ANNEXURE 1

CARLTON CENTRE INVENTORY

TDR FOR PROVISION OF INTEGRATED FACILITIES MANAGEMENT AT TRANSNET CARLTON CENTRE PRECINCT FOR A PERIOD OF 3 YEARS

Item	Description	Approximate Area
Office Tower		
1	Occupied Office floors, Low rise = 12	19812 M^2
	Occupied Office floors, Midrise = 10	17030 M^2
	Occupied Office floors, High rise = 5	9050 M^2
	Total currently used space	**45892 M^2**
Note: 1	All services to be done in all above-mentioned floors	
2	Un-occupied future floors on mid & low rise = 10 (5 low, 5 middle) and an additional 15 High rise floors for long term plan.	**42217 M^2**
Note: 2	All services to be done in all above-mentioned floors, excluding office cleaning which will be added as and when utilisation is required.	
3	Basements x4; which include parking, offices, equipment/Plant rooms and storerooms	**38143.7 M^2**
Note: 3	• Gross lettable area for Low Rise (Ground/lobby to 19th floor) area 1651m^2 per floor • Gross lettable area for Middle Rise (20th to 34th floor) area 1703m^2 per floor • Gross lettable area for High Rise (35th to 54th floor) area 1810m^2 per floor	
Retail / Shopping centre		
4	Shopping mall including Ground, -1, -2, and immediate surroundings	57000 M^2
5	Service level: Parking, storerooms, plant rooms	7500 M^2
6	Sky Rink: Floors Ground and 7th	4900 M^2
7	Sky Rink Parking x6 floors: 1 to 6	25000 M^2

ANNEXURE 2

CARLTON CENTRE CLEANING SERVICES SPECIFICATION

TDR FOR PROVISION OF INTEGRATED FACILITIES MANAGEMENT AT TRANSNET CARLTON CENTRE PRECINCT FOR A PERIOD OF 3 YEARS

1. Areas
(Cleaners)

1.1 Office Tower

1.1.1 Total number of floors occupied: 25

a. Office space - 19 floors

b. Plant rooms - 6 floors

c. Top of Africa (Viewing floor + Condenser plant room) - 1 Floor

d. Possible Additional 10x floors for possible future use on low and middle rise.

1.1.2 Basements x4; including parking, offices, equipment/Plant rooms and storerooms

a. Basement parking floors x4

b. Plantrooms

c. Basement Offices at A and D levels

1.1.3 Retail / Shopping centre

a. Shopping Mall: Ground, Level -1, Level -2, and immediate surroundings

b. Service level: Parking, storerooms, plant rooms

c. Sky Rink: 2 x Floors: Ground and 7th

d. Sky Rink Parking x 6 floors: 1 to 6

e. Any ad-hoc request for specialised cleaning may be requested as and when required and existing cleaners may be utilised on an as when required basis but not interfering with their core duties.

1.2 NATURE OF SERVICE SHALL INCLUDE BUT NOT LIMITED TO:

1.2.1 Clean and service of Office Tower, Retail, Skyrink offices, parking levels, pavement, storerooms etc. as per schedule unless required otherwise.

1.2.2 Clean and sanitise toilets/bathrooms as per schedule unless required otherwise.

1.2.3 Maintain all common areas, cleaned to the required standards.

1.2.4 Ensure safe handling of guest belongings.

1.2.5 Ensure that health and safety standards are always adhered to.

1.2.6 Maintain a professional level of Client service at all times.

1.2.7 Adhere to special requests on an as & when required basis, e.g., moving of furniture etc.

1.2.8 Contractor must provide his own cleaning equipment.

1.2.9 Contractor must provide cleaning and sanitising chemicals and materials as per schedule.

1.3 PERSONNEL REQUIREMENTS

1.3.3 Normal working hours are as follows but maybe altered as required in line with operational demands:

a. Monday to Friday,
- Shift A 06:00 to 15:00
- Shift B 09:00 to 18:00
- Night shift 18:00 to 06:00

b. Weekends and Public Holidays,
- Shift A 06:00 to 15:00
- Shift B 09:00 to 18:00
- Night shift 18:00 to 06:00

1.3.4 Additional working hours as and when required

1.3.5 Personnel shall at all times be neatly dressed and in a uniquely identifiable uniform.

1.3.6 Contractor to provide Personnel with PPE to be worn in required areas

1.3.7 Must have good communication and people skills for regular contact with clients.

1.3.8 Service provider to provide relivers as and when required at own cost, such relivers shall be on site within 1 hour of scheduled shift times.

1.3.8 The personnel and areas indicated may be rostered differently in line with operational requirements as required by Transnet Property.

1.3.9 The envisaged average staff compliment for accommodation areas is as follows and may be reduced or increased based on Transnet operational needs as may arise from time to time:

FACILITY	**STAFF**	**GENDER**
Office Tower		
Office space	42	As per above
Plant rooms	2	As per above
Top Of Africa	3	As per above
Basement parking floors	2	As per above
Basement offices	2	As per above
Total:	**51**	

Retail/ Shopping Centre		
Shopping Mall	50	As per above
Service level and plant rooms	5	As per above
Sky Rink Floors	2	As per above
Sky Rink Parking	2	As per above
Total:	**59**	

Total Average Staff Compliment	**110**

1.3.10 The above quantity includes additional cleaners for possible future operational expansion, these additional cleaners will be quoted for on the bill of quantities, but Transnet Property will only be billed as and when they are required and utilised.

1.4 TASKS FREQUENCIES AS PER NATURE OF SERVICES BUT NOT LIMITED TO:	FREQUENCY	TYPE WET/DRY
Sweeping - vinyl / ceramic floors	Daily	Dry
Mopping - vinyl / ceramic floors	Daily	Wet
Vacuuming - carpeted areas	Weekly	Dry
Steam/deep Cleaning - carpeted areas	Quarterly	Wet
Dusting - furniture	Daily	Dry
Dusting - skirting	Daily	Dry
Dusting - Window sills	Daily	Dry
Dusting - pictures	Daily	Dry
Polishing - furniture	Weekly	Wet
Wiping - telephones	Daily	Wet
Wiping - Window sills	Daily	Wet
Wiping - Pictures	Weekly	Wet
Wiping - Doors	Weekly	Wet
Dusting of Fire Ext Covers	Weekly	Dry
Wiping of Fire Ext Covers	Weekly	Wet
High dusting - cabinets	Weekly	Dry
High dusting - offices	Weekly	Dry
High dusting - Passages	Weekly	Dry
High dusting - Light fittings	Weekly	Dry
Emptying - office bins	Daily	Dry
Cleaning - office bins	Weekly	Wet
Cleaning - kitchen	Daily	Wet & Dry
Cleaning – windows (internal)	Bi-monthly	Wet
Strip & seal - vinyl / ceramic	Monthly	Wet
Buffing - vinyl / ceramic	3 x Weekly	Wet

1.5 Chemicals and Materials

1.5.1 Preferred Products

These products are preferred because of effectivity and past experience. A similar or better product will be accepted unless it proves to be undesirable, in which case an alternative will be specified.

Product: Trade Name	Description
Ammoniated cleaner (Handy Andy)	Will be used for wiping of office desks
Jik	Bleach
Brasso	Brass polish
Target Odourless	Insecticide
Hi-shine	Polymer floor dressing (non-slip)
Pine Gel	General Disinfectant

1.5.2 General Products

Product names are for identification purposes only. A similar or better product will be accepted unless it proves to be undesirable, in which case an alternative will be specified.

Product:	Description / Specification
Refuse Bags	Black, heavy duty
Toilet Paper	Rolls, 2 ply for office tower and basement offices. ***not recycled paper*** single ply for Retail, ***not recycled paper***
Bin Bags	White, to fit litter bins in rooms
Domestos or similar	Perfumed toilet disinfectant
Respect	All-purpose cleaner
Dishwashing liquid	Anti-bacterial concentrated
Furniture Polish	Aerosol, non-oil based
Air Freshener	Aerosol
Carpet Shampoo	Concentrated
Windowlene	Window cleaner
Methylated Spirits	General degreaser
Silki	Liquid anti-bacterial hand soap
Restrip	Non-ammoniated floor stripper
Waxstrip	Liquid polish stripper
Scouring Sponge	Specifically for cleaning baths and basins
Mutton Cloth	General purposes cleaning/wiping

1.5.3 Basic Equipment

Basic equipment that the contractor might need to effectively provide the required service:

EQUIPMENT DESCRIPTION
"Wet Floor" signs
"Men at Work" signs
General purpose waterproof gloves

Heavy duty elbow-length gloves
Toilet Brushes
Feather Duster, long
Feather Duster, short
Brooms, indoor and outdoor
Mops
Mop caddy/squeezer
Floor polisher/scrubber/stripper machine
Housekeeping trolleys
Compact trolleys with caddy
Buckets
Squeegees
Industrial Vacuum cleaners
Carpet washing machine

Lifts

Cleaning of Lifts

Daily cleaning of lifts to take place. All areas to be cleaned with damp soft cloth and window cleaner. After cleaning these areas, it should be shining and clear.
Door handles should be disinfected with a disinfectant solution daily.
Floors to be clean, free of dirt and dust to prevent build up at all times.

Description	Frequency
Mirrors and glass walls	3 x Daily
Floor	3 x Daily
Doors	3 x Daily

Note:

- Estimate number of Working Team leaders/Supervisors is 6 inclusive of night shift to be included in the proposed number **plus** a site manager.
- Any additional cleaners inclusive of 1.3.10 will be required on an as and when required basis and paid for separately using 'Variable' / 'Pass Through' costs.
- Should there be a need to reduce the number of cleaners due to reduction of work scope or reasons beyond Transnet or service provider, a negotiation will take place in line with the rate charged per cleaner or area.

- Price quoted for cleaning will include all labor as per numbers required, cleaning chemicals/detergents, PPE, tools, equipment and consumables like plastics, etc. as part of fixed costs.

ANNEXURE 3

CARLTON CENTRE GARDEN-HORTICULTURE SERVICES SPECIFICATION

TDR FOR PROVISION OF INTEGTARED FACILITIES MANAGEMENT AT TRANSNET CARLTON CENTRE PRECINT FOR A PERIOD OF 3 YEARS

A. SUMMARY

#	Area / Building and Surroundings	Activity	Size	
			Measure	Unit
1	Level 200 (-2), Ground floor and all office floors	Planting of indoor plants on provided beds at Ground and Floor - 200	60	m^2
		Chemical application	100	ea
		Pruning when required	100	ea
		Fertilization	100	ea
		Seasonal pot plants	100	ea

ANNEXURE 4

CARLTON CENTRE WASTE MANAGEMENT SERVICES SPEC

TDR FOR PROVISION OF INTEGTARED FACILITIES MANAGEMENT AT TRANSNET CARLTON CENTER PRECINCT FOR A PERIOD OF 3 YEARS

Scope of Service: Normal Requirement
• Waste should be collected from service level and covers the transportation of static waste compactor bin, cleaning waste compactor or any other work arising out of or incidental of the above or required of the Contractor for the proper completion of the Service in accordance with the true meaning and intent of this Contract on a daily basis. • Provision of waste infrastructure (waste separation bins; 10 x 1100L and 10 x 660L wheelie bins) to support waste separation initiative for re-use and recycling programme. • Specifically provide waste containers for hazardous materials and appropriately transport and dispose at Hazardous Landfill Site. • Store waste as per the requirements of internal policies, SANS Codes and regulatory requirements • Transport waste from the building in line with the applicable regulatory requirements. • Use waste registers to record collected waste per type and compile an updated waste database. • Issue waste disposal certificates for all waste collected and disposed. • Manage the collection and provide reports capturing volumes on individual waste categories. • **Supply is expected to credit rebates for all recyclable waste collected.** Comply with waste management expectations in line with SLA (Annexure 13)

Staff requirements:

- At least 4-day shift and 2-night shift personnel to be available on site for waste separation and sorting at sorting site.
- PPE and tools required for the above employees will be provided by the bidding service provider.

ANNEXURE 5

HYGIENE AND PEST CONTROL SPECIFICATION

PROVISION OF INTEGRATED FACILITIES MANAGEMENT AT TRANSNET CARLTON CENTRE FOR A PERIOD OF 3 YEARS

1 FREQUENCIES

The frequency is specified in the Schedule of Work, e.g., if the frequency is monthly or once per month / as and when.

2 LABOUR

All personnel employed on the premises by the contractor shall be identified with Transnet - security supervisors. This is to maintain access control and security levels.

3 DEEP CLEANING

NB: THIS SERVICE MUST BE CONDUCTED ON A MONTHLY BASIS (TWELVE TIMES A YEAR) IN THE EXTREME SITUATION / EMERGENCY WHERE THE SERVICE MIGHT BE NEEDED; THE PROPER SERVICE REQUEST PROCESS MUST BE ADHERED TO WITH THE APPOINTED CONTRACTOR.

3.1 Deep cleaning must be conducted in the following areas of washroom's bathrooms:

- From top to bottom of the walls
- Ceiling
- Washroom floors
- Behind equipment

3.2 Top / inside / around and underneath the following operating equipment:

- Wash basins
- Showers
- Toilettes
- Walls and floors
- Urinals

4 WASHROOM / BATHROOM HYGIENE

NB: THE INSTALLATION OF ALL UNITS MUST BE DONE WITH THE APPROVAL OF TRANSNET – CARLTON CENTRE MANAGEMENT. THE CONTRACTOR SHOULD BE IN A POSITION TO CONSIDER THE FOLLOWING:

- Outright purchase of the units with service maintenance contract.
- Monthly rental per unit including maintenance contract and ownership to TP at the end of the 3 year contract. (Amortisation)

THIS SERVICE MUST BE CONDUCTED ON A MONTHLY BASIS (TWELVE TIMES A YEAR) IN THE EXTREME / EMERGENCY WHERE THE SERVICE MIGHT BE NEEDED; THE PROPER SERVICE REQUEST PROCESS MUST BE ADHERED TO WITH THE APPOINTED CONTRACTOR

4.1 The service will be provided on the following hand care units:

- Automatic Sanitizers
- Combination Units
- Sanitary Bin
- Air fresheners
- Safe Seat Dispenser
- Hand Dryer
- Toilet Roll Holder

5 SUPPLY OF HAND CARE UNITS

NB: THE INSTALLATION OF THESE UNITS MUST BE DONE WITH THE APPROVAL OF TRANSNET – CARLTON CENTRE MANAGEMENT. THE CONTRACTOR SHOULD BE IN A POSITION TO CONSIDER THE FOLLOWING OPTIONS:

- Outright purchase of the units with service maintenance contract
- Monthly rental per unit including maintenance contract

THIS SERVICE MUST BE CONDUCTED ON A MONTHLY BASIS (TWELVE TIMES A YEAR) IN THE EXTREME / EMERGENCY WHERE THE SERVICE MIGHT BE NEEDED; THE PROPER SERVICE REQUEST PROCESS MUST BE ADHERED TO WITH THE APPOINTED CONTRACTOR

5.1 Washroom hygiene must be conducted in and around the following areas of buildings:

- She bins inside the washrooms

5.2 Washroom hygiene must be conducted at the following area:

- All ladies and gentlemen washrooms

5.3 The service will be provided on the following hand care units:

- Soap Dispensers

6 SCHEDULE AND EQUIPMENT REQUIREMENTS

6.1 Hygiene Services/Equipment

Area	Item	Quantity	Intervals of Service (per year)
Office Tower			
Office space	Air freshener units	150	12
	Sanitizer Combo Units	150	12
	Sanitary Bins	150	12
	Soap Dispenser	150	12
	Safe Seat Dispenser	300	12
	Hand Dryer	150	12
	Toilet Roll Holder	300	12
Top Of Africa Floor	Air freshener units	6	12
	Sanitizer Combo Units	6	12
	Sanitary Bins	6	12
	Soap Dispenser	6	12
	Safe Seat Dispenser	12	12
	Hand Dryer	6	12
	Toilet Roll Holder	12	12
Basement Offices	Air freshener units	6	12
	Sanitizer Combo Units	6	12
	Sanitary Bins	6	12
	Soap Dispenser	6	12
	Safe Seat Dispenser	12	12
	Hand Dryer	6	12
	Toilet Roll Holder	12	12
Retail/Shopping Centre			
Shopping Mall	Air freshener units	12	12
	Sanitizer Combo Units	16	12
	Sanitary Bins	16	12
	Soap Dispenser	12	12
	Safe Seat Dispenser	32	12
	Hand Dryer	12	12

	Toilet Roll Holder	32	12
Service Level	Air freshener units	2	12
	Sanitizer Combo Units	3	12
	Sanitary Bins	3	12
	Soap Dispenser	6	12
	Safe Seat Dispenser	8	12
	Hand Dryer	2	12
	Toilet Roll Holder	8	12
Sky Rink Floors	Air freshener units	12	12
	Sanitizer Combo Units	16	12
	Sanitary Bins	16	12
	Soap Dispenser	12	12
	Safe Seat Dispenser	32	12
	Hand Dryer	12	12
	Toilet Roll Holder	32	12
Sky Rink Parking	Air freshener units	2	12
	Sanitizer Combo Units	3	12
	Sanitary Bins	3	12
	Soap Dispenser	6	12
	Safe Seat Dispenser	8	12
	Hand Dryer	2	12
	Toilet Roll Holder	8	12

Note:

- Equipment will be serviced monthly as per above breakdown - Annexure 5A as part of fixed costs.
- Soap dispensers, sanitary combo units and sanitary bins will be refilled daily as part of fixed costs.
    - **It is therefore advised that pricing should be based on a refill of each of the above dispensers daily in line with the size and type of the equipment offered in order to last for at least a day and twice a day for 24/7 operational areas.**

Paper towel and toilet paper requirements per month:

The above paper will be part of **fixed costs** and rebate given in case of low occupancy or additional will be required using pass-through costs in case of higher consumption in line with quoted prices and/or at market rates.

Quantity is as per Pricing Schedule

6.2 Deep cleaning

Area / building	Item Description	Total number
Office tower and Sky Rink	Toilet cubicles	550
	Urinals	360
	Washbasins / Sinks	550
	Showers	50
Retail	Toilet cubicles	132
	Urinals	120
	Washbasins	132
	Showers	26

7 PEST CONTROL

Pest Control (Including fumigation)

NB: THIS SERVICE MUST BE CONDUCTED ON A MONTHLY BASIS (12 TIMES A YEAR) IN THE EXTREME SITUATION / EMERGENCY WHERE THE SERVICE MIGHT BE NEEDED; THE PROPER SERVICE REQUEST PROCESS MUST BE ADHERED TO WITH THE APPOINTED CONTRACTOR. IT IS HOWEVER REQUIRED PEST CONTROL FOR THE KITCHENS TO BE CONDUCTED ONCE A WEEK.

7.1 Pest control must be conducted in and around the following areas of buildings but not limited to:

Behind operating equipment

- Corners of buildings
- Behind and around furniture
- Inside and around areas where infestation might be a hazard
- In all corners of the kitchens, equipment's and around the production areas.

7.2 Pest control must be conducted in and around the following areas but not limited to:

- Ablution blocks
- Offices
- Service areas
- Staff change rooms and ablution blocks

- Storerooms
- Outside Refuse Areas
- Tamper-proof Rodent Bait Station as per site layout
- Cats trappers to be supplied and placed at strategic areas as necessary

Area	**Item Description**	**Quantity**	**Unit**
Office tower and Sky Rink	Pest Control Spraying	139 000	M^2
	Rodents bate stations	500	Item
Retail	Pest Control Spraying	50 000	M^2
	Rodents bate stations	250	Item
	Electric Flying Insects Monitor	2	Item
Total:	Pest Control Spraying	189 000	M^2
Total:	Rodents Bait Stations	750	Item
Total:	Electric Flying Insects Monitor	2	Item

Note:

- Pest control to be done monthly at all other areas.
- Fumigation to be done 3 monthly in all areas as requested.
- Staffing requirements: a minimum of 6 personnel to be permanently or as and when required basis on site for pest control and fumigation duties.

All the above requirements will be part of Fixed Costs, any requirements above the requested frequencies will be part of Variable/Pass-through Costs.

ANNEXURE 6

HVAC INVENTORY AND MAINTENANCE PROGRAM

PROVISION OF INTEGRATED FACILITIES MANAGEMENT AT

TRANSNET CARLTON CENTRE PRECINCT

FOR A PERIOD OF 3 YEARS

A. INTRODUCTION

The installed Air Con systems/ equipment require service and maintenance. The document seeks to address the inspection and repair thereof for a comprehensive preventive maintenance program for the units. The original equipment manufacturers maintenance manuals should be used in conjunction with this report. The contract will provide repairs to the equipment and related equipment (pumps, motors, condenser, and evaporator coils). Transnet house rules shall apply to the maintenance contract.

a) Original equipment manufacturers manuals should be used in conjunction with this document.
b) Repairs to the equipment/ systems (and related equipment such as pumps, motors, condenser, and evaporator coils) should be provided
c) Transnet house rules shall apply to the maintenance contract.
d) Contractor shall furnish all supervision, labour, materials, equipment, tools, chemicals, transportation, and all effort necessary to perform the requirements herein.
e) Components purchased relating to repairs shall be approved by Transnet.

B. EQUIPMENT SUMMARY/ INVENTORY

HVAC – INVENTORY LIST

Area	Item	Location
Carlton Centre	Refrigeration plant room	D level
Carlton Centre	Air handling unit	11th floor
Carlton Centre	Air handling unit	30th floor
Carlton Centre	Air handling unit	50th floor
Carlton Centre	Air handling unit	52nd floor
Carlton Centre	Air handling unit	Woolworths plant room
Carlton Centre	Air handling unit	Standard bank plant room (2)
Carlton Centre	Air handling unit	S8 plant room
Carlton Centre	Air handling unit	S1

Carlton Centre	Air handling unit	S2
Carlton Centre	Air handling unit	S3
Carlton Centre	Air handling unit	S4
Carlton Centre	Air handling unit	S5
Carlton Centre	Air handling unit	S6

#	Equipment description and requirements	Qty	Maintenance/ service
1	**Main Chiller Plant**	1	
	Minor/Quarterly Preventative maintenance		3 x per annum
	Major/Annual Preventative maintenance		1 x per annum
2	**Packed and split ducted system**	0	
	Minor/Quarterly Preventative maintenance		4 x per annum
3	**VRV/VRF system** (80KW VRV)	0	
	Major/Annual Preventative maintenance		1 x per annum
4	**Normal split units** (Minor Equipment – 60000 BTU)	20	
	Minor Service - Mid Wall Split		2 x per annum
	Minor Service - Window Wall Split		2 x per annum
	Minor Service - Ceiling Cassette Split		2 x per annum
	Major Service - Midwall Splits		once every 2 years
	Major Service - Window Wall Split		once every 2 years
	Major Service - Ceiling Cassette Split		once every 2 years
5	**Evaporative coolers** (to be replaced with VRV/VRF)	0	1 x per annum
	Major/Annual Preventative maintenance		1 x per annum
6	Kitchen Extraction System	3	
	Minor Service		Weekly
	Major Service		Bi-Annual

C. EQUIPMENT/ SYSTEM DESCRIPTION AND REQUIREMENTS

1. CHILLER PLANTS

SERVICE SCHEDULE

Contractor shall perform three quarterly and one comprehensive annual service and inspection. Frequency of schedule may be altered by Transnet. The annual service shall be done in winter season and the three quarterly ones in summer season. A checklist of all inspections and tests performed (as listed below) shall be supplied

to Transnet. Electronic checklists would be required, and a signed hard copy shall be the preferred method for submission. It shall be the Contractor's responsibility to maintain the chiller (main body and all components attached to the body) and ancillary components in a manner that causes the machine to be fully functional in accordance with manufacturers and industry standards

MINOR/QUATERLY PREVENTATIVE INSPECTION AND MAINTENANCE

Frequency	**Activity**
3 x per Annum	▪ Lubricate and adjust equipment (bearings) as required by manufacturer's recommendations ▪ Inspection of electric wiring from the line side starter to its respective motor ▪ Inspection of refrigerant piping between two or more pieces of equipment (excluding chilled water piping, condenser piping and hot water piping) and the insulation of the piping. ▪ Inspect all pressure and temperature controls, thermometers, gauges, linkages, control devices and thermostats located at equipment. ▪ Inspection of the starters.
3 x per Annum	Check all safety switches and alarms for proper operation. These include to: ▪ High-pressure cut-off ▪ Low-pressure cut-off ▪ Low oil pressure switch ▪ Oil pump sensor ▪ Flow switches ▪ Pump interlocks ▪ System monitors timers ▪ System freezes stats ▪ Vane closing switches
3 x per Annum	Check operation of all operating controls: ▪ Temperature control stats ▪ Motor load limit controls ▪ Vane operation controls ▪ Variable frequency drive units
3 x per Annum	Check compressor operation: ▪ Performance evaluation ▪ Check amperage balance ▪ Check terminal lug torque

	▪ Check lubricating system, oil levels, and temperatures ▪ Check vane operation under various loaded conditions ▪ Check operation of expansion valve, superheat settings ▪ Check and evaluate performance of purge compressor unit
3 x per Annum	Check operation of chiller unit: ▪ Leak check compressor fittings and terminals ▪ Leak check purge compressor ▪ Leak check oil pump and fittings ▪ Leak check relief valves and rupture disk
3 x per Annum	Check operation of main starter: ▪ Examine contacts on all electrical connections ▪ Verify overload and trip settings
3 x per Annum	Check the operation of the Air Handling Units: ▪ Remove covers ▪ Check all V-Belts ▪ Check all pulleys ▪ Grease motor bearings ▪ Clean filters (Renew if necessary) ▪ Check drum fan bearings & grease ▪ Check and test contactors & overloads ▪ Check all electrical connections ▪ Check all electrical connections ▪ Check & test pressure switches ▪ Check and test controls ▪ Replace covers ▪ Check drum fan direction ▪ Test all electrical connections
	Clean the condenser and evaporator coils as well as general equipment surroundings.

3 X per Annual	Operation of the cooling tower ▪ Check oil level ▪ Check oil leaks ▪ Check for noise or vibration ▪ Check water level ▪ Check spray nozzles ▪ Check for blocked floor drain ▪ Check sand filter ▪ Clean the area

MAJOR/ANNUAL PREVENTATIVE INSPECTION AND MAINTENANCE

Frequency	Activity
1 x per Annum	▪ Brush all the condenser tubes as per manufacturers' recommendation. ▪ Oil analysis as per SANS to determine wear and corrosion elements in the oil sample. This will include, but not limited to: iron, chromium, aluminium, lead, silicon, tin, and zinc. Reported results shall be in parts per million (ppm). ▪ Clean air-cooled coils including chemical solution as recommended by the manufacturer. ▪ Eddy Current Test 100% of the condenser tubes at least once every two (2) years or when the condition requires the procedure. The technician performing such tests must be accredited to carry such an operation and proof must be submitted. ▪ Brush 100% of the evaporator tubes at least once every five (5) years or when the condition requires the procedure. ▪ Eddy Current Test 100% of the evaporator tubes at least once every five (5) years or when the condition requires the procedure. Please ensure that the tubes are brushed before each Eddy Current test is performed. ▪ Vibration Analysis shall be conducted on a quarterly basis and a baseline trend established, charted, and compared with the manufacturer's specifications for rectification if any is required. ▪ Megger Insulation Test on compressor motor. ▪ Complete leak check of chillers. ▪ Inspect starter panel and main contacts for pitting/burring. Torque all connections and clean starter. ▪ Copy of annual inspection report (Contractor's form) shall be forwarded to Facilities Management Department for formal review. ▪ Clean or back flush heat exchanger, replace oil filter and oil return filter or driers. ▪ Replace coolant after cleaning heat exchanger. ▪ Replace or clean filters as recommended by the manufacturer. ▪ Inspect repair or replace associated water pipe work. ▪ Inspect repair or replace air distribution system, including ductwork and fan casings. ▪ Inspect water quality and treat if applicable.

