000 for the East Pole Decommission Prep Work of the EAST Tower AUX antenna. WCIU's portion, \$33,333.33. | N/A | N/A |
| Structural engineering tower load study for well documented tower | \$12,600.00 | \$16,668.00 | See attached Willis Tower Budget Overview for EAST Tower RFS Systems. Willis Tower estimates \$100,000 for the East Pole Decommissioning of the EAST Tower AUX antenna. WCIU's portion, \$16,666.67 | N/A | N/A |
| Sub-total | \$1,396,900.00 | \$497,501.33 | N/A | \$0.00 | N/A |
| Total for all systems | \$5,012,307.62 | \$3,319,205.64 | N/A | \$0.00 | N/A |

Components

Information not provided.

Cost Information

Outside Professional Services

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

| Description | Predetermined Cost Estimate | Estimated Cost | Estimated Cost Justification | Actual Cost | Actual Cost Justification |
|--|-----------------------------|--------------------|------------------------------|---------------|---------------------------|
| Outside Professional Services | \$34,920.00 | \$32,750.00 | | \$0.00 | |
| Address transition timing and coordination issues w/ other stations and wireless | \$2,630.00 | \$2,500.00 | N/A | N/A | N/A |
| Perform engineering study for new channel assignment and antenna development | \$7,360.00 | \$7,000.00 | N/A | N/A | N/A |
| Prepare engineering section of FCC Form 2100 (main), Construction Permit Application | \$3,155.00 | \$3,000.00 | 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 request for Special Temporary Authorization | \$2,050.00 | \$1,500.00 | N/A | N/A | N/A |

| | | | | | |
|--|----------------|----------------|-----|--------|-----|
| Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application | \$5,260.00 | \$5,000.00 | N/A | N/A | N/A |
| 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 - Negotiation of lease and other matters for shared locations | \$4,210.00 | \$4,000.00 | N/A | N/A | N/A |
| Attorney Fees - Prepare and File request for Special Temporary Authorization | \$3,680.00 | \$3,500.00 | N/A | N/A | N/A |
| Prepare and or review reimbursement form | \$2,630.00 | \$2,500.00 | N/A | N/A | N/A |
| Sub-total | \$34,920.00 | \$32,750.00 | N/A | \$0.00 | N/A |
| Total for all systems | \$5,012,307.62 | \$3,319,205.64 | N/A | \$0.00 | N/A |

Components

Information not provided.

Cost Information

Other Expenses

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

| Description | Predetermined Cost Estimate | Estimated Cost | Estimated Cost Justification | Actual Cost | Actual Cost Justification |
|----------------------------|-----------------------------|---------------------|--|---------------|---------------------------|
| Other Expenses | \$213,603.80 | \$213,038.80 | | \$0.00 | |
| Outside Project Management | <i>\$15,833.33</i> | \$15,833.33 | See attached Willis Tower Budget Overview for EAST Tower RFS Systems. Willis Tower estimates \$95,000 for the Outside Project Management of the EAST Tower AUX antenna. WCIU's portion, \$15,833.33. | N/A | N/A |

| | | | | | |
|---------------------------|---------------------------|-------------|--|-----|-----|
| RF Safety Coordination | <i>\$16,666.67</i> | \$16,666.67 | See attached Willis Tower Budget Overview for EAST Tower RFS Systems. Willis Tower estimates \$100,000 for the RF Safety Coordination of the EAST Tower AUX antenna. WCIU's portion, \$16,666.67. | N/A | N/A |
| Transmission Line Removal | <i>\$41,666.67</i> | \$41,666.67 | See attached Willis Tower Budget Overview for EAST Tower RFS Systems. Willis Tower estimates \$250,000 for the Transmission Line Removal of the EAST Tower AUX antenna. WCIU's portion, \$41,666.67. | N/A | N/A |

