PSPC
Trent Severn Waterway Central – Burleigh Falls

ADDENDUM Nº 6

Question 40:	To quantities of stone for cofferdams can you please transmit the CAD version of drawings.
Answer 40:	Yes CAD files will be transmitted with the French version of drawings.

Question 41:	Drawing 005 shows a minim 10m seepage liner width. On drawing 004 there is no limit. Can you clarify the requirements for the seepage liner.
Answer 41:	The seepage liner is part of the contractor's dewatering design. A revised drawing 704 presents a concept and will be issued along with the French version of the drawings. La largeur est révisée à 10m maximum.

Question 42:	There is no specification for post tension of the deck prefab slab. Can you provide specifications and requirements?
Answer 42:	The goal of the post-tensioned anchors is to tighten the deck element together and minimise gaps. The design of these anchors and the tensioning forces is part of the deck element design by the Contractor. These anchors must be protected against corrosion (galvanized or stainless) and must not protrude form the concrete face. Tensioning pockets must be filled with concrete mortar of color and resistance similar to deck concrete.

Question 43:	In the civil drawing material types refer to OPSS 1004 et OPSS 1010. Please clarify if these are OPSS-MUNI or OPSS-PROV
Answer 43:	OPSS-PROV

Question 44:	Drawing 703 show erosion protection on each side of the existing bridge. Please provide details if these work as part of this tender.
Answer 44:	There is no work planned in theses zones at this stage. These zones are left on drawing 703 for environmental permit purposes.

Question 45:	Is there a electrical connection on site. If yes can you provide information on voltage and capacity.

Answer 45:	The only existing electrical connection available on PCA land is the residential connection of the house on the north bank. Higher capacity connection must be organized by the contractor with utilities or neighboring landowners.

Question 45:	17.01 TEMPORARY STEEL STOP LOGS, SILS AND GAINS A) No paint or galvanisation required on stoplogs and embedded parts. Is the steel be left uncoated as this is temporary works? B) No paint or galvanisation required on stoplog support beam. Shouldn't they be galvanised as they can also be used later on with the future stoplogs? C) There are 2 mentions of a follower beam, 1 in the design section and 1 in the shop assembly and tests section. Please confirm there are no follower beam to be provided. D) 2.4.3.4 " Provide stainless steel seal seating plates, machined over their entire length." As the guides are temporary and the required straightness (1,0mm/2,0m) is reachable without machining, please validate that machining is required of the guides.
Answer 45:	A) Steel to be left uncoated. B) Support beams are not required for future dam and stoplogs. C) No follower beam is required. Specifications to be modified. D) If required straightness can be obtained without machining then this is acceptable. However if straightness cannot be obtained then machining must be done. This is the Contractor's responsibility. Section 35 20 17.01 Replace paragraph 2.4.3.4 with the following: ".4 Provide stainless steel seal seating plates, machined over their entire length unless tolerances can be met otherwise. The top edges of these plates shall be chamfered to permit gradual engagement of the seals during lowering of the stop log.

Question 46:	35 20 17.02 TIMBER STOP LOGS, SILLS AND GAINS 2.4.2.1 "*The sill beam shall be of steel in one piece, and its top surface shall be smooth and straight to permit the sealing with the bottom lower stop log section. The surface shall be in stainless steel and machined over its full length.*" The drawing #601 is showing a single steel h-beam with angles welded underneath for anchoring. No stainless steel surfaces nor machining is showed. The embedded parts are required to be galvanised (item #3.2.2). The stainless steel surface will be galvanised as well.

	The embedded parts are required to be galvanised (item #3.2.2). The precision given with the machining will be lost. The straightness tolerance required in table 1 (1,0mm/2,0m) can easily be achieved without machining. Furthermore, the previous similar projects for the TSW didn't require machining of stainless steel. A) Please validate if the stainless steel surface and machining is required. 2.4.3.1 "*Provide rigid lateral guides of welded construction, stress relieved and shop machined. Carry out final assembly of the guides before machining.*" B) The embedded parts are required to be galvanised (item #3.2.2). The precision given with the machining will be lost. The straightness tolerance required in table 1 (1,0mm/2,0m) can easily be achieved during fabrication without machining. C) The critical part to reach the desired straightness will be during installation as the guides are embedded in the first stage concrete and no anchors/adjustments are required per specifications. Rather than requiring machining, a second stage concrete installation would be preferable to achieve optimal straightness. D) Please validate if the machining is required. 2.4.3.5 " The lateral gains must be extended beyond the primary concrete up to the level of the concrete deck slabs. Appropriate stiffeners must be designed for the extended section of the lateral guide which will not be concreted." E) Drawing #601 shows strap anchors on the back of the guides even higher than the top of the pier. Are stiffeners required temporarily as the top deck will be concreted later? F) If the guide is actually not concreted, what is the available gap between the guide and the top deck block-out (or pocket) all around the guide to install the stiffeners in?
Answer 46:	A)stainless steel is not required and machining is not required if tolerances can be met otherwise. B) No machining required if tolerances can be met otherwise. C) No this is a typical gain detail used throughout projects on the Trent-Severn and elsewhere with Public Works and no problems were encountered. D) No machining required despite what is written in the specs. E) Strap anchors to remain. Stiffeners not required now. F) Lateral gains are considered sufficiently rigid such that stiffeners are not required. Section 35 20 17.02 Replace section 2.4.2.1 with: ".1 The sill beam shall be of steel in one piece, and its top surface shall be smooth and straight to permit the sealing with the bottom lower stop log section. The surface shall be ~~in stainless steel and~~ machined over its full length unless tolerance can be met otherwise." Replace section 2.4.3.1 with: ".1 Provide rigid lateral guides of welded construction, stress relieved and shop machined <u>unless tolerance are otherwise met</u>. Carry out final assembly of the guides before machining. "

