

BOQ- REFURBISHMENT FOR NONKQUBELA STATION					
ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1.1	<p><b>BILL NO.1</b></p> <p><b>PRELIMINARIES AND GENERAL COSTS</b></p> <p>The Contractor shall allow for all Preliminary Items as set out below in the tender price,</p> <p><b>BUILDING AGREEMENT AND PRELIMINARIES</b></p> <p>The JBCC Principal Building Agreement (Minor works agreement Edition 6.2 - May 2018) prepared by the Joint Building Contracts Committee shall be the applicable building agreement, amended as hereinafter described</p> <p><u>The JBCC Principal Building Agreement contract data forms an integral part of this agreement</u></p> <p>The JBCC General Preliminaries (May 2018) published by the Joint Building Contracts Committee for use with the JBCC Minor Works Agreement (Edition 6.2 – May 2018) shall be deemed to be incorporated in this project specific preliminaries, amended as hereinafter described</p> <p>The contractor is deemed to have referred to the above-mentioned documents for the full intent and meaning of each clause</p> <p><b>PREAMBLES FOR TRADES</b></p> <p>The General Preambles for Trades 2017 published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in this Project Specific Preliminaries</p> <p>Supplementary preambles and/or specifications are incorporated in this Project Specific Preliminaries to satisfy the requirements of this project. Such supplementary preambles and/or specifications shall take precedence over the provisions of the General Preambles</p> <p>The contractors prices for all items throughout these bills of quantities must take account of and include for all of the obligations ,requirements and specifications given in the Model preambles and any supplimentary preambles</p> <p><b>BILL OF QUANTITIES</b></p> <p>Please note that the Bill of Quanties is measured in accordance with the standard system of measuring building works</p> <p><b>SECTION A : MINOR WORKS AGREEMENT</b></p> <p>All standard clauses of the minor works agreement are applicable with the exception of the following</p> <p>Clause 1.0 - Definitions and interpretation</p> <p>Contract sum</p> <p>The contract sum to include, unless otherwise stated, for all materials, fabrication, conveyance and delivery, unloading, storing, unpacking, hoisting, labour, setting, fitting and fixing in position, cutting and waste (except where to be measured in accordance with the standard system of measurement), patterns, models and templates, plant, temporary works, returning of packaging, duties, taxes (other than Value Added Tax), imposts, establishment charges, overheads, profit and all other obligations arising out of this agreement. Value Added Tax (VAT) is to be separately stated in the contract data</p> <p>The contract sum shall include for all construction equipment, temporary works, services and other items and shall include for the supply, maintenance, operating cost and subsequent removal and making good as necessary</p> <p>Value Added Tax Provision is made in the contract data for inclusion in the contract sum of Value Added Tax (VAT)</p> <p><b>GENERAL NOTES</b></p> <p>Contractor is required to visit the site and inspect items before bidding for the tender.</p> <p>View site : Before submitting, the Contractor shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials contained in the buildings or portions of the buildings.</p>	Item	1.00	R	R

	<p><b>WORK AND MATERIALS</b></p> <p>Old material to become property of the contractor Old materials from alterations, except where described to be re-used or handed over, become the property of the contractor who must allow credit for same in the Final Summary</p> <p>All rubble and debris from the pulling down are to be carted away without delay and the site is to be left clean and tidy.</p> <p>Contacto to supply updated As-Built information and drawings of all services to ensure Prasa have updated records etc. at hand over and before final completion is granted.</p> <p>The contractor will be responsible for applying and getting wayleaves etc from all the local municipalities etc as required.</p> <p><b><u>OCCUPATIONAL HEALTH AND SAFETY</u></b></p> <p>Presentation, agreement and implementation of the health and safety plan including notifications to local health and safety authorities, open health and safety file inclusive of Covid 19 requirements as per the Department of labour</p> <p>Designated health and safety personnel, committee, etc as required and Health and Safety file</p> <p>The contractor will be responsible for all their security requirements on Site at all times for the full duration of the contract.</p>					
1.2						R
	<b><u>CARRIED TO SUMMARY</u></b>					R
	<b><u>BILL NO. 2</u></b>					
	<b><u>ALTERATIONS, DEMOLITIONS, ETC</u></b>					
