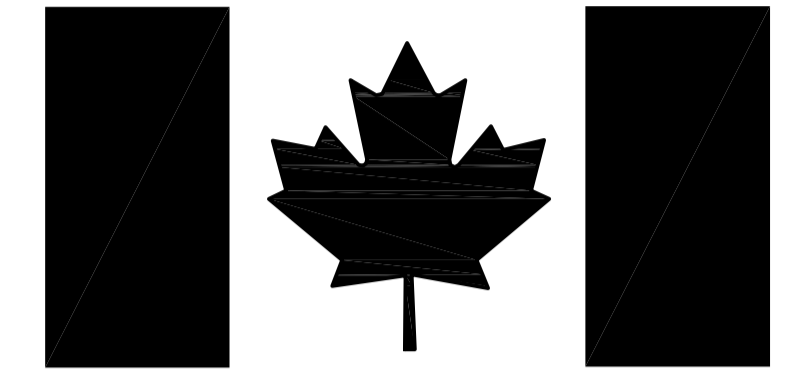


FISHERIES AND OCEANS CANADA / PÊCHES ET OcéANS CANADA



Canada

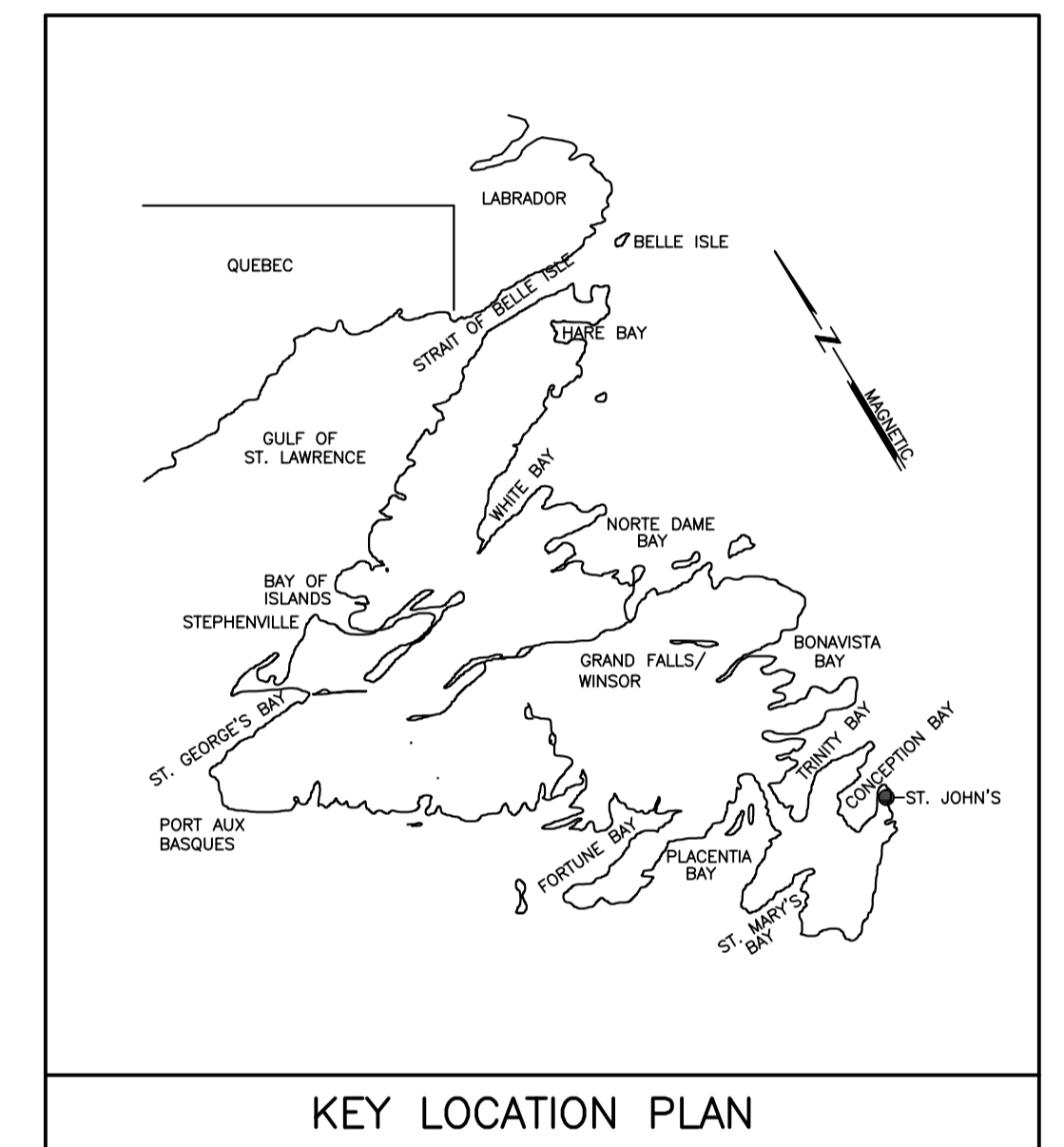
PROJECT TITLE NORTH ATLANTIC FISHERIES CENTER (NAFC) AQUARIUM MONITORING SYSTEM

CLIENT PROJECT NO: F6879-219216

CORE PROJECT NUMBER: 21-3277

ISSUED FOR TENDER

DATE: DECEMBER 09, 2021



CLIENT/OWNER:

Fisheries and Oceans Canada
Pêches et Océans Canada
Real Property Services Immobiliers

DRAWING LIST:

No.	TITLE
ME1	PARTIAL FLOOR PLAN R16 - MECHANICAL/ELECTRICAL LAYOUT & ELECTRICAL DETAILS
ME2	PIPING, MOUNTING AND CONTROL DETAILS

