

# PAPERBARK COURT STRATHDALE

## GB4919

## DRAINAGE UPGRADE

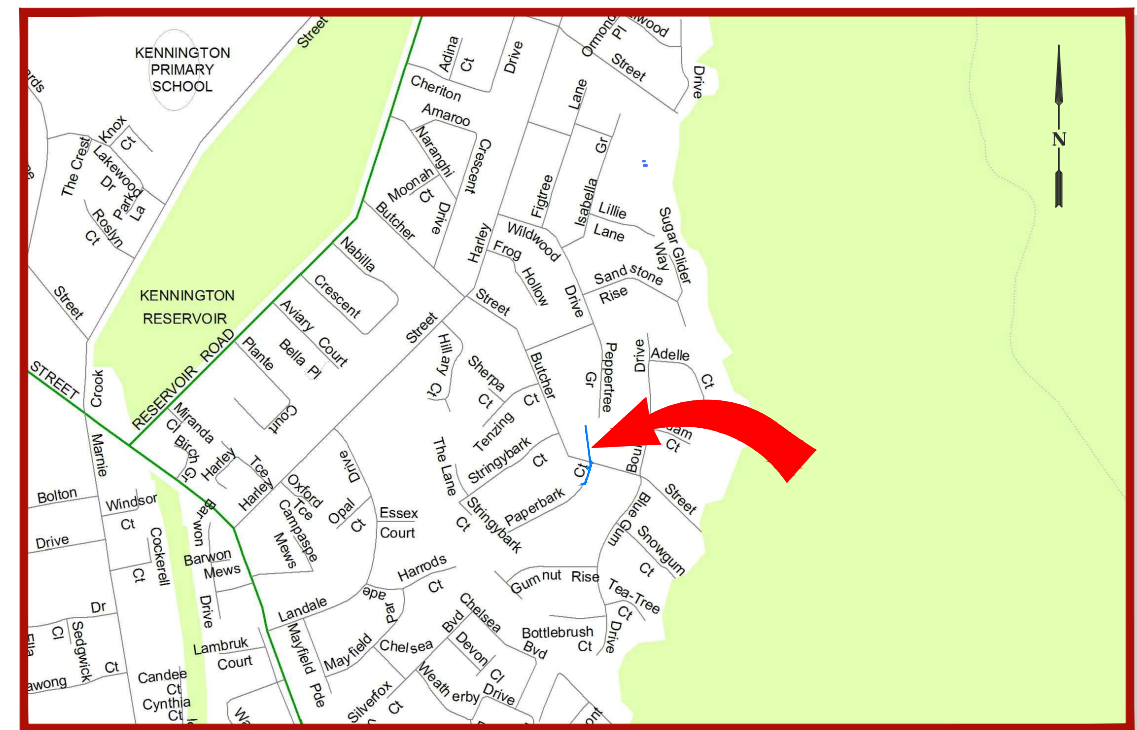


SEPTEMBER 2022

DOCUMENT CONTROL				
SHEET No.	SHEET DESC.	16/9/22	XX/XX	XX/22
		DRAFT	TENDER	CONSTRUCTION
		REVISION	REVISION	REVISION
1	COVER SHEET	A		
2	GENERAL NOTES & TYPICAL DETAIL	A		
3	OVERALL LAYOUT & CONTROL	A		
4 - 6	DETAIL LAYOUT	A		
7 - 8	DRAINAGE LONGITUDINAL SECTION	A		
9	PIT SCHEDULE & SETOUT	A		
10	KERB / PATH LONG & CROSS SECTIONS	A		
11	SETOUT	A		



PROJECT EXTENTS



LOCALITY MAP

PROJECT PLANNING REQUIREMENTS				AMENDMENTS			
Item	Required	Comments	Contractor	Revision	Description	Approved by	Date
Vegetation	No	-		-	-	-	-
RRV	No	-					
CMA	No	-					
Planning Permit	No	-					
Land Acquisition	No	-					
CHMP	No	-					
Other	No	-					

**CITY OF GREATER BENDIGO**

PAPERBARK COURT  
STRATHDALE  
DRAINAGE UPGRADE

COVER SHEET

Survey	H. WHYTECK	JUNE 2022
Design	L. OLIVER	JULY 2022
Checked	A. SMITH	-/-22
Approved by	N. SARTORI	-/-22
Scale: -	Revision: A	
Original sheet size: A3	File: GB4919.dwg	
Sheet: 1 OF 11	Reference: GB4919	

