



# INDEPENDENT DEVELOPMENT TRUST

TENDERING PROCEDURES, RETURNABLE DOCUMENTS, AGREEMENT AND  
CONTRACT DATA, SCOPE OF WORK AND SITE INFORMATION

## VOLUME 2 OF 2

APPOINTMENT OF A CONTRACTOR FOR COMPLETION OF THE OUTSTANDING WORKS  
AND NEW ADDITIONS FOR TROTSVILLE PRIMARY SCHOOL FOR THE DEPARTMENT OF  
EDUCATION, NORTHWEST PROVINCE.

BID NO: DOE14NWER016

CLOSING DATE AND TIME: 24 JULY 2023 at 12h00

Independent Development Trust

*SCM / Technical Enquiries*

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Bidder: .....

CIDB Registration Number: .....

CSD Registration Number: .....

COIDA / FEMA Certificate Number: .....

Contact Person: .....

Contact Details: .....

## **PART B**

### **TECHNICAL PROJECT SPECIFICATION**

TECHNICAL PROJECT SPECIFICATION FOR THE SUPPLY,  
DELIVERY,  
INSTALLATION, COMMISSIONING AND TESTING FOR THE  
ELECTRICAL INSTALLATION AT  
TROTSMVILLE PRIMARY SCHOOL

| DESCRIPTION |                                                     |
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| 1           | GENERAL                                             |
| 2           | REGISTRATION AS ELECTRICAL CONTRACTOR               |
| 3           | SUPPLY BOARDS                                       |
| 4           | CHANNELS, POWER SKIRTING, CONDUITS AND CABLE LADDER |
| 5           | WIRING                                              |
| 6           | LIGHTS AND SOCKET OUTLET POINTS                     |
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## **TECHNICAL PROJECT SPECIFICATION**

### **1 GENERAL**

#### **1.1 SITE INFORMATION**

This is the technical specification for electrical installation for Trotsville Primary School.

#### **1.2 SCOPE OF WORK**

- Supply, delivery, installation, commissioning, testing and handing over in working condition of:
  - Building general electrical installations,
  - Low Voltage Distribution Panels,
  - Electrical Cable Reticulation,
- Twelve (12) months free maintenance, after first delivery certificate.

#### **1.3 SUMMARY OF WORKS**

- Install new electrical installation in accordance with the drawings, Client's Technical Specifications and SANS 10142.
- Electrical connection from the supply authority end point.
- Provide a free maintenance of the electrical installation for a period of twelve (12) months, after the issuing of the first delivery certificate.

### **2. REGISTRATION AS ELECTRICAL CONTRACTOR**

Electrical contractors must register with the Department, prior to the commencement of any service. This registration must be done at the Regional Office

The Electrical contractor must provide the following documents, when registering with the department:

- (a) Electrical Installer Certificate
- (b) Electrical contractor's license.
- (c) Industrial council registration certificate.
- (d) Registration certificates and latest receipts of payment to the Workman's Compensation as required by the Workman's Compensation Act of 1941, as amended.
- (e) A valid and original TAX Clearance Certificate.

### **3. SUPPLY BOARDS**

The Contractor shall provide and install new distribution boards located as indicated on the layout drawings complete with all switchgears and accessories as per the Distribution Boards drawings. The contractor shall supply a set of workshop drawings on all distribution boards for engineer's approval before manufacture of the distribution boards commences.

#### **3.1 ELECTRICAL DISTRIBUTION BOARDS**

The contractor shall supply a set of approved workshop drawings on all low voltage distribution panels for engineer's approval before manufacture of the low voltage distribution panel commences.

The following types of distribution boards are required for the service:

- a) Main DB: DB A: Floor Standing
- b) Sub DB: DB B: Flush Mounted
- c) Sub DB: DB C: Flush Mounted
- d) Sub DB: DB D: Flush Mounted
- e) Sub DB: DB E: Flush Mounted
- f) Sub DB: DB F: Flush Mounted
- g) Sub DB: DB G: Flush Mounted
- h) Sub DB: DB H: Flush Mounted
- i) Sub DB: DB I: Flush Mounted

The Distribution Board shall have pad-lockable doors and security bars. Provide Spare Capacity: 25% spare capacity

#### 4 CHANNELS AND CONDUITS

##### 4.1 CONDUITS

Conduit installation shall be of limited length only. Most of the wiring shall be in the wiring channels from which the conduits shall T-off.

| APPLICATION                                                   | CONDUIT SYSTEMS |                 |       |      |     |
|---------------------------------------------------------------|-----------------|-----------------|-------|------|-----|
|                                                               | SCREWED STEEL   | PLAIN-END STEEL |       |      | PVC |
|                                                               | Black           | Galv.           | Black | Galv |     |
| Surface: in accessible roof space                             | Yes             | Yes             | Yes   | Yes  | Yes |
| Surface above accessible ceiling with other services          | Yes             | Yes             | Yes   | Yes  | No  |
| Surface above accessible ceiling without other services       | Yes             | Yes             | Yes   | Yes  | Yes |
| Surface above accessible ceiling with gang-planks as walkways | Yes             | Yes             | Yes   | Yes  | No  |
| Spaces between concrete slabs and false ceilings              | Yes             | Yes             | Yes   | Yes  | Yes |
| Surface visible                                               | Yes             | Yes             | Yes   | Yes  | No  |
| Surface on open slabs                                         | Yes             | Yes             | Yes   | Yes  | No  |
| Covered walkways                                              | No              | Yes             | No    | Yes  | No  |
| Hazardous areas                                               | Yes             | Yes             | No    | No   | No  |
| Built or cut into brick walls                                 | Yes             | Yes             | Yes   | Yes  | Yes |
| Cast in concrete                                              | Yes             | Yes             | Yes   | Yes  | Yes |
| In damp areas                                                 | No              | Yes             | No    | Yes  | Yes |
| Exposed to weather                                            | No              | Yes             | No    | No   | No  |
| In floors of laundries and other damp areas                   | No              | Yes             | No    | Yes  | Yes |
| Fire detection                                                | Yes             | Yes             | Yes   | Yes  | Yes |

##### 4.2 WIRING CHANNELS

Wiring channels shall form main part of the wire ways along the passage-ceiling void/side walls with conduits making T-offs from the wiring channels in a limited length.

Wiring channels must not be loaded to more than 60% of their capacity.

The following accessories shall form part of wiring channels installation. Snap-in Cover plate, Distribution Board Outlet, 90° Elbow (bends), Tee piece, Hangers, End Caps, and 4-Way pieces.

### **Services**

Install multiple duct runs or internal metal partitions where conductors for power, control, communication and other services are present.

## **5. WIRING**

Except where otherwise specified, all wiring shall be carried out in conduit throughout. **Only one circuit per conduit will be permitted.**

No wiring shall be drawn into conduit until the conduit installation has been completed and all conduit ends provided with bushes. All conduits and wiring channels to be clear of moisture and debris before wiring is commenced.

| <b>CIRCUIT</b>         | <b>PVC WIRE SIZE</b> | <b>BARE COPPER EARTH</b> |
|------------------------|----------------------|--------------------------|
| Lighting circuits      | 2.5 mm <sup>2</sup>  | 2.5 mm <sup>2</sup>      |
| Socket outlet circuits | 4.0 mm <sup>2</sup>  | 2.5 mm <sup>2</sup>      |
| Geyser Power Points    | 4.0 mm <sup>2</sup>  | 2.5 mm <sup>2</sup>      |
| Stove Power Points     | 6.0 mm <sup>2</sup>  | 2.5 mm <sup>2</sup>      |
| Geyser Power Points    | 4.0 mm <sup>2</sup>  | 2.5 mm <sup>2</sup>      |

Sizes of conductors not specified must be in accordance with the "Wiring Code".

The loop-in system shall be followed throughout, and no joints of any description will be permitted.

Where cable ends connect onto switches, fittings, etc. the end strands must be neatly and tightly twisted together and firmly secured. Cutting away of wire strands of any cable will not be allowed.

## **6. LIGHTS AND SOCKET OUTLET POINTS**

The contractor shall supply and install all light switches, socket outlets, isolators complete with cover plates as specified on the drawings and in the bill of quantities. They shall all be labelled.

### **6.1 LIGHT SWITCHES - Normal power (Earthed neutral supply)**

#### **Rating**

Light switches must be rated at 16 A, 250 V except where otherwise specified.

Switches must have protected terminals for safe wiring. Switches must have silver contacts.

#### **Wiring and Protection**

Each lighting circuit must be protected in the distribution board with a 10 A moulded case circuit breaker.

Lighting circuit wiring must consist of two PVC insulated, 2,5 mm<sup>2</sup> stranded copper conductors plus a 2,5 mm<sup>2</sup> bare stranded copper earth continuity conductor or a 4 mm<sup>2</sup> green-yellow PVC insulated, stranded copper earth continuity conductor as specified.

For single-phase circuits the colour of the PVC insulated conductors must be as follows:

|                            |                                    |
|----------------------------|------------------------------------|
| Live conductor             | :RED                               |
| Neutral conductor          | :BLACK                             |
| Earth continuity conductor | :GREEN-YELLOW or Bare as specified |
| Return conductor           | :WHITE or YELLOW                   |

In three-phase installations, ensure that all the socket outlets in any one room are connected to the same phase.

|                                      |                                                                                                                             |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| <b>Type</b>                          | <b>Single pole rocker switch</b>                                                                                            |
| <b>Rating</b>                        | 16 A                                                                                                                        |
| <b>Earthing</b>                      | Earth terminal on the yoke                                                                                                  |
| <b>Installation or mounting type</b> | 100 mm x 50 mm x 50 mm galvanised steel wall box                                                                            |
| <b>Circuit wiring</b>                | 2 x 2,5 mm <sup>2</sup> black and red PVC insulated copper conductors and a 2,5 mm <sup>2</sup> bare copper earth conductor |
| <b>Mounting height</b>               | 1300 mm above final floor level                                                                                             |
| <b>Wire way</b>                      | Galvanised trunking and/or 20 mm diameter conduit                                                                           |

## 6.2 SOCKET OUTLETS

Install socket outlets in the area as specified. Install normal power socket outlets in accordance with applicable standards except where specified otherwise in this section.

For single-phase circuits the colour of the PVC insulated conductors must be as follows:

|                            |                                    |
|----------------------------|------------------------------------|
| Live conductor             | :RED                               |
| Neutral conductor          | :BLACK                             |
| Earth continuity conductor | :GREEN-YELLOW or Bare as specified |

In three-phase installations, ensure that all the socket outlets in any one room are connected to the same phase.

### Socket outlets - Normal power

|                |                                                                                                                       |
|----------------|-----------------------------------------------------------------------------------------------------------------------|
| Type           | 3-pin, single,                                                                                                        |
| Switch         | Single pole rocker switch                                                                                             |
| Rating         | 16 A                                                                                                                  |
| Wall box       | 100 mm x 100 mm x 50 mm galvanised steel                                                                              |
| Circuit wiring | 4 mm <sup>2</sup> black and red PVC insulated copper conductors and a 2,5 mm <sup>2</sup> bare copper earth conductor |
| Wire way       | Galvanised trunking and/or 20 mm diameter conduit                                                                     |

### Mounting height for socket outlets

| Position                                                               | Height       |
|------------------------------------------------------------------------|--------------|
| General purpose outlets in entrance lobbies, offices, stores, passages | 400 mm affl  |
| Outlets above counters                                                 | 100 mm acl   |
| Kitchens and laundries                                                 | 1200 mm affl |

| Position                                                                                                   | Height |
|------------------------------------------------------------------------------------------------------------|--------|
| Offices, residences, hospital wards, corridors, nurses' homes, stores, dining rooms, reception, rest rooms | 400 mm |
| Manual training centres, work shops                                                                        | 900 mm |
| Classrooms, measured between the bottom edge of the blackboard and the centre of the outlet box            | 230 mm |
| Kitchens, domestic science centres, laundries                                                              | 1,2 m  |

## 7 **POWER POINTS**

Allow for the installation of power points and equipment as listed in the schedule and indicated on the drawings.

| Equipment  | Position/<br>Mounting Height | Wiring                                                                                     |
|------------|------------------------------|--------------------------------------------------------------------------------------------|
| Geyser     | In Ceiling Void              | 4 mm <sup>2</sup> PVC insulated conductors plus 2.5 mm <sup>2</sup> bare copper earth wire |
| Stove      | Wall Mounted                 | 6 mm <sup>2</sup> PVC insulated conductors plus 2.5 mm <sup>2</sup> bare copper earth wire |
| Siren      | Wall Mounted                 | 4 mm <sup>2</sup> PVC insulated conductors plus 2.5 mm <sup>2</sup> bare copper earth wire |
| Air Con    | Wall Mounted                 | 4 mm <sup>2</sup> PVC insulated conductors plus 2.5 mm <sup>2</sup> bare copper earth wire |
| Gate Motor | Wall Mounted                 | 10 mm <sup>2</sup> Cable plus 2.5 mm <sup>2</sup> bare copper earth wire                   |

## 8 **EARTHING OF A GENERAL ELECTRICAL INSTALLATION**

The contractor for this contract shall be responsible for all internal and external earthing such as the bonding of all fixed appliances like geysers, water pipes, etc. in accordance with SANS 10142, Part I and the Cliental Standard Specifications for General Electrical Installations

## 9 **SUPPORT SERVICES**

Only wire ways with draw wires for the following support services installation shall be installed as per the drawing layout:

- Communications systems
- Public Addresser

Wire Ways:     - 25 mm DIA Conduits  
                       - Wiring Channels

The actual wiring of the support services shall be done through a specialist contractor.

## 10 **CABLE**

Supply, install and connect all the low voltage cables specified. The cables must comply with the standard specification. The type of cable specified is an Earth Continuity Conductor (ECC) cable type.

Installation of cables shall consist of the following, laid in ducts or trenches or sleeves, and fixing support.

### Cable Schedule

Supply, install and connect the following cables:

| FROM        | TO        | CABLE SIZE                                                                                         |
|-------------|-----------|----------------------------------------------------------------------------------------------------|
| Meter Kiosk | Main DB-A | 70 mm <sup>2</sup> x 4-core PCV SWA PVC copper cable and 50 mm <sup>2</sup> bare copper earth wire |
| Main DB-A   | Sub DB-B  | 25 mm <sup>2</sup> x 4-core PCV SWA PVC copper cable and 16 mm <sup>2</sup> bare copper earth wire |
| Main DB-A   | Sub DB-C  | 16 mm <sup>2</sup> x 4-core PCV SWA PVC copper cable and 6 mm <sup>2</sup> bare copper earth wire  |
| Main DB-A   | Sub DB-D  | 16 mm <sup>2</sup> x 4-core PCV SWA PVC copper cable and 6 mm <sup>2</sup> bare copper earth wire  |
| Main DB-A   | Sub DB-E  | 16 mm <sup>2</sup> x 4-core PCV SWA PVC copper cable and 6 mm <sup>2</sup> bare copper earth wire  |
| Main DB-A   | Sub DB-F  | 16 mm <sup>2</sup> x 4-core PCV SWA PVC copper cable and 6 mm <sup>2</sup> bare copper earth wire  |
| Main DB-A   | Sub DB-G  | 16 mm <sup>2</sup> x 4-core PCV SWA PVC copper cable and 6 mm <sup>2</sup> bare copper earth wire  |
| Main DB-A   | Sub DB-H  | 16 mm <sup>2</sup> x 4-core PCV SWA PVC copper cable and 6 mm <sup>2</sup> bare copper earth wire  |
| Main DB-A   | Sub DB-I  | 16 mm <sup>2</sup> x 4-core PCV SWA PVC copper cable and 6 mm <sup>2</sup> bare copper earth wire  |

### 11. SCHEDULE OF DRAWINGS

The list of drawings is for all drawings associated with the Electrical Engineering Services. They are listed together for completeness and for information purposes only.

| DRAWING No. | DESCRIPTION                         | Size | Rev |
|-------------|-------------------------------------|------|-----|
| ...5(1)/1   | LIGHTING LAYOUT                     | A1   | TD  |
| ...5(1)/2   | POWER LAYOUT                        | A1   | TD  |
| ...5(1)/3   | ELECTICAL DISTRIBUTION BOARD LAYOUT | A3   | TD  |

### 12 EARTHING AND LIGHTNING PROTECTION INSTALLATION

A specialist company to be appointed will install earthing and lightning protection. The contractor shall provide wire ways where required for the earthing and lightning protection.

Lightning protection installations must comply with SABS 03.

### 13. SCHEDULE OF LUMAIRES

The light fittings and accessories are to be according to the specifications and shall be approved by the Client, complete with SANS mark of approval. Each light fitting shall be supplied complete with relevant lamps.

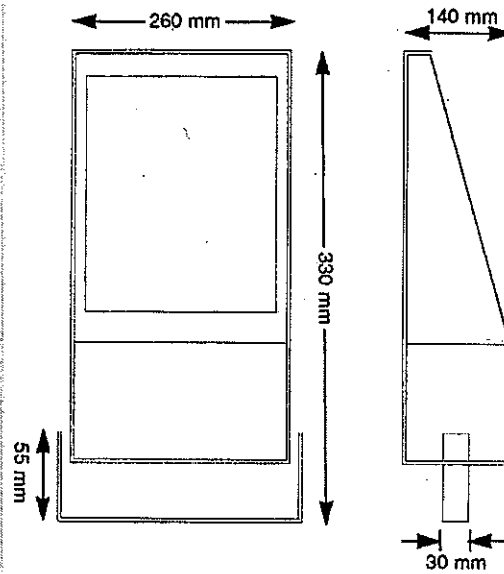
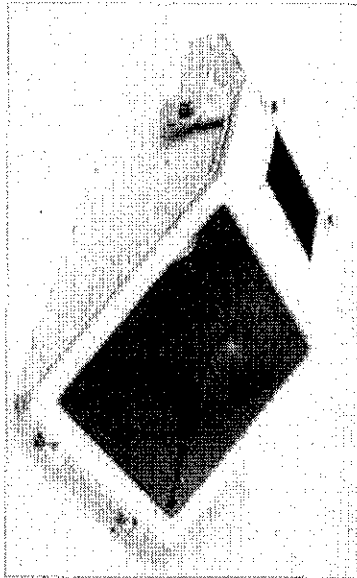
All the conduits and the wiring to the light points are part of this contract.

| <b>SYMBOL /<br/>TYPE</b> | <b>DESCRIPTION</b>                                                                                                                                                                   |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A                        | Open Channel Fluorescent Luminaire, 2x58W fluorescent tubes. The fitting to have electronic control gear and telescopic lamp holders. Similar to (F22)                               |
| B                        | Shallow Surface Mounted Luminaire, 2x58W fluorescent tubes. The diffuser to have conical design and double                                                                           |
| C                        | Wall Mounted Round Bulkhead, 2 x PL9W with a aluminum base and electronic control gear. The color of the diffuser to be clear and base to be black. Similar to (B11)                 |
| C                        | Ceiling Mounted Round Bulkhead with a decorative ring, 2 x PL9W with a aluminum base and electronic control gear. The color of the diffuser to be polycarbonate and base to be White |
| D                        | Flood Light Luminaire 125W HPS (High Pressure Sodium Lamp). Similar to (B2)                                                                                                          |
| B                        | Vapour proof fluorescent luminaire 2x58 W with polycarbonate diffuser and an electronic control gear.                                                                                |

### 14. SPECIFICATION OF LIGHT FITTINGS

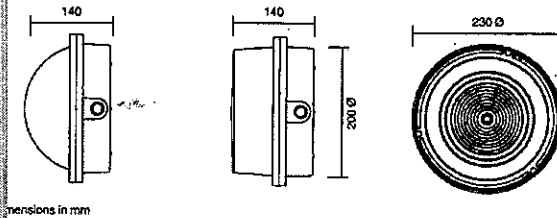
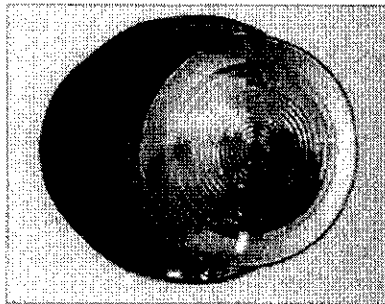
TYPE B11: EXTERIOR LUMINAIRE C  
TYPE B15: EXTERIOR LUMINAIRE D  
TYPE F22: OPEN CHANNEL FLUORESCENT LUMINAIRE A

## BULKHEAD LUMINAIRE (B2)



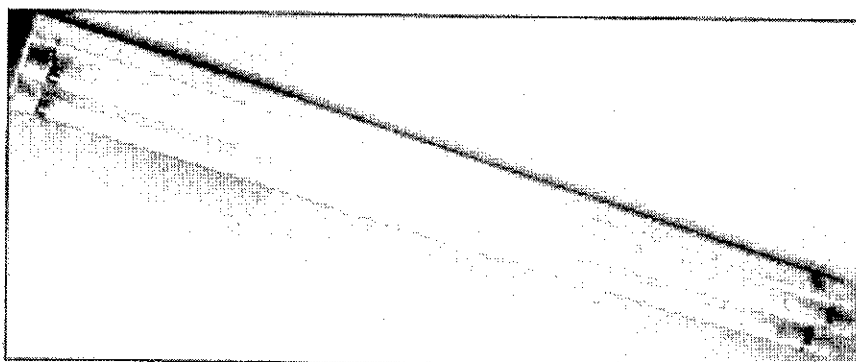
|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Identification symbol     | B2                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Application               | Exterior lighting                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Type                      | Bulkhead                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Mounting                  | Surface                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Shape                     | Rectangular                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Approximate dimensions    | Width: 260 mm<br>Height: 330 mm<br>Depth: 140 mm                                                                                                                                                                                                                                                                                                                                                                                                              |
| Base                      | <ul style="list-style-type: none"> <li>➤ Glass reinforced plastic with double O-ring type silicon gasket</li> <li>➤ Central 20 mm diameter entry hole in the bottom of the base for cable entry through a compression gland</li> <li>➤ Threaded blind holes for equipment mounting</li> <li>➤ Three way terminal block secured independently</li> <li>➤ Flexible silicone insulated 1 mm<sup>2</sup> copper internal wiring in a protective sleeve</li> </ul> |
| Control gear              | <ul style="list-style-type: none"> <li>➤ Extruded aluminium gear tray, secured to the base with screws in threaded holes</li> <li>➤ Gear tray must be easily removable</li> </ul>                                                                                                                                                                                                                                                                             |
| Finish                    | Polyurethane powder coated                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Colour                    | Black                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Diffuser                  | Clear 4 mm thick toughened glass                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Lamp                      | 125 W Mercury Vapour discharge lamp                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Lamp holder               | The design must prevent loosening of the lamp caused by vibrations<br>Porcelain outer with brass inserts                                                                                                                                                                                                                                                                                                                                                      |
| Ingress protection rating | IP65                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| SABS mark                 | Safety mark for luminaire<br>Safety and/or approved performance mark for control gear components                                                                                                                                                                                                                                                                                                                                                              |

## EXTERIOR LUMINAIRE (B11)



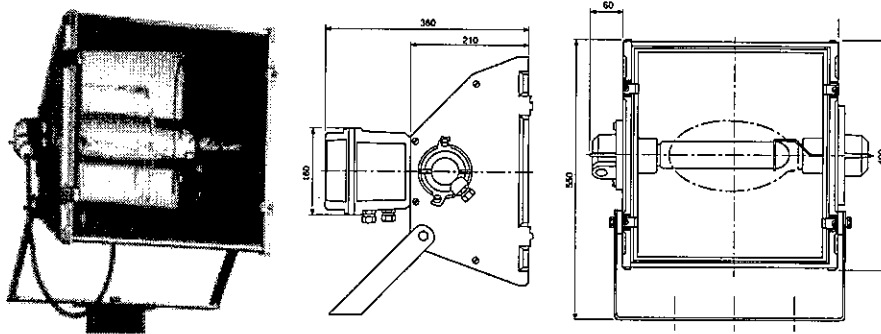
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|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Identification symbol     | B11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Application               | Exterior lighting<br>Interior: Corridor or stairway                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Type                      | Bulkhead                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Mounting                  | Surface                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Shape                     | Round                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Approximate dimensions    | Diameter: 230 mm<br>Height: 140mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Base                      | <ul style="list-style-type: none"> <li>➤ Die-cast aluminium with recessed fitted sealing gasket</li> <li>➤ One die-formed fixing centre (65 mm diameter and 4 mm high) with central 20 mm diameter wire or conduit entry and four "C" guides in circular formation (to be drilled through on site) for fixing to 60 mm diameter round conduit boxes</li> <li>➤ One 20 mm diameter side knock-out</li> <li>➤ Threaded blind holes for equipment mounting</li> <li>➤ Rigid 1 mm thick angle bracket for lamp holder</li> <li>➤ Three way terminal block, independently secured, with a copper earth connection to the base</li> <li>➤ Flexible silicone insulated 1 mm<sup>2</sup> copper internal wiring in a protective sleeve</li> </ul> |
| Control gear              | <ul style="list-style-type: none"> <li>➤ Gear tray must be secured to the base with screws in threaded holes</li> <li>➤ When disconnected the gear tray must be suspended with a removable flexible holding strap</li> <li>➤ Provide separate chokes for the two lamps</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Finish                    | Polyurethane powder coated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Colour                    | Black                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Diffuser                  | <ul style="list-style-type: none"> <li>➤ Clear prismatic polycarbonate diffuser with smooth outside</li> <li>➤ Secure diffuser to the base with three screws</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Lamp                      | 2 x 9 W Compact fluorescent lamps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Lamp holder               | 2 x Compact fluorescent 2 pin                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Ingress protection rating | IP55                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| SABS mark                 | Safety mark for luminaire<br>Safety and/or approved performance mark for control gear components                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

## OPEN CHANNEL FLUORESCENT LUMINAIRE (F22)



|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Identification symbol     | F22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Application               | Perimeter lighting built into kitchen canopy                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Type                      | Open channel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Mounting                  | Surface                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Shape                     | Rectangular                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Approximate dimensions    | Length: 1500 mm<br>Width: 70 mm<br>Depth: Body: 55 mm; Total: 105 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Body                      | <ul style="list-style-type: none"> <li>➤ Body and cover of 0.8 mm thick cold rolled steel</li> <li>➤ Ventilation louvers for heat dissipation</li> <li>➤ Cross bracing for rigidity</li> <li>➤ Secure cover with steel screws to threaded inserts on the cross bracings</li> <li>➤ Three die-formed fixing centres (65 mm diameter and 4 mm high) with punched 20 mm diameter conduit entries and four "C" slots in circular formation for fixing to 60 mm diameter round conduit boxes</li> <li>➤ One 20 mm diameter knock-out at each end</li> <li>➤ Welded earth stud</li> <li>➤ Manufacturers label fixed inside the body</li> </ul> |
| Control gear              | <ul style="list-style-type: none"> <li>➤ Fix control gear with welded studs, nuts and washers or threaded brackets, screws and washers.</li> <li>➤ Starters must be on the sides of the body and accessible without removing the lamps or cover</li> <li>➤ Switch start circuit</li> <li>➤ Three way 15 A terminal block, independently secured</li> <li>➤ Internal wiring must have 105 °C, 600 V grade insulation</li> </ul>                                                                                                                                                                                                           |
| Finish                    | Hot-dip bonderised with epoxy powder coating                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Colour                    | White                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Lamp                      | 2 x 58 W, 26 mm diameter fluorescent lamps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Lamp holder               | Telescopic 2-pin lamp holders                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Ingress protection rating | IP20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| SABS Mark                 | Safety mark for luminaire<br>Safety and/or approved performance mark for control gear components                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

## FLOODLIGHT LUMINAIRE (B15)



|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Identification symbol  | B15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Application            | Exterior: Sport field and area lighting                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Type                   | Flood light                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Mounting               | Adjustable bracket                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Shape                  | Square (lens)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Approximate dimensions | Width: 400 mm (lens)<br>Height: 400 mm (lens)<br>Depth: 360 mm (total)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Options available      | <p>Provide these options if specified:</p> <ul style="list-style-type: none"> <li>➤ Symmetrical narrow, medium wide and extra wide beam distribution</li> <li>➤ Asymmetrical beam distributions as specified</li> <li>➤ An integrally mounted thermal circuit breaker 10 A, 5 kA with the circuit breaker lever accessible from the outside</li> <li>➤ A pug-in type daylight switch installed via Nema socket located above the gear compartment of the luminaire housing</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Body                   | <ul style="list-style-type: none"> <li>➤ The luminaire must consist of a separate lamp compartment and control gear housing that are attached to each other</li> <li>➤ The lamp compartment must be manufactured of high pressure die-cast aluminium and stainless steel and consist of two side plates that control the shape of the pre-formed back reflectors by 4 extruded aluminium stay-bars</li> <li>➤ The control gear compartment must be manufactured of high pressure die-cast aluminium and consist of a body and lid sealed together with a silicone sponge rubber gasket</li> <li>➤ The control gear housing lid must be held captive by a removable wish-bone spring when it is unscrewed and opened</li> <li>➤ The reflector system must be made of super pure anodised aluminium and consist of a back reflector and two side reflectors</li> <li>➤ The angle adjustable mounting bracket must be made of 5 x 40 mm hot dipped galvanised steel with pre-drilled mounting holes</li> </ul> |

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Identification symbol     | B15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Control gear              | <ul style="list-style-type: none"> <li>➤ Control gear must be suited for the lamp specified and must be mounted on a removable gear tray</li> <li>➤ The gear tray must be manufactured of sheet steel at least 0.7 mm thick</li> <li>➤ All components must be individually removable and must bear the relevant SABS mark</li> <li>➤ All internal wiring must be Teflon coated with protective sleeving</li> <li>➤ All screws, bolts and metals must be stainless steel or of non-corrosive material</li> <li>➤ Mains connection must be through a suitable screw terminal block</li> <li>➤ Ignitors where applicable must be of the superposed pulse type</li> <li>➤ The luminaire must be power factor corrected to at least 0.85</li> <li>➤ The luminaire must be able to withstand ambient temperatures of 45°C without mechanical or electrical failure or damage</li> <li>➤ The luminaire must be completely wired internally</li> </ul> |
| Finish                    | Natural                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Colour                    | Aluminium/Stainless steel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Lens                      | <ul style="list-style-type: none"> <li>➤ The lens must be heat and impact resistant glass</li> <li>➤ The lens must be secured by at least four stainless steel screw-down clamps</li> <li>➤ The lens must be sealed with a moulded, heat resistant, silicone sponge rubber gasket</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Lamp options              | Provide the lamp options as specified: <ul style="list-style-type: none"> <li>➤ 250/400 W MV/Metal Halide</li> <li>➤ 150/250/400 W HPS</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Lamp holder               | <ul style="list-style-type: none"> <li>➤ Lamp holder must be suitable for the lamp specified</li> <li>➤ Lamp replacement must be facilitated from the side with a high pressure die-cast aluminium lamp holder housing sealed with a one-piece silicone gasket and secured with two stainless steel screws</li> <li>➤ The housing must support an E40 porcelain lamp holder suitable for 5 kV superposed ignitor pulses</li> <li>➤ The design must prevent loosening of the lamp caused by vibrations</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Ingress protection rating | Lamp compartment: IP65<br>Control gear compartment: IP65                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| SABS mark                 | Safety and approved performance mark for luminaire<br>Safety and/or approved performance mark for control gear components                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

**TECHNICAL SPECIFICATION**  
**FOR THE**  
**ELECTRICAL INSTALLATION**  
**AT**  
**TROTSMVILLE PRIMARY SCHOOL**  
**BILL OF QUANTITIES**

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## **SPECIFICATION FOR ELECTRICAL WORK**

### **BILL OF QUANTITIES**

#### **GENERAL NOTES**

- 1 The conditions of contract and the application of the Contract Price Adjustment Provisions shall be as set out in Part A: Main Contract

- 2 This Bill of Quantities forms part of, and must be read in conjunction with the specification.

- 3 No alteration, erasure or addition is to be made in the text of the Bill of Quantities. Should any alteration, erasure or addition be made, it will not be recognised but the original wording of the Bill of Quantities will be adhered to.

Tenderers shall complete the Bills of Quantities and detail the unit rate and total amount of No. item.

The total shall constitute the tender price of adjudication.

#### **NOTE:**

Tenderers are advised to check their item extension and total additions, as arithmetical errors in the priced Bills of Quantities shall not be considered as having an effect on the tender amount

- 4 The client will check the completed Bill of Quantities and reserves the right to adjust any individual price and to rectify any discrepancy whilst the total tender price as quoted remains unaltered.
- 5 The quantities given in the Bill for cable, cable markers, earth wire laid with cable and excavations cannot be regarded as exact and are subject to measurement on site after completion of the service and adjustments will be made according to the unit rates given in the Bill. The same will apply to the rest of the bill items.
- 6 The unit rate for each item in the Bills of Quantities shall include for all materials, labour, profit, transport, etc., everything necessary for the execution and complete installation of the work in accordance with the description.

**TROTSVILLE PRIMARY SCHOOL: BILL OF QUANTITIES**

SUPPLY, DELIVERY, INSTALLATION, TESTING, COMMISSIONING, HANDING OVER IN A WORKING CONDITION AND 12 MONTHS FREE MAINTENANCE DURING THE GUARANTEE PERIOD OF THE COMPLETED ELECTRICAL INSTALLATION.

