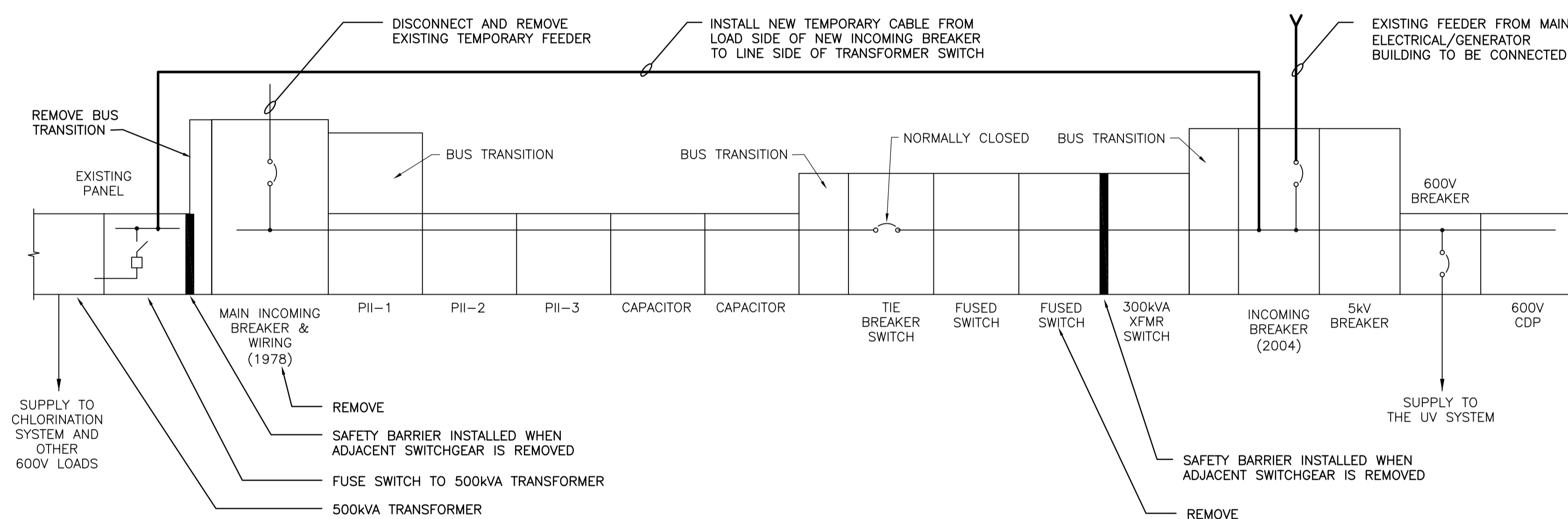
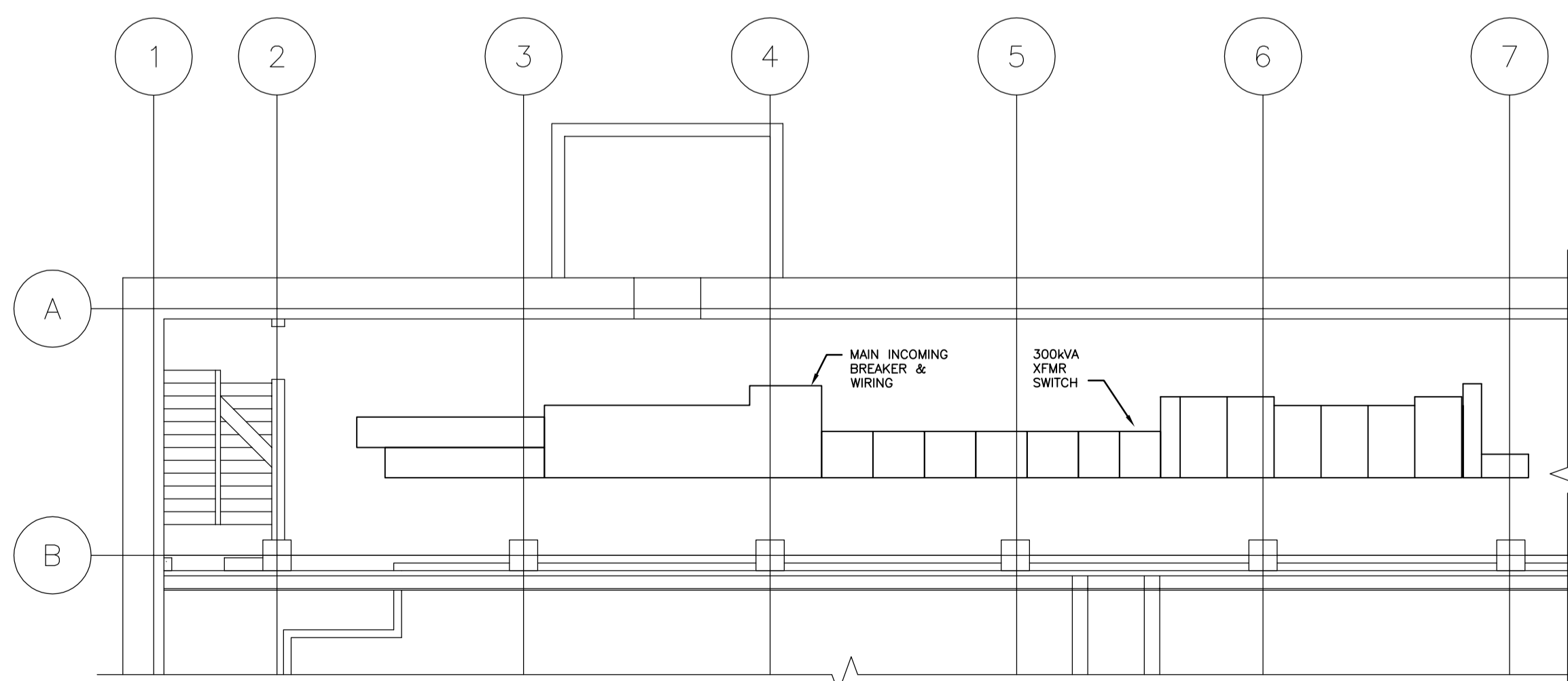


