

**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW BHOSIKI POLICE STATION**

75	Reducer - Ø32/20 mm	No	13
76	Reducer - Ø32/26 mm	No	8
77	Reducer - Ø40/16 mm	No	9
78	Reducer - Ø40/20 mm	No	6
79	Reducer - Ø40/26 mm	No	3
80	Reducer - Ø40/32 mm	No	13
81	Reducer - Ø50/16 mm	No	3
82	Reducer - Ø50/20 mm	No	2
83	Reducer - Ø50/32 mm	No	1
84	Reducer - Ø50/40 mm	No	1
85	HDPE/Mepla adapter	No	10
86	Mepla male adapter with female thread - Ø20 - Ø22 mm	No	4
87	Mepla male adapter with female thread - Ø32 - Ø22 mm	No	3
88	Mepla male adapter with female thread - Ø40 - Ø22 mm	No	1
89	Mepla male adapter with female thread - Ø50 - Ø22 mm	No	1
90	IV-2 - Isolation valve - Ø20 mm	No	1
91	IV-4 - Isolation valve - Ø26 mm	No	1
92	IV-5 - Isolation valve - Ø32 mm	No	3
93	IV-6 - Isolation valve - Ø40 mm	No	4
94	IV-7 - Isolation valve - Ø50 mm	No	1
95	TSV-1 - thermostatic mixing valve - Ø20 mm	No	3
96	Ø22mm Brass bib tap c/w isolation valve	No	7
97	Mepla connector to wash hand basin (cold water only)	No	22
98	Mepla connector to wash hand basin (hot & cold water)	No	4

Carried to Collection

Section No. 2
Bill No. 14
PLUMBING AND DRAINAGE

R

211

RS

R.M.

**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW BHOSIKI POLICE STATION**

99	Mepla connector to sink (hot & cold water)	No	5
100	Mepla connector to shower (hot & cold water)	No	7
101	Mepla connector to cistern water closet (cold water only)	No	16
102	Mepla connector to flush master water closet (cold water only)	No	5
103	Mepla connector to flush master urinal (cold water only)	No	5
104	Mepla connector to tap (cold water only)	No	8
<u>Copper Class 1</u>			
105	Straight pipe - Ø22 mm	m	48
106	Straight pipe - Ø35 mm	m	1
107	90° elbow - Ø22 mm	No	62
108	Tee - Ø22 mm	No	8
<u>PIPE INSULATION</u>			
<u>25mm thick pipe insulation with thermal conductivity - λ W/(m·K) off +40 °C = 0,04 or better (secured with straps/ ties)</u>			
109	Insulation to Ø16mm pipes including couplings	m	26
110	Insulation to Ø20mm pipes including couplings	m	32
111	Insulation to Ø22mm pipes including couplings	m	2
112	Insulation to Ø26mm pipes including couplings	m	38
113	Insulation to Ø32mm pipes including couplings	m	10

DRAINAGE RETICULATION

Carried to Collection

Section No. 2
Bill No. 14
PLUMBING AND DRAINAGE

R
[Handwritten signature]

212 RY R.M.

SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW BHOSIKI POLICE STATION

"Geberit" "Sunridge" or other equal and approved HDPE soil and vent pipes, pipe in walls, in screed, soffits complete with brackets, etc. HDPE c/w all fittings, connectors, couplings, buttwelds, electrowelds, flanges, etc. (All underground pipework to be "Denso" or gaffer wrapped)

114	Straight pipe - Ø56 mm	m	70
115	Straight pipe - Ø63 mm	m	40
116	Straight pipe - Ø70 mm	m	1
117	Straight pipe - Ø75 mm	m	6
118	Straight pipe - Ø90 mm	m	4
119	Straight pipe - Ø110 mm	m	178
120	45° elbow - Ø56 mm	No	90
121	45° elbow - Ø63 mm	No	36
122	45° elbow - Ø75 mm	No	2
123	45° elbow - Ø90 mm	No	3
124	45° elbow - Ø110 mm	No	167
125	Branch 45° - Ø63/63/56 mm	m	2
126	Branch 45° - Ø63/63/63 mm	No	1
127	Branch 45° - Ø75/75/56 mm	No	4
128	Branch 45° - Ø90/90/56 mm	No	1
129	Branch 45° - Ø110/110/56 mm	No	8
130	Branch 45° - Ø110/110/63 mm	No	11
131	Branch 45° - Ø110/110/75 mm	No	2
132	Branch 45° - Ø110/110/90 mm	No	1
133	Branch 45° - Ø110/110/110 mm	No	25
134	Branch 88.5° - Ø56/56/56 mm	No	5

Carried to Collection

Section No. 2
Bill No. 14
PLUMBING AND DRAINAGE

R

213 by R.N.