DO NOT ADD VAT ON UNIT PRICE

**BILL 1: SITE INSTALLATION (REMAINING WORKS)****BILL 1.1 : CABLES, CABLE SUPPORTS, TRENCHES AND LIGHTING**

| ITEM                               | DESCRIPTION                                                                                                                                                                                      | UNIT | QTY | RATE | TOTAL |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                  | Cables: PVC/PVC/SWA/PVC copper conductor cable to SANS 1507. Cables laid in ducts or trenches or sleeves, and fixing support. Cable trenches, ducts, sleeves and terminations measured elsewhere |      |     |      |       |
| 1,1                                | 70 mm <sup>2</sup> x 4-core                                                                                                                                                                      |      |     |      |       |
|                                    | Material                                                                                                                                                                                         | m    | 0   | R    | R     |
|                                    | Labour                                                                                                                                                                                           | m    | 0   | R    | R     |
| 1,2                                | 25 mm <sup>2</sup> x 4-core                                                                                                                                                                      |      |     |      |       |
|                                    | Material                                                                                                                                                                                         | m    | 140 | R    | R     |
|                                    | Labour                                                                                                                                                                                           | m    | 140 | R    | R     |
| 1,3                                | 16 mm <sup>2</sup> x 4-core                                                                                                                                                                      |      |     |      |       |
|                                    | Material                                                                                                                                                                                         | m    | 600 | R    | R     |
|                                    | Labour                                                                                                                                                                                           | m    | 600 | R    | R     |
| 1,4                                | 10 mm <sup>2</sup> x 4-core                                                                                                                                                                      |      |     |      |       |
|                                    | Material                                                                                                                                                                                         | m    | 100 | R    | R     |
|                                    | Labour                                                                                                                                                                                           | m    | 100 | R    | R     |
| 1,5                                | 10 mm <sup>2</sup> x 3-core                                                                                                                                                                      |      |     |      |       |
|                                    | Material                                                                                                                                                                                         | m    | 100 | R    | R     |
|                                    | Labour                                                                                                                                                                                           | m    | 100 | R    | R     |
| 1,6                                | 4 mm <sup>2</sup> x 4-core                                                                                                                                                                       |      |     |      |       |
|                                    | Material                                                                                                                                                                                         | m    | 800 | R    | R     |
|                                    | Labour                                                                                                                                                                                           | m    | 800 | R    | R     |
| 2                                  | Bare copper earth conductor and termination                                                                                                                                                      |      |     |      |       |
| 2,1                                | 50 mm <sup>2</sup> copper earth wire                                                                                                                                                             |      |     |      |       |
|                                    | Material                                                                                                                                                                                         | m    | 0   | R    | R     |
|                                    | Labour                                                                                                                                                                                           | m    | 0   | R    | R     |
| 2,2                                | 16 mm <sup>2</sup> copper earth wire                                                                                                                                                             |      |     |      |       |
|                                    | Material                                                                                                                                                                                         | m    | 240 | R    | R     |
|                                    | Labour                                                                                                                                                                                           | m    | 240 | R    | R     |
| 2,3                                | 10 mm <sup>2</sup> copper earth wire                                                                                                                                                             |      |     |      |       |
|                                    | Material                                                                                                                                                                                         | m    | 140 | R    | R     |
|                                    | Labour                                                                                                                                                                                           | m    | 140 | R    | R     |
| 2,4                                | 6 mm <sup>2</sup> copper earth wire                                                                                                                                                              |      |     |      |       |
|                                    | Material                                                                                                                                                                                         | m    | 700 | R    | R     |
|                                    | Labour                                                                                                                                                                                           | m    | 700 | R    | R     |
| 2,5                                | 2.5 mm <sup>2</sup> copper earth wire                                                                                                                                                            |      |     |      |       |
|                                    | Material                                                                                                                                                                                         | m    | 600 | R    | R     |
|                                    | Labour                                                                                                                                                                                           | m    | 600 | R    | R     |
| TOTAL CARRIED FORWARD TO NEXT PAGE |                                                                                                                                                                                                  |      |     |      | R     |

**BILL 1.1 : CABLES, CABLE SUPPORTS AND TRENCHES (Continue)**

| ITEM                                         | DESCRIPTION                                                                                                                                                           | UNIT | QTY  | RATE | TOTAL |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|-------|
| TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE     |                                                                                                                                                                       |      |      |      | R     |
| 3                                            | Terminations and connection of PVC SWA PVC cable to switchgear etc. Cables shall be provided with cable glands, neoprene shrouds and cable lugs where necessary       |      |      |      |       |
| 3,1                                          | 70 mm <sup>2</sup> x 4-core<br>Material                                                                                                                               | No.  | 0    | R    | R     |
|                                              | Labour                                                                                                                                                                | No.  | 0    | R    | R     |
| 3,2                                          | 25-16-10 mm <sup>2</sup> x 4-core<br>Material                                                                                                                         | No.  | 18   | R    | R     |
|                                              | Labour                                                                                                                                                                | No.  | 18   | R    | R     |
| 3,3                                          | 6mm <sup>2</sup> x 3-core<br>Material                                                                                                                                 | No.  | 40   | R    | R     |
|                                              | Labour                                                                                                                                                                | No.  | 40   | R    | R     |
| 4                                            | Careful Excavations of trenches, levelling bottom, bedding in sifted ground, backfilling and making good of surface. All trenches to be 900mm deep 600mm Wide.        |      |      |      |       |
| 4,1                                          | Trenching in Earth                                                                                                                                                    | m    | 1100 | R    | R     |
| 4,2                                          | Trenching in Soft Rock                                                                                                                                                | m    | 50   | R    | R     |
| 4,3                                          | Trenching in Hard Rock                                                                                                                                                | m    | 10   | R    | R     |
| 5                                            | SLEEVES, Including all bends, Type "KABELFLEX - Grooved"                                                                                                              |      |      |      |       |
| 5,1                                          | Sleeves: 110mm dia.<br>Material                                                                                                                                       | m    | 50   | R    | R     |
|                                              | Labour                                                                                                                                                                | m    | 50   | R    | R     |
| 5,2                                          | Sleeves: 50mm dia.<br>Material                                                                                                                                        | m    | 50   | R    | R     |
|                                              | Labour                                                                                                                                                                | m    | 50   | R    | R     |
| 6                                            | Post Top luminaire 125W HPS similar to Beka Way. IP65 High Pressure Dia Cast Aluminium Top Cover with removable control gear. Rate to include a 3.5m Galvanised pole. |      |      |      |       |
|                                              | Material                                                                                                                                                              | No.  | 7    | R    | R     |
|                                              | Labour                                                                                                                                                                | No.  | 7    | R    | R     |
| 7                                            | Electrical Manhole bricked 600mm Wide x 700mm Deep with steel cover plate                                                                                             |      |      |      |       |
|                                              | Material                                                                                                                                                              | No.  | 6    | R    | R     |
|                                              | Labour                                                                                                                                                                | No.  | 6    | R    | R     |
| 8                                            | Cable Markers: 150mm wide PVC warning: "Danger" marking tape                                                                                                          |      |      |      |       |
|                                              | Material                                                                                                                                                              | m    | 800  | R    | R     |
|                                              | Labour                                                                                                                                                                | m    | 800  | R    | R     |
| 9                                            | Cable Markers: Concrete route markers                                                                                                                                 |      |      |      |       |
|                                              | Material                                                                                                                                                              | No.  | 10   | R    | R     |
|                                              | Labour                                                                                                                                                                | m    | 10   | R    | R     |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 1 |                                                                                                                                                                       |      |      |      | R     |

**BILL 1.2: ELECTRICITY POWER SUPPLY**

| ITEM                                         | DESCRIPTION                                                                                                                                                                                                                                                                        | UNIT | QTY | RATE | TOTAL |
|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                            | Supply and install free standing painted steel panel metering kiosk complete with doors, frames, sub-frames, chassis, fixtures, fittings, terminations, busbars and wiring, danger signs and plinth with spare space as per specification. Material and labour                     | No.  | 1   | R    | R     |
|                                              | Material                                                                                                                                                                                                                                                                           | No.  | 1   | R    | R     |
| 2                                            | Equipment provided in metering kiosk.                                                                                                                                                                                                                                              |      |     |      |       |
| 2,1                                          | Moulded case circuit breakers                                                                                                                                                                                                                                                      |      |     |      |       |
|                                              | 150 Ampere T.P. 15 kA                                                                                                                                                                                                                                                              | No.  | 0   | R    | R     |
|                                              | Material                                                                                                                                                                                                                                                                           | No.  | 0   | R    | R     |
| 2,2                                          | 2 Ampere P.T. fuses                                                                                                                                                                                                                                                                | No.  | 0   | R    | R     |
|                                              | Material                                                                                                                                                                                                                                                                           | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                             | No.  | 0   | R    | R     |
| 2,3                                          | Lightning Arrestors                                                                                                                                                                                                                                                                |      |     |      |       |
|                                              | Domestic S.P. 65 kA                                                                                                                                                                                                                                                                | No.  | 0   | R    | R     |
|                                              | Material                                                                                                                                                                                                                                                                           | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                             | No.  | 0   | R    | R     |
| 2,4                                          | Maximum Demand/kWh meter                                                                                                                                                                                                                                                           |      |     |      |       |
|                                              | 150 Ampere Three Phase (Space only)                                                                                                                                                                                                                                                | No.  | 0   | R    | R     |
|                                              | Material                                                                                                                                                                                                                                                                           | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                             | No.  | 0   | R    | R     |
| 2,5                                          | Current Transformers                                                                                                                                                                                                                                                               |      |     |      |       |
|                                              | 200 : 5 (Space only)                                                                                                                                                                                                                                                               | No.  | 0   | R    | R     |
|                                              | Material                                                                                                                                                                                                                                                                           | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                             | No.  | 0   | R    | R     |
| 3                                            | Padlocks                                                                                                                                                                                                                                                                           |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                           | No.  | 1   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                             | No.  | 1   | R    | R     |
| 4                                            | Electricity Upgrade fee                                                                                                                                                                                                                                                            | Item | 0   | R    | R     |
| 5                                            | Bulk contribution (if applicable)                                                                                                                                                                                                                                                  | Item | 0   | R    | R     |
| 6                                            | Boundary contribution costs (if applicable)                                                                                                                                                                                                                                        | Item | 0   | R    | R     |
| 7                                            | Deposit payable to Supply Authority                                                                                                                                                                                                                                                | Item | 0   | R    | R     |
| 8                                            | Contractor's Attendance and Profit (if required) for the above items Provisional Sums (Item 4 to 7) that Totals: R 0,000.00: (____%)                                                                                                                                               | Lump | %   |      | R     |
| 9                                            | Supply and install heavy duty industrial type motor for a gate similar to Centurion D10 complete with 20 Remote controls, tracks, wheels, beams and other accessories                                                                                                              |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                           | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                             | No.  | 0   | R    | R     |
| 10                                           | Contractors price to make good of all the already installed electrical equipments in all blocks. I.e. leveling light switches and scokets, cleaning electrical equipments, ensuring all equipments are fixed to the wall/ceiling and filling up gaps around electrical equipments. |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                           | sum  | sum | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                             | sum  | sum | R    | R     |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 2 |                                                                                                                                                                                                                                                                                    |      |     |      | R     |

**SITE INSTALLATION SUMMARY OF BILLS OF QUANTITIES (REMAINING WORKS)**

Total price for each bill, brought forward to this summary page.

| ITEM | DESCRIPTION                                                                                                                                                 | AMOUNT      |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| 1    | Bill 1: CABLES, CABLE SUPPORT, TRENCHES AND LIGHTS                                                                                                          | R           |
| 2    | Bill 2: ELECTRICITY POWER SUPPLY                                                                                                                            | R           |
| 3    | Add Provisional Amount for the Lightning Protection for the Amount of R 20,000.00                                                                           | R 20 000,00 |
| 4    | Add Provisional Amount for Public Address for the Amount of R 20,000.00                                                                                     | R 20 000,00 |
| 5    | Contractor's Attendance and Profit (if required) for the above Provisional Sums: R 40,000.00 ( _ _ _ _ %)                                                   | R           |
| 6    | TOTAL PRICE FOR THE ELECTRICAL INSTALLATION : EXCLUDING VAT - ADD ITEMS 1 TO 6 ABOVE (AMOUNT TO BE TRANSFERRED TO THE MAIN BILL SUMMARY OF REMAINING WORKS) | R           |

**BILL 2 : ADMINISTRATION BLOCK (REMAINING WORKS)****BILL 2.1 : WIRING AND CONTROL BOXES**

| ITEM                                         | DESCRIPTION                                                                                                                                                           | UNIT | QTY | RATE | TOTAL |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                            | Galvanised/PVC Round conduit boxes with cover and screws:<br>50mm diameter (any way), built into brick, concrete or in roof space or on surface                       |      |     |      |       |
| 1,1                                          | 20 mm                                                                                                                                                                 |      |     |      |       |
|                                              | Material                                                                                                                                                              | No.  | 30  | R    | R     |
|                                              | Labour                                                                                                                                                                | No.  | 30  | R    | R     |
| 2                                            | Galvanised/PVC Looping conduit boxes with cover and screws:<br>(any way), built into brick, concrete or in roof space or on surface                                   |      |     |      |       |
| 2,1                                          | 20 mm                                                                                                                                                                 |      |     |      |       |
|                                              | Material                                                                                                                                                              | No.  | 10  | R    | R     |
|                                              | Labour                                                                                                                                                                | No.  | 10  | R    | R     |
| 2,2                                          | 25 mm                                                                                                                                                                 |      |     |      |       |
|                                              | Material                                                                                                                                                              | No.  | 10  | R    | R     |
|                                              | Labour                                                                                                                                                                | No.  | 10  | R    | R     |
| 3                                            | Galvanised pressed metal boxes, flush mounted in wall complete with mounting on conduit, built into brick or concrete, in roof space or on surface                    |      |     |      |       |
| 3,1                                          | 100mm x 100 mm x 50 mm .                                                                                                                                              |      |     |      |       |
|                                              | Material                                                                                                                                                              | No.  | 5   | R    | R     |
|                                              | Labour                                                                                                                                                                | No.  | 5   | R    | R     |
| 3,2                                          | 50 mm x 100mm x 50 mm                                                                                                                                                 |      |     |      |       |
|                                              | Material                                                                                                                                                              | No.  | 2   | R    | R     |
|                                              | Labour                                                                                                                                                                | No.  | 2   | R    | R     |
| 4                                            | PVC insulated copper conductor wires in conduits, wiring channels or power skirting; for lights, plugs, power points, including connection to switches and equipment. |      |     |      |       |
| 4,1                                          | 2,5 mm <sup>2</sup> PVC wire                                                                                                                                          |      |     |      |       |
|                                              | Material                                                                                                                                                              | m    | 400 | R    | R     |
|                                              | Labour                                                                                                                                                                | m    | 400 | R    | R     |
| 4,2                                          | 4,0 mm <sup>2</sup> PVC wire                                                                                                                                          |      |     |      |       |
|                                              | Material                                                                                                                                                              | m    | 450 | R    | R     |
|                                              | Labour                                                                                                                                                                | m    | 450 | R    | R     |
| 4,3                                          | 6,0 mm <sup>2</sup> PVC wire                                                                                                                                          |      |     |      |       |
|                                              | Material                                                                                                                                                              | m    | 150 | R    | R     |
|                                              | Labour                                                                                                                                                                | m    | 150 | R    | R     |
| 4,4                                          | 4 mm <sup>2</sup> x 4-Core and Earth (Surfix or Flattwin) Cable.                                                                                                      |      |     |      |       |
|                                              | Material                                                                                                                                                              | m    | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                | m    | 0   | R    | R     |
| 5                                            | Copper earth conductor wires in conduits, wiring channels or power skirting; for lights, plugs, power points, including connection to switches and equipment.         |      |     |      |       |
| 5,1                                          | 2,5 mm <sup>2</sup> bare copper earth wire                                                                                                                            |      |     |      |       |
|                                              | Material                                                                                                                                                              | m    | 300 | R    | R     |
|                                              | Labour                                                                                                                                                                | m    | 300 | R    | R     |
| 6                                            | SLEEVES, Including all bends, Type "KABELFLEX - Grooved"                                                                                                              |      |     |      |       |
| 6,1                                          | Sleeves: 110mm dia.                                                                                                                                                   |      |     |      |       |
|                                              | Material                                                                                                                                                              | m    | 20  | R    | R     |
|                                              | Labour                                                                                                                                                                | m    | 20  | R    | R     |
| 6,2                                          | Sleeves: 50mm dia.                                                                                                                                                    |      |     |      |       |
|                                              | Material                                                                                                                                                              | m    | 20  | R    | R     |
|                                              | Labour                                                                                                                                                                | m    | 20  | R    | R     |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 2 |                                                                                                                                                                       |      |     |      | R     |

**BILL 2.2: CONTROL DEVICES**

| ITEM                                                | DESCRIPTION                                                                                                                                            | UNIT | QTY | RATE | TOTAL    |
|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|----------|
| 1                                                   | Light switches, complete with steel powder coated coverplates and screws, fitted to flush outlet box (boxes measured                                   |      |     |      |          |
| 1,1                                                 | 16A (1 Lever-1 Way Vertical)                                                                                                                           |      |     |      |          |
|                                                     | Material                                                                                                                                               | No.  | 25  | R    | R        |
|                                                     | Labour                                                                                                                                                 | No.  | 25  | R    | R        |
| 1,2                                                 | 16A (1 Lever-2 Way Vertical)                                                                                                                           |      |     |      |          |
|                                                     | Material                                                                                                                                               | No.  | 4   | R    | R        |
|                                                     | Labour                                                                                                                                                 | No.  | 4   | R    | R        |
| 1,3                                                 | 16A (2 Lever-1 Way Vertical)                                                                                                                           |      |     |      |          |
|                                                     | Material                                                                                                                                               | No.  | 2   | R    | R        |
|                                                     | Labour                                                                                                                                                 | No.  | 2   | R    | R        |
| 2                                                   | Switched socket outlets of 16A, 250V, complete with steel powder coated coverplates and screws, fitted to flush outlet box (boxes measured elsewhere). |      |     |      |          |
| 2,1                                                 | Single Switched Socket Outlet                                                                                                                          |      |     |      |          |
|                                                     | Material                                                                                                                                               | No.  | 5   | R    | R        |
|                                                     | Labour                                                                                                                                                 | No.  | 0   | R    | R        |
| 2,2                                                 | Double Switched Socket Outlet                                                                                                                          |      |     |      |          |
|                                                     | Material                                                                                                                                               | No.  | 6   | R    | R        |
|                                                     | Labour                                                                                                                                                 | No.  | 140 | R    | R        |
| 3                                                   | Switched socket outlets of 16A, 250V, mounted on the Power                                                                                             |      |     |      |          |
| 3,1                                                 | 16 Amp normal 3-pin, 250V grade switch socket outlet in power                                                                                          |      |     |      |          |
|                                                     | Material                                                                                                                                               | No.  | 10  | R    | R        |
|                                                     | Labour                                                                                                                                                 | No.  | 10  | R    | R        |
| 3,2                                                 | 16 Ampere dedicated (red) 3-pin 250V grade switch socket                                                                                               |      |     |      |          |
|                                                     | Material                                                                                                                                               | No.  | 10  | R    | R        |
|                                                     | Labour                                                                                                                                                 | No.  | 10  | R    | R        |
| 3,3                                                 | Data and Telephone Point mounting on power skirting                                                                                                    |      |     |      |          |
|                                                     | Material                                                                                                                                               | No.  | 30  | R    | R        |
|                                                     | Labour                                                                                                                                                 | No.  | 30  | R    | R        |
| 3,4                                                 | Cover Plate for switch socket outlet in power skirting                                                                                                 |      |     |      |          |
|                                                     | Material                                                                                                                                               | No.  | 40  | R    | R        |
|                                                     | Labour                                                                                                                                                 | No.  | 40  | R    | R        |
| 4                                                   | 5 Amp unswitched socket outlet                                                                                                                         |      |     |      |          |
|                                                     | Material                                                                                                                                               | No.  | 5   | R    | R        |
|                                                     | Labour                                                                                                                                                 | No.  | 5   | R    | R        |
| 5                                                   | Blank service outlet cover for 100x100mm wall box                                                                                                      |      |     |      |          |
|                                                     | Material                                                                                                                                               | No.  | 2   | R    | R        |
|                                                     | Labour                                                                                                                                                 | No.  | 2   | R    | R        |
| 6                                                   | Blank service outlet cover for 100x50mm wall box                                                                                                       |      |     |      |          |
|                                                     | Material                                                                                                                                               | No.  | 0   | R    | R        |
|                                                     | Labour                                                                                                                                                 | No.  | 0   | R    | R        |
| 7                                                   | Surface mounted 30 Ampere, 250V grade, Double Pole Isolator                                                                                            |      |     |      |          |
|                                                     | Material                                                                                                                                               | No.  | 4   | R    | R        |
|                                                     | Labour                                                                                                                                                 | No.  | 4   | R    | R        |
| 8                                                   | Flush mounted 60 Ampere, 250V grade, Double Pole stove                                                                                                 |      |     |      |          |
|                                                     | Material                                                                                                                                               | No.  | 1   | R    | R        |
|                                                     | Labour                                                                                                                                                 | No.  | 1   | R    | R        |
| <b>TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 2</b> |                                                                                                                                                        |      |     |      | <b>R</b> |

**BILL 2.3 : WIRE WAYS**

| ITEM                                      | DESCRIPTION                                                                                                                                                                                                                                                                                                                               | UNIT | QTY | RATE | TOTAL    |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|----------|
| 1                                         | <b>WIRING CHANNELS</b><br>Galvanised Wiring Channel with Steel Covers<br>including:<br>- bolts, nuts and washers, - coupling pieces, - earthing<br>- mounted in service level or ceiling void or roof trusses.<br>- hangers, - bends, - supporting (rods, etc.), - Steel covers<br>- Lengths Powder coated in one of 4 different colours. |      |     |      |          |
| 1,1                                       | P9000 Channel                                                                                                                                                                                                                                                                                                                             |      |     |      |          |
|                                           | Material                                                                                                                                                                                                                                                                                                                                  | m    | 40  | R    | R        |
|                                           | Labour                                                                                                                                                                                                                                                                                                                                    | m    | 18  | R    | R        |
| 1,2                                       | Steel cover for P9000 Channel                                                                                                                                                                                                                                                                                                             |      |     |      |          |
|                                           | Material                                                                                                                                                                                                                                                                                                                                  | m    | 40  | R    | R        |
|                                           | Labour                                                                                                                                                                                                                                                                                                                                    | m    | 40  | R    | R        |
| 1,3                                       | Radius distribution board outlet and cover for P9000 Channel                                                                                                                                                                                                                                                                              |      |     |      |          |
|                                           | Material                                                                                                                                                                                                                                                                                                                                  | No   | 1   | R    | R        |
|                                           | Labour                                                                                                                                                                                                                                                                                                                                    | No   | 1   | R    | R        |
| 1,4                                       | Splices for P9000 channel                                                                                                                                                                                                                                                                                                                 |      |     |      |          |
|                                           | Material                                                                                                                                                                                                                                                                                                                                  | No   | 10  | R    | R        |
|                                           | Labour                                                                                                                                                                                                                                                                                                                                    | No   | 10  | R    | R        |
| 1,5                                       | End cap for P9000 channel                                                                                                                                                                                                                                                                                                                 |      |     |      |          |
|                                           | Material                                                                                                                                                                                                                                                                                                                                  | No   | 8   | R    | R        |
|                                           | Labour                                                                                                                                                                                                                                                                                                                                    | No   | 8   | R    | R        |
| 2                                         | Draw wire 1.5mm                                                                                                                                                                                                                                                                                                                           |      |     |      |          |
|                                           | Material                                                                                                                                                                                                                                                                                                                                  | m    | 50  | R    | R        |
|                                           | Labour                                                                                                                                                                                                                                                                                                                                    | m    | 50  | R    | R        |
| 3                                         | <b>CONDUITS</b><br>Conduits including conduit accessories, such as couplings, bushes, locknuts, saddle, etc. Flush or wall mounted into brickwork, concrete, chased into concrete or in ceiling void or in service level or in dry walls with proper support of the draw boxes.                                                           |      |     |      |          |
| 3,1                                       | 20 mm, Black enamelled                                                                                                                                                                                                                                                                                                                    |      |     |      |          |
|                                           | Material                                                                                                                                                                                                                                                                                                                                  | m    | 50  | R    | R        |
|                                           | Labour                                                                                                                                                                                                                                                                                                                                    | m    | 50  | R    | R        |
| 3,2                                       | 20 mm, PVC conduits                                                                                                                                                                                                                                                                                                                       |      |     |      |          |
|                                           | Material                                                                                                                                                                                                                                                                                                                                  | m    | 200 | R    | R        |
|                                           | Labour                                                                                                                                                                                                                                                                                                                                    | m    | 200 | R    | R        |
| 3,3                                       | 25 mm, Black enamelled                                                                                                                                                                                                                                                                                                                    |      |     |      |          |
|                                           | Material                                                                                                                                                                                                                                                                                                                                  | m    | 0   | R    | R        |
|                                           | Labour                                                                                                                                                                                                                                                                                                                                    | m    | 0   | R    | R        |
| 3,4                                       | 25 mm, PVC conduits                                                                                                                                                                                                                                                                                                                       |      |     |      |          |
|                                           | Material                                                                                                                                                                                                                                                                                                                                  | m    | 200 | R    | R        |
|                                           | Labour                                                                                                                                                                                                                                                                                                                                    | m    | 200 | R    | R        |
| 4                                         | <b>FLEXIBLE CONDUIT</b>                                                                                                                                                                                                                                                                                                                   |      |     |      |          |
| 4,1                                       | Flexible conduit with steel reinforced PVC conduit.                                                                                                                                                                                                                                                                                       |      |     |      |          |
|                                           | Material                                                                                                                                                                                                                                                                                                                                  | m    | 50  | R    | R        |
|                                           | Labour                                                                                                                                                                                                                                                                                                                                    | m    | 50  | R    | R        |
| <b>TOTAL CARRIED FORWARD TO NEXT PAGE</b> |                                                                                                                                                                                                                                                                                                                                           |      |     |      | <b>R</b> |

**BILL 2.3 : WIRE WAYS (Continues)**

| ITEM                                         | DESCRIPTION                                                 | UNIT | QTY | RATE | TOTAL |
|----------------------------------------------|-------------------------------------------------------------|------|-----|------|-------|
| TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE     |                                                             |      |     |      | R     |
| 5                                            | POWER SKIRTING                                              |      |     |      |       |
|                                              | Power skirting, 2 compartment 2 cover type, including steel |      |     |      |       |
|                                              | - Steel cover, bolts, nuts and washers.                     |      |     |      |       |
|                                              | - coupling pieces, earthing, etc.                           |      |     |      |       |
| 5,1                                          | 2 Compartment, 2 cover type power skirting including cover  |      |     |      |       |
|                                              | Material                                                    | m    | 36  | R    | R     |
|                                              | Labour                                                      | m    | 36  | R    | R     |
| 5,2                                          | 90 degree Bends                                             |      |     |      |       |
|                                              | Material                                                    | No   | 10  | R    | R     |
|                                              | Labour                                                      | No   | 10  | R    | R     |
| 5,3                                          | 45 degree Bends                                             |      |     |      |       |
|                                              | Material                                                    | No   | 2   | R    | R     |
|                                              | Labour                                                      | No   | 2   | R    | R     |
| 5,4                                          | Endcaps                                                     |      |     |      |       |
|                                              | Material                                                    | No   | 0   | R    | R     |
|                                              | Labour                                                      | No   | 0   | R    | R     |
| 5,5                                          | Cover plate for power skirting including                    |      |     |      |       |
|                                              | Material                                                    | m    | 1   | R    | R     |
|                                              | Labour                                                      | m    | 1   | R    | R     |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 2 |                                                             |      |     |      | R     |

**BILL 2.4 : LIGHT FITTINGS**

| ITEM                                         | DESCRIPTION                                                                                                                                                                                                                             | UNIT       | QTY      | RATE   | TOTAL  |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|----------|--------|--------|
| 1                                            | Type: A (Including Lamps)<br>Open Channel Fluorescent Luminaire, 2x58W fluorescent tubes. The fitting to have electronic control gear and telescopic lamp holders<br>Material<br>Labour                                                 | No.<br>No. | 15<br>15 | R<br>R | R<br>R |
| 2                                            | Type: C (Including Lamps)<br>Wall Mounted Round Bulkhead, 2 x PL9W with a aluminum base and electronic control gear. The color of the diffuser to be clear and base to be black<br>Material<br>Labour                                   | No.<br>No. | 6<br>6   | R<br>R | R<br>R |
| 3                                            | Type: C (Including Lamps)<br>Ceiling Mounted Round Bulkhead with a decorative ring, 2 x PL9W with a aluminum base and electronic control gear. The color of the diffuser to be polycarbonate and base to be White<br>Material<br>Labour | No.<br>No. | 32<br>32 | R<br>R | R<br>R |
| 4                                            | Type: M (Including Lamps)<br>Wall Mounted Round Bulkhead, 2 x PL9W with a aluminum base and electronic control gear. The color of the diffuser to be red with a black base<br>Material<br>Labour                                        | No.<br>No. | 1<br>1   | R<br>R | R<br>R |
| 5                                            | Type: D (Including Lamps)<br>Flood Light Luminaire 125W HPS (High Pressure Sodium Lamp)<br>Material<br>Labour                                                                                                                           | No.<br>No. | 2<br>2   | R<br>R | R<br>R |
| 6                                            | Type: A (Including Lamps)<br>Decorative Recessed Down lighter, 2x PL9W fluorescent tubes. With a white base ring.<br>Material<br>Labour                                                                                                 | No.<br>No. | 5<br>5   | R<br>R | R<br>R |
| 7                                            | Type: F (Including Lamps)<br>Vapour proof fluorescent luminaire 2x58 W with polycarbonate diffuser and an electronic control gear.<br>Material<br>Labour                                                                                | No.<br>No. | 1<br>1   | R<br>R | R<br>R |
| 8                                            | 58W fluorescent tubes.<br>Material<br>Labour                                                                                                                                                                                            | No.<br>No. | 40<br>40 | R<br>R | R<br>R |
|                                              |                                                                                                                                                                                                                                         |            |          |        |        |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 2 |                                                                                                                                                                                                                                         |            |          |        | R      |

**BILL 2.5 :GENERAL**

| ITEM                                                | DESCRIPTION                                                                                                                                                                                                                                                                                                                    | UNIT | QTY | RATE | TOTAL    |
|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|----------|
| 1                                                   | Main DB; DB-A: Distribution Board, complete with all switchgears (breakers and isolators), labels and legend cards. (See Distribution Boards Layout Drawing).                                                                                                                                                                  |      |     |      |          |
|                                                     | Material                                                                                                                                                                                                                                                                                                                       | No.  | 1   | R    | R        |
|                                                     | Labour                                                                                                                                                                                                                                                                                                                         | No.  | 1   | R    | R        |
| 2                                                   | Sub DB; DB-Bell: Distribution Board, complete with all switchgears (breakers and isolators), labels and legend cards. (See Distribution Boards Layout Drawing).                                                                                                                                                                |      |     |      |          |
|                                                     | Material                                                                                                                                                                                                                                                                                                                       | No.  | 1   | R    | R        |
|                                                     | Labour                                                                                                                                                                                                                                                                                                                         | No.  | 1   | R    | R        |
| 3                                                   | Public Addresser Box, flush mounted, consisting of metal tray, architrave frame and hinged doors, wall mounted in the position specified and a 20 mm thick soft pine wood panel in the main telephone distribution board to cover the entire back of the board. 600mmx500x120mm                                                |      |     |      |          |
|                                                     | Material                                                                                                                                                                                                                                                                                                                       | No.  | 4   | R    | R        |
|                                                     | Labour                                                                                                                                                                                                                                                                                                                         | No.  | 4   | R    | R        |
| 4                                                   | Light sensitive photo electrical switch or Motion Detector Switch, Type National, in an empty Luminaire such as B10. The rate to include for the empty bulkhead.                                                                                                                                                               |      |     |      |          |
|                                                     | Material                                                                                                                                                                                                                                                                                                                       | No.  | 2   | R    | R        |
|                                                     | Labour                                                                                                                                                                                                                                                                                                                         | No.  | 2   | R    | R        |
| 5                                                   | Robust, Die-Cast aluminium School Siren, effective radius of 700m (105dB).                                                                                                                                                                                                                                                     |      |     |      |          |
|                                                     | Material                                                                                                                                                                                                                                                                                                                       | No.  | 1   | R    | R        |
|                                                     | Labour                                                                                                                                                                                                                                                                                                                         | No.  | 1   | R    | R        |
| 6                                                   | Earth Bonding Strip (water pipes, etc.) as per SANS 10142 and detailed in the Specification                                                                                                                                                                                                                                    |      |     |      |          |
|                                                     | Material                                                                                                                                                                                                                                                                                                                       | m    | 50  | R    | R        |
|                                                     | Labour                                                                                                                                                                                                                                                                                                                         | m    | 50  | R    | R        |
| 7                                                   | Commissioning and Testing by Electrician<br>Testing, commissioning and adjustment of the final electrical installation as well as being in attendance for any inspections and tests that the Representative / Agent may call for, including the issuing of the Certificate of Compliance (COC) by Electrician for the Main DB. | Lump | Sum | R    | R        |
|                                                     |                                                                                                                                                                                                                                                                                                                                |      |     |      |          |
| <b>TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 2</b> |                                                                                                                                                                                                                                                                                                                                |      |     |      | <b>R</b> |

