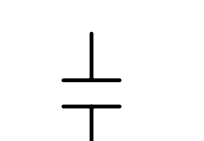
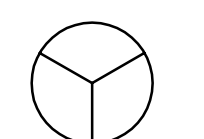
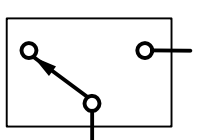
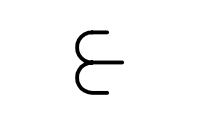
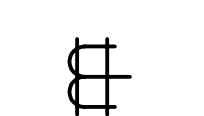
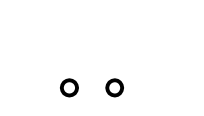
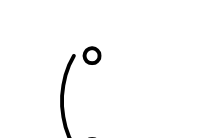

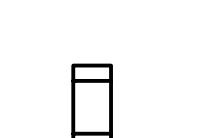
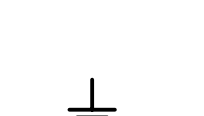
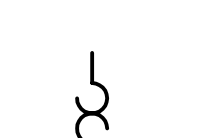
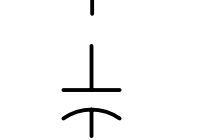
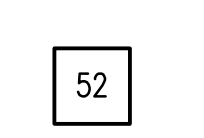
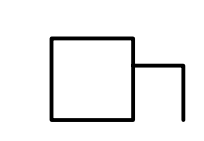

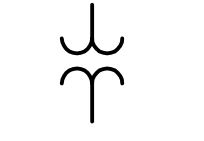

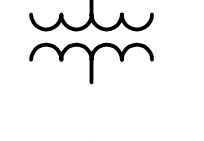



- 2 TIME DELAY RELAY
- 11 MULTIFUNCTION DEVICE
- 26Q OIL TEMPERATURE SWITCH
- 27 UNDERVOLTAGE RELAY
- 27X AUXILIARY UNDERVOLTAGE RELAY
- 38 BEARING PROTECTIVE DEVICE
- 39 MECHANICAL CONDITION MONITOR (VIBRATION, ETC.)
- 43 MANUAL TRANSFER OR SELECTOR DEVICE
- 46 REVERSE PHASE OR PHASE-BALANCE CURRENT RELAY
- 49 MACHINE OR TRANSFORMER THERMAL RELAY
- 50 INSTANTANEOUS OVERCURRENT RELAY
- 51 AC TIME OVERCURRENT RELAY
- 51N GROUND TIME OVERCURRENT RELAY (RESIDUALLY CONNECTED)
- 50/51 COMBINATION INSTANTANEOUS / TIME OVERCURRENT RELAY
- 50G INSTANTANEOUS GROUND OVERCURRENT RELAY
- 51G AC TIME GROUND OVERCURRENT RELAY
- 50/51/50N COMBINATION INSTANTANEOUS / TIME OVERCURRENT WITH TIME GROUND OVERCURRENT RELAY
- 50/51N GROUND FAULT COMBINATION INSTANTANEOUS / TIME OVERCURRENT RELAY CONNECTED IN A RESIDUAL CT CIRCUIT
- 59 OVERVOLTAGE RELAY
- 63G GAS PRESSURE SWITCH
- 66 MOTOR START LIMITER RELAY
- 71Q OIL LEVEL SWITCH
- 74 ALARM RELAY

- 83 AUTOMATIC SELECTIVE CONTROL OR TRANSFER RELAY
- 86 LOCKOUT RELAY
- 86X AUXILIARY LOCKOUT RELAY
- A AMMETER
- AS AMMETER SELECTOR SWITCH
- CS CONTROL SWITCH
- CTD CAPACITIVE TRIP DEVICE
- K KEY INTERLOCK
- KW KILOWATT METER
- I INTERLOCK
- MF MULTIFUNCTION METER
- PF POWER FACTOR METER
- PFT POWER FACTOR TRANSMITTER
- PLC PLC I/O POINT
- PM POWER METER
- RM REVENUE METER
- V VOLTMETER
- VS VOLTMETER SELECTOR SWITCH
- VT VOLTAGE TRANSMITTER
- Σ SUMMATION DEVICE
- TD TIME DELAY

-  CONTACTOR
-  GENERATOR
-  TRANSFER SWITCH
-  CURRENT TRANSFORMER
-  GROUND FAULT CURRENT TRANSFORMER
-  SURGE ARRESTOR
-  CIRCUIT BREAKER
-  DISCONNECTING DEVICE / STAB
-  FUSE
-  GROUND CONNECTION
-  MOTOR OVERLOAD
-  CAPACITOR
- 52 AC CIRCUIT BREAKER
-  LOCAL DISCONNECT SWITCH
-  RECEPTACLE/PLUG
-  POTENTIAL TRANSFORMER
-  DISCONNECT SWITCH
-  TRANSFORMER
-  MOTOR

LAST SAVE: 2008/04/17 - 9:27am
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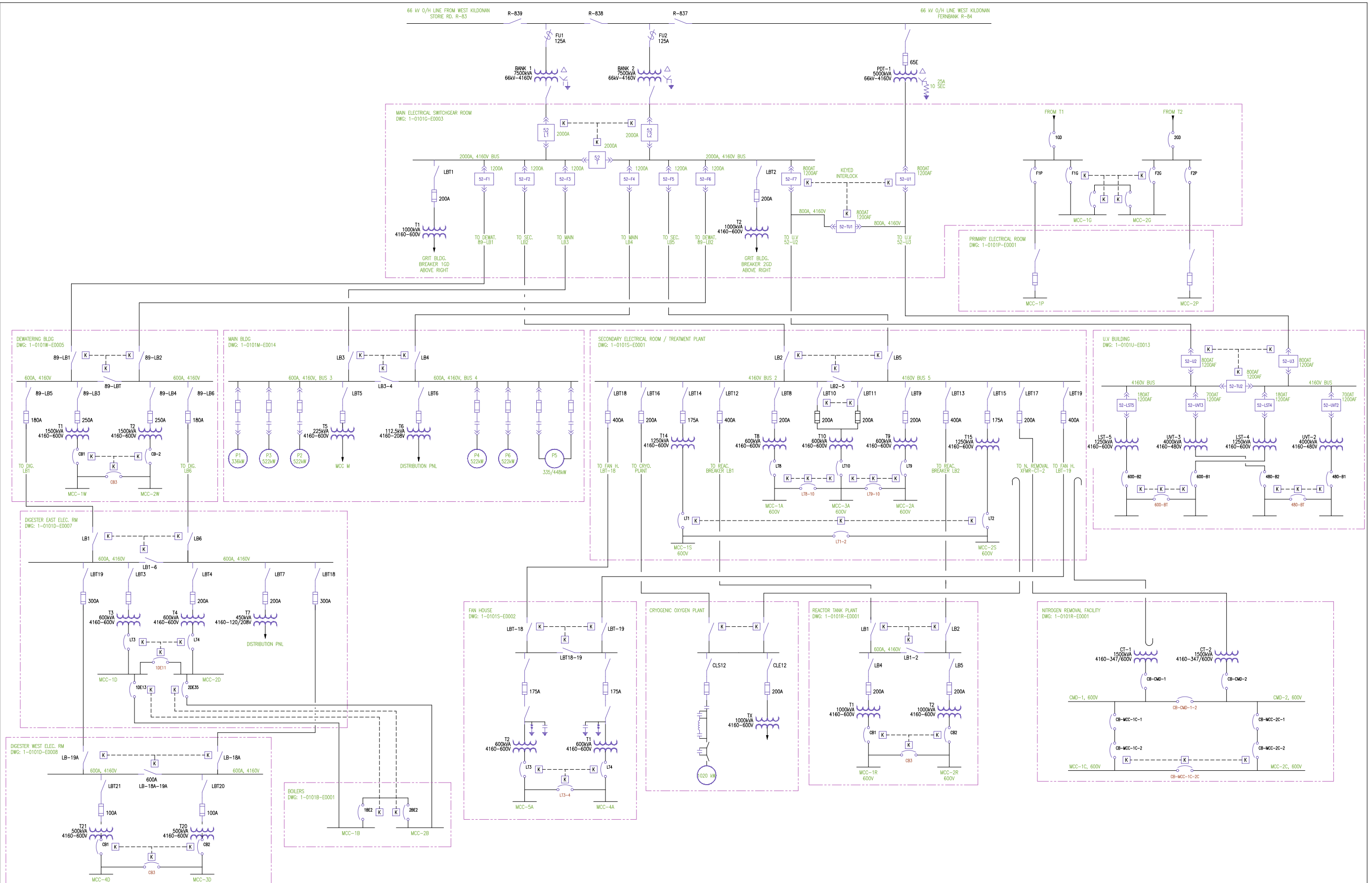
DRAWING NUMBER	REFERENCE DRAWINGS

B.M. ELEV.	FIELD BOOK #:		SNC-LAVALIN INC. 148 Nature Park Way Winnipeg, MB, Canada R3P 0X7 204-786-8080	ENGINEER'S SEAL
POSTED TO LBIS		DESIGNED BY: EXISTING		CHECKED BY: CJR
		DRAWN BY: CJR		APPROVED BY: -
		HOR. SCALE: VERTICAL		NTS: NTS
01 REVISED DRAWING NUMBER; WAS 1-0101A-D-E0001		2008/03/03	EFB	RELEASED FOR CONSTRUCTION
00 ISSUED FOR CITY USE		2007/07/05	CJR	DATE: 2005/11/07
NO. REVISIONS		DATE	BY	FILENAME: 1-0101A-E0004-01-01D.dwg

THE CITY OF WINNIPEG			
WATER AND WASTE DEPARTMENT			
NORTH END WATER POLLUTION CONTROL CENTRE			
ELECTRICAL SINGLE LINE DIAGRAM			
LEGEND & DETAILS			
CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101A-E0004	001	01	D

AS SIZE - 84mm x 118mm

DATE: 2010/07/14 - 11:58am
 FILE: \\m-11-24-01\Projects\2011\11-0101A-E003-001-03.dwg
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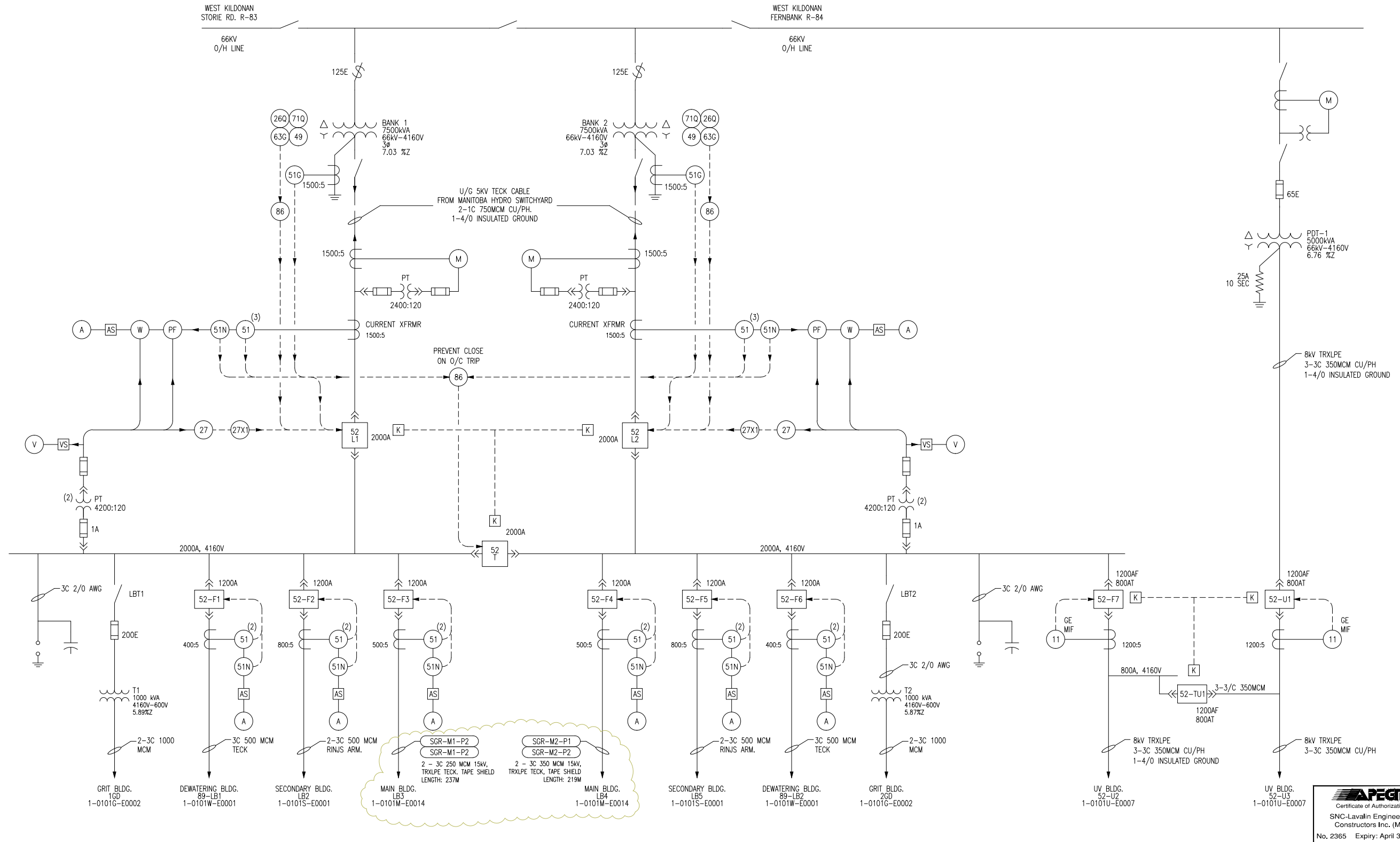


NOTES:

- THIS DRAWING SUPERCEDES DRAWING NEP-2052.
- THIS DRAWING WAS CREATED BASED UPON EXISTING DOCUMENTATION, AND A DETAILED SITE VERIFICATION WAS NOT PERFORMED AT THE TIME OF DRAWING CREATION. THE CITY OF WINNIPEG IS RESPONSIBLE FOR VERIFICATION OF THE ACCURACY OF THIS DRAWING.

