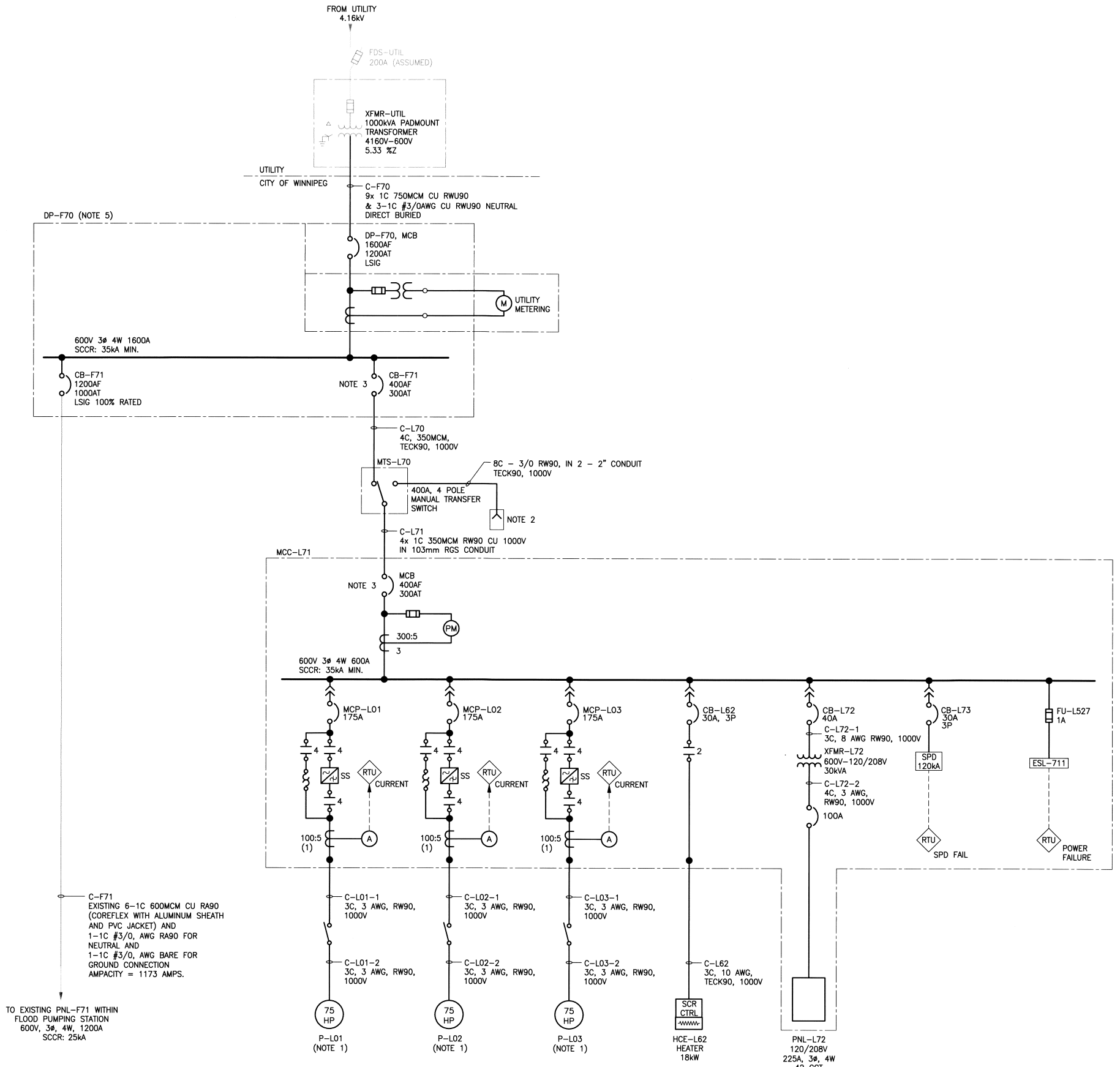


CW-9-M564-1

File Name: P:\Projects\2013\13-0107-021\DWG\Elec\20160311 AS-BUILT\1-0116L-E0001-001.dwg - Tab: E01 Plotted By: D.Deroche 03/11/2016 [Fri 9:01am]



C-F71 EXISTING 6-1C 600MCM CU R90 (COREFLEX WITH ALUMINUM SHEATH AND PVC JACKET) AND 1-1C #3/0, AWG R90 FOR NEUTRAL AND 1-1C #3/0, AWG BARE FOR GROUND CONNECTION AMPACITY = 1173 AMPS.

TO EXISTING PNL-F71 WITHIN FLOOD PUMPING STATION 600V, 3Ø, 4W, 1200A SCCR: 25kA

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

- NOTES:**
1. AUTOMATIC CONTROLS WILL ONLY ALLOW TWO OF THREE PUMPS TO OPERATE SIMULTANEOUSLY.
 2. PROVIDED A 400A CROUSE-HINDS POSI-MAX SERIES PORTABLE POWER SOLUTION FOR CONNECTION OF TEMPORARY GENERATOR. CITY OF WINNIPEG TO PROVIDED 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 WAS COORDINATED SUCH THAT THE MCC BREAKER WILL TRIP BEFORE THE DP-F70 BREAKER FOR BOTH FAULT AND OVER-CURRENT CONDITIONS.
 4. CONTRACTOR PROVIDED ARC FLASHING LABELING FOR ALL ELECTRICAL EQUIPMENT. LABEL REQUIREMENTS PROVIDED AFTER SHOP DRAWING APPROVAL.
 5. A NEW PAD MOUNTED ELECTRICAL DISTRIBUTION EQUIPMENT WITH A SERVICE ENTRANCE RATED MAIN BREAKER. INCOMING SERVICE CONDUCTORS TERMINATED IN A SEPARATE COMPARTMENT WITH A BOLT ON COVER INSIDE A PADLOCKABLE EXTERIOR DOOR. PROVIDED NEW METERING ENCLOSURE AND SOCKET FOR INSTALLATION OF METER AND METERING TRANSFORMERS BY MANITOBA HYDRO.
 6. GRAY ITEMS DENOTES EXISTING EQUIPMENT TO BE REUSED.

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

PROJECT COMPLETION DATE : 15 JULY 2015
CONTRACTOR : NELSON RIVER CONSTRUCTION INC./ROBIN ELECTRIC

AS-BUILT
AS-BUILT DRAWING REVISIONS ARE BASED SOLELY ON DRAWING MARKUPS OR OTHER FIELD DOCUMENTATION PROVIDED BY: ROBIN ELECTRIC JULY 9, 2015 THESE CHANGES HAVE NOT BEEN VERIFIED IN THE FIELD BY KGS GROUP.

NO.	REVISIONS	DATE	BY
4	ISSUED AS-BUILT	16/03/11	JAB
3	RE-ISSUED FOR CONSTRUCTION	15/01/16	JAB
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

