

**REAL PROPERTY SERVICES**  
Western Region

Client: **NRCan and Parks Canada**

Client: **2nd Floor Greenstone Building  
Yellowknife, N.T.**

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WILLIAMS ENGINEERING CANADA  
**WE**

PERMIT TO PRACTICE  
WILLIAMS ENGINEERING CANADA INC.  
PERMIT NUMBER  
P-646  
NWT/NT Association of Professional Engineers and Geoscientists  
Sept 10, 2015

ELECTRICAL SYMBOL LEGEND	
DESCRIPTORS:	R1 = ORIGINAL LOCATION OF DEVICE TO BE RELOCATED R2 = NEW LOCATION OF RELOCATED DEVICE N = NEW DEVICE NL = NIGHT LIGHT (UN-SWITCHED)
	SHADED DEVICES ARE INDICATIVE OF EXISTING DEVICES TO REMAIN
	LUMINAIRE, FLUORESCENT, SUSPEND MOUNT
	LUMINAIRE SURFACE OR PENDANT MOUNT
	SWITCH, SINGLE-POLE, LINE VOLTAGE
	SWITCH, SINGLE-POLE, LOW VOLTAGE D = DIMMER SWITCH
	DETECTOR, OCCUPANCY, LOW VOLTAGE, WALL MOUNT
	FLOOR BOXES POWER: CONTAINS 2 CIRCUITS, DATA/TEL: CONTAINS 2 CAT-6 CABLE RUNS
	CONSOLIDATION POINTS
	ZONE BOXES
	RECEPTACLE GFCI = GROUND FAULT CIRCUIT INTERRUPTOR c = COUNTER TOP F = FRIDGE
	DATA/TEL JACK c = COUNTER TOP
	FIRE ALARM - BELL/STROBE COMBO UNIT
	FIRE ALARM - MANUAL PULL STATION
	ELECTRIC STRIKE
	CARD READER
	REQUEST ACCESS
	INTRUSION DETECTION SYSTEM - KEYPAD
	DAY LIGHT SENSOR - PHOTOCELL
	SMOKE DETECTOR

**SCOPE OF WORK**

- RELOCATE DEVICES AND PROVIDE NEW AS SHOWN ON DRAWINGS. EXTEND EXISTING CIRCUITS TO FEED DEVICES AND PROVIDE NEW CIRCUITS AS NOTED.
- REUSE EXISTING CONDUIT, DEVICES, WIRING WHERE POSSIBLE, WIRING TO BE WITHOUT ADDITIONAL SPLICES AND IF THE WIRING IS IN GOOD CONDITION. OTHERWISE PROVIDE NEW WIRING.
- PROVIDE NEW CAT6-F/TE CABLES FROM EACH DATA/VOICE OUTLET c/w TERMINATION AND PATCH CORD (AS NEEDED).

