



(REFERENCE COPY - Not for submission)

Amendment to a Modification of a Construction Permit to Convert from DTV to DTS Application

File Number: **0000036076** | Submit Date: **03/18/2020** | Call Sign: **WUNW** | Facility ID: **83822** | FRN: **0001910066** | State: **North Carolina** | City: **CANTON**

Service: **DTS** | Purpose: **Modification to Convert Amendment 0000035959** | Status: **Granted** | Status Date: **04/13/2020**

Expiration Date: **04/13/2023** | Filing Status: **InActive**

General Information

| Section | Question | Response |
|-------------|--|----------|
| Attachments | Are attachments (other than associated schedules) being filed with this application? | Yes |

Fees, Waivers, and Exemptions

| Section | Question | Response |
|---------|---|----------|
| Waivers | Does this filing request a waiver of the Commission's rule(s)? | No |
| | Total number of rule sections involved in this waiver request: | |
| | Are the frequencies or parameters requested in this filing covered by grandfathered privileges, previously approved by waiver, or functionally integrated with an existing station? | No |

**Applicant
Information**

Applicant Name, Type, and Contact Information

| Applicant | Address | Phone | Email | Applicant Type |
|---|--|-------------------|----------------------|-------------------|
| University of North Carolina Doing Business As: University of North Carolina | PO Box 14900 Research Triangle Park, NC 27709 United States | +1 (919) 549-7000 | fcc_notice@unctv.org | Government Entity |

Authorization Holder Name

Check box if the Authorization Holder name is being updated because of the sale (or transfer of control) of the Authorization(s) to another party and for which proper Commission approval has not been received or proper notification provided.

Contact
Representatives
(4)

| Contact Name | Address | Phone | Email | Contact Type |
|--|---|-----------------------|-------------------------------------|-----------------------------|
| Joseph M. Davis , P.E. . <i>Consulting Engineer</i> Chesapeake RF Consultants, LLC | 207 Old Dominion Road Yorktown, VA 23692 United States | +1 (703) 650- 9600 | Joseph.Davis@RF- consultants.com | Technical Representative |
| Stephen Hartzell Brooks, Pierce et al. | Stephen Hartzell 150 Fayetteville Street Suite 1700 Raleigh, NC 27601 United States | +1 (919) 839- 0300 | shartzell@brookspierce. com | Legal Representative |
| Donald W Smith University of North Carolina | Donald Smith 10 T.W. Alexander Drive 10 T.W. Al Research Triangle Park, NC 27709 United States | +1 (919) 549- 7025 | dsmith@unctv.org | Technical Representative |
| Marcus W Trathen Brooks, Pierce et al. | Marcus Trathen 150 Fayetteville Street Suite 1700 Raleigh, NC 27601 United States | +1 (919) 839- 0300 | mtrathen@brookspierce. com | Legal Representative |

Alien Ownership

| Question | Response |
|---|----------|
| 1) Is the applicant a foreign government or the representative of any foreign government as specified in Section 310(a) of the Communications Act? | No |
| 2) Is the applicant an alien or the representative of an alien? (Section 310(b)(1)) | No |
| 3) Is the applicant a corporation, or non-corporate entity, that is organized under the laws of any foreign government? (Section 310(b)(2)) | No |
| 4) Is the applicant an entity of which more than one-fifth of the capital stock, or other equity or voting interest, is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any entity organized under the laws of a foreign country? (Section 310(b)(3)) | No |
| 5) Is the applicant directly or indirectly controlled by any other entity of which more than one-fourth of the capital stock, or other equity or voting interest, is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any entity organized under the laws of a foreign country? (Section 310(b)(4)) | No |
| 6) Has the applicant received a declaratory ruling(s) under Section 310(b)(4) of the Communications Act? | No |
| 7) In connection with this application, is the applicant filing a foreign ownership Petition for Declaratory Ruling pursuant to Section 310(b)(4) of the Communications Act? | No |

