

CONSTRUCTION STAGING DESCRIPTION – MECHANICAL

GENERAL CONDITIONS

- CONTRACTOR IS RESPONSIBLE TO REPLACE ANY EQUIPMENT DAMAGED DURING THE REMOVAL PROCESS.
- COORDINATE WITH ELECTRICAL DIVISION FOR ALL EQUIPMENT DISCONNECTIONS AND CONNECTIONS.
- UNLESS STATED OTHERWISE, DEMOLISHED MATERIALS BECOME THE PROPERTY OF THE CONTRACTOR AND MUST BE DISPOSED OF SAFELY IN ACCORDANCE WITH ALL CODE REQUIREMENTS AND REGULATIONS FROM AUTHORITIES HAVING JURISDICTION.

STAGE 1

VENTILATION:

- REMOVE EXISTING TRANSFER FAN IN CONTROL ROOM.
- REMOVE EXISTING WALL MOUNTED EXHAUST FANS AND PUT ASIDE FOR RELOCATION. REMOVE ALL DAMPERS AND CONTROLS ASSOCIATED TO FANS AND SET ASIDE FOR RELOCATION. CAP EXISTING PNEUMATIC CONTROLS TUBING FOR FUTURE RE-USE.

FUEL:

- DRAIN ALL SUPPLY FUEL PIPES BEFORE COMMENCING WORK.
- REMOVE EXISTING DUPLEX FUEL TRANSFER PUMPS AND SET ASIDE FOR FUTURE RELOCATION.
- REMOVE EXISTING FUEL PIPING AS SHOWN ON 1/M3.

STAGE 2

VENTILATION:

- RE-INSTALL WALL MOUNTED EXHAUST FANS AS SHOWN ON 2/M2 ALONG WITH ALL DAMPERS AND CONTROLS.
- EXTEND EXISTING PNEUMATIC CONTROL TUBING TO SUITE NEW FAN LOCATION.
- FABRICATE STRUCTURAL SUPPORTS FOR EXHAUST FANS.
- FABRICATE NEW TEMPORARY DOORWAY PARTITION.
- REMOVE EXISTING TUBULAR EXHAUST FAN ALONG WITH ALL DUCTWORK, DAMPERS, CONTROLS AND ACCESSORIES.

FUEL:

- RE-INSTALL DUPLEX FUEL PUMPS AS SHOWN ON 2/M3.
- INSTALL NEW FUEL SUPPLY PIPING TO ACCOMMODATE NEW PUMPS' LOCATION. CONTRACTOR MAY RE-USE EXISTING FUEL PIPING, PROVIDED IT HAS BEEN ADEQUATELY PROTECTED DURING DEMOLITION TO PREVENT CONTAMINATION OF PIPING FROM CONSTRUCTION DEBRIS.
- REMOVE EXISTING FUEL COOLERS AND SET ASIDE FOR REINSTALLATION.
- CONTRACTOR MUST COORDINATE THE REMOVAL OF FUEL COOLERS WITH ELECTRICAL DIVISION TO ENSURE ALL ARRANGEMENTS HAVE BEEN MADE FOR A SYSTEM SHUT DOWN.
- INFORM DEPARTMENTAL REPRESENTATIVE OF REQUIRED SHUT DOWN PERIOD 2 WEEKS PRIOR TO COMMENCING WORK.

STAGE 3

VENTILATION:

- NO VENTILATION WORK IN STAGE 3.

FUEL:

- RE-INSTALL FUEL COOLERS AS SHOWN ON 5/M3.
- INSTALL NEW FUEL PIPING FROM FUEL COOLERS TO DEMOLITION POINT ON EXISTING FUEL LINES. CONTRACTOR MAY RE-USE EXISTING FUEL PIPING, PROVIDED IT HAS BEEN ADEQUATELY PROTECTED DURING DEMOLITION TO PREVENT CONTAMINATION OF PIPING FROM CONSTRUCTION DEBRIS.

