

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Section 01 00 10 General Instructions
- .2 Section 01 35 29.06 Health and Safety Requirements
- .3 Section 02 82 00. 01 Asbestos Abatement - Minimum Precautions
- .4 Section 02 83 20 Lead Precautionary Measures
- .5 Section 07 92 00 Joint Sealants

1.2 REFERENCE STANDARDS

- .1 Canadian Standards Association (CSA) Group:
 - .1 CAN/CSA-A440-[00 (R2005)] Windows.
- .2 Health Canada/Workplace Hazardous Materials Information System (WHMIS):
 - .1 Material Safety Data Sheets (MSDS).
- .2 The Society for Protective Coatings (SSPC)
 - .1 SSPC-SP2 Hand Tool Cleaning

1.3 SEQUENCING

- .1 Repair steel windows in accordance with Work of this section. Repairs include glazing replacement, sealing of gap at panes, replacing screws at hinges and fixing ventilators in closed position.
- .2 Before starting work, verify existing conditions and variations from original contract documents.

1.4 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 00 10 - General Instructions – Submittal Procedures.
- .2 Product Data:
 - .1 Provide product data in accordance with Section 01 00 10 – General Instructions.
 - .2 Material Safety Data Sheets (MSDS).
- .3 Samples:
 - .1 Submit for review and acceptance samples for the following:
 - .1 Glazing tape.
 - .2 Sealants. Colour charts.

- .3 Coated stainless steel wire.
- .4 Replacement Screws, bolts and fasteners.
- .5 4mm replacement glass.
- .6 Rust Inhibiting Steel Primer.
- .7 Urethane Modified Gloss Alkyd Paint.

1.5 CLOSEOUT SUBMITTALS

- .1 Record Documentation:
 - .1 Submit as built drawings to locate and indicate all interventions and any variations from the original drawings and specifications.
 - .2 Submit record photography of ongoing work.

1.6 QUALITY ASSURANCE

- .1 Qualifications:
 - .1 Work of this Section: only undertaken by Contractor experienced in conservation of ferrous metal and bronze architectural work.
- .2 Mock ups:
 - .1 Construct mock up in accordance with Section 01 00 10 General Instructions – 1.10.1 Quality Control – Mock ups.
 - .1 Prepare mock up to demonstrate understanding of each specified repair.
 - .2 Prepare mock up for inspection by Departmental Representative before proceeding with further work.
 - .3 Adjust techniques as directed by Departmental Representative until desired result are achieved.
 - .4 Mock-up will be used to judge quality of work and efficacy of repair.
 - .5 Notify Departmental Representative % working days in advance of mock up preparation.
 - .6 Mock-up may remain as part of finished work.

1.7 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 00 10 General Instructions, Article 1.13 Construction Facilities, Article 1.15 Common Product Requirements.
- .2 Packaging Waste Management:
 - .1 Separate and recycle packaging materials in accordance with Section 01 00 10 – General Instructions, Article 1.18 Waste Management.

Part 2 **Products**

2.1 **MATERIALS**

- .1 Aluminum glazing stops: Retain, restore and reuse existing glazing stops for reinstallation.
- .2 Temporary aluminum stops: Extruded aluminum L angle, sized to suit, with predrilled holes to correspond with existing holes in sash. Paint to match finish of existing stops.
- .3 Replacement glazing: Clear float glass 4 mm thick, sized to suit.
- .4 Fasteners: Retain and reinstall existing fasteners where possible.
- .5 New fasteners: Stainless steel grade 316, to match existing thread, size and head.
- .6 Primer: Rust Inhibiting Steel Primer
- .7 Urethane Modified Gloss Alkyd Paint: Colour to match adjacent surface.
- .8 Glazing tape: High density, closed cell urethane foam.
- .9 Sealant: High performance, single component, neutral cure, medium-modulus silicone sealant. Black. For wet seals inside and out.
- .10 Penetrating oil.
- .11 Removable weather strip caulking. Clear. For gap fill.
- .12 Replacement thumb screw at casement stay: Custom bronze thumbscrew to match existing thread, size and head.
 - .1 Assume need for custom casting, polishing and machining.
 - .2 Quantity: 15
 - .3 Extra thumbscrews to be handed over to Departmental Representative.
- .13 Coated stainless steel wire: Brown. To fix ventilators latches in closed position.

