

Guidance for Flashing Arrow Boards

It is the goal of Mn/DOT to provide consistent use of truck and trailer mounted Flashing Arrow Boards (FABs) statewide that meet LED standards, while reducing the carbon footprint by changing from the use of diesel generators (used to power older arrow boards) to solar power battery units for trailer mounted FABs.

The districts are directed to start a program to replace the number of incandescent Flashing Arrow Boards (FABs) with Light Emitting Diode (LED) FABs that are solar powered. The following are guidance to be followed for all types of FABs:

- Phase out Mn/DOT's fleet of incandescent FABs by attrition.
- Districts should review and evaluate their inventory of FABs every 2 years
- FAB's not performing as designed or damaged beyond repair shall be replaced with a LED flashing arrow boards from the approved products list (APL).
- Replacement of incandescent bulbs is permissible, especially when they are found lacking in intensity) with recommended halogen bulbs.
- Older FABs that are damaged should not be repaired and reused, as the cost to repair and to keep other older diesel powered boards in service outweighs the cost to purchase a FAB from the APL. Parts should not be purchased to keep older units working.
- FABs must have a flat black background to provide high contrast and reduce headlight and sunlight reflection.
- When equipped with sun screen bulb hoods, they must all be in place and in unbroken condition.
- The dimming feature must be working.
- All bulbs must be working and properly oriented in their "sockets"
- Incandescent bulbs should all be the General Electric Model 4412A, which will give a consistent intensity and amber color across the board.
- Batteries on trailer models must be properly maintained. Absorbed glass matte (AGM) batteries, while more expensive, are a maintenance free alternative to lead acid batteries.
- Diesel engines on trailers should be operated at maximum rpm.
- If truck mounted, diesel engines should be operated at an rpm which keeps batteries charged and protects the alternator from premature failure. This number varies so check with shop mechanic.
- Solar arrays must be clean, and if used in the winter, free from snow. It appears that some external battery charging may occasionally be needed.
- As with all units, aiming the device into traffic is important.