A1 SIZE – 594mm x 841mm

PANEL ID:	AMPS:	VOLTS:	PHASE:	WIRE:	SURF. MOUNT	TOP FED
PNL–K711	225	208/120V	3ø	4	X	
					FLUSH MOUNT	BOT. FED X

DESCRIPTION: NON–ESSENTIAL
LOCATION: HIGH RATE CLARIFICATION ELECTRICAL ROOM
MFG / MODEL: SQUARE D NQ
INTERRUPTING RATING: 10KA
MAIN BREAKER: 150A
INST. SETTINGS: N/A

CCT.	DESCRIPTION	NOTE	WIRE (AWG)	BRKR AMPS	LOAD (VA)	A B C	LOAD (VA)	BRKR AMPS	WIRE (AWG)	NOTE	DESCRIPTION	CCT.
1	GLYCOL FEED SYSTEM FDR–K664, K–106 MECH RM		12	15	300		40	15	12		XV–K6141, XV–K6142 WASTE SLUDGE SUMP DAMPERS	2
3	SPARE			15				15			SPARE	4
5	RCPT. K–106 MECH. RM, K–105 WALKWAY, SUMP ROOM		12	15	600			15			SPARE	6
7	RCPT. K–109 CLARIFIER ROOM		12	15	360			15			SPARE	8
9	RCPT. K–109 CLARIFIER ROOM		12	15	360			15			SPARE	10
11	RCPT. K–104 BALLAST PIT, K–105 WALKWAY		12	15	360		240	15	12	2	RCPT. EXTERIOR NORTH–EAST	12
13	RCPT. EXTERIOR NORTH–WEST	2	12	15	240		140	15	12		UH–K613–1, K–109 CLARIFIER ROOM	14
15	RCPT. K–101 STAIRS, K–102 LOAD AREA, K–107 JANITOR RM		12	15	480		140	15	12		UH–K613–2, K–109 CLARIFIER ROOM	16
17	UH–K633–1,2. K–102 LOADING AREA		12	15	40		140	15	12		UH–K613–3, K–109 CLARIFIER ROOM	18
19	SPARE		12	15			140	15	12		UH–K613–4, K–109 CLARIFIER ROOM	20
21	UH–K635–1,2. K–106 MECH. ROOM		12	15	40		20	15	12		UNIT HEATER PANEL CP–K830	22
23	SPARE			15			500	15	12		SOLENOID VALVES – CP–K821	24
25	UH–K637 K–104 BALLAST PIT		12	15	20			15			SPARE	26
27	AIR HANDLING UNIT LIGHTS, K–106 MECH RM		12	15	225		110	15	12	1	XV–K1134 SODIUM HYPOCHLORITE VALVE – CP–K821	28
29	XV–K1103 SODIUM HYPOCHLORITE VALVE – CP–K821	1	12	15	110		110	15	12	1	XV–K1155 CH. 1 EFFLUENT SAMPLE LINE VALVE – CP–K821	30
31	XV–K1123 POLYMER VALVE – CP–K821	1	12	15	110			15			SPARE	32
33	XV–K1124 POLYMER VALVE – CP–K821	1	12	15	110		110	15	12	1	XV–K1512 EFFLUENT SPRAYER VALVE	34
35	XV–K1125 POLYMER VALVE – CP–K821	1	12	15	110			15			SPARE	36
37	SPARE			15				15			SPARE	38
39	SPACE										SPACE	40
41	SPACE										SPACE	42

TOTAL CONNECTED LOAD: 5.2 KVA
PHASE A: 1.4 kVA 11.3 A
PHASE B: 1.6 kVA 13.3 A
PHASE C: 2.2 kVA 18.4 A

NOTE LEGEND:
AFCI ARC FAULT CIRCUIT INTERRUPTOR
GFCI GROUND FAULT CIRCUIT INTERRUPTOR

NOTES:
1. INSTALL LOCKED ON BREAKERS AT 120 VAC VALVE ACTUATORS.
2. CLASS A TYPE GFCI BREAKER.

