



LOCALITY PLAN

SCALE: 1:10 @ A3

Schedule 8: Drawing Schedule

Drawing No.	Sheet No.	Title
1801844-S-01	01	Locality Plan, Schedules & Notes
1801844-S-02	02	Detail Plan
1801844-S-03	03	Long Section (Sheet 1 of 1)
1801844-S-04	04	Construction Details



WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATION OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

General Notes:

- Only contractors accredited by Central Highlands Water shall be eligible to construct these works.
- Only products approved and catalogued by the Water Agency shall be used.
- Works must be constructed according to the MRWA edition of the WSA Sewerage code of Australia WSA 02-2014-3.1
- The design consultant is responsible for the design and coordination of the works. Any problem arising during construction shall be directed to the consultant.

Survey, Set Out and Asset Recording

- All contours and levels are in metres to the Australian height datum (A.H.D.)
- All coordinates are in metres to the Map Grid of Australia (MGA 54-94) and to the Local Coordinate System.
- Chainages shown on detail plans are discontinuous at maintenance structures. Chainages shown on long section sheets are continuous.
- Coordinates are to sewer line intersection point unless otherwise shown.
- Before commencement of work, the contractor must complete a level check between all TBM's to verify level values.
- TBM's and control points are to be maintained and protected at all times during construction. Should any marks be disturbed, the contractor will immediately notify the consultant to arrange re-instatement at the contractors expense.
- The Contractor is to engage a suitably qualified & experienced Surveyor to undertake asset recording of the work. All surveyor works and data recording shall be undertaken in accordance with the MRWA survey manual.

Property Connections

- Number of lots to be sewer: 22 lots
- All property connections to be DN100 unless otherwise indicated.
- Properties requiring boundary traps are indicated in the detailed plans. The remainder do not require boundary traps.
- Branch tie distance shown on detail plan are from approved subdivision survey pegs. Branch ties for future lots are shown as a chainage. (Ch) Distance is from the downstream sewer structure.
- Invert level of the property connection point is shown opposite the branch position.
- Where a Spur Branch connects to a shaft, both property connections are considered to be shaft connections

Earthworks:

- In areas subject to earthworks, construction of sewers shall not commence until earthworks has been completed unless written approval has been given by the Water Authority.

Embedment

- Embedment shall be Type A (refer MRWA-S-202) unless otherwise specified on the long section. If the contractor observes the presence of ground water, the superintendent shall be consulted regarding the embedment system selection.

Backfill

- Selection and compaction of trench backfill material shall be in accordance with the Water Agency adopted version of MRWA specification no 04-03.2.
- Refer to Long Section drawings for backfill requirements.

Compaction Testing

- Test results shall be provided to the superintendent prior to practical completion / acceptance of works.
- The contractor is required to undertake all testing of fill compaction in accordance with the Water Agency adopted version of the MRWA Backfill Specification 04-03.2.

Work on Live Sewers:

- All works on live sewers must be carried out by a water company accredited contractor.
- All existing sewers must be plugged to stop gas emissions prior to any connections being made to these sewers.
- To enable connections to live assets or any work on live assets, the

contractor shall submit the appropriate forms to the superintendent at least 3 working days prior to any works on live sewers.

- The contractor is not permitted to break into an existing live pipeline, enter a live sewer or remove the cover to a live maintenance structure unless authorised by the Water Agency.

Safety:

- Prior to commencement of works on site, the contractor must ensure that all matters relating to the Occupational Health and Safety Act 2004 and Occupational Health and Safety regulations 2007, have been and will be complied with.

Testing:

- The contractor is to give a minimum of two (2) days notice to the superintendent and Water Agency prior to the testing being undertaken. Testing is to be undertaken in the presence of the superintendent.

Environmental Management Plan:

- On commencement of construction works the contractor must comply with the recommendations of the EPA publication "Construction Techniques for Sediment Pollution Control" (Publication No. 275 1991).
- Prior to the commencement of work, the contractor is to submit a site environmental management plan to Melbourne Water.
- All trees and vegetation are to be protected unless otherwise indicated for removal. The extent of any vegetation removal shall be confirmed on site with the superintendent and local council prior to commencement, and in accordance with any planning permits. Any removal shall be documented.
- All areas containing creek vegetation, trees and revegetated areas near the construction zone are to be fenced off during the works with secure and highly visible material such as para-webbing fencing.
- Ensure all machinery, equipment and/or footwear entering the site is weed and pathogen free.