**ADMINISTRATION BLOCK SUMMARY OF BILLS OF QUANTITIES (REMAINING WORKS)**

Total price for each bill, brought forward to this summary page.

| ITEM | DESCRIPTION                                                                                                                                                            | AMOUNT |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 1    | Bill 2.1: WIRING AND CONTROL BOXES                                                                                                                                     | R      |
| 2    | Bill 2.2: CONTROL DEVICES                                                                                                                                              | R      |
| 3    | Bill 2.3: WIRE WAYS                                                                                                                                                    | R      |
| 4    | Bill 2.4: LIGHT FITTINGS                                                                                                                                               | R      |
| 5    | Bill 2.5: GENERAL                                                                                                                                                      | R      |
| 6    | TOTAL PRICE FOR THE ADMINISTRATION BLOCK : EXCLUDING VAT - ADD ITEMS 1 TO 5 ABOVE (AMOUNT TO BE TRANSFERRED TO THE ELECTRICAL INSTALLATION SUMMARY OF REMAINING WORKS) | R      |

**BILL 3 : THREE CLASSROOMS AND HOD BLOCK (REMAINING WORKS)****BILL 3.1 : WIRING AND CONTROL BOXES**

| ITEM                                         | DESCRIPTION                                                                                                                                                                 | UNIT | QTY | RATE | TOTAL |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                            | Galvanised/PVC Round conduit boxes with cover and screws:<br>50mm diameter (any way), built into brick, concrete or in roof<br>space or on surface                          |      |     |      |       |
| 1,1                                          | 20 mm                                                                                                                                                                       |      |     |      |       |
|                                              | Material                                                                                                                                                                    | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                      | No.  | 0   | R    | R     |
| 2                                            | Galvanised/PVC Looping conduit boxes with cover and screws:<br>(any way), built into brick, concrete or in roof space or on<br>surface                                      |      |     |      |       |
| 2,1                                          | 20 mm                                                                                                                                                                       |      |     |      |       |
|                                              | Material                                                                                                                                                                    | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                      | No.  | 0   | R    | R     |
| 2,2                                          | 25 mm                                                                                                                                                                       |      |     |      |       |
|                                              | Material                                                                                                                                                                    | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                      | No.  | 0   | R    | R     |
| 3                                            | Galvanised pressed metal boxes, flush mounted in wall<br>complete with mounting on conduit, built into brick or concrete,<br>in roof space or on surface                    |      |     |      |       |
| 3,1                                          | 100mm x 100 mm x 50 mm                                                                                                                                                      |      |     |      |       |
|                                              | Material                                                                                                                                                                    | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                      | No.  | 0   | R    | R     |
| 3,2                                          | 50 mm x 100mm x 50 mm                                                                                                                                                       |      |     |      |       |
|                                              | Material                                                                                                                                                                    | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                      | No.  | 0   | R    | R     |
| 4                                            | PVC insulated copper conductor wires in conduits, wiring<br>channels or power skirting; for lights, plugs, power points,<br>including connection to switches and equipment. |      |     |      |       |
| 4,1                                          | 2,5 mm <sup>2</sup> PVC wire                                                                                                                                                |      |     |      |       |
|                                              | Material                                                                                                                                                                    | m    | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                      | m    | 0   | R    | R     |
| 4,2                                          | 4,0 mm <sup>2</sup> PVC wire                                                                                                                                                |      |     |      |       |
|                                              | Material                                                                                                                                                                    | m    | 100 | R    | R     |
|                                              | Labour                                                                                                                                                                      | m    | 100 | R    | R     |
| 4,3                                          | 4 mm <sup>2</sup> x 4-Core and Earth (Surfix or Flatwin) Cable.                                                                                                             |      |     |      |       |
|                                              | Material                                                                                                                                                                    | m    | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                      | m    | 0   | R    | R     |
| 5                                            | Copper earth conductor wires in conduits, wiring channels or<br>power skirting; for lights, plugs, power points, including<br>connection to switches and equipment.         |      |     |      |       |
| 5,1                                          | 2,5 mm <sup>2</sup> bare copper earth wire                                                                                                                                  |      |     |      |       |
|                                              | Material                                                                                                                                                                    | m    | 80  | R    | R     |
|                                              | Labour                                                                                                                                                                      | m    | 80  | R    | R     |
| 6                                            | SLEEVES, Including all bends, Type "KABELFLEX - Grooved"                                                                                                                    |      |     |      |       |
| 6,1                                          | Sleeves: 110mm dia.                                                                                                                                                         |      |     |      |       |
|                                              | Material                                                                                                                                                                    | m    | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                      | m    | 0   | R    | R     |
| 6,2                                          | Sleeves: 50mm dia.                                                                                                                                                          |      |     |      |       |
|                                              | Material                                                                                                                                                                    | m    | 5   | R    | R     |
|                                              | Labour                                                                                                                                                                      | m    | 5   | R    | R     |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 3 |                                                                                                                                                                             |      |     |      | R     |

**BILL 3.2: CONTROL DEVICES**

| ITEM                                         | DESCRIPTION                                                                                                                                            | UNIT | QTY | RATE | TOTAL |
|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                            | Light switches, complete with steel powder coated coverplates and screws, fitted to flush outlet box (boxes measured 16A (1 Lever-1 Way Vertical)      |      |     |      |       |
| 1,1                                          | Material                                                                                                                                               | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 0   | R    | R     |
| 2                                            | Switched socket outlets of 16A, 250V, complete with steel powder coated coverplates and screws, fitted to flush outlet box (boxes measured elsewhere). |      |     |      |       |
| 2,1                                          | Single Switched Socket Outlet                                                                                                                          |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 0   | R    | R     |
| 3                                            | Switched socket outlets of 16A, 250V, mounted on the Power Skirting                                                                                    |      |     |      |       |
| 3,1                                          | 16 Amp normal 3-pin, 250V grade switch socket outlet in power skirting including cover plate and mounting brackets                                     |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 2   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 2   | R    | R     |
| 3,2                                          | 16 Ampere dedicated (red) 3-pin 250V grade switch socket outlet in power skirting including cover plate and mounting brackets                          |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 1   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 1   | R    | R     |
| 3,3                                          | Data and Telephone Point mounting on power skirting                                                                                                    |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 0   | R    | R     |
| 5                                            | Blank service outlet cover for 100x100mm wall box                                                                                                      |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 6   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 6   | R    | R     |
| 6                                            | Blank service outlet cover for 100x50mm wall box                                                                                                       |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 0   | R    | R     |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 3 |                                                                                                                                                        |      |     |      | R     |

**BILL 3.3 : WIRE WAYS**

| ITEM                               | DESCRIPTION                                                                                                                                                                                                                                                                                                             | UNIT | QTY | RATE | TOTAL |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                  | <b>WIRING CHANNELS</b><br>Galvanised Wiring Channel with Steel Covers including:<br>- bolts, nuts and washers, - coupling pieces, - earthing<br>- mounted in service level or ceiling void or roof trusses.<br>- hangers, - bends, - supporting (rods, etc.),<br>- Lengths Powder coated in one of 4 different colours. |      |     |      |       |
| 1,1                                | P9000 Channel                                                                                                                                                                                                                                                                                                           |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | m    | 0   | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | m    | 0   | R    | R     |
| 1,2                                | Steel cover for P9000 Channel                                                                                                                                                                                                                                                                                           |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | m    | 0   | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | m    | 0   | R    | R     |
| 1,3                                | Radius distribution board outlet and cover for P9000 Channel                                                                                                                                                                                                                                                            |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | No   | 0   | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | No   | 0   | R    | R     |
| 1,4                                | Splices for P9000 channel                                                                                                                                                                                                                                                                                               |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | No   | 0   | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | No   | 0   | R    | R     |
| 1,5                                | End cap for P9000 channel                                                                                                                                                                                                                                                                                               |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | No   | 0   | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | No   | 0   | R    | R     |
| 2                                  | Draw wire 1.5mm                                                                                                                                                                                                                                                                                                         |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | m    | 20  | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | m    | 20  | R    | R     |
| 3                                  | <b>CONDUITS</b><br>Conduits including conduit accessories, such as couplings, bushes, locknuts, saddle, etc. Flush or wall mounted into brickwork, concrete, chased into concrete or in ceiling void or in service level or in dry walls with proper support of the draw boxes.                                         |      |     |      |       |
| 3,1                                | 20 mm, Black enamelled                                                                                                                                                                                                                                                                                                  |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | m    | 0   | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | m    | 0   | R    | R     |
| 3,2                                | 20 mm, PVC conduits                                                                                                                                                                                                                                                                                                     |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | m    | 50  | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | m    | 10  | R    | R     |
| 3,3                                | 25 mm, Black enamelled                                                                                                                                                                                                                                                                                                  |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | m    | 0   | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | m    | 0   | R    | R     |
| 3,4                                | 25 mm, PVC conduits                                                                                                                                                                                                                                                                                                     |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | m    | 40  | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | m    | 40  | R    | R     |
| 4                                  | <b>FLEXIBLE CONDUIT</b>                                                                                                                                                                                                                                                                                                 |      |     |      |       |
| 4,1                                | Flexible conduit with steel reinforced PVC conduit.                                                                                                                                                                                                                                                                     |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | m    | 7   | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | m    | 7   | R    | R     |
| TOTAL CARRIED FORWARD TO NEXT PAGE |                                                                                                                                                                                                                                                                                                                         |      |     |      | R     |

**BILL 3.3 : WIRE WAYS (Continues)**

| ITEM                                         | DESCRIPTION                                                 | UNIT | QTY | RATE | TOTAL |
|----------------------------------------------|-------------------------------------------------------------|------|-----|------|-------|
| TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE     |                                                             |      |     |      | R     |
| 5                                            | POWER SKIRTING                                              |      |     |      |       |
|                                              | Power skirting, 2 compartment 2 cover type, including steel |      |     |      |       |
|                                              | - Steel cover, bolts, nuts and washers.                     |      |     |      |       |
|                                              | - coupling pieces, earthing, etc.                           |      |     |      |       |
| 5,1                                          | 2 Compartment, 2 cover type power skirting including cover  |      |     |      |       |
|                                              | Material                                                    | m    | 8   | R    | R     |
|                                              | Labour                                                      | m    | 8   | R    | R     |
| 5,2                                          | 90 degree Bends                                             |      |     |      |       |
|                                              | Material                                                    | No   | 1   | R    | R     |
|                                              | Labour                                                      | No   | 1   | R    | R     |
| 5,3                                          | Endcaps                                                     |      |     |      |       |
|                                              | Material                                                    | No   | 2   | R    | R     |
|                                              | Labour                                                      | No   | 2   | R    | R     |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 3 |                                                             |      |     |      | R     |

### BILL 3.4 : LIGHT FITTINGS

| ITEM                                                | DESCRIPTION                                                                                                                                                                                           | UNIT       | QTY    | RATE   | TOTAL    |
|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------|--------|----------|
| 1                                                   | Type: A (Including Lamps)<br>Open Channel Fluorescent Luminaire, 2x58W fluorescent tubes. The fitting to have electronic control gear and telescopic lamp holders<br>Material<br>Labour               | No.<br>No. | 0<br>0 | R<br>R | R<br>R   |
| 2                                                   | Type: C (Including Lamps)<br>Wall Mounted Round Bulkhead, 2 x PL9W with a aluminum base and electronic control gear. The color of the diffuser to be clear and base to be black<br>Material<br>Labour | No.<br>No. | 4<br>4 | R<br>R | R<br>R   |
| 3                                                   | Type: D (Including Lamps)<br>Flood Light Luminaire 125W HPS (High Pressure Sodium Lamp)<br>Material<br>Labour                                                                                         | No.<br>No. | 0<br>0 | R<br>R | R<br>R   |
|                                                     |                                                                                                                                                                                                       |            |        |        |          |
| <b>TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 3</b> |                                                                                                                                                                                                       |            |        |        | <b>R</b> |

**BILL 3.5: GENERAL**

| ITEM                                         | DESCRIPTION                                                                                                                                                                                                                                                                                                                         | UNIT | QTY  | RATE | TOTAL |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|-------|
| 1                                            | Sub DB; DB-D: Distribution Board, complete with all switchgears (breakers and isolators), labels and legend cards. (See Distribution Boards Layout Drawing).                                                                                                                                                                        |      |      |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                            | No.  | 1,0  | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                              | No.  | 1,0  | R    | R     |
| 2                                            | Public Addresser Box, flush mounted, consisting of metal tray, architrave frame and hinged doors, wall mounted in the position specified and a 20 mm thick soft pine wood panel in the main telephone distribution board to cover the entire back of the board. 600mmx500x120mm                                                     |      |      |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                            | No.  | 1,0  | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                              | No.  | 1,0  | R    | R     |
| 3                                            | Light sensitive photo electrical switch or Motion Detector Switch, Type National, in an empty Luminaire such as B10. The rate to include for the empty bulkhead.                                                                                                                                                                    |      |      |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                            | No.  | 1,0  | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                              | No.  | 1,0  | R    | R     |
| 4                                            | Robust, Die-Cast aluminium School Siren, effective radius of 700m (105dB).                                                                                                                                                                                                                                                          |      |      |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                            | No.  | 0,0  | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                              | No.  | 0,0  | R    | R     |
| 5                                            | Earth Bonding Strip (water pipes, etc.) as per SANS 10142 and detailed in the Specification                                                                                                                                                                                                                                         |      |      |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                            | m    | 10,0 | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                              | m    | 10,0 | R    | R     |
| 6                                            | Commissioning and Testing by Electrician<br>Testing, commissioning and adjustment of the final electrical installation as well as being in attendance for any inspections and tests that the Representative / Agent may call for, including the issuing of the Certificate of Compliance (COC) by Electrician for the Sub DB: DB-D. | Lump | Sum  | R    | R     |
|                                              |                                                                                                                                                                                                                                                                                                                                     |      |      |      |       |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 3 |                                                                                                                                                                                                                                                                                                                                     |      |      |      |       |

**BILL 4 : THREE CLASSROOMS (REMAINING WORKS)****BILL 4.1 : WIRING AND CONTROL BOXES**

| ITEM                                         | DESCRIPTION                                                                                                                                                                 | UNIT | QTY | RATE | TOTAL |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                            | Galvanised/PVC Round conduit boxes with cover and screws:<br>50mm diameter (any way), built into brick, concrete or in roof<br>space or on surface                          |      |     |      |       |
| 1,1                                          | 20 mm                                                                                                                                                                       |      |     |      |       |
|                                              | Material                                                                                                                                                                    | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                      | No.  | 0   | R    | R     |
| 2                                            | Galvanised/PVC Looping conduit boxes with cover and screws:<br>(any way), built into brick, concrete or in roof space or on<br>surface                                      |      |     |      |       |
| 2,1                                          | 20 mm                                                                                                                                                                       |      |     |      |       |
|                                              | Material                                                                                                                                                                    | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                      | No.  | 0   | R    | R     |
| 2,2                                          | 25 mm                                                                                                                                                                       |      |     |      |       |
|                                              | Material                                                                                                                                                                    | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                      | No.  | 0   | R    | R     |
| 3                                            | Galvanised pressed metal boxes, flush mounted in wall<br>complete with mounting on conduit, built into brick or concrete,<br>in roof space or on surface                    |      |     |      |       |
| 3,1                                          | 100mm x 100 mm x 50 mm                                                                                                                                                      |      |     |      |       |
|                                              | Material                                                                                                                                                                    | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                      | No.  | 0   | R    | R     |
| 3,2                                          | 50 mm x 100mm x 50 mm                                                                                                                                                       |      |     |      |       |
|                                              | Material                                                                                                                                                                    | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                      | No.  | 0   | R    | R     |
| 4                                            | PVC insulated copper conductor wires in conduits, wiring<br>channels or power skirting; for lights, plugs, power points,<br>including connection to switches and equipment. |      |     |      |       |
| 4,1                                          | 2,5 mm <sup>2</sup> PVC wire                                                                                                                                                |      |     |      |       |
|                                              | Material                                                                                                                                                                    | m    | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                      | m    | 0   | R    | R     |
| 4,2                                          | 4,0 mm <sup>2</sup> PVC wire                                                                                                                                                |      |     |      |       |
|                                              | Material                                                                                                                                                                    | m    | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                      | m    | 0   | R    | R     |
| 4,3                                          | 4 mm <sup>2</sup> x 4-Core and Earth (Surfix or Plattwin) Cable.                                                                                                            |      |     |      |       |
|                                              | Material                                                                                                                                                                    | m    | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                      | m    | 0   | R    | R     |
| 5                                            | Copper earth conductor wires in conduits, wiring channels or<br>power skirting; for lights, plugs, power points, including<br>connection to switches and equipment.         |      |     |      |       |
| 5,1                                          | 2,5 mm <sup>2</sup> bare copper earth wire                                                                                                                                  |      |     |      |       |
|                                              | Material                                                                                                                                                                    | m    | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                      | m    | 0   | R    | R     |
| 6                                            | SLEEVES, Including all bends, Type "KABELFLEX - Grooved"                                                                                                                    |      |     |      |       |
| 6,1                                          | Sleeves: 110mm dia.                                                                                                                                                         |      |     |      |       |
|                                              | Material                                                                                                                                                                    | m    | 4   | R    | R     |
|                                              | Labour                                                                                                                                                                      | m    | 4   | R    | R     |
| 6,2                                          | Sleeves: 50mm dia.                                                                                                                                                          |      |     |      |       |
|                                              | Material                                                                                                                                                                    | m    | 3   | R    | R     |
|                                              | Labour                                                                                                                                                                      | m    | 3   | R    | R     |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 4 |                                                                                                                                                                             |      |     |      | R     |

**BILL 4.2: CONTROL DEVICES**

| ITEM                                         | DESCRIPTION                                                                                                                                            | UNIT | QTY | RATE | TOTAL |
|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                            | Light switches, complete with steel powder coated coverplates and screws, fitted to flush outlet box (boxes measured 16A (1 Lever-1 Way Vertical)      |      |     |      |       |
| 1,1                                          | Material                                                                                                                                               | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 0   | R    | R     |
| 2                                            | Switched socket outlets of 16A, 250V, complete with steel powder coated coverplates and screws, fitted to flush outlet box (boxes measured elsewhere). |      |     |      |       |
| 2,1                                          | Single Switched Socket Outlet                                                                                                                          |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 0   | R    | R     |
| 3                                            | Blank service outlet cover for 100x100mm wall box                                                                                                      |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 3   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 3   | R    | R     |
| 4                                            | Blank service outlet cover for 100x50mm wall box                                                                                                       |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 2   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 2   | R    | R     |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 4 |                                                                                                                                                        |      |     |      | R     |

**BILL 4.3 : WIRE WAYS**

| ITEM                                         | DESCRIPTION                                                                                                                                                                                                                                                                                                             | UNIT | QTY | RATE | TOTAL |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                            | <b>WIRING CHANNELS</b><br>Galvanised Wiring Channel with Steel Covers including:<br>- bolts, nuts and washers, - coupling pieces, - earthing<br>- mounted in service level or ceiling void or roof trusses.<br>- hangers, - bends, - supporting (rods, etc.),<br>- Lengths Powder coated in one of 4 different colours. |      |     |      |       |
| 1,1                                          | P9000 Channel                                                                                                                                                                                                                                                                                                           |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                | m    | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                  | m    | 0   | R    | R     |
| 1,2                                          | Steel cover for P9000 Channel                                                                                                                                                                                                                                                                                           |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                | m    | 20  | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                  | m    | 20  | R    | R     |
| 1,3                                          | Radius distribution board outlet and cover for P9000 Channel                                                                                                                                                                                                                                                            |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                | No   | 1   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                  | No   | 1   | R    | R     |
| 1,4                                          | Splices for P9000 channel                                                                                                                                                                                                                                                                                               |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                | No   | 20  | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                  | No   | 20  | R    | R     |
| 1,5                                          | End cap for P9000 channel                                                                                                                                                                                                                                                                                               |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                | No   | 2   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                  | No   | 2   | R    | R     |
| 2                                            | Draw wire 1.5mm                                                                                                                                                                                                                                                                                                         |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                | m    | 20  | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                  | m    | 20  | R    | R     |
| 3                                            | <b>CONDUITS</b><br>Conduits including conduit accessories, such as couplings, bushes, locknuts, saddle, etc. Flush or wall mounted into brickwork, concrete, chased into concrete or in ceiling void or in service level or in dry walls with proper support of the draw boxes.                                         |      |     |      |       |
| 3,1                                          | 20 mm, Black enamelled                                                                                                                                                                                                                                                                                                  |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                | m    | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                  | m    | 0   | R    | R     |
|                                              | 20 mm, PVC conduits                                                                                                                                                                                                                                                                                                     |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                | m    | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                  | m    | 0   | R    | R     |
| 3,3                                          | 25 mm, Black enamelled                                                                                                                                                                                                                                                                                                  |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                | m    | 50  | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                  | m    | 10  | R    | R     |
| 3,4                                          | 25 mm, PVC conduits                                                                                                                                                                                                                                                                                                     |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                | m    | 50  | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                  | m    | 50  | R    | R     |
| 4                                            | <b>FLEXIBLE CONDUIT</b>                                                                                                                                                                                                                                                                                                 |      |     |      |       |
| 4,1                                          | Flexible conduit with steel reinforced PVC conduit.                                                                                                                                                                                                                                                                     |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                | m    | 10  | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                  | m    | 10  | R    | R     |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 4 |                                                                                                                                                                                                                                                                                                                         |      |     |      | R     |

**BILL 4.4 : LIGHT FITTINGS**

| ITEM                                         | DESCRIPTION                                                                                                                                                                                           | UNIT       | QTY    | RATE   | TOTAL  |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------|--------|--------|
| 1                                            | Type: A (Including Lamps)<br>Open Channel Fluorescent Luminaire, 2x58W fluorescent tubes. The fitting to have electronic control gear and telescopic lamp holders<br>Material<br>Labour               | No.<br>No. | 0<br>0 | R<br>R | R<br>R |
| 2                                            | Type: C (Including Lamps)<br>Wall Mounted Round Bulkhead, 2 x PL9W with a aluminum base and electronic control gear. The color of the diffuser to be clear and base to be black<br>Material<br>Labour | No.<br>No. | 6<br>6 | R<br>R | R<br>R |
| 3                                            | Type: D (Including Lamps)<br>Flood Light Luminaire 125W HPS (High Pressure Sodium Lamp)<br>Material<br>Labour                                                                                         | No.<br>No. | 1<br>1 | R<br>R | R<br>R |
|                                              |                                                                                                                                                                                                       |            |        |        |        |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 4 |                                                                                                                                                                                                       |            |        |        | R      |

**BILL 4.5 :GENERAL**

| ITEM                                                | DESCRIPTION                                                                                                                                                                                                                                                                                                                         | UNIT | QTY | RATE | TOTAL    |
|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|----------|
| 1                                                   | Sub DB; DB-D: Distribution Board, complete with all switchgears (breakers and isolators), labels and legend cards. (See Distribution Boards Layout Drawing).                                                                                                                                                                        |      |     |      |          |
|                                                     | Material                                                                                                                                                                                                                                                                                                                            | No.  | 0,5 | R    | R        |
|                                                     | Labour                                                                                                                                                                                                                                                                                                                              | No.  | 1,0 | R    | R        |
| 2                                                   | Public Addresser Box, flush mounted, consisting of metal tray, architrave frame and hinged doors, wall mounted in the position specified and a 20 mm thick soft pine wood panel in the main telephone distribution board to cover the entire back of the board. 600mmx500x120mm                                                     |      |     |      |          |
|                                                     | Material                                                                                                                                                                                                                                                                                                                            | No.  | 1   | R    | R        |
|                                                     | Labour                                                                                                                                                                                                                                                                                                                              | No.  | 1   | R    | R        |
| 3                                                   | Light sensitive photo electrical switch or Motion Detector Switch, Type National, in an empty Luminaire such as B10. The rate to include for the empty bulkhead.                                                                                                                                                                    |      |     |      |          |
|                                                     | Material                                                                                                                                                                                                                                                                                                                            | No.  | 1   | R    | R        |
|                                                     | Labour                                                                                                                                                                                                                                                                                                                              | No.  | 1   | R    | R        |
| 4                                                   | Robust, Die-Cast aluminium School Siren, effective radius of 700m (105dB).                                                                                                                                                                                                                                                          |      |     |      |          |
|                                                     | Material                                                                                                                                                                                                                                                                                                                            | No.  | 0   | R    | R        |
|                                                     | Labour                                                                                                                                                                                                                                                                                                                              | No.  | 0   | R    | R        |
| 5                                                   | Commissioning and Testing by Electrician<br>Testing, commissioning and adjustment of the final electrical installation as well as being in attendance for any inspections and tests that the Representative / Agent may call for, including the issuing of the Certificate of Compliance (COC) by Electrician for the Sub DB: DB-D. | Lump | Sum | R    | R        |
|                                                     |                                                                                                                                                                                                                                                                                                                                     |      |     |      |          |
| <b>TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 4</b> |                                                                                                                                                                                                                                                                                                                                     |      |     |      | <b>R</b> |

**THREE CLASSROOM BLOCK SUMMARY OF BILLS OF QUANTITIES (REMAINING WORKS)**

Total price for each bill, brought forward to this summary page.

| ITEM | DESCRIPTION                                                                                                                                                                       | AMOUNT       |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| 1    | Bill 4.1: WIRING AND CONTROL BOXES                                                                                                                                                | R            |
| 2    | Bill 4.2: CONTROL DEVICES                                                                                                                                                         | R            |
| 3    | Bill 4.3: WIRE WAYS                                                                                                                                                               | R            |
| 4    | Bill 4.4: LIGHT FITTINGS                                                                                                                                                          | R            |
| 5    | Bill 4.5: GENERAL                                                                                                                                                                 | R            |
| 6    | PRICE PER THREE CLASSROOM BLOCK: EXCLUDING VAT - ADD ITEMS 1 TO 5 ABOVE                                                                                                           | R            |
| 7    | TOTAL PRICE FOR ALL THE THREE CLASSROOM BLOCKS:<br>EXCLUDING VAT: MULTIPLY ITEM 6 BY 2 (AMOUNT TO BE<br>TRANSFERRED TO THE ELECTRICAL INSTALLATION SUMMARY OF<br>REMAINING WORKS) | x 2 Blocks R |

**BILL 5 : GRAGE-R CLASSROOM BLOCK (REMAINING WORKS)****BILL 5.1 : WIRING AND CONTROL BOXES**

| ITEM                                                | DESCRIPTION                                                                                                                                                                 | UNIT | QTY | RATE | TOTAL    |
|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|----------|
| 1                                                   | Galvanised/PVC Round conduit boxes with cover and screws:<br>50mm diameter (any way), built into brick, concrete or in roof<br>space or on surface                          |      |     |      |          |
| 1,1                                                 | 20 mm                                                                                                                                                                       |      |     |      |          |
|                                                     | Material                                                                                                                                                                    | No.  | 0   | R    | R        |
|                                                     | Labour                                                                                                                                                                      | No.  | 0   | R    | R        |
| 2                                                   | Galvanised/PVC Looping conduit boxes with cover and screws:<br>(any way), built into brick, concrete or in roof space or on<br>surface                                      |      |     |      |          |
| 2,1                                                 | 20 mm                                                                                                                                                                       |      |     |      |          |
|                                                     | Material                                                                                                                                                                    | No.  | 0   | R    | R        |
|                                                     | Labour                                                                                                                                                                      | No.  | 0   | R    | R        |
| 2,2                                                 | 25 mm                                                                                                                                                                       |      |     |      |          |
|                                                     | Material                                                                                                                                                                    | No.  | 0   | R    | R        |
|                                                     | Labour                                                                                                                                                                      | No.  | 0   | R    | R        |
| 3                                                   | Galvanised pressed metal boxes, flush mounted in wall<br>complete with mounting on conduit, built into brick or concrete,<br>in roof space or on surface                    |      |     |      |          |
| 3,1                                                 | 100mm x 100 mm x 50 mm                                                                                                                                                      |      |     |      |          |
|                                                     | Material                                                                                                                                                                    | No.  | 0   | R    | R        |
|                                                     | Labour                                                                                                                                                                      | No.  | 0   | R    | R        |
| 3,2                                                 | 50 mm x 100mm x 50 mm                                                                                                                                                       |      |     |      |          |
|                                                     | Material                                                                                                                                                                    | No.  | 0   | R    | R        |
|                                                     | Labour                                                                                                                                                                      | No.  | 0   | R    | R        |
| 4                                                   | PVC insulated copper conductor wires in conduits, wiring<br>channels or power skirting; for lights, plugs, power points,<br>including connection to switches and equipment. |      |     |      |          |
| 4,1                                                 | 2,5 mm <sup>2</sup> PVC wire                                                                                                                                                |      |     |      |          |
|                                                     | Material                                                                                                                                                                    | m    | 0   | R    | R        |
|                                                     | Labour                                                                                                                                                                      | m    | 0   | R    | R        |
| 4,2                                                 | 4,0 mm <sup>2</sup> PVC wire                                                                                                                                                |      |     |      |          |
|                                                     | Material                                                                                                                                                                    | m    | 50  | R    | R        |
|                                                     | Labour                                                                                                                                                                      | m    | 50  | R    | R        |
| 4,3                                                 | 4 mm <sup>2</sup> x 4-Core and Earth (Surfix or Plattwin) Cable.                                                                                                            |      |     |      |          |
|                                                     | Material                                                                                                                                                                    | m    | 0   | R    | R        |
|                                                     | Labour                                                                                                                                                                      | m    | 0   | R    | R        |
| 5                                                   | Copper earth conductor wires in conduits, wiring channels or<br>power skirting; for lights, plugs, power points, including<br>connection to switches and equipment.         |      |     |      |          |
| 5,1                                                 | 2,5 mm <sup>2</sup> bare copper earth wire                                                                                                                                  |      |     |      |          |
|                                                     | Material                                                                                                                                                                    | m    | 40  | R    | R        |
|                                                     | Labour                                                                                                                                                                      | m    | 40  | R    | R        |
| 6                                                   | SLEEVES, Including all bends, Type "KABELFLEX - Grooved"                                                                                                                    |      |     |      |          |
| 6,1                                                 | Sleeves: 110mm dia.                                                                                                                                                         |      |     |      |          |
|                                                     | Material                                                                                                                                                                    | m    | 0   | R    | R        |
|                                                     | Labour                                                                                                                                                                      | m    | 0   | R    | R        |
| 6,2                                                 | Sleeves: 50mm dia.                                                                                                                                                          |      |     |      |          |
|                                                     | Material                                                                                                                                                                    | m    | 5   | R    | R        |
|                                                     | Labour                                                                                                                                                                      | m    | 5   | R    | R        |
| <b>TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 5</b> |                                                                                                                                                                             |      |     |      | <b>R</b> |

**BILL 5.2: CONTROL DEVICES**

| ITEM                                         | DESCRIPTION                                                                                                                                            | UNIT | QTY | RATE | TOTAL |
|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                            | Light switches, complete with steel powder coated coverplates and screws, fitted to flush outlet box (boxes measured                                   |      |     |      |       |
| 1,1                                          | 16A (1 Lever-1 Way Vertical)                                                                                                                           |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 0   | R    | R     |
| 1,2                                          | 16A (1 Lever-2 Way Vertical)                                                                                                                           |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 0   | R    | R     |
| 2                                            | Switched socket outlets of 16A, 250V, complete with steel powder coated coverplates and screws, fitted to flush outlet box (boxes measured elsewhere). |      |     |      |       |
| 2,1                                          | Single Switched Socket Outlet                                                                                                                          |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 0   | R    | R     |
| 2,2                                          | Double Switched Socket Outlet                                                                                                                          |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 0   | R    | R     |
| 3                                            | Blank service outlet cover for 100x100mm wall box                                                                                                      |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 0   | R    | R     |
| 4                                            | Blank service outlet cover for 100x50mm wall box                                                                                                       |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 0   | R    | R     |
| 5                                            | Surface mounted 30 Ampere, 250V grade, Double Pole Isolator                                                                                            |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 1   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 1   | R    | R     |
| 6                                            | Flush mounted 60 Ampere, 250V grade, Double Pole stove                                                                                                 |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 0   | R    | R     |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 5 |                                                                                                                                                        |      |     |      |       |