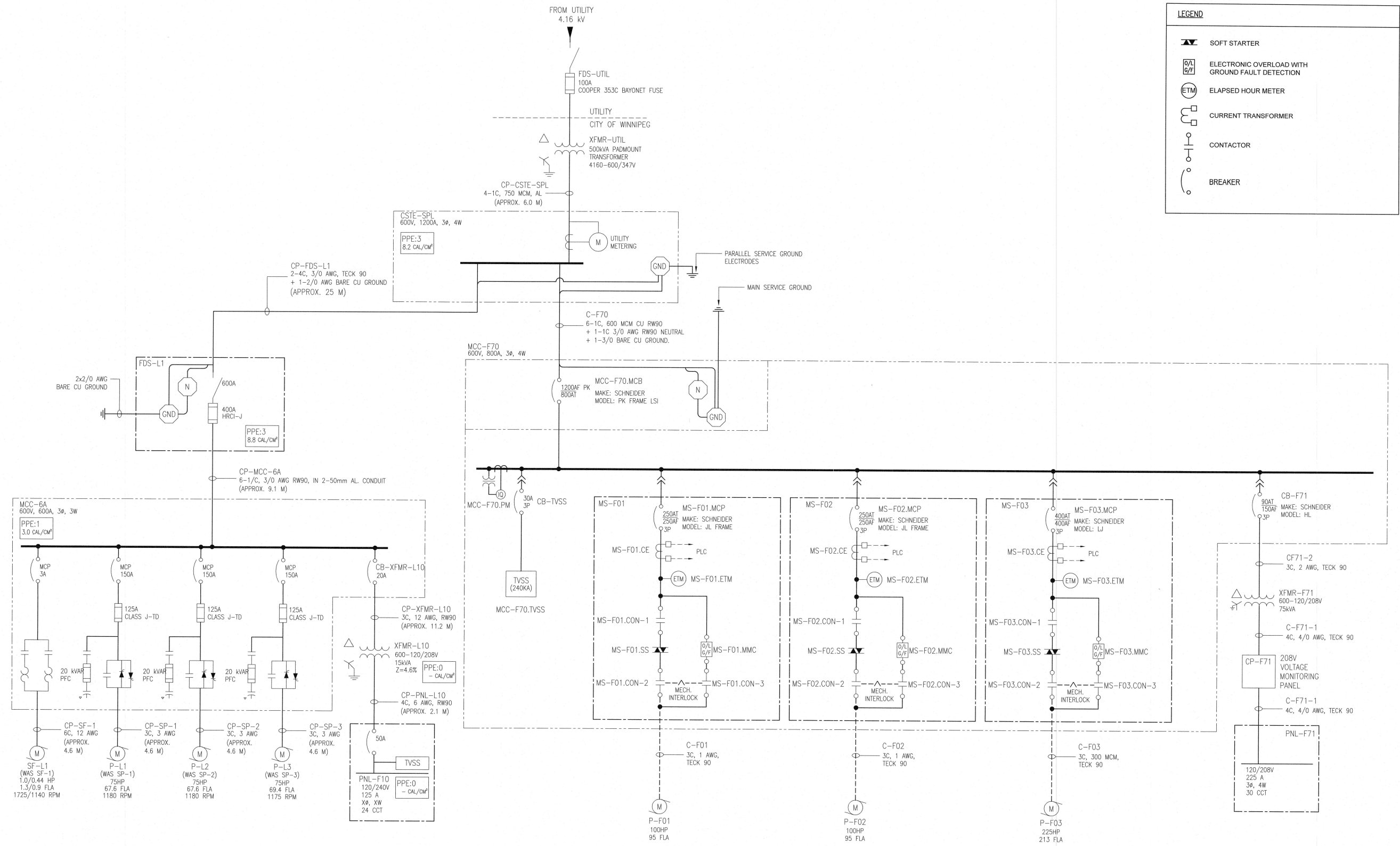
DESIGNED BY	CHECKED BY	DATE
DDW	JAB	16/03/11
GCN	DDW	15/01/16
		14/12/10
		14/07/14
		14/06/16

ENGINEER'S SEAL
THE ORIGINAL ISSUE REV. 0 WAS STAMPED, DATED AND SIGNED BY: J.A. BOUCHARD, P.ENG ON 14/06/17

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

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

SHEET E01 OF
CITY DRAWING NUMBER 1-0116L-E0001-001



LEGEND

- SOFT STARTER
- ELECTRONIC OVERLOAD WITH GROUND FAULT DETECTION
- ELAPSED HOUR METER
- CURRENT TRANSFORMER
- CONTACTOR
- BREAKER

ENGINEERS GEOSCIENTISTS MANITOBA
 Certificate of Authorization
Tetra Tech Canada Inc.
 No. 6499

THE INFORMATION CONTAINED ON THIS DRAWING HAS BEEN PREPARED SOLELY FOR THE OWNER FOR USE ON THIS PROJECT AND IS COPYRIGHTED. ANY UNAUTHORIZED USE OF THIS INFORMATION IS A BREACH OF COPYRIGHT AND WILL BE PURSUED AS SUCH. USE OF THE INFORMATION ON THIS DRAWING IN WHOLE OR IN PART OTHER THAN FOR THE INTENDED PURPOSE IS AT THE SOLE RISK OF THE USER.

LOCATION APPROVED UNDERGROUND STRUCTURES

SUPR. U/G STRUCTURES	DATE	F.B.

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	DATE	BY
00	ISSUED FOR TENDER	18.08.02	TL

TETRA TECH

DESIGNED BY: DB	CHECKED BY: HSL
DRAWN BY: CPG	APPROVED BY:
HOR. SCALE: AS NOTED	RELEASED FOR CONSTRUCTION:
VERTICAL:	DATE:

PROVINCE OF MANITOBA
H.S. LEUNG
 Member
 3022
 REGISTERED PROFESSIONAL ENGINEER

CONSULTANT DRAWING NO.
 1800120700-DWG-E0004

THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT

BALTIMORE FLOOD PUMPING STATION UPGRADES
 ELECTRICAL SINGLE LINE DIAGRAM

CITY DRAWING NUMBER
 SHEET 16 OF 23
 E0004

AT SIZE - 894mm x 841mm

NOTES:

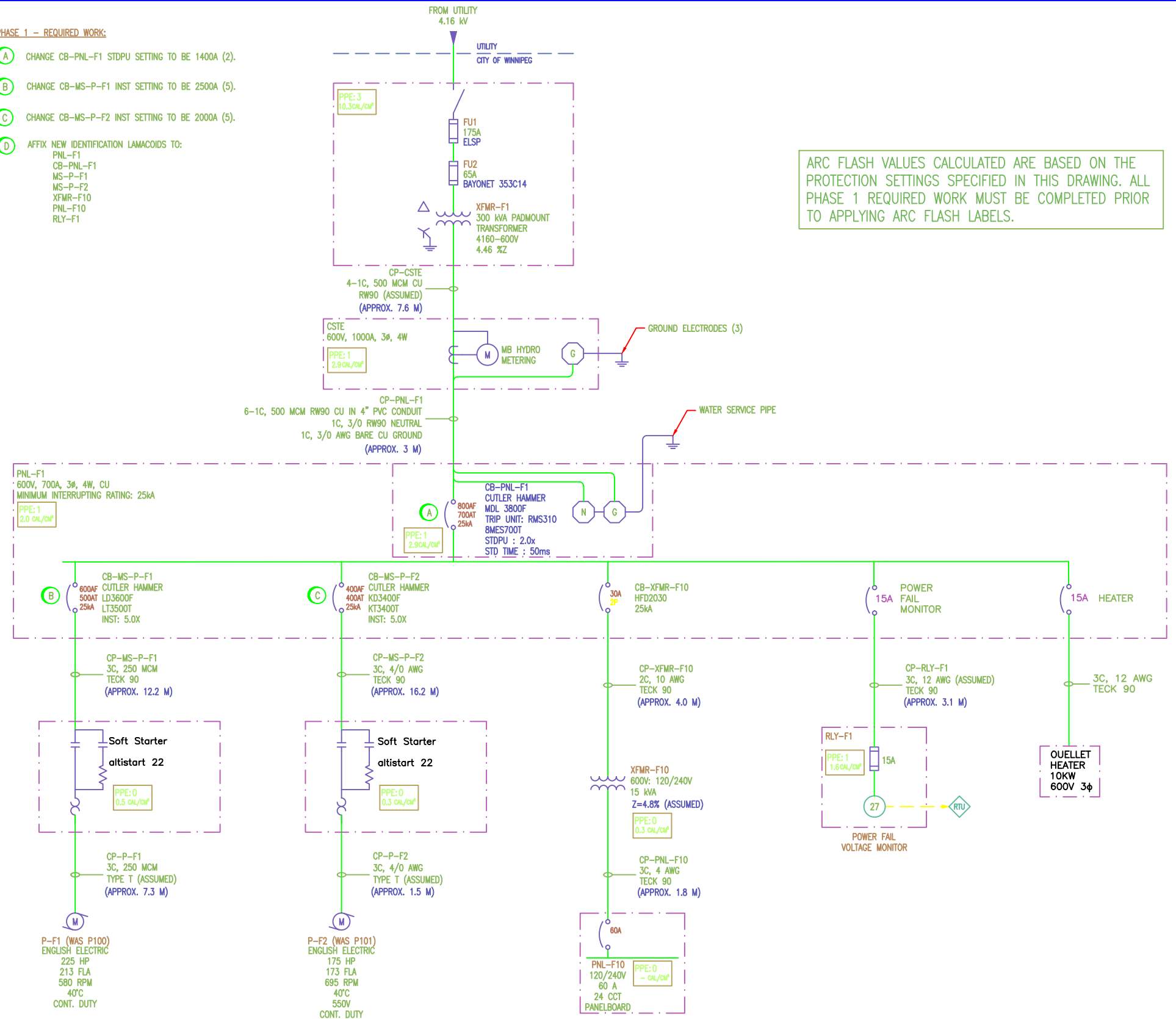
1. THIS DRAWING SUPERCEDES 1-04XXA-F-E0001.
2. THIS DRAWING CONTAINS UNVERIFIED INFORMATION FROM EXISTING DOCUMENTATION.
3. THE ENGINEER'S RESPONSIBILITY IS LIMITED TO THE ARC FLASH STUDY AND RECOMMENDED MITIGATION.