Schedule 1: New Pipe

Pipe Size	Pipe Type	Length (m)	Pipe Class	Standard
DN100	UPVC-DWV	Property Branches	SN10	WSA PS 230
DN150	UPVC-DWV	185m	SN8	WSA PS 230

Schedule 2: Property Connections

Connection Type	Type 1a	Type 1b	Type 2	Type 4a	Type 4b	Type S	Type 4S	Type B	Type 4B	Jump Up Flexible Couplings, ie: "F"
Quantities	1	1	13	1	2	0	1	0	3	0

Schedule 3: Service Offsets & Locations:

Location	Gas		Water		Electricity		Telecommunication		Sewer	
	Side	Offset (m)	Side	Offset (m)	Side	Offset (m)	Side	Offset (m)	Side	Offset (m)
HATHAWAY CLOSE	E	2.10	E	2.80	W	2.90	W	2.20	E	1.00
SERVICE BOARD	S	11.42	S	12.10	N	2.80	N	2.10	NEX	1.00
COURT BOWL HEAD		2.10		2.55		3.15		2.95		-

Schedule 4: Maintenance Structures (other than Maintenance Holes)

Inspection Shafts (IS), Maintenance Shafts (MS) and Maintenance Chambers (MC):

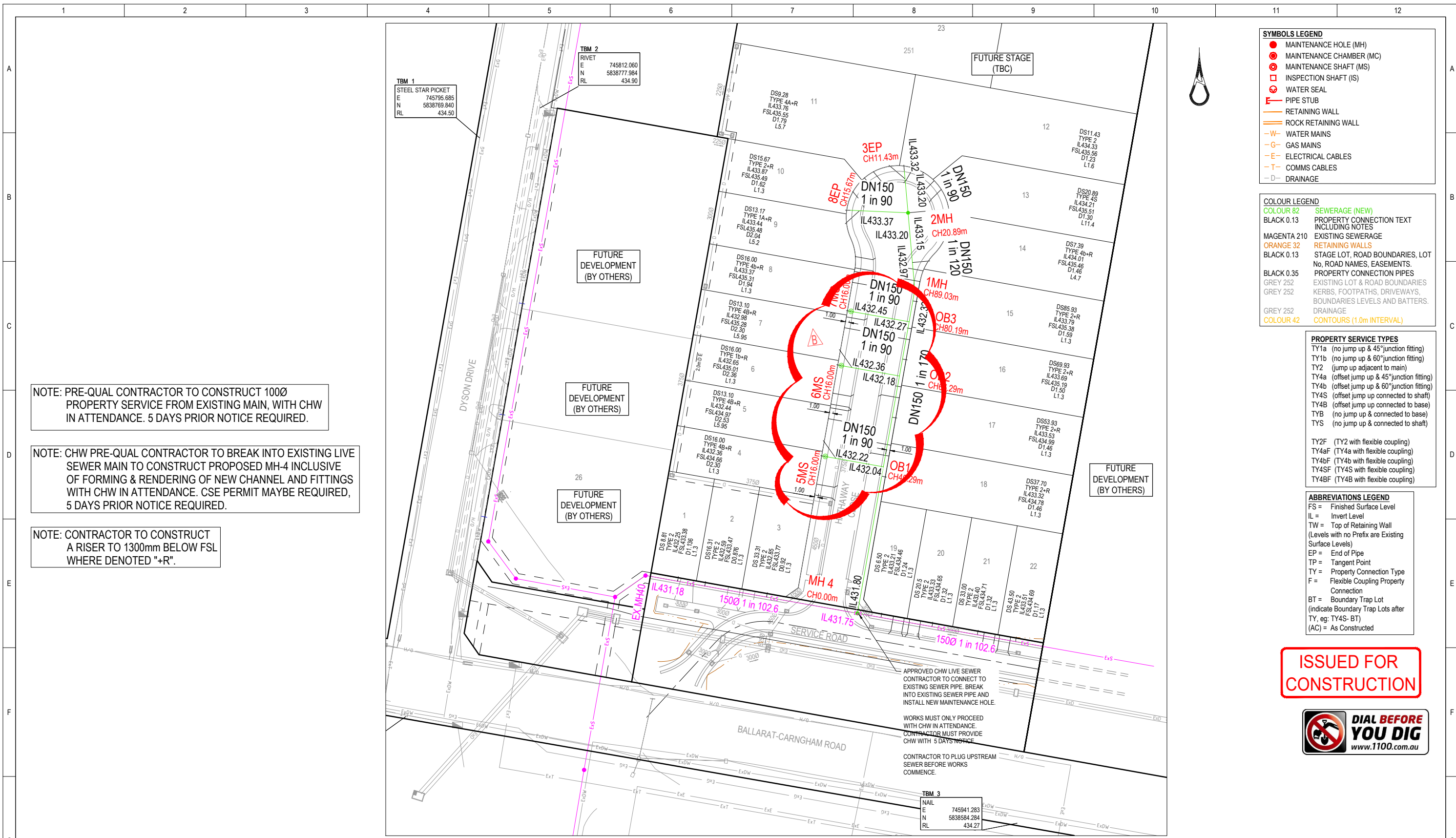
Maintenance Structure ID	DIAMETER Ø (mm)	Type - (IS/MS/MC)	Cover Class	Easting	Northing	Depth to Invert (mm)	Shaft Connections	Comments/ References (Offsets/Details)
5MS	300	MS	B	745889.2984	5838683.5978	2480	-	MRWA-S-305
6MS	300	MS	B	745893.6659	5838708.2140	2660	-	MRWA-S-305
7MS	300	MS	B	745896.2736	5838722.8824	2820	-	MRWA-S-305