PANEL ID:	AMPS:	VOLTS:	PHASE:	WIRE:	SURF. MOUNT	TOP FED
PNL–K721	225	208/120V	3ø	4	X	X
					FLUSH MOUNT	BOT. FED

DESCRIPTION: NON–ESSENTIAL
LOCATION: HIGH RATE CLARIFICATION ELECTRICAL ROOM
MFG / MODEL: SQUARE D NQ
INTERRUPTING RATING: 10KA
MAIN BREAKER: 150A
INST. SETTINGS: N/A

CCT.	DESCRIPTION	NOTE	WIRE (AWG)	BRKR AMPS	LOAD (VA)	A B C	LOAD (VA)	BRKR AMPS	WIRE (AWG)	NOTE	DESCRIPTION	CCT.
1	ELECTRONIC TRAP PRIMER U–K511, K–106 MECH RM		12	15	15		2808	30	6		CU–K642, ACU–K642	2
3	AIT–K1253		12	15	100		2808				K–B02 SERVICE GALLERY	4
5	RCPT. K–B02 SERVICE GALLERY	1	12	15	360		40	15	12		UH–K636–1,2 K–102 WALKWAY	6
7	RCPT. K–B03 PUMP RM, K–B02 SERVICE GALLERY	1	12	15	480		240	15	12	1	RCPT. ROOFTOP	8
9	RCPT. K–B03 PUMP ROOM	1	12	15	480		240	15	12	1	RCPT. ROOFTOP	10
11	UH–K634–1,2,3,4 K–B02 SERVICE GALLERY		12	15	80		80	15	12		UH–K623–1,2,3,4. K–B03 PUMP ROOM	12
13	RCPT. K–108 ELEC. ROOM		12	15	480		120	15	12		RCPT. K–101, TOP OF STAIRS	14
15	EF–K652 (1/8 HP), XV–K6521		12	15	150		60	15	12	3	TC–K7211 HEAT TRACE TEMP. CONTROLLER	16
17	POWER JB–K7261, VIA CP–K726		10	20	610		500	15	12		PSP–K820, TB11	18
19	(SODIUM HYDROXIDE PIPING HEAT TRACE)			2P	610		500	15	12		PSP–K820, TB13	20
21	POWER JB–K7262, VIA CP–K726		10	20	610		500	15	12		PSP–K820, TB15	22
23	(SODIUM HYDROXIDE PIPING HEAT TRACE)			2P	610			15			SPARE	24
25	SPARE			20				15			SPARE	26
27				2P			2808	30	6		CU–K641, ACU–K641	28
29	P–K531, HOT WATER TANK RECIRC. PUMP		12	15	100		2808				K–B02 SERVICE GALLERY	30
31	XV–K1203 SODIUM HYPOCHLORITE VALVE	2	12	15	110		110	15	12	2	XV–K1234 SODIUM HPYOCHLORITE VALVE	32
33	XV–K1223 POLYMER VALVE	2	12	15	110		110	15	12	2	XV–K1255 CH. 2 ELLUENT SAMPLE LINE VALVE	34
35	XV–K1224 POLYMER VALVE	2	12	15	110			15			SPARE	36
37	XV–K1225 POLYMER VALVE	2	12	15	110			15			SPARE	38
39	SPACE										SPACE	40
41	SPACE										SPACE	42

TOTAL CONNECTED LOAD: 18.9 KVA
PHASE A: 5.6 kVA 46.5 A
PHASE B: 8.0 kVA 66.5 A
PHASE C: 5.4 kVA 44.8 A

NOTE LEGEND:
AFCI ARC FAULT CIRCUIT INTERRUPTOR
GFCI GROUND FAULT CIRCUIT INTERRUPTOR

NOTES:
1. PROVIDE CLASS A TYPE, GFCI CIRCUIT BREAKER.
2. INSTALL LOCKED ON BREAKERS AT 120 VAC VALVE ACTUATORS.
3. PROVIDE CLASS A TYPE, 30mA GFCI BREAKER FOR HEAT TRACE TEMPERATURE CONTROLLER.

PANEL ID:	AMPS:	VOLTS:	PHASE:	WIRE:	SURF. MOUNT	TOP FED
PNL–K713U	100	208/120V	3ø	4	X	
					FLUSH MOUNT	BOT. FED X

DESCRIPTION: UNINTERRUPTIBLE
LOCATION: HIGH RATE CLARIFICATION ELECTRICAL ROOM
MFG / MODEL: SQUARE D NQ
INTERRUPTING RATING: 10KA
MAIN BREAKER: 125A
INST. SETTINGS: N/A

