2025 Ports Capital Upgrade Project - West Bay Float Replacement

Supplemental Specifications

Sunshine Coast Regional District

C41-0199A

CIMA+ file number: C41-0199A-SPC-001
Feb 25, 2026 – Rev 1

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Prepared by:

Ali Malekian, Ph.D., P.Eng.
Project Engineer - Infrastructure

Reviewed by:

Ali Norouz Zarmehri, P.Eng.
Structural Engineer

675 W Hastings St #700, Vancouver, BC
Canada V6B 1N2

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Confidentiality and ownership

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Introduction

The 2025 Ports Capital Upgrade Project is to replace the float at West Bay port as per design drawings and specifications.

- West Bay (49.460389, -123.418219)

This document identifies Supplementary Specifications for this project. The construction specifications for this project are contained in applicable CCDC documents, this document, and the design drawings. These Supplementary Specifications take precedence over the applicable CCDC Specifications.

If there is any inconsistency or conflict between the provisions of the Supplementary Specifications, then the Supplementary Specifications shall govern and take precedence in the order listed below.

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Definitions

Consultant:	CIMA Canada Inc., acting as the Owner's representative & Contract Admin.
Owner:	Sunshine Coast Regional District

Section 01 20 01 – Demolition and Cleanup

This section provides details on demolition and cleanup requirements of the project.

1. General

1.1. Contractor is responsible to properly dispose of all the unsalvageable material from the site in accordance with the contract documents as well as all local, provincial and federal regulations.

1.2. The contractor must take all necessary precautions to confine the demolition within the designated limits. Any damage to the existing structure shall be the liability of the contractor.

1.3. The contractor is responsible for repairing, replacing, or reconstructing any part of the property or structure that is not explicitly marked for demolition and incurs damage during the work execution.

1.4. Remove all debris and surplus material from site once the work is completed. Work area shall be in clean and neat condition to the satisfaction of the Consultant and the Owner.

END OF SECTION

Section 01 30 01 – Project Documentation Requirements

This section provides details on documentation requirements of the project.

1. Submittals

1.1. Submittals include but not limited to the following documents:

1.1.1. Construction schedule

1.1.2. Quality Control Plan

1.1.3. Inspection and Test Plan (ITP)

1.1.4. Shop drawings and product data

1.1.5. Record drawings

1.1.6. Certificates

1.2. For each submittal or submittal package, type or print the appropriate information on the form to fully describe the submittal(s) being sent for review.

1.3. Number each transmittal form in sequential order, for record and tracking purposes.

2. Shop drawings and product data

2.1. Submit shop drawings and other submittals to the Consultant and the Owner for review with a submittal transmittal form in a form acceptable to the Consultant and the Owner.

2.2. Shop drawings to detail all the parts, sizes, grades, standards, etc. Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, wiring diagrams, panel layouts with bills of material, explanatory notes and other information necessary for completion of Work. Indicate cross references to design drawings and specifications.

2.3. Adjustments made on shop drawings by the Consultant and the Owner are not intended to change the Contract Amount. If adjustments affect the value of Work, state such in writing to the Consultant and the Owner prior to proceeding with Work.

2.4. Make such changes in shop drawings as the Consultant and the Owner may require, consistent with Contract Documents. When resubmitting, notify the Consultant and the Owner in writing of any revisions other than those requested.

2.5. Submit electronic copies of product data sheets or brochures for requirements or product indicated in the design drawings.

2.6. Review by the Consultant and the Owner is for the sole purpose of ascertaining conformance with the general design concept. This review does not mean that the Consultant and the Owner approve the detail design inherent in the shop drawings, responsibility for which remains with Contractor, and such review does not relieve Contractor of the responsibility for errors or omissions in the shop drawings or of the responsibility for meeting all requirements of the Contract Documents. Contractor is responsible for dimensions to be confirmed and correlated at the jobsite, for information that pertains solely to fabrication processes or to techniques of construction and installation and for coordination of the work of all sub-trades.

