

**DEPARTMENT OF FISHERIES AND OCEANS
CANADIAN COAST GUARD
NEWFOUNDLAND AND LABRADOR**

Robin Hood Bay Perimeter Lighting
Sugar Loaf Road, St. John's



PROJECT NO.: 30001402
DATE: June 15, 2021

SPECIFICATIONS

Project No: 30001402
Title: Contractor Services for Robin Hood Bay Perimeter Lighting
Site of work: Sugar Loaf Road, St. John's, NL

Background Information:

Canadian Coast Guard requires perimeter lighting around existing laydown area.

Description of Work:

Supply/install PT poles, lighting and electrical as per attached drawings.

1.0 General

- 1.1** Contractor is to submit a **project/site specific** Health and Safety Plan for undertaking the work within (7) days of contract award and prior to mobilizing for ANY fieldwork. All work to be undertaken in accordance with applicable federal, provincial, and municipal legislation and standards. In the event of conflict between any provisions of above authorities the most stringent provision governs.
- 1.2** Contractor to provide within (7) days of contract award a detailed work plan indicating work methods/procedures to be implemented and products to be utilized. Also, work plan to include anticipated schedule for the undertaking of all work.
- 1.3** Contractor is to provide within (7) days of contract award a detailed cost estimate for provision of the identified services within the time period identified in the transmittal letter. All travel expenses to be in accordance with Treasury Board guidelines.
- 1.4** Upon completion of work Contractor to provide written notification indicating that all work has been completed and is ready for inspection.

2.0 Work Required

- 2.1** The Work to be performed under this scope of work shall include all labour, materials and equipment necessary to complete the following:
 - 2.1.1** Supply and install pressure treated timber poles as per attached drawings.

- 2.1.2 Supply and install lighting as per drawing.
- 2.1.3 Supply and install of electrical as per attached drawings. Note, Some materials are provided by the Coast Guard based on inventory. Any materials required to complete the job not listed below are responsibility of the contractor. Any unused materials from inventory remain property of CGG.

Materials provided by the Coast Guard are;

- 1) 200m each of 1/0 1C Copper cabling in Blue, Red and White
 - 2) #10 3C Tech 90 Cable
 - 3) 300 lengths of 2" x 10' straight rigid PVC (90's, connectors, etc. not provided)
 - 4) Electrical panel in training shack supplied and mounted since drawings completed.
- 2.1.4 Contractor responsible for excavation and material required for buried cable.
- 2.1.5 Site visit recommended to assess ground conditions and access. Assume two light poles will require a gravity base crib. Cost to install each additional crib base should they be required, to be provided in tender package cost breakdown.
- 2.1.6 Contractor to follow latest provincial Chief Medical Officer Covid 19 preventative measures. Contractor to also comply with current CCG safe operating procedures/screening when required. Any additional PPE required are the responsibility of the contractor.

3.0 Schedule

- 3.1 All work shall be completed within (8) eight weeks from the date contract is awarded.

4.0 Safety Requirements

This Section describes specific safety requirements the contractor shall observe and enforce during the progress of the Work.

Summary:

- 4.1 Inclusion of these specific safety requirements shall not constitute a relief of the Contractor's responsibility but is a precaution against oversight or errors.

- 4.2 The Contractor is solely responsible for safety procedures deemed necessary by the Contractor to meet the requirements of these Specifications.
- 4.3 Provide all workers, including sub-trades, with adequate and appropriate safety procedures prior to commencement of their duties. Ensure all workers comply with all safety regulations required by National and Provincial Building Codes, Workmen's Compensation Board, Canada Labour Code Part II and any Provincial and municipal statutes and authorities. Take all precautions and provide all required protection to ensure the safety of the general public and the workmen in accordance with the current edition of the Occupational Health and Safety Act and Regulations for Construction Projects.
- 4.4 In the event of conflict between any provisions of above authorities the most stringent provision governs.

5.0 Environmental Requirements

- 5.1 Contractor is solely responsible for all environmental protection procedures deemed necessary to comply with all applicable Federal, Provincial and Municipal regulatory requirements.
- 5.2 Contractor is fully responsible for all costs associated with required remediation occurring from Contractors work on site.
- 5.3 Fires and burning of rubbish not permitted on site.
- 5.4 Do not dispose/bury rubbish or waste materials on site.
- 5.5 Do not dispose of waste or volatile materials such as mineral spirit, oil, paint thinner etc. into waterways, storm or sanitary sewers.
- 5.6 Contractor is to ensure that all equipment is in good repair and no fuels or fluids are leaking from it. Equipment in disrepair is not permitted on site and will be ordered removed. Basic petroleum spill equipment must be on site.
- 5.7 No maintenance beyond that of a required daily routine shall be performed on equipment while on site. No refueling to be completed within 30m of a water body.
- 5.8 Do not pump water suspected of containing suspended materials into waterways, sewers or drainage systems.
- 5.9 Contractor must comply with any/all direction and/or advice provided by the Federal, Provincial or Municipal authorities having jurisdiction.

