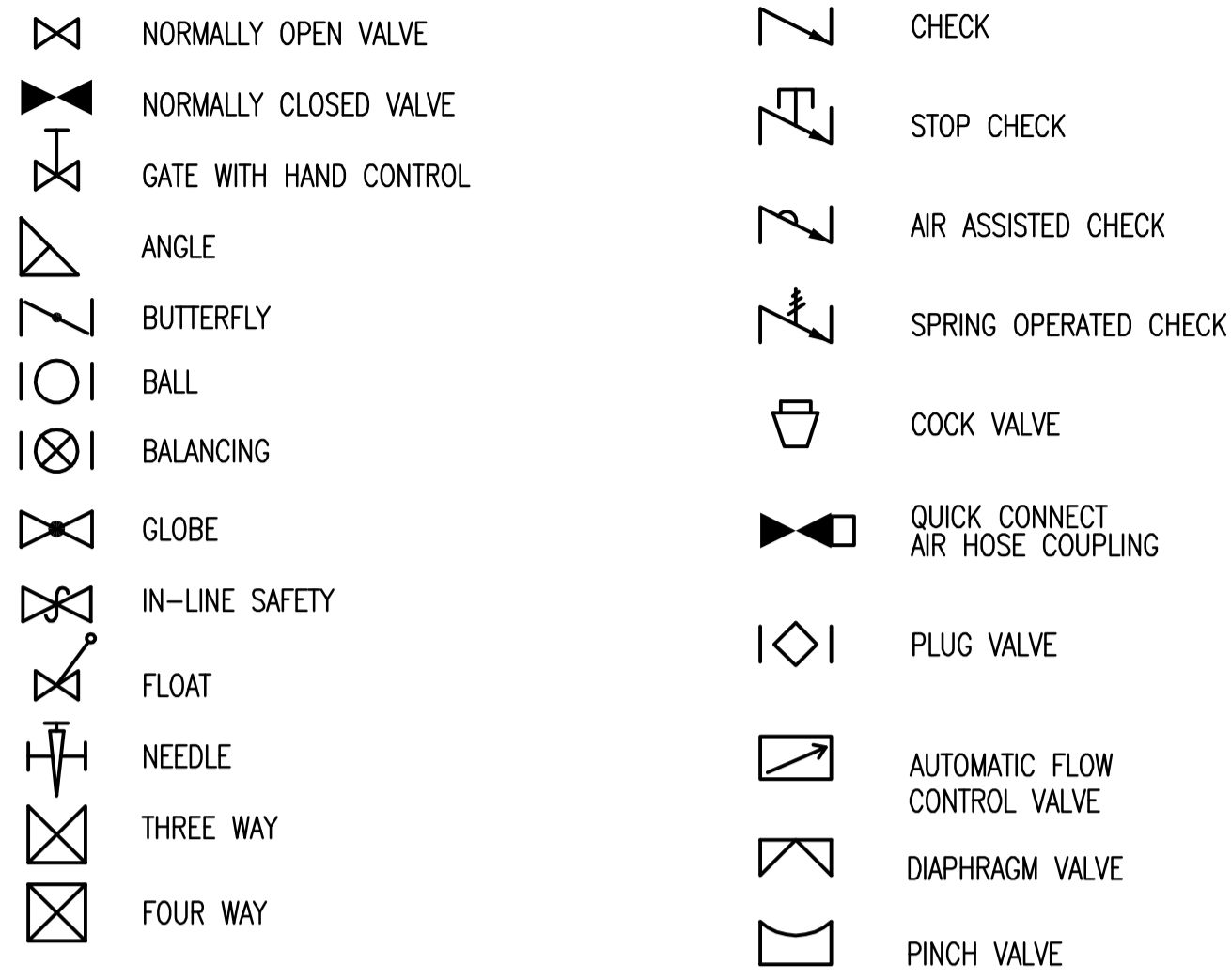