	<b>REMOVAL OF EXISTING WORK</b>					
2.1	Remove the existing Palisade fence and store for reuse	M	500.00	R		R
2.2	Removal of broken tiles at the walkway concourse	m2	100.00	R		R
2.3	Carefully take out and remove two layers of Malthoid / bitumen waterproofing roofing membrane including turn-up from concrete roof to remain including preparing surface to receive new waterproofing (New waterproofing elsewhere measured)	m2	80.00	R		R
	<b><u>CARRIED TO SUMMARY</u></b>					R
	<b><u>BILL NO. 3</u></b>					
	<b><u>EXTERNAL AREA</u></b>					
	<b><u>FLOOR TILING</u></b>					
	<b><u>Union Tiles' or other equally approved 600 x 600mm R10 slip rated full bodied porcelain floor (Code: SEZZ6879N) tiles with 3mm grouting fixed with "Tal Goldstar 6" and Tal Bond" tile adhesive to screed / wood floated / power floated floors (screeds, wood floated or power floated elsewhere measured) and flush pointed with "Tal Floor" anti-bacterial grout in accordance with the manufacturer's instruction.</u></b>					
3.1	On floors (Light grey)	m2	200.00	R		R
	<b><u>Prepare and sand down existing surfaces and apply "Plascon" or other equally approved Primer (PP700) and two coats "Velvagio" water based paint for interior use</u></b>					
3.2	On ceiling	m2	500.00	R		R
3.2	Supply & Erect 16mm Multiwall Polycarbonate sheet, Opening height 2 000mm.	m	80.00	R		R
3.3	30mm x 30mm x 5mm Aluminium frame	m	164.00			
	<b><u>CARRIED TO SUMMARY</u></b>					R
	<b><u>BILL NO. 4</u></b>					
	<b><u>BUDGETARY ALLOWANCES</u></b>					
4.1	Allow an amount of R 200 000.00 for new purpose made for plumbing , the amount to be utilized at the discretion of the PRASA Project manager.	SUM	1.00	R	200 000.00	R 200 000.00
	<b><u>CARRIED TO SUMMARY</u></b>					R 200 000.00

	<b>BILL NO.5</b>				
	<b>PLATFORM</b>				
5.1	Install tactile in line with PRASA specification, 600mm wide.	m	300.00	R	R
5.2	Paint yellow line (prohibition line)	m	300.00	R	R
	<b>STRUCTURAL STEEL SHELTER</b>				
	<b>Works for which budgetary allowances are provided will be measured and valued in accordance with clause 32 of the Principal Building Agreement and deducted in whole or in part if not required</b>				
5.3	Excavate 450mm wide foundation strip trench	M3	60.00	R	R
5.4	Cast 20 Mpa concrete blinding 50mm thick.	M3	10.00	R	R
5.5	Reinforce foundation strip with Y12 Bars, spaced at 130mm c/c with 30mm concrete cover.	ton	0.60	R	R
5.6	Cast 300mm x 400mm foundation strip, 30 Mpa	M3	50.00	R	R
5.7	Build a platform shelter walls, Brickforce every 2nd course, double brick wall, 7Mpa brick	M2	450.00	R	R
5.8	Plaster the walls and prepare for receiving paint	M2	800.00	R	R
	<b>PROFILED METAL SHEETING AND ACCESSORIES</b>				
	<b>0.50mm "Saflok 700 Colourplus" aluminium zinc (AZ 150) ribbed double interlocking roof sheeting in single lengths and accessories with "Colourplus" colour coated finish on one side, fixed to Timber purlins in strict accordance with the manufacturers recommendations</b>				
5.9	Roof covering with pitch not exceeding 25 degrees	m2	600.00	R	R
5.10	Barge flashing 660mm girth	m	300.00	R	R
	<b>Prepare and sand down existing surfaces and apply "Plascon" or other equally approved Primer (PP700) and two coats "Velvagio" water based paint for interior use</b>				
5.11	On steel	m2	200.00	R	R
5.12	On walls	m2	760.00	R	R
5.13	Install paving blocks	m2	1800.00	R	R
	<b>CARRIED TO SUMMARY</b>				R
	<b>BILL NO.6</b>				
	<b>FENCING</b>				
6.1	Erect the Palisade fence removed in <b>BILL 2 ITEM 2.1</b> , 100m from the end of the Platform, <b>LABOUR ONLY</b>	M	600.00	R	R
	High density security galvanised mesh fence with min 3.15mm horizontal wire diameter and 4mm vertical wire diameter. Panels: Apertures to be 76x12mm inner and min 3050mm wide panels to be reinforced with 4x 50mm V formation horizontal recessed bands. Height above the ground to be min 3000mm. All fixtures to be on the inside of the fence line. Panel to be fixed over 48 line wires with Double and single bolt clamps using Anti Vandal bolts. Posts to be embedded into concrete and must have moisture proof caps for all posts. Pending on the security risk area; a) Razor mesh panels 600mm high b) Shark tooth spike rails and or c) 100mm Castle type spike rails can be installed on top of mesh. Posts to be 85mm width which includes Locking recess mechanism, posts to be sealed with UV stabilized polymer cap and post to be Hot Dipped galvanized. A 10 year underwritten Anti - Corrosion Gurantee life span to be provided. Product to comply with SANS 10244-2:2003 ISO 1461 hot dip galvanising. Anti - Burrow options: from 300 - 600mm Mesh extension shall be secured to to the panels underside for additional security and or a 200mm concrete sill shall be secured to the panel's lower edge angle.				