Appendix A

Drawings

1. SCOPE OF WORK:
WORK SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:
 - INSTALLATION OF WIRING AND CONDUIT FROM BUILDING DOWN TO STORAGE YARD, AND DIRECT BURIED TECK90 CABLE WITHIN STORAGE YARD FOR LIGHTING AS INDICATED ON DRAWINGS (INCLUDES ABOVE AND BELOW GRADE INSTALLATION).
 - SUPPLY AND INSTALLATION OF DIRECT BURIED WOODEN POLES AND ASSOCIATED LIGHT FIXTURES.
 - SUPPLY AND INSTALLATION OF NEW ELECTRICAL PANEL IN TRAINING SHACK.
2. THE COMPLETE ELECTRICAL INSTALLATION SHALL CONFORM TO THE LATEST EDITION OF THE CANADIAN ELECTRICAL CODE AND LOCAL BY LAWS CURRENTLY IN FORCE IN THE PROVINCE AND MUNICIPALITY.
3. ALL WORK SHALL BE PERFORMED BY PERSONS HAVING QUALIFICATIONS AS REQUIRED BY ANY AUTHORITY HAVING JURISDICTION AND WHO ARE COMPETENT IN THEIR TRADE.
4. ALL WORK SHALL BE SUBJECT TO INSPECTION BY LOCAL INSPECTION AUTHORITY, THE OWNER OR HIS REPRESENTATIVE. CORRECT DEFICIENCIES AS REQUIRED BY INSPECTION AUTHORITY WITHOUT CHARGE TO OWNER.
5. PAYMENT FOR PERMITS AND DEPOSITS FOR THE WORK SHALL BE INCLUDED.
6. BEFORE SUBMITTING A PROPOSAL FOR THE WORK COVERED BY THE SPECIFICATIONS, EACH BIDDER SHALL VISIT AND INSPECT THE SITE IN ORDER THAT HE MAY BE THOROUGHLY FAMILIAR WITH THE SITE AND LOCAL CONDITIONS, WITH THE CHARACTER AND DETAILS OF THE CONSTRUCTION AND WITH ALL MATTERS WHICH CAN, IN ANY WAY, AFFECT THE WORK COVERED BY THE SPECIFICATIONS. NO CLAIM WILL BE ENTERTAINED OR ALLOWED FOR ANY LABOUR, MATERIALS OR OTHER EXTRAS THAT MAY BE REQUIRED FOR THE PROPER EXECUTION AND COMPLETION OF THE CONTRACT, WHICH COULD HAVE BEEN DETERMINED BY SITE EXAMINATION.
7. ANY MATERIALS AND EQUIPMENT SUPPLIED BY CONTRACTOR SHALL BE NEW AND BEAR CSA APPROVAL.
8. CONDUIT: THE MINIMUM SIZE OF CONDUIT SHALL BE 27mmØ. ALL CONDUIT RUN INSIDE SHALL BE EMT. ALL EXTERIOR AND UNDERGROUND CONDUIT SHALL BE RIGID PVC.
9. WIRE: ALL WIRING SHALL BE RW90 COPPER. ALL CONDUCTORS SHALL BE 1000V, PROPERLY COLOUR CODED.
10. TECK CABLE: CABLE SHALL BE TECK 90, GALVANIZED STEEL INTERLOCK ARMOR, 90°C, 1000 VOLT, XLPE INSULATION, INNER PVC JACKET AND OUTER PVC JACKET. COPPER CONDUCTORS C/W INTEGRAL BOND WIRE.
11. PANEL BOARDS SHALL HAVE TIN PLATED ALUMINUM BUS WITH NEUTRAL OF SAME AMPERE RATING AS MAINS. MAINS SUITABLE FOR BOLT-ON THERMAL-MAGNETIC BREAKERS. HALF SIZE (OR MINI) BREAKERS ARE NOT ACCEPTABLE. PANEL ENCLOSURE TO BE NEMA 4X RATED. PROVIDE AN ARC FLASH AND SHOCK HAZARD LABEL ON PANEL. MOUNTING HEIGHT AS PER CEC.
12. GUARANTEE: THIS CONTRACTOR SHALL GUARANTEE ALL NEW MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF COMPLETION OF THE WORK AND FINAL ACCEPTANCE.
13. EXISTING UNDERGROUND INFRASTRUCTURE EXISTS IN AREA OF WORK. CONTRACTOR TO COORDINATE ALL NEW UNDERGROUND WORK WITH EXISTING SERVICES.

