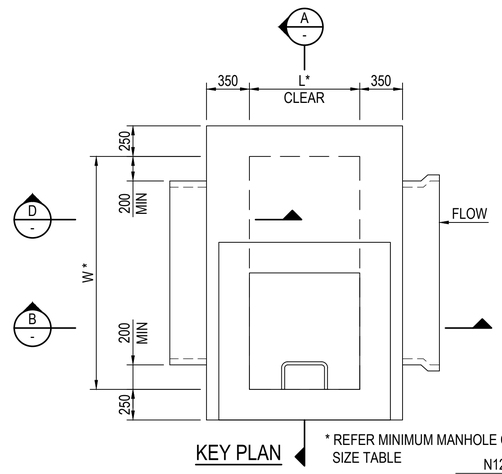
REV	MWC DRAWING NUMBER	CODE
A	7251/08/407	

PIPE SIZES AND MINIMUM MANHOLE CHAMBER SIZE			
PIPE SIZE (mm)	INTERNAL* WIDTH (mm) (W)	INTERNAL* LENGTH (mm) (L)	INTERNAL HEIGHT (mm) (H)
1950	2600	900	2800
2100	2800	900	3000
2250	2950	900	3150
2400	3150	900	3350
INTERNAL DIMENSION OF SHAFT IS 900x900			

* DIMENSIONS OF PIT ARE BASED ON THE O.D. OF CLASS 3 PIPE

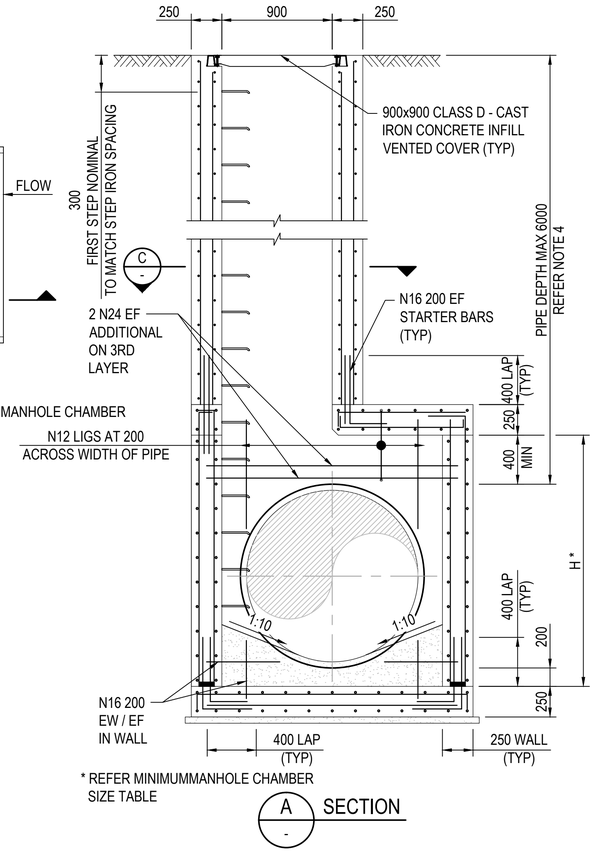


KEY PLAN

* REFER MINIMUM MANHOLE CHAMBER SIZE TABLE

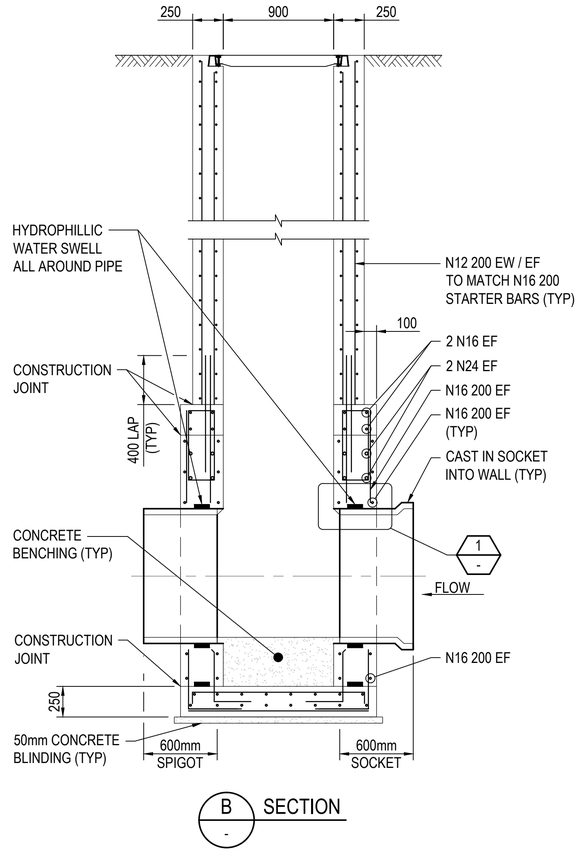
REINFORCEMENT IN MANHOLE WITH DEPTH TO OBVERT GREATER THAN 3.5m AND LESS THAN 6.0m