EXISTING ELECTRICAL DISTRIBUTION EQUIPMENT - PLAN VIEW



OPERATION 1 - PLAN VIEW
INSTALLATION OF TEMPORARY CABLE



EXISTING PUMP STATION PARTIAL PLAN - SWITCHGEAR GENERAL ARRANGEMENT
NOT TO SCALE

Sequence of removing existing Electrical equipment and replacing existing and new Electrical equipment:

Existing conditions for equipment being removed or altered:

1. Existing fused switch for existing 500kVA transformer.
2. Existing temporary service conductor from existing 5MVA station transformer to Main Incoming (1978) Breaker.
3. Existing 2 speed starter for Pump PII-1 connected to associated pump motor.
4. Existing 2 speed starter for Pump PII-2 connected to associated pump motor.
5. Existing 2 speed starter for Pump PII-3 connected to associated pump motor.
6. Capacitor cubicles for pump motors.
7. Capacitor breaker cubicles.
8. Tie Breaker Switch with bus transition (Reused).
9. Spare Fused Switch (Reused).
10. Spare Fused Switch (Reused).
11. 300kVA transformer Fused Switch (Existing to remain).
12. Incoming (2004) Breaker (Existing to remain).
13. 5kV breaker for 2000kVA UV transformer (Existing to remain).

Operation #1

1. Open the tie breaker switch and lock out in the de-energized mode.
2. Open and de-energize the existing 1978 main 5kV breaker.
3. Extend the 8kV feeder cable (brought to the Deacon Station from the Main Electrical/Generator Build by others) into the Deacon Station and prepare cable to be terminated on existing east side main breaker.
4. Connect the new 8kV feeder cable to the Schneider (2004) Vacuum Breaker. (cable to be de-energized until "Operation 1" is completed.)
5. Allow Breaker to operate for a period of time as indicated by the CM. Tie switch will be in the Open position during this operation. After the test time is complete, contractor will complete the remaining operations.
6. Disconnect the existing temporary feeder cable presently terminated on the 1978 Main Incoming Breaker (west side).
7. Remove the Incoming (1978) Main Breaker and Hydro metering equipment and remove from site.
8. Disconnect and remove existing transition section, connecting the switch for the 500kVA transformer, and the west side main breaker to allow equipment removed. Install temporary safety barrier on exposed switch unit.
9. Provide, install and terminate new temporary cables between the load side of the Incoming Breaker (2004) and the line side of the 5 kV Transformer Switch feeding the existing 500kVA transformer. The new temporary cables shall be 2 sets of 3C-350MCM 5 kV Teck armoured cables as manufactured by Prysmian. The two sets of cables shall be installed with a minimum one cable diameter separation. Some temporary bus modifications to allow for the temporary cable connection may be required. Contractor shall allow for the temporary bus modification.
10. Disconnect and remove existing "Spare Switch" located adjacent to 300kVA transformer switch. Install temporary safety barrier on exposed switch unit.
11. Energize the breaker in generator building, which feeds the Deacon Booster Pumping Station East Side Breaker.
12. Rack in and energize the East Main Breaker. This will energize the temporary feeder to the west side switch (500kVA transformer)

The 100kW generator in the Deacon Station will be operating and servicing the loads fed from this generator. (Confirm generator operation)

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|--|---------------|---|--|-------------------|---|---|---------------------------------|--|---|------------------|
| <p>Certificate of Authorization Earth Tech Canada Inc. No. 730</p> | B.M. ELEV. | <p>Frederickson Cooper ARCHITECTS</p> | <p>A Type International Ltd. Company</p> | ENGINEER'S SEAL | <p>THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT ENGINEERING DIVISION</p> | | | | | |
| | | | | DESIGNED BY: GSN | | CHECKED BY: GSN | ORIGINAL SIGNED BY: P. STRYK | | | |
| | | | | DRAWN BY: ERC/CPG | | APPROVED BY: AHL | 2007/03/19 | | | |
| | | | | SCALE: N.T.S. | | RELEASED FOR CONSTRUCTION BY: R. SOROKOWSKI | CONSULTANT DRAWING NO. WD-E0411 | | | |
| | NO. REVISIONS | DATE | BY | DATE | 2006/09/11 | DATE | 2007/03/19 | | <p>WATER TREATMENT PLANT DEACON BOOSTER PUMP STATION UPGRADE</p> | CITY FILE NUMBER |
| | | | | | | | | | <p>ELECTRICAL SWITCHGEAR REPLACEMENT AND UPGRADE SEQUENCE OF OPERATIONS</p> | <p>SHEET OF</p> |
| | | | | | | | | | <p>1-0601D-G-E0411-001-01D</p> | |