Part 3 **Execution**

3.1 **PREPARATION**

- .1 Install overhead protection and temporary enclosures in accordance with Section 01 00 10 General Instructions.
- .2 Protect adjacent surfaces from damage prior to undertaking in-situ repairs.

3.2 REPLACEMENT OF EXISTING GLAZING – R1

- .1 Minimize risk of breakage: reinforce panes of glass with vinyl adhesive tape on both sides.
- .2 Carefully remove stops and broken or cracked glazing glass panes from sash/ventilators.
 - .1 Clean screw heads. Apply penetrating oil to screw heads 24 hours in advance of removal.
 - .2 Use only screwdrivers that exactly fit screw heads. Do not strip or damage fasteners.
 - .3 Fasteners:
 - .1 Retain existing fasteners for reuse.
 - .2 Where fasteners are missing replace with stainless steel fasteners that match the existing in profile, size and head.
- .3 Remove old caulking, putty, paint and dirt from rebate by scraping with hand tools and sandpaper to SSSP-2.
 - .1 Clean any remaining residue and dust with alcohol.
 - .2 Paint within 4 hours of cleaning. Apply one coat of primer and two coats of paint to rebate. Allow to dry as per manufacturer's instruction.
- .4 Install new 4mm glass pane.
 - .1 Where glazing stops are being reinstalled.
 - .1 Set glazing on adequately sized setting blocks to provide sufficient clearance from frame.
 - .2 Apply glazing tape on both sides. Ensure drainage at base is not impeded by tape installation.
 - .3 Secure with aluminum glazing stop.
 - .4 Cut back glazing tape flush with metal frame/stop on interior and exterior.
 - .5 Apply small bead of silicone caulking as wet seal over exposed edge of glazing tape inside and out.
 - .2 Where glazing stops are missing.
 - .1 Set glazing on adequately sized setting blocks to provide sufficient clearance from frame.
 - .2 Apply glazing tape at rebate. Ensure drainage at base is not impeded by tape installation.
 - .3 Secure glass with temporary/new aluminum L stop with new stainless steel fasteners that match existing in profile, size and head.
 - .4 Paint new stop to match adjacent sash.
 - .5 Cut back glazing tape flush with metal frame/new stop on interior and exterior.
 - .6 Apply small bead of silicone caulking as wet seal over exposed

edge of glazing tape inside and out.

3.3 WINDOW GLAZING GAP SEAL – R2

- .1 Where glazing is installed and there are visible gaps between the glazing and the perimeter stop or muntin.
 - .1 Apply a bead of weather strip caulking to fill missing area on both sides of pane/stop.
 - .2 Tool back neatly.

3.4 RESTRAINT OF LATCH OR PULL – R3

- .1 Add wire restraint to ensure ventilator sash is secured in closed position.
 - .1 Secure latches together using coated wire.
 - .2 Neatly twist and fold wire ends under.

3.5 SCREW REPLACEMENT – R4

- .1 Secure Hinge to Window Frame.
 - .1 Ensure that all hinges are secured to the metal frame.
 - .1 Where fasteners missing, verify that metal frame is intact and can receive fastener.
 - .2 Reuse existing fasteners where ever possible.
 - .3 Where fasteners are missing install new stainless steel fastener to match existing thread, size and head.
- .2 Thumbscrew at stay.
 - .1 Where thumbscrews are missing install new custom bronze thumbscrew to match existing thread, size and head.

3.6 CLEANING

- .1 Progress Cleaning: Clean in accordance with Section 01 00 10 General Instructions, Article 1.20 Cleaning.
 - .1 Leave Work area clean at end of day.

3.7 PROTECTION

- .1 Protect existing and installed components from damage during repair work.
- .2 Protect adjacent materials during window work.
 - .1 Any damage incurred during the repair work to be repaired by a qualified trades person at no cost to the client.

END OF SECTION