DRAWING NUMBER	REFERENCE DRAWINGS

		SNC-LAVALEN INC. 146 Nelson Park Way Winnipeg, MB, Canada R2P 0A7 (204) 786-6000		ENGINEER'S SEAL _____ TITLE	
DESIGNED BY:	EXISTING	CHECKED BY:		THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT NORTH END WATER POLLUTION CONTROL CENTRE SWITCHING DIAGRAM 4160 ELECTRICAL DISTRIBUTION	
DRAWN BY:	DEB	APPROVED BY:		CITY DRAWING NUMBER 1-0101A-E003	
SCALE:	NTS	RELEASED FOR CONSTRUCTION BY:		SHEET REV. SIZE 001 03 A0	
DATE:	2006/07/07	DATE:		DWG. 1-0101A-E003-001-03_V01_2014-11-24_AP01.dwg	
PA. ISSUED FOR REVIEW	2007/02/19	CONSULTANT NO.:		NO. REVISIONS DATE DESIGN CHECK	



NOTES:

1. THE INSTANTANEOUS UNITS ARE DISABLED FOR ALL RELAYS ASSOCIATED WITH BREAKERS 51-L1 AND 52-L2.

B.M. ELEV.		FIELD BOOK #:	
07	CORRECTING REF DRAWINGS	2012/04/02	SW
06	AS BUILT	2007/11/22	AEO
05	ISSUED FOR CONSTRUCTION	2007/08/16	YM
04	ADDED SURGE ARRESTORS AND CAPACITORS	2007/07/06	CJR
03	ISSUED FOR TENDER	2007/06/22	YM
02	ISSUED FOR REVIEW	2007/05/22	AO
01	ISSUED FOR REVIEW	2007/02/19	CJR
00	ISSUED FOR TENDER	2006/07/17	CJR
NO.	REVISIONS	DATE	BY

SNC-LAVALIN
Engineers & Constructors

SNC-LAVALIN
148 Nature Park Way
Winnipeg, Manitoba
Canada R3P 0X7

ENGINEER'S SEAL

DESIGNED BY: EXISTING
DRAWN BY: DS
CHECKED BY: CJR
APPROVED BY: C. REIMER
DATE: 2006/07/07

ORIGINAL DRAWING
SEALED BY:
C. J. REIMER
2007/12/14
REV. 06

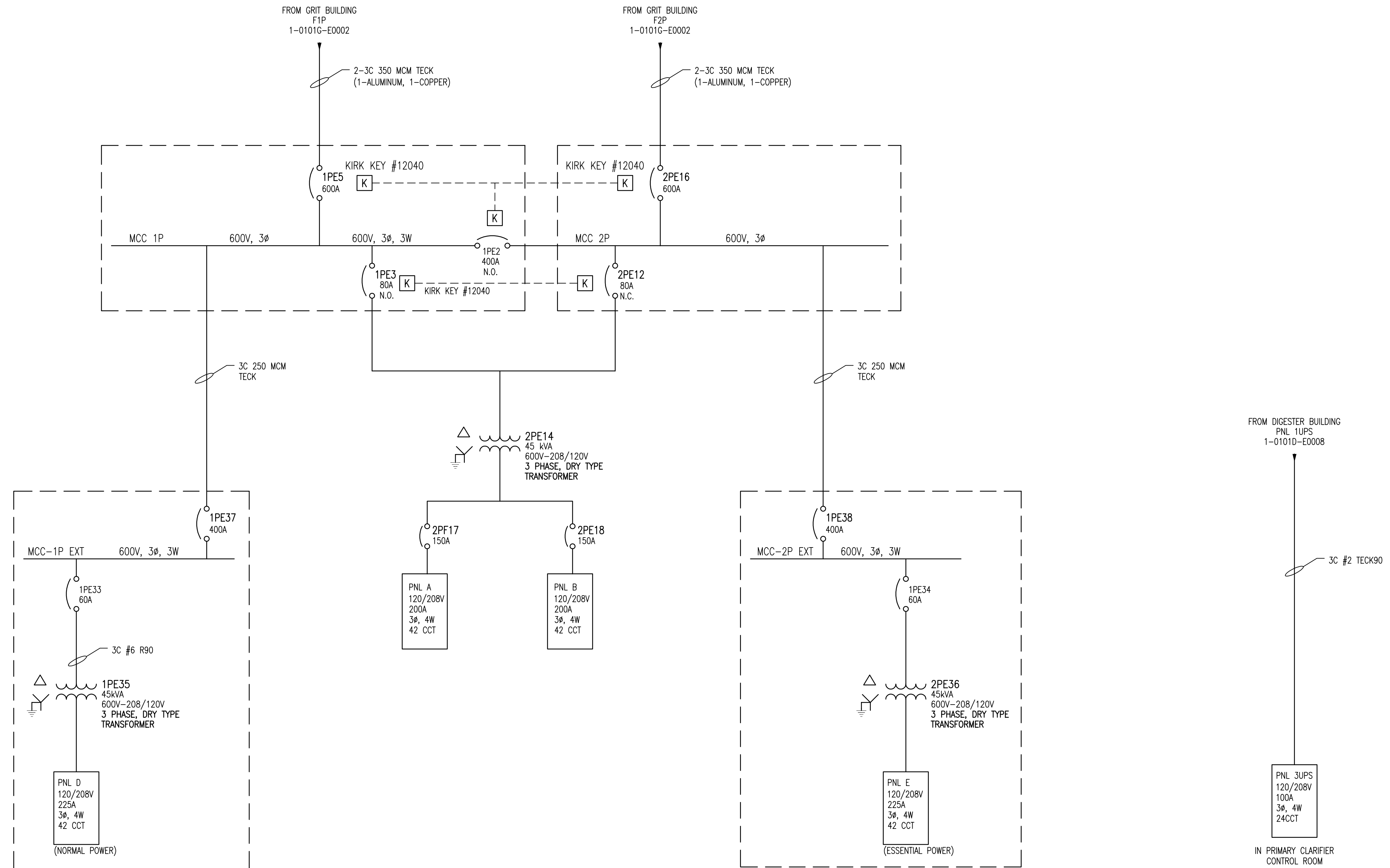
CLOUDED CHANGES ONLY

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

NORTH END WATER POLLUTION CONTROL CENTRE
PRE-AERATION & GRIT BUILDING
SINGLE LINE DIAGRAM
4160V ELECTRICAL DISTRIBUTION

CITY DRAWING NUMBER: 1-0101G-E0003
SHEET: 001
REV.: 07
SIZE: D

1-0101A-E0001	4160V ELECTRICAL DISTRIBUTION SWITCHING DIAGRAM
1-0101A-E0001	ELECTRICAL SINGLE LINE DIAGRAM LEGEND & DETAILS
DRAWING NUMBER	REFERENCE DRAWINGS



NOTES:

1. ALL CONDUIT IS GENERALLY RIGID ALUMINUM, UNLESS OTHERWISE NOTED.

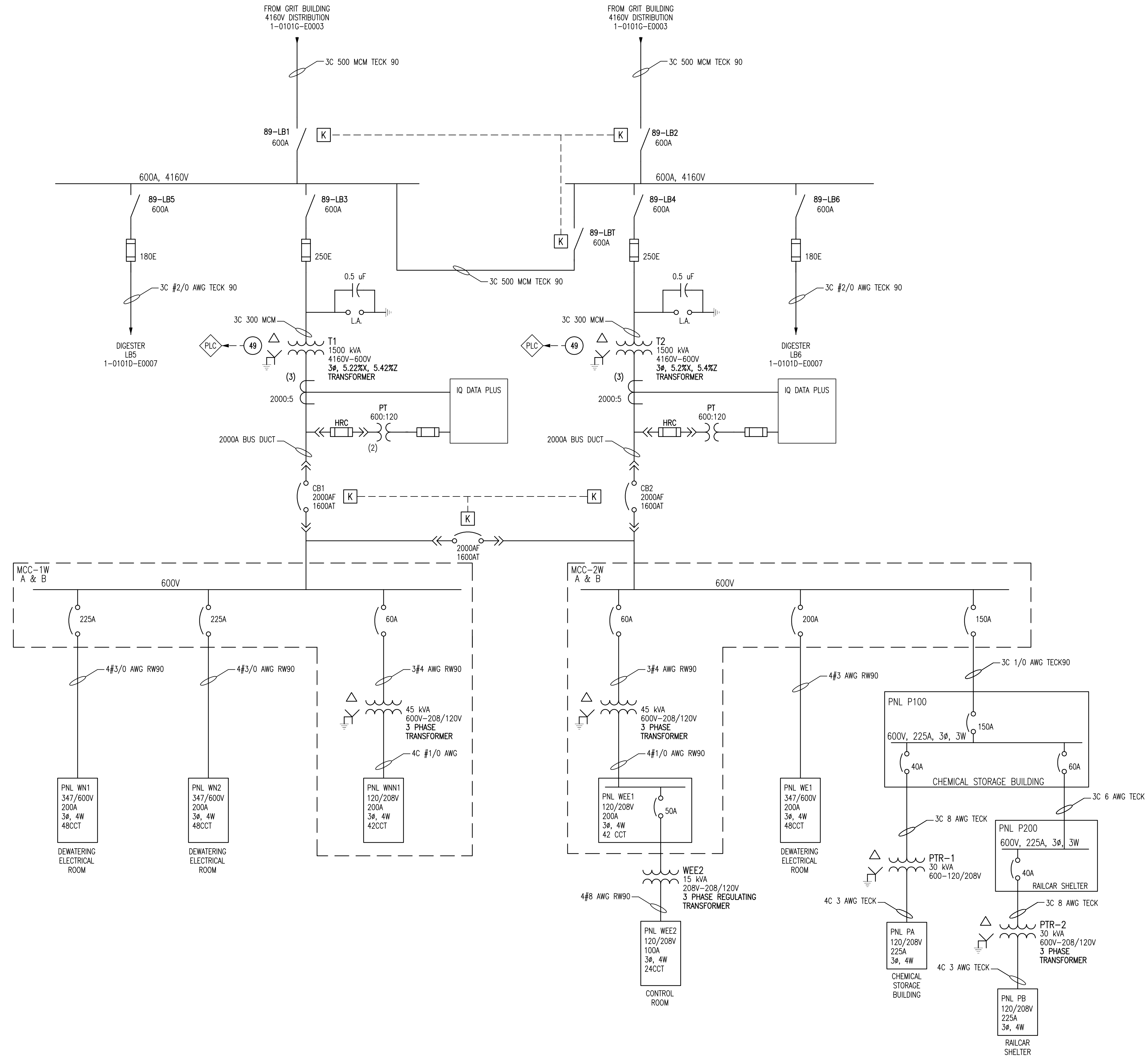
1-0101G-E0002	GRIT BUILDING SINGLE LINE DIAGRAM ELECTRICAL DISTRIBUTION
1-0101A-E0003	4160V ELECTRICAL DISTRIBUTION SWITCHING DIAGRAM
1-0101A-E0004	ELECTRICAL SINGLE LINE DIAGRAM LEGEND & DETAILS
DRAWING NUMBER	REFERENCE DRAWINGS

