

TENDER DOCUMENTS

SUBSECTION 6.93

ROAD SWEEPING AND STRUCTURAL COMPONENTS CLEANING

TABLE OF CONTENTS

	PAGE
SUBSECTION 6.93 ROAD SWEEPING AND STRUCTURAL COMPONENTS CLEANING	1
6.93.1 GENERAL	1
6.93.2 REFERENCE STANDARDS	1
6.93.3 EQUIPMENT AND TOOLS	1
6.93.4 PERFORMANCE OF WORK	2
6.93.5 QUALITY CONTROL AND WATER SUPPLY	4

SUBSECTION 6.93 ROAD SWEEPING AND STRUCTURAL COMPONENTS CLEANING

6.93.1 GENERAL

- 6.93.1.1 This subsection sets out the requirements for the sweeping and cleaning of structural elements (spring cleaning) and regular road sweeping covered by this contract.
- 6.93.1.2 Any special requirements related to the road sweeping and cleaning of structural elements covered by this contract are set out in Section 4 *Special Technical Conditions*.

6.93.2 REFERENCE STANDARDS

- 6.93.2.1 The **Contractor** shall perform all road sweeping and cleaning of structural elements in accordance with the following standards and documents, to which are added the terms and conditions of the contract:
- 6.93.2.1.1 Ministère des transports du Québec (MTQ)
- MTQ *Cahier des charges et devis généraux (CCDG)*;
 - MTQ *Normes – Ouvrages routiers – Tome VI Entretien*;
 - Norme 6321-1 *Balayage et ramassage des débris sur les voies de circulation*.

6.93.3 EQUIPMENT AND TOOLS

- 6.93.3.1 The **Contractor** shall have a sufficient number of self-propelled vehicles to enable it perform the work in accordance with the requirements set out in these specifications.

6.93.3.1.1 WATER TRUCK

- 6.93.3.1.1.1 The **Contractor** shall use a water truck with the following features:

- a tank with a volume of at least 9,000 litres;
- a pump capable of maintaining a pressure of 470 kPa;
- adjustable 360° pivoting nozzles approximately 330 mm from the ground.

6.93.3.1.2 SELF-PROPELLED SWEEPER (MECHANICAL SWEEPER)

- 6.93.3.1.2.1 The **Contractor** shall use a self-propelled sweeper with the following features:

- two gutter brushes (one on each side);
- a pick-up brush at least 2 metres wide;
- a watering system with tank and nozzle on either side of the sweeper;
- a conveyor system;
- a tub with a minimum gross capacity of 2 cubic metres;
- an exterior basket for large debris.

6.93.3.2 HAND TOOLS

6.93.3.2.1 Where necessary, the **Contractor** shall use any other equipment needed to remove all loose material from the road surface.

6.93.4 PERFORMANCE OF WORK

6.93.4.1 GENERAL

6.93.4.1.1 Road sweeping and cleaning of structural elements shall be carried out in accordance with the requirements of this subsection and volume VI “Entretien” of the MTQ standards.

6.93.4.2 ROAD SWEEPING AND CLEANING

6.93.4.2.1 REMOVAL OF DEBRIS

6.93.4.2.2 Prior to cleaning and/or sweeping, the **Contractor** shall pick up from the traffic lanes, the shoulders and the noses any debris or other objects that cannot be picked up by the self-propelled sweeper.

6.93.4.2.3 The **Contractor** shall sweep the parking areas and roadways around the maintenance centre south of the Jacques Cartier Bridge and the administrative building of the old Champlain Bridge toll station.

6.93.4.3 WATERING AND CLEANING OF SURFACES

6.93.4.3.1 Watering shall be done from the middle of the road surface to the sides using sufficient pressure to move deposits to the curb. The **Contractor** shall not flush deposits into the drains.

6.93.4.3.2 For on- and off-ramps, the water truck shall travel with the nozzles crossed. The impact attenuator equipped vehicle shall travel behind the water truck.