STAGE 4

VENTILATION:

- NO VENTILATION WORK IN STAGE 4.

FUEL:

- PROVIDE NEW FUEL PIPING AS INDICATED ON 1/M4 AND 2/M1.
- COORDINATE LOCATION AND DEPTH OF UNDERGROUND FUEL PIPING WITH CIVIL AND ELECTRICAL DIVISIONS.
- CONTRACTOR IS RESPONSIBLE FOR SUPPLY AND INSTALLATION OF ALL FUEL PIPING AND MUST COORDINATE THE INSTALLATION OF PIPING WITHIN THE NEW GENERATOR ENCLOSURE WITH UNIT MANUFACTURER.

STAGE 5

VENTILATION:

- REMOVE TEMPORARY WALL MOUNTED EXHAUST FANS ALONG WITH ALL DAMPERS, CONTROLS AND ACCESSORIES.
- REMOVE ALL EXISTING TURBINE EXHAUST DUCTS AS INDICATED ON 3/M2.
- CAP EXISTING STACKS AS INDICATED.
- REMOVE ALL EXISTING INTAKE DUCTS.

FUEL:

- REMOVE ALL FUEL RELATED PIPING AND EQUIPMENT WITHIN TURBINE ROOM AS SHOWN ON 7/M3.
- CUT EXISTING FUEL SUPPLY PIPE AFTER 90° ELBOW ON EXTERIOR WALL FOR FUTURE CONNECTION TO NEW FUEL PIPING.

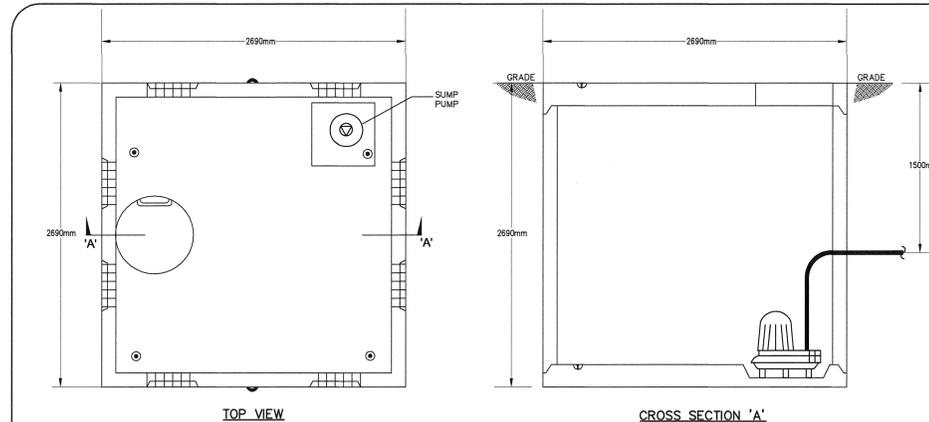
STAGE 6

VENTILATION:

- NO VENTILATION WORK IN STAGE 6.

FUEL:

- CONNECT FUEL SUPPLY PIPE FROM MAIN TANK TO TRANSITION SUMP AS INDICATED ON 8/M3.



- NOTES:**
- PROVIDE NEW SUMP PUMPS IN EXISTING MANHOLES AS PER DRAWING M4. COORDINATE LOCATION WITH CIVIL.
 - CONTRACTOR TO VERIFY FINAL DIMENSIONS TO SUIT FINAL INVERT OF CHAMBER OR CATCH BASIN.

