Contents

Typical Weighbridge sizes, capacity and number of load cells for design.

Dimensions	Capacity	Number of Load Cells
4 m x 2 m	8 to 15 Tons (8,000 to 15,000 kg)	4 Load Cells
6 m x 3 m	15 to 30 Tons (15,000 to 30,000 kg)	4 Load Cells
7.5 m x 3 m	20 to 40 Tons (20,000 to 40,000 kg)	4 Load Cells
9 m x 3 m	30 to 50 Tons (30,000 to 50,000 kg)	4 or 6 Load Cells
12 m x 3 m	40 to 80 Tons (40,000 to 80,000 kg)8	6 Load Cells
15 m x 3 m	50 to 60 Tons (50,000 to 60,000 kg)	6 or 8 Load Cells
18 m x 3 m	80 to 120 Tons (80,000 to 120,000 kg)	8 or 10 Load Cells
21 m x 3 m	80 to 120 Tons (80,000 to 120,000 kg)	8 or 10 Load Cells
24 m x 3 m	80 to 120 Tons (80,000 to 120,000 kg)	10 or 12 Load Cells

Table No.01

Typical weighbridge sizes, capacity, and number of load cells for design *Depending on the beam sectional dimension, a linear density of beam material, load cell capacity, and document compatible with LB-PA-R76-2 (Determining the capacity of the load cells required for Non-automatic weighing instrument).

Typical Weighbridge installation requirements based on operation method.