| | | | | | |
|-----------------------------------|---------------------------|-------------|--|-----|-----|
| Transmission Line Installation | <i>\$20,833.33</i> | \$20,833.33 | See attached Willis Tower Budget Overview for EAST Tower RFS Systems. Willis Tower estimates \$125,000 for the Transmission Line Installation of the EAST Tower AUX antenna. WCIU's portion, \$20,833.33 | N/A | N/A |
| Equipment Storage | <i>\$333.33</i> | \$333.33 | See attached Willis Tower Budget Overview for EAST Tower RFS Systems. Willis Tower estimates \$2,000 for the Equipment Storage of the EAST Tower AUX antenna. WCIU's portion, \$333.33. | N/A | N/A |

| | | | | | |
|-----------------------------------|---------------------------|-------------|---|-----|-----|
| East Pole Material Disposal | <i>\$13,333.33</i> | \$13,333.33 | See attached Willis Tower Budget Overview for EAST Tower RFS Systems. Willis Tower estimates \$80,000 for the East Pole Material Disposal of the EAST Tower AUX antenna. WCIU's portion, \$13,333.33 | N/A | N/A |
| Cylinder Entry Port Resoration | <i>\$25,000.00</i> | \$25,000.00 | See attached Willis Tower Budget Overview for EAST Tower RFS Systems. Willis Tower estimates \$150,000 for the Cylinder Entry Port Restoration of the EAST Tower AUX antenna. WCIU's portion, \$25,000. | N/A | N/A |

| | | | | | |
|--|---------------------------|-------------|--|-----|-----|
| Combiner Room Construction | <i>\$12,857.14</i> | \$12,857.14 | See attached Willis Tower Budget Overview for EAST Tower RFS Systems. Willis Tower estimates \$90,000 for the Combiner Room Construction of the EAST Tower AUX antenna. WCIU's portion, \$12,857.14. | N/A | N/A |
| MVPD Notification of Channel Change | <i>\$2,500.00</i> | \$2,500.00 | Notification to all MVPD regarding channel changes. | N/A | N/A |
| Disposal Costs (for equipment and other waste, net of any salvage value) | <i>\$50,000.00</i> | \$50,000.00 | Removal of WCIU IOT transmitter cabinets, beam supplies, RF System, cooling system, electrical system. | N/A | N/A |
| DTV Medical Facility Notification | \$11,550.00 | \$11,000.00 | N/A | N/A | N/A |
| Equipment Delivery and Handling Charges | <i>\$2,500.00</i> | \$2,500.00 | Willis Tower loading dock after hours fees. | N/A | N/A |

| | | | | | |
|---|----------------|----------------|-----|--------|-----|
| FCC Filing Fees - Special Temporary Authorization request | \$195.00 | \$190.00 | N/A | N/A | N/A |
| FCC Filing Fees - Form 2100 license to cover application | \$335.00 | \$325.00 | N/A | N/A | N/A |
| Sub-total | \$213,603.80 | \$213,038.80 | N/A | \$0.00 | N/A |
| Total for all systems | \$5,012,307.62 | \$3,319,205.64 | N/A | \$0.00 | N/A |

Components

Information not provided.

Cost Information **Grand Total**

| | Predetermined Cost Estimate | Estimated Cost | Actual Cost |
|------------------------------|------------------------------------|-----------------------|--------------------|
| Total for all systems | \$5,012,307.62 | \$3,319,205.64 | \$0.00 |

Reimbursement Status

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

| Certification | Section | Question | Response |
|---------------|--|---|----------|
| | Submission of Estimated Expenses Statements | <p>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.</p> | |
| | | <ol style="list-style-type: none"> 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.

| | |
|---|--|
| <p>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.</p> | |
| <p>I declare, under penalty of perjury, that I am an authorized representative of the above-named applicant for the Authorization(s) specified above.</p> | <p>Kyle Walker <i>VP,</i> <i>Technology</i></p> <p>08/30/2017</p> |

Attachments