

ENGINEERING EXHIBIT

Incentive Auction Channel Reassignment

Request for Special Temporary Authorization

prepared for

Rochester TV License Company, LLC

KIMT(DT) Mason City, IA

Facility ID 66402

Ch. 24 475 kW 466 m

*Rochester TV License Company, LLC, (“RTV”), licensee of KIMT(DT) (Facility ID 66402, Mason City IA), requests Special Temporary Authority (“STA”) to operate KIMT on its reassignment channel with parameters at variance. Reassignment of KIMT from Channel 42 to Channel 24 was specified in the *Incentive Auction Closing and Channel Reassignment Public Notice* (“CCRPN”, DA 17-317, released April 13, 2017). The KIMT Channel 24 Construction Permit (“CP”, file# 0000027610) authorizes operation at 610 kW effective radiated power (“ERP”) at 466 meters antenna height above average terrain (“HAAT”) with a nondirectional horizontally-polarized top-mounted antenna. KIMT is presently operating with an interim facility on its reassignment Channel 24 pursuant to a separate STA (LMS file# 0000056419) at 22.3 kW ERP and 367 m HAAT.*

A new, top-mounted antenna has been installed for the permanent Channel 24 operation; however the as-built antenna is elliptically-polarized and as such has a lower power gain than the originally planned horizontally-polarized antenna. It has been determined that, with the elliptically-polarized antenna, the transmitter’s power output capacity is not sufficient to achieve the authorized ERP of 610 kW. Accordingly, it will be necessary for the station to modify its construction permit. Meanwhile, *RTV* herein requests STA to operate the new, top-mounted antenna at the reduced ERP of 475 kW.

The as-built antenna is an elliptically-polarized directional ERI model ATW22H3-ETO-24H (30 percent vertical polarization), installed at the site location and height as authorized in

the CP. The proposed STA facility provides 48 dBμ principal community contour coverage over Mason City, and the 41 dBμ noise limited service contour does not extend beyond that of the authorized KIMT, as depicted in Figure 1. The proposed facility's predicted population exceeds 95 percent of the *CCRPN* baseline facility's population.

Regarding RF exposure, calculations per FCC OET Bulletin Number 65 (considering 10 percent antenna relative field in downward elevations) show that the signal density near the tower at two meters above ground level attributable to the proposed facility is $1.0 \mu\text{W}/\text{cm}^2$, which is 0.3 percent of the general population/uncontrolled maximum permitted exposure limit. This is well below the five percent threshold limit described in §1.1307(b) regarding sites with multiple emitters, categorically excluding the applicant from responsibility for taking any corrective action in the areas where the proposal's contribution is less than five percent. The applicant will coordinate exposure procedures with all pertinent stations and will reduce power or cease operation as necessary to protect persons having access to the site, tower, or antenna from RF electromagnetic field exposure in excess of FCC guidelines.

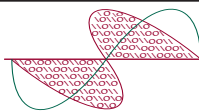
List of Attachments

Figure 1 Proposed STA Coverage Contours

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Figure 1
Proposed STA Contours
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November, 2018

