



**NOTES**

**GENERAL**

1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH COUNCIL'S INFRASTRUCTURE SPECIFICATIONS.
2. ALL DESIGN AND INSTALLATION SHALL BE IN ACCORDANCE WITH AS4058:2007 AND AS3725:2007.
3. PIPES SHALL BE RUBBER RING JOINTED CONCRETE PIPES WITH SOCKETS FACING UPSTREAM. FRC PIPES SHALL NOT BE USED
4. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE
5. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH COUNCIL'S INFRASTRUCTURE SPECIFICATIONS.

**LOADS**

1. ALL DEAD AND LIVE LOADS SHALL BE ASSESSED BY THE DESIGNER IN ACCORDANCE WITH AS4058:2007 AND AS3725:2007.
2. PIPE (MIN. CLASS 4) SHALL BE DETAILED ON THE DESIGN DRAWINGS.
3. DESIGNERS SHALL ASSESS SUPERIMPOSED LIVE LOADS DUE TO CONSTRUCTION VEHICLES AND PROVIDE CONSTRUCTION METHODOLOGY ON THE DESIGN DRAWINGS. DEVIATIONS FROM THE CONSTRUCTION EQUIPMENT SPECIFIED SHALL BE REFERRED TO THE DESIGNER.
4. DESIGNERS ARE TO ASSESS SUPERIMPOSED LIVE LOADS DUE TO ROAD VEHICLES FROM AS3725:2007 APPENDIX B, TABLE B2 FOR THE W80, A160, M1600 AND HLP ROAD VEHICLES.
5. ANY CONSTRUCTION WHICH REQUIRES AN INCREASE IN TRENCH WIDTH TO THAT DETAILED IN THE DESIGN DRAWINGS SHALL BE REFERRED TO THE DESIGNER PRIOR TO PIPE INSTALLATION.
6. IF COVER IS LESS THAN 400mm CONDUCT A PIPE CLASS ASSESSMENT OR ADOPT CONCRETE ENCASEMENT IN ACCORDANCE WITH SW-101.

**EXCAVATION**

1. EXCAVATION SHALL BE TO THE LINE AND LEVEL SHOWN ON THE DRAWINGS. WHERE THE EXCAVATION TO THE REQUIRED FOUNDATION LEVEL REVEALS MATERIAL, WHICH IN THE OPINION OF THE SUPERINTENDENT IS UNSUITABLE, THE TRENCH SHALL BE OVER EXCAVATED TO A DEPTH REQUIRED TO REMOVE THE UNSUITABLE MATERIAL AND REFILLED WITH COMPACTED MATERIAL CONFORMING TO THE REQUIREMENTS OF THE BED ZONE.
2. VERY SOFT OR EXPANSIVE CLAYS, IRREGULAR OR FRAGMENTED ROCK AND SATURATED SOILS, PARTICULARLY THOSE CONTAINING AGGRESSIVE GROUNDWATER, ARE ALL UNSUITABLE FOUNDATIONS AND SHOULD BE AVOIDED.
3. TRENCH FOUNDATION TO BE COMPACTED AS SPECIFIED IN COMPACTION SCHEDULE.

**BED ZONE**

1. BED ZONE MATERIAL SHALL BE COMPACTED SELECT FILL WITH THE FOLLOWING GRADING LIMITS:

SEIVE SIZE (mm)	% MASS PASSING
19.0	100
2.36	100 - 50
0.60	90 - 20
0.30	60 - 10
0.15	25 - 0
0.075	10 - 0

- WITH THE FRACTION PASSING THE 0.075mm SIEVE HAVING A MAXIMUM LINEAR SHRINKAGE OF 10% DETERMINED IN ACCORDANCE WITH AS 1289.3.4.1.
2. SELECT FILL WITH THE FRACTION PASSING THE 0.6 mm SIEVE NOT CONFORMING TO THE ABOVE LIMITS MAY BE USED IN THE BED AND HAUNCH ZONE AT THE DISCRETION OF COUNCILS SUPERINTENDENT.
  3. SELECT FILL MATERIALS MAY INCLUDE COURSE - GRAINED SOILS WITH UNIFIES SOIL CLASSIFICATIONS OF SC, SP, SW, GC, GW AND GP AS DEFINED IN AS 1726.
  4. SELECT FILL SHALL BE PLACE AND COMPACTED IN LAYERS NOT EXCEEDING 150mm LOOSE THICKNESS.
  5. THE BED ZONE SHALL EXTEND THE FULL WIDTH OF THE TRENCH AND SHALL BE COMPACTED BY TAMPING, ROLLING AND/OR VIBRATION.

**HAUNCH ZONE & SIDE ZONES**

1. AS FOR THE BED ZONE, EXCEPT COMPACTION MAY BE BY CONVENTIONAL METHODS OR BY SATURATION AND VIBRATION. NOTE WHERE SATURATION METHOD USED, SUBSOIL DRAINAGE MUST BE PROVIDED IN THE TRENCH.

**OVERLAY AND BACKFILL ZONE**

1. OVERLAY AND BACKFILL MATERIAL SHALL BE COMPACTED ORDINARY FILL CONTAINING NOT MORE THAN 20% BY MASS OF STONES WITH A SIZE BETWEEN 75mm AND 150mm AND NONE LARGER THAN 150mm.
2. ORDINARY FILL SHALL BE PLACE AND COMPACTED IN LAYERS NOT EXCEEDING 200mm LOOSE THICKNESS.

COMPACTION SCHEDULE		
LOCATION AND DEPTH OF FILLING	REQUIRED DENSITY (NON-COHESIVE MATERIAL - DENSITY INDEX)	REQUIRED DENSITY (NON-COHESIVE MATERIAL - STANDARD COMPACTION)
ORDINARY AND SELECT FILL		
0-1.5m BELOW FINISHED SURFACE OR ROAD SUBGRADE	70	100%
GREATER THAN 1.5m BELOW FINISHED SURFACE OR ROAD SUBGRADE	70	95%
SELECT FILL		
BED AND HAUNCH ZONE	50	95%
FOUNDATION	50	95%

NOTE: ADJUST THE MOISTURE CONTENT AT THE TIME OF COMPACTION WITHIN 60%-95% OF THE OPTIMUM MOISTURE CONTENT

THIS DRAWING REFERS ONLY TO TRENCH INSTALLATION OF PIPES LESS THAN OR EQUAL TO 1500 DIAMETER. IT IS NOT INTENDED AS A COMPLETE SPECIFICATION BUT INCLUDES ESSENTIAL REQUIREMENTS OF AS3725-2007

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SR PCG - STANDARDS REVIEW PROJECT CONTROL GROUP  
ASM - ASSET SECTION MANAGER

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