

**SMALL CRAFT HARBOURS
CENTRAL AND ARCTIC REGION**



4	ISSUED FOR TENDER	JJ	12/08/20
3	ISSUED FOR COMPLETION	JJ	17/12/14
2	ISSUED FOR FINAL REVIEW	JJ	22/10/14
1	ISSUED FOR 100% REVIEW	JJ	17/09/14

No.	Description	Drawn By Des.Par	Date
Revision / Révision			

Do not scale drawings. Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

A Detail No. No. du détail
 B drawing no. - where detail required dessin no. - ou détail exigé
 C drawing no. - where detailed dessin no. - ou détaillé



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Project title / Titre du projet

**PORT ELGIN
WEST PIER
REHABILITATION**

Drawing title / Titre du dessin

GENERAL NOTES

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Approved by / Approuvé par JOHN JUFFS	Drawing Date / Date du dessin MAY 8 2014
Project manager / Administrateur de projet JOHN JUFFS	
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Project Number / Numéro du projet 131-23620-00-100	
Sheet / Feuille 2 of 12	

LEGEND

- 1.1 THE GENERAL NOTES AND STRUCTURAL STANDARD DETAILS ARE GENERAL AND APPLY TO THE ENTIRE PROJECT EXCEPT WHERE THERE ARE SPECIFIC INDICATIONS TO THE CONTRARY.
- 1.2 PROVIDE ALL REQUIRED TEMPORARY BRACING AND SUPPORTS FOR ALL SLABS, BEAMS/WALLS. TEMPORARY BRACING AND SUPPORTS MUST BE CAPABLE OF TRANSFERRING ALL IMPOSED CONSTRUCTION AND DEAD WITHOUT EXCEEDING SPECIFIED DESIGN LOADS. INCLUDE TEMPORARY SUPPORT AND SHORING OF ADJACENT BUILDINGS INCLUDING HARBOUR CENTRE BUILDING AND RESTAURANT.
- 1.3 THE CONTRACTOR SHALL PROTECT EXISTING BUILDINGS DURING CONSTRUCTION. PRIOR TO EXCAVATION A TEST EXCAVATION(S) SHALL BE COMPLETED TO ASSESS EXISTING FOUNDATION CONDITIONS/DEPTH.
- 1.4 REINFORCING STEEL FABRICATING AND PLACING TOLERANCES SHALL NOT REDUCE THE CONCRETE COVER TO LESS THAN THE SPECIFIED MINIMUM CLEAR CONCRETE COVER NOTED IN THE GENERAL NOTES.
- 1.5 SUBMIT PROPOSALS FOR CONSTRUCTION JOINT LOCATIONS OTHER THAN THOSE SHOWN ON DRAWINGS TO THE ENGINEER FOR REVIEW.
- 1.6 BEFORE CASTING CONCRETE, ENSURE THAT ALL EMBEDDED ITEMS, SUCH AS ANCHOR BOLTS, AND SLEEVES ARE IN POSITION AND SECURELY FASTENED IN PLACE TO THE SATISFACTION OF THE ENGINEER.
- 1.7 ENSURE THAT THE SOIL BELOW A FOUNDATION IS NOT ALLOWED TO FREEZE, EITHER DURING OR AFTER CONSTRUCTION. UNDER NO CIRCUMSTANCES SHALL CONCRETE BE PLACED ON FROZEN SOIL.
- 1.8 REINFORCEMENT REQUIREMENTS ARE SHOWN ON DETAIL DRAWINGS. WHERE DETAILS OF BAR SIZINGS AND SPACING ARE NOT SHOWN, ALLOW FOR MINIMUM REINFORCEMENT IN ACCORDANCE WITH CAN/CSA A23.3. ALL REINFORCEMENT SHOWN SHALL BE CONTINUOUS UNLESS DETAILED OTHERWISE.
- 1.9 ALL WORKS SHALL CONFORM TO ALL HEALTH AND SAFETY REGULATIONS.
- 1.10 CONTRACTOR IS RESPONSIBLE TO CARRY OUT WORK IN SUCH A MANNER THAT VIBRATION IS MINIMIZED.
- 1.11 CONTRACTOR IS RESPONSIBLE FOR THE RESTORATION OF ALL DISTURBED AREAS BACK TO ORIGINAL CONDITIONS OR BETTER AFTER THE COMPLETION OF WORKS.
- 1.12 CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING OF ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES. THE OWNER AND THE CONSULTANT ASSUME NO RESPONSIBILITY FOR THE ACCURACY OF UTILITIES INDICATED ON THE DRAWINGS.
- 1.13 THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF THE CONTRACTOR LAYDOWN AREAS AND RESTORATION AT THE CONCLUSION OF THE WORK.
- 1.14 CONTRACTOR IS RESPONSIBLE FOR PRE- AND POST-CONSTRUCTION SURVEY. A COPY SHALL BE PROVIDED TO THE OWNER.
- 1.15 VIBRATION MONITORING IS REQUIRED DURING PILE DRIVING TO ADDRESS VIBRATIONS AT HARBOUR CENTRE AND RESTAURANT. VIBRATION MONITORING PLANS SHALL BE PREPARED, AND ASSESSED DURING CONSTRUCTION, BY A LICENSED PROFESSIONAL ENGINEER RETAINED BY THE CONTRACTOR.
- 1.16 CONTRACTOR IS ADVISED THAT LAKE LEVELS MAY VARY DURING THE CONSTRUCTION PERIOD.
- 1.17 CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE CLEANLINESS OF THE SITE ACCESS ROADS RELATED TO HIS ACTIVITIES.
- 1.18 INSTALL SILT CURTAINS, MONITOR TURBIDITY LEVELS, AND REPORT TO AGENCIES AND OWNER AS REQUIRED.
- 1.19 REMOVE EXISTING, FLAGPOLES, DESIGN AND FABRICATE NEW ANCHOR BOLTS.

