TAYLOR ARCHITECTURE GROUP

3502 RACCINE RD. ■ YELLOWKNIFE, NT ■ X1A 3J2 ■ 867 920-2728 ■ EMAIL: TAG@TAGYK.COM ■ WWW.TAGYK.COM

ADDENDUM NO. 5

ADD 005

Project: Nunavut Water Board New Office Building

Location: Gjoa Haven, NU

Project no: RFP GH 2018-001 TAG:17-017

Date: March 6th, 2018

Note well: Addendum No. 5 is comprised of:
General: comprised of 01 addendum items.
Specification General: comprised of 07 addendum items.
Architectural Specification: comprised of 02 addendum items.
Electrical: comprised of 12 addendum items and 02 attachments (see Addendum E01 and E02 attached).
Mechanical: comprised of 02 addendum items.
The Addendum contains a total of (11) - 8 ½" x 11" sheets, (4) – 24" x 36" sheets, and 24 items.

General

1.	Information	Based on inquiry by some Contractors and after reviewing the Nunavut Water Board's current and projected housing requirements, the Nunavut Water Board is able to make two (2) housing units available for rent to the successful Contractor for accommodations for the project personnel during construction (aligning with Project Start and Completion dates). If Contractors wish to make alternate arrangements for accommodations for project personnel, they are NOT required to rent these units from the Nunavut Water Board. Contractors choosing to rent the units will be able to rent one or both units on the same rental terms as the Nunavut Water Board provides to employees, as follows: - Details: 1,162 square foot, two-bedroom housing units. Unfurnished, appliances included. - Rental Price: $5000 per month per housing unit, including heating. Renter is responsible to pay for water, sewage and electricity. - Renters must sign a lease agreement with the Nunavut Water Board. Any damages to the properties will be the responsibility of the Renter.

- Contractor must advise the Nunavut Water Board of their intention to rent one or both units and enter into a signed lease agreement within 14 days of the award of contract, after which time the units may no longer be available."

Specifications - General

2.	00 21 13, Part 1.12.6.1	Clarification	"…completion date in the agreement shall be this completion time added to commencement date." Completion date in the preceding sentence is referring to the Substantial Completion Date.
3.	00 21 13, Part 1.12.1.2	Addition	".3 If the bidder is unable to obtain reference letters from the Government of Nunavut or the Government of the Northwest Territories, and they have no private projects to select from, an alternative to 1.12.1.2.1 and .2 is as follows: Bidder may submit two (2) reference letters for projects completed outside of NU/NWT, along with a written explanation of why the Bidder is unable to obtain letters from NU/NWT. If bidders have no projects outside of NWT/NU, they must also provide a written explanation. If the above explanations are satisfactory to the Nunavut Water Board, this will not count as a fail on the prequalification requirements."
4.	Addenda 4, Item #3	Clarification	Item 1.12.4 Performance Assurance is a requirement of the accepted bidder, not a bid enclosure requirement.
5.	00 21 13, Part 1.12	Remove	".7 Fees for Changes in Work"
6.	00 21 13, Part 1.12.1.1	Clarification	"…Note that the bids will not be rated as per the GN NNI policy." There is no minimum requirement for Inuit labour or participation from Inuit firms.

TAYLOR ARCHITECTURE GROUP
3502 RACCINE RD. ■ YELLOWKNIFE, NT ■ X1A 3J2 ■ 867 920-2728 ■ EMAIL: TAG@TAGYK.COM ■ WWW.TAGYK.COM

7.	00 21 13, Part 1.9	Clarification	".1 Bidders must provide a certificate of good standing from Workers Safety and Compensation Commission (WSCC)" The certificate of good standing in the preceding sentence is to be submitted with the bid forms.
8.	01 21 00, Part 1.2.9	Addition	".3 Include allowance of $25,000.00 for fabrication and installation of Boardroom Table (furniture #T1)."

Architectural Specifications

9.	07 21 13, Part 2.2.2.7.1	Clarification	Refer to Part 2.2.2.7.1 for acceptance of Dow Styrofoam CavityMate as board insulation for exterior walls.
10.	07 27 13, Part 2.1	Request for Alternates	No air and vapour barrier products will be accepted from manufacturers other than Soprema Canada.

Mechanical Specifications

11.	23 09 10, Part 3.3	Revise	".1 Refer to Detail 1 on drawing M600 Heating Schematic .2 Provide flow switches or amperage switches for each pump (P-3, P-4, P-5A, P-5B, P6) to provide on-off indication. Provide alarm indication if a pump is not running. .3 Boiler package is to come with an integral boiler control panel. This panel is to be used to set up the boilers to provide for dual boiler operation, equal run time rotation, boiler outdoor reset, mixed outdoor reset on the floor heating loop. And manage indirect domestic hot water

operation. Primary pumps (P3 and P4) to be shut-down when associated boiler is not in operation.

.4 Outdoor sensor shall reset the heating supply set-point temperature. Initial set-points to be as follows:

OAT	0 C	-30 C
HWST	65 C	82 C

.5 The in-floor heating loop temperature is also to be reset by outside air temperature to maintain a lower heating loop supply temperature as follows:

OAT	15 C	-30 C
Rad Loop HWST	20 C	40 C

.6 IF Rad Loop HWST exceeds 40C the heat pump P-6 is to shut off and an alarm is to sound.

.7 Heating pumps are complete with variable speed controls which are to be set up to minimize pump energy use."

12. 23 09 10, Part 3.6 Revise

".1 Refer to Detail 4 Drawing M600 Heat Recovery Ventilation Schematic.

.2 Provide time clock for day-night control with manual bypass switch marked "Day-Auto-Off". The time clock shall have a 7-day time clock complete with a holiday mode button. Ventilation system to be in day mode from 7:30am to 6:00pm 5 days a week.

.3 In auto mode both fans are to run and the reversing damper is to cycle to maintain supply air temperature.

.4 In day mode both fans are to run for 2 hours and then the system is to return to auto mode."

Electrical Addenda

Refer to the attached Electrical Addenda E01 and E02.

