1 INSTRUCTIONS

a. These drawings are intended to illustrate the basic requirements to be satisfied. They do not cover all the requirements.

b. It is the responsibility of the contractor to prepare a detailed layout diagram/block diagram/schematic for the new system, any errors or losses arising from use of these drawings for equipment manufacture shall be borne by the contractor.

c. These drawings shall not be used for any other purpose other than understanding the employer's requirements.

d. In case of conflict between these drawings and the employer requirements, employer requirements shall prevail.

2 CONTENTS

2.1 Sheet 01: Proposed SCADA RCC physical architecture block diagram
2.2 Sheet 02: Proposed SCADA LCC physical architecture block diagram
2.3 Sheet 03: Proposed SCADA RCC Operations server cabinet layout diagram
2.4 Sheet 04: Proposed SCADA RCC DMZ side Logical architecture block diagram
2.5 Sheet 05: Proposed SCADA LCC panel layout diagram
2.6 Sheet 06: Proposed SCADA RCC Operations server cabinet layout diagram
2.7 Sheet 07: Proposed SCADA RCC DMZ server cabinet layout diagram

3 KEY

1. DMZ: Demilitarized zone
2. FOC: Fibre optic cable
3. GPS: Global positioning system
4. IPC: Industrial personal computer (X86-X64 IBM compatible)
5. KVM: Keyboard video Mouse
6. LAN: Local Area Network
7. LCC: Local control centre
8. ODU: Outdoor Unit
9. PLC: Programmable Logic controller
10. RCC: Remote or regional control centre
11. VLAN: Virtual LAN
12. VM: Virtual Machine
NOT ALL SOFTWARE APPLICATIONS IN THIS DRAWING ARE IN SCOPE OF SUPPLY. REFER TO TENDER DOCUMENT, SCOPE OF SUPPLY AND BOM FOR THE COMPREHENSIVE SCOPE OF SUPPLY.
KAMBURU RCC DMZ LAN

VM MANAGEMENT HOST 2

KAMBURU RCC DMZ VM MANAGEMENT VLAN

KAMBURU RCC DMZ LAN

VM PRODUCTION HOST 2A

VM PRODUCTION HOST 2B

1 Logical processor = 1vCPU

FROM SCADA CONTROL LAN (PREVIOUS PAGE)
Top mounted redundant fans
Lifting Eye bolts

Level 2 industrial Ethernet switch A
Level 2 industrial Ethernet switch B
Blanking Plate
Level 1 industrial Ethernet switch A.1
Level 1 industrial Ethernet switch B.1
24 port Fibre optic patch panel (LC)
Cable entry panel (FOC Patch chords)
Blanking Plate

19" industrial grade Touch monitor

Console keyboard drawer
Blanking Plate
Industrial PTP Grandmaster clock & Time server
Blanking Plate
Industrial PC - SCADA Data Acquisition Server A

Industrial PC - SCADA Data Acquisition Server B

Cable entry panel [CAT 7 SSTP Patch chords]
24 port RJ45 (PORT A), CAT7, SSTP ethernet patch panels
Cable entry panel [CAT 7 SSTP Patch chords]
24 port RJ45 (PORT A), CAT7, SSTP ethernet patch panels
Cable entry panel [CAT 7 SSTP Patch chords]
24 port RJ45 (PORT A), CAT7, SSTP ethernet patch panels
Cable entry panel [CAT 7 SSTP Patch chords]
24 port RJ45 (PORT A), CAT7, SSTP ethernet patch panels
British type (BS 1363) Socket strip

24 port RJ45 (PORT A), Cat7, SSTP ethernet patch panels
24 port RJ45 (PORT A), Cat7, SSTP ethernet patch panels
24 port RJ45 (PORT A), Cat7, SSTP ethernet patch panels
24 port RJ45 (PORT A), Cat7, SSTP ethernet patch panels

Blanking Plate
Blanking Plate
Blanking Plate
Blanking Plate

10" industrial grade Touch monitor

Front door with poly carbonate window

24 port RJ45 (PORT A), Cat7, SSTP ethernet patch panels
24 port RJ45 (PORT A), Cat7, SSTP ethernet patch panels
24 port RJ45 (PORT A), Cat7, SSTP ethernet patch panels
24 port RJ45 (PORT A), Cat7, SSTP ethernet patch panels

16/04/2019 20:09:51, DENOWR, ISO A3 (297.00 x 420.00 MM)
Sixteen Outlet (C13), 240 V AC, 32A PDU
Cisco Ethernet Switch (C3850-24XU-S) - A
24 port Fibre optic patch panel (LC)
Cable entry panel (CAT 7 SSTP Patch chords)
Level 3.5 Enterprise security appliance - A
Blanking Plate
Integrated console monitor, keyboard & 8 port KVM switch
Management Host Server 1
Production Host Servers - 1A
Integrated console monitor, keyboard & 8 port KVM switch
Management Host Server 1
Production Host Servers - 1B
Cable entry panel (CAT 7 SSTP Patch chords)
Level 3 Enterprise security appliance - A
Blanking Plate
Blanking Plate
Base Plate
Level 3.5 Enterprise security appliance - B
Management Workstation 1
Level 3.5 Enterprise security appliance - B
Integrated console monitor, keyboard & 8 port KVM switch
Management Host Server 1
Production Host Servers - 1B
Cable entry panel (CAT 7 SSTP Patch chords)
Level 3 Enterprise security appliance - A
Blanking Plate
Blanking Plate
Blanking Plate
Base Plate
Blanking Plate
*** Some patch panels to be mounted on the rear side of the panel

**** PANEL LAYOUT DRAWING
DRAWN FOR ILLUSTRATION
PURPOSE ONLY, CONTRACTOR TO
DEVELOP ACCURATE PANEL
DRAWINGS AS PER
SPECIFICATIONS

DIMENSIONS IN CENTIMETERS

DATE NAME SHEET TITLE PROJECT TITLE

DRAWN 27/12/2018 D.WANGAIRIA PROPOSED KAMBURU RCC CONTROL SERVER CABINET SAMPLE DRAFT LAYOUT
CHECKED 03/02/2019 J.MUGA

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