

## SECTION 606 - BEACHING

### 606.01 DESCRIPTION

This section covers the requirements for the supply and placing of rock, stone or manufactured block beaching for the protection of batter slopes, drainage channels and culvert endwalls as shown on the drawings. Three types of beaching are covered by this section :

- Type 1 : Riprap
- Type 2 : Grouted rock beaching
- Type 3 : Butted paving block beaching

### 606.02 CONFORMITY WITH DRAWINGS

The finished surface of the beaching shall conform with the levels, lines and grades as shown on the drawings or as specified.

### 606.03 MATERIALS

Unless otherwise specified, the Contractor shall supply all materials necessary to construct the beaching as specified, including rock or paving blocks, bedding materials, geotextile, concrete, reinforcement and drainage pipes.

#### (a) Beaching Material

##### (i) Type 1 Beaching

Rock for Type 1 beaching shall consist of sound, dense field or quarry rock. Sedimentary rock shall not be used.

Field or quarry rock shall be resistant to the weathering action of air and water and shall be free from cracks and other structural defects which may reduce its mechanical strength and resistance to weathering.

The required size of stone will be determined by the "critical mass" specified. At least 50% of the material comprising the riprap shall consist of stones having a mass heavier than the critical mass and not more than 10% by mass of the material shall consist of stone having a mass of less than 20% of the critical mass. No rock shall be more than 2 times greater than the critical mass.

##### (ii) Type 2 Beaching

Rock for Type 2 beaching shall conform with the same general requirements as for Type 1 beaching except that the rocks shall be of such size that the layers of beaching shall be at least 150 mm thick and of mass between 10 kg and 40 kg with at least 60% by number having a mass of over 25 kg. The rocks shall be reasonably uniform in colour.

##### (iii) Type 3 Beaching

Paving blocks shall be of a type, face size, thickness and colour as specified.

#### (b) Bedding

Type 1 beaching shall not require a granular bedding. However a needle-punched non-woven, "very robust (G=2000-3000)" geotextile, shall be laid over the trimmed surface where beaching is to be placed

Type 2 beaching shall not require bedding unless otherwise specified or shown on the drawings.

Bedding for Type 3 beaching shall consist of a 50 mm minimum layer of bedding sand.

(d) Type 3 Beaching

The blocks shall be placed on the specified bedding sand and laid in accordance with the manufacturer's recommendation. Edge blocks shall be neatly cut to establish straight edges. Dry sand shall be broomed into the joints on completion and lightly watered. The sand used in this mixture shall all pass a 1.18 mm AS sieve and 10-20% shall pass a 0.075 mm AS sieve.

606.07 **GROUTING**

Grouting with mortar shall be kept moist for 3 days after grouting.

Joint mortar shall consist of one part Portland cement, six parts sand by volume, thoroughly mixed with water to produce grout of suitable consistency.

The joints shall neatly be finished by filling with mortar. Care shall be taken to keep the exposed rock face clean. Brooming of mortar across the face of the rocks will not be permitted.

606.08 **DRAINAGE**

(a) Where specified, or shown on the drawings, a 100 mm diameter PVC pipe shall be laid down the batter in a trench beneath the bedding to discharge immediately above the top of toe wall. The pipe shall be securely bedded within the backfilled compacted crushed rock or natural gravel trench.

(b) Weepholes consisting of 75 mm diameter PVC pipes shall be placed through the beaching at 2 m centres immediately above the top of the concrete toe wall and cut off flush with the face of beaching.

606.09 **CLEANING**

On completion of the work, the beaching shall be cleaned to remove all foreign materials and discolouration from the beaching surface. Any joint mortar adhering to the surrounding rock surfaces shall be removed.

606.10 **MEASUREMENT AND PAYMENT**

(a) Beaching

The unit of measurement shall be square metres of each type of beaching in place.

Payment for supply and placement of beaching, including all labour, plant and materials to do the work, shall be at the scheduled rate for all works completed in accordance with the specification.

(b) Toe and Perimeter Walls

The unit of measurement shall be per lineal metre of Toe and Perimeter Wall constructed.

Payment for construction of Toe and Perimeter Walls, including all labour, plant and materials to do the work, shall be at the scheduled rate for all works completed in accordance with the specification.