PRIME CONSULTANTS/ELECTRICAL/MECHANICAL:



ELECTRICAL LEGEND

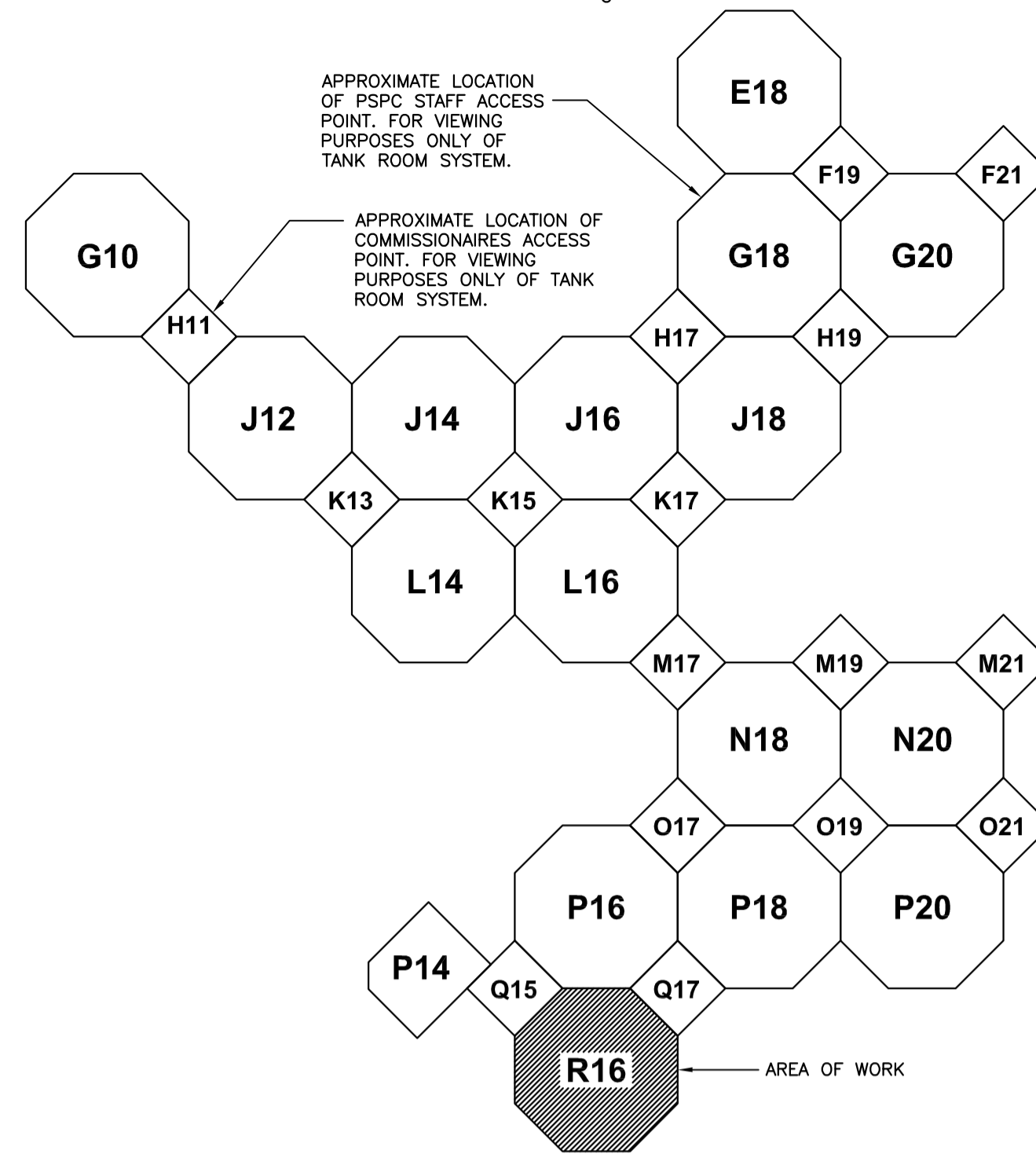
- NEW DISSOLVED OXYGEN/TEMPERATURE SENSOR
- NEW JUNCTION BOX
- NEW ELECTRICAL CONNECTION TO EQUIPMENT.

GENERAL NOTES:

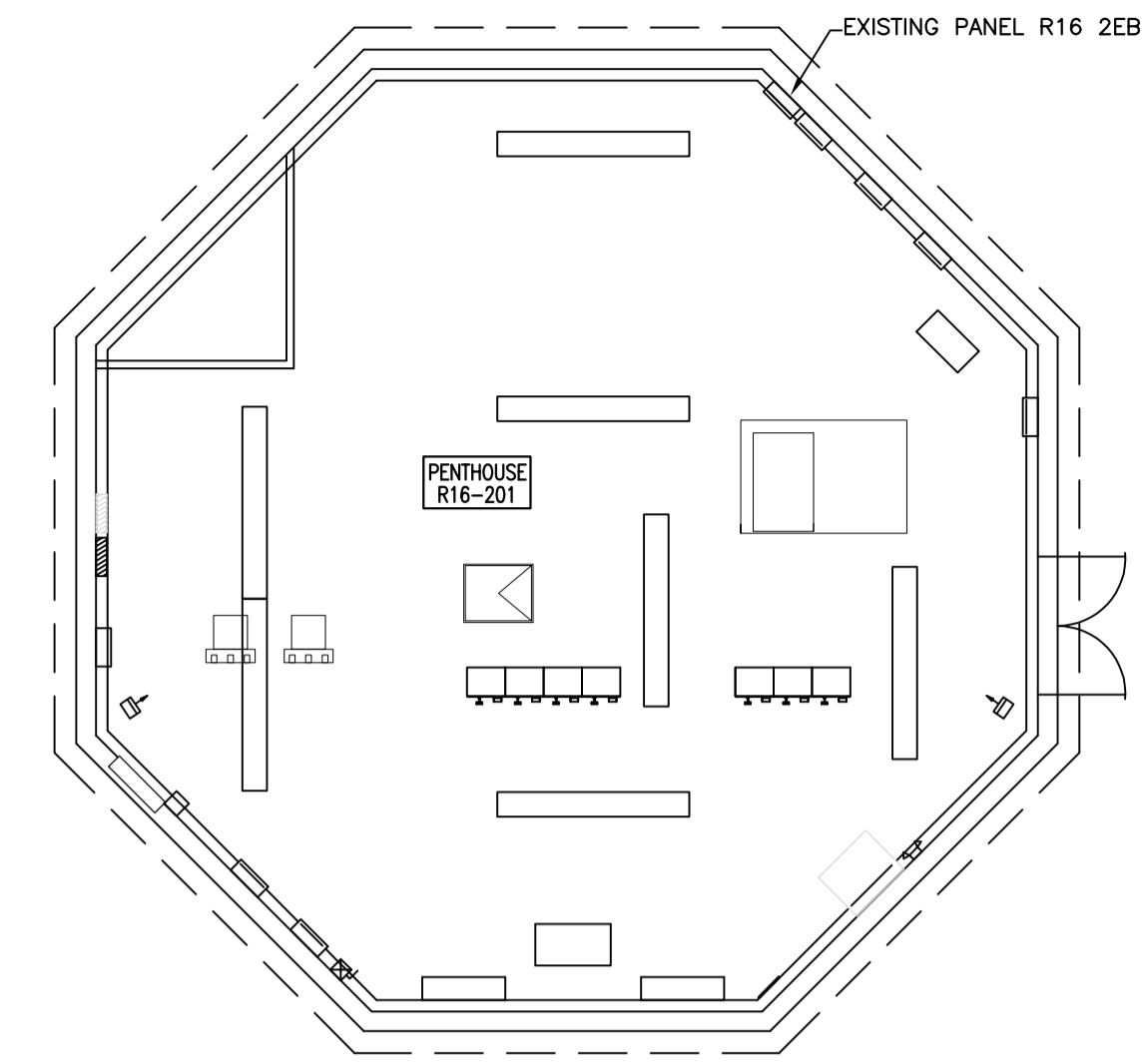
1. ALL WIRING TO BE RUN IN PVC CONDUIT.
2. ALL SUPPORTS FOR ELECTRICAL DEVICES, WIRING, CONDUIT ETC. SHALL BE TYPE 304 STAINLESS STEEL (STRAPS, BOLTS, SCREWS ETC.)

DRAWING NOTES:

- 1 PROVIDE NEW MOTORIZED SHUT-OFF BALL VALVE IN EXISTING LINE SERVING TANK FRESH WATER MAKE-UP. SEE "TANK CONTROL VALVE PIPING" DETAIL ON DRAWING E2. EXISTING VALVE TO BE REMOVED.
- 2 IN LINE CHLORINE SENSOR. SEE "CHLORINE SENSOR CONTROL" DETAIL ON DRAWING E2. PROVIDE SAMPLE TUBING.
- 3 NEW DISSOLVED OXYGEN MONITOR PANEL. MOUNT 1400mm A.F.F. PROVIDE ALUMINUM UNISTRUT SUPPORT AS REQUIRED.

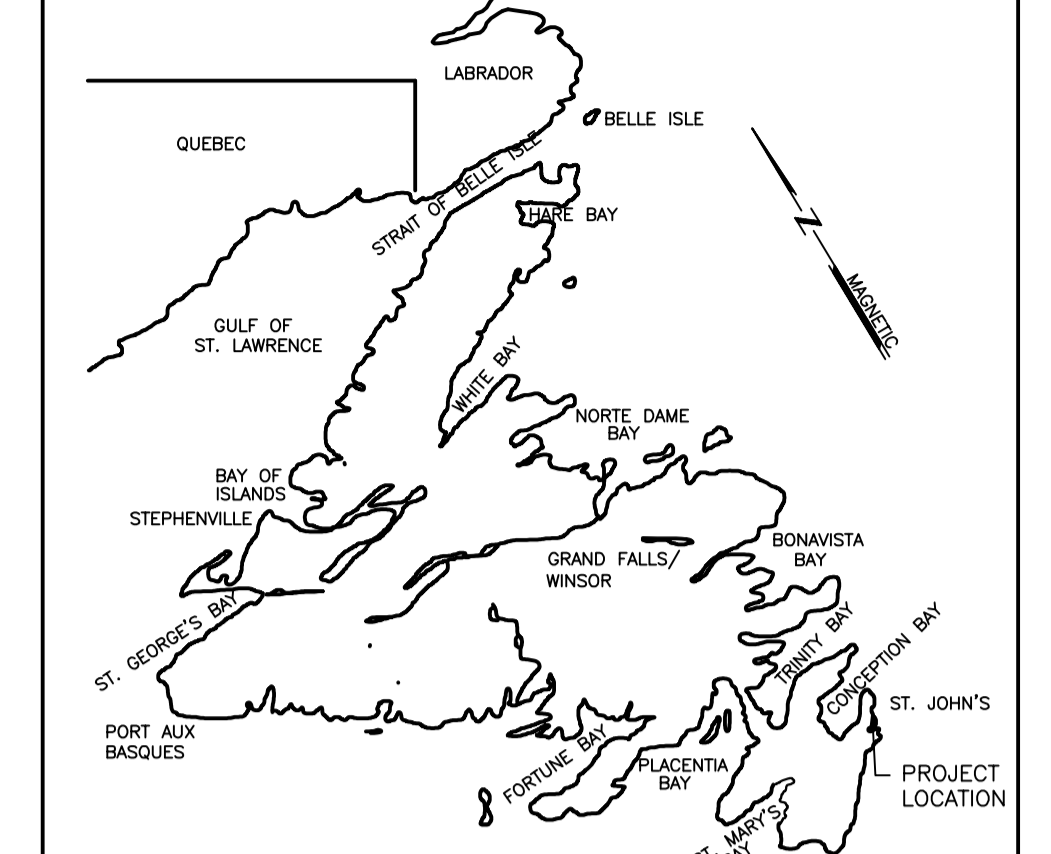


KEY PLAN
N.T.S.