Schedule 5: Maintenance Holes

Maintenance Hole ID	Easting	Northing	MH Shaft Type (GRP/PP (Plastic) / Concrete)	MH Top Type (Conical/Flat)	Cover Class	Internal Diameter (mm)	Min. Wall Thickness (mm)	Depth to Invert (mm)	Drops	Ladder (L) Step Irons (S) Landing (Ld)	Corrosion Protection (Coating / PE or PVC Lining)	Shaft Re-inforcement	Comments (Offsets / Details)
1MH	745913.5679	5838728.7856	Concrete	Conical	B	1050	150	3070	-	S	None	-	
2MH	745912.7209	5838749.5892	Concrete	Conical	D	1050	150	2240	-	S	None	-	
4MH	745898.0104	5838641.1264	Concrete	Conical	B	1050	150	2430	-	S	None	-	

ISSUED FOR CONSTRUCTION

B	SEWER CROSSINGS LOCATIONS AMENDED	14.07.21	R.C.			DESIGNED	P.HUNJAN	PROJECT NUMBER	1801844-02	<p>Beveridge Williams Suite 3/180 Eleanor Dr Lucas VIC 3350 ph: 03 5327 2000 www.beveridgewilliams.com.au</p>	<p>CENTRAL HIGHLANDS WATER</p>	<p>CENTRAL HIGHLANDS WATER CITY OF BALLARAT MAPLE LANE ESTATE - STAGE 02 SEWER RETICULATION EXTENSION No.1801844-02 NOTES, SCHEDULES & LOCALITY PLAN</p>	SCALE: AS SHOWN
A	ISSUED FOR CONSTRUCTION	29.06.21	R.C.			DRAWN	P.HUNJAN	MELWAY REFERENCE	-				SHEET 01 OF 04
P1	MAINTENANCE STRUCTURE TABLE UPDATED	09.02.21	M.J.			CHECKED	R.SANDERS	AUTHORISED	R.SANDERS	DRAWING No.: 1801844-02-S			REV B
P0	ISSUED FOR INFORMATION	28.10.20	R.S.			DATE: 22.10.20	DATE: 22.10.20	DATE: 22.10.20	DATE: 22.10.20	01			
REV	DESCRIPTION	DATE	APPROVED	REV	DESCRIPTION	DATE	APPROVED						



