

# THE WILLCOX APARTMENTS

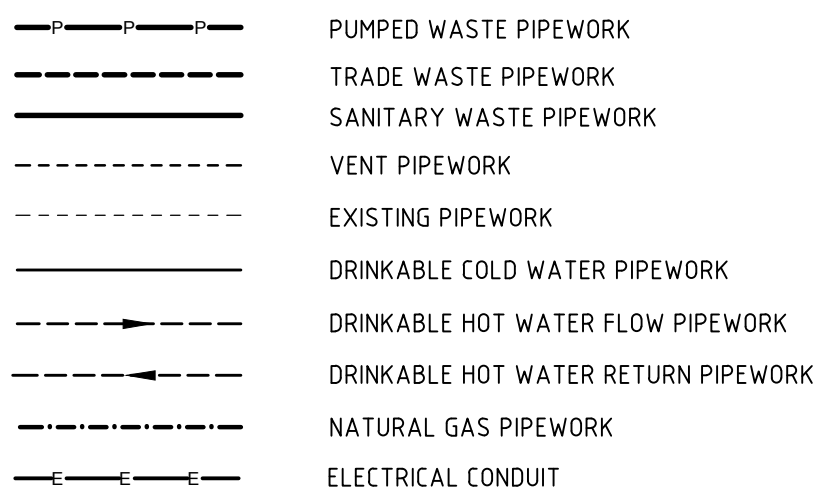
## 117 PROSPECT ROAD, PROSPECT

### HYDRAULIC SERVICES

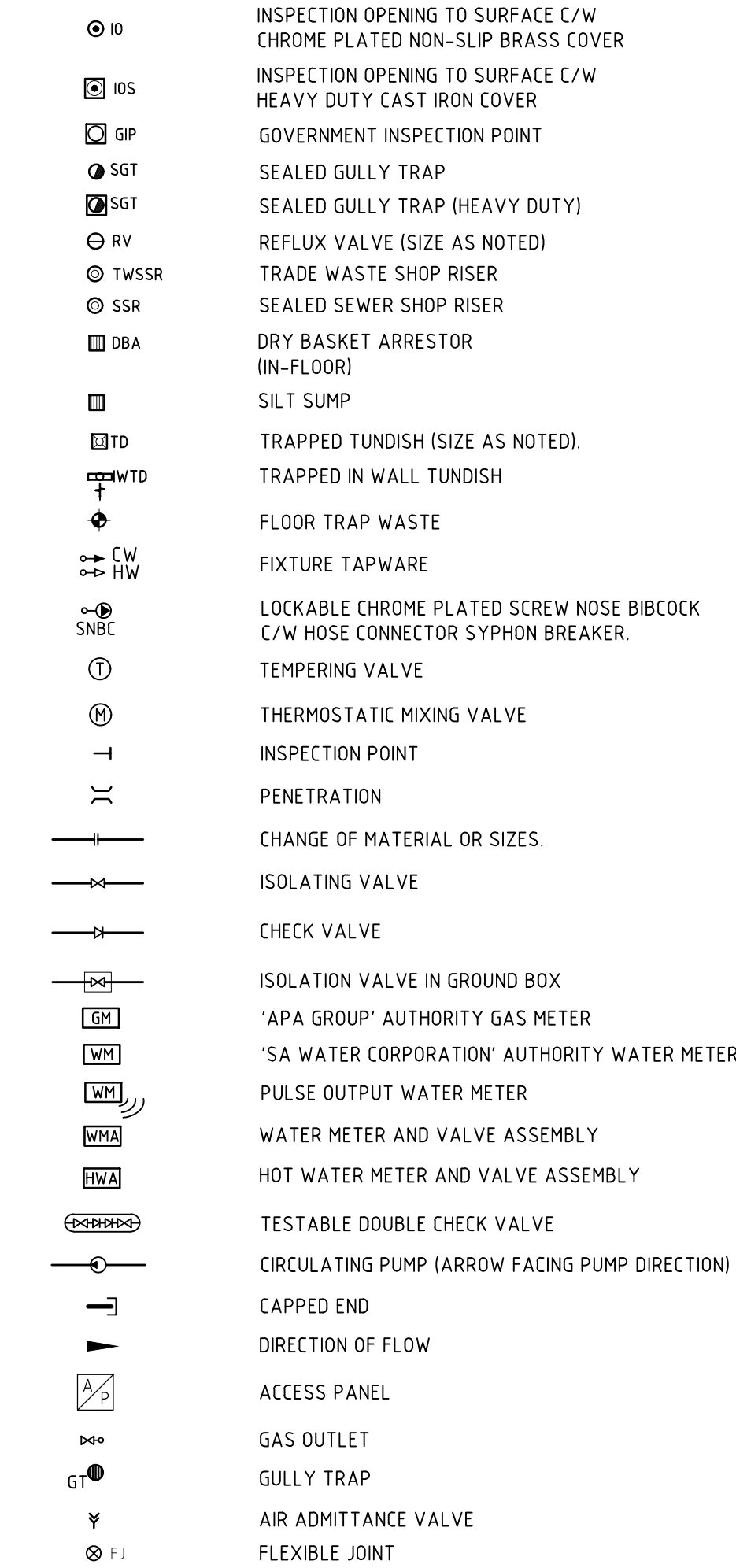
#### GENERAL NOTES

- 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 DRAINAGE AND PLUMBING WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH AS/NZS3500. THE DRINKABLE COLD AND HOT WATER WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH AS/NZS3500. NATURAL GAS WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH AS6501.
- PAINTING AND IDENTIFICATION OF PIPE RUNS SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
- 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, 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.
- SUSPENDED SOIL, WASTE AND VENT PIPES SHALL BE ACOUSTIC WRAPPED UPVC OR ACOUSTIC RATED PIPE UNLESS OTHERWISE NOTED. INGROUND SOIL, WASTE AND VENT PIPES SHALL BE UPVC UNLESS OTHERWISE NOTED. TRADE WASTE PIPEWORK SHALL BE HDPE MATERIAL UNLESS OTHERWISE NOTED.
- THE FOLLOWING MATERIALS SHALL BE EMPLOYED IN THE DRINKABLE HOT AND COLD WATER PIPEWORK RETICULATION SYSTEM:
  - COPPER TYPE B - EXTERNAL ABOVE GROUND.
  - HDPE PN12.5/SDR11 - EXTERNAL BELOW GROUND.
  - CROSS LINKED POLYETHYLENE - INTERNAL HOT AND COLD WATER PIPEWORK.