**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW BHOSIKI POLICE STATION**

135	Branch 88.5° - Ø63/63/56 mm	No	1
136	Branch 88.5° - Ø63/63/63 mm	No	4
137	Branch 88.5° - Ø75/75/63 mm	No	1
138	Branch 88.5° - Ø110/110/56 mm	No	3
139	Branch 88.5°, swept entry - Ø110/110/110 mm	No	15
140	Reducer (concentric) - Ø63/56 mm	No	7
141	Reducer (concentric) - Ø75/56 mm	No	2
142	Reducer (concentric) - Ø75/63 mm	No	2
143	Reducer (concentric) - Ø90/75 mm	No	1
144	Reducer (concentric) - Ø110/63 mm	No	2
145	Reducer (concentric) - Ø110/70 mm	m	11
146	Reducer (concentric) - Ø110/75 mm	No	1
147	PVC / HDPE adapter	No	15
148	Threaded connector with screw cap (rodding eye) - Ø63 mm	No	1
149	Threaded connector with screw cap (rodding eye) - Ø110 mm	No	5
150	Expansion socket with double flange - Ø110 mm	No	9
151	Vent cowls - Ø110mm	No	10
152	Ø110mm (215-100) uPVC gulley inlet exceeding 500mm but not exceeding 750mm deep c/w 200mm plain grating	No	2
153	Ø110mm 304 grade stainless steel floor drain	No	12
154	304 grade stainless steel grease trap for minimum flow rate of 1.8ℓ/s	No	1

FIRE PROTECTION

Carried to Collection

Section No. 2
Bill No. 14
PLUMBING AND DRAINAGE

R

han

214 RY R.M.

SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW BHOSIKI POLICE STATION

All cost rates for the items in the BOQ must be the fully installed, tested and commissioned cost, incl. all necessary fixings, supports, clamps, etc. Branded items shall be equal and approved.

Fire / Safety Signage in Accordance with SANS 1186

Photo luminescent fire signage, 190mm high, housed in clear anodised aluminium frames, wall mounted

155	E1 - 190x380mm	No	2
156	E2 - 190x380mm	No	3
157	E3 - 190x380mm	No	5
158	E6 - 190x380mm	No	6
159	F22 - 190x380mm	No	2
160	F23 - 190x380mm	No	1
161	F28 - 190x380mm	No	6

Photo luminescent fire signage, 290 x 290 mm, double sided, housed in clear anodised aluminium frames and mounted on 1500mm long steel pole

162	F30	No	1
163	F49	No	1
164	GA26 - Emergency assembly point - Position TBC	No	2

Fire Equipment

165	FE-1 - Fire extinguisher c/w wall mounted backing board covered in F24 chevron signage and mounting bracket (4.5kg DCP).	No	9
166	FE-2 - Fire extinguisher c/w wall mounted backing board covered in F24 chevron signage and extinguisher mounting bracket (5kg CO ₂).	No	3

Carried to Collection

Section No. 2
Bill No. 14
PLUMBING AND DRAINAGE

R

215

RY

R.M.C.

Handwritten signature

**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW BHOSIKI POLICE STATION**

167	FE-3 - Fluoroketone (FK) base (clean agent) 10kg automatic fire extinguisher, 68°C c/w bracket and supports for ceiling/roof truss mounting at a height of 3 meters above FFL.	No	2
168	FHR-1 - Fire hose reel - fixed type with 30m hose and nozzle, hose guide and s/o valve.	No	3
169	FH-1 - 80mm x 65mm brass right angle hand wheel hydrant with single lug Instantaneous outlet, 80mm Male BSP inlet, matching 30m layflat hose with couplings and nozzle housed in a painted steel cabinet, Ø15mm socket, pressure gauge and s/o valve.	No	4
170	FTB-1 - 100mm twin booster and standpipe with 65mm brass booster connectors, pressure gauge (0-2500 kPa), test point and SANS T16 Inlet.	No	3

Fire Stopping

Rates for fire stopping include the labour to ensure all fire separations are adequately fire stopped throughout.

171	"Hilti FS-ONE MAX", "Pyro cote" or other equal and approved intumescent mastic	l	5
172	"Hilti Firestop", "Pyro cote" or other equal and approved mortar.	m2	50
173	"Hilti Firestop", "Pyro cote" or other equal and approved foam.	m2	50

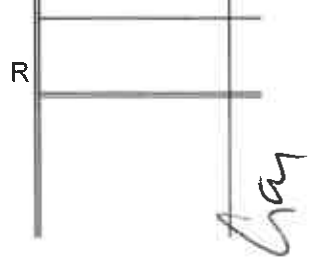
Fire Reticulation

Galvanised steel pipes and threaded fittings to SABS 62-1 and pipe threads to SABS 1109. for fire protection use; incl. nipples, off-cuts, wastage, fittings, hangers, support brackets, painting.

174	Straight pipe - Ø25 mm.	m	50
175	Straight pipe - Ø80 mm.	m	13
176	90° elbow - Ø25 mm.	No	12
177	90° elbow - Ø80 mm.	No	4

Carried to Collection

Section No. 2
Bill No. 14
PLUMBING AND DRAINAGE



216

Ry R.M.

SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW BHOSIKI POLICE STATION

178	Equal tee - Ø80 mm.	No	2
179	Reducer - Ø80 / Ø25 mm.	m	2
180	Galvanised steel / HDPE adapter.	No	4
<u>DOMESTIC WATER & FIRE PLANT ROOM</u>			
<u>Plant Reticulation</u>			
<u>Medium steel pipes and fittings to SANS 62-1 for above ground installation, galvanised, painted red, incl. couplings, off-cuts, fittings, hangers, supports, brackets, etc.</u>			
181	Straight pipe - Ø20 mm	m	11
182	Straight pipe - Ø32 mm	m	8
183	Straight pipe - Ø40 mm	m	10
184	Straight pipe - Ø50 mm	m	11
185	Straight pipe - Ø65 mm	m	12
186	Straight pipe - Ø100 mm	m	29
187	90° elbow - Ø20 mm	No	4
188	90° elbow - Ø32 mm	No	4
189	90° elbow - Ø50 mm	No	4
190	90° elbow - Ø65 mm	No	7
191	90° elbow - Ø100 mm	No	9
192	Equal tee - Ø20 mm	No	4
193	Equal tee - Ø40 mm	No	1
194	Equal tee - Ø65 mm	No	3
195	Equal tee - Ø100 mm	No	5
196	Long reducer - Ø40 / Ø32 mm	No	2

