INVITATION TO TENDER "ITT" No. PS20190021
CONSTRUCTION SERVICES FOR THE GRANVILLE BRIDGE REHABILITATION

QUESTIONS AND ANSWERS NO. 7

ISSUED ON: MAY 7, 2019

Q1	As per addendum 1 (new drawings were released for this addendum) the general notes states that contractor is to protect the utilities and trolley lines at all times during construction. As per addendum 2, it states that shielding is required if we work within 3m of the lines. Can the city confirm whether there is to be shielding installed at all utility and trolley locations within project extents for the whole duration of the job or if shielding is to be only in place where we are working within 3m of the lines and utilities?
A1	**Shielding is only required when working within 3 m of the CMBC cables that run under the bridge on the east side. Once shielding is in place, the Contractor is able to perform work up to the shielding, but Safety Watch must still be present for any work within 3 m of the CMBC cables (even with shielding).** **For the overhead trolley lines above the bridge deck, no shielding is required, but Safety Watch is required for any work within 3 m of the lines.**
Q2	For the bus shielding – is there a preferred material/mechanism for the shielding?
A2	**There is no preference; the material the Contractor proposes to use will need to be accepted by the Contract Administrator prior to use. In the past Plexiglass shielding has been used.**
Q3	For the bus shielding – Is temporary anchorage near to cables to hold shielding in place permitted if the minor holes are to be filled with grout after removal?
A3	**Yes, the shielding may be anchored in place using small anchorages into the soffit. The anchorages and shielding will need to be accepted by the Contract Administrator prior to use and procedures for installation, working in proximity of, and removal are to comply with the Safety Watch requirements.**
Q4	Please confirm the hardware for the bracing strengthening – what type of bolts? Thickness and length?
A4	**Bolts, including nuts and washers, are required to secure the new plates shown in Detail 3. Bolts to be ASTM F3125 Grade A325 Type 1 and sized to match the size of the hole where the rivets are removed from. Bolts shall be installed in**

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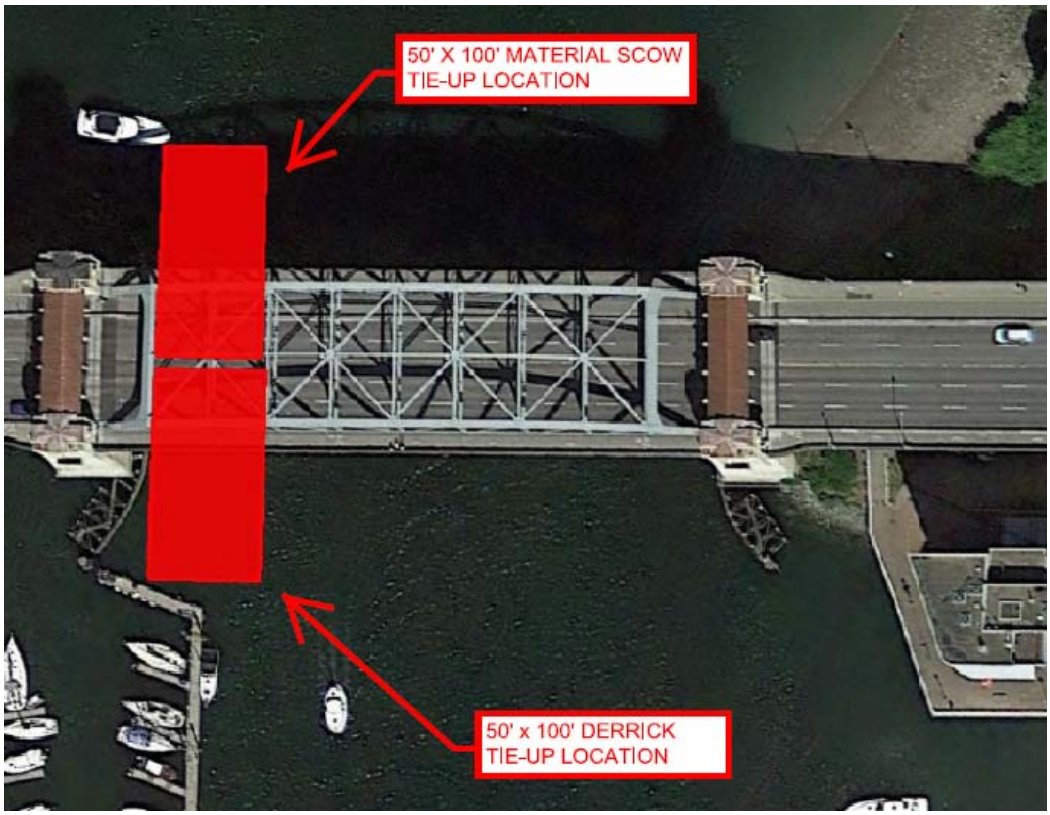
	accordance with the General Notes and Specifications.
Q5	Please confirm the length of the angle for the tab repair – the length is not shown in the design drawings.
A5	**The angles do not need to be replaced.**
Q6	Are there clearance requirements & safety watch to working with equipment close to the overhead trolley lines?
A6	**Yes, safety watch is required for any work happening within 3 m of the overhead trolley lines.**
Q7	Are there any limitations pertaining to the duration of time the barge is to be at M6 & the size of the barge for the M6 access
A7	**The planned size of barge and duration of time the barge is to be at M6 must be submitted for approval to the Navigation Protection Program at Transport Canada.** **The City has previously proposed the below size for the Burrard Bridge Project. This is for reference only and the approval would be based on the Granville Bridge Context, which may be different.** 

