

**INVITATION TO TENDER "ITT" NO. PS20180897
CONSTRUCTION SERVICES FOR PUMP STATION REPLACEMENT AND WASHROOM ADDITION**

QUESTIONS AND ANSWERS NO. 5

ISSUED ON FEBRUARY 12, 2019

Q1	I'm trying to open the TOPO Drawing you added on the FRP Link this morning with your Q&A 2, and it shows that 14 SHX files are missing, and when I ignore the message, it shows the second message down below, and the drawings not opened.
A1	The .pdf file of the survey plan has been added to the FTP for Tenderers.
Q2	In the report of the Temporary bypass System, Step 11: MH-S3 will be overbuilt while existing 200mm Sanitary Sewer remains in service, and for short term by passing during final benching of the new Manhole, and Tie-in to the new 2400mm Inlet Manhole, you recommended to pump-out of the existing upstream Manhole on the 200mm sewer located south side of Great Norther way. Please provide the drawings of the existing Sewer and Manhole showing distances, Invert, and rim elevations.
A2	The markup of sewer record drawings for Glen Drive has been added to the FTP for Tenderers.
Q3	Refer to Part C - Form of Tender - Schedule "A" Item 11.3: The stand-by generating set, automatic transfer switch, fuel tank and associated systems and equipment is specified in Division 16. This schedule of quantity and price item shall be listed as part of Electrical (Division 16). Please clarify.
A3	Please price as listed under item 11.3.
Q4	Please provide drawing for location of exhaust fan (EF-7) and associated ductwork for staff washroom.
A4	The fan is no longer required for the staff washroom.
Q5	In Questions & Answers No. 02 a topographical survey was provided in Autodesk / AutoCAD format, may this information be provided in a pdf? Please note not all sub-trades have access to the Autodesk software.
A5	See answer A1 in this QA 5.
Q6	The below grade washroom does not have any interior elevations, will it have the same interior as the two at grade washrooms? For example will it have the same

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	interior finishes, same washroom specialty items & quantities of them (grab bars, coat hooks, hand dryer etc.)?
A6	No hand dryer or grab bars required. Please provide coat hook on rear of door to match coat hook in public washroom.
Q7	The two at grade washrooms appear to have the exact same interiors please confirm this is correct.
A7	Yes.
Q8	May the bidders be provided with a room finish schedule as we need to know the finishes of the OCU Room, Service Room etc?
A8	The finishes for all rooms other than the public washrooms to be in accordance with Specification Section 09901. The finishes for the bathrooms to be in accordance with Specification Section 09300. Note that the floor sealant for the main floor concrete topping slab is as specified in clause 2.8.10 of Specification section 03310.
Q9	Drawing C-101 notes proposed bench see Vancouver Parks & Recreation Detail No. 4-02.2. When finding this detail online it notes "Bench to be provided by Owner" (detail attached above). Please confirm that all bidders will only carry cost for installation of this bench.
A9	The park bench will be supplied by the City. The Contractor will coordinate timing with the City and pick up the bench at 955 Evans Ave. The Contractor shall install the bench as per Parks standards.
Q10	Specification section 14600 item 2.1.1 states "Monorail shall be of standard structural steel sections to G40.21-44W. Fabricate & mount as detailed on the drawings". The drawings provided do not show details pertaining to the monorail, only the monorail beam is shown on some drawings. Please can monorail detail be provided.
A10	Drawing S215 and S231 show the monorail beam and mounting/connection details. No additional monorail track is required to be added to the beam. The Contractor shall ensure that the trolley wheels are compatible with the beam provided (suitable for flat or tapered flange as required).
Q11	May a detail of the davit crane be provided showing how the flush mounted floor socket is to be constructed?
A11	The davit crane cut sheet has been added to the FTP for Tenderers..
Q12	We at KSB Pumps Inc. hereby would like to submit our official request to be named

