

**DERRY-LONDONDERRY EXIT 4A  
13065****FEBRUARY 6, 2020****SPECIAL PROVISION****AMENDMENT TO SECTION 619 -- MAINTENANCE OF TRAFFIC****Item 619.279 – Automated Trailer-Mounted Speed Limit Sign****Description**

**1.1** This special provision provides for furnishing, operating, and maintaining an Automated Trailer Mounted Radar Speed Limit Sign for project use. The Design-Build Team shall furnish, operate, and maintain the Automated Trailer Mounted radar Speed Limit Signs during the project operations.

**1.1.1** Instruction and maintenance manuals shall be provided.

**Materials****2.1. Automated Trailer Mounted Speed Limit Sign.**

**2.1.1** Trailer mounted speed limit signs shall be self-contained units including sign assembly, flashing lights, directional radar to measure speed limits, a regulatory speed limit sign, a construction sign stating “Work Zone Speed Limit When Flashing” and power supply specifically constructed to operate as a trailer-mounted sign. The preferred color of the unit shall be “construction orange”.

**2.1.2 Signs.** Base material for the regulatory speed limit signs shall be weather proof, rigid substrate specifically manufactured for highway signing and meet the retro-reflective sheeting application requirements of the sheeting manufacturer.

**2.1.2.1** Sign text shall consist of the letters, digits and symbols either applied by stick-on, or silk screen, to conform with the dimensions and designs indicated in the Contract, NHDOT Construction Sign Standards, MUTCD and/or FHWA Standard Highway Signs. The materials and methods shall be in accordance with standard commercial processes.

**2.1.2.2** The regulatory sign should have changeable speed limit numbers.

**2.1.2.3** “Work Zone” construction signs shall be mounted on the trailer unit above and below the regulatory speed limit sign. (see attached detail). The “When Flashing” construction sign shall be added to the trailer, if the Contract Administrator deems the sign necessary.

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**2.1.2.4** Signs and secondary signs shall follow the MUTCD for minimum mounting heights.

**2.1.3 Power supply.** The power supply shall be either full battery power with solar panel charging (capable of maintaining a charged battery level) and 135 ampere, 12 volt deep cycle batteries, or diesel powered generator with a fuel capacity sufficient for 10 hours of continuous operation.

**2.1.4 Flashing Lights.** Each unit shall be equipped with two 8" diameter (min.) mono-directional flashing lights, placed in accordance with the MUTCD, with amber lenses and reflectors, which are visible through a range of 120 degrees when viewed facing the sign. The lights, either strobe, halogen, or incandescent lamps, shall be visible for a minimum distance of one mile under daylight conditions and shall have a minimum flash rate of 40 flashes per minute. An "On" indicator light shall be mounted on the back of the signs, which is visible for at least 500 feet to provide confirmation that the flashing lights are operating.

**2.1.5 Radar.** The directional radar shall monitor approaching traffic only. The radar shall be capable of measuring speeds from 5 to 70 MPH at a distance of up to 1500 feet and shall have a high speed cut off thresh hold.

## **Construction Requirements**

### **3.1 Automated Trailer Mounted Speed Limit Sign**

**3.1.1** The Design-Build Team shall furnish the automated Trailer Mounted Speed Limit Sign as described in 2.1 for this project.

**3.1.2** All existing speed limit signs, which conflict with the construction zone trailer mounted speed limit signs shall be covered completely during the operation of the flashing lights. These signs shall be immediately uncovered when the use of the flashing lights is discontinued.

**3.1.3** Automated Trailer Mounted Speed Limit Signs shall be used only during the Design-Build Team's actual work hours, unless specifically authorized by the Engineer.

**3.1.4** The Engineer will record the actual time and location for the signs on a daily basis when the Automated Trailer Mounted Speed Limit Signs are in use.

**3.1.5** Automated Trailer Mounted Speed Limit Signs shall be located as described below. Placement of additional "Reminder" signs may be ordered by the Contract Administrator. See MUTCD for addition information for placement.

- Divided Highway: One on each shoulder, 2,000 feet in advance of the project limits for mainline traffic.
- Two Lane Highway: One in each direction to the right of the traveled way, in advance of the work zone.

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**3.1.6** Automated Trailer Mounted Speed Limit Signs shall be placed outside the clear zone whenever practical and possible. The signs shall be removed outside the clear zone of the traveled way as specified in the Traffic Control Plan when not in use unless protected by portable barrier or equivalent. The signs shall be delineated with retro-reflective temporary traffic control devices while in use and shall also be delineated by affixing a retro-reflective material directly on the trailer.

**3.1.7** Upon delivery of the Automated Trailer Mounted Speed Limit Sign and before acceptance by the Department, the Design-Build Team shall have a representative of the manufacturer review the condition and notify the Engineer in writing, of all deficiencies noted.

**3.1.7.1** The Design-Build Team shall arrange to have all necessary repairs performed at no cost to the Department.

**3.1.8** To avoid impairing driver vision, the Design-Build Team shall dim the lighted speed limit readings by 50 percent during nighttime use, and restore full power lighting during daytime operation.