End

ADDENDUM NO. E01

BID DOCUMENTS FOR
NUNAVUT WATER BOARD OFFICE BUILDING

5 March 2018
FILE: 144902600-07-02

ISSUED BY:

Kristen Smith, P.Eng., Senior Associate
STANTEC CONSULTING LTD.
Tel: (709) 576-1458 ext. 5761242
Fax: N/A
kristen.smith@stantec.com

Addendum issued to active tenderers with documents on record **([7] pages including attachments)**

1. Clarifications
   1.1. Refer to electrical drawings E200, E201, E202, and E500 for clarifications. Clarifications are clouded and marked with revision #6.
2. Specifications:
   2.1. Add specifications Section 28 32 00 – Mechanical Alarm Detection System.
3. Description of Addendum – Bidder Questions:
   3.1. Question from bidder re: Exit Signs:
      3.1.1. *Question*: Can we use self-powered Universal Exit Lights instead of bringing a DC Circuit into each exit fixture?
      3.1.2. *Response*: No; exit signs to be circuited to common AC circuit and powered via DC circuits to battery packs. Refer to drawing E200 & E500. This has now been clarified on the drawings and in panel schedule for Panel A.
   3.2. Question from bidder re: light switching:
      3.2.1. *Question:* Can you confirm the intent for switching in this building.
         3.2.1.1. Is the Intention of the 3-way switching as per drawing below? (see below)
         3.2.1.2. In Staff Room 122 there is (2) 3-way switches with (2) lighting circuits is the plan to install a contactor to switch these lighting circuits?
         3.2.1.3. In Corridor 126/121/108 there is (3) 3-way switches with (4) Lighting Circuits.
            3.2.1.3.1. Is one supposed to be a 4-way?
            3.2.1.3.2. Are we to install a contactor to switch these lighting circuits?
            3.2.1.3.3. In Lobby 102 there is (2) 3-way switches with (2) lighting circuits is the plan to install a contactor to switch these lighting circuits?

3.2.2 *Response:* Please refer to attached drawing sheet E200 which clarifies the switching intent. Revisions/clarifications have been identified with revision clouds.

4. Attachments:

   4.1. Electrical drawing E200

   4.2. Electrical drawing E201

   4.3. Electrical drawing E202

   4.4. Electrical drawing E500

   4.5. Specifications Section 28 32 00 – Mechanical Alarm Detection System

Distribution:
Taylor Architecture Group
Each Bidder
Stantec Project File

Part 1 General

1.1 SYSTEM

.1 Alarm devices as described and supplied under Divisions 23 and 25.

.2 Red light to indicate full sewage water tank.

.3 Amber light to indicate full domestic water tank.

.4 Amber light to indicate low domestic water tank.

Part 2 Products

2.1 INDICATOR LIGHTS

.1 Supply and wire sewage water fill lights to float switches. Float switches to be supplied by Division 25.

.2 Supply and wire domestic water fill light to float switch. Float switch to be supplied by Division 25.

.3 Fixture housing to be marine-grade aluminum housing c/w silicone gaskets. Lamps to be light emitting diode (LED) type. LED array rated for 50,000 hours and draws approximately 16W. Globe to be coloured polycarbonate. Fixture to be wall-mount c/w guard. Standard of acceptance to be Phoenix Metallic LED VP Series:

Red: VA-W-LED-13-NW-PPR

Amber: VA-W-LED-13-NW-PPA

.4 Division 28 to provide any transformers or relays required for operational system.

Part 3 Execution

3.1 INSTALLATION

.1 Division 28 to supply relay contact in mechanical control panel which is normally open and closes on alarm. Provide all wiring required to make system functional.

.2 Domestic water fill amber light to light when water level is high and operator is required to stop pumping. Amber light to stay on for a period of time as specified in the mechanical drawing Light is to be mounted as shown on drawings.

.3 Domestic water low amber light to light when water level is low and requires fill up. Amber light to stay on until the tank is filled up to above the minimum level. Light is to be mounted as shown on drawings.

.4 Sewage tank full light is to light when the sewage level is high and the operator is required to pump it out. Red light is to remain on until such time as the level drops.

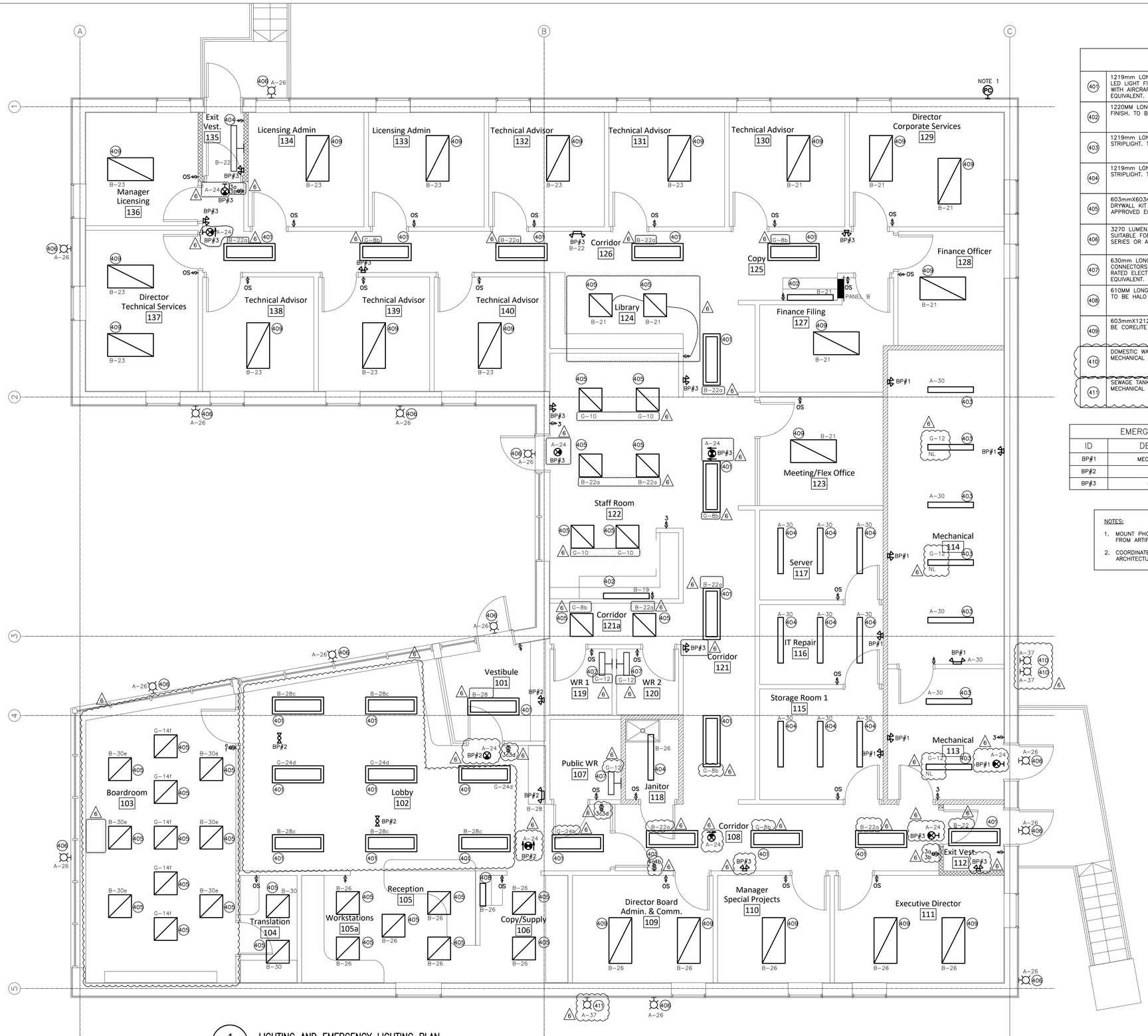
.5 Provide Type A lamicoid labels below each appropriate light reading:

.1 "DOMESTIC WATER TANK FULL"

.2 "DOMESTIC WATER TANK LOW"

.3 "SEWAGE WATER TANK FULL"

END OF SECTION



1 LIGHTING AND EMERGENCY LIGHTING PLAN
E200 1:50

LUMINAIRE SCHEDULE

401	1219mm LONG, 6190 LUMEN, 63.7 WATT, 4000K, SUSPENDED DIRECT/INDIRECT LED LIGHT FIXTURE, 65% UPLIGHT, 35% DOWNLIGHT. SUSPENDED 2300mm A.F.F. WITH AIRCRAFT CABLE. TO BE CORELITE VERTECHS SERIES OR APPROVED EQUIVALENT.
402	1220MM LONG, 1320 LUMEN, 4000K UNDER COUNTER LED FIXTURE. WHITE FINISH. TO BE HALO HU10 SERIES OR APPROVED EQUIVALENT.
403	1219mm LONG, 4615 LUMEN, 41 WATT, 4000K, SUSPENDED LENSED LED STRIPLIGHT. TO BE METALUX SNLED SERIES OR APPROVED EQUIVALENT.
404	1219mm LONG, 4615 LUMEN, 41 WATT, 4000K, SURFACE MOUNT LENSED LED STRIPLIGHT. TO BE METALUX SNLED SERIES OR APPROVED EQUIVALENT.
405	603mmX603mm, 3437 LUMEN, 29 WATT, 4000K, RECESSED LED TROFFER. C/W DRYWALL KIT WHERE REQUIRED. TO BE METALUX ENCOUNTER SERIES OR APPROVED EQUIVALENT.
406	3270 LUMEN, 27W, 4000K FULL CUTOFF EXTERIOR LED WALL MOUNT FIXTURE. SUITABLE FOR USE AT -40°C AND WET LOCATION RATED. TO BE LUMARK WP SERIES OR APPROVED EQUAL.
407	630mm LONG, 14W, 1000 LUMEN, 4000K SURFACE MOUNTED LED FIXTURE C/W CONNECTORS, MOUNTING CLIPS, WHITE FINISH, POWER CORD AND STANDARD 120V RATED ELECTRONIC DRIVER. TO BE PRIMA LIGHTING NOVO III SERIES OR APPROVED EQUIVALENT.
408	610MM LONG, 615 LUMEN, 4000K UNDER COUNTER LED FIXTURE. WHITE FINISH. TO BE HALO HU10 SERIES OR APPROVED EQUIVALENT.
409	603mmX1212mm, 4350 LUMEN, 47.7 WATT, 4000K RECESSED LED TROFFER. TO BE CORELITE R2X SERIES OR APPROVED EQUIVALENT.
410	DOMESTIC WATER TANK FILL LIGHTS. REFER TO SPECIFICATIONS SECTION 28 32 00 MECHANICAL ALARM DETECTION SYSTEM.
411	SEWAGE TANK FULL LIGHT. REFER TO SPECIFICATIONS SECTION 28 32 00 MECHANICAL ALARM DETECTION SYSTEM.

EMERGENCY LIGHT BATTERY PACK SCHEDULE

ID	DESCRIPTION	VOLTAGE	MINIMUM WATTAGE
BP#1	MECHANICAL ROOMS	24V	144W
BP#2	LOBBY AREA	24V	144W
BP#3	OFFICE AREA	24V	144W

NOTES:

1. MOUNT PHOTOCELL AT 3000mm ABOVE FINISHED MAIN FLOOR LEVEL AWAY FROM ARTIFICIAL SOURCES OF LIGHT, ON NORTH FACING WALL OF BUILDING.
2. COORDINATE FINAL LOCATIONS OF EXTERIOR LIGHT FIXTURES WITH ARCHITECTURAL. REFER TO A301.

TAYLOR ARCHITECTURE GROUP
3502 Raccine Road
Yellowknife, NT
X1A 3J2
t: 867-920-2728
f: 867-873-3816
e: tag@tagyk.com

Stantec

NOT FOR CONSTRUCTION

ALL DIMENSIONS TO BE SITE VERIFIED BY CONTRACTOR

#	Date	Description
6	5-Mar-18	Issued For Addendum
5	9-Feb-18	Issued For Tender
4	1-Feb-18	100% Construction Documents
3	19-Dec-17	66% Construction Documents
2	1-Dec-17	Client Review
1	15-Nov-17	Design Development

