UPPER LEVEL PLAN (EL.233.600)
SCALE: 1:50

TOP LEVEL PLAN (EL. 233.953)
SCALE: 1:50

LOWER LEVEL PLAN (EL.226.355)
SCALE: 1:50

NOTES:

WET WELL
AREA CLASSIFICATION:

1. AREA INSIDE CHAMBER IS CLASSIFIED AS A SEWAGE WET WELL DUE TO THE PRESENCE OF RAW SEWAGE IN THE COMBINED SEWER. ALL INSTALLATION AND MATERIALS TO MEET REQUIREMENTS SET OUT BY CANADIAN ELECTRICAL CODE (CEC) AND OTHER RELEVANT STANDARDS.

2. HAZARDOUS MATERIAL: SEWAGE WASTE WATER.

POTENTIAL GASSES	APPROXIMATE AUTO IGNITION TEMPERATURE	FLAMMABLE / EXPLOSIVE LIMITS
HYDROGEN SULFIDE (H2S)	232°C	4.3% – 46%
METHANE (CH4)	537°C	4.4% – 17%
AMMONIA (NH4+)	651°C	15% – 28%

3. AREA TYP: WASTE WATER WET WELL.

4. CEC SECTION 18 AREA RATING: ZONE 1 EXPLOSIVE GAS (DIVISION 2)

5. CEC SECTION 22 AREA RATING: CATEGORY 2 CORROSIVE VAPOUR.

6. WIRING METHODS:

   – TECK CABLE WITH "HL" RATING SPACED MINIMUM 12mm FROM WALL
   – ACIC CABLE WITH "HL" RATING SPACED MINIMUM 12mm FROM WALL
   – RIGID ALUMINIUM PVC COATED (RA PVC, "ROBROY")

8. SEALING METHODS:

   – TECK CABLE: SEE ZONE 1 CABLE SEALING DETAIL.
   – RA PVC: POURED EYS SEALS OUTSIDE OF THE RATED AREA. INSTALLATION ONLY PERMITTED WHERE CABLING IS NOT PART OF A PRE–MANUFACTURED EQUIPMENT ASSEMBLY.
   – PRE–MANUFACTURED CABLE: SEE ZONE 1 CABLE SEALING DETAIL.

9. EQUIPMENT RATINGS: ALL ELECTRICAL EQUIPMENT IN THE WET WELL IS TO BE CONSTRUCTED AND CERTIFIED AS AN "INTRINSICALLY SAFE FIELD DEVICE" WITH A RATING EQUAL TO OR GREATER THAN THE HAZARDOUS AREA RATING. THE EQUIPMENT AT MINIMUM SHALL INCLUDE ONE OF THE FOLLOWING CSA MARKINGS:
   ZONE 0: IS, I.S., Ex i, Ex ia
   ZONES 1 AND 2: ALL OF ZONE 0, Ex ib
   ZONE 2: ALL OF ZONES 0 AND 1, Ex ic
   REFER TO CEC 22.1–18 TABLE 18 FOR FURTHER MARKINGS.

10. GROUNDING AND BOUND: STRUCTURAL STEEL BELOW GROUND IN CONTACT WITH EARTH SHALL BE BONDED TO THE SYSTEM GROUND.

11. AREAS WITHIN 0.9M OF ALL HATCHES TO A ZONE 1 AREA ARE TO BE CONSIDERED A ZONE 2 AREA UP TO HEIGHT OF 0.5M.

NO.	DRAWING NUMBER	REFERENCE DRAWING TITLE
10		
9		
8		
7		
6		
5		
4		
3		
2		
1		

REFERENCE DRAWINGS

0 1000 2000 3000 4000 5000
SCALE: 1:50

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES
UNLESS OTHERWISE NOTED

ENGINEERS GEOSCIENTISTS MANITOBA
Certificate of Authorization
MPE, A DIVISION OF ENGLOBE CORP.
No. 4968

B.M.
ELEV.

NO.	REVISIONS	DATE	BY
0	ISSUED FOR CONSTRUCTION	2024.03.15	

MPE a division of Englobe

DESIGNED BY	J. SWAIN	CHECKED BY	R. OFSTIE
DRAWN BY	D. MCMILLAN	APPROVED BY	R. OFSTIE
SCALE: HORIZONTAL / VERTICAL	AS SHOWN	RELEASED FOR CONSTRUCTION	
DATE	2024–03–15	DATE	

PLOT DATE: 2024 03 15

PROVINCE OF MANITOBA
R.G OFSTIE
Member 44405
REGISTERED PROFESSIONAL ENGINEER
MARCH 18, 2024

CONSULTANT DRAWING NUMBER

BID OPPORTUNITY: --

Winnipeg

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENGINEERING DIVISION

RENFREW OUTFALL GATE CHAMBER
2024 UPGRADES
HAZARDOUS LOCATION PLAN

CITY DRAWING NUMBER 1–0240G–E0011–001
SHEET 24 OF 41

FILE PATH: M:\N–Data\84\00 City of Winnipeg\006 – Renfrew Outfall Gate Chamber Upgrades\AutoDesk\ACAD\
FILE NAME: e.10 hazardous location plan.dwg