

PART 1 - GENERAL

1.1 RELATED
SECTIONS

- .1 Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
- .2 Section 06 10 10 - Dimension Timber.

1.2 REFERENCES

- .1 Canadian Standards Association (CSA International)
 - .1 CSA 080 Series-97, Wood Preservation.
 - .2 CSA 0322-02, 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.

1.3 CERTIFICATES

- .1 For products treated with preservative by pressure impregnation, submit following information certified by authorized signing officer of treatment plant:
 - .1 Information listed in AWP A M2 and revisions specified in CSA 080 Series-97 Series, Supplementary Requirement to AWP A M2 applicable to specified treatment.
 - .2 Moisture content after drying following treatment with water-borne preservative.

1.4 WASTE MANAGEMENT
AND DISPOSAL

- .1 Do not dispose of preservative treated wood through incineration or with other materials destined for recycling or reuse.

1.5 MEASUREMENT FOR
PAYMENT

- .1 No payment to be made under this section. Include costs in the unit bid price specified in section of work of this section in applicable sections where treatment is required.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Preservative Treatment: Treat to CSA 080 M1989 commodity standard 080.18, Table 1 and its reference for coastal waters.
- | .1 CCA | ACA | Kg/m ³ |
|-----------------|-----|-------------------|
| Douglas Fir | 24 | 24 |
| Pacific Coast | 24 | 24 |
| Eastern Hemlock | 24 | 24 |

2.2 GRADING

- .1 All dimension timber shall be graded to the "National Lumber Grading Authority" (NLGA) or an equivalent "Canadian Lumber Standards Association Board" approved grading authority.

PART 3 - EXECUTION

3.1 APPLICATION: PRESERVATIVE

- .1 Treat to CSA 080.18 Series using CCA preservative to obtain minimum net retention specified for Marine applications.

3.2 APPLICATION: FIELD TREATMENT

- .1 Comply with AWP M4 and revisions specified in CSA 080 Series-97 Series, Supplementary Requirements to AWP M2.

3.3 TREATMENT

- .1 Apply three (3) brush coats of same preservative used in original treatment to all bolt holes, saw cuts and exposed untreated wood in field to CSA 080-M1989. Treat exposed ends or cuts with three (3) liberally brushed coats allowing sufficient interval between applications to permit total absorption and timber to dry. In the case of creosote, the preservative is to be applied hot.
- .2 Fill all unused bored holes with preservative and plug with treated wooden plugs.
- .3 Field cutting of timber after treatment is not permitted unless specifically approved by Departmental Representative.

3.5 FIELD HANDLING

- .1 Carefully handle material to prevent damage to treated wood.
- .2 Damaged material will be rejected and replaced with new material.

3.6 DELIVERY AND STORAGE

- .1 Store timber horizontally, evenly supported and piled to permit air circulation when stored for prolonged periods.
- .2 When handling long timber, provide support at sufficient number of points, properly located to prevent damage due to excess bending.
- .3 Handle treated timber with hemp, manila or sisal rope slings or other approved means of support that will not damage surface.
- .4 Do not use sharp pointed tools to handle treated timber. Any timber so handled will be rejected.

3.7 FIELD QUALITY

- .1 Timbers which contain rot, splits exposing untreated wood, excessive wane, or timbers which cannot be fastened in the work so as to be structurally sound are unacceptable.
- .2 The Departmental Representative reserves the right to carry out field testing of treated timber for penetration and retention of preservative. Timber not meeting the requirements of the specification may be rejected for use under this contract.

PWGSC
Float Construction
And Delivery
Various Wharves

Dimension Timber

Section 06 10 10

Page 1

Charlotte and Saint John Counties, N.B.
Project No. R.076522.001

PART 1 - GENERAL

1.1 RELATED SECTIONS

- .1 Section 06 05 73 - Wood Treatment.
- .2 Section 06 49 30 - Floats

1.2 REFERENCES

- .1 Canadian Standards Association (CSA)
 - .1 CAN/CSA-O141-91 (R1999), Softwood Lumber.
- .2 National Lumber Grades Authority (NLGA)
 - .1 Standard Grading Rules for Canadian Lumber 2000.

1.3 QUALITY ASSURANCE

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

1.4 MEASUREMENT FOR PAYMENT

- .1 No measurement for payment will be made under this section but will be included in the lump sum bid price under section 06 49 30, Floats.

PART 2 - PRODUCTS

2.1 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.
- .2 Species
 - .1 Decking : Hemlock or Douglas Fir (CCA Treated).
 - .2 Structural timber species: Hemlock or Douglas Fir (CCA Treated).
 - .3 Grade: No.1 Structural Grade with maximum of 20% of a lesser grade.

2.2 WOOD PRESERVATIVE

- .1 In accordance with Section 06 05 73.

PWGSC
Float Construction
And Delivery
Various Wharves

Dimension Timber

Section 06 10 10

Page 2

Charlotte and Saint John Counties, N.B.
Project No. R.076522.001

PART 3 - EXECUTION

3.1 INSTALLATION

- .1 Comply with requirements of NBC 1995 Part 9 supplemented by 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.
- .6 Do installation of dimension timber to CSA 086-M83.
- .7 Precut timber prior to preservative treatment.

3.2 FIELD CUTTING TREATED TIMBER

- .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 080 Series-97. Ensure that damaged areas such as abrasions, nail and spike holes are thoroughly saturated with field treatment solutions as per CSA 080 Series-97.
- .3 Treat bolt holes, cut-offs and field cuts in accordance with CSA 080 Series-97.