Carried to Collection

Section No. 2
Bill No. 14
PLUMBING AND DRAINAGE

R

217 RJ R.M.

**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW BHOSIKI POLICE STATION**

197	Long reducer - Ø65 / Ø20 mm	No	1
198	Long reducer - Ø100 / Ø65 mm	No	1
199	Galvanised steel / HDPE coupling	No	5
200	Galvanised steel / Mepla coupling	No	1
201	IV-1 - Isolation valve - Ø16 mm	No	2
202	IV-8 - Isolation valve - Ø32 mm	No	4
203	IV-9 - Isolation valve - Ø65 mm	No	6
204	IV-10 - Isolation valve - Ø80 mm	No	4
205	IV-11 - Isolation valve - Ø100 mm	No	4
206	NRV-2 - Non-return valve - Ø65 mm	No	1
207	NRV-3 - Non-return valve - Ø80 mm	No	1
208	NRV-3 - Non-return valve - Ø100 mm	No	1
209	FV-1- Float valve - 32mm	No	2
210	RPBP-1 - Reduced pressure backflow preventor - Ø65 mm	No	1
211	RPBP-1 - Reduced pressure backflow preventor - Ø100 mm	No	1
212	STR-2 - Y-strainer c/w drain - Ø65 mm	No	1
213	STR-3 - Y-strainer c/w drain - Ø100 mm	No	1
<u>HOLES, ETC.</u>			
<u>Core drilling hole not exceeding 50mm diameter</u>			
214	255mm Thick reinforced concrete slab, beam, wall, etc	No	15
<u>Core drilling hole exceeding 50mm and not exceeding 100mm diameter</u>			
215	255mm Thick reinforced concrete slab, beam, wall, etc	No	10

Carried to Collection

Section No. 2
Bill No. 14
PLUMBING AND DRAINAGE

R

218

RJ R.M.

SILICON SEALANT

5mm Silicon sealant all around plumbing fittings, intersections with floors, walls, and ceilings

216	Around pipe fittings, etc. (Provisional)	m	46	
-----	--	---	----	--

AS-BUILT DRAWINGS

217	Provision of as-built drawings		Item	
-----	--------------------------------	--	------	--

Carried to Collection

Section No. 2
Bill No. 14
PLUMBING AND DRAINAGE

R

219 27 R.M. Han

**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW BHOSIKI POLICE STATION**

Section No. 2

Bill No. 14

PLUMBING AND DRAINAGE

COLLECTION

Total Brought Forward from Page No.

**Page
No**

Amount

121

122

123

124

125

126

127

128

129

130

131

132

133

134

135

136

137

138

139

140

Carried Forward to Summary of Section No. 2

Section No. 2

Bill No. 14

PLUMBING AND DRAINAGE

R

Ray

220 RY R-N.

SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW BHOSIKI POLICE STATION

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 2</u>			
	<u>BILL NO. 15</u>			
	<u>GLAZING</u>			
	<u>CPAP WORK GROUP NO. 150 UNLESS OTHERWISE STATED</u>			
	The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017 Edition).			
	<u>Float glass</u>			
	The term "float glass" is used for monolithic annealed glass.			
	<u>Laminated glass</u>			
	Laminated glass to have polyvinyl butyral (PVB) interlayer(s).			
	<u>GLAZING TO STEEL WITH PUTTY</u>			
	<u>6.4mm Thick toughened Low E safety glass</u>			
1	Panes not exceeding 0.1m ² (LI)	m2	16	
2	Panes exceeding 0.1m ² and not exceeding 0.5m ² (LI)	m2	1	
3	Panes exceeding 0.5m ² and not exceeding 2m ² (LI)	m2	20	
	<u>TOPS, SHELVES, DOORS, MIRRORS, ETC</u>			
	<u>6mm Polished edge glass mirror fixed with 4 x chrome plated domed mirror screws in brickwork</u>			
4	Mirror 750 x 450mm high (LI)	No	16	
	Carried Forward to Summary of Section No. 2			R
	Section No. 2 Bill No. 15 GLAZING			

221

R.J.

R.M.

Kan

SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW BHOSIKI POLICE STATION

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 2</u>			
	<u>BILL NO. 16</u>			
	<u>PAINTWORK</u>			
	<u>CPAP WORK GROUP NO. 152 UNLESS OTHERWISE STATED</u>			
	The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017 Edition).			
	<u>PAINTWORK, ETC. TO NEW WORK</u>			
	<u>ON INTERNAL FLOATED PLASTER SURFACES</u>			
	<u>"DULUX" or other equal and approved</u>			
	<u>Prepare and brush surface to remove all loose contaminants and apply one coat Dulux trade alkali resistant plaster primer (full coat) and two coats Dulux Luxurious Silk Paint</u>			
1	Walls (L1)	m2	6,004	
	<u>ON SMOOTH CONCRETE SURFACES</u>			
	<u>"DULUX" or other equal and approved</u>			
	<u>Prepare and brush surface to remove all loose contaminants and apply one coat Dulux trade alkali resistant plaster primer (full coat) and two coats Dulux Luxurious Silk Paint</u>			
2	Ceilings and beams ("White" colour group) (L1)	m2	419	
	<u>ON FIBRE-CEMENT BOARD SURFACES</u>			
	Carried to Collection			R
	Section No. 2 Bill No. 16 PAINTWORK			