**BILL 5.3 : WIRE WAYS**

| ITEM                                         | DESCRIPTION                                                                                                                                                                                                                                                                                                             | UNIT | 240 | RATE | TOTAL |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                            | <b>WIRING CHANNELS</b><br>Galvanised Wiring Channel with Steel Covers including:<br>- bolts, nuts and washers, - coupling pieces, - earthing<br>- mounted in service level or ceiling void or roof trusses.<br>- hangers, - bends, - supporting (rods, etc.),<br>- Lengths Powder coated in one of 4 different colours. |      |     |      |       |
| 1,1                                          | P9000 Channel                                                                                                                                                                                                                                                                                                           |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                | m    | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                  | m    | 0   | R    | R     |
| 1,2                                          | Steel cover for P9000 Channel                                                                                                                                                                                                                                                                                           |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                | m    | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                  | m    | 0   | R    | R     |
| 1,3                                          | Radius distribution board outlet and cover for P9000 Channel                                                                                                                                                                                                                                                            |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                | No   | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                  | No   | 0   | R    | R     |
| 1,4                                          | Splices for P9000 channel                                                                                                                                                                                                                                                                                               |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                | No   | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                  | No   | 0   | R    | R     |
| 1,5                                          | End cap for P9000 channel                                                                                                                                                                                                                                                                                               |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                | No   | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                  | No   | 0   | R    | R     |
| 2                                            | Draw wire 1.5mm                                                                                                                                                                                                                                                                                                         |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                | m    | 20  | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                  | m    | 20  | R    | R     |
| 3                                            | <b>CONDUITS</b><br>Conduits including conduit accessories, such as couplings, bushes, locknuts, saddle, etc. Flush or wall mounted into brickwork, concrete, chased into concrete or in ceiling void or in service level or in dry walls with proper support of the draw boxes.                                         |      |     |      |       |
| 3,1                                          | 20 mm, Black enamelled                                                                                                                                                                                                                                                                                                  |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                | m    | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                  | m    | 0   | R    | R     |
| 3,2                                          | 20 mm, PVC conduits                                                                                                                                                                                                                                                                                                     |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                | m    | 50  | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                  | m    | 50  | R    | R     |
| 3,3                                          | 25 mm, Black enamelled                                                                                                                                                                                                                                                                                                  |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                | m    | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                  | m    | 0   | R    | R     |
| 3,4                                          | 25 mm, PVC conduits                                                                                                                                                                                                                                                                                                     |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                | m    | 20  | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                  | m    | 20  | R    | R     |
| 4                                            | <b>FLEXIBLE CONDUIT</b>                                                                                                                                                                                                                                                                                                 |      |     |      |       |
| 4,1                                          | Flexible conduit with steel reinforced PVC conduit.                                                                                                                                                                                                                                                                     |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                | m    | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                  | m    | 0   | R    | R     |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 5 |                                                                                                                                                                                                                                                                                                                         |      |     |      | R     |

**BILL 5.4 : LIGHT FITTINGS**

| ITEM                                         | DESCRIPTION                                                                                                                                                                                                                             | UNIT       | QTY      | RATE   | TOTAL  |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|----------|--------|--------|
| 1                                            | Type: A (Including Lamps)<br>Open Channel Fluorescent Luminaire, 2x58W fluorescent tubes. The fitting to have electronic control gear and telescopic lamp holders<br>Material<br>Labour                                                 | No.<br>No. | 0<br>0   | R<br>R | R<br>R |
| 2                                            | Type: C (Including Lamps)<br>Ceiling Mounted Round Bulkhead with a decorative ring, 2 x PL9W with a aluminum base and electronic control gear. The color of the diffuser to be polycarbonate and base to be White<br>Material<br>Labour | No.<br>No. | 6<br>6   | R<br>R | R<br>R |
| 3                                            | Type: C (Including Lamps)<br>Wall Mounted Round Bulkhead, 2 x PL9W with a aluminum base and electronic control gear. The color of the diffuser to be clear and base to be black<br>Material<br>Labour                                   | No.<br>No. | 10<br>10 | R<br>R | R<br>R |
| 4                                            | Type: D (Including Lamps)<br>Flood Light Luminaire 125W HPS (High Pressure Sodium Lamp)<br>Material<br>Labour                                                                                                                           | No.<br>No. | 0<br>0   | R<br>R | R<br>R |
|                                              |                                                                                                                                                                                                                                         |            |          |        |        |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 5 |                                                                                                                                                                                                                                         |            |          |        |        |

**BILL 5.5 :GENERAL**

| ITEM                                         | DESCRIPTION                                                                                                                                                                                                                                                                                                                         | UNIT | QTY | RATE | TOTAL |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                            | Sub DB; DB-E: Distribution Board, complete with all switchgears (breakers and isolators), labels and legend cards. (See Distribution Boards Layout Drawing).                                                                                                                                                                        |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                            | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                              | No.  | 1   | R    | R     |
| 2                                            | Public Addresser Box, flush mounted, consisting of metal tray, architrave frame and hinged doors, wall mounted in the position specified and a 20 mm thick soft pine wood panel in the main telephone distribution board to cover the entire back of the board. 600mmx500x120mm                                                     |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                            | No.  | 1   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                              | No.  | 1   | R    | R     |
| 3                                            | Light sensitive photo electrical switch or Motion Detector Switch, Type National, in an empty Luminaire such as B10. The rate to include for the empty bulkhead.                                                                                                                                                                    |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                            | No.  | 1   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                              | No.  | 1   | R    | R     |
| 4                                            | Earth Bonding Strip (water pipes, etc.) as per SANS 10142 and detailed in the Specification                                                                                                                                                                                                                                         |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                            | m    | 10  | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                              | m    | 10  | R    | R     |
| 5                                            | Commissioning and Testing by Electrician<br>Testing, commissioning and adjustment of the final electrical installation as well as being in attendance for any inspections and tests that the Representative / Agent may call for, including the issuing of the Certificate of Compliance (COC) by Electrician for the Sub DB: DB-E. | Lump | Sum | R    | R     |
|                                              |                                                                                                                                                                                                                                                                                                                                     |      |     |      |       |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 5 |                                                                                                                                                                                                                                                                                                                                     |      |     |      | R     |

**GRADE-R CLASSROOM BLOCK SUMMARY OF BILLS OF QUANTITIES (REMAINING WORKS)**

Total price for each bill, brought forward to this summary page.

| ITEM | DESCRIPTION                                                                                                                                                                     | AMOUNT |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 1    | Bill 5.1: WIRING AND CONTROL BOXES                                                                                                                                              | R      |
| 2    | Bill 5.2: CONTROL DEVICES                                                                                                                                                       | R      |
| 3    | Bill 5.3: WIRE WAYS                                                                                                                                                             | R      |
| 4    | Bill 5.4: LIGHT FITTINGS                                                                                                                                                        | R      |
| 5    | Bill 5.5: GENERAL                                                                                                                                                               | R      |
| 6    | TOTAL PRICE FOR THE GRADE-R CLASSROOM BLOCK : EXCLUDING VAT - ADD<br>ITEMS 1 TO 5 ABOVE (AMOUNT TO BE TRANSFERRED TO THE ELECTRICAL<br>INSTALLATION SUMMARY OF REMAINING WORKS) | R      |

**BILL 6 : COMPUTER AND LIBRARY BLOCK (REMAINING WORKS)****BILL 6.1 : WIRING AND CONTROL BOXES**

| ITEM                                         | DESCRIPTION                                                                                                                                                           | UNIT | QTY  | RATE | TOTAL |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|-------|
| 1                                            | Galvanised/PVC Round conduit boxes with cover and screws: 50mm diameter (any way), built into brick, concrete or in roof space or on surface                          |      |      |      |       |
| 1,1                                          | 20 mm                                                                                                                                                                 |      |      |      |       |
|                                              | Material                                                                                                                                                              | No.  | 10   | R    | R     |
|                                              | Labour                                                                                                                                                                | No.  | 10   | R    | R     |
| 2                                            | Galvanised/PVC Looping conduit boxes with cover and screws: (any way), built into brick, concrete or in roof space or on surface                                      |      |      |      |       |
| 2,1                                          | 20 mm                                                                                                                                                                 |      |      |      |       |
|                                              | Material                                                                                                                                                              | No.  | 5    | R    | R     |
|                                              | Labour                                                                                                                                                                | No.  | 5    | R    | R     |
| 2,2                                          | 25 mm                                                                                                                                                                 |      |      |      |       |
|                                              | Material                                                                                                                                                              | No.  | 5    | R    | R     |
|                                              | Labour                                                                                                                                                                | No.  | 5    | R    | R     |
| 3                                            | Galvanised pressed metal boxes, flush mounted in wall complete with mounting on conduit, built into brick or concrete, in roof space or on surface                    |      |      |      |       |
| 3,1                                          | 100mm x 100 mm x 50 mm                                                                                                                                                |      |      |      |       |
|                                              | Material                                                                                                                                                              | No.  | 5    | R    | R     |
|                                              | Labour                                                                                                                                                                | No.  | 5    | R    | R     |
| 3,2                                          | 50 mm x 100mm x 50 mm                                                                                                                                                 |      |      |      |       |
|                                              | Material                                                                                                                                                              | No.  | 0    | R    | R     |
|                                              | Labour                                                                                                                                                                | No.  | 0    | R    | R     |
| 4                                            | PVC insulated copper conductor wires in conduits, wiring channels or power skirting; for lights, plugs, power points, including connection to switches and equipment. |      |      |      |       |
| 4,1                                          | 2,5 mm <sup>2</sup> PVC wire                                                                                                                                          |      |      |      |       |
|                                              | Material                                                                                                                                                              | m    | 60   | R    | R     |
|                                              | Labour                                                                                                                                                                | m    | 60   | R    | R     |
| 4,2                                          | 4,0 mm <sup>2</sup> PVC wire                                                                                                                                          |      |      |      |       |
|                                              | Material                                                                                                                                                              | m    | 1200 | R    | R     |
|                                              | Labour                                                                                                                                                                | m    | 1200 | R    | R     |
| 5                                            | Copper earth conductor wires in conduits, wiring channels or power skirting; for lights, plugs, power points, including connection to switches and equipment.         |      |      |      |       |
| 5,1                                          | 2,5 mm <sup>2</sup> bare copper earth wire                                                                                                                            |      |      |      |       |
|                                              | Material                                                                                                                                                              | m    | 630  | R    | R     |
|                                              | Labour                                                                                                                                                                | m    | 630  | R    | R     |
| 6                                            | SLEEVES, Including all bends, Type "KABELFLEX - Grooved"                                                                                                              |      |      |      |       |
| 6,1                                          | Sleeves: 110mm dia.                                                                                                                                                   |      |      |      |       |
|                                              | Material                                                                                                                                                              | m    | 0    | R    | R     |
|                                              | Labour                                                                                                                                                                | m    | 0    | R    | R     |
| 6,2                                          | Sleeves: 50mm dia.                                                                                                                                                    |      |      |      |       |
|                                              | Material                                                                                                                                                              | m    | 8    | R    | R     |
|                                              | Labour                                                                                                                                                                | m    | 8    | R    | R     |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 6 |                                                                                                                                                                       |      |      |      | R     |

**BILL 6.2: CONTROL DEVICES**

| ITEM                                         | DESCRIPTION                                                                                                                                            | UNIT | QTY | RATE | TOTAL |
|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                            | Light switches, complete with steel powder coated coverplates and screws, fitted to flush outlet box (boxes measured 16A (1 Lever-1 Way Vertical)      |      |     |      |       |
| 1,1                                          | Material                                                                                                                                               | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 0   | R    | R     |
| 2                                            | Switched socket outlets of 16A, 250V, complete with steel powder coated coverplates and screws, fitted to flush outlet box (boxes measured elsewhere). |      |     |      |       |
| 2,1                                          | Single Switched Socket Outlet                                                                                                                          |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 2   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 2   | R    | R     |
| 2,2                                          | Double Switched Socket Outlet                                                                                                                          |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 1   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 1   | R    | R     |
| 3                                            | Switched socket outlets of 16A, 250V, mounted on the Power Skirting                                                                                    |      |     |      |       |
| 3,1                                          | 16 Amp normal 3-pin, 250V grade switch socket outlet in power skirting including cover plate and mounting brackets                                     |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 4   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 4   | R    | R     |
| 3,2                                          | 16 Ampere dedicated (red) 3-pin 250V grade switch socket outlet in power skirting including cover plate and mounting brackets                          |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 46  | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 46  | R    | R     |
| 3,3                                          | Data and Telephone Point mounting on power skirting                                                                                                    |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 0   | R    | R     |
| 4                                            | 5 Amp unswitched socket outlet                                                                                                                         |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 0   | R    | R     |
| 5                                            | Blank service outlet cover for 100x100mm wall box                                                                                                      |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 2   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 2   | R    | R     |
| 6                                            | Blank service outlet cover for 100x50mm wall box                                                                                                       |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 2   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 2   | R    | R     |
| 7                                            | Surface mounted 30 Ampere, 250V grade, Double Pole                                                                                                     |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 4   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 4   | R    | R     |
|                                              |                                                                                                                                                        |      |     |      |       |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 6 |                                                                                                                                                        |      |     |      | R     |

**BILL 6.3 : WIRE WAYS**

| ITEM                               | DESCRIPTION                                                                                                                                                                                                                                                                                                             | UNIT | QTY | RATE | TOTAL |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                  | <b>WIRING CHANNELS</b><br>Galvanised Wiring Channel with Steel Covers including:<br>- bolts, nuts and washers, - coupling pieces, - earthing<br>- mounted in service level or ceiling void or roof trusses.<br>- hangers, - bends, - supporting (rods, etc.),<br>- Lengths Powder coated in one of 4 different colours. |      |     |      |       |
| 1,1                                | P9000 Channel                                                                                                                                                                                                                                                                                                           |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | m    | 20  | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | m    | 20  | R    | R     |
| 1,2                                | Steel cover for P9000 Channel                                                                                                                                                                                                                                                                                           |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | m    | 20  | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | m    | 20  | R    | R     |
| 1,3                                | Radius distribution board outlet and cover for P9000 Channel                                                                                                                                                                                                                                                            |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | No   | 1   | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | No   | 1   | R    | R     |
| 1,4                                | Splices for P9000 channel                                                                                                                                                                                                                                                                                               |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | No   | 10  | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | No   | 10  | R    | R     |
| 1,5                                | End cap for P9000 channel                                                                                                                                                                                                                                                                                               |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | No   | 4   | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | No   | 4   | R    | R     |
| 2                                  | Draw wire 1.5mm                                                                                                                                                                                                                                                                                                         |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | m    | 18  | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | m    | 18  | R    | R     |
| 3                                  | <b>CONDUITS</b><br>Conduits including conduit accessories, such as couplings, bushes, locknuts, saddle, etc. Flush or wall mounted into brickwork, concrete, chased into concrete or in ceiling void or in service level or in dry walls with proper support of the draw boxes.                                         |      |     |      |       |
| 3,1                                | 20 mm, Black enamelled                                                                                                                                                                                                                                                                                                  |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | m    | 0   | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | m    | 0   | R    | R     |
| 3,2                                | 20 mm, PVC conduits                                                                                                                                                                                                                                                                                                     |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | m    | 50  | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | m    | 50  | R    | R     |
| 3,3                                | 25 mm, Black enamelled                                                                                                                                                                                                                                                                                                  |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | m    | 0   | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | m    | 0   | R    | R     |
| 3,4                                | 25 mm, PVC conduits                                                                                                                                                                                                                                                                                                     |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | m    | 200 | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | m    | 200 | R    | R     |
| 4                                  | <b>FLEXIBLE CONDUIT</b>                                                                                                                                                                                                                                                                                                 |      |     |      |       |
| 4,1                                | Flexible conduit with steel reinforced PVC conduit.                                                                                                                                                                                                                                                                     |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | m    | 0   | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | m    | 0   | R    | R     |
| TOTAL CARRIED FORWARD TO NEXT PAGE |                                                                                                                                                                                                                                                                                                                         |      |     |      | R     |

**BILL 6.3 : WIRE WAYS (Continues)**

| ITEM                                         | DESCRIPTION                                                                                                                                                   | UNIT | QTY | RATE | TOTAL |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE     |                                                                                                                                                               |      |     |      | R     |
| 5                                            | POWER SKIRTING<br>Power skirting, 3 compartment 3 cover type, including steel<br>- Steel cover, bolts, nuts and washers.<br>- coupling pieces, earthing, etc. |      |     |      |       |
| 5,1                                          | 3 Compartment, 3 cover type power skirting including cover<br>Material                                                                                        | m    | 50  | R    | R     |
|                                              | Labour                                                                                                                                                        | m    | 50  | R    | R     |
| 5,2                                          | 90 degree Bends<br>Material                                                                                                                                   | No   | 5   | R    | R     |
|                                              | Labour                                                                                                                                                        | No   | 5   | R    | R     |
| 5,3                                          | 45 degree Bends<br>Material                                                                                                                                   | No   | 1   | R    | R     |
|                                              | Labour                                                                                                                                                        | No   | 1   | R    | R     |
| 5,4                                          | Endcaps<br>Material                                                                                                                                           | No   | 10  | R    | R     |
|                                              | Labour                                                                                                                                                        | No   | 10  | R    | R     |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 6 |                                                                                                                                                               |      |     |      | R     |

**BILL 6.4 : LIGHT FITTINGS**

| ITEM                                         | DESCRIPTION                                                                                                                                                                                                                             | UNIT       | QTY    | RATE   | TOTAL  |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------|--------|--------|
| 1                                            | Type: A (Including Lamps)<br>Open Channel Fluorescent Luminaire, 2x58W fluorescent tubes. The fitting to have electronic control gear and telescopic lamp holders<br>Material<br>Labour                                                 | No.<br>No. | 2<br>2 | R<br>R | R<br>R |
| 2                                            | Type: C (Including Lamps)<br>Wall Mounted Round Bulkhead, 2 x PL9W with a aluminum base and electronic control gear. The color of the diffuser to be clear and base to be black<br>Material<br>Labour                                   | No.<br>No. | 8<br>8 | R<br>R | R<br>R |
| 3                                            | Type: C (Including Lamps)<br>Ceiling Mounted Round Bulkhead with a decorative ring, 2 x PL9W with a aluminum base and electronic control gear. The color of the diffuser to be polycarbonate and base to be White<br>Material<br>Labour | No.<br>No. | 1<br>1 | R<br>R | R<br>R |
| 4                                            | Type: D (Including Lamps)<br>Flood Light Luminaire 125W HPS (High Pressure Sodium Lamp)<br>Material<br>Labour                                                                                                                           | No.<br>No. | 2<br>2 | R<br>R | R<br>R |
| 5                                            | Type: F (Including Lamps)<br>Shallow Surface Mounted Luminaire with 2x58W fluorescent tubes and electronics control gear. The diffuser to be double parabolic.<br>Material<br>Labour                                                    | No.<br>No. | 1<br>1 | R<br>R | R<br>R |
| 6                                            | Diffuser<br>Install double parabolic diffuser for Type F light fitting.<br>Material<br>Labour                                                                                                                                           | No.<br>No. | 6<br>6 | R<br>R | R<br>R |
|                                              |                                                                                                                                                                                                                                         |            |        |        |        |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 6 |                                                                                                                                                                                                                                         |            |        |        | R      |

**BILL 6.5 :GENERAL**

| ITEM                                                | DESCRIPTION                                                                                                                                                                                                                                                                                                                     | UNIT | QTY | RATE | TOTAL    |
|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|----------|
| 1                                                   | Main DB; DB-B: Distribution Board, complete with all switchgears (breakers and isolators), labels and legend cards. (See Distribution Boards Layout Drawing).                                                                                                                                                                   |      |     |      |          |
|                                                     | Material                                                                                                                                                                                                                                                                                                                        | No.  | 0   | R    | R        |
|                                                     | Labour                                                                                                                                                                                                                                                                                                                          | No.  | 1   | R    | R        |
| 2                                                   | Public Addresser Box, flush mounted, consisting of metal tray, architrave frame and hinged doors, wall mounted in the position specified and a 20 mm thick soft pine wood panel in the main telephone distribution board to cover the entire back of the board. 600mmx500x120mm                                                 |      |     |      |          |
|                                                     | Material                                                                                                                                                                                                                                                                                                                        | No.  | 1   | R    | R        |
|                                                     | Labour                                                                                                                                                                                                                                                                                                                          | No.  | 1   | R    | R        |
| 3                                                   | Light sensitive photo electrical switch or Motion Detector Switch, Type National, in an empty Luminaire such as B10. The rate to include for the empty bulkhead.                                                                                                                                                                |      |     |      |          |
|                                                     | Material                                                                                                                                                                                                                                                                                                                        | No.  | 1   | R    | R        |
|                                                     | Labour                                                                                                                                                                                                                                                                                                                          | No.  | 1   | R    | R        |
| 4                                                   | Earth Bonding Strip (water pipes, etc.) as per SANS 10142 and detailed in the Specification                                                                                                                                                                                                                                     |      |     |      |          |
|                                                     | Material                                                                                                                                                                                                                                                                                                                        | m    | 10  | R    | R        |
|                                                     | Labour                                                                                                                                                                                                                                                                                                                          | m    | 10  | R    | R        |
| 5                                                   | Commissioning and Testing by Electrician<br>Testing, commissioning and adjustment of the final electrical installation as well as being in attendance for any inspections and tests that the Representative / Agent may call for, including the issuing of the Certificate of Compliance (COC) by Electrician for the Sub DB-B. | Lump | Sum | R    | R        |
|                                                     |                                                                                                                                                                                                                                                                                                                                 |      |     |      |          |
| <b>TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 6</b> |                                                                                                                                                                                                                                                                                                                                 |      |     |      | <b>R</b> |

**BILL 7: DINNING AND NUTRITION CENTRE (REMAINING WORKS)****BILL 7.1 : WIRING AND CONTROL BOXES**

| ITEM                                         | DESCRIPTION                                                                                                                                                                 | UNIT | QTY | RATE | TOTAL |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                            | Galvanised/PVC Round conduit boxes with cover and screws:<br>50mm diameter (any way), built into brick, concrete or in roof<br>space or on surface                          |      |     |      |       |
| 1,1                                          | 20 mm                                                                                                                                                                       |      |     |      |       |
|                                              | Material                                                                                                                                                                    | No.  | 5   | R    | R     |
|                                              | Labour                                                                                                                                                                      | No.  | 5   | R    | R     |
| 2                                            | Galvanised/PVC Looping conduit boxes with cover and screws:<br>(any way), built into brick, concrete or in roof space or on<br>surface                                      |      |     |      |       |
| 2,1                                          | 20 mm                                                                                                                                                                       |      |     |      |       |
|                                              | Material                                                                                                                                                                    | No.  | 2   | R    | R     |
|                                              | Labour                                                                                                                                                                      | No.  | 2   | R    | R     |
| 2,2                                          | 25 mm                                                                                                                                                                       |      |     |      |       |
|                                              | Material                                                                                                                                                                    | No.  | 5   | R    | R     |
|                                              | Labour                                                                                                                                                                      | No.  | 5   | R    | R     |
| 3                                            | Galvanised pressed metal boxes, flush mounted in wall<br>complete with mounting on conduit, built into brick or concrete,<br>in roof space or on surface                    |      |     |      |       |
| 3,1                                          | 100mm x 100 mm x 50 mm                                                                                                                                                      |      |     |      |       |
|                                              | Material                                                                                                                                                                    | No.  | 2   | R    | R     |
|                                              | Labour                                                                                                                                                                      | No.  | 2   | R    | R     |
| 3,2                                          | 50 mm x 100mm x 50 mm                                                                                                                                                       |      |     |      |       |
|                                              | Material                                                                                                                                                                    | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                      | No.  | 0   | R    | R     |
| 4                                            | PVC insulated copper conductor wires in conduits, wiring<br>channels or power skirting; for lights, plugs, power points,<br>including connection to switches and equipment. |      |     |      |       |
| 4,1                                          | 2,5 mm <sup>2</sup> PVC wire                                                                                                                                                |      |     |      |       |
|                                              | Material                                                                                                                                                                    | m    | 50  | R    | R     |
|                                              | Labour                                                                                                                                                                      | m    | 50  | R    | R     |
| 4,2                                          | 4,0 mm <sup>2</sup> PVC wire                                                                                                                                                |      |     |      |       |
|                                              | Material                                                                                                                                                                    | m    | 100 | R    | R     |
|                                              | Labour                                                                                                                                                                      | m    | 100 | R    | R     |
| 4,3                                          | 4 mm <sup>2</sup> x 4-Core and Earth (Surfix or Plattwin) Cable.                                                                                                            |      |     |      |       |
|                                              | Material                                                                                                                                                                    | m    | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                      | m    | 0   | R    | R     |
| 5                                            | Copper earth conductor wires in conduits, wiring channels or<br>power skirting; for lights, plugs, power points, including<br>connection to switches and equipment.         |      |     |      |       |
| 5,1                                          | 2,5 mm <sup>2</sup> bare copper earth wire                                                                                                                                  |      |     |      |       |
|                                              | Material                                                                                                                                                                    | m    | 80  | R    | R     |
|                                              | Labour                                                                                                                                                                      | m    | 80  | R    | R     |
| 6                                            | SLEEVES, Including all bends, Type "KABELFLEX - Grooved"                                                                                                                    |      |     |      |       |
| 6,1                                          | Sleeves: 110mm dia.                                                                                                                                                         |      |     |      |       |
|                                              | Material                                                                                                                                                                    | m    | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                      | m    | 0   | R    | R     |
| 6,2                                          | Sleeves: 50mm dia.                                                                                                                                                          |      |     |      |       |
|                                              | Material                                                                                                                                                                    | m    | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                      | m    | 0   | R    | R     |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 7 |                                                                                                                                                                             |      |     |      | R     |

**BILL 7.2: CONTROL DEVICES**

| ITEM                                         | DESCRIPTION                                                                                                                                            | UNIT | QTY | RATE | TOTAL |
|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                            | Light switches, complete with steel powder coated coverplates and screws, fitted to flush outlet box (boxes measured                                   |      |     |      |       |
| 1,1                                          | 16A (1 Lever-1 Way Vertical)                                                                                                                           |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 5   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 5   | R    | R     |
| 1,2                                          | 16A (1 Lever-2 Way Vertical)                                                                                                                           |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 4   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 4   | R    | R     |
| 2                                            | Switched socket outlets of 16A, 250V, complete with steel powder coated coverplates and screws, fitted to flush outlet box (boxes measured elsewhere). |      |     |      |       |
| 2,1                                          | Single Switched Socket Outlet                                                                                                                          |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 10  | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 10  | R    | R     |
| 2,2                                          | Double Switched Socket Outlet                                                                                                                          |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 6   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 6   | R    | R     |
| 3                                            | Blank service outlet cover for 100x100mm wall box                                                                                                      |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 2   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 2   | R    | R     |
| 4                                            | Blank service outlet cover for 100x50mm wall box                                                                                                       |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 2   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 2   | R    | R     |
| 5                                            | Surface mounted 30 Ampere, 250V grade, Double Pole Isolator                                                                                            |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 1   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 1   | R    | R     |
| 6                                            | Flush mounted 60 Ampere, 250V grade, Double Pole stove                                                                                                 |      |     |      |       |
|                                              | Material                                                                                                                                               | No.  | 2   | R    | R     |
|                                              | Labour                                                                                                                                                 | No.  | 2   | R    | R     |
|                                              |                                                                                                                                                        |      |     |      |       |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 7 |                                                                                                                                                        |      |     |      | R.    |

**BILL 7.3 : WIRE WAYS**

| ITEM                                         | DESCRIPTION                                                                                                                                                                                                                                                                                                             | UNIT | QTY | RATE | TOTAL |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                            | <b>WIRING CHANNELS</b><br>Galvanised Wiring Channel with Steel Covers including:<br>- bolts, nuts and washers, - coupling pieces, - earthing<br>- mounted in service level or ceiling void or roof trusses.<br>- hangers, - bends, - supporting (rods, etc.),<br>- Lengths Powder coated in one of 4 different colours. |      |     |      |       |
| 1,1                                          | P9000 Channel                                                                                                                                                                                                                                                                                                           |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                | m    | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                  | m    | 0   | R    | R     |
| 1,2                                          | Steel cover for P9000 Channel                                                                                                                                                                                                                                                                                           |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                | m    | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                  | m    | 0   | R    | R     |
| 1,3                                          | Radius distribution board outlet and cover for P9000 Channel                                                                                                                                                                                                                                                            |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                | No   | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                  | No   | 0   | R    | R     |
| 1,4                                          | Splices for P9000 channel                                                                                                                                                                                                                                                                                               |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                | No   | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                  | No   | 0   | R    | R     |
| 1,5                                          | End cap for P9000 channel                                                                                                                                                                                                                                                                                               |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                | No   | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                  | No   | 0   | R    | R     |
| 2                                            | Draw wire 1.5mm                                                                                                                                                                                                                                                                                                         |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                | m    | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                  | m    | 0   | R    | R     |
| 3                                            | <b>CONDUITS</b><br>Conduits including conduit accessories, such as couplings, bushes, locknuts, saddle, etc. Flush or wall mounted into brickwork, concrete, chased into concrete or in ceiling void or in service level or in dry walls with proper support of the draw boxes.                                         |      |     |      |       |
| 3,1                                          | 20 mm, Black enamelled                                                                                                                                                                                                                                                                                                  |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                | m    | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                  | m    | 0   | R    | R     |
| 3,2                                          | 20 mm, PVC conduits                                                                                                                                                                                                                                                                                                     |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                | m    | 30  | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                  | m    | 30  | R    | R     |
| 3,3                                          | 25 mm, Black enamelled                                                                                                                                                                                                                                                                                                  |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                | m    | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                  | m    | 0   | R    | R     |
| 3,4                                          | 25 mm, PVC conduits                                                                                                                                                                                                                                                                                                     |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                | m    | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                  | m    | 0   | R    | R     |
| 4                                            | <b>FLEXIBLE CONDUIT</b>                                                                                                                                                                                                                                                                                                 |      |     |      |       |
| 4,1                                          | Flexible conduit with steel reinforced PVC conduit.                                                                                                                                                                                                                                                                     |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                | m    | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                  | m    | 0   | R    | R     |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 7 |                                                                                                                                                                                                                                                                                                                         |      |     |      | R     |

**BILL 7.4 : LIGHT FITTINGS**

| ITEM                                         | DESCRIPTION                                                                                                                                                                                                                             | UNIT       | QTY      | RATE   | TOTAL  |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|----------|--------|--------|
| 1                                            | Type: A (Including Lamps)<br>Open Channel Fluorescent Luminaire, 2x58W fluorescent tubes. The fitting to have electronic control gear and telescopic lamp holders<br>Material<br>Labour                                                 | No.<br>No. | 2<br>2   | R<br>R | R<br>R |
| 2                                            | Type: C (Including Lamps)<br>Ceiling Mounted Round Bulkhead with a decorative ring, 2 x PL9W with a aluminum base and electronic control gear. The color of the diffuser to be polycarbonate and base to be White<br>Material<br>Labour | No.<br>No. | 3<br>3   | R<br>R | R<br>R |
| 3                                            | Type: C (Including Lamps)<br>Wall Mounted Round Bulkhead, 2 x PL9W with a aluminum base and electronic control gear. The color of the diffuser to be clear and base to be black<br>Material<br>Labour                                   | No.<br>No. | 10<br>10 | R<br>R | R<br>R |
| 4                                            | Type: D (Including Lamps)<br>Flood Light Luminaire 125W HPS (High Pressure Sodium Lamp)<br>Material<br>Labour                                                                                                                           | No.<br>No. | 0<br>0   | R<br>R | R<br>R |
| 5                                            | Type: F (Including Lamps)<br>Vapour proof fluorescent luminaire 2x58 W with polycarbonate diffuser and an electronic control gear.<br>Material<br>Labour                                                                                | No.<br>No. | 5<br>5   | R<br>R | R<br>R |
|                                              |                                                                                                                                                                                                                                         |            |          |        |        |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 7 |                                                                                                                                                                                                                                         |            |          |        | R      |

**BILL 7.5 :GENERAL**

| ITEM                                         | DESCRIPTION                                                                                                                                                                                                                                                                                                                         | UNIT | 0   | RATE | TOTAL |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                            | Sub DB; DB-E: Distribution Board, complete with all switchgears (breakers and isolators), labels and legend cards. (See Distribution Boards Layout Drawing).                                                                                                                                                                        |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                            | No.  | 1   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                              | No.  | 1   | R    | R     |
| 2                                            | Public Addresser Box, flush mounted, consisting of metal tray, architrave frame and hinged doors, wall mounted in the position specified and a 20 mm thick soft pine wood panel in the main telephone distribution board to cover the entire back of the board. 600mmx500x120mm                                                     |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                            | No.  | 1   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                              | No.  | 1   | R    | R     |
| 3                                            | Light sensitive photo electrical switch or Motion Detector Switch, Type National, in an empty Luminaire such as B10. The rate to include for the empty bulkhead.                                                                                                                                                                    |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                            | No.  | 1   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                              | No.  | 1   | R    | R     |
| 4                                            | Earth Bonding Strip (water pipes, etc.) as per SANS 10142 and detailed in the Specification                                                                                                                                                                                                                                         |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                            | m    | 20  | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                              | m    | 20  | R    | R     |
| 5                                            | Commissioning and Testing by Electrician<br>Testing, commissioning and adjustment of the final electrical installation as well as being in attendance for any inspections and tests that the Representative / Agent may call for, including the issuing of the Certificate of Compliance (COC) by Electrician for the Sub DB: DB-E. | Lump | Sum | R    | R     |
|                                              |                                                                                                                                                                                                                                                                                                                                     |      |     |      |       |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 7 |                                                                                                                                                                                                                                                                                                                                     |      |     |      | R     |

**DINNING AND NUTRITION CENTRE SUMMARY OF BILLS OF QUANTITIES (REMAINING WORKS)**

Total price for each bill, brought forward to this summary page.

