

## ABBREVIATIONS:

AFF	ABOVE FLOOR FINISH
ANN	ANNUNCIATOR
CCT	CIRCUIT
CH	COUNTER HEIGHT
F/A	FIRE ALARM
EL	LIFE SAFETY EMERGENCY
E	DENOTES EXISTING DEVICE TO REMAIN
R	DENOTES EXISTING DEVICE TO BE REMOVED
ER	DENOTES EXISTING DEVICE TO BE RELOCATED
RE	DENOTES EXISTING DEVICE IN RELOCATED LOCATION
A	AMPS
V	VOLTS
Fz	DENOTES FIRE ALARM ZONE
Sz	DENOTES SUPERVISORY ZONE
TL	DENOTES TWISTED LOCK
DF	DENOTES DRINKING FOUNTAIN
FZ	DENOTES FIRE ALARM ZONE

## LIGHTING SYMBOLS

FJ1	SURFACE OR SUSPENDED MOUNTED FLUORESCENT FIXTURE LETTER DENOTES TYPES, FOR OTHER FIXTURE TYPES, REFER TO LUMINAIRE SCHEDULE.
FA2	RECESSED 610x610 FLUORESCENT FIXTURE LETTER DENOTES TYPES, FOR OTHER FIXTURE TYPES, REFER TO LUMINAIRE SCHEDULE.
FA4	RECESSED 610x1220 FLUORESCENT FIXTURE LETTER DENOTES TYPES, FOR OTHER FIXTURE TYPES, REFER TO LUMINAIRE SCHEDULE.
LC1	RECESSED DOWN LIGHT, LETTER DENOTES TYPE, FOR OTHER FIXTURE TYPES, REFER TO LUMINAIRE SCHEDULE.
LC1	RECESSED WALL MOUNT LIGHT, LETTER DENOTES TYPE, FOR OTHER FIXTURE TYPES, REFER TO LUMINAIRE SCHEDULE.
LT	TRACK LIGHT FIXTURE, NUMBER OF HEADS AS INDICATED FOR OTHER FIXTURE TYPES, REFER TO LUMINAIRE SCHEDULE.
C	SURFACE 305x1220 FLUORESCENT FIXTURE FOR OTHER FIXTURE TYPES, REFER TO LUMINAIRE SCHEDULE.
EXIT	EXIT SIGN, LETTER DENOTES TYPE, FOR OTHER FIXTURE TYPES, REFER TO LUMINAIRE SCHEDULE.
SW	SINGLE POLE, SINGLE THROW TOGGLE SWITCH. (‘3’ DENOTES 3-WAY, ‘P’ DENOTES PILOT LIGHT, ‘LV’ DENOTES LOW VOLTAGE SWITCH)
EL	DENOTES LIGHTING FIXTURE TO BE ON EMERGENCY LIFE SAFETY CIRCUITS.
FT1	UNDER COUNTER STRIP LIGHT. LETTER DENOTES TYPE, FOR OTHER FIXTURE TYPES, REFER TO LUMINAIRE SCHEDULE.
D	DIMMER SWITCH
2C-1-1	TYPICAL CIRCUIT LINE VOLTAGE SWITCH DESIGNATIONS IS AS FOLLOWS: SWITCH LEG CIRCUIT NUMBER PANEL DESIGNATION
2C-1-A 1	TYPICAL RELAY PANEL'S CIRCUIT DESIGNATIONS IS AS FOLLOWS: RELAY NUMBER RELAY PANEL PANEL CIRCUIT NUMBER LIGHTING PANEL

## NOTE

MOUNTING HEIGHTS ARE TO CENTER LINE OF LIGHT FIXTURES

## POWER SYMBOLS

15A-125V 2P-3W CONVENIENCE GROUNDED DUPLEX RECEPTACLE, WALL MOUNTED
20A-125V 2P,3W TWISTED LOCK GROUNDED RECEPTACLE, WALL MOUNT AND DISCONNECT
MANUAL STARTER
COMBINATION MAGNETIC STARTER
DISCONNECT
120V-1PH DIRECT CONNECTION
600V-3PH DIRECT CONNECTION
PANELBOARD, RECESSED OR SURFACE MOUNTED,
WALL MOUNTED WIRELESS RECEIVER BOX.

## SYSTEMS SYMBOLS

TELEVISION OUTLET MH 2400mm, c/w DOUBLE GANG BACKBOX, CONNECTORS, C/W PLASTER RING IN 1" (25mm) EC C/W PULL STRING BACK TO NEW IT CLOSET.
ADMINISTRATION COMBINATION DATA OUTLET c/w DOUBLE GANG BACKBOX, CONNECTORS, C/W PLASTER RING IN 1" (25mm) EC. C/W PULL STRING BACK TO NEW IT CLOSET
TELEPHONE OUTLET - MH 600mm, c/w DOUBLE GANG BACKBOX, CONNECTORS, C/W 1 GANG PLASTER RING IN 1" (25mm) EC. C/W PULL STRING BACK TO NEW IT CLOSET
FIRE ALARM BELL - WALL MOUNTED
FIRE ALARM SMOKE DETECTOR
FIRE ALARM HEAT DETECTOR
FIRE ALARM PULL STATION. MH 1200mm.
RECESSED MICROPHONE IN CONSOLE C/W PUSH TO TALK SWITCH
JUNCTION BOX
PULL BOX
DOOR OPERATOR
HANDICAP PUSH BUTTON. MH 1200mm. 1 GANG BACKBOX C/W 3/4"C. C/W PULL STRING TO OVERHEAD DOOR
FIRE ALARM STROBE LIGHT
FIRE ALARM CONNECTON TO SUPERVISED VALVE
FIRE ALARM CONNECTON TO FLOW SWITCH
FIRE ALARM CONNECTON TO WET ALARM VALVE
FIRE ALARM CONNECTON TO DRY ALARM VALVE
FIRE ALARM CONNECTON TO ITEM AS INDICATED
ADDRESSABLE INTERFACE MODULE
FIRE ALARM END OF LINE RESISTOR

consultant

**Reich  
Petch** ARCHITECTS

1867 YONGE ST, STE 1100, TORONTO ON CANADA M4S 1Y5  
T 416 480 2020 F 416 480 1881

consultant

CROSSEY  
ENGINEERING  
LTD.



2255 Sheppard Avenue. E.  
Suite E-331  
North York, On M2J 4Y1  
(416)497.3111 fax (416)497.7210

3	ISSUED FOR BID	09 DEC 2013
2	ISSUED FOR 95% SUBMISSION	12 NOV 2013
1	ISSUED FOR 75% SUBMISSION	30 APR 2013
revision		date

Do not scale drawings.  
Verify all dimensions and conditions on site and immediately  
notify the Departmental Representative of all discrepancies.



A	Detail No. No. du détail
B	drawing no. - where detail required dessin no. - où détail exigé
C	drawing no. - where detailed dessin no. - où détaillé

project title  
titre du projet  
**BURLINGTON** ONTARIO  
CANADA CENTRE FOR INLAND WATERS  
867 LAKESHORE ROAD

## LIBRARY RENOVATION

drawing title  
titre du dessinELECTRICAL LEGENDS  
AND DRAWING LIST

drawn by dessiné par	LN
designed by conc par	NN/LN
approved by approuvé par	NN
bid offre	project manager administrateur de projets
project date date du projet	2013/02/20
project no. no. du projet	R.061475.001
drawing no. dessiné no.	E-001

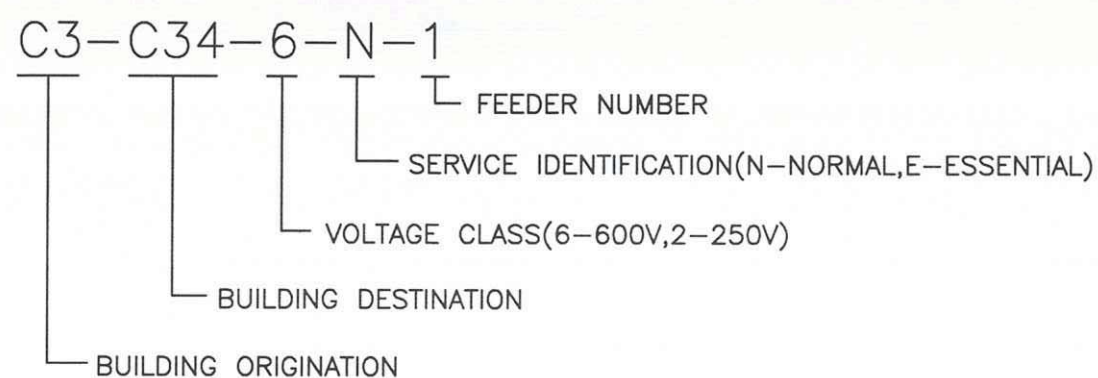
## MAXIMUM NUMBER OF CABLES BASED UPON ALLOWABLE FILL

CONDUIT TRADE SIZE	CABLE OUTSIDE DIAMETER, mm (in)					
	5.6 (.22)	6.1 (.24)	7.4 (.29)	7.9 (.31)	9.4 (.37)	13.5 (.53)
16 (1/2)	0	0	0	0	0	0
21 (3/4)	4	3	2	2	1	0
27 (1)	7	6	3	3	2	1
35 (1 1/4)	12	10	6	4	3	1
41 (1 1/2)	16	15	7	6	4	2
53 (2)	22	20	14	12	7	4
63 (2 1/2)	36	30	17	14	12	6
78 (3)	50	40	20	20	17	7
91 (3 1/2)	-	-	-	-	22	12
103 (4)	-	-	-	-	30	14

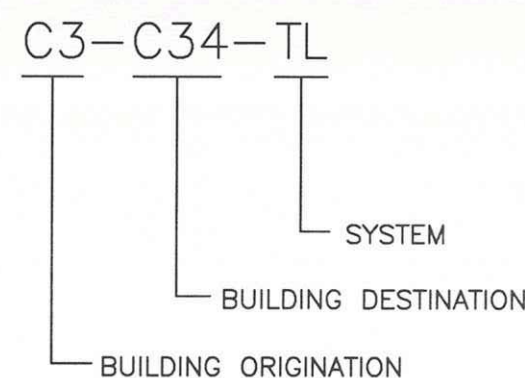
## NOTES:

- ON INITIAL INSTALLATION, DO NOT EXCEED 40% OF MAXIMUM FILL SHOWN IN ABOVE TABLE FOR CONDUITS OVER TRADE SIZE 35 (1 1/4").
- REDUCE MAXIMUM FILL CAPACITY WHERE BENDS EXIST IN CONDUIT. TOTAL CONDUIT BENDS NOT TO EXCEED 180 DEGREES BETWEEN PULL POINTS.

