

PART 4

SUPPLEMENTARY SPECIFICATIONS (SSP)

**General
Requirements**

SSP 1

.1 DAMAGE, BARRICADES, EXISTING SERVICES, ETC.

In the event of damage to existing services and utilities, or if certain portions of the services and utilities have to be repaired or altered, the Contractor shall call the owners of the utilities or services and advise them that work is required, its location, and request that such work be carried out. The *Contractor* shall not carry out any such repair work with his own forces, unless otherwise instructed to

The Contractor shall, at his own expense, at once repair and make good any damage which may occur to any water mains, service or utility pipes, or facilities, or to any electrical conductor or telephone facility or to any sidewalk, crosswalk as a result of this operation.

The *Contractor* shall in no way restrict the activities of the owners of the utilities and services when repairs or alterations may be required.

.2 INTERFERENCE WITH NAVIGATION

The Contractor shall obey all navigation regulations and conduct operations so as to interfere as little as possible with the use of channels, berthing spaces, fairways, and passages. The Contractor shall install and maintain any and all protection to navigation as may be required by regulatory authorities.

The Contractor shall coordinate his movement of equipment in navigable waters, berths, channels, and passages with the Contract Administrator twenty four (24) hours in advance of any such move.

.3 WEATHER

No work shall be undertaken by the Contractor when in the opinion of the Contract Administrator; the weather is unsuitable for a particular class of work. Time lost by the Contractor, due to stoppage on account of adverse weather conditions, may be allowed for at the discretion of the

Contract Administrator, as an extension of time for completion of the work over and above the date of completion specified in the Contract.

The Contractor will not be entitled to any compensation for delays, losses, or expenses caused by unfavourable or unsuitable weather conditions.

.4 **ATTENDANCE**

The *Contractor* shall provide, at his own expense, any competent labour required by the Contract Administrator, or the Contract Administrator's field representatives, in connection with the survey, measurement, checking, inspection and testing of the Work. This labour shall be made available upon request during normal working hours.

.5 **SETTING OUT**

Setting out is the responsibility of the Contractor. Should the Contractor discover or suspect any error in the original points, lines or bench-marks or in those set out by himself, he shall at once discontinue work based on such points, lines or bench-marks, draw the Contract Administrator's attention to the same and not resume the work affected until such error has been investigated and, if necessary, rectified.

The Contractor shall nevertheless afford the Contract Administrator, at the Contract Administrator's request, all facilities necessary for checking of the setting-out of the Work well in advance of construction. The Contract Administrator does not set-out or position the Work.

.6 **NOISE CONTROL**

The Contractor shall provide adequate means of controlling noise on the project.

.7 HOURS OF WORK

The Contractor shall schedule the performance of the Work between the hours of 0700 and 1900 hours, Monday through Friday. No work will be permitted on Saturdays, Sundays or Statutory Holidays or at times outside the hours noted above except by special permission of the Contract Administrator.

If the Contractor schedules his work outside these hours, he will be required to pay for the Contract Administrator and his employees in accordance with rates of overtime where applicable. The cost involved will be deducted from payments made to the Contractor. Crews will not be reduced from their normal size in overtime hours.

For the purposes of calculating the value of the monies which will be deducted from payments to the Contractor for overtime hours worked by Engineers and Survey crew personnel, the following rates will apply:

Engineering Representative	\$165.00/hr
Contract Administrator	\$200.00/hr

.8 PREVENTION OF WATER AND AIR POLLUTION

The Contractor shall comply with Federal, Provincial, and Regional District laws, orders, and regulations concerning the disposal or dispersion of products into the environment. See SSP 18 for further details.

.9 CLEANING UP OF SITE

The Contractor shall clean up the site. If the Contractor vacates any part of the site as being no longer required by him for the purposes of constructing the *Work*, then, if the Contract Administrator so orders, such part of the site shall be cleaned up in advance of cleaning up other portions of the site which are still occupied by the Contractor.

