

PROVISION OF ENHANCEMENT SERVICES TO THE COMPUTERISED CONCRETE COMPRESSION TEST SYSTEM AT HDB ENGINEERING MATERIALS LABORATORY

SPECIFICATIONS

1 OVERVIEW OF COMPUTERISED CONCRETE COMPRESSION TEST SYSTEM

- 1.1. HDB's Computerised Concrete Compression Test (CCCT) system is a computerized concrete cube testing system fully integrated with the compressive testing machines for performing compressive testing of concrete cubes embedded with "Radio frequency identification" tags facilitating in retrieving its cube data from the system and capture the test result automatically upon completion of test without any intervention by third party.

The CCCT system is also compatible with Material Management System (MMS) for transferring cube data and uploading of test results. Hence, the proposed enhancement of CCCT system shall be user friendly, effective and able to increase efficiency on the whole operation.

CCCT system was developed as windows desktop application using client/server architecture.

The Contractor shall be deemed to have studied and verified the overall nature and setup of the current CCCT system and deemed to have included all cost involved.

2 SCOPE OF WORKS

The enhancement works shall include but not limited to the following:

Enhancement required:

- CCCT System requires following enhancement:
 - Browser application
 - Eliminates installing application in new PCs
 - Client configuration like database drivers no longer needed.
 - Any new version of future windows OS will be able to run the new browser application.
 - User friendly interface.
 - Single Application User interface will help users to save time
 - No need to login in into multiple applications as compared to current system.

New Cube Testing System (CTS):

- Main function of new CTS will be:
 - Import cube data from MMS:
 - No need to check duplicates, contract number, and only transfer the data from MMS.
 - Daily cube transferred from web.
 - Cube Testing
 - No need to calculate Sample strength and rolling average strength as it will be computed in MMS.
 - Calculate individual cube failure only.
 - Include Grade, Age, Cube Size, Load etc.
 - Export Cube load data to MMS
 - Retest
 - Retest and re-import cube data.
- Manual data entry for normal cubes (No RFID tag):
 - Those cubes without RFID tags to be tested manually.
- Import/Export results into CCCT.
- Cube data:
 - Tested Cube count by date range and summary of cubes tested.
 - Purge tested data after 60 days.
- Security/IT audit enhancement:
 - Secure communication between client and server (https)
 - Windows IIS server (application server) self-signed / CA Certs
 - Application Session timeout.
 - Automatic logout after a period of inactivity (timeout to be configured).
 - Disallow multiple logins using same account.

- To include Audit logs:
 - Login / Logout
 - Cube data
 - Cube Test data
- User Interface (UI) Design and API and API/Database modification for UI.

Unused modules in CCCT to be removed:

- Contract details like Contractor address, telephone number are not necessary.
- Premature Specs, Rolling Average, Sample strength (All calculation done by MMS).
- Criteria Specifications.
- Cube Billing.

System Requirements:

- Users: browser application, able to access CCCT Database Sever
- Server: CCCT Database Server, IIS Web Server

3 REQUIREMENTS FOR THE SERVICES PROVIDED

- 3.1 The Contractor shall ensure that the execution of all Works shall not affect the usage of the CCCT System at all times. The Contractor shall submit the workflow on the execution of the Works. The Works shall include the migration of all data in the current system to the enhanced system. The Works shall also include the testing and commissioning of the enhanced system.
- 3.2 The Contractor shall be deemed to have included the cost for the software design and development, system set up and network, firewall support, subscription fee, transportation, manpower, equipment and all the necessary provision to carry out the Works as stipulated in the Specifications in the Contract Rate/Price submitted.
- 3.3 The Contractor shall be deemed to have thoroughly evaluated the current CCCT system and possess the required technical competency to carry out the Works.
- 3.4 The Contractor shall provide the details of the contact person including alternative contact person. The contact person shall be contactable at all times.
- 3.5 The Contractor shall submit the proposed Works plan and schedule to HDB for approval. All Works shall be carried out only upon the approval by HDB. The Contractor shall not be allowed to remove, relocate, transfer or tamper with the system without written approval from HDB.
- 3.6 All source codes developed for the system shall belong to HDB and the Contractor shall store the source codes in CD/DVD-ROM and submit to HDB upon completion.
- 3.7 All amendments made to the existing modules or new modules in the CCCT system shall be captured in the audit trails. Access right control shall be defined for the users.
- 3.8 The Contractor shall provide a Three (3) months warranty period for the Works executed commencing from the end of the Contract Term.
- 3.9 The Contractor shall be deemed to have undertaken to observe the secure usage and handling of all information on the system provided and made available to them during the execution of the Works to protect HDB against unauthorized disclosures of confidential information.
- 3.10 All Works as stipulated shall be completed and within the stipulated timeframe unless otherwise approved by HDB. The contractor shall allow

