

CENTRAL MN ESB REGION
Allied Radio Matrix for Emergency Response (ARMER)
Standards, Protocols, Procedures

Document Section:	1. Management of System	O&O Approved
Sub-Section:	Central MN 1.8.1	Date: 06/21/2018
Procedure Title:	Signal Booster Requirements	
Date Established:	08/17/2010	
Replaces Document Dated:	08/17/2010	ESB Approval
Date Revised:	06/21/2018	Date: 12/19/2018

1. Purpose or Objective

To establish the procedure for approval of installations of Signal Boosters (BDA or CRAE) within the regional public safety radio system.

2. Technical Background:

- **Capabilities**

- **Constraints**

The FCC requires that consent be obtained from the license holder of any frequency to be rebroadcast through a Signal Booster. In the case of ARMER, the frequencies are licensed by MNDOT and in some cases a local entity (county/city).

MNDOT requires that it be notified of every (indoor and outdoor) ARMER frequency Signal Booster installation.

3. Operational Context:

Since changes to the regional public safety radio system may affect more than one participant, changes and upgrades will need to be reviewed for possible performance or cost impact to some or all users of the system.

4. Recommended Protocol/ Standard:

Consent will be obtained from the license holder (MNDOT or local entity) of any frequency to be rebroadcast through a Signal Booster. Notification of every (indoor and outdoor) Signal Booster installation will be submitted to MNDOT for review. MNDOT also requires that each *outdoor* Signal Booster be reviewed the by the Operations and Technical Committee (OTC) of the Statewide Emergency Communications Board (SECB).

See Appendix A

5. Recommended Procedure:

Requests for signal boosters which are being installed to improve ARMER coverage in buildings shall be submitted to MNDOT, as well as, the appropriate sub-system administrator for review. If a determination is made that the proposed signal booster design poses a risk to proper operation of any ARMER subsystem system the sub-system administrator can recommend a design change or request review by the CM Owners & Operators Committee. The subsystem administrator shall maintain a record of the installation and will notify first responders in their area that a signal booster exists in the building or area.

6. Management

The appropriate system manager or sub-system administrator will be responsible for the tracking of signal booster which are installed to improve ARMER system coverage.

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MINNESOTA DEPARTMENT OF PUBLIC SAFETY



- Alcohol and Gambling Enforcement
- Bureau of Criminal Apprehension
- Driver and Vehicle Services
- Emergency Communication Networks
- Homeland Security and Emergency Management
- Minnesota State Patrol
- Office of Communications
- Office of Justice Programs
- Office of Traffic Safety
- State Fire Marshal

Emergency Communication Networks

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www.ecn.state.mn.us

Rectangular Snip

To: Signal Booster (BDA) Grant Applicants
 From: ECN Grants Staff
 Date: February 28, 2017
 Subject: Signal Booster (BDA) Requirements

The Minnesota Department of Transportation (MNDOT) and the Federal Communications Commission (FCC) have established the following requirements as they relate to Signal Boosters, often known as BDAs (Bidirectional Amplifiers).

The FCC requires that consent be obtained from the license holder of any frequency to be rebroadcast through a Signal Booster. In the case of ARMER, the frequencies are licensed by MNDOT.

MNDOT requires that it be notified of every (indoor and outdoor) ARMER frequency Signal Booster installation. MNDOT also requires that each outdoor Signal Booster be reviewed by the Operations and Technical Committee (OTC) of the Statewide Emergency Communications Board (SECB). Notice to MNDOT can be made by email to:
 David Savolainen
david.savolainen@state.mn.us
 651-234-7972

The FCC requires that all Part 90 Class B Signal Boosters (>75 kHz bandwidth) be registered with the FCC. MNDOT further requires that all Part 90 Class A Signal Boosters (<75 kHz bandwidth) rebroadcasting ARMER frequencies be registered with the FCC.

Registering a Signal Booster with the FCC can be accomplished at no cost online at <https://signalboosters.fcc.gov/signal-boosters/>. Required data will include:

- Location of Signal Booster (address and latitude & longitude)
- FCC Call Signs for the frequencies to be rebroadcast (provided by MNDOT)
- Frequencies Impacted
- Contact Information

Please ensure that your staff and/or your contractors follow these procedures. Please contact the ECN or MNDOT if you have any questions.

Thank you.