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	as approved vendor for pumps and mixers under Div 11 - Sections 11150 and 11205.
A12	See A8 in QA4
Q13	<p>Division 11 Section 11310 2.3 Odour Control 2.3.1.1 Filter housing is 16-gauge galvanized steel or 2.3.2.1 Housing is 16-gauge 304 stainless steel</p> <p>Which is correct</p>
A13	Housing to be 16 gauge 304 stainless steel.
Q14	<p>Section 1.1.1 lists only two devices. A 1 tonne (2,200 lb) Monorail and a 500 lb Davit crane</p> <p>Section 2.2.1 refers to trolleys for both monorails</p> <p>Section 2.2.2.4 references a Kito TS trolley which is a manual push type trolley</p> <p>Section 2.2.3 says the monorail trolley must be motorized and able to accommodate a manual hoist and references a TSP010 which is a manual trolley.</p> <p>No manual hoist details are provided.</p> <p>Section 2.2.3 references a 910 kg (2,000 lb) monorail.</p> <p>Section 2.3 references a 1,000 kg (2,000 lb) rated capacity system. These are not the same. We presume this is supposed to say "1,000 kg (2,200 lb)" system</p> <p>Section 2.3.3.1 references a Kito ER2MD hoist and trolley which is correct for a motorized trolley</p> <p>Is there a second monorail of 910 kg capacity requiring a Kito TSP Push type trolley and hook mount manual chain hoist?</p> <p>Or are these "Legacy Issues" from another spec. ?</p>
A14	<p>Section 1.1.1 - Correct, only two devices.</p> <p>Section 2.2.1 - error, there is only one monorail trolley/hoist system and it is to be motorized. See attached corrected specification.</p> <p>Section 2.3.3.1 - Correct specification.</p>

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	There is no second monorail.
Q15	Dwg C-102 shows a number of below grade utilities are required to be constructed through tree protection zones. Can you confirm requirements for excavation through these areas? I.e best practice, arborist supervision, special excavation procedures?
A15	Please see clarifications added to revised specification section 02140 that has been added to the FTP for Tenderers..
Q16	Dwg C-101 indicates all existing wood bollards along Glen Dr. to be removed. Is this inclusive of all from E7th Ave to E 6th Ave or just along the frontage of the work area?
A16	Inclusive of all of Glen from E7th to E6th.
Q17	Geotech Dwg G-1 - Note 3.2.6 indicates max panel width of 2m, however Dwg G-3 Notes - 3rd bullet indicates max panel width of 3m. Can you please clarify the maximum panel width for shotcrete?
A17	Use a maximum panel width of 2 m for the first stage of excavation and no more than 3 m for the lower two stages.
Q18	There are a number of discrepancies between Dwg C-102, C301, C302, C502 in regards to the make up of Flange versus MJ assemblies on the 300mm Forcemain, Bypass and Siphon assemblies. Can you clarify the intended make up of Flange versus MJ assemblies accordingly?
A18	In general the fittings on C-102 are correct. Please see markups on attached "A18_ForcemainFittings" for clarification.
Q19	The Geotech report describes the lower strata layers as potentially "weak sandstone or siltstone bedrock". Section 02221 Rock Removal - 1.1. defines rock as "bedrock, consolidated glacial till and hardpan that requires breaking by continuous drilling and blasting before excavation". As the ability to excavate through the various strata layers is dependent on the type and size of excavation equipment used, how will the determination be made that "continuous drill and blasting" will be required over additional excavation effort. Additionally, will alternatives to "continuous drill and blasting" such as the use of specialized excavation equipment such as ripper teeth and/or hoe ram equipment be considered Rock Excavation, or will these methods be considered methods of common excavation?
A19	Material which can be loosened and removed by a Caterpillar Model 345 Backhoe equipped with a ripping bucket shall not be considered as rock.
Q20	Section 02500 - Utility Services - 2.11 .1 references BC Hydro Dwg No 460-U07-