222 RJ R. M.
Kw

SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW BHOSIKI POLICE STATION

<p><u>Prepare and brush surface to remove all loose contaminants and apply one coat alkali resistant primer and two coats superior quality acrylic emulsion paint</u></p>			
3	Fascias and barge boards, including priming metal jointing strips (LI)	m2	260
<p><u>ON METAL SURFACES</u></p>			
<p><u>Prepare and brush surface to remove all loose contaminants and apply one coat self etching primer, one coat alkyd based universal undercoat and two coats superior quality universal non drip water based enamel paint, on galvanised steel</u></p>			
4	Door frames (LI)	m2	130
5	Door (LI)	m2	44
6	Window frames (LI)	m2	11
<p><u>ON WOOD SURFACES</u></p>			
<p><u>Prepare and brush surface to remove all loose contaminants and apply one coat primer and two coats premium quality polyurethane non-drip water based enamel paint</u></p>			
7	Doors (LI)	m2	54

Carried to Collection

Section No. 2
Bill No. 16
PAINTWORK

R

Handwritten signature

223

RJ

R.M.

SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW BHOSIKI POLICE STATION

Section No. 2

Bill No. 16

PAINTWORK

COLLECTION

Total Brought Forward from Page No.

Page
No

143

144

Amount

Carried Forward to Summary of Section No. 2

Section No. 2

Bill No. 16

PAINTWORK

R

km

224

Ry

R. M.

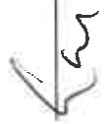
**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW BHOSIKI POLICE STATION**

Bill No	<u>SECTION SUMMARY - SECTION 2: BUILDERS WORK</u>	Page No	Amount
1	EARTHWORKS	49	
2	CONCRETE, FORMWORK AND REINFORCEMENT	55	
3	MASONRY	60	
4	WATERPROOFING	64	
5	ROOF COVERINGS, CLADDINGS, ETC.	67	
6	CARPENTRY AND JOINERY	79	
7	CEILINGS, PARTITIONS AND ACCESS FLOORING	84	
8	FLOOR COVERINGS, WALL LININGS, ETC.	85	
9	IRONMONGERY	94	
10	STRUCTURAL STEELWORK	98	
11	METALWORK	113	
12	PLASTERING	117	
13	TILING	120	
14	PLUMBING AND DRAINAGE	141	
15	GLAZING	142	
16	PAINTWORK	145	
	Carried to Final Summary		R
	Section No. 2		


225

R.Y

R.M.C



SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW BHOSIKI POLICE STATION

Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 3</u></p> <p><u>BILL NO. 1</u></p> <p><u>ELECTRICAL WORK</u></p> <p>Tenderers are advised to study the specifications and bills before pricing bill</p> <p><u>SECTION 1: MAIN RETICULATION & DISTRIBUTION</u></p> <p>The supply, delivery on site and construction of the following materials and equipment and the guarantee thereof as specified.</p> <p>All prices below must make provision for the delivery on site and must include all material deemed necessary for the commissioning of the equipment in full, including all handling, insurance and other costs involved in delivery of materials.</p> <p><u>Kiosk</u></p> <p><u>Isolation and Distribution Kiosks supplied and installed with base plinth to specifications of the Isolation and Distribution Kiosk</u></p>			
1	400A Rated Metered-Isolation Kiosk	No	1	
2	Distribution Kiosk (6-Way)	No	1	
	<p><u>Distibution Boards</u></p>			
	Carried to Collection			R
	<p>Section No. 3 Bill No. 1 ELECTRICAL WORK</p>			

226

Ry R.M.

SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW BHOSIKI POLICE STATION

Distribution boards as described in the specification, depicted on the schematic layouts, equipped with circuit breakers, wired for the maximum number of circuit breakers. Supply and install in position the following Distribution Boards, each complete with trays, architraves, internal busbars, wiring, lacing, bilingual labelling and legends, equipment as indicated on the drawings, conduit terminations as required by the number and type of circuits (minimum one conduit per circuit) along with at least two 20 mm diameter spare conduits per board to roof space, and all other necessary items. (Including Chasing were Required)

3	Main Reticulated Distribution Board (Admin)(Essential)	No	1
4	Main Reticulated Distribution Board (Holding)(Essential)	No	1
5	Main Reticulated Distribution Board (Admin)(Fire Pump)	No	1
6	Main Reticulated Distribution Board (Training)(Essential)	No	1
7	Sub - Distribution Board (Admin)(HVAC)	No	1
8	Sub - Distribution Board (Holding)(HVAC)	No	1
9	Solar PV Distribution Board	No	1

ATS (Automatic Transfer Switch)

GGD type LV low voltage distribution cabinet is suitable for three-phase AC 50HZ, max voltage 420V, rated current to 3150 A power distribution system. GGD refers to the Switchgear being AC Low Voltage Switchgear. Components are Fixed Installation/Fixed Route and that it is a Power Cabinet.

10	ATS Transfer Switchgear/Auto Transfer Main Distribution Board MDB	No	2
----	---	----	---

Low Voltage Cable Installations

Carried to Collection

Section No. 3
Bill No. 1
ELECTRICAL WORK

R

hcm

227

Ry R.M.

