WATERVIEW DRIVE, WHITE HILLS

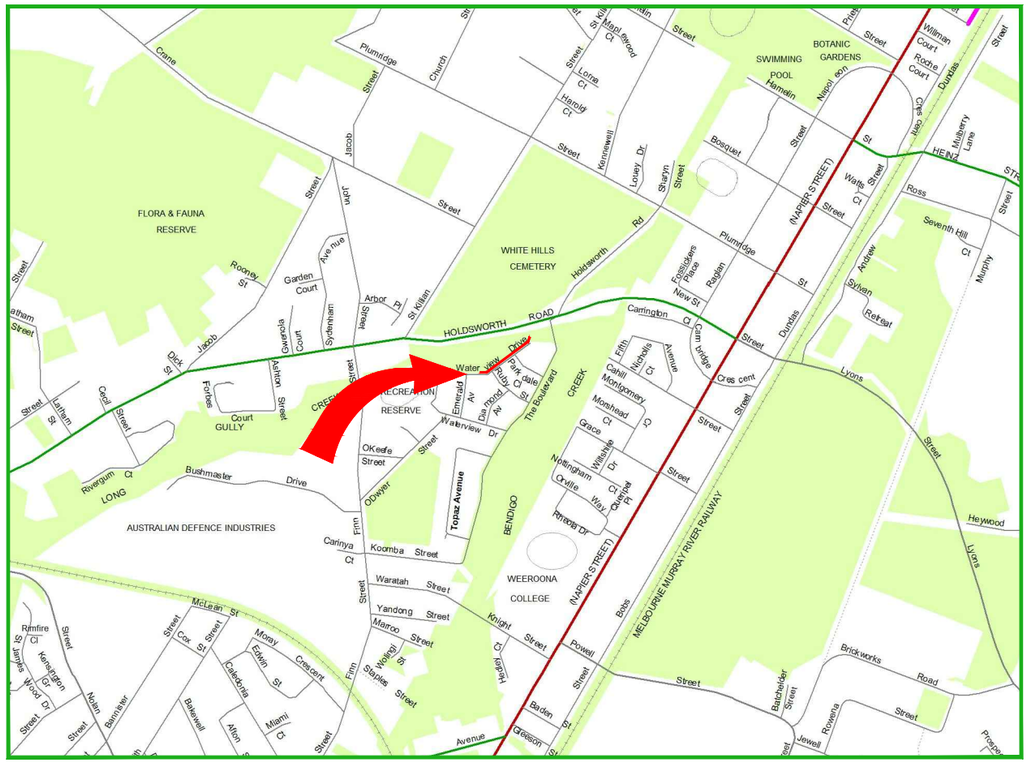
GB4949

DRAINAGE

JULY 2022

CITY OF GREATER BENDIGO

DOCUMENT CONTROL				
SHEET No.	SHEET DESC.	26/07/22	xx/xx/22	xx/xx/22
		DRAFT	TENDER	CONSTRUCTION
		REVISION	REVISION	REVISION
1	COVER SHEET	A		
2	GENERAL NOTES AND CONTROL	A		
3	DETAIL PLAN	A		
4	DETAIL PLAN	A		
5	LONGITUDINAL SECTION	A		
6	LONGITUDINAL SECTION	A		
7	LONGITUDINAL SECTION	A		
8	CREEK OUTLET DETAIL	A		



LOCALITY MAP

PROJECT EXTENTS

PROJECT PLANNING REQUIREMENTS			
Item	Required	Comments	Contractor
Vegetation	No	-	
RRV	No	-	
CMA	No	-	
Planning Permit	No	-	
Land Acquisition	No	-	
CHMP	No	-	
Other	No	-	

AMENDMENTS			
Revision	Description	Approved by	Date
-	-	-	-

CITY OF GREATER BENDIGO

WATERVIEW DRIVE
WHITE HILLS
DRAINAGE

COVER SHEET

Survey	H. WHYTOCK	MAY '22
Design	M. JENNINGS	JUNE '22
Checked	A. SMITH	-/-/22
Approved by	N. SARTORI	-/-/22