Basic Qualifying Questions

| Section | Question | Response |
|------------------------------|--|----------|
| Revoked Application | Has the Applicant or any party to this application had any FCC station Authorization revoked or had any application for an initial, modification or renewal of FCC station Authorization denied by the Commission? | No |
| State or Federal Convictions | Has the Applicant or any party to this application, or any party directly or indirectly controlling the Applicant, ever been convicted of a felony by any state or federal court? | No |

Channel and Facility Information

| Section | Question | Response |
|---------------|----------------|---------------------------|
| Facility ID | 83822 | |
| State | North Carolina | |
| City | CANTON | |
| DTS Channel | 27 | |
| Facility Type | Facility Type | Noncommercial Educational |
| | Station Type | Main |
| Zone | Zone | 2 |

DTS Reference
Point

| Section | Question | Response |
|---|--|-------------------|
| Construction Permit File Number and Facility ID | File Number for Current Authorized Service Area: | 0000035959 |
| | Facility ID | 83822 |
| Coordinates (NAD83) | Latitude | 35° 34' 07.0" N+ |
| | Longitude | 082° 54' 26.2" W- |

Site 1: Antenna
Location Data

| Section | Question | Response |
|--------------------------------|---|---------------------------------------|
| Antenna Structure Registration | Do you have an FCC Antenna Structure Registration (ASR) Number? | Yes |
| | ASR Number | 1275765 |
| Coordinates (NAD83) | Latitude | 35° 34' 07.0" N+ |
| | Longitude | 082° 54' 26.2" W- |
| | Structure Type | TOWER-A free standing or guyed struct |
| | Overall Structure Height | 59.0 meters |
| | Support Structure Height | 59.0 meters |
| | Ground Elevation (AMSL) | 1366.0 meters |
| Antenna Data | Height of Radiation Center Above Ground Level | 55 meters |
| | Height of Radiation Center Above Average Terrain | 504.9 meters |
| | Height of Radiation Center Above Mean Sea Level | 1421.0 meters |
| | Effective Radiated Power | 55 kW |

Site 1: Antenna
Technical Data

| Section | Question | Response |
|--------------------------------|--|--------------------|
| Antenna Type | Antenna Type | Directional Custom |
| | Do you have an Antenna ID? | Yes |
| | Antenna ID | 103681 |
| Antenna Manufacturer and Model | Manufacturer: | DIE |
| | Model | TFU-10DSB-B-R |
| | Electrical Beam Tilt | 3 |
| | Mechanical Beam Tilt | Not Applicable |
| | toward azimuth | |
| | Polarization | Horizontal |
| DTV and DTS: Elevation Pattern | Does evaluation of this application require the use of an elevation or matrix pattern? | No |
| | Rotation | 0 degrees |
| | Uploaded file for elevation antenna (or radiation) pattern data | |

Directional Antenna Relative Field Values (Pre-rotated Pattern)

| Degree | Value | Degree | Value | Degree | Value | Degree | Value |
|--------|-------|--------|-------|--------|-------|--------|-------|
| 0 | 0.613 | 90 | 0.627 | 180 | 0.873 | 270 | 0.917 |
| 10 | 0.627 | 100 | 0.613 | 190 | 0.917 | 280 | 0.873 |
| 20 | 0.644 | 110 | 0.608 | 200 | 0.952 | 290 | 0.824 |
| 30 | 0.66 | 120 | 0.616 | 210 | 0.979 | 300 | 0.772 |
| 40 | 0.672 | 130 | 0.639 | 220 | 0.995 | 310 | 0.721 |
| 50 | 0.676 | 140 | 0.675 | 230 | 1 | 320 | 0.675 |
| 60 | 0.672 | 150 | 0.721 | 240 | 0.995 | 330 | 0.639 |
| 70 | 0.66 | 160 | 0.772 | 250 | 0.979 | 340 | 0.616 |
| 80 | 0.644 | 170 | 0.824 | 260 | 0.952 | 350 | 0.608 |