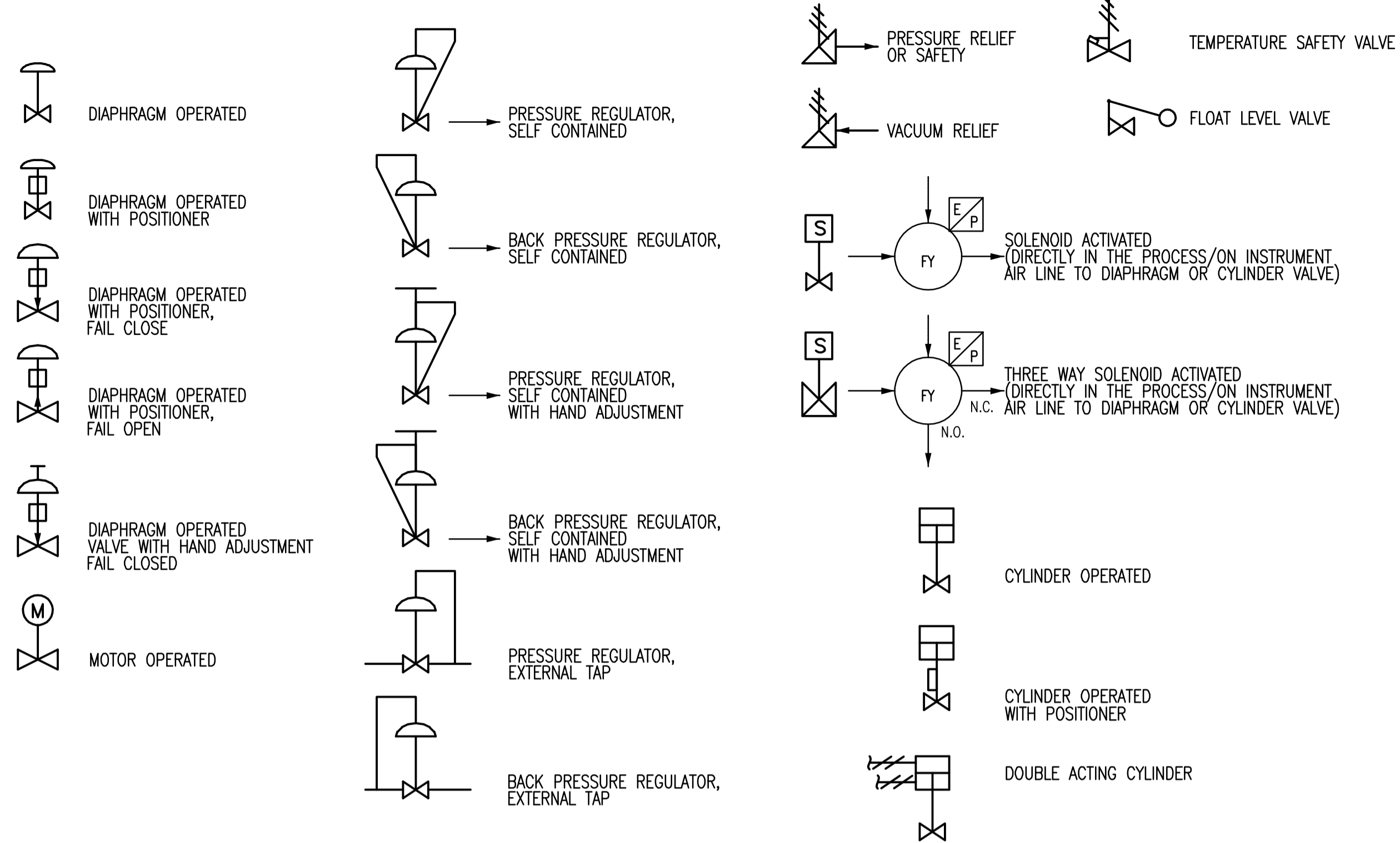