Revisions

Date: NOVEMBER 15, 2017

Project:
NUNAVUT WATER BOARD NEW OFFICE BUILDING

Gjoa Haven, NU

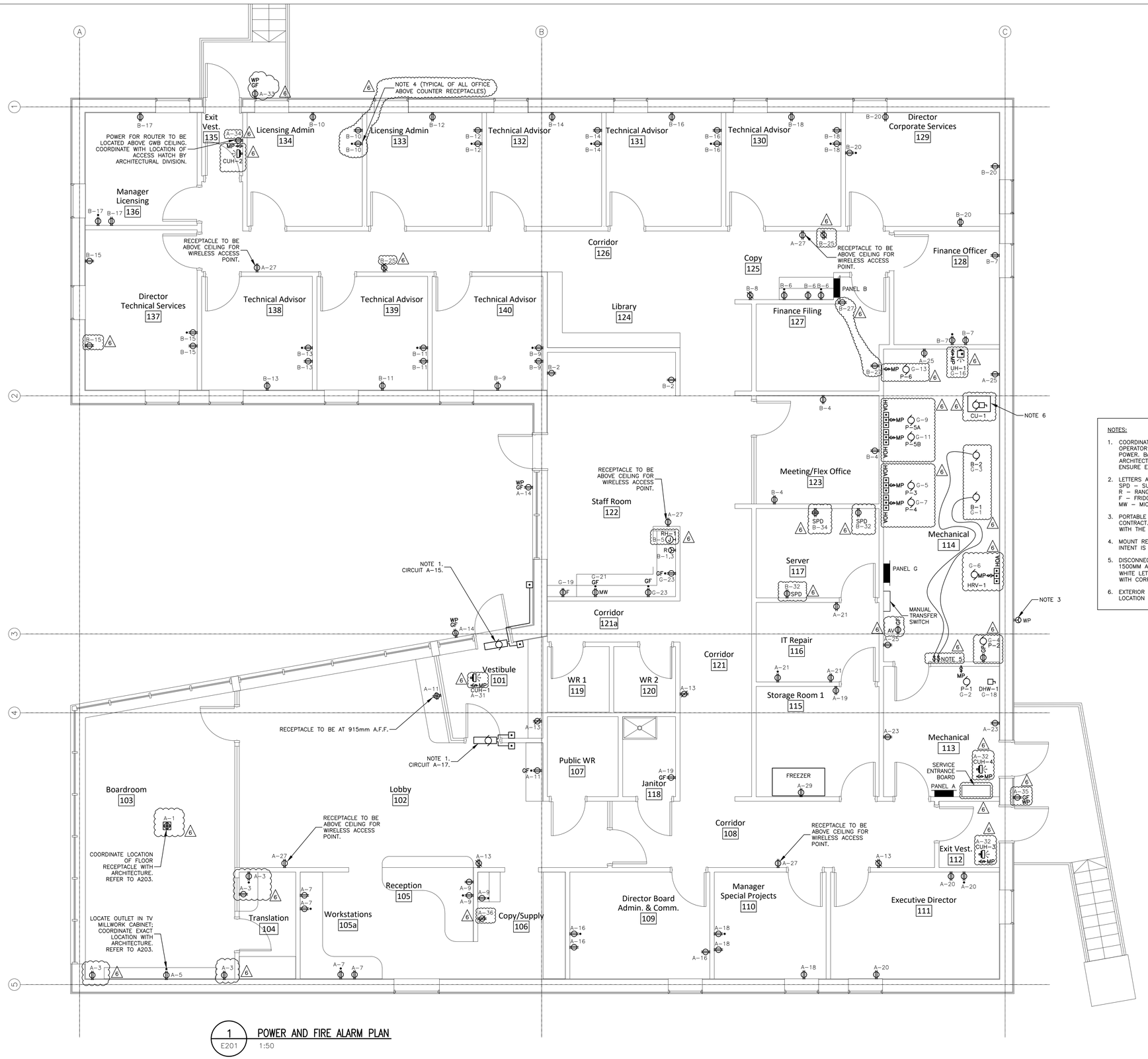
project north / true north

Design by: K.S.S.
Drawing by: E.H.
Scale: As Noted

Sheet name:
Lighting Plan

Project #
TAG PROJECT # 17-017
STANTEC PROJECT # 144902600

Drawing #
E200



1 POWER AND FIRE ALARM PLAN
E201 1:50

NOTES:

1. COORDINATE INSTALLATION AND LOCATION OF BARRIER-FREE DOOR OPERATOR WITH ARCHITECTURAL DIVISION. PROVIDE BACKBOXES, CONDUIT, POWER. BARRIER-FREE PUSHBUTTONS AND OPERATOR SUPPLIED BY ARCHITECTURAL DIVISION. DIVISION 26 TO INSTALL AND MAKE OPERATIONAL. ENSURE EXTERIOR PUSHBUTTON BOX IS PROPERLY WEATHER-SEALED.
2. LETTERS ADJACENT TO RECEPTACLES INDICATE THE FOLLOWING:
   SPD – SURGE PROTECTIVE DEVICE
   R – RANGE
   F – FRIDGE
   MW – MICROWAVE
3. PORTABLE GENERATOR CONNECTION POINT. PORTABLE GENERATOR NOT IN CONTRACT. COORDINATE EXACT ATTACHMENT RECEPTACLE REQUIREMENTS WITH THE OWNER-SUPPLED PORTABLE GENERATOR.
4. MOUNT RECEPTACLES DENOTED AS ABOVE COUNTER AT 1200MM A.F.F. INTENT IS THAT RECEPTACLE IS MOUNTED ABOVE DESK HEIGHT.
5. DISCONNECT BANK FOR BOILERS B-1 AND B-2. LOCATE SWITCHES AT 1500MM A.F.F. ON LATCH SIDE OF DOOR. PROVIDE RED COVER PLATES WITH WHITE LETTERING READING 'EMERGENCY DISCONNECT'. IDENTIFY EACH SWITCH WITH CORRESPONDING EQUIPMENT NAME.
6. EXTERIOR CONDENSING UNIT LOCATED BELOW BUILDING. COORDINATE EXACT LOCATION WITH MECHANICAL DIVISION.

TAYLOR ARCHITECTURE GROUP
3502 Raccine Road
Yellowknife, NT
X1A 3J2
t: 867-920-2728
f: 867-873-3816
e: tag@tagyk.com

Stantec

NOT FOR CONSTRUCTION

ALL DIMENSIONS TO BE SITE VERIFIED BY CONTRACTOR

#	Date	Description
6	5-Mar-18	Issued For Addendum
5	9-Feb-18	Issued For Tender
4	1-Feb-18	100% Construction Documents
3	19-Dec-17	66% Construction Documents
2	1-Dec-17	Client Review
1	15-Nov-17	Design Development

Revisions

Date: NOVEMBER 15, 2017

Project:
NUNAVUT WATER BOARD
NEW OFFICE BUILDING
Gjoa Haven, NU

project north / true north

Design by: K.S.S.
Drawing by: E.H.
Scale: As Noted

Sheet name:
Power Plan

Project #
TAG PROJECT # 17-017
STANTEC PROJECT # 144902600

Drawing #
E201

1 LOW TENSION PLAN
E202 1:50

INTRUSION ALARM SCHEDULE		
PARTITION	LOCATION	ZONES
IA1	PUBLIC AREA	IAZ9–IAZ10
IA2	SERVICE SPACES	IAZ11
IA3	MAIN OFFICE AREA	IAZ1–IAZ8

NOTES:

1. THE LETTERS ADJACENT TO THE INTRUSION ALARM MOTION DETECTORS IDENTIFY THE TYPE OF RANGE AS FOLLOWS:
   'B' – BROAD
   'L' – LONG
2. FOR ANY INTRUSION ALARM DEVICE OR KEYPAD, PROVIDE SEPARATE HOMERUN BACK TO INTRUSION ALARM PANEL. EACH DEVICE TO BE A SEPARATE ZONE.
3. INTRUSION ALARM DOOR POSITION SWITCHES. COORDINATE WITH DOOR FRAME SUPPLIER/INSTALLER REGARDING FRAME CUTTING, INSTALLATION, AND DOOR POSITION SWITCH CONTROLS.
4. INSTALL COMMUNICATIONS EQUIPMENT AND INTRUSION ALARM PANEL ON 19mm X 1219mm X 1219mm PLYWOOD BACKBOARD. BACKBOARD TO BE PAINTED WITH FIRE RETARDANT PAINT.
5. FOR EACH STRUCTURED WIRING OUTLET, PROVIDE TWO (2) CAT 6 CABLES, UNLESS OTHERWISE INDICATED ON THE DRAWINGS, AND TERMINATE ON RJ45 JACKS. CABLES TO BE HOME RUN TO SERVER ROOM 117.
6. PROVIDE 2 X 53mm EMT CONDUIT FROM TELECOM BACKBOARD TO SERVER ROOM 117.