NOTE: SITE PLAN WAS CREATED FROM AERIAL PHOTOGRAPHS. CONTRACTOR TO CARRYING PRICE FOR AN ADDITIONAL 20m OF WIRE AND CONDUIT FROM BUILDING TO THE STORAGE YARD, AND AN ADDITIONAL 20m OF WIRE AND CONDUIT FOR SITE LIGHTING.

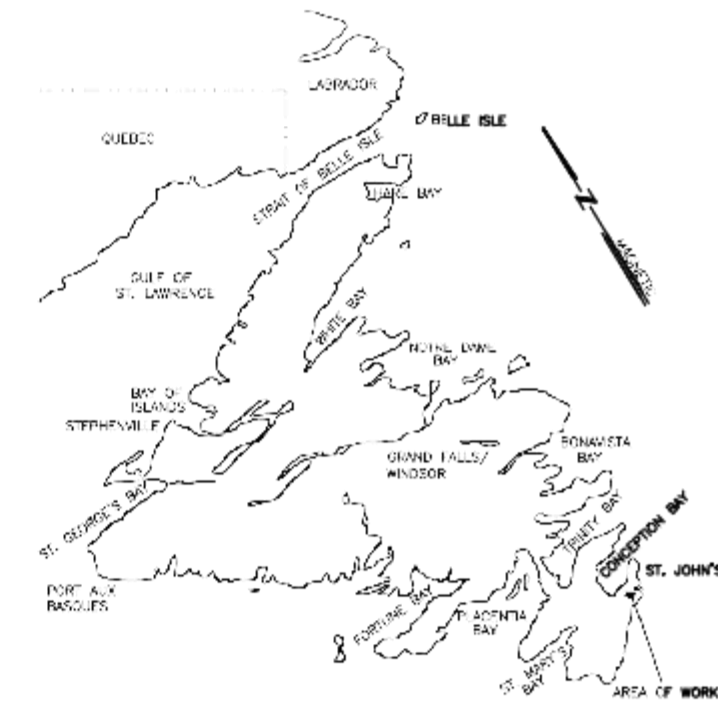
LEGEND

#1 NEW 120V, 178W LED FLOOD LIGHT, C/W BUILT-IN PHOTOCCELL, FIXTURE EQUAL TO GARDCO ECF-S-64L-900-NW-G2-4-120-PCB-BK AND SHALL BE MOUNTED TO NEW WOODEN POLE. FIXTURE TO BE C/W YOLK MOUNT AND 1m WHIP OR ACCESSORIES TO ENSURE ELECTRICAL CONNECTION CAN BE MADE WITH SURFACE MOUNTED WIRING. CONNECT TO CIRCUIT AS INDICATED. CONTRACTOR SHALL SUPPLY ONE ADDITIONAL FIXTURE AND TURN OVER TO OWNER. #1 INDICATES POLE ID, PPA2-1 INDICATES CIRCUITNUMBER.

DUSTIN D. COLE	PROVINCE OF NEWFOUNDLAND AND LABRADOR PERMIT HOLDER This Permit Allows JEWEL BAILEY CONSULTANTS LTD. <u>MIRC:</u> To practice Professional Engineering in Newfoundland and Labrador. Permit No. as issued by PEG N0540 which is valid for the year 2021.
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LIGHT POLE WIRE SIZE TABLE		
FROM	TO	WIRE SIZE
PANEL	POLE #1	#10 AWG
PANEL	POLE #2	#4 AWG
POLE #2	POLE #3	#4 AWG
POLE #3	POLE #4	#4 AWG
POLE #4	POLE #5	#4 AWG
POLE #5	POLE #6	#4 AWG



KEY LOCATION PLAN

- NOTES:
- CONTRACTOR TO COORDINATE WITH NEWFOUNDLAND POWER TO LOCATE EXISTING BURIED 4800V CABLE PRIOR TO DIGGING. COORDINATE WITH OWNER SUCH THAT THEY BE PRESENT DURING ONSITE MEETING WITH NEWFOUNDLAND POWER.
 - CONTRACTOR TO INSTALL PULL STRING IN ALL CONDUITS.

TYPICAL: REFER TO STRUCTURAL DRAWING S01 FOR POLE BASE DETAILS.

TYPICAL: FOR EACH POLE, SUPPLY AND INSTALL NEMA 4X PVC JUNCTION BOX, C/W LIQUID TIGHT FITTINGS, NEAR POLE BASE (1200mm AFG) AND ANOTHER NEAR TOP OF POLE FOR CONNECTION TO LIGHTING FIXTURE WHIP (1m LENGTH).

SUPPLY AND INSTALL NEW 100A, 120/208V, 3Ø, 4W, 12 CIRCUIT PANEL PPA-2, C/W 60A, 3P MAIN BREAKER IN TRAINING SHACK. SUPPLY AND INSTALL JUNCTION BOX AS REQUIRED TO DOWNSIZE WIRING PRIOR TO TERMINATING ON MAIN BREAKER. SEE DETAIL 3, DWG E02.

