

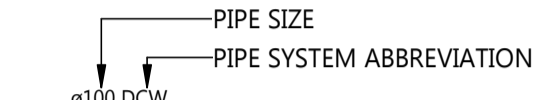
LEGEND OF SYMBOLS

PIPEWORK SYSTEMS

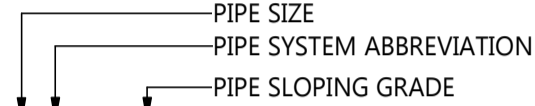
DCW	DRINKABLE COLD WATER PIPEWORK
DHW	DRINKABLE HOT WATER PIPEWORK
DWW	DRINKABLE WARM WATER PIPEWORK
NG	NATURAL GAS PIPEWORK
NDCW	NON DRINKABLE COLD WATER PIPEWORK
SD	SANITARY DRAINAGE PIPEWORK
SDV	SANITARY DRAINAGE VENT PIPEWORK
PW	PUMPED WASTE PIPEWORK
TW	TRADE WASTE PIPEWORK
TWV	TRADE WASTE VENT PIPEWORK
- - -	EXISTING PIPEWORK
- - - - -	DEMOLISHED/REDUNDANT PIPEWORK

PIPING IDENTIFICATION

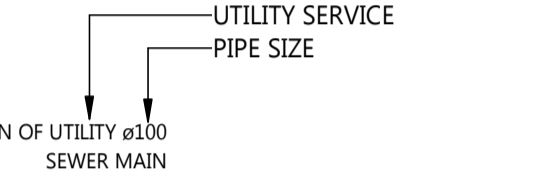
GENERAL PIPES



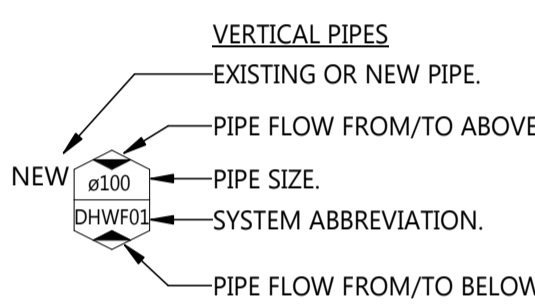
SLOPED PIPES



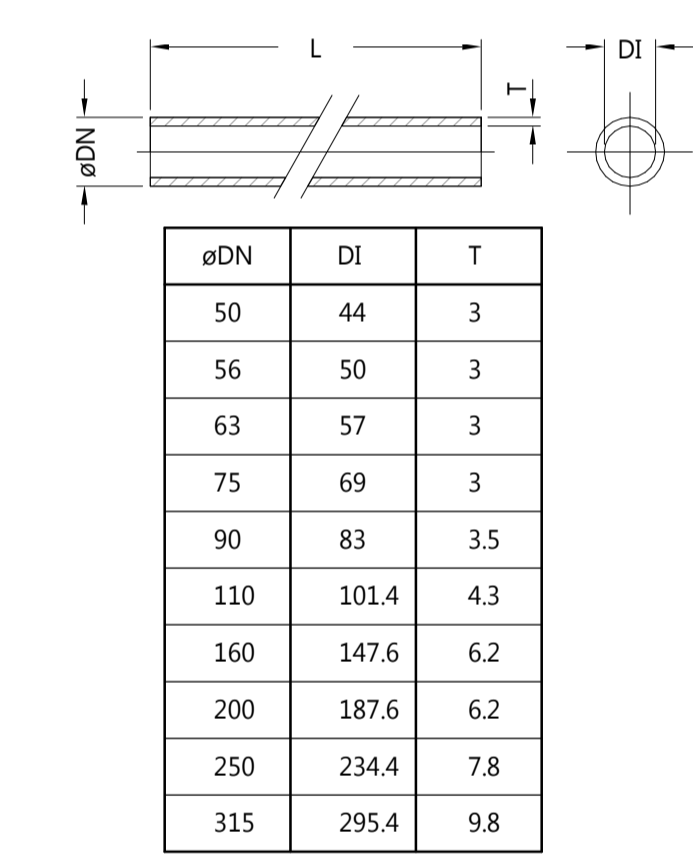
UTILITY PIPES



VERTICAL PIPES



HDPE PIPE CHART



EQUIVALENT PIPE SIZES GUIDE

Specified nominal size	Acceptable equivalent size		
	Copper	PE-X Nominal	Stainless Steel
DN	AS 1432 DN	D _n *	DN
10	10	12	10
15	15	16	15
18	18	20	18
20	20	25	20
25	25	32	25
32	32	40	32
40	40	50	40
50	50	63	50

Notation D_n* - nominal size in plastic pipe Standards.