B.M. ELEV.	FIELD BOOK #:	SNC-LAVALIN INC. 148 Nature Park Way Winnipeg, MB, Canada R3P 0X7 204-786-8080		ENGINEER'S SEAL	
POSTED TO LBIS		DESIGNED BY	EXISTING	CHECKED BY	CJR
		DRAWN BY	DEB	APPROVED BY	
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00	ISSUED FOR CITY USE	2007/07/05	CJR	VERTICAL	RELEASED FOR CONSTRUCTION
PA	ISSUED FOR REVIEW	2007/02/19	CJR	DATE	2006/07/07
NO. REVISIONS	DATE	BY	FILENAME: 1-0101P-E0001-001-01D.dwg	DATE	

THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT

NORTH END WATER POLLUTION CONTROL CENTRE
 PRIMARY CLARIFIERS
 SINGLE LINE DIAGRAM
 ELECTRICAL DISTRIBUTION

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101P-E0001	001	01	D

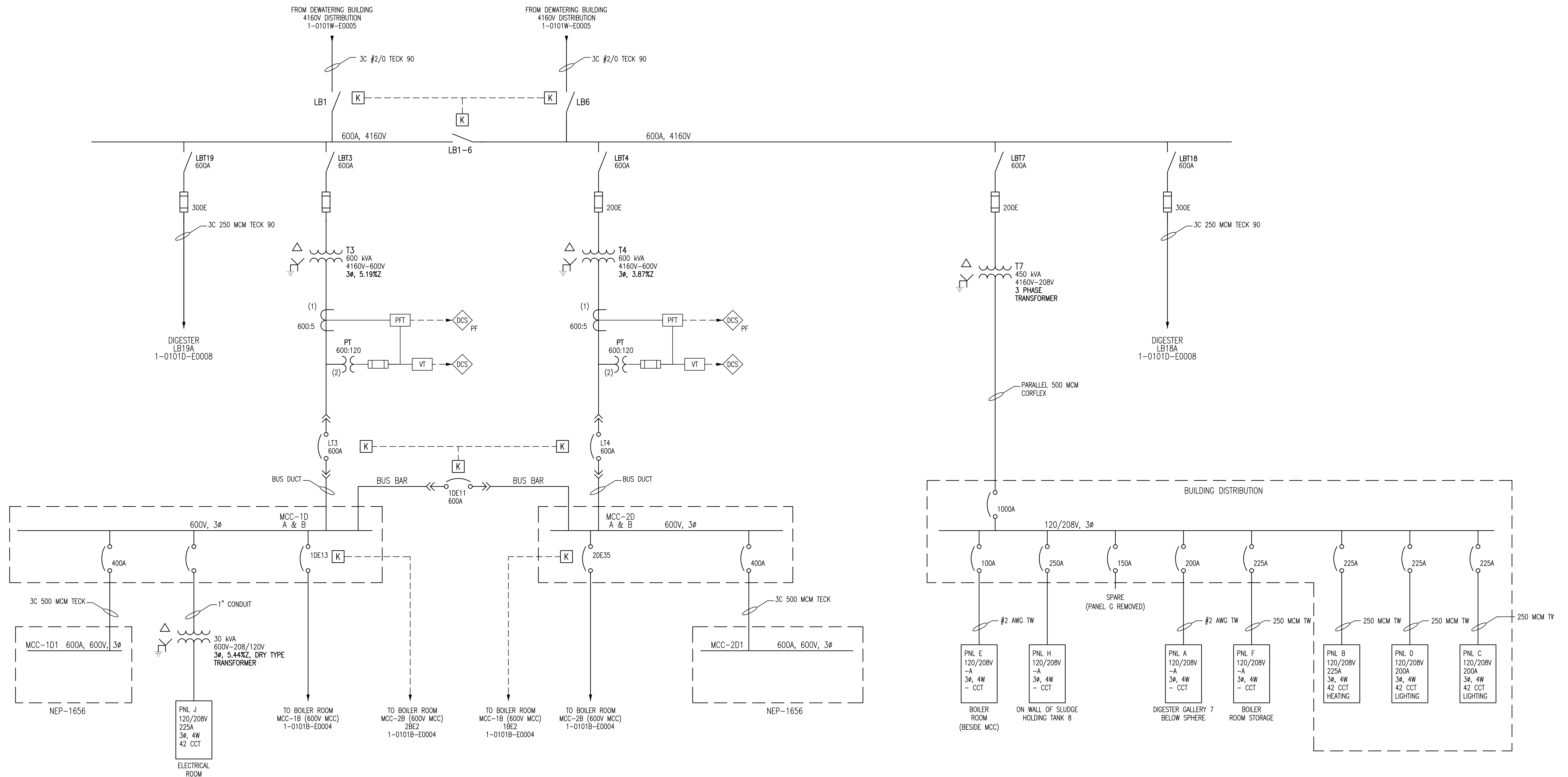


1-0101A-E0003	4160V ELECTRICAL DISTRIBUTION SWITCHING DIAGRAM
1-0101A-E0004	ELECTRICAL SINGLE LINE DIAGRAM LEGEND & DETAILS
DRAWING NUMBER	REFERENCE DRAWINGS

B.M. ELEV.	FIELD BOOK #:			SNC-LAVALIN INC. 148 Nature Park Way Winnipeg, MB, Canada R3P 0X7 204-786-8080		ENGINEER'S SEAL
POSTED TO LBIS		DESIGNED BY	EXISTING	CHECKED BY	CJR	
		DRAWN BY	DEB	APPROVED BY		
01 REVISED DRAWING NUMBER; WAS 1-0101W-F-E0001	2008/03/03	EFB		HOR. SCALE	NTS	RELEASED FOR CONSTRUCTION
00 ISSUED FOR CITY USE	2007/07/05	CJR		DATE	2006/07/07	DATE
PA ISSUED FOR REVIEW	2007/02/19	CJR		DATE	2006/07/07	DATE
NO. REVISIONS	DATE	BY		FILENAME:	1-0101W-E0005-001-01D.dwg	

THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 NORTH END WATER POLLUTION CONTROL CENTRE
 DEWATERING
 SINGLE LINE DIAGRAM
 ELECTRICAL DISTRIBUTION

CITY DRAWING NUMBER	SHEET	REV.	SIZE
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NOTES:
 1. ALL CONDUIT IS GENERALLY RIGID ALUMINUM, UNLESS OTHERWISE NOTED.

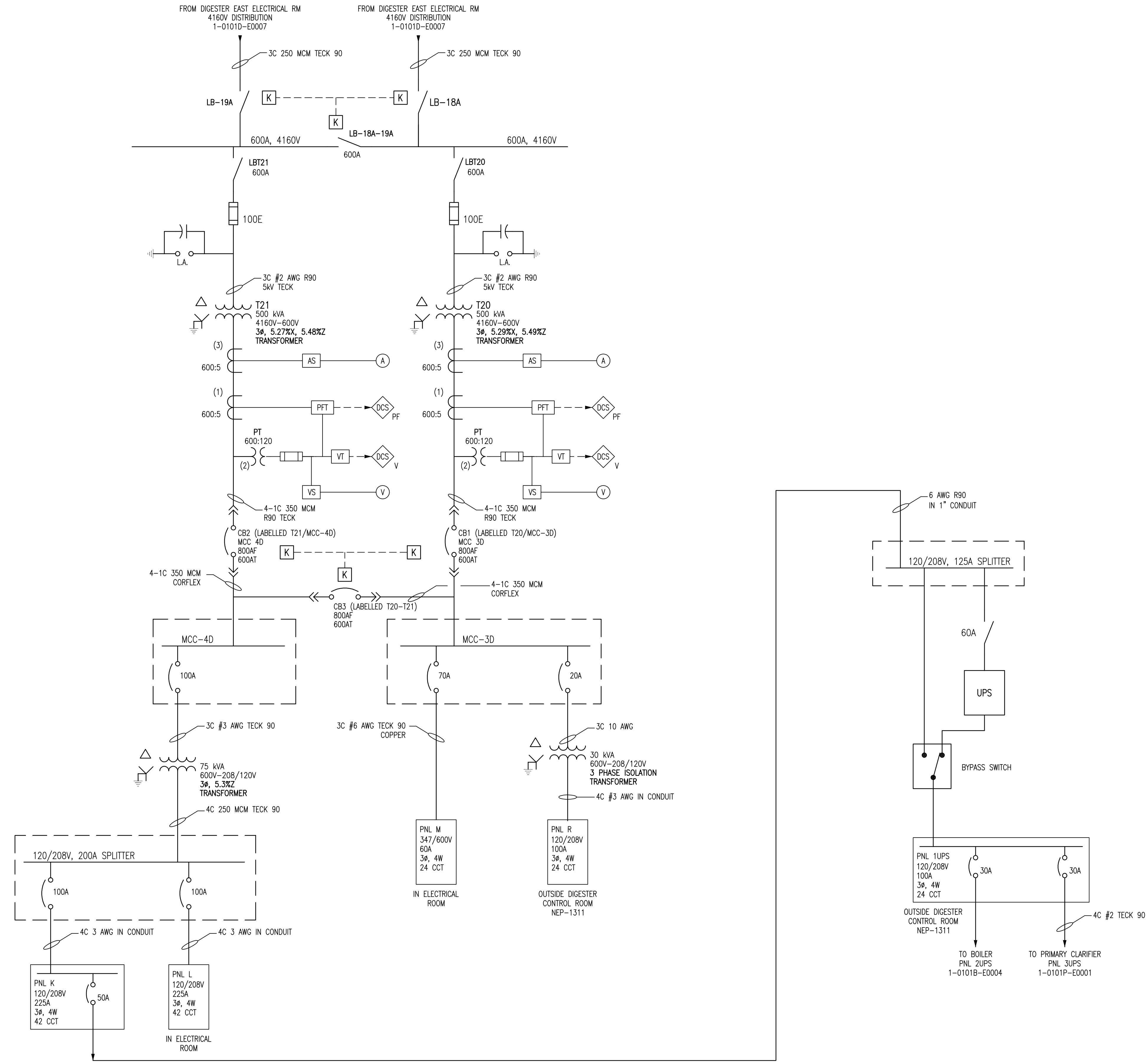
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01 REVISED DRAWING NUMBER; WAS 1-0101D-F-E0001	2008/03/03	EFB		
00 ISSUED FOR CITY USE	2007/07/05	CJR		
PB UPDATED 120/208V PANEL INFORMATION	2007/04/24	EFB		
PA ISSUED FOR REVIEW	2007/02/19	CJR		
NO. REVISIONS	DATE	BY	DATE	DATE
			2006/07/07	
			FILENAME: 1-0101D-E007-01-01D.dwg	

1-0101A-E0003	4160V ELECTRICAL DISTRIBUTION SWITCHING DIAGRAM
1-0101A-E0004	ELECTRICAL SINGLE LINE DIAGRAM LEGEND & DETAILS
DRAWING NUMBER	REFERENCE DRAWINGS

THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT

NORTH END WATER POLLUTION CONTROL CENTRE
 DIGESTERS
 SINGLE LINE DIAGRAM
 EAST ELECTRICAL ROOM DISTRIBUTION

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101D-E0007	001	01	D

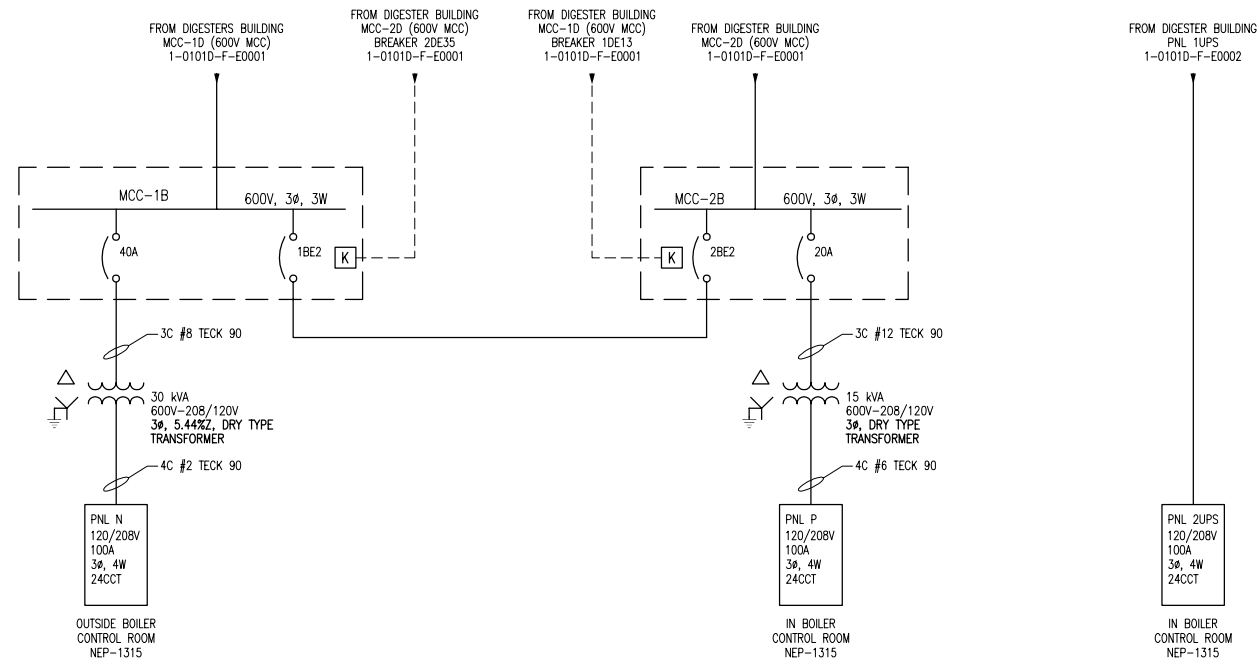


NOTES:
 1. ALL CONDUIT IS GENERALLY RIGID ALUMINUM, UNLESS OTHERWISE NOTED.

