

Vehicle Loads on Structures

Building Services Information Sheet

Last Updated: July 2022

This information sheet clarifies the minimum required design loads for structures that are required to support fire trucks and waste retrieval vehicles (garbage trucks).

The Ontario Building Code requires that roof areas be designed to support the expected loads imposed by fire fighting equipment as per 3.2.5.6.(1)(e).

The Code also requires structures be designed to have sufficient structural capacity to resist all loads that may reasonably be expected as per 4.1.1.3.(1). This includes waste retrieval vehicles. Loads are identified below.

Structural drawings must identify all areas that have been designed for these increased loads and state those loads on the design drawings.

Fire trucks (see Appendix A)

- Maximum weight = 37,273 kg
- Rear axles = 27,273 kg
- Front axle = 10,000 kg
- Outrigger concentrated load = 25,910 kg

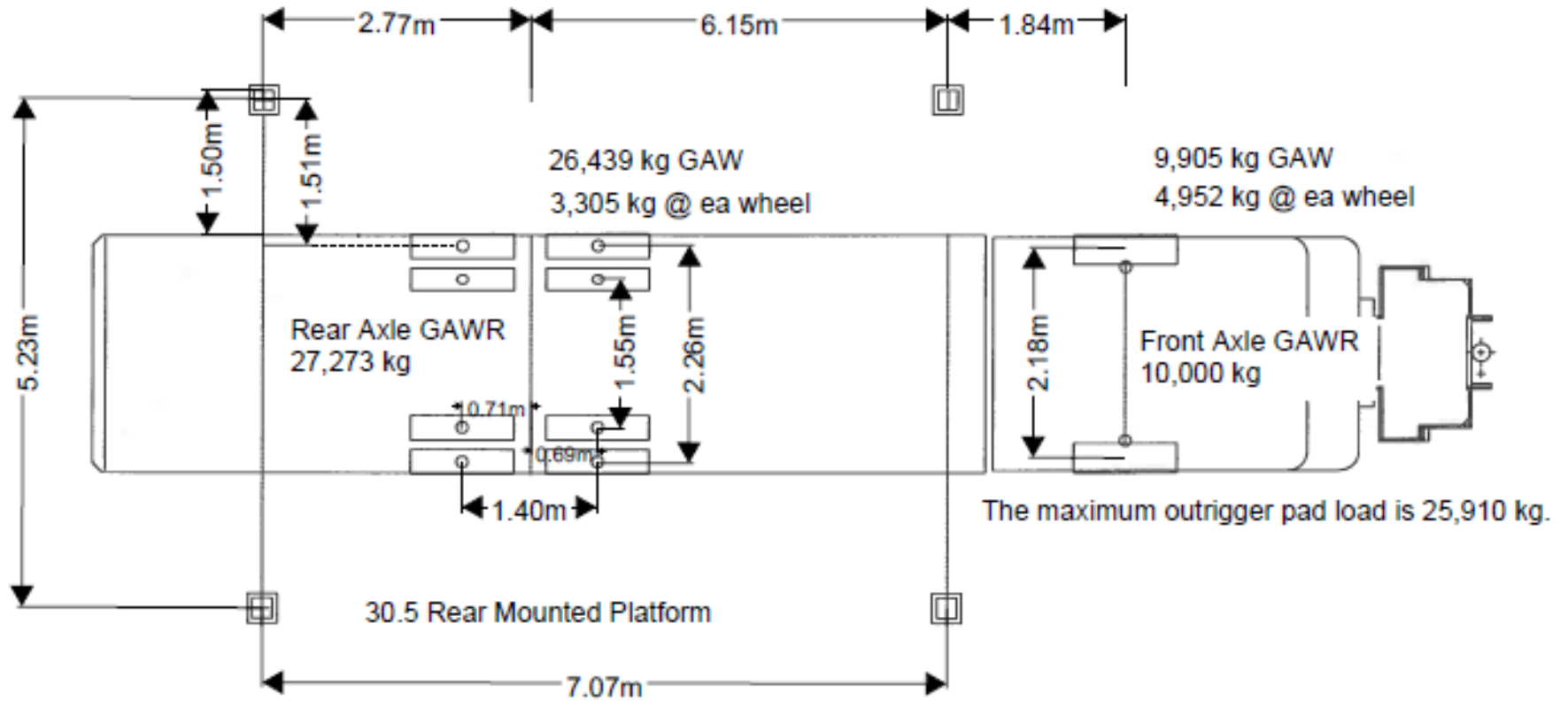
Waste Collection Vehicle (see Appendix B)

There are four (4) main types of Waste Collection vehicles used by the City of Barrie:

- Multi-residential side loading recycling collection
- Multi-residential front loading garbage
- Multi-residential rear loading organics
- Single Family Yard Waste, Recycling, Organics, and Garbage Collection



Appendix A - Fire Truck Diagram



Appendix B - Waste Collection Vehicles

Collection Vehicle	Weight per axle (empty truck)	Weight per axle (fully loaded truck)	Wheelbase - Distance between axle (front and rear)	Wheelbase - Distance between tires (side-to-side)	Truck Length	Truck Width	Truck Height
Multi-residential side loading recycling collection	Total Weight: 15460kg Front Axle: 6500kg Rear Axles: 8960kg Rear Double Axle: 4480kg ea	Total weight: 26870kg Front Axle: 7000kg Rear Axles: 19870kg Rear Double Axle: 9935kg ea	6.12m	Steer=2.2m Drive outer=2.2m Drive inner=1.5m	11.50m	2.60m	4.00m
Multi-residential front loading garbage collection	Total Weight: 16760kg Front Axle: 7800kg Rear Axles: 8960kg Rear Double Axle: 4480kg ea	Total weight: 26010kg Front Axle: 8200kg Rear Axles: 17810kg Rear Double Axle: 8905kg ea	5.33m	Steer=2.13m Drive outer=2.2m Drive inner=1.5m	11.00m	2.60m	4.10m
Multi-residential rear loading organics collection	Total Weight: 18500kg Front Axle: 6500kg Rear Axles: 12000kg Rear Double Axle: 6000kg ea	Total weight: 28830kg Front Axle: 7200kg Rear Axles: 21630kg Rear Double Axle: 10815kg ea	5.79m	Steer=2.2m Drive outer=2.2m Drive inner=1.5m	11.00m	2.60m	4.10m
Single Family Yard Waste, Recycling, Organics and Garbage Collection	Total Weight: 15460kg Front Axle: 6500kg Rear Axles: 8960kg Rear Double Axle: 4480kg ea	Total weight: 26870kg Front Axle: 7000kg Rear Axles: 19870kg Rear Double Axle: 9935kg ea	6.12m	Steer=2.2m Drive outer=2.2m Drive inner=1.5m	11.50m	2.60m	4.00m

Appendix B - Front End Lift Garbage Collection Truck Diagram