Interfering Services

SSP 2

- .1 The Contractor shall, at his own expense, provide for the uninterrupted flow of all watercourses, sewers, drains, and any other utility encountered during the work.
- .2 When other utility structures are encountered, the Contractor shall support them to the satisfaction of the

Contract Administrator so as to protect them from damage. The Contractor shall be responsible for the cost of repairs and damage to any utilities and associated facilities resulting from his work. Refer also to SSP1.1

- .3 It is the Contractor's responsibility, wherever necessary, to determine the location of existing pipes, valves, or other underground structures. Wherever it is necessary to explore and excavate to determine the location of the existing underground structures, the Contractor at his own expense shall make explorations and excavations for such purposes.
- .4 Where gas mains and/or service lines exist in the vicinity of the proposed work, the Contractor shall consult the officers of the gas company prior to commencing operations and arrange a mutually agreeable procedure for their protection.

**Pedestrian
Traffic Control &
Construction
Staging**

SSP 3

The Contractor shall be responsible for directing pedestrians and cyclists around construction areas in a safe manner at all times. Appropriate construction signs shall be used to designate areas under construction and closed to public access.

The Contractor shall stage the reconstruction works in a systematic manner so only one area is closed to public access at any time. Construction on adjacent areas shall not commence until the construction in the previous area has been completed and reopened unless otherwise approved by the Contract Administrator.

The Contractor shall submit a construction staging plan for approval prior to commencing work.

**Demolition of
Adjacent
Structures**

SSP 4

All demolished materials shall become the property of the Contractor and shall be removed from the Site. Disposal of all demolished materials shall be in accordance with MoT 20012 SSHC, Section 145.27.02

The Contractor may remove components of the boardwalk to gain access to repair areas upon approval from the Contract Administrator. The Contractor shall be responsible for the care and protection of all components removed. Components shall be reinstalled to their original condition or better.

Removal of any component of the boardwalk will be at the discretion of the Contractor and shall be incidental to the works where applicable.

Any damage incurred in the execution of this contract to any part of the property or structure not specifically designated for demolition shall be repaired, replaced and/or reconstructed to its original condition or better at the Contractor's expense.

Timber Construction

SSP 5

General

All timber construction and installations shall be in accordance with the MoT 20012 SSHC, Section 213.

New timber components shall be pressure treated Douglas Fir, No. 1 grade or better or as approved by the Contract Administrator and manufactured as per the requirement in SSHC, Section 904.

Timber Pile Construction

SSP 6

General

All timber piling construction including pile posting segments shall be in accordance with the MoT 2012 SSHC, Section 214.

Existing piles to be replaced shall be extracted full length from the ground.

Piles are to be driven to the following minimum tolerance:

- Location in Plan: $\pm 50\text{mm}$
- Plumb: 1 in 50

Handling of Materials

- a. Treated piles shall be handled with rope slings, taking care to avoid dropping, bruising or breaking of outer fibers, or penetrating the surface with tools. Sharp pointed tools shall not be used in handling treated piles or turning them in the leads.
- b. The surface of treated piles below cut-off elevation shall not be disturbed by boring holes or driving nails or spikes into them to support temporary material or staging. Staging may be supported in rope slings carried over the tops of piles or attached to pile clamps of an approved design.

Driving Records

An accurate record shall be kept of all piles, as each is

driven, to show the location in the structure, size of pile, penetration, resistance to driving and other essential data. See suggested form for reporting this information in the Supplementary Detail Drawings/Documents. Size can be 8 1/2" x 11" or 8" x 10 1/2".

The size and arrangement of pile driving record forms may be varied to adapt them to the convenience of user, method of filing, and use to be made of the data.

Payment

Payment for timber pile supply and installation shall be made at a lump sum bid price per pile.

Timber Pile Banding

SSP 7

General

Split piles shall be banded with minimum 22GA type 316 Stainless Steel band. Stainless steel shall be in accordance with ASTM A240/A240M.

