

ITEM 705.41

WASHED RIVER STONE SPLASH PAD

SQUARE FOOT

GENERAL

The work consists of furnishing and installing rounded river stones to the dimensions and details as shown on the Plans.

MATERIALS

Washed River Stone

Washed river stone shall have rounded, tumbled edges and shall be of various shades of gray, tan or brown. Stone shall be between 2 and 8 inches in diameter. All fines shall be screened from the aggregate. The material shall be free of organic and inorganic debris and trash.

Mortar

Cement mortar shall conform to the Massachusetts Department of Transportation Standard Specifications for Highways and Bridges Division III, M4.02.15.

Latex Bonding Agent

The latex bonding agent shall be non-re-emulsifiable in the presence of moisture and shall have at least 50% internally plasticized solids. It shall be similar and equal to Laticrete and used in accordance with manufacturer's instructions. Laticrete 3701 is a grout and mortar admixture, manufactured by Laticrete International, Woodbridge, Connecticut.

Concrete Base

Concrete for base course shall conform to the requirements of the Massachusetts Department of Transportation Standard Specifications for Highways and Bridges Division III, M4.02.00 for Air-Entrained 4000 psi, $\frac{3}{4}$ inch, 610 Cement Concrete.

Submittals

The Contractor shall submit photos of the washed river stone to the Engineer for review and approval prior to ordering the material. Photos shall show the full range of colors and sizes of stone to be utilized.

Samples of masonry tools and other materials to be used and samples for testing shall be submitted as requested by the Engineer.

Before construction begins, a minimum 2' x 2' size mockup shall be installed as a sample panel to be retained for reference until the project is accepted. Mockup may be incorporated into the project if approved by the Engineer.

Material Storage

All materials shall be delivered, stored, and handled to protect them from wetting, staining, chipping, or other damage. Cement and similar perishable materials shall be stored in watertight sheds with elevated floors. Any material showing evidence of water or other damage will be rejected.

CONSTRUCTION METHODS

Excavation

The splash pad shall be constructed to provide proper drainage at all points. The required excavation shall be made such that the subgrade shall be fine graded at a 5% to 10% slope to provide proper drainage before placing the gravel subbase.

Prior to placing gravel, compact subgrade in accordance with the provisions of the Massachusetts Department of Transportation Standard Specifications for Highways and Bridges Division II, Section 150.60: General and Section 150.62: Embankment Construction with Materials Other Than Rock.

Concrete Base Slab

The cement concrete base slab shall be constructed as shown on the Plans.

Dimensions such as length, width, depth, and lip size are all on the Plans.

Washed River Stone Paving

Before setting the stones, stone surfaces shall be brushed clean of excess dirt and residue.

Mortar for setting bed and joints between stones shall be prepared as specified above. The latex bonding agent shall be added in accordance with manufacturer's instructions. The use of lime is prohibited.

All masonry shall be laid by skilled workmen under adequate supervision and shall be laid true to lines and levels referred to in previous paragraphs. Masonry work shall not be laid in temperatures below 40°F., unless provisions are made to adequately protect the masonry materials and the finished work from frost by heating materials, enclosing the work, and heating the enclosed spaces and contact surfaces. All masonry materials installed in freezing weather shall be kept at a temperature between 50°F. and 90°F. Protect masonry against freezing for a minimum of 48 hours after being laid. Anti-freezing admixtures will not be allowed in the mortar. Frozen work shall not be built upon. Any completed work found to be affected by the frost shall be taken apart and rebuilt at the Contractor's expense.

The finished work shall not deviate from the graded elevations.

After the excavation has been completed, the subgrade fine graded, the gravel subbase placed, fine graded and compacted, the concrete base slabs constructed, and before

commencing the work of river stone paving, the slabs shall be thoroughly cleaned of all dust, dirt, and foreign matter. The slab shall be thoroughly saturated with water before laying stones, and the top surface of the slab shall be dry before starting to lay stones.

Washed river stones shall be laid in a full setting bed of mortar at the proper level. Dip, brush or paint the back of each stone with a mixture of cement and latex bonding agent (latex bonding agent shall be mixed with water in a 1:1 ratio) or approved equal and set the stone into the freshly installed mortar setting bed, tamping the stone level and true. Leveling of the stone shall be done as the setting operation proceeds so that it is not necessary to disturb the stones set earlier.

Joints shall be solidly filled to the full depth with mortar. Care shall be taken not to smear mortar on adjoining pavers, cut stone or other surface.

After installation of river washed stone, the splash pad shall be cured for at least 5 days by covering with curing paper or other approved material. As soon as the joints have been cured, the wax shall be removed with high pressure steam. Care shall be taken not to damage mortar by overheating any area.

In case the continuity of the work is suspended, the Contractor shall terminate his paving against temporary wood blocking. The stones along this blocking shall be set in sand to allow removal and tooting of the stones in the work to be later continued. All exposed stone surfaces shall be thoroughly cleaned with a solution of soap and water, using stiff fiber brushes. In extreme cases, the area shall be wetted with a 5% solution of muriatic (hydrochloric) acid but this shall be preceded and followed by a copious bath of fresh clean water.

All imperfect or frozen mortar shall be raked out to a depth of $\frac{3}{8}$ inch and repointed as directed by the Engineer at the Contractor's expense. The entire work shall be left in good condition, clean and free from all blemishes.

METHOD OF MEASUREMENT

Washed River Stone Splash Pad will be measured for payment by the square foot, complete in place.

BASIS OF PAYMENT

Washed River Stone Splash Pad will be paid at the Contract unit price per square foot, which price shall constitute include all labor, materials, equipment, and incidental costs required to complete the work. No separate payment will be made for grading and compacting subbase, cement concrete base, mortar, or washed river stone, but all costs in connection therewith shall be included in the Contract unit price bid.

Gravel will be paid for separately under Item 151.02, Gravel.

Excavation will be paid for separately under Item 120.1, Unclassified Excavation.