Scale: - Revision : A

Original sheet size: A3 File : GB4949.dwg

Sheet: 1 OF 8

Reference: GB4949

PRELIMINARY DESIGN DRAFT 3

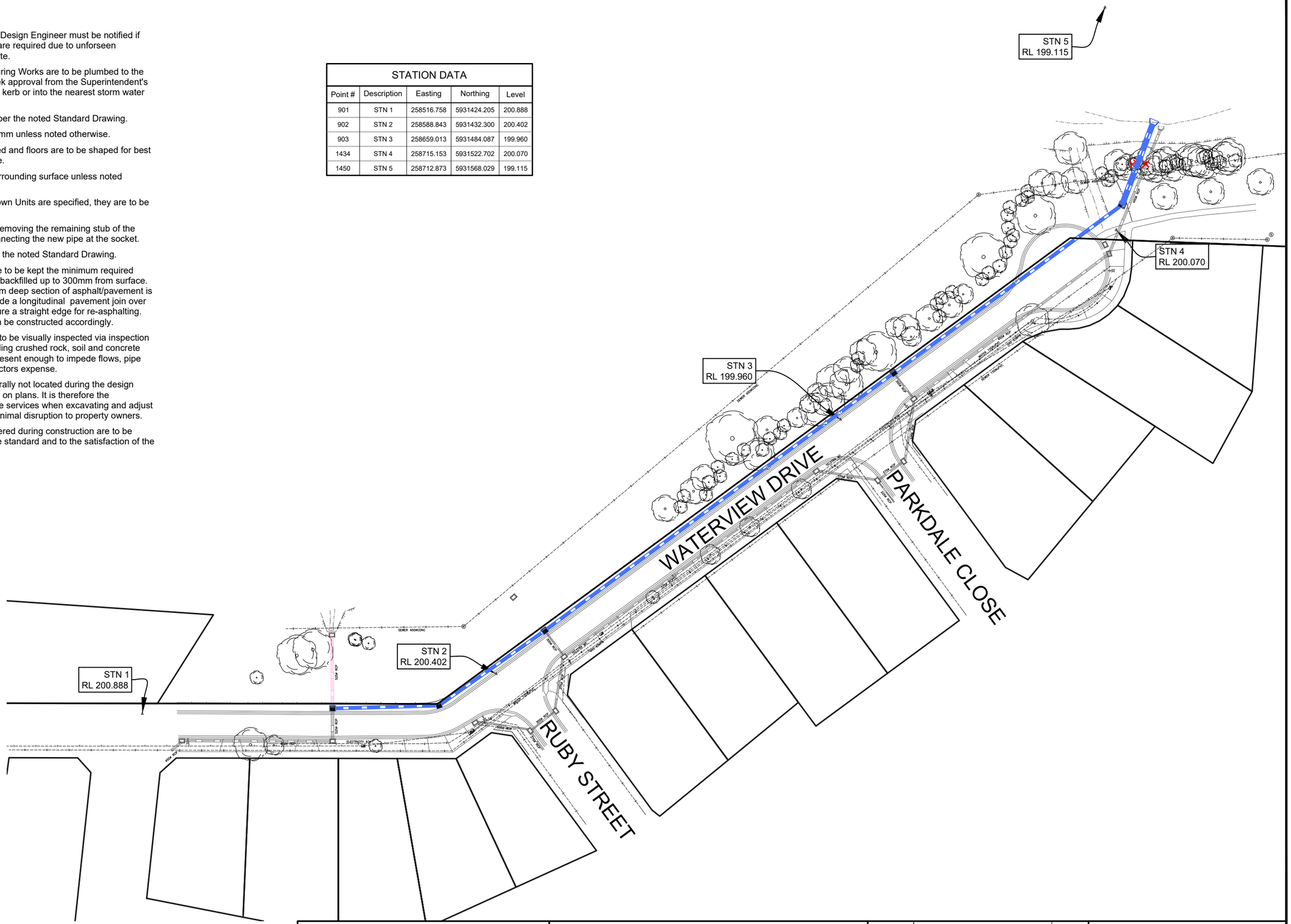
Plot Date: 4/08/2022

Plotted By: MEGAN JENNINGS

DRAINAGE CONSTRUCTION NOTES

1. The Superintendent's Representative and Design Engineer must be notified if any any modifications to drainage design are required due to unforseen circumstances identified during works onsite.
2. Any property storm water pipes located during Works are to be plumbed to the nearest pit. Where this is not practical, seek approval from the Superintendent's Representative to connect stormwater into kerb or into the nearest storm water pipe.
3. All drainage pits are to be constructed as per the noted Standard Drawing.
4. Invert fall through pits is to be a min. of 30mm unless noted otherwise.
5. Concrete pit walls are to be sponge finished and floors are to be shaped for best hydraulic efficiency unless noted otherwise.
6. Pit lids are to be installed flush with the surrounding surface unless noted otherwise.
7. Where concrete box culverts (CBC) or Crown Units are specified, they are to be compliant to AS1597.
8. Pipe extensions are to be constructed by removing the remaining stub of the existing pipe to be extended, and then connecting the new pipe at the socket.
9. All pipe backfill is to be constructed as per the noted Standard Drawing.
10. The location of any saw cuts in asphalt are to be kept the minimum required trench width until after the pipe is laid and backfilled up to 300mm from surface. At this point, a further 150mm wide, 300mm deep section of asphalt/pavement is to be sawcut and excavated so as to provide a longitudinal pavement join over the drainage trench. This also should ensure a straight edge for re-asphalting. The top 300m depth of backfill should then be constructed accordingly.
