1 GENERAL

1.01 RELATED REQUIREMENTS

.1 Section 01 33 00 – Submittal Procedures.

.2 Section 05 50 00 – Metal Fabrications.

.3 Section 06 30 00 – Wood Treatment.

1.02 DESCRIPTION

.1 The work under this section will include:
  .1 The fabrication, and delivery all pressure treated timber floats with all associated items as specified on the drawings.

1.03 REFERENCE STANDARDS

.1 CSA Group (CSA)
  .1 CSA B111-1974(R2003), Wire Nails, Spikes and Staples.

.2 American Society for Testing and Materials (ASTM International)
  .1 ASTM A 307-00, Specification for Carbon Steel Bolts and Studs, 60 000 PSI Tensile Strength.

.3 Canadian General Standards Board (CGSB)
  .1 CAN/CGSB-1.28-98, Exterior, Alkyd, House Paint.
  .2 CAN/CGSB-1.40-M97, Anti-corrosive, Structural Steel Alkyd Primer.
  .3 CAN/CGSB-1.59-97, Alkyd Exterior Gloss Enamel.
  .4 CAN/CGSB-1.181-99, Ready-Mixed Organic Zinc-Rich Coating.
  .5 CGSB 31-GP-107Ma-90, Non-inhibited, Phosphoric Acid Base Metal Conditioner and Rust Remover.

.4 Canadian Standards Association (CSA International)
  .1 CAN/CSA-080 Series-97 (February 2000), Wood Preservation.
  .2 CAN/CSA-G164-M92 (R1998), Hot Dip Galvanizing of Irregular Shaped Articles.
  .3 CAN/CSA-O141-91 (R2004), Softwood Lumber.

.5 National Research Council Canada (NRC)
  .1 National Building Code of Canada 2015 (NBC).

.6 National Lumber Grades Authority (NLGA)
  .1 Standard Grading Rules for Canadian Lumber 2017.
  .2 CSA International

1.04 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 rough carpentry work and include product characteristics, performance criteria, physical size, finish and limitations.

1.05 SUSTAINABLE DESIGN SUBMITTALS

.1 Submit in accordance with Section 01 33 00 - Submittal Procedures to confirm that products and procedures conform to specified sustainability requirements.

.2 Submit manufacturer's Chain-of-Custody Certificate number for CAN/CSA-Z809.

1.06 QUALITY ASSURANCE

.1 Lumber identification: by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.

.2 Sustainable Standards Certification:
.1 Certified Wood: submit listing of wood products and materials used in accordance with CAN/CSA-Z809.

1.07 DELIVERY, STORAGE AND HANDLING

.1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements and with manufacturer's written instructions.

.2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.

.3 Storage and Handling Requirements:
.1 Store materials off ground, in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
.2 Store and protect wood from nicks, scratches, and blemishes.
.3 Replace defective or damaged materials with new.

.4 Packaging Waste Management in accordance with Section 01 74 21 – Construction/Demolition Waste Management and Disposal.

2 PRODUCTS

2.01 MATERIALS

.1 Use timber graded and stamped in accordance with applicable grading rules and standards of Associations or Agencies approved to grade lumber by Canadian Lumber Standards Administration Board of CSA in accordance with following standards:
.1 Species to CAN3-086-M84 and CAN/CSA-O141.
.1 Dimension Timber (treated): Douglas Fir, Pacific Coast Hemlock, or Eastern Hemlock.
.2 Grade: No. 1 Structural.
.3 Grading Authority: NLGA Standard Grading Rules for Canadian Lumber.
.4 Preservative Treatment to section 06 30 00 – Wood Treatment.

.2 Miscellaneous Metals

.1 Miscellaneous Metals to section 05 50 00.

2.02 ACCESSORIES

.1 Fasteners: to CAN/CSA-G164, for pressure-preservative treated lumber.

.2 Nails, spikes and staples: to CSA B111.

.3 Bolts: 12.5 mm diameter unless indicated otherwise, complete with nuts and washers.

.4 Proprietary fasteners: toggle bolts, expansion shields and lag bolts, screws and lead or inorganic fiber plugs, recommended for purpose by manufacturer.

.5 Float containers: sizes as indicated on the drawings, wall thickness 4mm, Roto Molded – one piece construction, EPS Foam, Virgin Grade LLD polyethylene with UV inhibitors, buoyancy 30+lbs/ft, sizes as indicated on the drawings, as sold by Marine Systems International Inc, or an approved alternative.

.1 Empty containers are double flanged, minus the EPS Foam, sizes as indicated on the drawings. Holes in the empty containers are to be carefully made as not to affect the integrity of the container

.6 Wood preservatives in accordance with section 06 30 00.

.7 Metal items in accordance with section 05 50 00.

3 EXECUTION

3.01 INSTALLATION

.1 Comply with requirements of National Building Code of Canada (NBC), supplemented by the following paragraphs.

.2 Install members true to line, levels and elevations, square and plumb.

.3 Construct continuous members from pieces of longest practical length.

.4 Install spanning members with "crown-edge" up.

.5 Install fasteners in accordance with section 05 50 00 – Metal Fabrications.

.6 Do Installation of dimension timber to CSA 086-M84.

.7 Pre-cut timber prior to preservative treatment.

.8 Ensure that all timber, including any blocking fillers, are straight, true, square and fit neatly to abutting surfaces.

.9 Standard Plate Steel Washers suitable for the sizes of the bolts specified will be placed under the heads and nuts of all machine bolts bearing on timber surfaces, except where specified otherwise.