1 x per Annum	Check the operation of the Air Handling Units: ▪ Remove covers ▪ Check all V-Belts ▪ Check all pulleys ▪ Grease motor bearings ▪ Clean filters (Renew if necessary) ▪ Check drums fan bearings & grease ▪ Check and test contactors & overloads ▪ Check all electrical connections ▪ Check all electrical connections ▪ Check & test pressure switches ▪ Check and test controls ▪ Replace covers ▪ Check drum fan direction ▪ Test all electrical connections

2. PACKAGED AND SPLIT DUCTED SYSTEMS

SERVICE SCHEDULE

Frequency of schedule may be altered by Transnet. There shall be two services on newly installed equipment (not older than 2 years), and four services on old equipment. The Four quarterly services for old systems and two halves yearly services on new systems shall be done in the space of 12 months. A checklist of all inspections and tests performed shall be supplied to Transnet. Electronic checklists would be required, and a signed hard copy shall be the preferred method for submission. It shall be the Contractor's responsibility to maintain the unit and ancillary components in a manner that causes the machine to be fully functional in accordance with manufacturers and industry standards

QUATERLY PREVENTATIVE INSPECTION AND MAINTENANCE

Frequency	**Activity**
4 x per Annum	Compressor assembly and operation: ▪ Check for leaks on compressor ▪ Test operation of compressor ▪ Check availability of refrigerant and pressure levels ▪ Chemical Clean compressor and associated ancillary ▪ Check condenser coils and fins ▪ Check for correct operation ▪ Check power connections
4 x per Annum	Evaporator assembly and operation: ▪ Test operation of evaporator ▪ Check for leaks ▪ Inspect drainage pipe waste point ▪ Clean condensates drain trap, flush with clean water, and ensure water drains freely ▪ Check fins operation ▪ Check temperature settings against room temperature and installation results. ▪ Check power connections
4 x per Annum	Refrigerant pipes, duct work and ancillaries: ▪ Repair or replace air distribution system, including ductwork and fan casings. ▪ Repair or replace refrigerant distribution system, including pipework insulation. ▪ Clean the Filters (Renew if necessary)

3. VRF/VRV SYSTEMS

SERVICE SCHEDULE

The contractor shall perform one comprehensive annual service and inspection. Frequency of schedule may be altered by Transnet. The annual service shall be done in winter season. A checklist of all inspections and tests performed (as listed below) shall be supplied to Transnet. Electronic checklists would be required, and a signed hard copy shall be the preferred method for submission. It shall be the Contractor's responsibility to maintain the unit (main body and all components attached to the body) and ancillary components in a manner that causes the machine to be fully functional in accordance with manufacturers and industry standards.

ANNUAL PREVENTIVE INSPECTION AND MAINTENANCE

Frequency	Component	Activity
1 x per Annum	Refrigerant System	Compressor: ▪ Check for acoustic sound and vibration at start and stop ▪ Measure insulation resistance ▪ Check the Looseness of terminals and contact of wires
1 x per Annum	Refrigerant System	Pulse motor valve: ▪ Check for operation ▪ Check Operation sound at power ON/OFF
1 x per Annum	Refrigerant System	Refrigerant system: ▪ Check for operation of 4-way valve and insulation performance ▪ Check for Corrosion and abnormal sound
1 x per Annum	Refrigerant System	Heat Exchange: ▪ Check clogging by dirt or damage ▪ Check for Gas leakage
1 x per Annum	Electric Parts	Fan Motor: ▪ Check acoustic sound ▪ Measure insulation resistance
1 x per Annum	Electric Parts	Float switch: ▪ Check for Operation ▪ Check for the Breaking of wires
1 x per Annum	Moving and Removable Parts	Filter: ▪ Check dirt or snag

1 x per Annum	Moving and Removable Parts	Fan, fan casing, bell mouth: ▪ Check fluctuation & balance ▪ Check Stick of dirt and the overall Outlook
1 x per Annum	Structural Parts	▪ Check clogging dirt, or drain dirt ▪ Check peel or rise of paint on the cabinet ▪ Check dirt or damage on the make-up panel and louver ▪ Check dirt or damage on the front, top and side cabinet ▪ Check for hardening or deterioration of cushion rubber

4. NORMAL SPLIT UNITS (MINOR EQUIPMENT)

MINOR INSPECTION AND MAINTENANCE SERVICE

Frequency	Component	Activity
2 x per Annum	Mid wall Split	▪ Clean Filters ▪ Check Refrigerators ▪ Check for correct Operation
2 x per Annum	Window/ wall unit	▪ Clean Filter ▪ Check & Test Temperatures ▪ Check & Test correct operations of 4-way valve
2 x per Annum	Ceiling cassette	▪ Clean Filters ▪ Check & Test Temperatures

MAJOR INSPECTION AND MAINTENANCE SERVICE

Frequency	Component	Activity
Once every 2 years	Mid wall Split	▪ Chemical clean condenser & Evaporator ▪ Clean drip tray & Drain pipe ▪ Clean Evaporator & Condenser Fans ▪ Clean Filters on Evaporator (Renew if necessary) ▪ Check all Electrical Connections, Voltages & Currents ▪ Check LP & HP Pressures ▪ Top up Refrigerants if necessary ▪ Wash Condenser & Evaporator (Handy Andy & Water) ▪ Test Unit Heating & cooling for correct Operation.

Once every 2 years	Window/ wall unit	▪ Disconnect Unit, Remove from casing. ▪ Strip condenser covers. ▪ Brush & Blow out Unit. ▪ Chemical clean condenser & evaporator ▪ Replace Condenser Covers. ▪ Check all Electrical Corrections. ▪ Check correct operation of 4-way Valve ▪ Check Evaporator & Condenser Fans & Clean. ▪ Clean Filter (Renew if necessary) ▪ Check Temperatures (with Temp meter) ▪ Replace Unit in Casing & secure ▪ Connect and replace front Cover. ▪ Check for correct operation.

5 KIITCHEN EXTRACTION PLANT

MINOR INSPECTION AND MAINTENANCE SERVICE

Frequency	Component	Activity
Weekly	Kitchen extraction fan	▪ Check for any leaks ▪ Check for abnormal noise ▪ Check V-belts

MAJOR INSPECTION AND MAINTENANCE SERVICE

Frequency	Component	Activity
2 X Annually	Kitchen Extraction fan	▪ Check oil leaks ▪ Grease the Motor ▪ Inspect the bearings ▪ Check V-belts ▪ Check wiring connections ▪ Clean ducting ▪ Check leak in the duct

D. WARRANTY

Responsibility for equipment room conditions or overall system performance shall be for contractors' accountability. The minimum warranty period shall be twelve (12) months for new parts; six (6) months for labour. Warranty repair and/or replacement shall be performed at no additional charge to Transnet. All warranty periods shall begin upon acceptance by the end user department.

E. MINIMUM STOCK HOLDING

The bidder should, always, stock any replacement part necessary for the execution of Works. The principle that applies to stock keeping is that downtime on equipment should be kept to a minimum. Therefore, all consumables that might be necessary for the execution of the works shall be readily available. The bidders should list exclusions, if any, to the above with the maximum time necessary to acquire this spare part.

Item name/ description	Time to acquire

F. MINIMUM SPECIAL EQUIPMENT

The bidder should list any special equipment, if any, that might be necessary for the execution of the Works, that will not be, either on site, or at the premises on daily basis. The bidder should indicate the maximum time necessary to acquire this equipment.

Item name/ description	Time to acquire

Staffing requirements:

- **The Carlton Centre will require a minimum of 6 (including working supervisor) on site air condition staff members to attend to all reasonable maintenance requests, temperature adjustments and services.**

ANNEXURE 7

ELECTRICAL INFRASTRUCTURE INVENTORY AND MAINTENANCE SCHEDULE

PROVISION OF INTEGRATED FACILITIES MANAGEMENT

AT TRANSNET CARLTON CENTRE PRECINCT

FOR A PERIOD OF 3 YEARS

INVENTORY SUMMARY

#	Item	Size		
1	**Mini-Substations Transformers**	800 KVA **Income** 11kv **Out** 400V		
2	**Intake substation**	11KV		
3	**MV Switchgears**	400 v		
4	**Geysers**	200L		
5	**LV Distribution Boards**	circuits average per DB		
6	**Standby generators**	10430 KVA		
7	**Logo lighting & power supplies**	**Height & breadth**	**No. of Lamps**	**Lamp size (each)**

INVENTORY LIST ELECTRICAL: CARLTON CENTRE

UPS Installations			
Locality	**kVA**	**Phase**	**Image No**
SL 86 TRFR NO.5 PANEL	1	Single	
SL 87TRFR NO.10 PANEL	1	Single	
SL 88 Bus coupler GF Scada I/O Panel	1	Single	
SL 88 Generator Main IS IAB Panel	1	Single	
SL 85 Bus coupler CD Scada I/O Panel	1	Single	
D-Level Central Plant Generator Panel	1	Single	
D-Level Chiller No.1	1	Single	
D-Level Chiller No.2	1	Single	
D-Level Chiller No.3	1	Single	
MEISNER MP 3020 49 Floor	20	Single	
MEISNER MP 3040 49 Floor	40	Single	
43 Floor	40	Single	

Substation Equipment					
Locality	**Transformer kVA**	**HT CIRCUIT BREAKERS**	**VOLTAGE**		**Image No**
			Income	**Out**	
SL 86	**Incomer**	4	11KV	11 KV	
SL 86	800	1	11 KV	400V	
SL 86	800	1	11 KV	400V	
SL 86	800	1	11 KV	400V	
SL 86	800	1	11 KV	400V	
SL 86	800	1	11 KV	400V	
SL 86	800	1	11 KV	400V	
SL 86	800	1	11 KV	400V	
SL 86	800	1	11 KV	400V	
SL 87	800	1	11 KV	400V	

SL 87	800	1	11 KV	400V	
SL 87	800	1	11 KV	400V	
SL 87	800	1	11 KV	400V	
SL 87	800	1	11 KV	400V	
SL 87	800	1	11 KV	400V	
SL 87	800	1	11 KV	400V	
SL 87	800	1	11 KV	400V	
SL 75	800	1	11 KV	400V	
SL 75	800	1	11 KV	400V	
SL 75	800	1	11 KV	400V	
SL 101	800	1	11 KV	400V	
SL 101	800	1	11 KV	400V	
SL 101	800	1	11 KV	400V	
SL 101	800	1	11 KV	400V	
SL 96	800	1	11 KV	400V	
SL 96	800	1	11 KV	400V	
SL 96	800	1	11 KV	400V	
SL 96	800	1	11 KV	400V	
	800	1	11KV	400V	

INVENTORY LIST BATTERY CHARGERS

Locality	**Cells**	**V per cell**	**A/C**		**D/C**	
			Volts	**Amps**	**Volts**	**Amps**
SL 86 (1)	5	6,2	230V	1	32	0 TO 5
SL 75 (1)	25	1,3	220	1	32	0 TO 5
SL 86 (2)	5	6,2	230V	1	32	0 TO 5
SL 87 (1)	5	6,2	230V	1	32	0 TO 5
SL 87 (2)	5	6,2	230V	1	32	0 TO 5
SL 85 (1)	24	1,4	230V	2	35	0 TO 5
SL 96 (1)	25	1,3	220V	2	34	0 TO 5
SL 101 (1)	25	1,3	220V	2	34	0 TO 5
Generator Service Lv1	4 to 6	13,6	230V	2	27,2	0 TO 10
Generator 1 Panel Ground Lv1	4	13,5	230		27	5
Generator 2 Panel Ground Lv1	4	13,5	230		27	5
Generator D-Level	6	Decommissioned	230		40,5	0,08
Generator D-Level	6	12	230		0 TO 50	0 TO15

DISTRIBUTION BOARDS					
TENANT	**METER NUMBER**	**CT'S**	**METER TYPE**	**CB SIZE**	**LEVEL**
CARLTON FLORISH	10220035	YES	ENERMAX +	100A	200
CNA1	7340042	YES	ENERMAX +	100A	200
CAPELLO	10210018	YES	ENERMAX +	150A	200
SOUND&LIGHT	5230613	NO	ENERMAX	100A	200
MCDONALDS	10300019	YES	ENERMAX +	250A	200
MIVAMI	10270001	YES	ENERMAX +	100A	200
MTN				80A	200
OLD KING PIE	10270022	YES	ENERMAX +	100A	200
SPUR	10260066	YES	ENERMAX +	200A	200
PROTEA BOOKSHOP	6290003	YES	ENERMAX +	100A	200
KFC	5200013	YES	ENERMAX	225A	200
DEBONAIRS	4340008	NO	ENERMAX	300A	200
NANDOS	5200003	NO	ENERMAX	225A	200
MR PRICE RED PHASE	199771	YES	GEC ALSTHOM	250A	200
MR PRICE WHITE PH	199775	YES	GEC ALSTHOM	250A	200
MR PRICE BLUE	199772	YES	GEC ALSTHOM	250A	200
JET RED	199854	YES	GEC ALSTHOM	FUSE200 A	200
JET WHITE	199769	YES	GEC ALSTHOM	FUSE200 A	200
JET BLUE	199770	YES	GEC ALSTHOM	FUSE200 A	200
FORMERLY JET	6480050	YES	ENERMAX +	60A	200
FRED THE RED	5450202	NO	ENERMAX	80A	200
SOLID DEVELOP	6290009	YES	ENERMAX+	100A	200
ABSA BANK	5340613	NO	ENERMAX	100A	200
CYBER KIDS	647006	YES	ENERMAX+	63A	200
ABSA ATM	5351008	NO	ENERMAX	100A	200
EGOLI GIFTS	6300001	YES	ENERMAX +	63A	200
MTN	10220040	YES	ENERMAX+	63A	200
CIPC	5340610	NO	ENERMAX	100A	200
CARLTON PRINT	10260022	YES	ENERMAX+	80A	200
AFRICAN BANK	6490080	YES	ENERMAX+	80A	200
TRANSNET ENTER D	10210021	YES	ENERMAX +	NO CB	200
BEARS	6470033	YES	ENERMAX+	100A	200
TOTALSPORTS	5340607	NO	ENERMAX	63A	200
WIMPY	10200039	YES	ENERMAX+	225A	200
FOSCHINI	5500210	N0	ENERMAX	100A	200

ABSA ATM2	6480049	YES	ENERMAX+	63A	200

STREET GYM	53551010	NO	ENERMAX	80A	100
CELL C	5500204	NO	ENERMAX	63A	100
RAGE	5351020	NO	ENERMAX	100A	100
VODACOM	10230023	YES	ENERMAX+	60A	100
COUNTRY CLASSIC	10280046	YES	ENERMAX+	63A	100
CAPITEC BANK	10270010	YES	ENERMAX+	63A	100
PEP	5261021	NO	ENERMAX	80A	100
EURO COSMETIC	5500207	NO	ENERMAX	63A	100
UZZI	5380821	NO	ENERMAX	100A	100
SCALA HAIR SALON	6250012	YES	ENERMAX+	63A	100
BIDVEST BANK	10210044	YES	ENERMAX+	100A	100
DR MOKOATLE	10150015	YES	ENERMAX+	80A	100
PC TRAINING	AT43103	NO	HURBET DAVIES	50A	100
A KANJEE DENTIST	5261020	NO	ENERMAX	80A	100
ARTHUR FORD	5230611	NO	ENERMAX	80A	100
OSMAN'S OPTO	5261229	NO	ENERMAX	80A	100
ATHEAS	10260008	YES	ENERMAX+	100A	100
CARLTON VIDEO	5261226	NO	ENERMAX	80A	100
NEDBANK	5230608	NO	ENERMAX	100A	100
CASH CRUSADERS	8020039	YES	ENERMAX+	100A	100
ADIDAS	7030083	YES	ENERMAX+	100A	100
RESOL	7330091	YES	ENERMAX+	100A	100
PERFUME GARDEN	10270055	YES	ENERMAX+	80A	100
WEBBERS	7340044	YES	ENERMAX +	80A	100
MTN	5261223	NO	ENERMAX	63A	100
DANIEL J	6510010	YES	ENERMAX +	63A	100
GRAND SHOE	7340027	YES	ENERMAX +	100A	100
KGOMOTSO	10240047	YES	ENERMAX +	63A	100
STUDIO	6190043	YES	ENERMAX +	100A	100
FLORSHEM	5380401	NO	ENERMAX	100A	100
ESENCY CLOTHING	10250035	YES	ENERMAX +	63A	100
BARLTON EXPRESS	10280019	YES	ENERMAX +	60A	100
RAND BUREAU	5340611	NO	ENERMAX	100A	100
MARKHAMS	8010025	YES	ENERMAX +	100A	100
FRANCO	6470076	YES	ENERMAX +	100A	100
LEGIT	7340025	YES	ENERMAX +	100A	100
SIDE STEP	8020056	YES	ENRMAX +	80A	100
ONE CELL	5380404	NO	ENERMAX	63A	100
BONTLE HAIR	7340052	YES	ENERMAX +	100A	100

CELL POINT	5340606	NO	ENERMAX	63A	100
IDENTITY	S99.05874	OLD ONE	ALSTOM	100A	100
PLANET FITNESS	NO METER	YES	NONE	63A	100
CELL POINT	6290024	YES	ENERMAX +	100A	100
CHERRY LANE	A00393014	NO	CBI	63A	100
MCDONALDS DESERT	A00393069	NO	CBI	63A	100
MR PRICE KIDS	10260001	YES	ENERMAX +	125A	100
CLICKS RED	190787	OLD ONE	GEC ALSTHOM	200A	100
CLICKS WHITE	191596	OLD ONE	GEC ALSTHOM	200A	100
CLICKS BLUE	190774	OLD ONE	GEC ALSTHOM	200A	100
ACKERMANS RED	190802	OLD ONE	GEC ALSTHOM	350A	100
ACKERMANS WHITE	190800	OLD ONE	GEC ALSTHOM	350A	100
ACKERMANS BLUE	190774	OLD ONE	GEC ALSTHOM	350A	100
DB-KD MAIN	99267	OLD ONE	GEC ALSTHOM	630A	100
DB-KD MAIN WHITE	370274	OLD ONE	GEC ALSTHOM	630A	100
DB-KD MAIN BLUE	98651	OLD ONE	GEC ALSTHOM	630A	100

Distribution Board										
Carlton Centre High Rise										
Locality	**No of Contactor**	**No of Timer**	**No of Meter**	**No of Circuits**			**Amp's**			**Image No**
				Normal	**Dedicated**	**UPS**	**Normal**	**Dedicated**	**UPS**	
35th Floor West				64			100			01-05
35th Floor East				67			100			06-07
36th Floor West				58			100			10-14
36th Floor East				69			100			15-18
37th Floor West				66			100			19-23
37th Floor **East**				50			100			24-27

38th Floor West				65			100			29-32
38th Floor East				78			100			33-36
39th Floor West				60			100			37-41
39th Floor East				50			400			42-46
39th Floor Kitchen				66			400			47-48
40th Floor West				59			250			49-53
40th Floor east				76			100			54-56
41st Floor West				68			100			57-60
41st Floor East				56			100			61-63
42nd Floor West				67			100			64-67
42nd Floor East				54			100			68-73
43rd Floor West				67			100			74-75
43rd Floor East				73			100			76-81
44th Floor West				66			100			82-87
44th Floor East				56			100			88-92
45th Floor West				83			100			93-97
45th Floor East				55			100			98-102
46th Floor West				78			100			104-108
46th Floor East				80			100			109-112
47th Floor West				73			100			113-117
47th Floor East				66			100			118-122
48th Floor West				70			100			123-127

48th Floor East				62			100			130, 131
49th Floor West				110			200			146-156
49th Floor East				87			160			132-145
50th Floor Restaurant				74			200			146,148
50th Floor West				39			100			152,153,147
50th Floor East				23			10			149-151
50th Floor Emergency Circuit				12			60			159
51st Floor S/B DB				17			100			160
51st Floor plugs				6						156
51st Floor S/A DB				12			100			158,161
Drain Pumps Control Box				52						144-145
51st Floor Lighting Panel				62						157

Distribution Board										
Carlton Centre Med Rise										
Locality	**No of Contactor**	**No of Timer**	**No of Meter**	**No of Circuits**			**Amp's**			**Image No**
				Normal	**Dedicated**	**UPS**	**Normal**	**Dedicated**	**UPS**	
19th Floor East				67			80			1
19th Floor East Emergency				8			20			2
19th Floor East				3			100			3
19th Floor West				3			100			29
19th Floor West				60						30

20th Floor East				3			100			4
20th Floor East				62			60			5
20th Floor East Emergency				9			20			6
20th Floor West				3			60			74
20th Floor West				56			60			75
21st Floor East				63			63			7
21st Floor East				3			100			8
21st Floor East Emergency				9			20			9
21st Floor West				3			100			72
21st Floor West				48			60			73
22nd Floor East				3			100			10
22nd Floor East				63			60			11
22nd Floor East Emergency				8			20			12
22nd Floor West				3			100			70
22nd Floor West				63						71
23rd Floor East				3			100			13
23rd Floor East				85			100			14
23rd Floor East Emergency				7			20			15
23rd Floor East Sub DB				8			80			16

23rd Floor West				3			100			68
23rd Floor West				68			100			69
24th Floor East				3			100			17
24th Floor East				49			60			18
24th Floor East Emergency				5			20			19
24th Floor West				3			100			66
24th Floor West				51			100			67
25th Floor East				3			100			20
25th Floor East Emergency				9			20			21
25th Floor East				7			60			22
25th Floor West				3			100			64
25th Floor West				59			60			65
26th Floor East				3			100			31
26th Floor East				90			60			32
26th Floor East Emergency				9			30			33
26th Floor West				3			100			62
26th Floor West				80			60			63
27th Floor East				3			100			34
27th Floor East				66			60			35
27th Floor East				9			30			36

Emergency										
27th Floor West				62			100			60
27th Floor West				3			100			61
28th Floor East				3			100			37
28th Floor East				75			100			38
28th Floor East				9			30			39
28th Floor East Emergency				8			20			23
28th Floor East				78			100			24
28th Floor East				3			100			25
28th Floor West				3			100			58
28th Floor West				72			60			59
29th Floor East				3			100			40
29th Floor East				68			60			41
29th Floor East Emergency				10			30			42
29th Floor West				3			100			56
29th Floor West				51						57
32nd Floor East Emergency				26			60			26
32nd Floor East				73			60			27
32nd Floor East				3			100			28
32nd Floor West				3			100			53

32nd Floor West Sub DB				67			100			54
32nd Floor West				10			60			55
33rd Floor East				3			100			43
33rd Floor East				77			100			44
33rd Floor East Emergency				12			30			45
33rd Floor West				3			100			51
33rd Floor West				72			60			52
34th Floor East				3			100			46
34th Floor East				75			100			47
34th Floor East Emergency				10			30			48
34th Floor West				3			100			49
34th Floor West				77			60			50

Distribution Board										
Carlton Centre Low Rise										
Locality	**No of Contactor**	**No of Timer**	**No of Meter**	**No of Circuits**			**Amp's**			**Image No**
				Normal	**Dedicated**	**UPS**	**Normal**	**Dedicated**	**UPS**	
17th Floor West				56			100			01-07
17th Floor East				56			100			08-11
16th Floor				50			100			12-16

West										
16th Floor East				70			100			17-20, 25-28
15th Floor West				58			100			21-24
14th Floor West				66			100			29-33
14th Floor East				63			100			34-37
10th Floor West				66			100			38-42
10th Floor East				53			100			43-46
9th Floor West				53			100			52-57
9th Floor East				50			100			47-51
8th Floor West				49			100			58-62
8th Floor East				78			100			63-68
7th Floor West				89			100			69-72
7th Floor East				100			100			73-78
6th Floor West				86			100			79-84
6th Floor East				72			100			85-88
5th Floor West				71			100			89-93
5th Floor East				71			100			94-98
4th Floor West				77			100			99-102
4th Floor East				72			100			103-106

Distribution Board										
Carlton Hotel										
Locality	**No of Contactor**	**No of Timer**	**No of Meter**	**No of Circuits**			**Amp's**			**Image No**
				Normal	**Dedicated**	**UPS**	**Normal**	**Dedicated**	**UPS**	
31st Floor Closet				23			100			2
31st Health Studio Meter				14			60			4
31st Floor DB-H29E West Closet				45			300			6
31st Floor Light Timing DB										8
31st Floor DB H29B Meter										1
31st Floor Health Studio										3
31st Floor Pool Deck DB H29EA				80			150			5
Emergency DBH-29A				6			30			7
DB-Lights				33			30			
31st Floor DB H29E							100			6
30th Floor Emergency DB-H28A							30			9
30th Floor DB-H28A				19			100			10
30th Floor DB-H 28AA				24			30			11
30th Floor kitchen DB				78			100			12
30th Floor Stage DB				30			60			13

29th Floor Emergency DB-H27A							30			14
29th Floor DB-H27A				16			100			15
28th Floor Emergency DB-H26A				5			30			16
28th Floor DBH-26A				7			100			17

27th Floor Emergency DBH-25A				4			30			18
27th Floor DBH-25A				12			100			19
26th Floor Emergency DBH-24A				4			30			20
26th Floor DBH-24A				13			100			21
25th Floor Emergency DBH-23A				4			30			22
25th Floor DBH-23A				12			100			23
24th Floor Emergency DBH-22A				4			30			24
24th Floor DBH-22A				11			100			25
23rd Floor Emergency DBH-21A							30			26
23rd Floor DBH-21A							100			27
22nd Floor Emergency DBH-20A							30			28
22nd Floor DBH-20A							100			29
21st Floor Emergency DBH-19A				4			30			30

21st Floor DBH-19A				12			100			31
20th Floor Emergency DBH-18A							30			32
20th Floor DBH-18A							100			33
19th Floor Emergency DBH-17A				4			30			34
19th Floor DBH-17A				15			100			35
18th Floor Emergency DBH-16A							30			36
18th Floor DBH-16A							100			37

17th Floor Emergency DBH-15A				6			30			38
17th Floor DBH-15A				12			100			39
16th Floor Emergency DBH-14A				6			30			40
16th Floor DBH-14A				11			100			41
15th Floor Emergency DBH-13A				9			30			42
15th Floor DBH-13A				12			100			43
14th Floor Emergency DBH-11A				7			30			44
14th Floor DBH-11A				13			100			45
12th Floor Emergency DBH-10A				5			30			46
12th Floor DBH-10A				12			100			47