| ITEM | DESCRIPTION                                                                                                                                                                          | AMOUNT |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 1    | Bill 7.1: WIRING AND CONTROL BOXES                                                                                                                                                   | R      |
| 2    | Bill 7.2: CONTROL DEVICES                                                                                                                                                            | R      |
| 3    | Bill 7.3: WIRE WAYS                                                                                                                                                                  | R      |
| 4    | Bill 7.4: LIGHT FITTINGS                                                                                                                                                             | R      |
| 5    | Bill 7.5: GENERAL                                                                                                                                                                    | R      |
| 6    | TOTAL PRICE FOR THE DINNING AND NUTRITION CENTRE: EXCLUDING VAT - ADD<br>ITEMS 1 TO 5 ABOVE (AMOUNT TO BE TRANSFERRED TO THE ELECTRICAL<br>INSTALLATION SUMMARY OF REMAINING WORKS ) | R      |

**BILL 8 : ABLUTION BLOCKS (REMAINING WORKS)****BILL 8.1 : WIRING AND CONTROL BOXES**

| ITEM                                         | DESCRIPTION                                                                                                                                                                 | UNIT | QTY | RATE | TOTAL |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                            | Galvanised/PVC Round conduit boxes with cover and screws:<br>50mm diameter (any way), built into brick, concrete or in roof<br>space or on surface                          |      |     |      |       |
| 1,1                                          | 20 mm                                                                                                                                                                       |      |     |      |       |
|                                              | Material                                                                                                                                                                    | No.  | 10  | R    | R     |
|                                              | Labour                                                                                                                                                                      | No.  | 10  | R    | R     |
| 2                                            | Galvanised/PVC Looping conduit boxes with cover and screws:<br>(any way), built into brick, concrete or in roof space or on<br>surface                                      |      |     |      |       |
| 2,1                                          | 20 mm                                                                                                                                                                       |      |     |      |       |
|                                              | Material                                                                                                                                                                    | No.  | 5   | R    | R     |
|                                              | Labour                                                                                                                                                                      | No.  | 5   | R    | R     |
| 3                                            | Galvanised pressed metal boxes, flush mounted in wall<br>complete with mounting on conduit, built into brick or concrete,<br>in roof space or on surface                    |      |     |      |       |
| 3,1                                          | 100mm x 100 mm x 50 mm                                                                                                                                                      |      |     |      |       |
|                                              | Material                                                                                                                                                                    | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                      | No.  | 0   | R    | R     |
| 3,2                                          | 50 mm x 100mm x 50 mm                                                                                                                                                       |      |     |      |       |
|                                              | Material                                                                                                                                                                    | No.  | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                      | No.  | 0   | R    | R     |
| 4                                            | PVC insulated copper conductor wires in conduits, wiring<br>channels or power skirting; for lights, plugs, power points,<br>including connection to switches and equipment. |      |     |      |       |
| 4,1                                          | 2,5 mm <sup>2</sup> PVC wire                                                                                                                                                |      |     |      |       |
|                                              | Material                                                                                                                                                                    | m    | 200 | R    | R     |
|                                              | Labour                                                                                                                                                                      | m    | 200 | R    | R     |
| 4,2                                          | 4,0 mm <sup>2</sup> PVC wire                                                                                                                                                |      |     |      |       |
|                                              | Material                                                                                                                                                                    | m    | 50  | R    | R     |
|                                              | Labour                                                                                                                                                                      | m    | 50  | R    | R     |
| 5                                            | Copper earth conductor wires in conduits, wiring channels or<br>power skirting; for lights, plugs, power points, including<br>connection to switches and equipment.         |      |     |      |       |
| 5,1                                          | 2,5 mm <sup>2</sup> bare copper earth wire                                                                                                                                  |      |     |      |       |
|                                              | Material                                                                                                                                                                    | m    | 125 | R    | R     |
|                                              | Labour                                                                                                                                                                      | m    | 125 | R    | R     |
| 6                                            | SLEEVES, Including all bends, Type "KABELFLEX - Grooved"                                                                                                                    |      |     |      |       |
| 6,1                                          | Sleeves: 50mm dia.                                                                                                                                                          |      |     |      |       |
|                                              | Material                                                                                                                                                                    | m    | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                      | m    | 0   | R    | R     |
|                                              |                                                                                                                                                                             |      |     |      |       |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 8 |                                                                                                                                                                             |      |     |      | R     |

**BILL 8.2: CONTROL DEVICES AND WIRE WAYS**

| ITEM                                         | DESCRIPTION                                                                                                                                                                                                                                                                     | UNIT | QTY | RATE | TOTAL |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                            | Light switches, complete with steel powder coated coverplates and screws, fitted to flush outlet box (boxes measured 16A (1 Lever-1 Way Vertical)                                                                                                                               |      |     |      |       |
| 1,1                                          | Material                                                                                                                                                                                                                                                                        | No.  | 7   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                          | No.  | 7   | R    | R     |
| 2                                            | Switched socket outlets of 16A, 250V, complete with steel powder coated coverplates and screws, fitted to flush outlet box (boxes measured elsewhere).                                                                                                                          |      |     |      |       |
| 2,1                                          | Single Switched Socket Outlet                                                                                                                                                                                                                                                   |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                        | No.  | 1   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                          | No.  | 1   | R    | R     |
| 3                                            | Blank service outlet cover for 100x50mm wall box                                                                                                                                                                                                                                |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                        | No.  | 1   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                          | No.  | 1   | R    | R     |
| 4                                            | <b>CONDUITS</b><br>Conduits including conduit accessories, such as couplings, bushes, locknuts, saddle, etc. Flush or wall mounted into brickwork, concrete, chased into concrete or in ceiling void or in service level or in dry walls with proper support of the draw boxes. |      |     |      |       |
| 4,1                                          | 20 mm, Black enamelled                                                                                                                                                                                                                                                          |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                        | m    | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                          | m    | 0   | R    | R     |
| 4,2                                          | 20 mm, PVC conduits                                                                                                                                                                                                                                                             |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                        | m    | 50  | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                          | m    | 50  | R    | R     |
| 4,3                                          | 25 mm, Black enamelled                                                                                                                                                                                                                                                          |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                        | m    | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                          | m    | 0   | R    | R     |
| 4,4                                          | 25 mm, PVC conduits                                                                                                                                                                                                                                                             |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                        | m    | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                          | m    | 0   | R    | R     |
| 5                                            | <b>FLEXIBLE CONDUIT</b>                                                                                                                                                                                                                                                         |      |     |      |       |
| 5,1                                          | Flexible conduit with steel reinforced PVC conduit.                                                                                                                                                                                                                             |      |     |      |       |
|                                              | Material                                                                                                                                                                                                                                                                        | m    | 0   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                          | m    | 0   | R    | R     |
|                                              |                                                                                                                                                                                                                                                                                 |      |     |      |       |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 8 |                                                                                                                                                                                                                                                                                 |      |     |      | R     |

**BILL 8.3: GENERAL AND LIGHT FITTINGS**

| ITEM                                         | DESCRIPTION                                                   | UNIT | QTY | RATE | TOTAL |
|----------------------------------------------|---------------------------------------------------------------|------|-----|------|-------|
| 1                                            | Type: C (Including Lamps)                                     |      |     |      |       |
|                                              | Wall Mounted Round Bulkhead, 2 x PL9W with a aluminum         | No.  | 16  | R    | R     |
|                                              | Material                                                      | No.  | 16  | R    | R     |
| 2                                            | Type: D (Including Lamps)                                     |      |     |      |       |
|                                              | Flood Light Luminaire 125W HPS (High Pressure Sodium          | No.  | 1   | R    | R     |
|                                              | Material                                                      | No.  | 1   | R    | R     |
| 3                                            | Sub DB; DB-C: Distribution Board, complete with all           |      |     |      |       |
|                                              | Material                                                      | No.  | 1   | R    | R     |
|                                              | Labour                                                        | No.  | 1   | R    | R     |
| 4                                            | Light sensitive photo electrical switch or Motion Detector    |      |     |      |       |
|                                              | Material                                                      | No.  | 1   | R    | R     |
|                                              | Labour                                                        | No.  | 1   | R    | R     |
| 5                                            | Commissioning and Testing by Electrician                      |      |     |      |       |
|                                              | Testing, commissioning and adjustment of the final electrical | Lump | Sum | R    | R     |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 8 |                                                               |      |     |      | R     |

**ABLUTION BLOCK SUMMARY OF BILLS OF QUANTITIES (REMAINING WORKS)**

Total price for each bill, brought forward to this summary page.

| ITEM | DESCRIPTION                                                                                                                                                      | AMOUNT |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 1    | Bill 8.1: WIRING AND CONTROL BOXES                                                                                                                               | R      |
| 2    | Bill 8.2: CONTROL DEVICES AND WIRE WAYS                                                                                                                          | R      |
| 3    | Bill 8.3: GENERAL AND LIGHT FITTINGS                                                                                                                             | R      |
| 4    | TOTAL PRICE FOR THE ABLUTION BLOCK : EXCLUDING VAT - ADD ITEMS 1 TO 3 ABOVE (AMOUNT TO BE TRANSFERRED TO THE ELECTRICAL INSTALLATION SUMMARY OF REMAINING WORKS) | R      |

**ELECTRICAL INSTALLATION SUMMARY OF REMAINING WORKS**

Total price for each bill, brought forward to this summary page.

| ITEM | DESCRIPTION                                                                                                                                                                           | AMOUNT |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 1    | Bill 1: SITE INSTALLATION                                                                                                                                                             | R      |
| 2    | Bill 2: ADMINISTRATION BLOCK                                                                                                                                                          | R      |
| 3    | Bill 3: THREE CLASSROOMS AND HOD BLOCKS                                                                                                                                               | R      |
| 4    | Bill 4: THREE CLASSROOMS BLOCKS                                                                                                                                                       | R      |
| 5    | Bill 5: GRADE-R BLOCK                                                                                                                                                                 | R      |
| 6    | Bill 6: COMPUTER AND LIBRARY BLOCK                                                                                                                                                    | R      |
| 7    | Bill 7: DINNING AND NUTRITION CENTRE                                                                                                                                                  | R      |
| 8    | Bill 8: ABLUTION BLOCKS                                                                                                                                                               | R      |
| 9    | TOTAL PRICE FOR THE ELECTRICAL INSTALLATION REMAINING WORKS:<br>EXCLUDING VAT - ADD ITEMS 1 TO 8 ABOVE (AMOUNT TO BE TRANSFERRED TO<br>ELECTRICAL INSTALLTION FINAL SUMMARY OF WORKS) | R      |

**BILL 9: SITE INSTALLATION (NEW WORKS)****BILL 9.1 : CABLES, CABLE SUPPORTS, TRENCHES AND LIGHTING**

| ITEM                                         | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                | UNIT | QTY  | RATE | TOTAL |
|----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|-------|
| 1                                            | Cables: PVC/PVC/SWA/PVC copper conductor cable to SANS 1507. Cables laid in ducts or trenches or sleeves, and fixing support. Cable trenches, ducts, sleeves and terminations measured elsewhere                                                                                                                                                                                                                           |      |      |      |       |
| 1                                            | 25 mm <sup>2</sup> x 4-core                                                                                                                                                                                                                                                                                                                                                                                                |      |      |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                                                                                                                   | m    | 1200 | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                                                                                                                     | m    | 1200 | R    | R     |
| 1,2                                          | 10 mm <sup>2</sup> x 3-core                                                                                                                                                                                                                                                                                                                                                                                                |      |      |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                                                                                                                   | m    | 110  | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                                                                                                                     | m    | 110  | R    | R     |
| 2                                            | Bare copper earth conductor and termination                                                                                                                                                                                                                                                                                                                                                                                |      |      |      |       |
| 2,1                                          | 16 mm <sup>2</sup> copper earth wire                                                                                                                                                                                                                                                                                                                                                                                       |      |      |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                                                                                                                   | m    | 1100 | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                                                                                                                     | m    | 1100 | R    | R     |
| 3                                            | Terminations and connection of PVC SWA PVC cable to switchgear etc. Cables shall be provided with cable glands, neoprene shrouds and cable lugs where necessary                                                                                                                                                                                                                                                            |      |      |      |       |
| 3,1                                          | 25mm <sup>2</sup> x 4-core                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                                                                                                                   | No.  | 12   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                                                                                                                     | No.  | 12   | R    | R     |
| 3,2                                          | 10mm <sup>2</sup> x 3-core                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                                                                                                                   | No.  | 16   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                                                                                                                     | No.  | 16   | R    | R     |
| 4                                            | Careful Excavations of trenches, levelling bottom, bedding in sifted ground, backfilling and making good of surface. All trenches to be 900mm deep 600mm Wide.                                                                                                                                                                                                                                                             |      |      |      |       |
| 4,1                                          | Trenching in Earth                                                                                                                                                                                                                                                                                                                                                                                                         | m    | 500  | R    | R     |
| 4,2                                          | Trenching in Soft Rock                                                                                                                                                                                                                                                                                                                                                                                                     | m    | 20   | R    | R     |
| 4,3                                          | Trenching in Hard Rock                                                                                                                                                                                                                                                                                                                                                                                                     | m    | 4    | R    | R     |
| 5                                            | SLEEVES, including all bends, Type "KABELFLEX - Grooved"                                                                                                                                                                                                                                                                                                                                                                   |      |      |      |       |
| 5,1                                          | Sleeves: 110mm dia.                                                                                                                                                                                                                                                                                                                                                                                                        |      |      |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                                                                                                                   | m    | 80   | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                                                                                                                     | m    | 80   | R    | R     |
| 6                                            | Post Top type luminaire, shall consist of a die cast aluminium base finished in an epoxy powder coating which supports the lens, and an aluminium canopy finished in a gray powder coated upper surface with a white underside. The lens shall be of high impact acrylic. The luminaire must be properly sealed. The optical distribution must be symmetrical. The luminaire shall have 3 x 15W off-the-shelf Edison Screw |      |      |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                                                                                                                   | No.  | 6    | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                                                                                                                     | No.  | 6    | R    | R     |
| 7                                            | Galvanised ground mounted pole for Type S Light Fitting: Mounting height of Light Fitting to be 3m above ground level. The pole must taper down from bottom to top, and must have a corrosion proof sleeve                                                                                                                                                                                                                 |      |      |      |       |
|                                              | Material                                                                                                                                                                                                                                                                                                                                                                                                                   | No.  | 6    | R    | R     |
|                                              | Labour                                                                                                                                                                                                                                                                                                                                                                                                                     | No.  | 6    | R    | R     |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 9 |                                                                                                                                                                                                                                                                                                                                                                                                                            |      |      |      | R     |

**BILL 9.2: ELECTRICITY POWER SUPPLY**

| ITEM                                         | DESCRIPTION                                                                                                                                                                                                                                                                        | UNIT | QTY | RATE         | TOTAL        |
|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|--------------|--------------|
| 1                                            | Equipment provided in metering kiosk.                                                                                                                                                                                                                                              |      |     |              |              |
| 1,1                                          | Moulded case circuit breakers                                                                                                                                                                                                                                                      |      |     |              |              |
|                                              | 150 Ampere T.P. 15 kA                                                                                                                                                                                                                                                              |      |     |              |              |
|                                              | Material                                                                                                                                                                                                                                                                           | No.  | 1   | R            | R            |
|                                              | Labour                                                                                                                                                                                                                                                                             | No.  | 1   | R            | R            |
| 1,2                                          | 2 Ampere P.T. fuses                                                                                                                                                                                                                                                                |      |     |              |              |
|                                              | Material                                                                                                                                                                                                                                                                           | No.  | 1   | R            | R            |
|                                              | Labour                                                                                                                                                                                                                                                                             | No.  | 1   | R            | R            |
|                                              | Lightning Arrestors                                                                                                                                                                                                                                                                |      |     |              |              |
| 1,3                                          | Domestic S.P. 65 kA                                                                                                                                                                                                                                                                |      |     |              |              |
|                                              | Material                                                                                                                                                                                                                                                                           | No.  | 1   | R            | R            |
|                                              | Labour                                                                                                                                                                                                                                                                             | No.  | 1   | R            | R            |
|                                              | Maximum Demand/kWh meter                                                                                                                                                                                                                                                           |      |     |              |              |
| 1,4                                          | 150 Ampere Three Phase (Space only)                                                                                                                                                                                                                                                |      |     |              |              |
|                                              | Material                                                                                                                                                                                                                                                                           | No.  | 1   | R            | R            |
|                                              | Labour                                                                                                                                                                                                                                                                             | No.  | 1   | R            | R            |
|                                              | Current Transformers                                                                                                                                                                                                                                                               |      |     |              |              |
| 1,5                                          | 200 : 5 (Space only)                                                                                                                                                                                                                                                               |      |     |              |              |
|                                              | Material                                                                                                                                                                                                                                                                           | No.  | 1   | R            | R            |
|                                              | Labour                                                                                                                                                                                                                                                                             | No.  | 1   | R            | R            |
| 2                                            | Padlocks using master key                                                                                                                                                                                                                                                          |      |     |              |              |
|                                              | Material                                                                                                                                                                                                                                                                           | No.  | 30  | R            | R            |
|                                              | Labour                                                                                                                                                                                                                                                                             | No.  | 30  | R            | R            |
| 3                                            | Electricity Upgrade fee                                                                                                                                                                                                                                                            | Item | 1   | R 180 000,00 | R 180 000,00 |
| 4                                            | Bulk contribution (if applicable)                                                                                                                                                                                                                                                  | Item | 1   | R 20 000,00  | R 20 000,00  |
| 5                                            | Boundary contribution costs (if applicable)                                                                                                                                                                                                                                        | Item | 1   | R 10 000,00  | R 10 000,00  |
| 6                                            | Deposit payable to Supply Authority                                                                                                                                                                                                                                                | Item | 1   | R 12 000,00  | R 12 000,00  |
| 7                                            | Contractor's Attendance and Profit (if required) for the above items Provisional Sums (Item 4 to 7) that Totals: R 222,000.00: (___%)                                                                                                                                              | Lump | %   |              | R            |
| 8                                            | Supply and install heavy duty industrial type motor for a gate similar to Centurion D10 compete with 20 Remote controls, tracks, wheels, beams and other accessories                                                                                                               |      |     |              |              |
|                                              | Material                                                                                                                                                                                                                                                                           | No.  | 1   | R            | R            |
|                                              | Labour                                                                                                                                                                                                                                                                             | No.  | 1   | R            | R            |
| 9                                            | Contractors price to make good of all the already installed electrical equipments in all blocks. I.e. leveling light switches and scokets, cleaning electrical equipments, ensuring all equipments are fixed to the wall/ceiling and filling up gaps around electrical equipments. |      |     |              |              |
|                                              | Material                                                                                                                                                                                                                                                                           | sum  | sum | R            | R            |
|                                              | Labour                                                                                                                                                                                                                                                                             | sum  | sum | R            | R            |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 9 |                                                                                                                                                                                                                                                                                    |      |     |              | R            |

**BILL 10: THREE CLASSROOMS BLOCK (NEW WORKS)****BILL 10.1 : WIRING AND CONTROL BOXES**

| ITEM                                                 | DESCRIPTION                                                                                                                                                           | UNIT | QTY | RATE | TOTAL    |
|------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|----------|
| 1                                                    | PVC Round conduit boxes with cover and screws: 50mm diameter (any way), built into brick, concrete or in roof space or on surface                                     |      |     |      |          |
| 1,1                                                  | 20 mm                                                                                                                                                                 |      |     |      |          |
|                                                      | Material                                                                                                                                                              | No.  | 30  | R    | R        |
|                                                      | Labour                                                                                                                                                                | No.  | 30  | R    | R        |
| 2                                                    | PVC Looping conduit boxes with cover and screws: (any way), built into brick, concrete or in roof space or on surface                                                 |      |     |      |          |
| 2,1                                                  | 20 mm                                                                                                                                                                 |      |     |      |          |
|                                                      | Material                                                                                                                                                              | No.  | 5   | R    | R        |
|                                                      | Labour                                                                                                                                                                | No.  | 5   | R    | R        |
| 2,2                                                  | 25 mm                                                                                                                                                                 |      |     |      |          |
|                                                      | Material                                                                                                                                                              | No.  | 2   | R    | R        |
|                                                      | Labour                                                                                                                                                                | No.  | 2   | R    | R        |
| 3                                                    | Galvanised pressed metal boxes, flush mounted in wall complete with mounting on conduit, built into brick or concrete, in roof space or on surface                    |      |     |      |          |
| 3,1                                                  | 100mm x 100 mm x 50 mm                                                                                                                                                |      |     |      |          |
|                                                      | Material                                                                                                                                                              | No.  | 30  | R    | R        |
|                                                      | Labour                                                                                                                                                                | No.  | 30  | R    | R        |
| 3,2                                                  | 50 mm x 100mm x 50 mm                                                                                                                                                 |      |     |      |          |
|                                                      | Material                                                                                                                                                              | No.  | 5   | R    | R        |
|                                                      | Labour                                                                                                                                                                | No.  | 5   | R    | R        |
| 4                                                    | PVC insulated copper conductor wires in conduits, wiring channels or power skirting; for lights, plugs, power points, including connection to switches and equipment. |      |     |      |          |
| 4,1                                                  | 2,5 mm <sup>2</sup> PVC wire                                                                                                                                          |      |     |      |          |
|                                                      | Material                                                                                                                                                              | m    | 480 | R    | R        |
|                                                      | Labour                                                                                                                                                                | m    | 480 | R    | R        |
| 4,2                                                  | 4,0 mm <sup>2</sup> PVC wire                                                                                                                                          |      |     |      |          |
|                                                      | Material                                                                                                                                                              | m    | 360 | R    | R        |
|                                                      | Labour                                                                                                                                                                | m    | 360 | R    | R        |
| 4,3                                                  | 4 mm <sup>2</sup> x 4-Core and Earth (Surfix or Plattwin) Cable.                                                                                                      |      |     |      |          |
|                                                      | Material                                                                                                                                                              | m    | 10  | R    | R        |
|                                                      | Labour                                                                                                                                                                | m    | 10  | R    | R        |
| 5                                                    | Copper earth conductor wires in conduits, wiring channels or power skirting; for lights, plugs, power points, including connection to switches and equipment.         |      |     |      |          |
| 5,1                                                  | 2,5 mm <sup>2</sup> bare copper earth wire                                                                                                                            |      |     |      |          |
|                                                      | Material                                                                                                                                                              | m    | 420 | R    | R        |
|                                                      | Labour                                                                                                                                                                | m    | 420 | R    | R        |
| 6                                                    | SLEEVES, Including all bends, Type "KABELFLEX - Grooved"                                                                                                              |      |     |      |          |
| 6,1                                                  | Sleeves: 110mm dia.                                                                                                                                                   |      |     |      |          |
|                                                      | Material                                                                                                                                                              | m    | 4   | R    | R        |
|                                                      | Labour                                                                                                                                                                | m    | 4   | R    | R        |
| 6,2                                                  | Sleeves: 50mm dia.                                                                                                                                                    |      |     |      |          |
|                                                      | Material                                                                                                                                                              | m    | 3   | R    | R        |
|                                                      | Labour                                                                                                                                                                | m    | 3   | R    | R        |
| <b>TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 10</b> |                                                                                                                                                                       |      |     |      | <b>R</b> |

**BILL 10.2: CONTROL DEVICES**

| ITEM                                          | DESCRIPTION                                                                                                                             | UNIT | QTY | RATE | TOTAL |
|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                             | Light switches, complete with steel powder coated coverplates and screws, fitted to flush outlet box (boxes measured                    |      |     |      |       |
| 1,1                                           | 16A (1 Lever-1 Way Vertical)                                                                                                            |      |     |      |       |
|                                               | Material                                                                                                                                | No.  | 3   | R    | R     |
|                                               | Labour                                                                                                                                  | No.  | 3   | R    | R     |
| 2                                             | Wall mounted switched socket outlets combination of two outlets (sans 164-1 and 164-2) mounted at 300mm affl Unless otherwise specified |      |     |      |       |
|                                               | Material                                                                                                                                | No.  | 21  | R    | R     |
|                                               | Labour                                                                                                                                  | No.  | 21  | R    | R     |
| 3                                             | Blank service outlet cover for 100x100mm wall box                                                                                       |      |     |      |       |
|                                               | Material                                                                                                                                | No.  | 9   | R    | R     |
|                                               | Labour                                                                                                                                  | No.  | 9   | R    | R     |
| 4                                             | Blank service outlet cover for 100x50mm wall box                                                                                        |      |     |      |       |
|                                               | Material                                                                                                                                | No.  | 2   | R    | R     |
|                                               | Labour                                                                                                                                  | No.  | 2   | R    | R     |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 10 |                                                                                                                                         |      |     |      | R     |

**BILL 10.3 : WIRE WAYS**

| ITEM                                                 | DESCRIPTION                                                                                                                                                                                                                                                                                                             | UNIT | QTY | RATE | TOTAL    |
|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|----------|
| 1                                                    | <b>WIRING CHANNELS</b><br>Galvanised Wiring Channel with Steel Covers including:<br>- bolts, nuts and washers, - coupling pieces, - earthing<br>- mounted in service level or ceiling void or roof trusses.<br>- hangers, - bends, - supporting (rods, etc.),<br>- Lengths Powder coated in one of 4 different colours. |      |     |      |          |
| 1,1                                                  | P9000 Channel                                                                                                                                                                                                                                                                                                           |      |     |      |          |
|                                                      | Material                                                                                                                                                                                                                                                                                                                | m    | 30  | R    | R        |
|                                                      | Labour                                                                                                                                                                                                                                                                                                                  | m    | 30  | R    | R        |
| 1,2                                                  | Steel cover for P9000 Channel                                                                                                                                                                                                                                                                                           |      |     |      |          |
|                                                      | Material                                                                                                                                                                                                                                                                                                                | m    | 30  | R    | R        |
|                                                      | Labour                                                                                                                                                                                                                                                                                                                  | m    | 30  | R    | R        |
| 1,3                                                  | Radius distribution board outlet and cover for P9000 Channel                                                                                                                                                                                                                                                            |      |     |      |          |
|                                                      | Material                                                                                                                                                                                                                                                                                                                | No   | 1   | R    | R        |
|                                                      | Labour                                                                                                                                                                                                                                                                                                                  | No   | 1   | R    | R        |
| 1,4                                                  | Splices for P9000 channel                                                                                                                                                                                                                                                                                               |      |     |      |          |
|                                                      | Material                                                                                                                                                                                                                                                                                                                | No   | 20  | R    | R        |
|                                                      | Labour                                                                                                                                                                                                                                                                                                                  | No   | 20  | R    | R        |
| 1,5                                                  | End cap for P9000 channel                                                                                                                                                                                                                                                                                               |      |     |      |          |
|                                                      | Material                                                                                                                                                                                                                                                                                                                | No   | 2   | R    | R        |
|                                                      | Labour                                                                                                                                                                                                                                                                                                                  | No   | 2   | R    | R        |
| 2                                                    | Draw wire 1.5mm                                                                                                                                                                                                                                                                                                         |      |     |      |          |
|                                                      | Material                                                                                                                                                                                                                                                                                                                | m    | 20  | R    | R        |
|                                                      | Labour                                                                                                                                                                                                                                                                                                                  | m    | 20  | R    | R        |
| 3                                                    | <b>CONDUITS</b><br>Conduits including conduit accessories, such as couplings, bushes, locknuts, saddle, etc. Flush or wall mounted into brickwork, concrete, chased into concrete or in ceiling void or in service level or in dry walls with proper support of the draw boxes.                                         |      |     |      |          |
| 3,1                                                  | 20 mm, Black enamelled                                                                                                                                                                                                                                                                                                  |      |     |      |          |
|                                                      | Material                                                                                                                                                                                                                                                                                                                | m    | 20  | R    | R        |
|                                                      | Labour                                                                                                                                                                                                                                                                                                                  | m    | 20  | R    | R        |
|                                                      | 20 mm, PVC conduits                                                                                                                                                                                                                                                                                                     |      |     |      |          |
|                                                      | Material                                                                                                                                                                                                                                                                                                                | m    | 300 | R    | R        |
|                                                      | Labour                                                                                                                                                                                                                                                                                                                  | m    | 300 | R    | R        |
| 3,3                                                  | 25 mm, Black enamelled                                                                                                                                                                                                                                                                                                  |      |     |      |          |
|                                                      | Material                                                                                                                                                                                                                                                                                                                | m    | 20  | R    | R        |
|                                                      | Labour                                                                                                                                                                                                                                                                                                                  | m    | 20  | R    | R        |
| 3,4                                                  | 25 mm, PVC conduits                                                                                                                                                                                                                                                                                                     |      |     |      |          |
|                                                      | Material                                                                                                                                                                                                                                                                                                                | m    | 50  | R    | R        |
|                                                      | Labour                                                                                                                                                                                                                                                                                                                  | m    | 50  | R    | R        |
| 4                                                    | <b>FLEXIBLE CONDUIT</b>                                                                                                                                                                                                                                                                                                 |      |     |      |          |
| 4,1                                                  | Flexible conduit with steel reinforced PVC conduit.                                                                                                                                                                                                                                                                     |      |     |      |          |
|                                                      | Material                                                                                                                                                                                                                                                                                                                | m    | 10  | R    | R        |
|                                                      | Labour                                                                                                                                                                                                                                                                                                                  | m    | 10  | R    | R        |
| <b>TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 10</b> |                                                                                                                                                                                                                                                                                                                         |      |     |      | <b>R</b> |

## **BILL 10.4 : LIGHT FITTINGS**

| ITEM                                                 | DESCRIPTION                                                                                                                                                                                                                        | UNIT       | QTY      | RATE   | TOTAL    |
|------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|----------|--------|----------|
| 1                                                    | Type: A (Including Lamps)<br>1.2 meter, 2 lamp Open Cahnnel fluorescent Luminaire complete with 28 Watt lamps, telescopic lamp holder and electronic control gear<br>Material<br>Labour                                            | No.<br>No. | 18<br>18 | R<br>R | R<br>R   |
| 2                                                    | Type: C (Including Lamps)<br>2 x 9W E27 230V led lamps, round bulkhead luminaire, ceiling mounted, complete with unbreakable polycarbonate diffuser, black die cast aluminium base and mounting accessories.<br>Material<br>Labour | No.<br>No. | 6<br>6   | R<br>R | R<br>R   |
| 3                                                    | Type: D (Including Lamps)<br>Flood Light Luminaire 125W HPS (High Pressure Sodium Lamp)<br>Material<br>Labour                                                                                                                      | No.<br>No. | 1<br>1   | R<br>R | R<br>R   |
|                                                      |                                                                                                                                                                                                                                    |            |          |        |          |
| <b>TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 10</b> |                                                                                                                                                                                                                                    |            |          |        | <b>R</b> |

**BILL 10.5 :GENERAL**

| ITEM                                                 | DESCRIPTION                                                                                                                                                                                                                                                                                                                         | UNIT | QTY | RATE | TOTAL    |
|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|----------|
| 1                                                    | Sub DB; DB-I: Distribution Board, complete with all switchgears (breakers and isolators), labels and legend cards. (See Distribution Boards Layout Drawing).                                                                                                                                                                        |      |     |      |          |
|                                                      | Material                                                                                                                                                                                                                                                                                                                            | No.  | 1,0 | R    | R        |
|                                                      | Labour                                                                                                                                                                                                                                                                                                                              | No.  | 1,0 | R    | R        |
| 2                                                    | Public Addresser Box, flush mounted, consisting of metal tray, architrave frame and hinged doors, wall mounted in the position specified and a 20 mm thick soft pine wood panel in the main telephone distribution board to cover the entire back of the board. 600mmx500x120mm                                                     |      |     |      |          |
|                                                      | Material                                                                                                                                                                                                                                                                                                                            | No.  | 1   | R    | R        |
|                                                      | Labour                                                                                                                                                                                                                                                                                                                              | No.  | 1   | R    | R        |
| 3                                                    | Light sensitive photo electrical switch or Motion Detector Switch, Type National, in an empty Luminaire such as B10. The rate to include for the empty bulkhead.                                                                                                                                                                    |      |     |      |          |
|                                                      | Material                                                                                                                                                                                                                                                                                                                            | No.  | 1   | R    | R        |
|                                                      | Labour                                                                                                                                                                                                                                                                                                                              | No.  | 1   | R    | R        |
| 4                                                    | Commissioning and Testing by Electrician<br>Testing, commissioning and adjustment of the final electrical installation as well as being in attendance for any inspections and tests that the Representative / Agent may call for, including the issuing of the Certificate of Compliance (COC) by Electrician for the Sub DB: DB-I. | Lump | Sum | R    | R        |
|                                                      |                                                                                                                                                                                                                                                                                                                                     |      |     |      |          |
| <b>TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 10</b> |                                                                                                                                                                                                                                                                                                                                     |      |     |      | <b>R</b> |

**THREE CLASSROOM BLOCK SUMMARY OF BILLS OF QUANTITIES (NEW WORKS)**

Total price for each bill, brought forward to this summary page.

