



BILL OF QUANTITIES

CONSTRUCTION OF THREE-STOREY LEARNING SPACE AND CLASSROOM BUILDING ABC: ₱ 15,403,876.37 COLLEGE/UNIT/CAMPUS: TRECE CAMPUS					
Item No.	Description	Unit	Quantity	Unit Price (Pesos)	Amount (Pesos)
I	EARTHWORKS (Pesos _____ _____ and _____ centavos)				
II	CONCRETE WORKS (Pesos _____ _____ and _____ centavos)				
III	MASONRY WORKS (Pesos _____ _____ and _____ centavos)				
IV	TILE WORKS (Pesos _____ _____ and _____ centavos)				
V	CARPENTRY WORKS (Pesos _____ _____ and _____ centavos)				
VI	TRUSSES AND ROOFING WORKS (Pesos _____ _____ and _____ centavos)				
VII	MISCELLANEOUS WORKS (Pesos _____ _____ and _____ centavos)				
VIII	ELECTRICAL WORKS (Pesos _____ _____ and _____ centavos)				

IX	FIRE PROTECTION WORKS (Pesos _____ _____ and _____ centavos)				
X	PLUMBING WORKS (Pesos _____ _____ and _____ centavos)				
XI	PAINTING WORKS (Pesos _____ _____ and _____ centavos)				
GRAND TOTAL _____					
Write grand total in words _____ _____ _____					

Submitted by: _____ Date: _____
Name of Bidder/Bidder's Representative: _____
Position: _____
Construction Company/Contractor: _____

CAVITE STATE UNIVERSITY

SCOPE OF WORK:

A. CONSTRUCTION OF THREE-STOREY LEARNING SPACE AND CLASSROOM BUILDING

GENERAL NOTES:

1. The project should be finished in 210 calendar days.
2. Site inspection is a must to verify site condition.
3. This set of specifications shall govern the methods of construction and the kinds of materials to be used for the proposed project shown in the plans and detailed drawings.
4. All parts of the construction shall be finished with first class workmanship, to the fullest talent and meaning of the plans and these specifications, and to the entire satisfaction of the project inspector and the end-user.

B. Technical Description

I. Earthworks

- A. Site Preparation/ Temporary Enclosure/ Mobilization/ Demobilization/ Office/ Bankhouses/etc.
 - a. Site preparation
 - b. Site temporary enclosure may be blue sack or any suitable materials that may enclose the workplace.
 - c. Mobilization and Demobilization
 - d. Billboard
 - e. Office/Bunk house, etc.
- B. Demolition, Excavation / backfilling /clearing
 - a. This work includes demolition of existing canopy and gutter along Grid C/ 1 - 4.
 - b. This work includes excavation for all column/wall footings, tie beam and catch basin.
 - c. The area should be cleared/cleaned before and after the construction work at least six meters away from the building line. Unusable used formworks, excessive soil fill and all other unwanted debris of construction works should be disposed of properly.
- C. Additional fill & soil poisoning
 - a. Provide additional fill
 - b. The area should be treated with termite proofing. Termite proofing should be done by an accredited termite proofing company.
 - c. Gravel fill = 0.05 m. thick

II. Concrete Works

- A. Ready Mix Concrete
 - a. Concrete works include columns, footings, stiffener columns, slab, beams, stairs, roof beams, gutter, ledge/canopy and all other concrete components needed to complete the structure.
 - Provide lintel beams for the opening of windows and doors. Use 0.15m x 0.20 m reinforced with 10 mm bars.
 - b. Provide metal decking (1.00mm thick). See plan for details.
 - c. Strength of concrete to be adopted shall be 3,500 psi
 - d. Concrete works should be plain cement finished.
 - e. Provide necessary tools and equipment needed for concrete works.
- B. Steel reinforcement
 - a. Use deformed bar grade 40.
 - b. Provide necessary tools and equipment needed for steel works.

III. Masonry Works

- A. CHB laying
 1. Supply and Installation of CHB reinforced with 10 mm 0 deformed bar spaced at 0.60 m. on center vertically and every three layers.
 - a. CHB 6" for the perimeter/exterior walls.
 - b. CHB 4" for interior/partition walls.
 2. Masonry works should be plastered plain cement .