SYMBOLS LEGEND

- MAINTENANCE HOLE (MH)
- MAINTENANCE CHAMBER (MC)
- MAINTENANCE SHAFT (MS)
- INSPECTION SHAFT (IS)
- ⊕ WATER SEAL
- PIPE STUB
- RETAINING WALL
- ROCK RETAINING WALL
- W— WATER MAINS
- G— GAS MAINS
- E— ELECTRICAL CABLES
- T— COMMS CABLES
- D— DRAINAGE

COLOUR LEGEND

- COLOUR 82 SEWERAGE (NEW)
- BLACK 0.13 PROPERTY CONNECTION TEXT INCLUDING NOTES
- MAGENTA 210 EXISTING SEWERAGE
- ORANGE 32 RETAINING WALLS
- BLACK 0.13 STAGE LOT, ROAD BOUNDARIES, LOT No, ROAD NAMES, EASEMENTS.
- BLACK 0.35 PROPERTY CONNECTION PIPES
- GREY 252 EXISTING LOT & ROAD BOUNDARIES
- GREY 252 KERBS, FOOTPATHS, DRIVEWAYS, BOUNDARIES LEVELS AND BATTERS.
- GREY 252 DRAINAGE
- COLOUR 42 CONTOURS (1.0m INTERVAL)

PROPERTY SERVICE TYPES

- TY1a (no jump up & 45° junction fitting)
- TY1b (no jump up & 60° junction fitting)
- TY2 (jump up adjacent to main)
- TY4a (offset jump up & 45° junction fitting)
- TY4b (offset jump up & 60° junction fitting)
- TY4S (offset jump up connected to shaft)
- TY4B (offset jump up connected to base)
- TYB (no jump up & connected to base)
- TYS (no jump up & connected to shaft)

TY2F (TY2 with flexible coupling)

- TY4aF (TY4a with flexible coupling)
- TY4bF (TY4b with flexible coupling)
- TY4SF (TY4S with flexible coupling)
- TY4BF (TY4B with flexible coupling)

ABBREVIATIONS LEGEND

- FS = Finished Surface Level
- IL = Invert Level
- TW = Top of Retaining Wall (Levels with no Prefix are Existing Surface Levels)
- EP = End of Pipe
- TP = Tangent Point
- TY = Property Connection Type
- F = Flexible Coupling Property Connection
- BT = Boundary Trap Lot (indicate Boundary Trap Lots after TY, eg: TY4S-BT)
- (AC) = As Constructed

ISSUED FOR CONSTRUCTION



NOTE: PRE-QUAL CONTRACTOR TO CONSTRUCT 1000 PROPERTY SERVICE FROM EXISTING MAIN, WITH CHW IN ATTENDANCE. 5 DAYS PRIOR NOTICE REQUIRED.

NOTE: CHW PRE-QUAL CONTRACTOR TO BREAK INTO EXISTING LIVE SEWER MAIN TO CONSTRUCT PROPOSED MH-4 INCLUSIVE OF FORMING & RENDERING OF NEW CHANNEL AND FITTINGS WITH CHW IN ATTENDANCE. CSE PERMIT MAYBE REQUIRED, 5 DAYS PRIOR NOTICE REQUIRED.

NOTE: CONTRACTOR TO CONSTRUCT A RISER TO 1300mm BELOW FSL WHERE DENOTED "+R".

APPROVED CHW LIVE SEWER CONTRACTOR TO CONNECT TO EXISTING SEWER PIPE. BREAK INTO EXISTING SEWER PIPE AND INSTALL NEW MAINTENANCE HOLE.

WORKS MUST ONLY PROCEED WITH CHW IN ATTENDANCE. CONTRACTOR MUST PROVIDE CHW WITH 5 DAYS NOTICE.

CONTRACTOR TO PLUG UPSTREAM SEWER BEFORE WORKS COMMENCE.

