



SINGLE LINE DIAGRAM  
SCALE: N.T.S.

NOTES:

- INSTALLATION OF FIRE PUMPS SHALL COMPLY WITH NFPA 20 AND CANADIAN ELECTRICAL CODE, LATEST EDITIONS.
- 225A, 600V, 50kA, 3 POLE, 100% RATED, THERMAL-MAGNETIC SCHNEIDER ELECTRIC BREAKER IN INDIVIDUAL ENCLOSURE LLL36250CU31X.
- ADD BUS PADS TO EXISTING INCOMING TERMINATIONS ON LINE SIDE OF MAIN BREAKER. CONNECTIONS SHALL BE COMPRESSION LUGS. CABLES SHALL RUN OUT OF THE TOP OF THE SWITCHGEAR IN RIGID (METAL) CONDUIT OVER TO NEW BREAKER ENCLOSURES MOUNTED ON THE END OF THE SWITCHGEAR. SHALL BE DONE FOR BOTH INCOMING FEEDERS FROM TRANSFORMERS AS PER THE DRAWING. ADD PROPER BUS INSULATION TO MODIFIED INCOMING BUS (INSULATION BOOTS).
- FIRE PUMP CONTROLLER SHALL BE WITH GROUND FAULT DETECTION C/W VISUAL INDICATION AND HARDWIRED BACK TO PLC FOR ALARM STATUS. USE 2 X MULTICONDUCTOR IN TECK 6C#14AWG (6 FOR PUMP #1 (READY/RUN/FAULT/COMM/2 SPARES) SAME FOR PUMP #2). ROUTING: FROM TRANSFER SWITCHES IN GATEHOUSE TO PLC LOCATED IN CONTROL ROOM. FOR UNDERGROUND RUN, USE ONE OF 4" SPARE CONDUITS.
- AFTER MODIFICATION, EXISTING 600V, 1600A SWITCHGEAR SHALL BE RE-CERTIFIED BY ORGANIZATION ACCREDITED BY THE STANDARDS COUNCIL OF CANADA.

DRAWING NUMBER	REFERENCE DRAWINGS



**LOCATION APPROVED**  
UNDERGROUND STRUCTURES

SUPR. U/G STRUCTURES DATE COMMITTEE

**NOTE:**  
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE. BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

NO.	REVISIONS	YYMMDD	BY
1	ADDENDUM 1	18/11/07	RB
0	ISSUED FOR PHASE 2 & 3: BID OPP. 502-2017	18/05/09	RB

<b>AECOM</b>	
DESIGNED BY RB	CHECKED BY SS
DRAWN BY RB	APPROVED BY
HOR. SCALE N.T.S.	RELEASED FOR CONSTRUCTION
VERT. SCALE	DATE

PROFESSIONAL'S SEAL

CONSULTANT DRAWING NO. E0006

BID OPPORTUNITY NO. 502-2017

**THE CITY OF WINNIPEG**  
**WATER AND WASTE DEPARTMENT**

**SHOAL LAKE**  
**AQUEDUCT INTAKE FACILITY**  
**FIRE PUMP UPGRADES**  
**ELECTRICAL**  
 SINGLE LINE DIAGRAM

SHEET 26 OF 27	REV
CITY DRAWING NUMBER	1-0600A-E0006-001 1