11. At the completion of the Works, pipes are to be visually inspected via inspection pits to check for construction debris, including crushed rock, soil and concrete over spill. Should a volume of debris be present enough to impede flows, pipe cleaning shall be undertaken at the contractors expense.
12. Gas and water property services are generally not located during the design phase and therefore have not been shown on plans. It is therefore the Contractors responsibility to consider these services when excavating and adjust or realign accordingingly whilst causing minimal disruption to property owners.
13. Gas and Water property services encountered during construction are to be altered and reconnected to the appropriate standard and to the satisfaction of the Superintendents Representative.

STATION DATA				
Point #	Description	Easting	Northing	Level
901	STN 1	258516.758	5931424.205	200.888
902	STN 2	258588.843	5931432.300	200.402
903	STN 3	258659.013	5931484.087	199.960
1434	STN 4	258715.153	5931522.702	200.070
1450	STN 5	258712.873	5931568.029	199.115



AMENDMENTS			
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CITY OF GREATER BENDIGO

WATERVIEW DRIVE
WHITE HILLS
DRAINAGE

GENERAL NOTES AND CONTROL

Survey	H. WHYTOCK	MAY '22
Design	M. JENNINGS	JUNE '22
Checked	A. SMITH	-/-/22
Approved by	N. SARTORI	-/-/22
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PRELIMINARY DESIGN
DRAFT 3

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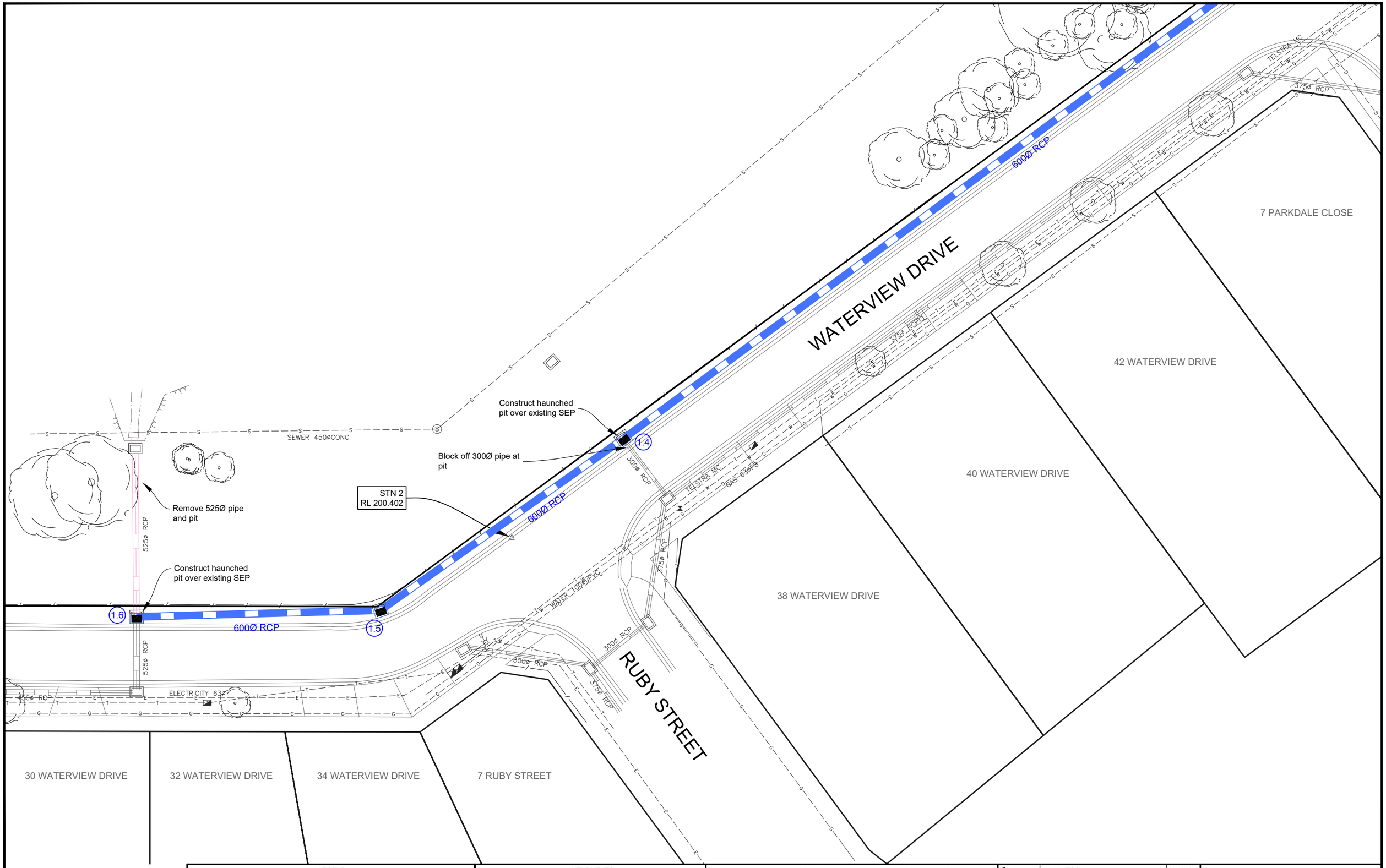