PENTHOUSE (R16) FLOOR PLAN - ELECTRICAL LAYOUT

SCALE : 1:100
0m 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m



KEY LOCATION PLAN

PRIME CONSULTANT: MECHANICAL/ELECTRICAL

COREC
ENGINEERING INC.
MECHANICAL & ELECTRICAL CONSULTANT
57 POPPY PLACE
ST. JOHN'S, NL CANADA A1B 4B8
TEL: (709) 722-8813
FAX: (709) 722-6910

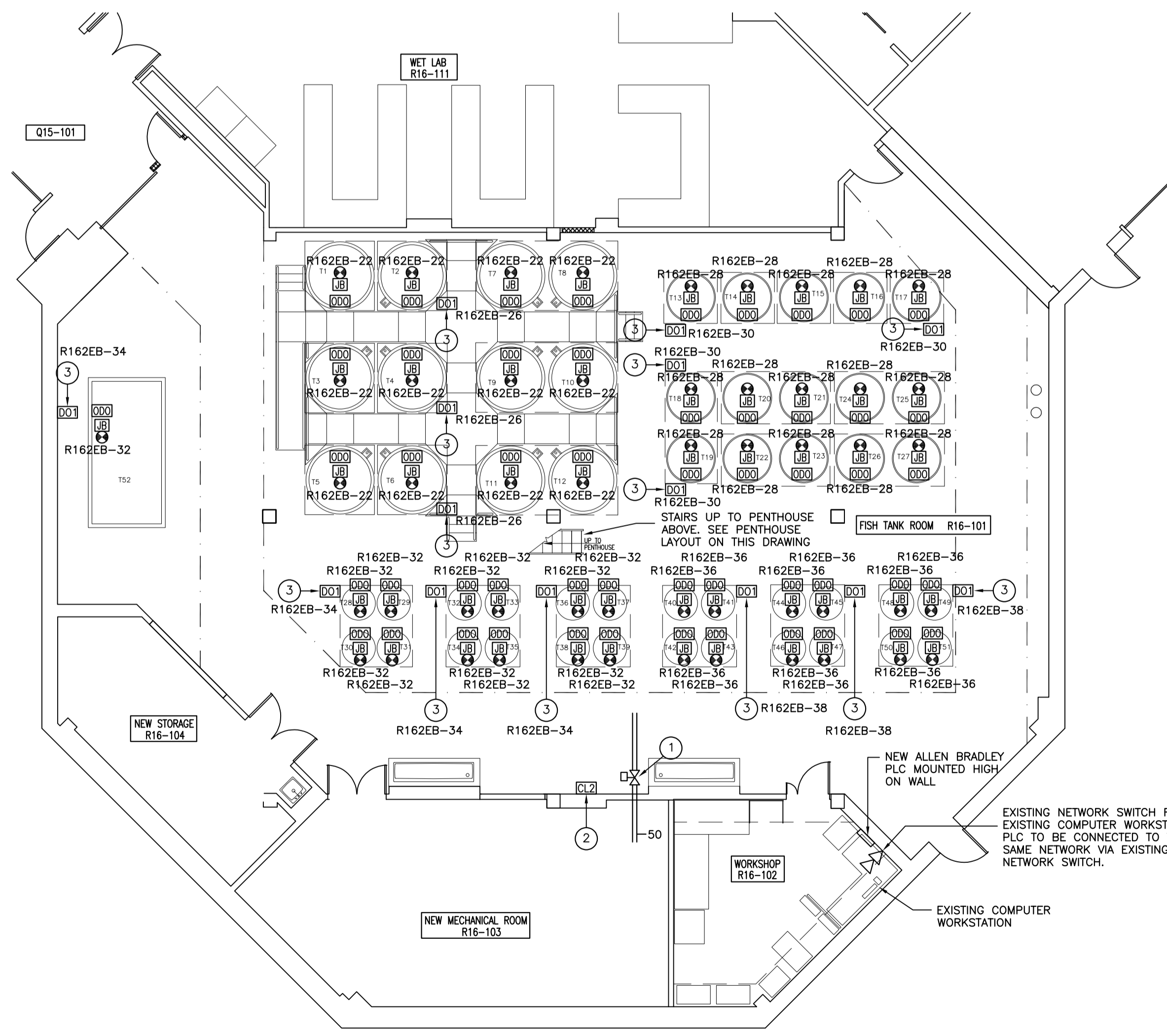
PROVINCE OF NEWFOUNDLAND
PERMIT HOLDER
This Permit Allows
CORE ENGINEERING INC.
MIRC: 04896
To practice Professional Engineering in Newfoundland and Labrador.
Permit No. as issued by PEGNL D0209 which is valid for the year 2021.