SEE NOTE 1.

EXISTING BURIED 4800V CABLE.

CONDUITS TO TRANSITION FROM ABOVE GRADE TO BELOW GRADE AT THIS LOCATION.

EXISTING COMMUNICATIONS RACK. CONTRACTOR TO SUPPLY AND INSTALL ADDITIONAL SUPPORT SYSTEM TO RIGIDLY SUPPORT NEW CONDUITS. PROVIDE MINIMUM HORIZONTAL/VERTICAL SEPARATION OF 600mm FROM EXISTING CABLING.

TRAINING SHACK

SPARE CONDUITS TO STUB UP INSIDE TRAINING SHACK TO 300mm AFF.

CONDUITS TO ENTER BUILDING AT THIS APPROXIMATE LOCATION. REFER TO DETAIL 1, E02 FOR CONTINUATION.

EXISTING CHAIN LINK FENCE.

EXISTING BURIED CABLE.

BUILDING

EXISTING BURIED CABLE.



no.	revision	date	by	approve
1	ISSUED FOR CONSTRUCTION	2021.06.30	RG	DC
0	ISSUED FOR CONSTRUCTION	2021.03.30	RG	DC
A	ISSUED FOR REVIEW	2021.03.03	RG	DC

Project - projet

YARD LIGHTING FOR STORAGE AREA

Drawing - dessin

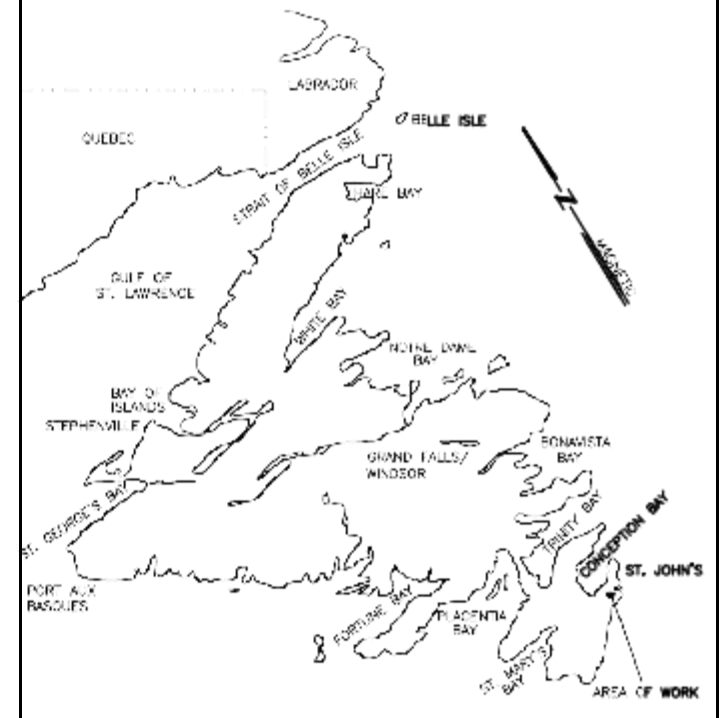
ELECTRICAL SPECIFICATIONS AND SITE PLAN

drawn - dessiné	H. GREEN	designed - dessiné par	D. COLE
date - date	2021.02.25	checked - vérifié	D. COLE
scale - échelle	AS SHOWN	approved - approuvé	