LEGEND

DESIGN PIPE

PIPE REMOVAL

TREE REMOVAL

AMENDMENTS

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CITY OF GREATER BENDIGO

WATERVIEW DRIVE
WHITE HILLS
DRAINAGE

DETAIL PLAN

Survey	H. WHYTOCK	MAY '22
Design	M. JENNINGS	JUNE '22
Checked	A. SMITH	-/-/22
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PRELIMINARY DESIGN DRAFT 3

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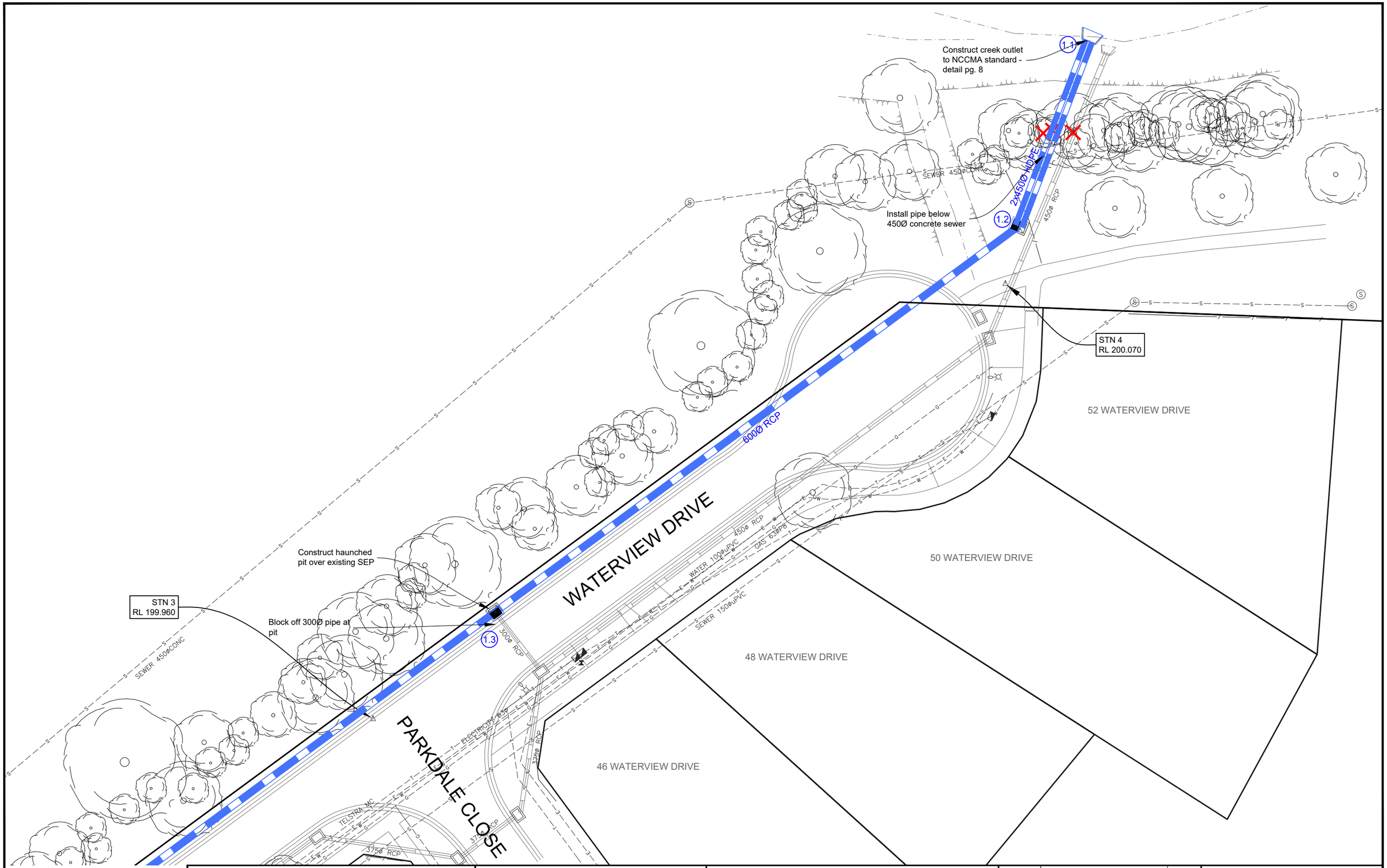