**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW BHOSIKI POLICE STATION**

**Supply and installation of 600/1000V PVC PVC SWA
PVC cables with copper conductors and Bare
Copper Earth Wire (E.C.C.) including cable lables at
each end and including all trenching, backfilling,
compacting to regulation. (Including Chasing were
Required)**

11	120mm x 4 CORE 600/1000V PVC SWA ECC Cu CABLE	m	97
12	95mm x 4 CORE 600/1000V PVC SWA ECC Cu CABLE	m	25
13	70mm x 4 CORE 600/1000V PVC SWA ECC Cu CABLE	m	28
14	50mm x 4 CORE 600/1000V PVC SWA ECC Cu CABLE	m	65
15	25mm x 4 CORE 600/1000V PVC SWA ECC Cu CABLE	m	66
16	16mm x 4 CORE 600/1000V PVC SWA ECC Cu CABLE	m	61
17	10mm x 4 CORE 600/1000V PVC SWA ECC Cu CABLE	m	36

Termination of Low Voltage Cables

**Termination of LV cable as specified including
connection of conductors, cable lugs, captive
glands, shrouds, etc for the following cable sizes.**

18	<u>120mm x 4 CORE 600/1000V PVC SWA</u>	No	2
19	95mm x 4 CORE 600/1000V PVC SWA	No	2
20	70mm x 4 CORE 600/1000V PVC SWA	No	2
21	50mm x 4 CORE 600/1000V PVC SWA	No	4
22	25mm x 4 CORE 600/1000V PVC SWA	No	2
23	16mm x 4 CORE 600/1000V PVC SWA	No	2
24	10mm x 4 CORE 600/1000V PVC SWA	No	4

Cable Sleeves

Carried to Collection

Section No. 3
Bill No. 1
ELECTRICAL WORK

R

han

228

RJ R.N.

**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW BHOSIKI POLICE STATION**

Supply and Install PVC Sleeves, including all trenching, preparation, backfilling and compaction, manholes with all accessories, etc

25	160mm PVC Sleeve (Power)	m	225
26	110mm PVC Sleeve (Telecommunications)	m	138

Excavations

Excavate for cable and sleeve trench including temporary support of sides, keeping excavations dry, backfilling and compacting to the Engineer's specification and includes PVC warning tape

27	Excavate in soft ground, backfill and compact to MOD AASHTO 95% (LI)	m3	104
28	Excavate in soft rock, backfill and compact to MOD AASHTO 95% (LI)	m3	52
29	Excavate in hard rock, backfill and compact to MOD AASHTO 95% (LI)	m3	26

Manholes

30	Supply and install pre-fabricated manholes and lids to accommodate multiple diameter sleeves, as specified and as indicated on drawings	No	11
----	---	----	----

Smart Metering

31	Supply and install Energy and Power Meters (Including CT's and VT's)	No	3
----	--	----	---

ACCESS CONTROL & CCTV

Access Control

32	Turnstiles (RFID Four Arm Full Height Double Turnstile four arms (90°), SUS304 Stainless Steel, Dual Lane (2018 x 1324 x 2220mm)	No	1
----	--	----	---

Connection Points, Unswitched Plug and Accessories

33	60 mm diameter Conduit Boxes (irrespective of No. of entries)	No	25
----	---	----	----

Carried to Collection

Section No. 3
Bill No. 1
ELECTRICAL WORK

R

RM

229

RJ

R.M.

SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW BHOSIKI POLICE STATION

34	IP66 Rated Waterproof Square Junction/Mounting Box <u>20mm PVC Conduiting (Including Chasing were Required)</u>	No	90
35	20mm PVC Conduiting <u>Wiring</u>	m	802
36	RG59 Coaxial Cable - 100m Roll <u>AREA LIGHTING</u> <u>Lighting Installation</u> <u>Supply, off-load, install and connect the following approved luminaires and equipment complete with lamps, connections, jointing/butting of luminaires where required, etc. The fittings shall be installed complete with lamps, control gear, 5A plug tops and connection cables, etc.(Refer to Electrical Schedule of Luminaires)</u>	No	6
37	15W Exterior Wall Mounted LED, Tamper Resistant Rectangular Bulkhead Or Similar Approved, Non-Dimmable on 24hr Circuit (341 x 195 x 101mm)	No	64
38	19W Vandal Proof Surface Mounted LED with Control Gear on 24hr Circuit (152 x 355 x 126mm)	No	76
39	55 Watts Exterior Pole Mounted LED on 6 meter Mounting Pole AFFL on 24hr Circuit	No	38
40	150 Watts Exterior LED Flood Light with Swivel Fitting Mounted Flush into Ground on 24hr Circuit <u>Supply and Install Light Switches Recessed Mounted</u> <u>16 Amp light switch (1-way), flush mounted in wall at 1100 mm AFFL, complete with 100 x 50 x 50 mm conduit box, yoke assembly & cover plate, including all PVC wiring up to distribution panel or other outlet, ECC, PVC conduit, & other consumables. (Including Chasing were Required)</u>	No	2
41	16 Amp, 1 Lever, 1 Way	No	4
42	16 Amp, 3 Lever, 1 Way	No	1

Carried to Collection

Section No. 3
Bill No. 1
ELECTRICAL WORK

R

230

R.Y. R.N.

SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW BHOSIKI POLICE STATION

Photocell

Daylight sensitive photo switch IP56, flush mounted in wall, complete with 100 x 50 x 50 mm conduit box, yoke assembly & cover plate, including all PVC wiring up to distribution panel or other outlet, ECC, PVC conduit, & other consumables. (Including Chasing were Required)

43	Daylight sensitive Photo switch with wall bracket (25A)	No	4	
----	---	----	---	--

5 Amp Unswitched Plug and Accessories

44	5 Amp Unswitched plug unit for installation in 60mm Diameter Conduit Box	No	180	
----	--	----	-----	--

45	60 mm diameter Conduit Boxes (irrespective of No. of entries)	No	180	
----	---	----	-----	--

Wiring (Cu Conductors) (All Colours)

600/1000 V grade PVC insulated stranded copper conductors drawn in conduit, trunking or wiremesh cable trays

46	1.5 mm ² Cu PVC Insulated	m	3,055	
----	--------------------------------------	---	-------	--

Draw Wire

47	Drawn into conduits 1.5mm ²	m	611	
----	--	---	-----	--

CONTAINMENT

Containment

Supply and Install Wireways

Carried to Collection

Section No. 3
Bill No. 1
ELECTRICAL WORK

R

231

RJ

R.M.

SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW BHOSIKI POLICE STATION

Cable trays, Ladders, Baskets and wireway trunking for Low voltage Power complete in all respects as specified and required as per layout drawings including wiremesh and Cable Trays/Ladders, Hangers, Brackets, Risers Unistrut Channels and Sections, Threaded Rods, Bolts, Fasteners, Droppers, Tees, Bends, Joints, Elbows, Supports, Cantilever Arms, Nuts, Washers, etc required for the complete installation of the Cable Ladders/Trays and ducting in the Building complex suspended from the ceiling concrete slab and/or wall mounted as indicated on the drawings. Accessories to be supplied by the same manufacturer. Galvanising to be done by the same manufacturer.

48	P2000 Galvanised Trunking (41.3 x 41.3mm)	m	618
49	32mm Galvanised Conduiting (Including Chasing were Required)	m	813
50	20mm PVC Conduiting (Power and Lighting)(Including Chasing were Required)	m	4,375
51	300 x 50mm Wire Mesh Cable Tray (Including Bends, Joints, Struts, Mountings etc.)	m	91
52	PT7 Heavy Duty Perforated Cable Tray 152 x 76mm (DATA Only) (Including Bends, Joints, Struts, Mountings etc.)	m	91

SECTION 2: FIRE DETECTION & ALARM SYSTEM INSTALLATION

Supply, deliver and install all necessary equipment and devices for a complete SANS10139:2021 Edition 4 approved Fire Detection & Alarm System

Main Building

Fire Detection Panel (Including Chasing were Required)

Addressable Fire Alarm panel with two (2) loop, complete with battery backup and capacity for 127 devices per loop and 20% spare capacity for future coverage installed

53	Fire Panel: Outside CAS terminal Office	No	1
----	---	----	---

Carried to Collection

Section No. 3
Bill No. 1
ELECTRICAL WORK

R

232

RJ

R.M.

Handwritten signature

**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW BHOSIKI POLICE STATION**

54	Final Programming of Fire Panel once fire detection installation is complete	No	1
<u>Fire Detection Devices (Including Chasing were Required)</u>			
55	Addressable Optical Detector	No	55
56	Addressable Heat Detector	No	5
57	Addressable Audible Alarm	No	11
58	Addressable Strobe Device	No	11
59	Addressable Manual Call point (Red Breakglass unit) with flap and backbox	No	11
60	Addressable Manual Call point (Red Breakglass unit) with flap and backbox, IP67 rated	No	2
61	Remote LED Indicator (Wall or Ceiling Mount)	No	27
62	Detector Bases	No	63
63	Strobe Bases	No	11
64	Audible Alarm Bases	No	11
65	Loop Isolator	No	9
66	Low Voltage I/O Relay device in suitably sized din rail outlet box to interface with HVAC and Access Control door release	No	1
67	Multi Criteria Detector	No	3
68	IP Rated Sounder and Beacon (Red)	No	2
<u>Fire Retardant Cabling</u>			
69	PH30 2C 1.5mm ² Standard Fire Retardant Cabling	m	2,530
<u>Containment Fire Detection System (Including Chasing were Required)</u>			
70	25mm Bosal Conduit	m	2,510

Carried to Collection

Section No. 3
Bill No. 1
ELECTRICAL WORK

R

233

Ry

R.M.

Handwritten signature

**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW BHOSIKI POLICE STATION**

71	25mm Steel sprague 2m long, complete with straight connectors	m	100
72	60mm Dome lids with screws	No	861
73	25mm Couplings	No	622
74	25mm Galvanised Round Boxes Back Entry	No	69
75	25mm Galvanised Round Boxes 1 way	No	35
76	25mm Galvanised Round Boxes 2 way	No	65
77	25mm Galvanised Round Boxes 3 way	No	26
78	60mm Galvanised Round Boxes Lids with screws	No	177
79	25mm Steel Saddles	No	1,876
80	Galvanised Steel Draw wire for Conduit	m	2,500
<u>Fire Detection Equipment & Sundries (Including Chasing were Required)</u>			
81	Door hold open magnets complete, with wall or floor universal bracket and armature, manuals, release button in protective wall box	No	1
82	24V PSU for Door Hold Open Devices	No	1
83	12V DC 7 Amp batteries	No	1
84	Logbook, logbook holder & laminated instructions	No	1
85	I/O Interface Unit for Door Hold Open to release on Fire Alarm complete with din rail enclosure	No	1
86	Input Unit for PSU Monitoring	No	1
87	Labelling of audible alarm devices, strobes & overdoor indicator devices: Red font on White Background		
88	Fire Panel Signage - Photo Luminance "Fire Panel"	No	1
89	Manual Call Point - Photo Luminance Signage - SANS1186-5 Compliance 190 x 190	No	13