LEGEND:

PPE: 4 ← HAZARD/RISK CATEGORY
29 cal/cm² ← INCIDENT ENERGY

PHASE 1 - REQUIRED WORK:

- (A) CHANGE CB-PNL-F1 STDPU SETTING TO BE 1400A (2).
- (B) CHANGE CB-MS-P-F1 INST SETTING TO BE 2500A (5).
- (C) CHANGE CB-MS-P-F2 INST SETTING TO BE 2000A (5).
- (D) AFFIX NEW IDENTIFICATION LAMACOIDS TO:
PNL-F1
CB-PNL-F1
MS-P-F1
MS-P-F2
XFMR-F10
PNL-F10
RLY-F1



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.

		SNC-LAVALIN INC. 148 Nelson Park Way Winnipeg, MB, Canada R3P 0X7 204-788-8080		ENGINEER'S SEAL ORIGINAL DRAWING SEALED BY: C. J. REIMER SNC-LAVALIN MEMBER # 21968 2011/05/19 REV. 00		THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT COLONY FLOOD PUMPING STATION ARC FLASH STUDY SINGLE LINE DIAGRAM	
DESIGNED BY:	EXISTING	CHECKED BY:	C. REIMER	DATE:	2009/09/15	BY:	
DRAWN BY:	S. COATES	APPROVED BY:	C. REIMER	DATE:		BY:	
SCALE:	NTS	RELEASED FOR CONSTRUCTION		DATE:		BY:	
ISSUED FOR CITY USE	2011/05/19	APS	CLR	CONSULTANT NO.:			
NO. REVISIONS	DATE	DESIGN	CHECK				

CITY DRAWING NUMBER: 1-0128F-E0001
SHEET: 001
REV: 00

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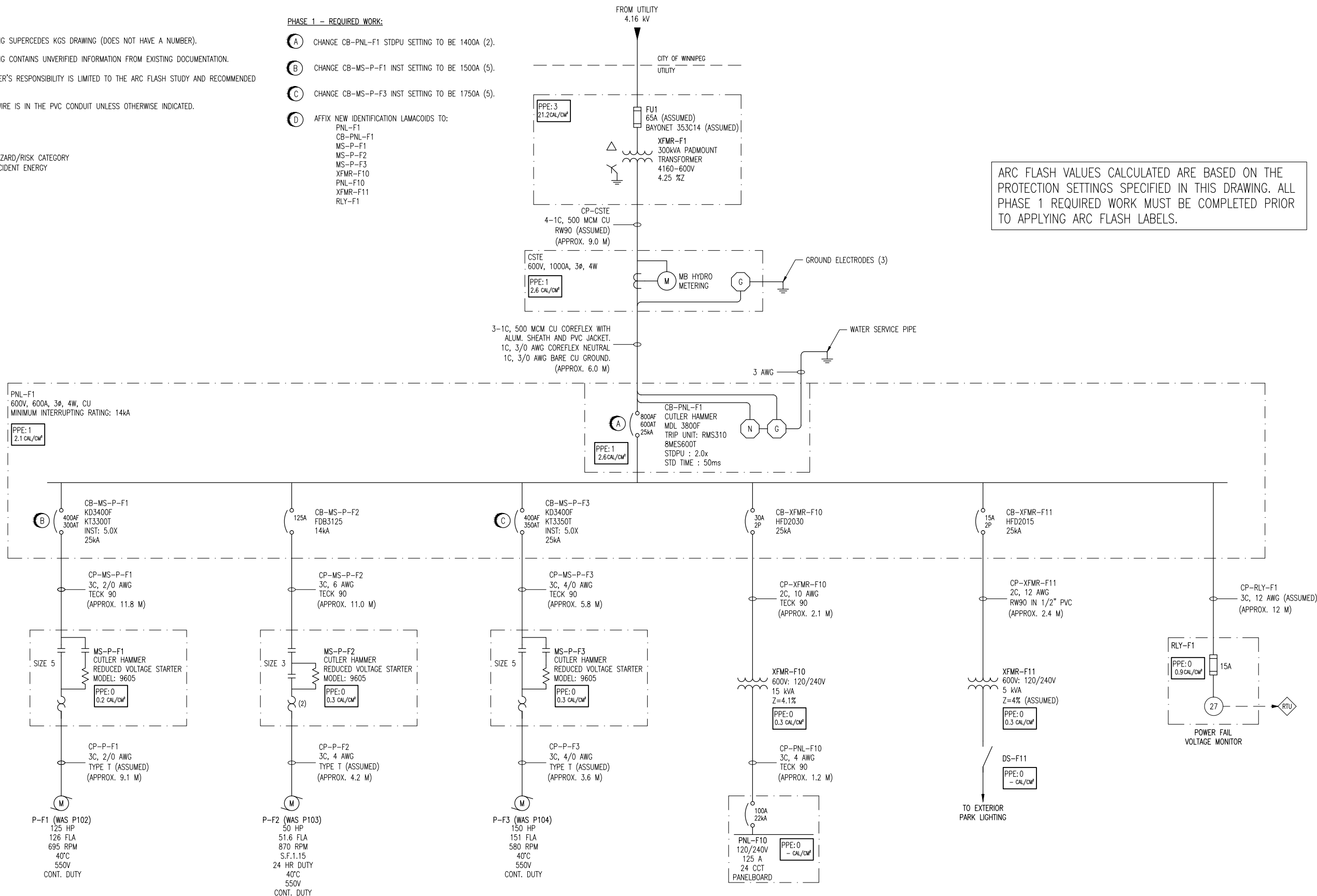
- THIS DRAWING SUPERCEDES KGS DRAWING (DOES NOT HAVE A NUMBER).
- THIS DRAWING CONTAINS UNVERIFIED INFORMATION FROM EXISTING DOCUMENTATION.
- THE ENGINEER'S RESPONSIBILITY IS LIMITED TO THE ARC FLASH STUDY AND RECOMMENDED MITIGATION.
- ALL RW90 WIRE IS IN THE PVC CONDUIT UNLESS OTHERWISE INDICATED.

LEGEND:

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

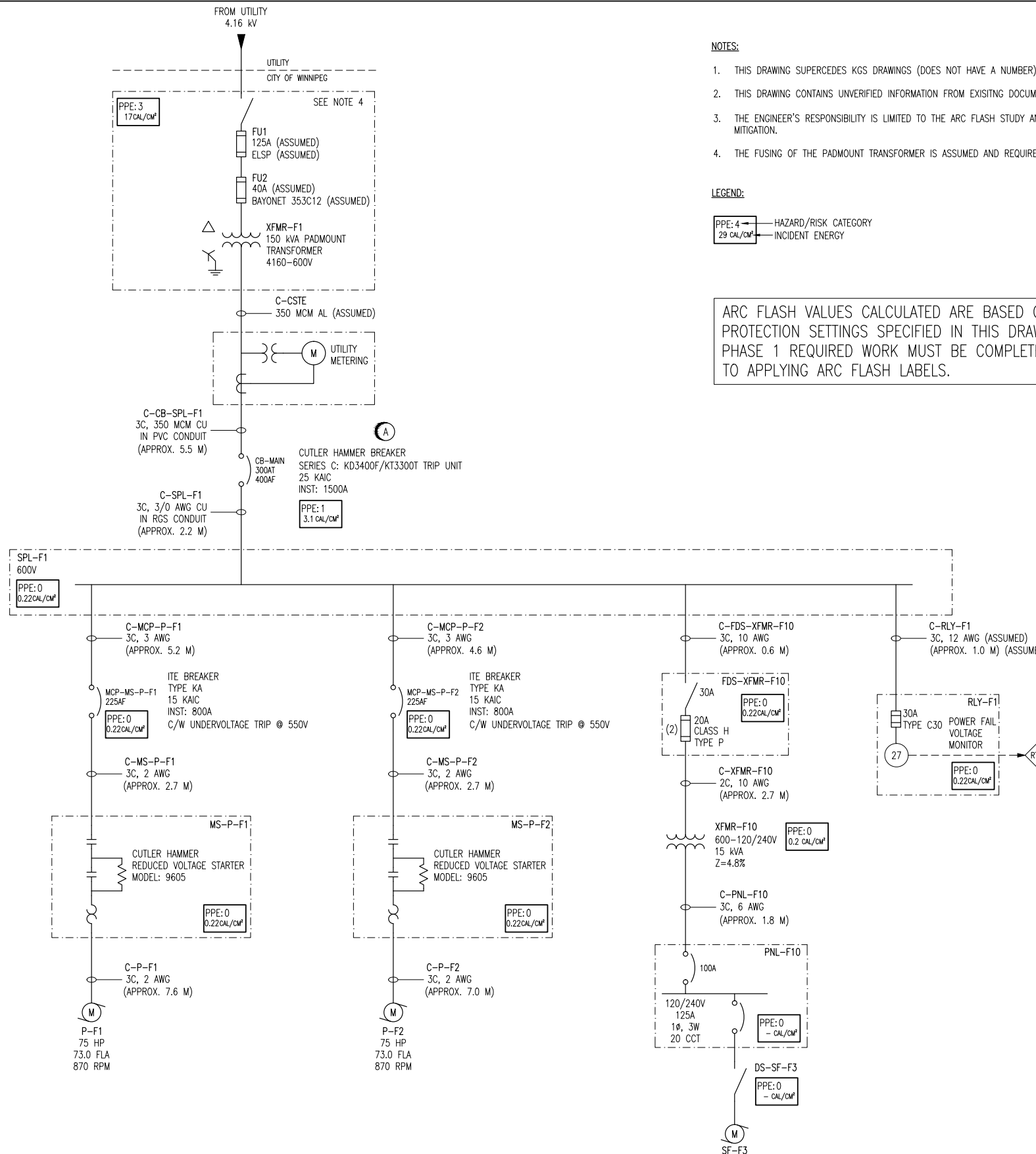
PHASE 1 - REQUIRED WORK:

- (A) CHANGE CB-PNL-F1 STDPU SETTING TO BE 1400A (2).
- (B) CHANGE CB-MS-P-F1 INST SETTING TO BE 1500A (5).
- (C) CHANGE CB-MS-P-F3 INST SETTING TO BE 1750A (5).
- (D) AFFIX NEW IDENTIFICATION LAMACOIDS TO:
 PNL-F1
 CB-PNL-F1
 MS-P-F1
 MS-P-F2
 MS-P-F3
 XFMR-F10
 PNL-F10
 XFMR-F11
 RLY-F1



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.

<p>SNC-LAVALIN INC. 148 Nature Park Way Winnipeg, MB, Canada R3P 0X7 204-786-8080</p>				<p>ENGINEER'S SEAL</p>	
<p>DESIGNED BY: T. CHURCH</p>		<p>CHECKED BY: C. REIMER</p>		<p>ORIGINAL DRAWING SEALED BY: C. J. REIMER SNC-LAVALIN MEMBER #21968 2011/05/19 REV. 00</p>	
<p>DRAWN BY: S. COATES</p>		<p>APPROVED BY: C. REIMER</p>			
<p>SCALE: NTS</p>		<p>RELEASED FOR CONSTRUCTION BY: DATE:</p>			
<p>DATE: 2009/09/15</p>		<p>CONSULTANT NO.:</p>		<p>CITY DRAWING NUMBER 1-0132F-E0001</p>	
<p>00 ISSUED FOR CITY USE</p>		<p>2011/05/19</p>		<p>SHEET REV. SIZE 001 00 A1</p>	
<p>NO. REVISIONS</p>		<p>DATE DESIGN CHECK</p>		<p>1-0132F-E0001-001-00.dwg</p>	



NOTES:

- THIS DRAWING SUPERCEDES KGS DRAWINGS (DOES NOT HAVE A NUMBER).
- THIS DRAWING CONTAINS UNVERIFIED INFORMATION FROM EXISTING DOCUMENTATION.
- THE ENGINEER'S RESPONSIBILITY IS LIMITED TO THE ARC FLASH STUDY AND RECOMMENDED MITIGATION.
- THE FUSING OF THE PADMOUNT TRANSFORMER IS ASSUMED AND REQUIRES CONFIRMATION.

LEGEND:

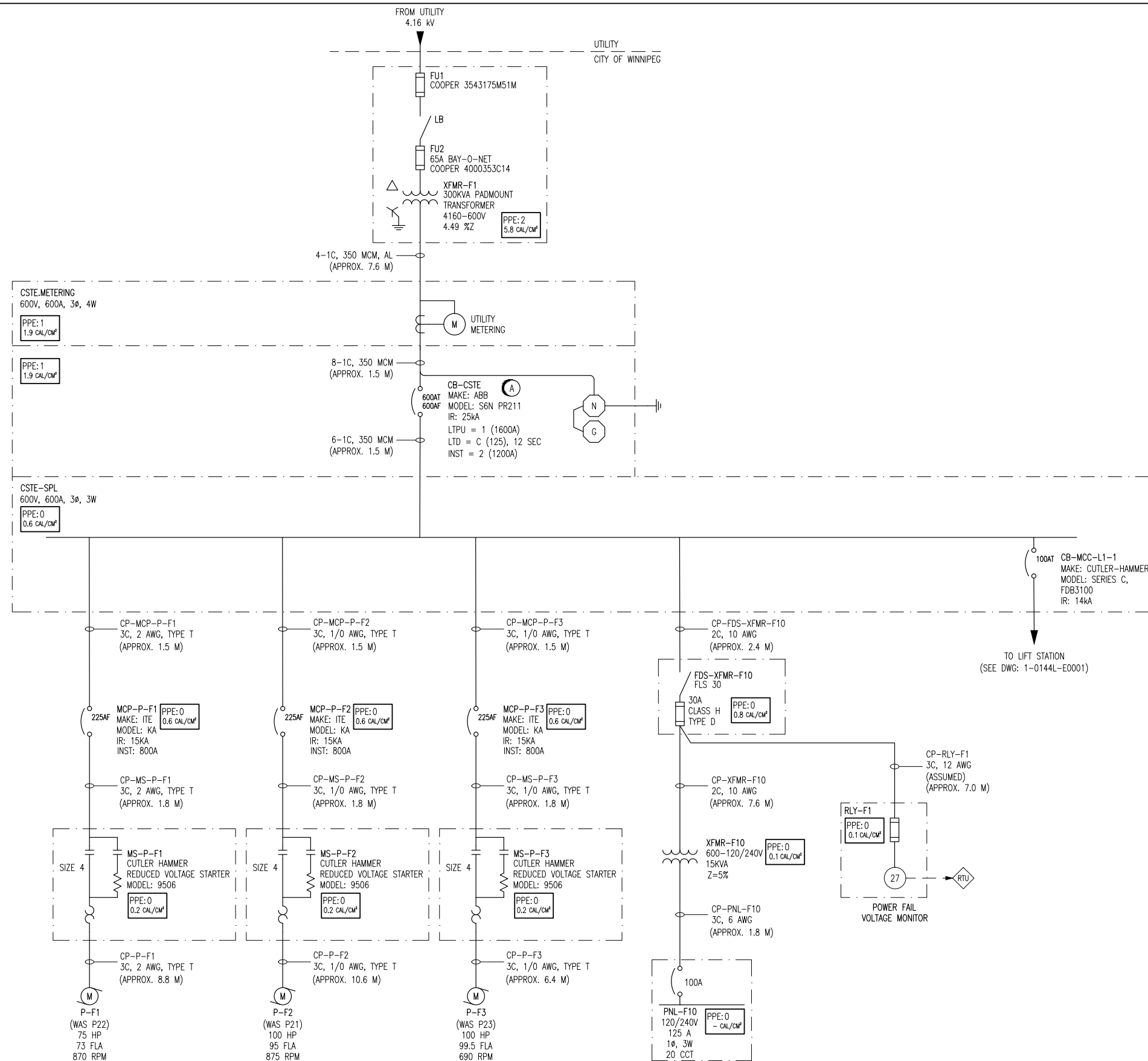
PPE: 4 — HAZARD/RISK CATEGORY
 29 cal/cm² — INCIDENT ENERGY

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.