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Q8	Further to Q6/A6 on Q&A #4, can you also confirm whether the drain pipe replacement is limited to the drain pipes, connections and supporting systems, or to all the items, including existing iron flumes, funnels, splash plates, heavy soil pipe (including underground section), etc.?
A8	**Drain pipe replacement is limited to above-grade drain pipes, connections, and supporting systems beneath cast Iron inlets.**
Q9	Ref 2125-407 | It shows remove segment of parapet and guardrail each side of joint. However, Drawing 2125-416 Section C shows new rail post and anchor plates. Should the contractor provide new segment of guardrail with new rail post and anchor plates? Please advise.
A9	**The existing guardrail/rail post is to be reinstated with the parapet. The Contractor is to provide anchor plates as detailed in Drawing 2125-416 to reinstate the parapet.**
Q10	Ref Dwg 2125-318 | The pay item of tab repair includes welding. However, the drawing shows no welding. If welding is required for tab repair, please provide more detail.
A10	**No welding of the tabs is required.**
Q11	Ref Dwg 2125-369 | Detail 1 shows the 12.7mm dia bolts are stainless steel. However, Dwg 2125-361 shows that bent plates are galvanized steel. Should the bolts be galvanized as well? Please advise.
A11	**The 12.7mm dia. bolts shown on drawing 2125-369 shall be stainless steel bolts.**
Q12	Pay Item 4.11 | The quantity of main span trough coating is 2. Can City of Vancouver specify which main span troughs are required to be coated?
A12	**As shown on Drawing 2125-351, the troughs at Joint M7N and Pier M8 shall be coated.**
Q13	Pay Item 8.9 | The quantity of main span trough coating is 2. Can City of Vancouver specify which main span troughs are required to be coated?
A13	**The two troughs that are under the provisional work items will be located at Pier M5 and Joint M6S.**
Q14	Ref Pay Item 4.7 Field Coating of Existing Structural Steel |The unit of measurement is lump sum. Can City of Vancouver locate and quantify the area required to receive field coating?
A14	**The extent of field coating is outlined on Drawing 2125-370.**

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Q15	There are drain pipe for M1, M2, M5, M6, M7 and M8. Can City of Vancouver specify the extent of the drainpipe replacement?
A15	**All above-grade drain pipe between Pier M1 and Pier M8 shall be replaced. This includes connections and supporting systems.**
Q16	Can City of Vancouver provide the dimension and the material of the purposed replacement drainpipe?
A16	**The replacement drain pipe shall be sized to provide hydraulic capacity equal to or greater than the existing drain pipe system. Details of the existing drain pipe system can be found in the provided Record Drawings. The material of replacement drain pipe shall be as specified in the General Notes and Specifications.**
Q17	There is a drainpipe along the main span. Does the contractor require to replace it as well?
A17	**Yes. Reference Drawing 2125-202 "Drain Pipe Replacement" Note 1.**
Q18	In order to remove and replace existing drainpipe, lane closure and road closure in Granville Island may be required. Please advise what are the lane closure and full road closure restriction are.
A18	**Granville Island is federal land managed by CMHC. Traffic restrictions will need to be determined through them.**
Q19	Does the existing drainpipe contain any hazardous material?
A19	**The existing steel drainpipes are from the 1950's and the coating likely contains lead paint.**
Q20	Can the City please provide more detail on the protective conduit that was used for the bus feeder cables as they pass through the concrete diaphragms/beams below each joint location.
A20	**It is anticipated that the are approx. 3" (76mm) diameter conduits spaced horizontally at approx. 1' (305mm) center to center.**
Q21	Will a full closure of the sidewalks on the South Approach be acceptable? This is required to facilitate the install of the sidewalk joints at S14, S16, S18 and S20?
A21	**Pedestrian access across the bridge must be retained at all times. The first preference would be to retain pedestrian provisions around the work area. Closure of a pedestrian access would require extensive messaging and alternate routing, and would receive very limited hours due to impact. Both sides may not be closed at the same time at any point.**

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<table>
<tr><td>Q22</td><td>Follow up to question no. 6 in QA4;
<table>
<tr><td>Q6</td><td>Under item 8.8. "Main span drainpipe replacement", please confirm whether the entire drainpipe system shall be replaced between M1 and M8 or only selected sections shall be replaced. In such case, please clarify which sections shall be replaced.</td></tr>
<tr><td>A6</td><td>All main span drainpipe shall be replaced. Reference Drawing 2125-202 "Drain Pipe Replacement" Note 1.</td></tr>
</table>
Please confirm to what extent is require for replacement; does refer to below grade pipe or just day-lighted pipes?</td></tr>
<tr><td>A22</td><td>No below-grade pipe will be replaced. All above-grade drain pipe shall be replaced.</td></tr>
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