

TITLE 27 - DEPARTMENT OF AGRICULTURE, DIVISION OF WEIGHTS AND
MEASURES

Chapter 3 - SCALE REGULATIONS

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001 Vehicle, Axle Load, Livestock, and Railroad Track Scales.

001.01 Application. This regulation shall apply to all permanent installations of vehicle, axle load, livestock and railroad track scales placed in use after the effective date of these regulations. All scales installed prior to the effective date of these regulations shall continue to meet the requirements of the regulations in effect at the time of their installation. It does not apply to scales to be installed at one location for less than 180 days.

001.02 Plans and Prints. Scale owners shall maintain the manufacturer's plans for review by the Department of Agriculture, Division of Weights and Measures, for compliance with these regulations. Amendments to original plans and prints shall be approved, in writing, by the manufacturer prior to construction. The installation of vehicle, axle load, livestock, and railroad track scales shall be strictly in accordance with these regulations, unless prior written authorization has been received from the Department of Agriculture, Division of Weights and Measures. Such authorization shall only be granted if it is determined to otherwise be in compliance with the Weights and Measures Act.

001.03 Requirements.

001.03A All vehicle, axle load, livestock and railroad track scales installed in the State of Nebraska following the effective date of this regulation shall meet all of the requirements specified by:

001.03A1 The manufacturer of the scale;

001.03A2 This regulation; and

001.03A3 The Weights and Measures Act.

001.03B Failure to meet these requirements or to correct any installation characteristic that adversely affects the performance of the scale shall result in the issuance of a stop-use, hold or removal order with respect to the scale.

001.04 Foundation. A suitable foundation shall be provided for the scale to rest on. This foundation shall meet the following minimum requirements:

001.04A Soil Bearing. An adequate bearing area shall be provided to match piers to existing soil bearing capabilities stabilized at the desired grade (elevation) to support the load as specified by the scale manufacturer. If not specified, the bearing area shall support at least 3,000 pounds per square foot. The scale owner shall be responsible for determining whether or not soil characteristics meet the requirements for a particular design, and if they do not, the owner shall arrange for design modifications to suit the existing soil conditions.

001.04B Piers. When piers are required by the manufacturer's specifications, they shall be of reinforced concrete poured to the depth of the local frost line, but shall not be less than four feet. The installation shall support the combined loads applied by the weight of the scale, the weighbridge, and the maximum anticipated load on the scale. The installation shall also distribute these loads evenly over the underlying ground so any settlement of the structure shall be minimized and uniform throughout the structure. End walls shall be of monolithic construction with the end piers or foundation. Pit type scales with internal piers shall be of monolithic construction with the pit sidewalls.

001.05 Clearance. Clearance shall mean the distance measured from the bottom of the weighbridge main beams or supporting structure to the bottom of the pit or the top of the cleaning slab. The clearance on all scales shall meet the following requirements:

001.05A Clearance in no case shall be less than the scale manufacturer's specifications.

001.05B Pit-type. Clearance is recommended to be not less than forty-eight (48) inches for both lever type scales and load cell type scales.

001.05C Pitless or Self-Contained. Clearance is recommended to be three (3) inches or greater from both lever type scales and load cell type scales.

001.06 Floors and Slabs.

001.06A Pit Floor. A pit floor is recommended to aid in cleaning the scale pit. If a pit floor is installed, it shall be constructed of reinforced concrete sloping to a drain, a sump, or both, located in close proximity to the entrance of the pit. The scale pit shall be kept clean and dry at all times. If the pit is installed without a floor, soil conditions shall be such that adequate drainage will occur.

001.06B Pitless or Self-Contained Slab. A pitless or self-contained scale shall have a concrete or asphalt slab four (4) inches thick below the weighbridge. The slab shall have an underlay of six (6) inches of gravel under the slab. The slab shall be sloped to provide drainage and aid in cleaning.

001.07 Pit Walls. Pit walls shall be of reinforced concrete and shall be of monolithic construction.

001.07A End Walls. The end walls for vehicle and axle load scales shall be at least sixteen (16) inches in thickness. The end walls for livestock scale shall be at least twelve (12) inches in thickness. Livestock scales designed for weighing livestock or vehicles shall be considered a vehicle scale when applying this section. When end walls for vehicle and axle load scales are constructed with a step at the upper outer edge to provide support for the concrete approaches, the step shall be at least six (6) inches by six (6) inches.

001.07B Sidewalls. The sidewalls for vehicle, axle load, and livestock scales shall be at least twelve (12) inches in thickness.