VALVE SYMBOLS



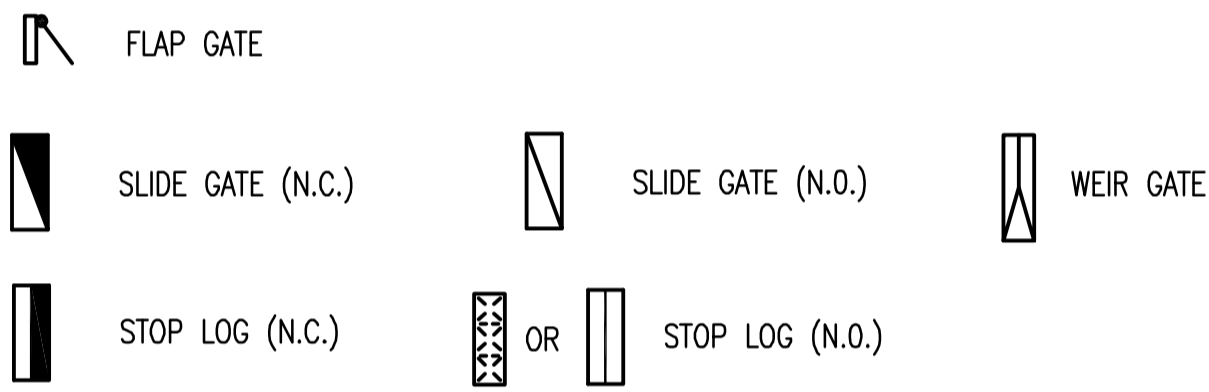
ACTUATOR SYMBOLS



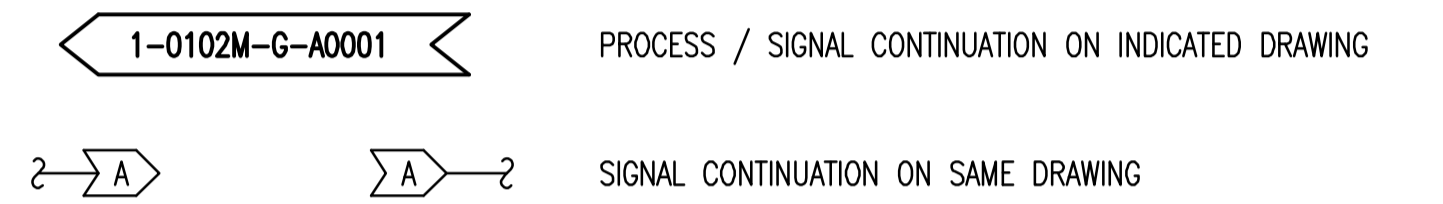
PID STANDARDS

- DRAWINGS UTILIZE CITY OF WINNIPEG STANDARDS FOR BORDER AND TITLE BLOCK. ALL DRAWINGS ARE PRODUCED ON AUTOCAD (LATEST REV. R2006 OR LATER).
- ALL UNITS ARE IN METRIC, EXCEPT AS NOTED OTHERWISE. ALL DIMENSIONS SHOWN ARE IN MILLIMETERS (mm).
- DRAWING CONTENT GENERALLY CONFORMS WITH TO ISA-5.1 STANDARD. AN EXCEPTION REGARDING EQUIPMENT TAGGING HAS BEEN MADE TO ALLOW BETTER CONFORMITY IN NAMING.
- PID'S INDICATE MAJOR PROCESS PIPING AND EQUIPMENT AND ASSOCIATED LOCAL INSTRUMENTATION, DCS AND OTHER PROCESS I/O.
- EQUIPMENT INCLUDING VESSELS, DRUMS, EXCHANGERS, HEATERS, PUMPS, COMPRESSORS, ETC. ARE ARRANGED IN SEQUENCE WITH PRINCIPLE FUNCTIONS AND FLOWS.
- ALL MAJOR EQUIPMENT INCLUDING PUMPS, COMPRESSORS, TANKS, ETC. ARE LABELED AS TO FUNCTION WITH DESIGN SIZES AND RATINGS.
- ALL PROCESS LINES ARE LABELED ACCORDING TO FUNCTION AND SIZE UTILIZING SYSTEM CODES DEFINED HEREIN.
- EACH SYSTEM INTERCONNECTION POINT BETWEEN DRAWINGS IS LABELED WITH A SOURCE DRAWING NUMBER OR DESTINATION DRAWING NUMBER. ARROWS ON PROCESS PIPING INDICATE DIRECTION OF FLOW BETWEEN DRAWINGS.