6.2	Manufacture, Supply and Install Swing gate 80 x 60mm mild steel square tubing metered and welded together. Panel bolted to frame, all steel to be coated to manufactures specification and colour to be charcoal with a Locking Mechanism that can allow padlock locking and external lock box to secure locking system with adjustable closing and brass lock with 4 keys.	M	650.00	R	R
6.3	Gate Size: 1.0m x 2.5m	No	1.00	R	R
6.4	Double Gate Size: 4.0m x 2.5	No	1.00	R	R
	<b>CARRIED TO SUMMARY</b>				R

<b>BILL NO. 7</b>					
<b>ELECTRICAL WORK</b>					
7.1	4,5mm <sup>2</sup> SWA cable	m	100.00	R	R
7.2	2,5mm <sup>2</sup> twin and earth	m	100.00	R	R
7.3	2,5mm <sup>2</sup> general purpose housewire. Red, black, green/yellow	m	300.00	R	R
7.4	20mm PVC conduit	m	40.00	R	R
7.5	Contactora	No	4.00	R	R
7.6	Photocell	No	4.00	R	R
<b>Walkway Foyer Concourse</b>					
7.7	Supply and install 1500mm double closed channel LED tube fittings	No	10.00	R	R
7.8	Install galvanized cages to protect the light, cages to be design in such a way enables access for maintenance purposes.	No	20.00	R	R
7.9	Supply and install flood lights 6500Lm minimum 5000K minimum cool white	No	2.00	R	R
<b>Staircases and footbridge</b>					
7.10	Supply and install flood lights 6500Lm minimum 5000K minimum cool white	No	8.00	R	R
<b>Platform lighting</b>					
<b>Supply and install Platform Lighting and Sarea lighting on walkways &amp; Parking area.</b>					
7.11	6.3m Galanised pole - above FGL, planted 1100mm deep complete with compaction and alignment	No	10.00	R	R
7.12	9.2m Galanised pole - above FGL, planted 1700mm deep complete with compaction and alignment	No	4.00	R	R
7.13	Supply and install LED street lights 6500Lm minimum 4000K minimum cool white. Include bracket or spigot to attach light to existing platform light poles.	No	36.00	R	R
7.14	6mm <sup>2</sup> x 4C PVC SWA Copper cable buried at 600mm depth.	M	200.00	R	R
7.15	4mm <sup>2</sup> x 3C PVC SWA Copper cable buried at 600mm depth.	M	200.00	R	R
7.16	16mm <sup>2</sup> x 4C PVC SWA Copper cable buried at 600mm depth.	M	350.00	R	R
7.17	2.5mm <sup>2</sup> 2C Surfex between termination box and streetlight / Floodlight terminal box	M	120.00	R	R
7.18	4.0mm <sup>2</sup> 2C Surfex between termination box and streetlight / Floodlight terminal box	M	300.00	R	R
7.19	10mm <sup>2</sup> Insulated Copper Earth strapped to buried Mains Cable	M	300.00	R	R
<b>Platform Shelther Lights</b>					
7.2	Supply and install 1500mm double closed channel LED tube fittings	No	48.00	R	R
7.21	Install galvanized cages to protect the light, cages to be design in such a way enables access for maintenance purposes.	No	48.00	R	R
7.22	Supply and install bulkhead lights 6500Lm minimum 5000K minimum cool white	No	16.00	R	R
7.23	Install galvanized cages to protect the light, cages to be design in such a way enables access for maintenance purposes.	No	16.00	R	R
<b>Solar Power for NONKUBELA Station</b>					
7.24	Bi-directional Inverter  Supply and fit Minimum: 30KW Sunsynk three phase Hybrid inverter with nominal DC 51.2V or similar approved by the Prasa's Electrical Manager. Output voltage 230VAC 50Hz at 12000 Watts. Include all relevant cables, lugs and ferrules as per manufacturer's specifications. HYBRID OPERATION with batteries. The system must be a primary source to the load and only use battery system during peak hrs and when there is power failures. Only when the battery levels are low should inverter use power from the grid to charge battery only on off-peak period and power load. Also function as an off-grid inverter to provide power during load shedding or power failures.	Item	1.00	R	R