3. Construction schedule and work plan

3.1. Contractor to provide a schedule in the form of horizontal bar chart, such as a Gantt chart.

3.2. Submit 1 printed portable document format (pdf) file of initial schedules within 10 days after award of contract.

3.3. Contractor shall provide bi-weekly updates on the schedule.

3.4. Revise and resubmit schedule and work plan within 5 days after notification by the Consultant and the Owner that previously reviewed schedule is not being met. Show changes in operations proposed to complete construction work within Contract Time.

3.5. If, during course of Work, Contract Time is extended, correct construction schedule and work plan to show revised commencement and completion dates of affected parts of work.

3.6. The construction schedule shall be resubmitted if there is a delay in the construction for any reason.

3.7. Provide work plan for each key activity, as requested by the Consultant and the Owner, to show construction methods. Relate work plan to activities shown on construction schedule.

4. Construction completion documentation and record drawings

4.1. At substantial completion, submit to the Consultant and the Owner a complete package of all quality control test results, RFIs, submittals, transmittals, survey (if any), and monitoring.

4.2. Contractor to provide red marked drawings showing changes, dimension details, depth of various elements of foundation, field changes of dimension and detail, changes made by change order or site instructions.

4.3. Record drawings shall show the approximate location of any underwater feature such as anchor blocks, mooring chains, etc.

5. Quality control program

5.1. Project quality control plan (QCP)

5.1.1. Contractor to prepare and implement a project quality control plan (QCP) to ensure the work conforms to the contract documents and that the products meet the quality requirements.

5.1.2. The project QCP to be submitted to the Consultant and the Owner for review prior to mobilization.

5.2. Inspection and Test Plan (ITP)

5.2.1. The project QCP to include an Inspection and Test Plan (ITP) that will frame the inspections and tests that the Contractor and/or Subcontractors will perform to ensure the work conforms to the contract documents and that the products meet the quality requirements.

5.2.2. Test results are to include, as a minimum, the following:

5.2.2.1. Type of test

5.2.2.2. Dates of sampling, testing, and reporting.

5.2.2.3. Personnel involved.

5.2.2.4. Location of test (with sketch if required).

5.2.2.5. Specified requirements.

5.2.2.6. Test results.

5.2.2.7. Remarks regarding conformance with contract documents.

5.2.3. Provide written test results to the Consultant and the Owner within 24 hours of tests. If the tests are completed on the Work Site, provide the Contract Administrator with field memo summarizing results immediately following testing.

5.2.4. Report, track, correct and retest any deficient work determined by the quality control or quality assurance programs at no additional cost to the owner.

5.2.5. Quality control testing will form the basis for acceptance of the work; however, the Contract Administrator may reject the work based on its quality assurance testing.

5.2.6. The final ITP will be submitted to the Consultant and the Owner prior to mobilization to establish the Owner/Consultant's witness and hold points.

5.2.7. Quality Control and Assurance

5.2.7.1. Quality Control (QC) is the responsibility of the Contractor. The Contractor is responsible to submit an Inspection Test Plan (ITP) for review and approval by the Consultant and the Owner. This ITP will be based on the project specifications and will include any required check list. Quality Assurance (QA) will be the responsibility of the Consultant, which covers review of quality control documentations and field-reviews when and if necessary. Field reviews will depend on construction progress to confirm material specification and quantities are adequate and recorded as per project specifications.

5.2.8. Refer to CCDC 2 GC 2.3 Review and Inspection of Work.

END OF SECTION

Section 09 10 04 – Concrete

This section provides details on concrete requirements of the project.

