

Project:

Proposed Addition and Renovations to

Lion's Head Rotary Building

59 Main Street

Lion's Head, Ontario

Owner:

The Municipality of the Northern Bruce Peninsula

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Consultant:

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Addendum issued via electronic transmission to all plan takers known to the architect.

Note: this *Addendum* shall be read together with the *Bid Documents* previously issued for this *Project*. The *Work* associated with the content of this *Addendum*, together with all other *Work* which may be reasonably understood to be necessary to incorporate the *Work* of the *Addendum* into the *Work* described in the *Bid Documents*, shall form a part of the *Work* for which the *Bid Price* is submitted. *Bidders* are solely responsible for the distribution of this *Addendum* to prospective *Sub-contractors* and suppliers and for the appropriate assignment of the scope of work described within this *Addendum* to the various parties who will be responsible for its execution under *Contract*. *Bidders* shall be solely responsible to coordinate the efforts of all of those responsible for the calculation of the *Bid Price* offered for the *Work*.

The Bid and Contract Documents are hereby amended as follows:

PART 1 : DOCUMENTS ATTACHED WITH THIS ADDENDUM:

1.1 SECTION 07 43 23 WOOD SIDING, SOFFIT AND TRIM.

- .1 10-pages, 8.5"x11" provided to correlate soffit numbering with that shown on revised reflected ceiling plan drawing A1.7.

1.2 DRAWINGS ATTACHED WITH THIS ADDENDUM

- .1 **Drawings C1.1, A1.5, A1.7, A2.1, A3.2, A4.8, and A5.4** issued with this addendum via electronic transmission. These are 11"x17" page format. These drawings replace C1.1, A1.5, A1.7, A2.1, A3.2, A4.8, and A5.4 previously issued for tender via electronic transmission.
- .2 **New drawings A4.10, A4.11 and A4.12** issued with this addendum via electronic transmission. These are 11"x17" page format.

1.3 DEI AND ASSOCIATES INC. MECHANICAL & ELECTRICAL ADDENDUM:

- .1 Mechanical and Electrical Addendum, dated October 10, 2017, consisting of 4 pages of text and revised drawings M3.1, M3.2, M4.1, M4.2, E2.1, E2.2, E3.1, E3.2, E4.1, E4.2 and E6.1.

1.4 GRAY & FICK CONSULTING STRUCTURAL ENGINEERS LTD. STRUCTURAL ADDENDUM:

- .1 Structural Addendum, dated 2017-10-04, consisting of 3 pages of text and sketch drawings SK200 to SK202 inclusive.

PART 2 : SELECTED SPECIFICATION REQUIREMENTS:

2.1 REFER TO SECTION 07 46 23 WOOD SIDING, SOFFIT AND TRIM

- .1 **Delete:** Section 07 46 23 as issued with addendum 1 entirely.
- .2 **Substitute:** Section 07 46 23 Wood Siding, Soffit and Trim attached with this addendum, 10-pages, 8.5"x11".
- .3 **Clarification:** Specification has been revised to correlate soffit numbering with that shown on revised reflected ceiling plan drawing A1.7.

PART 3 DRAWINGS:

3.1 GENERAL:

- .1 At all locations where 6" granular 'A' is shown below slabs on grade, this is to be increased to 8" to match notes on structural dwgs.
- .2 **Add:** At new posts PST-04 and PST-06 which occur in existing exterior walls, the wall/floor shall be cut open from the exterior to expose the existing foundation wall so that threaded rods can be drilled and epoxied into it. See structural dwgs. Make good existing. See also dwg A1.3, note 37.
- .3 Refer to structural drawings for all reinforcing required in concrete foundations, footings and slabs.

3.2 DWG C1.1:

- .1 **Revise:** Wall types as shown on attached revised wall type schedule drawing C1.1

3.3 DWG A1.1:

- .1 **Add:** Cut open existing concrete floor and walls as required to install new footing, post and lintel at existing stairs to main floor (see structural dwgs). Make good existing.
- .2 **Add:** Ceilings in existing rooms at this level are to be removed neatly locally as required to do mechanical/electrical work above. Ceilings do not need to be re-instated but are to be left on a neat condition
- .3 **Delete:** Existing oil tank shown to be removed. This has already been removed by owner.