TAYLOR ARCHITECTURE GROUP
3502 Raccine Road
Yellowknife, NT
X1A 3J2
t: 867-920-2728
f: 867-873-3816
e: tag@tagyk.com

Stantec

NOT FOR CONSTRUCTION

ALL DIMENSIONS TO BE SITE VERIFIED BY CONTRACTOR

#	Date	Description
6	5-Mar-18	Issued For Addendum
5	9-Feb-18	Issued For Tender
4	1-Feb-18	100% Construction Documents
3	19-Dec-17	66% Construction Documents
2	1-Dec-17	Client Review
1	15-Nov-17	Design Development

Revisions

Date: NOVEMBER 15, 2017

Project:
NUNAVUT WATER BOARD
NEW OFFICE BUILDING
Gjoa Haven, NU

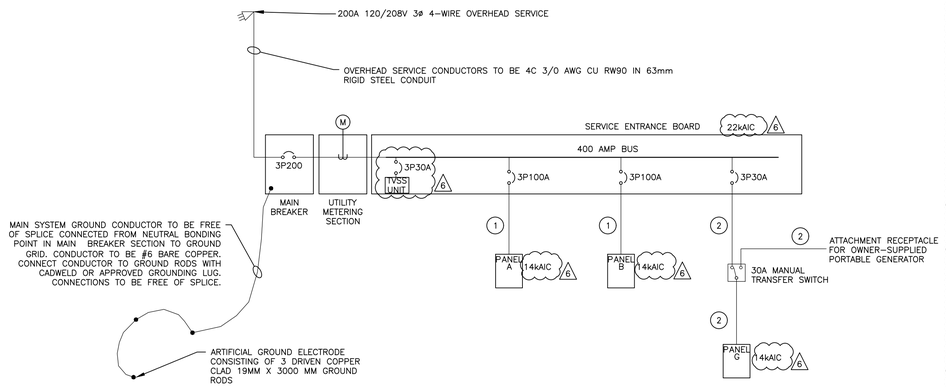
project north / true north

Design by: K.S.S.
Drawing by: E.H.
Scale: As Noted

Sheet name:
Low Tension Plan

Project #
TAG PROJECT # 17-017
STANTEC PROJECT # 144902600

Drawing #
E202



CONDUCTOR SCHEDULE	
1	SINGLE RUN OF 4 X #3 AWG CU RW90 XLPE + ONE #6 CU BOND IN 35mm EMT CONDUIT
2	SINGLE RUN OF 4 X #10 AWG CU RW90 XLPE + ONE #12 CU BOND IN 21mm EMT CONDUIT

1 E500 SINGLE LINE DIAGRAM

N.T.S.

DEMAND CALCULATION AS PER C22.1-15

SERVICE FEEDER CALCULATION – NUNAVUT WATER BOARD OFFICE BUILDING

	AREA (m^2)	WATTS / m^2	PERCENT		LOAD	
OFFICE	500					
FIRST 930m2	500	50	90	=	22500	W
REMAINING AREA	0	50	70	=	0	
SUBTOTAL				=	22500	W
ADDITIONAL LOADS	WATTS	QTY	PERCENT			
MECHANICAL LOADS	11800		100	=	11800	W
PARKING RECEPTACLES	650	6	100	=	3900	W
MISC	5000		100	=	5000	W
TOTAL ADDITIONAL LOAD				=	20700	W
TOTAL BUILDING SERVICE SIZE				=	43200	W
AT 120/208V, 3ø, 60Hz				=	120	A
USE 80% MAIN BREAKER				=	150	A
MAIN DISCONNECT SIZE					200	A
SERVICE CAPACITY					72	kVA

PANEL: A

VOLTS: 120/208 LOCATION: MECHANICAL ROOM 113 BUSS: 225

PHASE: 3 FEEDER: REFER TO SINGLE LINE DIAGRAM MTG: SURFACE

WIRE: 4

CIRC	BRKR	WATTS A	WATTS B	WATTS C	DESCRIPTION	DESCRIPTION	WATTS A	WATTS B	WATTS C	BRKR	CIRC
1	1P15	500			FLOOR RCPT – BOARDRM	PARKING RCPT	650			1P15	2
3	1P15		500		BOARDRM/TRANSLATION RM			650		1P15	4
5	1P15			500	BOARDRM TV RCPT	PARKING RCPT			650	1P15	6
7	1P15	600			WORKSTATIONS 10S RCPT		650			1P15	8
9	1P15		600		RECEPTION RCPT	PARKING RCPT		650		1P15	10
11	1P15			300	LOBBY RECP				650	1P15	12
13	1P20	450			HOUSEKEEPING RCPT	EXTERIOR RCPT*	1000			1P15	14
15	1P15		100		DOOR OPERATOR	OFFICE 109 RCPT		450		1P15	16
17	1P15			100	DOOR OPERATOR	OFFICE 110 RCPT			450	1P15	18
19	1P15	300			JANITOR/STORAGE RCPT	OFFICE 111 RCPT	450			1P15	20
21	1P15		450		IT REPAIR RCPT	P-2		333		1P15	22
23	1P15			300	MECH 113 RCPT	EXIT LIGHTS**			300	1P15	24
25	1P15	450			MECH 114 RCPT	EXTERIOR LGTS	530			1P20	26
27	1P15		250		WAPs	SPARE		–		1P15	28
29	1P15			250	STORAGE FREEZER	MECH RM LGTS			645	1P15	30
31	1P15	50			CUH-1	CUH-3 & CUH-4	100			1P15	32
33	1P15		500		EXTERIOR RCPT*	WIRELESS ROUTER		250		1P15	34
35	1P15			500	EXTERIOR RCPT*	PRINTER RCPT			500	1P20	36
37	1P15	100			TANK FILL LIGHTS	AV	100			1P15	38
39		–			SPACE	SPACE		–			40
41				–	SPACE	SPACE			–		42
TOTAL		2450	2400	1950			3280	2333	3195	TOTAL	

PHASE A TOTAL = 5730
PHASE B TOTAL = 4733
PHASE C TOTAL = 5145
PANEL TOTAL = 15608 @120/208 VOLTS 3 PHASE 43.3 AMPS

REMARKS
*PROVIDE GFI BREAKER.
**PROVIDE LOCK-ON DEVICE FOR BREAKER.