11th Floor Emergency DBH-9A				5			30			48
11th Floor DBH-9A				13			100			49
10th Floor Emergency DBH-8A				6			30			50
10th Floor DBH-8A				12			100			51
09th Floor Emergency DBH-7A				5			30			52
09th Floor DBH-7A				12			100			53
08th Floor Emergency DBH-6A				5			30			54
08th Floor DBH-6A				13			100			55
04th Floor Private Function DB				22			60			57, 58
04th Floor Kitchen DBH-4A				13			30			59, 60
2nd Floor Kitchen DBH-2A West				5			100			61
2nd Floor Kitchen DBH-2B East				9			100			62
Mezzanine Floor Closet DBH-1AA West							100			64
DBH-1A Emergency West							30			65
Mezzanine Floor DBH-				53			200			66

1B East										
Mezzanine Floor DBHB Section 2				25			60			67
Ground Floor DBH-5A Reception West				69			100			69
Ground Floor East DBH-5B				103			400			70, 68
7th Floor Plantroom										56

Distribution Boards										
Carlton Court										
Locality	**No of Contactor**	**No of Timer**	**No of Meter**	**No of Circuits**			**Amp's**			**Image No**
				Normal	**Dedicated**	**UPS**	**Normal**	**Dedicated**	**UPS**	
D.B.1				33			60			1
D.B.2				15			60			2
D.B.3				39			60			3
D.B.4				38			60			4
D.B.5				24			60			5
D.B.6				38			60			6
D.B.7				70			100			7
D.B.8				38			100			8
D.B.9				38			60			9
D.B.K				3			25			10

Distribution Board										
Carlton Centre Parking										
Locality	**No of Contactor**	**No of Timer**	**No of Meter**	**No of Circuits**			**Amp's**			**Image No**
				Normal	**Dedicated**	**UPS**	**Normal**	**Dedicated**	**UPS**	
A - LEVEL										
EM-DBU-P1A				17			60			1
DBU-P1B				55			200			2
DBU-P1D				25			100			3
EMB-DBU-PID				26			60			4
DBU-P1D				18			220			5
CASHIER BOOTH				9			20			6
JOCKEY PUMP				3			50			7
DBU-P1F				23			100			8
B - LEVEL										
DBU-P2F				20			60			9
DBU-P2D				20			60			10
EM-DBU-P2D				7			60			11
DBU-P2DA				30			200			12
DBU-P2CA				27			100			13
EM-DBU-P2C				18			60			14
EM-DBU-P2C				5			60			15
C - LEVEL										
DBU-P3CA				33			100			16
DBU-P3C				25			80			17
EM-DBU-P3C				5			60			18
DBU-P3DA				27			200			19
EM-DBU-P3D				6			60			20
DBU-P3D				19			60			21
DBU-P3F				14			60			22
D - LEVEL										
DBU-P4F				16			60			23
DBU-P4D				20			60			24

EM-DBU-P4D				27			200			25
Compressor				14			60			26
EM-BDU-P4C				12			80			27
DBU-P4C				25			60			28
DBU-P4CA				3			250			29
Car Wash				11			80			30

Distribution Board										
Carlton Centre Parkade and Skyrink										
Locality	**No of Contactor**	**No of Timer**	**No of Meter**	**No of Circuits**			**Amp's**			**Image No**
				Normal	**Dedicated**	**UPS**	**Normal**	**Dedicated**	**UPS**	
DIBPEX EM				24			100			1
DIBPEXL				64			200			2, 3
DIBEXP				34						4, 5
6th Floor West DBPPCAB				12			100			6
6th Floor West DBP-P6A				13			60			7
West Exhibition Sign				7			60			8
5th Floor DB P-P5A				11			63			9
5th Floor EM DBU P5D				15			60			10
4th Floor DBP-P4A				11			60			11
3rd Floor DBP-P3A				15			60			12
2nd Floor EM-DBU-P2D				10			60			13
2nd Floor DBP-P2ADBU-STQ				15			60			14

Carlton Gym Main				48			60			15
Carlton Gym Sub				9						16
Carlton Gym Sub 1				8			60			17
Carlton Gym Sub 2				12			50			18
Carlton Gym DBU-STN				49			100			19
Carlton Gym Geyser Small				8			40			20
CG DBUSTG				70			200			21
CG EM-DBU-STG				5			60			22
CG DBU-STG Sub				6			60			23
CG DBUSTG				32			100			24

Distribution Board										
Carlton Centre Plant Rooms										
Locality	**No of Contactor**	**No of Timer**	**No of Meter**	**No of Circuits**			**Amp's**			**Image No**
				Normal	**Dedicated**	**UPS**	**Normal**	**Dedicated**	**UPS**	
11th Floor East - Control Transformer and timer										108
11th Floor East – DBO – 11A										118
30th Floor East - Emergency Board				11						110
30th Floor – DBO – 30B										112
30th Floor East - Control Transformer and timer										114
30th Floor East – DBO – 30A										115
30th Floor - Timer Switch (Heaters)										116
30th Floor West - Control Transformer and timer										117
50th Floor West - Main CB				3			100			111

INVENTORY LIST BATTERY CHARGERS

Locality	Cells	V per cell	A/C		D/C	
			Volts	Amps	Volts	Amps
SL 86 (1)	5	6,2	230V	1	32	0 TO 5
SL 75 (1)	25	1,3	220	1	32	0 TO 5
SL 86 (2)	5	6,2	230V	1	32	0 TO 5
SL 87 (1)	5	6,2	230V	1	32	0 TO 5
SL 87 (2)	5	6,2	230V	1	32	0 TO 5
SL 85 (1)	24	1,4	230V	2	35	0 TO 5
SL 96 (1)	25	1,3	220V	2	34	0 TO 5
SL 101 (1)	25	1,3	220V	2	34	0 TO 5
Generator Service Lv1	4 to 6	13,6	230V	2	27,2	0 TO 10
Generator 1 Panel Ground Lv1	4	13,5	230		27	5
Generator 2 Panel Ground Lv1	4	13,5	230		27	5
Generator D-Level	6	Decommissioned	230		40,5	0,08
Generator D-Level	6	12	230		0 TO 50	0 TO15

INVENTORY LIST: STANDBY GENERATORS

Locality	Engine	Alternator	kVA	
Service Level	Caterpillar		1200	
Ground Level: Sky-rink	Cummins		1400	
Ground Level: Sky-rink	Cummins		1400	
Service Level	Caterpillar		3100	
Service Level	Caterpillar		3100	
6th floor Skyrink	Elegen		1030	

INVENTORY LIST: TRANSNET LOGO

Locality	**LOGO**		**LETTERS**	**SIZE**
OFFICER TOWER ROOF TOP	SOUTHREN FACADE X 1	15m x 11m	EASTERN FACADE x 8	8m X 5m
OFFICER TOWER ROOF TOP	NORTHERN FACADE X 1	15m x 11m	WESTREN FAÇADE X 8	8m X 5m

1. SUBSTATION

Quantity	
Frequency	**Activity**
Cleaning	
6 Monthly	Remove all external and internal dirt
Insulation	
6 Monthly	Clean and inspect all insulators and insulating material.
6 Monthly	Inspect porcelain insulation for cracks or other defects.
6 Monthly	Inspect oil filled bushings and chambers for leaks and ensure that the oil level is corrected.
6 Monthly	Repair all oil leaks.
6 Monthly	Perform insulation resistance tests.
Contacts	
6 Monthly	Clean and inspect all contacts.
6 Monthly	Ensure that any backing springs are exerting the recommended pressure and are correctly aligned.
6 Monthly	Any slight burning or tarnishing may only be removed with fine glasspaper or fine file. No emery/ carborundum paper may be used.
Arc Control Devices	
6 Monthly	Clean and inspect all arc control devices. Ensure that all vent holes and orifices are clean. Flush with clean oil before replacement
6 Monthly	If fitted, check resistors for continuity and ensure that the resistance value is correct.
Isolating Contacts	
6 Monthly	Clean and inspect all isolating contacts. Examine for signs of overheating.
6 Monthly	Re – lubricate and recondition as necessary.

Venting	
6 Monthly	Ensure that a free passage for oil and gases exists.
6 Monthly	If applicable ensure that the joint between the fixed and moveable portions of the gear is in sound condition.
Mechanism	
6 Monthly	Clean, inspect and check the overall correct operation.
6 Monthly	Ensure that all rolling or sliding surfaces are free from any old hardening lubricant.
6 Monthly	Lubricate the mechanism in accordance with the manufacture's specification.
6 Monthly	Extreme care has to be taken to ensure that all adjustments conform to the manufacture's specification.
Insulating Oil	
2 Yearly	Replace all oil with new oil.
	Ensure that the oil level is as specified.
Main Connections	
Yearly	Ensure that all contacts shall be checked, cleaned and greased.
Fixed Contacts	
6 Monthly	All fixed contacts shall be checked, cleaned and greased.
Test Position	
Yearly	If earthing is used, ensure that when operated, the circuit breaker cannot be pushed right in.
Paint work	
6 Monthly	Check if paint on all panels are in good condition.
6 Monthly	If the contractor damaged any paint work, the repairs will be for his account. The new paint shall match existing colour.
Grounding/ Earthing	
6 Monthly	Inspect for the continuity of all earthing connections and ensure that the system is grounded as required.
6 Monthly	Test that resistance to ground of the earth connection and record this value.
Fuses	
6 Monthly	Check that all applicable fuses are in good working order
6 Monthly	Check and ensure that the rating and type of fuse is as specified.
6 Monthly	If there are any deviations from the specification, do not replace but, report to the Engineer.
Tests to be Performed	
6 Monthly	Perform insulation resistance tests in accordance with BS CP 1009 – Maintenance of insulating oil.

6 Monthly	Make sure that all trip circuits operate at 70% of the rated auxiliary voltage.
6 Monthly	Determine the main contact resistance with a Ductor tester directly after un-racking the switchgear unit and again before returning the unit for service.
6 Monthly	Pole discrepancy test using a Hathaway CSD Circuit Breaker Test Unit.
6 Monthly	Timing/Speed test using a Hathaway CSD Circuit Breaker Test Unit.
Busbars	
6 Monthly	Inspect cable and busbar side bushing for any cracks
6 Monthly	Blow out and clean complete busbar chamber.
6 Monthly	Check busbar for any hot joints by using an infrared thermometer.
6 Monthly	Retape busbar connection if necessary.
6 Monthly	Conduct millivolt drop test on busbar.
Low Tension	
6 Monthly	Check all L.T. circuits for correct operation. Check and test all L.T circuit breakers for proper functioning. Check for loose cable terminations and ensure that proper lugs and ferrules are provided. Check MCBs labelling & phase voltages. Check and secure all MCBs and terminations
6 Monthly	Carryout primary injection on CT's (L.T.) side for correct operation. On CTs, perform ratio, polarity, insulation and high voltage testing
Transformers	
Monthly	Check oil levels, silica gel and oil leaks. Check operation of maximum demand ammeters and voltmeters. Check corona on the MV cable terminations
12 Monthly	Perform transformer oil tests which include di-electric, moisture and acidity tests. Powers wash at high pressure & high temperature and check working of oil level gauge. Cleaning and retorqueing of transformer bushings. Retorqueing of all loose bolts with impact wrench and measure the earth resistance. Megger test the transformer windings and record all values in the logbooks. Perform induced over voltage, winding resistance, ratio, vector group verification, transformer losses, partial discharge tests, and Tan Delta testing for dryness of winding and bushing. Fit silica gel air drier and check the condition of drying agent and replace if necessary. Check and record transformer tap changer settings, etc
Min-Sub MV Switchgear	
	Ensure correct operation of the switchgear unit, ancillary apparatus and electrical and mechanical tripping mechanism before it is returned to service. Check mini-sub vermin-proofing, earthing and painting. Check mini-sub locking mechanism is operational. Check mini-sub danger warning signs & labelling
6 Monthly	If possible, test the closing and tripping of the circuit breaker after it has been restored to service.
6 Monthly	Ensure that the safety shutters are unable to move up or down unless the latch on the shutter mechanism is released. After the latch is released, the shutters should operate smoothly by hand.

6 Monthly	Issuing of full test certificates and service reports on all work that has been carried out.

2. STANDBY GENERATOR

Quantity	
Specification	
Frequency	**Activity**
Oil Inspection	
Monthly	- Check oil level and top up as required - Check oil viscosity for dilution by water or fuel - Repair all oil leaks
Battery Inspection	
Monthly	- Check starter battery terminals and apply contact grease - Check battery cables for damage and secure terminals - Check battery electrolyte - Check battery voltage and record - Check battery voltage drop during engine cranking and record - Check battery charger operation after a cranking test.
Fuel Inspection	
Monthly	- Check level of fuel tank and top up if necessary - Check proper function of fuel pumping - Check bulk fuel tank (If applicable) - Replace all fuel leakages.
Cooling Water Inspection	
Monthly	- Check engine coolant level - Check proper function of cooling water pump - Check proper function of cooling tower fan
Engine and Alternator Inspection	
Monthly	- Check engine temperature during operation - Check abnormal engine speed during operation - Check engine synchronising mechanism during operation - Check change-over mechanism during operation - Verify generator alarm functions during operation - Check accumulation of dust on alternator and clean if necessary - Test run generator on load and record volts-amperes and frequency - Clean generator set and switched back into "auto" mode - Check and rectify any loose components
Generator Set Inspection	
12 monthly	- Drain oil sample and submit for analysis to establish need for an odd change - Record output parameters while on load - Record running hours

	- Service diesel engine and steam clean engine, alternator as well as day tank - Inspect all rubber hoses and wiring, replace if required - So cold starting volt drop test on prime mover starter battery, replace starter battery if required - Clean slip rings and inspect brush gear. Open alternator terminal box, clean and tighten terminations - Check and record earthing valve as measured with resistance measuring instruments - Service change-over switchgear Disassemble contractors and clean test operation - Service alarm panel and clean internally and externally - Simulate and verify alarm and shut down conditions - Replace all inoperative lamps, sirens and meters
Generator Room	
12 Monthly	- Clean plant room and re-lamp luminaires - Seal all sleeves with chicken wire and builder's foam. - Provide relevant poison inside cable trenches. - Paint floor with epoxy paint - Check laggings on exhaust system and repair if necessary - Check and fit new padlocking if necessary
Cooling System	
24 Monthly	- Drain cooling system, flush and refill with water and prescribed water conditioner.

3. INTAKE SUBSTATION

Quantity	**1**
Spec	**11KV intake substation and power factor equipment**
Frequency	**Activity**
SBV4 Feeder/Income Vacuum Circuit Breaker – 7off	
12 Monthly	- With draw the SBV4 circuit breakers from the housing and insect all contact and insulation surface damage or overheating - Clean all the switchgear equipment as necessary - Close the circuit breakers and using the wear gauge supplied check that none of the interrupters has reached their wear limit, and if necessary, replace. - With the circuit breakers open perform a high voltage test across each interrupter. The test voltage should be 28KV R.M.S and be applied for one minute - The operation of the mechanism as well as the test date of lubrication should be checked - Check the number of operations on the operation counter since the mechanism was last lubricated. If these exceed 10 000 operations the mechanism must be re-lubricated - Operate the mechanism a few times to ensure that the lubricant has penetrated and wipe away all excess oil. - Check and replace labelling - Measure contact resistance with the breaker in closed connection to detect poor or hot main contacts - Perform vacuum test to detect loss of vacuum and verify the operation of the circuit breaker - Check tripping and closing operations of circuit breaker at 50% to 80% nominal voltage and perform coil resistance test on the breaker

Protection Relays	
12 Monthly	- Perform protection secondary injection test to check the operation and timing of protection relays
Current Transformation	
12 Monthly	- Perform mastering curve test to determine any shorted or open-circuited current transformers
Voltage Transformer	
12 Monthly	- Check outburst of voltage transformer to determine their conduction' - Check the conduction of H.T and L.V fuses and ranking mechanism
Busbars and Cables	
12 Monthly	- Open and clean chambers and check cable connections for signs of corona and hot spots.
Fuses and MCB's	
12 Monthly	- Check fuses and MCB's for proper operation and replace if necessary
Battery Charger	
12 Monthly	- Perform load test, and check for damaged and dead cells. - Check and record float and boost currents to prevent damage to batteries - Check battery fluid levels and top up if necessary
Power Factor Equipment	
12 Monthly	- Check and test the operation of power factor equipment - Clean the power factor correction equipment housing
Maximum Demand Meter	
12 Monthly	- Check and test the proper function of weatherproof maximum demand meter
Main Substation building	
12 Monthly	- Clean equipment rooms and re-lamp luminaries - Paint floor with suitable industrial epoxy paint - Clean and vacuum cable trenches - Check and seal cable sleeves with builders' foam and chicken were if necessary. - Check and repair doors and doors locking mechanism if necessary - Wash walls and ceiling with suitable sugar soap. - Check and replace if necessary first aid kit

4. Transnet Logo

Quantity	
Frequency	**Activity**
Logo Structure	
12 Monthly	- Check paint work and re-paint with suitable paint if necessary - Check the cracks and paint of the Perspex - Check all bolts, nuts and studs of the logo & letters structure - Check the anchor points for rope access
Logo Distribution Board	
12 Monthly	- Check weatherproof distribution doors and locking mechanism - Check all circuit breakers busbars, contactors, terminals and wiring necessary to supply the luminaires - Check earthing at distribution board - Check the condition of cables
Logo & Letters Luminaires	
As in when	- Check and replace all LED lighting lamps - Clean all glass covers using suitable cleaning agent

	- Check and tighten all loose wiring. - Replace burnt lamps - Replace power supplies necessary to supply the luminaires when burnt

5. MV (Medium Voltage) SWITCHGEAR SYSTEM

Quantity	
Visit Frequency	**Visit Activity**
MV Switchgear room	
Monthly	- Clean MV switchgear room and check all labelling, markings and schematic and replace if necessary - Check earthing of all equipment, secure earth termination and retention all earth connection. - Check doors and locking mechanisms and replace if necessary
MV Switchgear	
Monthly	- Check for oil leaks and repair if necessary - Check oil levels and top up if necessary - Wipe down and clean framework
12 Monthly	- Remove insulation oil clean tank, lubricate switchgear mechanism - Check interlocks and clean fuse contacts. Remove rust using rust remover sand and repaint where necessary. Check and replace indication lamps. - Check and repair vermin proofing. Check for corona on cable terminations and repair if necessary. Check and clean all insulated cable and boxes - Check and test protection relay including control and suspension functions. Check switches and connection in panel and ET chamber - Clean current breaker and panel compartments. Remove secondary fuses and clean contact surfaces. Lubricate shutter mechanism, hinges and handles
MV Circuit Breaker	
12 Monthly	- Remove insulating oil and clean tank circuit breaker - Service the circuit breaker inside the oil chamber by means of blowing a dielectric cleaner onto switching` ports - Inspect the current breaker for signs of faults and or equipment damage and report the Client - Lubricate all circuit breakers moving parts using suitable recommended lubricant - Re-fill the oil chamber to the recommended level with new insulation oil and restore the circuit breaker to the normal operational state.

6. GEYSERS

Quantity	
Specification	
Frequency	**Activity**
Piping	
Monthly	- Insert water piping and equipment for water leaks and repair leaks where required - Safety valves must be flushed to ensure that there is no blockage

	- Insert pipe work, pipe joints, pipe work insulation and pipe support and rectify where required - Insert valves, steam traps, water gauges, temperature controls sight glasses thermometer etc. for water leaks, and repair where necessary - Flush clean all pipe work to remove any wild scale, stones or other debris which may damage the tank living.
Industrial geysers	
12 Monthly	- Check and ensure that all electrical connections are tight and tighten any loose electrical connections - Drain water from the industrial geysers and check any internal defects and ensure that corrosion protection is still intact - Check and service sacrificial anode thermostat and burnt element after geyser water drainage. Replace all items if required. - Sample and test cold water supply for foreign particles which may damage the geyser systems, purify cold water supply if necessary. - Check and clean electrical control panel and check for correct operation.

7. LOW VOLTAGE DISTRIBUTION BOARDS (DBs)

Quantities	
Frequency	**Activity**
L.V Board	
6 Monthly	- Check DB labelling, danger signs and legend and replace if necessary - Check all electrical are not loose, and tighten if necessary - Check all DB covers are in place, and replace if necessary - Check all DB c overs and locks are in place and replace/repair if necessary - Check all circuit breakers and isolators are operational as per specification, and replace if damaged - Check all DB blank covers are in place and replace if damaged/missing - Check the condition of the busbars and replace if and tighten all loose busbars.
12 Monthly	- Check and replace all damaged cable terminations including cable ferrules and rings - Check paint work and re-paint distribution boards including framework, panels and chassis, if necessary - Check busbars inside distribution boards as far as insulation and clearance distances, creepage distance joints, insulation resistance dielectric strength, deflection test, absorption resistance and short time withstand current on concerned record concerned record values and rectify if necessary. - Check the correct individual circuit breaker continuous current rating, trap routing and rupturing capacity, rectify if necessary - Check and clean all DB circuit breaker contacts with suitable cleaning material - Check and verify circuit breaker operating handle position indication of "ON" "OFF" and TRIP, and rectify if necessary - Check and test LV distribution earthing and provide COCs for distribution board in accordance with SANS 10142 Code of Practice for Wiring of Premises as amended. - Check and test earth leakage unit operation, and replace if necessary

	- Check and test installed indoor surge arrestors and replace if necessary.

8. MINIMUM STOCK HOLDING

The bidder should, always, stock any replacement part necessary for the execution of Works. The principle that applies to stock keeping is that downtime on equipment should be kept to a minimum. Therefore, all consumables that might be necessary for the execution of the works shall be readily available. The bidders should list exclusions, if any, to the above with the maximum time necessary to acquire this spare part.

Item name/ description	Time to acquire

9. MINIMUM SPECIAL EQUIPMENT

The bidder should list any special equipment, if any, that might be necessary for the execution of the Works, that will not be, either on site, or at the premises on daily basis. The bidder should indicate the maximum time necessary to acquire this equipment.

Item name/ description	Time to acquire

Staffing requirements:

- Electrical maintenance will require a minimum of 6 personnel comprising of 3 multi skilled technical workers and 3 qualified electricians to attend to planned, day to day electrical maintenance, breakdowns, repairs, and upgrades (2 electricians and 2 tech workers day shift and 1 electrician and 1 technical worker night shift)
- It is the responsibility of the bidder to provide tools, PPE, etc for the above staff.

Material:

- Material required for day to day and unplanned maintenance will be sourced under pass through costs as the works cannot be predetermined.
- Material (lubricants, oils, seals, anti-freeze, etc) and labour (internal or outsourced) for all periodic planned maintenance will form part of fixed costs and hence should be included in the quote on the pricing schedule, any unforeseen or additional work during periodic maintenance should be reported to TP Facilities Management team and if additional spares are required, they will form part of pass through costs.

ANNEXURE 8

LIFTS/ ESCALATORS SPEC AND INVENTORY

TDR FOR PROVISION OF INTEGRATED FACILITIES MANAGEMENT

AT TRANSNET CARLTON CENTRE PRECINCT

FOR A PERIOD OF 3 YEARS

A. INTRODUCTION

The installed Lifts and Escalators require service and maintenance. The document seeks to address the inspection and repair thereof for a comprehensive preventive maintenance program for the units. The original equipment manufacturers maintenance manuals should be used in conjunction with this report. The contract will provide repairs to the equipment and related equipment (motors etc). Transnet house rules shall apply to the maintenance contract.

a) Original equipment manufacturers manuals should be used in conjunction with this document.
b) Repairs to the equipment/ systems (and related equipment such as Gearbox, motors, Sheaves etc) should be provided
c) Transnet house rules shall apply to the maintenance contract.
d) Contractor shall furnish all supervision, labour, materials, equipment, tools, chemicals, transportation and all effort necessary to perform the requirements herein.
e) Components purchased relating to repairs shall be approved by Transnet.

