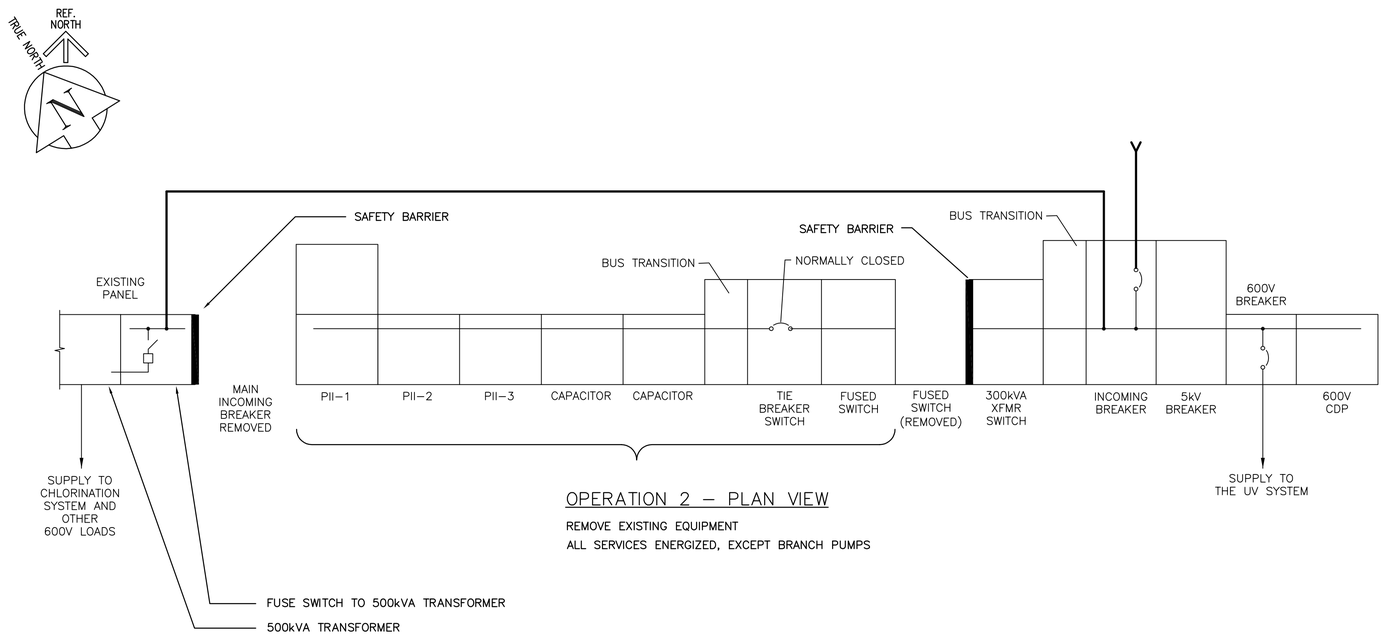
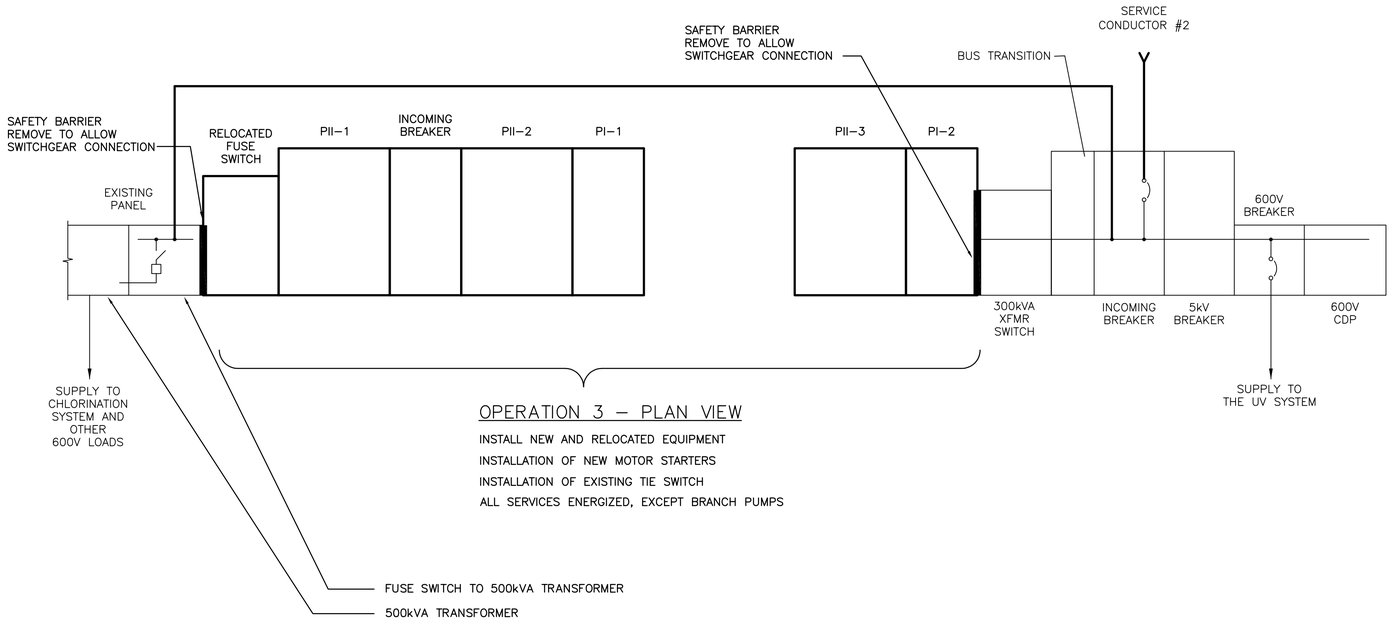


