

1 GENERAL

1.01 RELATED REQUIREMENTS

- .1 Division 1 - General Requirements.
- .2 Section - 04 03 06 Historic - Cleaning Historic Masonry
- .3 Section - 04 03 07 Historic - Masonry Repointing
- .4 Section - 04 05 00 Common Work Results for Masonry
- .5 Section - 04 03 08 Historic - Mortaring

1.02 ADMINISTRATIVE REQUIREMENTS

- .1 Conduct a pre-dismantling meeting with Departmental Representative to verify project requirements, equipment, procedures and assigned storage areas.

1.03 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Site Quality Control Submittals:
 - .1 Provide up-to-date copies of stone location recording system chart or card index, as well as chronological information concerning each numbered unit (individual cards of units), when requested.
- .3 Shop Drawings:
 - .1 Submit drawings stamped and signed by professional engineer registered or licensed in Province of Canada.
 - .2 Provide drawings for bracing and temporary framing work as required to support the wood stairs during the bolster removal.

1.04 CLOSEOUT SUBMITTALS

- .1 Provide maintenance data for incorporation into manual specified in Section 01 78 00 - Closeout Submittals. Include:
 - .1 Photographically record stonework to be dismantled and rebuilt.
 - .2 Record drawings of layout of stored stones.

1.05 QUALITY ASSURANCE

- .21 Qualifications:
 - .1 Masonry Contractor:
 - .1 Work of this Section: executed by contractor specializing in historic stone conservation work and competent to meet all performance criteria specified.
 - .2 Foreperson:
 - .1 Provide competent trade foreperson specializing in type of work

- required.
- .2 Experience: Competent to meet all performance criteria specified. Must be present on site throughout Work.
- .3 Dismantlers:
 - .1 Experience: Competent to meet all performance criteria specified.
- .3 Mock-ups:
 - .1 Construct mock-up in accordance with Section 01 45 00 - Quality Control.
 - .2 Perform mock-up 1000mm x 1000mm to demonstrate dismantling procedures for as required to repoint around the removed bolsters.
 - .3 Notify Departmental Representative minimum of 48 hours prior to construction of mock-up.
 - .4 Perform mock-up under supervision of Departmental Representative to demonstrate a full understanding of specified procedures and techniques is achieved before work commences.
 - .5 Perform mock-up where directed by Departmental Representative.
 - .6 Work not to proceed prior to approval of mock-up. Allow 48 hours for inspection of mock-up by Departmental before proceeding with masonry dismantling work.
 - .7 When accepted, mock-up will demonstrate minimum standard for this work. Mock-up may remain as part of finished work.

1.06 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements.
- .2 Protect and store stones to facilitate their resetting.
 - .1 Store dismantled masonry units [on wood [platforms] [pallets]], protected from exposure to water, elements, and potential mechanical damage [within a shed] [fully covered under polyethylene].
 - .2 Submit storage and identification system to [epartmental Representative].

1.07 AMBIENT CONDITIONS

- .1 Loosen wet masonry only when temperature is above 5 degrees C.
- .2 In temperature 5 degrees C and below:
 - .1 Keep stones dry.
 - .2 Protect wet stones from freezing.

2 PRODUCTS

2.01 NOT USED

- .1 Not Used.

3 EXECUTION

3.01 EXAMINATION

- .1 Examine masonry, staging and storage areas and notify Departmental Representative in writing of conditions detrimental to acceptable and timely completion of Work.

3.02 SITE VERIFICATION OF CONDITIONS

- .1 Report in writing, to Departmental Representative areas of deteriorated stone not identified in the documents. Obtain Departmental Representative's approval and instructions for repair of stone before proceeding.

3.03 PREPARATION

- .1 Remove deteriorated portions of stones using low impact removal methods until sound surface is reached.
- .2 Remove deteriorated portions of stones by cutting, scraping and chiselling.
- .3 Obtain Departmental Representative's approval for alternative methodology and tools to be employed before commencing the work.
- .4 Clean stone surface of dust and stone chips.

3.04 PROTECTION

- .1 Prevent damage to building and interior wood elements (stairs, posts, windows, etc.) which are to remain. Make good damage incurred.
- .2 Protect surrounding components from damage during work.
- .3 Make good damage to historic fabric.
- .4 Obtain Departmental Representative's approval for repair methodology.