RO	ISSUED FOR TENDER	DEC/09 2021
revisions		date

project NORTH ATLANTIC FISHERIES CENTER (NAFC) AQUARIUM MONITORING SYSTEM
ST. JOHN'S NL

drawing PARTIAL FLOOR PLAN R16 - MECHANICAL/ELECTRICAL LAYOUT & ELECTRICAL DETAILS
dessin

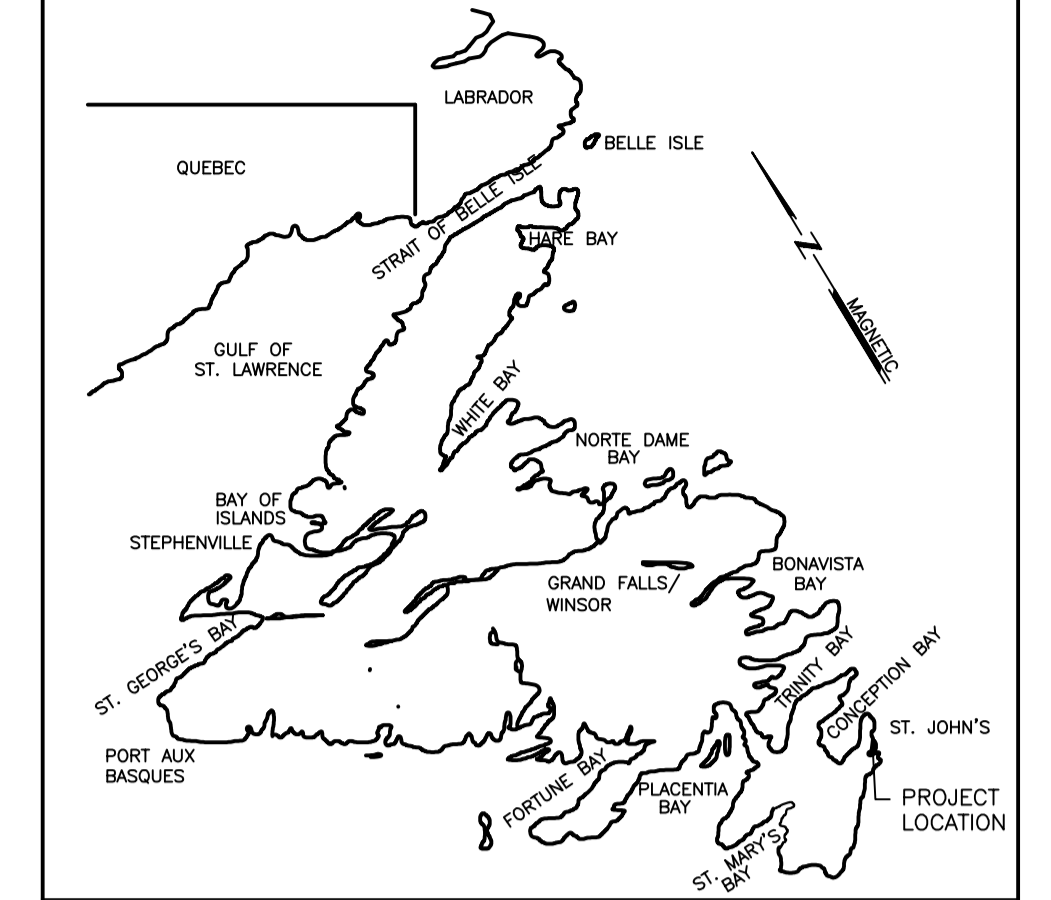
designed	G.T.	conçu	
date	SEPTEMBER 2021		
drawn	M.N.	dessiné	
date	SEPTEMBER 2021		
approved	G.T.	approuvé	
date	SEPTEMBER 2021		
Tender		Soumission	
PWGC Project Manager		Administrateur de projets TPSGC	
project number		no. du projet	
CLIENT#:	F6879-219216;	CORE#:	21-3277
drawing no.		no. du dessin	
		ME1 OF 2	



PARTIAL FLOOR PLAN (R16) - MECHANICAL/ELECTRICAL LAYOUT

SCALE : 1:100
0m 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m

EXISTING PANEL		PANEL SCHEDULE	
PANEL "R16_2EB"		TYPE CIRCUIT BREAKER	
RATING 120/208V, 3Ø, 4W, 100A		STANDARD OF ACCEPTANCE EXISTING SQUARE D, SERIES E2	
MINIMUM INTERRUPTING CAPACITY 10kA R.M.S. SYMM AMPERES		NOTES:	
CIRCUIT DESCRIPTION	LOAD WATTS	WIRE SIZE	CIRCUIT DESCRIPTION
(1) SURVEILLANCE CAMERA	200	15 1 2 15	SPARE (1)
(1) SPARE		30 3 4 15	SPARE (1)
(1) EMERGENCY LTS - PENTHOUSE	200	2 5 6 15	SPARE (1)
(1) SPARE		15 7 8 15	REC-WORKSHOP R16-102 (1)
(1) LIGHTING CONTROL PANEL	200	15 9 10 15	REC-WORKSHOP R16-102 (1)
(1) SPARE		15 13 14 15	REC-WORKSHOP R16-102 (1)
(1) SPARE		30 15 16 15	REC-WORKSHOP R16-102 (1)
(1) SPARE		2 17 18 15	SPARE (1)
(1) SPARE		30 19 20 15	START FANS (1)
(1) SPARE		2 21 22 15	12 600 NEW TANK SENSORS (T1-T12) (2)
(1) SPARE		15 23 24 15	SPARE (1)
(1) SPARE		15 25 26 15	12 300 DISSOLVED OXYGEN SENSOR CONTROLLER (T1-T12) (2)
(1) DDC PANEL	200	15 27 28 15	12 750 NEW TANK SENSORS (T13-T27) (2)
(1) SPARE		15 29 30 15	12 400 DISSOLVED OXYGEN SENSOR CONTROLLER (T13-T27) (2)
(1) SPARE		15 31 32 15	12 600 NEW TANK SENSORS (T28-T39, T52) (2)
(1) SPARE		15 33 34 15	12 400 DISSOLVED OXYGEN SENSOR CONTROLLER (T28-T39, T52) (2)
(1) SPARE		15 35 36 15	12 600 NEW TANK SENSORS (T40-T51) (2)
(1) SPARE		15 37 38 15	12 300 DISSOLVED OXYGEN SENSOR CONTROLLER (T40-T51) (2)
(1) SPARE		15 39 40 15	SPARE (1)
(1) SPARE		15 41 42	EXISTING SPACE (1)
CONNECTED LOAD: -			
NOTES:			
(1) EXISTING BREAKER TO REMAIN.			
(2) EXISTING BREAKER TO REMAIN. RUN NEW WIRING AND CONDUIT AS INDICATED.			