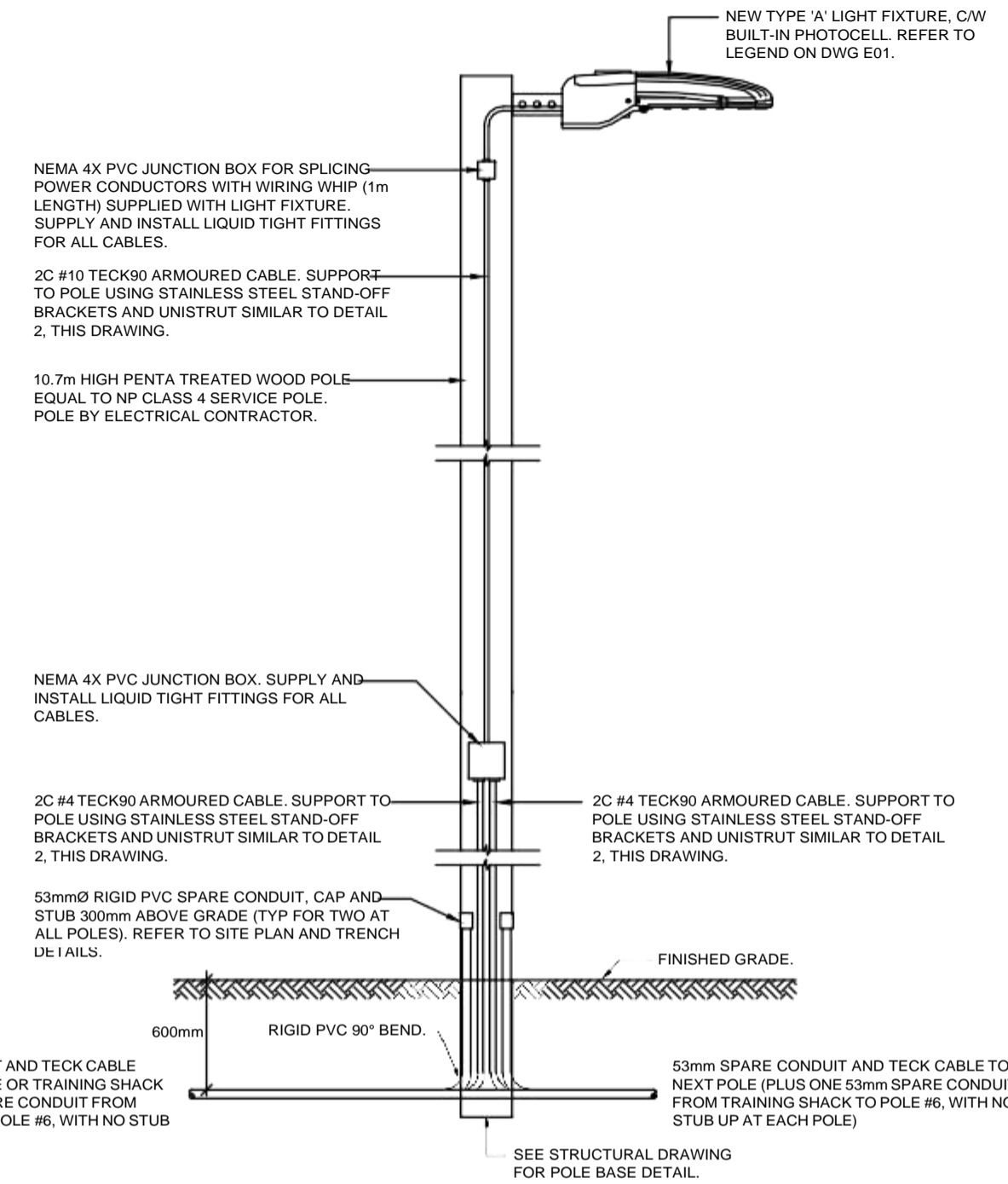
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XX-XX E01 1