1-0101D-E0007	DIGESTERS SINGLE LINE DIA. 4160 ELECTRICAL DISTRIBUTION
1-0101A-E0003	4160V ELECTRICAL DISTRIBUTION SWITCHING DIAGRAM
1-0101A-E0004	ELECTRICAL SINGLE LINE DIAGRAM LEGEND & DETAILS
DRAWING NUMBER	REFERENCE DRAWINGS

B.M. ELEV.	FIELD BOOK #:	SNC-LAWALIN INC. 148 Nature Park Way Winnipeg, MB, Canada R3P 0X7 204-786-8080		ENGINEER'S SEAL
POSTED TO LBIS		DESIGNED BY	EXISTING	CHECKED BY
		DRAWN BY	DEB	APPROVED BY
01 REVISED DRAWING NUMBER; WAS 1-0101D-F-E0002	2008/03/03	EFB		HOR. SCALE NTS
00 ISSUED FOR CITY USE	2007/07/05	CJR		RELEASED FOR CONSTRUCTION
PA ISSUED FOR REVIEW	2007/02/19	CJR		DATE
NO. REVISIONS	DATE	BY	DATE	2006/07/07
FILENAME: 1-0101D-E0008-01-01D.dwg				

THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 NORTH END WATER POLLUTION CONTROL CENTRE
 DIGESTERS
 SINGLE LINE DIAGRAM
 WEST ELECTRICAL ROOM DISTRIBUTION
 CITY DRAWING NUMBER: 1-0101D-E0008
 SHEET: 001
 REV: 01
 SIZE: D



NOTES:

1. ALL CONDUIT IS GENERALLY RIGID ALUMINUM, UNLESS OTHERWISE NOTED.

NEP-1307 NEP-1308 1-0101D-F-E0001 1-0101A-F-E0001 1-0101A-D-E0001	BOILER MCC-1B SCHEDULE BOILER MCC-2B SCHEDULE DIGESTERS SINGLE LINE DIAGRAM EAST ELECTRICAL ROOM DISTRIBUTION 4160V ELECTRICAL DISTRIBUTION SWITCHING DIAGRAM ELECTRICAL SINGLE LINE DIAGRAM LEGEND & DETAILS
DRAWING NUMBER	REFERENCE DRAWINGS

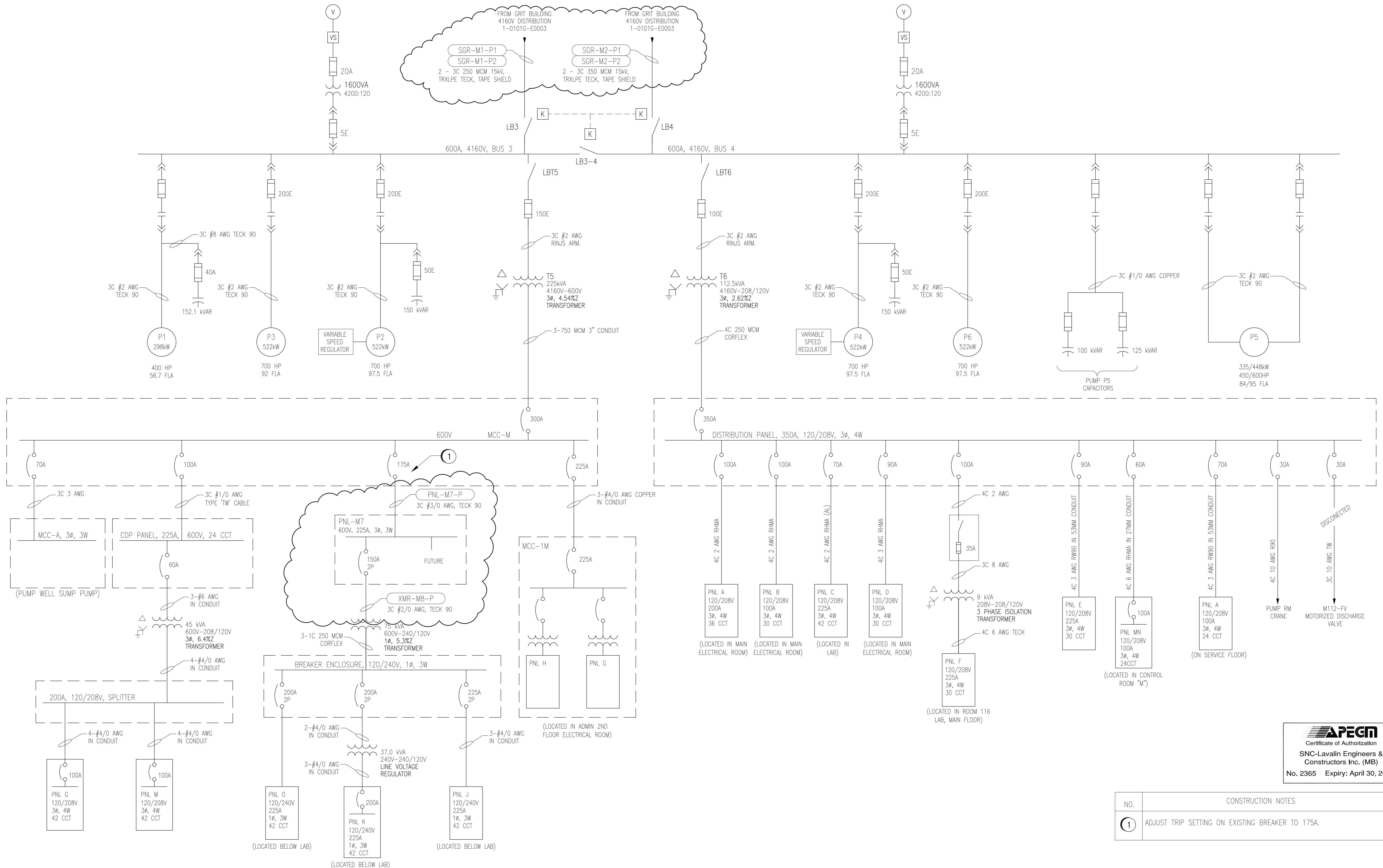
B.M. ELEV.	FIELD BOOK #:	SNC • LAVALIN Engineers & Constructors		SNC • LAVALIN 200-1600 Ross Avenue Winnipeg, Manitoba Canada R3J 3K7	
POSTED TO LBIS		DESIGNED BY	EXISTING	CHECKED BY	CJR
		DRAWN BY	DEB	APPROVED BY	
00	ISSUED FOR CITY USE	2007/07/05	CJR	HOR. SCALE	NTS
PB	UPDATED PANEL N TRANSFORMER SPECS	2007/04/20	EFB	VERTICAL	
PA	ISSUED FOR REVIEW	2007/02/19	CJR	DATE	2006/07/07
NO.	REVISIONS	DATE	BY	FILENAME:	1-0101B-F-E0001-001-000.dwg

ENGINEER'S SEAL

THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT

NORTH END WATER POLLUTION CONTROL CENTRE
 BOILERS
 SINGLE LINE DIAGRAM
 ELECTRICAL DISTRIBUTION

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101B-F-E0001	001	00	D



APEGN
 Certificate of Authorization
 SNC-Lavalin Engineers & Constructors Inc. (MB)
 No. 2365 Expiry: April 30, 2008

NO.	CONSTRUCTION NOTES
1	ADJUST TRIP SETTING ON EXISTING BREAKER TO 175A.

- NOTES:**
- THIS DRAWING WAS CREATED BASED UPON EXISTING DOCUMENTATION, AND A DETAILED SITE VERIFICATION WAS NOT PERFORMED AT THE TIME OF DRAWING CREATION. THE CITY OF WINNIPEG IS RESPONSIBLE FOR VERIFICATION OF THE EXISTING INSTALLATION REPRESENTED ON THIS DRAWING.
 - ALL METERING AND MOTOR CONTROL FUNCTIONS ARE NOT SHOWN ON THIS DRAWING.
 - ALL CONDUIT IS GENERALLY RIGID ALUMINUM, UNLESS OTHERWISE NOTED.

1-0101G-E0001	GRIT 4160V DISTRIBUTION SINGLE LINE DIAGRAM
1-0101A-E0001	4160V ELECTRICAL DISTRIBUTION SWITCHING DIAGRAM
1-0101A-E0001	ELECTRICAL SINGLE LINE DIAGRAM LEGEND & DETAILS
DRAWING NUMBER	REFERENCE DRAWINGS

B.M. ELEV.	FIELD BOOK #:	SNC-LAVALIN Engineers & Constructors 148 Nature Park Way Winnipeg, Manitoba Canada R2T 0X7	
POSTED TO LBIS		DESIGNED BY	EXISTING
		CHECKED BY	C. REIMER
04	REVISED DRAWING NUMBER, WAS 1-0101M-E0001	DRAWN BY	DEB
03	AS BUILT	APPROVED BY	C. REIMER
01	ISSUED FOR CONSTRUCTION	HOR. SCALE	NTS
02	MODIFIED EXISTING DETAILS	RELEASED FOR CONSTRUCTION	J. ELIAS
00	ISSUED FOR TENDER	DATE	2006/07/07
NO. REVISIONS	DATE	DATE	2007/08/17
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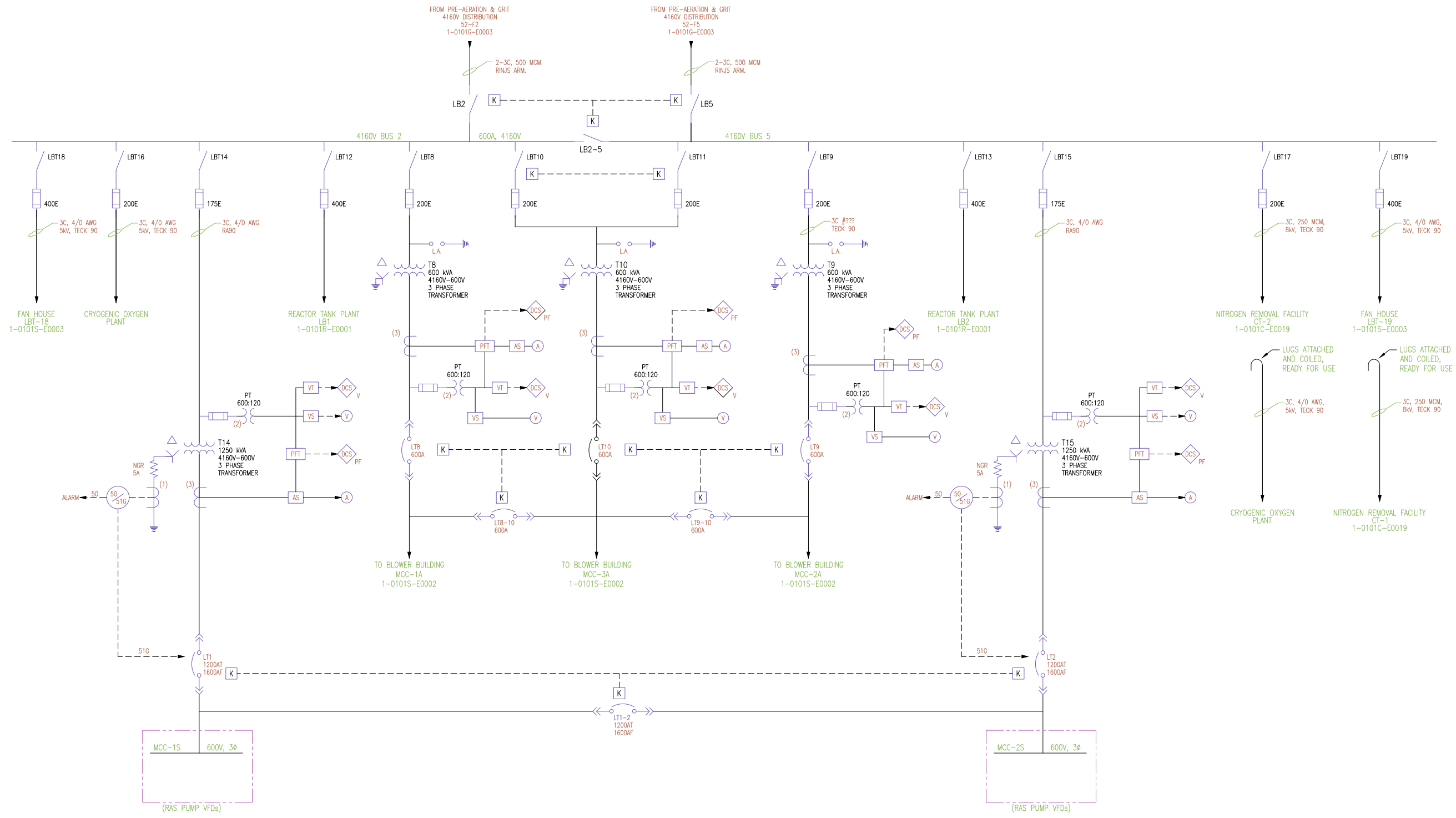
ENGINEER'S SEAL
 ORIGINAL DRAWING
 SEALED BY:
 C. J. REIMER
 2007/12/14
 REV. 03
 CLOUDED CHANGES ONLY

THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT

NORTH END WATER POLLUTION CONTROL CENTRE
 MAIN BUILDING
 SINGLE LINE DIAGRAM
 ELECTRICAL DISTRIBUTION

CITY DRAWING NUMBER
1-0101M-E0014

SHEET REV. SIZE
001 04 D



DRAWING NUMBER	REFERENCE DRAWINGS
1-0101G-E0003	GRIT BUILDING 4160V SINGLE LINE
1-0101A-E0003	4160V ELECTRICAL DISTRIBUTION SWITCHING DIAGRAM
1-0101A-E0004	ELECTRICAL SINGLE LINE DIAGRAM LEGEND & DETAILS

NO.	REVISIONS	DATE	DESIGN	CHECK
03	ADDED NITROGEN REMOVAL FEEDERS	2010/09/01	-	CJR
02	ISSUED FOR REVIEW	2010/07/14	-	CJR
01	REVISED DRAWING NUMBER, WAS 1-0101S-F-E0001	2008/03/03	-	EFB
PA	ISSUED FOR REVIEW	2007/02/19	-	CJR

SNC-LAVALIN INC.
 148 Nature Park Way
 Winnipeg, MB, Canada R3P 0X7
 204-786-8060

DESIGNED BY: EXISTING
 DRAWN BY: DEB
 SCALE: NTS
 DATE: 2006/07/07
 CONSULTANT NO.:

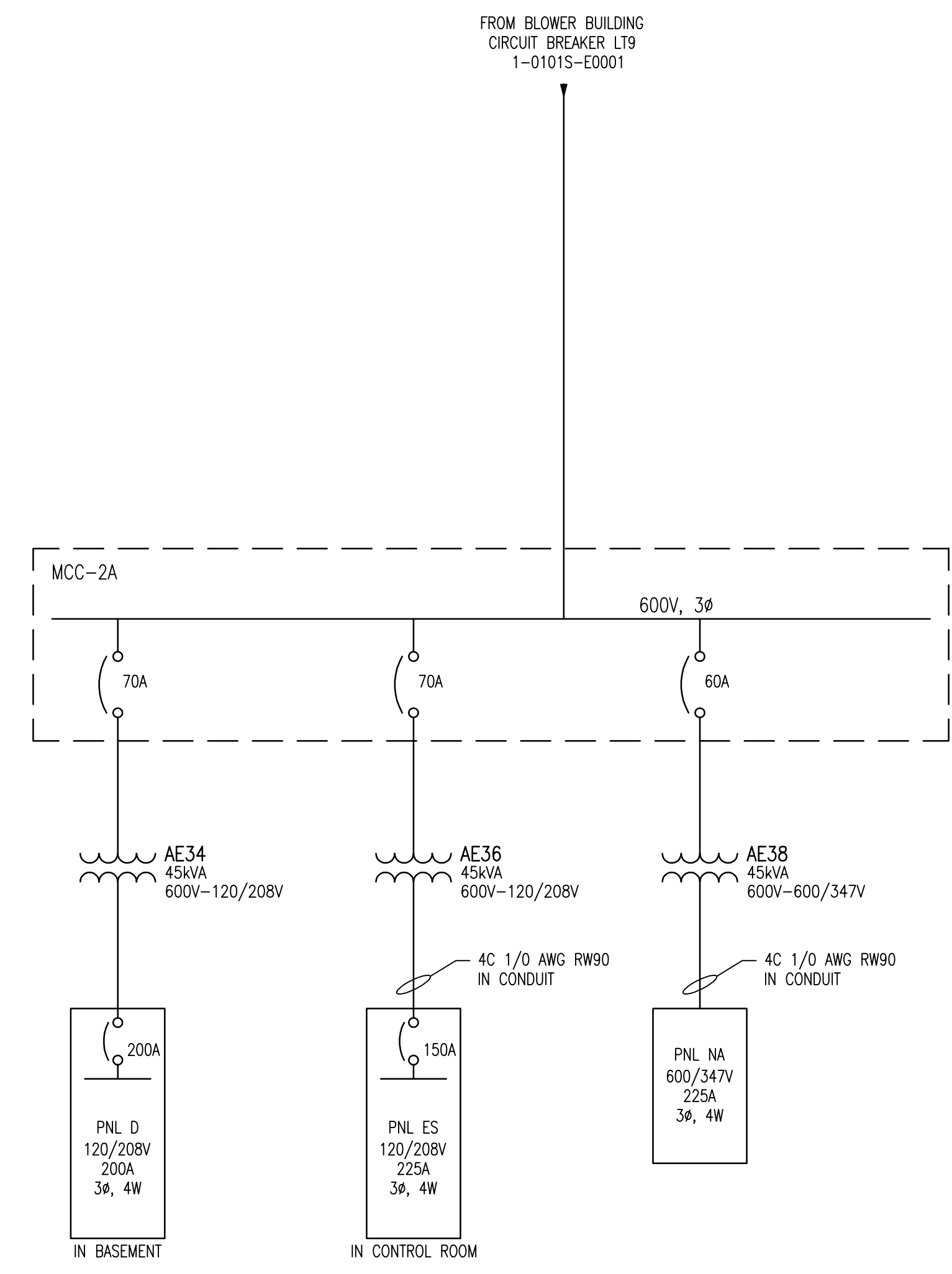
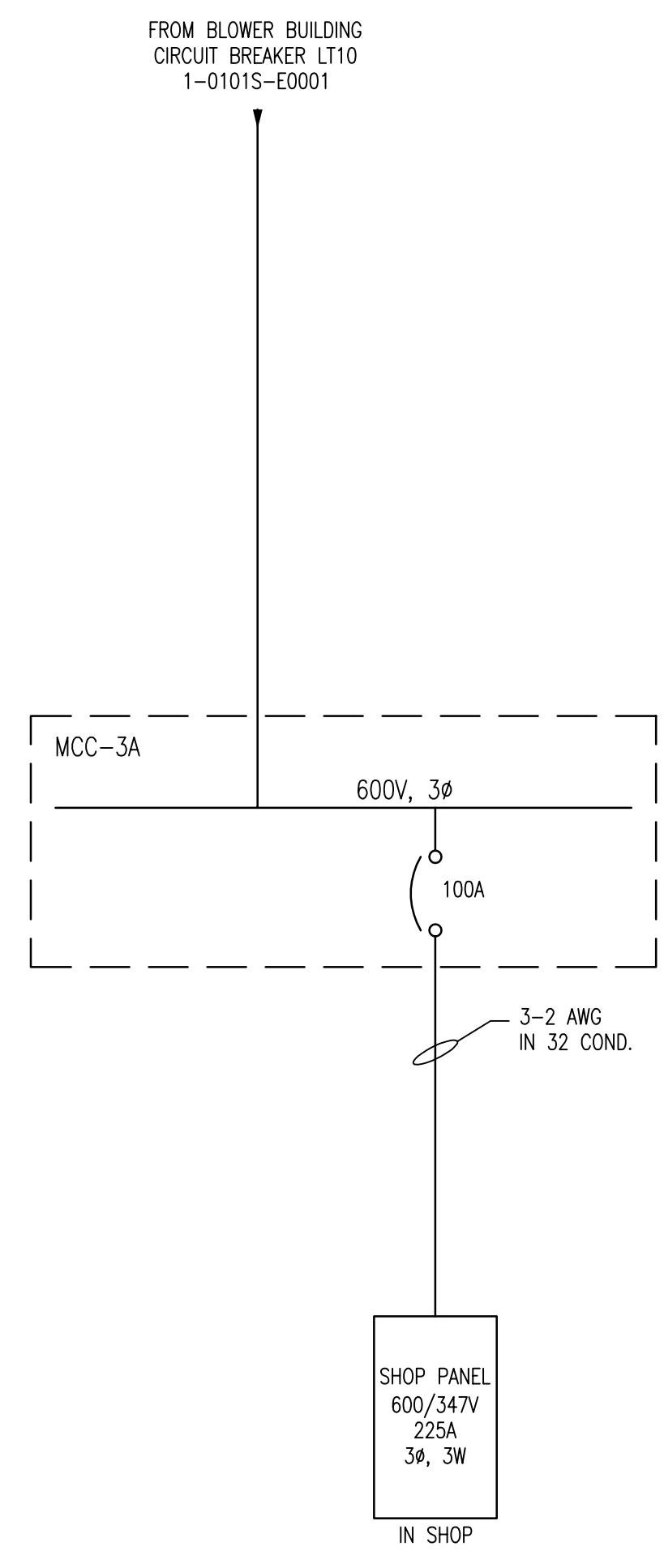
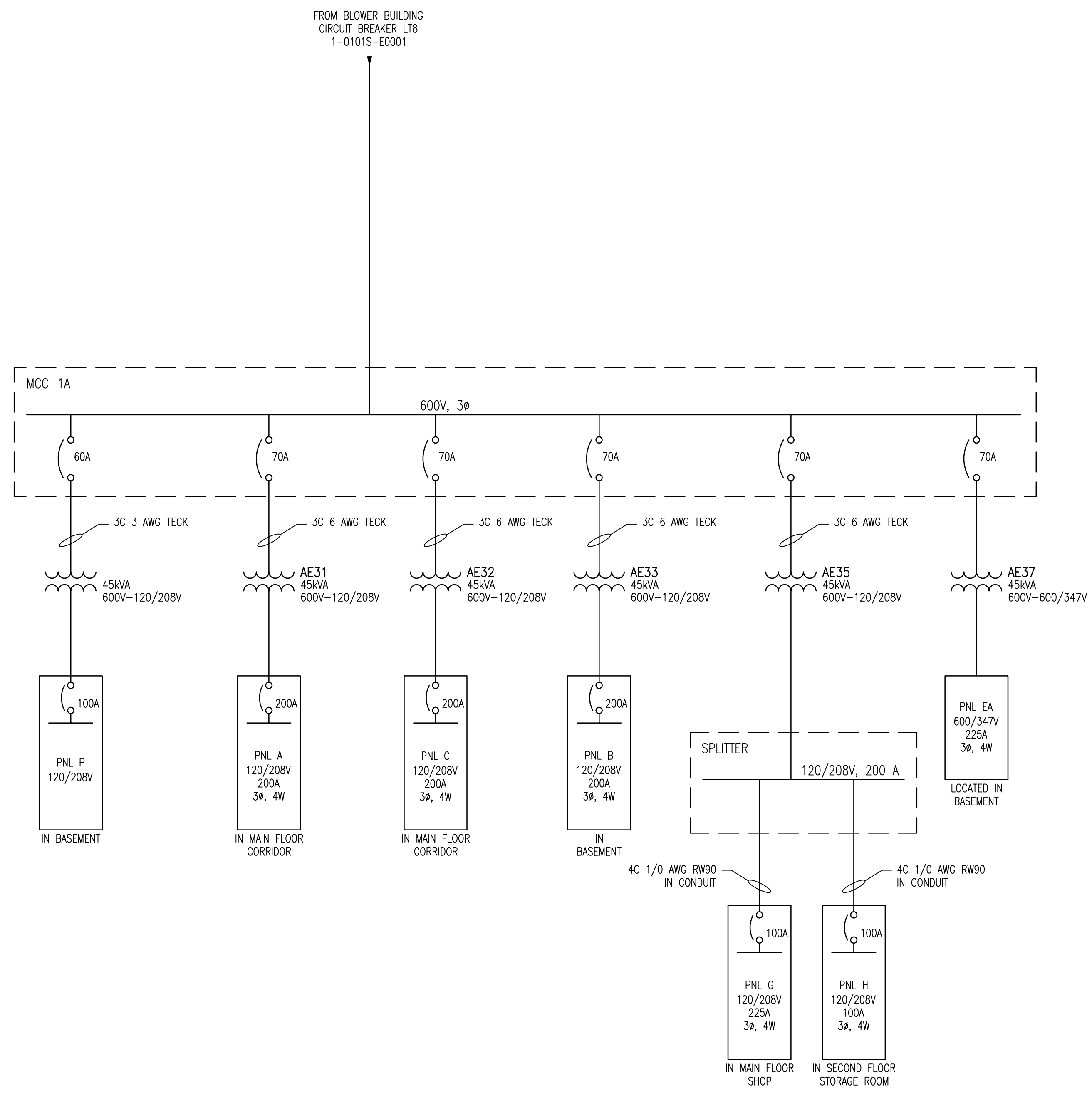
CHECKED BY: CJR
 APPROVED BY:
 RELEASED FOR CONSTRUCTION
 DATE:

ENGINEER'S SEAL

THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT

NORTH END WATER POLLUTION CONTROL CENTRE
 SECONDARY CLARIFIERS
 SINGLE LINE DIAGRAM
 ELECTRICAL DISTRIBUTION
 BLOWER BUILDING ELECTRICAL ROOM

CITY DRAWING NUMBER: 1-0101S-E0001
 SHEET: 001
 REV: 03
 SIZE: A1



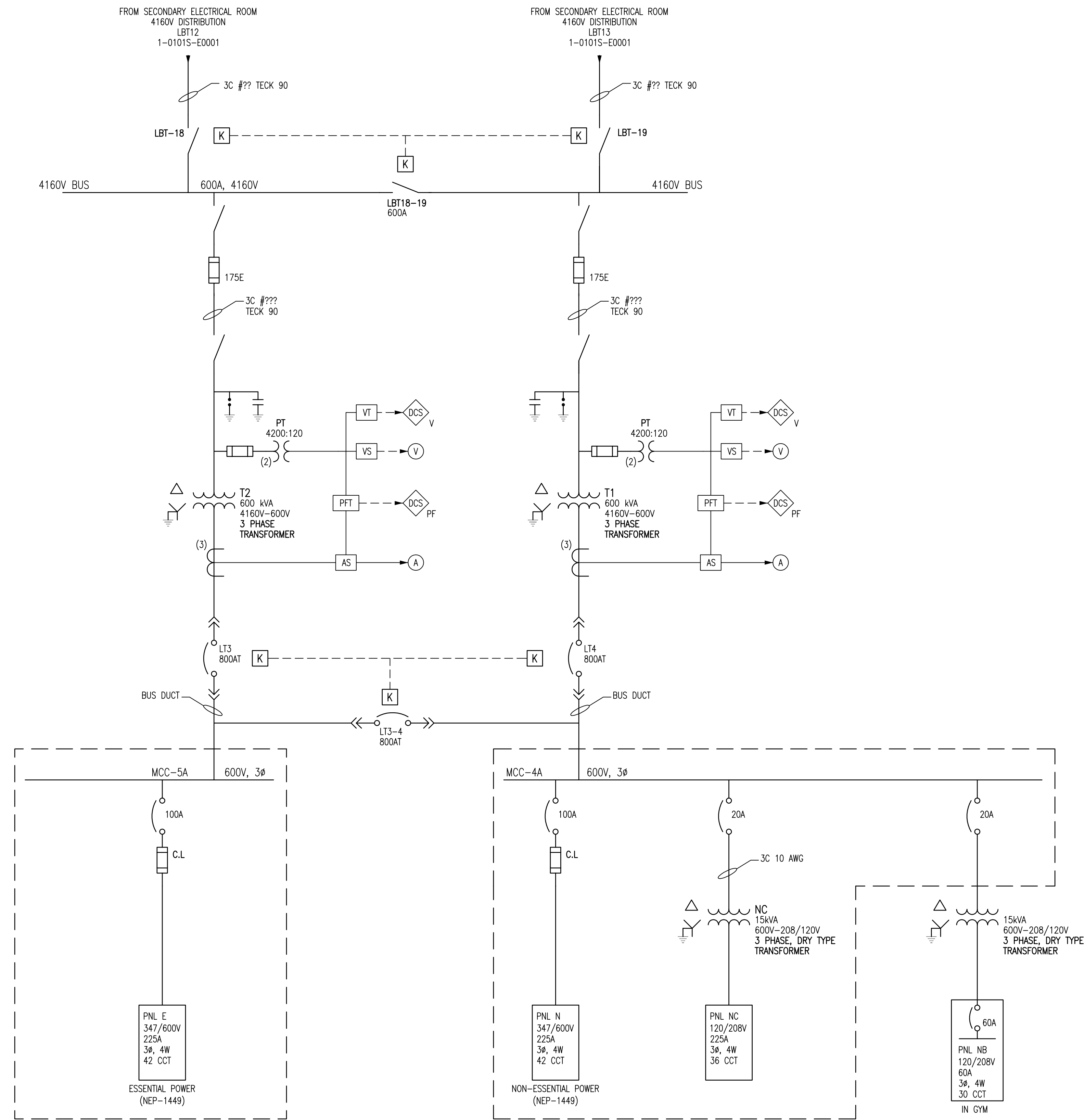
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B.M. ELEV.	FIELD BOOK #:	SNC-LAVALIN INC. 148 Nature Park Way Winnipeg, MB, Canada R3P 0X7 204-786-8080		ENGINEER'S SEAL	
POSTED TO LBIS		DESIGNED BY	EXISTING	CHECKED BY	CJR
		DRAWN BY	EFB	APPROVED BY	
		HOR. SCALE	NTS	RELEASED FOR CONSTRUCTION	
		VERTICAL		DATE	2006/07/07
01	REVISED DRAWING NUMBER; WAS 1-0101S-F-E0002	2008/03/03	EFB	DATE	
00	ISSUED FOR CITY USE	2007/07/05	CJR	DATE	
NO.	REVISIONS	DATE	BY	FILENAME:	1-0101S-E0002-01-01D.dwg

THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT

NORTH END WATER POLLUTION CONTROL CENTRE
 SECONDARY CLARIFIERS
 SINGLE LINE DIAGRAM
 LOW VOLTAGE ELECTRICAL DISTRIBUTION

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101S-E0002	001	01	D



NOTES:

1. ALL CONDUIT IS GENERALLY RIGID ALUMINUM, UNLESS OTHERWISE NOTED.

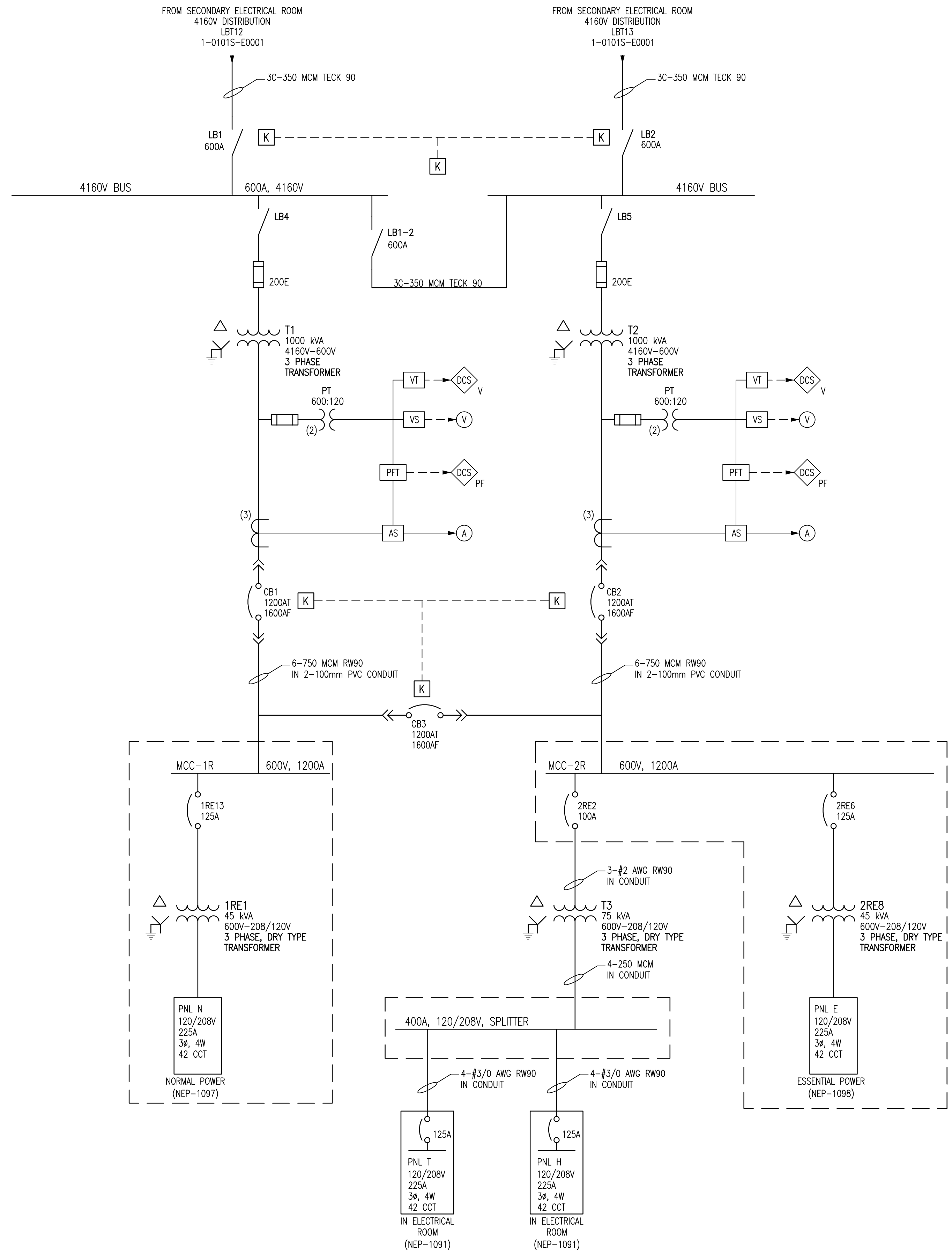
1-0101A-E0003	4160V ELECTRICAL DISTRIBUTION SWITCHING DIAGRAM ELECTRICAL SINGLE LINE DIAGRAM LEGEND & DETAILS
1-0101A-E0004	
DRAWING NUMBER	REFERENCE DRAWINGS

B.M. ELEV.	FIELD BOOK #:	SNC-LAVALIN INC. 148 Nature Park Way Winnipeg, MB, Canada R3P 0X7 204-786-8080		ENGINEER'S SEAL
POSTED TO LBIS		DESIGNED BY	EXISTING	CHECKED BY
		DRAWN BY	DEB	APPROVED BY
01	REVISED DRAWING NUMBER; WAS 1-0101S-F-E0003	2008/03/03	EFB	HOR. SCALE NTS
00	ISSUED FOR CITY USE	2007/07/05	CJR	RELEASED FOR CONSTRUCTION
PA	ISSUED FOR REVIEW	2007/02/19	CJR	DATE
NO. REVISIONS	DATE	BY	FILENAME: 1-0101S-E0003-01-01D.dwg	

THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT

NORTH END WATER POLLUTION CONTROL CENTRE
 SECONDARY CLARIFIERS
 SINGLE LINE DIAGRAM
 ELECTRICAL DISTRIBUTION
 FAN HOUSE

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101S-E0003	001	01	D



NOTES:

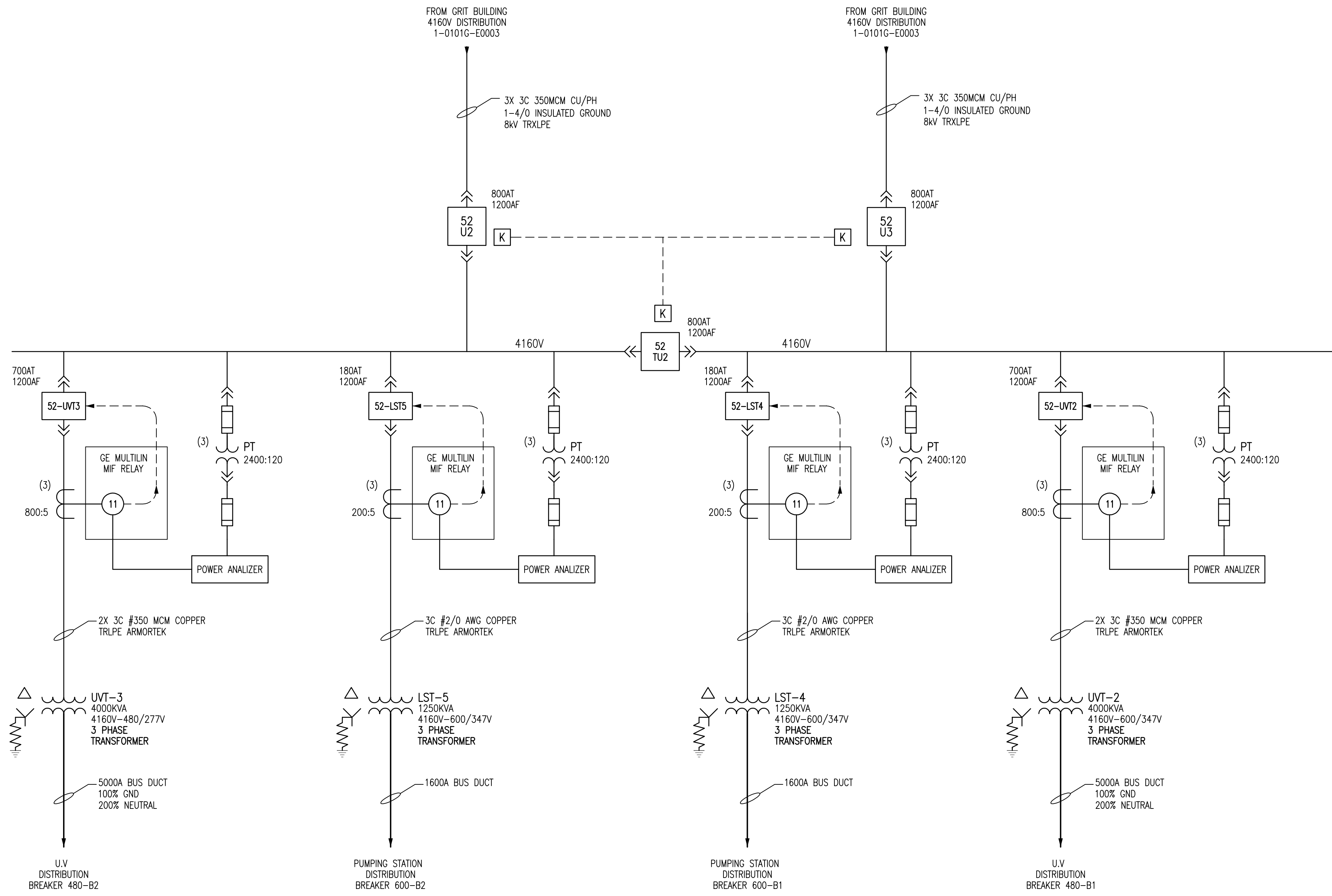
1. ALL CONDUIT IS GENERALLY RIGID ALUMINUM, UNLESS OTHERWISE NOTED.

1-0101A-E0003	4160V ELECTRICAL DISTRIBUTION SWITCHING DIAGRAM
1-0101A-E0004	ELECTRICAL SINGLE LINE DIAGRAM LEGEND & DETAILS
DRAWING NUMBER	REFERENCE DRAWINGS

B.M. ELEV.	FIELD BOOK #:	SNC-LAVALIN INC. 148 Nature Park Way Winnipeg, MB, Canada R3P 0X7 204-786-8080		ENGINEER'S SEAL
POSTED TO LBIS		DESIGNED BY	EXISTING	CHECKED BY
		DRAWN BY	DEB	APPROVED BY
01 REVISED DRAWING NUMBER; WAS 1-0101R-F-E0001	2008/03/03	EFB		HOR. SCALE NTS
00 ISSUED FOR CITY USE	2007/07/05	CJR		RELEASED FOR CONSTRUCTION
PA ISSUED FOR REVIEW	2007/02/19	CJR		DATE
NO. REVISIONS	DATE	BY	DATE	FILENAME: 1-0101R-E0001-001-01D.dwg

THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 NORTH END WATER POLLUTION CONTROL CENTRE
 REACTORS
 SINGLE LINE DIAGRAM
 ELECTRICAL DISTRIBUTION

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101R-E0001	001	01	D



66303D-CE2.01 1-0101G-E0003 1-0101A-E0004	U.V DISINFECTATION ELECTRICAL SINGLE LINE DIAGRAM PRE-AERATION & GRIT BLDG SINGLE LINE DIAGRAM 4160 ELEC. DIST. ELECTRICAL SINGLE LINE DIAGRAM LEGEND & DETAILS
DRAWING NUMBER	REFERENCE DRAWINGS

B.M. ELEV.	FIELD BOOK #:	SNC-LAWALIN INC. 148 Nature Park Way Winnipeg, MB, Canada R3P 0X7 204-786-8080	
POSTED TO LBIS		DESIGNED BY: EXISTING	CHECKED BY: CJR
		DRAWN BY: DEB	APPROVED BY:
01 REVISED DRAWING NUMBER; WAS 1-0101U-F-E0007	2008/03/03	EFB	HOR. SCALE NTS
00 ISSUED FOR CITY USE	2007/07/05	CJR	RELEASED FOR CONSTRUCTION
PA ISSUED FOR REVIEW	2007/02/19	CJR	DATE
NO. REVISIONS	DATE	BY	DATE 2006/07/07
FILENAME: 1-0101U-E0013-001-01D.dwg			

ENGINEER'S SEAL			
THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT			
NORTH END WATER POLLUTION CONTROL CENTRE UV DISINFECTATION SINGLE LINE DIAGRAM 4160V ELECTRICAL DISTRIBUTION			
CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101U-E0013	001	01	D

NOTES

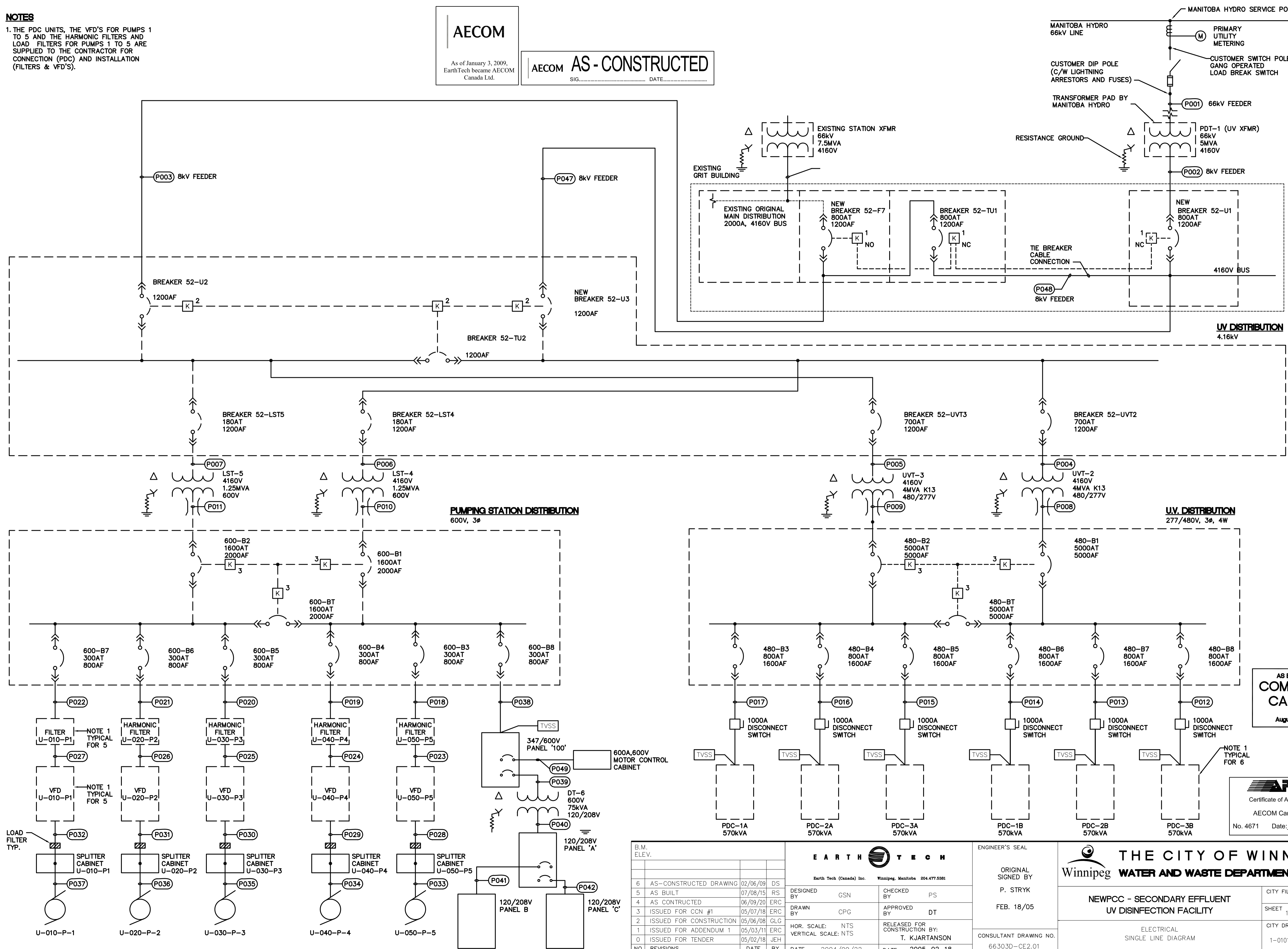
1. THE PDC UNITS, THE VFD'S FOR PUMPS 1 TO 5 AND THE HARMONIC FILTERS AND LOAD FILTERS FOR PUMPS 1 TO 5 ARE SUPPLIED TO THE CONTRACTOR FOR CONNECTION (PDC) AND INSTALLATION (FILTERS & VFD'S).

AECOM

As of January 3, 2009, EarthTech became AECOM Canada Ltd.

AECOM AS - CONSTRUCTED

SIG..... DATE.....

