



**NOTES:**

1. THIS DRAWING CONTAINS UNVERIFIED INFORMATION FROM EXISTING DOCUMENTATION.
2. THE ENGINEER'S RESPONSIBILITY IS LIMITED TO THE ARC FLASH STUDY AND RECOMMENDED MITIGATION.

**LEGEND:**

PPE: 4 → HAZARD/RISK CATEGORY  
 29 CAL/CM² → INCIDENT ENERGY

ARC FLASH VALUES CALCULATED ARE BASED ON THE PROTECTION SETTINGS SPECIFIED IN THIS DRAWING. ALL PHASE 1 REQUIRED WORK MUST BE COMPLETED PRIOR TO APPLYING ARC FLASH LABELS.

**REQUIRED WORK:**

- (A) ADJUST THE SHORT TIME PICKUP FOR BREAKER CB-PNL-F1 TO 5 (4000A) AND SHORT TIME DELAY TO 100ms.
- (B) ADJUST THE INSTANTANEOUS SETTINGS OF CB-P-F1 TO 7 (2450A).
- (C) ADJUST THE INSTANTANEOUS SETTINGS OF CB-P-F2 TO 7 (2450A).
- (D) ADJUST THE INSTANTANEOUS SETTINGS OF MSS-P-F1.CB TO 2 (2564A).
- (E) ADJUST THE INSTANTANEOUS SETTINGS OF MSS-P-F2.CB TO 2 (2564A).
- (F) REPLACE THE FUSES IN MS-P-L1 AND MS-P-L2 WITH 30A FUSES.
- (G) AFFIX NEW IDENTIFICATION LAMACOIDS TO:  
 PNL-F1  
 CB-P-F1  
 CB-P-F2  
 CB-PNL-F1  
 CB-XFMR-F10  
 CB-SPL-L1  
 SPL-L1  
 MSS-P-F1  
 MSS-P-F2  
 PNL-F10  
 PNL-L10  
 XFMR-F10  
 XFMR-L10  
 MS-P-L1  
 MS-P-L2  
 FDS-XFMR-L10  
 RLY-F1

WD-3256	FLOOD PUMPING STATION UPGRADE SINGLE LINE DIAGRAM
DRAWING NUMBER	REFERENCE DRAWINGS

00	ISSUED FOR CITY USE	2011/11/23	VE	CJR
NO.	REVISIONS	DATE	DESIGN	CHECK

**SNC-LAVALIN INC.**  
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 Winnipeg, MB, Canada R3P 0X7  
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DESIGNED BY: V. ELIMBAN  
 CHECKED BY: C. REIMER  
 DRAWN BY: S. COATES  
 APPROVED BY: C. REIMER  
 SCALE: NTS  
 RELEASED FOR CONSTRUCTION BY: [ ]  
 DATE: 2009/09/15  
 CONSULTANT NO.:

ENGINEER'S SEAL

ORIGINAL DRAWING SEALED BY:  
 C. J. REIMER  
 SNC-LAVALIN INC.  
 MEMBER #21968  
 2011/12/01  
 REV. 00

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

HAWTHORNE FLOOD PUMPING AND WASTEWATER LIFT STATIONS  
 ARC FLASH STUDY  
 SINGLE LINE DIAGRAM

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0145A-E0001	001	00	A1