PANEL: B

VOLTS: 120/208 LOCATION: FINANCE FILING 127 BUSS: 225

PHASE: 3 FEEDER: REFER TO SINGLE LINE DIAGRAM MTG: RECESSED

WIRE: 4

CIRC	BRKR	WATTS A	WATTS B	WATTS C	DESCRIPTION	DESCRIPTION	WATTS A	WATTS B	WATTS C	BRKR	CIRC
1	2P50	3000			RANGE	STAFF ROOM RCPT	300			1P15	2
3			3000			MEETING ROOM RCPT		450		1P15	4
5	1P15			50	RH-1	COPY ROOM RCPT			450	1P15	6
7	1P15	450			OFFICE 128 RCPT	PRINTER RCPT	300			1P20	8
9	1P15		450		OFFICE 140 RCPT	OFFICE 134 RCPT			450	1P15	10
11	1P15			450	OFFICE 139 RCPT	OFFICE 133 RCPT				1P15	12
13	1P15	450			OFFICE 138 RCPT	OFFICE 132 RCPT	450			1P15	14
15	1P15		450		OFFICE 137 RCPT	OFFICE 131 RCPT		450		1P15	16
17	1P15			450	OFFICE 136 RCPT	OFFICE 130 RCPT			450	1P15	18
19	1P15	200			STAFF ROOM LGTS	OFFICE 129 RCPT	600			1P15	20
21	1P15		400		FINANCE/COPY/LIBRARY LGTS	CORRIDOR/STAFF RM LGTS & BP#3		785		1P15	22
23	1P15			500	OFFICE LIGHTS	CUH-2			50	1P15	24
25	1P20	500			HOUSEKEEPING RCPT	OFFICES/COPY/RECPT LGTS	445			1P15	26
27	1P15		250		FINANCE FILING 127	LOBBY/VEST. LGTS & BP#2		530		1P15	28
29	1P15			–	SPARE	BOARDRM/TRANSLATION LGTS			235	1P15	30
31	1P15	–			SPARE	SERVER RM RCPT	500			1P15	32
33			–			SERVER RM QUAD RCPT		500		1P15	34
35				–					–		36
37		–					–				38
39			–					–			40
41				–					–		42
TOTAL		4600	4550	1450			2595	3165	1635	TOTAL	

PHASE A TOTAL = 7195
PHASE B TOTAL = 7715
PHASE C TOTAL = 3085
PANEL TOTAL = 17995 @120/208 VOLTS 3 PHASE 49.9 AMPS

REMARKS

PANEL: G

VOLTS: 120/208 LOCATION: MECHANICAL ROOM 114 BUSS: 225

PHASE: 3 FEEDER: REFER TO SINGLE LINE DIAGRAM MTG: SURFACE

WIRE: 4

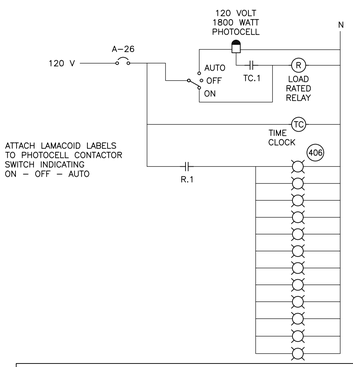
CIRC	BRKR	WATTS A	WATTS B	WATTS C	DESCRIPTION	DESCRIPTION	WATTS A	WATTS B	WATTS C	BRKR	CIRC
1	1P15	100			B-1	P-1	375			1P20	2
3	1P15		100		B-2	SPACE		–		–	4
5	1P20			375	P-3	SPACE			–	–	6
7	1P20	375			P-4	CORRIDOR LGTS	350			1P15	8
9	1P30		575		P-5A	STAFF RM LGTS		120		1P15	10
11	1P30			575	P-5B	WASHRM/MECH RM LGTS			165	1P15	12
13	1P20	375			P-6	BOARDRM LGTS	145			1P15	14
15			–		SPACE	UH-1		50		1P15	16
17				–	SPACE	SPACE			–	–	18
19	1P15	500			FRIDGE	SPACE	–				20
21	1P15		1000		MICROWAVE	SPACE		–			22
23	1P15			250	KITCHEN COUNTER RECPT	SPARE			–	1P15	24
25		–			SPACE	SPARE	–			1P15	26
27			–		SPACE	SPACE		–			28
29				–	SPACE	SPACE			–		30
TOTAL		1350	1675	1200			870	170	165	TOTAL	

PHASE A TOTAL = 2220
PHASE B TOTAL = 1845
PHASE C TOTAL = 1365
PANEL TOTAL = 5430 @120/208 VOLTS 3 PHASE 15.1 AMPS

REMARKS
OWNER SUPPLIED PORTABLE GENERATOR RATED 5500W. P5A & P5B ARE REDUNDANT; BOTH LOADS WILL NOT RUN AT THE SAME TIME.