3.4 DWG A1.2:

- .1 **Add:** Existing exhaust fan in existing men's washroom at south east corner of existing building is to be removed (see mech/elect dwgs). Patch existing gypsum board ceiling to match existing.
- .2 **Clarification:** At bar shown to be removed at west side of existing building there are existing plumbing and electrical that go through the existing wood floor into the lower level. Patch wood floor to match existing.
- .3 **Clarification:** At window shown to be removed on south wall (note 24) re-use existing trims from existing window shown to be removed on west wall (note 30) since they are identical trims

3.5 DWG A1.3:

- .1 **Add:** At existing windows on west wall shown to be removed and new installed, remove existing blinds carefully and re-install after windows have been installed and opening repaired.

3.6 DWG A1.4:

- .1 **Add:** 2"x 4" load bearing walls at 16" o.c. in area where existing stairs to lower level were removed to carry re-used floor boards indicated on demolition drawings.

3.7 DWG A1.5:

- .1 **Revise:** Location of automatic door operator push button activation switches at door 101A. See attached revised floor plan drawing A1.5.

3.8 DWG A1.7:

- .1 **Revise:** Soffits at west side of building. See attached revised reflected ceiling plan drawing A1.7.

3.9 DWG A2.1:

- .1 **Delete:** Louvre shown on front elevation near roof peak
- .2 **Revise:** Siding type SD3. See attached revised drawing A2.1
- .3 **Add:** Siding type SD4. See attached drawing A4.10 and A4.11 for locations.

3.10 DWG A3.2:

- .1 **Add:** Attached detail B/A3.2 showing deflection track at top of non-loadbearing walls

3.11 DWG A3.2:

- .1 **Clarification:** Left side of section A/A3.5 should show dormer and sloped ceiling above entry vestibule 101. See attached drawings A4.10 and A4.11

3.12 DWG A3.7:

- .1 Foundation wall below stair wall in section A/A3.7 to be shown shifted east so that west face is flush with west face of stud wall so that gypsum board in stair can extend past concrete wall at base of stair.

3.13 DWG A4.8:

- .1 **Revise:** Detail B/A4.8 to add prefinished wood trim boards as shown. See attached revised detail B/A4.8. These prefinished wood trim boards are to occur at rakes on north-east and north-west edge of addition roof.

At gable eaves of dormers at front entry and east side of addition 1 ¼" x 7" and 1 ¼" x 4 ¾" prefinished wood trim boards are to be used. See sections on A4.11.

At gable eaves of existing building 1 ¼" x 9" and 1 ¼" x 4 ¾" prefinished wood trim boards are to be used. This is to be site confirmed prior to ordering boards.

3.14 DWG A4.10, A4.11 & A4.12:

- .1 **Add:** Attached drawings A4.10, A4.11 and A4.12 showing sections through front entry and portion of front elevation enlarged.

3.15 DWG A6.2:

- .1 **Revise:** Window type W1 to add a 40" +/- wide window W1B. See attached revised floor plan drawing A1.5 for location. See attached revised drawing A5.4 showing revised window and handrail bracket locations.

END OF ADDENDUM NO. 3

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Section 06 10 00 Rough Carpentry
- .2 Section 07 21 13 Board Insulation
- .3 Section 07 21 30 Sprayed Insulation – Polyurethane
- .4 Section 07 27 10 Air Retarder, Air Barriers, Transition Membrane Assemblies
- .5 Section 07 62 00 Sheet Metal Flashing and Trim
- .6 Section 07 92 00 Joint Sealants
- .7 Section 08 1100 Metal Doors and Frames
- .8 Section 08 31 00 Access Doors
- .9 Section 08 50 00 Windows
- .10 Section 09 21 16 Gypsum Board Assemblies
- .11 Mechanical and Electrical Divisions.