01. Double-end access or drive through weighbridge

1.1. Double-end access weighbridge perpendicular to public roads

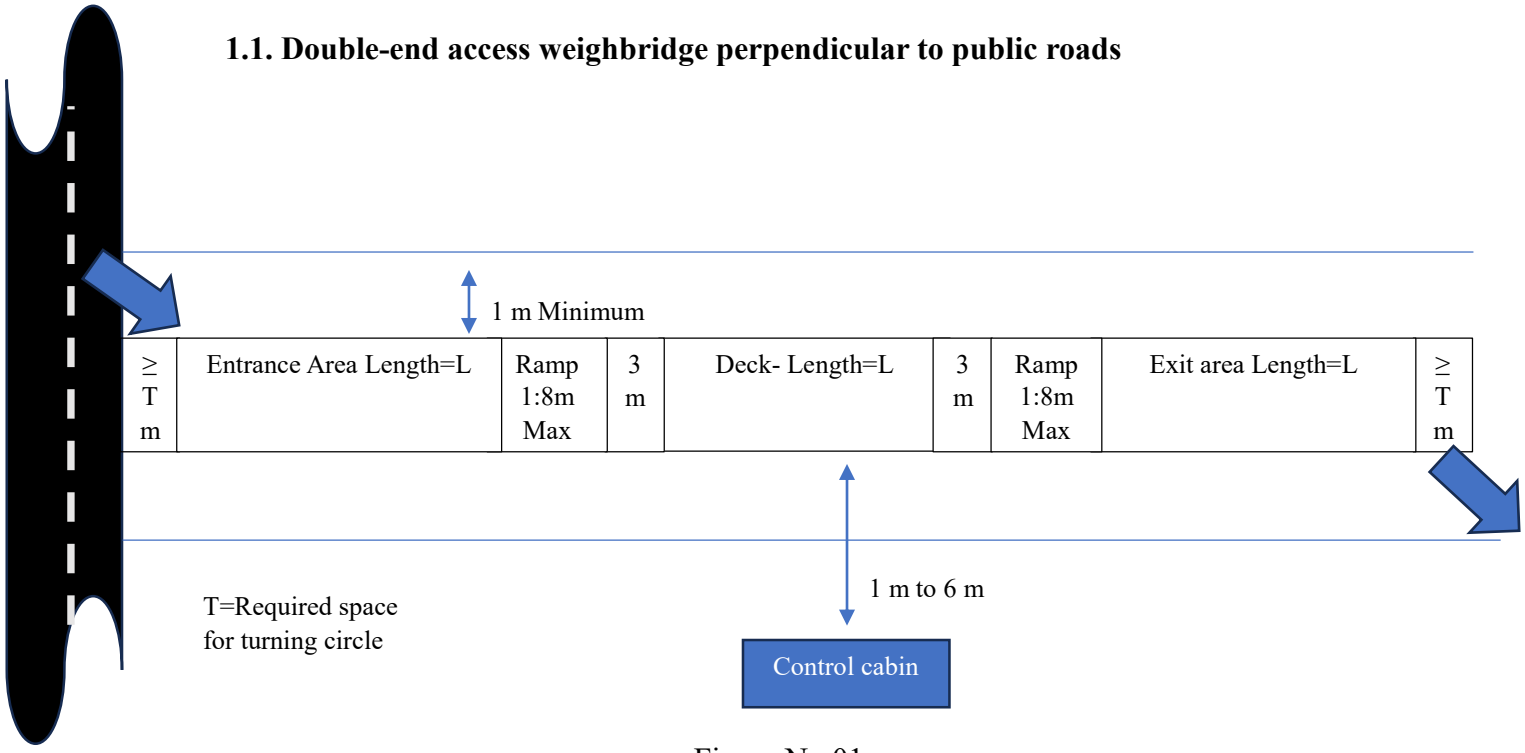

Figure No.01

1.2. Double-end access weighbridge parallel to a public road

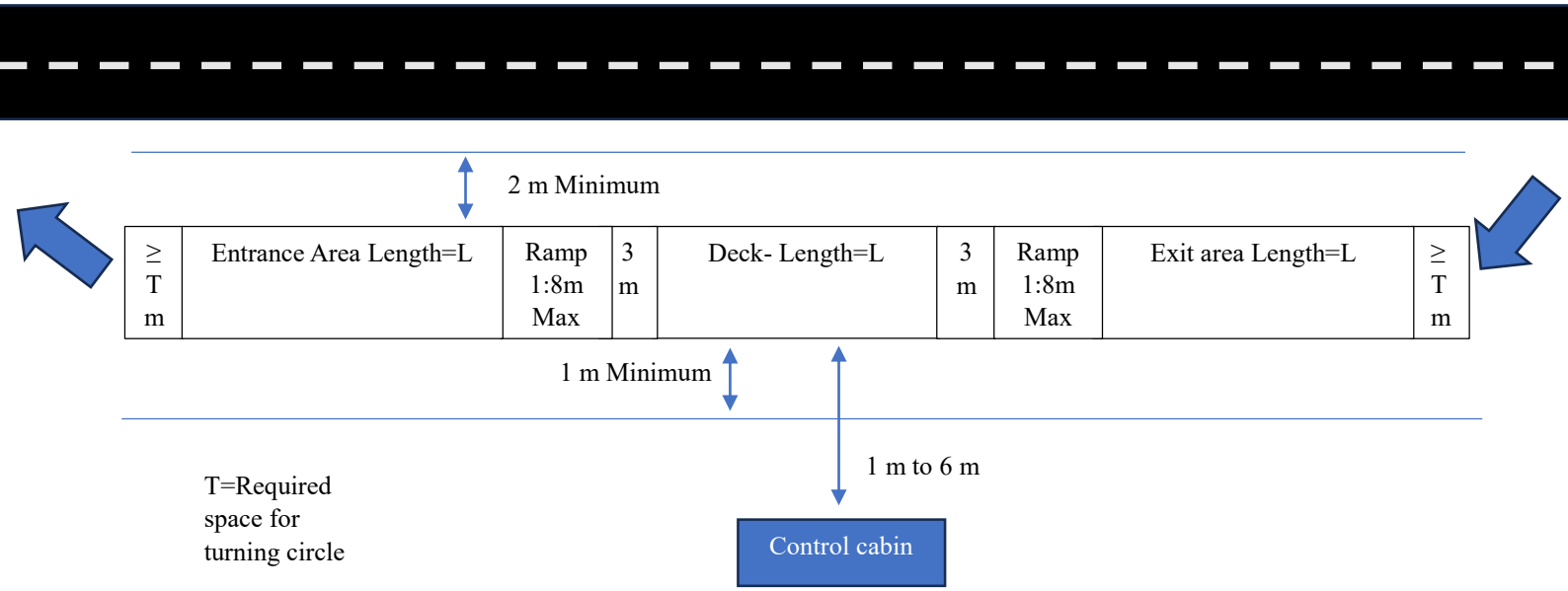

Figure No.02

02. single-end access weighbridge or drive-on, reverse-off weighbridge

2.1. Single-end access weighbridge perpendicular to a public road

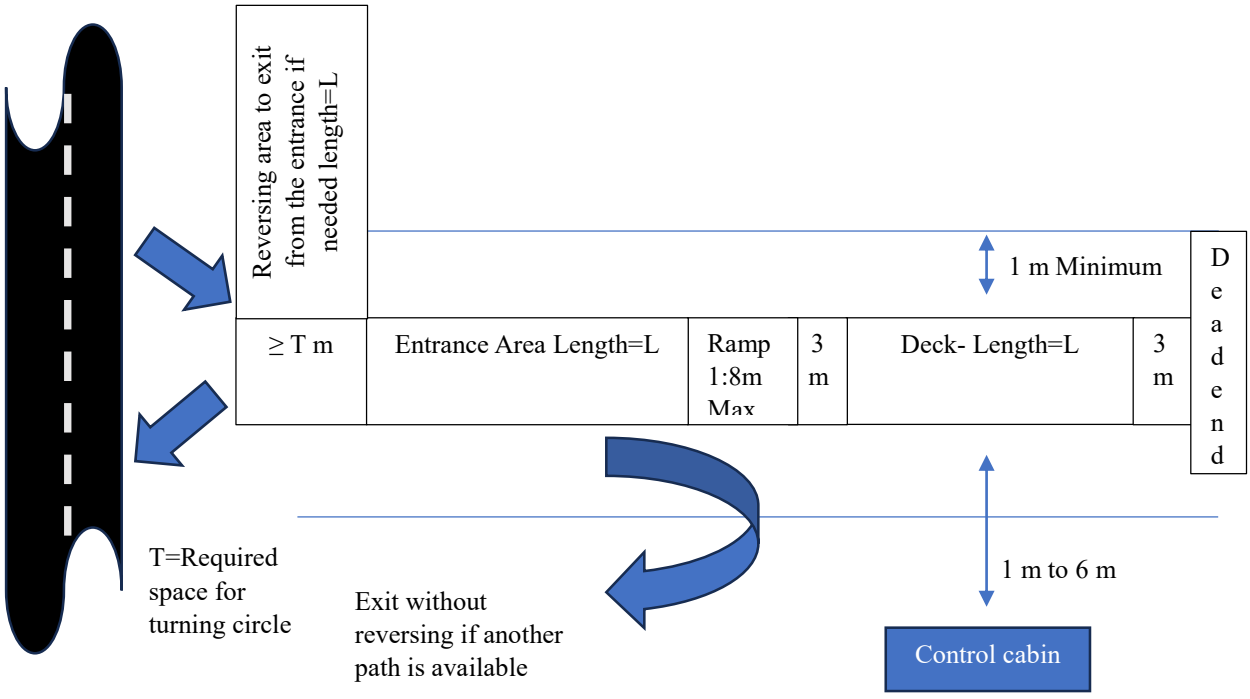

Figure No.03

2.2. Single-end access weighbridge parallel to a public road

