

Approved: 2005-03-31

Part 1 General

1.1 SECTION INCLUDES

- .1 Requirements for the installation of wood shingles on exterior surfaces and roofs.
- .2 Building 88 is a Heritage Building having a 'Classified' designation. All work is to respect the original design.

1.2 REFERENCES

- .1 American Society for Testing and Materials International, (ASTM).
 - .1 ASTM D5116-97, Standard Guide for Small-Scale Environmental Chamber Determinations of Organic Emissions from Indoor Materials/Products.
- .2 Canadian General Standards Board (CGSB).
 - .1 CAN/CGSB-51.32-M77, Sheathing, Membrane, Breather Type.
- .3 Canadian Standards Association (CSA International).
 - .1 CSA A123.3-98, Asphalt Saturated Organic Roofing Felt.
 - .2 CSA B111-1974(R2003), Wire Nails, Spikes and Staples.
 - .3 CSA 0118.1-08(R2013), Western Red Cedar Shakes and Shingles.
 - .4 CSA O118.3-93, Northern Pine Taper sawn Shakes.
 - .5 CAN/CSA-Z808-96, A Sustainable Forest Management System: Guidance Document
- .4 Cedar Shake and Shingle Bureau (CSSB).
 - .1 CSSB-97, Cedar Shake and Shingle Grading Rules.
 - .2 CSSB New Roof Construction Manual for Roof Application Details 2002.
 - .3 CSSB Exterior and Interior Wall Manual for Sidewall Application Details 2002.
- .5 Environmental Choice Program (ECP).
 - .1 CCD-126-95, Polyethylene Plastic Film Products.

1.3 DEFINITIONS

- .1 Shingle: tapered slice of wood sawn from block with taper in direction of grain or axial direction.

1.4 SUBMITTALS

- .1 Product Data:
 - .1 Submit manufacturer's printed product literature, specifications and data sheet in accordance with Section 01 33 00 - Submittal Procedures
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- .2 Submit two (2) copies of WHMIS MSDS - Material Safety Data Sheets in accordance with Section 01 33 00 - Submittal Procedures. Indicate VOC's for caulking materials during application and curing.
- .2 Shop Drawings:
 - .1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.
 - .2 Indicate details of flashing installation.
- .3 Samples:
 - .1 Submit cedar shingle colour sample for Departmental Representative approval prior to execution.
 - .2 Submit samples in accordance with Section 01 33 00 - Submittal Procedures.
 - .3 Submit duplicate full size shingles, of finish and profile specified.
- .4 Manufacturer's Instructions:
 - .1 Submit manufacturer's installation instructions.

1.5 QUALITY ASSURANCE

- .1 Qualifications:
 - .1 Installer: company or person specializing in shingle work installations approved by manufacturer.
- .2 Job Mock-up:
 - 1. Provide 1200 mm x 1200 mm mock-up including all components as directed by Departmental Representative. Mock-up will be used:
 - .1 To judge workmanship, substrate preparation, operation of equipment and material application.
 - 2. Locate where directed
 - 3. Allow 24 hours for inspection of mock-up before proceeding with work.
 - 4. When accepted, mock-up will demonstrate minimum standard of quality required for this work. Approved mock-up may remain as part of finished work. Remove mock-up and dispose of materials when no longer required and when directed Departmental Representative.
- .3 Test Reports: certified test reports showing compliance with specified performance characteristics and physical properties.
- .4 Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
- .5 Pre-Installation Meetings: conduct pre-installation meeting to verify project requirements, manufacturer's installation instructions and manufacturer's warranty requirements.

1.6 Warranty

- .1 Supply a material warranty for a duration of 50 years against wood decay and 15 years on stain, offered by the material manufacturer. Supply a written and signed warranty acceptable to the Departmental Representative.
- .2 At no additional cost to the Owner, provide labour and workmanship warranty. The warranty shall cover the repair of the cedar shingles and associated work as a result of faulty materials or workmanship for a period of two (2) years from the date of substantial and complete performance of the work.

1.7 DELIVERY, STORAGE AND HANDLING

- .1 Packing, Shipping, Handling and Unloading:
 - .1 Deliver, handle, store and protect materials as per manufacturer recommendations
 - .2 Remove only in quantities required for same day use.
- .2 Storage and Protection:
 - .1 Provide and maintain dry, off-ground weatherproof storage.

