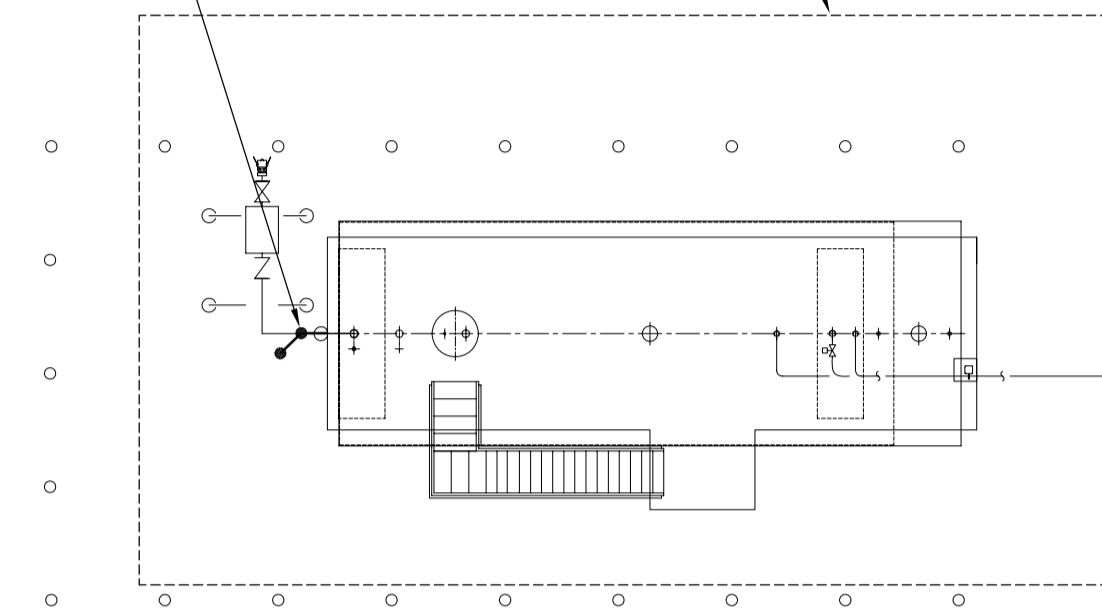


ALL ELECTRICAL WITHIN 3m FROM FUEL TANKS TO BE SUITABLE FOR CLASS 1, ZONE 1 INSTALLATION

GROUNDING ELECTRODE, BONDING CONNECTIONS TO TANK AND PIPING, AND BONDING CLAMP FOR FUEL LOADING. REFER TO MECHANICAL DWG. M0005 FOR DETAILS



ALL ELECTRICAL EQUIPMENT & WIRING WITHIN 1.5m IN ALL DIRECTIONS AND 7.5m HORIZONTALLY UP TO 900mm ABOVE FLOOR FROM FUEL PUMPS, VALVES, OR METERS TO BE SUITABLE FOR CLASS 1, ZONE 2 INSTALLATION

**1**  
ELECTRICAL LAYOUT  
N.T.S.

INTERSTITIAL SENSOR FOR STEEL TANK C/W INSTALLATION KIT. DISCRIMINATORY TYPE, 9ft PROBE LENGTH COMPATIBLE WITH TLS-300

EXPLOSION-PROOF JUNCTION BOX SUITABLE FOR CLASS 1, ZONE 1 INSTALLATION

NEW LEVEL SENSOR FOR ABOVE GROUND STEEL STORAGE TANK C/W WITH LOW AND HIGH LEVEL ALARM POINTS, FILL LINE ARRESTOR AND OVER-FILL PROTECTION, 9ft PROBE LENGTH