1. All concrete material storage, production, testing, placement and curing shall meet the requirements of CSA A23.1 and CSA A23.2. Aggregates shall be tested for alkali reactivity as per CSA A23.1 and CSA A23.2 and approved by the engineer.
2. Materials:
   - 2.1. Cement - in accordance with CSA A5 type GU.
   - 2.2. Aggregates - in accordance with CSA A23.1
   - 2.3. Admixtures - in accordance with CSA A23.1
   - 2.4. Air - entraining admixtures with ASTM c260
   - 2.5. Chemical admixtures to ASTM C494 and ASTM C1017
   - 2.6. Calcium chloride admixtures are not permitted.
3. Concrete mix design shall be as follows unless noted otherwise: exposure class C-1 and S-3.
   - 3.1. Minimum 28 day compressive strength - 35MPa
   - 3.2. Cementation material: type GU with 15% to 40% fly ash, conforming to CSA A-3001
   - 3.3. Maximum water/cement ratio by weight: 0.4.
   - 3.4. Slump: 80 ± 30mm
   - 3.5. Mix water to be potable
   - 3.6. Aggregate: 20 mm max. Nominal size for reinforced concrete
   - 3.7. Air content: 4% to 7% (general) 5% to 8% (concrete exposed to frost)
   - 3.8. Refer to Table 3 CSA A23.1:24 (additional requirements for concrete subjected to sulphate attack) for additional requirement for class S-3.
   - 3.9. Admixtures: conforming to CSA A23.1 and in compliance with ASTM C260, ASTM C494, and ASTM C1017. Calcium chloride not permitted
   - 3.10. Contractor to submit concrete mix design for review and approval.
4. Contractor shall submit shop drawings for precast and cast-in-place concrete elements to the Engineer for review and approval prior to fabrication and installation.
5. Concrete mixing and placement and curing:
   - 5.1. No additional water shall be added to the concrete after batching and mixing.
   - 5.2. Concrete temperature at the time of placing shall be as per table 14 of CSA A23.1/A23.2.

Permissible Concrete Temperatures at Placing		
Thickness of Section, m	Minimum Temperature ˚C	Maximum Temperature ˚C
< 0.3	10	32
0.3 – 1	10	30
1 – 2	5	25
> 2	5	20

5.3. All concrete contact surfaces shall be free of debris, contaminants and standing water. Bedrock and construction joint surfaces shall be cleaned and prepared in accordance with the specifications.

5.4. Construction joints shall be provided only as shown on the drawings, or as pre-approved by the engineer.

5.5. All concrete surfaces shall be kept continuously moist while curing for at least attaining 70% of the specified strength.

5.6. For standard strength tests, 100mm x 200mm cylinders to be used based on csa a23.1.

6. Formwork removal

6.1. Formwork to remain in place until all of the following conditions are satisfied:

6.1.1. Concrete has reached at least 40% of the required 28 day compressive strength.

6.1.2. A minimum period of 48 hours has passed.

6.1.3. Concrete has attained sufficient strength to support its own weight adequately, together with the construction loads likely to be imposed.

7. Tolerance for formed sections:

7.1. For cross-sections of girders, beams, and columns and for the thickness of walls and suspended slabs (L):

7.1.1. If $L \leq 0.3$m: ±8mm

7.1.2. If $0.3\text{m} \leq L \leq 1$m: ±12mm

7.1.3. If $L \geq 1$m: ±20mm

7.2. For slab on grade: the thickness of a slab on grade shall be acceptable if the average thickness is not more than 10mm less than the specified thickness and no individual measurement is more than 20mm less than the specified thickness.

8. Grouts:

8.1. Epoxy grout: as indicated on the drawings, for typical application use Hilti Hit Hy150 (dry conditions) or Hilti RE500 (wet conditions).

8.2. Non-shrink grout: cementitious pre-mixed grout, 50 MPa specified 28-day compressive strength. Place and cure all grout within temperature range recommended by the manufacturer.

9. Waterstops shall conform to CGSB 41-gp-35m, provided as follows:

9.1. WSA - greenstreak pvc waterstop, arctic grade, profile style #696 (229 mm wide), or approved equal

9.2. WSB - greenstreak pvc waterstop, arctic grade, profile style #726 (305 mm wide), or approved equal

9.3. WSC - greenstreak hydrotite hydrophilic waterstop, profile #cj-0 725, or approved equal, adhere with greenstreak leakmaster sealant

9.4. Prefabricated intersections shall be provided at all intersections, connect by field fused butt joints, as per manufacturer's instructions.