PART 1 - GENERAL

1.1 DESCRIPTION

- .1 This section specifies the requirements for the supply and installation of New Timber Floats to the location indicated on the drawings. Included in this bid item, will be the treated; timber decking, timber guard, stringers, longitudinal, binder posts, fenders, crossties, blocks, splice blocks, chocks, bolts, lag screws, washers, spikes, polystyrene billets, float connectors, pressure treatment, strapping, cleats and fasteners, yokes, steel and all other items necessary to complete the work as specified in the drawings, and to the satisfaction of the Departmental Representative.

1.2 MEASUREMENT for
PAYMENT

- .1 The supply and delivery of New Timber Floats as per the drawings and specifications will be measured for payment in Units as indicated in the unit price table for each type of floats.
- .1 Included will be all identified dimension timber, cleats, strappings, polystyrene billets, and any other identified components indicated on the details.
- .2 Included will be the inter float connections as indicated on the drawings and specified in section 05 50 00.
- .3 Included will be the Tire Fender Systems.
- .4 Included will be the yokes specified for each type of floats.
- .2 Delivery will be paid in a lump sum payment for each location as per the unit price table.
- .3 No separate payment will be made for wood treatment specified in section 06 05 73.
- .4 No separate payment shall be made for anchor bolts, machine bolts, nuts and washers, galvanized spikes, lagscrews, pipe sleeves, inserts, resin anchorage systems, galvanizing touch-ups, etc.
- .5 No separate payment shall be made to grout the countersunk holes.

1.3 RELATED SECTIONS

- .1 Dimension Timber: Section 06 10 10
- .2 Wood Treatment: Section 06 05 73

.3 Miscellaneous Metals: Section 05 50 00

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Timber: All timber used in the work will be as specified in section 06 10 10.
- .2 Wood Treatment: As per section 06 05 73.
- .3 Miscellaneous Metals: As per section 05 50 00.
- .4 Machine Bolts, lag screws, nuts, washers, spikes, etc.: All anchorage fasteners used in the work will be as specified in section 05 50 00.
- .5 Polystyrene: Billets shall have an average density of 24kg/m³ and a minimum compressive strength of 0.11 MPa (Value at yield or 10% deflection whichever occurs first, to ASTM D1621-73). Maximum water absorption, 4.0% by volume to ASTM D2842-69. To be Truefoam Truefloat Type II or approved equal.
- .6 Galvanizing: All bolts, anchors, nuts, lagscrews, plates, washers, spikes, pipes, angles, HSS sections, straps, channels, bars, etc., shall be hot dipped galvanized in accordance with section 05 50 00.
- .7 Decking: The decking will be 50mm x 150mm, surfaced four sides to a uniform dimension of 38mm x 138mm. The planks will be in single lengths to span full width of float. The species will be as specified in section 35 00 00 - Dimension Timber
- .8 Guards: Guards of 200mm x 200mm rough sawn timber will be placed along the outer faces of the float as shown on the details.
- .9 Mooring Cleats: The cleats will be 508mm± in length, with a capacity of 90kg as per detail. Shop drawings will be submitted to the Departmental Representative prior to ordering, as per section 01 33 00.

PART 3 - EXECUTION

3.1 INSTALLATION

- .1 Precut timber prior to preservative treatment.
- .2 Bore holes for machine bolts to same diameter as bolts.
- .3 Countersink machine bolts where required as detailed on Plan.
- .4 Grout countersunk holes on the guard.
- .4 Ensure that all timber, including blocks and fillers are straight, true, square and fit neatly to abutting surfaces.

3.2 HANDLING TREATED
TIMBER

- .1 Handle treated material to avoid damage causing alteration in original treatment.
- .2 Treat in field, cuts and damage to surface of treated material with appropriate preservative as described in section 06 05 73 - Wood Treatment.
- .3 Ensure that all holes, cuts and damaged areas are thoroughly saturated with field treatment solutions as per section 06 05 73 - Wood Treatment.

3.3 FLOAT CONSTRUCTION

- .1 Install machine bolts in accordance with section 05 50 00 - Miscellaneous Metals.
- .2 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.
- .3 Secure 200mm x 200mm crossties and 200mm x 200mm longitudinal to 200mm x 200mm binder posts with 22mm diameter machine bolts.
- .4 Secure 50mm x 150mm straps to longitudinal with 150mm long spikes as indicated.
- .5 Install the polystyrene billets in each bay as indicated on the details.

- .6 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 350mm long lagscrew at the top.
- .7 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 150mm long spikes, galvanized, two at each end and one at each crossing.
- .8 Chocks to be secured with two (2) 200mm spikes to the guard to prevent rotation.
- .9 The timber guards will butt joint over 50mm x 200mm x 600mm chocks, and rest on similar chocks 300mm long at approximately 1500mm intervals. They will be secured 150mm from their ends, and through every chock and top longitudinal with a 19mm diameter machine bolt countersunk in the guard.
- .10 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.
- .11 Yokes may or may not be installed on floats. Should yokes be required, Departmental Representative will indicate which detail to be used. Refer to D18 and D19 Details. Yokes will be paid for separately as per bid item.

3.4 Delivery of FLOATS

- .1 Method of pickup and of each float to be approved by the Departmental Representative.
- .2 Any damage during the delivery is to be repaired by the Contractor at no additional cost to this contract.