FEED FROM FEED FROM MANITOBA MANITOBA HYDRO **HYDRO** MANITOBA HYDRO MANITOBA HYDRO TRANSFORMER TRANSFORMER 12.47kV PRIMARY 12.47kV PRIMARY 750KVA 750KVA 600V SECONDARY 600V SECONDARY TF-9 TF-10 EXISTING 600V, 1600A SWITCHGEAR 3C, 2AWG IN RIGID — (METAL) CONDUIT RUN OUTSIDE OF N/C SWITCHGEAR TIE BREAKER N/O NOTE 2 NOTE 2 NOTE 2 NOTE 2 EXISTING LOADS EXISTING LOADS 3C, 2AWG, TECK 90, 1000V ----TRANSFER SWITCH SWITCH FIRE PUMP FIRE PUMP CONTROLLER CONTROLLER EXISTING 400KW STANDBY GENERATOR (NOT EMERGENCY 3C, 2AWG, TECK 90, 1000V — GENERATOR AS PER CSA C282) FIRE PUMP P-G971 P-G972 60 HP SINGLE LINE DIAGRAM

NOTES:

- 1. INSTALLATION OF FIRE PUMPS SHALL COMPLY WITH NFPA 20 AND CANADIAN ELECTRICAL CODE, LATEST EDITIONS.
- 2. 225A, 600V, 50kA, 3 POLE, 100% RATED, THERMAL-MAGNETIC SCHNEIDER ELECTRIC BREAKER IN INDIVIDUAL ENCLOSURE LLL36250CU31X.
- 3. 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).
- 4. 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.
- 5. AFTER MODIFICATION, EXISTING 600V, 1600A SWITCHGEAR SHALL BE RE-CERTIFIED BY ORGANIZATION ACCREDITED BY THE STANDARDS COUNCIL OF CANADA.

BID OPPORTUNITY NO. 502-2017

DRAWING NUMBER REFERENCE DRAWINGS

Certificate of Authorization AECOM Canada Ltd. No. 4671 Date: 18/11/07

LOCATION APPROVED UNDERGROUND STRUCTURES SUPR. U/G STRUCTURES DATE COMMITTEE 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 ADDENDUM 1 18/11/07 RB SERVICES MUST BE OBTAINED FROM THE ISSUED FOR PHASE 2 & 3: BID OPP. 502-2017 | 18/05/09 | RB INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION. NO. REVISIONS YY/MM/DD BY

CHECKED BY DESIGNED RB DRAWN BY APPROVED BY RELEASED FOR CONSTRUCTION HOR. SCALE VERT. SCALE DATE

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PROFESSIONAL'S SEAL

CONSULTANT DRAWING NO.

E0006

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

SHOAL LAKE **AQUEDUCT INTAKE FACILITY** FIRE PUMP UPGRADES **ELECTRICAL**

SINGLE LINE DIAGRAM

CITY DRAWING NUMBER

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