SUM

Carried to Collection

R

Section No. 3
Bill No. 1
ELECTRICAL WORK

234 ry

R. M.

han

**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW BHOSIKI POLICE STATION**

90	Testing & Commissioning of Complete Fire Detection System, including issuing of Certificates of Compliances			SUM
91	Training for Staff	Hrs	2.00	
92	12 Month Maintenance Contract as per Clause 14			SUM
<u>Electrical Outlets, Containment, Wireways etc (Including Chasing were Required)</u>				
93	New 20A double pole isolator mounted above fire panels	No	1	
94	New 10A single pole circuit breaker installed in local distribution panel for fire panel	No	1	
95	2.5mm ² house wire (Live & Neutral)	m	150	
96	2.5mm ² insulated green earth conductor	m	150	
97	Provide certificate of compliance for additional circuit breaker to local distribution board			SUM
98	Labelling of fire panel circuit breaker	No	1	
99	20mm Conduit Bosal including all saddles and boxes	m	150	
100	60mm Galvanised round boxes with lid	No	2	
101	100 x 100 x 50mm deep galvanised box with lid	No	1	
102	Draw wire for Conduit	m	160	
103	Fire Stopping of service penetrations between fire compartment walls - To cut and fit high density mineral rockwool into penetrations and to coat both surfaces with Flamsayf 325 or equal and approved	m ²	4	

LIGHTING

Carried to Collection

Section No. 3
Bill No. 1
ELECTRICAL WORK

R

han

235

RY

R.M.

SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW BHOSIKI POLICE STATION

Supply, off-load, install and connect the following approved luminaires and equipment complete with lamps, connections, jointing/butting of luminaires where required, etc. The fittings shall be installed complete with lamps, control gear, 5A plug tops and connection cables, etc. (Refer to Electrical Schedule of Luminaires)

104	16W x 4 LED Tubes Recessed Mounted 600 x 600mm Light Panel on 24hr Circuit	No	87
105	16W x 4 LED Tubes Recessed Mounted 600 x 600mm Light Panel on 24hr Circuit with Battery Pack to Last at least 2hrs	No	34
106	26 Watts T5 Vandal Proof LED Surface Mounted on 24hr Circuit (742 x 138 x 85mm)	No	7
107	26 Watts T5 Vandal Proof LED Surface Mounted on 24hr Circuit with Battery Pack to Last at least 2hrs (742 x 138 x 85mm)	No	2
108	19 Watts Vandal Proof LED Surface Mounted on 24hr Circuit with Battery Pack to Last at least 2hrs (152 x 355 x 126mm)	No	58
109	15 Watts LED Downlighter Recessed Mounted, Non-Dimmable on 24hr Circuit	No	100
110	15 Watts LED Downlighter Recessed Mounted, Non-Dimmable on 24hr Circuit with Battery Pack to Last at least 2hrs	No	17
111	15 Watts LED Downlighter Surface Mounted, Non-Dimmable on 24hr Circuit	No	47
112	15 Watts LED Downlighter Surface Mounted, Non-Dimmable on 24hr Circuit with Battery Pack to Last at least 2hrs	No	13

Supply and Install Light Switches Recessed Mounted (Including Chasing were Required)

16 Amp light switch (1-way), flush mounted in wall at 1100 mm AFFL, complete with 100 x 50 x 50 mm conduit box, yoke assembly & cover plate, including all PVC wiring up to distribution panel or other outlet, ECC, PVC conduit, & other consumables.

113	16 Amp, 1 Lever, 1 Way	No	79
-----	------------------------	----	----

Carried to Collection

Section No. 3
Bill No. 1
ELECTRICAL WORK

R

kon

236

mt R.m.

SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW BHOSIKI POLICE STATION

114	16 Amp, 3 Lever, 1 Way	No	1
115	16 Amp, 1 Lever, 2 Way	No	11
116	25Amp, Industrial, 1 Way	No	2
<u>5 Amp Unswitched Plug and Accessories</u>			
117	5 Amp Unswitched plug unit for installation in 60mm Diameter Conduit Box	No	365
118	60 mm diameter Conduit Boxes (irrespective of No. of entries)	No	365
<u>Wiring (Cu Conductors) (All Colours)</u>			
<u>600/1000 V grade PVC insulated stranded copper conductors drawn in conduit, trunking or wiremesh cable trays</u>			
119	1.5 mm ² Cu PVC Insulated	m	7,211
<u>Drawwire</u>			
120	Drawn into conduits 1.5mm ²	m	1,442
<u>Occupancy Sensors (Lighting/Airconditioning)</u>			
121	Lighting and Airconditioning Occupancy Sensor - EBDSPiR-PRM-2CH PRM switching, compact, IP40, ceiling, flush mounted, PIR, presence/absence detector, 2 channel	No	46
<u>LIGHTNING PROTECTION</u>			
<u>Lightning Protection</u>			
<u>Design, Supply and Install Lighting Protection, Installation must be done by Lightning Protection Specialist that is ELPA-SA registered and be an Accredited ELPA-SA Class 1, Class 2 or Class 3 (Under supervision of Class 1/2) contractor</u>			
122	Office Block (Including testing by Specialist including Certificate of Competence (CoC) upon completion. All buildings require Level 2 Lightning Protection)	No	1

Carried to Collection

Section No. 3
Bill No. 1
ELECTRICAL WORK

R

237

R.Y. R.N.