B. EQUIPMENT SUMMARY/ INVENTORY

LIFTS – INVENTORY LIST

Location	Item	Unit Number	Certificate Number	Installation Date	Number of Stops	Number of Openings
Carlton Centre	Electrical Lift	680480	JE5413		16	16
Carlton Centre	Electrical Lift	680478	JE5391	01/01/1971	16	16
Carlton Centre	Electrical Lift	680477	JE5390	01/01/1971	16	16
Carlton Centre	Electrical Lift	680476	JE5389	01/01/1972	16	16
Carlton Centre	Electrical Lift	680475	JE5388	01/01/1971	16	16
Carlton Centre	Electrical Lift	680474	JE5387	01/01/1971	16	16
Carlton Centre	Electrical Lift	680473	JE5386	01/01/1971	16	16

Carlton Centre	Electrical Lift	680534	JE5431		5	5
Carlton Centre	Electrical Lift	680535	JE5432		3	3
Carlton Centre	Electrical Lift	680479	JE5404		5	5
Carlton Centre	Electrical Lift	680481	JE5414		16	16
Carlton Centre	Electrical Lift	680482	JE5415		16	16
Carlton Centre	Electrical Lift	680483	JE5416		16	16
Carlton Centre	Electrical Lift	680484	JE5417		16	16
Carlton Centre	Electrical Lift	680485	JE5418		16	16
Carlton Centre	Electrical Lift	680486	JE5718	01/10/1973	16	16
Carlton Centre	Electrical Lift	680487	JE5719	01/07/1973	16	16
Carlton Centre	Electrical Lift	680488	JE5720	01/07/1973	16	16

Location	Item	Unit Number	Certificate Number	Installation Date	Number of Stops	Number of Openings
Carlton Centre	Electrical Lift	680489	JE5721	01/07/1973	18	18
Carlton Centre	Electrical Lift	680490	JE5722	01/09/1973	18	18
Carlton Centre	Electrical Lift	680491	JE5723	01/09/1973	16	16
Carlton Centre	Electrical Lift	680492	JE5724	01/09/1973	3	3
Carlton Centre	Electrical Lift	680493	JE5160	01/08/1973	52	52
Carlton Centre	Electrical Lift	680494	JE5254		7	7
Carlton Centre	Electrical Lift	680495	JE5251		7	7
Carlton Centre	Electrical Lift	680496	JE5403	01/02/1971	3	3
Carlton Centre	Electrical Lift	680497	JE5224	01/02/1971	5	6
Carlton Centre	Electrical Lift	680498	JE5222	01/02/1971	3	3
Carlton Centre	Electrical Lift	680518	JE5227	01/07/1971	6	6

Carlton Centre	Electrical Lift	680519	JE5228	01/07/1971	6	6
Carlton Centre	Electrical Lift	680520	JE5225	01/09/1970	6	6
Carlton Centre	Electrical Lift	680521	JE5226	01/09/1970	6	6
Carlton Centre	Electrical Lift	680533	JE5253		3	3
Carlton Centre	Electrical Lift	680558	JE5250		6	6
Carlton Centre	Electrical Lift	680559	JE5249		6	6
Carlton Centre	Electrical Lift	680561	JE5525	01/01/1971	10	10
Carlton Centre	Electrical Lift	680562	JE5526	01/01/1971	10	10
Carlton Centre	Electrical Lift	680568	JE5527	01/01/1971	10	10
Carlton Centre	Electrical Lift	680569	JE5528	01/01/1971	10	10
Carlton Centre	Electrical Lift	680573	JE5393		3	3
Carlton Centre	Electrical Lift	72NE6097	01L1482	19/07/2004		
Carlton Centre	Electrical Lift	72NE6132	01L1474		5	5
Carlton Centre	Electrical Lift	680560	JE5491		2	2
Carlton Centre	Electrical Lift	680506	JE5569	01/09/1972	27	27
Carlton Centre	Electrical Lift	680507	JE5570	01/09/1972	27	27
Carlton Centre	Electrical Lift	680508	JE5571	01/09/1972	27	27
Carlton Centre	Electrical Lift	680509	JE5572	01/09/1972	27	27
Carlton Centre	Electrical Lift	680510	JE5573	01/09/1972	28	28

Location	Item	Unit Number	Certificate Number	Installation Date	Number of Stops	Number of Openings
Carlton Centre	Electrical Lift	680511	JE5394		5	5
Carlton Centre	Electrical Lift	680512	JE5395		5	5
Carlton Centre	Electrical Lift	680513	JE5409		27	27

Carlton Centre	Electrical Lift	680514	JE5408		28	28
Carlton Centre	Electrical Lift	680515	JE5407		27	27
Carlton Centre	Electrical Lift	680516	JE5406	01/11/1972	6	6
Carlton Centre	Electrical Lift	680517	JE5405	01/11/1972	6	6
Carlton Centre	Electrical Lift	680575	JE5392	01/05/1972	4	4
Carlton Centre	Electrical Lift	680574	JE5396		3	3
Carlton Centre	Electrical Lift	72NE2661	JE6995		11	11
Carlton Centre	Electrical Lift	72NE2662	JE6996		11	11
Carlton Centre	Electrical Lift	72NE2663	JE6997	01/07/1982	9	9
Carlton Centre	Electrical Lift	72NE2664	JE6998	01/07/1982	9	9
Carlton Centre	Hydraulic Lift	680544	JE5223		3	3
Carlton Centre	Hydraulic Lift	680571	JE5492		3	3
Carlton Centre	Hydraulic Lift	680499	JE5246		3	3

ESCALATORS – INVENTORY LIST

Location	Item	Known As	Unit Number	Certificate Number	Installation Date
Carlton Centre	Escalator		680538	JESC617	06/07/1971
Carlton Centre	Escalator		680539	JESC616	06/07/1971

Carlton Centre	Escalator		680540	JESC615	06/07/1971
Carlton Centre	Escalator		680541	JESC614	06/07/1971
Carlton Centre	Escalator		680504	JESC149	22/05/1970
Carlton Centre	Escalator		680505	JESC150	22/05/1970
Carlton Centre	Escalator		680522	JESC157	30/11/1970
Carlton Centre	Escalator		680500	JESC145	22/05/1970
Carlton Centre	Escalator		680501	JESC146	22/05/1970
Carlton Centre	Escalator		680502	JESC147	22/05/1970
Carlton Centre	Escalator		680503	JESC148	22/05/1970
Carlton Centre	Escalator		680550	JESC117	26/12/1969
Carlton Centre	Escalator		680551	JESC118	16/08/1971
Carlton Centre	Escalator		680552	JESC119	16/08/1971
Carlton Centre	Escalator		680553	JESC120	16/08/1971
Carlton Centre	Escalator		680554	JESC121	16/08/1971
Carlton Centre	Escalator		680555	JESC122	16/08/1971
Carlton Centre	Escalator		680556	JESC123	26/12/1969
Carlton Centre	Escalator		680557	JESC124	26/12/1969
Carlton Centre	Escalator		680523	JESC166	30/11/1970
Carlton Centre	Escalator		680524	JESC158	30/11/1970
Carlton Centre	Escalator		680525	JESC159	30/11/1970
Carlton Centre	Escalator		680526	JESC160	30/11/1970
Carlton Centre	Escalator		680527	JESC161	30/11/1970
Carlton Centre	Escalator		680528	JESC162	30/11/1970
Carlton Centre	Escalator		680529	JESC163	30/11/1970

Location	Item	Unit Number	Certificate Number	Installation Date	Number of Stops	Number of Openings
Carlton Centre	Escalator	680530	JESC164	30/11/1970		
Carlton Centre	Escalator	680531	JESC165	30/11/1970		
Carlton Centre	Escalator	72NE2665	JESC407	10/05/1982		
Carlton Centre	Escalator	72NE2666	JESC408	10/05/1982		
Carlton Centre	Escalator	72NE3095	JESC458	01/11/1984		
Carlton Centre	Escalator	72NE3096	JESC459	01/11/1984		
Carlton Centre	Escalator	72NE3097	JESC460	01/11/1984		
Carlton Centre	Escalator	72NE3098	JESC461	01/11/1984		

C. SCHEDULE: PREVENTATIVE MAINATENANCE AND SERVICE

a) Frequency of schedule may be altered by Transnet.
b) A checklist of all inspections and tests performed (as listed below) shall be supplied to Transnet.
c) Electronic checklists would be required and a signed hard copy shall be the preferred method for submission.
d) It shall be the Contractor's responsibility to maintain the Lifts and Escalators (main body and all components attached to the body) and ancillary components in a manner that causes the machine to be fully functional in accordance with manufacturer's and industry standards

1. SCHEDULE – ELECTRIC LIFTS – LIST OF EXAMINATIONS

(Please note: The below lists are indicative only and not exhaustive, it is therefore the duty of the *Contractor* to update the list, two (2) months from the date of assuming responsibility as the contracted scope of works)

List of examinations to be carried out on an electric lift

Note: The relevant part of SANS 1545 must be used as a guiding document for these activities.

ELECTRIC LIFTS LIST OF EXAMINATIONS **Schedule 1**	**Monthly** Maintenance and Service **Activity Schedule " 1"**	**Two monthly** Maintenance and Service **Activity Schedule " 2"**	**Three monthly** Maintenance and Service **Activity Schedule " 3"**	**Six monthly** Maintenance and Service **Activity Schedule " 4"**	**Twelve monthly** Maintenance and Service **Activity Schedule " 5"**
Pit					
Ensure free movement of tension sheaves. governor, selector, etc.					
check guides rest on pit floor / steel work					
check if a socket outlet is available and secure					
check if pit lights are working					
check pit switches are working and secure					
ensure the pit area is dry and sump pump is working when install					
remove excess oil/grease from bottom of guides					
ensure the pit area is clean and free of debris					
Compensation and anti-rebound mechanism and switch (where fitted)					
check for free movement in guides					
check for free movement and operation					
check if switch trip in both directions					
check if sheave grooves are clean					
check if catches are free and are working properly					

ELECTRIC LIFTS LIST OF EXAMINATIONS **Schedule 1**	**Monthly** Maintenance and Service **Activity Schedule " 1"**	**Two monthly** Maintenance and Service **Activity Schedule " 2"**	**Three monthly** Maintenance and Service **Activity Schedule " 3"**	**Six monthly** Maintenance and Service **Activity Schedule " 4"**	**Twelve monthly** Maintenance and Service **Activity Schedule " 5"**
check if wipers on ropes are fitted (sheave rope guards)					
check for equal tension on ropes					
check for anti-rebound operation					
check electrical contact (where fitted)					
lubricate when necessary					

ELECTRIC LIFTS LIST OF EXAMINATIONS **Schedule 1**	**Monthly** Maintenance and Service **Activity Schedule " 1"**	**Two monthly** Maintenance and Service **Activity Schedule " 2"**	**Three monthly** Maintenance and Service **Activity Schedule " 3"**	**Six monthly** Maintenance and Service **Activity Schedule " 4"**	**Twelve monthly** Maintenance and Service **Activity Schedule " 5"**
Buffers					
check if spring buffers are secured					
check if all buffers are aligned with striker plates					
check if free room is available under the car when it rest on buffers					
Check if counterweight overrun is sufficient. Car level on top floor					
check for correct oil levels					
check switch when fitted					
check fixings for security					
lubricate when necessary					
Drive motor / generator					
check if brushes are free and of sufficient length					
check if brushes grades are correct					
check if brushes staggered and they react properly					
check motor bearings for wear					
check alignment of motor					
check condition of commutator (where fitted)					
replenish lubrication when necessary					
Gear box					
check gear box and sheave for wear					
check gear box for oil leaks					
check that gear box is not over filled					
check lubrication in gear box					
replenish when necessary					

ELECTRIC LIFTS LIST OF EXAMINATIONS **Schedule 1**	**Monthly** Maintenance and Service **Activity Schedule " 1"**	**Two monthly** Maintenance and Service **Activity Schedule " 2"**	**Three monthly** Maintenance and Service **Activity Schedule " 3"**	**Six monthly** Maintenance and Service **Activity Schedule " 4"**	**Twelve monthly** Maintenance and Service **Activity Schedule " 5"**
Traction sheave					
Check for unequal groove depth					
check traction sheave grooves for wear					

ELECTRIC LIFTS LIST OF EXAMINATIONS **Schedule 1**	**Monthly** Maintenance and Service **Activity Schedule " 1"**	**Two monthly** Maintenance and Service **Activity Schedule " 2"**	**Three monthly** Maintenance and Service **Activity Schedule " 3"**	**Six monthly** Maintenance and Service **Activity Schedule " 4"**	**Twelve monthly** Maintenance and Service **Activity Schedule " 5"**
Brake					
check brake slide (spring tension)					
check asbestos liner not be used					
check brake lining for wear					
check for correct adjustment					
check brake pivot pins and the moving pole piece					
check the brake system					
check for levelling					
lubricate when necessary					
Controller					
check for loose connections, relays, loop circuits, transformers, timers, etc.					
Check voltage sensitive relays. RMC, MC, etc.					
ensure cabinet is clean and dry and free of dust					
check contactor faces for pitting or signs of heavy arcing					
check contactor leads for signs of breakage					
Governors					
Keep mechanism clean, switches limits, jaws, etc.					
Current, voltage and speed					
measure and record current					
measure and record voltage					
measure and record lift speed					
Over-speed governor and tension pulley					
check all moving parts for free movement and wear					
check for correct operation					

ELECTRIC LIFTS LIST OF EXAMINATIONS **Schedule 1**	**Monthly** Maintenance and Service **Activity Schedule " 1"**	**Two monthly** Maintenance and Service **Activity Schedule " 2"**	**Three monthly** Maintenance and Service **Activity Schedule " 3"**	**Six monthly** Maintenance and Service **Activity Schedule " 4"**	**Twelve monthly** Maintenance and Service **Activity Schedule " 5"**
lubricate when necessary					

ELECTRIC LIFTS LIST OF EXAMINATIONS **Schedule 1**	**Monthly** Maintenance and Service **Activity Schedule " 1"**	**Two monthly** Maintenance and Service **Activity Schedule " 2"**	**Three monthly** Maintenance and Service **Activity Schedule " 3"**	**Six monthly** Maintenance and Service **Activity Schedule " 4"**	**Twelve monthly** Maintenance and Service **Activity Schedule " 5"**
Main rope diverter pulley(s)					
check rope grooves for wear					
check bearings for wear					
Guard against foreign objects entering between ropes and sheave					
lubricate when necessary					
Car/counterweight guides					
check fixings for security					
ensure rollers are running true and not too much tension					
ensure the car or counterweight is statically balanced					
ensure the float is not too much					
verify the distance between guides measurements for possible changes due to building settlement or loose brackets, etc.					
ensure that there is a film of oil where required on all guide surfaces					
Electric wiring					
Verify the integrity of the trunking system, pipe work and insulations installed. No broken pipe work, etc.					
Check for damage to trailers substantial protection etc. Hook ups cannot occur.					
check for insulation and the electrical continuity of the connection between the earth terminal of the machine room and the different parts of the lift liable to be made live accidentally					

ELECTRIC LIFTS LIST OF EXAMINATIONS **Schedule 1**	**Monthly** Maintenance and Service **Activity Schedule " 1"**	**Two monthly** Maintenance and Service **Activity Schedule " 2"**	**Three monthly** Maintenance and Service **Activity Schedule " 3"**	**Six monthly** Maintenance and Service **Activity Schedule " 4"**	**Twelve monthly** Maintenance and Service **Activity Schedule " 5"**
Lift car					
check emergency lighting					
check detectors					
check door open buttons					
check door pressures in close					
check alarm system					
check car buttons					
check key switches					
check floor levels					
check signals					
Car door operation					
check door closed contact or lock					
check for safety, switch on slave door, finger traps, etc.					
check doors for free running					
check operation and adjustment of door operator (where fitted)					
check wire rope or chain, when used, for integrity					
check for excessive wear and door gaps					
check emergency release mechanism					
check door passenger protection device					
lubricate when necessary					

ELECTRIC LIFTS LIST OF EXAMINATIONS **Schedule 1**	**Monthly** Maintenance and Service **Activity Schedule " 1"**	**Two monthly** Maintenance and Service **Activity Schedule " 2"**	**Three monthly** Maintenance and Service **Activity Schedule " 3"**	**Six monthly** Maintenance and Service **Activity Schedule " 4"**	**Twelve monthly** Maintenance and Service **Activity Schedule " 5"**
Car/counterweight guide shoes/rollers					
check car guide shoes/rollers for wear and adjust or replace when necessary					
check that rollers run true					
check that car and counterweight is statically balanced					
check for not too much pressure					
check that guards are fitted over the top rollers					
lubricate when necessary					
Safety gear(s)					
check all moving parts for free movement and wear					
check that safeties apply without pulling the car or counterweight skew					
check for correct functioning of the device					
check fixings for security					
lubricate when necessary					
Suspension ropes					
check for wear and broken wires per lay					
check for rope thicknesses throughout (1mm on 13mm to much)					
check for elongation					
check for correct tension					
lubricate when necessary					
Rope terminations					
examine for signs of deterioration and wear					
check if locknuts and split pins are provided					
check if grips are fitted correctly					
check if babbitt is filled correctly					

ELECTRIC LIFTS **LIST OF EXAMINATIONS** **Schedule 1**	**Monthly** Maintenance and Service **Activity Schedule " 1"**	**Two monthly** Maintenance and Service **Activity Schedule " 2"**	**Three monthly** Maintenance and Service **Activity Schedule " 3"**	**Six monthly** Maintenance and Service **Activity Schedule " 4"**	**Twelve monthly** Maintenance and Service **Activity Schedule " 5"**
check fixings for security					
check for fracture and tightness					

ELECTRIC LIFTS LIST OF EXAMINATIONS **Schedule 1**	**Monthly** Maintenance and Service **Activity Schedule " 1"**	**Two monthly** Maintenance and Service **Activity Schedule " 2"**	**Three monthly** Maintenance and Service **Activity Schedule " 3"**	**Six monthly** Maintenance and Service **Activity Schedule " 4"**	**Twelve monthly** Maintenance and Service **Activity Schedule " 5"**
Landing entrances					
check every landing lock for operation and security					
check doors for free running					
check for excessive wear and door gaps					
check doors shoe integrity					
check wire rope, chain or belt, when used, for integrity					
check emergency release mechanism					
check vision panels					
check door passenger protection device					
lubricate when necessary					
Floor level					
check lift for levelling at landing					
Motor run time limiter					
check for correct functioning					
Motor protection devices					
check for correct functioning					
Electric safety devices					
check operations and correct functioning					
check the stoppage of the lift when an earthing is created on the safety chain					
check for fitting of correct fuses and quality of earth circuits					
Alarm device					
check for correct functioning					

ELECTRIC LIFTS LIST OF EXAMINATIONS **Schedule 1**	**Monthly** Maintenance and Service **Activity Schedule " 1"**	**Two monthly** Maintenance and Service **Activity Schedule " 2"**	**Three monthly** Maintenance and Service **Activity Schedule " 3"**	**Six monthly** Maintenance and Service **Activity Schedule " 4"**	**Twelve monthly** Maintenance and Service **Activity Schedule " 5"**
Final limit switches					
check operation and correct functioning					
check over-travel clearances					
lubricate where necessary					
Components					
ensure that all components are clean and free from dust as required for correct functioning					

2. SCHEDULE – HYDRAULIC LIFTS – LIST OF EXAMINATIONS

List of examinations to be carried out on a hydraulic lift

NOTE- The relevant part of SANS 1545 must be used as a guiding document for these activities.

HYDRAULIC LIFTS LIST OF EXAMINATIONS **Schedule 2**	**Monthly** Maintenance and Service **Activity Schedule " 1"**	**Two monthly** Maintenance and Service **Activity Schedule " 2"**	**Three monthly** Maintenance and Service **Activity Schedule " 3"**	**Six monthly** Maintenance and Service **Activity Schedule " 4"**	**Twelve monthly** Maintenance and Service **Activity Schedule " 5"**
Pit area					
ensure free movement of tension sheaves, governor, selector, etc.					
check guides rest on pit floor / steel work					
check if a socket outlet is available and secure					
check if pit lights are working					
check pit switches are working and secure					

HYDRAULIC LIFTS LIST OF EXAMINATIONS **Schedule 2**	**Monthly** Maintenance and Service **Activity Schedule " 1"**	**Two monthly** Maintenance and Service **Activity Schedule " 2"**	**Three monthly** Maintenance and Service **Activity Schedule " 3"**	**Six monthly** Maintenance and Service **Activity Schedule " 4"**	**Twelve monthly** Maintenance and Service **Activity Schedule " 5"**
ensure the pit area is dry and sump pump is working when install					
check for cleanliness					
remove excess oil/grease from bottom of guides					
ensure the pit area is clean and free of debris					
Buffers					
check if spring buffers are secured					
check if all buffers are aligned with striker plates					
check if free room is available under the car when it rests on buffers					
check if counterweight overrun is sufficient. Car level on top floor					
check for correct oil levels					
check switch when fitted					
check fixings for security					
lubricate when necessary					

HYDRAULIC LIFTS LIST OF EXAMINATIONS **Schedule 2**	**Monthly** Maintenance and Service **Activity Schedule " 1"**	**Two monthly** Maintenance and Service **Activity Schedule " 2"**	**Three monthly** Maintenance and Service **Activity Schedule " 3"**	**Six monthly** Maintenance and Service **Activity Schedule " 4"**	**Twelve monthly** Maintenance and Service **Activity Schedule " 5"**
Tank unit					
check stop valve for operation and leaks					
check pump drive belts for tension and wear					
check pump for leaks					
check hydraulic fluid level in tank					
check condition of oil					
check tank and valve unit for leaks					
Controller					
check for loose connections, relays, loop circuits, transformers, timers, overloads, etc.					
clean any conceivable contamination					
ensure cabinet is clean, dry and free of dust					
check contactor faces for pitting or signs of heavy arcing					
check contactor leads for signs of breakage					
check operation of run time timer					
Current, voltage and speed					
measure and record current					
measure and record voltage					
measure and record lift speed					
Car/counterweight/ram guides					
check fixings for security					
ensure that there is a film of oil where required on all guide surfaces					
Jack					
check for excessive oil leakage					

HYDRAULIC LIFTS LIST OF EXAMINATIONS **Schedule 2**	**Monthly** Maintenance and Service **Activity Schedule " 1"**	**Two monthly** Maintenance and Service **Activity Schedule " 2"**	**Three monthly** Maintenance and Service **Activity Schedule " 3"**	**Six monthly** Maintenance and Service **Activity Schedule " 4"**	**Twelve monthly** Maintenance and Service **Activity Schedule " 5"**
Telescopic jack					
check for synchronization					

HYDRAULIC LIFTS LIST OF EXAMINATIONS **Schedule 2**	**Monthly** Maintenance and Service **Activity Schedule " 1"**	**Two monthly** Maintenance and Service **Activity Schedule " 2"**	**Three monthly** Maintenance and Service **Activity Schedule " 3"**	**Six monthly** Maintenance and Service **Activity Schedule " 4"**	**Twelve monthly** Maintenance and Service **Activity Schedule " 5"**
Electric wiring					
verify the integrity of the trunking system, pipe work and insulations installed. No broken pipe work, etc.					
Check for damage to trailers substantial protection, etc. Hook ups cannot occur.					
check for insulation and the electrical continuity of the connection between the earth terminal of the machine room and the different parts of the lift liable to be made live accidentally					
Lift car					
check detectors					
check door open buttons					
check door pressures in close					
check floor levels					
check signals					
check emergency lighting					
check alarm system					
check car buttons					
check key switches					
Car door operation					
check door closed contact or lock					
check doors for free running					
check for safety, switch on slave door, finger traps, etc.					
check operation and adjustment of door operator (where fitted)					
check wire rope or chain when used for integrity					
check for excessive wear and door gaps					

HYDRAULIC LIFTS LIST OF EXAMINATIONS **Schedule 2**	**Monthly** Maintenance and Service **Activity Schedule " 1"**	**Two monthly** Maintenance and Service **Activity Schedule " 2"**	**Three monthly** Maintenance and Service **Activity Schedule " 3"**	**Six monthly** Maintenance and Service **Activity Schedule " 4"**	**Twelve monthly** Maintenance and Service **Activity Schedule " 5"**
check emergency release mechanism					
check door passenger protection device					
lubricate when necessary					

HYDRAULIC LIFTS LIST OF EXAMINATIONS **Schedule 2**	**Monthly** Maintenance and Service **Activity Schedule " 1"**	**Two monthly** Maintenance and Service **Activity Schedule " 2"**	**Three monthly** Maintenance and Service **Activity Schedule " 3"**	**Six monthly** Maintenance and Service **Activity Schedule " 4"**	**Twelve monthly** Maintenance and Service **Activity Schedule " 5"**
Car / counterweight / ram guide shoes					
check car guide shoes / rollers for wear and adjust or replace when necessary					
check lubrication					
Car / counterweight guides					
ensure rollers are running true and not too much tension					
ensure the car or counterweight is statically balanced					
ensure the float is not too much					
verify the distance between guides measurements for possible changes due to building settlement or loose brackets, etc.					
check that rollers run true					
check that car and counterweight is statically balanced					
check for not too much pressure					
check that guards are fitted over the top rollers					
ensure rollers are running true and not too much tension					
ensure that there is a film of oil where required on all guide surfaces					
check fixings for security					
Safety gear / pawl / clamping devices					
check all moving parts for free movement and wear					
check that safeties apply without pulling the car or counterweight skew					
check fixings for security					
lubricate when necessary					

HYDRAULIC LIFTS LIST OF EXAMINATIONS **Schedule 2**	**Monthly** Maintenance and Service **Activity Schedule " 1"**	**Two monthly** Maintenance and Service **Activity Schedule " 2"**	**Three monthly** Maintenance and Service **Activity Schedule " 3"**	**Six monthly** Maintenance and Service **Activity Schedule " 4"**	**Twelve monthly** Maintenance and Service **Activity Schedule " 5"**
Suspension ropes / chains					
check for wear					
check for rope thicknesses throughout (1mm on 13mm to much)					
check for elongation					
check for correct tension					
lubricate when necessary					
Rope terminations					
check for signs of deterioration and wear					
check if locknuts and split pins are provided					
check if grips are fitted correctly					
check if babbitt is filled correctly					
check fixings for security					
check for fracture and tightness					
Landing entrances					
check every landing lock for operation and security					
check doors for free running					
check doors shoe integrity					
check wire rope, chain or belt, when used, for integrity					
check for excessive wear and door gaps					
check door passenger protection devices					
check vision panels					
check emergency release mechanism					
lubricate when necessary					

HYDRAULIC LIFTS LIST OF EXAMINATIONS **Schedule 2**	**Monthly** Maintenance and Service **Activity Schedule " 1"**	**Two monthly** Maintenance and Service **Activity Schedule " 2"**	**Three monthly** Maintenance and Service **Activity Schedule " 3"**	**Six monthly** Maintenance and Service **Activity Schedule " 4"**	**Twelve monthly** Maintenance and Service **Activity Schedule " 5"**
Final limit switches					
check operation and correct functioning					
check over-travel clearances					
lubricate when necessary					
Electric safety devices					
check operations and safety functioning					
check the stoppage of the lift when an earthing is created on the safety chain					
check for fitting of correct fuses and quality of earth circuits					
Car door operation					
check door closed contact or lock					
check doors for free running					
check operation and adjustment of door operator (if fitted)					
check wire rope or chain, when used, for integrity					
check for excessive wear and door gaps					
check door passenger protection device					
lubricate when necessary					
Over-speed governor and tension pulley					
check all moving parts for free movement and wear					
check for correct operation					
keep mechanism clean, switches limits, jaws, etc.					
check for operation and correct adjustment of rupture valve / restrictor					
lubricate when necessary					

HYDRAULIC LIFTS LIST OF EXAMINATIONS **Schedule 2**	**Monthly** Maintenance and Service **Activity Schedule " 1"**	**Two monthly** Maintenance and Service **Activity Schedule " 2"**	**Three monthly** Maintenance and Service **Activity Schedule " 3"**	**Six monthly** Maintenance and Service **Activity Schedule " 4"**	**Twelve monthly** Maintenance and Service **Activity Schedule " 5"**
Anti-creep device					
check for correct operation					
Leakage					
ensure that the empty car, stopped at the highest level served, does not move more than 10 mm downward within 10 min due to leakage					
Floor level					
check lift for floor levels at landing					
Pressure relief valve					
check for correct adjustment					
Thermal devices for temperature of oil					
check for correct functioning of sensor					
Manual lowering					
check for operation and correct adjustment					
Hand pump					
check for operation					
Hose / pipe work					
check for failures					
Overload device					
check for correct functioning					
Components					
ensure that all components are clean and free from dust as required for correct functioning					

3. SCHEDULE – ELECTRIC ESCALATORS – LIST OF EXAMINATIONS

List of examinations to be carried out on an electric escalator

Note: The relevant part of SANS 1543 must be used as a guiding document for these activities.

ELECTRIC ESCALATORS LIST OF EXAMINATIONS **Schedule 1**	**Monthly** Maintenance and Service **Activity Schedule " 1"**	**Two monthly** Maintenance and Service **Activity Schedule " 2"**	**Three monthly** Maintenance and Service **Activity Schedule " 3"**	**Six monthly** Maintenance and Service **Activity Schedule " 4"**	**Twelve monthly** Maintenance and Service **Activity Schedule " 5"**
Drive/ return stations					
Check that top and bottom tanks are clean and free of excessive oil spillage					
check that oil spill pans are installed and secure and properly overlapped to prevent oil from getting thru into/onto living areas, ceilings, walkaways, public areas etc.					
check that drip trays are available to catch excessive oil spills from the drive chains etc.					
Inspect the cladding for open gaps and security to prevent any dangerous conditions where the escalator/ passenger conveyor is exposed to public areas.					
check that the tank covers fit properly and on even plane with the floor tiles or carpeting surrounding it, with no trip hazards, loose foot plate sections or worn anti slip patterns etc.					
Check that all fixing screws are in place and secured.					
Check that lighting is installed and socket outlets are available.					
Ensure areas are clean, free from debris and oil.					
Drive machinery space					
Check that the machine is not leaking oil.					
check that wear is not apparent.					

