CALAMBA WATER DISTRICT
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24/7 Public Service
PHP QMS 2193 0047

PROJECT: REHABILITATION OF CR INCLUDING OFFICE AND BUILDING APPURTENANCES
SUBJECT: SCOPE OF WORKS AND SPECIFICATIONS
LOCATION: LAKEVIEW SUBDIVISION BRGY HALANG, CALAMBA, LAGUNA
DATE : SEPT 15, 2023

EXCAVATION AND BACKFILLING

1.1 SCOPE

The work covered by this section of the specification consist in furnishing all items, articles, methods, labor equipment appliances and materials and in performing all operations that may be necessary proper or incidental, to complete excavation, filing backfilling and grading in accordance with this section of specification all applicable plans and drawing, and subject to the term and condition of the contract.

1.2 EXCAVATION

A. The contractor shall make all necessary excavations for foundations to grades indicated without extra compensation including all other excavations, required and necessary for the proper persecution of the work. Incidental excavation to the level the bottom of footings compacting and tamping are included in the building contract.
B. Footing shall not be placed on fill.

1.3 FILLING AND GRADING

A. All excavations shall be backfilled presently as work permits after concrete walls and piers have attained full design strength and/or as the engineer directs.
B. After all forms have been removed from footings, walls and piers, the materials from excavation free from wastes and objectionable matter shall be use for backfilling around them. This filling shall be used for layers not exceeding 0.15 mts. (6"), thoroughly tampered.
C. In spaces where slab rest on ground, (or on fill) this shall be levelled and accurately graded with 0.10 mts (4") of gravel and sand, and tampered thoroughly before concrete pouring is done.

CONCRETE AND MASONRY WORKS

2.1 GENERAL

All concrete work shall be done in accordance with standard "specification for government reinforced concrete" as adopted by the government in so far as it does not conflict with the specific provisions specified herein for "concrete masonry works" and the revised proportioning of concrete as specified hereinafter.

2.2 USE CLASS "A" (3000-PSI CONCRETE) FOR FOOTINGS, COLUMNS, BEAMS, AND ALL CONCRETE SLABS. (2500PSI) FOR SLAB ON FILL.

2.4 REINFORCING STEEL

Unless otherwise shown on plans, reinforcing steel shall be deformed bars, standard size, and in accordance with the metal reinforcement and requirements of standard specifications for concrete and reinforced concrete.

2.5 WOOD FORMS

Shall be sound, good quality lumber, free from large loose knots and shall be less than 1/2" thick plywood, or boards of even thickness.

2.6 CONCRETE HOLLOW BLOCKS

For walls and partitions shown in the drawing requiring concrete hollow blocks, use approved machine locally made blocks.

A. Specimens shall be representative of whole lot of units from which they are selected. (Twenty days before any work is started)

B. Reinforcing bars shall be 12mm diameter bars. All horizontal reinforcement must be tied to the vertical reinforcement at their intersection. All horizontal reinforcement must be place at every three layers of hollow blocks and tied to the vertical reinforcement at 0.60m on centers at their intersections.

FLOOR AND WALL TILES, FLOOR FINISHES, PAINTS AND COATINGS

3.1 SCOPE

The work covered by this section of the specification consist in furnishing all plan, labor, equipment, appliances, methods, and materials and in performing all operation in connection with the installation of all floor tiles, floor finishes, complete in strict accordance with this section of the specifications and applicable drawings, and subject to the terms and conditions of the contract.

3.2 FLOOR FINISH

Material Requirement

- For interior floor finish, use vinyl tiles, same as with the existing vinyl tiles.
- For exterior floor finish, use epoxy enamel paint.
- For bathrooms, use 60x60cm non-skid floor tiles, or as approved by the engineer-in-charge
- Submit a sample of at least two(2) tiles for approval

3.3 GENERAL REQUIREMENTS, TILES ON VERTICAL SURFACE

Vertical units and joints together with caps, cases and moulding, shall be maintained plumb and level and even. Every fourth coarse shall be brought to a level and straight line. All caps, bases cave mouldings or other trim tile shall be backfill with mortar. As soon as the mortar setting bed has sufficiently hardened, the tile walls or any vertical surface shall be washed with clean water prior to grouting or pointing. All tiles shall be firmly secure in place and all finish surfaces brought to true and level planes.

Material Requirement

- Wall bathroom tiles to be installed shall have the following dimensions: 60x40cm. The coverage of wall tiles shall be from floor finish up to ceiling. In addition, one side of the comfort room shall be different from the other side of the bathroom wall (accent walls).
- Submit a sample of at least two(2) tiles for approval

3.4 PAINT AND COATINGS

- This Item shall consist of furnishing all paints, enamels, varnishes and other products to be used including labor, tools and equipment required as shown on the Plans and in accordance with this Specification.

