



CAMPUS PLANNING, DEVELOPMENT & MAINTENANCE OFFICE
UNIVERSITY OF THE PHILIPPINES MANILA
The Health Sciences Center
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REF. NO. : **WD102APP05092014**

PROJECT TITLE : **STRUCTURAL INTEGRITY TEST OF GAB**
Gusaling Andres Bonifacio
College of Arts and Sciences
University of the Philippines Manila

SUBJECT : **SCOPE OF WORKS AND SPECIFICATIONS**

Division 1 - General

Section 01000 General Requirements

1. The Contractor shall furnish all materials, equipment, tools, apparatus, transportation, labor and supervision required for the implementation of the contract
3. All Contractors submitting proposal for this project shall first examine the site. All proposals shall take into consideration all such conditions that may affect the work under this contract.
4. The Contractor shall coordinate his work with all parties to ensure proper phasing or schedule of works. The Contractor shall engage under him, a registered Engineer to supervise the works. He shall remain at all times in the project site.
5. A logbook shall be available at the site. It shall contain the daily activities in the site, including weather condition, delivery, manpower and other matter pertaining to the condition of the project. It will also serve as data for Contractor and the Project Inspector.
6. Identification Card of workers and engineer/representative shall be supplied by CPDMO with corresponding fees; it should be worn at all times while inside the building/campus premises. Those without IDs shall not be allowed to enter for security purposes.
7. No alteration or addition that will result to an additive or deductive cost change from the contract shall be allowed without the approval of the Chancellor.
8. Regular coordination meeting shall be conducted with CPDMO, Contractor and End-user for proper project monitoring.
9. After completion of all works, the Contractor shall promptly remove from the premises all equipment, apparatus and tools and restore all areas that were

damaged or affected by the works and leave the site clean to the satisfaction of the Project Inspector or his representative and End-user.

10. All materials removed from the area shall be properly for which gate pass shall be issued

Division 2 – Site construction

Section 02200 Site Preparation

Mobilization/Demobilization

- This work includes mobilization process, provision for warning signs, including barricades, temporary facilities, temporary fences, warning lights and similar safeguards shall be provided by the Contractor as they required for protection of his manpower and others during the working life of his project.
- Demobilization procedure shall include clearing o the affected areas from all rubbish, trash, debris, and all superfluous building materials and restore all areas that were damaged as affected by by the works and leave the site clean to the satisfaction of the Project Inspector or his representative and End-user.

Section 02230 Site Clearing

- Clear the area from all obstructions or as affected by the works, except those structures indicated on the drawings or designated by the Project/Engineer and End-users to be left standing. It shall be properly protected from incidental damage due to work by the section of suitable barriers upon approval of the project Architect/Engineer and End-users.
- The Contractor shall be responsible for the accuracy of his work and any necessary chiseling, drilling, coring, cutting and patching or other works required due to plugged or misplaced conduit shall be dine at the expense of the Contractor including the restoration on the damaged part of the building finish.

Section 02290 Site Monitoring

- Site monitoring shall be a must to the contractor for the effective implementation of the project. Any discrepancies on plans and actual site conditions shall be properly coordinated with the Project Architect/Engineer concerned for verification.
- Regular coordination meeting shall be done between the contractor or its representative and the Project Architect/Engineer concerned at CPDMO.

Section 02500 Utility Services

Utility Service/Consumption

- Provision of electric and water meter shall be included in the quotation to be charged to the contractor's overhead. All utility consumption shall be provided with meters to limit the usage of such during working period. Payments of bills shall be made thru the Cashier Office after the renovation period presenting the statement of account issued by Accounting upon recommendation of the Chief of CPDMO. End-user shall be furnished with the copy of official receipt.

Division 3 – Concrete

03100 Concrete Testing

Preparation Works

- Provide scaffoldings to ensure proper implementation of the testing/extraction of specimen, restoration works and for the safety of manpower during the duration of works.

Notations

- Test location shall be identified by the designated structural engineer of the Contractor/Consultant.
- Presence of CPDMO Project Architect/Engineer, Technical Consultant of UP Manila and End-user shall be required on the execution of the on-site testing.
- Actual testing of the specimens at the office of the Contractor/Consultant shall be done in the presence of CPDMO Project Architect/Engineer, Technical Consultant of UP Manila and End-user.