PHASE 1 REQUIRED WORK:

- (A) CHANGE CB-MAIN INST. SETTING TO 5X (1500A)
- (B) AFFIX NEW IDENTIFICATION LAMACOIDS TO:
 XFMR-F1
 CB-MAIN
 SPL-F1
 MCP-MS-P-F1
 MS-P-F1
 MCP-MS-P-F2
 MS-P-F2
 FDS-XFMR-F10
 XFMR-F10
 PNL-F10
 DS-SF-F3
 RLY-F1

SNC-LAVALIN INC. 148 Nature Park Way Winnipeg, MB, Canada R3P 0X7 204-786-8080				ENGINEER'S SEAL ORIGINAL DRAWING SEALED BY: C. J. REIMER SNC-LAVALIN INC. MEMBER #21968 2011/12/01 REV. 00	
DESIGNED BY: D. RAMJEET		CHECKED BY: C. REIMER		THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT	
DRAWN BY: D. RAMJEET		APPROVED BY: C. REIMER		GALT FLOOD PUMPING STATION ARC FLASH STUDY SINGLE LINE DIAGRAM	
SCALE: NTS		RELEASED FOR CONSTRUCTION BY: DATE:		CITY DRAWING NUMBER 1-0142F-E0001	
DATE: 2009/07/23		CONSULTANT NO.:		SHEET 001	
00 ISSUED FOR CITY USE		2011/11/23 DR CJR		REV. SIZE 00 A1	
NO. REVISIONS		DATE DESIGN CHECK		1-0142F-E0001-001-00.dwg	



PHASE 1 REQUIRED WORK:

- (A) ADJUST THE CB-CSTE INSTANTANEOUS SETTING TO 2 (1200A) AND THE LONG TIME DELAY SETTING TO C (125).
- (B) AFFIX IDENTIFICATION LAMACIODS TO:
 XFMR-F1
 MCP-P-F1
 MCP-P-F2
 MCP-P-F3
 MS-P-F1
 MS-P-F2
 MS-P-F3
 FDS-XFMR-F10
 XFMR-F10
 PNL-F10

NOTES:

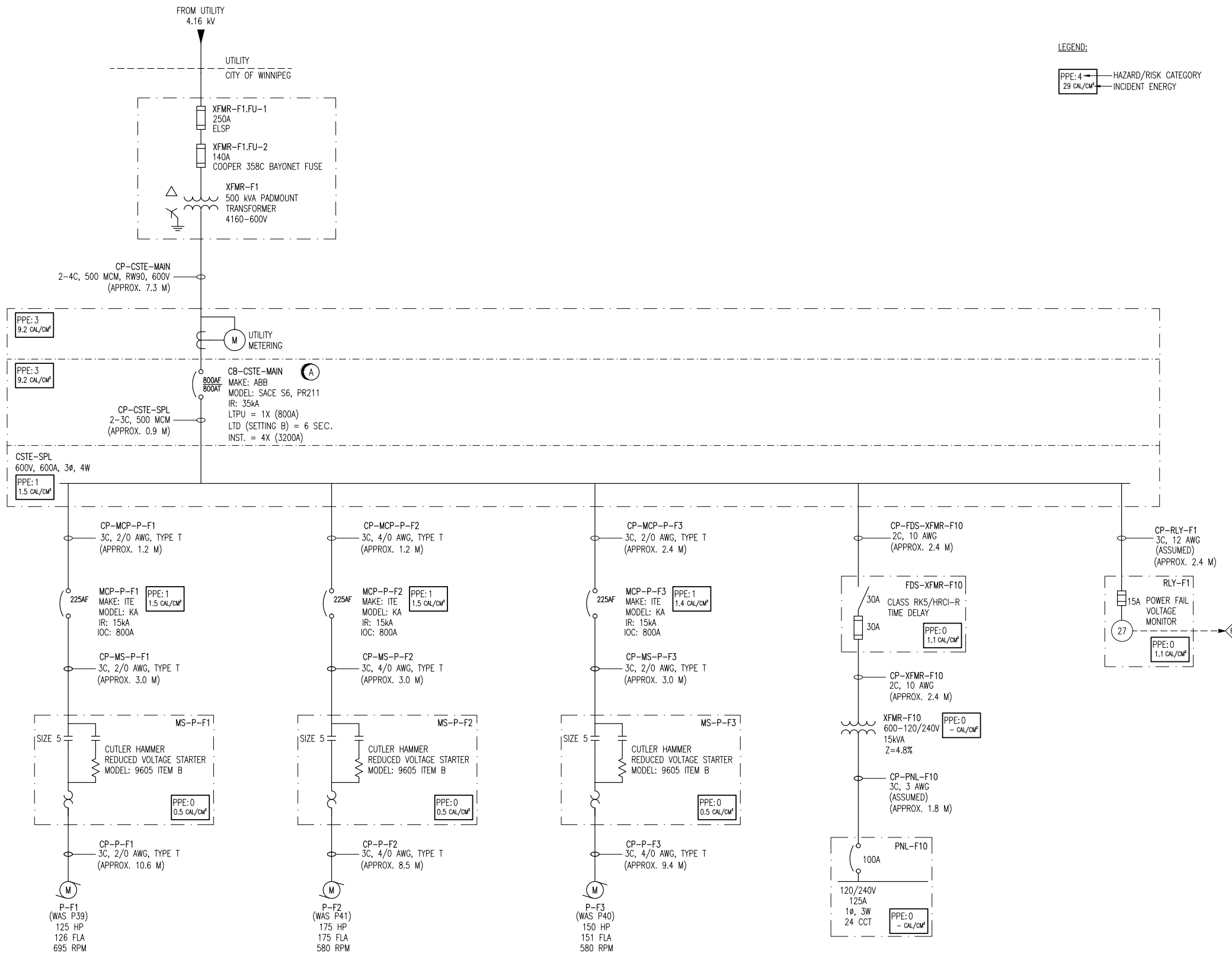
1. THIS DRAWING SUPERCEDES KGS DRAWING (DOES NOT HAVE A NUMBER).
2. THIS DRAWING CONTAINS UNVERIFIED INFORMATION FROM EXISTING DOCUMENTATION.
3. THE ENGINEER'S RESPONSIBILITY IS LIMITED TO THE ARC FLASH STUDY AND RECOMMENDED MITIGATION.

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.

SNC-LAVALIN INC. 148 Nature Park Way Winnipeg, MB, Canada R3P 0X7 204-786-8080				ENGINEER'S SEAL	
				ORIGINAL DRAWING SEALED BY: C. J. REIMER APPROVED BY: C. REIMER MEMBER #21968 2011/05/19 REV. 00	
DESIGNED BY: A. SMALLUCK		CHECKED BY: C. REIMER		THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT HART FLOOD PUMPING STATION ARC FLASH STUDY SINGLE LINE DIAGRAM	
DRAWN BY: S. COATES		APPROVED BY: C. REIMER			
SCALE: NTS		RELEASED FOR CONSTRUCTION BY: DATE:		CITY DRAWING NUMBER 1-0144F-E0001	
DATE: 2009/09/14		DATE:			
00 ISSUED FOR CITY USE		2011/05/19		SHEET 001	
NO. REVISIONS		DATE DESIGN CHECK		REV. SIZE 00 A1	



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

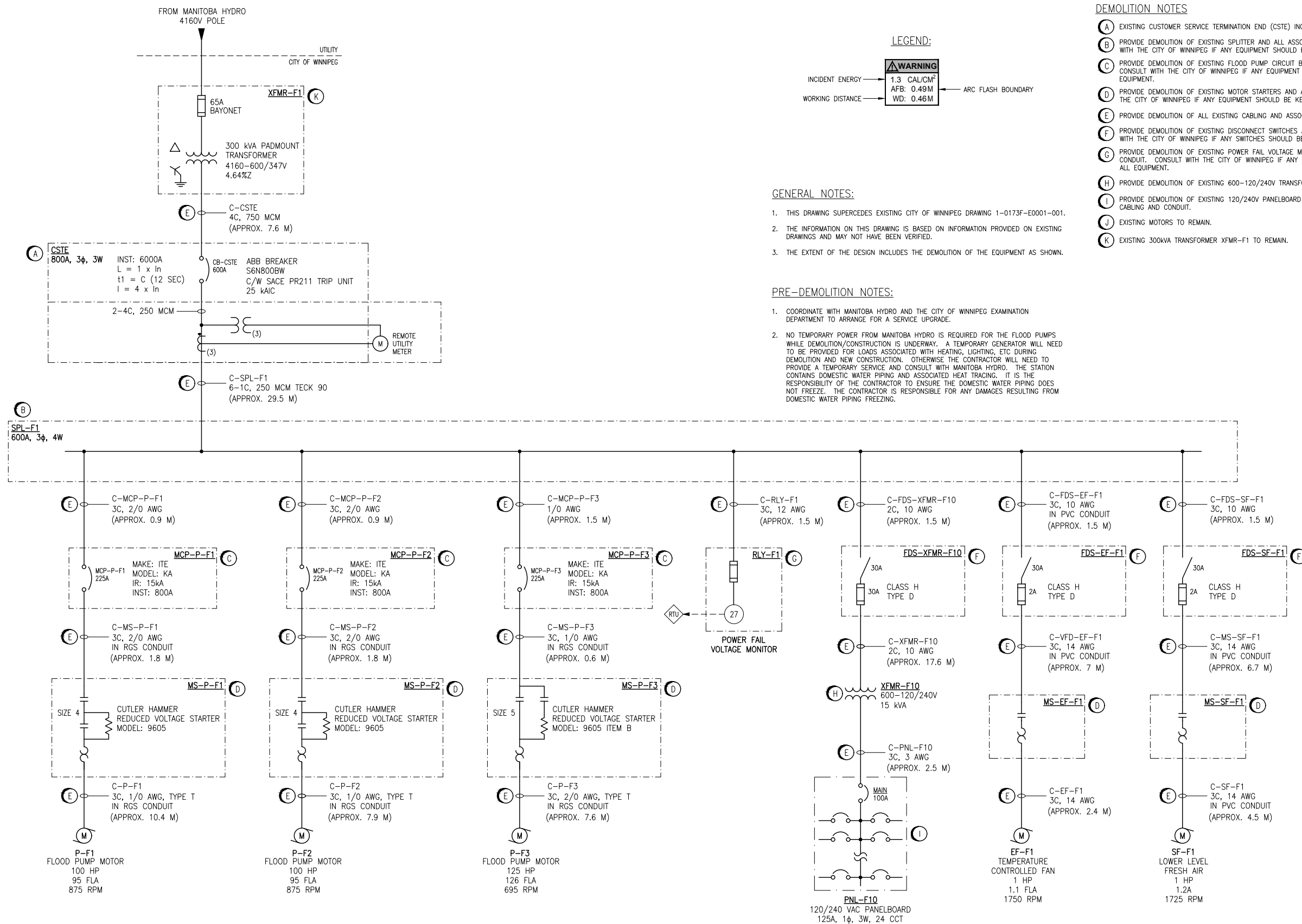
- NOTES:**
- THIS DRAWING SUPERCEDES KGS DRAWING (DOES NOT HAVE A NUMBER).
 - THIS DRAWING CONTAINS UNVERIFIED INFORMATION FROM EXISTING DOCUMENTATION.
 - THE ENGINEER'S RESPONSIBILITY IS LIMITED TO THE ARC FLASH STUDY AND RECOMMENDED MITIGATION.