1 ELECTRICAL SITE PLAN
E01 1:500

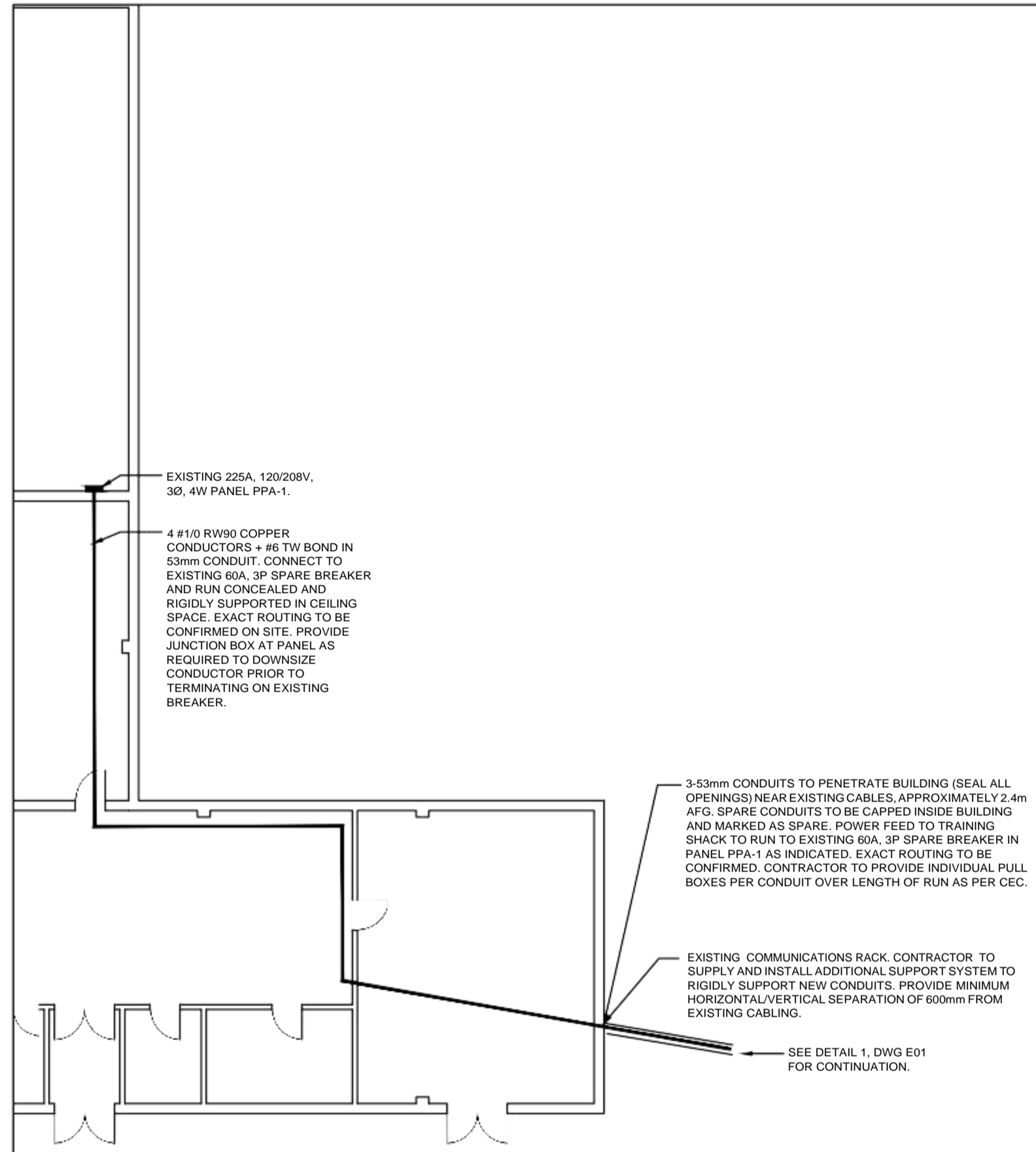




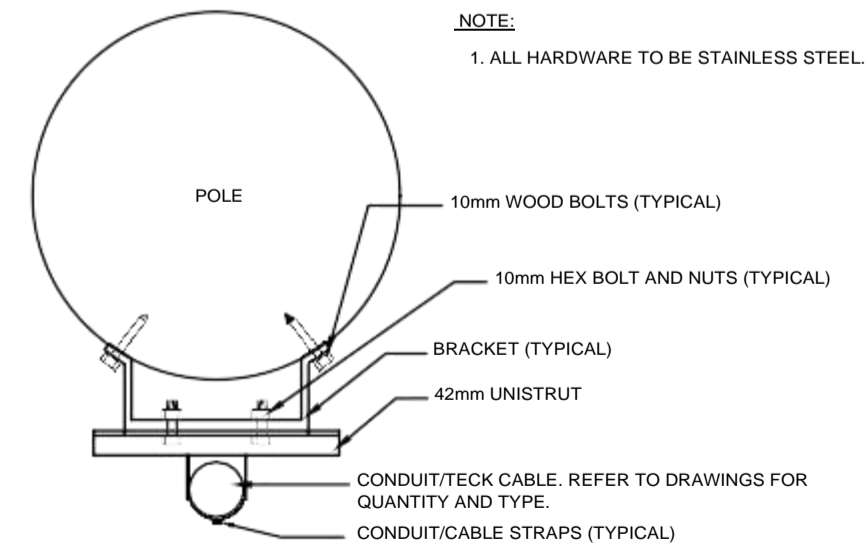
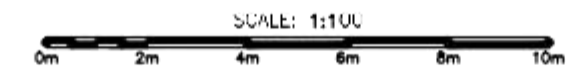
KEY LOCATION PLAN



5 E02 TYPICAL POLE DETAIL N.I.S.



1 E02 ELECTRICAL FLOOR PLAN 1:100



2 E02 TYPICAL STANDOFF BRACKET DETAIL N.I.S.



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A	ISSUED FOR REVIEW	2021.05.03	RG	DC