| ITEM | DESCRIPTION                                                                                                                                                                |            | AMOUNT |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------|
| 1    | Bill 10.1: WIRING AND CONTROL BOXES                                                                                                                                        |            | R      |
| 2    | Bill 10.2: CONTROL DEVICES                                                                                                                                                 |            | R      |
| 3    | Bill 10.3: WIRE WAYS                                                                                                                                                       |            | R      |
| 4    | Bill 10.4: LIGHT FITTINGS                                                                                                                                                  |            | R      |
| 5    | Bill 10.5: GENERAL                                                                                                                                                         |            | R      |
| 6    | PRICE PER THREE CLASSROOM BLOCK: EXCLUDING VAT - ADD ITEMS 1 TO 5 ABOVE                                                                                                    |            | R      |
| 7    | TOTAL PRICE FOR ALL THE THREE CLASSROOM BLOCKS:<br>EXCLUDING VAT: MULTIPLY ITEM 6 BY 2 (AMOUNT TO BE<br>TRANSFERRED TO THE ELECTRICAL INSTALLATION SUMMARY (NEW<br>WORKS)) | x 2 Blocks | R      |

**BILL 11: THREE CLASSROOMS AND STORE (NEW WORKS)****BILL 11.1 : WIRING AND CONTROL BOXES**

| ITEM                                          | DESCRIPTION                                                                                                                                                           | UNIT | QTY | RATE | TOTAL |
|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                             | PVC Round conduit boxes with cover and screws: 50mm diameter (any way), built into brick, concrete or in roof space or on surface                                     |      |     |      |       |
| 1,1                                           | 20 mm                                                                                                                                                                 |      |     |      |       |
|                                               | Material                                                                                                                                                              | No.  | 35  | R    | R     |
|                                               | Labour                                                                                                                                                                | No.  | 35  | R    | R     |
| 2                                             | PVC Looping conduit boxes with cover and screws: (any way), built into brick, concrete or in roof space or on surface                                                 |      |     |      |       |
| 2,1                                           | 20 mm                                                                                                                                                                 |      |     |      |       |
|                                               | Material                                                                                                                                                              | No.  | 5   | R    | R     |
|                                               | Labour                                                                                                                                                                | No.  | 5   | R    | R     |
| 2,2                                           | 25 mm                                                                                                                                                                 |      |     |      |       |
|                                               | Material                                                                                                                                                              | No.  | 2   | R    | R     |
|                                               | Labour                                                                                                                                                                | No.  | 2   | R    | R     |
| 3                                             | Galvanised pressed metal boxes, flush mounted in wall complete with mounting on conduit, built into brick or concrete, in roof space or on surface                    |      |     |      |       |
| 3,1                                           | 100mm x 100 mm x 50 mm                                                                                                                                                |      |     |      |       |
|                                               | Material                                                                                                                                                              | No.  | 32  | R    | R     |
|                                               | Labour                                                                                                                                                                | No.  | 32  | R    | R     |
| 3,2                                           | 50 mm x 100mm x 50 mm                                                                                                                                                 |      |     |      |       |
|                                               | Material                                                                                                                                                              | No.  | 6   | R    | R     |
|                                               | Labour                                                                                                                                                                | No.  | 6   | R    | R     |
| 4                                             | PVC insulated copper conductor wires in conduits, wiring channels or power skirting; for lights, plugs, power points, including connection to switches and equipment. |      |     |      |       |
| 4,1                                           | 2,5 mm <sup>2</sup> PVC wire                                                                                                                                          |      |     |      |       |
|                                               | Material                                                                                                                                                              | m    | 540 | R    | R     |
|                                               | Labour                                                                                                                                                                | m    | 540 | R    | R     |
| 4,2                                           | 4,0 mm <sup>2</sup> PVC wire                                                                                                                                          |      |     |      |       |
|                                               | Material                                                                                                                                                              | m    | 390 | R    | R     |
|                                               | Labour                                                                                                                                                                | m    | 390 | R    | R     |
| 4,3                                           | 4 mm <sup>2</sup> x 4-Core and Earth (Surfix or Plattwin) Cable.                                                                                                      |      |     |      |       |
|                                               | Material                                                                                                                                                              | m    | 10  | R    | R     |
|                                               | Labour                                                                                                                                                                | m    | 10  | R    | R     |
| 5                                             | Copper earth conductor wires in conduits, wiring channels or power skirting; for lights, plugs, power points, including connection to switches and equipment.         |      |     |      |       |
| 5,1                                           | 2,5 mm <sup>2</sup> bare copper earth wire                                                                                                                            |      |     |      |       |
|                                               | Material                                                                                                                                                              | m    | 465 | R    | R     |
|                                               | Labour                                                                                                                                                                | m    | 465 | R    | R     |
| 6                                             | SLEEVES, Including all bends, Type "KABELFLEX - Grooved"                                                                                                              |      |     |      |       |
| 6,1                                           | Sleeves: 110mm dia.                                                                                                                                                   |      |     |      |       |
|                                               | Material                                                                                                                                                              | m    | 4   | R    | R     |
|                                               | Labour                                                                                                                                                                | m    | 4   | R    | R     |
| 6,2                                           | Sleeves: 50mm dia.                                                                                                                                                    |      |     |      |       |
|                                               | Material                                                                                                                                                              | m    | 3   | R    | R     |
|                                               | Labour                                                                                                                                                                | m    | 3   | R    | R     |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 11 |                                                                                                                                                                       |      |     |      | R     |

**BILL 11.2: CONTROL DEVICES**

| ITEM                                          | DESCRIPTION                                                                                                                             | UNIT | QTY | RATE | TOTAL |
|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                             | Light switches, complete with steel powder coated coverplates and screws, fitted to flush outlet box (boxes measured                    |      |     |      |       |
| 1,1                                           | 16A (1 Lever-1 Way Vertical)                                                                                                            |      |     |      |       |
|                                               | Material                                                                                                                                | No.  | 4   | R    | R     |
|                                               | Labour                                                                                                                                  | No.  | 4   | R    | R     |
| 2                                             | Wall mounted switched socket outlets combination of two outlets (sans 164-1 and 164-2) mounted at 300mm affl Unless otherwise specified |      |     |      |       |
|                                               | Material                                                                                                                                | No.  | 23  | R    | R     |
|                                               | Labour                                                                                                                                  | No.  | 23  | R    | R     |
| 3                                             | Blank service outlet cover for 100x100mm wall box                                                                                       |      |     |      |       |
|                                               | Material                                                                                                                                | No.  | 10  | R    | R     |
|                                               | Labour                                                                                                                                  | No.  | 10  | R    | R     |
| 4                                             | Blank service outlet cover for 100x50mm wall box                                                                                        |      |     |      |       |
|                                               | Material                                                                                                                                | No.  | 2   | R    | R     |
|                                               | Labour                                                                                                                                  | No.  | 2   | R    | R     |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 11 |                                                                                                                                         |      |     |      | R     |

**BILL 11.3 : WIRE WAYS**

| ITEM                                                 | DESCRIPTION                                                                                                                                                                                                                                                                                                             | UNIT | QTY | RATE | TOTAL    |
|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|----------|
| 1                                                    | <b>WIRING CHANNELS</b><br>Galvanised Wiring Channel with Steel Covers including:<br>- bolts, nuts and washers, - coupling pieces, - earthing<br>- mounted in service level or ceiling void or roof trusses.<br>- hangers, - bends, - supporting (rods, etc.),<br>- Lengths Powder coated in one of 4 different colours. |      |     |      |          |
| 1,1                                                  | P9000 Channel                                                                                                                                                                                                                                                                                                           |      |     |      |          |
|                                                      | Material                                                                                                                                                                                                                                                                                                                | m    | 35  | R    | R        |
|                                                      | Labour                                                                                                                                                                                                                                                                                                                  | m    | 35  | R    | R        |
| 1,2                                                  | Steel cover for P9000 Channel                                                                                                                                                                                                                                                                                           |      |     |      |          |
|                                                      | Material                                                                                                                                                                                                                                                                                                                | m    | 35  | R    | R        |
|                                                      | Labour                                                                                                                                                                                                                                                                                                                  | m    | 35  | R    | R        |
| 1,3                                                  | Radius distribution board outlet and cover for P9000 Channel                                                                                                                                                                                                                                                            |      |     |      |          |
|                                                      | Material                                                                                                                                                                                                                                                                                                                | No   | 1   | R    | R        |
|                                                      | Labour                                                                                                                                                                                                                                                                                                                  | No   | 1   | R    | R        |
| 1,4                                                  | Splices for P9000 channel                                                                                                                                                                                                                                                                                               |      |     |      |          |
|                                                      | Material                                                                                                                                                                                                                                                                                                                | No   | 22  | R    | R        |
|                                                      | Labour                                                                                                                                                                                                                                                                                                                  | No   | 22  | R    | R        |
| 1,5                                                  | End cap for P9000 channel                                                                                                                                                                                                                                                                                               |      |     |      |          |
|                                                      | Material                                                                                                                                                                                                                                                                                                                | No   | 2   | R    | R        |
|                                                      | Labour                                                                                                                                                                                                                                                                                                                  | No   | 2   | R    | R        |
| 2                                                    | Draw wire 1.5mm                                                                                                                                                                                                                                                                                                         |      |     |      |          |
|                                                      | Material                                                                                                                                                                                                                                                                                                                | m    | 20  | R    | R        |
|                                                      | Labour                                                                                                                                                                                                                                                                                                                  | m    | 20  | R    | R        |
| 3                                                    | <b>CONDUITS</b><br>Conduits including conduit accessories, such as couplings, bushes, locknuts, saddle, etc. Flush or wall mounted into brickwork, concrete, chased into concrete or in ceiling void or in service level or in dry walls with proper support of the draw boxes.                                         |      |     |      |          |
| 3,1                                                  | 20 mm, Black enamelled                                                                                                                                                                                                                                                                                                  |      |     |      |          |
|                                                      | Material                                                                                                                                                                                                                                                                                                                | m    | 20  | R    | R        |
|                                                      | Labour                                                                                                                                                                                                                                                                                                                  | m    | 20  | R    | R        |
|                                                      | 20 mm, PVC conduits                                                                                                                                                                                                                                                                                                     |      |     |      |          |
|                                                      | Material                                                                                                                                                                                                                                                                                                                | m    | 350 | R    | R        |
|                                                      | Labour                                                                                                                                                                                                                                                                                                                  | m    | 350 | R    | R        |
| 3,3                                                  | 25 mm, Black enamelled                                                                                                                                                                                                                                                                                                  |      |     |      |          |
|                                                      | Material                                                                                                                                                                                                                                                                                                                | m    | 20  | R    | R        |
|                                                      | Labour                                                                                                                                                                                                                                                                                                                  | m    | 20  | R    | R        |
| 3,4                                                  | 25 mm, PVC conduits                                                                                                                                                                                                                                                                                                     |      |     |      |          |
|                                                      | Material                                                                                                                                                                                                                                                                                                                | m    | 50  | R    | R        |
|                                                      | Labour                                                                                                                                                                                                                                                                                                                  | m    | 50  | R    | R        |
| 4                                                    | <b>FLEXIBLE CONDUIT</b>                                                                                                                                                                                                                                                                                                 |      |     |      |          |
| 4,1                                                  | Flexible conduit with steel reinforced PVC conduit.                                                                                                                                                                                                                                                                     |      |     |      |          |
|                                                      | Material                                                                                                                                                                                                                                                                                                                | m    | 10  | R    | R        |
|                                                      | Labour                                                                                                                                                                                                                                                                                                                  | m    | 10  | R    | R        |
| <b>TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 11</b> |                                                                                                                                                                                                                                                                                                                         |      |     |      | <b>R</b> |

## **BILL 11.4 : LIGHT FITTINGS**

[illegible]

**BILL 11.5 :GENERAL**

| ITEM                                          | DESCRIPTION                                                                                                                                                                                                                                                                                                                         | UNIT | QTY | RATE | TOTAL |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                             | Sub DB; DB-M: Distribution Board, complete with all switchgears (breakers and isolators), labels and legend cards. (See Distribution Boards Layout Drawing).                                                                                                                                                                        |      |     |      |       |
|                                               | Material                                                                                                                                                                                                                                                                                                                            | No.  | 1,0 | R    | R     |
|                                               | Labour                                                                                                                                                                                                                                                                                                                              | No.  | 1,0 | R    | R     |
| 2                                             | Public Addresser Box, flush mounted, consisting of metal tray, architrave frame and hinged doors, wall mounted in the position specified and a 20 mm thick soft pine wood panel in the main telephone distribution board to cover the entire back of the board. 600mmx500x120mm                                                     |      |     |      |       |
|                                               | Material                                                                                                                                                                                                                                                                                                                            | No.  | 1   | R    | R     |
|                                               | Labour                                                                                                                                                                                                                                                                                                                              | No.  | 1   | R    | R     |
| 3                                             | Light sensitive photo electrical switch or Motion Detector Switch, Type National, in an empty Luminaire such as B10. The rate to include for the empty bulkhead.                                                                                                                                                                    |      |     |      |       |
|                                               | Material                                                                                                                                                                                                                                                                                                                            | No.  | 1   | R    | R     |
|                                               | Labour                                                                                                                                                                                                                                                                                                                              | No.  | 1   | R    | R     |
| 4                                             | Commissioning and Testing by Electrician<br>Testing, commissioning and adjustment of the final electrical installation as well as being in attendance for any inspections and tests that the Representative / Agent may call for, including the issuing of the Certificate of Compliance (COC) by Electrician for the Sub DB: DB-M. |      |     |      |       |
|                                               |                                                                                                                                                                                                                                                                                                                                     | Lump | Sum | R    | R     |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 11 |                                                                                                                                                                                                                                                                                                                                     |      |     |      | R     |

**BILL 12: TWO CLASSROOMS, ABLUTIONS AND HOD BLOCK (NEW WORKS)****BILL 12.1 : WIRING AND CONTROL BOXES**

| ITEM                                          | DESCRIPTION                                                                                                                                                           | UNIT | QTY | RATE | TOTAL |
|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                             | PVC Round conduit boxes with cover and screws: 50mm diameter (any way), built into brick, concrete or in roof space or on surface                                     |      |     |      |       |
| 1,1                                           | 20 mm                                                                                                                                                                 |      |     |      |       |
|                                               | Material                                                                                                                                                              | No.  | 33  | R    | R     |
|                                               | Labour                                                                                                                                                                | No.  | 33  | R    | R     |
| 2                                             | PVC Looping conduit boxes with cover and screws: (any way), built into brick, concrete or in roof space or on surface                                                 |      |     |      |       |
| 2,1                                           | 20 mm                                                                                                                                                                 |      |     |      |       |
|                                               | Material                                                                                                                                                              | No.  | 8   | R    | R     |
|                                               | Labour                                                                                                                                                                | No.  | 8   | R    | R     |
| 2,2                                           | 25 mm                                                                                                                                                                 |      |     |      |       |
|                                               | Material                                                                                                                                                              | No.  | 3   | R    | R     |
|                                               | Labour                                                                                                                                                                | No.  | 3   | R    | R     |
| 3                                             | Galvanised pressed metal boxes, flush mounted in wall complete with mounting on conduit, built into brick or concrete, in roof space or on surface                    |      |     |      |       |
| 3,1                                           | 100mm x 100 mm x 50 mm                                                                                                                                                |      |     |      |       |
|                                               | Material                                                                                                                                                              | No.  | 22  | R    | R     |
|                                               | Labour                                                                                                                                                                | No.  | 22  | R    | R     |
| 3,2                                           | 50 mm x 100mm x 50 mm                                                                                                                                                 |      |     |      |       |
|                                               | Material                                                                                                                                                              | No.  | 6   | R    | R     |
|                                               | Labour                                                                                                                                                                | No.  | 6   | R    | R     |
| 4                                             | PVC insulated copper conductor wires in conduits, wiring channels or power skirting; for lights, plugs, power points, including connection to switches and equipment. |      |     |      |       |
| 4,1                                           | 2,5 mm <sup>2</sup> PVC wire                                                                                                                                          |      |     |      |       |
|                                               | Material                                                                                                                                                              | m    | 546 | R    | R     |
|                                               | Labour                                                                                                                                                                | m    | 546 | R    | R     |
| 4,2                                           | 4,0 mm <sup>2</sup> PVC wire                                                                                                                                          |      |     |      |       |
|                                               | Material                                                                                                                                                              | m    | 460 | R    | R     |
|                                               | Labour                                                                                                                                                                | m    | 460 | R    | R     |
| 4,3                                           | 4 mm <sup>2</sup> x 4-Core and Earth (Surfix or Plattwin) Cable.                                                                                                      |      |     |      |       |
|                                               | Material                                                                                                                                                              | m    | 10  | R    | R     |
|                                               | Labour                                                                                                                                                                | m    | 10  | R    | R     |
| 5                                             | Copper earth conductor wires in conduits, wiring channels or power skirting; for lights, plugs, power points, including connection to switches and equipment.         |      |     |      |       |
| 5,1                                           | 2,5 mm <sup>2</sup> bare copper earth wire                                                                                                                            |      |     |      |       |
|                                               | Material                                                                                                                                                              | m    | 480 | R    | R     |
|                                               | Labour                                                                                                                                                                | m    | 480 | R    | R     |
| 6                                             | SLEEVES, Including all bends, Type "KABELFLEX - Grooved"                                                                                                              |      |     |      |       |
| 6,1                                           | Sleeves: 110mm dia.                                                                                                                                                   |      |     |      |       |
|                                               | Material                                                                                                                                                              | m    | 5   | R    | R     |
|                                               | Labour                                                                                                                                                                | m    | 5   | R    | R     |
| 6,2                                           | Sleeves: 50mm dia.                                                                                                                                                    |      |     |      |       |
|                                               | Material                                                                                                                                                              | m    | 5   | R    | R     |
|                                               | Labour                                                                                                                                                                | m    | 5   | R    | R     |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 12 |                                                                                                                                                                       |      |     |      | R     |

**BILL 12.2: CONTROL DEVICES**

| ITEM                                          | DESCRIPTION                                                                                                                                       | UNIT | QTY | RATE | TOTAL |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                             | Light switches, complete with steel powder coated coverplates and screws, fitted to flush outlet box (boxes measured 16A (1 Lever-1 Way Vertical) |      |     |      |       |
| 1,1                                           | Material                                                                                                                                          | No.  | 6   | R    | R     |
|                                               | Labour                                                                                                                                            | No.  | 6   | R    | R     |
| 2                                             | Wall mounted switched socket outlets combination of two outlets (sans 164-1 and 164-2) mounted at 300mm affl Unless otherwise specified           |      |     |      |       |
|                                               | Material                                                                                                                                          | No.  | 16  | R    | R     |
|                                               | Labour                                                                                                                                            | No.  | 16  | R    | R     |
| 3                                             | Switched socket outlets of 16A, 250V, mounted on the Power Skirting                                                                               |      |     |      |       |
| 3,1                                           | 16 Amp normal 3-pin, 250V grade switch socket outlet in power skirting including cover plate and mounting brackets                                |      |     |      |       |
|                                               | Material                                                                                                                                          | No.  | 4   | R    | R     |
|                                               | Labour                                                                                                                                            | No.  | 4   | R    | R     |
| 3,2                                           | 16 Ampere dedicated (red) 3-pin 250V grade switch socket outlet in power skirting including cover plate and mounting brackets                     |      |     |      |       |
|                                               | Material                                                                                                                                          | No.  | 2   | R    | R     |
|                                               | Labour                                                                                                                                            | No.  | 2   | R    | R     |
| 3,3                                           | Data and Telephone Point mounting on power skirting                                                                                               |      |     |      |       |
|                                               | Material                                                                                                                                          | No.  | 4   | R    | R     |
|                                               | Labour                                                                                                                                            | No.  | 4   | R    | R     |
| 5                                             | Blank service outlet cover for 100x100mm wall box                                                                                                 |      |     |      |       |
|                                               | Material                                                                                                                                          | No.  | 6   | R    | R     |
|                                               | Labour                                                                                                                                            | No.  | 6   | R    | R     |
| 6                                             | Blank service outlet cover for 100x50mm wall box                                                                                                  |      |     |      |       |
|                                               | Material                                                                                                                                          | No.  | 2   | R    | R     |
|                                               | Labour                                                                                                                                            | No.  | 2   | R    | R     |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 12 |                                                                                                                                                   |      |     |      | R     |

**BILL 12.3 : WIRE WAYS**

| ITEM                               | DESCRIPTION                                                                                                                                                                                                                                                                                   | UNIT | QTY | RATE | TOTAL |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                  | <b>WIRING CHANNELS</b>                                                                                                                                                                                                                                                                        |      |     |      |       |
|                                    | Galvanised Wiring Channel with Steel Covers including:<br>- bolts, nuts and washers, - coupling pieces, - earthing<br>- mounted in service level or ceiling void or roof trusses.<br>- hangers, - bends, - supporting (rods, etc.),<br>- Lengths Powder coated in one of 4 different colours. |      |     |      |       |
| 1,1                                | P9000 Channel                                                                                                                                                                                                                                                                                 |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                      | m    | 30  | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                        | m    | 30  | R    | R     |
| 1,2                                | Steel cover for P9000 Channel                                                                                                                                                                                                                                                                 |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                      | m    | 30  | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                        | m    | 30  | R    | R     |
| 1,3                                | Radius distribution board outlet and cover for P9000 Channel                                                                                                                                                                                                                                  |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                      | No   | 1   | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                        | No   | 1   | R    | R     |
| 1,4                                | Splices for P9000 channel                                                                                                                                                                                                                                                                     |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                      | No   | 14  | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                        | No   | 14  | R    | R     |
| 1,5                                | End cap for P9000 channel                                                                                                                                                                                                                                                                     |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                      | No   | 2   | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                        | No   | 2   | R    | R     |
| 2                                  | Draw wire 1.5mm                                                                                                                                                                                                                                                                               |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                      | m    | 20  | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                        | m    | 20  | R    | R     |
| 3                                  | <b>CONDUITS</b>                                                                                                                                                                                                                                                                               |      |     |      |       |
|                                    | Conduits including conduit accessories, such as couplings, bushes, locknuts, saddle, etc. Flush or wall mounted into brickwork, concrete, chased into concrete or in ceiling void or in service level or in dry walls with proper support of the draw boxes.                                  |      |     |      |       |
| 3,1                                | 20 mm, Black enamelled                                                                                                                                                                                                                                                                        |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                      | m    | 20  | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                        | m    | 20  | R    | R     |
| 3,2                                | 20 mm, PVC conduits                                                                                                                                                                                                                                                                           |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                      | m    | 310 | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                        | m    | 310 | R    | R     |
| 3,3                                | 25 mm, Black enamelled                                                                                                                                                                                                                                                                        |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                      | m    | 20  | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                        | m    | 20  | R    | R     |
| 3,4                                | 25 mm, PVC conduits                                                                                                                                                                                                                                                                           |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                      | m    | 40  | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                        | m    | 40  | R    | R     |
| 4                                  | <b>FLEXIBLE CONDUIT</b>                                                                                                                                                                                                                                                                       |      |     |      |       |
| 4,1                                | Flexible conduit with steel reinforced PVC conduit.                                                                                                                                                                                                                                           |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                      | m    | 20  | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                        | m    | 20  | R    | R     |
| TOTAL CARRIED FORWARD TO NEXT PAGE |                                                                                                                                                                                                                                                                                               |      |     |      | R     |

**BILL 12.3 : WIRE WAYS (Continues)**

| ITEM                                          | DESCRIPTION                                                 | UNIT | QTY | RATE | TOTAL |
|-----------------------------------------------|-------------------------------------------------------------|------|-----|------|-------|
| TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE      |                                                             |      |     |      | R     |
| 5                                             | POWER SKIRTING                                              |      |     |      |       |
|                                               | Power skirting, 2 compartment 2 cover type, including steel |      |     |      |       |
|                                               | - Steel cover, bolts, nuts and washers.                     |      |     |      |       |
|                                               | - coupling pieces, earthing, etc.                           |      |     |      |       |
| 5,1                                           | 2 Compartment, 2 cover type power skirting including cover  |      |     |      |       |
|                                               | Material                                                    | m    | 8   | R    | R     |
|                                               | Labour                                                      | m    | 8   | R    | R     |
| 5,2                                           | 90 degree Bends                                             |      |     |      |       |
|                                               | Material                                                    | No   | 1   | R    | R     |
|                                               | Labour                                                      | No   | 1   | R    | R     |
| 5,3                                           | Endcaps                                                     |      |     |      |       |
|                                               | Material                                                    | No   | 4   | R    | R     |
|                                               | Labour                                                      | No   | 4   | R    | R     |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 12 |                                                             |      |     |      | R     |

**BILL 12.4 : LIGHT FITTINGS**

| ITEM                                          | DESCRIPTION                                                                                                                                                                                                  | UNIT | QTY | RATE | TOTAL |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                             | Type: A (Including Lamps)<br>1.2 meter, 2 lamp Open Cahnnel fluorescent Luminaire complete with 28 Watt lamps, telescopic lamp holder and electronic control gear                                            |      |     |      |       |
|                                               | Material                                                                                                                                                                                                     | No.  | 16  | R    | R     |
|                                               | Labour                                                                                                                                                                                                       | No.  | 16  | R    | R     |
| 2                                             | Type: C (Including Lamps)<br>2 x 9W E27 230V led lamps, round bulkhead luminaire, wall mounted, complete with unbreakable polycarbonate diffuser, black die cast aluminium base and mounting accessories.    |      |     |      |       |
|                                               | Material                                                                                                                                                                                                     | No.  | 6   | R    | R     |
|                                               | Labour                                                                                                                                                                                                       | No.  | 6   | R    | R     |
| 3                                             | Type: C (Including Lamps)<br>2 x 9W E27 230V led lamps, round bulkhead luminaire, ceiling mounted, complete with unbreakable polycarbonate diffuser, white die cast aluminium base and mounting accessories. |      |     |      |       |
|                                               | Material                                                                                                                                                                                                     | No.  | 12  | R    | R     |
|                                               | Labour                                                                                                                                                                                                       | No.  | 12  | R    | R     |
| 4                                             | Type: D (Including Lamps)<br>Flood Light Luminaire 125W HPS (High Pressure Sodium Lamp)                                                                                                                      |      |     |      |       |
|                                               | Material                                                                                                                                                                                                     | No.  | 1   | R    | R     |
|                                               | Labour                                                                                                                                                                                                       | No.  | 1   | R    | R     |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 12 |                                                                                                                                                                                                              |      |     |      | R     |

**BILL 12.5: GENERAL**

| ITEM                                          | DESCRIPTION                                                                                                                                                                                                                                                                                                                         | UNIT | QTY  | RATE | TOTAL |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|-------|
| 1                                             | Sub DB; DB-H: Distribution Board, complete with all switchgears (breakers and isolators), labels and legend cards. (See Distribution Boards Layout Drawing).                                                                                                                                                                        |      |      |      |       |
|                                               | Material                                                                                                                                                                                                                                                                                                                            | No.  | 1,0  | R    | R     |
|                                               | Labour                                                                                                                                                                                                                                                                                                                              | No.  | 1,0  | R    | R     |
| 2                                             | Public Addresser Box, flush mounted, consisting of metal tray, architrave frame and hinged doors, wall mounted in the position specified and a 20 mm thick soft pine wood panel in the main telephone distribution board to cover the entire back of the board. 600mmx500x120mm                                                     |      |      |      |       |
|                                               | Material                                                                                                                                                                                                                                                                                                                            | No.  | 1,0  | R    | R     |
|                                               | Labour                                                                                                                                                                                                                                                                                                                              | No.  | 1,0  | R    | R     |
| 3                                             | Light sensitive photo electrical switch or Motion Detector Switch, Type National, in an empty Luminaire such as B10. The rate to include for the empty bulkhead.                                                                                                                                                                    |      |      |      |       |
|                                               | Material                                                                                                                                                                                                                                                                                                                            | No.  | 1,0  | R    | R     |
|                                               | Labour                                                                                                                                                                                                                                                                                                                              | No.  | 1,0  | R    | R     |
| 4                                             | Robust, Die-Cast aluminium School Siren, effective radius of 700m (105dB).                                                                                                                                                                                                                                                          |      |      |      |       |
|                                               | Material                                                                                                                                                                                                                                                                                                                            | No.  | 1,0  | R    | R     |
|                                               | Labour                                                                                                                                                                                                                                                                                                                              | No.  | 1,0  | R    | R     |
| 5                                             | Earth Bonding Strip (water pipes, etc.) as per SANS 10142 and detailed in the Specification                                                                                                                                                                                                                                         |      |      |      |       |
|                                               | Material                                                                                                                                                                                                                                                                                                                            | m    | 10,0 | R    | R     |
|                                               | Labour                                                                                                                                                                                                                                                                                                                              | m    | 10,0 | R    | R     |
| 6                                             | Commissioning and Testing by Electrician<br>Testing, commissioning and adjustment of the final electrical installation as well as being in attendance for any inspections and tests that the Representative / Agent may call for, including the issuing of the Certificate of Compliance (COC) by Electrician for the Sub DB; DB-H. | Lump | Sum  | R    | R     |
|                                               |                                                                                                                                                                                                                                                                                                                                     |      |      |      |       |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 12 |                                                                                                                                                                                                                                                                                                                                     |      |      |      |       |

**TWO CLASSROOM AND HOD BLOCK SUMMARY OF BILLS OF QUANTITIES (NEW WORKS)**

Total price for each bill, brought forward to this summary page.

| ITEM | DESCRIPTION                                                                                                                                                                   | AMOUNT |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 1    | Bill 12.1: WIRING AND CONTROL BOXES                                                                                                                                           | R      |
| 2    | Bill 12.2: CONTROL DEVICES                                                                                                                                                    | R      |
| 3    | Bill 12.3: WIRE WAYS                                                                                                                                                          | R      |
| 4    | Bill 12.4: LIGHT FITTINGS                                                                                                                                                     | R      |
| 5    | Bill 12.5: GENERAL                                                                                                                                                            | R      |
| 6    | TOTAL PRICE FOR TWO CLASSROOMS, ABLUTION AND HOD BLOCK: EXCLUDING VAT - ADD ITEMS 1 TO 5 ABOVE (AMOUNT TO BE TRANSFERRED TO THE ELECTRICAL INSTALLATION SUMMARY OF NEW WORKS) | R      |

**BILL 13 : SCIENCE LAB, ABLUTIONS AND HOD BLOCK (NEW WORKS)****BILL 13.1 : WIRING AND CONTROL BOXES**

| ITEM                                          | DESCRIPTION                                                                                                                                                           | UNIT | QTY | RATE | TOTAL |
|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                             | PVC Round conduit boxes with cover and screws: 50mm diameter (any way), built into brick, concrete or in roof space or on surface                                     |      |     |      |       |
| 1,1                                           | 20 mm                                                                                                                                                                 |      |     |      |       |
|                                               | Material                                                                                                                                                              | No.  | 32  | R    | R     |
|                                               | Labour                                                                                                                                                                | No.  | 32  | R    | R     |
| 2                                             | PVC Looping conduit boxes with cover and screws: (any way), built into brick, concrete or in roof space or on surface                                                 |      |     |      |       |
| 2,1                                           | 20 mm                                                                                                                                                                 |      |     |      |       |
|                                               | Material                                                                                                                                                              | No.  | 8   | R    | R     |
|                                               | Labour                                                                                                                                                                | No.  | 8   | R    | R     |
| 2,2                                           | 25 mm                                                                                                                                                                 |      |     |      |       |
|                                               | Material                                                                                                                                                              | No.  | 3   | R    | R     |
|                                               | Labour                                                                                                                                                                | No.  | 3   | R    | R     |
| 3                                             | Galvanised pressed metal boxes, flush mounted in wall complete with mounting on conduit, built into brick or concrete, in roof space or on surface                    |      |     |      |       |
| 3,1                                           | 100mm x 100 mm x 50 mm                                                                                                                                                |      |     |      |       |
|                                               | Material                                                                                                                                                              | No.  | 16  | R    | R     |
|                                               | Labour                                                                                                                                                                | No.  | 16  | R    | R     |
| 3,2                                           | 50 mm x 100mm x 50 mm                                                                                                                                                 |      |     |      |       |
|                                               | Material                                                                                                                                                              | No.  | 10  | R    | R     |
|                                               | Labour                                                                                                                                                                | No.  | 10  | R    | R     |
| 4                                             | PVC insulated copper conductor wires in conduits, wiring channels or power skirting; for lights, plugs, power points, including connection to switches and equipment. |      |     |      |       |
| 4,1                                           | 2,5 mm <sup>2</sup> PVC wire                                                                                                                                          |      |     |      |       |
|                                               | Material                                                                                                                                                              | m    | 486 | R    | R     |
|                                               | Labour                                                                                                                                                                | m    | 486 | R    | R     |
| 4,2                                           | 4,0 mm <sup>2</sup> PVC wire                                                                                                                                          |      |     |      |       |
|                                               | Material                                                                                                                                                              | m    | 530 | R    | R     |
|                                               | Labour                                                                                                                                                                | m    | 530 | R    | R     |
| 4,3                                           | 4 mm <sup>2</sup> x 4-Core and Earth (Surfix or Flatwin) Cable.                                                                                                       |      |     |      |       |
|                                               | Material                                                                                                                                                              | m    | 10  | R    | R     |
|                                               | Labour                                                                                                                                                                | m    | 10  | R    | R     |
| 5                                             | Copper earth conductor wires in conduits, wiring channels or power skirting; for lights, plugs, power points, including connection to switches and equipment.         |      |     |      |       |
| 5,1                                           | 2,5 mm <sup>2</sup> bare copper earth wire                                                                                                                            |      |     |      |       |
|                                               | Material                                                                                                                                                              | m    | 490 | R    | R     |
|                                               | Labour                                                                                                                                                                | m    | 490 | R    | R     |
| 6                                             | SLEEVES, Including all bends, Type "KABELFLEX - Grooved"                                                                                                              |      |     |      |       |
| 6,1                                           | Sleeves: 110mm dia.                                                                                                                                                   |      |     |      |       |
|                                               | Material                                                                                                                                                              | m    | 5   | R    | R     |
|                                               | Labour                                                                                                                                                                | m    | 5   | R    | R     |
| 6,2                                           | Sleeves: 50mm dia.                                                                                                                                                    |      |     |      |       |
|                                               | Material                                                                                                                                                              | m    | 5   | R    | R     |
|                                               | Labour                                                                                                                                                                | m    | 5   | R    | R     |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 13 |                                                                                                                                                                       |      |     |      | R     |