001.07C The end walls and sidewalls for a railroad track scale shall be constructed in accordance with the manufacturer's specifications.

001.08 Pit Coping. The pit walls shall provide for a structural steel angle iron frame to form the inner corner of the wall. The angle should be at least two inches by two inches by one-fourth inch (2"x2"x1/4"), and shall have welded projections to provide anchoring in the concrete at four (4) foot intervals (minimum). This frame shall be welded at the joints to prevent minor cracking of the walls.

001.09 Bumper Check Plates or Check Rods. Bumper check plates or check rods shall be installed in accordance with the manufacturer's specifications.

001.10 Approaches. The approach shall be straight and level, of the same width and in the same plane as the scale platform. Construction shall be in accordance with the manufacturer's specifications.

001.10A Vehicle Scales.

001.10A1 The entire approach shall be 40 feet in length or one-half the length of the platform, whichever is less. The approach shall be either tied to the supporting structure of the scale or supported with a step tied to the supporting structure of the wall. The steps shall be at least six (6) inches by six (6) inches along the entire width of the approach.

001.10A2 At least ten (10) feet of the approach adjacent to the scale shall be made of reinforced concrete. The remaining approach shall be of a durable material to ensure that the grade is maintained. It may vary from the plane of the scale platform but any slope shall not exceed one (1) inch per foot and shall be away from the scale platform, and the slope shall be at a uniform rate.

001.10A3 It is recommended that means be provided to prevent the turning of vehicles onto or off the scale (including the ten (10) foot concrete approaches) on each end of the scale.

001.10B Axle Load Scales. Axle load scales shall have reinforced concrete approaches at both ends of the scale and in the same plane as the scale platform. The length of each approach shall be equal to, or greater than, the longest vehicle capable of being weighed by the scale. When axle load scales are used in combination (multiple platform scales) the approaches shall meet the requirements of Section 001.10A of these regulations.

001.10C Livestock Scales. Livestock scales shall have a ten (10) foot approach of reinforced concrete and be in the same plane as the scale platform. Such approach shall be at least as wide as the gate, but not less than six (6) feet on at least one entrance of the scale. All corrals, gates, and other structures shall be arranged so the livestock scale is accessible to testing equipment.

001.10D Railroad Track Scales. Railroad track scales shall have an approach which meets or exceeds the manufacturer's specifications.

001.11 Access to Scale Mechanism. Access to the scale mechanism shall be provided to permit proper inspection, servicing, and cleaning.

001.11A Pit Access - Livestock Scales. On mechanical pit-type livestock scales, one opening shall be provided in the scale platform, pit neck covering, or pit wall to provide access to the pit. It is highly recommended that all livestock scales have an opening in the scale pit wall for easy cleaning and servicing.

001.11B Pit Access - Other Pit-Type Scales. One opening shall be provided for scale platforms twenty-five (25) feet, or less; two openings shall be provided for scale platforms over twenty-five (25) feet and under fifty (50) feet in length; and three openings shall be provided for scale platforms fifty (50) feet or more in length. Such openings shall be in the scale platform and shall be either a circle not less than twenty-two (22) inches in diameter, or a square of not less than twenty-two (22) inch sides. Both shall have suitable covers. An additional entrance through a pit wall may also be provided. Such entrance shall not be less than thirty-six (36) inches wide. The top of the opening shall not be lower than the main girders and the bottom of the opening shall be approximately even with the bottom of the pit. Where the scale entrance is at the pit neck, the center line of any lever extending through a pit wall opening shall have at least twenty-seven (27) inches clearance from one side of the opening.

001.12 Mechanical Indicating Elements. Mechanical indicating elements shall be mounted on a firm foundation which is adequate to prevent deflection or vibration.

001.13 Electric Load Cell Cabling. All cabling between load cells, junction boxes, and electronic instrumentation shall be shielded, grounded, and protected from environmental factors as per manufacturer's specifications.

001.14 Power Source. The power source shall be on a separate circuit back to the distribution transformer with no other loads connected or the power supply shall be isolated from outside electrical interference. One side of the power source should be at ground potential.

002 Definitions. The definition of terms found in the Weights and Measures Act shall apply to such terms found in these regulations.

003 Administration. These regulations are administered by the Nebraska Department of Agriculture, Division of Weights and Measures, Fourth Floor, State Office Building, 301 Centennial Mall South,

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Lincoln, Nebraska. The mailing address is P.O. Box 94757, Lincoln, Nebraska 68509. The telephone number is (402) 471-4292.

004 Annotation. Neb. Rev. Stat. §§89-187 to 89-1,103 (Reissue 1987 and Supp. 1991).

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