PIPE CONNECTIONS

DESCRIPTION	DOUBLE LINE (> 100Φ)	SINGLE LINE (< 100Φ)
WELD NECK FLANGED CONNECTION		
SLIP-ON FLANGED CONNECTION		
VICTAULIC FLANGED CONNECTION	VF	VF
BLIND FLANGE		
INSULATING FLANGE	IF	IF
WELDED CONNECTION (RANDOM LENGTH PIPE)		
SCREWED CONNECTION (RANDOM LENGTH PIPE)		
VICTAULIC JOINT CONNECTION	VC	VC
UNION		
COMPRESSION COUPLING	CC	CC
FLANGED COUPLING	FCC	FCC
BELLxFLANGE		
BELL AND SPIGOT, RING TIGHT, MECHANICAL JOINT CONNECTION		
COUPLER (PVC)		

PIPE TO VALVE CONNECTIONS

DESCRIPTION	DOUBLE LINE (> 100Φ)	SINGLE LINE (< 100Φ)
WELD NECK FLANGED CONNECTION		
SLIP-ON FLANGED CONNECTION		
WELDED CONNECTION		
THREADED CONNECTION		
VICTAULIC CONNECTION	VC	VC

PIPE FITTINGS

DESCRIPTION	DOUBLE LINE (> 100Φ)	SINGLE LINE (< 100Φ)
CROSS		
CROSS (BRANCH UP)		
45° ELBOW		
45° ELBOW (UP)		
45° ELBOW (DOWN)		
LATERAL		
90° ELBOW		
90° ELBOW (UP)		
90° ELBOW (DOWN)		
45° ELBOW (SHORT RADIUS)	SR	SR
90° ELBOW (SHORT RADIUS)	SR	SR
BASE ELBOW		
SIDE OUTLET ELBOW (UP)		
SIDE OUTLET ELBOW (DOWN)		
TEE		
TEE (BRANCH UP)		
TEE (BRANCH DOWN)		
SIDE OUTLET TEE (UP)		
CAP		
CONCENTRIC REDUCER		
ECCENTRIC REDUCER		
EXPANSION JOINT		
FLEXIBLE CONNECTION		

LINE LABELLING

PIPE DIAMETER (mm) — PIPE MATERIAL
LINE IDENTIFICATION — SPECIAL TREATMENT CODES

YYY-200-ZZZ-a,b,c

LINE IDENTIFICATION (YYY)

AA	AQUA AMMONIA
AAS	AERATION AIR SUPPLY
ACI	ACID (pH ADJUSTMENT)
ACS	POWDERED ACTIVATED CARBON SOLUTION
AD	AIR DISTRIBUTION
AL	ALUM
ALS	ALUM SOLUTION
ALG	ALGAECIDE SOLUTION
AMG	AMMONIA GAS
AMS	AMMONIA SOLUTION
ANS	ANTISCALANT
AS	AIR SUPPLY
BWS	BACKWASH SUPPLY
CAS	CITRIC ACID SOLUTION
CDG	CARBON DIOXIDE GAS
CDS	CARBON DIOXIDE SOLUTION
CIPS	CLEAN IN PLACE SUPPLY
CIPR	CLEAN IN PLACE RETURN
CIPD	CLEAN IN PLACE DRAIN
CLG	CHLORINE GAS
CLS	CHLORINE SOLUTION
CO	COAGULANT
COS	COAGULANT SOLUTION
CSS	CAUSTIC SODA SOLUTION
DCW	DOMESTIC COLD WATER
DE	DAF EFFLUENT
DHW	DOMESTIC HOT WATER
DHWR	DOMESTIC HOT WATER RECIRCULATION
DL	DIESEL FUEL
DR	DRAIN
DW	DAF WASTE
EW	EFFLUENT WATER
FL	FLUORIDE
FTW	FILTER TO WASTE
FW	FILTERED WATER
G(H)	NATURAL GAS (HIGH PRESSURE)
G(L)	NATURAL GAS (LOW PRESSURE)
GLS	GLYCOL SUPPLY
GLR	GLYCOL RETURN
HWS	HOT WATER SUPPLY
HWR	HOT WATER RETURN
IA	INSTRUMENT AIR
OF	OVERFLOW
PLY	POLYELECTROLYTE (LIQUID)
PLYS	POLYELECTROLYTE SOLUTION
PO	POLYMER
POS	POLYMER SOLUTION
PPS	POTASSIUM PERMANGANATE SOLUTION
PSW	PLANT SERVICE WATER
PW	POTABLE WATER
RAS	RETURN ACTIVATED SLUDGE
RF	REFRIGERANT
RJW	REJECT WATER
RW	RAW WATER
S	SANITARY WASTE
SA	SULFURIC ACID
SAM	SAMPLE LINE
SAS	SODA ASH SOLUTION
SB	SODIUM BISULPHATE
SEN	SENSING LINE
SHS	SODIUM HYPOCHLORITE SOLUTION
SLG	SLUDGE
SPSW	SOFTENED PLANT SERVICE WATER
SU	SUPERNATANT
SV	SANITARY VENT
TEW	TEMPERED EFFLUENT WASTE
TW	TREATED WATER
VE	VENT
WAS	WASTE ACTIVATED SLUDGE
WT	WEEPING TILE
XR	EXCESS RECIRCULATION

PIPE MATERIAL (ZZZ)

