



Tender Ref No: JTC23T0094

19 October 2023

To: All Applicants

CORRIGENDUM NO. 4

JTC INNOVATION CHALLENGE 2023

Challenge Statement 3: Solution to effectively clear and inspect choked drain pipes in buildings

Please take note of the following clarifications to the above Innovation Challenge in response to queries raised by applicants, which shall form part of the original Innovation Challenge document issued.

S/N	Query	Response
General		
1	What does a technology disclosure of FIP entail and the extent / details for this technology disclosure?	Please see Schedule 2, Technology Disclosure Form of the specimen Research Project Agreement on the details of technology disclosure.
2	We are assuming based on closing date of 26 Oct 2023, the earliest to showcase the prototype will be in Jan 2024. Is the timeframe a moving target and subject to change or is it a fixed timeline?	The development timeline provided in the challenge statement is for illustration purpose and as a guideline, applicants can adjust and propose according to their scope's requirements.
3	We noticed there are a total of 3 prototype refinements to stakeholders and based on refinement, will there be any fees payment for the refinement as well?	The timeline in the challenge statements is for illustration purpose and to be used as a guideline, applicants can adjust if necessary. Payment will be made in accordance with applicant's proposed milestones when deliverables are met satisfactorily upon assessment by JTC.

S/N	Query	Response
4	Would like to confirm that the proposal package would only include document 04 to 06b given in the documents package (i.e. 01 to 03b is only for reference for now).	Document 01 to 03b contains the cover letter, Terms of Participation, specimen Research Project Agreement and Undertaking to Comply with Progressive Wage Mark Requirements, where applicants are expected to comply to if successfully awarded. Refer to page 3 of the document "01_Cover Letter 2023", your submission/application must include document 04 to 06b, and OD (any other documents as otherwise indicated).
Challenge Statement 3: Solution to effectively clear and inspect choked drain pipes in buildings		
5	Is the system expected to be introduced after the complaint of clog to inspect and treat it to ensure the flow back?	The system is expected to be able to treat the clogged upon complaint.
6	Should the system only focus on eradicating clog and ensure flow or treat the whole region to be clog free?	The solution should minimally be able to eradicate the clog when detected, but applicants can propose preventive treatment of the drain pipe network.
7	Is the system expected to solve the clog in terms of hours or days, the time limit for the system to access the situation?	Ideally within hours, the solution is benchmarked against manual process (currently take days).
8	What is the expected composition of clog that can be found in the pipeline other than biological waste and rags?	(a) Congealed cooking grease and fats, (b) accumulated food scraps that are flushed down the pipes, and (c) mineral deposits like calcium and magnesium from hard water that accumulate in pipes over time.
9	Will the system be used for regular inspection and maintenance in a cyclic basic before complete clog?	We will consider systems that are used as part of regular inspection/maintenance if it can be cost-effectively carried out.
10	What is the expected possibility of hardened clog deposition that reduces the diameter of pipe before the clog area?	Possible but unlikely. Scenario does not change the fundamental problem. System is expected to clear both clogged site.
11	What is the expected probability of encountering a partially clogged value before reaching the clog site, minimizing the size of entry?	Possible but unlikely. Scenario does not change the fundamental problem. System is expected to clear both clogged site.
12	Please provide the graphical representation of the expected complexity of pipeline system.	Refer to the attached (please refer to " illustration of drain pipes routing ").

S/N	Query	Response
13	What are the types of pipe material and nature of bends (degree) to be encountered in the system?	As indicated in the drawings. System needs to be robust enough to navigate around common pipe network in Singapore, including around 90 degree pipe bends.
14	What are the expected sizes to be encountered by the system other than 100mm?	100mm ~ 300mm as indicated in the drawings.
15	What is the maximum distance that the system has to travel to unclog the pipe?	Ideally range should be equivalent to CCTV pipe survey system.
16	What is the expected roles from the system other than finding the clog region and treating it to ensure the flow?	Solution is expected to be able to inspect & clear detected clog region effectively.

Yours faithfully,

Ivy Sim
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Contracts & Procurement Division
Email Ivy_SIM@jtc.gov.sg
(This is an electronic document. No signature is required.)