Additional Azimuths

| Degree | V _A |
|--------|----------------|
|--------|----------------|

Site 2: Antenna
Location Data

| Section | Question | Response |
|--------------------------------|---|---------------------------------------|
| Antenna Structure Registration | Do you have an FCC Antenna Structure Registration (ASR) Number? | Yes |
| | ASR Number | 1271385 |
| Coordinates (NAD83) | Latitude | 35° 10' 36.4" N+ |
| | Longitude | 082° 40' 53.5" W- |
| | Structure Type | TOWER-A free standing or guyed struct |
| | Overall Structure Height | 54.8 meters |
| | Support Structure Height | 54.8 meters |
| | Ground Elevation (AMSL) | 1146.9 meters |
| Antenna Data | Height of Radiation Center Above Ground Level | 45.7 meters |
| | Height of Radiation Center Above Average Terrain | 429.2 meters |
| | Height of Radiation Center Above Mean Sea Level | 1192.6 meters |
| | Effective Radiated Power | 0.90 kW |

Site 2: Antenna
Technical Data

| Section | Question | Response |
|--------------------------------|--|-----------------|
| Antenna Type | Antenna Type | Non-Directional |
| | Do you have an Antenna ID? | |
| | Antenna ID | 1002716 |
| Antenna Manufacturer and Model | Manufacturer: | ERI |
| | Model | AL8O-27-E |
| | Electrical Beam Tilt | 1.75 |
| | Mechanical Beam Tilt | Not Applicable |
| | toward azimuth | |
| | Polarization | Circular |
| DTV and DTS: Elevation Pattern | Does evaluation of this application require the use of an elevation or matrix pattern? | No |
| | Uploaded file for elevation antenna (or radiation) pattern data | |

Site 4: Antenna
Location Data

| Section | Question | Response |
|--------------------------------|---|---------------------------------------|
| Antenna Structure Registration | Do you have an FCC Antenna Structure Registration (ASR) Number? | No |
| | ASR Number | |
| Coordinates (NAD83) | Latitude | 36° 02' 00.4" N+ |
| | Longitude | 082° 12' 08.5" W- |
| | Structure Type | TOWER-A free standing or guyed struct |
| | Overall Structure Height | 35 meters |
| | Support Structure Height | 35 meters |
| | Ground Elevation (AMSL) | 1243 meters |
| Antenna Data | Height of Radiation Center Above Ground Level | 33 meters |
| | Height of Radiation Center Above Average Terrain | 320.7 meters |
| | Height of Radiation Center Above Mean Sea Level | 1276 meters |
| | Effective Radiated Power | 0.94 kW |

Site 4: Antenna
Technical Data

| Section | Question | Response |
|--------------------------------|--|-----------------|
| Antenna Type | Antenna Type | Non-Directional |
| | Do you have an Antenna ID? | |
| | Antenna ID | 1002716 |
| Antenna Manufacturer and Model | Manufacturer: | ERI |
| | Model | AL8O-27-E |
| | Electrical Beam Tilt | 1.75 |
| | Mechanical Beam Tilt | Not Applicable |
| | toward azimuth | |
| | Polarization | Circular |
| DTV and DTS: Elevation Pattern | Does evaluation of this application require the use of an elevation or matrix pattern? | No |
| | Uploaded file for elevation antenna (or radiation) pattern data | |

Site 5: Antenna
Location Data

| Section | Question | Response |
|--------------------------------|---|----------------------|
| Antenna Structure Registration | Do you have an FCC Antenna Structure Registration (ASR) Number? | Yes |
| | ASR Number | 1299624 |
| Coordinates (NAD83) | Latitude | 35° 07' 56.7" N+ |
| | Longitude | 082° 59' 00.6" W- |
| | Structure Type | LTOWER-Lattice Tower |
| | Overall Structure Height | 54.8 meters |
| | Support Structure Height | 54.8 meters |
| | Ground Elevation (AMSL) | 1453.8 meters |
| Antenna Data | Height of Radiation Center Above Ground Level | 51.8 meters |
| | Height of Radiation Center Above Average Terrain | 570.2 meters |
| | Height of Radiation Center Above Mean Sea Level | 1505.6 meters |
| | Effective Radiated Power | 0.88 kW |