1.8 WASTE MANAGEMENT AND DISPOSAL

- .1 Divert unused wood materials from landfill to appropriate recycling, reuse, composting facility
- .2 Divert unused preservatives materials from landfill through disposal at special wastes depot.
- .3 Remove from site and dispose of packaging materials at appropriate recycling facilities.

1.9 MAINTENANCE

- .1 Provide information on preservation and restoration of shingles.

Part 2 Products

2.1 MATERIALS

- .1 Western red cedar shingle to CSA O118-1, 457 mm length, 10 mm thickness. Cedar shingles to be factory stained; colour will be approved by the Departmental Representative.
- .2 Ventilation Underlayment: 3 dimensional coated nylon waffle matrix that provides air flow. Fire, U.V., heat and cold resistant with a weight of 237 gm / square metre.
- .3 Weather protective barrier (vapour permeable): Self-adhering water resistive air barrier membrane underlayment conforming to ASTM E96/A : 202g per square meter per 24 hours (vapour transmission) and ASTM E 2178: max 0.02 liter per square meter at 75 Pa (air barrier). Minimum thickness 23 mils.

- .4 Nails: Stainless steel or hot dipped galvanized. Ring shank blunt tip nail with minimum 5.6 mm head.

Part 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

- .1 Compliance: comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.

3.2 REMOVAL OF EXISTING SHINGLES

- .1 Remove existing shingles, flashings and underlay, and expose sheathing of wall.
- .2 Remove Withdraw existing shingles and flashing nails, set those which break off. Leave surfaces free from dirt and loose material.
- .3 Departmental Representative to inspect the sheathing. Take up, cut out and/or remove portion of sheathing boards affected by fungal or insect attack as directed on site by Departmental Representative.
- .4 Replace cut out portions of sheathing boards with boards of equal sectional dimensions, and specified grade. New sheathing must bear 25 mm on structural members for support

3.3 APPLICATION

- .1 Do not prime water resistive air barrier in order preserve its vapour transmission capabilities.
- .2 Do wood shingle work in accordance with NBC and CSA O118.1, Appendix C, CSA O118.2, Appendix B, except where indicated or specified otherwise.
- .3 Install the self-adhesive weather resistive barrier as per the manufacturer's recommendations.
- .4 Install ventilation underlayment over all surfaces to be covered with cedar shingles, secured with round top nails as per manufacturer's instructions.
- .5 Install shingles over dry substrate.
- .6 Leave a keyway space of at least 3 mm between shingles. The edges should not touch. The keyway spacings on consecutive rows must be offset a minimum 38 mm.
- .7 Stagger joints minimum of 38 mm in succeeding courses. Ensure that in any 3 courses no two joints are in alignment.
- .8 Use two nails per shingle. Space nails 19 mm from edge and 25 mm above butt line of overlapping course. For shingles wider than 203 mm use two additional nails towards

the center driven 25 mm apart. Nails will penetrate solid nailable substrate a minimum 19 mm.

- .9 Drive nails flush but do not crush shingles.
- .10 Install shingles with 127 mm weather exposure and having triple thickness of shingles and at any given point.
- .11 Apply strip of SBS underlayment 200 mm wide over outside corners . Use shingles of uniform width approximately 150 mm wide. Apply shingles at same weather exposure as other part of the wall.
- .12 Install cedar shingle along outside corners in alternating lace pattern and cover with metal edge corner flashing to match existing. Ensure self-adhesive weather resistive barrier is continuous over all outside corners. Colour of metal flashing will be determined/approved by the Departmental Representative.
- .13 Install cedar shingle along inside corners in lace pattern, ensure self-adhesive weather resistive barrier is continuous over all inside corners.
- .14 Install bottom step flashing (soaker base flashing) interleaved between shingles at vertical junctions.

3.4 CLEANING

- .1 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.
- .2 Remove nails that have fallen on ground using high powered, earth magnets or other collection devices. Nails to be gathered on a daily basis. Nail pickup to be conducted to Departmental Representative's approval.

END OF SECTION 07 31 29