DETAIL PLAN



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B	SEWER CROSSINGS LOCATIONS AMENDED	14.07.21	R.C.			DESIGNED	P.HUNJAN	PROJECT NUMBER	1801844-02	<p>Beveridge Williams Suite 3/180 Eleanor Dr Lucas VIC 3350 ph: 03 5327 2000 www.beveridgewilliams.com.au</p>	<p>CENTRAL HIGHLANDS WATER CITY OF BALLARAT MAPLE LANE ESTATE - STAGE 02 SEWER RETICULATION EXTENSION No.1801844-02 DETAIL PLAN</p>	SCALE: 1:500 @ A1
A	ISSUED FOR CONSTRUCTION	29.06.21	R.C.			DRAWN	P.HUNJAN	MELWAY REFERENCE				SHEET 02 OF 04
P1	DESIGN UPDATED BASED ON AUTHORITY COMMENTS	09.02.21	M.J.			CHECKED	R.SANDERS	AUTHORISED	R.SANDERS			DRAWING No.: 1801844-02-S
P0	ISSUED FOR INFORMATION	28.10.20	R.S.			DATE	22.10.20	DATE	22.10.20			REV 02
REV	DESCRIPTION	DATE	APPROVED	REV	DESCRIPTION	DATE	APPROVED	CHECKED	DATE	APPROVED	DATE	REV

EMBEDMENT & BACKFILL DETAILS:

- Embedment shall be Type A unless stated otherwise.
- Backfill Type O is ordinary fill, to be selected and installed as per MRWA Backfill Specification 04-03.X
- Type F is to be installed as per Figure 1

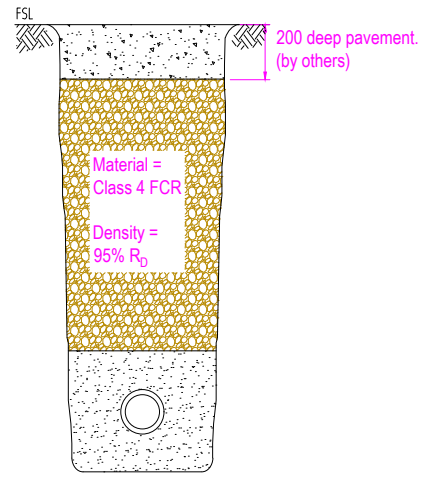


Figure 1: Type F Backfill

- Type R is to be installed as per Figure 2.
- Type R backfill is to be used under all road pavement.