IV. Tile Works

- A. Supply and installation of the following:
 1. Ceramic tiles (locally made) 0.40 m. x 0.40 m. for the whole area of lower &

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upper ground floor and second floor of the building. Unglazed ceramic tiles for hallway and walkway. Tiles must be accented with dark colors.

2. Granite tiles with groove for the steps and ceramic tiles for the riser of all stairs.
3. Tiles must be installed by using tile adhesive and finished with appropriate tile grout.
4. Consult the end user for color preference of tiles.

V. Carpentry Works

1. Provide necessary form lumber and scaffolding needed for the completion of the project.
2. Provide ceiling works for the whole second floor.
 - a. Use cement board 3/16" thick for the ceiling board.
 - b. Use light weight metal furring as ceiling runner/joist.
 - c. Provide decorative wooden molding to all ceiling corners.
 - d. Provide 3/16" x 1" flat bar coated with primer and paint for ceiling hanger every 1.20 m. both ways.
 - e. Use pre-painted spandrel 6" for the whole area of eaves with pre-painted end and center molding.
 - f. Provide ceiling ventilation for every one meter and all corners of the eaves.

VI. Trusses and Roofing Works

A. Trusses:

- a. See plans for sizes of bar and other details for the installation of steel trusses.
- b. This work also includes painting of two (2) coats of epoxy primer and two (2) coats of quick dry enamel black.
- c. Provide necessary tools and equipment.
- d. All joint connections should be fully welded.
- e. Use CEE purlins ga. 16, 2" x 6" @ 0.60 m. on center.
- f. Provide 16 mm. Ø plain bar with standard turnbuckle for horizontal cross bracing
- g. Provide 4-16 mm. Ø anchor bolts with nut and washer for each support.
- h. Provide 12 mm. Ø with nuts and washer for sag rod.

B. Roofing:

- a. Adopt gauge 26 (0.5 mm.) rib type pre-painted roof sheet.
- b. Adopt gauge 26 x 18 (0.5 mm.) pre-fabricated and pre-painted ridge roll.
- c. All attachment for roofing sheet and ridge roll shall be 2 1/2" tek screw for metal.
- d. Provide water sealant for all attachment (water sealant should be provided for both inside and outside surface of tek screw head).

VII. Miscellaneous Works

Supply and installation of the following:

A. Doors:

- | | | |
|------|------|--|
| 1.0 | set | D-1 Double swing glass door with 1/2" thick colored glass on alum. frame; complete with all accessories. |
| 14.0 | sets | D-2 Pre-painted steel flush door with 1/4" thick clear glass view window; complete with all accessories. |

B. Windows:

- | | | |
|------|------|--|
| 19.0 | sets | W-1 Steel casement window complete with all accessories with 1/4" thick clear glass. |
| 14.0 | sets | W-2 Aluminum frame jalousie window complete with all accessories with 1/4" thick smoked glass. |
| 6.0 | sets | W-3 Steel casement window complete with all accessories with 1/4" thick clear glass. |
| 10.0 | sets | W-4 Steel awning window complete with all accessories with 1/4" thick clear glass. |

Note: All windows shall be provided with 12mm square bar grills.

C. Stainless railing (Stairs and Ramp)

Provide 1.5 mm thick stainless tubing for railings. Use 2" & 1" tubing.

VIII. Electrical Works

1. Supply and Installation of panel boards and circuit breakers in accordance with the plan. G.E., Himel, Schneider or approved equal. **Note: Bolt-on type, Nema Standard should be used.**
2. Supply and installation of conductors and PVC conduit/junction box/utility box from

