



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

BILL OF QUANTITIES

IMPROVEMENT OF SILANG CAMPUS (CONSTRUCTION OF PERMANENT STAGE) ABC: ₱3,510,982.39 COLLEGE/UNIT/CAMPUS: SILANG CAMPUS					
			Bill of Quantities		
Item No.	Description	Unit	Quantity	Unit Price (Pesos)	Amount (Pesos)
I	EARTHWORKS (Pesos _____ _____ and _____ centavos)				
II	CONCRETEWORKS (Pesos _____ _____ and _____ centavos)				
III	MASONRY/TILE WORKS (Pesos _____ _____ and _____ centavos)				
IV	MISCELLANEOUS WORKS (Pesos _____ _____ and _____ centavos)				
V	CARPENTRY WORKS (Pesos _____ _____ and _____ centavos)				
VI	TRUSSES/ROOFING WORKS (Pesos _____ _____ and _____ centavos)				
VII	PLUMBING WORKS (Pesos _____ _____ and _____ centavos)				
VIII	ELECTRICAL 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. IMPROVEMENT OF SILANG CAMPUS (CONSTRUCTION OF PERMANENT STAGE)

GENERAL NOTES:

1. The project should be finished in 150 calendar days.
2. There is an existing structure and verification of the actual site is a must.
3. The area should be cleared/cleaned before and after the construction work at least ten meters away from the building line. Unusable used formworks, excessive soil fill and all other unwanted debris of construction works should be disposed properly.

B. Technical Description

I. Earthworks

- A. Site Preparation/ Temporary Enclosure/ Mobilization/ Demobilization/ Office/ Bunkhouses/ Comfort Rooms/etc.

Provide the following:

- Billboard
- Bankhouse with office
- Temporary comfort rooms
- Site temporary enclosure may be blue sack or any suitable materials that may enclose the workplace

- B. Excavation, Chipping, Dismantling, Backfilling, and Clearing Works

1. Excavation for column footing, wall footing, storm drainage, catch basin and septic tank.
2. Excavation of columns/wall footings, tie beams, catch basins and cistern/septic tank.
3. All dismantled items will be subjected to inventory and inspection by the project inspector/end-user and will be hauled by PPS Personnel.

- C. Additional fill /soil poisoning

1. Additional fill is included.
2. Gravel fill: 0.05 m. thick

II. Concrete Works

- A. Cast-in-place concrete

1. This work includes concrete works within the specified grid of the building, such as footing, column, stiffeners, lintel beams, slab and roof beam.
2. Strength of concrete to be adopted shall be **3500 psi** at 28 days.
3. Concrete works should be free from honeycomb upon turn-over.
4. Provide necessary tools and equipment needed for concrete works.

- B. Steel reinforcement

1. Use deformed bar grade 40. See plan for sizes of bars needed.
2. Provide necessary tools and equipment needed for steel works.
3. See plan for details and extent of work.

- C. Material testing for construction materials and cylinders shall be conducted and shouldered by the contractor.

III. Masonry/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 5" for the perimeter/exterior walls and one unit septic tank.
 - b. CHB 4" for interior/partition walls and catch basin.
2. Masonry works should be plastered plain cement .

- B. Tile Works

1. Supply and installation of non skid tiles 0.40 m. x 0.40 m. for all floors. Tiles must be accented with dark colors.
2. Supply and installation of ceramic colored tiles 0.30 m. x 0.30 m. for comfort rooms.
 - Tiles must be installed for the entire floors and walls.
 - Walls should be provided with accent/belts using dark colored decorative tiles 2" x 8"
3. Supply and installation granite slab for all counters, including walls.
4. Supply and installation of pebbles white for stairs and landings.
5. Consult the end user for color preference of tiles.

IV. Miscellaneous Works

Supply and installation of the following:

1. Doors

- a. **For Steel Doors (D-1 & D-2).**

- **2 sets D-1:** 0.90 x 2.10 Steel Doors with complete accessories
- **4 sets D-2:** 0.80 x 2.10 Steel Doors with complete accessories
- Powder coated finished.
- Provide heavy duty hinges and lever locksets.

- b. **For Aluminum doors D-3** (YP/Buss body).
 - **5 sets D-3:** 0.60 x 1.40 Aluminum Doors with complete accessories
 - Provide heavy duty hinges and locks
 - Provide heavy duty accessories
- 2. Windows
 - a. **2 sets W-1:** Aluminum sliding glass window complete with all accessories; 1/4" thick colored glass; powder coated aluminum framing & 2"x 4" jamb
 - b. **4 sets W-2:** Aluminum awning glass window complete with all accessories; 1/4" thick colored glass; powder coated aluminum framing & 2"x 4" jamb
- 3. Provide laminated wood flooring at stage. Use laminated wood flooring.
- 4. Stair railing
 - a. Provide 1.5 mm thick stainless tubing for railings. Use 2" & 1" tubing.