1.2 SECTION INCLUDES

- .1 Factory finished wood siding and trim boards and mouldings: Architectural mouldings and trims, corner boards, fascia, rake, belt line trims, cladding on exterior wood framing beams and posts, frieze boards all consisting of factory finished wood as specified herein and noted on drawings.
- .2 Metal drip flashings shown on drawings to protect exposed edges of wood products.
- .3 Sealants associated with wood siding and trims supplied and installed where shown on drawings.
- .4 Pre-finished wood soffit supply and installation.
- .5 Supply and install factory pre-finished fiber cement siding.
- .6 Supply and installation of painted fir plywood Custom Accent Colour panel SD3,

1.3 REFERENCES

- .1 ASTM International
 - .1 ASTM D5116-[10], Standard Guide For Small-Scale Environmental Chamber Determinations of Organic Emissions From Indoor Materials/Products.
 - .2 ASTM D 1761- Mechanical Fasteners in Wood.
 - .3 ASTM E 84 - Surface Burning Characteristics of Building Materials
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-51.32-M77, Sheathing, Membrane, Breather Type.
- .3 CSA International
 - .1 CSA B111-1974(R2003), Wire Nails, Spikes and Staples.
 - .2 CAN/CSA-Z809-08, Sustainable Forest Management.
- .4 Environmental Choice Program (ECP)
 - .1 CCD-045-95, Sealants and Caulking Compounds.
- .5 Forest Stewardship Council (FSC)

- .1 FSC-STD-01-001-2004, FSC Principle and Criteria for Forest Stewardship.
- .6 National Lumber Grading Authority (NLGA)
 - .1 NLGA Standard Grading Rules for Canadian Lumber 2010.
- .7 Sustainable Forestry Initiative (SFI)
 - .1 SFI- 2010-2014 Standard.
- 1.4 ACTION AND INFORMATIONAL SUBMITTALS**
 - .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
 - .2 Product Data:
 - .1 Submit manufacturer's instructions, printed product literature and data sheets for wood siding and include product characteristics, performance criteria, physical size, finish and limitations.
 - .2 Submit digital copies of WHMIS MSDS in accordance with Section 01 35 29.06 - Health and Safety Requirements.
 - .3 Samples:
 - .1 Submit duplicate 1220mm x width of board size of siding profile specified, all trim boards shown or specified.
 - .2 Wood Certification: submit manufacturer's Chain-of-Custody Certificate number for CAN/CSA-Z809 or FSC or SFI certified wood.
- 1.5 QUALITY ASSURANCE**
 - .1 Test Reports: submit certified test reports showing compliance with specified performance characteristics and physical properties.
 - .2 Certificates: submit product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
- 1.6 EXTRA MATERIALS**
 - .1 Provide 2% additional material of each specified profile or shape as maintenance materials.
 - .2 Cut off sections 1220mm and longer and not suitable for the work shall be retained by the Owner in addition to maintenance materials.
 - .3 Locate and store maintenance materials on site as directed by Owner.
- 1.7 DELIVERY, STORAGE AND HANDLING**
 - .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements. Include with material, manufacturer's written instructions.
 - .2 All lumber, trims and claddings shall be inspected by the Contractor at the site and upon receipt from shipper. Any damaged or unsuitable materials shall be rejected by the Contractor.
 - .3 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
 - .4 Storage and Handling Requirements:

- .1 Store materials off ground, covered with waterproof wrapping and in accordance with manufacturer's recommendations. Support all materials to prevent warping and distortion. Do not leave materials uncovered when not in use.
- .2 Store and protect wood siding and trim from nicks, scratches, and blemishes and distortion including warping.
- .3 Replace defective or damaged materials with new.
- .5 Store all cedar products in weather tight containers or trailers or within the building. Do not store outdoors and prevent precipitation from reaching stored products.
- .6 Keep all siding and trim products free of dust, gypsum board compound, mortar or other materials associated with other processes at the site.
- .7 Do not store cedar products on bare concrete or in wet areas. Maintain protective coverings at all times.
- .8 Do not install cedar products when precipitation would result in wetting of products during installation.