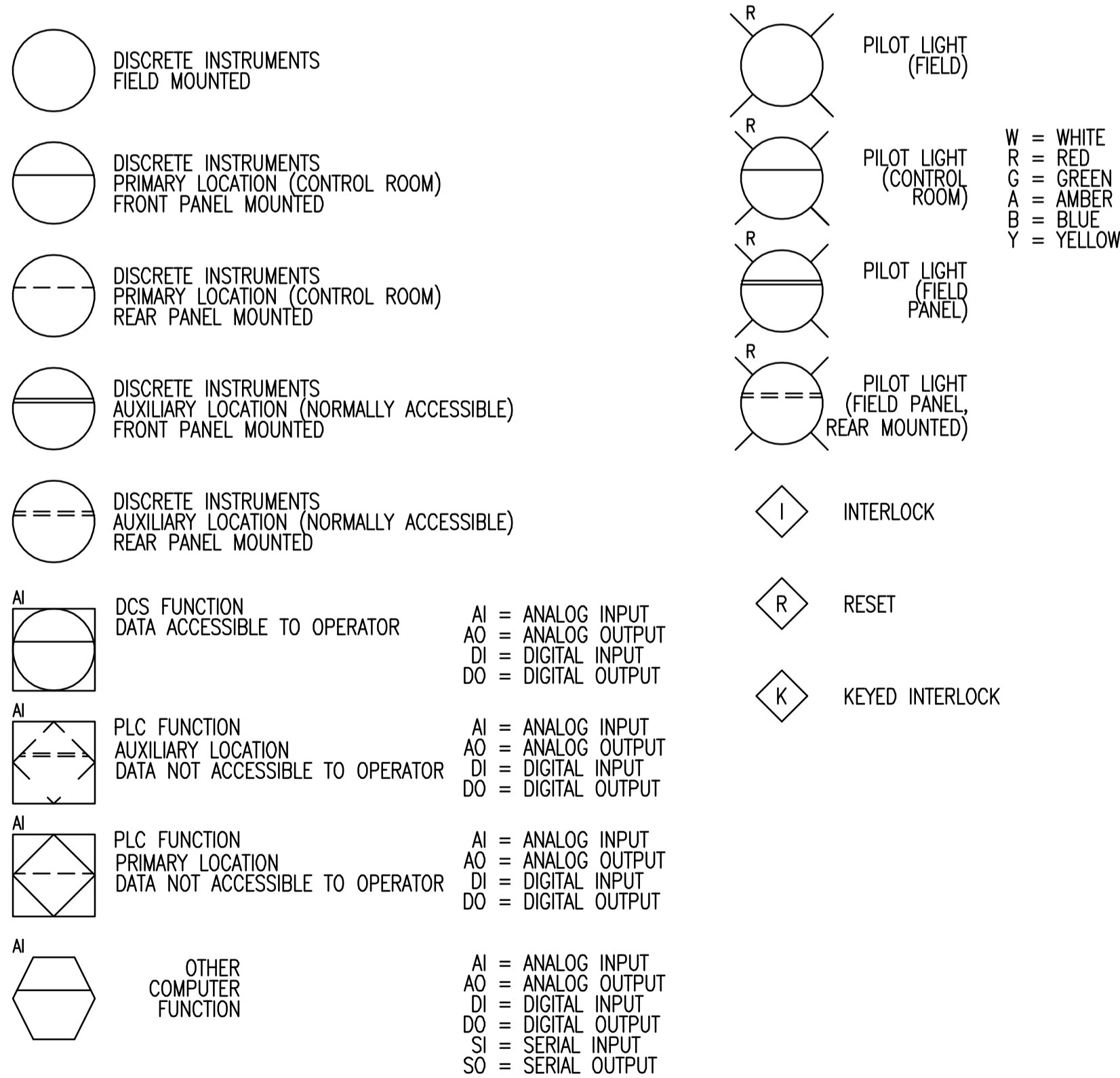
GATE SYMBOLS



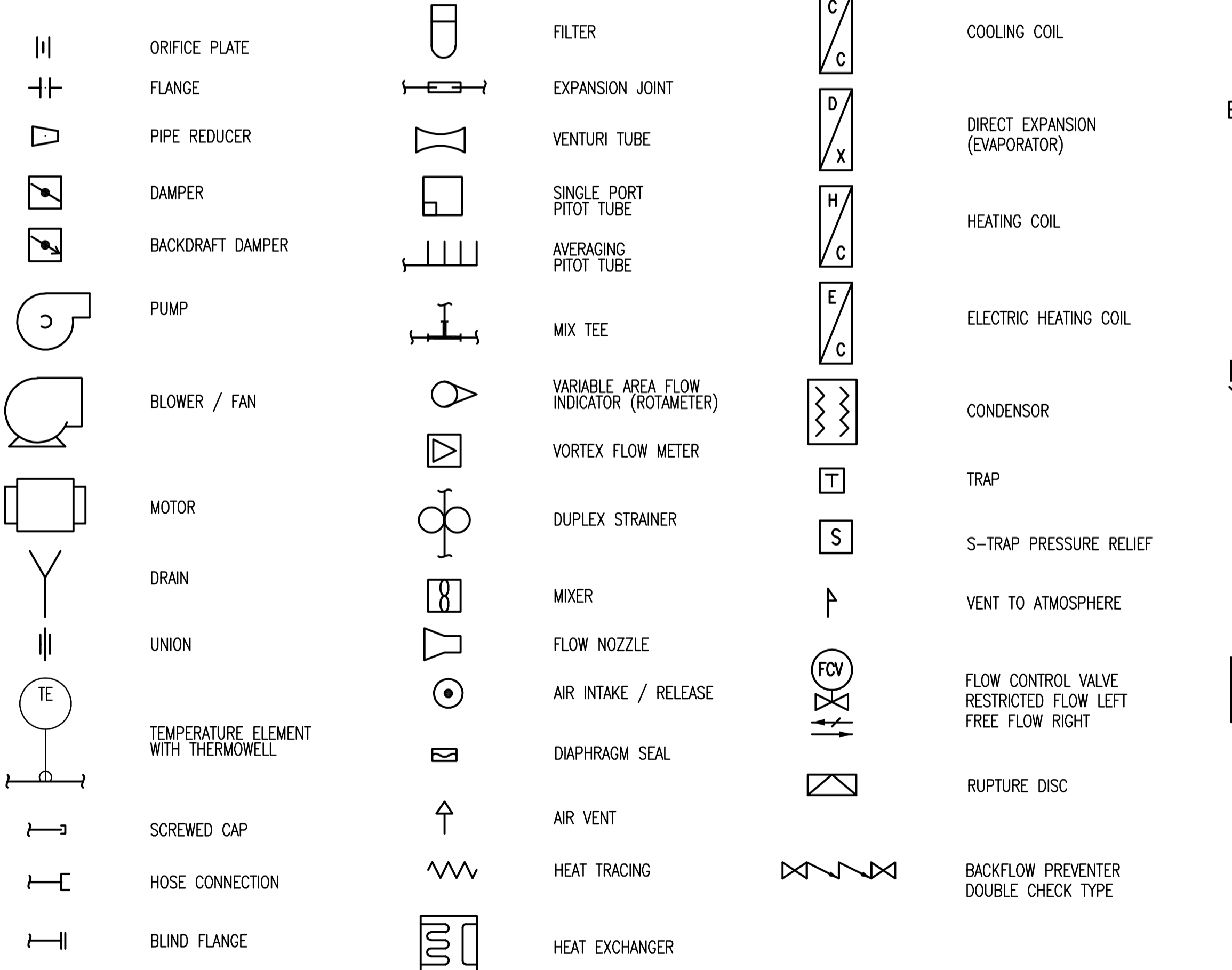
CONNECTING ARROWS



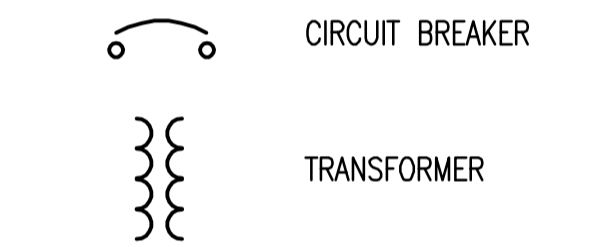
INSTRUMENT SYMBOLS



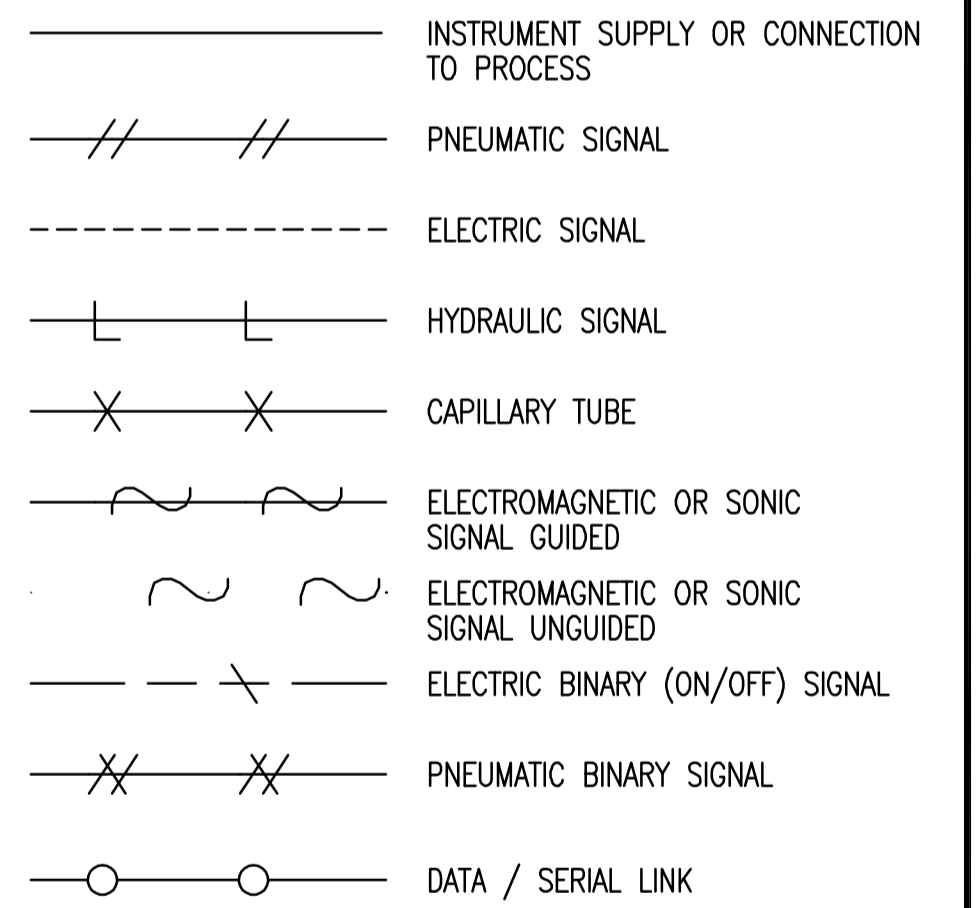
ACCESSORY DEVICE SYMBOLS



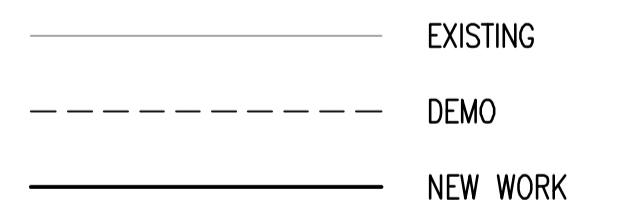
ELECTRICAL SYMBOLS



INSTRUMENT LINE SYMBOLS



LINETYPES

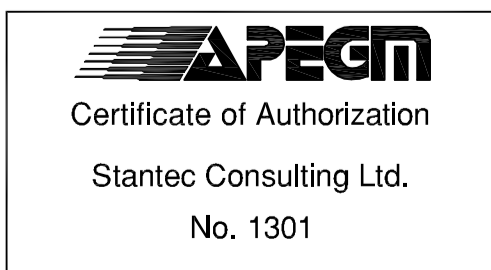


WARNING

IF POWER EQUIPMENT OR EXPLOSIVES ARE TO BE USED FOR EXCAVATION ON THIS PROJECT THE CONTRACTOR MUST:
 1) NOTIFY THE GAS COMPANY OF THE PROPOSED LOCATION OF EXCAVATION.
 2) TAKE PRECAUTION TO AVOID DAMAGE TO GAS COMPANY INSTALLATIONS.
