



1 EXISTING SITE PLAN - MAIN SALMON HATCHERY
SCALE 1:500

SPECIFICATION

- SUPPLY AND INSTALL ALL LABOUR AND MATERIALS THAT ARE REQUIRED FOR COMPLETE ELECTRICAL INSTALLATION.
- CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF WITH THE JOB AND ALL CONDITIONS WHICH MAY AFFECT HIS COSTS.
- ALL MATERIALS AND WORKMANSHIP TO CONFORM TO THE LATEST EDITION OF THE CANADIAN ELECTRICAL CODE AND ALL LOCAL AND PROVINCIAL BYLAWS.
- GIVE ALL NOTICES, OBTAIN ALL PERMITS AND PAY ALL FEES REQUIRED SO THE WORK MAY BE CARRIED OUT.
- COORDINATE WORK WITH OTHER CONTRACTORS. REFER TO THE DRAWINGS FOR CONSTRUCTION DETAILS AND FOR EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS AND THE RATINGS AND CHARACTERISTICS OF THE EQUIPMENT. COORDINATE EQUIPMENT RATINGS AND CONNECTION REQUIREMENTS FOR OWNER-SUPPLIED EQUIPMENT.
- SUBMITTALS: PROVIDE ALL REQUIRED DOCUMENTS FOR REVIEW AND APPROVAL IN ACCORDANCE WITH DIVISION 1 INCLUDING:
 - ALL POWER, COMMUNICATIONS AND LIGHTING SHOP DRAWINGS AS REQUESTED. ELECTRICAL CONTRACTOR TO REVIEW SUBMITTALS PRIOR TO SUBMISSION TO ENGINEER. THIS REVIEW REPRESENTS THAT NECESSARY REQUIREMENTS HAVE OR WILL BE DETERMINED AND VERIFIED AND THAT EACH SUBMITTAL HAS BEEN CHECKED AND COORDINATED WITH THE REQUIREMENTS OF THE WORK AND CONTRACT DOCUMENTS AND BEARS STAMP OF CONTRACTOR.
 - AS-BUILT DRAWINGS TO BE PROVIDED AND SHALL INCLUDE FINAL LAYOUT AND LOCATION OF ALL ELECTRICAL EQUIPMENT, DEVICES, OUTLETS AND PULLBOXES INSTALLED. CHANGES SHALL BE NEATLY MARKED IN RED AND BEAR STAMP OF CONTRACTOR.
 - SUBMIT OPERATION AND MAINTENANCE MANUALS. INCLUDE NAME/ADDRESS OF LOCAL SUPPLIERS FOR ITEMS INCLUDED; ENGINEER-REVIEWED SHOP DRAWINGS; ALL DETAILS TO PERMIT EFFECTIVE START-UP, OPERATION, MAINTENANCE, REPAIR, MODIFICATION, EXTENSION OR EXPANSION OF ANY PORTION OR FEATURE OF THE INSTALLATION; WORK REPORT; WARRANTY LETTERS FROM CONTRACTORS AND SUPPLIERS.
- ALL LABOUR AND MATERIALS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR AFTER THE DATE OF THE ACCEPTED SUBSTANTIAL COMPLETION OF THE CONTRACT.
- WHERE MANUFACTURERS' NAMES ARE USED, IT IS FOR THE PURPOSE OF ESTABLISHING A STANDARD, AND THAT EQUIPMENT SHALL BE USED IN PREPARING QUOTATIONS. PERMISSION TO USE ALTERNATIVES SHALL BE SECURED BY MEANS OF WRITTEN REQUEST NO LATER THAN 5 DAYS PRIOR TO TENDER CLOSING. MATERIALS USED THROUGHOUT SHALL BE OF ONE MANUFACTURER. WHERE TRADE NAMES ARE NOT USED TO DESCRIBE MATERIALS, THESE MATERIALS SHALL BE OF SPECIFICATION GRADE.
- ALL CLAIMS FOR EXTRAS SHALL BE SUPPORTED BY WRITTEN AUTHORIZATION AND ITEMIZED MATERIAL AND LABOUR COST BREAKDOWNS.
- ALL MATERIAL SHALL BE SORTED NEATLY AND OUT OF THE WAY. CLEAN UP DAILY ALL REFUSE CAUSED BY WORK. AT COMPLETION OF PROJECT, CLEAN ALL FIXTURES AND EQUIPMENT.
- CUTTING, PATCHING AND PAINTING DUE TO ELECTRICAL WORK WILL BE BY ELECTRICAL CONTRACTOR.
