

**RICE LAKE**  
**SURVIVOR**  
TOUGHEST SCALES ON EARTH™

### Truck Scale Foundations



Rice Lake's SURVIVOR® truck scales handle the toughest environments with a thorough finishing process and I-beam construction ensuring scales last for decades.

## Truck Scale Foundations

Even the toughest scales risk damage with a poor foundation. Picking the right base helps maximize the lifespan of your truck scale by providing the proper support.

### Prepping the Site Before Installing a Truck Scale

Prior to installing a truck scale, the site condition must be assessed. Many factors, such as the site's slope and soil conditions, impact installation. Consider environmental aspects impacting the scale, such as heavy rain or snow. Drainage also contributes to the long-term health of a truck scale, so ensure the site has adequate runoff.

Based on the site condition, the foundation must match the certified drawing provided by the truck scale manufacturer so the foundation doesn't shift. Shifting could cause the scale to fall outside calibration tolerance.

Depending on the type of foundation, concrete curing time can vary. Discuss with the supplier ensure the foundation has time to cure before the scale is installed. Suppliers can typically recommend quality, local contractors.

### Choosing a Truck Scale Foundation

Once the site is assessed, companies must decide on a foundation. Until the early 1970s, truck scales were installed in expensive, deep concrete pits. Now, most scales are installed aboveground or in concrete pits with floor foundations. With the benefit of new modular construction, scales can be installed in shallower pits.

Companies use pit foundations when the site is smaller. A pit installation requires less space than an aboveground installation since longer approaches are generally required for aboveground foundations.

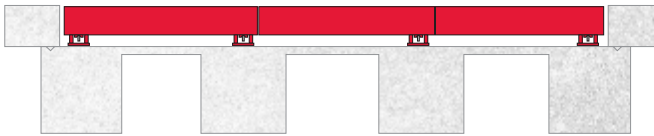
However, for applications with a larger site, aboveground foundations are less vulnerable to corrosion. Pit foundations are more susceptible to rust since standing water can gather in the pits and damage metal overtime.

## What are the Types of Truck Scale Foundations?

The three types of truck scale foundations are the pier, floating slab and pit. While there are some variants, every truck scale foundation will fall into one of these three main categories.

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### Pier Foundations & Shallow Pier Foundations



Pier foundations have deep columns supporting the heaviest parts of the scale. In cold climates, deep pier foundations can be partially below the frost line to eliminate damage from freeze-thaw conditions. For pier foundations, the site needs a 2,500-3,000 PSF soil bearing pressure.



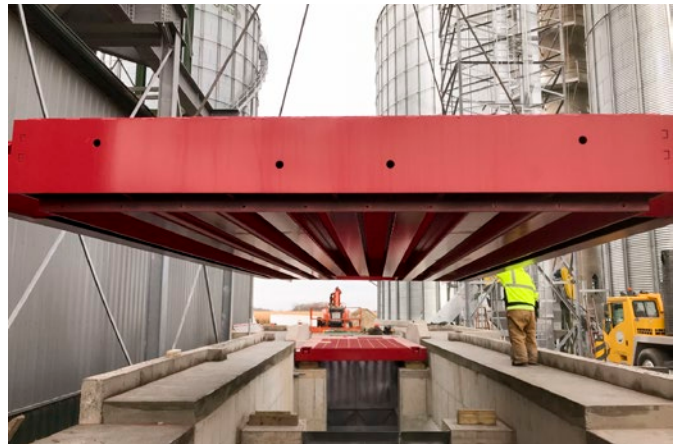
In warmer climates, shallow pier foundations can be a cost-effective solution for weighing. Discuss with your scale supplier if shallow pier foundations are best suited for your application.

2

### Floating Slab Foundations



Floating slab, or beam slab, foundations are a continuous pour of concrete running the entire length of the weighbridge. After pier foundations, floating slab foundations are the most cost-effective solution. These scales require a soil bearing pressure of at least 1,500 PSF.



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### Pit Foundations



Pit foundations go deeper in the ground, ranging from two to six feet deep. The depth depends on application needs and the truck scale being installed, as well as any legal requirements on a federal, state and local level.



**HEADQUARTERS**

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Aboveground foundation



Pit foundation

## Pit vs. Aboveground Foundation

	Pit	Aboveground
Cost	More expensive due to additional excavation, reinforcing steel and concrete	Less expensive due to less construction work
Service and Scale Repairs	In some cases, can be more costly due to confined area restrictions, which often require gas detection devices and operator safety harnesses to be used	Less difficult/less costly and allows service from the deck of the scale
Clean Out	Often done manually and can be very time consuming “bucket by bucket”	Quick and easy—done with a water hose or air compressor from the side
Scale Inspection	Must be done from inside the pit	Can be performed by simply walking around the perimeter of the scale
Restrictions or Hazards	Some states require specified clearances underneath the scale. Must also meet with OSHA and confined space hazards regulations	Some states require specified clearances underneath the scale
Approaches	10 feet flat and level	Often 10 feet flat and level
Ramps	Not required	Typically 25 feet long on each end of the approach. Often requires more real estate to install and operate
Electricity Needed	Typically has electricity for pit lights and sump pump if no gravity drain is present	No pit light or sump pump required

## Rice Lake Weighing Systems’ SURVIVOR Truck Scales

Rice Lake’s SURVIVOR truck scales handle the toughest environments with a thorough finishing process and I-beam construction ensuring scales last for decades. When it’s time to invest in a truck scale, consider Rice Lake for a durable and accurate weighing solution fit for any application.