EXPLOSION-PROOF JUNCTION BOX SUITABLE FOR CLASS 1, ZONE 1 INSTALLATION

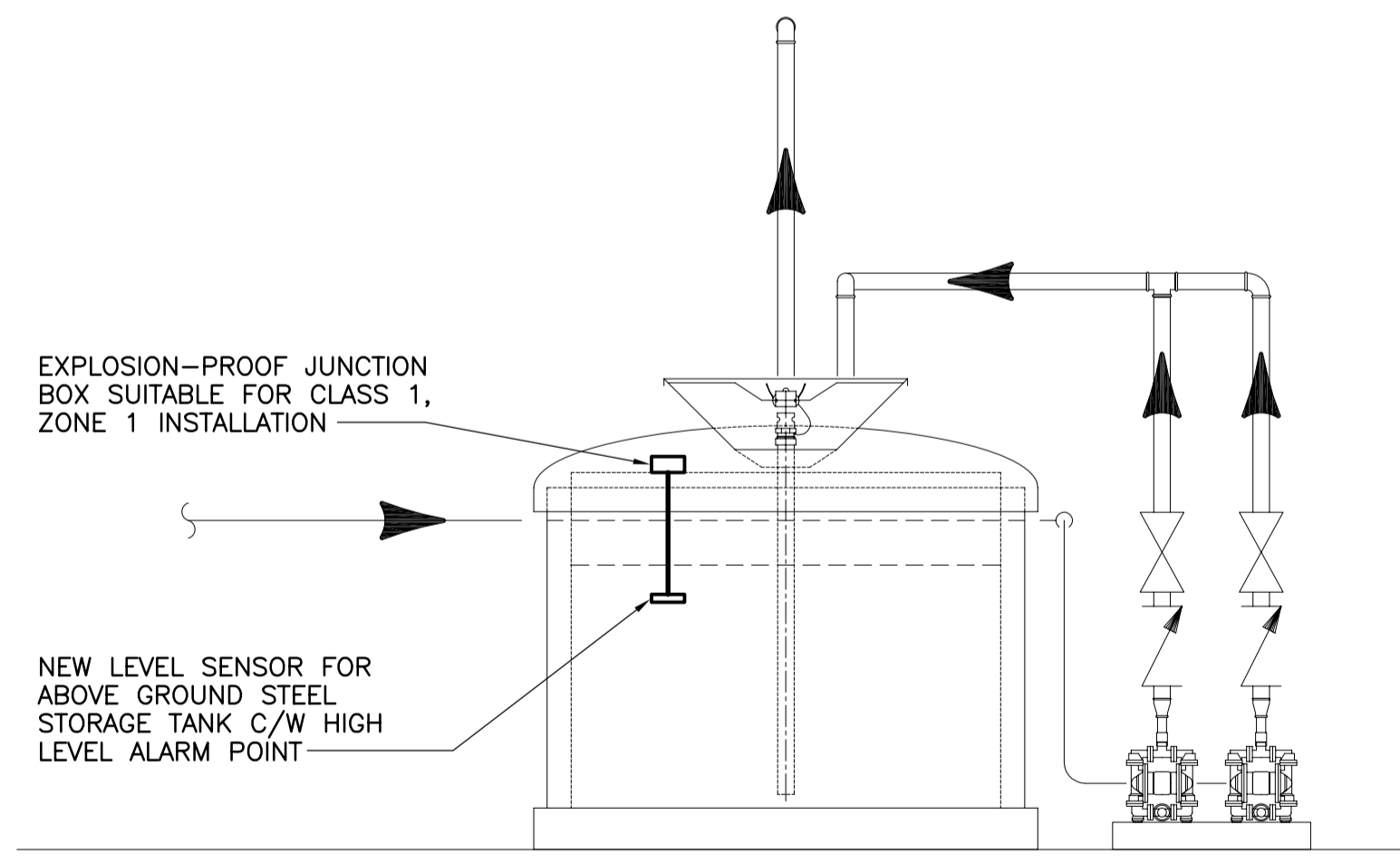
INDOOR JUNCTION BOX

NEW VEEDER-ROOT TLS-300 MONITORING DEVICE

CONSOLE WITH INTEGRAL PRINTER, REMOTE MONITORING, LEAKAGE, LOW & HIGH LEVEL SENSING, ALARM, AND WARNING LIGHT

PROVIDE SEALED FITTINGS AT THE POINT OF EMERGING OF CONDUIT FROM UNDERGROUND

**2**  
DIESEL FUEL TANK LEVEL SENSOR/PROBE SCHEMATIC DETAIL  
N.T.S.



EXPLOSION-PROOF JUNCTION BOX SUITABLE FOR CLASS 1, ZONE 1 INSTALLATION

NEW LEVEL SENSOR FOR ABOVE GROUND STEEL STORAGE TANK C/W HIGH LEVEL ALARM POINT

**3**  
WASTE OIL TANK LEVEL SENSOR/PROBE SCHEMATIC DETAIL  
N.T.S.

NOTE:  
1. SEE DETAIL 4 ON DWG. E0003 FOR CONTROL SCHEMATIC

EXISTING 400A SPLITTER 120/208V, 3Ø, 4W

NEW 100A, 3P FUSIBLE DISCONNECT SWITCH

DIESEL FUEL PUMPS

NEW TLS300 TANK MONITORING UNIT

PANEL 100 UNFUSED MAIN DISCONNECT SWITCH

NEW PANEL 100 100A, 120/208V, 3Ø, 4W (TO BE DUST & MOISTURE PROOF) NEMA 12

DIESEL FUEL PUMP STARTERS C/W NEMA 12 ENCLOSURES

DISCONNECT SWITCHES FOR FUEL PUMPS SUITABLE FOR CLASS 1, ZONE 2 INSTALLATION

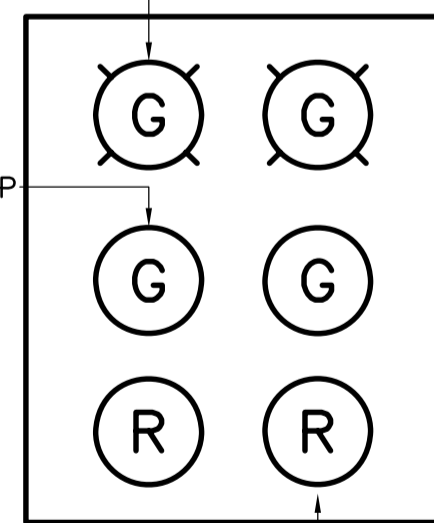
DIESEL FUEL START/STOP BUTTONS. ALL ELECTRICAL EQUIPMENT & WIRING WITHIN FUEL DISPENSING AREA TO BE SUITABLE FOR CLASS 1, ZONE 1 INSTALLATION (SEE DETAIL 4)