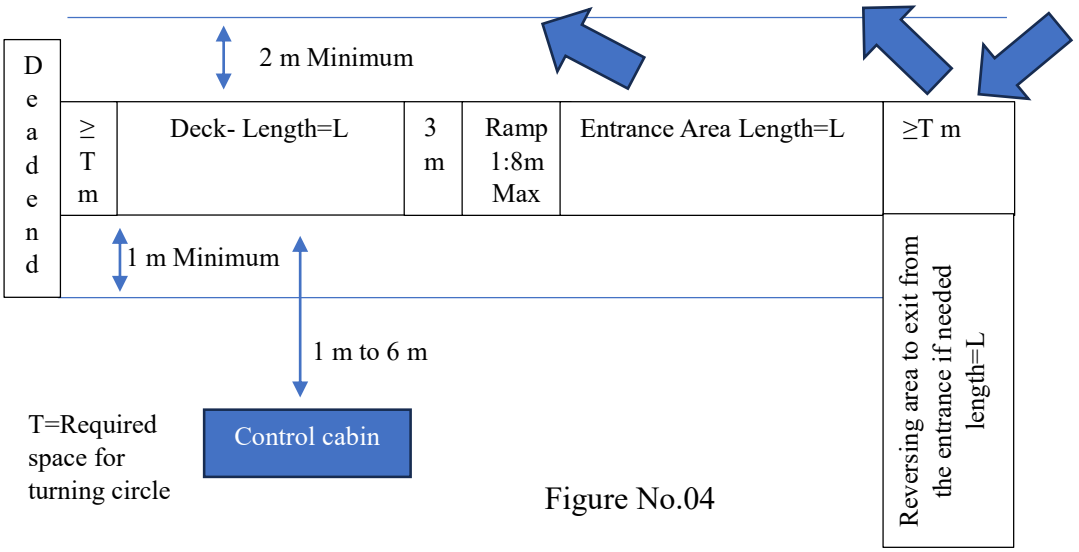

Figure No.04

Approval conditions

Pattern approval for the single-end access weighbridge or drive-on, reverse-off weighbridge granted only to the users if there are no alternative options and all relevant approvals obtained from local government, other relevant approvals and certifications for the site, construction and installation including RDA, CEB, NWSDB & NBRO before starting any construction work and decided by the director with the recommendation of a technical committee appointment.