Project - projet
YARD LIGHTING FOR STORAGE AREA

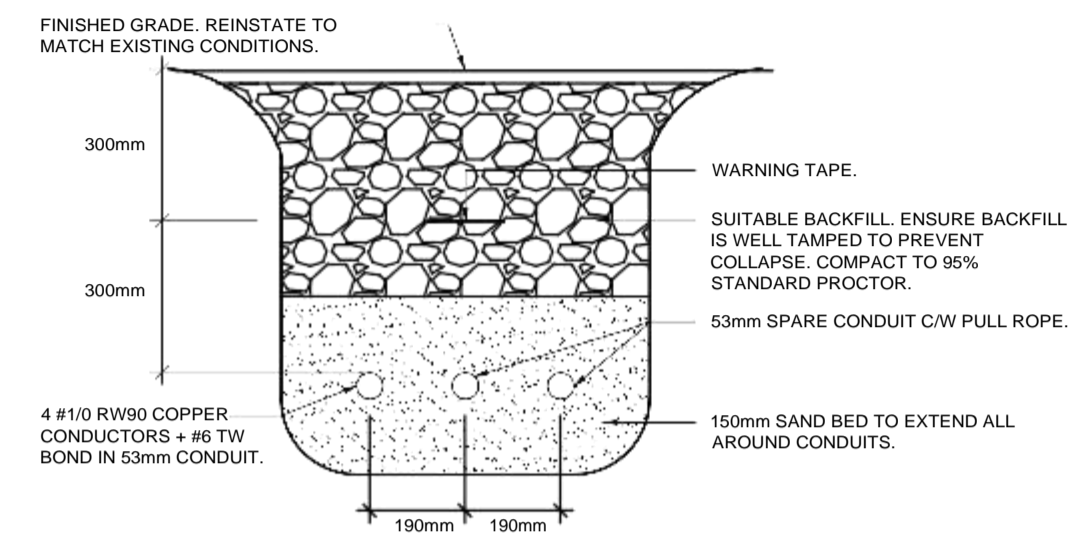
Drawing - dessin
ELECTRICAL FLOOR PLAN AND DETAILS

drawn - dessiné H. GREEN	designed - dessiné par D. COLE
date - date 2021.02.25	checked - vérifié D. COLE
scale - échelle AS SHOWN	approved - approuvé
project no. - projet no. XX-XX	sheet - feuille E02 1

EXISTING

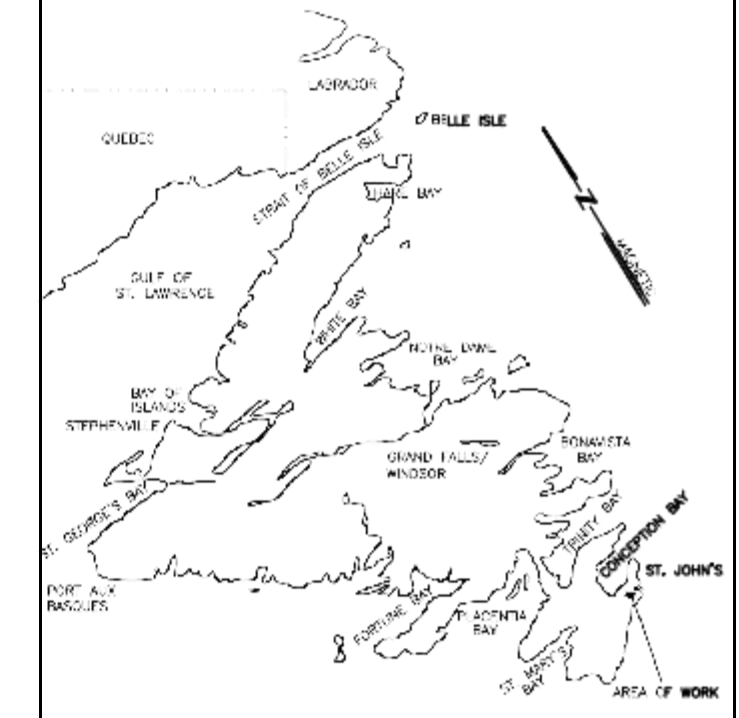
PPA-1		LOCATION: STORAGE ROOM				MOUNTING SURFACE				225 AMP MAINS.			
		SERVICE: 120/208v 3Ø, 4W				BRANCH CIRCUIT I.C.				10,000 AMPS RMS SYM.			
LOAD DESCRIPTION	LOAD	WIRE	BKR	CIRCUIT	BKR	WIRE	LOAD	LOAD DESCRIPTION	PHASE LOAD				
									A	B	C		
SPARE	-	-	ZL	1	2	ZL	-	SPARE	-	-	-		
			A	3	4	A	-						
			SI	5	6	SI	-						
SPARE	-	-	ZL	7	8	15	-	RECEPTACLES	-	-	-		
			A	9	10	15	-	LIGHTING	-	-	-		
			SI	11	12	15	-	RECEPTACLES	-	-	-		
RECEPTACLES	-	-	15	13	14	15	-	RECEPTACLES	-	-	-		
SPARE	-	-	BU	15	16	15	-	RECEPTACLES	-	-	-		
			A	17	18	BU	-						
			SI	19	20	A	1/0	PANEL PPA-2 (STORAGE YARD)	-	-	-		
				21	22	SI	-						
				23	24			SPARE	-	-	-		
				25	26								
				27	28								
				29	30								
COMMENTS: + - INDICATES C/W LOCK-ON DEVICE. CONNECTED LOAD - KW TOTAL WATTS -									-	-	-		
- SPRINKLER PROOF. ESTIMATED DEMAND - KW TOTAL AMPS -									-	-	-		