Site 5: Antenna
Technical Data

| Section | Question | Response |
|--------------------------------|--|-----------------|
| Antenna Type | Antenna Type | Non-Directional |
| | Do you have an Antenna ID? | |
| | Antenna ID | 1002716 |
| Antenna Manufacturer and Model | Manufacturer: | ERI |
| | Model | AL8O-27-E |
| | Electrical Beam Tilt | 1.75 |
| | Mechanical Beam Tilt | Not Applicable |
| | toward azimuth | |
| | Polarization | Circular |
| DTV and DTS: Elevation Pattern | Does evaluation of this application require the use of an elevation or matrix pattern? | No |
| | Uploaded file for elevation antenna (or radiation) pattern data | |

Site 6: Antenna
Location Data

| Section | Question | Response |
|--------------------------------|---|---------------------------------------|
| Antenna Structure Registration | Do you have an FCC Antenna Structure Registration (ASR) Number? | Yes |
| | ASR Number | 1280547 |
| Coordinates (NAD83) | Latitude | 35° 24' 47.0" N+ |
| | Longitude | 083° 30' 02.0" W- |
| | Structure Type | TOWER-A free standing or guyed struct |
| | Overall Structure Height | 54.8 meters |
| | Support Structure Height | 48.7 meters |
| | Ground Elevation (AMSL) | 1007.0 meters |
| Antenna Data | Height of Radiation Center Above Ground Level | 51.8 meters |
| | Height of Radiation Center Above Average Terrain | 298.7 meters |
| | Height of Radiation Center Above Mean Sea Level | 1058.8 meters |
| | Effective Radiated Power | 0.88 kW |

Site 6: Antenna
Technical Data

| Section | Question | Response |
|--------------------------------|--|-----------------|
| Antenna Type | Antenna Type | Non-Directional |
| | Do you have an Antenna ID? | |
| | Antenna ID | 1002716 |
| Antenna Manufacturer and Model | Manufacturer: | ERI |
| | Model | AL8O-27-E |
| | Electrical Beam Tilt | 1.75 |
| | Mechanical Beam Tilt | Not Applicable |
| | toward azimuth | |
| | Polarization | Circular |
| DTV and DTS: Elevation Pattern | Does evaluation of this application require the use of an elevation or matrix pattern? | No |
| | Uploaded file for elevation antenna (or radiation) pattern data | |

Site 7: Antenna
Location Data

| Section | Question | Response |
|--------------------------------|---|---------------------------------------|
| Antenna Structure Registration | Do you have an FCC Antenna Structure Registration (ASR) Number? | No |
| | ASR Number | |
| Coordinates (NAD83) | Latitude | 35° 18' 12.4" N+ |
| | Longitude | 083° 10' 39.5" W- |
| | Structure Type | TOWER-A free standing or guyed struct |
| | Overall Structure Height | 35.4 meters |
| | Support Structure Height | 35.4 meters |
| | Ground Elevation (AMSL) | 777 meters |
| Antenna Data | Height of Radiation Center Above Ground Level | 33 meters |
| | Height of Radiation Center Above Average Terrain | -146.0 meters |
| | Height of Radiation Center Above Mean Sea Level | 810 meters |
| | Effective Radiated Power | 0.94 kW |

Site 7: Antenna
Technical Data

| Section | Question | Response |
|--------------------------------|--|-----------------|
| Antenna Type | Antenna Type | Non-Directional |
| | Do you have an Antenna ID? | |
| | Antenna ID | 1002716 |
| Antenna Manufacturer and Model | Manufacturer: | ERI |
| | Model | AL8O-27-E |
| | Electrical Beam Tilt | 1.75 |
| | Mechanical Beam Tilt | Not Applicable |
| | toward azimuth | |
| | Polarization | Circular |
| DTV and DTS: Elevation Pattern | Does evaluation of this application require the use of an elevation or matrix pattern? | No |
| | Uploaded file for elevation antenna (or radiation) pattern data | |

**Parties to the
Application (0)**

Information not provided.