- PHASE 1 REQUIRED WORK:**
- (A)** CHANGE CB-CSTE-MAIN SETTINGS TO BE:
 LTPU: 1X (800A)
 LTD: B (6 SEC.)
 INST: 4X (3200A)
 - (B)** AFFIX NEW IDENTIFICATION LAMACOIDS OR LABELS TO:
 CB-CSTE MAIN
 MCP-P-F1
 MS-P-F1
 P-F1
 MCP-P-F2
 MS-P-F2
 P-F2
 MCP-P-F3
 MS-P-F3
 P-F3
 FDS-XFMR-F10
 XFMR-F10
 PNL-F10
 RLY-F1

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.

<p>SNC-LAVALIN INC. 148 Nature Park Way Winnipeg, MB, Canada R3P 0X7 204-786-8080</p>		<p>ENGINEER'S SEAL</p> <p>ORIGINAL DRAWING SEALED BY: C. J. REIMER SNC-LAVALIN MEMBER #21968 2011/05/09 REV. 00</p>	<p> THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT</p> <p>MISSION FLOOD PUMPING STATION ARC FLASH STUDY SINGLE LINE DIAGRAM</p>
<p>DESIGNED BY: D. RAMJEET</p> <p>DRAWN BY: D. RAMJEET</p> <p>SCALE: NTS</p> <p>DATE: 2011/05/09</p> <p>CONSULTANT NO.:</p>	<p>CHECKED BY: C. REIMER</p> <p>APPROVED BY: C. REIMER</p> <p>RELEASED FOR CONSTRUCTION BY: C. REIMER</p> <p>DATE:</p>	<p>CITY DRAWING NUMBER 1-0163F-E0001</p> <p>SHEET 001</p> <p>REV. 00</p> <p>SIZE A1</p>	<p>1-0163F-E0001-001-00.dwg</p>

A1 SIZE - 594mm x 841mm



- DEMOLITION NOTES**
- (A) EXISTING CUSTOMER SERVICE TERMINATION END (CSTE) INCLUDING REMOTE METER ENCLOSURE TO REMAIN.
 - (B) PROVIDE DEMOLITION OF EXISTING SPLITTER AND ALL ASSOCIATED SUPPORTS, CABLING AND CONDUIT. CONSULT WITH THE CITY OF WINNIPEG IF ANY EQUIPMENT SHOULD BE KEPT, OTHERWISE DISPOSE OF ALL EQUIPMENT.
 - (C) PROVIDE DEMOLITION OF EXISTING FLOOD PUMP CIRCUIT BREAKERS AND ALL ASSOCIATED CABLING AND CONDUIT. CONSULT WITH THE CITY OF WINNIPEG IF ANY EQUIPMENT SHOULD BE KEPT, OTHERWISE DISPOSE OF ALL EQUIPMENT.
 - (D) PROVIDE DEMOLITION OF EXISTING MOTOR STARTERS AND ALL ASSOCIATED CABLING AND CONDUIT. CONSULT WITH THE CITY OF WINNIPEG IF ANY EQUIPMENT SHOULD BE KEPT, OTHERWISE DISPOSE OF ALL EQUIPMENT.
 - (E) PROVIDE DEMOLITION OF ALL EXISTING CABLING AND ASSOCIATED CONDUIT.
 - (F) PROVIDE DEMOLITION OF EXISTING DISCONNECT SWITCHES AND ALL ASSOCIATED CABLING AND CONDUIT. CONSULT WITH THE CITY OF WINNIPEG IF ANY SWITCHES SHOULD BE KEPT, OTHERWISE DISPOSE OF SWITCHES.
 - (G) PROVIDE DEMOLITION OF EXISTING POWER FAIL VOLTAGE MONITOR PANEL AND ALL ASSOCIATED CABLING AND CONDUIT. CONSULT WITH THE CITY OF WINNIPEG IF ANY EQUIPMENT SHOULD BE KEPT, OTHERWISE DISPOSE OF ALL EQUIPMENT.
 - (H) PROVIDE DEMOLITION OF EXISTING 600-120/240V TRANSFORMER AND ALL ASSOCIATED CABLING AND CONDUIT.
 - (I) PROVIDE DEMOLITION OF EXISTING 120/240V PANELBOARD AND ALL DOWNSTREAM LOADS INCLUDING ASSOCIATED CABLING AND CONDUIT.
 - (J) EXISTING MOTORS TO REMAIN.
 - (K) EXISTING 300KVA TRANSFORMER XFMR-F1 TO REMAIN.

- GENERAL NOTES:**
- THIS DRAWING SUPERCEDES EXISTING CITY OF WINNIPEG DRAWING 1-0173F-E0001-001.
 - THE INFORMATION ON THIS DRAWING IS BASED ON INFORMATION PROVIDED ON EXISTING DRAWINGS AND MAY NOT HAVE BEEN VERIFIED.
 - THE EXTENT OF THE DESIGN INCLUDES THE DEMOLITION OF THE EQUIPMENT AS SHOWN.

- PRE-DEMOLITION NOTES:**
- COORDINATE WITH MANITOBA HYDRO AND THE CITY OF WINNIPEG EXAMINATION DEPARTMENT TO ARRANGE FOR A SERVICE UPGRADE.
 - NO TEMPORARY POWER FROM MANITOBA HYDRO IS REQUIRED FOR THE FLOOD PUMPS WHILE DEMOLITION/CONSTRUCTION IS UNDERWAY. A TEMPORARY GENERATOR WILL NEED TO BE PROVIDED FOR LOADS ASSOCIATED WITH HEATING, LIGHTING, ETC DURING DEMOLITION AND NEW CONSTRUCTION. OTHERWISE THE CONTRACTOR WILL NEED TO PROVIDE A TEMPORARY SERVICE AND CONSULT WITH MANITOBA HYDRO. THE STATION CONTAINS DOMESTIC WATER PIPING AND ASSOCIATED HEAT TRACING. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THE DOMESTIC WATER PIPING DOES NOT FREEZE. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES RESULTING FROM DOMESTIC WATER PIPING FREEZING.