.10 Secure 200mm x 200mm crossties and 200mm x 200mm longitudinal to 200mm x 200mm binder posts with 22mm diameter machine bolts.

.11 Install 100mm x 200mm stringers spaced and spliced as shown on the plans. Secure each stringer to its supporting 200mm x 200mm with a 19mm diameter x 300mm long lagscrew at the top.

.12 The decking will be placed in the direction shown on the Plan. A 5mm gap will be left between adjacent planks to allow water to run off. The planks will be secured to the stringers with 12mm x 127mm long Stainless Steel, head flush with top of deck. Pre-drill holes into decking.

.13 Chocks to be secured with two (2) 200mm spikes to the guard to prevent rotation.

.14 The timber guards will butt joint over 100mm x 200mm x 600mm chocks, and rest on similar chocks 300mm long at approximately 1500mm intervals maximum. They will be secured 150mm from their ends, through every chock and top longitudinal with a 19mm diameter machine bolt countersunk in the guard.

.15 The exact location of the mooring cleats will be as indicated on the details for the various floats. The cleats will be fastened to the float with two (2) – 19mm diameter machine bolts, through the decking and longitudinal.

.16 Float Containers as indicated on the drawings.

3.02 FIELD CUTTING TREATED MEMBERS

.1 Field cuts are not permitted.

.2 Treat, in field, cuts and damage to surface of treated material with an appropriate preservative as described in CSA O80 Series-97. Ensure that damaged areas such as abrasions, nail, bolt and spike holes are thoroughly saturated with field treatment solutions as per CSA O80 Series-97.

3.03 DELIVERY OF FLOATS

.1 Contractor will submit for review the means of delivery and offloading the floats onsite.

.2 Any damages that may occur during delivery and offloading will be repaired by the Contractor at no additional cost under this contract.

.3 Contractor to make arrangements with the Departmental Representative prior to delivery, to have the floats verified at construction location and then organize the time and date of the delivery to have the Departmental Representative on site.

END OF SECTION

1 GENERAL

1.01 RELATED REQUIREMENTS

.1 Section 01 33 00 – Submittal Procedures.

.2 Section 05 50 00 – Metal Fabrications.

.3 Section 06 08 99 - Rough Carpentry for Minor Works.

1.02 REFERENCE STANDARDS

.1 CSA Group (CSA)
- .1 CSA O80 Series-2015, Wood Preservation.
- .2 CSA O322-15, Procedure for Certification of Pressure-Treated Wood Materials for Use in Preserved Wood Foundations.
- .3 NLGA Standard grading rules for Canadian Lumber 1980 edition or most recent edition at time of tendering.

1.03 ACTION AND INFORMATIONAL SUBMITTALS

.1 Submit Submittal submissions: in accordance with Section 01 33 00 - Submittal Procedures.

.2 Quality assurance submittals:
- .1 Submit certificates in accordance with Section 01 33 00 - Submittal Procedures.
- .2 For products treated with preservative by pressure impregnation submit following information certified by authorized signing officer of treatment plant:
  - .1 Information listed in AWPA M2 and revisions specified in CSA O80 Series, Supplementary Requirement to AWPA M2 applicable to specified treatment.
  - .2 Moisture content after drying following treatment with water-borne preservative.

1.04 SUSTAINABLE DESIGN SUBMITTALS

.1 Submit in accordance with Section 01 33 00 - Submittal Procedures to confirm that products and procedures conform to specified sustainability requirements.

.2 Submit evidence that work of this Section incorporates required percentage of regional materials and products, showing their cost, distance from project to furthest site of extraction or manufacture, and total cost of materials for project.

.3 Submit vendor's/manufacturer's Chain-of-Custody Certificate number for CAN/CSA-Z809 or FSC or SFI certified wood.

1.05 QUALITY ASSURANCE

.1 Plant inspection of products treated with preservative by pressure impregnation will be carried out by designated testing laboratory to AWPA M2, and revisions specified in CSA O80 Series, Supplementary Requirements to AWPA M2.

.2 Inspection and testing of insert materials will be carried out by a Testing Laboratory designated by Departmental Representative.

.3 Departmental Representative will pay for costs of tests as specified in Section 01 29 00 - Payment Procedures.

1.06 DELIVERY, STORAGE AND HANDLING

.1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements and Section 06 08 99 – Rough Carpentry for Minor Works, with AWPA M4.

.2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with product category, manufacturer's name and address.

2 PRODUCTS

2.01 SUSTAINABLE REQUIREMENTS

.1 Wood preservation plants: certified by Canadian Wood Preservation Authority (CWPCA) to Environment Canada Technical Recommendation Document for the Design and Operation of Wood Preservation Facilities.

2.02 PRESERVATIVE TREATED WOOD MATERIALS AND APPLICATION

.1 Provide preservative treated lumber in accordance with CSA O80 Series, table 1 and its references for coastal waters.

.1

CCA	ACA	Kg/m³
Douglas Fir	24	24
Pacific Coast	24	24
Eastern Hemlock	24	24

2.03 CORROSION PROTECTION FOR CONNECTORS AND FASTENERS FOR USE WITH TREATED WOOD

.1 Connectors: Fabricated from steel sheet galvanized in accordance with ASTM A 653 to minimum G185 coating or galvanized post fabrication to ASTM A 123, Type 304/316 stainless steel sheet to ASTM A 480.

.2 Fasteners: Hot dip galvanized to ASTM A 153/A 153M Class C.

3 EXECUTION

3.01 NOT USED

.1 Not used.

END OF SECTION