3.05 SPECIAL TECHNIQUES

- .1 Temporary Marking and Recording:
 - .1 Mark stone, on face, before removal using marking product which can be completely erased when required without damaging masonry unit:
 - .1 Ball-point pen on diachylon, attached to stone.
 - .2 Waxless chalk directly on stone.
 - .2 Tracking relocated stones and other masonry units:
 - .1 Use numbering, marking, and positioning system.
 - .3 Mark/Identify:
 - .1 Stones and other elements or components to show identity and position.
 - .2 Wood platforms or other equipment used to transport and store stones.
 - .3 Work and storage areas.
 - .4 Location from which stones are removed on drawings.
 - .4 Stone location recording system.
 - .1 Prepare chart or card index to:
 - .1 Help locate stones or units when necessary.

- .2 To manage availability of platforms.
 - .3 To manage work and storage areas.
- .2 Keep chart or card index up-to-date and, if required, produce copy every day.
- .3 Prepare chart or card index or drawing to contain relevant information.
- .5 Ensure that temporary marking will remain in use resistant to weather, handling and cleaning until final marking of stones.
- .6 Remove markings and adhesive without damaging units:
 - .1 Brush with vegetable fibre brush: either dry or with water.
 - .2 Use no solvent, acid or other chemical product

3.06 STRUCTURAL SUPPORT

- .1 Provide temporary support for wood stairs.

3.07 METHOD FOR LOOSENING STONES

- .1 Use approved methods to loosen stones which will cause no damage either to stones or to other architectural elements.
- .2 Use hand tools only.
- .3 Obtain Departmental Representative's approval for use of power tools before commencing work.

3.08 DISMANTLING AND MOVING STONES

- .1 Avoid damaging arrises of stone when removing mortar and freeing up.
- .2 Remove excess mortar using [hand tools].
- .3 Use wood wedges where required to remove or dislocate stone.
 - .1 Use flat pry bars protected with impact absorbing protection (burlap, cardboard).
- .4 Use nylon hoisting belts. Use minimum 2 belts per stone.
- .5 Protect stone from damage when hoisting and lifting from position.
 - .1 Use wood shims to isolate units from hoisting belts.
- .6 Where damage occurs to stone, report to Departmental Representative and repair stone.
- .7 Make good damage incurred at no additional cost to Contract.
- .8 Obtain review of repaired damage by Departmental Representative.

3.09 HANDLING

- .1 Usage of Lewis bolts for handling stone is not permitted.
- .2 Place detached stones on wood surfaces during handling. Prevent contact with metal.
- .3 When stones are lowered to ground, place directly on wooden platform used for transport or storage.

- .4 Transport and keep stones on wooden platforms.
- .5 Ensure that sharp edges of stones do not come into contact with hard objects.

3.10 TEMPORARY STORAGE STAGING AREA

- .1 Place stones in designated area of site for cleaning, detailed inspection and for final marking, before storage.
- .2 Make stones accessible and retrievable when required.

3.11 CLEANING

- .1 Clean in accordance with Section 04 03 06 - Historic - Cleaning Historic Masonry.
- .2 Do cleaning operations at above freezing temperature.
 - .1 After cleaning, protect wet stones against freezing until dry.
- .3 Clean stones by wet scrubbing with vegetable fibre brush unless otherwise instructed by Departmental Representative.

3.12 FINAL MARKING

- .1 Do final marking after cleaning, on surface that supports good adhesion and legibility and will not be visible after resetting.
- .2 Do marking in colour. Dimensions: legible from distance of 2 metres.
- .3 Ensure that marking product used will not affect mortar to stone adhesion when resetting.
- .4 Ensure marking product used will survive storage until resetting of stone.

3.13 FINAL STORAGE

- .1 When stones are placed under shelter:
 - .1 Design and ventilate shelter to keep condensation from forming on internal surfaces.
- .2 Lay out storage so that each stone will have its numbered face visible, and be accessible or removable without having to move adjacent stones.
- .3 Show layout of stones to be stored on record drawing.
- .4 Store rubble stone in a wood box.

END OF SECTION