9.5. Where embedment interferes with waterstops, the waterstop shall be routed around the waterside at a minimum distance from the embedment equal to 1/2 the overall width.

9.6. All waterstops should be supported and protected from damage and movement during construction.

10. Concrete inspection and testing:

10.1. All the concrete testing and inspection should be in accordance with CSA A23.1/A23.2 " Concrete materials and methods of concrete construction/Test methods and standard practices for concrete".

END OF SECTION

Section 09 20 01 – Metal Fabrication and Installation

This section provides details on metal fabrication and installation requirements of the project.

1. Contractor to provide shop drawings for all the steel and aluminum work, unless noted otherwise, for Engineer's review and approval. Shop drawings shall contain all details and material specifications.
2. Contractor to submit the fabricator's Canadian Welding Bureau certificates with shop drawings.
3. Welded connections
   - 3.1. Steel welding shall be in accordance with the most current version of CSA W59.
   - 3.2. All welding shall meet the acceptance criteria of CSA W59, Clause 11.
   - 3.3. Aluminum welding shall be in accordance with CSA W59.2.
   - 3.4. Welding shall be performed by certified welders in accordance with CSA W47.1, CSA W47.2 and CSA W55.3. Fabricators shall be “fully approved” under CSA W55.3.
   - 3.5. Welding practice and qualifications of fabricators shall conform to CSA W47.1 and W59.
   - 3.6. Welding must follow certified weld procedure.
   - 3.7. Fabricator to submit proof of certification prior to start of work.
   - 3.8. All welds to be continuous seal welds.
   - 3.9. The Contractor shall be registered with the Canadian Welding Bureau (CWB) to CSA Standard W47.1, Division 2.1 for shop welding or Division 3 for field welding. If the Contractor is subcontracting steel fabrication, then the fabricator(s) shall be registered with the Canadian Welding Bureau (CWB) to CSA Standard W47.1, Division 2.1 for shop welding or Division 3 for field welding.
   - 3.10. Perform all Work of this Section to CSA W59 using workers experienced in metal fabrication and erection, including cutting, bending, forming, welding, and finishing.
   - 3.11. Welding inspection of the Work of this Section shall be carried out by a qualified independent agency, qualified under CSA W178.1 and W178.2, approved by the Engineer and paid for by the Contractor in accordance with W59, Clause 7, except for complete penetration welds of which shall be in accordance with Clause 8.
4. Bolted connections:
   - 4.1. Bolts shall be in accordance with ASTM F3125/F3125M, unless otherwise specified.
   - 4.2. All hardware for bolted connections such as bolts, nuts, washers, etc. to be hot dip galvanized.
   - 4.3. Bolts and nuts shall be tightened by the turn-of-nut method in accordance with CAN/CSA S16.
5. “ALL HARDWARE” refers to all the required fasteners and steel components of the connections required as per typical details such as bolts, nuts, washers, timber washers, etc.
6. Timber washers shall be hot dip galvanized and used on all timber connections notched where applicable.