CCT.	DESCRIPTION	NOTE	WIRE (AWG)	BRKR AMPS	LOAD (VA)	A B C	LOAD (VA)	BRKR AMPS	WIRE (AWG)	NOTE	DESCRIPTION	CCT.
1	PSP–K820, TB12		12	15	760		75	15	12		LIGHTING CONTROL PANEL CP–K724	2
3	GDC–K690 VIA JB–K690	3	12	15	100		48	15	12	2	MCC–K710, K720, K730, K740 POWER METERS	4
5	PSP–K820, TB14		12	15	760		20	15	12		LIGHTING CONTACTOR LC–K725	6
7	MCC–K710 ETHERNET SWITCHES		12	15	200		200	15	12		MCC–K720 ETHERNET SWITCHES	8
9	MCC–K730 ETHERNET SWITCHES		12	15	200		200	15	12		MCC–K740 ETHERNET SWITCHES	10
11	RCPT. K–108 ELEC. RM, INSIDE NP–K906		12	15	120		200	15	12		RCPT. K108 ELEC. RM, CWO–K881	12
13	MAGNETIC DOOR HOLDER NORTH ENTRANCE		12	15	40		150	15	12	1	PSP–K721, K–108 ELEC. ROOM	14
15	MAGNETIC DOOR HOLDER SOUTH ENTRANCE		12	15	40		500	15	12		PSP–K820, TB16	16
17				15				15				18
19				15				15				20
21				15				15				22
23				15				15				24
25				15				15				26
27				15				15				28
29				15				15				30

TOTAL CONNECTED LOAD: 3.6 KVA
PHASE A: 1.4 kVA 11.9 A
PHASE B: 1.1 kVA 9.0 A
PHASE C: 1.1 kVA 9.2 A

NOTE LEGEND:
AFCI ARC FAULT CIRCUIT INTERRUPTOR
GFCI GROUND FAULT CIRCUIT INTERRUPTOR

NOTES:
1. INSTALL RED BREAKER FOR FIRE ALARM BOOSTER POWER SUPPLY, LOCKABLE IN THE ON POSITION. AFFIX LABEL STATING "THE FIRE ALARM SYSTEM IS SUPPLIED FROM MORE THAN ONE PRIMARY POWER SOURCE.
2. LOAD IS ASSUMED.
3. REFER TO DRAWING AILD–K632 FOR LOOP DIAGRAM.

PANEL ID:	AMPS:	VOLTS:	PHASE:	WIRE:	SURF. MOUNT	TOP FED
PNL–K722	100	600/347V	3ø	4	X	
					FLUSH MOUNT	BOT. FED X

DESCRIPTION: NON–ESSENTIAL
LOCATION: HIGH RATE CLARIFICATION ELECTRICAL ROOM
MFG / MODEL: SQUARE D NF
INTERRUPTING RATING: 10KA
MAIN BREAKER: 35A
INST. SETTINGS: N/A

CCT.	DESCRIPTION	NOTE	WIRE (AWG)	BRKR AMPS	LOAD (VA)	A B C	LOAD (VA)	BRKR AMPS	WIRE (AWG)	NOTE	DESCRIPTION	CCT.
1	LTNG. K–103, K–104, K–107, SUMP ACCESS		12	15	620		1380	15	12		LTNG K–B03 PUMP ROOM	2
3	LTNG. K–102, K–105, K–106		12	15	1510		1250	15	12		LTNG. K–B02 SERVICE GALLERY	4
5	SPARE			15			3070	15	12		LTNG. K–109 CLARIFIER RM	6
7	EXTERIOR LIGHTING VIA LC–K725		12	15	977			15			SPARE	8
9	SPARE			15				15			SPARE	10
11	SPARE			15				15			SPARE	12
13	SPARE			15				15			SPARE	14
15	SPARE			15				15			SPARE	16
17	SPARE			15				15			SPARE	18
19	SPARE			15				15			SPARE	20
21	SPARE			15				15			SPARE	22
23	SPACE										SPACE	24
25					949						SPACE	26
27	EMERGENCY BATTERY ELB–K723		12	20	1800						SPACE	28
29											SPACE	30

TOTAL CONNECTED LOAD: 11.5 KVA
PHASE A: 3.9 kVA 11.2 A
PHASE B: 4.5 kVA 13.0 A
PHASE C: 3.1 kVA 8.8 A

NOTE LEGEND:
AFCI ARC FAULT CIRCUIT INTERRUPTOR
GFCI GROUND FAULT CIRCUIT INTERRUPTOR

NOTES:
1. .

