

Standard Guidelines for Product Review

SEQUENTIAL ARROW SIGN;

Section 00225.16

April 27, 2011

00225.16 – Sequential Arrow Sign;

Type 'B' signs are used for truck-mounted applications and Type 'C' signs for trailer-mounted applications. Sequential Arrow Signs are required to meet all aspects of the current Manual on Uniform Traffic Control Devices (MUTCD). The following list is a summary of our requirements.

The Sequential Arrow sign display shall:

- Fully comply with the current version of the MUTCD
- Be rectangular, have a solid, durable appearance, and finished in non-reflective black
- Include an electronic panel mounted on a vehicle, trailer, or other suitable support
- Include remote controls for all vehicle-mounted panels
- Be capable of being mounted at least 7 feet above the pavement to the bottom of the sign when used.
- Be legible from distances listed in the chart on Page 2 of these specifications. (Note: this is an actual field test)
- Include a properly sized display and number of elements, as listed on Page 2
- Be capable of displaying patterns in 'Flashing Arrow', 'Sequential Arrow', 'Sequential Chevron,' 'Flashing Double Arrow,' and 'Flashing Caution' modes, as shown on Page 2.
- Be capable of sustaining a flash rate between 25 and 40 flashes per minute
- Provide a flashing mode capable of 50% "on" and 50% "off" time for each flashing phase. "On" time shall be equal intervals of 25% for each sequential phase.
- Have an Automatic dimming capability. The Auto-dimming feature (for nighttime use) shall reduce the full-rated lamp voltage by 50%.
- Shall have solar panels (minimum 50 watts) that are suitable for operation in the Northwest. Possess a battery power source capable of keeping the sign functioning for at least 21 consecutive days on the batteries alone without requiring charging.
- If bulb matrix, either possess recessed light elements or provide hoods shielding the top part of the lamp by not less than 180 degrees.
- Provide amber-colored light elements with a wavelength between 587 nm and 593 nm
- Have a model number that is unique and only includes manufactured products that meet the requirements listed herein.
- Have Identification tags must include: Manufacturer name, Address, Phone Number, Model Number, Serial Number and Manufacture date. I.D. tag shall be indelible.
- You are required to let us know if production of any product we approve has been permanently discontinued.

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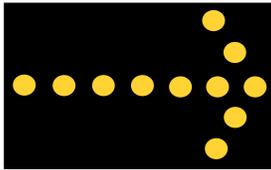
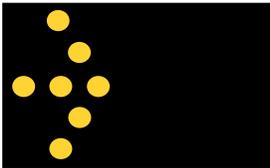
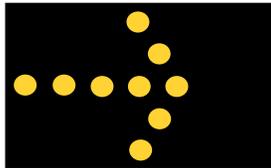
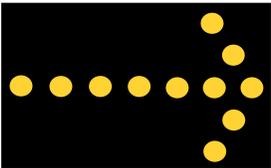
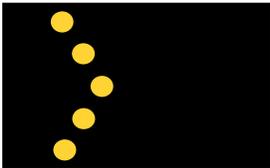
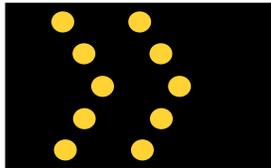
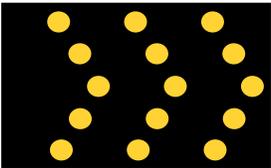
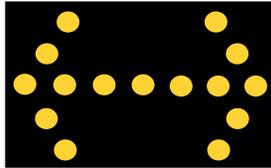
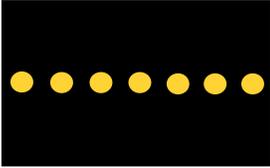
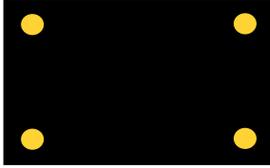
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The sequential arrow shall be capable of the following modes:

Operating Mode

Panel Display

- Flashing Arrow			
- Sequential Arrow			
- Sequential Chevron			
- Flashing Double Arrow			
- Flashing Caution		or,	

Type 'B' Sequential Arrows are appropriate for intermediate-speed facilities and for maintenance or mobile operations on high-speed roadways.

Type 'C' Sequential Arrows are to be used on high-speed, high-volume roadways.

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Panel Type	Min. Size (Inches)	Min. Legibility Distance (miles)	Min. Number Of Elements
B	60 x 30	$\frac{3}{4}$	13
C	96 x 48	1	25

If any of the requirements listed above are normally available as “options”, the manufacturer must:

- Identify the Sequential Arrow to be qualified specifically for Oregon use by a unique Model Number
- Equipment labeled with the said model number shall include the devices required to meet ODOT specifications
- Only those qualified models with the unique Model Number will be allowed for use on ODOT highway construction projects or Maintenance Operations

PROCESS:

- **Submit the following:**
 - [Preliminary Information for Product Evaluation Form.](#)
 - Documentation showing compliance with Specs listed above.
 - 6 copies of the product brochure.
 - 2 copies of the Operational Instruction sheet.
- **Submit to: Product Evaluation Coordinator**

Oregon Dept. of Transportation
800 Airport Road SE
Salem, OR. 97301-4792
- **On-Site Demonstration:**
 - After determining the product meets the above requirements, a time will be scheduled to bring the device to Salem for an on-site evaluation for legibility.
 - At the evaluation, the device will be set up and reviewed by a number of Evaluators at a distance of 1.0 miles. Patterns displayed on the device must be discernable as to the shape and direction (for sequential patterns) by the Evaluators.
- **Conclusion:**
 - If the Sequential Arrow complies with all requirements listed above, the vendor has submitted all required documents; **and**, the evaluation is successful, the recommendation to the QPL Committee will be to qualify the product.
 - If the Sequential Arrow is not legible by more than one Evaluator, or does not meet the requirements listed above, the recommendation sent to the QPL Committee will be to place the product on the Rejected List.
 - The vendor will be notified after the QPL Committee meets and a final determination has been made.