

EXHIBIT 18
Imlay City, MI
CHANNEL 206A

Introduction: Engineering Exhibit 18 will clarify what steps have been taken to avoid any significant Channel 6 interference.

Procedure: An adjustment of 6 dBu for television receiving antenna directivity was added between the range of angles allowed under 73.525(e)(1)(iii). Since the applicant chooses to use mixed polarity, distances to the appropriate FM field strength contours were determined by using the formula listed in section 73.525(e)(4)(ii), $(H + V/A)$ is no greater than P . Substituting the appropriate values, $(.001 \text{ kW} + 6.0 \text{ kW} / 40 = .151 \text{ kW})$. The equivalent permitted horizontal power is 151 watts since the area is outside a city with a population of 50,000 persons. The non-directional horizontal radiator will radiate 1 watt in all directions equally. The vertical directional values were divided by 40 and then added to 1 watt horizontal component in 5 degree increments. The sum values were used to determine the distance to the 63 dBu and 69 dBu F(50, 10) interfering contours.

Exhibits: On the right of the exhibit are the 63 dBu and 69 dBu F(50, 10) contours for the proposed FM station are drawn. The centroid method was used to determine the persons within the interference area. The interference area was found to have 2805 persons within the interference area. A population spray overlay shown with different colored "+" confirms the population count.

Conclusion: This proposal qualifies for an exemption under 47 CFR 73.525 (c). The Commission may properly grant this application since it is below their statutory limit of 3,000 persons.