## POWER CABLE IDENTIFICATION:



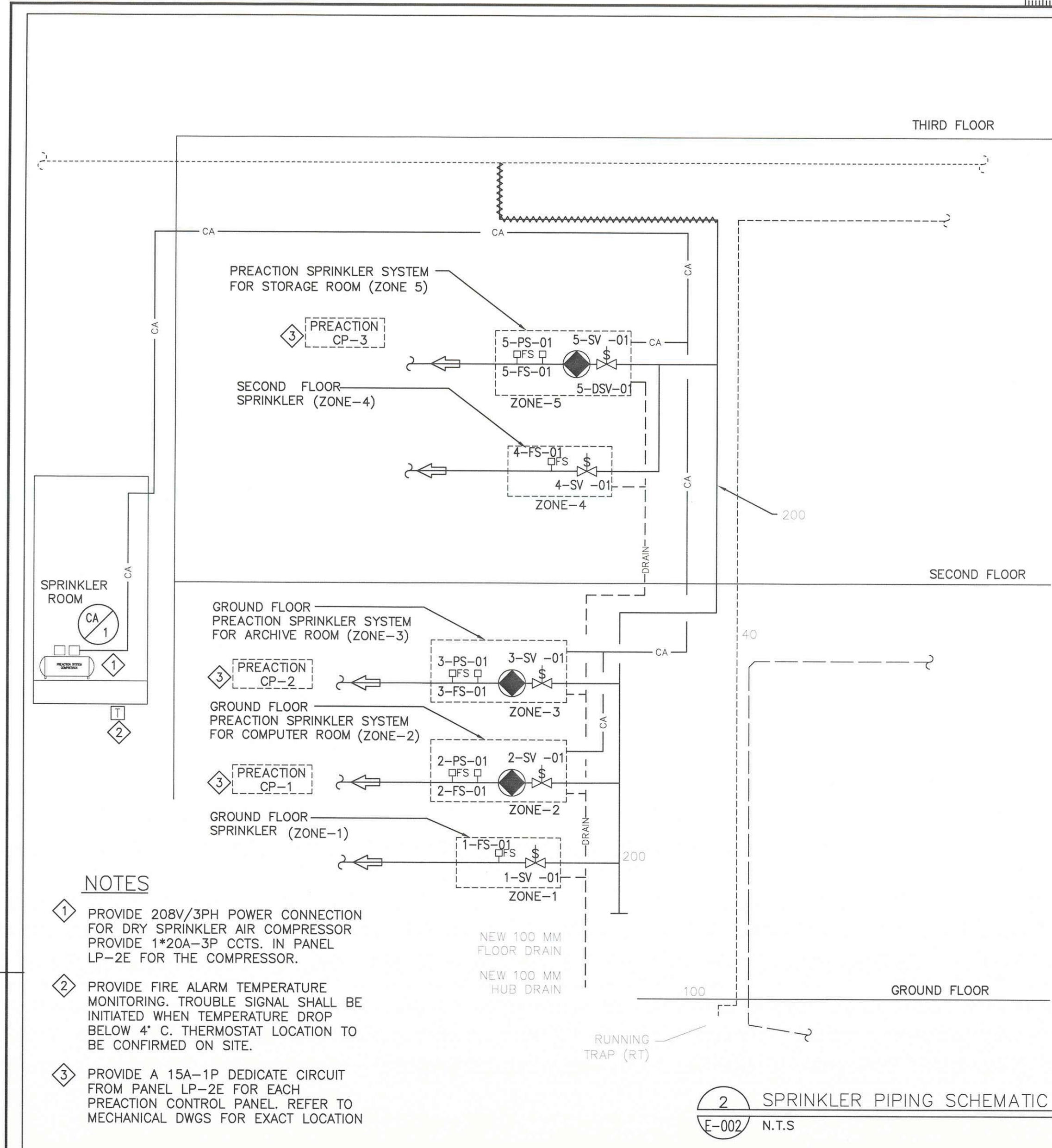
## SYSTEM CABLE IDENTIFICATION:



## DRAWING LIST:

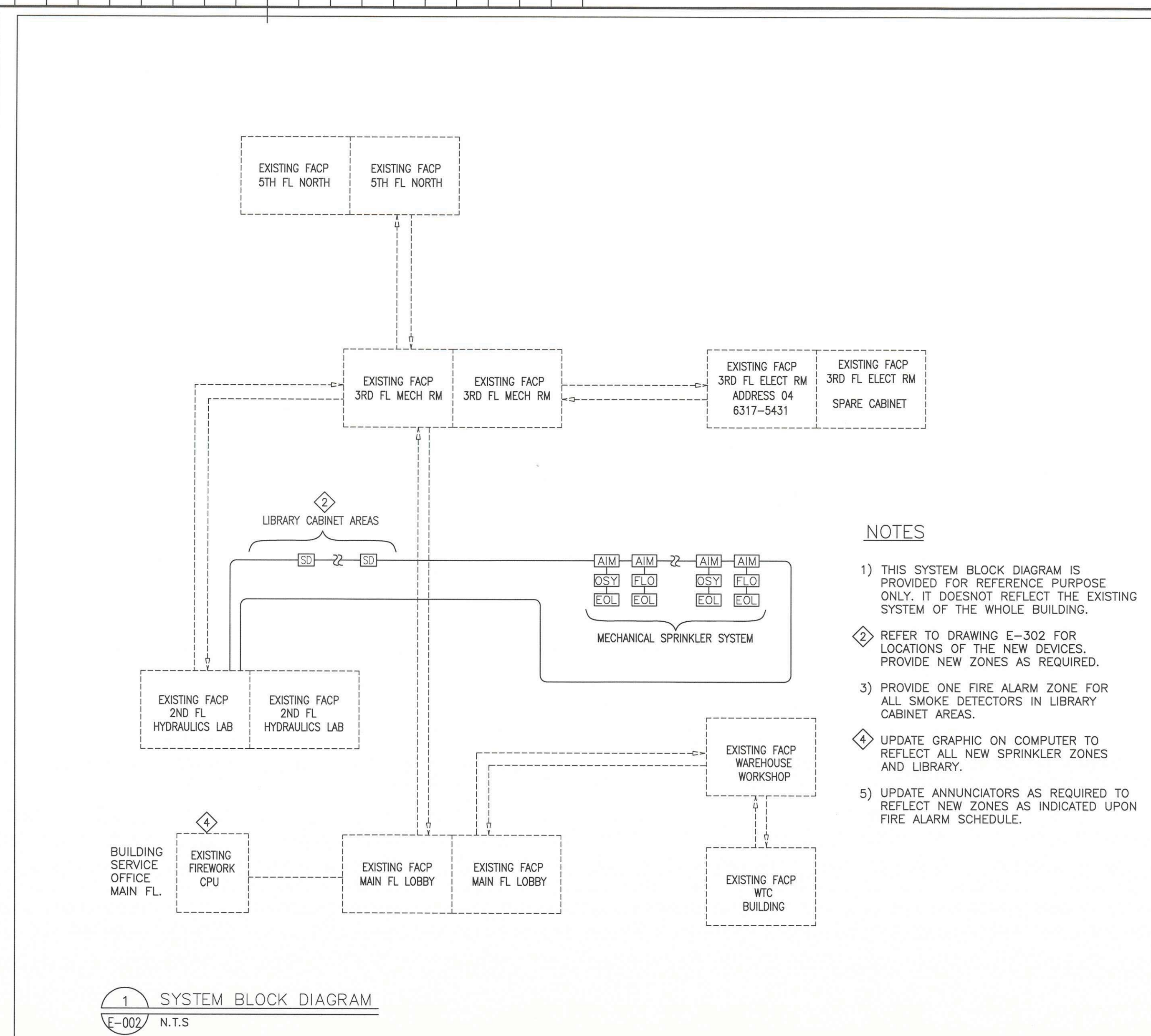
E-001	ELECTRICAL LEGENDS AND DRAWING LIST
E-002	ELECTRICAL DETAILS & SCHEDULES
E-003	ELECTRICAL PANEL SCHEDULES
E-201	SECOND FLOOR EXISTING LIGHTING PLAN - DEMOLITION
E-202	SECOND FLOOR NEW LIGHTING PLAN
E-300	PART GROUND FLOOR LIGHTING & FIRE ALARM SYSTEM
E-301	SECOND FLOOR EXISTING POWER & SYSTEMS PLAN - DEMOLITION
E-302	SECOND FLOOR NEW POWER & SYSTEMS PLAN
E-303	THIRD FLOOR NEW POWER & SYSTEMS PLAN