Non-Destructive Testing

- Non-destructive tests would include refinements in concrete outline drawings showing the location of columns, walls, slabs, beams and girders. This method would utilize equipment to locate reinforcing bars by means of magnetic detection.
1. Site Inspection enables the engineer/consultant to confirm the correctness of the existing structure and to assess the structural condition of the building. Any evidence structural modification, deterioration of materials, weakness in structural members of connection, settlement or foundation problems or unusual structural features shall be noted.
 2. Rebound Hammer Test shall be done at 10 (ten) locations to determine the in – place compressive strength of concrete. Rebound hammer consist of a spring-loaded steel hammer which when released strikes a steel plunger in contact with the concrete surface. The spring – loaded hammer must travel with a fixed and reproducible velocity. The rebound distance of the steel hammer from the steel plunger is measured in a linear scale attached to the frame of the instrument.

Destructive Testing

- Destructive Testing would include concrete core extraction to determine concrete compressive strength tests and steel bars strength tests. This method will consist of actual chipping of concrete to expose the steel bars. This tests will have to take specimens from the existing structures through the use of specialized equipment.
1. Concrete Coring for beams and columns shall be done at 10 (ten) locations known to be critical area of structural stability. Specimens to be drilled shall be 2" dia. to 4" dia. at a length twice its diameter by using Dymodrills. The core specimen shall not be disturbed during transportation. It must be placed in a container with sand.

2. Covermeter Survey – Existing concrete structures will need to be examined and tested to ensure the concrete remains of adequate strength and durability. The cover meter survey will give a detailed view of the reinforcement closest to the surface within a concrete structure. Information such as: reinforcement spacing, diameter, depth from surface and location can be determined. The test involves scanning the surface with an electromagnetic meter in six (6) locations, which can detect the ferrous elements within the concrete.

Structural Evaluation

- After all necessary tests are made and documented, the structural assessment for the following items shall be put into process:
 1. Verification of actual capacity of the existing structures based on the test result;
 2. Computation of loading capacity of structural elements ;
 3. Verification of actual condition for a proposed additional one (1) floor of the existing structures based on the test result;
 4. Provision for structural plans, working drawings showing rectification; and recommend rectification measures if necessary;
 5. Certify structural soundness of the building; and
 6. Other related design analysis and evaluations.

03930 Concrete Rehabilitation

Rehabilitation Works

- Upon completion of all the tests on the concrete structures of the building the contractor/consultant shall rehabilitate all the destructed concrete areas and restore in place all areas affected by their works. This includes the restoration of the physical, aesthetic features and painting of structures.
- Restoration works shall be properly checked by CPDMO Project Architect/Engineer and End-users. Rectification on that shall be made to the satisfaction of the End-user.

COMPLETION PERIOD

The Contractor is given **Thirty (30) calendar days** to execute the testing and evaluation of the structural integrity of the building. The Contractor shall coordinate to the CPDMO Inspector and End-users for the schedule of testing of systems and other related job.

Prepared by:


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BILL OF QUANTITIES - BID PROPOSAL FORM

PROJECT TITLE : **STRUCTURAL INTEGRITY TEST OF GAB**
 Gusling Andres Bonifacio
 College of Arts and Sciences
 University of the Philippines Manila

NAME OF BIDDER : _____

ADDRESS : _____

CONTACT NO(S). : _____

TOTAL LUMP SUM BID : _____ PhP _____

ITEM	QTY.	UNIT(S)	DESCRIPTION(S)	UNIT COST	TOTAL COST
1.00 GEN. REQ'ts. / SITEWORKS					
		lot	Mobilization & Demobilization	PhP	PhP
		lot	Site clearing works		
			Sub-Direct Cost		PhP
			Total for General Requirements / Siteworks		PhP
2.00 STRUCTURAL TESTING					
		core(s)	Concrete coring for beams, slabs and columns at ten (10) locations	PhP	PhP
		unit(s)	Rebound hammer test at ten (10) locations		
		lot	Covermeter survey at six (6) locations		
		lot	Structural Evaluation report, two (2) sets		
			Sub-Direct Cost		PhP
			Total for Structural Works		PhP
3.00 RESTORATION WORKS					
		lot	Rehabilitation works & finishing works	PhP	PhP
			Sub-Direct Cost		PhP
			Total for Restoration Works		PhP
SUMMARY					
1.00	GEN. REQ'ts. / SITEWORKS				PhP
2.00	STRUCTURAL TESTING				
3.00	RESTORATION WORKS				
			Total Materials and Labor Cost		PhP
			Overhead Cost	@	%
			Tax	@	12%
			TOTAL PROJECT COST		PhP

PREPARED BY : _____
 Signature over Printed Name & Position/Designation _____ Date _____