



NOTES:

- 1 THE EXACT CONFIGURATION OF THE HMI SERVERS WILL BE DETERMINED AFTER CONTROL SYSTEM VENDOR SELECTION. THE USE OF VIRTUAL SERVERS WILL BE CONSIDERED, AND INSTALLATION OF ADDITIONAL PHYSICAL SERVERS MAY BE REQUIRED DEPENDING ON THE FINAL CONFIGURATION.
- 2 IT IS ENVISIONED THAT THE NETWORKING SWITCHES AND SERVER NICs FOR THE HMI SYSTEM WILL BE GIGABIT BASED.
- 3 VLANS MAY BE UTILIZED TO SEPARATE AND PRIORITIZE NETWORK TRAFFIC.
- 4 LAYER 3 SWITCHES WILL PROVIDE ROUTING CAPABILITY FOR THE PROCESS NETWORK.
- 5 THE VIRTUAL PRIVATE NETWORKING GATEWAY PROVIDES DIRECT INTERCOMMUNICATION BETWEEN THE THREE WASTEWATER FACILITY NETWORKS, WHICH ALLOWS THE OPERATOR WORKSTATIONS AT EACH FACILITY TO VIEW THE OTHER FACILITIES.
- 6 THIS DRAWING INDICATES THE REQUIRED FUNCTIONALITY OF THE VPN GATEWAY AND FIREWALL, HOWEVER THE DETAILED CONFIGURATION IS HIGHLY DEPENDENT UPON THE NATURE OF THE INTRANET CONNECTION AND THE CITY'S SECURITY POLICIES.



| NO. | REVISIONS | DATE | DESIGN | CJR | BJC | CHECK |
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| THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT | | | |
| WASTEWATER TREATMENT SYSTEM FACILITY HMI ARCHITECTURE | | | |
| CITY DRAWING NUMBER SK-A0002 | SHEET 001 | REV. 00 | SIZE A1 |