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	01176, however these drawings are not found in the available documents. Dwg E-002 makes reference to "See civil drawings for new underground services" however there are no references on the civil drawings for what is required to provide underground electrical services. Can you please provide the required drawings and information to define the scope of work for electrical services accordingly?
A20	<p>BC Hydro will install the new pole and transformer. The Contractor is to install conduit from the pole to the pump station as shown on Dwg. E-002 in accordance with BC Hydro standards. BC Hydro will supply and install the cable for the power service.</p> <p>The note on Dwg. E-002 referencing the civil drawings for new and existing underground piping locations is intended to direct the Contractor to the civil plan for such piping as pump station overflow piping, water fountain piping and station drain piping, including the infiltration trench, that is in the vicinity of the electrical conduit route.</p> <p>A BC Hydro drawing has been added to the FTP for Tenderers for BC Hydro work, coordinate work with BC Hydro.</p>
Q21	The drawings indicate PVC Waterstop to be Greenstreak 644, however the specs call for Greenstreak Type 679. Can you please clarify type of PVC water stop?
A21	Greenstreak 644 is correct.
Q22	Can formed/cast-in-place concrete methods be used instead of Stage 2 shotcrete to construct the wet-well and pump chamber walls?
A22	No. Substantial re-engineering would be required.
Q23	For discharge of Ground water from excavation, will discharge be required to be directed to sanitary system under Metro Vancouver Sewer and Drainage Bylaw Discharge criteria and requirements? Or due to anticipated volumes of ground water discharge likely exceeding the maximum allowable under Metro Vancouver bylaw, can you confirm discharge of ground water can be made to the storm system under City of Vancouver Sewer and Watercourse bylaw No. 8093?
A23	<p>The sanitary sewer is the Pump Station. If discharge is into the sanitary sewer, it all leads back to the pump station, so the contractor should allocate provisions and will need to make sure the bypass pumping plan can accommodate this.</p> <p>In the event the groundwater discharge will be through the pump station, there is no capacity limit in this case, except the limitation imposed by the bypass pumping system which is the contractor's responsibility.</p> <p>Flow to the sewer should be controlled by use of an onsite temporary storage</p>

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	<p>system. These systems can have in-line additions to treat groundwater as required to meet sanitary and/or storm discharge criteria.</p> <p>Contractor to apply for Waste Discharge Permit.</p>
Q24	There's not much product specification for Emergency Lighting in Section 16500. There's no specified approved manufacturer either in lighting fixture schedule. Suppliers want to know more about the product which the city preferred in this type of application.
A24	No specific fixtures preferred, Acceptable product: AimLite EBST12-2L or equal
Q25	Also there's no exit sign shown in lighting drawings E-103 and E-104. Is exit sign not required in this project?
A25	Exit signs not required. Building is less than 2 stories, and occupant load is less than 150/no fire escape as part of means of egress.
Q26	Heat trace is shown in drawing E-101. We need more information on what is to be heat traced, so we can come up with the length of heat trace cable required.
A26	Delete heat tracing. Not required.
Q27	As per drawing E-101 manual motor starter is required for EF-2. Please provide more information about the fan specification so we can size this starter accordingly.
A27	Please see attached datasheets for specified fan. See also Specification section 15800.
Q28	As per drawing E-003 disconnect switch and feeders are required for Automatic Hoist (H-1), Unit Heater (UH-1), and Duct Heater (DH-1). Location of these equipment is not shown in electrical drawings. Please provide.
A28	See Markup A28
Q29	Please advise if Crispin Valves may be an acceptable product for specification section 15300 Valves (cut sheets attached).
A29	<p>Crispin Valves is an approved valve supplier. However, it is the Contractor's responsibility to ensure that the valves supplied meet all the requirements of the specifications.</p> <p>The plug valves proposed by Crispin are not acceptable as we have specified a ductile iron body and the proposed valves have a grey iron body.</p> <p>Note that the check valve is to come complete with a backflow actuator and a</p>

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	mechanical indicator.
Q30	Specification section 04210 Glazed Brick Veneer item 1.9 requires a 1,200 x 1,200 masonry veneer mock-up to be provided. Please clarify if this mock-up may be incorporated into the final wall assembly of the project or if it must be separate from the building
A30	Masonry mock-up may be incorporated into the final wall assembly if deemed acceptable. The location is to be confirmed with the Consultant. If not accepted, it must be removed and replaced.
Q31	Specification section 05120 Structural Steel item 2.1.5.c requires zinc-coating to the steel deck, item 2.3.1 requires galvanizing to steel work embedded in concrete & CLT fasteners, item 2.3.2.a requires metallic coating to exterior steelwork, but what are the shop applied finish requirements for the remainder of the interior steel work (columns, beams, guardrails)? For example is a shop applied coat of primer required etc.
A31	TS 05120 item 2.4.1 Paint all interior steel framing platforms, stairs and other miscellaneous metalwork. TS 09900 item 2.2.2 Paint System P1: a0 For all structural steel, handrails, guardrails and miscellaneous metals not exposed to weather.
Q32	Specification section 06114 Cross Laminated Timber item 3.2.33.a states "ensure protective sealer is not damaged before erection", however the spec section does not identify what if any the requirements are for shop applied protective sealer to the CLT. Please advise the type of shop applied sealer required & how many coats are required to be done in shop.
A32	Read "shop applied protective wrap" instead of "protective sealer". See item 2.3.24
Q33	Specification section 08910 Glazed Aluminum Curtain Walls item 1.7.1 states Mock-Up Division 01. Please clarify the intent of this, is a curtain wall mock-up required, if yes what size & will it be incorporated into the finished building or will the mock-up be separate from the building?
A33	A curtain wall mock-up is required and can be incorporated into the finished building. The location is to be confirmed with the Consultant. If not accepted, it must be removed and replaced.
Q34	Specification section 08910 Glazed Aluminum Curtain Walls item 1.7.1 states Mock-Up Division 01. Please clarify the intent of this, is a curtain wall mock-up required, if yes what size & will it be incorporated into the finished building or will the mock-up be separate from the building?
A34	See A33
Q35	Specification section 09900 Painting item 2.2.3 Paint System calls for P2 for non-