1.8 PROJECT CONDITIONS

- .1 Install materials when environmental conditions (precipitation, temperature, humidity) are within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
- .2 Do not install cedar products until roofing is complete and waterproof and fascia metals are installed.
- .3 Review all conditions for true, straight, plumb and smooth junctures with soffit materials.
- .4 Do not commence cedar installation if site conditions are unacceptable. Report defects found to Contractor and Consultant.
- .5 Provide all required access aids for construction including ladders, scaffold and associated safety equipment.

1.9 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate and recycle waste materials in accordance with Section 01 74 21 Waste Management and Disposal.
- .2 Remove from site and dispose of packaging materials at appropriate recycling facilities.
- .3 Collect and separate for disposal paper, plastic, polystyrene, box board corrugated cardboard, packaging material in appropriate on-site bins for recycling in accordance with Waste Management Plan.
- .4 Divert unused wood materials, except pressure treated materials, from landfill to recycling, re-use or composting facility approved by Consultant.
- .5 Develop Construction Waste Management Plan related to Work of this Section.
- .6 Packaging Waste Management: remove for reuse and return pallets, crates, padding. Recycle packaging materials where facilities exist.

1.10 COORDINATION

- .1 Coordinate Work with other operations and installation of finish materials below soffit and to avoid damage to installed materials.
- .2 Coordinate installation with Contractor to avoid conflicts on the site with other trades including delivery of materials, installation of other cladding products, roofing, metal flashings.

1.11 WARRANTY

- .1 Warranted to the original Owner to be free of manufacturing defects and defects to the finish arising from use and exposure for a period of 15 years for all factory finished products and a further 15 years provided that the Owner performs maintenance required as a condition of the warranty.
- .2 Provide one year warranty for all installation labour together with product warranty.
- .3 Submit warranty for inclusion in closeout materials.

Part 2 Products

2.1 MATERIALS

- .1 Lumber siding: to NLGA Standard Grading Rules for Canadian Lumber.
 - .1 Horizontal bevel siding: kiln dried spruce/pine/fir lumber, shaped with rabbeted edge; factory primed or otherwise prepared on all sides and edges; factory finished with opaque exterior wood stain all sides and edges, smooth texture. Colour selected by architect.
 - .2 Trim materials provided by same manufacturer as siding; factory-finished, smooth texture all exposed edges and faces, dimensions shown on drawings. All trims are 1.5" thickness unless noted otherwise. Trims used for fiber cement siding shall be fiber cement trims manufactured by the siding manufacturer. Trims used for wood siding shall be pre-finished wood trims manufactured by the wood siding manufacturer.
 - .3 Siding and trim materials shall be fabricated and factory finished to meet or exceed requirements for a 15-year initial warranty period followed by an additional 15-year warranty period extended by manufacturer provided that Owner performs maintenance work stipulated as a condition of the warranty.
 - .1 **SD1 Horizontal Siding Type 1** shall be beveled profile, wood, lap siding, factory-pre-finished manufactured by Maibec, 4" exposure, pre-finished colour to be selected from Nautilia colour range. All pre-finished wood trims (PWT) associated with pre-finished wood siding shall be factory finished wood trims 1.5" thick, smooth texture all sizes, width shown on drawings. Fasteners shall be stainless steel flat textured head ring shank nails or screws colour-matched to the siding where exposed to view.
 - .2 **SD3 Accent Siding** panel shall be one single panel, without intermediate joints of 3/4" thick, G2S fir plywood (up to 48" wide and 96" high), primed with alkyd exterior primer and finished with three top-coats of black exterior 100% acrylic solids paint, Benjamin Moore 2133-20 Black Jack. Surround panel with pre-finished wood trims (PWT).