## LUMINAIRE SCHEDULE

TYPE	DESCRIPTION	LAMP/WATTAGE
FA2	2FTX2FT RECESSED TROFFER FLUORESCENT C/W #12 PATTERN ACRYLIC WITH ELECTRONIC BALLAST 120V. THICKNESS OF LENS TO BE CONFIRMED	2-17W T8
FA3	2FTX4FT RECESSED IN T-BAR GRID, INDIRECT FLUORESCENT C/W REFLECTOR AND METAL DIFFUSER, ROUND HOLES WITH ELECTRONIC DIMMABLE BALLAST 120V	3-32W T8
FA4	2FTX4FT RECESSED INDIRECT IN T-BAR GRID, FLUORESCENT C/W REFLECTOR AND METAL DIFFUSER, ROUND HOLES WITH ELECTRONIC BALLAST 120V	3-32W T8
FJ1	4FT FLUORESCENT DIRECT PENDANT-MOUNTED 1-LAMP WITH SOLID BAFFLE, MATTE WHITE FINISH, ELECTRONIC BALLAST 120V. MOUNTED WITH FIELD ADJUSTABLE AIRCRAFT CABLES. SUSPENSION HEIGHT TO BE DETERMINED	1-T5H0/60W EACH
LC1	ARCHITECTURAL 120V LED DOWNLIGHT WITH 6" OPEN REFLECTOR, SELF-FLANGE SEMI-SPECULAR, MATTE-DIFFUSE OR SPECULAR REFLECTOR, CLEAR APERTURE/TRIM. COLOR TEMP. 3500K	18WATT LED
LJ1	LINEAR LED DIRECT PENDANT. FIXTURE LENGTH AND SUSPENSION HEIGHT TO BE DETERMINED	70WATT STANDARD DRIVER
LT1	FLUORESCENT TRACK LIGHT HEAD WITH ELECTRONIC BALLAST 120V. EXTRUDED ALUMINUM HOUSING C/W BLACK UNIDIRECTIONAL LOUVER AND SILVER FINISH.	39WATT - T5
FH1	DEEP SURFACE MOUNTED CUBELITE FLUORESCENT WITH 120V ELECTRONIC BALLAST AND WIREGUARD OPTION	2-32WATT-T8
FT1	FLUORESCENT UNDER CABINET SURFACE MOUNTED SLIM STRIP LIGHT C/W ON/OFF ROCKER SWITCH. BAKED WHITE ENAMEL FINISH	28WATT-T5
X2	120VAC DOUBLE-FACE STENCIL CEILING MOUNTED RECESSED/EDGE-LIT PICTOGRAM EXIT SIGN	2-3WATT
X5	120VAC STENCIL SURFACE MOUNT EDGE-LIT PICTOGRAM EXIT SIGN	2-3WATT
X7	120VAC END WALL SURFACE MOUNT EDGE-LIT PICTOGRAM EXIT SIGN	2-3WATT



## FIRE ALARM SCHEDULE

ZONE DESCRIPTION:	PULL STATION (FZ)	HEAT OR SMOKE DETECTOR (FZ)	ALARM CHECK VALVE (FZ)	TROUBLE SURV. VALVE (SZ)	SPRINK FLOW SWITCH (FZ)	SPRINK SUPRV. VALVE (SZ)	LOSS OF PRESS. (SZ)	STNDPIPE SUPRV. VALVE (SZ)	AUXILIARY (SZ)	AUDIO (BZ)	STROBE LIGHT CCT. (TZ)	REMARKS
GROUND FLOOR - OFFICE AREA (SPRINKLERED)	FZ-1	FZ-1										
SECOND FLOOR LIBRARY	FZ-2	FZ-2									STZ-1/STZ-2	
GROUND FLOOR - NEW DRY SPRINKLER AREA		FZ-3										
GROUND FLOOR - COMPUTER ROOM		FZ-4										
SECOND FLOOR LIBRARY STORAGE		FZ-5										
GROUND FLOOR - FLOW SWITCH 1-FS-01 (ZONE 1)					FZ-6							
GROUND FLOOR - SUPERVISORY 1-SV-01 (ZONE 1)						SZ-2						
SECOND FLOOR - FLOW SWITCH 4-FS-01 (ZONE 4)					FZ-7							
SECOND FLOOR - SUPERVISORY 4-SV-01 (ZONE 4)						SZ-3						
PREACTION SPRINKLER - TROUBLE (CONTROL PANEL 1)				SZ-4								
PREACTION SPRINKLER - ALARM (CONTROL PANEL 1)		FZ-8										
PREACTION SPRINKLER - SUPERVISORY (CONTROL PANEL 1)			SZ-5									
PREACTION SPRINKLER - TROUBLE (CONTROL PANEL 2)			SZ-6									
PREACTION SPRINKLER - ALARM (CONTROL PANEL 2)		FZ-9										
PREACTION SPRINKLER - SUPERVISORY (CONTROL PANEL 2)			SZ-7									
PREACTION SPRINKLER - TROUBLE (CONTROL PANEL 3)			SZ-8									
PREACTION SPRINKLER - ALARM (CONTROL PANEL 3)		FZ-10										
PREACTION SPRINKLER - SUPERVISORY (CONTROL PANEL 3)			SZ-9									
AIR COMPRESSOR LOSS OF PRESSURE							SZ-10					
AIR COMPRESSOR LOSS OF POWER									SZ-11			
FIRE ALARM TEMPERATURE MONITORING THERMOSTAT				SZ-12								

consultant



1867 YONGE ST, STE 1100, TORONTO ON CANADA M4S 1Y5  
T 416 480 2020 F 416 480 1881

consultant

CROSSEY  
ENGINEERING  
LTD.



2255 Sheppard Avenue. E.  
Suite E-331  
North York, On M2J 4Y1  
(416)497.3111 fax (416)497.7210

3	ISSUED FOR BID	09 DEC 2013
2	ISSUED FOR 95% SUBMISSION	12 NOV 2013
1	ISSUED FOR 75% SUBMISSION	30 APR 2013

revision date

Do not scale drawings. Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.



A	Detail No.
B	No. du détail
C	drawing no. - where detail required dessin no. - où détail exigé
	drawing no. - where detailed dessin no. - où détaillé

project title  
titre du projet  
**BURLINGTON ONTARIO**  
CANADA CENTRE FOR INLAND WATERS  
867 LAKESHORE ROAD

## LIBRARY RENOVATION

drawing title  
titre du dessin  
**ELECTRICAL DETAILS & SCHEDULES**

drawn by  
dessiné par  
LN

designed by  
conc par  
NN/LN

approved by  
approuvé par  
NN

bid  
offre  
project manager  
administrateur de projets

project date  
date du projet  
2013/02/20

project no.  
no. du projet  
R.061475.001

drawing no.  
dessiné no.  
E-002



Project Name

Job No. **CCIW**Voltage: **120** / **208**Ph/Wire: **3/4**Fed from: **Existing****Panel Schedule****LP-2E (Exist. LifeSafety)**

Panel:

Date: 10/06/2013

Panel Mains: 100 amps

Mounting: Recessed

Tub Type: Single

Location: Main Entrance

Main Breaker NO

BRKR	DESCRIPTION	C [W]	d.f.	D [W]	cct	bus	cct	D [W]	d.f.	C [W]	DESCRIPTION	BRKR
15A-1P	EXISTING	500	1	500	1	a	2	500	1	500	EXISTING	15A-1P
15A-1P	EXISTING	500	1	500	3	b	4	500	1	500	EXISTING	15A-1P
15A-1P	EXISTING	500	1	500	5	c	6	500	1	500	EXISTING	15A-1P
15A-1P	EXISTING	800	0.7	420	7	a	8	500	1	500	EXISTING	15A-1P
15A-1P	EXISTING	500	1	500	9	b	10	500	1	500	EXISTING	15A-1P
15A-1P	EXISTING	500	1	500	11	c	12	500	1	500	EXISTING	15A-1P
15A-1P	EXISTING	500	1	500	13	a	14	500	1	500	EXISTING	15A-1P
15A-1P	EXISTING	500	1	500	15	b	16	500	1	500	EXISTING	15A-1P
15A-1P	EXISTING	500	1	500	17	c	18	500	1	500	EXISTING	15A-1P
15A-1P	EXISTING	500	1	500	19	a	20	1000	1	1000	NEW LIBRARY EMERG. LTG	15A-1P
15A-1P	NEW LIBRARY EMERG. LTG	900	1	900	21	b	22	1100	1	1100	NEW OFFICES EMERG. LTG	15A-1P
15A-1P	NEW LIBRARY EMERG. LTG	900	1	900	23	c	24	950	1	950	NEW LIB. LOBBY EMERG LTG	15A-1P
15A-1P	PREACTION CONTROL PANEL	250	0.8	200	25	a	26	240	0.8	300		
15A-1P	PREACTION CONTROL PANEL	250	0.8	200	27	b	28	240	0.8	300	CA FOR DRY SPRINKLER SYS	15A-3P
15A-1P	PREACTION CONTROL PANEL	250	0.8	200	29	c	30	240	0.8	300		
		1	0	31	a	32	0	1				
		1	0	33	b	34	0	1				
		1	0	35	c	36	0	1				
		1	0	37	a	38	0	1				
		1	0	39	b	40	0	1				
		1	0	41	c	42	0	1				

CONNECTED 'A' 5150 W  
CONNECTED 'B' 5550 W  
CONNECTED 'C' 5400 W

4860 W DEMAND 'A'  
5440 W DEMAND 'B'  
5290 W DEMAND 'C'

Notes: Existing loads shown are not reflecting actual condition as there is no site measurement