- 2.2 ANCHOR ROD SHALL CONFORM TO ASTM A722.
- 2.3 **CONCRETE**
CONCRETE 28-DAY COMPRESSIVE STRENGTH:
STRUCTURAL CONCRETE 35 MPa
LEAN AND FILL CONCRETE 20 MPa
ALL CONCRETE TO BE CLASS C XL

ALL EXPOSED EDGES TO HAVE 20mm CHAMFER UNO.
- 2.4 **REINFORCEMENT**
3.6.1 REINFORCEMENT TO CSA G30.18M GRADE 400 UNO
3.6.2 DIST THREAD BAR GRADE 75ksi

EXPOSURE CONDITION	EXPOSURE CLASS AS PER CSA A23.1-04		
	N	F-1, F-2, S-1, S-2	C-XL, C-1, C-3, A-1, A-2, A-3
CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	-	75mm	75mm
BEAMS, GIRDERS, COLUMNS, AND PILES	30mm	40mm	60mm
SLABS, WALLS, JOISTS, SHELLS, AND FOLDED PLATES	20mm	40mm	60mm

BAR SIZE	REINFORCEMENT SPLICES 35 MPa CONCRETE, NORMAL WEIGHT 400 MPa REINFORCING BARS					
	LAP LENGTH (mm)					
	TOP BARS (mm)		OTHER BARS (mm)		DOWELS	
	CLASS A	CLASS B	CLASS A	CLASS B	A	B
10M	360	470	300	360	300	360
15M	510	670	400	510	400	510
20M	620	810	480	620	480	620
25M	1000	1300	770	1000	770	1000
30M	1190	1550	920	1190	920	1190
35M	1390	1810	1070	1390	1070	1390

NOTE 1: DOWELS ARE TO MATCH WALL REINFORCEMENT UNLESS NOTED OTHERWISE. USE CLASS A LENGTH FOR ANCHORAGE.
 NOTE 2: TOP BARS ARE:
 A) ALL BARS IN CONCRETE WITH MORE THAN 300mm CONCRETE BELOW.
 B) ALL HORIZONTAL BARS IN WALLS.
 NOTE 3: PROVIDE CLASS B LAP UNLESS NOTED OTHERWISE.
 NOTE 4: LAP SPLICE LENGTHS SHOWN IN THE TABLE ARE BASED ON HEAVIER CONFINED BARS.
 NOTE 5: TABLE APPLIES UNLESS SHOWN OTHERWISE.
 NOTE 6: DEVELOPMENT LENGTHS ARE EQUAL TO CLASS 'A' LAP SPLICES.
 NOTE 7: DEVELOPMENT LENGTHS ARE FOR UNCOATED REINFORCEMENT.