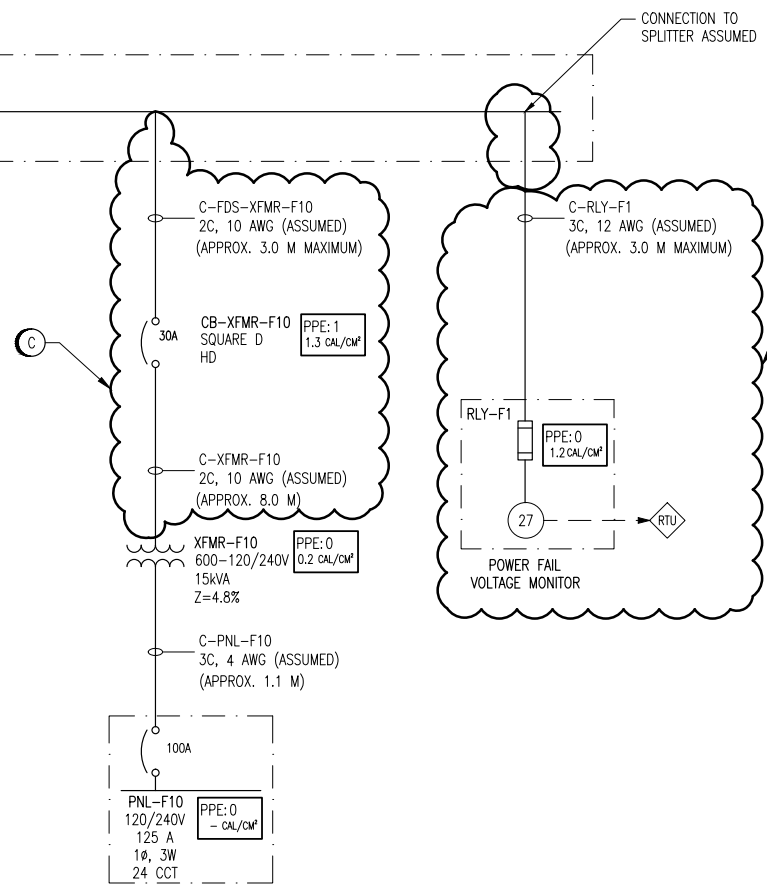
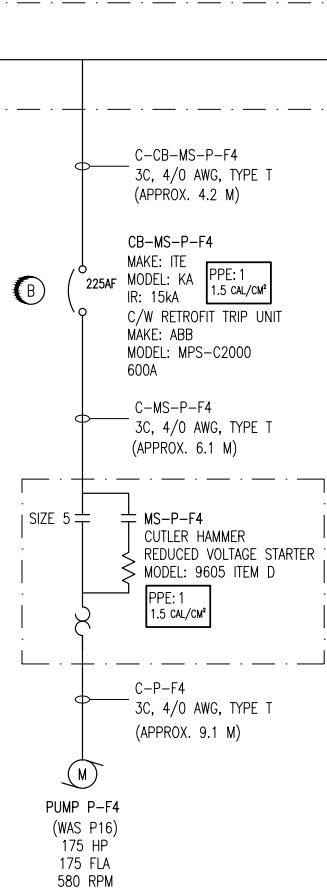
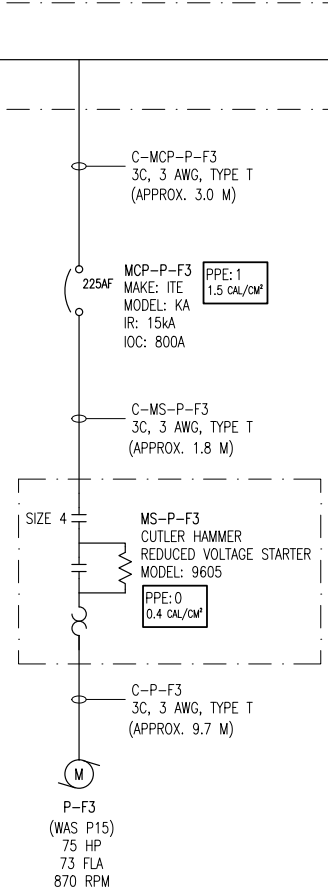
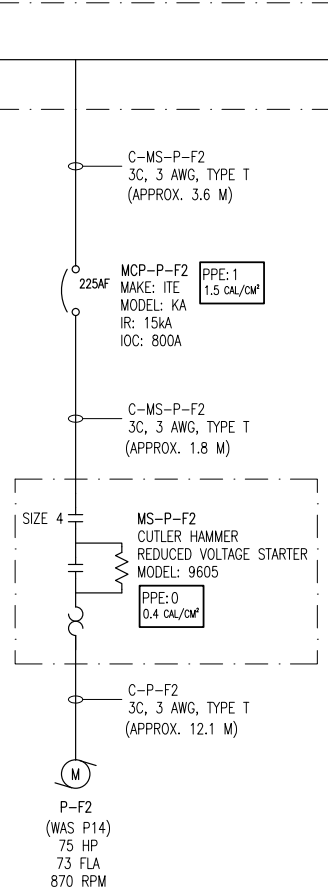
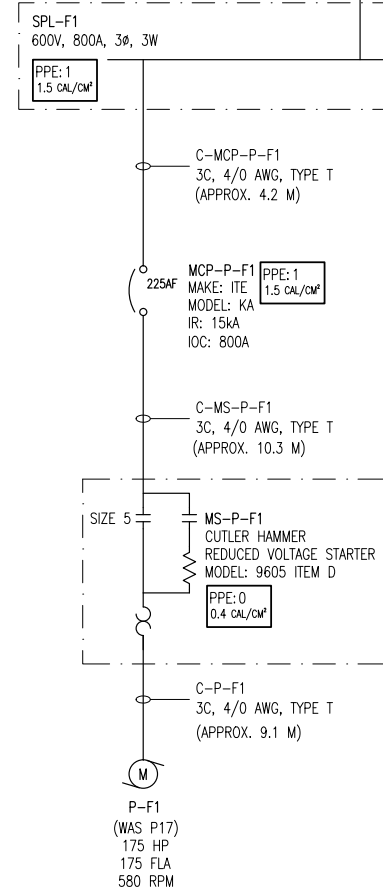
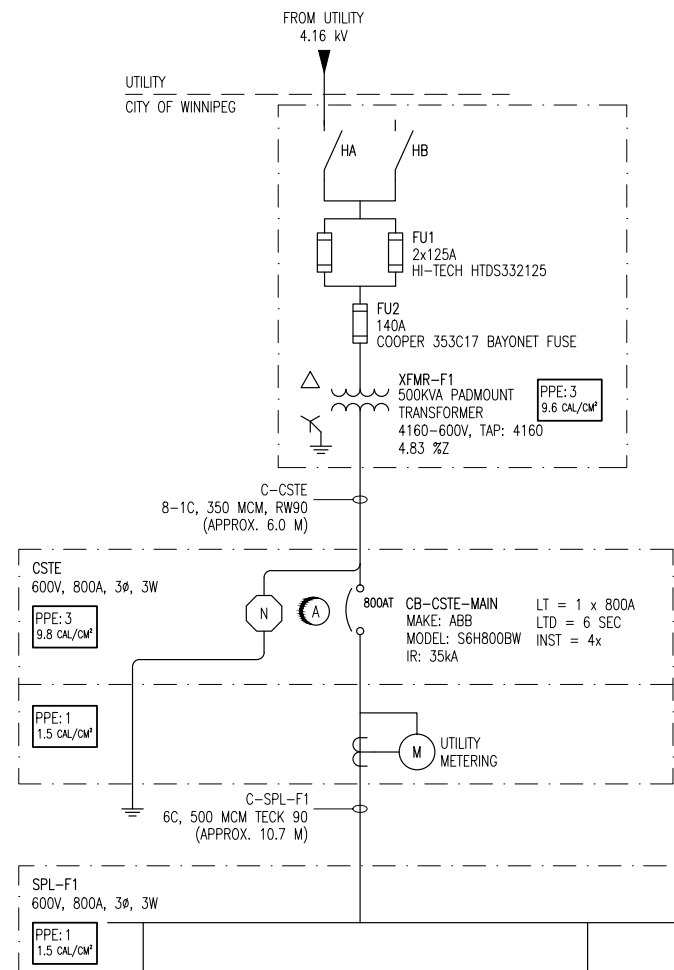
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PATH: M:\67295\ENG\VELE\DD - General DWG\1-0173F-E0002-001.dwg

1-0173F-E0004	ELECTRICAL PLAN LAYOUT WET WELL AND DRY WELL DEMOLITION
1-0173F-E0003	PLAN LAYOUT MOTOR ROOM AND COMMUNUTOR CHAMBER DEMOLITION
DRAWING NUMBER	REFERENCE DRAWINGS



SNC-Lavalin Inc.		SNC-Lavalin Inc. 148 Nature Park Way Winnipeg, MB, Canada R3P 0X7 204-786-8080	
DESIGNED BY: K. SAPIAK	CHECKED BY: B. CLEVEN	ENGINEER'S SEAL	
DRAWN BY: K. SAPIAK	APPROVED BY:	PRELIMINARY NOT TO BE USED FOR CONSTRUCTION	
SCALE: N.T.S.	ISSUED FOR CONSTRUCTION BY:	THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT	
DATE: 2020/03/12	DATE:	POLSON FLOOD PUMPING STATION 2020 UPGRADES SINGLE LINE DIAGRAM DEMOLITION	
CONSULTANT NO.:		CITY DRAWING NUMBER	SHEET REV. SIZE
		1-0173F-E0002	001 PA A1

1-0173F-E0002-001.dwg



NOTES:

- THIS DRAWING SUPERCEDES KGS DRAWING (DOES NOT HAVE A NUMBER).
- THIS DRAWING CONTAINS UNVERIFIED INFORMATION FROM EXISTING DOCUMENTATION.
- THE ENGINEER'S RESPONSIBILITY IS LIMITED TO THE ARC FLASH STUDY AND RECOMMENDED MITIGATION.