Remarks

TOTAL DEMAND AMPS **43.3 A**  
TOTAL CONNECTED LOAD **16.1 kW**  
TOTAL DEMAND LOAD **15.6 kW**

Project Name

Job No. **CCIW**Voltage: **120** / **208**Ph/Wire: **3/4**Fed from: **Existing****Panel Schedule****LP-2F (Existing 30ccts)**

Panel:

Date: 10/06/2013

Panel Mains: 100 amps

Mounting: Recessed

Tub Type: Single

Location: Main Entrance

Main Breaker NO

BRKR	DESCRIPTION	C [W]	d.f.	D [W]	cct	bus	cct	D [W]	d.f.	C [W]	DESCRIPTION	BRKR
15A-1P	EXISTING	500	1	500	1	a	2	500	1	500	EXISTING	15A-1P
15A-1P	EXISTING	500	1	500	3	b	4	500	1	500	EXISTING	15A-1P
15A-1P	EXISTING	500	1	500	5	c	6	500	1	500	EXISTING	15A-1P
15A-1P	EXISTING	500	1	500	7	a	8	500	1	500	EXISTING	15A-1P
15A-1P	EXISTING	500	1	500	9	b	10	500	1	500	EXISTING	15A-1P
15A-1P	EXISTING	500	1	500	11	c	12	500	1	500	EXISTING	15A-1P
15A-1P	EXISTING	500	1	500	13	a	14	500	1	500	EXISTING	15A-1P
15A-1P	EXISTING	500	1	500	15	b	16	500	1	500	EXISTING	15A-1P
15A-1P	EXISTING	500	1	500	17	c	18	500	1	500	EXISTING	15A-1P
15A-1P	EXISTING	500	1	500	19	a	20	500	1	500	EXISTING	15A-1P
15A-1P	EXISTING	500	1	500	21	b	22	0	1		SPACE	
	SPACE		1	0	23	c	24	0	1		SPACE	
	SPACE		1	0	25	a	26	3500	1	3500		
	SPACE		1	0	27	b	28	3500	1	3500	NEW PP-2C1	60A-3P
	SPACE		1	0	29	c	30	3500	1	3500		
			1	0	31	a	32	0	1			
			1	0	33	b	34	0	1			
			1	0	35	c	36	0	1			
			1	0	37	a	38	0	1			
			1	0	39	b	40	0	1			
			1	0	41	c	42	0	1			

CONNECTED 'A' 7500 W  
CONNECTED 'B' 7000 W  
CONNECTED 'C' 6500 W

7500 W DEMAND 'A'  
7000 W DEMAND 'B'  
6500 W DEMAND 'C'

Notes: Existing loads shown are not reflecting actual condition as there is no site measurement

Remarks

TOTAL DEMAND AMPS **58.3 A**  
TOTAL CONNECTED LOAD **21.0 kW**  
TOTAL DEMAND LOAD **21.0 kW**

Project Name

Job No. **CCIW**Voltage: **120** / **208**Ph/Wire: **3/4**Fed from: **Existing****Panel Schedule****LP-2C (Existing 42ccts)**

Panel:

Date: 10/06/2013

Panel Mains: 100 amps

Mounting: Recessed

Tub Type: Single

Location: Main Entrance

Main Breaker NO

BRKR	DESCRIPTION	C [W]	d.f.	D [W]	cct	bus	cct	D [W]	d.f.	C [W]	DESCRIPTION	BRKR
15A-1P	NEW LIGHTING LIBRARY	900	1	900	1	a	2	900	1	900	NEW LIGHTING LIBRARY	15A-1P
15A-1P	NEW LIGHTING LIBRARY	900	1	900	3	b	4	900	1	900	NEW LIGHTING LIBRARY	15A-1P
15A-1P	NEW LIGHTING LIBRARY	900	1	900	5	c	6	900	1	900	NEW LIGHTING LIBRARY	15A-1P
15A-1P	EXISTING		1	0	7	a	8	900	1	900	NEW LIGHTING LIBRARY	15A-1P
15A-1P	EXISTING		1	0	9	b	10	900	1	900	NEW LIGHTING LIBRARY	15A-1P
15A-1P	EXISTING		1	0	11	c	12	500	1	500	EXISTING	15A-1P
15A-1P	NEW LTG READING AREA	500	1	500	13	a	14	500	1	500	EXISTING	15A-1P
15A-1P	NEW LTG READING AREA	500	1	500	15	b	16	500	1	500	EXISTING	15A-1P
15A-1P	NEW LTG COMMON AREA	800	1	800	17	c	18	500	1	500	EXISTING	15A-1P
15A-1P	EXISTING	500	1	500	19	a	20	500	1	500	EXISTING	15A-1P
15A-1P	EXISTING	500	1	500	21	b	22	500	1	500	EXISTING	15A-1P
15A-1P	EXISTING	500	1	500	23	c	24	500	1	500	EXISTING	15A-1P
15A-1P	EXISTING	500	1	500	25	a	26	500	1	500	EXISTING	15A-1P
15A-1P	EXISTING	500	1	500	27	b	28	500	1	500	EXISTING	15A-1P
15A-1P	EXISTING	500	1	500	29	c	30	300	1	300	NEW LTG RECEPTION CORR	15A-1P
15A-1P	EXISTING	500	1	500	31	a	32	500	1	500	EXISTING	15A-1P
15A-1P	EXISTING	500	1	500	33	b	34	500	1	500	EXISTING	15A-1P
15A-1P	EXISTING	500	1	500	35	c	36	500	1	500	EXISTING	15A-1P
15A-1P	EXISTING	500	1	500	37	a	38	500	1	500	EXISTING	15A-1P
15A-1P	EXISTING	500	1	500	39	b	40	500	1	500	EXISTING	15A-1P
15A-1P	EXISTING	500	1	500	41	c	42	500	1	500	EXISTING	15A-1P

CONNECTED 'A' 7700 W  
CONNECTED 'B' 7700 W  
CONNECTED 'C' 7400 W

7700 W DEMAND 'A'  
7700 W DEMAND 'B'  
7400 W DEMAND 'C'

Notes: Existing loads shown are not reflecting actual condition as there is no site measurement

Remarks

TOTAL DEMAND AMPS **63.3 A**  
TOTAL CONNECTED LOAD **22.8 kW**  
TOTAL DEMAND LOAD **22.8 kW**

Project Name

Job No. **CCIW**Voltage: **120** / **208**Ph/Wire: **3/4**Fed from: **Existing LP-2F****Panel Schedule****PP-2C1 (New 30ccts)**

Panel:

Date: 10/06/2013

Panel Mains: 100 amps

Mounting: Recessed

Tub Type: Single

Location:

Main Breaker NO

BRKR	DESCRIPTION	C [W]	d.f.	D [W]	cct	bus	cct	D [W]	d.f.	C [W]	DESCRIPTION	BRKR
15A-1P	RECEPTIONIST RECEP'TS	600	0.4	240	1	a	2	1200	8	1500	IT/VOICE	20A-1P
15A-1P	RECEPTIONIST RECEP'TS	600	0.4	240	3	b	4	1200	8	1500	IT/VOICE	20A-1P
15A-1P	RECEPTIONIST RECEP'TS	600	0.4	240	5	c	6	160	8	200	VAC	15A-1P
15A-1P	RECEPTIONIST RECEP'TS	600	0.4	240	7	a	8	160	8	200	VAC	15A-1P
15A-1P	SHELVES RECEP'TS	600	0.4	240	9	b	10	0	1		SPARE	15A-1P
15A-1P	SHELVES RECEP'TS	600	0.4	240	11	c	12	0	1		SPARE	15A-1P
15A-1P	TV RECEP'TS	500	0.4	200	13	a	14	400	0.5	800	DOOR OPERATOR	15A-1P
15A-1P	TV RECEP'TS	500	0.4	200	15	b	16	360	0.4	900	READING RECEP'TS	15A-1P
15A-1P	RECEP'TS	600	0.4	240	17	c	18	360	0.4	900	READING RECEP'TS	15A-1P
15A-1P	RECEP'TS	600	0.4	240	19	a	20	240	0.4	600	READING RECEP'TS	15A-1P
15A-1P	FRIDGE RECEP'T	500	0.6	300	21	b	22	240	0.4	600	MEETING RECEP'TS	15A-1P
15A-2P	SPLIT RECEP'T	1000	0.5	500	23	c	24	240	0.4	600	MEETING RECEP'TS	15A-1P
		1000	0.5	500	25	a	26	0	0.4		SPARE	15A-1P
15A-1P	KITCHEN GFI RECEP'TS	500	0.5	250	27	b	28	0	0.7		SPARE	15A-1P
15A-1P	KITCHEN GFI RECEP'TS	500	0.5	250	29	c	30	0	1			
15A-1P	TV RECEP'TS	500	0.4	200	31	a	32	0	1			
			1	0	33	b	34	0	1			
			1	0	35	c	36	0	1			
			1	0	37	a	38	0	1			
			1	0	39	b	40	0	1			
			1	0	41	c	42	0	1			

CONNECTED 'A' 6900 W  
CONNECTED 'B' 5700 W  
CONNECTED 'C' 5000 W

3620 W DEMAND 'A'  
3030 W DEMAND 'B'  
2230 W DEMAND 'C'

Notes:

Remarks

TOTAL DEMAND AMPS **24.6 A**  
TOTAL CONNECTED LOAD **17.6 kW**  
TOTAL DEMAND LOAD **8.9 kW**



Public Works and  
Government Services Canada  
Travaux publics et  
Services gouvernementaux Canada

consultant



ARCHITECTS

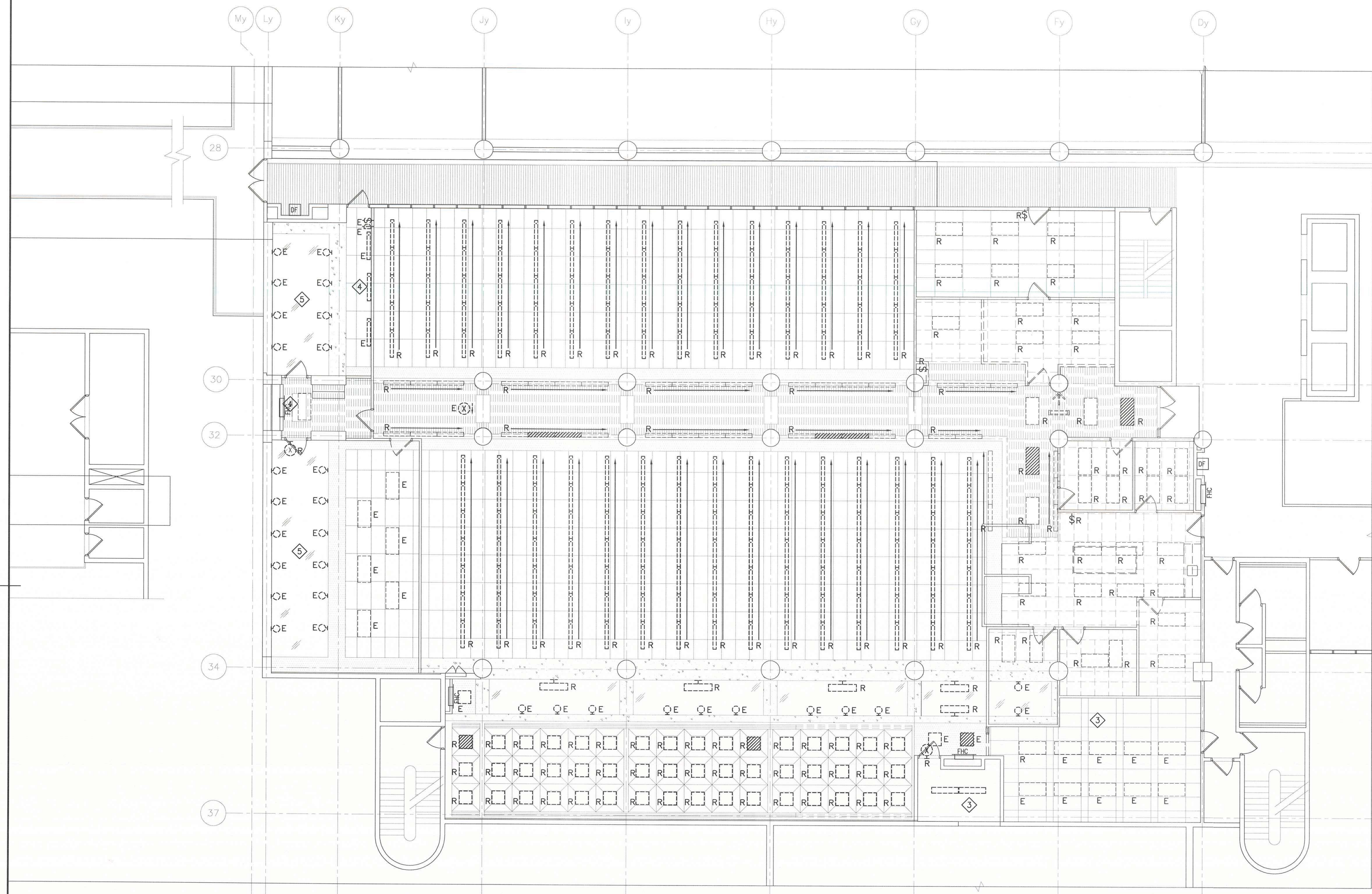
1867 YONGE ST., STE 1100, TORONTO ON CANADA M4S 1Y5  
T 416 480 2020 F 416 480 1881

consultant

CROSSEY  
ENGINEERING  
LTD.







## NOTES

- 1) THIS DRAWING DOES NOT SHOW ALL EXISTING LIGHTING. EXISTING LIGHTING TO REMAIN UNLESS OTHERWISE NOTED.
- 2) PROTECT ALL EXPOSED LIGHT FIXTURES AND LIGHTING DEVICES DURING CONSTRUCTION FROM DUST/DEBRIS ENTERING INTO EACH DEVICE.
- 3) FIXTURES IN THIS ROOM TO BE REMOVED AND RE-INSTALLED FOR MECHANICAL WORK.
- 4) RE-WIRE THIS EXISTING LIGHT FIXTURE TO ADJACENT EMERGENCY LIGHTING CIRCUITS.
- 5) EXISTING LUMINAIRES IN THIS AREA SHALL REMAIN.
- 6) WHEN REMOVING LIGHTING DEVICES AT CEILING OR WALL PENETRATIONS, ENSURE ALL PENETRATIONS ARE PROPERLY SEALED TO SUIT THE REQUIREMENTS OF BASE BUILDING STANDARDS.

0 1m 5m 10m

consultant



ARCHITECTS

1867 YONGE ST., STE 1100, TORONTO ON CANADA M4S 1Y5  
T 416 480 2020 F 416 480 1881

consultant

CROSSEY  
ENGINEERING  
LTD.



2265 Sheppard Avenue, E.  
Suite E-331  
North York, On M2J 4Y1  
(416) 497-3111 fax (416) 497-7210

3	ISSUED FOR BID	09 DEC 2013
2	ISSUED FOR 95% SUBMISSION	12 NOV 2013
1	ISSUED FOR 75% SUBMISSION	30 APR 2013

revision	date
----------	------

Do not scale drawings.  
Verify all dimensions and conditions on site and immediately  
notify the Departmental Representative of all discrepancies.



- A Detail No.  
No. du détail  
B drawing no. - where detail required  
dessin no. - où détail exigé  
C drawing no. - where detailed  
dessin no. - où détaillé

project title  
titre du projet  
**BURLINGTON** ONTARIO  
CANADA CENTRE FOR INLAND WATERS  
867 LAKESHORE ROAD

## LIBRARY RENOVATION

drawing title  
titre du dessinEXISTING LIGHTING PLAN  
SECOND FLOOR  
DEMOLITIONdrawn by  
dessiné par LNdesigned by  
conc. par NN/LNapproved by  
approuvé par NN

bid  
offre project manager  
administrateur de projets

project date  
date du projet 2013/02/20

project no.  
no. du projet R.061475.001


drawing no.  
dessiné no. E-201



3	ISSUED FOR BID	09 DEC 2013
2	ISSUED FOR 95% SUBMISSION	12 NOV 2013
1	ISSUED FOR 75% SUBMISSION	30 APR 2013
revision		date

Do not scale drawings.  
Verify all dimensions and conditions on site and immediately  
notify the Departmental Representative of all discrepancies.



- 
- |   |   |
|---|---|
| A | Detail No.<br>No. du détail   |
| B | drawing no. — where detail required<br>dessin no. — où détail exigé |
| C | drawing no. — where detailed<br>dessin no. — où détaillé            |

project title  
titre du projet

**BURLINGTON** ONTARIO

CANADA CENTRE FOR INLAND WATERS  
867 LAKESHORE ROAD

LIBRARY RENOVATION

drawing title
titre du dessin

NEW LIGHTING PLAN  
SECOND FLOOR

drawn by dessine par	LN
-------------------------	----

designed by	
conc par	NN/LN

approved by	
approuve par	NN

bid	project manager
offre	administrateur de projets

project date date du projet	2013/02/20
--------------------------------	------------

project no. no. du projet	R.061475.001
------------------------------	--------------