**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW BHOSIKI POLICE STATION**

123	Cell Block (Including testing by Specialist including Certificate of Competence (CoC) upon completion. All buildings require Level 2 Lightning Protection)	No	1
124	Washbay (Including testing by Specialist including Certificate of Competence (CoC) upon completion. All buildings require Level 2 Lightning Protection)	No	1
125	Covered Parking (Including testing by Specialist including Certificate of Competence (CoC) upon completion. All buildings require Level 2 Lightning Protection)	No	1
126	Generator building (Including testing by Specialist including Certificate of Competence (CoC) upon completion. All buildings require Level 2 Lightning Protection)	No	1
127	Sectional Water Tank (Including testing by Specialist including Certificate of Competence (CoC) upon completion. All buildings require Level 2 Lightning Protection)	No	1
128	Training Building (Including testing by Specialist including Certificate of Competence (CoC) upon completion. All buildings require Level 2 Lightning Protection)	No	1
129	Additional Points (Lightning Protection)	No	5

SMALL POWER

Supply and install Socket outlets/Plug points (Including Chasing were Required)

Switched socket outlet, flush mounted in wall at 300/1200 mm AFFL, complete with 100 x 100 x 50 mm conduit box, yoke assembly & cover plate, including all PVC wiring up to distribution panel or other outlet, ECC, PVC conduit, & other consumables

Socket outlet to be new SANS 164-2 Euro (1 x 3 Pin, 1 x 2 Pin, 2 x USB Port)

130	Switches Socket Outlet	No	61
131	3-Phase 5-Pin Outlet (IP44 32A 3P+N+E) Surface Mounted	No	2

Carried to Collection

Section No. 3
Bill No. 1
ELECTRICAL WORK

R

Handwritten signature

238

R.Y. R.M.

SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW BHOSIKI POLICE STATION

<u>Powerskirting (2 Tier, 2 Compartment) complete with all bends (90°) etc. to be mounted 100mm AFFL or if below work station, mounted 600mm AFFL (Including Chasing were Required)</u>		
132	Powerskirting Mounted (2 Tier, 3 Compartment)	m 230
133	Powerskirting Modules (1 x Dedicated Point, 1 x Power Point, 1 x Data Point)	No 48

Isolators

Supply, install and connect isolator switches complete with flush mounted conduit box, conduit terminations, coverplates, isolator housing/enclosure, label, final connection to equipment, complete as required & specified. Includes termination and final connection of supply cable including suitably sized cable glands onto equipment as specified. (Including Chasing were Required)

134	30A DP Isolator	No 15
135	60A DP Isolator	No 35
136	60A TP Isolator	m 3

Wiring (Cu Conductors) (All Colours)

600/1000 V grade PVC insulated stranded copper conductors drawn in conduit, trunking or wiremesh cable trays

137	2.5 mm ² Cu PVC Insulated	m 5,835
138	6 mm ² Cu PVC Insulated	m 2,261

Drawwire

139	Drawn into conduits 2.5mm ² and 6mm ²	m 1,619
-----	---	---------

TELECOMMUNICATION & DATA

TELKOM /Comms Distribution Panel

Carried to Collection

Section No. 3
Bill No. 1
ELECTRICAL WORK

R

239

Lm
R.M.

**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW BHOSIKI POLICE STATION**

Supply, deliver and installation of the following Telkom/Data distribution boards with wooden backboards and lockable doors, complete as required including all metalwork, wiring trays, conduit and sleeve terminations. (Including Chasing were Required)

140	Telkom / Data Distribution Board (Recessed) 600 x 600 x 150 with softboard inner and lockable door (To Facilitate for Future Development)	No	3
141	CAB-6U Fixed Wall, Rear Mounted Server Unit Cabinet. Mild steel, Powder Coated with Lockable Glass Front Door. Installation to Include Mounting DB Tray, Conduiting, Glanding, Cable Entries and all Fixture Items.	No	2
142	CAB-12U Fixed Wall, Rear Mounted Server Unit Cabinet. Mild steel, Powder Coated with Lockable Glass Front Door. Installation to Include Mounting DB Tray, Conduiting, Glanding, Cable Entries and all Fixture Items.	No	1

Telecommunication

Supply, deliver and installation of the following Telkom/Data distribution boards with wooden backboards and lockable doors, complete as required including all metalwork, wiring trays, conduit and sleeve terminations, labels internal switched socket outlets, etc as specified. (Including Chasing were Required)

Double data (RJ45) and Telkom (RJ11) outlet, mounted in power skirting, complete with yoke assembly & cover plate, including steel draw wire, PVC conduit. & other consumables

143	Data Outlet units (RJ45)	No	51
144	Recessed in (and including) 100 x 100 x 50mm wall box	No	3
145	CAT6 100m Cable (Data and VOI Connection)	No	5
146	RJ45 Connectors	No	54
147	Drawwire for Data Cable	No	100
148	20mm PVC Conduiting	m	360

Carried to Collection

Section No. 3
Bill No. 1
ELECTRICAL WORK

R

240

RY

R.M.