LINE CODE	FLANGE RATING	SCH OR THICKNESS	BASIC MATERIAL	SPECIAL NOTES
A1	ANSI 150	-	CARBON STEEL	STANDARD WEIGHT (STD)
A2	ANSI 150	-	CARBON STEEL	EXTRA STRONG (XS)
A3	ANSI 300	SCH 80	CARBON STEEL	EXTRA STRONG (XS)
B1	ANSI 150	SCH 80	PVC	-
B2	ANSI 150	SCH 40	PVC	-
B3	ANSI 150	SDR 18	PVC	-
B4	ANSI 150	SDR 21	PVC	-
B5	ANSI 150	SDR 26	PVC	-
B6	ANSI 150	SDR 28	PVC	-
B7	ANSI 150	SDR 32.5	PVC	-
B8	ANSI 150	SDR 35	PVC	-
B9	ANSI 150	SDR 41	PVC	-
B10	ANSI 150	SDR 51	PVC	-
B11	AWWA 150	C900 AND C905	PVC	-
B12	-	SCH 80	PVC (WELL RISER PIPE)	CERTA-LOCK
C1	-	TYPE K	COPPER	-
C2	-	TYPE L	COPPER	-
C3	-	TYPE M	COPPER	-
D1	ANSI 150	SCH 10S	STAINLESS STEEL, 304L	-
D2	ANSI 150	SCH 10S	STAINLESS STEEL, 316L	-
D3	ANSI 150	SCH 40S	STAINLESS STEEL, 304L	-
D4	ANSI 150	SCH 40S	STAINLESS STEEL, 316L	-
D5	ANSI 300	SCH 40S	STAINLESS STEEL, 304L	-
D6	ANSI 300	SCH 40S	STAINLESS STEEL, 316L	-
D7	ANSI 300	SCH 80S	STAINLESS STEEL, 304L	-
D8	ANSI 300	SCH 80S	STAINLESS STEEL, 316L	-
E1	-	-	PVC-DWV	-
E2	-	-	ABS-DWV	-
F1	-	-	BIG 'O' DRAIN	C/W FILTER SOCK
G1	ANSI 150	-	DUCTILE IRON	-
G2	ANSI 150	-	CAST IRON	-
H1	-	DR 9	HDPE, C906	-
H2	-	DR 11	HDPE, C906	-
H3	-	DR 13.5	HDPE, C906	-
H4	-	DR 15.5	HDPE, C906	-
H5	-	DR 17	HDPE, C906	-
H6	-	DR 32	HDPE, C906	-
H7	-	DR 11	PE 2406, YELLOW	-
H11	-	-	PEX A, WATER SERVICE	-
J1	-	-	ASBESTOS CEMENT PIPE	-
J2	-	CLASS V	REINFORCED CONCRETE PIPE	-
K1	-	-	PE OD TUBING	-
K2	-	-	PE ID TUBING	-
K3	-	-	LLDPE OD TUBING	-
K4	-	-	PP OD TUBING	-

SPECIAL TREATMENT CODES (a,b,c)

A	CEMENT MORTAR LINING
B	INTERNAL HOT APPLIED COAL TAR LINING
C	EXTERNAL HOT APPLIED COAL TAR LINING
D	INTERNAL EPOXY COATED
E	EXTERNAL EPOXY COATED
F	EXTERNAL YELLOW JACKETED
G	EXTERNAL DOUBLE WRAP POLYKEN TAPE
H	EXTERNAL INSULATED
I	EXTERNAL INSULATION AND ALUMINIUM MECHANICAL PROTECTION
J	EXTERNAL SHOP PRIME
K	DENSYL MASTIC WRAP - BURIED FLANGES, COUPLERS AND VALVES
L	GALVANIZED
M	ROCK SHIELD
N	FROST SHIELDED
P	INSTALLED IN RPVC CONDUIT
R	TRACER WIRE INSTALLED ABOVE PIPE

NOTES:

1. ALL ELEVATION ARE IN METERS UNLESS NOTED OTHERWISE. ALL DIMENSIONS AND PIPE SIZES ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
2. ALL ITEMS SHOWN IN BOLD INDICATE WORK TO BE DONE. ALL ITEMS SHOWN IN LIGHT INDICATED EXISTING CONDITIONS.

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

ENGINEERS GEOSCIENTISTS MANITOBA
Certificate of Authorization
MPE ENGINEERING
No. 5643

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 210/72 FOR DETAILS

LOCATION APPROVED
UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES COMMITTEE — DATE

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.

B.M.
ELEV.

NO.	REVISIONS	DATE	BY
1	ISSUED FOR TENDER	2019-09-10	M.J.B.

MPE Engineering Ltd.

DESIGNED BY	P.N.B.	CHECKED BY	XX
DRAWN BY	C.W.H.	APPROVED BY	XX
SCALE: HORIZONTAL VERTICAL		RELEASED FOR CONSTRUCTION	
DATE	2019-9-11	DATE	

PLOT DATE: 2019 09 16

ORIGINAL SEALED BY MARK J. BAKER 2019-09-16

CONSULTANT DRAWING NUMBER P0.2

BID OPPORTUNITY: 913-2019

Winnipeg

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENGINEERING DIVISION

BURROWS OUTFALL GATE CHAMBER UPGRADES

PIPING LEGEND

CITY DRAWING NUMBER 1-03000-M0001-001 — SHEET 9 OF 20

FILE PATH: N:\84\00 City of Winnipeg\002 - Burrows Outfall Gate Chamberts Upgrades\Autodesk\ACAD\
FILE NAME: P0.1 - P0.3.LEGENDS.dwg