ELECTRIC ESCALATORS LIST OF EXAMINATIONS **Schedule 1**	**Monthly** Maintenance and Service **Activity Schedule " 1"**	**Two monthly** Maintenance and Service **Activity Schedule " 2"**	**Three monthly** Maintenance and Service **Activity Schedule " 3"**	**Six monthly** Maintenance and Service **Activity Schedule " 4"**	**Twelve monthly** Maintenance and Service **Activity Schedule " 5"**
check that the drive sprocket and main chain show no excessive wear and is tensioned properly.					
check that he broken chain device is in place and will operate switch and safety brake should the chain fail.					
check if further adjustments are possible if this chain should stretch and become noisy.					
Check that a guard is fitted between the running steps and machinery space for safety.					
check that lubricators and pipe work, if fitted, to various chains and bearings are in place and secured.					
lubricate gearbox and change oil as required.					

ELECTRIC ESCALATORS LIST OF EXAMINATIONS **Schedule 1**	**Monthly** Maintenance and Service **Activity Schedule " 1"**	**Two monthly** Maintenance and Service **Activity Schedule " 2"**	**Three monthly** Maintenance and Service **Activity Schedule " 3"**	**Six monthly** Maintenance and Service **Activity Schedule " 4"**	**Twelve monthly** Maintenance and Service **Activity Schedule " 5"**
Brake(s)					
check for correct adjustment and tension.					
check for wear on liners and subsequent brake slide to comply with the current SANS 1543 codes of practice.					
Check all moving parts, swivel pins and lubricate as required.					
Lubricate when necessary.					
Controller					
check that arc barriers on controller are in place.					
check that correct fuses are in place. Circuit breakers are in place and functional.					
check that the controller is covered and securely fitted to its fixing brackets or positioning hooks.					
check that the trailing cable work is not damaged, and the cabinet is easily pulled out to be worked on.					
check that the wiring diagrams are available and protected.					
check for connections and boxes, terminals are secured and protected with covers fitted where required.					
Ensure cabinet is clean, dry, and free of dust.					
Check terminal connections, along with contactor faces, for pitting or sings of heavy arcing.					
Electrical supply and control circuits to the top and bottom tanks					
check that the main circuit breaker is in good condition and cable work secured, covered, and protected.					
check that the circuit breaker will protect the equipment against overloads, shorts etc.					

ELECTRIC ESCALATORS LIST OF EXAMINATIONS **Schedule 1**	**Monthly** Maintenance and Service **Activity Schedule " 1"**	**Two monthly** Maintenance and Service **Activity Schedule " 2"**	**Three monthly** Maintenance and Service **Activity Schedule " 3"**	**Six monthly** Maintenance and Service **Activity Schedule " 4"**	**Twelve monthly** Maintenance and Service **Activity Schedule " 5"**
check that the lighting and socket outlets are in working condition. Top and bottom.					
check that all cable work down the escalator truss is in good condition and secured. These are not oil soaked and sheathing has not deteriorated, and bared wiring is not visible.					
Check that the connection boxes and limit switches are in working condition and covered.					
Main step chain/ main drive chain					
Check for correct adjustment.					
check for wear and tensions.					
Check the integrity of the step axles, bushes and rollers, lubrication must be verified.					
Check tracks for wear, smoothness and holes have not occurred due to excessive wear etc.					
Check that up thrust tracks are properly adjusted, and fixing are secured.					
Check that the bottom carriage moves freely on its tracks and its tension springs are properly adjusted.					
Check that it's over travel and under travel limits are properly set and will trip if required.					
Ensure chain is adequately lubricated.					

ELECTRIC ESCALATORS LIST OF EXAMINATIONS **Schedule 1**	**Monthly** Maintenance and Service **Activity Schedule " 1"**	**Two monthly** Maintenance and Service **Activity Schedule " 2"**	**Three monthly** Maintenance and Service **Activity Schedule " 3"**	**Six monthly** Maintenance and Service **Activity Schedule " 4"**	**Twelve monthly** Maintenance and Service **Activity Schedule " 5"**
Step/ pallet					
Check integrity of step/pallets and step/ pallet wheels.					
Check that rollers are in good condition.					
check that they fit onto the step axle bushes and excessive play is not present.					
check that running clearances are within required tolerances as stipulated in the SANS 1543 codes of practice, between steps and the skirts.					
check that the steps track centralized thru the combs and the top and bottom step phenolic guides are properly adjusted.					
check that the broken step devices top and bottom are in place, properly adjusted and functional. (Up thrust tracks)					
check that the sideways play on the steps/pallets is minimised. Washed shims have been fitted.					
Check that yellow warning edges on the steps are all fitted and in place if fitted.					
Belt					
check condition of belt.					
Check tension of belt for correct and step to skirting clearances.					
Clearances					
Check steps to step clearances and step to skirting clearances					
Combs/ comb carrier					
Check conditions of combs, their functions and comb carrier clearance.					
Check the combs for broken teeth and security. Properly fixed and secured.					
Check that these run at the correct depth and are centralized in the step flutes.					

ELECTRIC ESCALATORS LIST OF EXAMINATIONS **Schedule 1**	**Monthly** Maintenance and Service **Activity Schedule " 1"**	**Two monthly** Maintenance and Service **Activity Schedule " 2"**	**Three monthly** Maintenance and Service **Activity Schedule " 3"**	**Six monthly** Maintenance and Service **Activity Schedule " 4"**	**Twelve monthly** Maintenance and Service **Activity Schedule " 5"**
Check that up thrust switches on the comb carriers/plates if fitted are functional.					
Handrails and related belts					
check free running of handrail and condition.					
check handrail integrity. Examine for cracks and opened finger traps, joints failing etc.					
Proper tensions must be verified to prevent slip and over tension. Both could cause damage to the rails.					
Drive belts, tensioning pulleys, wheels, counter shaft bearing and drive chain, "V" belts and pulley grooves must be checked, for adjustments and wear.					
Check handrail guides for wear and adjustments that could cause damage to the interior of the pricy rails. The unit must switch off should the above occur.					
Handrail entry point switches and brushes must be checked for integrity and to protect against hands or objects entering.					
Newel rollers that could cause damage and noise must be checked and cleaned on a regular basis.					
The handrail travel way must be kept clean and free of protrusions that could cause damage.					
Check if fitted the motion controls for continuous handrail movement.					
Check correct operation of handrail drive mechanism.					
Ensure all moving parts are free.					
Lubricate when necessary.					
Check that the handrails and step pallets are moving at about the same speed.					

ELECTRIC ESCALATORS LIST OF EXAMINATIONS **Schedule 1**	**Monthly** Maintenance and Service **Activity Schedule " 1"**	**Two monthly** Maintenance and Service **Activity Schedule " 2"**	**Three monthly** Maintenance and Service **Activity Schedule " 3"**	**Six monthly** Maintenance and Service **Activity Schedule " 4"**	**Twelve monthly** Maintenance and Service **Activity Schedule " 5"**
Skirt and Incline skirt panels, glass and opaque balustrades					
Check that the skirt panels be smoothly jointed with no protrusions to prevent clothes hooking up and cuts to limbs etc.					
Check side panel switches if fitted for functionality.					
All fixing screws should be fitted and not protrude.					
Gaps to the steps should be kept to the minimum.					
Cracked or broken glass must be replaced.					
All balustrades must be smooth and without protrusions, cutting edges and finger traps.					
Escalators crossing over must have guards to prevent pinching action in these areas.					
Climbing up between two escalators must be prevented.					
Guiding and counter guide system					
Check for alignment and wear.					
Safety devices					
Check operation of all safety devices fitted, including anti-reversal device fitted to the machine.					

ELECTRIC ESCALATORS LIST OF EXAMINATIONS **Schedule 1**	**Monthly** Maintenance and Service **Activity Schedule " 1"**	**Two monthly** Maintenance and Service **Activity Schedule " 2"**	**Three monthly** Maintenance and Service **Activity Schedule " 3"**	**Six monthly** Maintenance and Service **Activity Schedule " 4"**	**Twelve monthly** Maintenance and Service **Activity Schedule " 5"**
Over-speed governor					
Check all moving parts for free movement and wear.					
Check the over speed device fitted to the motor shaft for functionality.					
Verify the operation of the safety brake system should the main drive chain fail.					
Lubricate where necessary.					
Deflector devices (where fitted)					
Check condition of deflector devices and clearance.					

ELECTRIC ESCALATORS LIST OF EXAMINATIONS **Schedule 1**	**Monthly** Maintenance and Service **Activity Schedule " 1"**	**Two monthly** Maintenance and Service **Activity Schedule " 2"**	**Three monthly** Maintenance and Service **Activity Schedule " 3"**	**Six monthly** Maintenance and Service **Activity Schedule " 4"**	**Twelve monthly** Maintenance and Service **Activity Schedule " 5"**
Lighting					
Check operation of lighting at balustrades, steps etc.					
Check that lighting over the escalator is sufficient.					
Check that under step lights are operational if fitted.					
Check that balustrade lights are working if fitted.					
Check that skirt lights are operational if fitted at entry points.					
Components					
Ensure that all components are clean and kept free from dust as required for correct functioning					

D. WARRANTY

Responsibility for equipment room conditions or overall system performance shall be for contractors' accountability. The minimum warranty period shall be twelve (12) months for new parts; six (6) months for labour. Warranty repair and/or replacement shall be performed at no additional charge to Transnet. All warranty periods shall begin upon acceptance by the end user department.

E. MINIMUM STOCK HOLDING

The bidder should, at all times, stock any replacement part necessary for the execution of Works. The principle that applies to stock keeping is that downtime on equipment should be kept to a minimum. Therefore, all consumables that might be necessary for the execution of the works shall be readily available. The bidders should list exclusions, if any, to the above with the maximum time necessary to acquire this spare part.

Item name/ description	**Time to acquire**

F. MINIMUM SPECIAL EQUIPMENT

The bidder should list any special equipment, if any, that might be necessary for the execution of the Works, that will not be, either on site, or at the premises on daily basis. The bidder should indicate the maximum time necessary to acquire this equipment.

Item name/ description	Time to acquire

Staffing requirements:

Minimum of 4 x on site lift maintenance technicians to be on site at all operating hours of the Carlton Precinct to attend to all lift and escalator maintenance requests.

ANNEXURE 9

CARLTON CENTRE CIVIL INFRASTRUCTURE MAINTENANCE SCHEDULE AND INVENTORY

TDR FOR PROVISION OF INTEGRATED FACILITIES MANAGEMENT AT TRANSNET CARLTON CENTRE FOR A PERIOD OF 3 YEARS

INVENTORY SUMMARY

#	Item	Qty	Size
1	**PUMPS**	15	22 KW
A	**Storm water Pumps**	3	13 kw
B	**Sewer pumps**	5	13 kw
C	**Fresh water (Booster) pumps**	6	75 hp
2	**Geysers**	2	200L
3	**Boilers**	2	30th floor and 11th floors
4	**Lifting equipment**	2	Sky rink and service level
A	**Beams**	2	Sky rink and service level
B	**Roof anchors**	20 per floor	1st floor to 51st floor
C	**Safety lines**	20 per floor	1st floor to 51st floor
5	**High pressure vessels**	16	
6	**Parking Management system**	2	To be installed
A	**Boom Poles**	13	3M `
B	**Automatic Paying station**	7	
C	**Lane Entry station**	2	
D	**Lane Exit Station**	4	
E	**Nested Area**	6	

F	**Valiprint**	1	
G	**Management station**	1	
3	**Building structures and roof**		As per Annexure 1 (Asset Inventory)
4	**Ablution, kitchen facilities and equipment (basins, sinks, toilets, urinals, etc)**		As per Annexure 1 (Asset Inventory) and 5 (Hygiene)

1. PUMPS

Quantity	17
Frequency	**Activity**
Maintenance	
Weekly	Visual inspection
3 Monthly	Remove all external and internal dirt
6 Monthly	Major service (check the impellers, greasing and cutting disc etc…

2. GEYSERS

Quantity	
Specification	
Frequency	**Activity**
Piping	
Monthly	- Inspect water piping and equipment for water leaks and repair leaks where required - Safety valves must be flushed to ensure that there is no blockage - Insert pipe work, pipe joints, pipe work insulation and pipe support and rectify where required - Insert valves, steam traps, water gauges, temperature controls sight glasses thermometer etc. for water leaks, and repair where necessary - Flush clean all pipe work to remove any wild scale, stones or other debris which may damage the tank living. - Check and ensure that all electrical connections are tight and tighten any loose electrical connections
Industrial geysers	

12 Monthly	- Check and ensure that all electrical connections are tight and tighten any loose electrical connections - Drain water from the industrial geysers and check any internal defects and ensure that corrosion protection is still intact - Check and service sacrificial anode thermostat and burnt element after geyser water drainage. Replace all items if required. - Sample and test cold water supply for foreign particles which may damage the geyser systems, purify cold water supply if necessary. - Check and clean electrical control panel and check for correct operation.
	-

3. Lifting Equipment

Quantity	
Frequency	**Activity**
Beams	
Annually	- Check paint work and re-paint with suitable paint if necessary - Check all bolts, nuts and studs for high mast structure. - Check for the cracks on the walls and slap. - Check for structural damage around.
Safety lines and anchors	
	- Check for the cracks and patty - Check for all moving parts for free movement and grease when needed. - Tighten locks and handles where necessary
Roof	
Annually	- Clean all gutters to be free of dirt and leave - Check the down pipes if they are not blocked and they are secured. - Check the water proofing if it is not lifting. - Check for the water proofing joints

4 High Pressure vessel

Quantity	
Frequency	**Activity**
Servicing and test high pressure vessels	
Once every after two years	- Hydraulic testing: 1.25 / 1.1 Pnue test - Internal and external examination - Ultrasonic thickness test - Chemical Cleaner

3. BUILDING STRUCTURES AND ROOFS

Quantity	
Frequency	**Activity**
Building Structure	
	- Check paint work and re-paint with suitable paint if necessary - Check all bolts, nuts and studs for high mast structure. - Check for the cracks on the walls and slap.

	- Check for structural damage around.
Doors and windows	
	- Check for the cracks and patty - Check for all moving parts for free movement and grease when needed. - Tighten locks and handles where necessary
Roofs and gutters	
	- Clean all gutters to be free of dirt and leave - Check the down pipes if they are not blocked and they are secured. - Check the water proofing if it is not lifting. - Check for the water proofing joints

4. PARKING MANAGEMENT SYSTEM

Quantity	
Frequency	**Activity**
COMMON- LANE Stations, APS's and Cashiers	
	- Remove loose tickets from station - Clean dirt, cob-we,etc from station using a blower aor mini-vacuum - Test housing is loose and re-secure - Clean extractor fan and heater and adjust thermostat to suit local conditions.make sure no tickets etc obstruct fan/heater - Check the door locking mechanisms and lubricate if neede - Check t - Check all bolts, nuts and studs for high mast structure. - Check for the cracks on the walls and slap. - Check for structural damage around.
Doors and windows	
	- Check for the cracks and patty - Check for all moving parts for free movement and grease when needed. - Tighten locks and handles where necessary
Roofs and gutters	
	- Clean all gutters to be free of dirt and leave - Check the down pipes if they are not blocked and they are secured. - Check the water proofing if it is not lifting. - Check for the water proofing joints

	- Check paint work and re-paint with suitable paint if necessary - Check all bolts, nuts and studs for high mast structure. - Check for the cracks on the walls and slap. - Check for structural damage around.
Doors and windows	
	- Check for the cracks and patty - Check for all moving parts for free movement and grease when needed.

	- Tighten locks and handles where necessary
Roofs and gutters	
	- Clean all gutters to be free of dirt and leave - Check the down pipes if they are not blocked and they are secured. - Check the water proofing if it is not lifting. - Check for the water proofing joints

4. ABLUTION, KITCHEN FACILITIES AND EQUIPMENT (BASINS, SINKS, TOILETS, URINALS, ETC)

Quantity	
Frequency	**Activity**
Basins and Sinks	
12 Monthly	- Check for the leaks. - Check the p/trap and S/trap. - Check the silicon around the sink. - Check the sink tap if it is tight.
Toilets and flushing mechanisms	
Monthly	- Check that all doors are closing properly. - Check for cistern if is functional. - Check for leaks.
Urinals and mechanisms	
Monthly	- Check and clean a bottle trap. - Check for water pressure when flushing. - Check for the water leaks.

8. MINIMUM STOCK HOLDING

The bidder should, at all times, stock any replacement part necessary for the execution of Works. The principle that applies to stock keeping is that downtime on equipment should be kept to a minimum. Therefore, all consumables that might be necessary for the execution of the works shall be readily available. The bidders should list exclusions, if any, to the above with the maximum time necessary to acquire this spare part.

Item name/ description	Time to acquire

9. MINIMUM SPECIAL EQUIPMENT

The bidder should list any special equipment, if any, that might be necessary for the execution of the Works, that will not be, either on site, or at the premises on daily basis. The bidder should indicate the maximum time necessary to acquire this equipment.

Item name/ description	Time to acquire

Staffing requirements:

- Civil maintenance will require a minimum of 6 personnel comprising of 3 multi skilled technical workers and 3 qualified, multi skilled Plumber (or similar skill) to attend to planned, day to day civil maintenance, breakdowns, repairs and upgrades.
- It is the responsibility of the bidder to provide tools, PPE, etc for the above staff.

Material:

- Material required for day to day and unplanned maintenance will be sourced under pass through costs as the works cannot be predetermined.
- Material (lubricants, oils, seals, anti-freeze, etc) and labour (internal or outsourced) for all periodic planned maintenance will form part of fixed costs and hence should be included in the quote on the pricing schedule, any unforeseen or additional work during periodic maintenance should be reported to TP Facilities Management team and if additional spares are required they will form part of pass through costs.

ANNEXURE 10

FIRE AND GAS LINE INFRASTRUCTURE INVENTORY AND MAINTENANCE SCHEDULE

PROVISION OF INTEGRATED FACILITIES MANAGEMENT

AT TRANSNET PROPERTY CARLTON CENTRE

FOR A PERIOD OF 3 YEARS

SCOPE OF WORK AND INVENTORY SUMMARY

1. *Employer*'s Objectives

1.1. The *Employer's* objective is to enter into a term service contract with the *Contractor* to provide Preventative, Corrective and Emergency Maintenance For Fire Protection System and Gas line Installations At Carlton Centre In Johannesburg For Transnet Property For A Period Of 36 Months; to satisfy legislative requirements relating to the Occupational Health and Safety Act, 1993, (Act No 85 of 1993).

1.2. The Service is to be carried out in a programmed sequence (Contractors Plan / Maintenance Plan).

2. Executive Overview

2.1. The *Employer* is desirous that its Employees, Tenants and Others should receive the Services to ensure that the Improvements, Installation(s) and Equipment in or on the *Site / Affected Property* comply with all related standards through the conclusion of this Term Service Contract with the *Contractor*.

2.2. This Service covers the preventative, corrective and emergency maintenance on a planned basis on / in the Site / Affected Property, or any other work arising out of or incidental to the above or required of the Contractor for the proper completion of the Service in accordance with the true meaning and intent of this Contract. This will be a Non-inclusive Contract. The Service shall include all planned maintenance as per bill of activity schedule. This will include all the management, maintenance and repair of all other technical equipment not listed in the bill of activity schedule.

2.3. The *Contractor* shall inspect the Site / Affected Property on an on-going basis to identify non-compliances and determine necessary repairs or attend to corrections for the safe and efficient operation of the Installations(s) and Equipment

2.4. The *Servic*e shall be executed in accordance with the latest edition / amendment of the following inter alia:

- The Occupational Health and Safety Act, 1993 (Act No 85 of 1993) and the regulations promulgated in terms of the Act.

- Fire Detection and Alarm Systems for Building System Design Installation and Servicing SANS 10139

- National Building Regulations SANS 10400.

- The Regulations and By-laws of the Local Authority.
- The local Fire Department Regulations.
- Basic Conditions of Employment Act 75 of 1997
- Installation of gaseous extinguishing systems ISO 14520
- Installation of CO_2 gas extinguishing systems BS 5306
- Fire protection for electronic equipment installations. Code of practice BS 6266
- SANS 10087 Series

2.5. The *Contractor* shall keep the above documentation on site at all times, inclusive of the *Contractor*'s Safety file.

2.6. The Contractor must take cognizance of the fact that the Site's / Affected Properties may be occupied during the Service operation and care must be taken to minimize the disruption to tenants. Should any Service be in conflict with the tenant's operations, the Contractor will be required to adapt his program to suit the needs of the tenant if considered reasonable by the Service manager (Building- / Centre manager)

3. Description of the *Services*

3.1. The *Contractor* shall after the first inspection of the existing Installation on / in the Sites / Affected Properties.

3.1.1. Check correctness of as-built Installation drawings / diagrams- and where needed update these drawings / diagrams. Provide the *Employer* with a set of as-built drawing / diagrams where no as-built drawings / diagrams exist. Thereafter keep these drawing / diagrams updated for the duration of this contract.

3.1.2. Examine the Installation in accordance with the statutory requirements and manufacturer's maintenance instruction or where such instructions are not available: the *Contractor* shall use his own maintenance instructions that will also include those set out in the attached Activity Schedules to update the relevant Activity Schedules for approval by the *Employer*.

3.1.3. Check correctness of Site Information. Where the Site Information shows no or incomplete information for a specific *Site / Affected Property* the *Contractor*

will provide the *Employer* with a detail survey of the *Site / Affected Property* indicating all equipment associated with the Installation, where needed update this information and thereafter keep it updated for the duration of this Contract.

3.1.4. Check correctness and or relevance of all Activity Schedules attached to this Scope of Work and where needed provide the *Employer* with proposed amendments.

3.1.4.1. No alterations, erasure or addition is to be made in the text and or quantities of the above document without the approval of the *Employer*. Any alteration, removal or addition made without the approval of the *Employer* will not be recognised and the original wording and or quantities of the specific document will be adhered to.

3.1.4.2. The responsibility for accuracy of the text and or quantities written into the above document remains with the *Contractor* who updates the documents after the first inspection of this Contract.

3.2. Following the first inspection, the *Contractor* shall execute the services as prescribe in the Activity Schedules and provide a detailed and fully motivated quotation for work immediately necessary to bring the Installation into a maintainable condition. This quotation shall be submitted to the *Employer* for his consideration and decision as to the necessity for the work. Failure to comply with this requirement shall imply that the *Contractor* accepts the Installation as being in sound working order and a satisfactory state of repair and compliant with all applicable statutory requirements at the commencement of this Contract. The quotation must be received within three months of the starting date of this contract.

3.3. Where the service records of a particular *Site / Affected Property* are not available, the first service of the Installation will be done as follow and according to Activity schedule annexure but not limited to:

3.3.1. Six-monthly inspection and maintenance of sprinkler installation.

3.3.2. Six-monthly inspection of installation control valves (ICV's).

3.3.3. Annual maintenance of diesel engine pump set.

3.3.4. Annual inspection of storage tanks.

3.3.5. Annual inspection and maintenance of fire hydrants and fire booster connection.

3.3.6. Annual inspection and maintenance of hoses reels.

3.3.7. Annual inspection and maintenance of portable/wheeled (mobile) fire extinguishers including any pressure test required by any statutory authority / regulation.

3.3.8. Annual inspection and maintenance of fire detection installation.

3.3.9. Six-monthly pump set flow test and maintenance.

3.3.10. Six-monthly town main flow test and maintenance.

3.3.11. Six-monthly inspection and maintenance of diesel engine pump set.

3.3.12. Six-monthly inspection and maintenance of electric motor driven pump set.

3.3.13. Annual inspection and maintenance of gas extinguishing systems.

3.3.14. Monthly visual Inspection of Gas Lines

3.3.15. Monthly leak Detection (Basic/comprehensive)

3.3.16. Quarterly Valve Operation Check

3.3.17. Annually Pressure Testing

3.3.18. Monthly Appliance & Equipment Check

3.3.19. Quarterly Ventilation & Exhaust System Check

3.4. Checks / maintenance / inspection / tests etc will also include those specified by the supplier or manufacturer of the components of the Installation. The Contractor will be responsible to include this in the applicable Activity Schedule.

3.5. The Contractor shall use a set of applicable Activity Schedule per Site / Affected Property that will be neatly bound to serve as an Installation logbook of the particular Site / Affected Property.

3.6. Upon completion of a Service / Maintenance visit, the Contractor shall complete and sign all documents needed, listing all additional work required and submit this to the Employer's representative for approval and endorsement before leaving the Site / Affected Property.

3.7. The Contractor shall maintain the Installation and other logbooks of the Installation on the Site / Affected Property which contains such data and information that is required. After each service, repair or call-out; he shall enter, sign and date remarks in the logbooks and provide copies to the Service Manager (Building- / Centre Manager). Failing to provide the Service Manager (Building- / Centre Manager) with the relevant documents / copies, the Installation will be regarded as having not been serviced.

3.8. The Contractor shall at all times upon arrival on the Site / Affected Property for each inspection / service or call-out, report to the Service Manager (Building- / Centre Manager) or such nominated representative, in order to ascertain the reason for the call-out, and / or to obtain information with regard to any problems with the Service and or Installation on the Site / Affected Property. Failing to report to the Service Manager (Building- / Centre Manager), the Installation will be seen as not being serviced.

3.9. The Contractor shall take adequate precaution against damage to the Site / Affected Property, Installation, equipment and protect the public, the property of the public and the property and workmen of the Employer and all other persons, from injury or damage during the course of the Service. The Contractor or any of its employees, sub-contractors or agents will be held responsible for any damage to the Site / Affected Property or the contents thereof or for indirect loss, caused by him, either as a result of his actions or failure to act, whether it was done during the normal performance of their duties or not, and a claim for damages may be instituted against the Contractor accordingly.

3.10. The Contractor shall maintain all plant rooms and or service ducts in a clean, neat and tidy condition and remove all debris and surplus materials from the Site / Affected Property.

3.11. The *Employer*, at the request of the *Contractor*, shall arrange for necessary shutdowns of services and access to equipment to facilitate the execution of the Service wherever possible during normal working hours.

3.12. Any disruptions which are deemed to be beyond the Contractor's control, and which result in the Contractor's workmen having to leave the Site / Affected Property shall be logged in the applicable report book.

3.13. Notwithstanding anything expressed or implied to the contrary in this Scope of Work, the Contractor, shall plan and execute the Service in this Contract in such a way with sufficient spares and materials available and with sufficient staff employed on Site / Affected Property that, subject to proper operation of the Installation by the Employer and or his Tenants, the downtime of the various pieces of equipment of the Installations will be limited to a reasonable time period comparable with the item of equipment being maintained.

3.14. The working of overtime is not intended under this Contract, and no overtime will be paid in respect of normal Works. Overtime will only be entertained in cases of emergencies where breakdowns occur to essential services. Should an emergency arise, or where it is deemed necessary in the interests of the Employer, specific authority for such overtime must be obtained before the work is conducted.

3.15. Planning of all normal routine services must ensure that there will be a minimum interruption to the service provided by the Installation and the Price List / Rates shall provide for the cost of performing service activities requiring prolonged plant shutdown outside of normal working hours.

3.16. The *Employer* shall:

3.16.1. Report to the *Contractor* any irregular performance of or defect in, or damage to any items covered under this Contract.