V. Carpentry Works

1. Provide necessary form lumber and scaffolding needed for the completion of the project.
2. Provide ceiling works for the entire area (interior and eaves).
 - a. Use pre-painted spandrel for ceiling board.
 - b. Use pre-painted end molding and center molding.
 - c. Provide 3" corneza for ceiling corners (interior).
 - d. Provide metal furring for ceiling joist.

VI. Trusses and Roofing Works

1. Fabrication/supply & installation of steel trusses and roofing.
 - A. Trusses:
 1. See plans for sizes of pipe 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 4" at 0.60 m. on center.
 6. Provide 12 mm 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 12 mm. Ø with nuts and washers for sag rod.
 - B. Roofing:
 1. Adopt gauge 26 (0.5mm) rib type pre-painted roof sheet.
 2. Adopt gauge 26 (0.5mm) stainless gutter.
 3. Provide pre-painted spandrel 6" for fascia cladding.
 4. All attachment for roofing sheet and ridge roll shall be 2 1/2" teck screw for metal with water sealant.

VII. Plumbing Works

- A. Storm Drainage, Septic Tank
 1. Construction of catch basin and septic tank.
 2. See plans for detail and extent of works.
- B. Water Supply Line
 1. Adopt PPR pipes and fittings for water lines.
 2. Tapping to the source is included.
 3. Provide one unit heavy duty faucet (US) for each cubicle of comfort rooms.
 4. Provide one unit stop valve for every comfort.
- C. Sewer Line
 1. Adopt PVC heavy duty orange pipes and fittings (Sanimold type with O-ring or its equivalent) for ventilation and the whole sewer line system including the septic vault fittings.
 - Use 6" Ø for the main line.
 - Use 4" Ø for water closet.
 - Use 3" Ø for all floor drains and ventilation.
 - Use 2" Ø for lavatory.

Note 1: P-traps for floor drain should be located outside the building (not embedded to the concrete).

Note 2: Maintain 2% slope on all Comfort Room Flooring towards the drain.
- D. Fixture and Tile Works
 1. For Comfort Room
 - a. Provide BRASS floor drains for every cubicle. See plan.
 - b. Adopt colored tank type water closet.
 - c. Adopt colored under the counter lavatory
 - d. Adopt colored urinal with partition

Note: All fixtures must be TOTO/HCG/American Std or any approved equal complete with heavy duty fittings and accessories.

VIII. Electrical Works

- A. Supply and installation of the following:

1. PVC pipes including wiring from main panel to sub-main panel.
2. Feeder line/main line should be from building to secondary post only. Secondary posts should be at a maximum of 20 meters from the building.
3. All panel boards and circuit breakers needed to complete the project. Bolt-on type Nema Standard should be used.
4. Conductors and PVC conduits/junction box/utility box /convenience outlet/light outlet
 - a. PVC conduit orange pipe
 - b. Utility and junction boxes should be PVC & deep type.
 - c. THWN stranded wires with sizes indicated on the plan
5. Electrical fixtures/switches/outlets and other electrical devices.
 - a. Switches (Bticino, National or approved equal)
 - b. Convenience outlet (Bticino, National or approved equal)
 - c. 1-gang ACU outlet, special purpose, emergency light & exhaust fan outlets (Bticino, National or approved equal)
 - d. 6 units Emergency light
 - e. Flood lamp LED 20W (8 sets)
 - f. Spot light LED 20W (6 sets)
 - g. Pin light LED 7W (26 sets)
 - h. Fluorescent lamp (LED) 1-T5 with aluminum louver diffuser (5 sets)
 - i. Fluorescent lamp (LED) 2-T5 with aluminum louver diffuser (16 sets)
- B. Other matters concerning electrical works
 1. All emergency light outlets should be installed to the lighting circuit outlet.
 2. Tapping of Panel to the source is included.
 3. Testing/commissioning of electrical systems.
 4. See electrical plan and specification for additional information

IX. Painting Works

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

- A. Wood
 1. Apply one coat of enamel white paint. Allow to dry overnight.
 2. Repair minor surface imperfections with suitable putty. Let dry then sand.
 3. Apply at least two (2) coats of QDE in the desired color. Allow an overnight inter-coating interval.
- B. Metal
 1. Apply epoxy primer by brush or spray. Allow to dry for 24 hours. Apply suitable putty in imperfections.
 2. Apply at least two (2) coats of QDE in the desired color.
- C. Concrete
 1. Treat the surface with concrete neutralizer. Mix one part with 16 parts water by volume.
 2. Apply skim coat as primer. Repair minor surface imperfections with a suitable putty. Let dry, then sand.
 3. Apply at least two coats of colored dirt resistant semi gloss latex paint (factory mixed).

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

- C. 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.
- D. 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. **Note: In the event that discrepancies on plans and scope of work occur, generally, the scope of work prevails.**
- E. 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.**
- F. 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.
- G. Construction safety and health program as well as construction schedule (PERT/CPM/S-Curve) shall be provided by the winning bidder.
- H. 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.