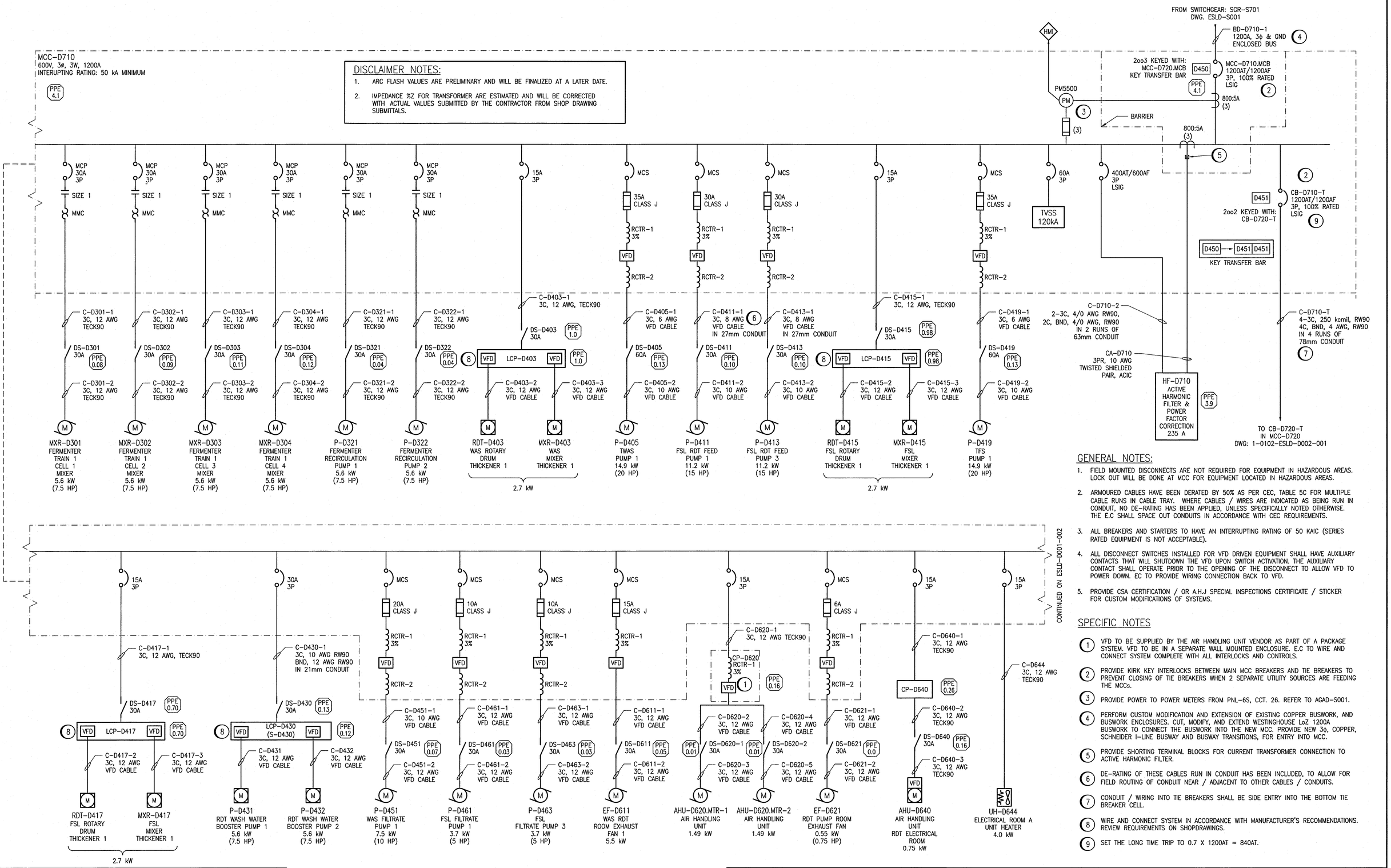
A1 SIZE – 594mm x 841mm



DISCLAIMER NOTES:

1. ARC FLASH VALUES ARE PRELIMINARY AND WILL BE FINALIZED AT A LATER DATE.
2. IMPEDANCE %Z FOR TRANSFORMER ARE ESTIMATED AND WILL BE CORRECTED WITH ACTUAL VALUES SUBMITTED BY THE CONTRACTOR FROM SHOP DRAWING SUBMITTALS.

GENERAL NOTES:

1. FIELD MOUNTED DISCONNECTS ARE NOT REQUIRED FOR EQUIPMENT IN HAZARDOUS AREAS. LOCK OUT WILL BE DONE AT MCC FOR EQUIPMENT LOCATED IN HAZARDOUS AREAS.
2. ARMOURED CABLES HAVE BEEN DERATED BY 50% AS PER CEC, TABLE 5C FOR MULTIPLE CABLE RUNS IN CABLE TRAY. WHERE CABLES / WIRES ARE INDICATED AS BEING RUN IN CONDUIT, NO DE-RATING HAS BEEN APPLIED, UNLESS SPECIFICALLY NOTED OTHERWISE. THE E.C SHALL SPACE OUT CONDUITS IN ACCORDANCE WITH CEC REQUIREMENTS.
3. ALL BREAKERS AND STARTERS TO HAVE AN INTERRUPTING RATING OF 50 KAIC (SERIES RATED EQUIPMENT IS NOT ACCEPTABLE).
4. ALL DISCONNECT SWITCHES INSTALLED FOR VFD DRIVEN EQUIPMENT SHALL HAVE AUXILIARY CONTACTS THAT WILL SHUTDOWN THE VFD UPON SWITCH ACTIVATION. THE AUXILIARY CONTACT SHALL OPERATE PRIOR TO THE OPENING OF THE DISCONNECT TO ALLOW VFD TO POWER DOWN. EC TO PROVIDE WIRING CONNECTION BACK TO VFD.
5. PROVIDE CSA CERTIFICATION / OR A.H.J SPECIAL INSPECTIONS CERTIFICATE / STICKER FOR CUSTOM MODIFICATIONS OF SYSTEMS.

SPECIFIC NOTES

1. VFD TO BE SUPPLIED BY THE AIR HANDLING UNIT VENDOR AS PART OF A PACKAGE SYSTEM. VFD TO BE IN A SEPARATE WALL MOUNTED ENCLOSURE. E.C TO WIRE AND CONNECT SYSTEM COMPLETE WITH ALL INTERLOCKS AND CONTROLS.
2. PROVIDE KIRK KEY INTERLOCKS BETWEEN MAIN MCC BREAKERS AND TIE BREAKERS TO PREVENT CLOSING OF TIE BREAKERS WHEN 2 SEPARATE UTILITY SOURCES ARE FEEDING THE MCCs.
3. PROVIDE POWER TO POWER METERS FROM PNL-6S, CCT. 26. REFER TO AGAD-S001.
4. PERFORM CUSTOM MODIFICATION AND EXTENSION OF EXISTING COPPER BUSWORK, AND BUSWORK ENCLOSURES. CUT, MODIFY, AND EXTEND WESTINGHOUSE LoZ 1200A BUSWORK TO CONNECT THE BUSWORK INTO THE NEW MCC. PROVIDE NEW 3ϕ, COPPER, SCHNEIDER I-LINE BUSWAY AND BUSWAY TRANSITIONS, FOR ENTRY INTO MCC.
5. PROVIDE SHORTING TERMINAL BLOCKS FOR CURRENT TRANSFORMER CONNECTION TO ACTIVE HARMONIC FILTER.
6. DE-RATING OF THESE CABLES RUN IN CONDUIT HAS BEEN INCLUDED, TO ALLOW FOR FIELD ROUTING OF CONDUIT NEAR / ADJACENT TO OTHER CABLES / CONDUITS.
7. CONDUIT / WIRING INTO TIE BREAKERS SHALL BE SIDE ENTRY INTO THE BOTTOM TIE BREAKER CELL.
8. WIRE AND CONNECT SYSTEM IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. REVIEW REQUIREMENTS ON SHOPDRAWINGS.
9. SET THE LONG TIME TRIP TO 0.7 X 1200AT = 840AT.

REFERENCE DRAWINGS	DESCRIPTION
1-0102-ECBD-D001	ELECTRICAL, MCC-D710 LAYOUT AND SCHEDULE
1-0102-EAAA-A001	ELECTRICAL, LEGEND AND DETAILS

MAXIMUM LOAD ESTIMATE

	CONNECTED LOAD (A)	DEMAND FACTOR	DEMAND LOAD (A)
LIGHTING	0	1	0
HVAC	31.05	0.8	25
MISC.	11.6	0.5	5.8
PROCESS	359.2	0.8	287
TOTAL	402		329

APEGM Certificate of Authorization
SNC-Lavalin Inc.
No. 4489

NO.	REVISIONS	DATE	DESIGN	CHECK
00	ISSUED FOR CONSTRUCTION – 976-2016	2017/04/05	WE	DEB

CH2MHILL. SNC·LAVALIN KGS GROUP

DESIGNED BY: V. ELIMBAN
CHECKED BY: E. RYCZKOWSKI
DRAWN BY: MJ. PERSSON
APPROVED BY: D. BECKER
SCALE: NTS
ISSUED FOR CONSTRUCTION BY: J. SHUMKA
DATE: 2014/02/16
DATE: 2017/04/05
CONSULTANT NO.: 474248

ENGINEER'S SEAL: PROVINCE OF MANITOBA, D.E. BECKER, Member 23646, REGISTERED PROFESSIONAL ENGINEER, April 5 2017

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

SOUTH END WATER POLLUTION CONTROL CENTRE
SEWPCC UPGRADING/EXPANSION PROJECT
ELECTRICAL – SINGLE LINE DIAGRAM
FERMENTERS/THICKENERS
MOTOR CONTROL CENTRE MCC-D710

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0102-ESLD-D001	001	00	A1

PLOT DATE: Mar 28, 2017 – 8:09am
FILE NAME:1-0102-ESLD-D001-001.dwg

LAST SAVE: 2017/03/28 – 8:09am
PATH: M:\614099\45ENG\47ELE\DD – General DWG\REV\2017-04-05 Issued for Construction – 976-2016\D Fermenters-thickeners\DWG\1-0102-ESLD-D001-001.dwg