REUSE EXISTING EMERGENCY SHUT-OFF BUTTON

FUEL DISPENSING INDICATING LIGHTS. EXPLOSION-PROOF TYPE, AMBER LIGHTS SUITABLE FOR CLASS 1, ZONE 1 INSTALLATION

"RUN" INDICATORS

PUMP No.1 START/STOP

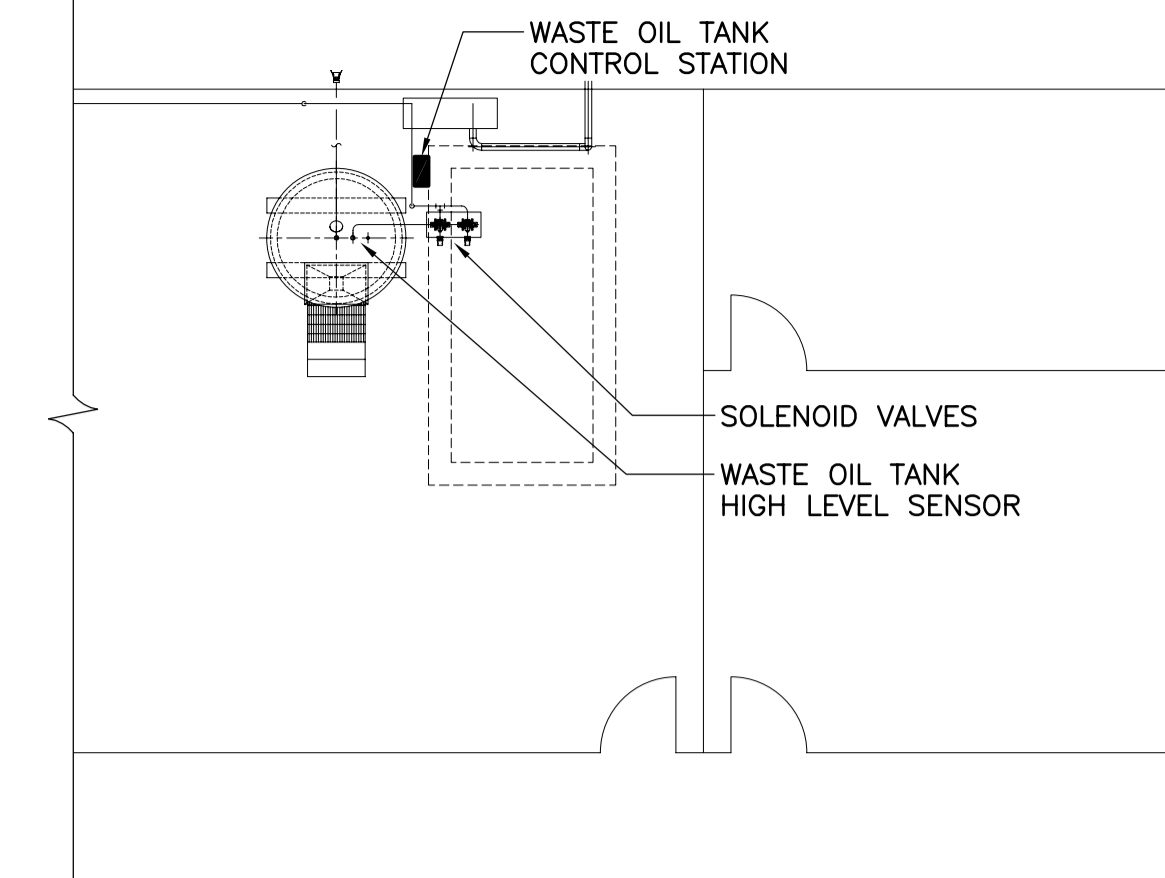


PUMP No.2 START/STOP

**4**  
DIESEL FUEL START/STOP STATION DETAIL  
N.T.S.

**NOTE:**

- TO MAINTAIN THE INTRINSICALLY SAFE INTEGRITY OF THE INSTALLED CONSOLE, SENSOR & PROBE CONDUIT CAN SHARE THE SAME TRENCHES WITH POWER CONDUITS.
- INSTALL CONDUIT FROM ALL PROBE AND SENSOR LOCATIONS TO THE CONSOLE'S LOCATION. KNOCKOUTS FOR CONDUIT ARE PROVIDED IN THE INTRINSICALLY SAFE AREA OF THE CONSOLE FOR PROBE AND SENSOR WIRING.
- THE RIGID METAL CONDUITS MUST BE THREADED AND PROPERLY SEALED IN ACCORDANCE WITH THE LATEST EDITION OF THE CANADIAN ELECTRICAL CODE, SECTION 18-HAZARDOUS LOCATIONS ( I.E. CLASS 1, ZONE 1 INSTALLATION).
- INTRINSICALLY SAFE WIRING: BONDED CONDUIT MEANS THAT THE METALLIC SECTIONS OF CONDUIT ARE PERMANENTLY JOINED TO FORM AN ELECTRICALLY CONDUCTIVE PATH THAT WILL ASSURE ELECTRICAL CONTINUITY AND THAT THE CONDUIT HAS THE CAPACITY TO CONDUCT SAFELY, ANY CURRENT LIKELY TO BE IMPOSED.
- BONDED AND NON-BONDED CONDUIT: THE WIRING BETWEEN THE MONITOR AND EACH PROBE/SENSOR LOCATION MUST BE #16AWG.STRANDED COPPER WIRES WITHIN A SHIELDED CABLE.