OPERATION 2 – PLAN VIEW

REMOVE EXISTING EQUIPMENT

ALL SERVICES ENERGIZED, EXCEPT BRANCH PUMPS



OPERATION 3 – PLAN VIEW

INSTALL NEW AND RELOCATED EQUIPMENT

INSTALLATION OF NEW MOTOR STARTERS

INSTALLATION OF EXISTING TIE SWITCH

ALL SERVICES ENERGIZED, EXCEPT BRANCH PUMPS

Operation #2

1. Disconnect the cables from the 3 existing 2-speed starters to the related pump motors.
2. Remove the following equipment and remove from site:
   a PII-1 2 speed starter for 900/400 HP pump motor.
   b PII-2 2 speed starter for 900/400 HP pump motor.
   c PII-3 2 speed starter for 900/400 HP pump motor.
   d All capacitors and related equipment associated with the 3 900hp pump starters.
   e Bus transition section on west side of existing Tie Breaker Switch.
3. Remove and make ready to be reinstalled:
   a Existing Tie Breaker Switch.
   b Existing Spare Fused Switch.

Operation #3

1. Install the new soft starters as indicated below:
   a New PII-1 2 speed soft starter for existing related pump motor.
   b New PII-2 2 speed soft starter for existing related pump motor.
   c New PII-3 2 speed soft starter for existing related pump motor.
   d New PI-1 single speed soft starter for the new related pump motor PI-1.
   e New PI-2 single speed soft starter for the new related pump motor PI-2.
2. Install new Schneider 1200A 5kV vacuum breaker to match the existing incoming vacuum breaker at East Side of distribution line up. Make bus connection between the fuse switch and the new vacuum breaker.
3. Reinstall the existing (2004) 5kV fused switches as indicated below:
4. Existing 1200A Schneider fused switch labeled as "Future 1".
5. Existing 1200A Schneider fused switch labeled as "Tie Switch".
6. Existing 1200A Schneider fused switch labeled as "Future 2".
7. Reinstall existing 5kV Teck cables from pump motors PII-1, PII-2 AND PII-3 to newly installed 2 speed soft starters labeled as PII-1, PII-2 and PII-3. Prepare and connect cables to starters.
8. Supply and install cables for new motors PI-1 and PI-2. Cables shall be 3/C #4 with suitable termination.
9. Connect all bus bars for each piece of equipment in the distribution line-up.
10. Perform all bus connection for equipment as required between equipment cells.

APEGM
Certificate of Authorization
Earth Tech Canada Inc.
No. 730 Expiry: April 30, 2007

B.M.
ELEV.

NO.	REVISIONS	DATE	BY
00	ISSUED FOR TENDER	07/03/19	ERC

CH2MHILL / Frederickson Cooper ARCHITECTS / EarthTech A Tyco International Ltd. Company

DESIGNED BY	GSN	CHECKED BY	GSN
DRAWN BY	ERC/CPG	APPROVED BY	AHL
SCALE:	N.T.S.	RELEASED FOR CONSTRUCTION BY:	R. SOROKOWSKI
DATE	2006/09/11	DATE	2007/03/19

ENGINEER'S SEAL
ORIGINAL SIGNED BY
P. STRYK
2007/03/19

CONSULTANT DRAWING NO.
WD-E0412

Winnipeg
THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENGINEERING DIVISION

WATER TREATMENT PLANT
DEACON BOOSTER PUMP STATION
UPGRADE

CITY FILE NUMBER
SHEET OF

ELECTRICAL
SWITCHGEAR REPLACEMENT AND UPGRADE
SEQUENCE OF OPERATIONS

CITY DRAWING NUMBER
1-0601D-G-E0412-001-00D