3.16.2. Use the items covered under this Contract in a normal and proper manner, including preventing a material change in the use or usage or the overloading thereof.

3.16.3. Protect the items covered under this Contract against vandalism, abuse or misuse and accidental damage.

3.16.4. Ensure that the Site / Affected Property with regards to the equipment spaces comply with the applicable regulations and local bylaws.

3.16.5. At the request of the Contractor, shall arrange for necessary shutdowns of services and equipment to facilitate the execution of the Service wherever possible during normal working hours.

3.17. Emergency Call Out Service and Downtime of Equipment

3.17.1. The *Contractor* shall for the period of this Contract provide and maintain an 24-7 emergency call-out service, enabling a qualified technician (competent person) being called upon by the *Service manager* to undertake any repairs or emergency service.

3.17.2. Emergency service may be executed without receipt of an official order number and solely on the request from the *Employer*. The *Contractor* must however ensure that the official from the *Employer* signs the job card. The *Contractor* must also ensure that he obtains an official order number from the *Employer* the following working day.

3.17.3. The Contractor shall inform the Employer verbally and act immediately on any potentially hazard or undesirable situation which may cause harm to persons, or which may damage or reduce the life expectancy of the equipment, even if the hazardous or undesirable situation does not form part of the Service.

3.17.4. Only breakdowns which affect public health and safety or the operation and safety of sensitive equipment, shall be treated as emergency repairs. Breakdowns involving personal comfort shall not be considered as emergency repairs unless authorized by the Employer.

3.17.5. The response time for callouts (i.e., from the Contractor's receipt of an official request to his attendance on Site / Affected Property) shall be as follow:

3.17.5.1. Emergency callouts shall not exceed half (0.5) hour during working hours.

3.17.5.2. Emergency callouts shall not exceed one (1) hour after working hours.

3.17.5.3. Normal breakdown calls shall not exceed two (2) hours.

3.17.6. Allowed downtimes for the equipment on / in the Site / Affected Property shall be as follow:

3.17.6.1. Major failures / problems, Electrical failures, requiring stripping and rebuilding or machining will not exceed five (5) days.

3.17.7. Should repairs not be possible within the downtime as indicated in this clause, Emergency call out services and downtime of equipment, above it will be the responsibility of the *Contractor* to obtain extension of time. The request must describe the breakdown, the cause of it, and state clearly all the reasons for the extension and the actual extension required in regard to the repair.

3.17.8. No extra payment will be made for the standby service availability and attendance to breakdowns or other emergencies whether or not during or after normal working hours and the costs thereof shall be included in the Price list/ Rate.

3.17.9. All breakdowns shall be analysed by the Contractor and relevant action shall be taken. The fault analysis (call-out rate) shall be compiled by the Contractor and shall be recorded. This history shall be kept for at least three (3) years

3.17.10. Failure of the Contractor to meet the response-time or downtimes under normal circumstances may indicate the Contractor's inability to provide the required Service and may invoke termination of this Contract.

3.17.11. The Contractor shall ensure that the Service manager is at all times in possession of such telephone numbers and contact addresses as may be necessary to enable the Employer to make emergency calls / callouts. Adequate communication equipment shall be provided by the Contractor to ensure a minimum delay in the response to emergency calls.

Activity Schedule

(Please note: The below list of schedules is an indicative only and not exhaustive, it is therefore the duty of the contractor to update the list of activity, two (2) months from the date of assuming responsibility as the contracted Service Provider)

Activity Schedule "A

SIX MONTHLY TOWN INSPECTION AND MAINTENANCE OF INSTALLATION CONTROL VALVES (ICV'S)

Building Address: …… Place code……..
Building Number: ……. Place code: ……. Installation Number. ……..

1 CHECKS

1.1	Check that all the valves are in their correct operating position. All installation control valves shall be opened in their correct operating position with padlocks abd light loose link chains after inspection.		**Checked:**	(Yes)	(No).
1.2	Check incoming Main pressure.		……kPa		
1.3	Main stop Valve.	-	**Fully Open**	(Yes)	(No).
1.4	Alarm Cock Valve.	-	Open	(Yes)	(No).
1.5	Test and Dry Valves	-	Closed	(Yes)	(No).

REMARKS:

_____

_____

_____

2 OPERATIONS:

2.1	Open 15mm test valve and test mechanical alarm	**Operrated**	(Yes)	(No).

2.2 Open larger test valve and monitor Standing Pressure: ……..kPa **Before**

2.3 Boost pressure using false alarm prevention pump Main Pressure.

……..kPa **Before** ……..kPa **After**

2.4 Attach and or sign service labels (Yes) (No).

REMARKS:

_____

_____

_____

3 COMPLANCE

Check labelling of sprinkler installation control valves. (Yes) (No).

Check labelling of control valves (Yes) (No).

Check labelling of pump connection. (Yes) (No).

REMARKS:

_____

_____

_____

Registered competent person:

Name:

…… Signature: …….

Date:

……. Time: ……

Activity Schedule "I

SIX MONTHLY MUNICIPAL MAIN SUPPLY

FLOW TEST AND MAINTENANCE

Building Address: …… Place code……..
Building Number: ……..…… Place code: ……..…….. Installation Number. ……..……..

Note: The pressure-flow characteristics of the water supply of any mains, elevated private reservoir or gravity tank (or any combonation of these) shall be tested independently.

Test Arrangement: The town main supply, elevated private reservoir supply and gravity tank supply shall be tested as follows:

- Fully open the control valves that control the flow from the supply to the installation.
- Manipulate the drain (test) valve to give appropriate flow required.
- When the flow is steady, record the supply pressure measured on the installation control valve C gauge, in kilopascals

1 Standing pressure **before test** ……kPa

2 Describe the test procedure and pressures recorded:

_____
_____
_____
_____
_____
_____
_____

3 Standing pressure **after test** ……kPa

4 Note operating pressure and flow pressure ……kPa and flow …….. l/

REMARKS:

_____

Registered competent person:

Name: …… Signature: ……..

Date:

…….. Time: ……

Activity Schedule "

ANNUAL INSPECTION AND MAINTENANCE OF

FIRE HYDRANTS INSTALLED

Building Address: …… Place code……..

Building Number: …… Installation Number. …….. Fire Hyrdant Number ……..

FIRE HYDRANT
(underground)

1	Check that the access manhole is not damaged and is painted red for identification	(Yes)	(No
2	Check that the underground valve is free of mud, dirty water or other debris	(Yes)	(No
3	Check that the valve is not leaking	(Yes)	(No
4	Fit a standpipe, fitted with a 65mm blank cap assembly complete with a pressure gauge and ball-cock	(Yes)	(No
5	Using the correct key and poker, open the hydrant slowly.	(Yes)	(No
6	Crack open the blank cap assembly ball-cock and drain the stagnant water into a bucket	(Yes)	(No
7	Close the blank cap assembly ball-cock and check and record the static pressure.	_____kPa	
8	Close the hydrant with the key and poker.	(Yes)	(No
9	Crack open the blank cap assembly ball-cock and drain the remaining water into a bucket	(Yes)	(No
10	Remove the standpipe and blank cap assembly.	(Yes)	(No

11	Check valve again for leaks.	(Yes)	(No
12	Report lack of water supply or low water pressure to the responsible person.	(Yes)	(No

REMARKS:_____

_____

_____

_____

_____

Registered competent person:

Name: …… Signature: …….

Date:

……. Time: ……

Activity Schedule "I

ANNUAL INSPECTION AND MAINTENANCE OF BOOSTER PUMP CONNECTION INSTALLATION

Building Address: …… Place code……..
Building Number: ……. Installation Number. ……

1 Dry riser system

1.1. Check that the dry riser system is signposted for identification	(Yes)	(No
1.2 Check that the valve is not leaking	(Yes)	(No
1.3 Check that the non-return valves operate freely and if required, apply a small amount of grease to the spindle.	(Yes)	(No
1.4 Check that the blank caps are secured to the chain and are in place.	(Yes)	(No

2 Wet riser system

2.1 Check that the wet riser system is signposted for identification	(Yes)	(No
2.2 Check that the non-valve for leaks	(Yes)	(No
2.3 Check and record the static pressure reading on the pressure gauge	……kPa	
2.4 Where pet-cocks are fitted, operate a pet-cock to ensure that there is water in the system mad the pressure gauge is operational.	(Yes)	(No
2.5 Check that the blank caps are in place and are secured to the chain.	(Yes)	(No
2.6 Report lack of water supply or low water pressure to the responsible person	(Yes)	(No

REMARKS:_____
_____

Registered competent person:

Name: …… Signature: ……..

Date:

…….. Time: ……

Activity Schedule "

ANNUAL INSPECTION AND MAINTENANCE OF WATER, WATER BASED, FOAM AND POWDER TYPE HANDHELD FIRE EXTINGUISHERS

Building Address: …… Place code……..
Building Number: ……. Place code: ……..Installation Number. ……
Position of extinguisher: ……. Last date of overhaul…….

Note:
All maintenance and testing will comply with the manufacturers instructions and that specified by SANS 1475-1 latest edition.
All these extinguishers will be overhaul (extended maintenance) every five (5) years.

1	Check the safety device and any other indicating devices to determine whether the unit have been operated.	(Yes)	(No)
2	Verify and check pressure indicating devices for correct internal pressure	(Yes)	(No)
3	Examine the fire extinguisher externally for corrosion, dents, gouges or damage.	(Yes)	(No)
4	Weigh the fire extinguisher and check and record total mass against last recorded. …….kg		
5	Check the condition of the discharge hose and nozzle, are unobstructed and not cracked, worn, or damaged.	(Yes)	(No)
6	Check the operating instructions for correctness and readability.	(Yes)	(No)
7	Check operating mechanism	(Yes)	(No)
8	Renew relevant O-rings, washers and hose diapragm	(Yes)	(No)
9	Reassemble and refill the fire extinguisher where relevant.	(Yes)	(No)
10	Complete the service label.	(Yes)	(No)

REMARKS:_____

Registered competent person:

Name: …… Signature: …….

Date: ……. Time: ……

Activity Schedule "

ANNUAL INSPECTION AND MAINTENANCE OF CARBON DIOXIDE (Co2) TYPE

HANDHELD FIRE EXTINGUISHERS

Building Address: …… Place code……..
Building Number: ……. Place code: ……..Installation Number. ……..……
Position of extinguisher: ……. Last date of overhaul…….

Note:
All maintenance and testing will comply with the manufacturers instructions and that specified by SANS 1475-1 latest edition.
All these extinguishers will be overhaul (extended maintenance) every five (5) years.

1	Check the safety device and any other indicating devices to determine whether the unit have been operated.	(Yes)	(No
2	Verify and check pressure indicating devices for correct internal pressure	(Yes)	(No
3	Examine the fire extinguisher externally for corrosion, dents, gouges or damage.	(Yes)	(No
4	Weigh the fire extinguisher and check and record total mass against last recorded. …….kg		
5	Check the condition of the discharge hose and nozzle, are unobstructed and not cracked, worn, or damaged.	(Yes)	(No
6	Check the discharge hose for any leakage	(Yes)	(No
7	Check the operating instructions for correctness and readability.	(Yes)	(No
8	Check operating mechanism	(Yes)	(No
9	Renew relevant O-rings, washers and hose diapragm	(Yes)	(No
10	Reassemble and refill the fire extinguisher where relevant.	(Yes)	(No
11	Complete the service label.	(Yes)	(No

REMARKS:_____
_____
_____
_____

Registered competent person:
Name:
…… Signature: ……..
Date:
……. Time: ……

Activity Schedule "C

ANNUAL INSPECTION AND MAINTENANCE OF HOSE REELS

Building Address: …… Place code……..
Building Number: ……. Installation Number. ……Last date of overhaul… ……

Hose reels shall be checked on an annual basis in accordance with SANS 1475 - 1 Part 2 as ammended

1	Check the fire hose frame and mounting bolts for carrion and physical damage	(Yes)	(No
2	Check whether the frame is mounted securely and whether the reel operates freely	(Yes)	(No
3	Unwind the fire hose completely and inspect all components for corrosion and physical damaged	(Yes)	(No
4	Check that the water control fittings (i.e. the inlet control valve and outlet control nozzle) are operative	(Yes)	(No
5	With the outlet nozzle closed and inlet control valve open, check whether the fire hose is in an acceptable condition and acceptably fitted and whether it can withstand the pressure in the supply main.	(Yes)	(No
6	While the hose is completely unwound, check whether it is of the correct required 30m length	(Yes)	(No
7	While the hose is under pressure check all water seals for leakage and replace any damaged seals that cannot be adjusted effectively	(Yes)	(No
8	Check and record water pressure.	……..kPa	
9	Report lack of water supply or low water pressure to the responsible person.	(Yes)	(No

REMARKS:_____

_____

_____

Registered competent person:

Name: …… Signature: …….

Date: ……. Time: ……

Activity Schedule "H"-

ANNUAL INSPECTION AND MAINTENANCE OF OF SPRINKLER INSTALLATION

Building Address: ……..…… Place code……..
Building Number: ……..…….. Place code: ……..…….. Installation Number. ……..……..

Note: A stock of spare sprinklers, as supplied by the manufacturer, shall be kept on the premises, together with the necessary spanners, in order to replace operated or damaged sprinklers.
The number of spare sprinklers kept shall be at least:
• 24 if there are 1 or 2, or 36 if there are more than 2, ordinary-hazard class installation.
• 36 if there are 1 or 2, or 54 if there are more than 2, high-hazard class installation.
The spare sprinklers shall be housed in a cabinet located in a prominent and easily accessible position where the ambient temperature does not exceed 38° C. The location of the cabinet/s shall be indicated in the block plan.
The stock shall be replenished as spares are used.

1 Visually inspected pipe work for leaks (Yes) (No)
REMARKS:
_____
_____
_____

2 Visually inspected pipe work for corrosion (Yes) (No)
REMARKS:
_____
_____
_____

3 Visually inspected sprinkler heads for paint or dirt on the bulbs or rosettes (Yes) (No)
REMARKS:
_____
_____
_____

4 Visually inspected that the pipe work is securley supported throughout (Yes) (No)
REMARKS:
_____
_____
_____

5 Visually inspected pipe work aligning (Yes) (No)
REMARKS:
_____
_____

Activity Schedule "H"-

6 Check that spare sprinkler heads of the same type are installed on the installation, are installed in the spares cabinet:

Ordinary hazard needs **24 spare** sprinkler heads	(Yes)	(No)
Extra high hazard needs **36 spare** sprinkler heads	(Yes)	(No)
Are the necessary spanners available	(Yes)	(No)

REMARKS:

7 Check for sprinkler signage: (Stop value, booster limitation etc)

Is the signage adequate	(Yes)	(No)
Is the signage correct	(Yes)	(No)

REMARKS:

8 Check that Block Plans of the installation are available and ICV are legible (Yes) (No)

REMARKS:

8 Check operation and signalling of all flow switches that they operate correctly (Yes) (No)

REMARKS:

Registered competent person:

Name: …… Signature: …….

Date: ……. Time: ……

Activity Schedule "I"- 1

ANNUAL INSPECTION AND MAINTENANCE OF

OF STORAGE TANKS

Building Address: ..... Place code.....
Building Number: ..... Place code: ..... Installation Number. .....

1	Visually inspected tanks externally for leaks **REMARKS:**	(Yes)	(No)
2	Visually inspected tanks externally for any corrosion **REMARKS:**	(Yes)	(No)
3	Visually inspected water level and found to be correct **REMARKS:**	(Yes)	(No)
4	Visually inspected tank internally, to be in good condition. **REMARKS:**	(Yes)	(No)
5	Is tank divided into two separate storage volumes? **REMARKS:**	(Yes)	(No)
6	Checked incoming ball valves, to be fully functional. **REMARKS:**	(Yes)	(No)

Activity Schedule "I"- 2

7	Checked all valves, to be in correct operative position	(Yes)	(No)

REMARKS:

_____

_____

_____

Registered competent person:

Name:

…… Signature: …….

Date:

……. Time: ……

Activity Schedule "J"
-1

ANNUAL INSPECTION, SERVICING AND TESTING OF FIRE DETECTION INSTALLATION

Building Address: …… Place code……..
Building Number: ……. Place code: …….. Installation Number. ……..
Control Board Manufactured By: ……..

Certificate for inspection, servicing and testing of the fire alarm system

I being a competent person (as described in SANS 10139:2007) responsible (as indicated by my signature below) for the inspection and servicing of the fire alarm system as installed in above premises, CERTIFY that the inspection and servicing work complies with the recommendations of clause 12.2 of SANS 10139:2007, except for the variations stated in this certificate.

Extend of liabilty is limited to the system as indicated on drawing …….. file in the log book.

Control board / panel description: ……..
and installed in the CCTV control room.

Number of manual control points: ……..

Number of smoke detectors: ……..

Number of fire detectors: ……..

The following variations from the recommendations as described in clause 12.2 of SANS 10139:2007 are identified on the installed system.

_____
_____
_____
_____
_____

Relevant detail of work carried out and faults identified

_____
_____
_____
_____

_____

During the past 12 months, ……. false alarms have occurred, this equals to …… false alarms per 100 automatic fire detections per annum. (not applicable for catergory M system)

Activity Schedule "J"
-2

The following work / action is considered necessary:

_____
_____
_____
_____
_____

Details of this certificate are entered into the system logbook.

Registered competent person:

Name (in block letters) …….. Position: ……

Signature: …….. Date: ……

For and behalf of: ……..……

Address: ……

…….. Postal Code: ……

Registered competent person:
Name:
…… Signature: …….
Date:
……. Time: ……

Gas Line Maintenance Checklist

1 Visual Inspection

Check for visible signs of corrosion, rust, or damage on exposed gas lines.
Inspect pipe supports and brackets for stability and wear.
Ensure gas lines are properly labeled and accessible.

2 Leak Detection

Use a calibrated gas detector to check for leaks at joints, valves, and connections.
Apply a soap solution to suspect areas to identify bubbling (indicating leaks).
Record and report any detected leaks immediately.

3 Valve Functionality

Operate all manuals shut-off valves to ensure they open and close smoothly.
Confirm emergency shut-off valves are clearly marked and accessible.
Lubricate valves if necessary and check for leaks around valve stems.

4 Pressure Testing

Conduct pressure tests according to local codes and manufacturer specifications.
Verify that pressure regulators are functioning correctly and set to appropriate levels.
Document test results and compare with baseline readings.

5 Appliance & Equipment Check

Inspect gas-powered appliances (boilers, heaters, ovens, etc.) for proper operation.
Check burner flames for proper color (blue flame indicates efficient combustion).
Clean burners and vents to prevent blockages.

6 Ventilation & Exhaust

Ensure all gas appliances have adequate ventilation.
Inspect flue pipes and exhaust systems for blockages or corrosion.
Confirm that carbon monoxide detectors are installed and functional.

7 Documentation & Compliance

Maintain records of all inspections, tests, and repairs.
Ensure compliance with local building codes and safety regulations.
Schedule annual inspections by a licensed gas technician.

8 Training & Emergency Preparedness

Train staff on how to recognize gas leaks and respond appropriately.
Post emergency contact numbers and shut-off procedures near gas equipment.
Conduct periodic emergency drills.

9 Recommended Frequency Inspection

Task	Frequency	Notes
Visual Inspection of Gas Lines	Monthly	Look for corrosion, damage, or wear. High-risk areas may need more frequent checks.
Leak Detection (Basic)	Monthly	Use soap solution or handheld detectors.
Leak Detection (Comprehensive)	Annually	Performed by a licensed technician with calibrated equipment.
Valve Operation Check	Quarterly	Ensure all shut-off valves are functional and accessible.
Pressure Testing	Annually	Or as required by local codes or after modifications.
Appliance & Equipment Check	Monthly	Check burners, pilot lights, and flame color.

Ventilation & Exhaust System Check	Quarterly	Ensure no blockages or corrosion.
Carbon Monoxide Detector Test	Monthly	Replace batteries as needed.
Documentation Review	Quarterly	Ensure all logs and inspection records are up to date.
Licensed Technician Inspection	Annually	Full system inspection and certification.
Emergency Drill & Staff Training	Biannually	Practice response to gas leaks or emergencies.

REMARKS: _____

_____

_____

Registered competent person:

Name: …… Signature: ……

Date: …… Time: ……

Item no	Fire Equipment	Quantity
1.1.	Fire Hydrants underground	76
1.2.	Fire Hydrants above ground	309
1.3.	Fire Hydrants skyrink	12
1.4.	Booster pump	22
1.5.	Water, Water based, foam and Powder type Handheld Fire Extinguishers	51
1.6.	Carbon dioxide (Co2) type Handheld Fire Extinguishers	292
1.7.	9 KG DCP Fire Extinguishers Skyrink	19

1.8.	Hose Reels	475
1.9.	Hose Reels Skyrink	19
1.10.	Storage Tanks	6
1.11.	Fire detection installation	1

Item no	**Fire Equipment**	**Quantity**
1.12.	Installation Control Valve	22
1.13.	Sprinkler installation	22
1.14.	Flow test	
1.15.	Electric Pump	22
1.16.	Diesel Pump	
1.17.	Graphics computers	2
1.18.	Addressable panel	48
1.19.	Addressable relay	68

1.20.	Call point	190
1.21.	fire telephone	48
1.22.	heat detector	166
1.23.	I/f fire	5
1.24.	I/f non fire	50
1.25.	Ion detectors	21
1.26.	Line sounder	191
1.27.	Optic heat	60
1.28.	Optical detector	4076
1.29.	Fire detection power supplies	18
1.30.	Electrical Pump Set	22
1.31.	Signage	7400

Item no	Fire Equipment	Quantity	Unit	Unit Price	Price
2. Monthly Inspections and Maintenance					
2.1.	Electrical Pump Set	22	**Item**	**R**	**R**
TOTAL					**R**

Item no.	Fire Equipment	Quantity	Unit	Unit Price	Price
3. Signage					
3.1.	Carlton Centre	7400	**Item**	**R**	**R**
`TOTAL					**R**

Above pricing summary should be included in the final Annexure for fire and Gas installation maintenance.

NB: not compulsory to price the on this document but compulsory on the final Pricing Annexure.

ANNEXURE 11

CARLTON CENTRE ADHOC - AS AND WHEN - REQUIRED ACTIVITIES SCHEDULE AND INVENTORY

TDR FOR PROVISION OF INTEGRATED FACILITIES MANAGEMENT AT TRANSNET CARLTON CENTRE FOR A PERIOD OF 3 YEARS

VARABLE COSTS (ADHOC/ UNPLANNED WORK)

Variable costs are costs that are unplanned and not predetermined, these costs cover Adhoc unplanned works that may be required by TP at any given time.

The personnel required to be on site will be responsible to do day to day activities as per specifications and the Adhoc unplanned works as and when they are required.

Examples of Adhoc works include but not limited to the following:

Electrical Maintenance:

- Changing of lamps.
- Repairs to plug points and sockets.
- Making and repairing of extension cords.
- Fault finding of tripping circuits.
- Repairs and maintenance to kitchen equipment.
- Minor to moderate electrical extensions and installations in line with the legislations
- Overtime works on weekend or after hours as and when required (billed under Pass through costs)
- Any minor adhoc project works as approved by Transnet
- Etc.

Civil and General Building Maintenance:

- Changing of door locks.
- Repairs to leaking taps and fittings
- Repairs to toilets and urinals
- Installation of hygiene equipment (damaged, lose or new as and when required)
- Installation or replacement of Hydro-boilers and water coolers
- General minor to moderate painting
- Overtime works on weekend or after hours as and when required (billed separately from fixed costs under Pass through costs)
- Cleaning and clearing of gutters and drains which do not form part of fixed costs labour works.
- Minor to moderate furniture movements and relocations within the Precinct or to other buildings.
- Any minor adhoc project works as approved by Transnet

Air conditioning:

- All material and spares
- Any minor adhoc project works as requested and/or approved by Transnet

Fire and Gas Installation Maintenance:

- All material and spares
- Any minor adhoc project works as requested and/or approved by Transnet

Soft Services: (Cleaning, Horticulture, Waste Management, Hygine, Pest Control)

- All replacement and repairs of non-fixed costs equipment.

- All replenishment of consumables upon exceeding the maximum required quantities as per specification and Pricing schedule; including but not limited to additional plants, hygiene equipment, Hygiene consumables, paper consumables,

Material and spares used for the above and ad-hoc maintenance projects or similar activities will be sourced through variable costs, the service provider will be paid a percentage mark-up/management fee not exceeding 12% of the project value outsourced by Transnet to a 3rd party and paid through the service provider.

ANNEXURE 12

CLAUSE BY CLAUSE

PROVISION OF INTEGRATED FACILITIES MANAGEMENT
AT TRANSNET CARLTON CENTRE
FOR A PERIOD OF 3 YEARS

Compulsory and Mandatory Clause by Clause compliance

Item	Description	Compliance to specification		Comments/ Remarks
		Yes	No	
1	**Maintenance of the following**			
1.1	Building structure and fabric, including the following structural components : walls, balconies, roofs, ceilings, doors, PWD facilities, windows, concrete work and civil work			
1.2	Water supply quality and water storage tanks and pumps including provision of emergency water supply in the event of municipal water interruption			
1.3	Water and effluent reticulation including plumbing, sewer and storm water pits and pumps			
1.4	Paved areas and parking areas			
1.5	Internal and external plants			
1.6	Electrical distribution including 11000 V/400V step-down transformers, substations, electrical distribution boards and electrical installations in the facilities annually			
1.7	Electric Lighting and Lighting Control,			
1.8	Lightning protection and earthling			
1.10	Mechanical plant and equipment such as Heating, Ventilation and Air-conditioning units and systems, extractor fans in parking areas, ablution, etc., Lift installations, and standby generators			
1.11	Fire prevention and protection systems and related equipment such as fire detection and alarm, intercom, sprinklers, hydrants, hose reels and fire extinguishers			
1.12	Office furniture, carpeting, window blinds, handrails, etc.			
1.13	Canteen equipment where applicable			
1.14	Access controlled doors, gates and metal detectors.			
1.15	Boom gates			
2	**Provision of the following (mandatory requirements):**			
2.1	Rental walk-off mat at all entrances			
2.2	Labeling of equipment and creation of an inventory register			
2.3	Provision of fuel for standby generators as required			
2.4	Technical access control equipment maintenance			
2.5	Asset tagging for verification			
2.6	Cleaning services, internal and external (entrances and surrounding areas) and windows, including deep cleaning of carpets, tiling and furniture, deep cleaning of parking areas and degreasing.			
2.7	Cleaning of archives, storerooms and libraries including shelving and treatment for fish moth infestation.			
2.8	Boardroom and pause area maintenance including preparation for meetings, tea-service, etc.			
2.9	Hygiene, Sanitation Services and deep cleaning all ablution facilities on quarterly basis			

2.10	Rendering of pest control services to office buildings on quarterly basis or on an as and when basis, including vermin, insects and bird control			
2.11	Landscaping, gardening service and provision and maintenance of internal plants.			
2.12	Maintenance of Water features, fountains, filtration and pumps			
2.13	Supply and maintenance of smoking booths and provision of ashtrays for external smoking facilities in accordance with smoking legislation where applicable			

Item	**Description**	**Compliance to specification**		
		Yes	**No**	
3	**Successful Bidder will be given 30 calendar days to attend to contract execution preparatory work to ensure the following (mandatory requirements):**			
3.1	Training and induction of staff			
3.2	Purchasing of required uniform, equipment, tools, and consumables			
3.3	Finalisation and confirmation of public liability insurance			
3.4	Ordering of critical resources to resume the contract			
3.5	Identification of on-site workstation			
3.6	Compiling of a comprehensive inventory of the buildings, structures, plant and equipment.			
3.7	Acquisition or compiling of network drawings, single line diagrams including but not limited to the floor-plans, water, air, gas supply reticulation.			
3.8	Acquisition of all relevant documents for the operation and maintenance of the plant and equipment.			
3.9	Provision of 1 ton light commercial vehicle (bakkie/van) with tow bar inclusive of 15 000km per annum for usage during the FM contract. Vehicle must be in a well serviceable condition and kept road worthy at all times.			