KEY LOCATION PLAN
 PRIME CONSULTANT: MECHANICAL/ELECTRICAL
COREC ENGINEERING INC.
 MECHANICAL & ELECTRICAL CONSULTANT
 57 POPPY PLACE ST. JOHN'S, NL CANADA A1B 4B8
 TEL: (709) 722-8813 FAX: (709) 722-6910

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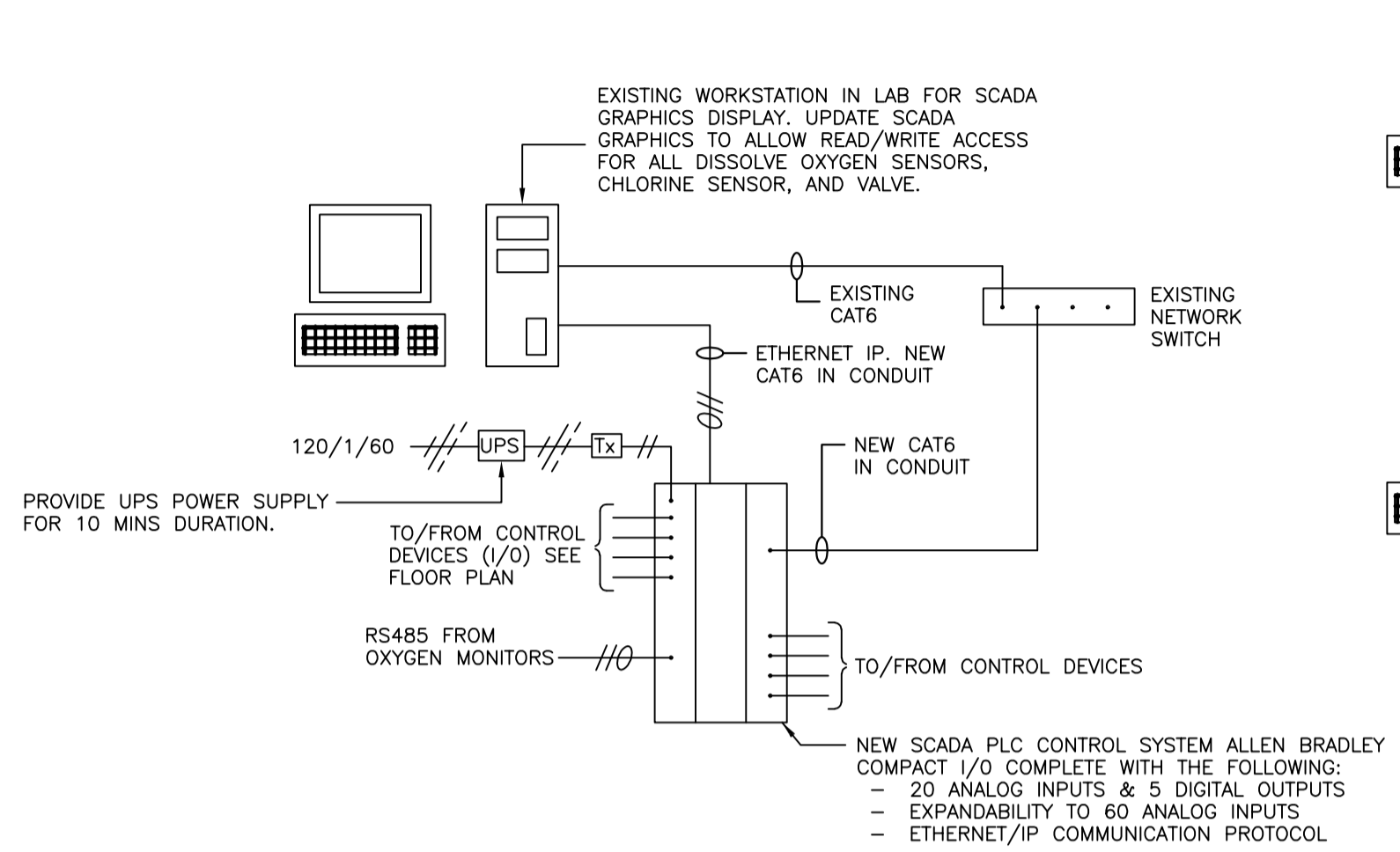
RO	ISSUED FOR TENDER	DEC/09 2021
revisions		date

project: NORTH ATLANTIC FISHERIES CENTER (NAFC) AQUARIUM MONITORING SYSTEM
 project location: ST. JOHN'S NL

