



Republic of the Philippines
CAVITE STATE UNIVERSITY
 Don Severino delas Alas Campus
 Indang, Cavite

BILL OF QUANTITIES

CONSTRUCTION OF TWO-STOREY SCHOOL BUILDING AT CvSU TRECE MARTIRES CITY CAMPUS ABC: ₱ 14,977,615.17 COLLEGE/UNIT/CAMPUS: TRECE CAMPUS					
Bill of Quantities					
Item No.	Description	Unit	Quantity	Unit Price (Pesos)	Amount (Pesos)
I	EARTHWORKS (Pesos _____ _____ and _____ centavos)				
II	CONCRETE WORKS (Pesos _____ _____ and _____ centavos)				
III	MASONRY AND TILE WORKS (Pesos _____ _____ and _____ centavos)				
IV	CARPENTRY WORKS (Pesos _____ _____ and _____ centavos)				
V	TRUSSES AND ROOFING WORKS (Pesos _____ _____ and _____ centavos)				
VI	MISCELLANEOUS WORKS (Pesos _____ _____ and _____ centavos)				

VII	ELECTRICAL WORKS (Pesos _____ _____ and _____ centavos)				
VIII	PLUMBING WORKS (Pesos _____ _____ and _____ centavos)				
IX	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 TWO-STOREY SCHOOL BUILDING
AT CvSU TRECE MARTIRES CITY CAMPUS**

GENERAL NOTES:

1. The project should be finished for 240 calendar days.
2. Actual site inspection is a must.

B. Technical Description

I. Earthworks

A. Site Preparation/Temporary Enclosure/ Mobilization/ Demobilization/ Office/ Bankhouses/ etc.

B. Demolition, Excavation/backfilling/clearing

1. This work includes excavation for all column/wall footings and tie beam, catch basin and septic tank.
2. 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 properly.

C. Additional fill and soil poisoning.

1. Provide additional fill.
2. The area should be treated with termite proofing.
3. Gravel fill = 0.05 m. thick.

II. Concrete Works

A. Cast-in-place concrete

1. Concrete works include columns, footings, stiffener columns, slab, beams, stairs, roof beams, gutter, lavatory counters, ledge/canopy and all other concrete components needed to complete the structure of a two-storey school building with basement.
- Provide lintel beams for the opening of windows and doors. Use 0.15m x 0.20 m reinforced with 10 mm Ø bars.
2. Strength of concrete to be adopted shall be **3,500 psi**.
3. Concrete works should be plain cement finished.
4. Provide necessary tools and equipment needed for concrete works.

B. Steel Reinforcement

1. Use deformed bar grade 40.
2. Provide necessary tools and equipment needed for steel works.

C. Material testing should be provided by the contractor and witnessed by the inspectors.

III. Masonry and Tile Works

A. CHB Laying

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

B. Tile Works (Comfort Rooms only)

Supply and installation of the following

1. Ceramic colored tiles 0.30m x 0.30m for comfort rooms.
*Tiles must be installed for the entire floors and walls. Accent using decorative tiles shall be provided. Dark colored tiles vertically on centers and corners.
2. Tiles must be installed by using tile adhesive and finished with appropriate tile grout.
3. Consult the end user for color preference of tiles.

IV. 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 and all comfort rooms including ceiling eaves.
 - a. Use cement board 1/4" thick for ceiling board.
 - b. Use metal furring for ceiling joist and runner complete with all wall/clip angles,

- hanger rods and all other accessories to complete ceiling works.
- c. Provide decorative wooden molding to all ceiling corner.
- d. Provide 3/16" x 1" flat bar coated with primer and paint for ceiling hanger every 1.20m. both ways.
- e. Use pre-painted spandrel 4" for the whole area of eaves with pre-painted end and center molding.
- f. Provide ceiling ventilation for every 5 meters and all corners of the eaves.

V. Trusses and Roofing Works

A. Trusses:

1. See plans for sizes of bar and other details for the installation of steel trusses.
2. This work also includes painting of two (2) coats of epoxy primer and two (2) coats of quick dry enamel black.
3. Provide necessary tools and equipment.
4. All joint connections should be fully welded.
5. Use CEE purlins ga. 16, 2" x 6" at 0.60 m. on center.
6. Provide 16mm Ø plain bar with standard turnbuckle for horizontal cross bracing.
7. Provide 4-16 mm Ø anchor bolts with nut and washer for each support.
8. Provide 12mm Ø with nut and washer for sag rod.
9. Use CEE purlins 2" x 6" and 2" x 4" for fascia board.