**BILL 13.2: CONTROL DEVICES**

| ITEM                                          | DESCRIPTION                                                                                                                                       | UNIT | QTY | RATE | TOTAL |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                             | Light switches, complete with steel powder coated coverplates and screws, fitted to flush outlet box (boxes measured 16A (1 Lever-1 Way Vertical) |      |     |      |       |
| 1,1                                           | Material                                                                                                                                          | No.  | 9   | R    | R     |
|                                               | Labour                                                                                                                                            | No.  | 9   | R    | R     |
| 2                                             | Wall mounted switched socket outlets combination of two outlets (sans 164-1 and 164-2) mounted at 300mm affl Unless otherwise specified           |      |     |      |       |
|                                               | Material                                                                                                                                          | No.  | 10  | R    | R     |
|                                               | Labour                                                                                                                                            | No.  | 10  | R    | R     |
| 3                                             | Switched socket outlets of 16A, 250V, mounted on the Power Skirting                                                                               |      |     |      |       |
| 3,1                                           | 16 Amp normal 3-pin, 250V grade switch socket outlet in power skirting including cover plate and mounting brackets                                |      |     |      |       |
|                                               | Material                                                                                                                                          | No.  | 20  | R    | R     |
|                                               | Labour                                                                                                                                            | No.  | 20  | R    | R     |
| 3,2                                           | 16 Ampere dedicated (red) 3-pin 250V grade switch socket outlet in power skirting including cover plate and mounting brackets                     |      |     |      |       |
|                                               | Material                                                                                                                                          | No.  | 2   | R    | R     |
|                                               | Labour                                                                                                                                            | No.  | 2   | R    | R     |
| 3,3                                           | Data and Telephone Point mounting on power skirting                                                                                               |      |     |      |       |
|                                               | Material                                                                                                                                          | No.  | 4   | R    | R     |
|                                               | Labour                                                                                                                                            | No.  | 4   | R    | R     |
| 5                                             | Blank service outlet cover for 100x100mm wall box                                                                                                 |      |     |      |       |
|                                               | Material                                                                                                                                          | No.  | 8   | R    | R     |
|                                               | Labour                                                                                                                                            | No.  | 8   | R    | R     |
| 6                                             | Blank service outlet cover for 100x50mm wall box                                                                                                  |      |     |      |       |
|                                               | Material                                                                                                                                          | No.  | 2   | R    | R     |
|                                               | Labour                                                                                                                                            | No.  | 2   | R    | R     |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 13 |                                                                                                                                                   |      |     |      | R     |

**BILL 13.3 : WIRE WAYS**

| ITEM                               | DESCRIPTION                                                                                                                                                                                                                                                                                                             | UNIT | QTY | RATE | TOTAL |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                  | <b>WIRING CHANNELS</b><br>Galvanised Wiring Channel with Steel Covers including:<br>- bolts, nuts and washers, - coupling pieces, - earthing<br>- mounted in service level or ceiling void or roof trusses.<br>- hangers, - bends, - supporting (rods, etc.),<br>- Lengths Powder coated in one of 4 different colours. |      |     |      |       |
| 1,1                                | P9000 Channel                                                                                                                                                                                                                                                                                                           |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | m    | 30  | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | m    | 30  | R    | R     |
| 1,2                                | Steel cover for P9000 Channel                                                                                                                                                                                                                                                                                           |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | m    | 30  | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | m    | 30  | R    | R     |
| 1,3                                | Radius distribution board outlet and cover for P9000 Channel                                                                                                                                                                                                                                                            |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | No   | 1   | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | No   | 1   | R    | R     |
| 1,4                                | Splices for P9000 channel                                                                                                                                                                                                                                                                                               |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | No   | 14  | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | No   | 14  | R    | R     |
| 1,5                                | End cap for P9000 channel                                                                                                                                                                                                                                                                                               |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | No   | 2   | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | No   | 2   | R    | R     |
| 2                                  | Draw wire 1.5mm                                                                                                                                                                                                                                                                                                         |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | m    | 20  | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | m    | 20  | R    | R     |
| 3                                  | <b>CONDUITS</b><br>Conduits including conduit accessories, such as couplings, bushes, locknuts, saddle, etc. Flush or wall mounted into brickwork, concrete, chased into concrete or in ceiling void or in service level or in dry walls with proper support of the draw boxes.                                         |      |     |      |       |
| 3,1                                | 20 mm, Black enamelled                                                                                                                                                                                                                                                                                                  |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | m    | 20  | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | m    | 20  | R    | R     |
| 3,2                                | 20 mm, PVC conduits                                                                                                                                                                                                                                                                                                     |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | m    | 390 | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | m    | 390 | R    | R     |
| 3,3                                | 25 mm, Black enamelled                                                                                                                                                                                                                                                                                                  |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | m    | 20  | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | m    | 20  | R    | R     |
| 3,4                                | 25 mm, PVC conduits                                                                                                                                                                                                                                                                                                     |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | m    | 40  | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | m    | 40  | R    | R     |
| 4                                  | <b>FLEXIBLE CONDUIT</b>                                                                                                                                                                                                                                                                                                 |      |     |      |       |
| 4,1                                | Flexible conduit with steel reinforced PVC conduit.                                                                                                                                                                                                                                                                     |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | m    | 20  | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | m    | 20  | R    | R     |
| TOTAL CARRIED FORWARD TO NEXT PAGE |                                                                                                                                                                                                                                                                                                                         |      |     |      | R     |

**BILL 13.3 : WIRE WAYS (Continues)**

| ITEM                                          | DESCRIPTION                                                                                                                                                   | UNIT | QTY | RATE | TOTAL |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE      |                                                                                                                                                               |      |     |      | R     |
| 5                                             | POWER SKIRTING<br>Power skirting, 2 compartment 2 cover type, including steel<br>- Steel cover, bolts, nuts and washers.<br>- coupling pieces, earthing, etc. |      |     |      |       |
| 5,1                                           | 2 Compartment, 2 cover type power skirting including cover                                                                                                    |      |     |      |       |
|                                               | Material                                                                                                                                                      | m    | 35  | R    | R     |
|                                               | Labour                                                                                                                                                        | m    | 35  | R    | R     |
| 5,2                                           | 90 degree Bends                                                                                                                                               |      |     |      |       |
|                                               | Material                                                                                                                                                      | No   | 3   | R    | R     |
|                                               | Labour                                                                                                                                                        | No   | 3   | R    | R     |
| 5,3                                           | Endcaps                                                                                                                                                       |      |     |      |       |
|                                               | Material                                                                                                                                                      | No   | 8   | R    | R     |
|                                               | Labour                                                                                                                                                        | No   | 8   | R    | R     |
|                                               |                                                                                                                                                               |      |     |      |       |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 13 |                                                                                                                                                               |      |     |      | R     |

### **BILL 13.4 : LIGHT FITTINGS**

[illegible]

**BILL 13.5: GENERAL**

| ITEM                                                 | DESCRIPTION                                                                                                                                                                                                                                                                                                                         | UNIT       | QTY          | RATE   | TOTAL  |
|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------|--------|--------|
| 1                                                    | Sub DB; DB-N: Distribution Board, complete with all switchgears (breakers and isolators), labels and legend cards. (See Distribution Boards Layout Drawing).<br>Material<br>Labour                                                                                                                                                  | No.<br>No. | 1,0<br>1,0   | R<br>R | R<br>R |
| 2                                                    | Public Addresser Box, flush mounted, consisting of metal tray, architrave frame and hinged doors, wall mounted in the position specified and a 20 mm thick soft pine wood panel in the main telephone distribution board to cover the entire back of the board. 600mmx500x120mm<br>Material<br>Labour                               | No.<br>No. | 1,0<br>1,0   | R<br>R | R<br>R |
| 3                                                    | Light sensitive photo electrical switch or Motion Detector Switch, Type National, in an empty Luminaire such as B10. The rate to include for the empty bulkhead.<br>Material<br>Labour                                                                                                                                              | No.<br>No. | 1,0<br>1,0   | R<br>R | R<br>R |
| 4                                                    | Earth Bonding Strip (water pipes, etc.) as per SANS 10142 and detailed in the Specification<br>Material<br>Labour                                                                                                                                                                                                                   | m<br>m     | 60,0<br>60,0 | R<br>R | R<br>R |
| 5                                                    | Commissioning and Testing by Electrician<br>Testing, commissioning and adjustment of the final electrical installation as well as being in attendance for any inspections and tests that the Representative / Agent may call for, including the issuing of the Certificate of Compliance (COC) by Electrician for the Sub DB: DB-N. | Lump       | Sum          | R      | R      |
|                                                      |                                                                                                                                                                                                                                                                                                                                     |            |              |        |        |
| <b>TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 13</b> |                                                                                                                                                                                                                                                                                                                                     |            |              |        |        |

**SCIENCE LAB, ABLUTION AND HOD BLOCK SUMMARY OF BILLS OF QUANTITIES (NEW WORKS)**

Total price for each bill, brought forward to this summary page.

| ITEM | DESCRIPTION                                                                                                                                                                      | AMOUNT |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 1    | Bill 13.1: WIRING AND CONTROL BOXES                                                                                                                                              | R      |
| 2    | Bill 13.2: CONTROL DEVICES                                                                                                                                                       | R      |
| 3    | Bill 13.3: WIRE WAYS                                                                                                                                                             | R      |
| 4    | Bill 13.4: LIGHT FITTINGS                                                                                                                                                        | R      |
| 5    | Bill 13.5: GENERAL                                                                                                                                                               | R      |
| 6    | TOTAL PRICE FOR SCIENCE LAB, ABLUTION AND HOD BLOCK: EXCLUDING VAT -<br>ADD ITEMS 1 TO 5 ABOVE (AMOUNT TO BE TRANSFERRED TO THE ELECTRICAL<br>INSTALLATION SUMMARY OF NEW WORKS) | R      |

**BILL 14: SCIENCE LAB AND HOD BLOCK (NEW WORKS)****BILL 14.1 : WIRING AND CONTROL BOXES**

| ITEM                                          | DESCRIPTION                                                                                                                                                           | UNIT | QTY | RATE | TOTAL |
|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                             | PVC Round conduit boxes with cover and screws: 50mm diameter (any way), built into brick, concrete or in roof space or on surface                                     |      |     |      |       |
| 1,1                                           | 20 mm                                                                                                                                                                 |      |     |      |       |
|                                               | Material                                                                                                                                                              | No.  | 20  | R    | R     |
|                                               | Labour                                                                                                                                                                | No.  | 20  | R    | R     |
| 2                                             | PVC Looping conduit boxes with cover and screws: (any way), built into brick, concrete or in roof space or on surface                                                 |      |     |      |       |
| 2,1                                           | 20 mm                                                                                                                                                                 |      |     |      |       |
|                                               | Material                                                                                                                                                              | No.  | 5   | R    | R     |
|                                               | Labour                                                                                                                                                                | No.  | 5   | R    | R     |
| 2,2                                           | 25 mm                                                                                                                                                                 |      |     |      |       |
|                                               | Material                                                                                                                                                              | No.  | 2   | R    | R     |
|                                               | Labour                                                                                                                                                                | No.  | 2   | R    | R     |
| 3                                             | Galvanised pressed metal boxes, flush mounted in wall complete with mounting on conduit, built into brick or concrete, in roof space or on surface                    |      |     |      |       |
| 3,1                                           | 100mm x 100 mm x 50 mm                                                                                                                                                |      |     |      |       |
|                                               | Material                                                                                                                                                              | No.  | 15  | R    | R     |
|                                               | Labour                                                                                                                                                                | No.  | 15  | R    | R     |
| 3,2                                           | 50 mm x 100mm x 50 mm                                                                                                                                                 |      |     |      |       |
|                                               | Material                                                                                                                                                              | No.  | 8   | R    | R     |
|                                               | Labour                                                                                                                                                                | No.  | 8   | R    | R     |
| 4                                             | PVC insulated copper conductor wires in conduits, wiring channels or power skirting; for lights, plugs, power points, including connection to switches and equipment. |      |     |      |       |
| 4,1                                           | 2,5 mm <sup>2</sup> PVC wire                                                                                                                                          |      |     |      |       |
|                                               | Material                                                                                                                                                              | m    | 366 | R    | R     |
|                                               | Labour                                                                                                                                                                | m    | 366 | R    | R     |
| 4,2                                           | 4,0 mm <sup>2</sup> PVC wire                                                                                                                                          |      |     |      |       |
|                                               | Material                                                                                                                                                              | m    | 540 | R    | R     |
|                                               | Labour                                                                                                                                                                | m    | 540 | R    | R     |
| 4,3                                           | 4 mm <sup>2</sup> x 4-Core and Earth (Surfix or Plattwin) Cable.                                                                                                      |      |     |      |       |
|                                               | Material                                                                                                                                                              | m    | 10  | R    | R     |
|                                               | Labour                                                                                                                                                                | m    | 10  | R    | R     |
| 5                                             | Copper earth conductor wires in conduits, wiring channels or power skirting; for lights, plugs, power points, including connection to switches and equipment.         |      |     |      |       |
| 5,1                                           | 2,5 mm <sup>2</sup> bare copper earth wire                                                                                                                            |      |     |      |       |
|                                               | Material                                                                                                                                                              | m    | 490 | R    | R     |
|                                               | Labour                                                                                                                                                                | m    | 490 | R    | R     |
| 6                                             | SLEEVES, Including all bends, Type "KABELFLEX - Grooved"                                                                                                              |      |     |      |       |
| 6,1                                           | Sleeves: 110mm dia.                                                                                                                                                   |      |     |      |       |
|                                               | Material                                                                                                                                                              | m    | 5   | R    | R     |
|                                               | Labour                                                                                                                                                                | m    | 5   | R    | R     |
| 6,2                                           | Sleeves: 50mm dia.                                                                                                                                                    |      |     |      |       |
|                                               | Material                                                                                                                                                              | m    | 5   | R    | R     |
|                                               | Labour                                                                                                                                                                | m    | 5   | R    | R     |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 14 |                                                                                                                                                                       |      |     |      | R     |

**BILL 14.2: CONTROL DEVICES**

| ITEM                                          | DESCRIPTION                                                                                                                                       | UNIT | QTY | RATE | TOTAL |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                             | Light switches, complete with steel powder coated coverplates and screws, fitted to flush outlet box (boxes measured 16A (1 Lever-1 Way Vertical) |      |     |      |       |
| 1,1                                           | Material                                                                                                                                          | No.  | 5   | R    | R     |
|                                               | Labour                                                                                                                                            | No.  | 5   | R    | R     |
| 2                                             | Wall mounted switched socket outlets combination of two outlets (sans 164-1 and 164-2) mounted at 300mm affl Unless otherwise specified           |      |     |      |       |
|                                               | Material                                                                                                                                          | No.  | 10  | R    | R     |
|                                               | Labour                                                                                                                                            | No.  | 10  | R    | R     |
| 3                                             | Switched socket outlets of 16A, 250V, mounted on the Power Skirting                                                                               |      |     |      |       |
| 3,1                                           | 16 Amp normal 3-pin, 250V grade switch socket outlet in power skirting including cover plate and mounting brackets                                |      |     |      |       |
|                                               | Material                                                                                                                                          | No.  | 20  | R    | R     |
|                                               | Labour                                                                                                                                            | No.  | 20  | R    | R     |
| 3,2                                           | 16 Ampere dedicated (red) 3-pin 250V grade switch socket outlet in power skirting including cover plate and mounting brackets                     |      |     |      |       |
|                                               | Material                                                                                                                                          | No.  | 2   | R    | R     |
|                                               | Labour                                                                                                                                            | No.  | 2   | R    | R     |
| 3,3                                           | Data and Telephone Point mounting on power skirting                                                                                               |      |     |      |       |
|                                               | Material                                                                                                                                          | No.  | 4   | R    | R     |
|                                               | Labour                                                                                                                                            | No.  | 4   | R    | R     |
| 5                                             | Blank service outlet cover for 100x100mm wall box                                                                                                 |      |     |      |       |
|                                               | Material                                                                                                                                          | No.  | 8   | R    | R     |
|                                               | Labour                                                                                                                                            | No.  | 8   | R    | R     |
| 6                                             | Blank service outlet cover for 100x50mm wall box                                                                                                  |      |     |      |       |
|                                               | Material                                                                                                                                          | No.  | 2   | R    | R     |
|                                               | Labour                                                                                                                                            | No.  | 2   | R    | R     |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 14 |                                                                                                                                                   |      |     |      | R     |

**BILL 14.3 : WIRE WAYS**

| ITEM                               | DESCRIPTION                                                                                                                                                                                                                                                                                                             | UNIT | QTY | RATE | TOTAL |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------|
| 1                                  | <b>WIRING CHANNELS</b><br>Galvanised Wiring Channel with Steel Covers including:<br>- bolts, nuts and washers, - coupling pieces, - earthing<br>- mounted in service level or ceiling void or roof trusses.<br>- hangers, - bends, - supporting (rods, etc.),<br>- Lengths Powder coated in one of 4 different colours. |      |     |      |       |
| 1,1                                | P9000 Channel                                                                                                                                                                                                                                                                                                           |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | m    | 28  | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | m    | 28  | R    | R     |
| 1,2                                | Steel cover for P9000 Channel                                                                                                                                                                                                                                                                                           |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | m    | 28  | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | m    | 28  | R    | R     |
| 1,3                                | Radius distribution board outlet and cover for P9000 Channel                                                                                                                                                                                                                                                            |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | No   | 1   | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | No   | 1   | R    | R     |
| 1,4                                | Splices for P9000 channel                                                                                                                                                                                                                                                                                               |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | No   | 13  | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | No   | 13  | R    | R     |
| 1,5                                | End cap for P9000 channel                                                                                                                                                                                                                                                                                               |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | No   | 2   | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | No   | 2   | R    | R     |
| 2                                  | Draw wire 1.5mm                                                                                                                                                                                                                                                                                                         |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | m    | 20  | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | m    | 20  | R    | R     |
| 3                                  | <b>CONDUITS</b><br>Conduits including conduit accessories, such as couplings, bushes, locknuts, saddle, etc. Flush or wall mounted into brickwork, concrete, chased into concrete or in ceiling void or in service level or in dry walls with proper support of the draw boxes.                                         |      |     |      |       |
| 3,1                                | 20 mm, Black enamelled                                                                                                                                                                                                                                                                                                  |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | m    | 20  | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | m    | 20  | R    | R     |
| 3,2                                | 20 mm, PVC conduits                                                                                                                                                                                                                                                                                                     |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | m    | 360 | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | m    | 360 | R    | R     |
| 3,3                                | 25 mm, Black enamelled                                                                                                                                                                                                                                                                                                  |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | m    | 20  | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | m    | 20  | R    | R     |
| 3,4                                | 25 mm, PVC conduits                                                                                                                                                                                                                                                                                                     |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | m    | 40  | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | m    | 40  | R    | R     |
| 4                                  | <b>FLEXIBLE CONDUIT</b>                                                                                                                                                                                                                                                                                                 |      |     |      |       |
| 4,1                                | Flexible conduit with steel reinforced PVC conduit.                                                                                                                                                                                                                                                                     |      |     |      |       |
|                                    | Material                                                                                                                                                                                                                                                                                                                | m    | 20  | R    | R     |
|                                    | Labour                                                                                                                                                                                                                                                                                                                  | m    | 20  | R    | R     |
| TOTAL CARRIED FORWARD TO NEXT PAGE |                                                                                                                                                                                                                                                                                                                         |      |     |      | R     |

**BILL 14.3 : WIRE WAYS (Continues)**

| ITEM                                          | DESCRIPTION                                                 | UNIT | QTY | RATE | TOTAL |
|-----------------------------------------------|-------------------------------------------------------------|------|-----|------|-------|
| TOTAL BROUGHT FORWARD FROM PREVIOUS PAGE      |                                                             |      |     |      | R     |
| 5                                             | POWER SKIRTING                                              |      |     |      |       |
|                                               | Power skirting, 2 compartment 2 cover type, including steel |      |     |      |       |
|                                               | - Steel cover, bolts, nuts and washers.                     |      |     |      |       |
|                                               | - coupling pieces, earthing, etc.                           |      |     |      |       |
| 5,1                                           | 2 Compartment, 2 cover type power skirting including cover  |      |     |      |       |
|                                               | Material                                                    | m    | 35  | R    | R     |
|                                               | Labour                                                      | m    | 35  | R    | R     |
| 5,2                                           | 90 degree Bends                                             |      |     |      |       |
|                                               | Material                                                    | No   | 3   | R    | R     |
|                                               | Labour                                                      | No   | 3   | R    | R     |
| 5,3                                           | Endcaps                                                     |      |     |      |       |
|                                               | Material                                                    | No   | 8   | R    | R     |
|                                               | Labour                                                      | No   | 8   | R    | R     |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 14 |                                                             |      |     |      | R     |

## **BILL 14.4 : LIGHT FITTINGS**

[illegible]

**BILL 14.5: GENERAL**

| ITEM                                          | DESCRIPTION                                                                                                                                                                                                                                                                                                                         | UNIT | QTY  | RATE | TOTAL |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|-------|
| 1                                             | Sub DB; DB-L: Distribution Board, complete with all switchgears (breakers and isolators), labels and legend cards. (See Distribution Boards Layout Drawing).                                                                                                                                                                        |      |      |      |       |
|                                               | Material                                                                                                                                                                                                                                                                                                                            | No.  | 1,0  | R    | R     |
|                                               | Labour                                                                                                                                                                                                                                                                                                                              | No.  | 1,0  | R    | R     |
| 2                                             | Public Addresser Box, flush mounted, consisting of metal tray, architrave frame and hinged doors, wall mounted in the position specified and a 20 mm thick soft pine wood panel in the main telephone distribution board to cover the entire back of the board. 600mmx500x120mm                                                     |      |      |      |       |
|                                               | Material                                                                                                                                                                                                                                                                                                                            | No.  | 1,0  | R    | R     |
|                                               | Labour                                                                                                                                                                                                                                                                                                                              | No.  | 1,0  | R    | R     |
| 3                                             | Light sensitive photo electrical switch or Motion Detector Switch, Type National, in an empty Luminaire such as B10. The rate to include for the empty bulkhead.                                                                                                                                                                    |      |      |      |       |
|                                               | Material                                                                                                                                                                                                                                                                                                                            | No.  | 1,0  | R    | R     |
|                                               | Labour                                                                                                                                                                                                                                                                                                                              | No.  | 1,0  | R    | R     |
| 4                                             | Earth Bonding Strip (water pipes, etc.) as per SANS 10142 and detailed in the Specification                                                                                                                                                                                                                                         |      |      |      |       |
|                                               | Material                                                                                                                                                                                                                                                                                                                            | m    | 60,0 | R    | R     |
|                                               | Labour                                                                                                                                                                                                                                                                                                                              | m    | 60,0 | R    | R     |
| 5                                             | Commissioning and Testing by Electrician<br>Testing, commissioning and adjustment of the final electrical installation as well as being in attendance for any inspections and tests that the Representative / Agent may call for, including the issuing of the Certificate of Compliance (COC) by Electrician for the Sub DB: DB-L. | Lump | Sum  | R    | R     |
|                                               |                                                                                                                                                                                                                                                                                                                                     |      |      |      |       |
| TOTAL CARRIED FORWARD TO SUMMARY: BILL NO. 14 |                                                                                                                                                                                                                                                                                                                                     |      |      |      |       |

**SCIENCE LAB AND HOD BLOCK SUMMARY OF BILLS OF QUANTITIES (NEW WORKS)**

Total price for each bill, brought forward to this summary page.

| ITEM | DESCRIPTION                                                                                                                                                      | AMOUNT |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 1    | Bill 14.1: WIRING AND CONTROL BOXES                                                                                                                              | R      |
| 2    | Bill 14.2: CONTROL DEVICES                                                                                                                                       | R      |
| 3    | Bill 14.3: WIRE WAYS                                                                                                                                             | R      |
| 4    | Bill 14.4: LIGHT FITTINGS                                                                                                                                        | R      |
| 5    | Bill 14.5: GENERAL                                                                                                                                               | R      |
| 6    | TOTAL PRICE FOR SCIENCE LAB AND HOD BLOCK: EXCLUDING VAT - ADD ITEMS 1 TO 5 ABOVE (AMOUNT TO BE TRANSFERRED TO THE ELECTRICAL INSTALLATION SUMMARY OF NEW WORKS) | R      |

**ELECTRICAL INSTALLATION SUMMARY OF NEW WORKS**

Total price for each bill, brought forward to this summary page.

| ITEM | DESCRIPTION                                                                                                                                                               | AMOUNT |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 1    | BILL 9: SITE INSTALLATION (NEW WORKS)                                                                                                                                     | R      |
| 2    | BILL 10: THREE CLASSROOMS BLOCK (NEW WORKS)                                                                                                                               | R      |
| 3    | BILL 11: THREE CLASSROOMS AND STORE (NEW WORKS)                                                                                                                           | R      |
| 4    | BILL 12: TWO CLASSROOMS, ABLUTIONS AND HOD BLOCK (NEW WORKS)                                                                                                              | R      |
| 5    | BILL 13 : SCIENCE LAB, ABLUTIONS AND HOD BLOCK (NEW WORKS)                                                                                                                | R      |
| 6    | BILL 14: SCIENCE LAB AND HOD BLOCK (NEW WORKS)                                                                                                                            | R      |
| 7    | TOTAL PRICE FOR THE ELECTRICAL INSTALLATION NEW WORKS: EXCLUDING VAT - ADD ITEMS 1 TO 6 ABOVE (AMOUNT TO BE TRANSFERRED TO ELECTRICAL INSTALLTION FINAL SUMMARY OF WORKS) | R      |

**ELECTRICAL INSTALLATION FINAL SUMMARY OF WORKS**

| ITEM | DESCRIPTION                                                                                                                                                 | AMOUNT |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 1    | ELECTRICAL INSTALLATION SUMMARY OF REMAINING WORKS                                                                                                          |        |
| 2    | ELECTRICAL INSTALLATION SUMMARY OF NEW WORKS                                                                                                                |        |
| 3    | TOTAL PRICE FOR THE ELECTRICAL INSTALLATION: EXCLUDING VAT - ADD<br>ITEMS 1 TO 2 ABOVE (AMOUNT TO BE TRANSFERRED TO PART A OF THE MAIN<br>SUMMARY OF BILLS) | R      |

**PARTICULARS OF THE ELECTRICAL SUB-CONTRACTOR**

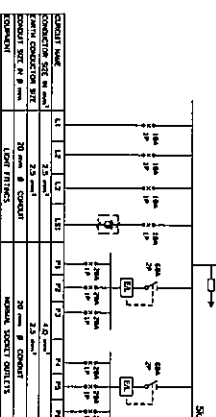
1. The Electrical Installation in the building included in this service shall be completed concurrently with the building work which is due for completion from date of the letter of acceptance of the building tender.
2. Name of Electrical Contractor : \_\_\_\_\_
3. Physical Address: : \_\_\_\_\_  
: \_\_\_\_\_
4. Postal Address: : \_\_\_\_\_  
: \_\_\_\_\_
5. Contractor's Registration Number at the Electrical Contracting Board of South Africa:  
: \_\_\_\_\_
6. Contractor's Registration Number at the Electrical Contractors Association:  
: \_\_\_\_\_
7. Name of Authorised Person: \_\_\_\_\_
8. Signature of Authorised Person: \_\_\_\_\_ Date: \_\_\_\_\_

**LEGEND**

NAME OF DB: DB-M  
FLUSH MOUNTED DISTRIBUTION BOARD  
PANEL COVER: ELECTRIC ORANGE  
DOORS AND FRAME COLOUR: BISCUIT  
25% SPACE SPACE  
PADLOCKABLE  
A4 LEGEND CARD  
BOOTLACE FERULES TO BE USED

SUPPLIED FROM DB-A BY 25mm<sup>2</sup> x  
4 Core Copper Cable - 16mm<sup>2</sup> BCEW

SUPPLIED FROM DB-A BY 25mm<sup>2</sup> x  
4 Core Copper Cable + 16mm<sup>2</sup> BCEV

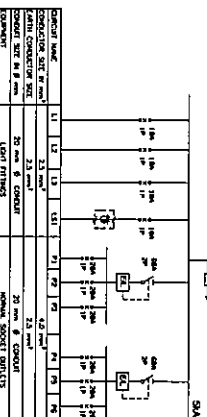


NOTES:

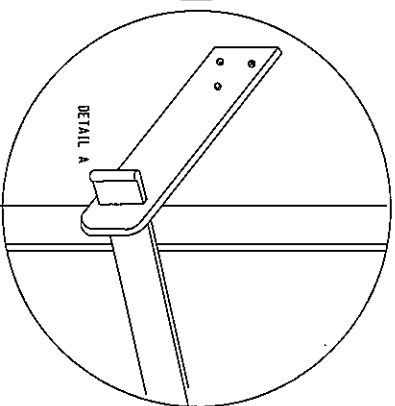
NAME OF DB: DB-H  
FLUSH MOUNTED DISTRIBUTION BOARD  
PANEL COVER: ELECTRIC ORANGE  
DOORS AND FRAME COLOUR: BISCUIT  
25% SPARE SPACE  
PADLOCKABLE  
A4 LEGEND CARD  
BOOtlACE FERULUS TO BE USED  
4 Core Copper

SUPPLIED FROM DB-A BY 25mm<sup>2</sup> x  
4 Core Copper Cable + 16mm<sup>2</sup> BCE

SUPPLIED FROM DB-A BY 25mm<sup>2</sup> x  
4 Core Copper Cable + 15mm<sup>2</sup> BCFW



100%



| LEGEND |                                    |
|--------|------------------------------------|
|        | 100% FLOW                          |
|        | CURRENT BREAKER                    |
|        | SURGE PROTECTION                   |
|        | LATENT (EXCITED THERMAL) ONLY LOAD |
|        | TIME SWITCH                        |
|        | MOTOR CELL                         |
|        | CONTROLLER                         |



**team**  
independent development

4059 JOULE  
INDUSTRIAL SITE  
MAHIKENG 2745

AN INDEPENDENT QUALITY SURVEYORS AND  
PROJECT MANAGERS  
P.O. Box 28975  
CHRYE CIRCLE  
METROBIA 00043

TEL: 0736 342 572

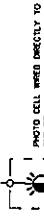
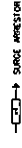
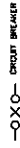
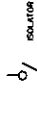
PROJECT NAME & CLIENT INFORMATION  
**TROISVILLE PRIMARY SCHOOL**  
**PHASE 2**

**LARGE PRIMARY SCHOOL**

**DISTRIBUTION BOARD LAYOUT  
FOR PHASE 2 BLOCKS**

|                              |            |          |          |
|------------------------------|------------|----------|----------|
| SCALE                        | DATE       | DESIGNED | DRAWN    |
| NTS                          | 2023.06.16 | M.S      | M/TN     |
| PROJECT No. - DRAWING NUMBER |            |          | REVISION |
| ...TROTS/1005/2/1/E1         |            |          | TEL      |

# LEGEND



## NOTES:

FOR ALL DB'S  
25% SPARE SPACE  
44 LEGEND CARD  
BOOTLACE FERRULES TO BE USED  
COLOUR: FRAME & DOORS BISCUIT  
PANEL ELECTRIC ORANGE  
BLANK PLATES MUST BE STEEL

| NO. | DATE       | DESCRIPTION             |
|-----|------------|-------------------------|
| 1   | 2014-10-23 | ISSUED FOR TENDER       |
| 2   | 2015-04-07 | ISSUED FOR CONSTRUCTION |