Attributable Interest

| Section | Question | Response |
|--------------------------------|--|----------|
| Equity and Financial Interests | Applicant certifies that equity and financial interests not set forth by the applicant parties are non-attributable. | |
| Other Authorizations | Does the applicant or any party to the application have an attributable interest in any other broadcast station(s). | |

Construction
Permit
Certifications

| Section | Question | Response |
|--|--|---|
| Post-Incentive Auction Expedited Processing | It will operate on the DTV channel for this station as established in the post-incentive auction channel reassignment public notice. | Yes |
| | It will operate post-incentive auction facilities that do not expand the noise-limited service contour in any direction beyond that established by the post-incentive auction channel reassignment public notice. | No |
| | It will operate post-incentive auction facilities that match or reduce by no more than five percent with respect to predicted population from those defined in the post-incentive auction channel reassignment public notice. | Yes |
| | The antenna structure to be used by this facility has been registered by the Commission and will not require re-registration to support the proposed antenna, OR the FAA has previously determined that the proposed structure will not adversely affect safety in air navigation and this structure qualifies for later registration under the Commission's phased registration plan, OR the proposed installation on this structure does not require notification to the FAA pursuant to 47 C.F.R. Section 17.7. | Yes |
| Environmental Effect | Would a Commission grant of Authorization for this location be an action which may have a significant environmental effect? (See 47 C.F.R. Section 1.1306) | No |
| Broadcast Facility | The proposed facility complies with the applicable engineering standards and assignment requirements of 47 C. F.R. Sections 73.616, 73.622(i), 73.623(e), 73.625, 73.1030, and 73.1125. | Yes |
| Interference Protection Provisions | The proposed TV station satisfies the interference protection provisions of 47 C.F.R. Section 73.626. | Yes |
| DTS Facility Requirements | The combined coverage from all of the DTS transmitters in the proposed DTS facility covers all of the station's authorized service area, as required in 47 C.F.R. Section 73.626(f)(1). | Yes |
| | Each DTS transmitter's coverage is contained within either the TV station's Table of Distances area (47 C.F.R. Section 73.626 (c)) or its authorized service area, except where such coverage is of a minimal amount and necessary to meet the requirements of 47 C.F.R. Section 73.626(f)(1). | Yes, coverage entirely contained within station s authorized service area |
| | Each DTS transmitter's coverage is contiguous with at least one other DTS transmitter's coverage, as required in 47 C.F. R. Section 73.626(e)(3). | Yes |
| | The coverage from one or more DTS transmitter(s) in the DTS facility provide(s) principal community coverage, as required in 47 C.F.R. Section 73.626(e)(4). | Yes, one transmitter provides principal community coverage |
| | | |

| | |
|--|-----|
| <p>The combined field strength of all of the DTS transmitters in the proposed DTS facility do not cause interference to another station in excess of the criteria specified in 47 C.F.R. Section 73.616, as required in 47 C.F.R. Section 73.626 (e)(5).</p> <p>Note: The combined field strength level shall be determined by a "root-sum-square" calculation, where the combined field strength level at a given location is equal to the square root of the sum of the squared field strengths from each transmitter in the DTS network at that location.</p> | Yes |
| <p>Each DTS transmitter in the proposed DTS facility is located within either the TV station's Table of Distances area or its authorized service area.</p> | Yes |