MOTOR, CONTROL AND EQUIPMENT SCHEDULE

MOTOR	DESCRIPTION	LOCATION	KW	HP	VOLTS	PHASE	FLA	FEEDER	BREAKER	SOURCE	CONTROL
B-1	BOILER	MECHANICAL 114	–	0.125	120	1	4.4	2C #12 CU + #14 CU BOND IN 21MM CONDUIT	1P15	G-1	LRD
B-2	BOILER	MECHANICAL 114	–	0.125	120	1	4.4	2C #12 CU + #14 CU BOND IN 21MM CONDUIT	1P15	G-3	LRD
P-1	DCW PUMP	MECHANICAL 113	–	0.5	120	1	9.8	2C #12 CU + #14 CU BOND IN 21MM CONDUIT	1P20	G-2	MMP
P-2	GLYCOL FILL PUMP	MECHANICAL 114	–	0.33	120	1	7.2	2C #12 CU + #14 CU BOND IN 21MM CONDUIT	1P15	A-22	GFI RECEPTACLE
P-3	HEATING PRIMARY PUMP	MECHANICAL 114	–	0.5	120	1	9.8	2C #12 CU + #14 CU BOND IN 21MM CONDUIT	1P20	G-5	MMP/R/HOA
P-4	HEATING PRIMARY PUMP	MECHANICAL 114	–	0.5	120	1	9.8	2C #12 CU + #14 CU BOND IN 21MM CONDUIT	1P20	G-7	MMP/R/HOA
P-5A	HEATING SECONDARY PUMP	MECHANICAL 114	–	0.75	120	1	13.8	2C #12 CU + #14 CU BOND IN 21MM CONDUIT	1P30	G-9	MMP/R/HOA
P-5B	HEATING SECONDARY PUMP	MECHANICAL 114	–	0.75	120	1	13.8	2C #12 CU + #14 CU BOND IN 21MM CONDUIT	1P30	G-11	MMP/R/HOA
P-6	RADIANT FLOOR PUMP	MECHANICAL 114	–	0.5	120	1	9.8	2C #12 CU + #14 CU BOND IN 21MM CONDUIT	1P20	G-13	MMP
HRV-1	HEAT EXCHANGER	MECHANICAL 114	–	1	120	1	16	2C #12 CU + #14 CU BOND IN 21MM CONDUIT	1P40	G-6	MMP/R/HOA
AC-1	SERVER AC UNIT	SERVER 117	2.7	–	208	1	13	3C #12 CU + #14 CU BOND IN 21MM CONDUIT	CU-1		LRD C/W NEMA 3 ENCLOSURE
CU-1	AC EXTERIOR UNIT	EXTERIOR						3C #10 TECK90 + #12 CU BOND	2P30	A-1,3	
RH-1	RANGE HOOD	STAFF ROOM 122	–	FRAC	120	1	FRAC	2C #12 CU + #14 CU BOND IN 21MM CONDUIT	1P15	B-5	BREAKER
CUH-1	CABINET UNIT HEATER	VESTIBULE 101	–	FRAC	120	1	FRAC	2C #12 CU + #14 CU BOND IN 21MM CONDUIT	1P15	A-31	MMP
CUH-2	CABINET UNIT HEATER	VESTIBULE 135	–	FRAC	120	1	FRAC	2C #12 CU + #14 CU BOND IN 21MM CONDUIT	1P15	A-34	MMP
CUH-3	CABINET UNIT HEATER	VESTIBULE 112	–	FRAC	120	1	FRAC	2C #12 CU + #14 CU BOND IN 21MM CONDUIT	1P15	A-32	MMP
CUH-4	CABINET UNIT HEATER	MECHANICAL 113	–	FRAC	120	1	FRAC	2C #12 CU + #14 CU BOND IN 21MM CONDUIT	1P15	A-32	MMP
UH-1	UNIT HEATER	MECHANICAL 114	–	FRAC	120	1	FRAC	2C #12 CU + #14 CU BOND IN 21MM CONDUIT	1P15	G-16	MMP
AV	ARTIC VENT	MECHANICAL 114	–	FRAC	120	1	FRAC	2C #12 CU + #14 CU BOND IN 21MM CONDUIT	1P15	A38	GFI RECEPTACLE



NOTES:

1. TIME CLOCK TO BE QUARTZ-BASED PROGRAMMABLE TYPE WITH CONTACTS PROGRAMMED TO REMAIN CLOSED BETWEEN 7:00 AM AND 11:00 PM.

2 E500 PHOTOCELL CONTROL SCHEMATIC

N.T.S.

NOTES:

1. MOTOR SCHEDULE IS FOR ESTIMATING PURPOSES ONLY. CONFIRM ALL MOTOR FULL LOAD CURRENTS WITH NAMEPLATES AND SIZE MOTOR DISCONNECTS, BREAKERS, FEEDERS AND OVERLOADS ACCORDINGLY.
2. CONFIRM MECHANICAL EQUIPMENT LOCATIONS WITH MECHANICAL DIVISION.
3. DIVISION 26 CONTRACTOR SHALL COORDINATE THE LOCATIONS OF ALL LINE VOLTAGE PILOT DEVICES WITH DIVISION 23 AND PROVIDE CONDUIT AND WIRING AS NECESSARY.
4. IN ADDITION TO CONTROL SHOWN, PROVIDE LOCAL DISCONNECT IF REQUIRED BY CEC.

CONTROL DEVICE LEGEND:

LRD – LOAD RATED DISCONNECT
MAG – MAGNETIC STARTER
CMS – COMBINATION MAGNETIC STARTER WITH DISCONNECT
MMP – MANUAL MOTOR PROTECTION
/R – WITH LOAD RATED RELAY
/HOA – WITH H-O-A SWITCH
/K – KEYED
/SS – SOFT START
VFD – VARIABLE FREQUENCY DRIVE

TAYLOR ARCHITECTURE GROUP
3502 Raccine Road
Yellowknife, NT
X1A 3J2
t: 867-920-2728
f: 867-873-3816
e: tag@tagyk.com

Stantec

NOT FOR CONSTRUCTION

ALL DIMENSIONS TO BE SITE VERIFIED BY CONTRACTOR

#	Date	Description
6	5-Mar-18	Issued For Addendum
5	9-Feb-18	Issued For Tender
4	1-Feb-18	100% Construction Documents
3	19-Dec-17	66% Construction Documents
2	1-Dec-17	Client Review
1	15-Nov-17	Design Development

Revisions

Date: NOVEMBER 15, 2017

Project:

NUNAVUT WATER BOARD
NEW OFFICE BUILDING

Gjoa Haven, NU

Design by: K.S.S.
Drawing by: E.H.
Scale: As Noted

Sheet name:

Electrical Single Line and Details

Project #

TAG PROJECT # 17-017
STANTEC PROJECT # 144902600

Drawing #

E500

Stantec

ADDENDUM NO. E02

BID DOCUMENTS FOR
NUNAVUT WATER BOARD OFFICE BUILDING

6 March 2018
FILE: 144902600-07-02

ISSUED BY:

Kristen Smith, P.Eng., Senior Associate
STANTEC CONSULTING LTD.
Tel: (709) 576-1458 ext. 5761242
Fax: N/A
kristen.smith@stantec.com

Addendum issued to active tenderers with documents on record **([3] pages including attachments)**

1. Clarifications

   1.1. Refer to electrical drawing E500. Revise Panel 'G' to a 120/240V panelboard as the Owner-supplied portable generator is only capable of 120/240V power supply. Loads and equipment to remain as indicated in the schedule. Circuiting to be adjusted and reflected on as-builts (Phases A and B).

