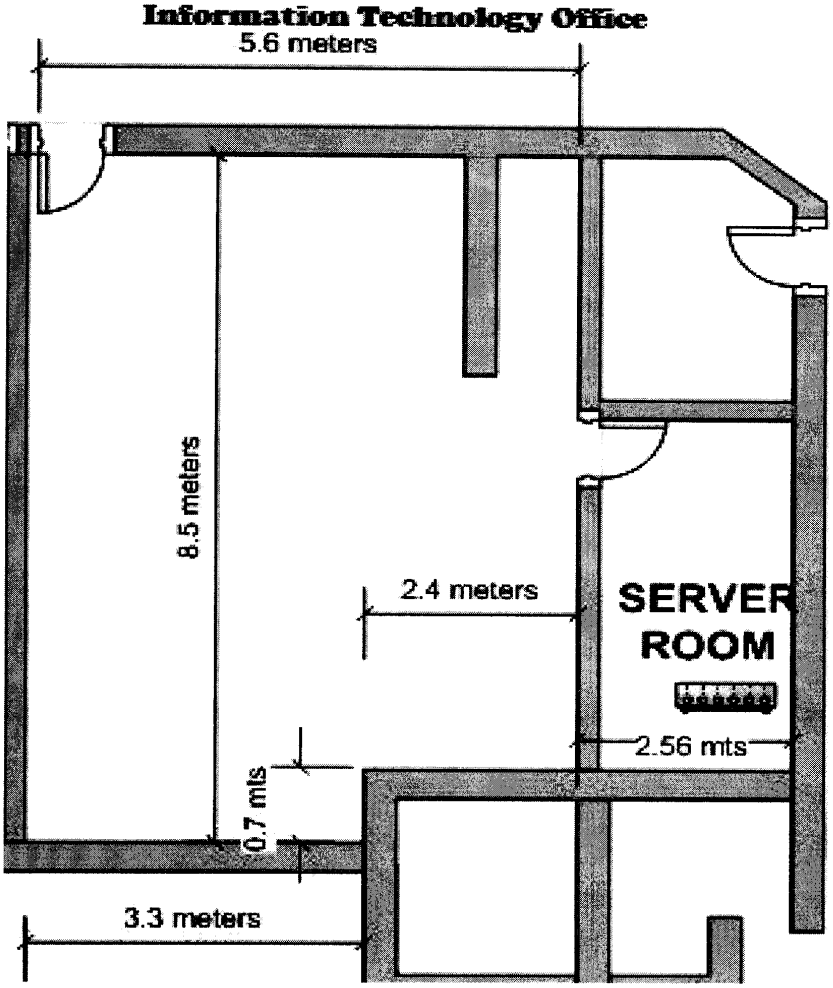
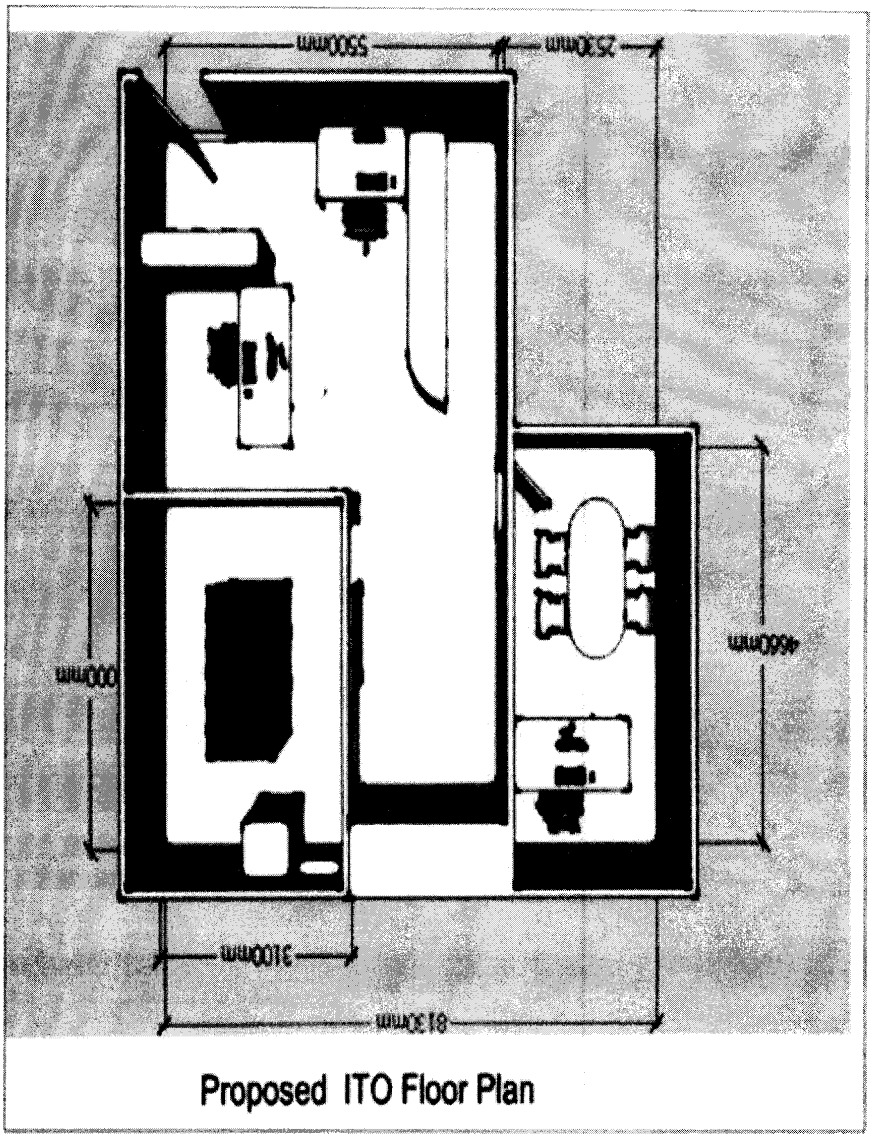
TERMS OF REFERENCE