Annexure 13

SERVICE LEVEL REQUIREMENT FOR FACILITIES MANAGEMENT SERVICES AT CARLTON CENTRE PRECINCT

Transnet Property

Table of Contents

1.0 Introduction

1.1 Purpose of this Service Level Requirement

The Integrated Facilities Management Service Level Requirement covers the provision of Services for the maintenance and repair of Carlton Centre Precinct and other systems and building fabric which support Transnet Property business and operational requirements.

The Service Level Requirement objective is for the Facilities Management service provider to deliver a service to all Transnet Property personnel and users of Transnet Property Carlton Centre Precinct in respect to the provision of the services.

1.2 Facilities Management System

1.2.1 General Management System

A systems approach is essential for maintaining the quality of the buildings and work environment. All aspects of operation, maintenance and change must be linked together in a unified management system that is to be proposed by the Facilities Management service provider and agreed with Transnet Property. The Facilities Management service provider will be responsible for the continuous development of this system.

The Facilities Management service provider will be responsible for adopting, maintaining (in accordance with Transnet Property standards) and further developing a computerised maintenance management system.

The framework of this system should be built around the service delivery elements set out in the following sections.

1.2.2 Performance Measurement System

The performance measurement system will be developed jointly by Transnet Property and the Facilities Management service provider.

1.2.3 Quality Management Regime

The Facilities Management service provider (and its Subcontractors) must provide the contracted Services in accordance with a quality assurance programme that is proposed by the Facilities Management service provider and agreed to by Transnet Property. The quality assurance programme must cover methods and workmanship practices and procedures.

1.2.4 Certification

The Facilities Management service provider will be responsible for the certification of the Services being provided. The certification scheme is to be proposed by the Facilities Management service provider (including statutory compliance) and agreed with Transnet Property. Transnet Property must be able to audit the methods and results of the certification system.

The Facilities Management service provider must create and maintain adequate documentation to demonstrate conformance with the Service standard.

1.2.5 Facility Management Role and Functions

Single Point of Accountability

Transnet Property will provide a properly qualified person within their organisation who will serve as a point of contact to the Facilities Management service provider Team. This person will be able to cover all services and interfaces with the Facilities Management service

provider, and will be responsible for the Facilities Management service provider performance and the client assessment regarding all aspects of the Contract

The Facilities Management service provider will provide a properly qualified person within their organisation who will serve as a point of accountability to Transnet Property. This person must be able to cover all services and interfaces with Transnet Property, and will be responsible for the Facilities Management service provider's performance regarding all aspects of the Contract

1.2.6 Communication Plan

The Facilities Management service provider must design and implement a process that provides Transnet Property with formal and informal communication and feedback. The Facilities Management service provider must develop a communication plan that identifies key meetings (types, participants, and cycles), reports and evaluation programmes. The Facilities Management service provider must submit to Transnet Property sample reports, meeting agendas and recommendations for resolving breakdowns in communication. The Facilities Management service provider must also produce a record of all meetings with Transnet Property and done in format(s) agreed by Transnet Property.

1.2.7 The Facilities Management service provider's Facilities Management Team

The Facilities Management service provider must provide an appropriate management organisation, led by an executive who will have authority to deal with all matters relating to the Service provision.

1.2.8 Benchmarking

It will be the responsibility of the Facilities Management service provider to establish benchmark performance standards based on the best industry standards. Regular inspections as set out in this document will be required.

2.0 Facility Management Service Requirements

2.1 Service Categories

2.1.1 Introduction

This section identifies Transnet Property general Service requirements and deals with the maintenance of quality and performance standards. The individual requirements for the various Services are set out in Sections 3 and 4 of this document.

2.1.2 Service Category Descriptions

Services have been divided into two main categories relating to the criticality of the service involved:

Type 1 Services: Services that are usually critical for the preservation of life and/or safety of Transnet Property personnel and customers, and Transnet Property ability to operate as a business and support its customer contracts.

Services such as the operation and management of the Carlton Centre Precinct, cleaning, and waste, etc. that are essential for the regular on-going operation of the business.

Type 2 Services: Services that support Transnet Property Day to day operations, including building fabric maintenance.

Non-performance of any of these Services will result in various levels of financial penalties to be assessed against The Facilities Management service provider.

2.2 General Requirements

The Facilities Management service provider will provide and agree with Transnet Property the maintenance management system which the Facilities Management service provider will adapt in the management of Carlton Centre Precinct

2.2.1 Normal Hours of Operation

The normal hours of operation for the Carlton Centre Precinct will be:

Monday to Friday, including weekends holidays at times: 7h00 until 18h00.

2.2.2 Maintenance

The Facilities Management service provider must operate the facilities within the sites and provide a comprehensive fault identification and maintenance management programme. This is essential for maintaining the operations performance and values of the facilities, and for ensuring that the building areas, plant, equipment, and services systems are maintained for Health and Safety, habitability, and contents protection, functional efficiency, and reliability

The Facilities Management service provider must comply with all relevant legal and statutory maintenance requirements and system priorities. The maintenance must be planned and organised to achieve the overall objectives and support the image of Transnet Property. The Facilities Management service provider must be able to provide and complete appropriate maintenance outside normal hours of operation as may be required.

2.2.3 Repair Periods and Cycles

The Facilities Management service provider should operate and maintain the Carlton Centre Precinct in accordance with the maintenance requirements and in line with Transnet Property approved budget provision

2.2.4 Environmental Requirements

The Facilities Management service provider must adopt and comply with Transnet Property Environmental policies, targets, and ISO 14001. The Facilities Management service provider must implement the waste management process based on waste hierarchy and further provide waste management infrastructure (colour coded waste collection bins) that encourages waste separation at source, re-use and recycling and proper waste management disposal. The service provision shall conduct waste accounting exercise per month and reconcile waste volumes per type, recycled and re-used. The Facility Management Service provider shall submit to TP Risk Management, monthly waste statistics and accompanied waste disposal certificates.

2.2.5 Statutory Inspections

The Facilities Management service provider must carry out regular statutory inspections for the installed systems via statutory inspections agent. The Facilities Management service provider must make available the necessary plan for inspections in a way which minimises the impact on Transnet Property business operations. The results of these inspections must be made available to Transnet Property.

2.2.6 Plant and Equipment

The Facilities Management service provider must provide all general equipment and apparatus for the delivery of each Service.

All equipment must be operational, fit for the purpose and used and maintained in accordance with the provisions of 2.2.2 and 2.2.3 above. All the Facilities Management service providers' staff must be fully trained with official certification in operation of such equipment (see 2.2.9 below). The Facilities Management service provider must provide Transnet Property on request with current Portable Appliance Testing Certificates for all electrical and mechanical equipment used on the site. Equipment must be identified for designated use and must be reported to Transnet Property when its efficiency falls below that recommended by the Manufacturer.

2.2.7 Materials and Products

The Facilities Management service provider must provide all the materials and products necessary to deliver the Service and ensure that all such materials and products are stored and used safely, under proper control and in accordance with the manufacturer's instructions and recommendations.

2.2.8 Staffing

The Facilities Management service provider must employ staff who are trained, skilled and experienced in all aspects of their work, and properly manage and supervise such staff. The Facilities Management service provider must prepare and submit policy statements and procedures to Transnet Property which govern behaviour, appearance, and identity of staff. The Facilities Management service provider must also ensure that their staff are properly trained. Such training may need to be specialised, site specific and/or for several business activities will need to occur outside normal hours of operation. All the Facilities Management service provider's staff will be required to undergo an induction process to be provided by Transnet Property.

The Facilities Management service provider must ensure that all staff are medically fit to perform the required function and that all necessary certification is complete and available for audit by Transnet Property.

Staff records must be maintained and be available for inspection by Transnet Property. Transnet Property reserves the right to require the Facilities Management service provider to withdraw any employee without explanation. The Facilities Management service provider must submit details of staff to Transnet Property for safety vetting. To meet the requirements of the shift system, The Facilities Management service provider must be able to offer the capacity to complete appropriate maintenance outside normal hours of operation. The Facilities Management service provider must provide Transnet Property on request, with an up-to-date directory of all key contacts for each service area.

2.2.9 Resolution of Different Safety Standards

Except as noted otherwise, it is assumed that Transnet Property current standards will apply. If the Facilities Management service provider proposes a higher standard, it should be discussed with Transnet Property before implementation.

2.3 Service Requirement Definitions

2.3.1 General

The following definitions apply to the headings and other terms used in the Services tables in Sections 3, 4 and 5.

2.3.2 Service

General description of the Service which is to be provided by the Facilities Management service provider.

2.3.3 Scope of Service: Normal Requirement

A description of the output required for that particular Service or system to be provided by the Facilities Management service provider.

2.3.4 Processes and Documents

A list of important relevant documents, other than relevant statutory legislation, local authority requirements and associated Codes of Practice which may also be applicable. With regard to the documents these are provided by Transnet Property and are to be employed by the Facilities Management service provider to achieve the delivery of the service in accordance with Transnet Property corporate rules and regulations.

2.3.5 Performance Standards

Description of the response and resolution times as set out by Transnet Property, or to be proposed by the Facilities Management service provider subject to Requirement with Transnet Property.

All performance standards are subject to design capability, availability of commissioning data and the limitations of performance measurement.

Performance Standards will be in line with current condition of fabric, equipment, finishes, etc. To be recorded at commencement of contract.

Response and Resolution times to be in accordance with 2.3.14 - Work Order Priority Schedule, with the exceptions were noted in the document.

2.3.6 Response

Response is the time from when the Facilities Management service provider receives official notification of a possible fault to the dispatch of a qualified individual or team to the location of the fault. For those Services where ‘As noted is specified for Response, the time allowed for observing a possible fault if first identified by Transnet Property or another party will be as directed by Transnet Property at the time or, if first identified by the Facilities Management service provider, then as soon as possible.

2.3.7 Diagnosis

Diagnosis is the process that begins with the arrival of the qualified individual or team at the location of the fault, to the notification to Transnet Property Facilities Department of the recommended solution. The diagnosis will include identification of the fault, options for resolutions, resolution plan, together with estimated costs and time for resolving the fault. Each diagnosis shall be communicated to an agreed/nominated person on site who is both responsible and has the necessary authority within Transnet Property organization to make decisions and give direction to the Facilities Management service provider. The Facilities Management service provider must communicate its diagnosis in the most appropriate manner verbal, e-mail, or written.

2.3.8 Resolution

Resolution is the time from the occurrence of the fault to its successful resolution or documented plan. For those services where ‘As noted’ is specified for ‘Resolution’, the time for resolving the fault if first identified by Transnet Property or another party will be as directed by Transnet Property at the time or, if first identified by the Facilities Management service provider, then as soon as possible.

The Facilities Management service provider must ensure that reasonable temporary measures are implemented to allow services provided to Transnet Property to be continued

while response, diagnosis and resolution phases are being implemented. The cost of such temporary measures will be reimbursed by Transnet Property.

2.3.9 Emergency

Emergency is the term used to describe events or situations which can affect the health and safety of or create distress to the site's occupants. It also includes situations which might interrupt Transnet Property business operations, or damage to Transnet's property asset.

2.3.10 Working Hours

Working hour's means hours counted only during normal hours of operation. For example, if the specified performance time is '4 working hours and the fault occurs at 2 hours before the end of the normal hours of operation period, then its correction must occur no later than 2 hours after the beginning of the next normal hours of operation period.

2.3.11 Actual Hours

Actual hours mean any hours. For example, if the specified performance time is '4 actual hours and the fault occurs at 2 hours before the end of the normal hours of operation period, then its correction must occur no later than 2 hours after the end of that normal hours of operation period.

2.3.12 Continuous Operation

Continuous Operation will always mean available (as agreed with Transnet Property), within reason, allowing for maintenance requirements. This applies to whole systems, not individual units.

2.3.13 Manufacturer's Instructions

Manufacturer's Instructions will form part of the review when establishing a technically effective and cost-efficient maintenance and operation regime. Transnet's operational and budgetary requirements will influence the final solution.

2.3.14 Work Order Priorities

These work order priorities will be used to assess nature of fault and define required response and resolution times. For each Service Level Performance Standards section, the Priority category for critical and non-critical (as appropriate) activity has been specified.

	W/O Priority	Classification	Description	Response Time	Resolution Time
Emergency	1	Life Safety / Political	Asset failure jeopardising life safety of the facility or occupant. i.e., Smell of burning, Revenue Earning facilities i.e., Computer Rooms / National Command Centre or Business reasons exist why the work should be carried out in this timeframe	30 Min	4 working hours, or Documented action plan
	2	Urgent	Asset failure which if left unattended impacts the productivity / safety of the facility user i.e., trip hazard,	2 working hours	2 days or documented action plan
Non Emergency	3	Planned Maintenance	Maintenance activity performed to prolong the life of equipment and prevent failures	As per Planned Preventative Maintenance (PPM)	Schedule / Maintenance plan
	4	As per PPM schedule	Normal	Normal Service request which if left unattended does not impact the productivity of the facility user. i.e., too hot/cold general lighting	1 Day or Documented action plan
	5	5 Days or documented action plan	Scheduled	Scheduled can be assigned to any of the above when after initial investigation the work requires ordering of materials or can only be carried out during a predetermined time slot	As per schedule / maintenance plan

2.3.15 Abbreviations

Following are the full terms for typical abbreviations used in this document:

AHU Air Handling Unit

BMS Building Management System

CR Construction Regulations

COSHH	Control of Substances Hazardous to Health
CPS	Continuous Power Supply
ENV	Environment
EOM	Engineering Operations and Maintenance
H&S	Health and Safety
M&E	Mechanical and electrical
NFPA	National Fire Protection Association
O&M	Operations and Maintenance
PAT	Portable Appliance Testing
PFC	Power Factor Correction
POE	Post Occupancy Evaluation
PO	Purchase Order
PPM	Planned Preventative Maintenance
SHE	Safety, Health and Environment
SLR	Service Level Requirement
SOR	Statement of Requirement
SOW	Statement of Work
SWP	Safe Working Practices
UPS	Uninterrupted Power Supply

3.0 Type 1 Service Requirements

3.1 Introduction

In addition to the description of Type 1 Services under 2.1 2, these Services include the routine and long-term operation, maintenance and repair of the sites and other systems, and a regular cleaning regime throughout the Carlton Centre Precinct. Provision of these Services is essential to the on-going occupation of the Carlton Centre Precinct.

3.1.1 On-going Monitoring and Response to Problems

Type 1 Services must be maintained at an appropriate performance level. The Facilities Management service provider must continually monitor the Services so that essential operating conditions are maintained, and problems are dealt with within the critical response times. The Facilities Management service provider must be responsible for establishing the necessary systems including the use of a computerised maintenance management system (CMMS) to log and record responses to problems as they occur.

3.1.2 Operation, Maintenance and Provision of Engineering Services

The Facilities Management service provider will be responsible for the operation, provision and maintenance of all engineering Services outlined in this section. The systems used by the Facilities Management service provider for providing these Services must be based on the current and future development of the CMMS programme

The provision and maintenance of the engineering Services must include:

- a team of qualified engineers to operate and maintain the engineering Services
- a continual strategic review to continuously improve the efficiency of operation and energy conservation
- the provision and maintenance of a logbook or record system for all buildings

The Facilities Management service provider must monitor the programme of statutory inspections by Transnet Property nominated agent to ensure all equipment receives the required inspections at the correct time. The Facilities Management service provider must issue the programme to Transnet Property.

The Facilities Management service provider will be responsible for holding the O & M Manuals, drawings and the Health and Safety file for the leased buildings and to maintain them to be up-do-date. They must be available for inspection at any time by the relevant Transnet Property Safety representative(s).

3.1.3 Repair Periods and Cycles

The description of a Service or its Scope of Service: Normal Requirement' will not state minimum periods for repair or replacement. These intervals will be determined by the Facilities Management service provider based on what is appropriate to meet Transnet Property business and financial outputs.

In general, items and components shall be kept in appropriate condition. As items approach the end of their expected life cycle or are in frequent need of repair and maintenance they must be identified in the Asset Management planning process.

3.1.4 End-State Condition

The equipment and facilities covered by the Type1 Services must be in appropriate condition at the end of the Requirement relative to the performance requirements. The

Facilities Management service provider must develop a system life-cycle analysis and replacement schedule which identifies the remaining useful life of each major system.

3.1.5 Fire Precautions

The Facilities Management service provider must liaise with the Fire Officer over their routine inspections and immediately report to Transnet Property Facilities Department on any recommendations the Officer makes.

3.1.6 Scopes and Performance Standards for Type1 Services

Following are the detailed scopes and performance standards of the Type 1 Services. Response and Resolution times for each activity are defined in Section 2. 3. 14. The criticality tables are to be used as a guideline to the likely criticality of activities within each Service element.

3.2 Type 1 Services

3.2.1 BMS Systems **– not applicable**

3.2.2 Mains Supplies & Distribution Systems

3.2.3 Heating, Ventilation and Air-conditioning Systems

3.2.4 Lighting & Lighting Controls

3.2.5 Emergency Lighting System

3.2.6 Standby Generator Systems

3.2.7 Uninterruptable Power Systems (UPS)

3.2.8 Lightning Protection Systems

3.2.9 Earthing Systems

3.2.10 Below Ground Drainage Systems

3.2.11 Above Ground Drainage Systems

3.2.12 Cold, Hot & Drinking Water Supply Systems

3.2.13 Emergency Call-Out

3.2.14 Fire Preventative and Protective Systems.

3.2.15 Passenger Lift Systems

3.2.16 Lock & Key Controls

3.2.17 General Cleaning (including hygiene services)

3.2.18 Toilet Cleaning

3.2.19 Pest Control

3.2.20 Waste management Hazardous Waste **– not applicable**

3.2.21 Water Management **– not applicable**

SLR 3.2.1 Building Management System (BMS)

Service	Scope of Service: Normal Requirement	Processes & Documents	Performance Standards / Service Level	Measurement's criteria / Key Performance Indicator	Penalty (Proposal)
3.2.1 Building Management System. (BMS)	• Maintain and operate the BMS's to monitor building engineering systems to provide the environmental conditions required to comply with TP's requirements and statutory regulations. Adjust and update software as required • Maintain and produce a status report by exception, including trend logs, (frequency and format to be agreed with TP) to describe the operational status of all systems controlled and monitored by BMS • When required provide Software training of nominated TP staff so that they can interrogate the system Allow for training TP personnel • Produce an annual assessment on the condition and performance/efficiency of the system	• In accordance with HVAC Guides and National Standards. • OEM specifications and O&M documents • For guidance use General Design Standards for Engineering Services (applies to all Mechanical and Electrical System Services).	• Response and Resolution times to be in accordance with 2.3.14 - Work Order Priority Schedule with the exception were noted	• Achievement of response and resolution times • PPM Schedules Completed (Plan vs. Actual) • Reporting targets achieved • SLR Non-compliance Work Order Listing • SLR Compliance Work Order Listing • SLR Rescheduled Work Order Listing	

SLR 3.2.2 Mains Supplies & Distribution System

Service	Scope of Service: Normal Requirement	Processes & Documents	Performance Standards / Service Level	Measurement's criteria / Key Performance Indicator	Penalty
3.2.2 Mains Supplies & Distribution Systems.	• Maintain and monitor the distribution and supplies of gas, water, and electricity within TP facilities. • Maintain valves, pipework, equipment and plant rooms, substations, transformers, switchgear, distribution boards, cables, wires, conduits, etc. from site source to connection of equipment, to allow performance of the distribution systems to comply with statutory requirements and satisfy the operational requirements of the buildings • Maintain records of performance of systems. • Produce report of systems failures and action plans to resolve as required • Produce an annual assessment on the condition and performance/efficiency of the system. with recommendations for improvement. • Produce an annual report of the energy and water efficiency of the facilities with recommendations for improvement • Provide Certificates of compliance and documentation relevant to alterations, including drawings	• Occupational Health and Safety Act • Electrical Machinery Regulations • Electrical Installation Regulations • National Standards • SANS 10142 • OEM specifications and O&M documentation	• Response and Resolution times to be in accordance with 2.3.14 - Work Order Priority Schedule with the exception where noted,	• Achievement of response and resolution times • PPM schedule completed (Plan vs Actual) • Failures documented • Reporting targets achieved • SLR Non-compliance Work Order Listing • SLR Compliance Work Order Listing • SLR Rescheduled Work Order Listing	

SLR 3.2.3 Heating, Ventilation and Air-conditioning (HVAC) Systems

Service	Scope of Service: Normal Requirement	Processes & Documents	Performance Standards / Service Level	Measurement's criteria / Key Performance Indicator	Penalty
3.2.3 Heating, Ventilation and Air-conditioning (HVAC) Systems	• Maintain and operate HVAC systems (Chilled Water, Variable Refrigerant Volume, etc) in accordance with designers and manufacturers specifications and O&M Manuals to allow performance of the systems to comply with statutory requirements and satisfy the operational requirements of the buildings. The maintenance to include chiller plant, compressors, cooling towers condenser plant and condenser reticulation, chilled water or refrigerant reticulation, air-handling plant and air-conditioning cassettes and air-conditioning ducting, including plant rooms. Systems include exhaust extraction in basement parking areas • Maintain records of performance of systems. Produce report of systems failures and action plan to resolve as required, • Ensure all pressure vessels and gas appliances are independently tested at appropriate intervals. • NB: Independent test to be arranged by the Facilities Management service provider • Monitor and record temperatures of heat distribution in all circuits where BMS is installed, as required.	• Occupational Health and Safety Act • Pressure Equipment Regulations • National Standards • SANS 10147 • SANS 10400 • OEM specifications and O&M documentation	• Response and Resolution times to be in accordance with 2.3.14 - Work Order Priority Schedule with the exception were noted in the document, • Server/Machine Room: 21° ±1° • Customer / Reception Areas / Offices: 23° C ±1°C	• Server/ Machine room environmental conditions measured and reported monthly • Achievement of response and resolution times • PPM schedule completed (Plan v Actual) • Failures documented • Reporting targets achieved • SLR Non-Compliance Work Order Listing • SLR Compliance Work Order Listing • SLR Rescheduled Work Order Listing	

	• Produce an annual assessment on the condition and performance/efficiency of the system.				

