**Revise Section 630 of the Standard Specifications for this project to include the following:**

# Description

This work consists of furnishing, installing, certifying, moving, repairing, maintaining, and removing temporary impact attenuators per these specifications and in conformity with the lines and details shown on the plans or established.

# Materials

Eachimpact attenuator shall be selected from the Crash Cushion and End Treatment Application Chart as listed in the *Safety Selection Guide* on the CDOT Design and Construction Project Support web site. Impact attenuators shall conform to the requirements of the manufacturer and be capable of bi-directional shielding of the objects detailed and located on the plans. ♦ Filler materials shall be treated according to the manufacturer's recommendations to prevent freezing to a temperature of -50 °F.

If the posted speed limits of the construction zone are 45 miles per hour or less, the impact attenuator shall comply with the crash test requirements contained in NCHRP Report 350 (only applicable for impact attenuators developed before 2011) or MASH (acceptable for all impact attenuators), TL-2. For posted speed limits in the construction zone greater than 45 miles per hour, the attenuator shall meet the requirements of TL-3.

# Construction Requirements

 • If sand barrel arrays are used, the Contractor shall paint, with white epoxy paint, an outline and the weight of each barrel on the pavement before final placement. All numbers shall be a minimum of 6 inches high. Barrel type shall be one of those listed in the *Safety Selection Guide*.

The site shall be prepared to receive the impact attenuator by filling, excavating, smoothing, constructing the paved foundation pad, installing approved transition and anchoring, and all other work necessary for the proper installation of the attenuator.

The impact attenuator shall be fabricated and installed per the manufacturer's recommendations. The Contractor shall provide a copy of the manufacturer’s installation instructions and parts list to the Engineer before installation of the device.

Each installation shall be supervised and certified as correct upon completion by a representative of the device manufacturer or by an employee of the Contractor who is a certified installer. The certified installer shall have completed device training and shall be registered with the manufacturer as a certified installer. The Contractor shall submit all appropriate documentation to validate that the certified installer has completed device training and has been registered with the manufacturer as a certified installer.

# Method of Measurement

Impact Attenuator (Temporary) will be measured by the number of attenuators shown on the plans, installed, certified, and accepted; or the actual number of authorized 24-hour periods that the attenuator is used.

# Basis of Payment

If the pay unit is “day” there will be no incremental payment for the device. If the pay unit is “each” the item will be paid incrementally per subsection 630.16.

The accepted quantities will be paid for at the contract unit price for the pay item listed below:

Payment will be made under:

| **Pay Item** | **Pay Unit** |
| --- | --- |
| Impact Attenuator (Temporary) | Each |
| Impact Attenuator (Temporary) | Day |

Payment will be full compensation for all work and materials required to furnish, install, certify, move, repair, maintain, and remove the impact attenuator. Site preparation, foundation pad, epoxy painting, and all necessary hardware including anchors and transitions will not be paid for separately but shall be included in the work.

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**Instructions to Designers** (Delete these instructions and highlights in your final draft)

♦ When the designer knows that a barrel array will not suit the work zone conditions, delete the last sentence of this paragraph and replace with “A sand barrel array will not be permitted.”

•When the designer knows that a barrel array will not suit the work zone conditions, this paragraph should be deleted.