

SECTION 04902

MASONRY RE-POINTING

1 PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Assessment of existing conditions.
2. Historic mortar analysis.
3. Replacement sands, binders, and mortars.
4. Climate requirements.
5. Sun, wind, rain, and frost protection.
6. Removing existing mortar.
7. Removing and salvaging historic host masonry.
8. Absorption control.
9. Mortar mixes.
10. Re-pointing mortar joints.
11. Curing.
12. Clean up.

1.2 REFERENCES

- A. Small-scale Lime-burning by Michael Wingate. Intermediate Technology Publications, 9 King Street, London, 1985. ISBN 0 946688.
- B. ASTM C 136-96a – Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates; 1996.
- C. EN459/BS459 – European Norm and British Standards for Specifications for Building Limes; 2001.
- D. ASTM C 144 – Standard Specification for Aggregate for Masonry Mortar; 1997.
- E. ASTM E-11 –Specification for Wire-cloth and Sieves for Testing Purposes; Book of Standards Volume 14.02.
- F. ASTM C 1324 – Standard Test Method for Examination and Analysis of Hardened Masonry Mortar; 2004.
- G. Technical Advice Note 1, Preparation and Use of Lime Mortars, Historic Scotland, ISBN 1903570, Revised Edition 2003.

1.3 SUBMITTALS

A. Product Data:

1. Virginia Lime Works Mix&GO:

- a. Product data sheets for all mix ingredients.
- b. Mix design.
- c. Aggregate sieve analysis.
- d. Manufacturer's storage and shipping requirements information.
- e. Manufacturer's climate requirements for installation and curing.
2. Virginia Lime Works Traditional Lime Putty Mortar
 - a. Product data sheets for all mix ingredients.
 - b. Mix design.
 - c. Aggregate sieve analysis.
 - d. Manufacturer's storage and shipping requirements information.
 - e. Manufacturer's climate requirements for installation and curing.
3. Virginia Lime Works Traditional Hot Lime Mortar
 - a. Product data sheets for all mix ingredients.
 - b. Mix design.
 - c. Aggregate sieve analysis.
 - d. Manufacturer's storage and shipping requirements information.
 - e. Manufacturer's climate requirements for installation and curing.
4. Virginia Lime Works Natural Hydraulic Lime
 - a. Product data sheets.
 - b. Manufacturer's storage and shipping requirements information.
 - c. Manufacturer's climate requirements for installation and curing.
5. Virginia Lime Works Traditional Lime Putty
 - a. Product data sheets.
 - b. Manufacturer's storage and shipping requirements information.
 - c. Manufacturer's climate requirements for installation and curing.
6. Aggregate for site mix
 - a. Historic Sand
 - 1) Sieve analysis.
 - 2) Aggregate void ratio.
 - 3) Gradation pictogram.
 - b. Replacement Sand
 - 1) Sieve analysis.
 - 2) Aggregate void ratio.
 - 3) Gradation pictogram.
7. Roller Pan Mixer
 - a. Product Data Sheets
 - b. Diagram of electrical requirements and contractor's plan for providing adequate power.
 - c. Contractor's plan for repair/replacement in case of malfunction.
8. Written procedure for:
 - a. Obtaining water supply.
 - b. Diagram of water distribution system.

B. Testing and Analysis

1. Historic Mortar Analysis Report - Provide mortar analysis as the basis for determining the design mix. Mortar analysis shall include the following laboratory examination of building mortar in each type of masonry to determine the composition of the historic mortars.
 - 1) Petrographic Examination per ASTM C1324.
 - 2) XRD per ASTM C1324.