

# Educational Media Foundation

## Exhibit 11-1 – Compliance with CFR 74.1204

New-T, 105.7 MHz, Durham, NC  
35-59-20 N, 78-51-39 W, 0.001 kW, 186m RCAMSL

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**Full Service Contour Overlap Statement** – An interference study was prepared to determine the closest full-service authorizations and applications to the proposed FM translator facilities. The full-service broadcast FM radio stations within 50 km of the service contour of any full-service radio station or within 30 km of the pertinent service or interfering contours of any FM translator application or authorization. Exhibit 11-2 is a map of the service and interfering contours of the proposal and the service contours of the pertinent stations to study and prove compliance with CFR Title 47, Section 74.1204 with respect to interference to full service broadcast radio stations. The pertinent stations, applications and frequency range are:

Call Sign	State	City	Freq	ERP_w	LicenseeClass	Status	Distance_km
WDCG NC	DURHAM		105.1	100000.0		CAPSTAR TX LIMITED PARTNERSHIP	
C	LIC	29.78					
WRDU NC	WILSON		106.1	100000.0		CAPSTAR TX LIMITED PARTNERSHIP	
C0	CP	66.15					
WRDU NC	WILSON		106.1	100000.0		CAPSTAR TX LIMITED PARTNERSHIP	
C0	LIC	66.15					

Title 47 CFR Section 74.1204(d) states that, “The provisions of this section concerning prohibited overlap will not apply where the area of such overlap lies entirely over water. In addition, an application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to intervening terrain, lack of population or such other factors as may be applicable.” Exhibit 11-2 demonstrates that there is overlap with second adjacent channel station WRDU (LIC & CP), Wilson, NC. The applicant certifies and demonstrates that no interference will be caused by the instant application because the interfering area, as determined by the “undesired to desired” ratio method of determining interference, is entirely unpopulated. In this case the signal level of the Station WRDU computed f(50,50) contour geographically coincident with the proposed translator site is 65 dBu as demonstrated by Exhibit 11-2. Given a ratio of undesired-to-desired signal differences of 40 dB, (which is the undisputed and standing basis for all FCC second and third adjacent channel interference regulations for FM broadcasting in the US), the interfering contour of the proposed translator is defined as 105 dBu. Due to the lack of “terrain” in the proposed interfering area, the FCC staff recognizes that the “free-space” method of determining distance to contours is far more accurate than the “F” curves at short distances and lower power levels. The proposed interfering contour (free-space method employed) extends 39.5 meters from the proposed antenna and since the interfering signal would not extend over any occupied structures, residences, or places of employment and would not extend over any public roads, no interference will be expected, now or in the future and this application complies completely with Section 74.1204 with respect to generated interference by the proposed translator. Furthermore the specified center of radiation is 59 meters AGL. The specified interfering contour extends 39.5 meters from the proposed radiation center. Therefore, it would be impossible for population or roads to exist within the interfering contour given that the contour does not reach the ground at any level and is located easily within the “fall distance” of the existing registered tower.

Title 47 CFR Section 74.1204(d) states that, “The provisions of this section concerning prohibited overlap will not apply where the area of such overlap lies entirely over water. In addition, an application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to intervening terrain, lack of population or such other factors as may be applicable.” Exhibit 11-2 demonstrates that there is overlap with third adjacent channel station WDCG, Durham, NC. The applicant certifies and demonstrates that no interference will be caused by the instant application because the interfering area, as determined by the “undesired to desired” ratio method of determining interference,

is entirely unpopulated. In this case the signal level of the Station WDCG computed f(50,50) contour geographically coincident with the proposed translator site is 83 dBu as demonstrated by Exhibit 11-2. Given a ratio of undesired-to-desired signal differences of 40 dB, (which is the undisputed and standing basis for all FCC second and third adjacent channel interference regulations for FM broadcasting in the US), the interfering contour of the proposed translator is defined as 123 dBu. Due to the lack of “terrain” in the proposed interfering area, the FCC staff recognizes that the “free-space” method of determining distance to contours is far more accurate than the “f” curves at short distances and lower power levels. The proposed interfering contour (free-space method employed) extends 4.97 meters from the proposed antenna and since the interfering signal would not extend over any occupied structures, residences, or places of employment and would not extend over any public roads, no interference will be expected, now or in the future and this application complies completely with Section 74.1204 with respect to generated interference by the proposed translator. Furthermore the specified center of radiation is 59 meters AGL. The specified interfering contour extends 4.97 meters from the proposed radiation center. Therefore, it would be impossible for population or roads to exist within the interfering contour given that the contour does not reach the ground at any level and is located easily within the “fall distance” of the existing registered tower.

**Translator Contour Overlap Statement** – An interference study was prepared to determine the closest FM translator authorizations and applications to the proposed FM translator facilities. The FM translator stations within the appropriate study and frequency range are:

There are no existing FM Translator authorizations or applications within the affected area.

**LPFM Contour Overlap Statement** - All LPFM Stations, permits and applications under consideration have been studied using the maximum facilities unless otherwise specified as set forth in 74.1204(a)(4). The LPFM stations within the appropriate study and frequency range are:

There are no LPFM stations within the affected area.

**IF Separations Statement** – The applicant is categorically exempt from protecting IF stations (53 or 54 channels removed from the proposed). This is due to the translator’s ERP being proposed at a power level under 100 watts, pursuant to 74.1204(g).

**Mexican Separations Statement** – This application is more than 320 km from the Mexican Border. Therefore, it categorically complies with the provisions of 74.1204(h).

**Canadian Separations Statement** – This application is more than 320 km from the Canadian Border. Therefore it categorically complies with the provisions of 74.1204(h).

Site: NEW

Coordinates: 35-59-20.0 N, 78-51-39.0 W

Freq: 105.70000 MHz

ERP: 1.00 W

Bearing	ERP W	HAAT	DH	Distance	Lat	Lon
0	1.00	93	90	3.05 36-00-58.7 N	78-51-39.0 W	
30	1.00	92	60	3.03 36-00-44.9 N	78-50-38.3 W	
60	1.00	94	30	3.07 36-00-09.6 N	78-49-52.7 W	
90	1.00	92	30	3.03 35-59-19.9 N	78-49-37.7 W	
120	1.00	69	70	2.73 35-58-35.7 N	78-50-04.3 W	
150	1.00	70	30	2.73 35-58-03.3 N	78-50-44.3 W	
180	1.00	84	30	2.92 35-57-45.4 N	78-51-39.0 W	
210	1.00	90	30	3.00 35-57-55.9 N	78-52-38.9 W	
240	1.00	98	60	3.13 35-58-29.2 N	78-53-27.5 W	
270	1.00	75	130	2.79 35-59-19.9 N	78-53-30.4 W	
300	1.00	62	80	2.64 36-00-02.6 N	78-53-10.4 W	
330	1.00	60	80	2.65 36-00-34.3 N	78-52-32.0 W	