Illustration of drain pipes routing

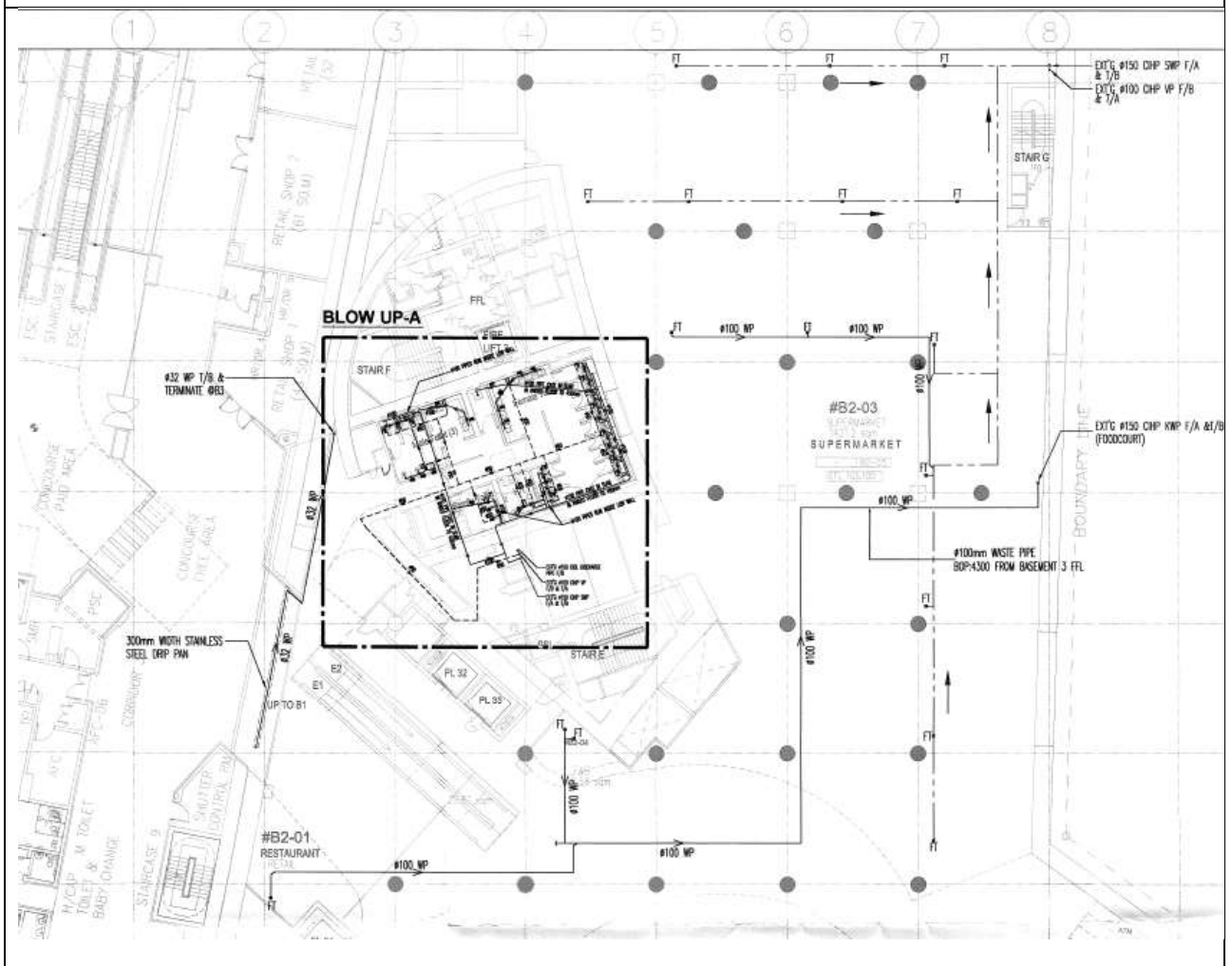
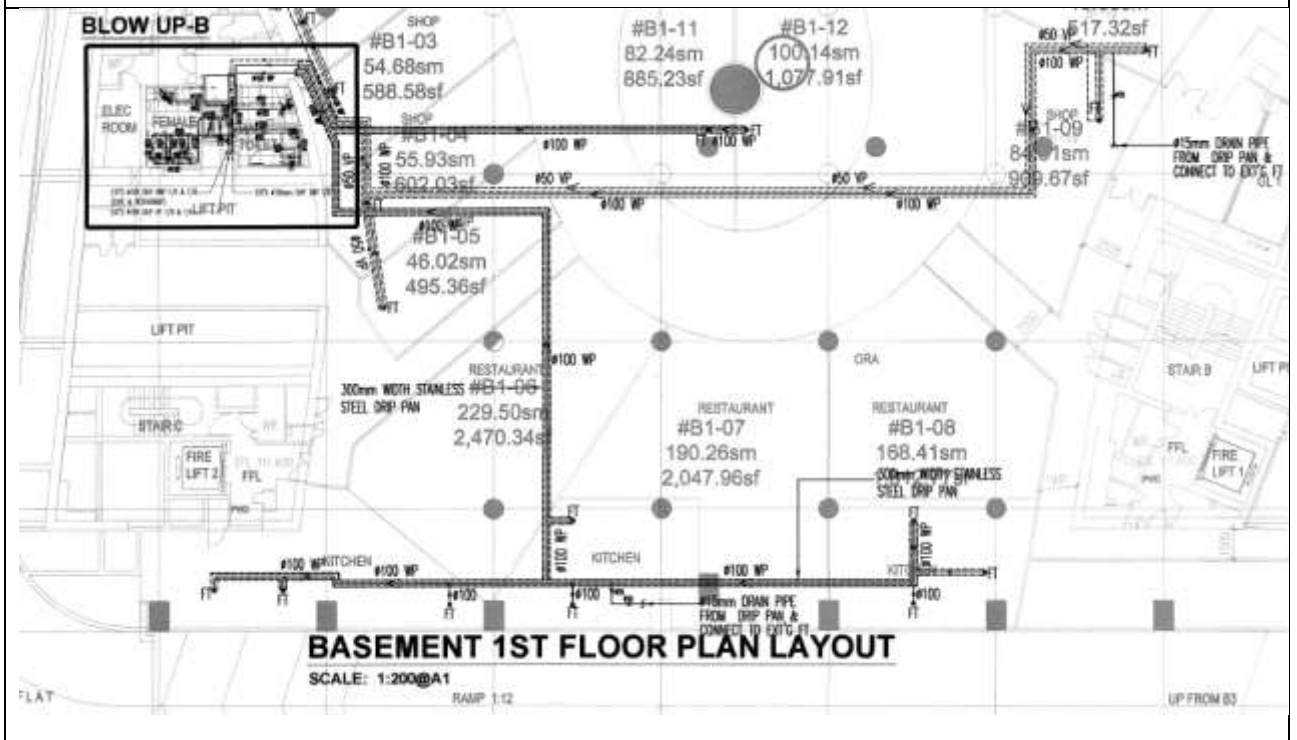