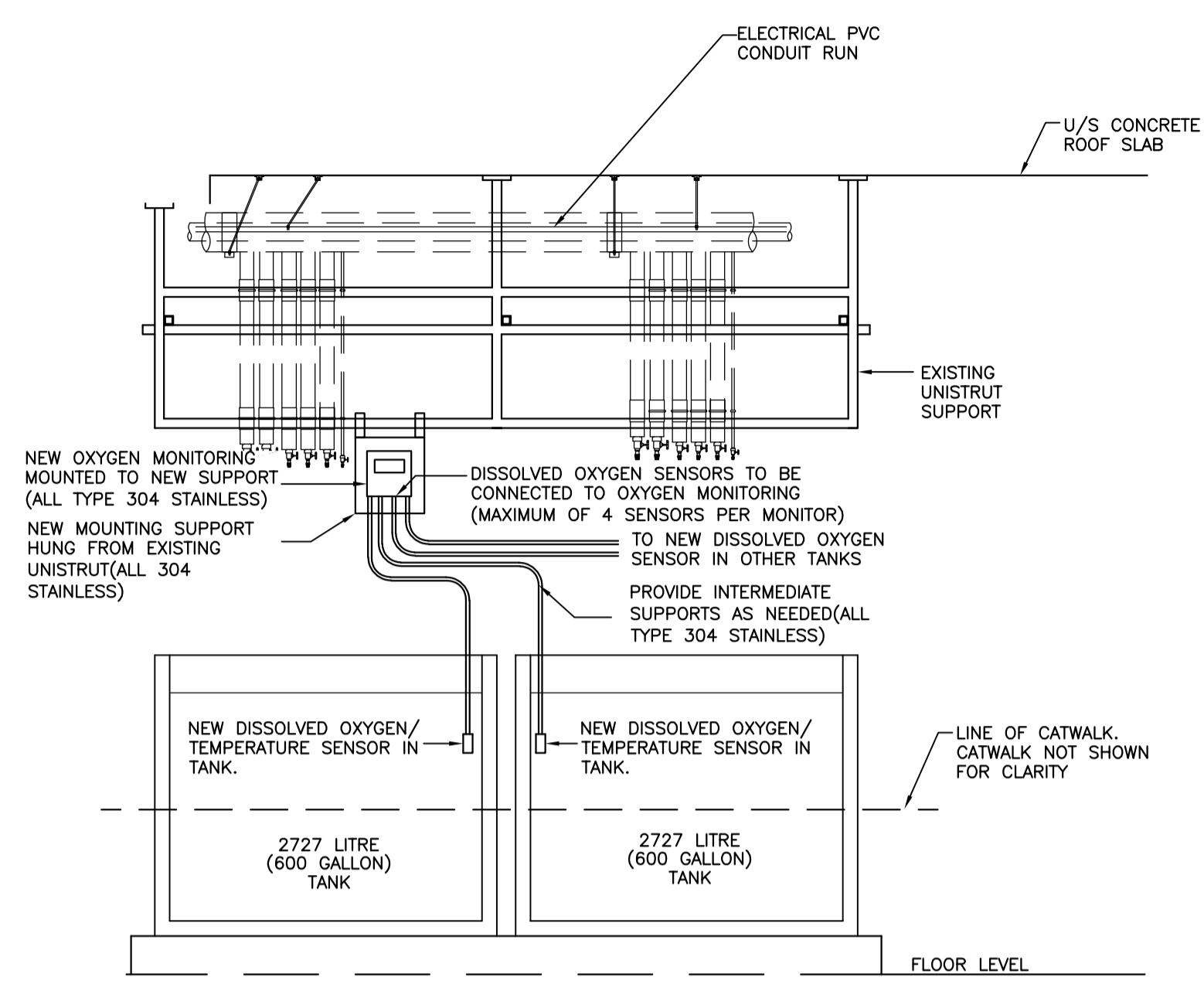
PIPING, MOUNTING AND CONTROL DETAILS

designed	G.T.	conçu
date	SEPTEMBER 2021	
drawn	M.N.	dessiné
date	SEPTEMBER 2021	
approved	G.T.	approuvé
date	SEPTEMBER 2021	
Tender		Soumission
PWGC Project Manager		Administrateur de projets TPSGC
project number		no. du projet
	CLIENT#: F6879-219216;	CORE#: 21-3277
drawing no.	ME2 OF 2	no. du dessin

- GENERAL NOTES:**
1. ALL CONTROL WIRING TO BE INSTALLED IN PVC CONDUIT IN TANK/FILTER ROOM. INSTALL IN EMT CONDUIT ELSEWHERE.
 2. CONTROLS CONTRACTOR TO SUPPLY AND INSTALL ALL WIRING/CONDUIT FOR CONTROLS SYSTEM 50V AND BELOW.
 3. MOUNT NEW PLC IN PVC NEMA 3R ENCLOSURE.

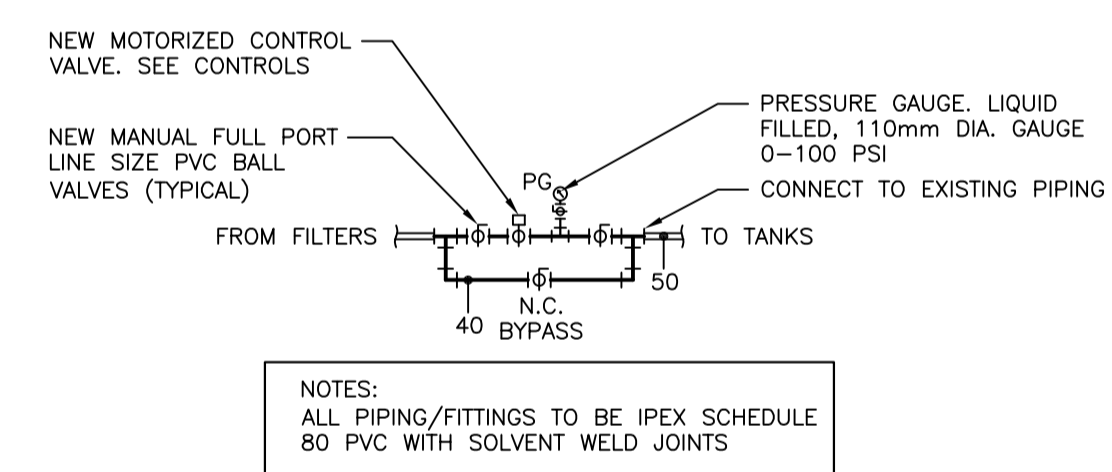


SCADA CONTROL DETAIL – AQUARIUM MONITORING SYSTEM
 N.T.S.