ANNOTATIONS

⊙ IO	INSPECTION OPENING TO SURFACE C/W NON-SLIP COVER AS SPECIFIED.
⊙ IOS	INSPECTION OPENING TO SURFACE C/W HEAVY DUTY COVER AS SPECIFIED.
⊙ GIP	GOVERNMENT INSPECTION POINT.
● SGT	SEALED GULLY TRAP (COVER AS NOTED)
⊙ SGT	SEALED GULLY TRAP C/W HEAVY DUTY CLASS 'D' COVER
⊙ RV	REFLUX VALVE (COVER AS NOTED)
⊙ RV	REFLUX VALVE C/W HEAVY DUTY CLASS 'D' COVER
⊙ IFDBA	IN FLOOR DRY BASKET ARRESTOR (SIZE AS NOTED)
⊙ TD	TRAPPED TUNDISH (SIZE AS NOTED)
⊙ IWTD	TRAPPED IN WALL TUNDISH (SIZE AS NOTED)
⊙ FW	FLOOR TRAP WASTE (SIZE AS NOTED)
● GT	GULLY TRAP
⊙ SSR	SEALED SEWER SHOP RISER
⊙ TWSSR	TRADE WASTE SEALED SHOP RISER
⊙ FJ	FLEXIBLE JOINT
⊙ IO	INSPECTION POINT (HORIZONTAL)
⊙ AAV	AIR ADMITTANCE VALVE
⊙ CW	FIXTURE TAPWARE (HOT AND COLD)
⊙ HW	DCW FIXTURE CONNECTION
⊙ CW	LOCKABLE CHROME PLATED SCREW NOSE BIBCOCK C/W HOSE CONNECTOR SYPHON BREAKER.
⊙ SNBC	TEMPERING VALVE
⊙	THERMOSTATIC MIXING VALVE
⊙	ISOLATION VALVE (SIZE AS NOTED)
⊙	ISOLATION VALVE IN GROUND BOX (SIZE AS NOTED)
⊙	HOT WATER PLANT - STORAGE TANKS (SIZE AS NOTED)
⊙	HOT WATER PLANT - GAS BURNERS (SIZE AS NOTED)
⊙	'APA GROUP' AUTHORITY GAS METER (SIZE AS NOTED)
⊙	'SA WATER CORPORATION' AUTHORITY WATER METER (SIZE AS NOTED)
⊙	REMOTE PULSE OUTPUT WATER METER (SIZE AS NOTED)
⊙	TESTABLE DOUBLE CHECK VALVE (SIZE AS NOTED)
⊙	CHECK VALVE (SIZE AS NOTED).
⊙	GAS OUTLET
⊙	BALANCING VALVE C/W ISOLATION VALVES ON INLET AND OUTLET (SIZE AS NOTED)
⊙	CONTROL PANEL
⊙	COUPLING JOINT OR CHANGE OF MATERIAL/SIZES
⊙	PENETRATION
⊙	CAPPED END
⊙	ACCESS PANEL
⊙	CONTINUATION OF PIPEWORK
⊙	DIRECTION OF FLOW
⊙	PUMP (ARROW FACING PUMP DIRECTION OF FLOW)
⊙	PRESSURE REDUCING VALVE.
⊙	IRRIGATION CONDUIT
⊙	ELECTRICAL CONDUIT