7. Design fabrications to the most current version of CSA-S16.
8. Grind smooth all burrs, welds and sharp edges to a minimum 2mm radius.
9. Dissimilar types of steels and aluminum shall be isolated from each other. All fasteners shall be compatible with material that are in contact.
10. Deliver, store, handle with sufficient care and protect materials from damage. Damaged materials shall not be installed and shall be replaced at the contractor's expense.
11. All structural steel, miscellaneous metal and fasteners shall be hot dip galvanized in accordance with ASTM A123.
12. All hardware shall be new unless noted otherwise.
13. Except parts of members to be embedded in concrete, galvanized or unless noted otherwise on the drawings, all steel work shall be shop primed. Priming shall be in accordance with CISC/CPMA -1-73A “quick drying primer” when no topcoat is required and in accordance with CISC/CPMA-2-75 when a topcoat is specified. If a topcoat is specified, the primer shall be selected ensuring compatibility with the specified system. Items specified to be galvanized shall be hot dipped galvanized to the most current version of ASTM 1-123, minimum zinc coating of 600g/m2. Field touch up all abrasions, scratches, welds or bolts.
14. Temporary bracing during construction shall be provided, installed and maintained by the contractor and is the responsibility of the contractor. The bracing shall be removed only after the work is complete.
15. Coating of all steel work shall be completed off-site. Paint and coat touch-up is acceptable if required. If field paint and coat is required, measures shall be taken to prevent any spillage. Work plan shall be submitted to the engineer and environmental consultant for review and approval before work commence.
16. Structural steel shall conform to CSA-G40.20/G40.21 as per the following grades unless otherwise specified:
    - 16.1. Rolled W-shapes 350W
    - 16.2. W, I and C shapes 350W
    - 16.3. Plates 350W
    - 16.4. HSS sections ..... 350W Class C
    - 16.5. Pipes ..... ASTM A53 (fy = 240 MPa)
    - 16.6. Bolts ..... F3125 Grade A325 type 1
    - 16.7. Nuts ..... ASTM A563 Gr DH
    - 16.8. Washers ..... ASTM F436
    - 16.9. Anchor rods ..... ASTM F1554 GR.55
    - 16.10. Lag screws ..... CSA B34
    - 16.11. Drift pins ..... CSA G40.21 Grade 350W
17. Corrosion protection:

17.1. All structural and miscellaneous steel installation must consider corrosion protection and corrosion contamination.

17.2. Damaged galvanized parts shall receive a coat of zinc-rich paint.

17.3. When hot-dip galvanized steel used, it must be in compliance with CAN/CSA G164, unless noted otherwise.

17.4. A minimum of 3 mm fillet shall be used for sealing purpose unless noted otherwise.

17.5. Provide 10 mm ventilation holes in accordance with the guidelines set by American Galvanizers Association to all hollow elements that are to be hot dipped galvanized to avoid blow-out during galvanizing.

END OF SECTION

Section 15 10 01 – West Bay Floating Dock Specification

This section provides details on West Bay Floating Dock Specification of the project.

1. The contractor shall provide drawings and calculations sealed by a professional engineer licensed in British Columbia (Float Engineer) as a submittal. These drawings shall provide details such as design requirements, design codes used, layout, member sizes, connections, dimensions, materials and finishes.
2. The float must be designed in accordance with relevant Canadian codes and available Best Management Practices (BMP), as well as the specifications provided in the drawings and other contract documents. The applicable codes and BMPs include but not limited to:
    2.1. CSA A23.3 design of concrete structures
    2.2. CSA O86 engineering design in wood
    2.3. CSA S16 design of steel structures
    2.4. CSA S157 strength design in aluminum
    2.5. Shisha'lh nation best management practices for marine docks. Version 20180605
    2.6. Atl'ka7tsem/howe sound biosphere region best management practices for marine docks. Draft 10. June 13, 2021
3. The design drawings show a high-level detail of the floating platform. Contractor is encouraged to propose new design ideas as long as the General Requirements (specified below) of the floating dock is met.
4. General Requirements for the float include, but not limited to:
    4.1. The float frame shall not be fabricated from aluminum. The Contractor, in consultation with the Float Engineer, shall recommend an alternative frame material suitable for the design loads, service life, and marine environment. The proposed material and supporting design calculations shall be submitted to the Consultant and the Owner for review and approval as part of the sealed float design package.
    4.2. Raised lumber bullrails all around the float. The two bullrails along the length on each side to be painted yellow and the two in front and end to be painted red. See pictures in the drawing package.
    4.3. Rubboard is required; treated lumber rubboard all around the float.
    4.4. Floatation billet shall be expanded polystyrene foam wrapped in HDPE or approved similar.
    4.5. Replace the existing gangway roller with a new one. The material of the new roller shall be compatible with the new float deck, gangway pad/guide and shall be resistant to wear. Rollers' specifications shall be provided as part of float shop drawings for review.
    4.6. Gangway pad and/or guide with upgraded landing area for the gangway rollers/wheels, resistant to wear the rollers.

4.7. Dock fenders/bumpers are required all around the float and shall have high resistance to environmental elements, such as UV light, and marine growth.