for minor adjustment/modification to the enhancement of CCCT as stipulated in Section 2 – Scope of Works of the Specifications.

- 3.11 The Contractor shall produce a User Manual for the enhanced CCCT system. The content of the User Manual shall include but not limited to the following:
- a) License Information
 - b) Precautionary Notes
 - c) General Usage
 - d) Accessing to the Systems
 - e) Administrative User
 - f) Contractor User
 - g) Consultant Engineer and other User

The Contractor shall submit the approved User Manual in editable soft copy format to HDB.

- 3.12 The Works shall also include the following:
- a) to provide briefing on the enhanced system.
 - b) to ensure smooth transition from current to new system.

4 EVALUATION CRITERIA

4.1 The Tenderer shall have a valid Government Supplier Registration of EPU/CMP/10 – Computer Related Hardware, Software and Services and financial category of S2 - \$100,000 and above.

4.2 The Tenderer shall not be suspended or debarred by the Standing Committee on Debarment, c/o Ministry of Finance, from participating in public-sector projects.

4.3 The Tender shall submit via GeBIZ their proposals, technical information and other relevant information before quotation close.

4.4 In the event of a tie in the quotation amount, the tie breaker shall be based on the higher total completed contract value for the projects on software development and/or enhancement in the past three years.

5 FIRM PRICE CONTRACT

5.1 Tenderers shall submit the quotation rates/price via GeBIZ.

5.2 The quotation shall be awarded on a firm price basis and the contract rates/price as quoted by Tenderers and accepted by the HDB shall remain firm for the duration of the Contract Term.

6 ACCEPTANCE OF TENDER

- 6.1 The HDB shall be under no obligation to accept the lowest or any tender. The HDB shall normally not enter into correspondence with any Tenderer regarding the reasons for non-acceptance of a tender.
- 6.2 The HDB reserves the right, unless the Tenderer expressly stipulates to the contrary in his tender, of accepting such portion of each tender as the HDB may decide.

7 CONTRACT TERM

- 7.1 The Contract Term shall be **THREE (3) MONTHS** from the date of issue of the award letter or from the commencement date as stated in the award letter. The successful Tenderer shall commence the Works from the date the quotation is awarded. The Works shall be completed within the time frame as stipulated.

8 SITE SHOWROUND

- 8.1 There will be a site show round on **12 Sep 2024 (Thu) at 10am** at HDB EM Lab at No.1 Woodlands Industrial Park E3, Singapore 757780. The attendance for the site show round is compulsory.
- 8.2 Tenderers shall verify the existing nature, condition, availability of the current CCCT System information and any other required information to carry out the Works during the site show round.

9 PAYMENT

- 9.1 The Contractor would be paid the amount due to him only upon the completion of the Works and Services to be executed to the satisfaction of the SO.

The Contractor shall submit the relevant service reports in form acceptable to the HDB. The service reports shall indicate the actual work performed in accordance with the scope of work as specified. The Contractor shall ensure all service reports are duly signed and endorsed by the HDB.

10 GOODS AND SERVICES TAX

- 10.1 The Tenderer shall not include in the rates and prices proposed in his tender the Singapore Goods and Services Tax (GST) chargeable for the supply of Goods or Services required in the Tender. All rates and prices quoted shall be exclusive of the GST chargeable on the supply of the said Goods and Services.

11 EARLY TERMINATION

- 11.1 If the Contractor is unable to execute the required works to the satisfaction of HDB based on the stipulated conditions, HDB shall, without prejudice to any other provisions in this contract, reserves the right to terminate the Contract by giving due notice and the Contractor shall not be entitled to claim for any work done.
- 11.2 In this respect, the Contractor shall not be entitled to any claim arising from the HDB exercising his right under this clause.