ABBREVIATIONS

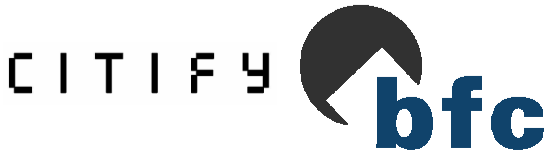
SS	SOIL STACK
WS	WASTE STACK
TWS	TRADE WASTE STACK
BV	BRANCH VENT
RV	RELIEF VENT
SV	SOIL VENT
SSV	SOIL STACK VENT
TWV	TRADE WASTE VENT
SGV	SEALED GULLY VENT
PSV	PUMP STATION VENT
DCW	DRINKABLE COLD WATER
DHW	DRINKABLE HOT WATER
DHWF	DRINKABLE HOT WATER FLOW
DHWR	DRINKABLE HOT WATER RETURN
NDCW	NON DRINKABLE COLD WATER
WW	WARM WATER
NG	NATURAL GAS
TD	TUNDISH (SIZE AS NOTED)
IWTD	INWALL TUNDISH (SIZE AS NOTED)
AAV	AIR ADMITTANCE VALVE
FW	FLOOR WASTE
GT	GULLY TRAP
SGT	SEALED GULLY TRAP
IOS	INSPECTION OPENING BROUGHT TO SURFACE
GIP	GOVERNMENT INSPECTION OPENING
RV	REFLUX VALVE
SSR	SEALED SHOP RISER
TWSSR	TRADE WASTE SEALED SHOP RISER
SNBC	SCREW NOSE BIBCOCK
HWU	HOT WATER UNIT
TDCV	TESTABLE DOUBLE CHECK VALVE
TMV	THERMOSTATIC MIXING VALVE
IC	IRRIGATION CONDUIT
AFL	ABOVE FLOOR LEVEL
AFFL	ABOVE FINISHED FLOOR LEVEL
AFSL	ABOVE FINISHED SURFACE LEVEL
H/L	HIGH LEVEL
C/I	CAST IRON
C/W	COMPLETE WITH
A/G	ABOVE GROUND
I/G	INGROUND
IL	INVERT LEVEL.
FFL	FINISHED FLOOR LEVEL.