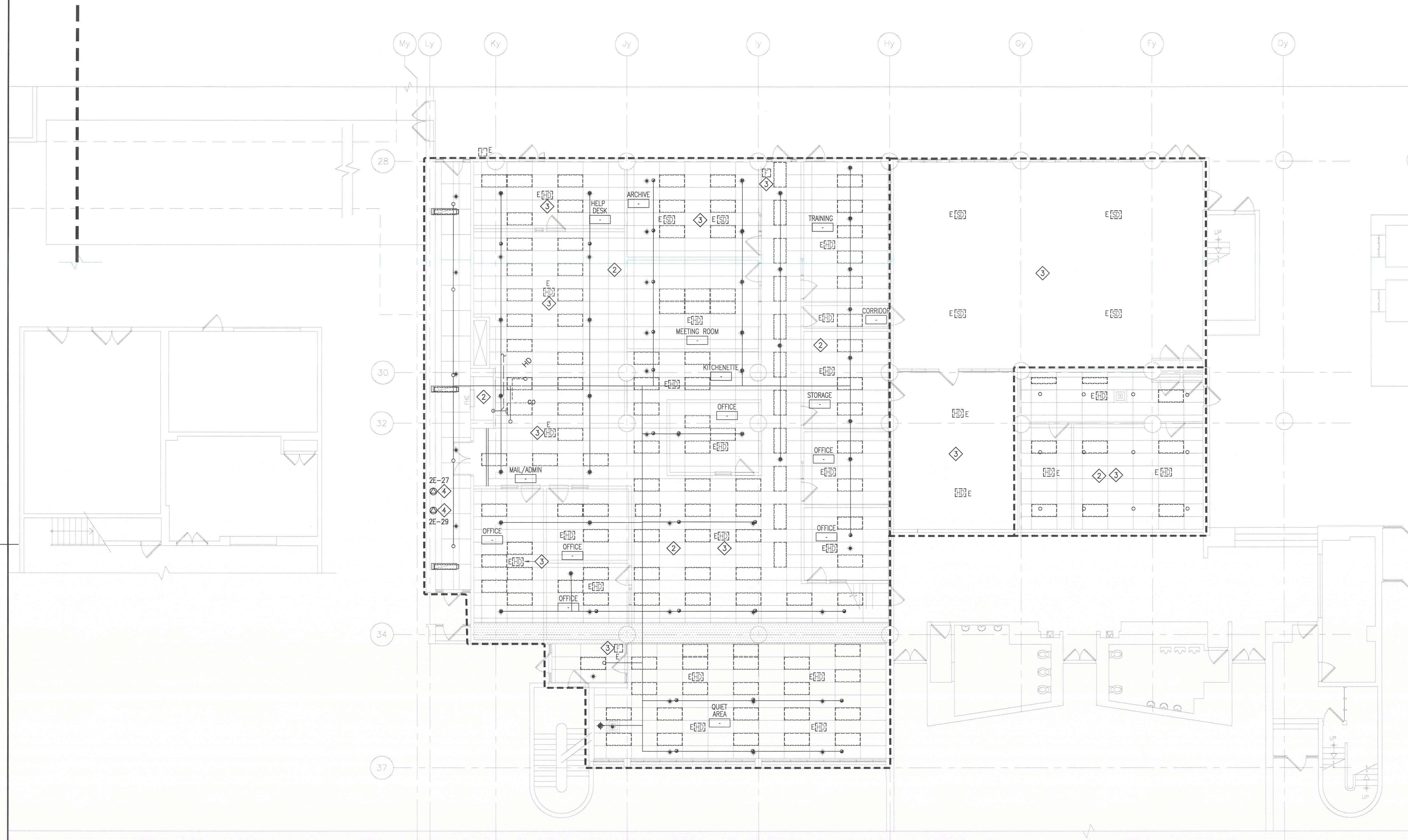
drawing no. E-202  
dessine no.

## NOTES

- |   |   |   |  |
|---|---|---|--|
| 1 | REWIRE NEW LUMINAIRE FIXTURES IN THIS AREA TO EXISTING LIGHTING CIRCUITS AS SHOWN.  | 6 | RE-PLACE EXISTING EXIT SIGN WITH NEW. REFER TO LUMINAIRE SCHEDULE E-002 FOR DETAILS. REWIRE TO USE LIFE SAFETY CIRCUIT 2E-26 |
| 2 | CONNECT THIS EXISTING LUMINAIRE FIXTURE TO EXISTING ADJACENT EMERGENCY LIGHTING CIRCUIT.  | 7 | RE-WIRE THIS EXISTING LIGHT FIXTURE TO LIFE SAFETY CIRCUIT 2E-20.  |
| 3 | EXISTING LUMINAIRE FIXTURES IN THIS ROOM SHALL BE REMOVED AND RE-INSTALLED FOR MECHANICAL WORK.   | 8 | NEW EXIT SIGN TO BE CONNECTED TO LIFE SAFETY CIRCUIT 2E-26.  |
| 4 | MASTER LOW VOLTAGE SWITCHES.  | 9 | EXISTING FIXTURE AT RELOCATED LOCATION TO BE CONNECTED TO LIFE SAFETY CIRCUIT 2E-21.   |
| 5 | RE-LAMP EXISTING CYLINDER LIGHT WITH LED 26W PAR38 FLOODLIGHT LED26DP38S-FL/TP LAMP OR APPROVED EQUAL TO SUIT AND RE-WIRE BACK TO THE PANEL WITH LIGHTING CIRCUIT AS SHOWN. |   |  |







## NOTES

- 1) THIS DRAWING DOES NOT SHOW ALL EXISTING LIGHTING FIXTURES. EXISTING LIGHTING FIXTURES TO REMAIN UNLESS OTHERWISE NOTED.
- 2) ELECTRICAL CONTRACTOR VERIFY EXACT QUANTITIES OF EXISTING LIGHTING FIXTURES TO BE REMOVED AND REINSTALLED FOR SPRINKLER SYSTEM WORK IN THE AREA INDICATED. REFER TO MECHANICAL DRAWINGS FOR DETAILS.
- 3) REPROGRAM ALL EXISTING FIRE ALARM DEVICES IN THE AREA INDICATED TO THE NEW FIRE ALARM ZONES SHOWN. UPDATE GRAPHIC & LED ANNUNCIATORS AS REQUIRED. REFER TO DRAWING E-002 FOR DETAILS. UPDATE GRAPHICS ON FIREWORKS SOFTWARE IN EDWARDS' SYSTEMS WITH THE NEW LAYOUT OF FIRE ALARM DEVICES.
- 4) POWER CONNECTION FOR PREACTION CONTROL PANEL.

0 1m 5m 10m

Public Works and  
Government Services Canada  
Travaux publics et  
Services gouvernementaux Canada

consultant

**+ Reich  
Petch** ARCHITECTS

1867 YONGE ST, STE 1100, TORONTO ON CANADA M4S 1Y5  
T 416 480 2020 F 416 480 1881

consultant

CROSSEY  
ENGINEERING  
LTD.



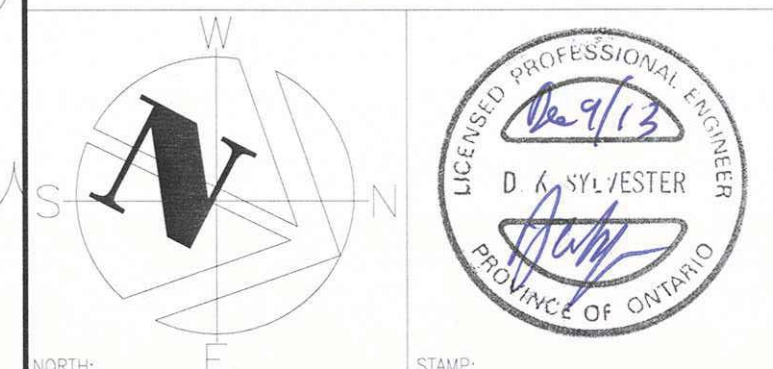
2255 Sheppard Avenue. E.  
Suite E-331  
North York, On M2J 4Y1  
(416)497.3111 fax (416)497.7210

3	ISSUED FOR BID	09 DEC 2013
2	ISSUED FOR 95% SUBMISSION	12 NOV 2013
1	ISSUED FOR 75% SUBMISSION	30 APR 2013

revision

date

Do not scale drawings.  
Verify all dimensions and conditions on site and immediately  
notify the Departmental Representative of all discrepancies.



A	Detail No. No. du détail
B	drawing no. — where detail required dessin no. — où détail exigé
C	drawing no. — where detailed dessin no. — où détaillé

project title  
titre du projet  
**BURLINGTON** ONTARIO  
CANADA CENTRE FOR INLAND WATERS  
867 LAKESHORE ROAD

## LIBRARY RENOVATION

drawing title  
titre du dessin  
**GROUND FLOOR  
LIGHTING & FIRE ALARM  
EXISTING LAYOUTS**

drawn by  
dessiné par LN

designed by  
conc par NN/LN

approved by  
approuvé par NN

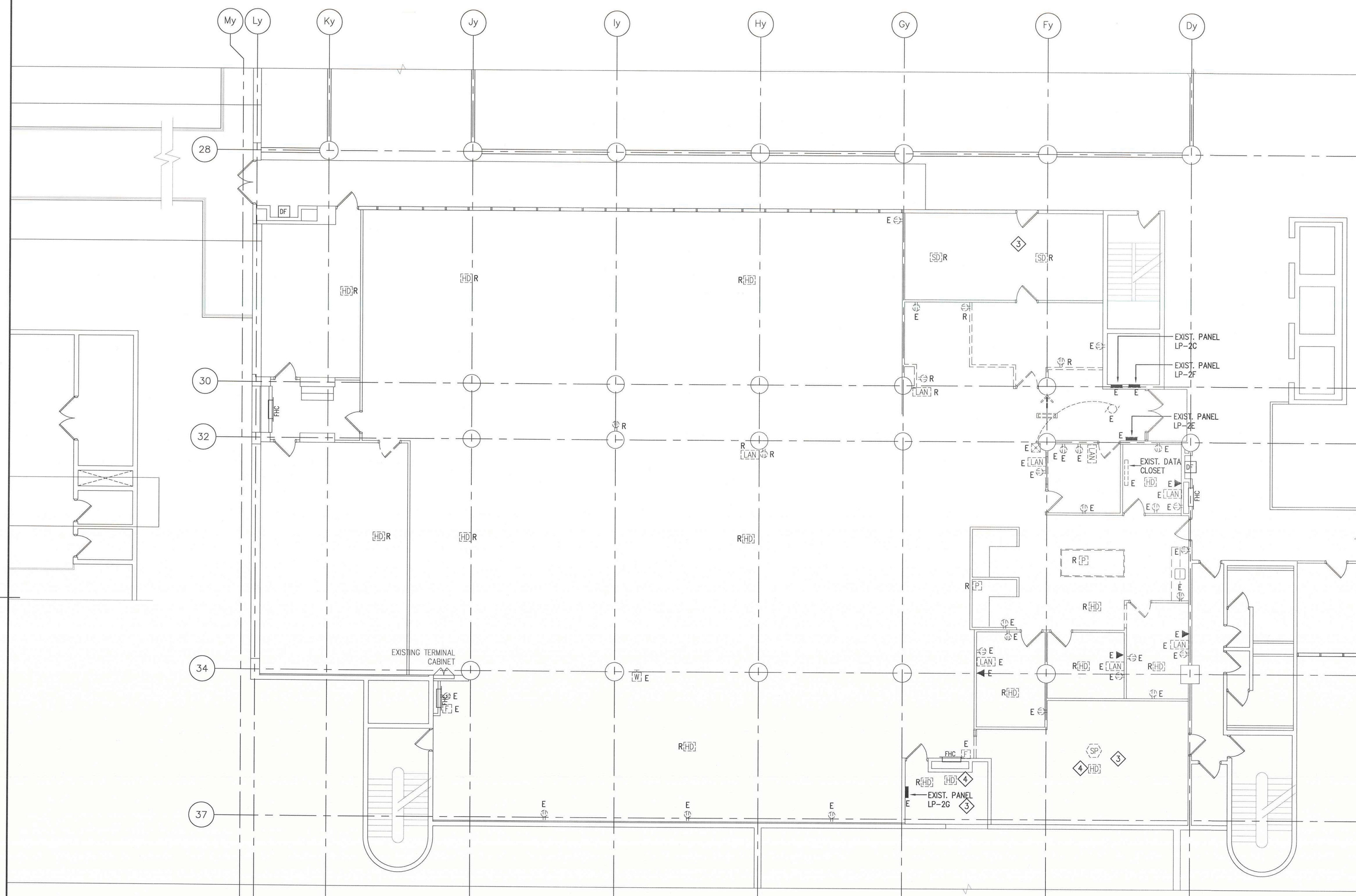
bid  
offre project manager  
administrateur de projets

