



2400 - SPECIFICATION FOR HAUL ON THE BASIS OF THE CUBIC METRE HECTOMETRE

2400 - 1 DESCRIPTION

- 1.01 The work shall consist of hauling materials. This specification will apply to haul that is specified on the tender form on a cubic metre hectometre basis.

2400 - 2 MATERIALS

2400 - 3 CONSTRUCTION

- 3.01 If hauling equipment crosses existing pavements or other surface course, the Contractor shall be required to construct an earth fill over the crossing at no direct expense to the Department. The length, width, and thickness of the fill shall be adequate to prevent damage to the pavement or surface course. When hauling has been completed each day, the earth fill shall be removed and disposed of in a manner subject to the approval of the Engineer, at no direct expense to the Department.
- 3.02 If crawler tractors cross existing pavements or other surface courses, the Contractor shall use rubber tires, planks, or other suitable methods to prevent damage to the surface, at no direct expense to the Department.
- 3.03 Damage to pavements or other surface courses, resulting from the Contractor's hauling operations, shall be repaired by the Contractor in a manner subject to the approval of the Engineer and at no direct expense to the Department.
- 3.04 Motor vehicles used for hauling shall comply with the requirements for Loading Regulations (Specification 8200).
- 3.05 Temporary approaches and/or roads required for access to borrow pits shall be constructed, and removed upon completion of the work. Haul roads to and around borrow pits shall be scarified, if required, and restored to a suitable condition, at no direct expense to the Department.
- 3.06 If work must be carried over from one construction season to the next, the Engineer may order that, when work closes down for the season, the Contractor shall repair, at no direct expense to the Department, damage to public roads caused by the hauling operation.

2400 - 4 MEASUREMENT

- 4.01 Haul will be computed from a mass diagram.
- 4.02 The unit of measurement for haul will be the cubic hectometre. The cubic metre hectometre is one cubic metre hauled 100 metres.
- 4.03 A mass curve will be plotted from a horizontal base line. The base line will represent horizontal distance measured in hectometres. The mass curve will represent, at each 25 metre interval or less, the accumulated algebraic sum of the volume of embankment (adjusted for shrinkage or swell) measured in cubic metres. (Excavation is considered positive and embankment negative).

- 4.04 The points where the mass curve intersects the base line will be "balance points". The adjusted volume of embankment is equal to the volume of excavation between any two balance points.
- 4.05 For the purpose of computing the mass diagram, certain balance points will be designated by the Engineer as "Control Balance Points". It will be assumed that the total volume of excavation is exactly equal to the total volume of adjusted embankment between any two of these points. Haul across these points will not be considered in the computation of the mass diagram and the haul quantities, unless such hauling has been directed by the Engineer.
- 4.06 Haul will be determined from the mass diagram as follows:
- (a) Haul will be computed by calculating the area(s), in cubic metre hectometres between the mass curve(s) and the horizontal base line(s).
 - (b) If the material is excavated from an area lying between two parallel lines 15 metres outside each side of the right-of-way, haul distances will be measured along the centreline of the highway. No allowance will be made for transverse haul on material excavated within this area.
 - (c) If material is obtained from a borrow pit outside of the right-of-way and any portion of the pit area is more than 15 metres from the right-of-way will be considered as the borrow pit. The haul will be calculated by the quantity of material multiplied by the shortest practical haul distance between the approximate centre of volume of the borrow pit and a point or points on the centreline of the highway to the point of deposit.
 - (d) If open pits are backfilled and haul routes are used, the haul will be calculated by the quantity of material multiplied by the shortest practical loaded travel distance. The haul routes will be designated by the Engineer.

2400 - 5 PAYMENT

- 5.01 Payment for HAUL on a commodity will be at the contract unit price per cubic metre hectometre as specified on the tender form. The unit price will be full compensation for all work and requirements described in this specification.
- 5.02 If the contract unit price for the commodity to be hauled includes full compensation for hauling, haul will not be paid for directly but will be considered as a subsidiary obligation of the Contractor under the contract unit Price for the commodity.