2. Specifications:
   2.1. **Delete** the following from the 'Issued For Tender' specifications:

   2.1.1. Refer to Section 26 05 00:
   - 2.1.1.1. Delete 1.2.6.4 reference to CAN/ULC-S524, Installation of Fire Alarm Systems
   - 2.1.1.2. Delete 1.2.6.5 reference to CAN/ULC-S537, Verification of Fire Alarm Systems
   - 2.1.1.3. Delete 1.2.7.4 reference to CAN/ULC-S524, Installation of Fire Alarm Systems
   - 2.1.1.4. Delete 1.2.7.5 reference to CAN/ULC-S537, Verification of Fire Alarm Systems
   - 2.1.1.5. Delete 1.8.2.5 reference to Fire Alarm System
   - 2.1.1.6. Delete 2.8.7 – Fire alarm pullboxes and junction boxes to be finished in red.
   - 2.1.1.7. Delete 3.5.4.5 – Fire alarm manual stations: 1150 mm.
   - 2.1.1.8. Delete 3.5.4.6 - Fire alarm signal devices: 2300 mm to the top of device, and no less than 150 mm below finished ceiling. Entire lens to be no less than 2000 mm and no greater than 2400 mm A.F.F.
   - 2.1.1.9. Delete 3.7.2.5 – Systems: fire alarm
   - 2.1.1.10. Delete 3.11.1.13 - Fire Alarm Verification report is submitted, free of any deficiencies, qualifications or conditions.
   - 2.1.1.11. Delete 3.11.1.14 - Overcurrent device protection/coordination study has been completed showing results satisfactory to the Engineer with all identified field settings completed.

   2.1.2. Refer to Section 26 05 21:
   - 2.1.2.1. Delete Article 2.5 Fire Alarm Cable in its entirety
   - 2.1.2.2. Delete 3.4.1 - Install control cables in conduit *(Note: cables to be run free-air)*
   - 2.1.2.3. Delete Article 3.6 Installation of Fire Alarm Wiring in its entirety

   2.1.3. Refer to Section 26 05 28:
   - 2.1.3.1. Delete 1.1.2 CSA International, reference to CSA Z32
   - 2.1.3.2. Delete 3.5.1.7 – Fire alarm and detection 1 #6 AWG RW90-XLPE in 12 mm conduit to nearest ground bus

2.1.4. Refer to Section 26 05 32:
2.1.4.1. Delete 2.3.4 – delete paragraph in its entirety

2.2. **Add** the following to the 'Issued For Tender' specifications:
2.2.1. Refer to Section 26 05 00:
2.2.1.1. In Article 1.9 Closeout Submittals, add requirement for Record Drawings:
- Provide 1 set of marked up electrical site record drawings. Provide set of white prints of the construction drawings and use for record drawings. Mark thereon all changes as work progresses and as changes occur. This shall include changes to all electrical systems as constructed, including any revisions from addenda, site instructions, or change orders. Ensure that items marked correspond to the drawing title.
- Use different colour waterproof ink for each service on a per drawing basis.
- Make mark-ups available for reference purposes and inspection at all times.
- Scan record drawings and provide Owner with final record marked up hard copies and electronic scanned record drawings on a CD. Include the CD in the Operation and Maintenance Manual. Provide Owner with record drawings at Substantial Completion.

2.2.2.Refer to Section 26 05 21:
2.2.2.1. Add to Article 2.2.8 TECK90 Cable, Connectors:
2.2.2.1.1. Item .2 Wet type approved for TECK cable where installed outdoors

2.2.3. Refer to Section 26 27 26:
2.2.3.1. Add item 2.1.5 - All switches to be commercial specification grade
2.2.3.2. Add item 2.2.1.7 - All receptacles to be commercial specification grade
2.2.3.3. Add Article 2.3 Special Wiring Devices, to read as follows:
"2.3.1 Generator Connection Receptacle and Plug Set: Pin and Sleeve type connection system specifically for portable generator equipment and including the following features:
.1 240V, 30A, single-phase, 3-pole with grounding pole that makes first.
.2 Copper free cast aluminum construction with spring closing weather cap.
.3 Full weatherproof construction and rain tight connection.
.4 Capable of terminating up to 3/0 wiring.
.5 Designed for reverse service with hot plug.
.6 Receptacle mounting box with 45-degree downward mounting.
.7 Plug complete with connector body and plug."

2.2.4. Refer to Section 26 28 21:
2.2.4.1. Add item 2.1.6 - Circuit breakers to have minimum of 10,000 A symmetrical rms interrupting capacity rating.

2.2.5. Refer to Section 26 53 00:
2.2.5.1. Add item 2.1.15 Standards of Acceptance to be: Aimlite RPALW, Lumacell LA Series, or approved equal.

2.2.6. Refer to Section 28 16 00:
2.2.6.1. Add Article 2.7 Digital Voice Autodialer to Part 2 Products:
".1 Provide autodialer with the following features:

.1 Solid state, user programmable, voice message recording and playback. Not to utilize mechanical tape mechanisms.
.2 Number of message repetitions adjustable from 1 to 8 times.
.3 Each channel to be capable of being individually configurable for alarm on "contacts close", "contacts open" or "no alarm".
.4 Operable on both touch-tone and rotary dial, standard telephone lines.
.5 Minimum message length of 15 seconds per channel for 4-channels or 30 seconds per channel for 2-channels.
.6 Autodialer to be 4-channel Paradox Security Systems Paravox 710 or approved equivalent.

.2 Provide 4 amp/hr battery for use with autodialer.

.3 Provide 120V/12V transformer with minimum of 250mA output at 12 volts for use with autodialer.

.4 Each of the following systems shall activate separate autodialer channels with separate phone numbers and separate messages:
.1 Mechanical alarm
.2 Intrusion alarm"

2.3. **Revise** the following in the 'Issued For Tender' specifications:

2.3.1.Refer to Section 26 24 02:
2.3.1.1. Revise item 1.2.4 to read the following: Provide proof of compatible series rated combination groups for breakers and equipment, if used, with shop drawings.
2.3.1.2. Revise item 2.1.15 to read the following: Switchboard and all breakers within are to be part of a compatible series rated combination group which is compatible with the downstream branch circuit panelboards and breakers.

2.3.2. Refer to Section 26 24 17:
2.3.2.1. Revise item 1.2.3 to read the following: Provide proof of compatible series rated combination groups for breakers and equipment, if used, with shop drawings.
2.3.2.2. Revise item 2.1.10 to read the following: Branch circuit panelboards and all breakers within are to be part of a series rated combination group, which is compatible with upstream breakers and service entrance board.

2.3.3. Refer to Section 26 28 21 Moulded Case Circuit Breakers:
2.3.3.1. Revise item 2.1.5 to read the following: All breakers in branch circuit panelboards and the service entrance switchboard are to be part of a compatible series rated combination group.

2.3.4. Refer to Section 28 16 00:
2.3.4.1. Revise item 3.3.3 to read the following: Provide training as indicated in Article 1.2

Distribution:
Taylor Architecture Group
Each Bidder
Stantec Project File