

Republic of the Philippines  
**BICOL UNIVERSITY**  
**PHYSICAL DEVELOPMENT AND MANAGEMENT OFFICE**  
Legazpi City

**Project Title:** REPAIR /REHAB. OF BUTC GENERAL ADMINISTRATION BLDG.  
**Location** BU Tabaco Campus, Tabaco City, Albay  
**ABC:** Php 6,000,000.00  
**Duration:** 180 C.D.

**SCOPE OF WORKS AND TECHNICAL SPECIFICATIONS**

*All works to be undertaken shall be in accordance with the plans and working drawings. It includes the furnishing of all materials, labor and equipment with supervision necessary for the complete construction of the said project.*

*The plans, detailed drawings and this scope of work shall be considered as complementing with each other, so that what is mentioned or shown on one, although not mentioned or shown in another, shall be considered as appearing in both. In case of conflict between the two, the same should be referred to the designing Architect/Engineer.*

**ITEMS OF WORK INCLUDED :**

*This program of work covers the repair of New Admin Building at BUTC with total area of 1,062 sq.m. (L-59m and W-18m). This includes the repair and replacement of damaged Windows and Doors, furnishing and installation of new Floor Tiles and new Plumbing & Electrical fittings and accessories. This also includes the construction of new masonry walls, dry partitions, glass partitions, & Client's waiting area.*

**I. GENERAL REQUIREMENTS**

**1.00 lot**

This item of work includes the fabrication and installation of Project Sign Boards, Temporary Utilities, Stock Room and Enclosure, and the provisions for the Construction Safety and Health Program. This also includes the 6 months Water & Electrical Power Consumption.

**II. SITE WORKS**

**1.00 lot**

This item of work includes the following site works:

A. Clearing and cleaning of site before and after construction	1.00 lot
B. Dismantling/Removal and disposal of existing:	
1. Masonry walls and bathroom partition walls	142.10 m2
2. Glass partition	187.80 m2
3. Chipping of Floor and Wall Tiles	916.68 m2
4. Doors, Door Jambs, and Accessories	1.00 lot
5. Broken Window Glasses	1.00 lot
6. Plumbing Fixtures & Plumbing Pipes	1.00 lot
7. Electrical wirings	1.00 lot
C. Embankment	20.14 cu.m.

Also included is the equipment rental of hauling truck, and electric grinder needed to complete the said item of work. Confer with the Supply Officer as to the designated area where the waste materials are to be stockpiled. The contractor shall submit the waste material prior to demobilization.

**III. CIVIL WORKS**

**5.04 cu.m.**

**A. Concrete Works**

**5.04**

**cu.m.**

This item of work includes the pouring of class "A" concrete mixture for slab-on-grade. Use a minimum cement factor of 9 bags per cubic meter and 3,000 psi compressive strength.

This item of work also includes equipment rental of one (1) Bagger Concrete Mixer and one (1) set of Concrete Vibrator.

Use Type I Cement on all concrete works and 3/4" crushed gravel.

All surfaces must be plain cement finished. All materials shall be so delivered, stored and handled as to prevent the inclusion of foreign materials and the damage of materials by water or breakage.

Packaged materials shall be so delivered and stored in original packages until ready for use.

All materials delivered shall be of the respective qualities as specified.

Water to be used in gauging concrete shall be free of oil, acid, alkali, vegetable matter or other deleterious substance and shall be reasonably clear and clean. The use of sea or blackish water is not allowed.

Cements shall be of any standard commercial brand in standard 40kg bag. No re-bagged cement shall be used.

Fine aggregates used in the composition of concrete mortar, grout or plaster should consist of sand or other inert materials with similar characteristics or a combination thereof, having clean, hard, strong, durable, uncoated grains and free from injurious amount of dust, lumps, soft or flaky particles and shall not contain more than 5% of clay. In exposed work fine aggregates shall be free from any substance, which will discolor the concrete surface.

Coarse aggregates shall consists of crushed stones, gravel, or other approved inert materials with similar characteristics or a combination thereof, having clean, hard, strong, durable, uncoated particles, free from injurious amount of soft, elongated and laminated pieces organic or other matter.

Coarse aggregates shall be well garded as to size, ranging from 6mm up to size which will readily pass between all reinforcing bars and between reinforcements and forms, but not to exceed 25mm in size for reinforced beams, floor slabs, columns, etc. and may range up to 50mm for less highly reinforced parts of structure such as footing.

Gravel under concrete slab shall be river run gravel with a maximum sie of 50mm. A minimum size of 12.50mm.

Placing concrete - concrete shall be rapidly handled from the mixing site to forms and deposited as early as possible in its final position without loss of ingredients. Concrete shall be spaded and worked by hand to assure close contact to surfaces of forms and reinforcement. Concrete shall not be dropped freely more than 1.22520 mm (5 ft) for columns.

Mixing concrete/materials shall be measured, batched and mixed in a mixer or by hand in a watertight wooden platform at the job site.

Preparation for placing concrete- Before placing concrete, remove all sawdust, chips and other construction debris from the places to be occupied by the concrete. Reinforcement shall be secured in position and inspected by the authorized representative.

Please refer to the plan for complete details.

## **B. Steel Works**

**325.25**

**kg**

This item of work includes furnishing, fabrication and installation of ASTM Grade 40 10mmØ RSB for slab-on-grade (Client's Waiting area).

This item of work also includes equipment rental of one (1) set of Cut-off Machine.

Reinforcing bars shall be standard commercial deformed type.

Tie wire shall be local standard commercial G.I. wire gauge 16.

Placing steel reinforcements – Place reinforcements securely fastened and support it to prevent displacement before or during placing of concrete. Bars shall be bent cold. Bars shall be free from rust, scales and oil. Splices in bars shall be made at critical points of maximum stresses.

Deformation of reinforcing bars shall conform to ASTM A615-68

Unless otherwise noted in the plans the minimum yield strength of the main reinforcing bars shall be as

12 mm and smaller  $f_y = 230$  Mpa (Structural Grade)

16 mm and larger  $f_y = 420$  Mpa (High Tensile Grade)

Development length requirements ( $l_d$ ) shall be as tabulated in standard details.

Splice and anchorages shall follow those set from development length ( $l_d$ ) unless otherwise shown in the plans or approved by the Engineer.

Standard hook for re-bars if required shall be either of the following:

Semicircular turns plus an extension of at least 4 bar diameters but not less than 65mm at free end of the bar.

90 degree turn plus an extension of at least 12 bar diameters at free end of the bar.

Minimum diameter of bend measured on the inside of the bar be as follows:

10 mm to 25 mm

6 bar diameter

Please refer to the plan for complete details.