Materials Requirements

- Specified materials shall be delivered to the job site bearing manufacturers' name, brand name, type of paint, and analysis showing all important constituents of the paint. color of paint and instructions for thinning.
- Specified item and/or its components shall be handled in such manner as to prevent damage. The same shall be properly protected from harmful elements or damage by other work prior to its incorporation Into the Project.
- Store materials in a well-ventilated space designated for the storage and mixing of paint. Materials delivered to the site shall be properly stored so as to minimize exposure to extremes of temperature.

DRAINAGE SYSTEM AND SOIL PIPING

4.1 SCOPE

The work covered by this section of the specification consist in furnishing of all plants, labor, equipment, appliances and materials and performing all operations, proper or incidental. In connection with the installation of drainage system and the sewer piping to and from septic vaults and private sewer as the case may be, applicable drawings and subjects to the terms and condition of the contract.

PLUMBING

5.1 SCOPE OF WORK

A. The contractor shall furnish all labor, tools and materials necessary for the complete installation of the plumbing system, including all fixtures and connections of the building to the sewer, or to and from septic vault as the case may be.

a. The plumbing shall also include the water service to all fixtures and equipment within the building, the water supply pipes to the water main. It also includes the waste, soil and bent pipes.

b. The contractor shall pay all fees and permits incidental to the completion of the work, ready for service.

c. All works shall comply with the pertinent provisions of the national plumbing code of the Philippines.

5.2 THE DRAWINGS SHOW THE GENERAL ARRANGEMENT OF ALL PIPINGS. HOWEVER, WHERE LOCAL AND/OR ACTUAL CONDITIONS OF THE JJOB OR AT THE JOB SITE NECESSITATE A DEVIATIONS OR RE-ARRANGEMENT. THE CONTRACTOR SHALL PREPARE AND SUBMIT FOR APPROVAL DRAWINGS FOR THE PROPOSED ARRANGEMENT.

5.3 PIPING

A. Every water closet and lavatory shall have a separate shut-off.

B. Water pipes shall consist of PPR pipes.

C. Exposed bent pipes in rooms or on the exterior of the building 2 inches diameter shall be of

steel, galvanized pipe. Waste pipes shall be of cast iron, except those exposed in rooms which shall be nickel plated like traps.

5.4 COVERING OF WORKS

No drainage of plumbing system or part thereof shall be covered until it has been inspected, tested and approved as specified.

WATER DISTRIBUTION

6.1 GENERAL REQUIREMENTS

A. The contractor shall install the water distribution system complete with connections to public utility service main and service connection to buildings.
B. The layout if water pipes shall be approved by the engineer before any work in the water supply piping is started.

6.2 VALVED

A. Valves 3-inch diameter and under shall be bronze

B. No valve shall be set under roads, pavements or walls, except where noted. All valves on waterline underground shall provided with cast iron extension boxes and covers at grade properly identified or marked "w" or enough to extend two feet above top of deepest valve box shall be provided for each valve furnished.
C. All water supply to each room shall have separate gate valve.

6.3 PIPE SIZES

Refer to the working drawings.

CARPENTRY AND JOINERY WORKS

7.1 SCOPE

The work covered by this section of the specifications consists in the furnishing of all items, articles, plants, labor, materials, equipment, appliances and everything listed mentioned or scheduled on drawings and in the specifications and in performing all operations necessary for the completion of all carpentry and joinery work in

accordance with all applicable drawings and full size details, and subject to the terms and conditions of the contracts.

7.2 GENERAL CONDITIONS

A. Lumber shall be of the approved quality of the respective kinds required for the various parts of the work, well seasoned, thoroughly dry, straight and free from large loose or unsound knots, sap, shakes, or other imperfections impairing its strength, durability or appearance.
B. Framing lumber shall be of the rough lumber shown on drawings.

C. All exposed wood work shall be smoothly dressed and well sand papered.

7.3 FRAMES

All frames shall be done as far as possible with carefully putted mortise and tenent joints.

7.4 WORKMANSHIP

Unless otherwise specified, all wood mouldings, wood framing for doors and windows, cabinets and doors shall be shop-fabricated.

7.5 DOORS, GENERAL

A. All lumber for doors including bar doors, cabinet and closet doors and all wood work of similar nature, shall be kiln dried with not more than fourteen percent (14%) moisture content.