LEGEND

DESIGN PIPE

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TREE REMOVAL

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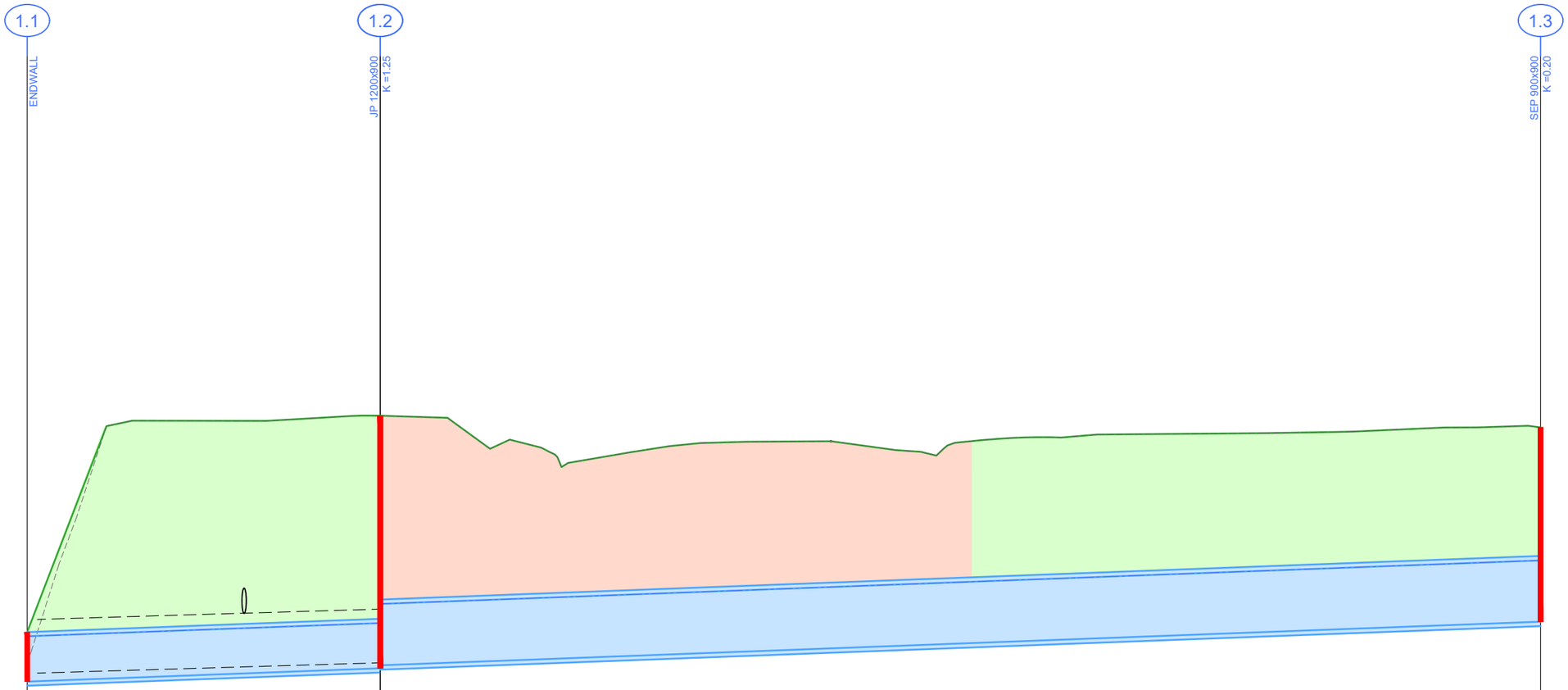