General Requirements for Weighbridge Installations

1. Vehicle Entry and Exit

1.1. Vehicles must enter the weighbridge in the forward driving direction only. Reversing onto the weighbridge is not permitted.

1.2. A suitable turning circle should be constructed within the premises to allow smooth entry onto the weighbridge and exit back to the public road, minimizing disruption to vehicle flow.

1.3. The vehicle must exit the premises and re-enter the public road in a forward direction. Reversing onto or from the public road is not allowed.

1.4. Vehicles must not cross into the path of oncoming traffic when entering the weighbridge.

2. Weighbridge Platform

2.1. Surface-level weighbridges (Pit mounted) do not require ramps (ramp length = zero). However, sufficient space must be provided inside the premises to accommodate vehicle maneuvering.

2.2. The space required should be sufficient for vehicles to turn, assuming a vehicle length equal to the length of the weigh bridge deck, before entering the public road.

2.3. The effective width of the weighbridge should be between 3 meters to 3.5 meters, ensuring enough clearance for large vehicles (Refer Table No.01).

3. Different installations

3.1. Different installations from above can be allowed when the weighbridge is installed in an angle with the access roads, however basic access, technical, safety, and general requirements shall be fulfilled as above.

3.2. If user have no option for above designs any alternative options may be considered for granting approval to the user based on the requirement and decided by the director with the recommendation of a technical committee appointment by the director if all relevant approvals obtained from local government, other relevant approvals and certifications for the site, construction, and installation including RDA, CEB, NWSDB & NBRO if needed.

4. Construction and maintenance requirements

4.1. Mechanically strong, adjustable stopper arrangements of transverse and longitudinal directions.

4.2. A minimum height of 150 mm should be maintained between the load cell location plate (pedestal plate) and the existing ground level.

4.3. Constructed rainwater discharge systems should be proper and shouldn't interfere with the weighbridge.

4.4. Construction of any canopy covering the weighbridge should have a minimum height of 4.6m from the weighbridge deck surface.

4.5. The earthing system and lightning protection shall be constructed appropriately.

4.6. An enclosed box should fully cover extra load cell wires and junction box (sum box).

4.7. All load cells, load cell wires, and cables from the junction box to the indicator should be covered by steel conduit insulation material.

4.8. Construction of a pit-mounted weigh bridge dismisses the area required for the ramp.

4.9. Locate the manhole for all load cell points with minimum dimensions of 1m×1m×d.
- Here; d > pedestal plate to deck surface height + 200mm

4.10. The observation cabin should be positioned so that the entirety of the vehicle can be clearly viewed. Any other devices assisting the process are allowed within that area.

4.11. The observation cabin should be wired independently with a separate earthing system and indicator, computer, remote display, printer and other accessories should be set up properly.

5. Safety Features

5.1. Guard rails with a height of 100 mm shall be installed on both sides of the weighbridge deck and even area if applicable, these should extend to the end of the ramp if necessary for additional safety.

5.2. Bumpers with a height of 100 mm must be installed at the dead ends of the weighbridge, and at the boundaries of the reversing area to prevent vehicles from overshooting.

6. Site Evaluation/inspection by MUSSD before installation of weighbridge

6.1. It is possible to request a site inspection from the Measurement Units, Standards and Services Department (MUSSD) before the construction and installation of the weighbridge. To ensure compliance with requirements for installations.

6.2. A site plan and all relevant drawings for the selected location must be submitted before installation.

6.3. It is necessary to obtain applicable local government and other relevant approvals and certifications for the site, construction, and installation before starting any construction work including RDA, CEB, NWSDB, NBRO, and Local Government Authorities.

6.4. This process helps avoid non-compliance with the requirements and reduces the need for changes during the initial verification.

6.5. A site visit may be required in more complex situations to ensure proper evaluation.