Legal
Certifications

| Section | Question | Response |
|------------------------------------|---|---|
| Eligibility | The applicant certifies that it is a: | Governmental entity other than a school |
| | The applicant certifies that the applicant's officers, directors and members of its governing board are broadly representative of the educational, cultural, and civic segments of the principal community to be served. | |
| | The applicant certifies that the Commission has previously granted a broadcast application identified here by file number that found this applicant qualified as a noncommercial educational entity with a qualifying educational program, and that the applicant will use the proposed station to advance a program similar to that the Commission has found qualifying in applicant's previous application. | |
| | FCC File Number | BLEDT-20110921AAA |
| | The applicant certifies that its governing documents (e.g., articles of incorporation, by-laws, charter, enabling statute, and/or other pertinent organizational document) permit the applicant to advance an educational program and that there is no provision in any of those documents that would restrict the applicant from advancing an educational program or complying with any Commission rule, policy, or provision of the Communications Act of 1934, as amended. | Yes |
| Character Issues | <p>Applicant certifies that neither applicant nor any party to the application has or had any interest in, or connection with:</p> <p>(a) any broadcast application in any proceeding where character issues were left in unresolved or were resolved adversely against the applicant or party to the application; or</p> <p>(b) any pending broadcast application in which character issues have been raised.</p> | Yes |
| Adverse Findings | Has the Applicant or any party to this application had an adverse finding or an adverse final action taken by any court or administrative body in a civil or criminal proceeding brought under any law related to the following: any felony; mass media-related antitrust or unfair competition; fraudulent statements to another governmental unit; or discrimination? | No |
| Program Service Certification | Applicant certifies that it is cognizant of and will comply with its obligations as a Commission licensee to present a program service responsive to the issues of public concern facing the station's community of license and service area. | Yes |
| Local Public Notice | Applicant certifies that it has or will comply with the public notice requirements of 47 C.F.R. Section 73.3580. | Yes |
| Equal Employment Opportunity (EEO) | If the applicant proposes to employ five or more full-time employees, applicant certifies that it is filing simultaneously with this application a Model EEO Program Report. | Yes |
| Holding Period | Applicant certifies that this application does not propose a modification to an authorization that was awarded on the basis of a preference for fair distribution of service pursuant to 47 U.S.C. Section 307(b). | Yes |
| | | |

| | |
|--|-----|
| Applicant certifies that the proposed modification will not downgrade service to the area on which the Section 307(b) preference was based. | |
| Applicant certifies that although it proposes to downgrade service to the area on which the Section 307(b) preference was based, applicant has provided full service to that area for a period of four years of on-air operations. | |
| Applicant certifies that this application does not propose a modification to an authorized station that received a credit for superior technical parameters under the point system selection method in 47 C.F.R. Section 73.7003. | Yes |
| Applicant certifies that the population and area within the proposed service contour (60 dBu (FM) or Noise-Limited (TV)) are greater than or equivalent to those authorized. | |

Certification

| Section | Question | Response |
|----------------------------------|--|--|
| General Certification Statements | The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by authorization or otherwise, and requests an Authorization in accordance with this application (See Section 304 of the Communications Act of 1934, as amended.). | |
| | The Applicant certifies that neither the Applicant nor any other party to the application is subject to a denial of Federal benefits pursuant to §5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. §862, because of a conviction for possession or distribution of a controlled substance. This certification does not apply to applications filed in services exempted under §1.2002(c) of the rules, 47 CFR . See §1.2002(b) of the rules, 47 CFR §1.2002(b), for the definition of "party to the application" as used in this certification §1.2002 (c). The Applicant certifies that all statements made in this application and in the exhibits, attachments, or documents incorporated by reference are material, are part of this application, and are true, complete, correct, and made in good faith. | |
| Authorized Party to Sign | FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID Upon grant of this application, the Authorization Holder may be subject to certain construction or coverage requirements. Failure to meet the construction or coverage requirements will result in automatic cancellation of the Authorization. Consult appropriate FCC regulations to determine the construction or coverage requirements that apply to the type of Authorization requested in this application. WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND /OR IMPRISONMENT (U.S. Code, Title 18, §1001) AND/OR REVOCATION OF ANY STATION AUTHORIZATION (U.S. Code, Title 47, §312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, §503). | |
| | I certify that this application includes all required and relevant attachments. | Yes |
| | I declare, under penalty of perjury, that I am an authorized representative of the above-named applicant for the Authorization(s) specified above. | Thomas Brooks Skinner <i>Associate General Manager and General Counsel</i> 03/18/2020 |

Attachments

| File Name | Uploaded By | Attachment Type | Description |
|--|-------------|----------------------|---|
| WUNW amended DTS conversion minor mod application ENG 03-16-2020.pdf | Applicant | All Purpose | WUNW engineering exhibits and description of amendment. FCC processing of this proposal is requested using a 1.0 km cell size and 0.1 km terrain profile increment. |
| WUNW - Local Public Notice Exhibit.pdf | Applicant | Legal Certifications | Local Public Notice Exhibit |
| WUNW Purpose of Amendment Exhibit.pdf | Applicant | Amendment | WUNW Amendment Explanation |