  - INTERNAL EXPOSED PIPEWORK TO BE CHROME PLATED.
- THE CONTRACTOR SHALL SUPPLY AND INSTALL ALL SANITARYWARE AND TAPWARE AS SCHEDULED IN THE ARCHITECTURAL DOCUMENTATION.
- 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 COLLAR AND 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 DOMESTIC 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 AS3500.1. ALL FINAL CONNECTIONS TO EQUIPMENT SHALL BE AS PER MANUFACTURERS SPECIFICATIONS AND WATER MARKED.
- RETICULATION PIPE SIZES INDICATED ON DRAWINGS ARE ON NOMINAL BORE - COPPER PIPE. THE USE OF ALTERNATIVE MATERIALS SHALL BE REFERRED TO ADJACENT 'EQUIVALENT PIPE SIZES GUIDE' FOR INFORMATION.
- 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 (TYPICAL FOR ALL 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.
- EMBEDDED NETWORK PROVIDER SHALL SUPPLY AND INSTALL CENTRAL HOT WATER PLANT INCLUDING ALL PUMPS, TANKS AND ASSOCIATED PIPEWORK MANIFOLDS IN ACCORDANCE WITH THE HYDRAULIC SERVICES SPECIFICATION AND MANUFACTURERS INSTALLATION INSTRUCTIONS. EMBEDDED NETWORK PROVIDER SHALL ALSO SUPPLY PULSE OUTPUT WATER METERS FOR INSTALLATION ON DHW AND DCW SUPPLIES TO APARTMENTS, TENANCIES AND GROUND FLOOR AMENITIES BY HYDRAULIC CONTRACTOR AS INDICATED ON HYDRAULIC SERVICES DRAWINGS.