Illustration of drain pipes routing

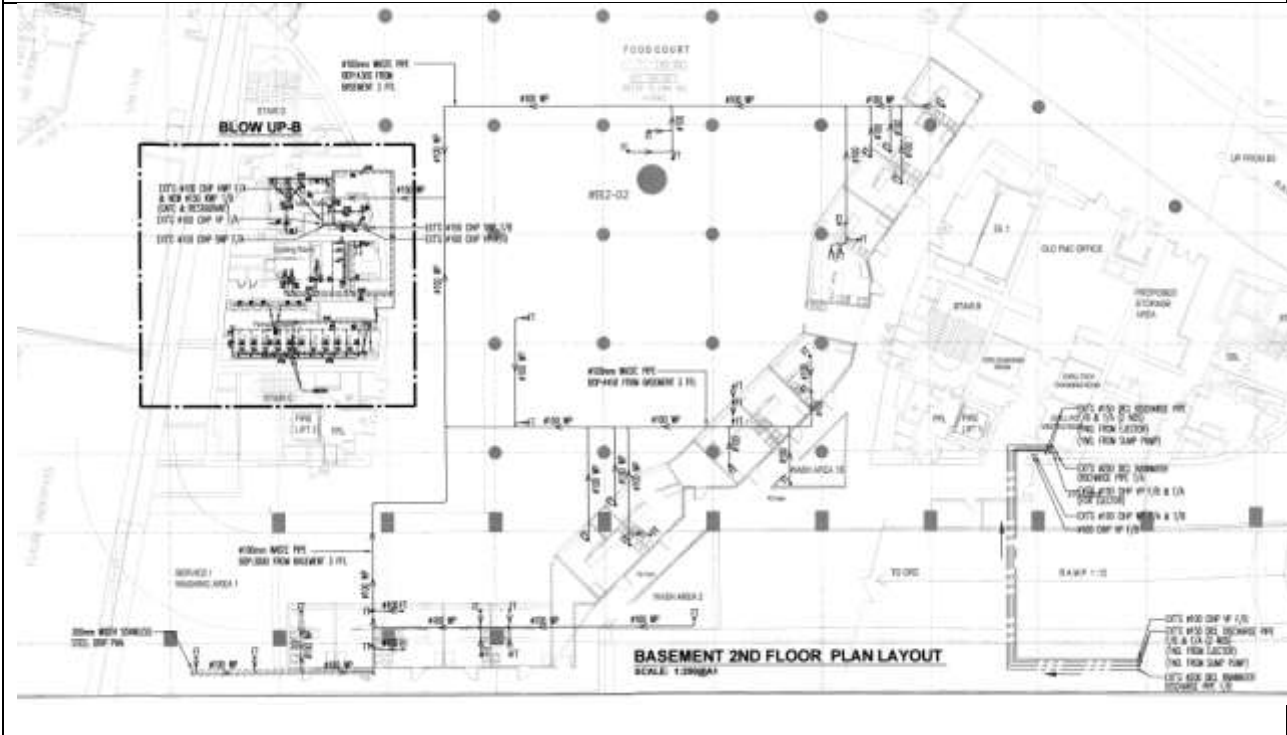


Illustration of drain pipes routing