- ELECTRICAL CONTRACTOR SHALL TOTALLY REVIEW ALL ARCHITECTURAL AND MECHANICAL DRAWINGS AND SPECIFICATIONS TO COORDINATE AND DETERMINE WORK ASSOCIATED WITH ELECTRICAL WORK PRIOR TO SUBMITTING TENDER PRICE. ALSO REVIEW ALL ADDENDA ASSOCIATED WITH ALL TRADES. AFTER REVIEW OF ALL DOCUMENTS ASSOCIATED WITH OTHER TRADES FORWARD ANY QUESTIONS AND CLARIFICATIONS PRIOR TO TENDER SUBMISSION. SUBMISSION OF TENDER BY ELECTRICAL CONTRACTOR ACKNOWLEDGES COORDINATION WITH OTHER TRADES.
- IDENTIFICATION: ALL LIGHT SWITCHES, LIGHTS (IN CONTRACT AREA) ARE TO HAVE ITS PANEL AND CIRCUIT IDENTIFIED WITH A PLASTIC NAMEPLATE 6mm HIGH X 25mm LONG (IE A-3 OR A-2, 4, 6). NAMEPLATES TO BE PROPERLY ADHERED TO LABELS OF EQUIPMENT AND IDENTIFIED BY CORRESPONDING OUTLET BOX, CONDUIT AND CABLE TO BE IDENTIFIED WITH PLASTIC TAPE OR PAINT AT POINTS WHERE CONDUIT ENTERS WALL, CEILING OR FLOOR AND AT 1.5M INTERVALS. BRANCH CIRCUIT WIRING TO BE IDENTIFIED AT BOTH ENDS, INCLUDING IN ALL JUNCTION BOXES IN BETWEEN WITH PERMANENT INDELEIBLE IDENTIFYING MARKINGS, INDICATION PANEL AND CIRCUIT (IE A-3). ELECTRICAL EQUIPMENT TO HAVE DESIGNATED NAME OF EQUIPMENT, VOLTAGE, NUMBER OF PHASES AND WIRING, BRANCH CIRCUIT NUMBER.
- ALL PENETRATIONS THROUGH FIRE-RATED WALLS OR CEILINGS MUST BE SEALED WITH PRE-APPROVED FIRESTOP BY ELECTRICAL CONTRACTOR.
- WIRING METHODS: INTERIOR WIRING SHALL BE 600V AND 300V RW90 COPPER IN EMT OR AC90. MINIMUM #12 FOR LIGHTING, RECEPTACLES, AND FOR POWER. ALL WIRING SHALL BE CONCEALED WHERE POSSIBLE. EXPOSED WIRING SHALL BE INSTALLED IN EMT AND SHALL CONFORM TO BUILDING CONSTRUCTION LINES. ALL EMPTY CONDUIT SHALL BE C/W NYLON FISH WIRE.
- ALL NON-CURRENT-CARRYING METAL PARTS, INCLUDING RACEWAYS, CABINETS, METAL SUPPORT FRAMES AND OTHER EQUIPMENT WHERE GROUNDING IS REQUIRED, SHALL BE COMPLETELY GROUNDED IN AN APPROVED MANNER AS PRESCRIBED BY THE UTILITY SERVICE ENTRANCE STANDARDS AND THE CANADIAN ELECTRICAL CODE. ALL NECESSARY CONDUIT, CONDUCTORS, CLAMPS, CONNECTORS, ETC FOR THE GROUNDING SYSTEM SHALL BE FURNISHED, INSTALLED AND CONNECTED BY THE ELECTRICAL CONTRACTOR.
- WIRING DEVICES: COMMERCIAL SPECIFICATION GRADE, DECORA WHITE WITH MATCHING STAINLESS STEEL COVERPLATES. RECEPTACLES SHALL BE UNLESS OTHERWISE NOTED, U GROUND TYPE, WHITE SCREW TERMINAL TYPE. RECEPTACLES SHALL BE DECORA SPECIFICATION GRADE. ALL RECEPTACLES TO BE INSTALLED IN 'GROUND UP' POSITION. LIGHT SWITCHES SHALL BE UNLESS OTHERWISE NOTED, SILENT, AC TYPE, ROCKER STYLE, WHITE WITH MATCHING COVERPLATE. BRYANT, HUBBELL, LEVITON, COOPER AND P&S SHALL BE CONSIDERED AS ACCEPTABLE MANUFACTURERS.
- LIGHTING: ELECTRICAL CONTRACTOR IS TO ENSURE LAMP/FIXTURE COMBINATION PROVIDED BY MANUFACTURER IS COMPATIBLE. LIGHT FIXTURE SCOPE OF WORK INDICATES MINIMUM PERFORMANCE REQUIRED FOR EACH LIGHTING SYSTEM. SUPPORT LUMINAIRES IN ACCORDANCE WITH LOCAL INSPECTION REQUIREMENTS.