**DEMOLITION NOTES**

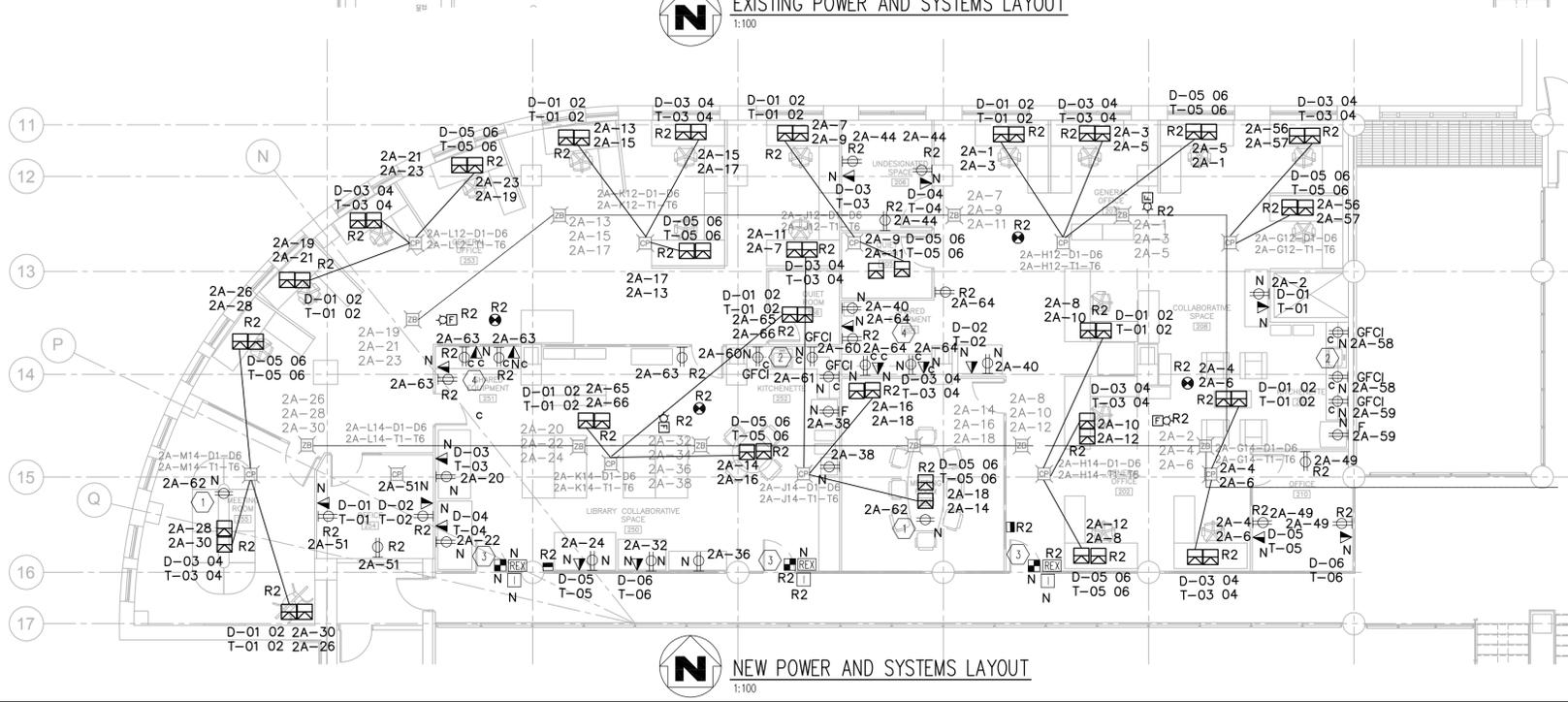
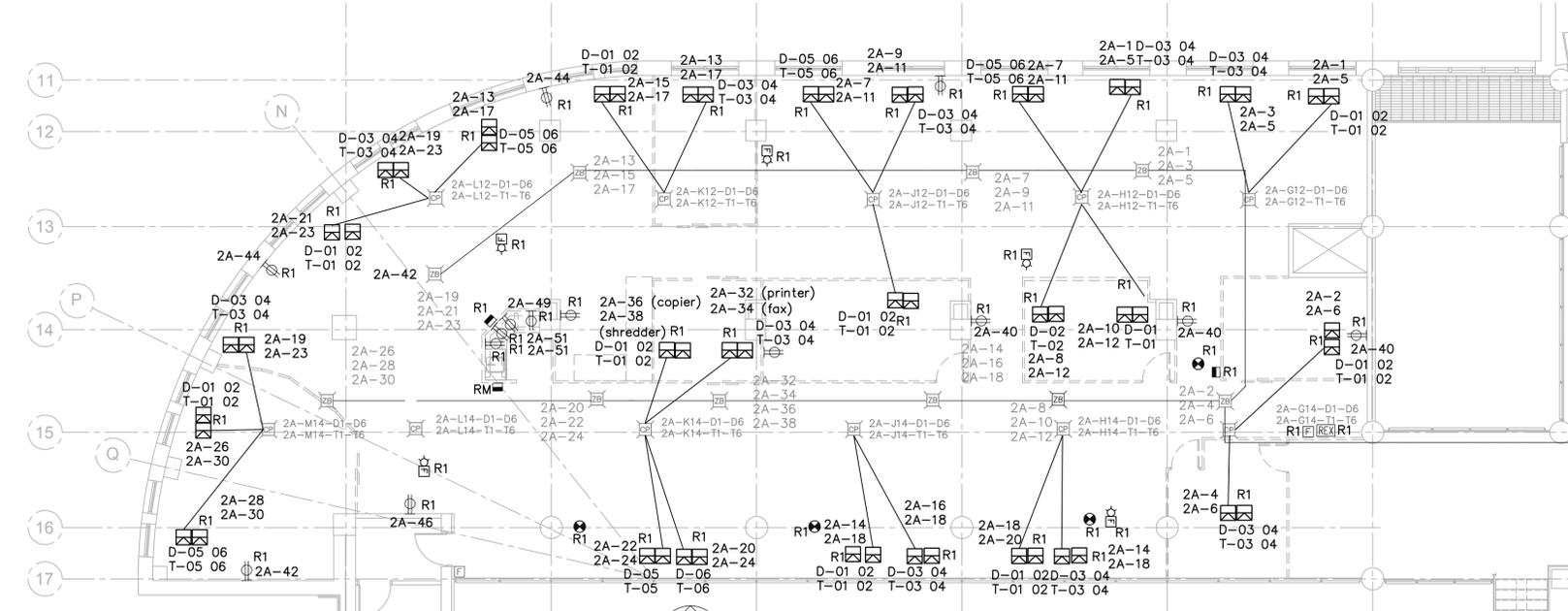
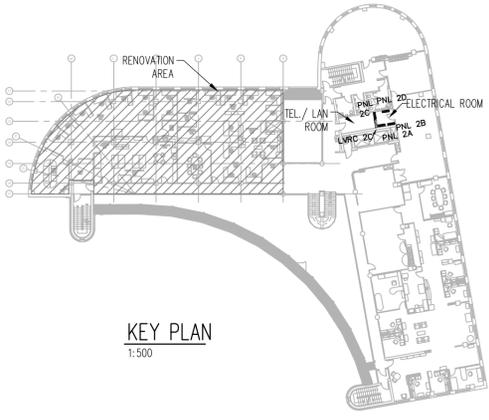
- WHERE THE TERM "REMOVE" OR "DELETE" IS USED, THIS MEANS THAT THE LUMINAIRE OR DEVICE AND ITS ASSOCIATED CONDUIT AND WIRING SHALL BE REMOVED UP TO THE NEAREST ACCESSIBLE JUNCTION BOX IN A CONCEALED CEILING SPACE. DEAD JUNCTION BOXES AND CONDUIT IN CONCEALED CEILING SPACE ARE TO BE REMOVED.
- IN THE EVENT THAT A WALL OUTLET BOX (TO BE DELETED) CONTAINS CONDUCTORS WHICH FEED REMAINING DOWNSTREAM DEVICES:
  - IF THE WALL IS TO BE DEMOLISHED, THE OUTLET BOX, CONDUIT AND WIRING SHALL BE REMOVED AND THE DOWNSTREAM OUTLETS SHALL BE RE-FED BY CONCEALED CONDUIT AND WIRING TO PROVIDE A COMPLETE, OPERATIONAL OUTLET.
  - IF THE WALL IS TO REMAIN AND THE DEVICE SHALL BE REMOVED, THE ACCESSIBLE OUTLET BOX MAY REMAIN IN THE WALL, COVERED WITH A BLANK PLATE.
  - IF A NEW WALL IS TO BE REBUILT OR BUILT NEXT TO WHERE A DEMOLISHED WALL USE TO BE, THE DEVICES CAN BE RELOCATED TO THE NEW WALL AS SHOWN ON THE DRAWINGS.
- CONSTRUCTION WILL BE CARRIED OUT ONLY IN A PORTION OF THE SECOND FLOOR. ALL ELECTRICAL EQUIPMENT AND DEVICES IN "NON-CONSTRUCTION AREAS" ARE TO REMAIN OPERATIONAL, EXCEPT FOR BRIEF PERIODS OF DOWNTIME NECESSITATED BY CHANGE OF EQUIPMENT LOCATION OR POWER SOURCE. ALL DOWNTIME PERIODS ARE TO BE COORDINATED WITH THE ARCHITECT/ENGINEER AND THE OWNER.