project date  
date du projet 2013/02/20

project no.  
no. du projet R.061475.001

drawing no.  
dessiné no. E-300





## NOTES

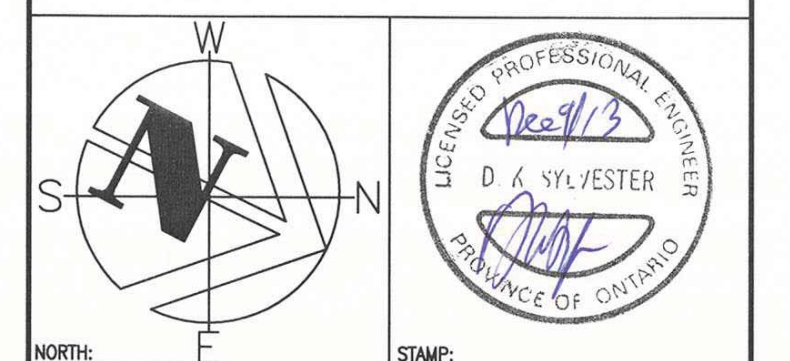
- 1) WHEN REMOVING ELECTRICAL DEVICES, SHOULD ANY CIRCUITS BE ABANDONED, THE CONDUCTORS TO THESE CIRCUITS MUST BE REMOVED OR PROPERLY TERMINATED TO SUIT THE REQUIREMENTS OF THE BASE BUILDING STANDARDS.
- 2) PROTECT ALL ELECTRICAL DEVICES DURING CONSTRUCTION FROM DUST/DEBRIS ENTERING INTO EACH DEVICE OR EQUIPMENT.
- 3) EXISTING ELECTRICAL DEVICES IN THIS ROOM SHALL BE REMOVED AND RE-INSTALLED FOR MECHANICAL WORK.
- 4) EXISTING HEAT DETECTOR TO BE REPLACED BY SMOKE DETECTOR. REFER TO E-302 FOR LOCATION.
- 5) THIS DRAWING DOES NOT SHOW ALL EXISTING DEVICES. EXISTING DEVICES TO REMAIN UNLESS OTHERWISE NOTED.

0 1m 5m 10m

3	ISSUED FOR BID	09 DEC 2013
2	ISSUED FOR 95% SUBMISSION	12 NOV 2013
1	ISSUED FOR 75% SUBMISSION	30 APR 2013

revision	date
----------	------

Do not scale drawings.  
Verify all dimensions and conditions on site and immediately  
notify the Departmental Representative of all discrepancies.



A	Detail No.
B	No. du détail
C	drawing no. - where detail required dessin no. - où détail exigé
	drawing no. - where detailed dessin no. - où détaillé

project title  
titre du projet  
**BURLINGTON** ONTARIO  
CANADA CENTRE FOR INLAND WATERS  
867 LAKESHORE ROAD

## LIBRARY RENOVATION

drawing title  
titre du dessin  
**SECOND FLOOR EXISTING  
POWER & SYSTEMS PLAN  
DEMOLITION**

drawn by  
dessiné par LN

designed by  
conc par NN/LN

approved by  
approuvé par NN

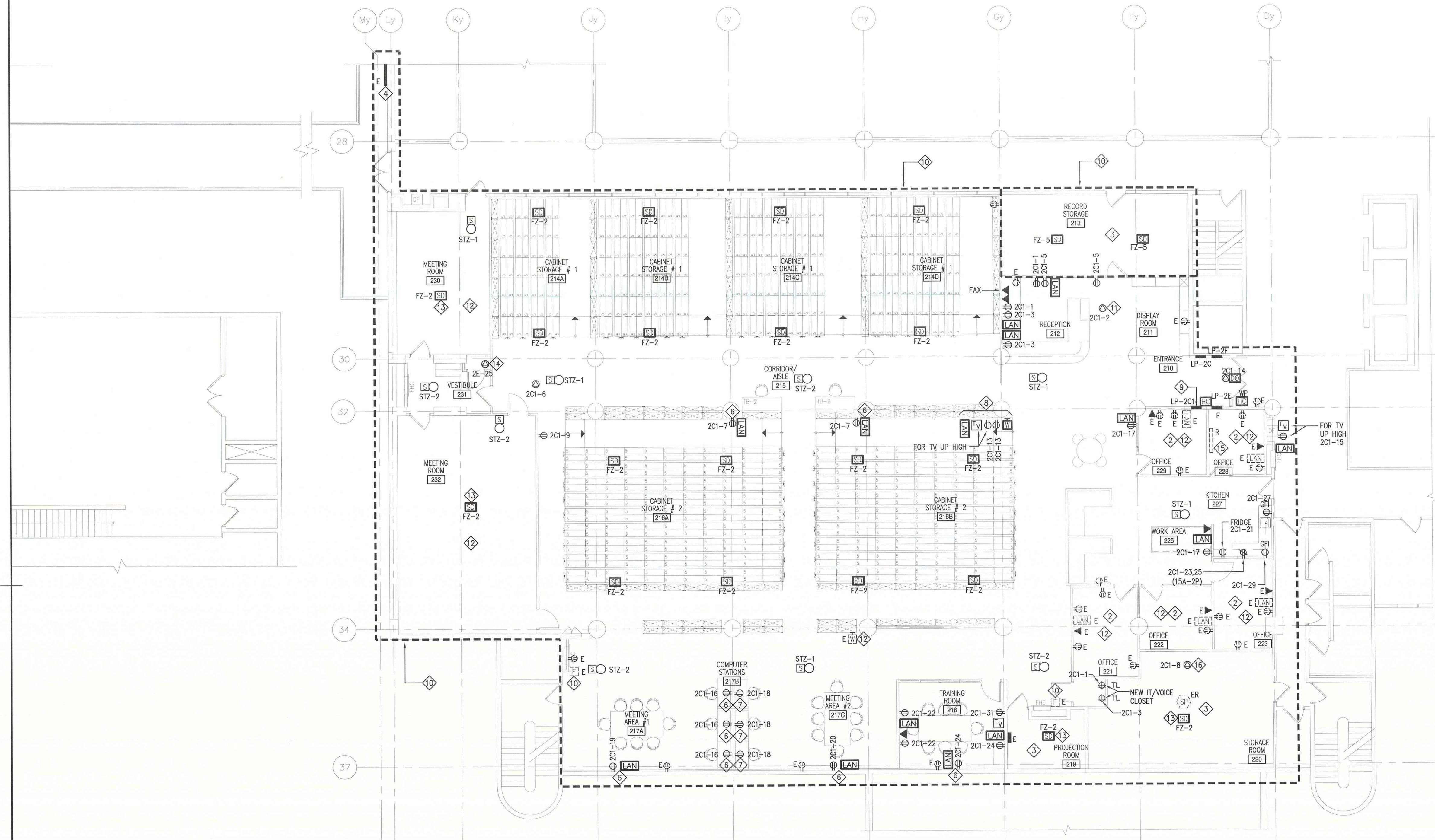
bid  
offre project manager  
administrateur de projets

project date  
date du projet 2013/02/20

project no.  
no. du projet R.061475.001

drawing no.  
dessiné no. E-301





### NOTES

- 1) REFER TO EXISTING FLOOR PLAN FOR EXISTING DEVICES TO REMAIN.
- 2) ALL EXISTING DEVICES IN OFFICES TO REMAIN OTHERWISE NOTED.
- 3) EXISTING ELECTRICAL DEVICES IN THIS ROOM SHALL BE REMOVED FOR MECHANICAL WORK AND RE-INSTALLED, INCLUDE APPROPRIATE FIRE ALARM DEVICES IN THE ROOM FOR SPRINKLER SYSTEM AND UPDATE GRAPHICS ON FIREWORKS SYSTEMS OF CHUBB EDWARDS.
- 4) APPROXIMATE LOCATION OF THE EXISTING FIRE ALARM CONTROL PANEL TO REMAIN.
- 5) REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATIONS OF SPRINKLER DRY SYSTEM COMPRESSOR AND SPRINKLER VALVES ASSOCIATED WITH FIRE ALARM CONNECTIONS. REFER TO FIRE ALARM SCHEDULE ON DRAWING E-002 FOR NEW ZONES.
- 6) PROVIDE SURFACE WIREMOLD RACEWAY & BOXES AS REQUIRED.
- 7) INSTALL OUTLET ON RACEWAY WITH PREWIRED FLEX CONNECTOR BETWEEN CARRELS.