- .3 **Soffit Type 7** - pre-finished wood equivalent to Maibec Modern profile, 8" width, smooth surface, solid colour stain selected from Nautilia or Balsamia range.
- .4 **Soffit Type 5 and 6** - pre-finished wood equivalent to Maibec Modern profile, 8" width, smooth surface, solid colour stain selected from Nautilia or Balsamia range and the colour will differ from Soffit type 7.
- .5 **SD4 Horizontal Pre-Finished Wood Siding** manufactured by Maibec. Modern profile, 8" wide boards, smooth surface, installed horizontally on vertical surfaces and long dimension oriented 90 degrees to building face on soffit. Colour selected from Nautilia or Balsamia range.
- .6 **SD2 Horizontal Siding Type 2** shall be beveled profile, fiber cement, lap siding, factory-pre-finished manufactured by James Hardie, 4" exposure, pre-finished colour to be selected from standard range. All pre-finished trims (marked PWT) associated with pre-finished fiber cement siding shall be factory finished fiber cement trims, 1.5" thick, smooth texture all sizes, width shown on drawings Fasteners shall be stainless steel flat textured head ring shank nails or screws colour-matched to the siding where exposed to view.
- .4 CAN/CSA-Z809 or FSC or SFI certified.
- .5 Exposed trim, corner boards, window and door trims supplied by siding manufacturer with factory finish equal to siding panels, colour selected by architect.
- .2 Item Deleted.
- .3 **Strapping and Furring:**
 - .1 Wood - SFP number 1 or 2; S4S; S-Dry, 19% maximum moisture content when installed; 15% moisture content, maximum, in service.
 - .2 Metal - Products specified on drawings and wall type schedule
- .4 Air Retarder - exterior wall sheathing paper: to CAN/CGSB-51.32 single ply spun-bonded olefin specified within section 07 27 10 Air Retarder, Air Barrier and Transition Membranes.
- .5 Siding and Associated Trim Fasteners: nails to CSA B111, pre-finished heads, hot dipped galvanized and stainless steel recommended by manufacturer of siding and trim; ring thread type with finishing head.
- .6 Item Deleted.
- .7 Strapping Fastener: hot-dipped galvanized.
- .8 Sealants: refer to 07 92 00.
- .9 Fasteners shall be stainless steel for fiber cement siding and trims.

Part 3 Execution

3.1 EXAMINATION

- .1 Verify that surfaces and conditions are ready to accept the Work of this section.

- .2 Ensure all surfaces are clean, dry, sound, smooth and continuous and that previous installations comply with specified requirements including position of blocking, nailing strips, air barrier and transition membrane and manufacturer's requirements for products and installation specified herein.
- .3 The installer shall examine substrates, construction area, environmental conditions, use and access conditions, etc. for compliance with manufacturer's requirements and propriety of construction sequence completed or contemplated.
- .4 Notify the contractor and Consultant in writing of circumstances detrimental to the proper completion of the work. Do not proceed with installation until unsatisfactory conditions have been corrected.
- .5 Do not start work until deficiencies have been corrected and Consultant's written approval to proceed is received by the Contractor.
- .6 Commencement of Work implies acceptance of conditions and responsibility for entire installation.
- .7 For Air Retarder, ensure that:
 - .1 Surfaces are sound, dry, even, and free of oil, grease, dirt, excess mortar or other contaminants.
 - .2 Wood sheathing panels are appropriately fastened (refer to Section 06 10 00) and sufficiently stabilized at corners and edges using appropriate fasteners.
 - .3 Transition membranes are installed over framing junctures where shown on drawings .
 - .4 Base course air barrier membrane is applied to primed panel sheathing and primed concrete foundation wall.
 - .5 Transition and continuity air barrier membranes associated with doors, windows and any other opening through exterior walls are applied to head and jamb appropriately. Sill membranes must be prepared to lap over air retarder membranes.
 - .6 Air barrier transition membranes are delivered to the site and personnel are prepared to install these in appropriate sequence with air retarder for all openings.
 - .7 Substrate is visibly dry and free of moisture.
 - .8 Notify Architect in writing of anticipated problems using air barrier over substrate.
 - .9 Rigid board insulation specified within Section 07 21 13 is on site and that personnel are prepared to install it.
 - .10 Strapping and furring materials are number 1 or 2 SPF, S-Dry, S4S and that moisture content is no more than 19%.