20% AEP FLOW (L/s)		441	449
HGL CAPACITY (L/s)		603	670
SURCHARGE (L/s)			
PIPE VELOCITY (m/s)		1.39	1.54
PIPE DETAILS		2X 450ØHDPE	600ØRCP CL2 RRJ
SLOPE/GRADE		1:133 0.7%	1:133 0.8%
DATUM RL 196			
INVERT LEVEL	197.450	197.582 / 197.612	198.045
DEPTH TO INVERT	0.21	2.51 / 2.48	1.93
EXISTING SURFACE	197.66	200.09	199.98
DESIGN SURFACE	197.66	200.09	199.98
HGL	197.90	198.03 / 198.22	198.66
CHAINAGE	0.00	17.57	75.33
		17.57	57.75

DRAINAGE LONGITUDINAL SECTION
SCALES: HORIZONTAL 1:250 VERTICAL 1:50

LEGEND

- EXISTING PIPE TO REMAIN
- DESIGN PIPE / PIT or ENDWALL
- CoGB SD390 TRENCH BACKFILL (BEHIND KERB)
- CoGB SD391 TRENCH BACKFILL (UNDER NEW ROAD)
- CoGB SD392 TRENCH BACKFILL (UNDER EXISTING ROAD)

AMENDMENTS

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CITY OF GREATER BENDIGO

WATERVIEW DRIVE
WHITE HILLS
DRAINAGE

LONGITUDINAL SECTION

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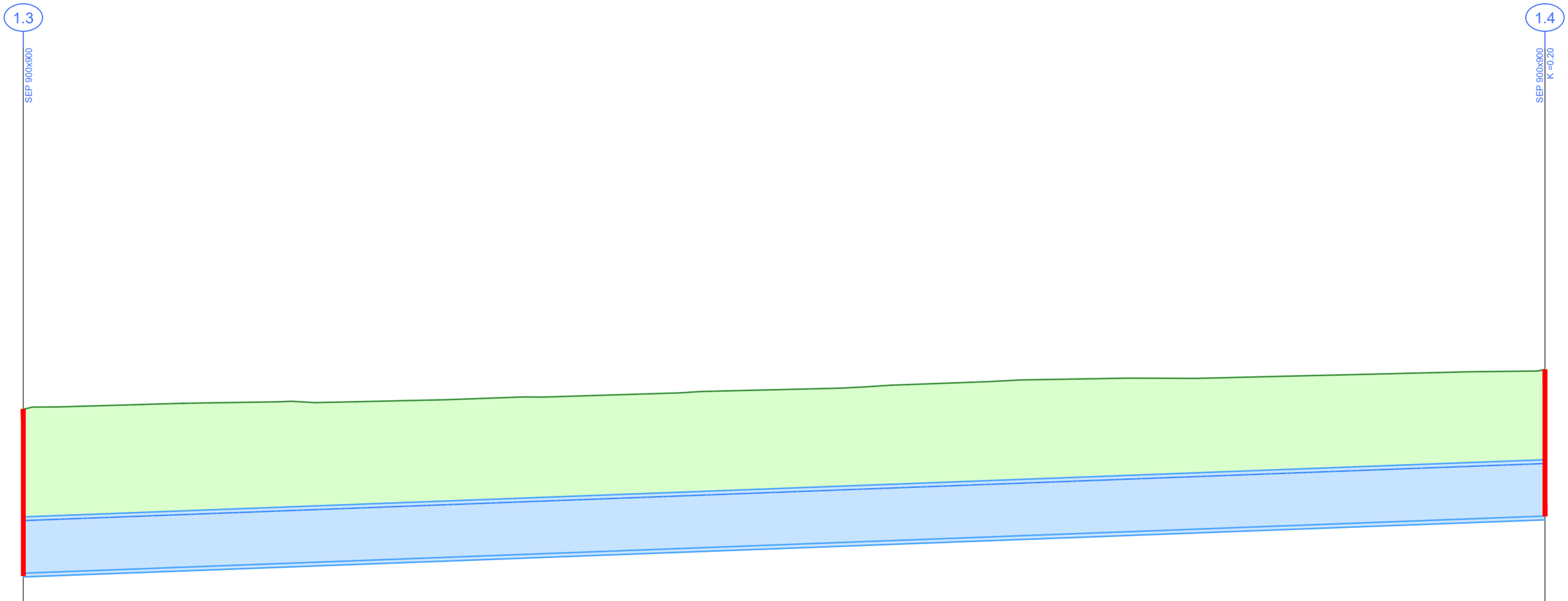