- main panel to convenience outlet/light outlet.
- a. PVC conduit orange pipe. Neltex or approved equal.
 - b. Utility and junction boxes should be PVC and deep type.
 - c. THHN and THWN copper conductor wires. Phelps doge, Philflex or approved equal. Refer to Schedule of Loads for proper wire size and color.
3. Supply and Installation of electrical fixtures/switches/outlets and other electrical devices.
 - a. Switches (Bticino, National or its equivalent)
 - b. Convenience outlets (Bticino, National or its equivalent)
 - c. 2-T8 18W LED fluorescent lamp w/ diffuser (72 sets). Philips, Firefly or approved equal.
 - d. 1-T8 18W LED fluorescent lamp w/ diffuser (27 sets). Philips, Firefly or approved equal.
 - e. Air Conditioning unit 2.5HP wall mounted split type inverter D-smart (18 units) Carrier, LG or approved equal.
 - f. Emergency light twin head heavy duty (17 sets). Firefly or approved equal.
 4. Construction of service entrance post
 5. Supply and installation of heavy duty secondary rack and brown spool/spool insulator to existing 9.5 m electrical concrete poles (6 pole locations).
 6. Electrical feeder line is to be connected from MDP to disconnecting mean as indicated in the plan (see E-6). Provide the necessary copper conductor wires, messenger wires, connectors & equipment for the wiring installation.
 7. Include tapping to the source.
 8. Consult plan for details and extent of works.
- Note:** Electrical testing and guarantee, electrical supervision and final electrical inspection report should be signed and sealed by Professional Electrical Engineer with notary public.

IX. Fire Protection Works

Supply and Installation of the following:

1. Three units firehose with cabinet
2. 6 units stored pressure type HCFC 123 CEA fire extinguisher. Amerex B402 or approved equal.
3. 3 units Fire alarm bell with control. Honeywell/Edwards or approved equal.
4. 1 unit fire alarm control panel. Honeywell/Edwards or approved equal.
5. 9 units smoke detector. Honeywell/Edwards or approved equal.
6. Dry stand pipe 3" with siamese fitting

X. Plumbing Works

A. Sewer Line

1. Adopt 4" PVC heavy duty orange pipes and fittings for downspout.
2. Provide 16 pcs. dome type brass roof drains
3. Provide catch basins with reinforced concrete pipes. (see plan for sizes)

XI. Painting Works

The whole building should be painted (both exterior & interior) including door and windows.

A. Metal

1. Apply epoxy primer by brush or spray. Allow to dry for 24 hours. Apply suitable putty on imperfections, then, sand.
2. Apply at least two coats of Quick Dry Enamel in the desired color.

B. Concrete

1. Treat the surface with concrete neutralizer. Mix one part with 16 parts water by volume.
2. Apply Latex flat as primer. Apply skim coat on all concrete surfaces. Let dry, then sand.
3. Apply at least two coats of colored dirt resistant semi gloss latex paint (factory mixed).

Note: Color of paint will depend upon the preference of the end-user. Paints and its accessories should be BOYSEN or approved equal.

C. Building permits, necessary clearances and other government taxes should be shouldered and

settled by the contractor.

- D. Contractor should have a PCAB license with a specialty in electrical works.
- E. Contractor of the said project must provide an as-built plan of the project at the end of the contract as a requirement for the release of their final billing.
- F. For color/types of any fixtures or materials to be used on site, consult the end-user and the inspector for approval. Consult the plan and the scope of work for the extent of tasks of the contract. If possible, let the end-user sign your sample as proof of approval.
- G. The plans, detailed drawings and these specifications shall be considered as complementing each other, so that what is mentioned or shown in one, although not mentioned or shown in the other, shall be considered as appearing on both. **In case of conflict between the two, generally, the scope of work prevails.**
- H. Resident site engineer is a must for the projects to be undertaken by the contractor of the university. In cases where there are electrical works, it is required that an electrical engineer or a master electrician be a part of the contractor's team to supervise all electrical works. Likewise, master plumbers must supervise plumbing works. It can be considered when only one person is the master plumber and master electrician at the same time as long as his major duty is supervision of both fields. Safety engineer is a must as per DOLE requirement. **Note: All key personnel should be included in the list of personnel for submission.**
- I. In cases of participation in two or more projects, the set of workers and foreman shall be different per project, however, the set of engineers and equipment may be reused.
- J. Construction safety and health program as well as construction schedule (PERT/CPM/S-Curve) shall be provided by the winning bidder.
- K. See plans/consult the end-user and project inspector for details and extent of work. The silence of specifications, plans, special provisions and supplementary specifications as to any detail, or the apparent omission therein of detailed description or definition of the quality of materials and workmanship shall be regarded to mean that only materials and workmanship of first class quality are to be used or employed.