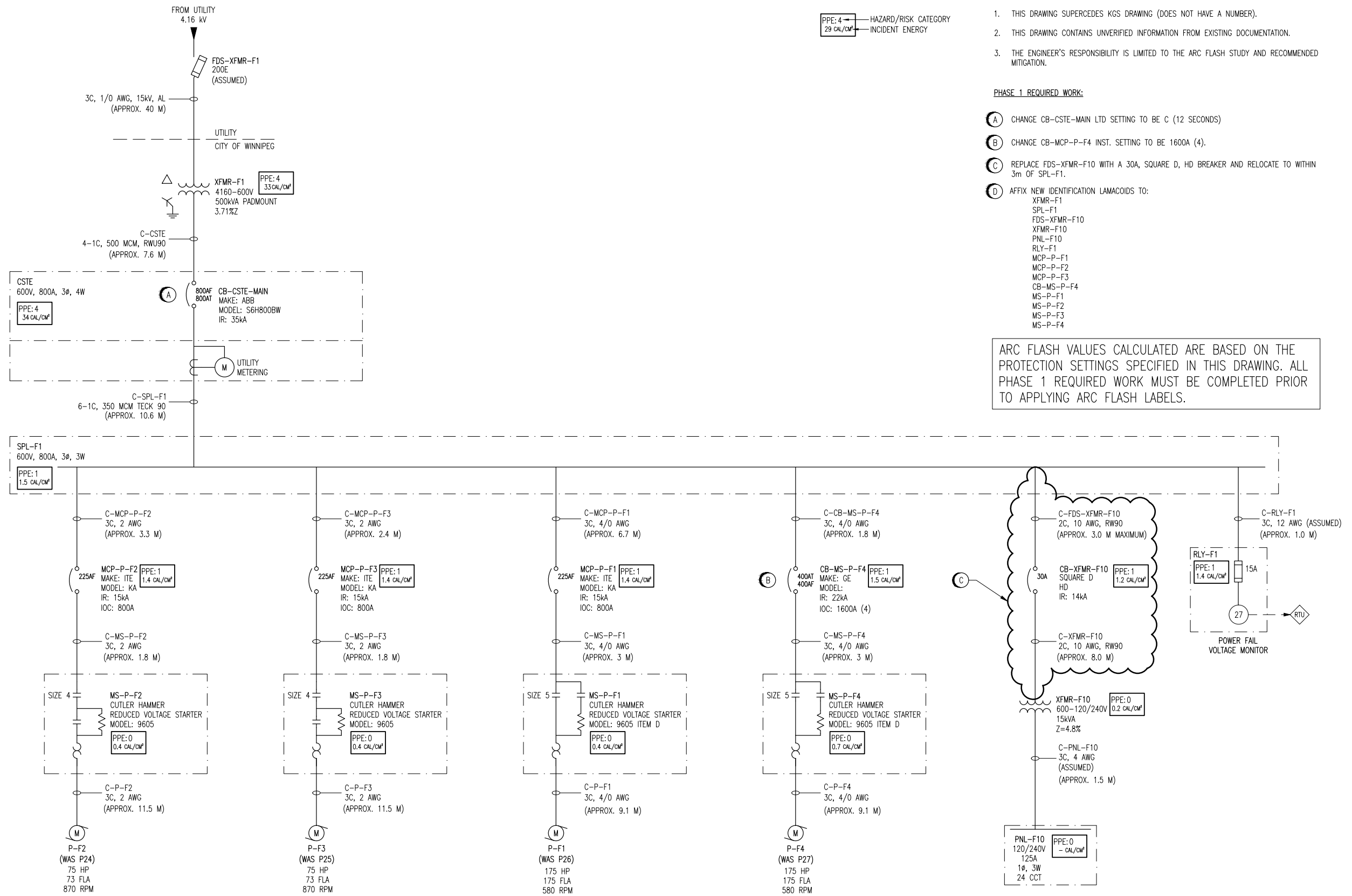
LEGEND:

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.

- PHASE 1 REQUIRED WORK:**
- (A) CHANGE CB-CSTE-MAIN LTD TO 6 SEC (B).
 - (B) CHANGE CB-MS-P-F4 SETTINGS TO BE:
 LTPU: 0.6 (360A)
 LTD: MIN
 STPU: 2.0 (1200A)
 STD: MIN (1"2t In)
 INST: 3.0 (1800A)
 GND: 100A
 GND TD: MIN (1"2t Out)
 - (C) REPLACE FDS-XFMR-F10 WITH A 30A, SQUARE D, HD BREAKER AND RELOCATE TO WITHIN 3m OF SPL-F1.
 - (D) RELOCATE RLY-F1 TO WITHIN 3m OF SPL-F1.
 - (E) AFFIX NEW IDENTIFICATION LAMACOIDS TO:
 CB-CSTE-MAIN
 SPL-F1
 FDS-XFMR-F10
 XFMR-F10
 PNL-F10
 RLY-F1
 MCP-P-F1
 MCP-P-F2
 MCP-P-F3
 CB-MS-P-F4
 MS-P-F1
 MS-P-F2
 MS-P-F3
 MS-P-F4

<p>SNC-LAVALIN INC. 148 Nature Park Way Winnipeg, MB, Canada R3P 0X7 204-786-8080</p>				<p>ENGINEER'S SEAL</p> <p>ORIGINAL DRAWING SEALED BY: C. J. REIMER SNC-LAVALIN MEMBER #21968 2011/05/18 REV. 00</p>		<p>THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT</p> <p>SELKIRK FLOOD PUMPING STATION ARC FLASH STUDY SINGLE LINE DIAGRAM</p>	
DESIGNED BY: T. CHURCH	CHECKED BY: C. REIMER	DRAWN BY: D. RAMJEET	APPROVED BY: C. REIMER	SCALE: NTS	RELEASED FOR CONSTRUCTION BY: BY:	DATE: 2009/09/03	DATE:
00 ISSUED FOR CITY USE	2011/05/16	TMC	CJR	CONSULTANT NO.:			
NO.	REVISIONS	DATE	DESIGN	CHECK			
CITY DRAWING NUMBER				SHEET	REV.	SIZE	
1-0181F-E0001				001	00	A1	



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

NOTES:
 1. THIS DRAWING SUPERCEDES KGS DRAWING (DOES NOT HAVE A NUMBER).
 2. THIS DRAWING CONTAINS UNVERIFIED INFORMATION FROM EXISTING DOCUMENTATION.
 3. THE ENGINEER'S RESPONSIBILITY IS LIMITED TO THE ARC FLASH STUDY AND RECOMMENDED MITIGATION.

PHASE 1 REQUIRED WORK:

- (A) CHANGE CB-CSTE-MAIN LTD SETTING TO BE C (12 SECONDS)
- (B) CHANGE CB-MCP-P-F4 INST. SETTING TO BE 1600A (4).
- (C) REPLACE FDS-XFMR-F10 WITH A 30A, SQUARE D, HD BREAKER AND RELOCATE TO WITHIN 3m OF SPL-F1.
- (D) AFFIX NEW IDENTIFICATION LAMACOIDS TO:
 XFMR-F1
 SPL-F1
 FDS-XFMR-F10
 XFMR-F10
 PNL-F10
 RLY-F1
 MCP-P-F1
 MCP-P-F2
 MCP-P-F3
 CB-MS-P-F4
 MS-P-F1
 MS-P-F2
 MS-P-F3
 MS-P-F4

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.

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<p>DESIGNED BY: T. CHURCH</p>		<p>CHECKED BY: C. REIMER</p>		<p>ORIGINAL DRAWING SEALED BY: C. J. REIMER SNC-LAVALIN MEMBER #21968 2011/05/18 REV. 00</p>	
<p>DRAWN BY: D. RAMJEET</p>		<p>APPROVED BY: C. REIMER</p>			
<p>SCALE: NTS</p>		<p>RELEASED FOR CONSTRUCTION BY: DATE:</p>			
<p>DATE: 2009/09/03</p>		<p>DATE:</p>		<p>CITY DRAWING NUMBER 1-0185F-E0001</p>	
<p>ISSUED FOR CITY USE</p>		<p>2011/05/16</p>		<p>SHEET REV. SIZE 001 00 A1</p>	
<p>NO. REVISIONS</p>		<p>DATE DESIGN CHECK</p>		<p>1-0185F-E0001-001-00.dwg</p>	