One band shall be installed for each 600mm long split. If split exceeds 600mm, band spacing shall be 300mm unless otherwise specified on the drawings. Splits extending to the top of the pile shall be banded within 100mm from the top. Banding shall be installed with an appropriate banding tool and hand tightened as required.

Payment

Payment for banding shall be per lump sum bid price per pile banded.

Timber Pile Clamping

SSP 8

Split piles that are designated to be clamped, shall be clamped with a 6mm x 60mm stainless steel clamp. Stainless steel shall be in accordance with ASTM A240/A240M.

Splits extending to the top of the pile shall be clamped within 100mm from the top. Clamps shall be installed and tightened with a 12.7mm bolt.

Payment

Payment for banding shall be per lump sum bid price per pile clamped.

**Timber Cap Replacement/
Corbel Installation**

SSP 9

Pile Cap Replacement

New timber pile caps and corbels shall be Douglas Fir, No. 1 grade or better. Caps shall be replaced in-kind. Where applicable, drift pins can be cut to facilitate removal of existing pile caps. New pile caps and corbels shall be

installed in accordance with the details illustrated on the Contract drawings. External brackets shall be installed to replace internal drift pins in accordance with the details illustrated on the Contract drawings.

Sub-cap Replacement

Sub-caps shall be replaced in-kind including any hardware deemed unusable by Contractor and Contract Administrator. Section dimensions shall match with the sizes of existing caps and shall conform to the timber specifications outlined in these supplementary specifications.

Payment

Payment for the timber cap replacement or corbel installation shall be made on a lump sum bid price(s) for each cap completely replaced, and corbel installed

Pile Shimming

SSP 10

General

Pile shimming shall be conducted using two matching hardwood timber wedges in accordance with details illustrated on the Contract drawings. Shims shall be pressure treated with an approved wood preservative in accordance with the CSA Standard 080. Preparation and handling shall also be in accordance with MoT 2012 SSHC, Section 213. The Contractor should have available several sizes of shims on-site to handle various gap widths.

If applicable, piles shall be squared off at the head parallel to the pile cap prior to installing the shims.

Payment

Payment for shimming shall be per lump sum bid price per pile shimmed.

Steelwork

SSP 11

All steelworks shall be in accordance with MoT 2012 SSHC, Section 422. All permanent steelworks shall be hot dip galvanized in accordance with this specification.

All permanent bolts, nuts and washers shall conform to ASTM A307.

All hardware deemed reusable by the Contractor shall be inspected and approved by the Contract Administrator.

Concrete Work

SSP 12

Unreinforced concrete is required to fill gaps below existing

concrete foundations as identified on the Contract drawings.

The Contractor shall be responsible for design of the concrete mix in accordance with the latest editions of CSA-A23.1 and CSA A23.2 to meet the following minimum requirements:

- .1 Cement: Type 10 General Purpose;
- .2 Maximum aggregate size: 32 mm;
- .3 Minimum compressive strength at 28 days: 30 MPa;
- .4 Exposure Class: C-1

The Contractor shall submit his concrete mix design to the Contract Administrator for review a minimum of seven (7) days before mixing.

Temporary Works

SSP 13

The Contractor shall be responsible for the design, construction and removal of all temporary works

Temporary works will be considered incidental to the works and no extra payment will be made.

Demolition of Boardwalk Behind Pelican Bay Marina

SSP 14

All demolished materials shall become the property of the Contractor and shall be removed from the Site. Disposal of all demolished materials shall be in accordance with MoT 2012 SSHC, Section 145.27.02.

The Contractor shall be responsible for the care and protection of all adjacent components that may be affected by removal of the boardwalk and/or remaining portions of the dock structure. These components include, but are not necessarily limited to, the upper retaining wall (west of boardwalk), and the lower retaining wall (east of boardwalk). Any damage caused to adjacent components is to be returned to original condition or better at the Contractors expense.