 SEE PROVINCIAL REGULATION 140/92 FOR DETAILS

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
 DECIMALIZED NUMBERS INDICATE METRES



| | | | | | | | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------|--|------------------------------------------------------------|--|---------------------------|--|---------------------------------------------------------------------------------------|--|
| LOCATION APPROVED UNDERGROUND STRUCTURES SUPV. U/G STRUCTURES COMMITTEE DATE | | B.M. ELEV. | | 500-311 Portage Ave, Winnipeg MB Canada www.stantec.com | | ENGINEER'S SEAL | | THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT | |
| NOTE: LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION. | | DESIGNED BY: S.L. CHECKED BY: D.R. | | DRAWN BY: E.G.D. APPROVED BY: S.K.B. | | TENDER NO. 952-2015 | | CITY DRAWING NUMBER I-0101A-A0009-001 | |
| NO. REVISIONS DATE BY | | HOR. SCALE: AS NOTED VERTICAL: | | RELEASED FOR CONSTRUCTION: | | SHEET 1 OF 20 | | PROCESS & INSTRUMENTATION DIAGRAM LEGEND AND DETAILS - SHEET I OF 3 | |
| 3 ISSUED FOR TENDER 16.03.09 D.R. 2 ISSUED FOR TENDER REVIEW 16.03.07 D.R. 1 ISSUED FOR 95% REVIEW 16.01.29 D.R. | | DATE 2016.01.12 | | PLOT DATE: 2016 03 08 | | BID OPPORTUNITY: 952-2015 | | FILE PATH: V:\1112\active\111216000\0300_drawing\0302_sheet_files\10_instrumentation\ | |