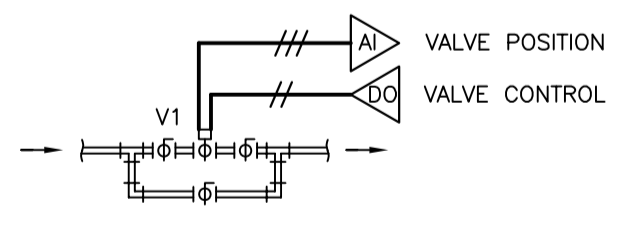


TANK MOUNTING DETAIL – SENSOR AND MONITORING
 N.T.S.

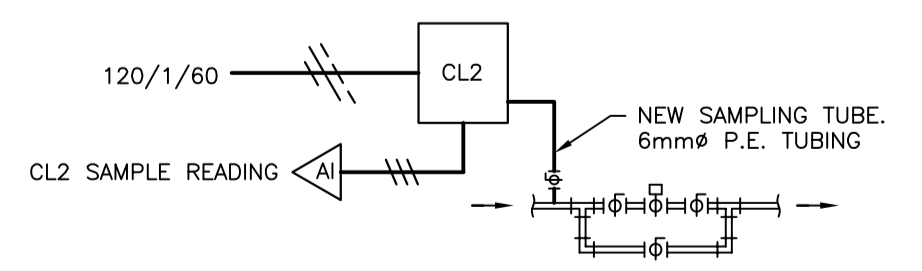
- CONTROLS LEGEND**
- AO - ANALOG OUTPUT SIGNAL FROM PLC PANEL
 - AI - ANALOG INPUT SIGNAL TO PLC PANEL
 - DO - DIGITAL OUTPUT SIGNAL FROM PLC PANEL
 - DI - DIGITAL INPUT SIGNAL TO PLC PANEL
 - CL2 - ONLINE COLORIMETRIC CHLORINE ANALYZER WITH 5% ACCURACY, 2.5 MIN. CYCLE TIME, LOWER DETECTION LIMIT: 0.01mg/L, 2 YR WARRANTY, FACTORY CALIBRATED, LCD DISPLAY ECD MODEL FC80 OR APPROVED EQUAL.
 - V1 - NORMALLY OPEN 50mmØ FULL PORT BALL VALVE SUITABLE FOR POTABLE WATER, LEAD FREE, BRASS BODY WITH 24 VAC NORMALLY OPEN ACTUATOR AND POSITION FEEDBACK, RATED FOR 689 kPa, G.F. PIPING SYSTEMS SERIES 179 OR APPROVED EQUAL.
 - DO1 - DISSOLVED OXYGEN MONITOR, LCD DISPLAY, NEMA 4X, RS485 COMM., 4 DO PROBE, 2YR WARRANTY, YSI MODEL 5500D OR APPROVED EQUAL.
 - ODO - DISSOLVED OXYGEN SENSOR, +/- 1% ACCURACY, TEMP. OUTPUT, 2YR WARRANTY, COORDINATE LENGTH TO SUIT YSI 626200 OR APPROVED EQUAL.



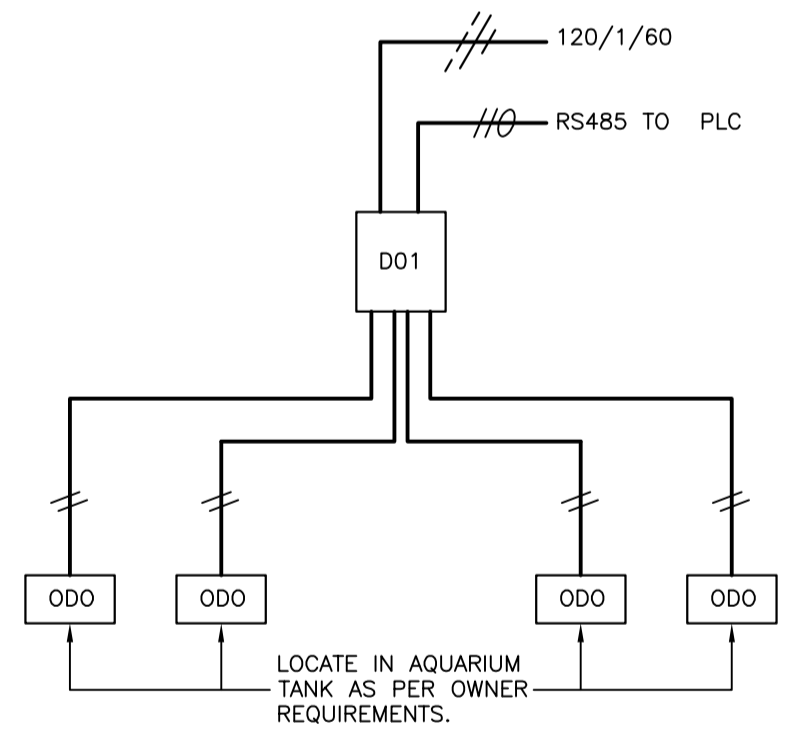
TANK CONTROL VALVE PIPING
 SCALE: N.T.S.



EMERGENCY SHUT-OFF VALVE CONTROL
 SCALE: N.T.S.



CHLORINE SENSOR CONTROL
 SCALE: N.T.S.



DISSOLVES OXYGEN SENSORS (3 SUCH)
 SCALE: N.T.S.