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	stainless steel submerged in water. Please advise where on the project this applies.									
A35	P2 not used in this project.									
Q36	Specification section 09900 Painting item 1.8 identifies warranties relating to paint systems P1, P2, P3, P4 & P5. In 09900 item 2.2 only paint systems P1 though P4 are described. If there is a P5 type paint system please advise the product & where it applies.									
A36	P5 paint type not required for this project.									
Q37	For CLT that is not exposed, example behind the tiled walls in the washrooms, do the CLT panels still required to be site painted with the Sikken's Cetol SRD RE translucent wood finish, or will the shop applied finish (if applicable) be adequate?									
A37	Where CLT walls are not exposed, specifically behind the tile, shop applied finish (if applicable) is acceptable. However, it is required where equipment conceals the walls, such as electrical panels.									
Q38	Specification section 09900 Painting item 3.4 states electrical conduits to remain unpainted. Specification section 09901 Architectural Painting item 3.5.6 states paint exposed conduit & electrical equipment occurring in finished areas. Please confirm if the conduits are to be site painted.									
A38	Conduits to be unpainted.									
Q39	Specification section 08305 Floor Access Hatches item 2.2 identifies the wet well access hatch as 914 x 914 single leaf aluminum access hatches Bilco JAL-H20, drawing M-101 shows these hatches as 1,067 x 1,067. Please advise the correct size of the access hatches.									
A39	The hatch dimensions on M-101 are correct.									
Q40	<div><div>REQUEST FOR APPROVAL</div><div>We've been requested to submit a quotation on the above-mentioned project; therefore, we respectfully request permission to quote the following equipment as "Equal" to that specified. We guarantee that our products will meet or exceed the specified products in all aspects</div><table><tr><th>SPECIFIED:</th><th>EQUIPMENT:</th><th>APPROVAL REQUEST:</th></tr><tr><td>EH PRICE</td><td>AIR OUTLETS</td><td>KRUEGER</td></tr><tr><td>GREENHECK</td><td>LOUVERS, BDD, FD, MD</td><td>VENTEX/ALUMAVENT</td></tr></table></div>	SPECIFIED:	EQUIPMENT:	APPROVAL REQUEST:	EH PRICE	AIR OUTLETS	KRUEGER	GREENHECK	LOUVERS, BDD, FD, MD	VENTEX/ALUMAVENT
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	GREENHECK	EXHASUT FANS	AEROVENT (A DIVISION OF TCF COMPANY)
	GREENHECK	EXHASUT FANS	PENN BARRY
	FANTECH	BATHROOM FANS	STERLING
	GENERAL AIR	AXIAL FANS	AEROVENT (A DIVISION OF TCF COMPANY) OR PENN BARRY
	GENERAL AIR	AXIAL FANS	PENN BARRY
A40	The proposed suppliers are approved. The contractor will be responsible for ensuring that the equipment provided meets all specification requirements and can be installed within the space provided without compromising clearances to other equipment. Shop drawings shall be provided for review prior to ordering equipment. Any ducting modifications required to fit the alternate equipment, will be the responsibility of the contractor including design and record drawings.		
Q41	With regards to Section 01200, can you please indicate if Items 17.3 and 17.6 are required? They are not in Part C of the Tender Forms.		
A41	Item 17.3 and 17.6 in Specification section 01200 are not required.		