7.25	Battery Bank  Supply and fit Sunsynk 5.12KW 51.2V 208AH deep cycle Lithium Ion battery pack or similar approved by Prasa's Electrical Manager. Include all relevant cables, lugs and ferrules as per manufacturer's specifications. Include a busbar box to allow for future storage expansion.	Item	8.00	R	R

7.26	Supply and fit DC Isolator switch for battery bank and 2 x 160A fuses as per manufacturer's specifications. Include all the necessary trunking (NOTE: All AC and DC cables to run in separate trunking)	Sum	2.00	R		R	
7.27	PV Modules Supply and fit PV Modules. Minimum: Peak power 545 Watts each. PV modules to be fitted at top of ticket office roof such that maximum solar radiation is absorbed by solar panel. Include all brackets, cables, lugs and ferrules as per manufacturer's specifications	Item	60.00	R		R	
7.28	Supply and fit PV Combinder box with protection for PV modules as per manufacturer's specifications. Include all the necessary trunking (NOTE: All AC and DC cables to run in separate trunking)	Item	2.00	R		R	
7.29	Supply, manufacture and install a vandal-proof frame to secure PV modules at the top roof with Galvanised steel frame sufficiently braced on all sides, to be made in sections to mount the 24 PV modules at least in two rows. 32mm Square with a minimum thickness of 2mm tubing mount structure to be manufacture for a flat roof structure.	Item	1.00	R		R	
7.30	Supply and fit AC Combinder box with protection for both grid and Inverter as per manufacturer's specifications. Include all the necessary trunking (NOTE: All AC and DC cables to run in separate trunking)	Item	1.00	R		R	
7.31	Plug Sockets Supply and fit standard surface mounted double plug sockets.	Item	4.00	R		R	
7.32	Light Switches Supply and fit standard surface mounted light switches.	Item	4.00	R		R	
7.33	Test, Commission, After service and Warranty Commissioning of Solar PV system and provide 10 years warranty on Inverter and batteries. 12 months gurrantee on parts and workmanship. Provide 12 months maintenance, checks, cleaning of panels and general teething problems and resetting of inverter for nuisance trips	Item	1.00	R		R	
7.34	Allow for supply and installation of EMI smart meter as per City of Cape Town SSEG Bi-Laws and installation of CT coils for all three phases to curb back feed	Item	1.00	R		R	
7.35	Allow for SSEG registration with the City of Cape Town	Item	1.00	R		R	
<b>CARRIED TO SUMMARY</b>						<b>R</b>	
<b>BILL NO.8</b>							
<b>SIGNAGE</b>							
8.1	Allow an amount of R 350 000.00 for Supply, mount and fit Signage which include Station name board, Prohibition signage, End of Platform signage and directional signage. The amount to be utilized at the discretion of the PRASA Project manager.	SUM	1.00	R	350 000.00	R	350 000.00
<b>CARRIED TO SUMMARY</b>						<b>R</b>	<b>350 000.00</b>
<b>BILL NO.9</b>							
<b>STATION CONCOURSE / ADMINISTRATIVE BUILDING</b>							
9.1	Apply a window tint to all ticket window sales	m2	6.00	R		R	
9.2	Erect 900mm x 900mm wooden shelve at Supervisors office	No	1.00	R		R	
9.3	Commision all the aircons	No	5.00	R		R	
9.4	Allow an amount of R 100 000.00 for Commissioning the Fire detection system. The amount to be utilized at the discretion of the PRASA Project manager.	SUM	1.00	R	100 000.00	R	100 000.00