**PRELIMINARY DESIGN  
DRAFT 6**

Plot Date: 16/09/2022  
Plotted By: LEIGH OLIVER

FILL NOTES

1. All earthworks and compaction are to be in accordance with VicRoad's Specification Section 204.
2. All fill materials are to be approved by the Superintendent's Representative prior to being imported onto the site, and unless noted otherwise, shall be a clean clay based material free of vegetation matter or contaminants.
3. All filling is to comply with AS3798-1996 Appendix B, level 1 (or 2) as specified
4. The Contractor is responsible for ensuring that all imported fill material, including topsoil, satisfies the description for clean fill material in EPA bulletin publication No. 448 (Sep 95) and subsequent revisions. The Contractor shall provide verification including test certificates to the Superintendent's Representative.

ROAD CONSTRUCTION NOTES

1. All Works to be carried out in accordance with CoGB Standard Drawings, Specifications, approved plans and to the satisfaction of the Superintendent's Representative.
2. These notes also refer to the latest version of the Infrastructure Design Manual (IDM) and latest version of the IDM Standard Drawings.
3. The Project Manager is to be notified seven days prior to the commencement of Works with a Pre-commencement meeting to be held between CoGB, the Consultant and the Contractor. A site management plan is to be submitted prior to the commencement of Works and prior to the onsite Pre-commencement meeting.
4. Prior to commencement of the Works, the Contractor shall provide the following:

- Source of quarry material

- N.A.T.A. approved test results for the F.C.R that is to be used

- If the source of the quarry material is changed during the course of the Works, then new test results shall be provided.
5. Prior to commencement of Works on site, the Contractor must ensure that all matters relating to the Occupational Health and Safety Act 1985, have been and will be complied with.
6. On the commencement of construction, the Contractor must comply with the recommendation of the Environment Protection Authority publication "Construction Techniques for Sediment Pollution Control". Appropriate siltation control is to be maintained throughout the construction and maintenance period of the Works.
7. The disposal site for spoil storage, and truck removal route, is to be submitted in writing to, and approved by the Superintendent's Representative prior to the commencement of Works.
8. Where Works are in the vicinity of existing services, these services are to be located and exposed prior to commencement of the work. Relevant authorities are to be notified 7 days prior to the Works.
9. All dimensions are in metres unless noted otherwise.
10. All levels are to Australian Height Datum (AHD) unless noted otherwise.
11. All co-ordinates are to Map Grid of Australia (MGA) unless noted otherwise.
12. The Contractor must arrange the inspection of the Works with the Superintendent's Representative as per the hold points in the Specifications, or as directed by the Superintendent's Representative.
13. All redundant assets are to be removed and disposed off site unless noted otherwise.
14. All service conduit trenches under road pavements, under footpaths and under swales are to be backfilled as per IDM SD310 unless noted otherwise. Compaction standards noted in SD310 shall be achieved.
15. Blasting is not generally accepted.
16. All existing assets affected by the Works (i.e. signs, vehicle crossings, footpaths, kerb and line marking) shall be reinstated by the Contractor before the completion of Works, to the satisfaction of the Superintendent's Representative.
17. At the completion of all Works, all rubbish, debris and surplus spoil shall be removed and the site shall be cleared to the satisfaction of the Superintendent's Representative.
18. The Contractor is to obtain a Building Permit for any structures, fences and for any retaining walls over 1.0m in height.
19. Any infrastructure damage incurred during the Defects Liability Period noted on the contract is the responsibility of the Contractor and is to be reinstated to the satisfaction of the Superintendent's Representative.
20. All disturbed areas (eg. nature strips, batters, allotments and reserves) are to be reinstated to a clean, tidy condition, top dressed with 75mm min. depth approved top soil, and seeded with a CoGB approved blend or unless otherwise noted. Soil & seeded treated areas must be satisfactorily established prior to the end of the Maintenance Period otherwise further treatment is required by the Contractor.
21. Any exposed aggregate concrete works are to be achieved by sandblasting only. Washing aggregate off with water is not permitted.
22. The Contractor shall notify the public of any impending road closures by providing sufficient signage 2 weeks prior to construction commencing.

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 unforeseen 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 accordingly 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.

