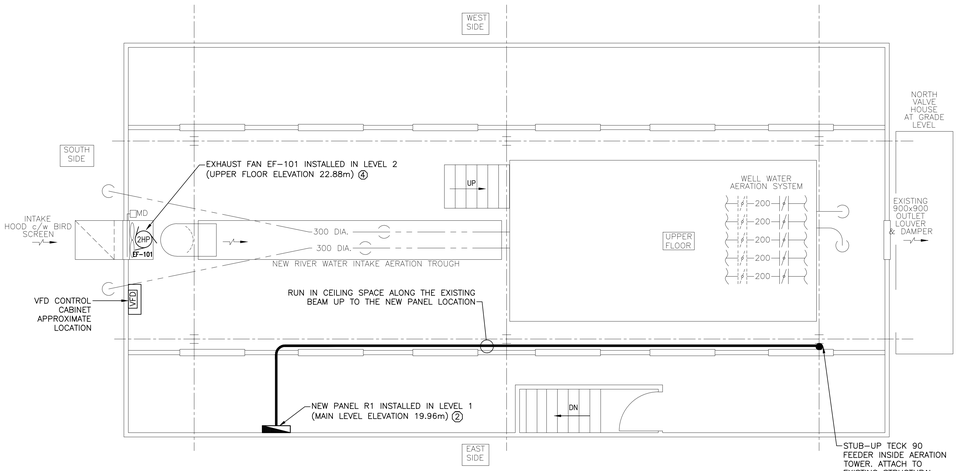
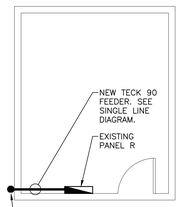


AERATION BUILDING – NEW ELECTRICAL LAYOUT 1/E1

SCALE: 1:50

0m 1m 2m 3m 4m 5m



DETAIL – NORTH VALVE BUILDING ELECTRICAL LAYOUT 2/E1

SCALE: 1:50

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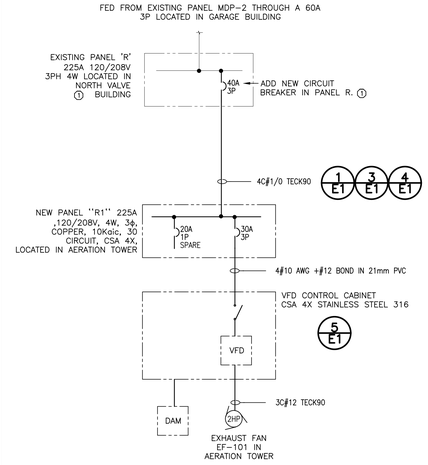


PARTIAL SINGLE LINE DIAGRAMS

SCALE : N.T.S.

LEGEND

- R1 — SURFACE MOUNTED PANELBOARD. R1 – INDICATED PANEL NAME
- DISCONNECT SWITCH
- VFD — VARIABLE FREQUENCY DRIVE CABINET
- 2HP / EF-101 — EXHAUST FAN 208V, 3ϕ. 2HP – INDICATES 2 HORSEPOWER. EF-101 – INDICATES EQUIPMENT IDENTIFICATION
- DAM — MOTORIZED DAMPER
- FUSE
- A.F.G. — INDICATES ABOVE FINISH GRADE

GENERAL NOTES:

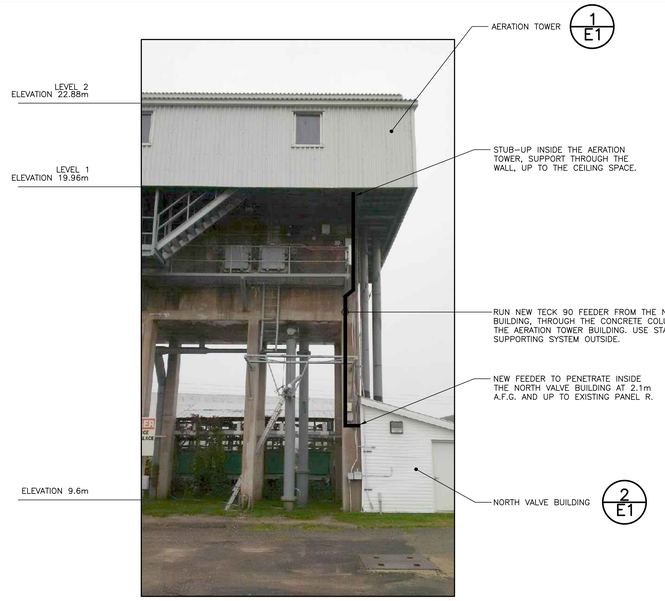
1. IT IS THE DEPARTMENTAL REPRESENTATIVE INTENTION TO KEEP MACTAQUAC BIODIVERTSITY FACILITY AERATION TOWER OPERATIONAL DURING THE CONSTRUCTION PHASE TO MAINTAIN NORMAL WORKING HOURS. THEREFORE ANY WORK WHICH WOULD ADVERSELY AFFECT THE FACILITY ONGOING OPERATION IS TO BE COORDINATED WITH THE DEPARTMENTAL REPRESENTATIVE WITHOUT EXCEPTION. THE MACTAQUAC BIODIVERTSITY FACILITY BUSINESS OPERATIONS SHALL PREVAIL AND TAKE PRIORITY OVER ANY PLANNED SHUTDOWNS.
2. ELECTRICAL CONTRACTOR SHALL COORDINATE ALL WORK WITH DEPARTMENTAL REPRESENTATIVE PRIOR TO STARTING ANY WORK.
3. NOT ALL EXISTING INFORMATION ARE SHOWN. THIS CONTRACTOR SHALL ASSESS ALL EXISTING CONDITIONS, OBSTRUCTIONS, MATERIALS, CIRCUITRY, ETC PRIOR TO START ANY WORK.
4. ALL RUBBISH, UNUSED MATERIALS ETC., SHALL BE REMOVED AND THE PREMISES LEFT CLEAN.
5. MAKE GOOD ALL AREAS AFFECTED BY CONSTRUCTION AND MATCH EXACT CONDITIONS.
6. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR TESTING, START-UP AND COMMISSIONING OF THE COMPLETE ELECTRICAL SYSTEM UNDER THE SCOPE OF THIS PROJECT. DEMONSTRATE TO THE DEPARTMENTAL REPRESENTATIVE OPERATION OF THE ELECTRICAL SYSTEM AT THE END OF THE PROJECT.
7. FURNISH A CERTIFICATE OF ACCEPTANCE FROM THE LOCAL INSPECTION AUTHORITY ON COMPLETION OF WORK.