	Replace section 2.4.3.2 with: ".2 All lateral guide faces for which a tolerance is given in Table 1 of the present specification shall be machined unless tolerances are otherwise met." Replace section 2.4.3.5 with: ".5 The lateral gains must be extended beyond the primary concrete up to the level of the concrete deck slabs. ~~Appropriate stiffeners must be designed for the extended section of the lateral guide which will not be concreted.~~"

Question 47:	41 22 17 STOPLOG GANTRY CRANE 1.4.5 "*Gantry Crane Operating Temperature : -20 to 40 degree C*" 1.10.2.1 "*Design the equipment to function adequately when subjected to temperature variations between -40°C and +40°C .*" Please validate the correct minimal temperature.
Answer 47:	Gantry crane can be operated down to -40°C Section 41 22 17 Replace 1.4.5 with "*Gantry Crane Operating Temperature : -40 to 40 degree C*"

Question 48:	specifications section 03 30 00, subsection 3.3.2.1. Specifications calls for concrete surface temperature to be between 15 and 27°C for the initial 3 days. However, subsection 3.3.1 requires to maintain a thermal gradient within the element below 20°C and a maximum core temperature of 65°C. Can you please clarify what requirement governs?
Answer 48:	Section 03 30 00 Replace paragraph 3.3.2 with: "*Maintain concrete at following temperatures:"* with: "*For concrete elements of thickness less than 1000mm, maintain concrete at following temperatures:"*

Question 49:	Can you please provide drawings of the existing house to be demolished. If not available, can a brief description including building/garage dimensions and existing underground utilities be provided?

Answer 49:	Please find attached Designated Substance Survey report that shows pictures and plans of the house. Contractor is responsible to locate utilities. Please note that the site (outside of the house) is accessible for bidder. Please advise lock 28 operator upon arrival and departure on site via phone at 705-772-7312 (lock 28 phone number)

Question 50:	There is an existing creek/wetland in the proposed north laydown area between the existing building and the public parking lot to access the lock. Can you please confirm that the contractor can backfill this creek with granular material to use as laydown area?
Answer 50:	Yes, please note that backfilling of this area is to be limited to the work area shown on the drawings and the culvert under HWY 28 is not to be blocked.

Question 51:	Can you please provide the maximum flow capacity for each existing and proposed sluices? Can you please clarify the minimum flow capacity that needs to be maintained for each phase of the proposed construction staging?
Answer 51:	The flow capacity of each sluice is as follows: At max navigation level 241.47: Existing high sill sluice, fully opened: 15 m3/s Existing low sill sluice, fully opened: 34 m3/s Existing lowered sluice, fully opened: 63 m3/s new sluice, fully opened: 52 m3/s At level 241.70: Existing high sill sluice, fully opened: 19 m3/s Existing low sill sluice, fully opened: 40 m3/s Existing lowered sluice, fully opened: 69 m3/s new sluice, fully opened: 61 m3/s please note that past 500 m3/s river flow, there might be backwater effects form the bridge affecting capacity. Flow capacity that needs to be maintained is: October: 220 m3/s at elevation 241.47 m November: 280 at elevation 241.7 m Dec-Jan: 300 m3/s at elevation 241.7 m Spring: 389 m3/s at elevation 241.8 m and 289 m3/s at elevation 241.47

Question 52:	Can you please confirm that the supply, installation and commissioning of the temporary gantry crane is to be paid in Lump Sum Item #10 and the operation of the lower stop log system is to be paid per each at unit price items #6 and #7?
Answer 52:	Yes that is correct.

