Approved by OMB (Office of Management and Budget) 3060-0386
July 2002

Federal Communications Commission

(REFERENCE COPY - Not for submission)

DTS Engineering STA Application

File Number: **0000238132** | Submit Date: **02/21/2024** | Call Sign: **WUNW** | Facility ID: **83822** | FRN: **0001910066** | State: **North Carolina** | City: **CANTON**

Service: **DTS** | Purpose: **Engineering STA** | Status: **Granted** | Status Date: **02/07/2024** | Expiration Date: **08/06/2024**

Filing Status: **Active**

General Information

Section	Question	Response

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:	

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@pbsnc.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 (3)

Contact Name	Address	Phone	Email	Contact Type
Patrick Cross Brooks, Pierce et al.	Patrick Cross 150 Fayetteville Street Suite 1700 Raleigh, NC 27601 United States	+1 (919) 839-0300	pcross@brookspierce.com	Legal Representative
Donald W Smith University of North Carolina	Donald Smith PO Box 14900 RESEARCH TRIANGLE PARK, NC 27709 United States	+1 (919) 549-7025	dsmith@pbsnc.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

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:	
	Facility ID	
Coordinates (NAD83)	Latitude	- -
	Longitude	- -

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	115 kW

Site 1: Antenna Technical Data

Section	Question	Response
Antenna Type	Antenna Type	Directional Custom
	Do you have an Antenna ID?	No
	Antenna ID	1011449
Antenna Manufacturer and Model	Manufacturer:	Dielectric
	Model	TFU-10DSB/VP-B-R
	Electrical Beam Tilt	3
	Mechanical Beam Tilt	Not Applicable
	toward azimuth	
	Polarization	Elliptical
DTV and DTS: Elevation Pattern	Does the proposed antenna propose elevation radiation patterns that vary with azimuth for reasons other than the use of mechanical beam tilt?	
	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	0.675	**90**	1.000	**180**	0.675	**270**	0.676
10	0.721	**100**	0.995	**190**	0.639	**280**	0.672
20	0.772	**110**	0.979	**200**	0.616	**290**	0.660
30	0.824	**120**	0.952	**210**	0.608	**300**	0.644
40	0.873	**130**	0.917	**220**	0.613	**310**	0.627
50	0.917	**140**	0.873	**230**	0.627	**320**	0.613
60	0.952	**150**	0.824	**240**	0.644	**330**	0.608
70	0.979	**160**	0.772	**250**	0.660	**340**	0.616
80	0.995	**170**	0.721	**260**	0.672	**350**	0.639

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 the proposed antenna propose elevation radiation patterns that vary with azimuth for reasons other than the use of mechanical beam tilt?	
	Uploaded file for elevation antenna (or radiation) pattern data	

Site 3: 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 3: 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 the proposed antenna propose elevation radiation patterns that vary with azimuth for reasons other than the use of mechanical beam tilt?	
	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?	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 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 the proposed antenna propose elevation radiation patterns that vary with azimuth for reasons other than the use of mechanical beam tilt?	
	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?	No
	ASR Number	
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	35 meters
	Support Structure Height	31 meters
	Ground Elevation (AMSL)	1007 meters
Antenna Data	Height of Radiation Center Above Ground Level	33 meters
	Height of Radiation Center Above Average Terrain	279.5 meters
	Height of Radiation Center Above Mean Sea Level	1040 meters
	Effective Radiated Power	0.94 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 the proposed antenna propose elevation radiation patterns that vary with azimuth for reasons other than the use of mechanical beam tilt?	
	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?	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 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 the proposed antenna propose elevation radiation patterns that vary with azimuth for reasons other than the use of mechanical beam tilt?	
	Uploaded file for elevation antenna (or radiation) pattern data	

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.	**David Crabtree** *Chief Executive Officer* 02/02/2024

Attachments

File Name	Uploaded By	Attachment Type	Description
WUNW Site-3 STA Request 240131.pdf	Applicant	General Information	WUNW Site No. 3 STA Request Exhibit