#### LEGEND OF PIPEWORK

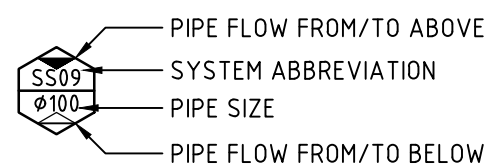


#### LEGEND OF SYMBOLS

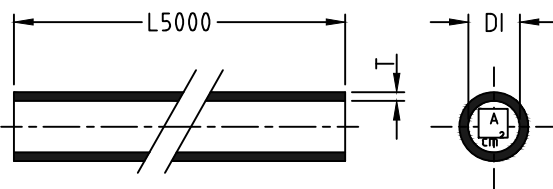


#### LEGEND OF ABBREVIATIONS

|      |                               |
|------|-------------------------------|
| SS   | SOIL STACK                    |
| TWS  | TRADE WASTE STACK             |
| GAV  | GREASE ARRESTOR VENT          |
| PSV  | PUMP STATION VENT             |
| GV   | GROUP VENT                    |
| BV   | BRANCH VENT                   |
| RV   | RELIEF VENT                   |
| TWV  | TRADE WASTE VENT              |
| SGV  | SEALED GULLY VENT             |
| TA   | TO ABOVE                      |
| TB   | TO BELOW                      |
| FA   | FROM ABOVE                    |
| FB   | FROM BELOW                    |
| AFSL | ABOVE FINISHED SURFACE LEVEL  |
| AFFL | ABOVE FINISHED FLOOR LEVEL    |
| DCW  | DRINKABLE COLD WATER          |
| DHW  | DRINKABLE HOT WATER           |
| DHWF | DRINKABLE HOT WATER FLOW      |
| DHWR | DRINKABLE HOT WATER RETURN    |
| DWW  | DRINKABLE WARM WATER          |
| NG   | NATURAL GAS                   |
| IOS  | INSPECTION OPENING TO SURFACE |
| SGT  | SEALED GULLY TRAP             |
| IWTD | IN WALL TUNDISH               |
| AAV  | AIR ADMITTANCE VALVE          |
| HWU  | HOT WATER UNIT                |
| TMV  | THERMOSTATIC MIXING VALVE     |
| TDCV | TESTABLE DOUBLE CHECK VALVE   |
| ENP  | EMBEDDED NETWORK PROVIDER     |
| IL   | INVERT LEVEL                  |
| FFL  | FINISHED FLOOR LEVEL          |



#### HDPE PIPE CHART



| ØDN | DI    | T   |
|-----|-------|-----|
| 50  | 44    | 3   |
| 56  | 50    | 3   |
| 63  | 57    | 3   |
| 75  | 69    | 3   |
| 90  | 83    | 3.5 |
| 110 | 101.4 | 4.3 |
| 160 | 147.6 | 6.2 |
| 200 | 187.6 | 6.2 |
| 250 | 234.4 | 7.8 |
| 315 | 295.4 | 9.8 |

#### EQUIVALENT PIPE SIZES GUIDE

| Specified nominal size | Acceptable equivalent size |                  |                 |
|------------------------|----------------------------|------------------|-----------------|
|                        | Copper                     | PE-X Nominal     | Stainless Steel |
| DN                     | AS 1432 DN                 | D <sub>e</sub> * | 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<sub>e</sub>\* - nominal size in plastic pipe Standards.

#### DRAWING INDEX

##### LEGEND OF SYMBOLS, DRAWING INDEX AND GENERAL NOTES

##### BASEMENT SANITARY DRAINAGE ARRANGEMENT

##### GROUND FLOOR SANITARY DRAINAGE ARRANGEMENT

##### LEVEL 1 SANITARY DRAINAGE ARRANGEMENT

##### LEVEL 2 SANITARY DRAINAGE ARRANGEMENT

##### LEVEL 3 SANITARY DRAINAGE ARRANGEMENT

##### LEVEL 4 SANITARY DRAINAGE ARRANGEMENT

##### ROOF SANITARY DRAINAGE ARRANGEMENT

##### BASEMENT WATER AND GAS RETICULATION ARRANGEMENT

##### GROUND FLOOR WATER AND GAS RETICULATION ARRANGEMENT

##### LEVEL 1 WATER AND GAS RETICULATION ARRANGEMENT

##### LEVEL 2 WATER AND GAS RETICULATION ARRANGEMENT

##### LEVEL 3 WATER AND GAS RETICULATION ARRANGEMENT

##### LEVEL 4 WATER AND GAS RETICULATION ARRANGEMENT

##### SANITARY DRAINAGE AND NATURAL GAS SCHEMATICS

##### HOT WATER AND COLD WATER SCHEMATICS

##### DETAILS

CONSTRUCTION ISSUE

|   |                    |                |       |
|---|--------------------|----------------|-------|
| A   | CONSTRUCTION ISSUE | 21.09.18       | AS    |
| REV'D   | DESCRIPTION        | DATE           | CHK'D |
| <div><div><div><div><div><div><span></span></div><div>LUCID</div></div></div><div>CONSULTING AUSTRALIA</div><div>Level 3/169 Pirie St Adelaide SA 5000<br/>Phone: (08) 8407 9700<br/>Email: adelaide@lucidconsulting.com.au</div></div></div></div> |                    |                |       |
| CLIENT  |                    |                |       |
| <div>CITIFY</div> <div>bfc</div>  |                    |                |       |
| PROJECT   |                    |                |       |
| THE WILLCOX APARTMENTS<br>117 PROSPECT ROAD, PROSPECT   |                    |                |       |
| DRAWING   |                    |                |       |
| LEGEND OF SYMBOLS,<br>DRAWING INDEX AND GENERAL NOTES   |                    |                |       |
| HYDRAULIC SERVICES  |                    |                |       |
| SCALE   |                    | DATE           |       |
| NTS @ A1  |                    | SEPTEMBER 2018 |       |
| DESIGNED  |                    | DRAWN          |       |
| JZ  |                    | JZ/ML          |       |
| DRAWING NUMBER  |                    | No. IN SET     |       |
| LCE13523-H01  |                    | 1 OF 17        |       |
|   |                    | REVISION       |       |
|   |                    | A              |       |