SUMP PUMPS															
REF. NUMBER	QTY.	LOCATION	TYPE	SIMPLEX OR DUPLEX	L/min HEAD (m)	RPM	BODY	IMPELLOR	SOLIDS SIZE (mm)	TYPE	ELECTRICAL				
SP-01	2	MANHOLE	SUBMERSIBLE FOR DEWATERING	SIMPLEX	43.2	4.6	1550	CAST IRON	13mm	38	DIAPHRAGM	NONE	115/1/60	0.3	0.7

1 M1 STORM DRAINAGE PUMP CHAMBER
N.T.S.

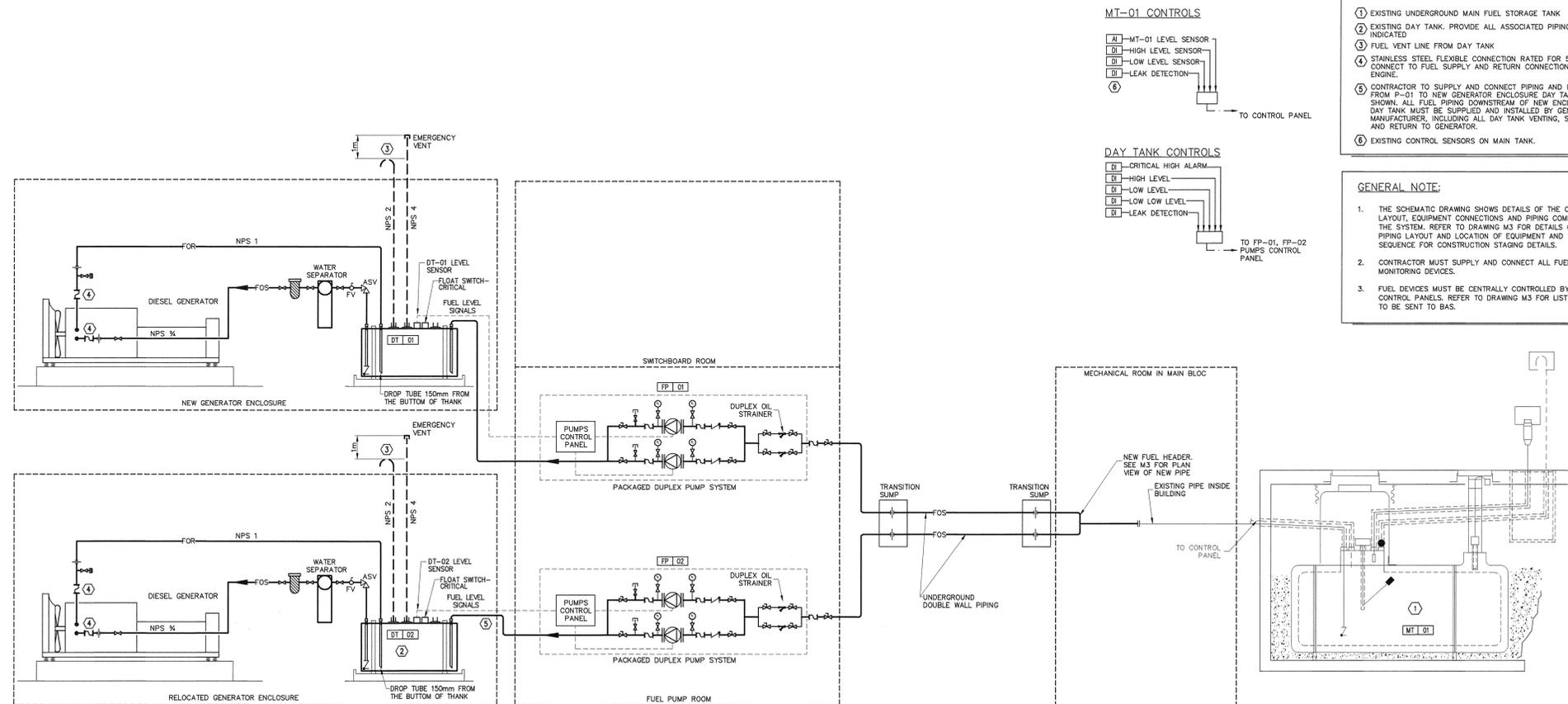
DRAWING LIST

- M1 LEGEND, DRAWING LIST, WORK STAGING AND DETAILS
- M2 MECHANICAL – VENTILATION – STAGED CONSTRUCTION LAYOUT
- M3 MECHANICAL – FUEL OIL – STAGED CONSTRUCTION LAYOUT
- M4 MECHANICAL – FUEL OIL – NEW LAYOUT
- M5 MECHANICAL – ENERGY AND CONTROL MONITORING SYSTEM