PANEL ID:	AMPS:	VOLTS:	PHASE:	WIRE:	SURF. MOUNT	TOP FED
PNL–K723E	100	600/347V	3ø	4	X	
					FLUSH MOUNT	BOT. FED X

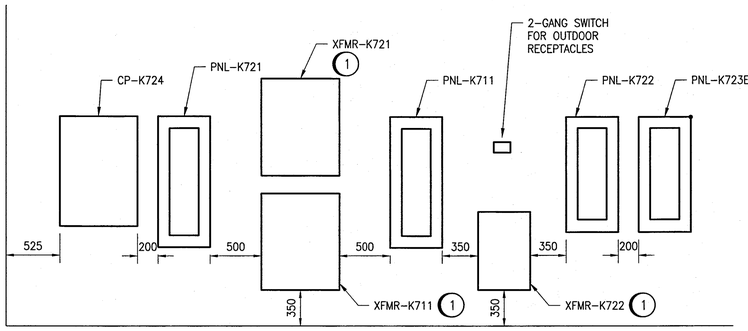
DESCRIPTION: ESSENTIAL
LOCATION: HIGH RATE CLARIFICATION ELECTRICAL ROOM
MFG / MODEL: SQUARE D NF
INTERRUPTING RATING: 10KA
MAIN BREAKER: 100A
INST. SETTINGS: N/A

CCT.	DESCRIPTION	NOTE	WIRE (AWG)	BRKR AMPS	LOAD (VA)	A B C	LOAD (VA)	BRKR AMPS	WIRE (AWG)	NOTE	DESCRIPTION	CCT.
1	E–LTNG. K–102, K–105, K–106, K–108, K–109, K–104		12	15	924		30	15	12		EXIT SIGNS	2
3	E–LTNG. K–101, K–108, K–B02, K–B03		12	15	1770			15	12		SPARE	4
5	SPARE			15				15	12		SPARE	6
7	SPARE			15				15			SPARE	8
9	SPARE			15				15			SPARE	10
11	SPARE			15				15			SPARE	12
13	SPARE			15				15			SPARE	14
15	SPARE			15				15			SPARE	16
17	SPARE			15				15			SPARE	18
19	SPARE			15				15			SPARE	20
21	SPARE			15				15			SPARE	22
23	SPACE										SPACE	24
25	SPACE										SPACE	26
27	SPACE										SPACE	28
29	SPACE										SPACE	30

TOTAL CONNECTED LOAD: 2.7 KVA
PHASE A: 1.0 kVA 2.7 A
PHASE B: 1.8 kVA 5.1 A
PHASE C: 0.0 kVA 0.0 A

NOTE LEGEND:
AFCI ARC FAULT CIRCUIT INTERRUPTOR
GFCI GROUND FAULT CIRCUIT INTERRUPTOR

NOTES:
1.



A EQUIPMENT ELEVATION
1 : 30
EGAD–K001

PUBLIC ADDRESS SPEAKER TYPE

TYPE	DESCRIPTION	MANUFACTURER	MODEL	VOLTS (VAC)	LOAD	NOTES
A	SC SERIES PAGING HORN SPEAKERS, 30 W	TOA	SC–630T	70V	30W	3
B	SC SERIES PAGING HORN SPEAKERS, 15 W	TOA	SC–615T	70V	15W	3
C	HAZARDOUS LOCATION SPEAKERS	COOPER CROUSE HINDS	DB16UCXN2MPN	70V	30W	1,2
D	PC SERIES CEILING MOUNT SPEAKERS	TOA	PC–580RU	70V	10W	4

SPECIFIC NOTES:

1. CLASS I, ZONE 2 RATED,
2. TRANSFORMER OPTION FOR 70V.
3. PROVIDE SWIVEL BRACKET (YS–151S) FOR MOUNTING SPEAKER.
4. PROVIDE BACKBOX, TOA BB–580, FOR CEILING MOUNTED SPEAKER UNLESS STATED OTHERWISE.

GENERAL NOTES:

1. PROVIDE INDIVIDUAL LOCK–OFF DEVICES FOR ALL CIRCUIT BREAKERS IN ALL PANELBOARDS.

SPECIFIC NOTES:

1. MOUNT TRANSFORMERS ON WALL. PROVIDE ALL MOUNTING HARDWARE AS REQUIRED.

REFERENCE DRAWINGS	DESCRIPTION

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: V. ELIMBAN	APPROVED BY: D. BECKER
SCALE: AS SHOWN	ISSUED FOR CONSTRUCTION BY: J. SHUMKA
DATE: 2015/02/10	DATE: 2017/04/05
CONSULTANT NO.: 474248	

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

Winnipeg
THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

SOUTH END WATER POLLUTION CONTROL CENTRE
SEWPCC UPGRADING/EXPANSION PROJECT
ELECTRICAL
HIGH RATE CLARIFICATION BUILDING
PANEL SCHEDULES & DETAILS

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1–0102–ESCH–K001	001	00	A1

LAST SAVE: 2017/03/24 – 9:54am
PATH: C:\DWG\1–0102–ESCH–K001.dwg

PLOT DATE: Mar 24, 2017 – 9:54am
FILE NAME: 1–0102–ESCH–K001.dwg