A. **DATA CENTER**

1. Current IT Office Floor Plan



2. Proposed IT Office Floor Plan



Proposed ITO Floor Plan

3. Scope of works

   i. Project planning
   ii. Installation
      1. Labor and materials
      2. Civil and electrical works (provision/installation)
      3. Setup and configuration
      4. Cable Tagging, Testing and commissioning
      5. Other necessary components
   iii. Equipment power-up and pre-configuration
   iv. Integration, configuration and testing
   v. Fine tuning and monitoring
   vi. User and technical training
   vii. Documentation
      1. User manuals
      2. Network diagram
      3. Line diagram
      4. Expansion plan (scalable design)
   viii. Warranty
      1. Three (3) years warranty on hardware and software with next business day replacement for active devices
   ix. Technical support
      1. Two (2) years on-site free labor and technical support
      2. Two (2) years 24x7 help desk facility and virtual technical support

The contractor shall furnish all labor, materials, tools and equipment, and perform all operations necessary to complete the supply, delivery, installation, testing and commissioning of Structured Cabling for a minimum of one hundred forty five (145) data nodes, network switches, and transfer and improvement of the IT Office Data Center. The contractor must provide advance training for IT Personnel and other interested personnel for the Network Equipment/switches, basic trouble shooting for the Structured Cabling and Management of Data Center for at least five (5) days.

4. Construction of the Data Center

   i. Provision of Floor Plans and Working Drawings

The proponent shall submit a blue print of General Perspective that includes other working drawings such as Floor Plan, electrical computation design for review and evaluation if the existing electrical system will suffice.

Safety Enclosures:

The contractor shall provide safety barriers, enclosures, warning signs and other safety nets at the working area to warn passersby of the ongoing work to avoid untoward incidents in the course of the construction works.

   ii. Supply, delivery, installation of materials and labor for the following civil works:
      1. Construction of new data center room using glass panel enclosure (tempered clear glass)

2. Door:

a. Clear Tempered Glass Door with Stainless Handle & complete accessories

b. Door frame size should be sufficient to allow for easy introduction and removal of equipment. For new construction, doors should be 42 inches wide and 9 feet tall. If hinges are exterior to the room, doors should use locking hinge pins.

c. Should be installed with Biometrics System Magnetic door lock mechanism set

d. An electronic access control system should be in place and log all access to data center room

e. Secured doors must fail open in a fire emergency.

3. Windows:

a. Installation of Hardiflex board and painting (blend w/ existing color)

4. Provision for the PACU ducting
5. Waterproofing - Application of waterproofing materials on new surface to avoid leakages
6. Board Partition - Moldings and Base Boards
7. The ceiling of the room should be at least 9 feet high.
8. Floors: an anti-static floor surface is recommended

iii. Supply, delivery, installation of materials and labor for the following electrical, electronic and mechanical works

1. Ceiling: Installation of ceiling data and power cables and pipes
2. Biometrics System Magnetic door lock mechanism set
3. Back up air conditioning unit – 1hp split inverter type
4. Power provisioning for the PACU, 2 x 6 KVA UPS
5. Power provisioning for the active components
6. Power outlets and lighting, electrical panels
7. Transfer of existing electrical panel board

iv. Supply, delivery, installation, set-up and commissioning of the following equipment and materials:

1. Cable tray
2. Cable Ladder
3. Precision Air Conditioning Unit (PACU)
4. 1 server type rack and 1 network type rack that are PACU compatible
5. Required Cables and other materials/accessories