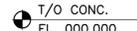
2. MATERIALS

- 2.1 **STRUCTURAL STEEL**
- 2.1.1 DESIGN AND CONSTRUCTION TO CONFORM TO THE FOLLOWING CODES/STANDARDS (LATEST EDITIONS/REVISIONS):
CAN/CSA W59 WELDED STEEL CONSTRUCTION (METAL ARC WELDING).
- 2.1.2 ALL STRUCTURAL STEEL SECTIONS, HSS, WELDED PLATE MEMBERS TO BE DESIGNED ACCORDING TO CSA S16-14.
- 2.1.3 HOT ROLLED SECTIONS SHALL CONFORM TO CSA STANDARD G40.21 GR 350W (ASTM A992 OR A572 GR50).
- 2.1.4 HOT ROLLED STEEL SHEET, PLATE AND STRIP USED IN THE FABRICATION OF WELDED ASSEMBLIES TO CONFORM TO CSA STANDARD G40.21 GR 300W.
- 2.1.5 HOLLOW STRUCTURAL STEEL SECTIONS SHALL CONFORM TO CSA STANDARD G40.21 GR 350W CLASS C.
- 2.1.6 ALL MATERIAL USED FOR THIS PROJECT SHALL BE NEW, FREE FROM DEFECTS IMPAIRING THEIR STRENGTH, DURABILITY AND APPEARANCE.
- 2.1.7 SHOP CONNECTIONS (WHERE PRACTICAL AND POSSIBLE) TO BE WELDED. (UNO)
- 2.1.8 FIELD CONNECTIONS (WHERE PRACTICAL AND POSSIBLE) TO BE BOLTED. (UNO)
- 2.1.9 THE FABRICATOR SHALL BE FULLY APPROVED IN ACCORDANCE WITH CSA STANDARD W47.1.
- 2.1.10 ALL WELDS TO CONFORM TO CAN/CSA W59. USE STITCH WELDS FOR EMBEDDED PLATES AND ANGLES UNO. ALL BUTT WELDS AT JOINTS TO BE COMPLETE JOINT PENETRATION UNO. CONNECTIONS TO BE DETAILED SUCH THAT MINIMIZE WATER AND DIRT ACCUMULATION. ANGLE AND CHANNEL MEMBERS TO BE TOE DOWN WHERE PRACTICAL. WIDE FLANGE AND CHANNEL MEMBERS WITH HORIZONTAL WEBS TO HAVE ADEQUATE DRAINAGE HOLES. PROVIDE WASHER PLATES MIN. 6mm THICK WITH OVERSIZE HOLES OR SLOTTED HOLES.
- 2.1.11 ALL BOLTS SHALL CONFORM TO ASTM A325M UNO. BOLTED CONNECTIONS SHALL HAVE A MINIMUM OF TWO M20 BOLTS UNO.
- 2.1.12 BOLTS TO BE SUPPLIED WITH HARDENED WASHERS TO ASTM F436 AND HEAVY HEX NUTS TO ASTM A563.
- 2.1.13 ALL FRAMING MEMBERS SHALL BE EASILY IDENTIFIABLE (I.E. EITHER STAMPED, STENCILED OR PAINTED).
- 2.1.14 ANCHOR RODS SHALL CONFORM TO ASTM A36, UNO.

LEGEND

- ALUM. ALUMINUM
- BM BEAM
- BUL BOTTOM UPPER LAYER
- BLL BOTTOM LOWER LAYER
- CO CLEAN OUT
- CONC. CONCRETE
- CONT'D CONTINUED
- DWLS DOWELS
- EW EACH WAY
- EF EACH FACE
- FD FLOOR DRAIN
- GALV. GALVANIZED
- HORZ HORIZONTAL
- HIF HORIZONTAL INSIDE FACE
- HOF HORIZONTAL OUTSIDE FACE
- IJ ISOLATION JOINT
- MAX MAXIMUM
- MIN MINIMUM
- REINF. REINFORCEMENT
- S.S. STAINLESS STEEL
- S.S.P. STEEL SHEET PILE
- SOG SLAB ON GRADE
- SPMDD STANDARD PROCTOR MAXIMUM DRY DENSITY
- T&B TOP & BOTTOM
- TUL TOP UPPER LAYER
- TLL TOP LOWER LAYER
- TYP TYPICAL
- UNO UNLESS NOTED OTHERWISE
- VERT VERTICAL
- VIF VERTICAL INSIDE FACE
- VOF VERTICAL OUTSIDE FACE

LEGEND

-  OPENING
-  CENTER LINE
-  T/O CONC. EL. 000.000
- FINISH ELEVATION
-  DIAMETER
-  SECTION MARK
-  CALL OUT DETAIL
-  ROCK
-  EARTH
-  GRANULAR