B. All doors must be guaranteed against warping, twisting, or cracking for a period of six (6) months from the date of final acceptance of the finished buildings.

7.6 KINDS OF PLYWOOD

Marine plywood for interior works and ordinary plywood for exterior works.

PLUMBING FIXTURES (TOILET AND BATHROOM ACCESSORIES)

8.1 SCOPE

A. The work covered by this section of the specifications consists in furnishing all plants, labor, equipment, and tools articles, appliances and materials, and in performing all operations in connection with the installation of all plumbing fixtures, fittings and accessories complete in strict. Accord this section of the specifications and the applicable drawings, and subject to the term and conditions of the contract.

B. All plumbing fixtures, fittings, accessories, materials and all work obviously necessary for the proper functioning of all installations, whether or not specifically called for in the specifications or indicated on drawings, pre-included in this work.

8.2 LAVATORIES

The contractor shall provide and set complete ready for service the following lavatories:

A. For all toilet rooms, use vitreous China lavatory, colored, size 16" x 20", with splash back-front overflow, anti-splash rim cast-in-soap dish, basin off-center. To right hand side, pocket hanger and integral China brackets, (or approved equivalents)

8.2 WATER CLOSETS

Vitreous China free-standing close coupled closet combination with integral seat siphon wash bowl with jet, extended rear shelf, PF 4049 tank with cover and with locking device (or approved equivalents)

8.3 URINALS

Wall hung urinal with back inlet, complete with fittings and accessories. Minimum dimension shall be 365L x 444H x 200D mm or equivalent as approved by the engineer-in-charge

HARDWARE

9.1 GENERAL CONDITION

A. The contractor shall provide all rough hardware required for the completion of work, including nails, spikes, bolts, lag, screws and shall provide and fit in place all finishing hardware hereinafter specified -put in the most improved manner with screws to match the finish.

B. Finishing hardware, suitable to the service required fully equip in the most satisfactory operative conditions, for all doors, windows, transom sashes, screen doors and windows, closet, built-in cabinets, counters, drawers, and other operating members throughout the project shall be furnished and installed or fitted by the contract .

ELECTRICAL, WIRING INSTALLATIONS

11.1 GENERAL

A. Under these specifications, the contractor shall furnish and deliver all equipment, materials, labor and supervision at the site or construction and shall install complete, ready for service, the electrical wiring installation of the buildings, all in accordance with the plans and accompanying specifications.

B. Tenders shall include the electrical installations complete as shown on plans including the service entrance ducts for the lighting and power systems, service meter and meter cabinet, feeder dust and feeder conductor, feeder panels, distributions branch circuits, conduit piping, conduit boxes, junction boxes, well switches, telephone outlets, convenience outlets, ceiling line outlets, recessed light outlets, lighting fixtures and outlets, air-conditioner and outlets, and all electrical connections of any description that may be required to complete the installation ready
for service, all in accordance with the National and Philippine Electrical Codes, although such equipment and devices may not show on plans nor mentioned in these specifications.

C. All conductive and metallic materials is enclosing electric conductors and equipment shall be positively grounded and shall have electrical continuity for the purpose of preventing a potential above ground on all metallic enclosures

D. The electrical work to be installed hereunder shall comply with the rules and regulations of the latest edition of the National and Philippine Electrical Codes with the existing applicable ordinances or the local government and with the rules and requirements of the local power and telephone companies.

E. All electrical materials, equipment, appliances, device, fittings to be used hereunder be brand new and of the types and manufacture approved.

11.2 TEST AND GUARANTEE

A. When the installation is reported in writing by the electrical contractor to be complete and ready for acceptance, test as directed shall be made by the electrical contractor in the presence of the engineer-in-charge.

B. All apparatus, materials and labor required for making test of all work shall be supplied by the contractor at his own expense.

11.3 DISTRIBUTION PANELS AND CABINETS

Shall be standard factory products of a reputable electrical manufacturer and shall be of the flush type. All trims shall each have a door equipped with chrome-plated catch look and two (2) keys.

11.4 CONDUIT WORKS

A. Conduit dust to be installed for this project shall be PVC electrical conduits smooth inside and free from flaws and imperfections.

B. No conduit of less than ½ inch nominal diameter will be permitted on any-part of the installation and shall be larger where so required by the number and size of wires to be installed therein.

11.5 WIRING METHODS

All conductors shall be used for this project shall be rubber-covered, double braided, single copper conductor of the approved type of building wires. They shall rubber-covered, double braided, single copper conductors. If run in underground conduits or conduits installed at wet locations, conductors shall be "THWN" electrical wires and cables (or approved equivalent).

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