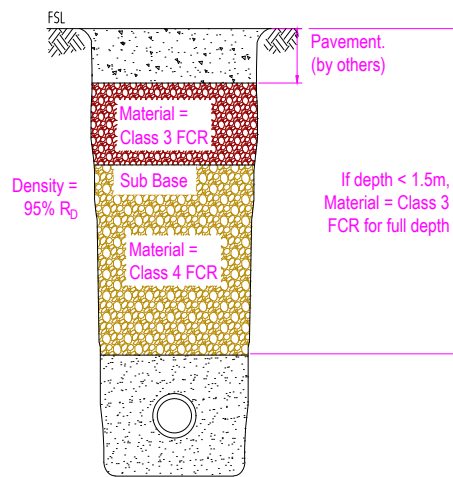
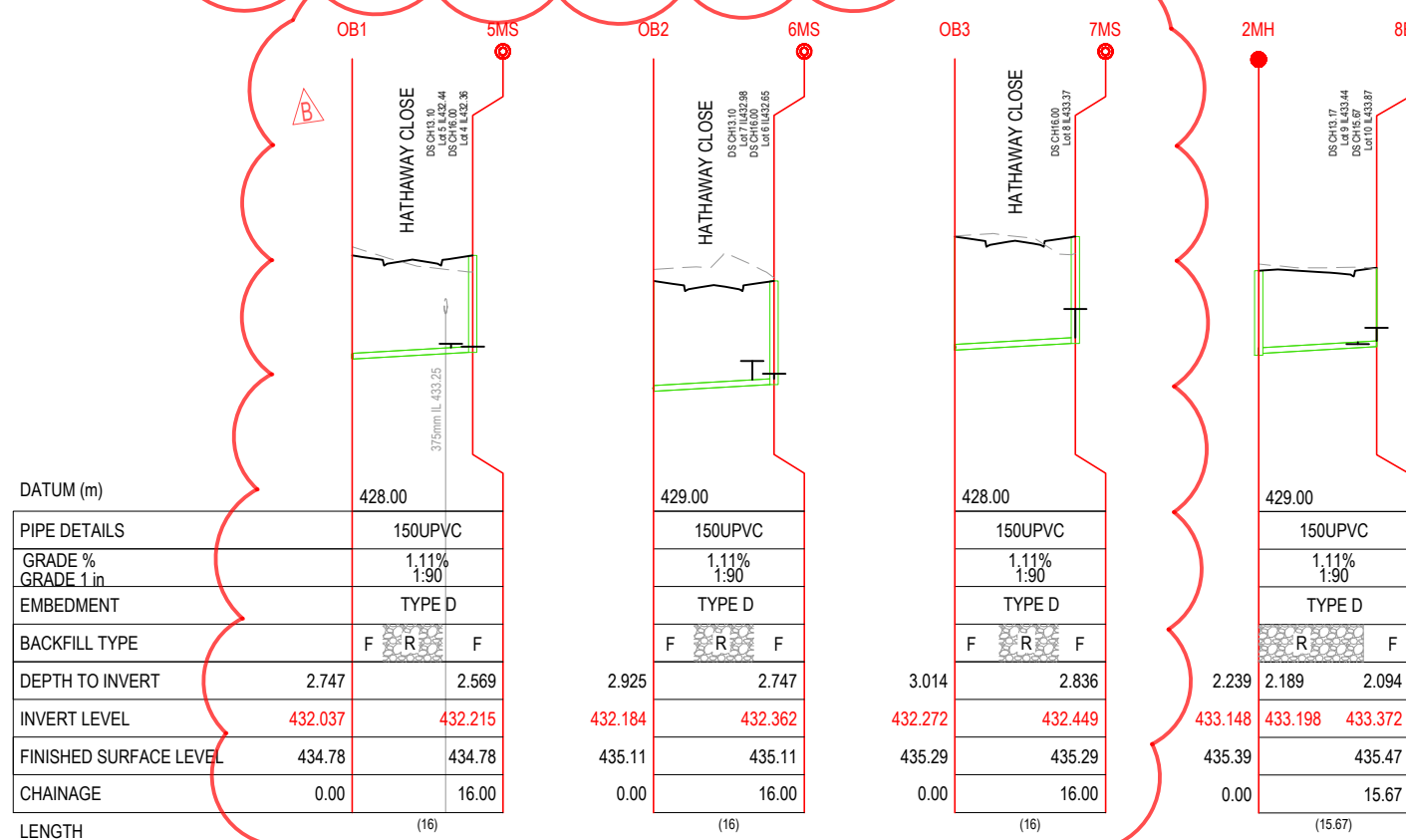


Figure 2: Type R Backfill

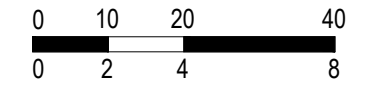


COLOUR LEGEND

COLOR 82	SEWERAGE (NEW) INCLUDING NOTES
BLACK 0.35	PROPERTY CONNECTION TEXT
BLACK 0.35	FINISHED SURFACE, PROPERTY CONNECTION PIPES
MAGENTA 210	EXISTING SEWERAGE
GREY 252	DRAINAGE
ORANGE 32	RETAINING WALLS
GREY 252	CUT & FILL (EARTHWORKS)