PAVEMENT NOTES

1. Construction of road pavements is to be in accordance with the requirements of VicRoad's Standard Specifications for Roadworks (Section 304). Testing must be carried out by a N.A.T.A. approved laboratory, or by calibrated nuclear densometer test to the relevant Australian Standard.
2. Compaction tests are to be undertaken in the following locations:

- At ⅔ depth of the pavement

- At alternating sides of the road

- 1.0m in from the seal edge or lip of kerb

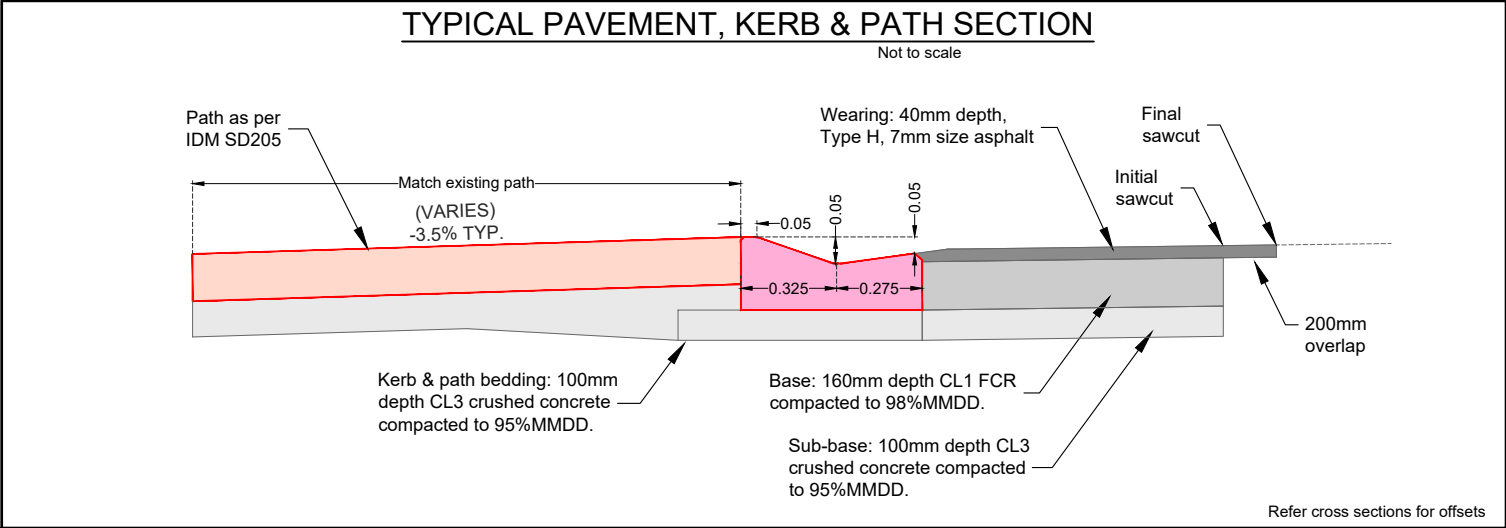
- At even spacings.
3. The number of compaction tests shall comply with the table below:


Location	Number of Compaction tests
Court bowls	3
Intersections	2
Straights	1 per 500m2 (1/50m for 10.2m wide pvmt.)
4. Copies of the geotechnical results are to be submitted to the Superintendent's Representative.
5. Sub-base and base materials are to be at 85% optimum moisture content (OMC) during compaction, and maintained at 85% OMC until proof rolling.
6. Typical Compaction levels required (unless noted otherwise):

Subgrade: To be compacted to 100% standard dry density ratio.

Subbase: Flexible pavements shall be compacted in accordance with Scale C in VicRoads table 304.082. Compaction shall be to 98% of the maximum dry density ratio determined by the modified compaction test.

Base: Flexible pavements shall be compacted in accordance with Scale C in VicRoads table 304.082. Compaction shall be to 100% of the maximum dry density ratio determined by the modified compaction test.
7. Proof rolling of the Subgrade, Sub base and Base must be undertaken as per Section 12.7.15 of the IDM. Proof rolling will be at the expense of the contractor in accordance with AS3798 and the requirements of section 173 and 204.12 of the VicRoad's Specification. The Superintendent's Representative must be present during the proof rolling. The Subgrade must not deflect more than 2mm vertically within 300mm of the test roller in isolated locations.
8. Identification and treatment of soft areas during proof rolling shall be dealt with as per Sections 12.7.13 and 12.7.14 of the IDM and as approved by the Superintendent's Representative.






**IMPORTANT:**

The location of underground services have been derived from available information, however accuracy cannot be guaranteed. All existing service information should therefore be treated as indicative only, and service locations must be arranged prior to commencement of any excavation. The contractor will be held responsible for any damage caused to underground services.