Care is to be taken to avoid embankment fill, between the lower and upper retaining walls, entering the waterway. All disturbed embankment fill is to be replaced in kind.

All timber components of the boardwalk are to be removed. Concrete-filled steel piles are to be removed down to a height of 300mm above the lower retaining wall (east of boardwalk).

Piles are to have their steel edges ground smooth. Concrete infill is to be ground to a roughness not exceeding 2mm.

Continuation of existing timber curb to be installed at north end of boardwalk, on existing upper level. Timber curb, similar to north end of boardwalk, to be installed at south end on top of final deck plank.

Blue overhead lentil sign structure to be removed at its base on the boardwalk, and reinstated on the walkway above. Lentil sign overhead beam to be shortened to allow new base to be placed on shortened post and new base on walkway above.

Reference Standard Drawing 10, Figure 3 for typical seawall detail.

**Lions Bay
Concrete Beam
Retrofit**

SSP 15

General

Refer to design drawings for construction specifications.

Payment

Payment shall be lump sum bid price.

**Maritime Market
Boardwalk
Riprap Re-
grading**

SSP 16

General

Refer to design drawings for construction specifications.

All machinery is to be inspected to be free of hazardous materials and visible leaks before entering/working in the intertidal zone. Hydraulic fluids are to be non-petroleum vegetable oil based. Hard substrates are to be replaced with life attached upright and at the same tidal elevation as they were removed. All re-fueling and maintenance of machines is to be conducted at a distance of at least thirty (30) meters from any waterway. A silt containment plan is to be supplied to the engineer for approval. Notification is to be given to the engineer as to when any and all in-water work is to be completed. Contractor to provide a construction and access plan to the engineer for review and approval prior to commencing construction.

Work is to be completed during the least risk work window, August 16 – February 28.

Any excess rock material can be placed on the existing slope, evenly as long as it remains stable. Finer materials such as gravel, sand, and silt is to be removed from the site and disposed of at an approved facility.

Payment

Payment shall be lump sum bid price.

Quality Control

SSP 17

General

The Contractor shall be responsible for all Quality Control during the performance of the Work. QC work includes monitoring, inspecting and testing the means, methods, materials, workmanship, processes and products of all aspects of the Work as necessary to ensure conformance with the Contract and Specifications.

Shop drawings shall be submitted to the Consultant for review for general compliance with design intent and specifications. Review by the Consultant shall not relieve the Contractor of responsibility for errors or omissions in the shop drawings, or for meeting all requirements in the contract and specifications. All measurements, fabrication, delivery, installation, and final implementation are solely the responsibility of the Contractor.

Environmental Protection

SSP 18

General

The Contractor shall prepare and submit an Environmental Management Plan ("EMP") to the Engineer for review and approval a minimum of 7 days prior to commencement of any part of the Work on Site. The EMP shall be a single, comprehensive, self-contained plan addressing and meeting environmental management requirements, applicable Laws, Regulations, Permits, Licences, and Approvals. The EMP shall be an action plan that consolidates environmental requirements and commitments into one document and clearly outlines the responsibilities of the Contractor. The EMP shall be designed to be practical and useable in the field and shall be updated by the Contractor to address new environmental protection and reporting procedures as those requirements develop.

Any in water work that may be required to facilitate Site access/egress, staging, or other lay-down areas must conform to standard mitigation measures and BMP's for working in and around water, and as per the conditions of any issued regulatory permit, licence or approval.

The Contractor shall provide, in accordance with the requirements of all authorities having jurisdiction and all applicable laws, all suitable equipment, facilities and precautions required to control the discharge of

contaminants, or to prevent actions, which may pollute or degrade the atmosphere, any body of water or land areas, or which may harm fish, wildlife, and/or their habitats.

The Contractor shall obtain a copy of Hemmera's Environmental Management Report and abide by all recommendations and specifications that are included within it.