



**SPECIAL PROVISIONS  
FOR  
LONG-TERM TEMPORARY RUMBLE STRIPS**

**Pottawattamie County  
IMX-080-1(496)30--02-78**

**Effective Date  
March 18, 2025**

**THE STANDARD SPECIFICATIONS, SERIES 2023, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.**

**230305.01 GENERAL.**

**A. Description of Work.**

This special provision includes the furnishing of all labor, materials, tools, equipment and performance of all work and services necessary or incidental for the installation, maintenance, and removal of the temporary rumble strips as indicated in the contract documents.

**B. Submittals.**

Submit PDF shop drawing file for the placement of the temporary rumble strip arrays to be furnished on the project. Submit a single PDF of catalog cut files and list manufacturer's specifications for all items related to the temporary rumble strip arrays.

**230305.02 MATERIALS.**

**A. Composition:** Rumble strips consist of a pre-applied, pressure sensitive adhesive with high Quality polymeric materials and pigments.

**B. Removability:** Rumble strips can be removed from asphalt or concrete intact or in large pieces at temperatures above 40°F without use of heat, solvents, grinding or blasting.

**C. Applicability to pavement surfaces:** Rumble strips shall be applied to clean and dry surfaces in accordance with the manufacturer's recommendations.

1. Dryness shall be determined by taping a small sheet of black plastic to the Pavement for 15 minutes. After 15 minutes, the underside of the sheet of plastic has no visible condensation, The pavement is determined as dry.

2. This product is to be designed with a pressure sensitive adhesive to be applied at temperatures above 50°F.

- D. Durability:** The temporary rumble strips must maintain acceptable performance when subjected to a variety of traffic conditions including commercial heavy trucks.
- E. Color:** Orange.
- F. Hardness:** Shore a durometer 75 to 105.
- G. Cross section:** 0.25 inches by 4 inches.
- H. Length:** The long-term temporary rumble strips must provide coverage to within 6 inches of each edge of the traveled lane.
- I. Primer:** Use removable primer unless asphalt surface is less than 30 days old.
- J. Acceptable manufacturers:** ATM Rumble Strips, manufactured by Patch Rubber Company, 100 Patch Rubber Road, Weldon, NC, 27890, (252)536-2574 or Engineer approved equivalent.

### **230305.03 CONSTRUCTION.**

#### **A. General.**

Install the temporary rumble strips in accordance with the manufacturer's recommendations, and the following:

1. Ensure the pavement surface is clear of all foreign material such as gravel, sand, or other debris. Completely remove curing compound by brushing, grinding, or sandblasting the PCC surface. Place each rumble strip on a uniform paved surface free of joints or defects including, potholes, excessive rutting, separated cracks, and utility structures. Do not install rumble strips on horizontal curves or steep vertical curves.
2. Install each long-term temporary rumble strip perpendicular to the travel direction and ensure the strip is in complete contact with the road surface. Center the strip or array in the middle of the lane to maximize contact with traffic and minimize opportunities for motorists to maneuver around the long-term temporary rumble strips.
3. Firmly tamp rumble strips in the same direction the strip was applied using a tamper cart with a minimum 200 pound load. A minimum of three passes on each strip is required. Do not twist the tamper cart during tamping. Ensure strip has completely conformed to the road surface and all edges are firmly adhered.
4. Locate the arrays based on the following, unless field conditions prohibit or are otherwise shown on the plans or directed by the Engineer:
  - a. 250 feet in advance and 250 feet following the "Road Work Ahead" signs in each direction of travel.
  - b. Each array consists of ten strips placed at 18 inch centers.

#### **B. Inspection.**

Inspect all long-term temporary rumble strip arrays on a weekly basis and notify the Engineer in writing before the items repaired if the items appear to be deficient in fit, form, or function.

#### **C. Removal.**

When removing rumble strips, pull strip at 90 degree angle to the pavement.

### **230305.04 METHOD OF MEASUREMENT.**

- A.** For Furnish and Install Long-Term Temporary Rumble Strip Array, the Engineer will count the number of arrays of temporary rumble strip arrays placed. Each array is counted by the traveled lane.

- B.** For Maintain and Replace Temporary Rumble Strip, the Engineer will count the number of individual long-term temporary rumble strips removed and replaced due to damage not caused by construction vehicles or activities.

**230305.05 BASIS OF PAYMENT.**

- A.** Payment will be at the bid price per each for Furnish and Install Long-Term Temporary Rumble Strip Array and per each price for Maintain and Replace Long-Term Temporary Rumble Strip.
- B.** Bid price for Furnish and Install Long-Term Temporary Rumble Strip Array includes, but is not limited to all labor, materials, and equipment necessary for installation and removal of arrays.
- C.** Bid price for Maintain and Replace Long-Term Temporary Rumble Strip includes, but is not limited to all labor, materials, and equipment necessary for maintenance of individual long-term temporary rumble strips, at the direction of the Engineer. This includes removal of damaged long-term temporary rumble strip, disposal and placement of new strip.
- D.** Payment includes associated traffic control related to installing and maintaining long-term temporary rumble strip arrays and individual long-term temporary rumble strips.