.8 Item Deleted.

3.2 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.

- .2 Review wood siding installation instructions

3.3 **INSTALLATION – AIR RETARDER:**

- .1 Install one course of air retarder horizontally on the wall commencing at the bottom of OSB sheathing using nails equipped with plastic washers. Use minimum number nails required to retain air retarder in place temporarily while work is in progress.
- .2 Install second course of air retarder material commencing at underside of soffit (lapped and taped using red construction tape specified within Section 07 27 10 onto vapour barrier or transition membrane tab if applicable) and extending to over-lap initial course minimum 500mm. Tape top course of air retarder sheet to bottom course with continuous tape joint.
- .3 Over lap end joint of air retarder 500mm taping initial application to wood sheathing and subsequent application to previous air retarder sheet using red construction tape specified within Section 07 27 10.
- .4 Install sill transition and continuity membrane to lap over air retarder membrane as secondary water proofing.
- .5 Tape air retarder using continuous run of tape for all joints where solid blocking is employed or air retarder terminates at openings, corners and where it meets flashing material.
- .6 Install air retarder membrane in sequence with rigid board and strapping associated with siding such that no more than 3000mm length of exterior wall is left with air retarder membrane exposed to wind and weather following any day's work.

3.4 **RIGID BOARD INSULATION:**

- .1 Install one layer of rigid board insulation (50mm thick; ship-lapped joints) horizontally over sheathing and fasten using hot-dipped galvanized nails with plastic washers specified within Section 07 21 13. Use two fasteners spaced 500mm vertically into underlying studs selecting alternate (every second) stud over which each board crosses. Cover entire wall surface with rigid boards except where solid blocking or furring is noted on drawings.
- .2 Wood strapping applied over each stud shall form the means to retain rigid insulation in place permanently.
- .3 Butt rigid insulation boards tightly to blocking, openings, and other building components.
- .4 Completely cover air retarder with rigid insulation boards.

3.5 **PRE-FINISHED WOOD SOFFIT:**

- .1 Examine conditions and existing framing for true and level surfaces free of protrusions that would impair the soffit installation. Apply blocking and strapping to create firm, sound fastener locations in all instances.
- .2 Carefully layout installation for soffit and associated trims prior to commencement of soffit installation. Pay close attention to patterns shown. Ensure that patterns will be symmetrically and aligned from bay-to-bay where installed between dropped false beams.

- .3 Apply strapping to underside of joist or rafter frame materials or hand-frame using lumber to establish nailing points for soffit boards with maximum spacing of 400mm on centre. Apply strapping to establish continuous support for ventilation strip, trims and joints.
- .4 Fasten strapping using hot-dipped galvanized nails spaced maximum 400mm on centre.
- .5 Fasten wood soffit boards to strapping using stainless steel wire nails with finishing heads.
- .6 Carefully layout installation prior to commencement of soffit installation where patterns are shown. Ensure that patterns will be symmetrically and aligned from bay-to-bay where installed between dropped false beams. Use continuous lengths for soffits constrained by trim details such as those associated with front entrance covered by roof terrace.
- .7 Apply in patterns shown on drawings.
- .8 Use stainless wire nails for pneumatic nailing, concealed in T and G joints.
- .9 Stagger all joints between courses.
- .10 Cut butt and mitre joints to fit tightly; use 45 degree kerf joints for joints created in the length of soffit boards.
- .11 Apply trims to conceal joints where indicated on drawings.
- .12 Scarf joints for runs of trim in high roof soffit.
- .13 Provide pre-finished wood trim shown on drawings continuous for outer perimeter of wood soffits at wall, dropped beam, fascia or adjoining vertical faces for all cases.
- .14 Conceal all fasteners.

