

## **SPECIFICATION SECTION 03300 - BORROW MATERIAL**

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## **SPECIFICATION SECTION 03300 - BORROW MATERIAL**

### **1. DESCRIPTION**

This specification prescribes requirements and procedures for the provision of materials from borrow pits for the following categories of work.

Borrow Material for capping layers.

Borrow Material for subgrade.

Borrow Material for road and counterweight embankment.

Borrow Material for cohesive slope.

The Contractor shall use suitable material from borrow pits for constructing embankments, backfill, subgrade, shoulders, cohesive slopes and other parts of the work as shown on the Drawings. Borrow Material shall be provided from sources which have been approved by the Engineer and only from those locations shown on the Drawings.

The Contractor shall prepare and submit for approval to the Engineer his method statement for the earthworks which shall include an earthworks balance schedule or plan. The earthworks/excavation balance schedule or plan shall include details of the use of suitable material, in particular the locations and volumes, from which borrow pit the material is to be provided. The plan shall be updated on a weekly basis, in accordance with the progress of the Works and submitted with the Contractor's weekly work schedule until completion of the roadway excavation.

### **2. MATERIAL REQUIREMENTS**

#### **2.1 Submittals for Materials**

##### **2.1.1 Shop and Working Drawings and Schedules**

- a) The Contractor shall submit his method statement for the earthworks including complete sets of Contractor's drawings and schedules of the use of Borrow Materials to the Engineer for his approval.
- b) The Contractor's method statement shall include a schedule of Borrow Materials he intends to provide together with all necessary supporting information concerning the source. The schedule of materials shall be properly incorporated into the Contractor's earthworks balance schedule or plan for the earthworks operation.
- c) The Contractor shall be responsible for ensuring that all borrow pits have all necessary licenses and approvals from the appropriate local and

regulatory Authorities for the operation of the pit and the extraction of the Borrow Materials. All such licenses and approvals shall be submitted with the supporting information. The supporting information concerning the sources of Borrow Material shall also include but not be limited to, the following:

- (i) The location of the material sources and the routes and procedures for delivery of material to the Site.
  - (ii) The approximate anticipated volume of material to be supplied from each source together with the dimensions and depths of borrow pit excavations.
  - (iii) The intended location for the use in the Permanent Works of material from each borrow pit.
  - (iv) Proposed procedures for the testing and acceptance of materials from each source.
  - (v) Construction details for the each pit which shall include; construction of detours, construction of temporary or permanent drainage facilities, excavation slopes or retaining walls and soil water conservation drainage details.
  - (vi) The excavation methods, limits, volume and depths for each stage of abstraction.
  - (vii) The safety, environmental and traffic management measures to be used.
- d) The Contractor shall make all his submissions for approval to the Engineer well before the programmed start of the work on Site.
- e) The Contractor shall be solely responsible for making and completing all arrangements and necessary work required to return the area of the borrow pit to the original owners or organizations responsible for its management in a condition acceptable to the owners or managers.

#### 2.1.2 Samples and Testing

- a) The Contractor shall submit to the Engineer for testing samples of each distinct material type to be supplied for use as Borrow Material.
- b) The Contractor's method statement shall include details of his own sampling and testing schedule to monitor the quality and continuing suitability of all Borrow Material provided to the Site. The results of the monitoring and testing shall be included in the Contractor's reporting

obligations to the Engineer in a format subject to the approval of the Engineer.

## **2.2 Borrow Material for Embankment Construction**

The Borrow Materials to be used for embankment construction shall be in accordance with the requirements for materials stated in subsection 2.3 of Specification Section 03400 Embankment.

## **3. CONSTRUCTION REQUIREMENTS**

- a) All suitable materials provided from borrow sources shall be used and placed to; the grades, the cross sections and other requirements indicated on the Drawings, subject to the approval of the Engineer.
- b) During the operation of the borrow pit the Contractor shall ensure the pit remains in a safe properly drained condition. The drainage shall be kept functioning and in as good condition as practicable and the sides and ends of borrow pits shall be maintained at the slopes included in the Contractor's submission.
- c) Where a borrow pit includes materials of distinctive types excavation shall be carried out in a manner that ensures each type remains separate and that no mixing occurs. Excavation shall also be carried out in such a way that excavated surfaces are free draining and that the as dug moisture content of Borrow Material remains unaffected.
- d) During excavation of the borrow pit temporary drainage shall be provided and maintained in order to prevent; excessive surface run off and the erosion and possible sliding of materials onto adjacent properties or public roads. Temporary drainage shall be directed into the existing local drainage system subject to suitable measures being taken to prevent silting or flooding from such existing drainage.
- e) All trucks and other construction plant leaving the borrow area or the area of placement on the Site shall have wheels, wheel arches and other dirty sections washed before entering onto public roads.
- f) Trucks used for hauling Borrow Materials shall not be overloaded.
- g) Trucks used for hauling Borrow Materials shall be covered with canvas to prevent materials from being blown or falling off the truck.
- h) The Contractor shall ensure that all operations related to the excavation and provision of materials from borrow pits comply with his approved

health and safety plan, his approved environmental management plan and his approved traffic management plans.

- i) The Contractor shall not obtain Borrow Material from locations other than the borrow areas approved by the Engineer for the Works.
- j) The Contractor shall include in his method statement for earthworks and his earthworks balance schedule or plan the maximum rate for the reuse of the material used for the construction of embankments and counterweight berms.

#### **4. MEASUREMENT AND PAYMENT**

All costs for the Borrow Material in accordance with the provisions, material requirements and construction requirements of this Specification Section shall be deemed to be Indirectly Paid Work, which shall be included in the applicable Pay Items established in Specification Section 03200 Structural Excavation Specification Section 03400 Embankment and any other applicable Specification Sections.

Any Borrow Material Works not specifically identified in this Specification Section but which are necessary for the performance of the Works shall be deemed to be Indirectly Paid Work, which shall neither be measured nor paid separately and shall be deemed included in the rates and prices for other main items or distributed among all the pay items listed in the Bill of Quantities.