- 8) DEVICES TO BE MOUNTED ON BULKHEAD, UP HIGH.
- 9) NEW RELAY PANEL LP-A LOCATED ON TOP OF NEW POWER PANEL LP-2C1 AS INDICATED.
- 10) REPROGRAM EXISTING FIRE ALARM DEVICES IN THE LIBRARY TO THE NEW FIRE ALARM ZONES SHOWN. UPDATE GRAPHIC & LED ANNUNCIATORS AS REQUIRED. REFER TO DRAWING E-002 FOR DETAILS.
- 11) POWER CONNECTION FOR MECHANICAL CONTROLS.
- 12) REDIRECT CONDUIT FOR DATA AND TELEPHONE TO NEW IT/VOICE CLOSET. REMOVE EXISTING CABLE TO FACILITATE THIS MODIFICATION. PROVIDE NEW PULL STRING.
- 13) REPLACE EXISTING HEAT DETECTOR WITH SMOKE DETECTOR AS SHOWN.
- 14) POWER CONNECTION FOR PREACTION CONTROL PANEL.
- 15) REMOVE CABINET AND ALL COMPONENTS INSIDE WHEN ALL EXISTING CABLE REMOVED, AND CONDUITS RE-DIRECTED TO THE NEW IT CLOSET.
- 16) FOR MECHANICAL CONTROLS.

0 1m 5m 10m

Public Works and  
Government Services Canada  
Travaux publics et  
Services gouvernementaux Canada

consultant

**Reich  
+ Petch** ARCHITECTS

1867 YONGE ST., STE 1100, TORONTO ON CANADA M4S 1Y5  
T 416 480 2020 F 416 480 1881

consultant

CROSSEY  
ENGINEERING  
LTD. 2255 Sheppard Avenue. E.  
Suite E-331  
North York, On M2J 4Y1  
(416)497.3111 fax (416)497.7210

3	ISSUED FOR BID	09 DEC 2013
2	ISSUED FOR 95% SUBMISSION	12 NOV 2013
1	ISSUED FOR 75% SUBMISSION	30 APR 2013

revision	date
----------	------

Do not scale drawings.  
Verify all dimensions and conditions on site and immediately  
notify the Departmental Representative of all discrepancies.



A	Detail No.
B	No. du détail
C	drawing no. - where detail required dessin no. - où détail exigé
	drawing no. - where detailed dessin no. - où détaillé

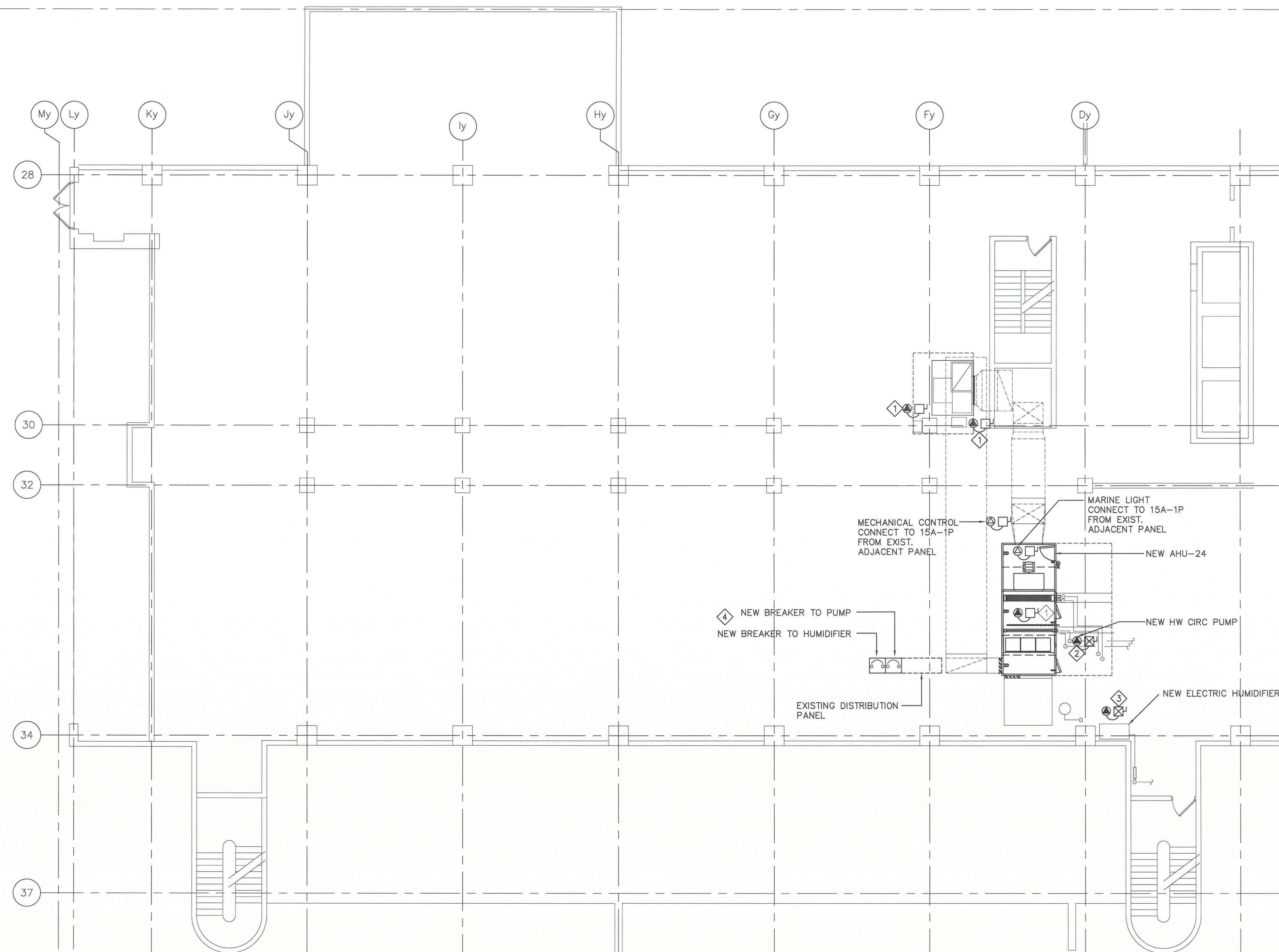
project title  
titre du projet  
**BURLINGTON** ONTARIO  
CANADA CENTRE FOR INLAND WATERS  
867 LAKESHORE ROAD

### LIBRARY RENOVATION

drawing title  
titre du dessin  
**SECOND FLOOR  
NEW  
POWER & SYSTEMS PLAN**

drawn by dessiné par	LN
designed by conc par	NN/LN
approved by approuvé par	NN
bid offre	project manager administrateur de projets
project date date du projet	2013/02/20
project no. no. du projet	R.061475.001
drawing no. dessiné no.	E-302





## NOTES

- 1 DISCONNECT AND RECONNECT. PROVIDE NEW FLEXIBLE CONNECTION AND DISCONNECT AS REQUIRED
- 2 PROVIDE COMBINED MAGNETIC STARTER AND DISCONNECT FOR NEW PUMP. PROVIDE A NEW 15A-3P BREAKER IN ENCLOSURE OF THE EXISTING DISTRIBUTION PANEL SHOWN FOR THE NEW P-6N.
- 3 PROVIDE COMBINED MAGNETIC STARTER AND DISCONNECT FOR THE NEW HUMIDIFIER CONNECT TO THE EXISTING DISTRIBUTION PANEL SHOWN. PROVIDE NEW 40A-3P BREAKER IN ENCLOSURE.
- 3 MOUNT NEW BREAKERS IN ENCLOSURE TO THE SIDE OF THE EXISTING DISTRIBUTION PANEL. CONNECT BREAKERS TO THE MAIN BUS AS REQUIRED.

0 1m 5m 10m



Public Works and  
Government Services Canada  
Travaux publics et  
Services gouvernementaux Canada

consultant

**+ Reich  
Petch**

ARCHITECTS

1867 YONGE ST., STE 1100, TORONTO ON CANADA M4S 1Y5  
T 416 480 2020 F 416 480 1881

consultant

CROSSEY  
ENGINEERING  
LTD.



2255 Sheppard Avenue. E.  
Suite E-331  
North York, On M2J 4Y1  
(416)497.3111 fax (416)497.7210

3	ISSUED FOR BID	09 DEC 2013
2	ISSUED FOR 95% SUBMISSION	12 NOV 2013
1	ISSUED FOR 75% SUBMISSION	30 APR 2013

revision date

Do not scale drawings.  
Verify all dimensions and conditions on site and immediately  
notify the Departmental Representative of all discrepancies.



A Detail No.  
No. du détail  
B drawing no. - where detail required  
dessin no. - où détail exigé  
C drawing no. - where detailed  
dessin no. - où détaillé

project title  
titre du projet  
**BURLINGTON** ONTARIO  
CANADA CENTRE FOR INLAND WATERS  
867 LAKESHORE ROAD

## LIBRARY RENOVATION

drawing title  
titre du dessin  
**THIRD FLOOR  
NEW POWER AND  
SYSTEMS PLAN**

drawn by  
dessiné par LN

designed by  
conc par NN/LN

approved by  
approuvé par NN

bid offer project manager  
administrateur de projets

project date  
date du projet 2013/02/20

project no.  
no. du projet R.061475.001

drawing no.  
dessiné no. E-303