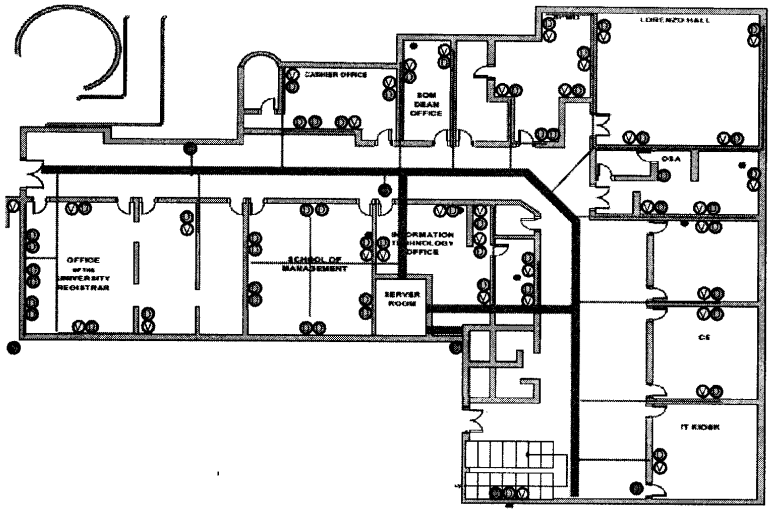
v. Replace existing battery of 650VA UPS

vi. Transfer from existing room to the new Data Center room

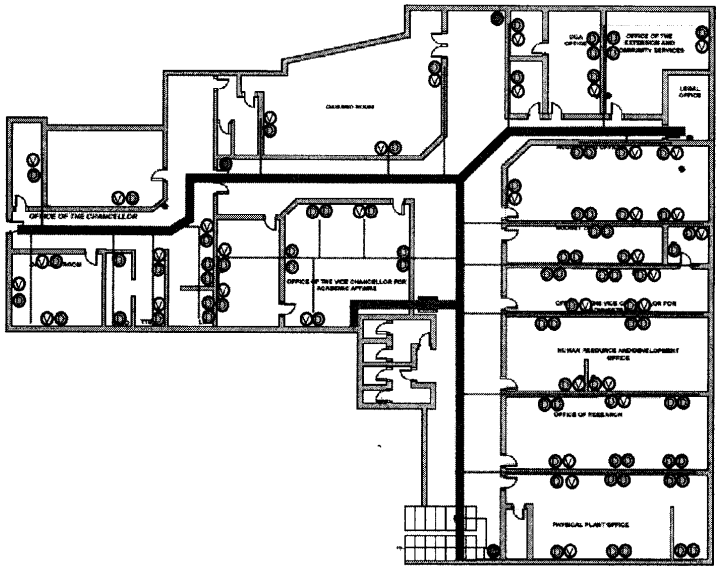
1. Data cabinet, racks, components and / or equipment (servers, switches, etc.)
2. Re-routing, arranging and tagging of (structured) cables and wires to the new server room
3. Supply and Installation of materials and or equipment needed

A. **STRUCTURED CABLING FOR THE ADMINISTRATION BUILDING**

1. Cabling Layout Plan Admin Building 1st Floor.



2. Cabling Layout Admin Building 2nd Floor.



3. Installation

1. A total of 218 nodes of the two floors.
2. The common path of the cabling must be placed in an enclosed cable tray with removable cover on top and securely attached in the concrete ceiling/trusses completely hanging without touching the ceiling joints.
3. Cable Tray specifications:
    - Must be metal with rust proofing paint or better.
    - Minimum width of 6inches and at least 2inches height.
    - Using big PVC pipes that serve as cable tray is strictly prohibited.
4. Cabling from the second floor must be dropped directly to the server room located in the ground floor.
5. Cables coming out from the cable tray leading to the outlet must be enclosed by at least PVC pipe.
6. A Connector/Adapter must be used to securely attached the PVC pipe to the cable tray.
7. Cables drop from ceiling to the outlet must be at least covered with good quality decorative moulding for aesthetics.
8. All outlets except for IP Camera must be terminated in an I/O with wall plate of the same brand of the cable.
9. All cables must be terminated in the patch panel of the same brand of the cable.
10. MULTIPLE BRANDS IS NOT ALLOWED. All Cables & passive components must be of the same brand. The brand must be known for durability and reliability (should be supported with industry certification).
11. Cable to use is UTP CAT6.
12. The whole structured cabling must provide at least a GIGABIT bandwidth.
13. Each node must be tested using high-end equipment to determine if the node supports GIGABIT bandwidth.
14. Patch panels must be labeled properly identical to each end node outlet.
15. The structured cabling must last for at least ~~10~~ **25** years.
16. A certification from a certified structured cable installer is a MUST.
17. Horizontal and backbone cables should have an end-to-end labelling.
18. A unique identifier shall be marked on each faceplate to identify it as connecting hardware. Each port in the faceplate shall be labelled with its identifier.
19. A unique identifier shall be marked on each piece of connecting hardware to identify it as connecting hardware. Each port on the connecting hardware shall be labelled with its identifier.