3 PANEL SCHEDULE
N.T.S.



1. PROVIDE PLASTIC SPACERS AT 900mm C-C AND STRAP CONDUITS TO SPACERS USING PLASTIC TY-WRAPPS.

1 ELECTRICAL TRENCH DETAIL
N.T.S.



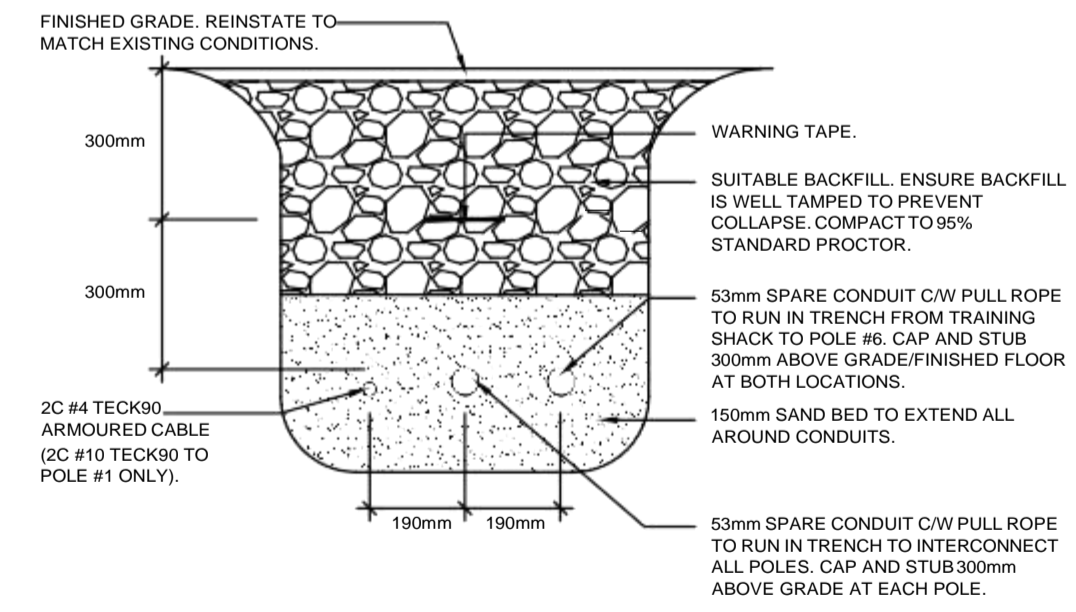
KEY LOCATION PLAN

NEW, C/W 60A, 3P MAIN BREAKER

PPA-2		LOCATION: TRAINING SHACK				MOUNTING SURFACE				100 AMP MAINS.			
		SERVICE: 120/208v 3Ø, 4W				BRANCH CIRCUIT I.C.				10,000 AMPS RMS SYM.			
LOAD DESCRIPTION	LOAD	WIRE	BKR	CIRCUIT	BKR	WIRE	LOAD	LOAD DESCRIPTION	PHASE LOAD				
									A	B	C		
SITE LIGHTING	1068	10	15	1	2				1068	-	-		
SPARE			15	3	4			SPARE	-	-	-		
SPARE			15	5	6				-	-	-		
				7	8				-	-	-		
				9	10				-	-	-		
				11	12				-	-	-		
COMMENTS: + - INDICATES C/W LOCK-ON DEVICE. CONNECTED LOAD 1.1 KW TOTAL WATTS 1068									-	-	-		
- SPRINKLER PROOF. ESTIMATED DEMAND 1.1 KW TOTAL AMPS 8.5									-	-	-		

1. FROM PANEL TO JUNCTION BOX ON LIGHT POLE #1, USE #10 AWG

4 PANEL SCHEDULE
N.T.S.



1. PROVIDE PLASTIC SPACERS AT 900mm C-C AND STRAP CONDUITS TO SPACERS USING PLASTIC TY-WRAPPS.

THIS TRENCH DETAIL IS SIMILAR FOR TRENCH TO POLE #1, BUT THE TWO 53mm CONDUITS BOTH SHALL BE CAPPED AND STUBBED 300mm ABOVE GRADE AT EACH POLE.

2 ELECTRICAL TRENCH DETAIL
N.T.S.

PROFESSIONAL ENGINEER
PEEA
JUSTIN D. COLE
2021.06.30
NEWFOUNDLAND & LABRADOR

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A	ISSUED FOR REVIEW	2021.03.03	RG	LC

Project - project

YARD LIGHTING FOR STORAGE AREA

Drawing - dessin

ELECTRICAL DETAILS AND PANEL SCHEDULES

drawn - dessiné	H. GREEN	checked - vérifié	D. COLE
date - date	2021.02.25	approved - approuvé	D. COLE
acc's - échelle	AS SHOWN	project no. - projet no.	XX-XX
		drawing no. - no du dessin	ED1
		sheet - feuille	1