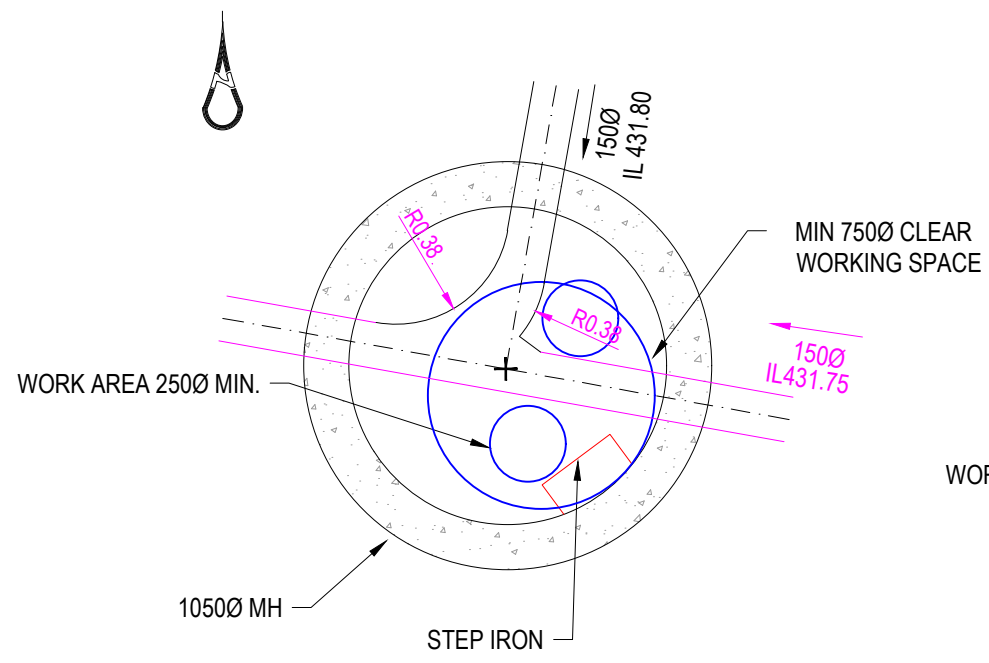
ISSUED FOR CONSTRUCTION

FILL SHOWN THUS: TENDERS SHOULD BE PREPARED ON THE BASIS THAT EARTHWORKS SHOWN SHADED SHOULD BE COMPLETED PRIOR TO THE COMMENCEMENT OF WORKS.