**WIRING METHOD**

- WIRING METHOD FOR POWER CIRCUIT SHALL BE UNDER FLOOR IN CONDUIT AND AC90 CABLE (AS EXISTING). EXISTING POWER OUTLETS ARE CONNECTED TO UNDER FLOOR JB'S WITH AC90 CABLE SYSTEM.
- 120-V POWER WIRING IS TO BE MINIMUM #12 AWG COPPER WITH XLPE RW90 INSULATION.
- CONCEALED BX (AC90) CABLE MAY BE USED IN SHORT LENGTHS (1.5 METERS) FOR FINAL CONNECTION TO FIXTURES.
- ELECTRICAL DEVICE BOXES SHOULD NOT BE INSTALLED BACK TO BACK. A MINIMUM OF 300mm SHOULD SEPARATE THEM.
- ALL PENETRATIONS THROUGH FIRE WALLS ARE TO BE FIRE-SEALED.
- ALL TELEPHONE AND DATA WIRING SHALL BE UNDER FLOOR (AS EXISTING) USING EXISTING CABLE TRAY, CONDUIT AND JUNCTION BOXES SYSTEM.
- EXISTING LIGHTING CONTROL SYSTEM IS LV SYSTEM AND TO BE MAINTAINED.

**RENOVATION NOTES:**

- REUSE EXISTING CONDUIT, DEVICES, WIRING WHERE POSSIBLE, WIRING TO BE WITHOUT ADDITIONAL SPLICES AND IF THE WIRING IS IN GOOD CONDITION. OTHERWISE PROVIDE NEW WIRING.
- ANY NEW OR RELOCATED DEVICES SHOULD BE CLEARLY LABELED TO MATCH EXISTING LABELS.
- FEED NEW CIRCUITS FROM EXISTING PANELS AS INDICATED (LOCATION INDICATED ON DRAWINGS). UPDATE PANEL DIRECTORIES TO REFLECT NEW ROOM DESIGNATIONS. ALL NEW RECEPTACLES ARE TO BE INSTALLED ON NEXT AVAILABLE CIRCUIT. OBSERVE CEC MAXIMUM CIRCUIT LOADING LIMITATIONS. PROVIDE NO MORE THAN 4 RECEPTACLES PER CIRCUIT FOR COMPUTER/WORKSTATION LOADS. PRINTERS, FAXES AND COPIERS TO BE ON SEPARATE DEDICATED CIRCUITS.
- EXISTING TEL/LAN WIRING SYSTEM IS CAT-6 CABLE, ALL OUTLETS ARE CONNECTED TO UNDER FLOOR JB'S AND BACK TO TEL/LAN ROOM



