

INSTRUCTIONS FOR USE

Construction Specification 63 – Treatment of Rock Surfaces

1. Applicability

Construction Specification 63 is applicable to the treatment of rock surfaces. Included are the cleaning and preparing of the surfaces and the furnishing and placing of the treatment material. When large volumes of concrete are involved, or when desired, Construction Specification 32 may be used as an alternative to this specification. Treatment details would then be placed in construction details for Construction Specification 32.

2. Material Specifications

The following material specifications complement Construction Specification 63:

- 522 – Aggregate for Portland Cement Concrete
- 531 – Portland Cement
- 534 – Concrete Curing Compound

3. Included Items

Items to be included in contract specifications and drawings follow:

- a. Plan view showing location and extent of surface treatment
- b. Details for cleaning and treatment of cracks, and dental excavation
- c. Type of treatment including design of mix, slump, air content, and special placement methods when required
- d. Type of cement
- e. Type of admixtures, include necessary material specifications
- f. Gradation of coarse aggregate
- g. Slope limitations for the finished surface(s), as determined by site topography, plasticity of available fill material, embankment zoning, and other design considerations, stated as follows:

“Except for small local areas, the slope of the finished surface shall not be steeper than ___ horizontal to ___ vertical. Steeper surfaces extending not more than ___ feet, measured vertically, are permitted.”

- h. Method of curing and protection in Section 8
- i. Method of measurement and payment in Section 9

4. Methods

Section 8, Curing and Protection

Method 1 – Treatment of rock surfaces is intended to remove surface irregularities that could contribute to nonuniform installation of earth material.

Method 2 – Treatment of rock surfaces is an integral phase to ensure blending and/or bonding of surface treatment and the proposed earth embankments. Water-tightness and the reduction of potential seepage paths are major design considerations. (See Figure 63–1.)

Section 9, Measurement and Payment

Method 1 – Intended for use when the area to be treated is not fully definable and the full extent of treatment needs to be determined at the time of installation. This method applies to rock surfaces that have significant irregularities and are not readily determined before installation.

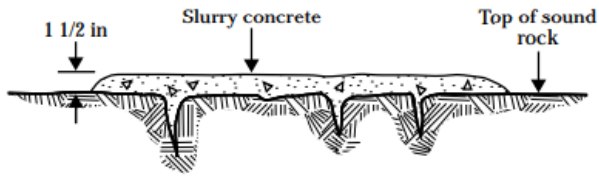
Method 2 – Intended for use when the area to be treated is clearly definable and the extent of treatment has been determined. This method applies to rock surfaces that can be viewed and where the extent of treatment will not vary.

When specifications are prepared using electronic procedures and all methods but one are deleted for use in a contract specification, delete from the last paragraph “*All Methods – The following provisions apply to all methods of measurement and payment.*” Left justify the remaining text.

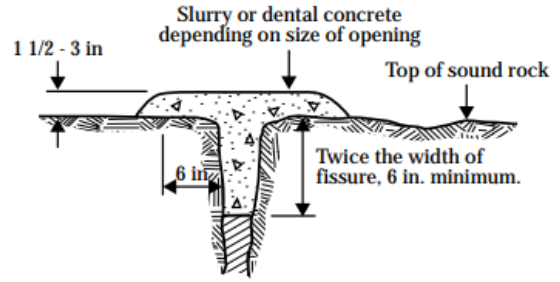
5. Items of Work and Construction Details

Starting at the top of page 63–5, prepare and outline job specific "Items of Work and Construction Details" (IWCD) in accordance with these instructions. For ease of utilization, the use of recyclable color paper for the IWCD should be considered.

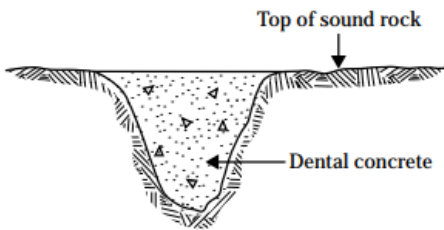
Figure 63-1 Typical treatments of rock surfaces



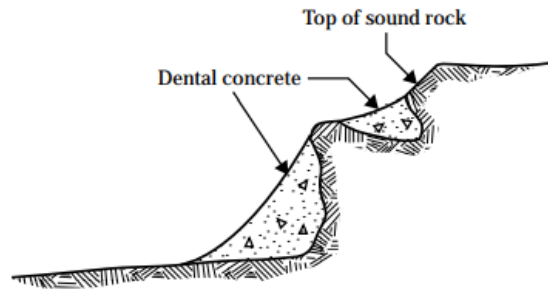
Thin surface cracks



Open fissures



Holes or solution channels



Overhangs and irregular surfaces