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DO NOT SCALE DRAWINGS. SITE PLANS SCALED FROM PDF RECEIVED FROM D.F.O. (CREATED BY CBCL LIMITED DATED DECEMBER, 2002) AND ARE NOT EXACT. VERIFY ALL DIMENSIONS/CONDITIONS ON SITE.

LIGHT FIXTURE SCOPE OF WORK		SYMBOL	LEGEND
WORK	DESCRIPTION		
.18	ALL EXTERIOR LIGHTING TO BE REPLACED WITH NEW LED FIXTURES. EXISTING WIRING, CIRCUITS AND CONTROLS TO BE REUSED. THE FIXTURE SCHEDULE IS AS FOLLOWS:	⊕	20/15A RECEPTACLE.
1	LED WALL MOUNTED FIXTURE TO BE MOUNTED IN SAME LOCATION AS FIXTURE BEING REPLACED. 120V, 100W, BLACK IN COLOR, 5000K, COLOUR TEMP AND MINIMUM 6000 LUMENS LITHONIA #TWPLED-30C-700-50K-T3M-MVOLT-PE-DBLXD OR EQUIVALENT. QTY:43	⊕	SWITCH FOR FISH FEEDER.
2	LED POLE MOUNTED FIXTURE TO BE MOUNTED ON EXISTING SQUARE METAL POLE. 120V, 140W, BLACK IN COLOUR, 5000K COLOUR TEMP AND MINIMUM 13,000 LUMENS LITHONIA #KADLED-60C-700-50K-R4-MVOLT-PUMBAK-DBLXD-DLL127F1.5JU OR EQUIVALENT. QTY:20	○	FISH FEEDER.
3	LED SURFACE ON CANOPY FIXTURE TO BE MOUNTED IN SAME LOCATION AS FIXTURE BEING REPLACED. 120V, 10W, WHITE IN COLOUR, 4000K COLOUR TEMP AND MINIMUM 1900LUMENS. LITHONIA #FMMML-7-8-40-WL OR EQUIVALENT. QTY:8	□	JUNCTION BOX
4	LED SURFACE ON CANOPY TO BE MOUNTED IN SAME LOCATION AS FIXTURE BEING REPLACED 120 V, 103W, BLACK IN COLOR, 5000K COLOUR TEMP AND MINIMUM 9000 LUMENS LITHONIA #KADLED-60C-700-50K-R4-MVOLT-SRM-DBLXD C/W PHOTOCELL OR EQUIVALENT. QTY:4	⊕	TRANSFORMER.
19	EXISTING LIGHT POLE TO BE ROTATED ON CONCRETE BASE 180° SO THAT LIGHT FIXTURE DIRECTS LIGHT ONTO OUTSIDE OF FENCE. INSTALL WEATHERPROOF 180° MOTION DETECTOR AT TOP OF POLE ON SAME SIDE AS LIGHT FIXTURE AND WIRE 120V CONTACT IN SERIES WITH LIGHT CIRCUIT SO LIGHT COMES 'ON' WHEN MOTION IS DETECTED. MOTION DETECTOR TO BE SENSOR SWITCH #SBOR60EXBZ. QTY:8	⊕	SURFACE MOUNTED ELECTRICAL PANEL.
20	EXISTING DPST SWITCH FOR EXTERIOR POLE MOUNTED LIGHT FIXTURES TO BE IN PARALLEL WITH DPST CONTACTS ON NEW PHOTOCELL TO BE MOUNTED ON ADJACENT EXTERIOR WALL AWAY FROM EFFECT OF WALL PACK EXTERIOR LIGHT FIXTURE. ALLOW FOR 6 METER DISTANCE FROM LIGHT SWITCH. PHOTOCELL TO BE PARAGON #CW-201-00, TORQ #2101 OR INTERMATIC #K4221 C/W 2 CONTACTS. QTY:2	⊕	SMOKE DETECTOR.
		⊕	IONIZATION DETECTOR.
		⊕	LIGHTING CONTRACTOR.
		E	EXISTING
		N	NEW (SUPPLY, INSTALL AND CONNECT NEW WIRE AND EMT CONDUIT; WIRE AND LIQUID FLEX OR TECH CABLE TO ADJACENT EXISTING LIGHT FIXTURE.

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project
**YARD LIGHTING UPGRADE
FISH CULTURE CENTRE
MACTAQUAC**
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EARLY REARING FACILITY
ELECTRICAL LAYOUTS
& DETAILS** dessin

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