ITEM	THICKNESS (mm)	REINFORCEMENT		
		TOP	BOTTOM	STARTER BARS FOR WALLS AND SLABS
BASE SLAB	250	N16 200 EW	N16 200 EW	N16 200 EF
ROOF	250	N16 200 EW	N16 200 EW	
WALLS		VERTICAL	HORIZONTAL	STARTER BARS FOR ROOF
WALLS WITH PIPE PENETRATION	350	N16 200 EW N12 LIGATURES ABOVE PIPE	N16 200 EF ADDITIONAL 2 N24 EF ABOVE PIPE	N16 200 OUTSIDE FACE INTO TOP OF ROOF SLAB. N16 200 INSIDE FACE INTO SHAFT WALLS
OTHER WALLS PARALLEL	250	N16 200 EF	N16 200 EF	AS FOR WALLS WITH PIPE
SHAFT WALLS	250	N12 200 EF	N12 200 EF	-

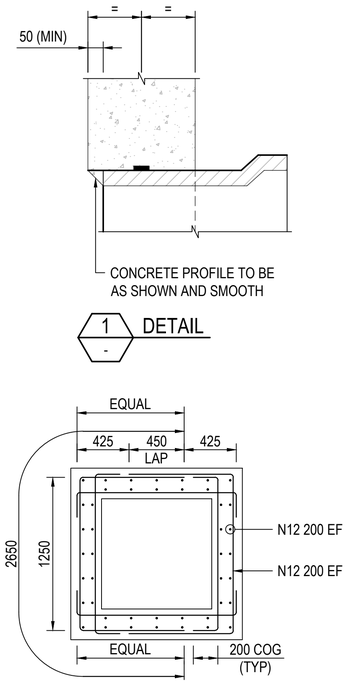


* REFER MINIMUMMANHOLE CHAMBER SIZE TABLE

A - SECTION



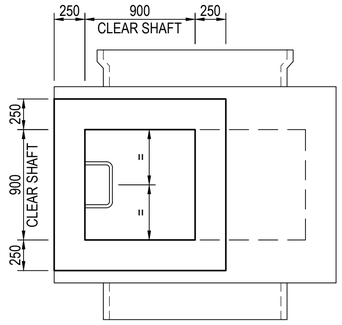
B - SECTION



SHAFT REINFORCEMENT DETAIL

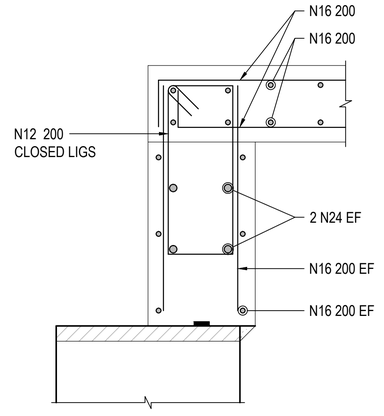
NOTES:

1. THE PURPOSE OF THE MANHOLE IS TO PROVIDE ACCESS INTO THE DRAIN. NO FUTURE PIPE CONNECTIONS TO BE MADE INTO MANHOLE STRUCTURE.
2. FOR PIPES WITH DEPTH TO OBVERT LESS THAN 3500mm REFER TO TABLES FOR DIMENSIONS OF MANHOLE CHAMBER AND REINFORCEMENT DETAIL.
3. FOR SMALLER PIPE DIAMETERS NOT COVERED IN MANHOLE CHAMBER SIZE TABLE REFER TO DRAWING 7251/08/405.
4. FOR PIPES WITH DEPTH TO OBVERT LESS THAN 3500mm REFER TO DRAWINGS 7251/08/406.
5. REFER DRAWING 7251/08/416 FOR STEP IRON AND LADDER DETAILS.
6. PREFERENCE TO BE GIVEN FOR INSTALLING THE STEP IRONS IN A SINGLE STRAIGHT RUN. MISALIGNMENT OF STEP IRONS TO BE IN ACCORDANCE WITH AS 1657.
7. MANHOLES ARE TO BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH AS 3600 AND AS3735.
8. MANHOLES SHOWN ON THIS DRAWING HAVE BEEN DESIGNED FOR A LATERAL AT REST EARTH PRESSURE OF 0.50 AND A WHEEL LOAD OF 80kN. THE REQUIREMENTS OF WALL THICKNESS AND REINFORCEMENT SHALL BE DETERMINED BY THE DESIGNER HAVING REGARD TO SITE CONDITIONS.
9. THE DESIGNER TO CONSIDER MANHOLE BACKFILLING METHODOLOGY DURING THE DESIGN PROCESS. PIPE BACKFILLING TO COMPLY WITH DRAWING 7251/08/419.
10. IT IS THE DESIGNER'S RESPONSIBILITY TO ENSURE THAT THE NOMINATED MELBOURNE WATER STANDARD DRAWINGS ARE SUITABLE FOR PROJECT USE.
11. DESIGN ENGINEER TO CARRY OUT SAFETY IN DESIGN RISK ASSESSMENT FOR ANY DESIGN INCORPORATING MELBOURNE WATER STANDARD DRAWINGS.
12. NOMINATED MANHOLE COVER CLASS IS TO AS3996. VENTS IN COVERS TO BE FORMED IN THE MANUFACTURING PROCESS AND NOT ON SITE.
13. CONCRETE SHALL BE GRADE S40 WITH A MAXIMUM CEMENT RATIO OF 0.50.
14. MINIMUM CONCRETE COVER TO REINFORCEMENT IS 50mm.
15. THE CONTRACTOR TO OBTAIN NECESSARY PERMITS AND APPROVALS FROM MELBOURNE WATER PRIOR TO COMMENCING WORKS ON EXISTING MELBOURNE WATER ASSETS.
16. ALL CONCRETE TO BE CAST IN SITU.
17. FOR MANHOLES LOCATED IN NON-PAVED AREAS, CAST IN 600mm CONCRETE APRON SURROUND ALL AROUND THE MANHOLE AS SHOWN ON CONCRETE APRON ARRANGEMENT DETAIL ON DRAWING 7251/08/417.
18. NO VEGETATION OBSTRUCTIONS TO BE LOCATED WITHIN 2m ZONE OF MANHOLES.

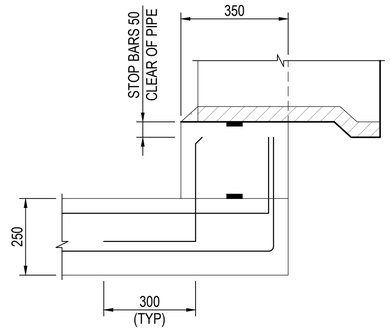


* REFER MINIMUM MANHOLE CHAMBER SIZE TABLE

C - SECTION



D - SECTION



CORNER DETAILS

PLAN VIEW

REV	DESCRIPTION	COMPANY	PROJECT OR WO NUMBER	DRAWN	ENG. CHECK	PR. MAN. APP'D	DATE
A	FIRST REVISION			RD	VY	RM	25.11.15

Melbourne Water

DRAINAGE STANDARD DRAWINGS

DRAFTER	DESIGNER	DESIGN MANAGER APPROVAL	PROJECT MANAGER APPROVAL
RD	GT	RM	VY
DRAFTING CHECK	ENGINEERING REVIEW		
BS	VY		

TITLE **MANHOLES (>3.5m AND <6.0m DEEP)**

FOR PIPELINES 1950mm TO 2400mm DIAMETER

PROJECT DATUM	Original Size	MELBOURNE WATER CORPORATION	
SCALE NTS	A1	7251/08/407	A
		MWC DRAWING NUMBER	REV
		CODE	