- CONNECT THE BARRIER GROUND TO THE EARTH ROUND BUS AT THE CLOSEST POWER DISTRIBUTION PANEL WITH #12AWG (OR LARGER) CONDUCTOR.
- INTRINSICALLY SAFE WIRING SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE CANADIAN ELECTRICAL CODE.
- ELECTRICAL RATING POWER INPUT 120VAC 60HZ 100VA MAXIMUM FOR CONSOLE WITH INTEGRAL PRINTER.
- INSTALL BUILDING WIRES IN CONDUIT SYSTEMS IN ACCORDANCE WITH SECTION 16-133 - CONDUITS, CONDUIT FASTENINGS AND CONDUIT FITTINGS.
- TERMINATE CABLES IN ACCORDANCE WITH SECTION 16151-WIRE AND BOX CONNECTORS - 0 -1000 V.



NO.	DESCRIPTION	DATE	ISSUED BY
1	REVISED FOR ADDENDUM #2	07.05.22	L.K.
0	ISSUED FOR TENDER	07.04.05	S.N.

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CLIENT  
**CITY OF WINNIPEG  
TRANSIT DEPARTMENT**

**WARDROP** | Engineering Inc.

PROJECT NAME  
PETROLEUM STORAGE AND HANDLING SYSTEMS REPLACEMENT

DRAWING DESCRIPTION  
**ELECTRICAL EQUIPMENT LAYOUT AND SCHEMATIC DETAILS  
@ 1520 MAIN STREET FACILITY**

DESIGNED BY:	DRAWN BY:	CHECKED BY:
S.N.	H.P.C.C.	
APPROVED BY:		
SCALE:	N.T.S.	DATE:
		07.02.28
DRAWING NO.	REV.	
0729720100-DWG-E0002	1	

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REVISION "0" SEALED BY  
S.T. NETSERE  
07.04.05