Robert A. Lynch
Proposed New FM Broadcast Translator
Lansing, NY
Ch. 273FT (102.5 MHz.), 10w. ERP, 133m AAT

ENGINEERING STATEMENT

This Engineering Statement has been prepared by Robert A. Lynch, Applicant for a New commercial FM Broadcast Translator to serve Lansing, New York. The engineering supports the Applicant's Long Form construction permit application to implement the proposal first advanced in Short Form application, File No: BNPFT-20030317AFE (Facility ID 150701), subsequently amended in accordance with the Commission's Public Notice of May 21, 2013 (DA 13-1170).

This Applicant, Mr. Lynch, is duly qualified to author and oversee preparation of this engineering application and its included exhibits. Mr. Lynch served for 25 years, through October 2012, as a staff engineer with the firm Independent Broadcast Consultants, Inc. (IBC), Trumansburg, NY. In that capacity, he authored, prepared, and assisted in the preparation of numerous AM and FM broadcast applications, including those for FM Translators. He is thoroughly familiar with the Commission's Rules and engineering standards of allocation, and has applied that knowledge in the preparation of this filing.

The Applicant's preparation of this submission is based on his own research, assisted by the technical resources of IBC and its president, William J. Sitzman. All computer-generated contour calculations and contour maps were prepared utilizing IBC proprietary software. Minor additional assistance was provided by Mr. Mark Humphrey, technical consultant to a former mutually-exclusive applicant.

Resolution of Mutual Exclusivity

On July 19, 2013, this Applicant, Mr. Lynch, amended his referenced Short Form application in accordance with the *technical resolution amendment* procedures authorized under the Commission's Public Notice of May 21, 2013. On July 19th, both this Applicant and a mutually-exclusive applicant, Calvary Chapel of the Finger Lakes, Inc. (Calvary Chapel), applicant for a New FM Translator at East Ithaca, NY, under BNPFT-20030317KMQ; Facility ID 151608, tendered Short Form application amendments. Elimination of mutual prohibited contour overlap was effectively accomplished through frequency change. Instead of being mutually-exclusive, both on Channel 272 (102.3 MHz.), their amendments migrated the Calvary Chapel Short Form proposal to Channel 271 (102.1 MHz.) and this Applicant's Short Form filing to Channel 273 (102.5 MHz.) As second-adjacent channel applicants, their interfering and protected allocation contours would no longer overlap.

By Commission Public Notice dated July 31, 2013 (DA 13-1675), both referenced applicants were directed to prosecute their previous Short Form proposals by tendering Long Form applications. Accordingly, this application is submitted.

Minor Coordinate Change

This Long Form engineering proposal advances facilities essentially identical to those submitted with the original and subsequently amended BNPFT-20030317AFE, taking into account the amended frequency change. However, a very minor adjustment of proposed antenna coordinates is necessary. This application continues to specify placement of the single-bay non-directional FM translator antenna on the

Center (#2) radiator of a four-element AM broadcast array proposed by Romar Communications Inc.(Romar) to serve the community of Lansing, NY under construction permit application BNP-20020522AAM (Facility ID 136961, currently pending. [Applicant Robert A. Lynch is also the president, director and majority shareholder of Romar.] At the time the translator application was tendered, Commission policy allowed all four AM radiators to bear common coordinates scaled to the center of array. However, the policy subsequently changed, and each of the four proposed AM radiators must now be identified by distinct coordinates. Accordingly, Romar re-registered its proposed, as yet unbuilt, antennas to comply with Commission policy. This Long Form application revises the translator's site by *two seconds* latitude and *one second* longitude to conform to the revised coordinates of the Center (#2) antenna of the Romar array.

Allocation Considerations

Figure 1 of this application provides a tabulation of fourteen co-channel, adjacent-channel and I.F.-related channel facilities and/or proposals which were studied in relation to the facilities advanced in this application. All entries were based on the most recent engineering specifications contained on the FCC database.

[It should be noted that the two I.F.-related stations listed, WICB and WRFI, are provided for demonstration purposes only. Since this instant proposal would operate with a power of less than 100 watts, I.F. protection is not required under the provisions of Section 74.1204(g) of the Rules.]

Figure 2A and then **Figure 2B** provide first a full-scale, computer-generated FM allocation map showing contour protection to all facilities; and then a Detailed Allocation Map, which provides better resolution of contour clearance to facilities and/or proposals in close proximity. Contour calculations utilize FCC F(50,50) curves for protected contours and F(50,10) curves for interfering contours. As shown, appropriate contour clearance is achieved.

Figure 3 provides a tabulation of average terrain. Antenna HAAT, and selected contours for this proposal.

Figure 4 provides the required LPFM Preclusion Study to confirm that this proposal would not limit any subsequent LPFM licensing opportunity in any designated Appendix A grid.

Appendix 1 presents a copy of Exhibit 10A from this Applicant's Amended Short Form filing of July 19, 2013. It documents with clarity the contour clearance between this proposal and the Calvary Chapel proposed facilities, now specified on Channel 271. (For the purpose of this exhibit, the slight change in this proposal's site coordinates is de minimus.)

Environmental Considerations

This proposal raises no issues other than those which might arise from exposure to radiofrequency emissions by the general public in an uncontrolled environment. Given the elevation of the translator antenna and the low level of antenna power proposed, this impact is insignificant.

Table B on Page 67 of OET Bulletin #65 (Aug. 1, 1997) states that the maximum permissible exposure for uncontrolled environments in the 30-300 MHz. band is a power density of 0.2 milliwatts per centimeter squared. As a worst-case, power density is studied at points two (2) meters above ground contiguous to the FM translator antenna; if power density is not excessive at that elevation, it would not be excessive below it, points where the general public might have access.

The proposed FM translator would operate with 10 watts ERP at an elevation of 46 meters (151 feet) above ground utilizing a one-bay antenna. Given the characteristics of the Armstrong Model FMA 707-1 antenna, the maximum power density at the 2m AGL level (44 meters below the antenna) would be no greater than 0.00009 milliwatts per centimeter squared, less than one-tenth of one per cent of the allowed maximum exposure. Clearly, this proposal satisfies RF exposure requirements for the uncontrolled environment. [Separate standards would apply for the AM radiators themselves; but this translator's incremental impact would be an insignificant component.]

Conclusion

In summary, this proposal stands in total conformance with allocation rules and environmental standards.

August 29, 2013

Robert A. Lynch
Applicant