ELECTRICAL NOTES: 1

1. EXISTING PANEL R IS SQARE D "NQOB" QBL430. CURRENTLY, EXISTING PANEL HAS 4 SPACES CIRCUITS 24, 26, 27 AND 29. THE FOLLOWING SHALL BE PROVIDED:
   - REARRANGE EXISTING CIRCUIT BREAKER TO FREE 3 ADJACENT SPACES TO ALLOW THE INSTALLATION OF A NEW 40A 3P CIRCUIT BREAKER.
   - PROVIDE A NEW 40A 3P 10KAIC CIRCUIT BREAKER AND INSTALL IN EXISTING PANEL R TO FEED NEW PANEL R1. NEW CIRCUIT BREAKER SHALL BE COMPATIBLE WITH EXISTING PANEL R.
   - UPDATE EXISTING PANEL R DIRECTORY TO SHOW THE NEW ADDITION.
2. INSTALL NEW PANEL ON EXISTING BUILDING WALL PARTITION. PROVIDE NEW SUPPORTING SYSTEM INCLUDING ALL REQUIRED BACKBOARD, U-CHANNEL, BOLT AND NUTS TO SUPPORT THE NEW PANEL. SUPPORT ASSEMBLY TO BE WALL MOUNTED. ALL NEW SUPPORTING SYSTEMS SHALL BE HOT DIP GALVANIZED. REEFED AS SHOWN ON NEW PARTIAL SINGLE LINE DIAGRAM ON THIS DRAWING.
3. ALLOW FOR ALL CUTTING PATCHING AND CORE DRILLING. SEAL WATERTIGHT ALL PENETRATIONS.
4. CONFIRM EXHAUST FAN SIZE AND ELECTRICAL RATING THROUGH EXHAUST FAN SHOP DRAWING BEFORE STARTING ANY WORK. EXACT ELEVATION WHERE FAN WILL BE INSTALLED SHALL BE COORDINATED WITH THE MECHANICAL CONTRACTOR.
5. PROVIDE 15A 1P CIRCUIT BREAKER IN EXISTING PANEL A TO FEED THE NEW WATER METER. NEW CIRCUITRY SHALL BE 2#12AWG +#12 BOND IN 21mm PVC CONDUIT. CONFIRM EXACT LOCATION WITH MECHANICAL BEFORE INSTALLATION. EXISTING PANEL A IS SQUARE D MODEL NUMBER QBL-442. UPDATE THE PANEL DIRECTORIES AFTER INSTALLATION TO SHOW NEW LOAD.

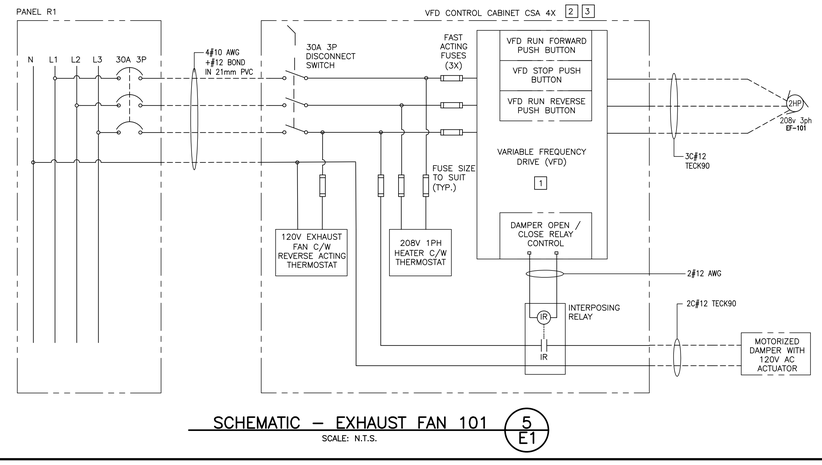
ELEVATION – NEW ELECTRICAL RACEWAY ROUTING 3/E1