9.5	Install 7 litre Hydroboil	No	2.00	R		R	
<b>WATERPROOFING</b>							
<b>PREAMBLES</b>							
The descriptions given in the various items below are not necessarily full and complete and reference must be made to the "Standard Preambles To All Trades", Supplementary Preambles and "Supplementary Specifications" to this contract for the full requirements of each scheduled item							
One Layer "Derbigum" or other equally approved SP4 waterproofing membrane sealed to solvent based minimum 100mm side laps and minimum 150mm end laps bitumen primed surface by means of torch fusion with							
9.6	On Slab	m2	80.00	R		R	
9.7	On turn-up, turn-down not exceeding 300mm girth	m2	30.00	R		R	
9.8	Counter flashing	m	55.00	R		R	

9.9	Extra over for sealing around 50mm cables	No	2.00	R	R	
9.10	Extra over for sealing around 110mm diameter pipes	No	6.00	R	R	
9.11	Extra over for sealing around 110mm diameter full-bores	No	10.00	R	R	
	<b>One Layer "Derbigum" or other equally approved Unitorch 3E waterproofing membrane sealed to solvent based bitumen primed surface by means of torch fusion with minimum 100mm side laps and minimum 150mm end laps</b>					
9.12	On turn-up, turn-down not exceeding 300mm girth	m2	35.00	R	R	
	<b>One Layer "Derbigum" or other equally approved Unitorch 4E waterproofing membrane sealed to solvent based bitumen primed surface by means of torch fusion with minimum 100mm side laps and minimum 150mm end laps</b>					
9.13	On turn-up, turn-down not exceeding 300mm girth	m2	35.00	R	R	
	<b>PROTECTIVE ROOFING PAINT</b>					
	<b>Two coats bituminous aluminium paint</b>					
9.14	On waterproofing to roofs	m2	80.00	R	R	
	<b>CARRIED TO SUMMARY</b>					<b>R</b>
	<b>BILL NO.10</b>					
	<b>ELECTRONICS</b>					
10.1	Allow an amount of R 550 000.00 for Supply, mount and Commission Electronics (Biometric, PA System and CCTV system).The amount to be utilized at the discretion of the PRASA Project manager.	SUM	1.00	R	550 000.00	R 550 000.00
	<b>CARRIED TO SUMMARY</b>					<b>R 550 000.00</b>
	<b>BILL NO. 11</b>					
	<b>STORMWATER DRAINAGE</b>					
11.1	Excavate 200 x 500 trench and prepare to receive new works	m3	60.00	R	R	
11.2	Lay 110mm diameter HDPE perforated pipe	m	600.00	R	R	
11.3	Make inspection/rodding eye to allow maintenance and unclogging the pipe	No	8.00	R	R	
11.4	Cover the pipe with geotextile fabric to prevent foreign object to enter the pipe	m2	150.00	R	R	
11.5	Backfill and compact	m3	60.00	R	R	
11.6	Cast a concrete 2000 x 2000 x 200mm slab, 25MPa, Y16 bar reinforcement 200mm c/c both directions	m3	3.20	R	R	
11.7	Manhole covers	No	2.00	R	R	
11.8	Build Soakaway tank of 1500 x 1500 x 2000 mm, the walls to be 2 courses above NGL	m2	12.00	R	R	
11.9	Waterproof the walls with Sika Cemflex to prevent ground water seeping in.	m	12.00	R	R	
11.1	Lay 2.5mm x 4 CORE ARMoured CABLE to supple power to the pump	m	300.00	R	R	
11.11	Supply & install SUBMERSIBLE WATER PUMP BVP 750 M-A CODE : 60 122691VOLTAGE 50 HZ 1 X 230 V Installation to alternate the pumps per tank	No	4.00	R	R	
	<b>CARRIED TO SUMMARY</b>					<b>R</b>
	<b>BILL NO.12</b>					
	<b>FURNITURE</b>					
10.1	Allow an amount of R 250 000.00 for Supply, Deliver and Install of Furniture as required. The list and amount to be utilized at the discretion of the PRASA Project manager.	SUM	1.00	R	250 000.00	R 250 000.00
	<b>CARRIED TO SUMMARY</b>					<b>R 250 000.00</b>