3.6 STRAPPING AND WOOD SIDING:

- .1 Install wood strapping (furring) over each stud location, nailed through insulating sheathing using hot-dipped galvanized ardox nails 128mm long.
- .2 Fasten strapping minimum 400mm on centre into studs ensuring minimum 31mm fastener penetration into stud or more
- .3 For vertical siding installation, stagger strapping vertically to permit air circulation and drying in a continuous path of ventilation between top of foundation wall and underside of soffit. Nail straps to each stud crossed by the strap. Terminate straps on stud locations.
- .4 For horizontal siding installation, nail strapping vertically over each stud location. Nails shall be spaced no further apart than 400mm on centre.
- .5 Apply additional strapping continuously around openings through exterior walls, at corners and in locations where stud spacing varies from 400mm on centre.
- .6 Ensure that installed strapping will support all siding and trim appropriately and in accordance with manufacturer's instructions and that strapping secures rigid insulating sheathing adequately to the building.
- .7 Fasten wood siding in straight, aligned lengths to strapping using stainless steel fasteners spaced according to manufacturer's installation instructions. Stagger joints in length of boards not less than 1220mm and distribute evenly over wall faces. For vertical installations, no joints in boards are permitted. Cut butt joints at 45 degrees and

for vertical siding installation, slope to outside. Seal cut surfaces using manufacturer-supplied exterior opaque stain.

- .8 Siding Trims:
- .1 All horizontal siding trims and belt courses with exposed top side edges in service shall be protected by pre-finished metal flashing applied to strapping and purpose bent to create a drip profile as shown on drawings. This includes siding trim over doors, window, mechanical or electrical service penetrations through the exterior walls and the top side of all belt course or rake board trims.
 - .2 Mechanical, electrical service openings, window and door opening trims shall have continuous metal flashings formed with drip profiles as shown on drawings and installed without joints across their length. Wood trims associated with these openings shall be a single piece for all head, jamb and sill trims without exception.
 - .3 Horizontal belt line, entablature or rake trims shall have continuous pre-finished metal flashings formed to a drip profile in 3600mm continuous lengths, overlapped 100mm where adjoining subsequent flashing, sealed between flashings with double-sided butyl tape. These trim boards shall be installed in 3600mm lengths using 45 degree kerf joints, sealed in each case. For all kerf joints, adhere adjoining boards using exterior grade construction adhesive applied to faces of kerf prior to installation. Wipe all excess adhesive from exposed faces of boards so adhered immediately following installation.
 - .4 Install smooth exterior corner trims for equal thickness when viewed from either side of corner such that edge thickness forms part of the width of the face exposed at the corner. No joints permitted in length of corner trims.
 - .5 Install interior corner trims for equal exposure on each wall surface. No joints permitted in length of interior corner trims.
 - .6 Apply manufacturer's exterior opaque stain finish on site to exposed cut ends of trims in every case including underside of vertical trims (end grain), prior to installing trims.

3.7 FIBER CEMENT SIDING AND TRIMS:

- .1 Supply and install pre-finished fiber cement trims with thickness and height of exposure shown on drawings and flat texture. Install pre-finished metal flashing over all horizontal surfaces of trims as is specified for wood horizontal trims.
- .2 Supply and install pre-finished fiber cement siding according to manufacturer's instructions and all applicable technical bulletins.
- .3 Use stainless steel screws, self-tapping, through siding and trims into metal furring.
- .4 Reject damaged boards immediately. Replace with new.
- .5 Do not install materials such that expansion and contraction due to temperature and humidity cannot occur.
- .6 Stagger all joints minimum 1500 mm and use kerf joint with adhesive.

3.8 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.

- .2 Remove soil, hand marks and other dirt from siding, trims and flashings as these are installed.
- .3 Leave Work area clean at end of each day.
- .4 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.
- .5 Waste Management: separate waste materials for chipping and compost in accordance with Section 01 74 21 – Construction Waste Management and Disposal.
 - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

3.9 PROTECTION

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by wood siding installation.

END OF SECTION