GENERAL NOTES

- THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS, DETAILS AND OTHER CONSULTANTS DRAWINGS AND SPECIFICATION AND WITH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT.
- DO NOT SCALE OFF DRAWINGS. ALL DIMENSIONS SHALL BE VERIFIED FROM ARCHITECTS DRAWINGS. PIPEWORK SIZES SHOWN ARE IN NOMINAL BORE DIAMETER UNLESS NOTED OTHERWISE.
- UNLESS NOTED OTHERWISE ALL DIMENSIONS ARE IN MILLIMETRES.
- THE SANITARY PLUMBING, SANITARY DRAINAGE AND WATER RETICULATION WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH AS/NZS3500. NATURAL GAS WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH AS/NZS5601.
- PAINTING AND IDENTIFICATION OF PIPE RUNS SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, AS/NZS3500 AND AS/NZS1345.
- THE PLUMBING CONTRACTOR SHALL NOTIFY THE OTR PLUMBING AND DRAINAGE INSPECTION BRANCH PRIOR TO STARTING WORK ON SITE. WHERE CHANGES ARE REQUIRED TO THE PLUMBING DRAINAGE SYSTEM DESIGN TO SATISFY THE PLUMBING AND DRAINAGE INSPECTION BRANCH, THE CONTRACTOR MUST RECORD CHANGES AND INCLUDE WITHIN THE "AS INSTALLED" DRAWINGS.
- THE WHOLE OF THE SANITARY PLUMBING AND WATER SUPPLY SHALL BE CARRIED OUT BY, OR UNDER THE DIRECT SUPERVISION OF, A REGISTERED FULLY LICENSED CONTRACTOR PLUMBER AND LICENSED GAS FITTER. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE RELEVANT PROVISIONS OF AS/NZS3500, AS5601:2013, THE REGULATIONS AND DIRECTIONS OF THE 'SA WATER 'CORPORATION', 'OFFICE OF THE TECHNICAL REGULATOR (OTR) AND TO THE COMPLETE SATISFACTION OF THE SUPERINTENDENT.
- ALLOW FOR ALL COSTS ASSOCIATED WITH THE TESTING OF THE INSTALLATION AND INSPECTION BY LOCAL AUTHORITIES AS REQUIRED.
- FLOOR LEVELS, INVERT LEVELS, STRUCTURAL ELEMENTS AND THE LOCATION OF EXISTING SERVICES SHALL BE CHECKED ON SITE PRIOR TO SETTING OUT. NO ADDITIONAL CLAIMS WILL BE CONSIDERED IF FAILURE TO COMPLY WITH THIS REQUIREMENT RESULTS IN ADDITIONAL COSTS TO THE PLUMBING CONTRACTOR. TAKE INTO ACCOUNT ANY EXISTING CONDITIONS LIKELY TO AFFECT PERFORMANCE OF THE CONTRACT. TENDER PRICE WILL BE DEEMED ALL INCLUSIVE.
- ALLOW FOR NECESSARY OUT OF HOURS WORKS INCLUDING BUT NOT LIMITED TO CONNECTIONS TO AUTHORITY MAINS.
- THE FOLLOWING MATERIALS SHALL BE EMPLOYED IN THE FOLLOWING PIPING SYSTEMS UNLESS OTHERWISE NOTED:
 - SUSPENDED SOIL, WASTE AND VENT PIPES SHALL BE ACOUSTIC WRAPPED UPVC OR ACOUSTIC RATED PIPE.
 - INGROUND SOIL, WASTE AND VENT PIPES SHALL BE UPVC MATERIAL.
 - TRADE WASTE PIPEWORK SHALL BE HDPE MATERIAL.
- PIPEWORK ROUTES AND RETICULATION ALIGNMENTS ARE SHOWN FOR CLARITY ONLY. CONTRACTOR SHALL INSTALL ALL HOT WATER PIPEWORK TO FIXTURES IN MINIMUM LENGTHS TO AVOID DEADLEGS. (TYPICAL FOR ALL AREAS).
- THE FOLLOWING MATERIALS SHALL BE EMPLOYED IN THE DRINKABLE HOT AND COLD WATER PIPEWORK RETICULATION SYSTEM:
 - COPPER TYPE B - EXTERNAL ABOVE GROUND AND INTERNAL MAINS.
 - HDPE PN12.5 - EXTERNAL BELOW GROUND.
 - CROSS LINKED POLYETHYLENE - INTERNAL HOT AND COLD WATER PIPEWORK BRANCHES.
 - INTERNAL EXPOSED PIPEWORK TO BE CHROME PLATED.
- RETICULATION PIPE SIZES INDICATED ON DRAWINGS ARE NOMINAL BORE - COPPER PIPE. THE USE OF ALTERNATIVE MATERIALS SHALL BE REFERRED TO THE ADJACENT "EQUIVALENT PIPE SIZE GUIDE" FOR FURTHER INFORMATION.
- THE CONTRACTOR SHALL SUPPLY AND INSTALL ALL SANITARY WARE AND TAPWARE AS SCHEDULED ON THE ARCHITECTURAL DRAWINGS.