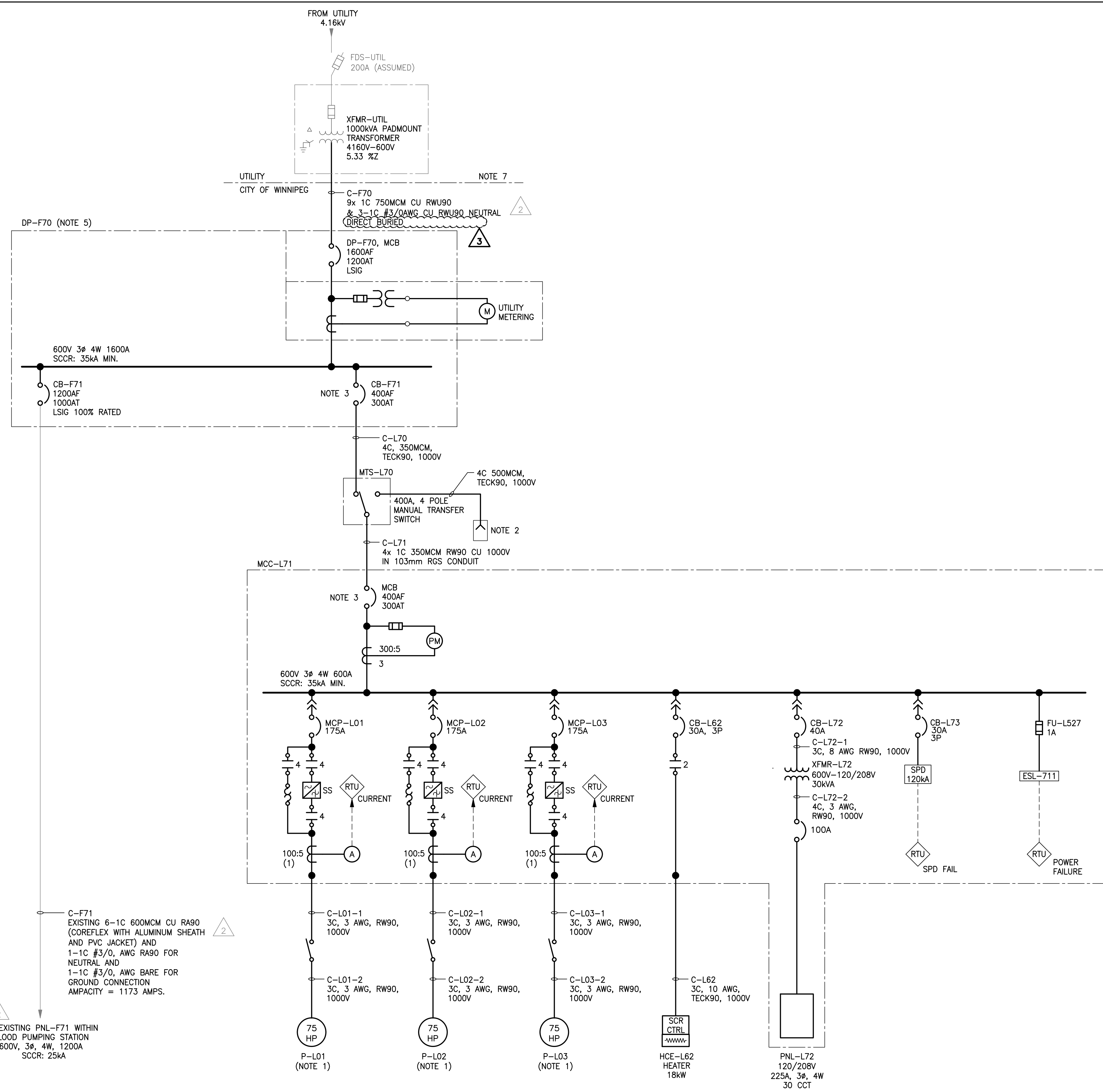


AS BUILT PER COMSTOCK CANADA August 15 2007

AECOM Certificate of Authorization AECOM Canada Ltd. Original dated on: No. 4671 Date: 2005/02/18

<p>EARTH TECH</p> <p>Earth Tech (Canada) Inc. Winnipeg, Manitoba 204.477.5381</p>		<p>ENGINEER'S SEAL</p> <p>ORIGINAL SIGNED BY P. STRYK</p> <p>FEB. 18/05</p>		<p>THE CITY OF WINNIPEG</p> <p>Winnipeg WATER AND WASTE DEPARTMENT</p>	
<p>DESIGNED BY GSN</p> <p>CHECKED BY PS</p>		<p>APPROVED BY DT</p> <p>RELEASED FOR CONSTRUCTION BY: T. KJARTANSON</p>		<p>CITY FILE NUMBER</p>	
<p>DRAWN BY CPG</p> <p>HOR. SCALE: NTS</p> <p>VERTICAL SCALE: NTS</p>		<p>CONSULTANT DRAWING NO. 66303D-CE2.01</p>		<p>SHEET 10 OF 15</p>	
<p>NO. REVISIONS</p>		<p>DATE 2004/09/22</p> <p>DATE 2005-02-18</p>		<p>CITY DRAWING NUMBER 1-0101U-E0001-001-06</p>	

File Name: \\k-file-a-p-data\Projects\2014\14-0107-037\Drawings\Elec\1-0116F-E001-001.dwg - Tab: E01 Plotted By: boige 08/06/2015 [Thu 4:12pm]

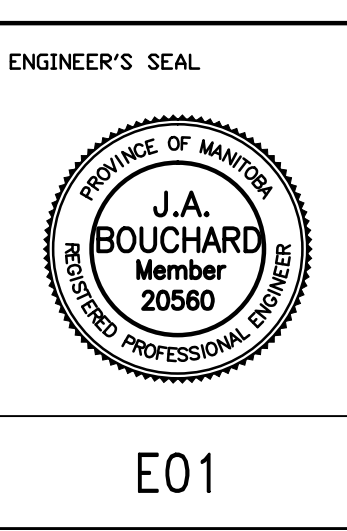


1 SINGLE LINE DIAGRAM
SCALE: N.T.S.



NO.	REVISIONS	DATE	BY	DATE	BY
3	RE-ISSUED FOR CONSTRUCTION	15/01/16			
2	RE-ISSUED FOR CONSTRUCTION	14/12/10	JAB		
1	RE-ISSUED FOR CONSTRUCTION	14/07/14	JAB		
0	ISSUED FOR CONSTRUCTION	14/06/16	JAB		

DESIGNED BY	DDW	CHECKED BY	JAB
DRAWN BY	GCN	APPROVED BY	
HDR. SCALE	N.T.S.	RELEASED FOR CONSTRUCTION	
VERTICAL	N.T.S.		
DATE	2013 07 25	DATE	2014/06/16



THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

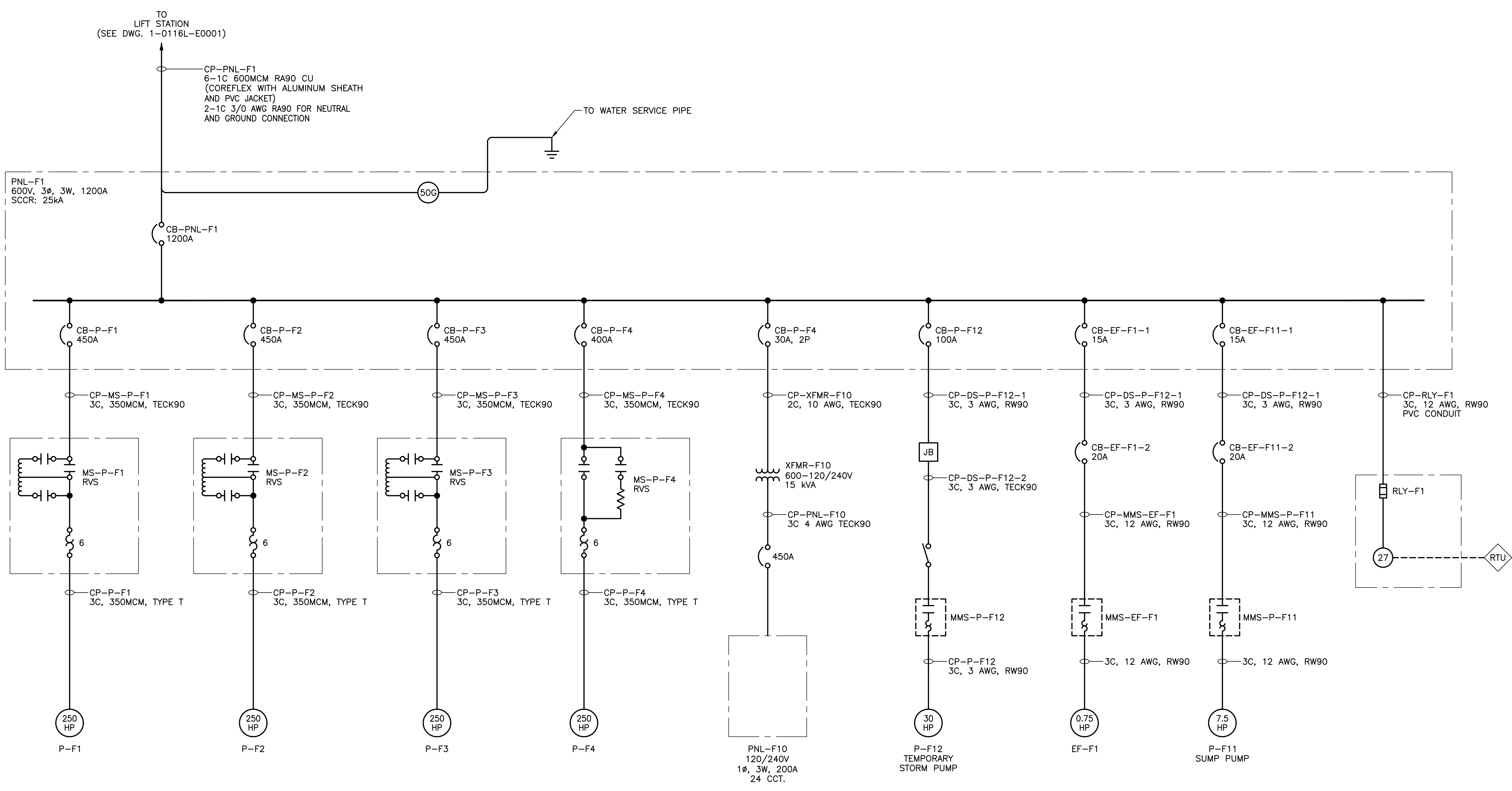
AUBREY WASTEWATER PUMPING STATION UPGRADE
1016 PALMERSTON AVE
ELECTRICAL
SINGLE LINE DIAGRAM

SHEET 1 OF 1
CITY DRAWING NUMBER
1-0116L-E0001-001

- NOTES:**
1. AUTOMATIC CONTROLS WILL ONLY ALLOW TWO OF THREE PUMPS TO OPERATE SIMULTANEOUSLY.
 2. PROVIDE A 400A CROUSE-HINDS POSI-MAX SERIES PORTABLE POWER SOLUTION FOR CONNECTION OF TEMPORARY GENERATOR. CITY OF WINNIPEG TO PROVIDE TEMPORARY GENERATOR COMPLETE WITH A MAIN CIRCUIT BREAKER OR A MEANS TO READILY SHUT-DOWN THE GENERATOR. NEUTRAL OF GENERATOR TO BE BONDED TO GENERATOR FRAME AND GROUND.
 3. TRIP UNITS ON 400A BREAKER TO BE COORDINATED SUCH THAT THE MCC BREAKER WILL TRIP BEFORE THE DP-F70 BREAKER FOR BOTH FAULT AND OVER-CURRENT CONDITIONS.
 4. CONTRACTOR SHALL PROVIDE ARC FLASHING LABELING FOR ALL ELECTRICAL EQUIPMENT. LABEL REQUIREMENTS SHALL BE PROVIDED AFTER SHOP DRAWING APPROVAL.
 5. NEW PAD MOUNTED ELECTRICAL DISTRIBUTION EQUIPMENT WITH A SERVICE ENTRANCE RATED MAIN BREAKER. INCOMING SERVICE CONDUCTORS TO BE TERMINATED IN A SEPARATE COMPARTMENT WITH A BOLT ON COVER INSIDE A PADLOCKABLE EXTERIOR DOOR. PROVIDE NEW METERING ENCLOSURE AND SOCKET FOR INSTALLATION OF METER AND METERING TRANSFORMERS BY MANITOBA HYDRO.
 6. GRAY ITEMS DENOTES EXISTING EQUIPMENT TO BE REUSED.
 7. EXISTING PADMOUNT TRANSFORMER IS OWNED BY CITY OF WINNIPEG AND MAINTAINED BY MANITOBA HYDRO. PROCESS TO TRANSFER OWNERSHIP OF TRANSFORMER TO MANITOBA HYDRO IS IN PROGRESS AT TIME THIS DRAWING IS ISSUED.

- LEGEND:**
- (PM) POWER METER
 - (RTU) REMOTE TERMINAL UNIT

File Name: \\v-file-4\p-data\Projects\2014\14-0107-037\DWG\Elec\1-0116F-E001-002.dwg - Tab: Rev0A Plotted By: boige 08/06/2015 [Thu 4:11pm]



- LEGEND**
- REMOTE TERMINAL UNIT
 - PROTECTIVE RELAYING DEVICE
 - 27 UNDERVOLTAGE RELAY
 - 50G OVERCURRENT RELAY (RESIDUAL)

DRAWING ISSUED FOR REFERENCE FOR BID OPP 515-2015 ARC FLASH HAZARD ANALYSIS

FIELD BOOK #:			ENGINEER'S SEAL	THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT			
POSTED TO LBIS					DESIGNED BY MAM	CHECKED BY	AUBREY WASTEWATER PUMPING STATION UPGRADE
4	ISSUED FOR REFERENCE	15/06/03	MAM		1016 PALMERSTON AVE	SHEET 1 OF 1	
3	ISSUED FOR RE-CONSTRUCTION	15/01/16	JAB		ELECTRICAL SINGLE LINE DIAGRAM	CITY DRAWING NUMBER	
2	ISSUED FOR RE-CONSTRUCTION	14/12/10	JAB				
1	ISSUED FOR RE-CONSTRUCTION	14/07/14	JAB				
0	ISSUED FOR CONSTRUCTION	14/06/16	JAB				
ND	REVISIONS	DATE	BY	DATE	2015 06 02	DATE	2015/06/03

1-0116L-E0001-001