B. Roofing

1. Adopt gauge 26 (0.50 mm) rib type red pre-painted roof sheet.
2. Adopt gauge 26 x 18 (0.50 mm) pre-fabricated and pre-painted ridge roll.
3. Adopt gauge 26 (0.50 mm) pre-fabricated and pre-painted flushing.
4. All attachment to roofing sheet and ridge roll shall be 2 1/2" teck screw for metal.
5. Provide water sealant for all attachment (water sealant should be provided for both inside and outside surface of teck screw head).

VI. Miscellaneous Works

Supply and installation of the following:

1. Doors

- 22.0 sets D-1 Flush wooden door with 1/4" thick clear glass view window complete with all accessories
 - 10.0 sets D-2 Flush wooden door complete with all accessories
 - 12.0 sets D-3 Stainless door panel, complete with hinges, barrel bolt and all other accessories.
- *For wooden doors: all framings and jambs shall be kiln dry; accessories shall include 4-heavy duty hinges 3" and heavy duty door lock.
- *For stainless doors: all framing shall be 1" Ø GI pipe and paneled on both faces with ga. 20 stainless sheet.

2. Windows

- 22.0 sets W-1 Aluminum frame jalousie window complete with all accessories with 1/4" smoked glass
- 10.0 sets W-2 Steel casement window complete with all accessories with 1/4" thick clear glass
- 10.0 sets W-2A Steel casement window complete with all accessories with 1/4" thick clear glass
- 5.0 sets W-3 Steel awning 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

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

3. Stainless railing (Stairs and ramp including the grab rail for PWD CR at grids A to B/3 to 4 for both floors)

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

VII. Electrical Works

1. Supply and installation of panel board and circuit breakers.
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. Provide PVC conduit orange pipe.
 - b. Utility and junction boxes should be PVC and deep type.
 - c. Provide THHN stranded wires.
3. Supply and installation of electrical fixtures/switches/outlets and other electrical

devices.

- a. Switches and outlets (Bticino, National or its equivalent)
 - b. Convenience outlets (Bticino, National or its equivalent)
 - c. ACU and emergency light outlets
 - d. 2 – T8 LED fluorescent lamp with diffuser (68 sets)
 - e. Orbit fan (33 units)
 - f. Pin light LED 11 W (15 sets)
 - g. LED Automatic Emergency Lights – 14 sets (2-2W LED, 4V 4Ah lead acid battery with 8 hours operating time)
4. Construction of service entrance post.
 5. Consult plan for details and extent of works.
 6. Tap to the source.

VIII. Plumbing Works

A. Water Supply Line

1. Adopt PPR pipes and fittings for water line.
 - a. 1" and 1/2" Ø for water line.
 - b. Provide gate valve for every comfort room.
2. Tapping to the source is included.
3. No pipe should be embedded without testing it to leak.

B. Sewer Line

1. Adopt PVC heavy duty orange pipes and fittings (Sanimold type with O-ring or its equivalent) for ventilation, downspout and the whole sewer line system including septic vault fittings.
 - a. Use 4" Ø for main line and water closet
 - b. Use 2" Ø for lavatory and 3" Ø for ventilation.
2. Provide 4" Ø PVC pipe for downspout.
3. Provide brass roof drains.
4. Provide two units septic tank with pipes extending to the nearest disposal area.
5. Provide catch basin with reinforced concrete pipes. (See plan for sizes)

C. Fixture

1. Provide the following for the comfort rooms:
 - a. Brass floor drain
 - b. Colored tank type water closet, counter top type lavatory and urinal including wall hung lavatory for PWD CR.
*Note: All fixtures must be **HCG, American Std, Toto** or approved equivalent, colored and complete with all accessories.
 - c. American standard made faucets (plain bibb) for every cubicle and lavatory.

IX. Painting Works

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

WOOD

1. Apply one coat of flatwall enamel white. Allow to dry overnight.
2. Repair minor surface imperfection with glazing putty. Let dry then sand.
3. Apply at least two coats of Quick Dry Enamel in the desired color. Allow an overnight intercoating interval.

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.

CONCRETE

1. Treat the surface with concrete neutralizer. Mix one part with 16 parts water by volume.
2. Apply Latex flat as primer. Repair minor surface imperfections with a suitable putty. Let dry, then sand.
3. Apply at least two coats of colored dirt resisting semi-gloss latex (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.

- X. 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 used or employed.