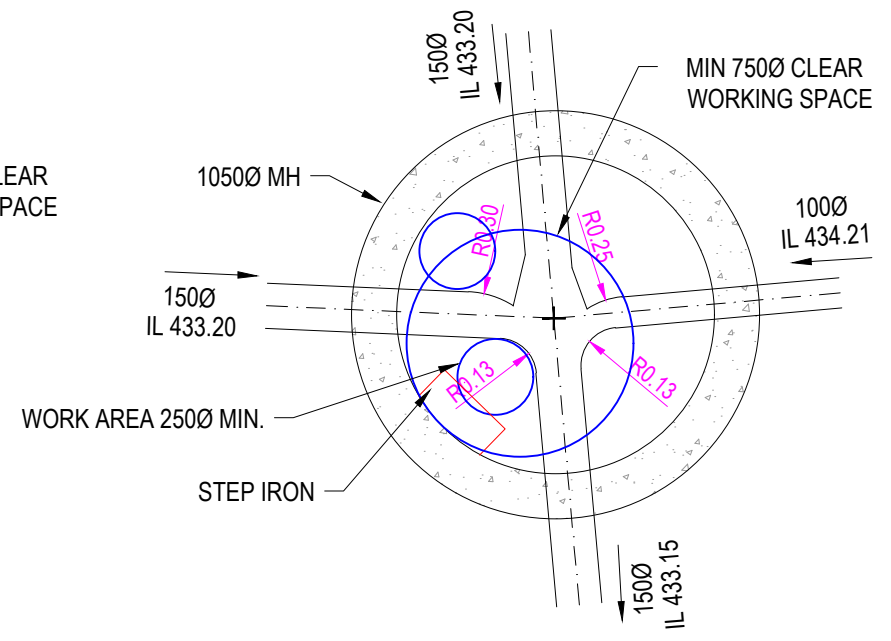


Scale H 1:1000 V 1:200 @ A3

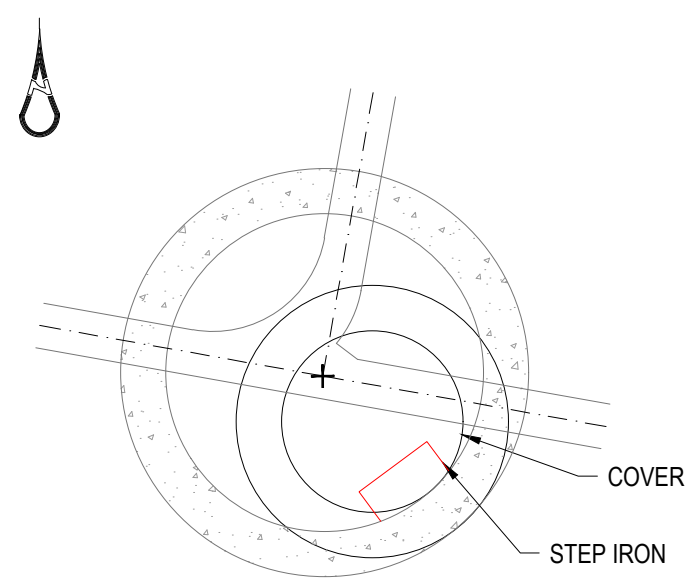
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A	ISSUED FOR CONSTRUCTION	29.06.21	R.C.	DRAWN	P.HUNJAN	MELWAY REFERENCE				SHEET 03 OF 04
P1	UPDATED BASED ON AUTHORITY COMMENTS	09.02.21	M.J.	CHECKED	R.SANDERS	AUTHORISED	R.SANDERS			DRAWING No.: 1801844-02-S
P0	ISSUED FOR INFORMATION	28.10.20	R.S.	DATE	22.10.20	DATE	22.10.20			REV 03
REV	DESCRIPTION	DATE	APPROVED	REV	DESCRIPTION	DATE	APPROVED			B



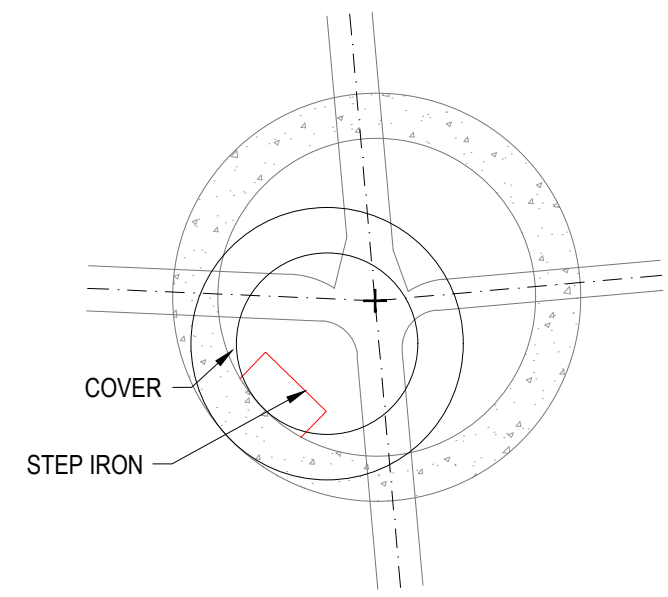
MH 4 BASE ARRANGEMENT
SCALE 1:25 @ A3



MH 2 BASE ARRANGEMENT
SCALE 1:25 @ A3



MH 4 COVERS & FITTINGS
SCALE 1:25 @ A3

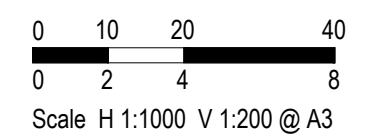


MH 2 COVERS & FITTINGS
SCALE 1:25 @ A3

COLOUR LEGEND	
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REV	DESCRIPTION	DATE	APPROVED	REV	DESCRIPTION	DATE	APPROVED	CHECKED	DATE	AUTHORISED	DATE
B	SEWER CROSSINGS LOCATIONS AMENDED	14.07.21	R.C.					DESIGNED	P.HUNJAN	PROJECT NUMBER	1801844-02
A	ISSUED FOR CONSTRUCTION	29.06.21	R.C.					DRAWN	P.HUNJAN	MELWAY REFERENCE	
P1	SEWER MAINTENANCE HOLE ADDED	09.02.21	M.J.								
P0	ISSUED FOR INFORMATION	28.10.20	R.S.					CHECKED	R.SANDERS	AUTHORISED	R.SANDERS

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BEVERIDGE WILLIAMS REFERENCE: 1801844-02-620-SLS



CENTRAL HIGHLANDS WATER
CITY OF BALLARAT
MAPLE LANE ESTATE - STAGE 02
SEWER RETICULATION EXTENSION No.1801844-02
CONSTRUCTION DETAILS

SCALE: 1:500 @ A1
SHEET 04 OF 04
DRAWING No.: 1801844-02-S
REV 04