20% AEP FLOW (L/s)		458	
HGL CAPACITY (L/s)		670	
SURCHARGE (L/s)			
PIPE VELOCITY (m/s)		1.57	
PIPE DETAILS		600ØRCP CL2 FJ	
SLOPE/GRADE		1:133 0.8%	
DATUM RL 196.5			
INVERT LEVEL	198.075		198.738
DEPTH TO INVERT	1.90		1.70
EXISTING SURFACE	199.98		200.44
DESIGN SURFACE	199.98		200.44
HGL	198.69		199.35
CHAINAGE	75.33	88.36	163.69

DRAINAGE LONGITUDINAL SECTION
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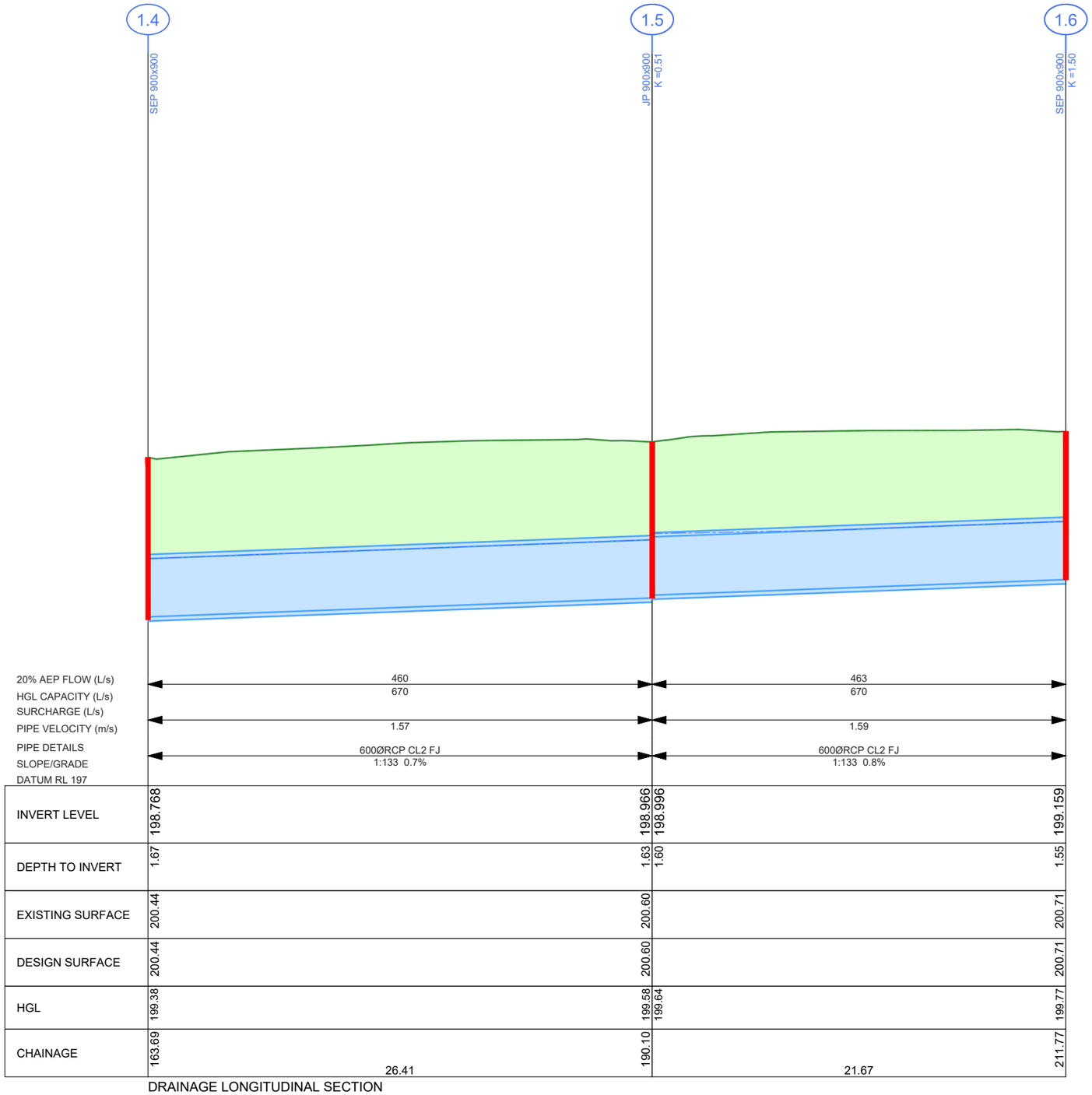