SCALE: N.T.S



ELEVATION – NEW ELECTRICAL RACEWAY ROUTING 4/E1 3

SCALE: N.T.S



SCHEMATIC – EXHAUST FAN 101 5/E1

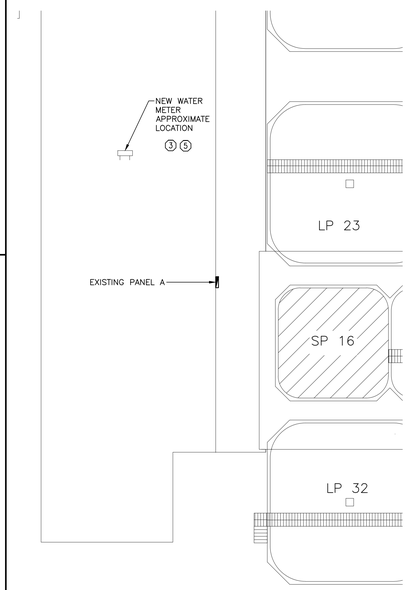
SCALE: N.T.S.

SCHEMATIC NOTES:

1. VFD CABINET SHALL BE CAPABLE TO ACHIEVE THE FOLLOWING OPERATION:
   - START / STOP THE FAN AND THE MOTORIZED DAMPER AT THE SAME TIME.
   - REVERSE THE DIRECTION OF THE FAN.
   - WHEN THE FAN OPERATE, THE DAMPER SHALL OPEN. WHEN THE FAN STOP, THE DAMPER SHALL CLOSE.
2. THE AERATION TOWER BUILDING IS NOT HEATED OR INSULATED. VFD SHALL BE INSTALLED IN A CSA 4X 316 STAINLESS STEEL CABINET. CABINET SHALL BE CSA CERTIFIED AS AN ASSEMBLY AND SHALL BE PROVIDED C/W HEATER, THERMOSTATS, EXHAUST FAN, AIR INTAKE VENT AND ALL REQUIRED INTERCONNECTION. THE CABINET SHALL BE WALL MOUNTED OR FLOOR MOUNTED AS REQUIRED. THE ENTIRE ASSEMBLY SHALL BE PROVIDED BY ONE SINGLE SOURCE OF SUPPLY. SUBMIT SHOP DRAWING FOR REVIEW.
3. THE FOLLOWING COMMAND SHALL BE MOUNTED OF THE EXTERNAL FACE OF THE CABINET:
   - VFD RUN FORWARD PUSH BUTTON – SUPPLY AIR.
   - VFD STOP PUSH BUTTON
   - VFD RUN REVERSE PUSH BUTTON – EXHAUST AIR.
   - MOTOR OVERLOAD ALARM (PILOT LIGHT).
   - MAIN DISCONNECT SWITCH ON/ OFF CONTROL.
   - VFD KEYPAD
   - ALL EXTERNAL CONTROL SHALL BE CSA 4X RATED.

SEQUENCE OF OPERATION:

1. TO RUN THE FAN FORWARD "SUPPLY AIR", PUSH "VFD FORWARD PUSH BUTTON – SUPPLY AIR". FAN WILL TURN ON AND MOTORIZED DAMPER WILL OPEN.
2. TO STOP THE FAN, PUSH "VFD STOP PUSH BUTTON". FAN WILL TURN OFF AND MOTORIZED DAMPER WILL CLOSE.
3. TO RUN THE FAN ON REVERSE "EXHAUST AIR", PUSH "VFD RUN REVERSE PUSH BUTTON – EXHAUST AIR". FAN WILL TURN ON AND MOTORIZED DAMPER WILL OPEN.

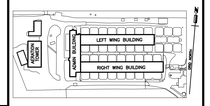


ADMINISTRATION BUILDING – WATER METER POWER SUPPLY 5/E1

SCALE : 1:150

0m 5m 10m 15m

Public Works and Government Services Canada / Travaux Publics et Services gouvernementaux Canada



KEY PLAN

2	ISSUED FOR TENDER	NOV/26/2019
revisions		date

project / projet

WATER SITE SERVICES UPGRADES MACTAQUAC FISH HATCHERY FRENCH VILLAGE, NB

drawing / dessin

NEW FLOOR PLANS DETAILS AND NOTES

designed / concu	H. BATTIKH	
date	OCT-01-2019	
drawn / dessiné	K. WOLFE	
date	OCT-01-2019	
approved / approuvé	Hank Battikh	
date	NOV-26-2019	
Tender / Soumission		
PWGSC Project Manager / Administrateur de projets TPSGC		
project number / no. du projet	R.098285.001	
drawing no. / no. du dessin	E01	

PWGSC AO (2004)

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