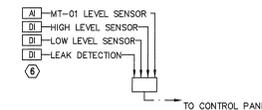
LEGEND

- UPWARD
- DOWNWARD
- TO REMAIN
- TO REMOVE
- DISMANTLING POINT
- CONNECTION POINT TO EXISTING
- UNION TYPE JOINT
- STRAINER
- GATE VALVE (OPEN)
- CHECK VALVE
- FOS DIESEL SUPPLY
- FOR DIESEL RETURN
- DIESEL VENT
- PUMP
- FV 6 FIRE VALVE
- WATER SEPARATOR
- OIL FILTER
- FLEXIBLE CONNECTION
- PRESSURE GAUGE
- ANTI SIPHON VALVE

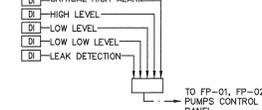
FUEL SYSTEM SCHEMATICS PIPING AND CONTROLS SCHEMATICS



MT-01 CONTROLS



DAY TANK CONTROLS



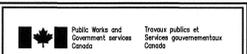
DRAWING NOTES:

- EXISTING UNDERGROUND MAIN FUEL STORAGE TANK
- EXISTING DAY TANK. PROVIDE ALL ASSOCIATED PIPING AS INDICATED
- FUEL VENT LINE FROM DAY TANK
- STAINLESS STEEL FLEXIBLE CONNECTION RATED FOR 540°C. CONNECT TO FUEL SUPPLY AND RETURN CONNECTIONS ON ENGINE.
- CONTRACTOR TO SUPPLY AND CONNECT PIPING AND EQUIPMENT FROM P-01 TO NEW GENERATOR ENCLOSURE DAY TANK AS SHOWN. ALL FUEL PIPING DOWNSTREAM OF NEW ENCLOSURE DAY TANK MUST BE SUPPLIED AND INSTALLED BY GENERATOR MANUFACTURER, INCLUDING ALL DAY TANK VENTING, SUPPLY AND RETURN TO GENERATOR.
- EXISTING CONTROL SENSORS ON MAIN TANK.

GENERAL NOTE:

- THE SCHEMATIC DRAWING SHOWS DETAILS OF THE CONTROLS LAYOUT, EQUIPMENT CONNECTIONS AND PIPING COMPONENTS OF THE SYSTEM. REFER TO DRAWING M3 FOR DETAILS ON THE PIPING LAYOUT AND LOCATION OF EQUIPMENT AND TO WORK SEQUENCE FOR CONSTRUCTION STAGING DETAILS.
- CONTRACTOR MUST SUPPLY AND CONNECT ALL FUEL MONITORING DEVICES.
- FUEL DEVICES MUST BE CENTRALLY CONTROLLED BY PUMP CONTROL PANELS. REFER TO DRAWING M3 FOR LIST OF ALARMS TO BE SENT TO BAS.

2 M1 FUEL SYSTEM SCHEMATIC
N.T.S.



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révisions	description	date

A	A. Add'l no.	A
C	B. location drawing no.	B/C
	C. change no.	

project GOUVERNEMENT OF CANADA

TURBINE REPLACEMENT

designed C.B. conceu
date
drawn C.B. dessiné
date
revised G.M. révisé
date
approved G.M. approuvé
date

Tender C. CAMPBELL Soumission
PWC Project Manager Administrateur de projet
project no. R.055763.002
drawing no. M1 OF 5