DRAINAGE LONGITUDINAL SECTION
SCALES: HORIZONTAL 1:250 VERTICAL 1:50

Pit Schedule

Pit No.	Pit Type	Pit Width	Pit Length	Outlet Diameter	Outlet Invert RL	Inlet Diameter	Inlet Invert RL	Pit Depth	Pit Lid Level	Comment
		(mm)	(mm)	(mm)	(m)	(mm)	(m)	(m)	(m)	
1.1	ENDWALL	-	-			450	197.450	0.296	197.746	Stormwater outlet per pg. 8
1.2	JP COGB SD590 B-C-L-R	900	1200	450	197.582	600	197.612	2.512	200.094	
1.3	SEP COGB SD590 B-C-G-R	900	900	600	198.045	600	198.075	1.934	199.979	
1.4	SEP COGB SD590 B-C-G-R	900	900	600	198.738	600	198.768	1.701	200.439	
1.5	JP COGB SD590 B-C-L-R	900	900	600	198.966	600	198.996	1.635	200.601	
1.6	SEP COGB SD590 B-C-G-R	900	900	600	199.159	525	199.196	1.551	200.709	

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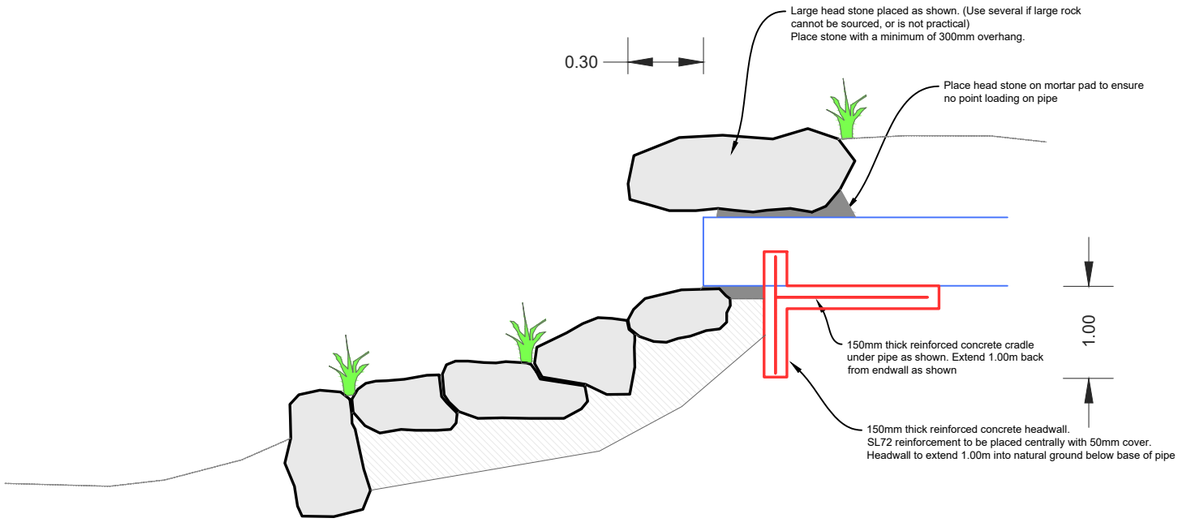
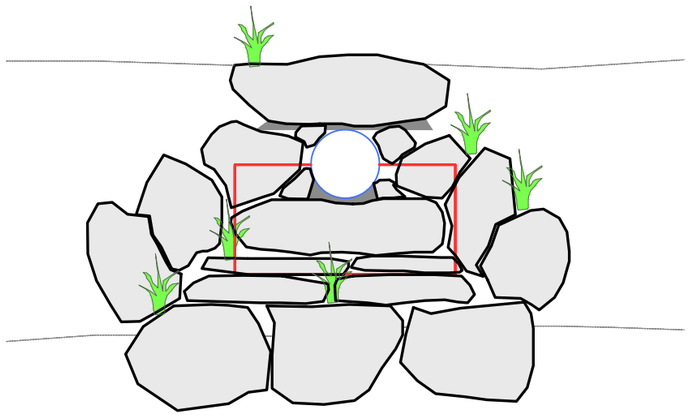
Creek outlet detail



Side Elevation



Front Elevation

Construction procedure

1. Construct and place pipe to desired location and construct concrete endwall
2. Excavate and place toe and perimeter rocks to min 600mm depth into undisturbed material
3. Place rocks in the chute. Care is to be taken to ensure each rock is 'locked in' to its surrounding rocks and voids are to be kept to a minimum. Should appear as a rock blanket
4. Place and mortar in Headstone and rocks adjacent pipe

AMENDMENTS			
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CREEK OUTLET DETAIL

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