

Designer Note: For use on all interstate hot-mix asphalt paving contracts and on other hot-mix asphalt paving contracts at the district's discretion. Consult with Materials Section to determine if use is appropriate for your project. Note that use of this device requires a pay item and payment is by the ton (m ton).

The special provision contains three (3) fill in the blank areas which must be provided by the Designer and are considered project specific requirements. The following guidelines should be considered:

(1) Type of materials to be placed with the Material Transfer Device (to be determined by the district). Example wording: This work shall consist of placing hot-mix asphalt concrete binder and surface course mixtures according to Section 406 of the Standard Specifications, except that these materials shall be placed using a material transfer device.

(2) Location where Material Transfer Device will be used on project (to be determined by the district). Example wording: The material transfer device shall be used for the placement of all hot-mix asphalt concrete binder and surface course mixtures placed with a hot-mix asphalt paver including ramps but excluding shoulders.

(3) Based on (1) above, the designer must restate which materials are placed with the Material Transfer Device (to be determined by the district). If square yard pay items are placed with the Material Transfer Device, conversion factors must be shown on the plans. Example wording: This work will be measured for payment in metric tons (tons) for all bituminous concrete binder and surface course materials placed with a Material Transfer Device.

The operation or transportation of heavy equipment on pavement or structures within contract limits is governed by Article 107.16 of the Standard Specifications and implemented through Construction Memorandum No. 39. The special provision contains specific restrictions regarding travel on bridges and full depth pavements. In addition, the designer shall submit information to the Bureau of Bridges and Structures identifying the structures that will be crossed by the Material Transfer Device. The Bureau of Bridges and Structures will analyze the structures to verify that they have the capacity to safely carry an emptied MTD and will provide the designer with recommendations. The recommendations provided by the Bureau of Bridges and Structures will identify any structure, which due to general deterioration or insufficient load carrying capacity, can not be crossed by an emptied MTD. The plans shall include notice to the Contractor of special requirements and restrictions for structures that cannot be crossed by an emptied MTD. The notice shall indicate to the Contractor that the emptied MTD must be transported over the identified structures on a transport vehicle and that information describing axle loads and axle spacing of the transport vehicle must be provided to the Engineer for review by the Bureau of Bridges and Structures.

MATERIAL TRANSFER DEVICE (BDE)

Effective Date: June 15, 1999

Revised Date: January 1, 2009

Description. This work shall consist of placing _____ (1) _____, except that these materials shall be placed using a material transfer device.

Materials and Equipment. The material transfer device shall have a minimum surge capacity of 15 tons (13.5 metric tons), shall be self-propelled and capable of moving independent of the paver, and shall be equipped with the following:

(a) Front-Dump Hopper and Conveyor. The conveyor shall provide a positive restraint along the sides of the conveyor to prevent material spillage. Material Transfer devices having paver style hoppers shall have a horizontal bar restraint placed across the foldable wings which prevents the wings from being folded.

(b) Paver Hopper Insert. The paver hopper insert shall have a minimum capacity of 14 tons (12.7 metric tons).

(c) Mixer/Agitator Mechanism. This re-mixing mechanism shall consist of a segmented, anti-segregation, re-mixing auger or two full-length longitudinal paddle mixers designed for the purpose of re-mixing the hot-mix asphalt (HMA). The longitudinal paddle mixers shall be located in the paver hopper insert.

CONSTRUCTION REQUIREMENTS

General. The material transfer device shall be used for the placement of (2) _____. The material transfer device speed shall be adjusted to the speed of the paver to maintain a continuous, non-stop paving operation.

Use of a material transfer device with a roadway contact pressure exceeding 20 psi (138 kPa) will be limited to partially completed segments of full-depth HMA pavement where the thickness of binder in place is 10 in. (250 mm) or greater.

Structures. The material transfer device may be allowed to travel over structures under the following conditions:

(a) Approval will be given by the Engineer.

(b) The vehicle shall be emptied of HMA material prior to crossing the structure and shall travel at crawl speed across the structure.

(c) The tires of the vehicle shall travel on or in close proximity and parallel to the beam and/or girder lines of the structure.

Method of Measurement. This work will be measured for payment in tons (metric tons) for (3) _____ materials placed with a material transfer device.

Basis of Payment. This work will be paid for at the contract unit price per Ton (Metric Ton) for MATERIAL TRANSFER DEVICE.

The various HMA mixtures placed with the material transfer device will be paid for as specified in their respective specifications. The Contractor may choose to use the material transfer device for other applications on this project; however, no additional compensation will be allowed.