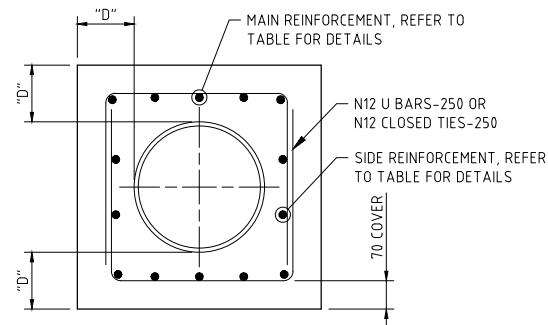


A GEOTECHNICAL INVESTIGATION MUST BE UNDERTAKEN PRIOR TO UNDERTAKING THE WORKS TO DETERMINE SUB-SURFACE CONDITIONS INCLUDING GROUNDWATER AND TO CONFIRM THE SUITABILITY OF THE PROPOSED TRENCHLESS INSTALLATION. THE TRENCHLESS TECHNOLOGY MUST BE APPROPRIATE FOR THE SITE SPECIFIC APPLICATION AND THE LEVEL OF ACCURACY REQUIRED

TYPICAL RESTRICTED ACCESS CROSSING - TYPE 2
TRENCHLESS CROSSING SCL MAIN IN ENCASING PIPE

SCALE 1:20



CONCRETE ENCASMENT DETAIL

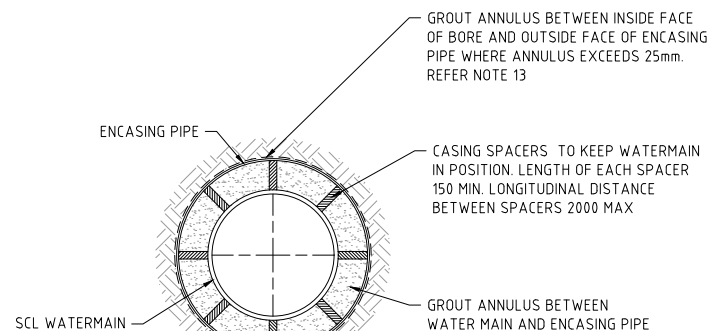
SCALE 1:10

CONCRETE ENCASMENT REINFORCEMENT DETAILS						
MAIN SIZE	"L1" MIN	"V1" MIN	"X1" MIN	MAIN REO (T&B)	SIDE REO (T&B)	"D"
DN150	0-2500	750	500	4N24	NIL	200
DN200	0-2500	750	750	5N20	NIL	250
DN250	0-2500	1000	1000	5N20	2N16	300
DN300	0-2500	1500	1000	5N24	2N16	300

REFER NOTE 2

ROCKER PIPE DIMENSIONS		
PIPE SIZE (DN)	"R" MIN	"R" MAX
150	300	450
200	400	600
250	500	750
300	600	900

STEEL PIPE DIMENSIONS			ENCASING PIPE	
PIPE SIZE (DN)	OUTSIDE DIAMETER (OD)	WALL THICKNESS (WT)	NOMINAL SIZE (DN)	INTERNAL DIAMETER (ID) MIN
150	168	5.0	225	229
200	219	5.0	300	292
250	273	5.0	375	369
300	324	5.0	450	445



SECTION A
SCALE 1:10

NOTES:

- THIS DRAWING MUST BE READ IN CONJUNCTION WITH DTC/1100.
- THRUST RESTRAINT PROVIDED BY CONCRETE ENCASMENT. ULTIMATE LIMIT STATE BASED ON TEST PRESSURE OF 150m HEAD OF WATER. THIS DESIGN MAY ONLY BE USED WHERE DIMENSION "L1" IS LESS THAN 2500 AND THE MINIMUM LENGTH FOR DIMENSIONS "V1" AND "X1" ARE ACHIEVED AS SPECIFIED IN THE CONCRETE ENCASMENT REINFORCEMENT DETAILS.
- ALL STEEL PIPE JOINTS MUST BE WELDED. ALL JOINTS TO BE EITHER PLAIN ENDS WITH WELDING COLLAR, BUTT WELDED OR SLIP-IN TYPE WELDED JOINTS. REFER TO DTC/1150 AND DTC/1151.
- SHOW DIMENSIONS "W1", "X1", "Z1", "L1", "V1" IN DESIGN AND WORK AS CONSTRUCTED DRAWINGS.
- TAPE 700 LONG PE SLEEVING TO DCL ROCKER PIPES. SLEEVING TO EXTEND 150 INTO CONCRETE ENCASMENT.
- MINIMUM CLEAR COVER TO REINFORCEMENT MUST BE 70mm.
- DO NOT APPLY ANY THRUST LOADS FOR AT LEAST 14 DAYS AFTER POURING CONCRETE.
- BORED OR JACKED ENCASING PIPE MATERIAL:
 - MINIMUM CLASS 4 CONCRETE JACKING PIPE
 - GRP JACKING PIPE, TRENCHLESS SPECIALIST TO CONFIRM CLASS OF JACKING PIPE
- CONCRETE ENCASMENT MUST BE COMPLETED IN A SINGLE POUR WITH NO CONSTRUCTION JOINTS.
- THE DESIGNER LOCATE ALL EXISTING AND PROPOSED SERVICES AND RECORD DETAILS ON THE DESIGN DRAWINGS.
- THE CONSTRUCTOR LOCATE AND CONFIRM THE LOCATION AND LEVEL OF ALL EXISTING SERVICES PRIOR TO COMMENCING CONSTRUCTION OF THE CROSSINGS.
- GREATER CLEARANCES MAY BE REQUIRED. THE CLEARANCE REQUIREMENT FOR ALL SERVICES AND ADDITIONAL CONTROLS FOR TEMPORARY SUPPORT OF OTHER EXPOSED UTILITIES MUST BE DETERMINED IN CONSULTATION WITH THE RELEVANT UTILITY AUTHORITY AND WITH SITE SPECIFIC SAFETY CONSIDERATIONS.
- GROUT TO HAVE A MINIMUM COMPRESSIVE STRENGTH 0.3MPa AND MAXIMUM 1.5MPa AT 7DAYS. TESTING TO BE IN ACCORDANCE WITH AS 1012.9:2014.
- DESIGNER TO UNDERTAKE SETTLEMENT ANALYSIS AND GROUNDWATER IMPACT ASSESSMENT IN CONSULTATION WITH THE ROAD AUTHORITY.

REFERENCE DRAWINGS:

DTC/1100	WATER MAINS CONSTRUCTION NOTES
DTC/1150	STEEL WATER MAINS DN150 TO DN1200 STEEL PIPE JOINTING
DTC/1151	STEEL WATER MAINS DN150 TO DN1200 STEEL PIPE JOINTING WELDED - PLAIN ENDS

Sydney
WATER

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APPROVED

NORBERT SCHAEFER
ENGINEERING MODERNISATION MANAGER

ENGINEERING & TECHNICAL SUPPORT

B	GENERAL UPDATE	NS	31/07/24
A	ORIGINAL ISSUE	PJG	31/01/12
LETTER	DETAILS OF ISSUE / AMENDMENT		APP'D DATE

DEEMED TO COMPLY DRAWINGS

CROSSINGS UNDER OBSTRUCTIONS
WATER MAINS ≤DN300
TYPE 2 - TRENCHLESS INSTALLATION
SCL MAIN IN ENCASING PIPE

DTC

1125

ISSUE	DATE
B	31/07/24