4.8. The surface of the float shall be non-slip material (e.g. mini mesh decking) and shall be specified in the shop drawings.

4.9. Ladder on gangway end of the float (similar to the existing). The ladder shall extend a minimum of 1m below the water surface. Material selected and fabrication method shall be corrosion resistant.

4.10. Non-slip transition plate from gangway to float, hinged on gangway. Approximate dimensions are provided on design drawings; contractor shall determine the exact dimensions. Transition plate specifications shall be provided in float shop drawings.

4.11. Anchor chains shall have tension cords. Chains length to be confirmed based on depth of water. Shop drawings shall show details. Chain length can be field fitted during installation.

4.12. Parts that are submerged or below the waterline at any time shall not be constructed from lumber.

4.13. All routine maintenance work including replacement of decking and rub rails shall be possible from the deck of the float.

4.14. The mooring chains are to be replaced with 25mmØ Long-Link Gr. 80, hot dip galvanized (H.D.G.). Float Engineer to confirm the mooring chains sizing, grade, arrangement of the mooring chains, number and size of the anchor blocks, and anchor blocks' arrangement/placement based on the design loads.

4.15. Contractor shall replace all anchor blocks with the dual-block system shown in the drawings. The proposed anchor block size is 750 × 750 × 750 mm, subject to confirmation by the Float Engineer. The Contractor shall provide the final configuration, block sizes, and all other mooring system details in the shop drawings. Shop drawings shall show the location of the anchor blocks.

4.16. The proposed mooring system for the float is dual block system as shown on the drawings. Size, orientation, configuration, and number of blocks shall be reviewed and approved by Float Engineer based on the dock's loads.

5. The float shall be design for a minimum service life of 25 years in ocean environment.

6. The Owner is open to ideas and recommendations for the float design provided that it meets the specifications. Contractors are encouraged to provide options for the float design along with pricing. The owner reserves the right to accept, modify, or reject any or all of the recommendations.

7. Safety signs:

   7.1. Sings shall be installed as per regulations. Indicate any limitation of use or warnings as required.

8. Float Design Loads:

   8.1. Live Load (uniformly distributed).....1.4 kPa

   8.2. Snow Load .....As per BC Building Code

   8.3. Wind Load .....As per BC Building Code

   8.4. Wave Load .....to be determined by Float Engineer

8.5. Concentrated load 1.8kN

8.5.1. Placed at any location, no closer than 300mm to any edge.

8.5.2. Stability shall be checked by float engineer.

8.6. Any assumptions in the design shall be clearly stated and submitted to the Consultant and the Owner for review.

8.7. The float shall sit level with a maximum cross slope of 2%, and an acceptable freeboard of 400mm – 500mm during normal condition. This information shall be provided in the shop drawing submittal package.

9. Dispose of the existing float properly in accordance with the contract documents as well as all local, provincial and federal regulations.

END OF SECTION

Section 20 10 01 – Environmental Protection Plans

1. Contractor shall follow and comply with all conditions within Environmental Protection Plan (EPP) prepared by Environmental Consultant (Hatfield) throughout the entire construction period. The EPP documents are available as part of the contract document with the following titles:

   1.1. West Bay Port Facility – Environmental Protection Plan

2. The following permits are obtained from Fisheries and Oceans Canada (DFO) for the upgrade project. Contractor shall follow and comply with all conditions within the permits and letter of advice throughout the entire project duration. The documents are available as part of the contract documents.

   2.1. West Bay - DFO Avoid and Mitigate Letter - 24-HPAC-00488

3. The existing permits authorize in-water and related works only until June 5, 2026. The Contractor shall plan and execute the Work to ensure completion within this permitted window. Should the Contractor fail to complete the Work within the authorized period, the Contractor shall, at no additional cost to the Owner, be solely responsible for applying for, securing, and paying all fees associated with any permit extensions, amendments, or new permits required to complete the Work. Any delays or impacts arising from failure to maintain valid permits shall be the responsibility of the Contractor.