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Question 53:	Can the contractor replace the QVE process identified Section 01 45 00, Section 03 10 00, and Section 03 30 00 by an in-house process such i.e., certificate of conformance issued by the contractor's qualified professional engineer?
Answer 53:	That is likely to be acceptable, provided the Bidder meets all quality management plan requirements for submittals, inspections and testing. Bidders are required to identify the Quality Manager and Quality Management methodology within the Technical Bid for evaluation.

Question 54:	Can the contractor use a wire saw cutting machine to demolish Phase 1 sluices 8 to 12 (Section 02 41 16)?
Answer 54:	Yes, please consider the state of concrete in the piers for all demolition methods.

Question 55:	Can the contractor use coil ties with cones instead of the form tie with water stop specified in Section 03 10 00 – item 2.1.2?
Answer 55:	Yes, coil ties with cones are ok. Waterstop are not required. Both end to be sealed with filler mortar matching color and resistance of the concrete.

Question 56:	Can the contractor use a 76mm wood radius edging instead of steel (Section 03 10 00 – item 2.1.5)?
Answer 56:	yes. Note that a mock-up is required as per (03 10 00 1.3.4 and 3.1.10.1) ensure that edging methods allows for adequate vibration and unforming and finish.

Question 57:	Can the stop log gain tolerances be relaxed to account for the gains to be installed in first stage concrete (drawing 601)?
Answer 57:	No. Tolerance of drawing 601 are to remain. Specification section 35 20 17.01 and 35 20 17.02 and drawing 202 are changed accordingly. Specification 35 20 17.01 et 17.02. Replace table 1 with the following :

INSTALLATION OF EMBEDDED PARTS (SEE DRAWING 601)

EMBEDDED PARTS	POSITION OR DIMENSION (mm)	VERTICALITY T (mm/height)	HORIZONTALITY T (mm/length)	STRAIGHTNESS T (mm/m)
Sill beams sealing surfaces	± 2,0 (*)		3,0(**)	1,0/1,8
Lateral guides In each direction parallel				

		to flow for each face	± 3,0(*)	3,0		
		Lateral guides In each direction perpendicular to flow	± 3,0(*)	5,0		

Question 58:	Section 7.7.2.1e within CSA A23.1-14 considers forms in contact with the concrete surface as an approved curing methodology. If the contractor were to leave the forms on for the initial 3-day curing period, would the contractor be exempt from maintaining the maximum initial concrete temperature as outlined in Section 03 30 00 Subsection 3.3.2, providing that the contractor maintains the permissible thermal gradient of 20 degrees Celsius? **7.7.2.1 Methods** Curing of concrete surfaces shall commence as soon as the concrete has hardened sufficiently to prevent surface damage. Curing of concrete surfaces shall be achieved using one or more of the following methods in accordance with Table 19 (wet curing methods shall be used for curing Type 3): (a) curing compounds; (b) ponding or continuous sprinkling with water; (c) applying water and covering with polyethylene sheets (lapped and lying flat on the floor); (d) applying water and covering with absorptive burlap fabric; (e) forms in contact with concrete surface; or (f) other moisture-retaining methods as approved by the owner (see Clause 7.5).
Answer 58:	does not substitute the requirements of clause 3.3.2, which remain. See answer 48 for changes to clause 3.3.2

Question 59:	Given the duration of the project and specialized skill set for the superintendent on major tasks/stage, can the contractor propose to platoon a Cofferdam/Marine Site Superintendent and/or a Concrete Site Superintendent? E Each superintendent would be present full time to the project for their applicable task/stage; possibly both superintendents on-site if tasks are scheduled simultaneously. Both Superintendents would meet the minimum experience requirement outlined in Section 1.2 of Appendix 5.
Answer 59:	Bidder is responsible for identifying team members which include the identified key staffing positions, as a minimum. It is up to the Bidder to demonstrate their how proposed personnel meet the identified criteria. It is likely that the described combination of Superintendent(s) would be deemed acceptable

Question 60:	Could you provide more details about the stainless steel lifeline shown on dwg 500?
Answer 60:	No please consider information on drawing 500 (note 4) as a guideline for design. The intent of the life line is for a person in the water to pull themselves to shore safely.

Question 61:	Could you provide more details about the jack support locking system shown on dwg 601?
Answer 61:	The jacking pin and support system is removed from the project. As per a previous answer item 26 of the unit price table has been removed form the specifications.

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Question 62:	We are requesting a two (2) week extension to the closing date for the Burleigh Falls Dam at Lock 28
Answer 62:	No extensions beyond the August 18th closing date will be entertained at this time.

Question 63:	Can the requirements for the Project Manager's experience be lowered to a minimum of 8 years?
Answer 63:	No

Addendum 5 question 2:	
Answer	Answer said that item 25 Erosion Protection is materials 4, 6 and 8 in dwg 704. Errata: Materials to be considered under this item are material 4,6,8 and 9.