4059 JOULE  
INDUSTRIAL SITE  
MAHIKENG 2745

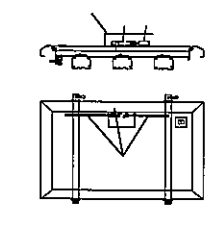
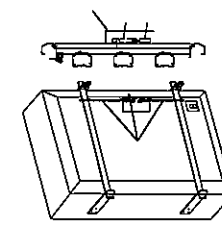
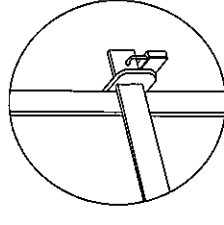
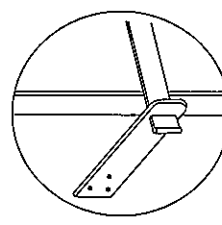
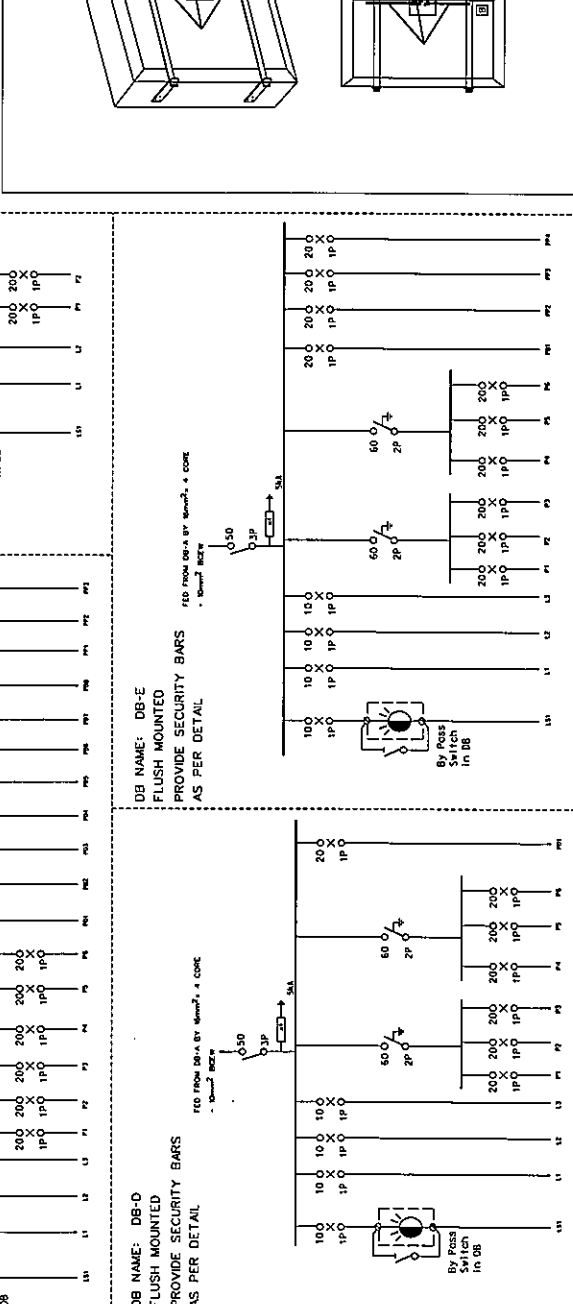
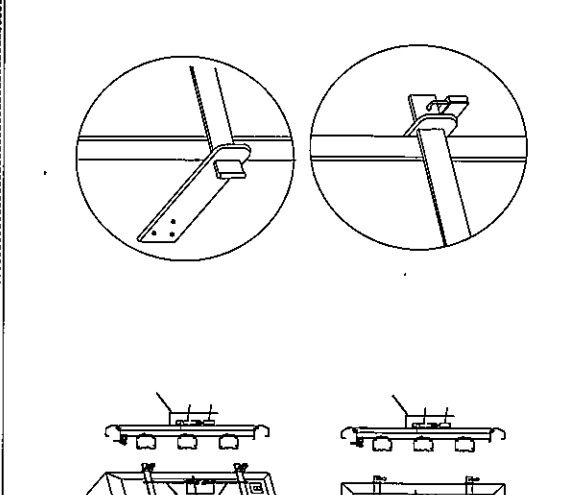
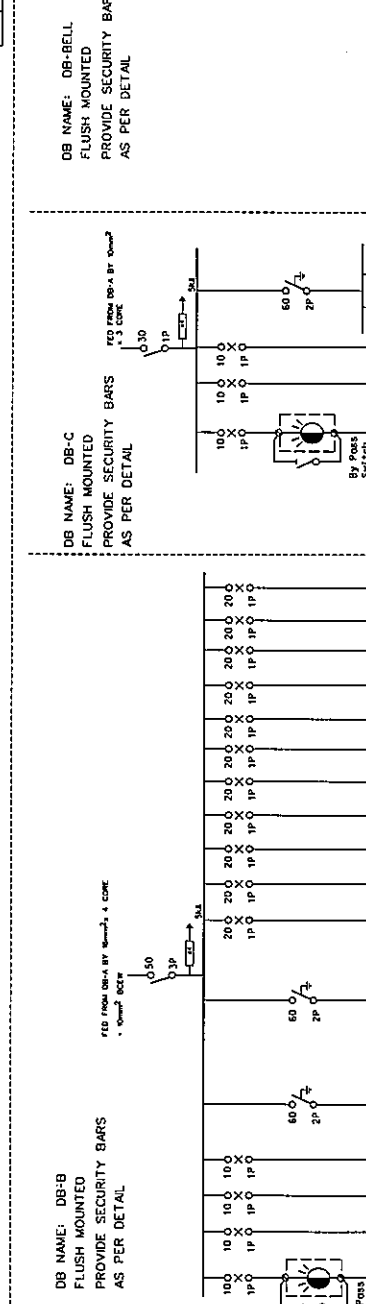
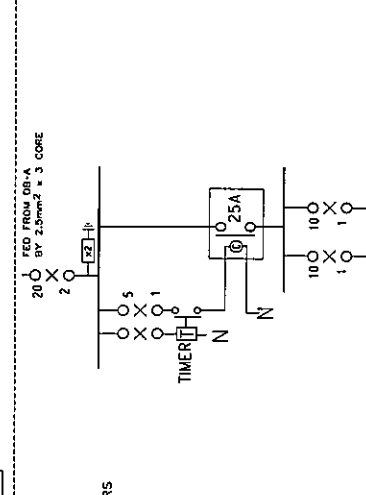
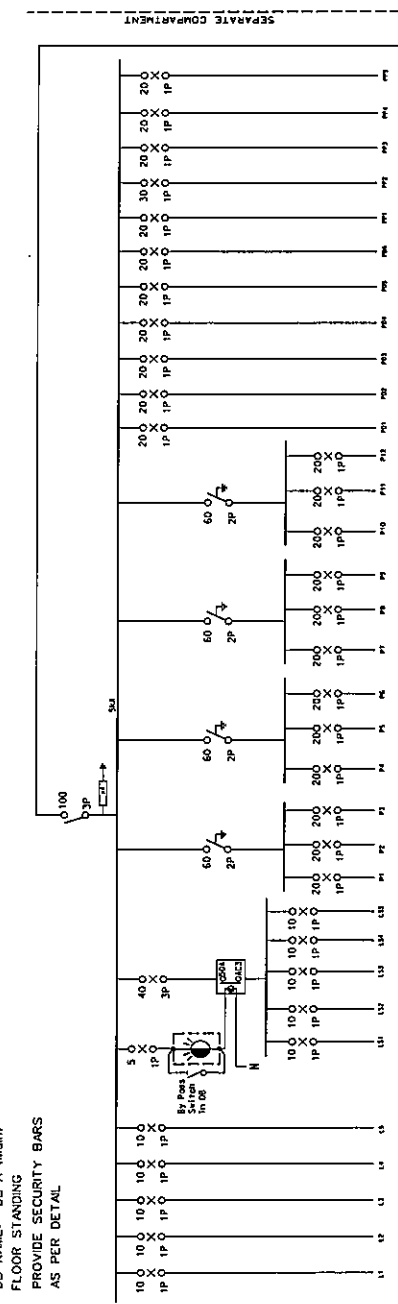
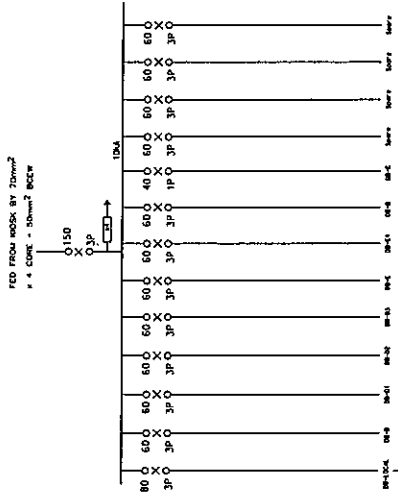
**T.A NDLOVU**  
QUANTITY SURVEYORS  
AND PROJECT MANAGERS

2A NDLOVU QUANTITY SURVEYORS  
AND PROJECT MANAGERS  
101 RIVERVIEW  
FAIRVIEW  
PRETORIA 0003  
TEL: 075 342 252  
TELEPHONE: 011 462 1111  
ADDITIONS & ALTERATIONS TO  
TROTTSVILLE PRIMARY  
SCHOOL

TITLE  
BIG PRIMARY SCHOOL

DATE OF SUBMISSION

| DISTRIBUTION BOARDS LAYOUT   |            |          |           |
|------------------------------|------------|----------|-----------|
| NO.                          | DATE       | REVISION | BY        |
| 1                            | 2014-10-23 | 1        | TA NDLOVU |
| PROJECT NO. - DRAWING NUMBER |            |          | 0         |





## **C3 Scope of Work**

### **1 DESCRIPTION OF THE WORKS**

#### **1.1 Employer's objectives**

The primary objective of the employer is to appoint a contractor for the completion of outstanding works and new additions at Tronsville Primary School

The employer may include the following statement in the tender documents should the employer wish to have specific training carried out as an objective of the project:

One of the objectives of the project is to training either of the following: (occupational qualifications, trade qualification, work integrated learners – P1 and P2 learners, professional candidates)

The objective of the project is to provide for a minimum contract participation goal (CPG) of 5% of the total project value and to develop targeted enterprise by the main or lead partner contractors.

#### **The Contractor shall:**

- Subcontract a minimum of 5% of the total project value to targeted enterprises;
- Perform needs analysis on the targeted enterprise to identify developmental goals;
- Provide internal mentorship support to improve the targeted enterprise/s performance;
- Develop a project specific enterprise development plan to improve the targeted enterprise/s performance in the identified developmental areas to the CIDB Competence Standard for Contractors Gazette No. 41237, 10 November 2017
- Monitor and report the progress of the agreed development areas with the targeted enterprise/s
- Submit a project completion report to the Employer's representative for each targeted enterprise.

The Contractor shall provide opportunities to learners requiring structured workplace learning using one or a combination of any of the Skills Methods as agreed: accommodate Part/Full Occupational qualification (Method 1), Trade qualifications learners (Method 2), train Work Integrated Learners – P1 and P2 Learners (Method 3) and/or Professional Candidates (Method 4) as indicated in the cidb Standard and as agreed to by the Employer on this project (Employer to stipulate)

The Contractor may only place 33% employees employed by him/her or that of his/her subcontractor contributing to the CSDG.

The Contractor shall achieve the measurable CSDG by providing opportunities to learners requiring structured workplace learning using one or a combination of any of the Skills Methods as agreed: accommodate Part/Full Occupational qualification (Method 1), Trade qualifications learners (Method 2), Work Integrated Learners (Method 3) and/or Candidates (Method 4) as per the cidb Standard in relation to work directly related to the Contract as indicated under clause 4.2 and 4.3 in the cidb Standard. (Employer to stipulate).

The Contractor shall ensure that all beneficiaries of the Standard are registered with CIDB Skills Development Agency (SDA).

The Contractor shall be responsible for developing subcontractors in accordance with the cidb Standard for Contract

**Addendum A**  
**Occupational Health and Safety Regulations**

**BID No: BID No: DOE14NWER016 - CONTRACTOR**

Indirect Targeting for Enterprise Development.

The Contractor shall be responsible for the appointment of the Enterprise Development Coordinator.

**1.2 The scope of works comprises the completion of outstanding works on the administration block, external works including covered parking and paving with associated electrical works. New additions comprises of construction of new 2x 3 classroom, 1x 2classroom +ablutions +hod block, Science Laboratory and hod, 1x 3 classroom and store, multi-Purpose classroom +ablutions and hod. Electrical installations forms part of the scope works.**

### **1.3 Location of the works**

*Trotsville Primary School:*

The project is located at Trotsville in Dr Kenneth Kaunda District Municipality, North West Province. Site Coordinates: Latitude. -27.260005370991072"S and -25 962321203340696"E.

### **Temporary works**

To be communicated to the winning Bidder before construction commences

## **2 DRAWINGS**

- Architect – Annexured to the Tender Document
- Civil & Structural Engineer – Annexured to the Tender Document
- Electrical Engineer – Annexured to the Tender Document
- Mechanical Engineer – Annexured to the Tender Document

## **3 Subcontracting**

### **3.2**

#### **3.2.1 Scope of mandatory subcontract work**

As per the mandatory sub-contracting clause, the Contractor must not sub-contract more than 30%, 10% of which should be allocated to the IDT CDP contractors between 2GB and 3GB (list per cluster will be provided upon appointment).

The Contractor shall without delay enter into contracts with the Domestic Subcontractors as submitted on the returnable schedule and forward a copy of these agreements to the Principal Agent. The Contractor shall remain responsible for providing the subcontracted portion of the works as if the work had not been subcontracted.

The Contractor to take note of item 3.2.2 below

#### **3.2.2 Preferred subcontractors / suppliers**

#### **3.2.3 Subcontracting procedures**

See items 3.2.1 and 3.2.2 as well as BID data

Contract

BID No: BID No: DOE14NWER016 - CONTRACTOR

Addendum A  
Occupational Health and Safety Regulations

### **3.2.4 Attendance on subcontractors**

Attendance to Domestic Sub-contractors as stated above should be priced under the relevant items in the Preliminaries section of the bills of quantities. Attendance to nominated sub-contractors should be priced under the relevant items in the Provisional Sums section of the bills of quantities.

## **4 CIDB B.U.I.L.D. Programme**

The contractor must comply with the Department of Public Works and Infrastructure General Notice 1779 of 2023 as per Construction Industry Development Board (CIDB) for achieving the standards for delivery skills for infrastructure contracts 31 March 2023.

## **5. MANAGEMENT**

### **5.1 Recording of weather**

The Contractor shall erect an effective rainfall gauge on the site and record the daily rainfall figures in a book. Such book shall be handed to the employer's representative for his signature no later than 12 days after rain that is considered to justify an extension of time occurs.

### **5.2 Unauthorized persons**

The Contractor shall keep unauthorized persons from the works at all times. Under no circumstances may any person except guards be allowed to sleep on the building site.

### **5.3 Management meetings**

The Employer's Representative and the Contractor shall hold meetings relating to the progress of the works at regular intervals and at other such times as may be necessary. The Contractor shall attend all site meetings and shall ensure that all persons under his jurisdiction are notified timeously of all site meetings should the Employer's Representative require their attendance at such meetings.

The Contractor shall keep on site a set of minutes of all site meetings, daily records of resources (people and equipment employed), a site instruction book, a complete set of contract working drawings and a copy of the procurement document and make these available at all reasonable times to all persons concerned with the contract.

### **5.4 Forms for contract administration**

The Contractor shall be required to submit an updated contractor monthly report during site meetings, which will be used by the consultant to update the client.

### **5.5 Payment certificates**

The Contractor to ensure that the VAT invoice required with each certificate is delivered timeously. The date of the certificate will be that of the date when the certificate is received by the consultant.

The Contractor to ensure timeous submission of all required documentation for the expedient processing of payment certificates, as required by the client, eg BAS entity forms, company registration details, VAT clearance certificates, etc. The Contractor is responsible for such documentation submission.

### **5.6 Addenda**

Contract

BID No: BID No: DOE14NWER016 - CONTRACTOR

Addendum A  
Occupational Health and Safety Regulations

**INDEPENDENT DEVELOPMENT TRUST**  
**COMPLETION OF OUTSTANDING WORKS AND NEW ADDITIONS FOR**  
**TROTSVILLE PRIMARY SCHOOL FOR NORTHWEST PROVINCE**

**C4 Site Information**

**TORTSVILLE PRIMARY SCHOOL**

| PROJECT NAME                 | LOCATION   | LATITUDE              | LONGITUDE             |
|------------------------------|------------|-----------------------|-----------------------|
| TROTSVILLE<br>PRIMARY SCHOOL | TROTSVILLE | -27.260005370991072"S | -25 962321203340696"E |

**Contract**

**BID No: BID No: DOE14NWER016 - CONTRACTOR**

**Addendum A**  
**Occupational Health and Safety Regulations**

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## **ADDENDUM A**

---

### **Occupational Health and Safety Regulations**

GOVERNMENT NOTICE

DEPARTMENT OF LABOUR

No. R. ....

7 February 2014

**OCCUPATIONAL HEALTH AND SAFETY ACT, 1993**

## **CONSTRUCTION REGULATIONS, 2014**

The Minister of Labour has under section 43 of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), after consultation with the Advisory Council for Occupational Health and Safety, made the regulations in the Schedule.

**Contract**

**BID No: BID No: DOE14NWER016 - CONTRACTOR**

**Addendum A  
Occupational Health and Safety Regulations**

ADDENDUM A

OCCUPATIONAL HEALTH AND SAFETY ACT, 1993  
Regulation 3 of the Construction Regulations, 2014

NOTIFICATION OF CONSTRUCTION WORK

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1.(a) Name and postal address of principal contractor:

(b) Name and tel. no of principal contractor's contact person:

2. Principal contractor's compensation registration number: \_\_\_\_\_

3.(a) Name and postal address of client:

(b) Name and tel no of client's contact person or agent:

4.(a) Name and postal address of designer(s) for the project:

(b) Name and tel. no of designer(s) contact person:

5. Name and telephone number of principal contractor's construction supervisor on site appointed in terms of regulation 6.(1). \_\_\_\_\_

6. Name/s of principal contractor's sub-ordinate supervisors on site appointed in terms of regulation 6.(2). \_\_\_\_\_

7. Exact physical address of the construction site or site office: \_\_\_\_\_

Contract

BID No: BID No: DOE14NWER016 - CONTRACTOR

Addendum A  
Occupational Health and Safety Regulations

8. Nature of the construction work:

---

---

---

9. Expected commencement date: \_\_\_\_\_

10. Expected completion date: \_\_\_\_\_

11. Estimated maximum number of persons on the construction site.

---

12. Planned number of contractors on the construction site accountable to principal contractor:

---

13. Name(s) of contractors already chosen.

---

---

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---

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---

\_\_\_\_\_  
Principal Contractor

\_\_\_\_\_  
Date

\_\_\_\_\_  
Client

\_\_\_\_\_  
Date

- THIS DOCUMENT IS TO BE FORWARDED TO THE OFFICE OF THE DEPARTMENT OF LABOUR **PRIOR TO COMMENCEMENT** OF WORK ON SITE.
- **ALL PRINCIPAL CONTRACTORS** THAT QUALIFY TO NOTIFY MUST DO SO EVEN IF ANOTHER PRINCIPAL CONTRACTOR ON THE SAME SITE HAD DONE SO PRIOR TO THE COMMENCEMENT OF WORK.

Contract

BID No: BID No: DOE14NWER016 - CONTRACTOR

Addendum A  
Occupational Health and Safety Regulations

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## **ADDENDUM B**

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### **Occupational Health and Safety Specification**

**APPOINTMENT OF A CONTRACTOR FOR COMPLETION OF  
OUTSTANDING WORKS AND NEW ADDITIONS TO TROTSVILLE  
PRIMARY SCHOOL FOR NORTH WEST PROVINCE.**

**INDEPENDENT DEVELOPMENT TRUST**  
(Hereinafter referred to as the Employer)

### **OCCUPATIONAL HEALTH AND SAFETY SPECIFICATION**

This specification shall be used in conjunction with all other applicable safety specifications, legislation and regulations in force at the time of the contract. Where unique site specifications are in force, those site specifications shall take precedence over this Specification.

The Independent Development Trust (IDT)  
Glenwood Office Park  
Cnr. Oberon and Sprite Street  
Faerie Glen  
Pretoria  
0182

**ADDENDUM "A"**

**PRO-FORMA AGREEMENT IN TERMS OF OCCUPATIONAL HEALTH AND SAFETY ACT  
1993**

**Contract**

**Addendum B**

**Occupational Health and Safety Specification**

**BID No: BID No: DOE14NWER016 - CONTRACTOR**

**PRO-FORMA AGREEMENT IN TERMS OF**

**OCCUPATIONAL HEALTH AND SAFETY ACT 1993 – SECTION 37 (2)**

**NEW CONSTRUCTION SAFETY REGULATIONS**

The above-mentioned regulations were promulgated in the Govt. Gazette on Friday, 18 July 2014 under the Occupational Health & Safety Act (85 of 1993) and are now in force.

The Employer and the Contractor hereby agree, in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act 1993 (Act 85 of 1993, hereinafter referred to as the Act), that the following arrangements and procedures shall apply between them to ensure compliance by the Contractor with the provisions of the Act, namely:

- (a) The Contractor undertakes to acquaint the appropriate officials and employees of the Contractor with all the relevant provisions of the Act and the regulations promulgated in terms of the Act, and the Employer's Health and Safety Specifications included in the contract documents.
- (b) The Contractor undertakes that all relevant duties, obligations and prohibitions imposed in terms of the Act and Regulations and the Employer's Health and Safety Specifications included in the contract documents will be complied with in all respects.
- (c) In relation to any work or activity performed by the Contractor, his workmen or any other person for whose acts or omissions the Contractor is responsible in terms of the Contract, the Contractor hereby accepts sole liability for such due compliance with the relevant duties, obligations and prohibitions imposed by the Act and

Contract

Addendum B

Occupational Health and Safety Specification

BID No: BID No: DOE14NWER016 - CONTRACTOR

Regulations and expressly absolves the Employer from itself being obliged to comply with any of the aforesaid duties, obligations and prohibitions.

- (d) The Contractor agrees that any duly authorised officials of the Employer shall be entitled, although not obliged, to take such steps as may be necessary to ensure that the Contractor has complied with his undertakings as set out more fully in paragraphs (a) and (b) above, which steps may include, but will not be limited to, the right to inspect any appropriate site or premises occupied by the Contractor, or to inspect any appropriate records held by the Contractor.
- (e) The Contractor shall be obliged to report forthwith in writing to the Representative/Agent full details of any investigation, complaint or criminal charge which may arise as a consequence of the provisions of the Act and Regulations, pursuant to work performed in terms of this Contract.
- (f) Forward "safety meeting" minutes to the representative/Agent.

For the Employer: \_\_\_\_\_ Date: \_\_\_\_\_

Witnesses: 1) : \_\_\_\_\_ 2) \_\_\_\_\_

For the Contractor: \_\_\_\_\_ Date: \_\_\_\_\_

Witnesses: 1) : \_\_\_\_\_ 2) \_\_\_\_\_

## **ADDENDUM "B"**

### **NOTIFICATION OF CONSTRUCTION WORK**

**Contract**

**Addendum B**

**Occupational Health and Safety Specification**

**BID No: BID No: DOE14NWER016 - CONTRACTOR**

**NOTIFICATION OF CONSTRUCTION WORK**  
(Regulation 3 of the Construction Regulations, 2014)

**1. CONTRACTOR**

1.1 Name and postal address of Contractor:

---

---

---

1.2 Name and telephone number of Contractor's contact person :

---

1.3 Contractor's compensation registration number :

---

1.4 Name and telephone number of Contractor's Construction Supervisor :

---

1.5 Physical address of the construction site or site office:

---

---

---

1.5 Estimated number of persons on the construction site:

---

1.6 Estimated number of Subcontractors on the construction site accountable to the Contractor:

---

**2. EMPLOYER**

2.1 Name and postal address of Employer :

---

---

---

2.2 Name and telephone number of Employer's Principal Agent:

Contract

Addendum B

Occupational Health and Safety Specification

BID No: BID No: DOE14NWER016 - CONTRACTOR

---

**3. DESIGN CONSULTANTS**

3.1 Name and postal address of OHS consultants:

3.1.1 Occupational Health and Safety

To be advised

3.1.2 Other (if any):

---

3.2 Name and telephone number of design consultant's contact person:

3.2.1 Construction project managers/ Principal Agent:

---

3.2.2 Architects:

---

3.2.3 Structural engineer :

---

3.2.4 Electrical engineer:

---

3.2.5 Mechanical engineer:

---

3.2.6 Civil engineer:

---

3.2.7 Other (if any):

---

**4. THE WORKS**

Nature of the works:

Commencement date:

Completion date:

Contractor: \_\_\_\_\_ Date: \_\_\_\_\_

Employer: \_\_\_\_\_ Date: \_\_\_\_\_

THIS DOCUMENT IS TO BE FORWARDED TO THE OFFICE OF THE DEPARTMENT OF LABOUR **PRIOR TO COMMENCEMENT** OF WORK ON SITE.

ALL CONTRACTORS THAT QUALIFY TO NOTIFY MUST DO SO EVEN IF ANOTHER CONTRACTOR ON THE SITE HAD DONE SO PRIOR TO THE COMMENCEMENT OF WORK.

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## **ADDENDUM C**

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### **Environmental Management Plan**

TO BE PROVIDED BY THE SUCCESSFUL BIDDER

*Addendum I*

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## **ADDENDUM I**

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### **Drawings**

**BID No: BID No: DOE14NWER016 - CONTRACTOR**

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## ADDENDUM J

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### IDT Addendum to the JBCC



BID No: BID No: DOE14NWER016 - CONTRACTOR

# **ADDENDUM**

To the

## **THE JBCC PRINCIPAL BUILDING AGREEMENT**

**NAME OF PROJECT:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## INTRODUCTION

**WHEREAS**, the Independent Development Trust ("IDT") made an Offer of Appointment and the Contractor has accepted such appointment subject to the conditions stipulated in the aforesaid Offer of Appointment Letter, which conditions include signing of the JBCC Agreement, Edition ..... (hereinafter referred to as "Main Agreement").

**AND WHEREAS**, this addendum shall form part of the Main Agreement between the Employer and the Contractor.

### 1. ADDENDUM TO THE MAIN AGREEMENT

- 1.1 This Agreement will constitute an Addendum to the Main Agreement as contemplated herein;
- 1.2 The Terms of Reference, Accepted Proposal or BID, Standard Conditions of BID, Special Conditions of BID and adjusted Priced Bills of Quantities shall form part of the agreement between the Contractor and the Employer;
- 1.3 This Addendum will be deemed to incorporate, with or without variation, all the provisions of the Main Agreement, unless the context clearly requires otherwise;
- 1.4 All words and phrases used in this Addendum which are defined in the Main Agreement, will bear the same meaning assigned to them in the Main Agreement; and
- 1.5 All references in the Main Agreement to "the/this Agreement" itself, will be deemed to be references also to the Main Agreement duly amended by this Addendum.
- 1.6 **Interpretations and Definition**
  - 1.6.01 **Financial Implications** shall mean the variation amount over and above the awarded contract sum.

## **2. SPECIAL CONDITION**

If there is any conflict between the contents or any part of this Addendum and the contents or any part of the Main Agreement and other annexures, the content of this Addendum shall prevail.

## **3. WAIVER OF CONTRACTOR'S LIEN**

- 3.1 The Contractor hereby waives, in favour of the Employer, any lien or right of retention that is or may be held in respect of the Works to be executed on the Site.
- 3.2 The Employer, as an Organ of State, shall not be required to provide payment guarantees.

## **4. ASSIGNMENT OF RIGHTS OR OBLIGATIONS**

- 4.1 Neither **party** shall assign or cede rights or obligations without the written consent of the other **party**, which consent shall not be unreasonable withheld.
- 4.2 Where the Contractor intend to cedes any right to monies due or to become due under this agreement as security in favour of a financial institution, a written consent in accordance with clause 4.1 above, shall be obtained from the Employer prior to entering into such cession.
- 4.3 Any cession entered into without the necessary written consent from the either party, shall be null and void.
- 4.4 The Employer shall not consent to a cession of monies due or to become due under this agreement as security in favour of a financial institution, unless such financial institution submitted to the IDT a Valid Tax Clearance Certificate, is registered as a credit provider in terms of the National Credit Act and as a vendor in the IDT's Vendor Management System.

## **5 INTERIM PAYMENT**

- 5.1 The **Employer** shall, in accordance with clause 8.2.3 of the treasury regulation of March 2005, pay to the **Contractor** the amount certified in an interim **payment certificate** within **thirty (30) calendar days** of the date of submission of the **payment certificate**".
- 5.2 Default interest, where applicable, shall only be effective after the 30 calendar days of the date of receipt of the interim **payment certificate from the Principal Agent**.
- 5.3 The Employer shall be entitled to apply a set-off against a legitimate and liquid claim against the Contractor from which a valid invoice has been received.

## **6 TAX COMPLIANCE MEASURES**

- 6.1 The Contractor hereby grant confirmation that SARS may, on on-going basis during the contract term, disclose the Contractor's tax compliance status to the employer.
- 6.2 Should the Contractor appoint a sub-contractor to execute a portion of a work in excess of the threshold (currently 25%) prescribed by the National Treasury, the Contractor must ensure that a sub-contractor is tax compliant and remains tax compliant for the full duration of the contract. The contractor shall obtain a written consent from its sub-contractors confirming that SARS may on on-going basis during the contract term, disclose the sub-contractor's tax compliance status to the employer.
- 6.3 The Contractor shall submit a valid tax clearance certificate within 10 working days from the date of expiry of the tax clearance certificate. The Employer reserve the right to demand a valid Tax Clearance Certificate prior to making any payment to the Contractor, should it become aware that the tax clearance corticated has expired.
- 6.4 Unless the Employer receive a written confirmation that the Contractor has challenged its tax compliance status with SARS, the Employer shall not process

any payment to the Contractor, if 30 days has lapsed since the written notice by the Employer and the Contractor has failed to remedy its tax compliance status.

- 6.5 Employer's non-payment of the Contractor's invoice in accordance with clause 6.4 above shall not absolve the contractor from performing its obligation in terms of the contract.
- 6.6 Unless the Employer receives a written confirmation that the Contractor or sub-Contractor has challenged its tax compliance status with SARS, the Employer shall be entitled to cancel the contract with the Contractor or instruct the Contractor to cancel its contract with the Sub-Contractor.
- 6.7 Where a Contractor is a JV, each party to a JV must be tax compliant and remains tax compliant for the full duration of the contract, failing which, the Employer shall invoke paragraph 6.4 or 6.6 above.

## **7. APPROVAL OF VARIATION ORDERS**

- 7.1 Upon receipt of the Variation Order (VO), the Principal Agent must professionally consider the merits of the Variation Order and make a recommendation to the Employer.
- 7.2 The Principal Agent shall not have the power to approve any deviation or variation which has financial implications on the Employer without the necessary written approval of the Employer, except under emergency circumstances wherein failure to undertake the work may result in loss of life.
- 7.3 The Employer must communicate the approval of a Variation Order in writing to the Principal Agent and the Principal Agent shall, upon receipt of confirmation of the approval of the VO, issue the necessary Contract Instruction to the contractor to undertake the works.
- 7.4 The Contractor shall not commence with any Variation Order Works without the written approval of the Variation Order from the Employer, except under circumstances mentioned in paragraph 7.2 above.

- 7.5 Should the Contractor undertakes the Variation Order Works without the necessary written approval of the Variation Order from the Employer, the Contractor shall be entirely liable for any financial and any related implications and hereby indemnify and hold harmless the Employer from and against any and all claims, actions, damages, liabilities, injuries, costs, fees, expenses, or losses, including and without limitation, reasonable attorney's fees and costs of investigation and litigation, whatsoever which may be incurred by, or for which liability may be asserted against, the Employer arising out of the Contractor's performance or non-performance of unauthorized works, but only to the extent caused by the negligent acts, errors or omissions of the Contractor.
- 7.6 The Contractor shall not accept any instructions from any party, including beneficiary Department, other than the Principal Agent.

## **8. JOINT VENTURE AGREEMENT**

- 8.1 Should the Joint Venture Agreement be dissolved or any of the JV partner pull out the JV Agreement for any reasons whatsoever, the Employer hereby reserve its right to terminate the contract with immediate effect.
- 8.2 Should the Employer decide not to terminate the contract upon the dissolution of the JV Agreement and the replacement JV partner does not meet the BBBEE threshold stipulated in the BID document, the IDT shall be entitled to cancel the contract with immediate effect.
- 8.3 Should the BBBEE status of the Joint Venture be changed to a lower rate than the BIDDing rate, based on legislation applicable at the closing date of the

8.4 BID, the IDT shall be entitled to cancel the contract.

## **9. BREACH**

9.1 In the event that the contractor: -

9.1.1 commits an act of insolvency; or

9.1.2 is placed under a provisional or final winding-up or judicial management order; or

9.1.3 is placed under or applied for business rescue; or

9.1.4 makes an assignment of more than 25% of either its right and/or its obligation for the benefit of the third party without the written consent of the employer; or

9.1.5 the Contractor is registered or fails to renew his registration with the CIDB or changes directorship during the course of the project, resulting in the contravention of BBBEE statutory requirement; or

9.1.6 fails to satisfy or take steps to have set aside any judgment taken against it within 14 (Fourteen) business days after such judgment has come to its notice,

then the other Employer will be entitled to terminate the Agreement on written notice.

Signed at ..... on this the ..... day of .....202.....B.

**AS WITNESSES:**

**BID No: BID No: DOE14NWER016 - CONTRACTOR**

1. \_\_\_\_\_

\_\_\_\_\_  
For and on behalf of the **Employer:**  
(.....), in his/her  
capacity as the \_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_  
For and on behalf of the **Employer:**  
(.....), in his/her  
capacity as the \_\_\_\_\_  
\_\_\_\_\_.

Signed at ..... on this the ..... day of .....202...

**AS WITNESSES:**

3. \_\_\_\_\_  
f

4. \_\_\_\_\_

\_\_\_\_\_  
For and on behalf of the **Contractor:**  
.....i  
n his/her capacity as  
.....,  
who hereby confirm that he/she is  
duly authorized.