- THE PLUMBING TRADE SHALL BE RESPONSIBLE FOR SETTING OUT OF THEIR WORKS BY COORDINATING WITH ASSOCIATED TRADES AND SERVICES. ALL BUILDING PENETRATIONS SHALL BE BY THE CONTRACTOR.
- CONTRACTOR TO SUPPLY AND INSTALL FIRE STOP COLLARS APPROVED BY MANUFACTURER FOR SERVICES PASSING THROUGH FIRE RATED ELEMENTS AND FIRE COMPARTMENTS. FIRE RATED SEALS SHALL BE IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS, NCC AND THE REQUIREMENTS AND RECOMMENDATIONS OF THE BUILDING SURVEYOR. FIRE SEAL AROUND ALL PIPE PENETRATIONS THROUGH FIRE RATED CONSTRUCTION WALLS WITH CERTIFIED MATERIALS AS APPROVED BY MANUFACTURER.
- ALLOW TO DETERMINE AN EXACT SUITABLE ROUTE ON SITE WITH ALL CEILINGS REMOVED. FOR TENDER PURPOSES ALLOW FOR AN ADDITIONAL 10m LENGTH THAN SHOWN FOR DRINKABLE COLD WATER SUPPLY AND SANITARY DRAINAGE PIPEWORK.
- PIPEWORK ROUTES AND RETICULATION ALIGNMENTS ARE SHOWN FOR CLARITY ONLY. CONTRACTOR SHALL INSTALL ALL HOT WATER PIPEWORK TO FIXTURES IN MINIMUM LENGTHS TO AVOID DEADLEGS. (TYPICAL FOR ALL AREAS).
- SUBMIT SAMPLES OF ALL HYDRAULIC ITEMS WHICH HAVE A VISUAL IMPACT TO THE PROJECT FOR APPROVAL BY THE ARCHITECT AND ENGINEER PRIOR TO ORDERING AND INSTALLATION.
- ALL PIPEWORK ROUTES SHOWN ON THE DRAWINGS SUBMITTED SHALL BE INSTALLED WITHIN CEILING AND WALL VOIDS, DUCTS, UNDER BENCHES OR IN JOINERY. WHERE PIPEWORK IS LIKELY TO BE EXPOSED, THESE CASES MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO INSTALLATION OR COMMENCEMENT ON SITE.
- PLUMBING CONTRACTOR SHALL ENSURE ALL WATER SUPPLIES TO FIXTURES INSTALLED AS PART OF THESE WORKS DO NOT EXCEED 500kPa IN ACCORDANCE WITH AS/NZS3500.1. ALL FINAL CONNECTIONS TO EQUIPMENT SHALL BE AS PER MANUFACTURERS SPECIFICATIONS AND WATER MARKED.
- INSTALL PULSED OUTPUT/CHECK WATER METERS AS SHOWN ON DRAWINGS FOR COLD AND HOT WATER SUPPLIES TO APARTMENTS AND COMMERCIAL TENANCIES. HOT WATER METERS SHALL BE PROVIDED BY EMBEDDED NETWORK PROVIDER FOR INSTALLATION BY HYDRAULIC SERVICES CONTRACTOR.
- SUPPLY AND INSTALL ISOLATING VALVES AS REQUIRED. PROVIDE BALL VALVES, READILY ACCESSIBLE AND POSITIONED IN A SUITABLE LOCATION ADJACENT EQUIPMENT. VALVES LOCATED WITHIN DUCTS, CEILINGS OR WALL SPACES SHALL BE LOCATED BEHIND ACCESS PANELS OR HAVE TRAFFOLITE TAGS INDICATING LOCATION WITHIN CEILING WHERE CEILING TILES ARE INSTALLED. ALL VALVES SHALL HAVE SAME NOMINAL DIAMETER AS PIPE TO WHICH IT IS FITTED.
- PROVIDE Ø15 DCW BRANCH WITH STOP TAP AND FLOOD STOP VALVE PRIOR TO CONNECTION TO DISHWASHING MACHINE IN APARTMENTS.
- PROVIDE ACOUSTIC LAGGING TO PIPEWORK RUNS WITHIN CEILING VOIDS AND ABOVE ANY HABITABLE SPACES TO ACOUSTIC CONSULTANT RECOMMENDATIONS.
- ALL PIPING SHALL BE SUPPORTED TO ENSURE THE SYSTEM IS FREE FROM VIBRATION AND WATER HAMMER. PIPEWORK IS NOT TO BE HUNG FROM ADJACENT PIPEWORK, POWER DRIVEN FIXINGS ARE NOT APPROVED.
- PROVIDE SEISMIC RESTRAINT TO SERVICES IN ACCORDANCE WITH AS1170.

T1	TENDER ISSUE	23.05.19	KR
REV N	DESCRIPTION	DATE	CHKD

TENDER ISSUE



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PROJECT
HYDE PARK PLACE
248 UNLEY ROAD, HYDE PARK
HYDRAULIC SERVICES
DRAWING
GENERAL NOTES AND LEGEND OF SYMBOLS

NOT FOR CONSTRUCTION PURPOSES UNLESS STAMPED FOR CONSTRUCTION. VERIFY DIMENSIONS AND LEVELS ON SITE BEFORE SETTING OUT. DO NOT SCALE. REFER TO FIGURED DIMENSIONS - IN mm UNLESS OTHERWISE STATED.			
Scale	Design: JZ	No. in Set	Date
NTS	Drawn: JZ	2 of 25	MAY 2019
Review: KR			
Orig. Size	Drawing no.	Revision	
A1	LCE14462-H001	T1	