6.93.4.4 REGULAR ROAD SWEEPING

6.93.4.4.1 Regular road sweeping includes sweeping of traffic lanes, extensions, painted areas and shoulders in order to remove all deposits and loose material, such as debris, dust and grass clippings. If necessary, the sweeper shall make several passes.

6.93.4.5 SWEEPING AND CLEANING OF STRUCTURAL ELEMENTS (SPRING CLEANING)

6.93.4.5.1 To begin the season, the **Contractor** shall carry out sweeping and cleaning of structural elements (spring cleaning) in accordance with the requirements set out in clauses 6.93.4.5.2 and 6.93.4.5.3 and shall use appropriate equipment and methods to remove and dispose of all debris and residue.

6.93.4.5.2 CLEANING OF CONCRETE MEDIAN BARRIER

6.93.4.5.2.1 The median barrier is the element that separates traffic moving in opposing directions and comprises a concrete curb with concrete, asphalt or grass in the middle.

6.93.4.5.2.2 Where the centre of the median barriers is concrete or asphalt, the **Contractor** shall remove all deposits, grass clippings, debris and other objects using a water truck with a movable nozzle on both sides of the median barrier, if there is one. If necessary, the water truck shall travel in the left lane in the direction where the lanes are open to traffic and clean so that the debris is thrown in the direction opposite to traffic.

6.93.4.5.2.3 Where the centre of the median barriers is not concrete or asphalt, only the two barrier sides of the barrier have to be cleaned.

6.93.4.5.2.4 Irrespective of the method used, the **Contractor** shall ensure that no debris or dirt is thrown into open traffic lanes. Whenever the work is done from lanes open to traffic, the **Contractor** shall use movable work signs in accordance with the requirements set out in Subsection 6.14 *Traffic Control and Temporary Signage*.

6.93.4.5.3 CLEANING OF MEDIAN BARRIER SIDE

6.93.4.5.3.1 Median barrier sides may include curbs, noses, islands, impact attenuators, slabs, sidewalks and rigid barriers. Median barrier sides include the surfaces between fast lanes and other lanes, such as ramps, adjacent service lanes or other fast lanes in the same direction.

6.93.4.5.3.2 The surfaces of these median barrier sides may be concrete or asphalt.

- 6.93.4.5.3.3 During pressure cleaning of these surfaces, including cleaning of edges, noses, islands, parapets, impact attenuators and curbs, the **Contractor** shall first push the deposits towards the shoulders or painted areas and then pick them up with the sweeper.
- 6.93.4.5.4 Water blasting shall be used to clean semi-rigid safety barriers and structural parapets placed against other road elements that allow deposits to build up.
- 6.93.4.5.5 Water blasting is not necessary to clean curbs against grass surfaces.
- 6.93.4.5.6 The **Contractor** shall clean the impact attenuator devices installed at on- and off-ramps. For sand-filled barrel-type impact attenuators, the **Contractor** shall clean deposits around each barrel. In all other cases, the **Contractor** shall clear away debris from the bottom and around the impact attenuators.
- 6.93.4.6 DISPOSAL OF RESIDUE
- 6.93.4.6.1 The **Contractor** shall dispose of residue from sweeping and cleaning of structural elements (spring cleaning) and regular road sweeping in accordance with the environmental requirements set out in Subsection 6.13 *Environmental Protection* and the *Special Technical Conditions* of this contract.

6.93.5 QUALITY CONTROL AND WATER SUPPLY

- 6.93.5.1 Sweeping and cleaning of structural elements shall be carried out when the temperature is above 4°C.
- 6.93.5.2 The **Contractor** shall supply its own water at its own expense. The **Contractor** shall obtain the necessary permits from the municipalities concerned. The cost of such permits shall be included in the unit prices tendered by the **Contractor**.

END OF SUBSECTION