SLR 3.2.4 Lighting & Lighting Controls

Service	Scope of Service: Normal Requirement	Processes & Documents	Performance Standards / Service Level	Measurement's criteria / Key Performance Indicator	Penalty
3.2.4 Lighting & Lighting Controls Systems	• Maintain and operate lighting and lighting control systems (all internal, external and car park security lighting, including lamp replacement and disposal of waste). • Produce an annual assessment on the condition and performance/efficiency of the system.	• Occupational Health and Safety Act • National Standards • SANS 10400	• Response and Resolution times to be in accordance with 2.3.14 - Work Order Priority Schedule with the exception were noted • Lighting levels subject to original design constraints and SANS 10400 Part O	• Achievement of response and resolution times, • PPM Schedule completed (Actual v Plan) • Failures documented • Reporting targets achieved • • SLR Non-compliance Work Order Listing • SLR Compliance work Order Listing • SLR Rescheduled Work Order Listing	

SLR 3.2.5 Emergency Lighting System

Service	Scope of Service: Normal Requirement	Processes & Documents	Performance Standards / Service Level	Measurement's criteria / Key Performance Indicator	Penalty
3.2.5 Emergency Lighting System	• Ensure continuous functioning of emergency lighting • Maintain and provide illumination levels of all fire escape routes, plant rooms, storage areas, and open plan office areas to comply with statutory requirements • Test in accordance with statutory requirements • Produce an annual assessment on the condition and performance/efficiency of the system.	• Occupational Health and Safety Act • National Standards • SANS 10400	• Response and Resolution times to be in accordance with 2.3.14 — Work Order Priority Schedule with the exception were noted in the document.	• Fire Certificate held by the Facilities Management service provider • Achievement of Response and Resolution times • PPM Schedule completed (Actual v Plan) • Failures documented • SHE Manual audit • Reporting targets achieved • SLR Non-compliance Work Order Listing • SLR Compliance Work Order Listing • SLR Rescheduled Work Order Listing	

SLR 3.2.6 Standby Generator Systems

Service	Scope of Service: Normal Requirement	Processes & Documents	Performance Standards / Service Level	Measurement's criteria / Key Performance Indicator	Penalty
3.2.6 Standby Generator Systems	• Ensure continuous availability of standby generator systems, including provision of fuel as required for operation • Maintain standby generator and all accessories to Manufacturer's specifications and statutory requirements. Maintain plant room and fuel storage tanks • Provide refuelling of fuel tanks • Test run generators in accordance with manufacturer specification to ensure availability and satisfactory operation of system and components. • NB: Load testing is varied according to site specific, requirements and the user. • Produce an annual assessment on the condition and • Performance / efficiency of the system.	• Occupational Health and Safety Act • National standards • Manufacturer's O&M manuals	• Response and Resolution times to be in accordance with 2.3. 14 - Work Order Priority Schedule with the exception were noted in the document.	• Achievement of Response and Resolution times • PPM Schedule completed (Actual v Plan) • Failures documented • Reporting targets achieved • SLR Non-compliance Work Order Listing • SLR Compliance Work Order Listing • SLR Rescheduled Work Order Listing	

SLR 3.2.7 Uninterruptable Power Systems (UPS)

Service	Scope of Service: Normal Requirement	Processes & Documents	Performance Standards / Service Level	Measurement's criteria / Key Performance Indicator	Penalty
3.2.7 Uninterruptable Power Systems (UPS)	• Ensure continuous availability of Uninterruptable Power Systems. • Maintain uninterruptable power systems to comply with Manufacturer's specifications and statutory requirements • Test regularly to ensure availability and satisfactory operation of the system and its components. • Produce an annual assessment on the condition and performance/efficiency of the system.	• National standards • Manufacturer O&M manuals.	• Response and Resolution times to be in accordance with 2.3.14 — Work Order Priority Schedule with the exception were noted in the document	• Achievement of response and resolution times. • PPM Schedule completed (Actual v Plan) • Failures documented • Reporting targets achieved • SLR Non-compliance Work Order Listing • SLR Compliance Work Order Listing • SLR Rescheduled Work Order Listing	

SLR 3.2.8 Lightning Protection Systems

Service	Scope of Service: Normal Requirement	Processes & Documents	Performance Standards / Service Level	Measurement's criteria / Key Performance Indicator	Penalty
3.2.8 Lightning Protection Systems	• Ensure continuous availability of lightning protection systems. • Maintain lightning protection to comply with statutory requirements and operational requirements of the buildings. • Produce an annual assessment on the condition and performance/efficiency of the system.	• National standards • SANS 62305	• Response and Resolution times to be in accordance with 2.3.14 — Work Order Priority Schedule with the exception were noted in the document	• Achievement of response and resolution times • PPM Schedule completed (Actual v Plan) • Failures documented • Reporting targets achieved • SLA Non-compliance Work Order Listing • SLR compliance Work Order Listing • SLR Rescheduled Work Order Listing	

SLR 3.2.9 Earthing Systems

Service	Scope of Service: Normal Requirement	Processes & Documents	Performance Standards / Service Level	Measurement's criteria / Key Performance Indicator	Penalty
3.2.9 Earthing Systems	• Ensure continuous functionality of earthing elements. • Maintain earthing elements to comply with statutory requirements.	• Occupational Health and Safety Act • Electrical Machinery Regulations • National Standards • SANS 10142.	• Response and Resolution times to be in accordance with 2.3.14 - Work Order Priority Schedule with the exception were noted in the document,	• Achievement of response and resolution times • PPM Schedule completed (Actual v Plan) • Failures documented • Reporting targets achieved • SLR Noncompliance Work Order Listing • SLR Compliance Work Order Listing • SLR Rescheduled Work Order listing	

SLR 3.2.10 Below Ground Drainage Systems

Service	Scope of Service: Normal Requirement	Processes & Documents	Performance Standards / Service Level	Measurement's criteria / Key Performance Indicator	Penalty
3.2.10 Below ground Drainage Systems	• Maintain repair and operate below ground drainage systems including sewer and storm water pits and pumps • Produce an annual assessment on the condition and performance/efficiency of the system.	• National Standards • SANS 10400	• Response and Resolution times to be in accordance with 2.3.14 - Work Order Priority Schedule with the exception were noted in the document,	• Achievement of response and resolution times • PPM Schedule completed (actual vs. plan) • Failures documented • Reporting targets achieved • SLR Non-compliance Work Order Listing • SLR Compliance Work Order Listing • SLR Rescheduled Work Order Listing	

SLR 3.2.11 Above Ground Drainage Systems

Service	Scope of Service: Normal Requirement	Processes & Documents	Performance Standards / Service Level	Measurement's criteria / Key Performance Indicator	Penalty
3.2.11 Above Ground Drainage Systems	• Maintain all drainage systems to comply with statutory requirements and operational requirements of the buildings. • Includes (but not limited to): ➢ Sanitary Drainage, ➢ Vent Installation, ➢ Surface Water Drainage, ➢ Sanitary Ware Systems, ➢ Dosing of kitchen drainage systems and grease traps and deep clean to kitchen drains — allow for twice per year. • Produce an annual assessment on the condition and performance/efficiency of the system.	• National Standards • SANS 10400	• Response and Resolution times to be in accordance with 2.3.14 - Work Order Priority Schedule with the exception were noted in the document	• Achievement of response and resolution times. • PPM Schedule completed (Actual v Plan) • Failures documented • Reporting targets achieved • SLR Non-compliance Work Order Listing • SLR Compliance Work Order Listing • SLR Rescheduled Work Order Listing	

SLR 3.2.12 Cold, Hot & Drinking Water Supply Systems

Service	Scope of Service: Normal Requirement	Processes & Documents	Performance Standards / Service Level	Measurement's criteria / Key Performance Indicator	Penalty
3.2.12 Cold, Hot and Drinking Water supply systems	• Maintain cold, hot and drinking water supply and infrastructure systems including water storage tank and pumps • Produce an annual assessment on the condition and performance/efficiency of the system.	• Occupational Health and Safety Act • National Standards • SANS 10306	• Response and Resolution times to be in accordance with 2.3.14 - Work Order Priority Schedule with the exception were noted in the document.	• Achievement of response and resolution times • PPM Schedule completed (Actual v Plan) • Failures documented • Reporting targets achieved • Water Quality Test records • SLR Non-compliance Work Order Listing • SLR Compliance Work Order Listing • SLR Rescheduled Work Order Listing	

SLR 3.2.13 Emergency Call-Out

Service	Scope of Service: Normal Requirement	Processes & Documents	Performance Standards / Service Level	Measurement's criteria / Key Performance Indicator	Penalty
3.2.13 Emergency Call- Out	• Provide emergency call-out Note: The call out system applies to any facilities-related call-out, that occurs outside of normal working hours, and requires attention to ensure minimum disruption to critical services or the provision of TP's standards for the working environment, it is a specific TP requirement that the call-out service be available on a 24/7 standby basis In addition to the above there is a dedicated call-out service to meet the specific requirements of TP on 24/7 standby	• None	• Response and Resolution times to be in accordance with 2.3.14 - Work Order Priority Schedule with the exception where noted in the document.	• Achievement of response and resolution times • Emergency Call Out Activity Report	

SLR 3.2.14 Fire Preventive & Protective Systems

Service	Scope of Service: Normal Requirement	Processes & Documents	Performance Standards / Service Level	Measurement's criteria / Key Performance Indicator	Penalty
3.2.14 Fire Preventive and Protective Systems	• These systems include but are not limited to: ➢ Fire Detection and Alarm (intercom) ➢ Sprinkler Systems ➢ Hose Reels • Smoke Control Systems ➢ Dry risers ➢ Wet risers ➢ Fire suppression systems ➢ Portable fire extinguishers • Ensure protection of premises and occupants and the continuation of business operations • Maintain fire engineering systems to comply with TP's requirements, insurance requirements, and statutory requirements. • Liaise with the Fire Officer/Authority • Liaise where necessary (minimum of once in every 6 months) with TP's insurers on sprinkler requirements and report any recommendation made by the insurers.	• Occupational Health and Safety Act • National Standards • SANS 10400 • (Fire Regulations)	• Response and Resolution times to be in accordance with 2.3.14 - Work Order Priority Schedule with the exception were noted in the document,	• Achievement of response and resolution times. • PPM Schedule completed (Actual v Plan) • Failures documented OHS Review • SLR Non-compliance Work Order Listing • SLR Compliance Work Order Listing • SLR Rescheduled Work Order Listing	

	• Co-ordinate activities regarding insurance, and statutory inspections and ensure any recommendations are actioned appropriately. • Liaise directly with the insurance company in the event of a significant failure. • In the event of a significant failure provide for immediate steps to minimise the risk to all TP employees and contractors and visitors to Carlton Centre Precinct and ensure that TP is fully involved throughout this process. • Provision should be made for 24/7. • Provide for all emergency response team requirements covered under TP Security documents. • Ensure all documentation relating to fire certificate or insurer's conditions are managed and maintained. (Refer to insurance approval for building, structural or fire protective/preventive system changes prior to carrying out) • Ensure TRANSNET are advised immediately on any significant failure or systems that affect the protective/preventive measures. • In concert with TP Facilities Management provide training in use of fire extinguishers and hose reels to				

	selected TP and the Facilities Management service provider staff. • Provide regular servicing of portable extinguishers in accordance with fire certificates.				

SLR 3.2.15 Passenger Lift Systems

Service	Scope of Service: Normal Requirement	Processes & Documents	Performance Standards / Service Level	Measurement's criteria / Key Performance Indicator	Penalty
3.2.15 Passenger Lift Systems	• To ensure vertical transportation of occupants and continuous business operation. • Maintain and provide for use passenger lift installations, including lift shafts, rails, cars, traction ropes, power supplies, plant and equipment and machine rooms (including monitoring and testing, adjustment, cleaning, lubrication, etc.) • To include for co-ordinating between the specialist service provider and TP's insurers, ensuring all Statutory tests are monitored and performed and recorded at the appropriate times, • Produce an annual assessment on the condition and performance efficiency of the system.	• Occupational Health and Safety Act • Lifts, Escalators, and passenger conveyor regulations • National Standards • SANS 1545 • OEM specification and O&M documents	• Response and Resolution times to be in accordance with 2.3.14 - Work Order Priority Schedule with the exception were noted in the document,	• Achievement of response and resolution times • PPM Schedule completed (Actual v Plan) • Failures documented • Reporting targets achieved • SA Non- compliance Work Order Listing • SLA Compliance Work Order Listing • SLA Rescheduled Work Order Listing	

SLR 3.2.16 Lock & Key Controls

Service	Scope of Service: Normal Requirement	Processes & Documents	Performance Standards / Service Level	Measurement's criteria / Key Performance Indicator	Penalty
3.2.16 Lock & Key Controls	• Issue and control all office door key. • Maintain all necessary audit documentation • Audit all master and core keys on a shift-to-shift basis, • Maintain all supplies necessary for the operation of a key service. • Ensure Master type keys are never issued outside of the security function. • Audit entire process every 6 months, document results and notify TP Facilities of any identified exposures.	• TP Policy	• No audit exposures	• The Facilities Management service provider Self-Assessment • Monthly TP Assessment • Check reports covering 6 monthly reviews of entire process.	

SLR 3.2.17 General Cleaning

Service	Scope of Service: Normal Requirement	Processes & Documents	Performance Standards / Service Level	Measurement's criteria / Key Performance Indicator	Penalty
3.2.17 General Cleaning	• Provide a comprehensive cleaning service to ensure a neat, clean, and healthy working environment. External and internal including window cleaning. • Ensure cleaning does not impact on TP's business, • Provide programme to establish zoned areas for levels of cleaning in all locations. • Light fittings must be free from dust and dirt allowing fitting to perform to its stated lux output. • Carpets must be free of stains and dirt (mud and soil) and must be vacuumed at least once per week. • Basement parking must be free from dust and grease/oil • Bins must be empty at the start of the working day and must not be allowed to overflow during any part of the working day.	• TP documented standard	• Response and Resolution times to be in accordance with 2.3.14 "Work Order Priority Schedule with the exception were noted in the PPM document.	• Weekly The Facilities Management service provider Assessment • Monthly Contract Assessment • TP departmental Satisfaction Survey/response • Annual User Satisfaction • TP Review ➢ Visual ➢ Standards/Image Measurements • Provide a monthly report ➢ Monthly cleaning measurements ➢ Periodical schedule review ➢ Job cards for general cleaning ➢ Image review reports	

	• Sanitisation of telephones will be available as user funded works, The Facilities Management service provider to advise frequency				

SLR 3.2.18 Ablution Cleaning

Service	Scope of Service: Normal Requirement	Processes & Documents	Performance Standards / Service Level	Measurement's criteria / Key Performance Indicator	Penalty
3.2.18 Ablution Cleaning	• Ablution must be clean and always have a fresh appearance and odour. Toilets must be cleaned at least once a day. • Replenish consumable and dispose of sanitary waste as required. • All sanitary facilities must be free of lime scaling. • Maintain an inspection and recording regime for all ablution areas.	• TP documented standard	• Response and Resolution times to be in accordance with 2.3.14 — Work Order Priority Schedule with the exception were noted in the PPM document • Frequency of cleaning is dependent on building status and usage and is more than once per day in a number of locations (to be defined), or areas within locations.	• Weekly Facilities Management service provider Assessment • TP departmental Satisfaction Survey/response. • Annual User Satisfaction Survey. • TP Review ➢ Visual Standard ➢ Image ➢ Measurements. • Daily toilets check sheets for toilet cleaning	

SLR 3.2.19 Pest Control

Service	Scope of Service: Normal Requirement	Processes & Documents	Performance Standards / Service Level	Measurement's criteria / Key Performance Indicator	Penalty
3.2.19 Pest Controls	• Ensure site and buildings are free of all pests: Rats. Mice, cockroaches, moles, mites, lice, fish moths and woodlice • Implement Bird control for doves and pigeon • Keep records of inspections and treatments in a Pest Control Book.	• Occupational Health and Safety Act • National Standards • SANS 10206	• Response and Resolution times to be in accordance with 2.3.14 - Work Order Priority Schedule with the exception were noted in the PPM document	• Achievement of response and resolution times • User satisfaction measurements • OHS Reviews • Up to date pest control log • Pest control reports	

SLR 3.2.20 Waste Management, Including Hazardous Waste

Service	Scope of Service: Normal Requirement	Processes & Documents	Performance Standards / Service Level	Measurement's criteria / Key Performance Indicator	Penalty
3.2.20 Waste Mgt. Including Hazardous Waste	• Provision of waste infrastructure (waste separation bins) to support waste separation initiative for re-use and recycling programme. • Specifically provide waste containers for hazardous materials and appropriately transport and dispose at Hazardous Landfill Site. • Store waste as per the requirements of internal policies, SANS Codes and regulatory requirements • Transport waste from the building in line with the applicable regulatory requirements. • Use waste registers to record collected waste per type and compile an updated waste database. • Manage the collection and provide reports capturing volumes on individual waste categories.	• National Waste Management Policy • Waste Management Hierarchy • South African National standards • SANS 10400 • TP SHEQ Policy Statement • TP Waste Management Framework • Waste separation guideline	• Response and Resolution times to be in accordance with 2.3.14 — Work Order Priority Schedule with the exception were noted in the PPM document	• Monitor and provide monthly reports on performance and provide consolidated monthly report • Waste transfer/disposal certificates • Waste stream statistics	

SLR 3.2.21 Water Management

Service	Scope of Service: Normal Requirement	Processes & Documents	Performance Standards / Service Level	Measurement's criteria / Key Performance Indicator	Penalty
3.2.21 Water Management Service	• Compliance with Statutory requirements. • Organise/schedule and provide a register of visits by independent specialists. • Produce report on visits and outline of activities, Support all audit activities,	• Occupational Health and Safety Act • National Standards • SANS 10400	• Response and Resolution times to be in accordance with 2.3.14 - Work Order Priority Schedule with the exception were noted in the PPM document.	• Achievement of response and resolution times • PPM Schedule completed (Actual v Plan) • Failures documented • Provide current records of independent specialist latest visit • SLR Non - compliance Work order listing • SLR compliance Work order listing • SLR Rescheduled work order listing	

4.0 Type 2 Service Level Requirements

4.1 Type 2 Services Requirements

4.1.1 Introduction

Type 2 Services are those Services which support the general day-to-day operations of TP and support to building occupants. An occasional failure to deliver these Services to the specified performance level will not affect occupancy of the building and, except for Building Fabric Maintenance, continuation of these Services is not essential for the long-term occupation of the building

4.1.2 Building Fabric Maintenance

The condition of all building fabric components and systems is to be kept under constant review, so that essential operating conditions can be maintained and short-term problems dealt with within the critical response times. The Facilities Management service provider will be responsible for establishing the necessary systems of reporting/recording and responding to problems as they arise.

It will be the responsibility of the Facilities Management service provider to establish benchmark performance standards based on agreed industry standards. Regular inspections as set out in this document will be required.

4.1.3 Scopes and Performance Standards for Type 2 Services

Following are the detailed scopes and performance standards of the Type 2 Services. Response and resolution times for each activity are defined in Section 2.3.14. The criticality tables are to be used as a guideline to the likely criticality of activities within each Service element

4.2 Type 2 Services

4.2.1 TP, Facilities Management User Satisfaction Surveys

4.2.2 Financial Management

4.2.3 External areas cleaning including windows

4.2.4 Landscaping and internal Planting

4.2.5 External Building Fabric: Roofs

4.2.6 External Building Fabric: Walls, windows, and Doors

4.2.7 External areas maintenance

4.2.8 Interior: Walls

4.2.9 Monthly Report

4.2.10 Support to TP, Facilities Operations

4.2.11 General Services

4.2.12 Project Feasibility

SLR 4.2.1 TP, Facilities User Satisfaction Surveys

Service	Scope of Service: Normal Requirement	Processes & Documents	Performance Standards / Service Level	Measurement's criteria / Key Performance Indicator	Penalty
4.2.1 TP, Facilities User Satisfaction survey	• Evaluate responses. • Implement agreed actions and targets, and report back to the TP, Facilities	• TP documented standard	Action plans within one month of obtaining results.	• TP, Facilities User Satisfaction Survey following publication of annual survey results • Show action plan, provided within one month of obtaining survey results • Monthly status report of actions agreed against target	

SLR 4.2.2 Financial Management

Service	Scope of Service: Normal Requirement	Processes & Documents	Performance Standards / Service Level	Measurement's criteria / Key Performance Indicator	Penalty
4.2.2 Financial Management	• For Budgeting and Resource Planning: • Prepare annual budget by month for provision of facility services based on achieving best value for money. • Agree annual and monthly financial targets and review monthly. • Prepare for monthly Business reviews and periodic TP Audit & reviews. • For reporting and Controls: Prepare records of operating expenses. • Maintain accurate records of spend and commitment categorised by the main service types. • Monthly control figures and year and out-turn forecast for FM Services operating expenses, Contract & Budget Variations • For variations to this contract, provide documentation for review	• TP Budgetary business processes	• Response and Resolution times to be agreed with TP prior to commencement of contract • Provide information monthly.	• Monthly Report - Finance • TP Facilities Reviews. • On-going integral part of reviews/audits • Invoice reconciliation document • Budget variation file, all BVOs correctly authorised • Monthly invoice verification summary sheet actions arising from these reviews and close-out confirmation (action log sheet) • Signed invoice tracking reports	

	With TP to include description of variation, business case and costs, • Track and monitor monthly for review with TPs representative and for review with TP Facilities Finance Manager as part of monthly invoice submission by the Facilities Management service provider • Client Report invoice Verification/ Review of orders invoices, approvals, and all associated documentation with TPs representatives • Document all actions and observations stemming from the review and close out. • Provide a dedicated qualified and competent person to produce, monitor and report to TP Facilities.				

SLR 4.2.3 External Areas Cleaning

Service	Scope of Service: Normal Requirement	Processes & Documents	Performance Standards / Service Level	Measurement's criteria / Key Performance Indicator	Penalty
4.2.3 External Areas Cleaning	• External areas include entrance, service areas, car parks, paths, external furniture and patios. • Take reasonable measures to keep all parking area, driveways, access areas, service areas and pedestrian areas and walkways clear of leaves and litter/rubbish. • Walkways and driveways must be always kept reasonably clear and passable during normal working hours.	• TP Documented Standard	• Response and Resolution times to be in accordance with 2.3.14 - Work Order Priority Schedule with the exception were noted in the PPM document	• User Satisfaction Survey • Achievement of response and resolution times • Monthly supplier performance measurements • Reports specific to external areas cleaning	

SLR 4.2.4 Landscaping and Internal Planting

Service	Scope of Service: Normal Requirement	Processes & Documents	Performance Standards / Service Level	Measurement's criteria / Key Performance Indicator	Penalty
4.2.4 Landscaping and Internal Planting	• All maintenance operations carried out by full trained personnel. Certificated where required All chemicals used must be in accordance with statutory requirements • Except where directed otherwise by TP all grass areas cut to maintain a height of between 20-75mm weeded and maintained in good, healthy condition. • All leaves and litter must be collected. • All areas of shrub planting maintained in weed free condition, pruned, thinned, and maintained in appropriate condition for the season. • All planting, hedges, and trees to be maintained by trimming and pruning as necessary. • All plantings near buildings to be cut back to maintain a 600 mm line of sight around all buildings.	• TP Documented Standard	• Response and Resolution times to be in accordance with 2.3.14-Work Order Priority Schedule with the exception were noted in the PPM document • All landscaping items must be maintained so that no plants shrubs, trees, grass etc. appear to be in a	• TP Facilities Reviews • Monthly landscaping measurements • Report on landscaping work • Show Control of Substances Hazardous to Health assessment	

	• All trees to be monitored for disease. In the event of disease being diagnosed, The Facilities Management service provider to inform TP and (if necessary, the local municipal authority). • Guidance to be sought as to appropriate treatment or felling. All permissions to be sought and gained. • Paths and car parks maintained in weed free and neat condition. Car Park edges to be kept free of debris. • Maintain all ornaments and water features. • Maintain all internal landscaping features in all areas (entrance/reception, lobbies and working areas) including provision of plants and trees. .		'dead or dying' state.		

SLR 4.2.5 External Building Fabric: Roofs

Service	Scope of Service: Normal Requirement	Processes & Documents	Performance Standards / Service Level	Measurement's criteria / Key Performance Indicator	Penalty
4.2.5 External Building Fabric: Roofs	• Maintain to meet visual, operational, ergonomic and health & safety standards. • NB. If identified by the Facilities Management service provider Projects as failing then such item is to be included in the asset plan • Inspection of roof leaks repair and maintain roof fabric	• Occupational Health and Safety Act • National standards • SANS 10400	• Response and Resolution limes to be in accordance with 2.3.14-Work Order Priority Schedule with the exception were noted in the PPM document	• Achievement of response and resolution times • PPM Schedule completed (Actual v Plan) • Failures documented • SLR Non-compliance Work Order Listing • SLR Compliance Work Order Listing • SLR Rescheduled Work Order Listing	

SLR 4.2.6 External Building Fabric Walls, windows & doors

Service	Scope of Service: Normal Requirement	Processes & Documents	Performance Standards / Service Level	Measurement's criteria / Key Performance Indicator	Penalty
4.2.6 External Building Fabric: Walls, windows and doors	• Maintain to meet visual, operational, ergonomic, and health & safety standards • Repair malfunctioning windows NB. If identified by the Facilities Management service provider as failing then such item is to be included in the asset plan	• Occupational Health and Safety Act • National Standards • SANS 10400 • Design standards and specifications	• Response and Resolution times to be in accordance with 2.3.14 -Work Order Priority Schedule with the exception were noted in the PPM document	• Achievement of response and resolution times • PPM Schedule completed (Actual v Plan) • Failures documented • SLR Non-compliance Work Order Listing • SLR compliance Work Order Listing • SLR Rescheduled Work Order Listing	

SLR 4.2.7 External Areas Maintenance (Hard surfaces to include road & car parking etc.)

Service	Scope of Service: Normal Requirement	Processes & Documents	Performance Standards / Service Level	Measurement's criteria / Key Performance Indicator	Penalty
4.2.7 Exterior Areas Maintenance (Hard surfaces to include road and car parking, hard-standings, paths etc.).	• Maintain to meet visual, operational, ergonomic, and health & safety standards.	• Occupational Health and Safety Act • National Standards • SANS 10400	• Response and Resolution times to be in accordance with 2.3.14 - Work Order Priority Schedule with the exception were noted in the PPM document	• Achievement of response and resolution times • PPM Schedule completed (Actual v Plan) • Failures documented • SLR Non-compliance Work Order Listing • SLR Compliance Work Order Listing • SLR Rescheduled Work Order Listing	

SLR 4.2.8 Interior: Wall (including doors, ceiling & floor systems)

Service	Scope of Service: Normal Requirement	Processes & Documents	Performance Standards / Service Level	Measurement's criteria / Key Performance Indicator	Penalty
4.2.8 Interior: Wall (Including doors), Ceiling and floor systems	• Maintain to meet visual, operational, ergonomic, and health & safety standards • Includes inspections of Fire Stopping • Repair doors, locks, and door frames etc. • Repair or replace ceiling elements	• Occupational Health and Safety Act • National Standards • SANS 10400	• Response and Resolution times to be in accordance with 2.3.14 - Work Order Priority Schedule with the exception were noted in the PPM document	• Achievement of response and resolution times • PPM Schedule completed (Actual v Plan) • Failures documented • SLR Non-compliance Work Order Listing • SLR Compliance Work Order Listing • SLR Rescheduled Work Order Listing	

SLR 4.2.9 Monthly Report

Service	Scope of Service: Normal Requirement	Processes & Documents	Performance Standards / Service Level	Measurement's criteria / Key Performance Indicator	Penalty
4.2.9 Monthly Report	• Provision of Monthly Report detailing information regarding provision of services for previous month • Monthly meeting between the Facilities Management service provider and TP Facilities including minutes and reviews of outstanding actions, issues and concerns and overall measurement of the Facilities Management service provider's performance.	• TP, Facilities Management service monthly report format	• Supporting • documentation available	• Monthly Report • TP, Facilities Annual Review • Provide monthly report in agreed format • Provide signed copy monthly for filing and report purposes	

SLR 4.2.10 Support to TP, Facilities Operations

Service	Scope of Service: Normal Requirement	Processes & Documents	Performance Standards / Service Level	Measurement's criteria / Key Performance Indicator	Penalty
4.2.10 Support to TP, Facilities operations	• The Facilities Management service provider is required to provide support to the operations that will form part of the Facilities Management service provider normal Business as Usual • This shall cover audits. (technical) and support to projects. The Facilities Management service provider is required to assist the project parties by means of the provision of drawings, access permits, permits to work (where this is held by the Facilities Management service provider) and charged to the Project order where appropriate). The Facilities Management service provider shall take all reasonable steps to assist 3rd parties in their performance of TP's duties • The Facilities Management service provider shall form an integral part of the handover of any project. The Facilities Management service provider shall satisfy itself that all items handed over to them at the end of any project comply to the project spec.	• The Facilities Management service provider to attend TP meetings as required. • Minutes of meetings	• No complaints	• Monthly report on support provided • Provide copy of checklist where 3rd Party Project handed over • Provide reports of work completed • Provide list of Authority Levels to ensure compliance	

	• The Facilities Management service provider will professionally liaise with other suppliers providing TP with services and freely provide information judged beneficial to TP's overall operation				

SLR 4.2.11 General Services

Service	Scope of Service: Normal Requirement	Processes & Documents	Performance Standards / Service Level	Measurement's criteria / Key Performance Indicator	Penalty
4.2.11 General Services	• Automated Doors • Provide a maintenance regime for the automated doors as documented • Internal plants to be maintained in a healthy condition or be replaced • Building water features including fountains • Furniture Maintenance example chairs, desk, credenza, cabinets, and cupboards etc • Furniture movement within buildings as and when required. • Provision of 1x 1ton light commercial vehicle (Bakkie/van) to be permanently on site or available as and when required within reasonable time for procurement of emergency spares and call out requirements.	• Occupational Health and Safety Act • National Standards • Manufacturer O&M Manuals • Indoor plants SA association standard • TP Finance processes	• As per CMMS work order priority table • As per CMMS work order priority table • As per CMMS work order priority table	• CMMS SLR compliance reports • No queries from suppliers or landlords. • SLR Non-compliance Work Order Listing • SLR Compliance Work Order Listing • SLR Rescheduled Work Order Listing	

SLR 4.2.12 Project Feasibility

Service	Scope of Service: Normal Requirement	Processes & Documents	Performance Standards / Service Level	Measurement's criteria / Key Performance Indicator	Penalty
4.2.12 Project Feasibility	• All feasibility for projects shall be compiled by the Facilities Management service provider. It shall include within the price for all associated design and costing work in preparing such feasibility studies that may be required (excluding for external design team which will be authorised by TP as and when required) to meet the needs of Feasibility Process	• Feasibility Process flow chart	• Project specific	• Cost Matrix ➢ Approved sign-off ➢ Approved and repeated if required • Show delivery of between one and three options for feasibility study • Show delivery of feasibility studies to agreed timescales	