**GENERAL NOTES:**

- CONTRACTOR TO OBSERVE MAXIMUM "15 AMP" CIRCUIT LOADING FOR LIGHTING 1200 WATTS AND FOR POWER 4-RECEPTACLES PER 15 AMP CIRCUIT.
- CONTRACTOR TO MAKE SURE THAT ANY ADDITIONAL LOAD DOES NOT EXCEED THE BRANCH C.B AND / OR THE PANEL LOAD CAPACITY.
- REUSE EXISTING WIRING WHERE POSSIBLE, WITHOUT ADDITIONAL SPLICES AND IF THE WIRING IS IN GOOD CONDITION. OTHERWISE PROVIDE NEW WIRING.
- ANY NEW OR RELOCATED DEVICES SHOULD BE CLEARLY LABELED TO MATCH EXISTING LABELS. EXACT LOCATION IS TO BE CONFIRMED AT SITE WITH THE OWNER.
- EXISTING DATA/TEL. CABLES ARE CAT-6, TERMINATED TO EXISTING UNDER FLOOR JB'S AND BACK TO TEL/LAN ROOM PATCH PANELS.
- MAINTAIN BONDING SYSTEM AND PROVIDE NEW AS REQUIRED BY CEC-15.
- KEEP THE LIGHT FIXTURES HEIGHT FOR OPEN AND DROP CEILING SAME AS EXISTING, 2343mm A.F.L FOR DROP CEILING AND 3048mm A.F.L FOR OPEN CEILING.
- PROVIDE LOW VOLTAGE LIGHTING CONTROL RELAY AND PROGRAM SEQUENCE OF OPERATION AS PER LV RELAY SCHEDULE. LV SWITCHES AND OCCUPANCY SENSORS ARE TO MATCH EXISTING.
- AT COMPLETION OF PROJECT CONTRACTOR TO VERIFY THE HORN/STROBE DEVICE AND ONE DEVICE UPSTREAM AND DOWNSTREAM.
- LIGHTING CIRCUIT AND SWITCHING ARE FOR REFERENCE ONLY AND REFLECT THE ORIGINAL DESIGN INTENT. CONTRACTOR IS TO VERIFY CIRCUIT, SWITCH AND RELAY NUMBERING BEFORE COMMENCEMENT.

**KEYNOTES:**

- PROVIDE AN OVERHEAD RECEPTACLE FOR PROJECTOR. ALSO PROVIDE A JUNCTION BOX FOR CONNECTION OF HDMI CABLE FOR THE PROJECTOR
- PROVIDE 20A T-SLOT RECEPTACLES FOR KITCHEN COUNTERS
- PROVIDE NEW CARD READER, ELECTRIC STRIKE AND REQUEST TO EXIT, TO BE FED FROM THE NEXT AVAILABLE CIRCUIT VIA POWER TRANSFER AT DOOR HINGE AND VIA DOOR, STRIKE ON SECURE DOOR TO LATCH AS PER ARCHITECTURAL REQUIREMENTS. PROVIDE NEW DOOR RELEASE BUTTON, EXACT LOCATION IS TO BE CONFIRMED WITH THE OWNER AT SITE. ADD NEW CONTROL CARD "AS REQUIRED" TO THE EXISTING DOOR ACCESS CONTROL PANEL LOCATED IN MAIN FLOOR ELECTRICAL ROOM. CONNECT DOOR RELEASE TO FIRE ALARM SYSTEM.
- PROVIDE NEW DATA/TEL JACKS IN SHARED EQUIPMENT ROOM. FEED WITH CAT6 CABLE RUNNING BACK TO PATCH PANEL IN LAN ROOM. DO NOT FEED FROM CONSOLIDATION POINTS.

REVISIONS	DESCRIPTION	DATE
A	ISSUED FOR TENDER	2015.09.11

A	detail number number du detail	A
B	source drawing no. de dessin no.	B/C
C	detail on drawing no. detail sur dessin no.	B/C

project title: **NRCan and Parks Canada  
Fit-Up  
2nd Floor Greenstone  
Yellowknife, N.W.T.**

drawing title: **ELECTRICAL  
POWER, DATA AND  
LIFE SAFETY  
LAYOUTS**

designed by: UG	conçu par:
drawn by: UG	dessiné par:
approved by: BR	approuvé par:
PWSSC Project Manager	Administrateur de Projets TPSSC
scale: AS NOTED	échelle: sheet: feuille:
project no: R.067351 & 067352	proj. no: E1
date: 2015.09.10	date: OF 3