AMENDMENTS			
Revision	Description	Approved by	Date
-	-	-	-



**CITY OF GREATER BENDIGO**

PAPERBARK COURT  
STRATHDALE  
DRAINAGE UPGRADE

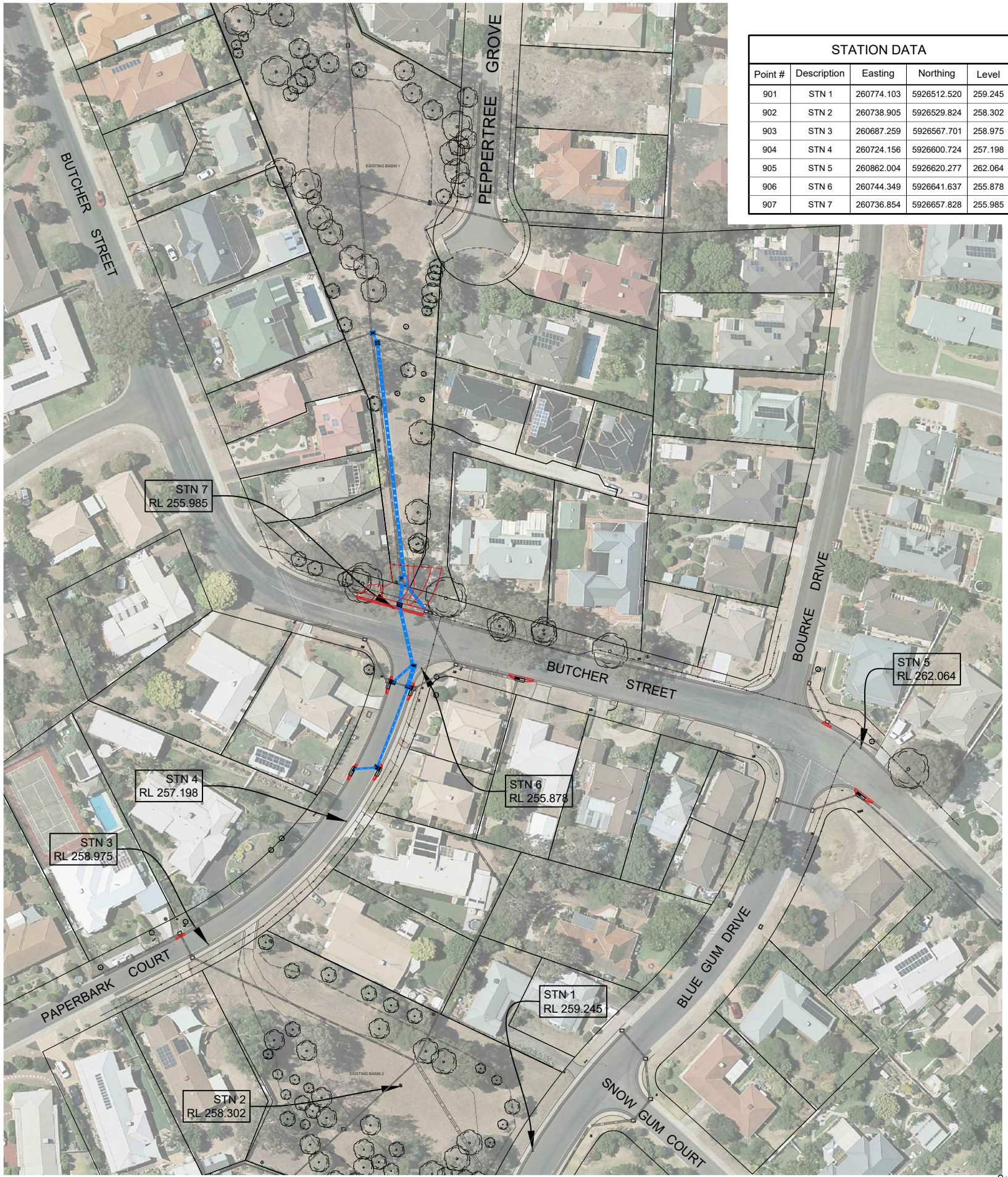
GENERAL NOTES & TYPICAL DETAIL

Survey	H. WHYTOCK	JUNE 2022
Design	L. OLIVER	JULY 2022
Checked	A. SMITH	-/-22
Approved by	N. SARTORI	-/-22
Scale: -	Revision : A	
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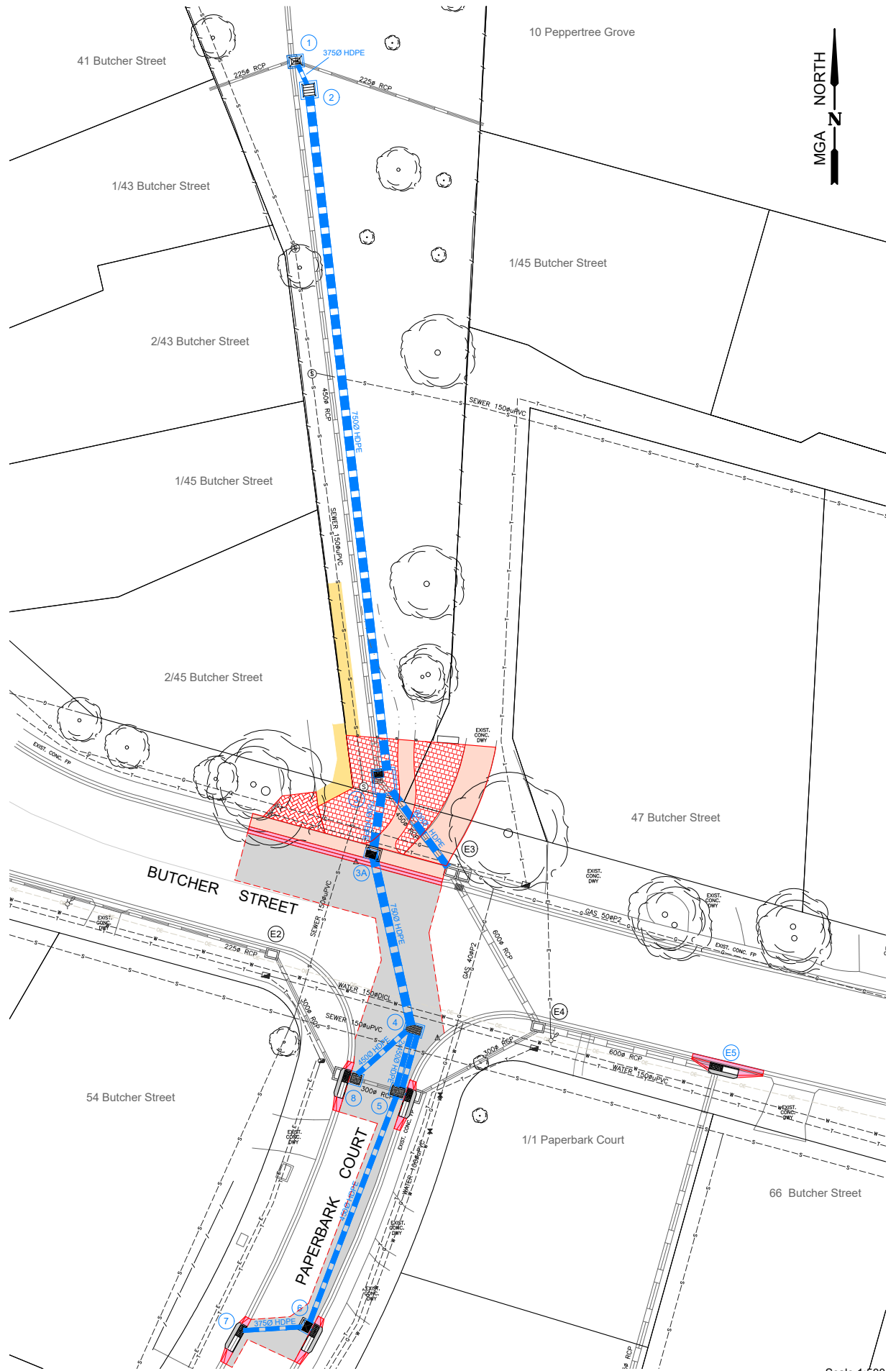
**PRELIMINARY DESIGN  
DRAFT 6**


Plot Date: 16/09/2022

Plotted By: LEIGH OLIVER



STATION DATA				
Point #	Description	Easting	Northing	Level
901	STN 1	260774.103	5926512.520	259.245
902	STN 2	260738.905	5926529.824	258.302
903	STN 3	260687.259	5926567.701	258.975
904	STN 4	260724.156	5926600.724	257.198
905	STN 5	260862.004	5926620.277	262.064
906	STN 6	260744.349	5926641.637	255.878
907	STN 7	260736.854	5926657.828	255.985




**DIAL 1100**  
BEFORE YOU DIG

**IMPORTANT!**

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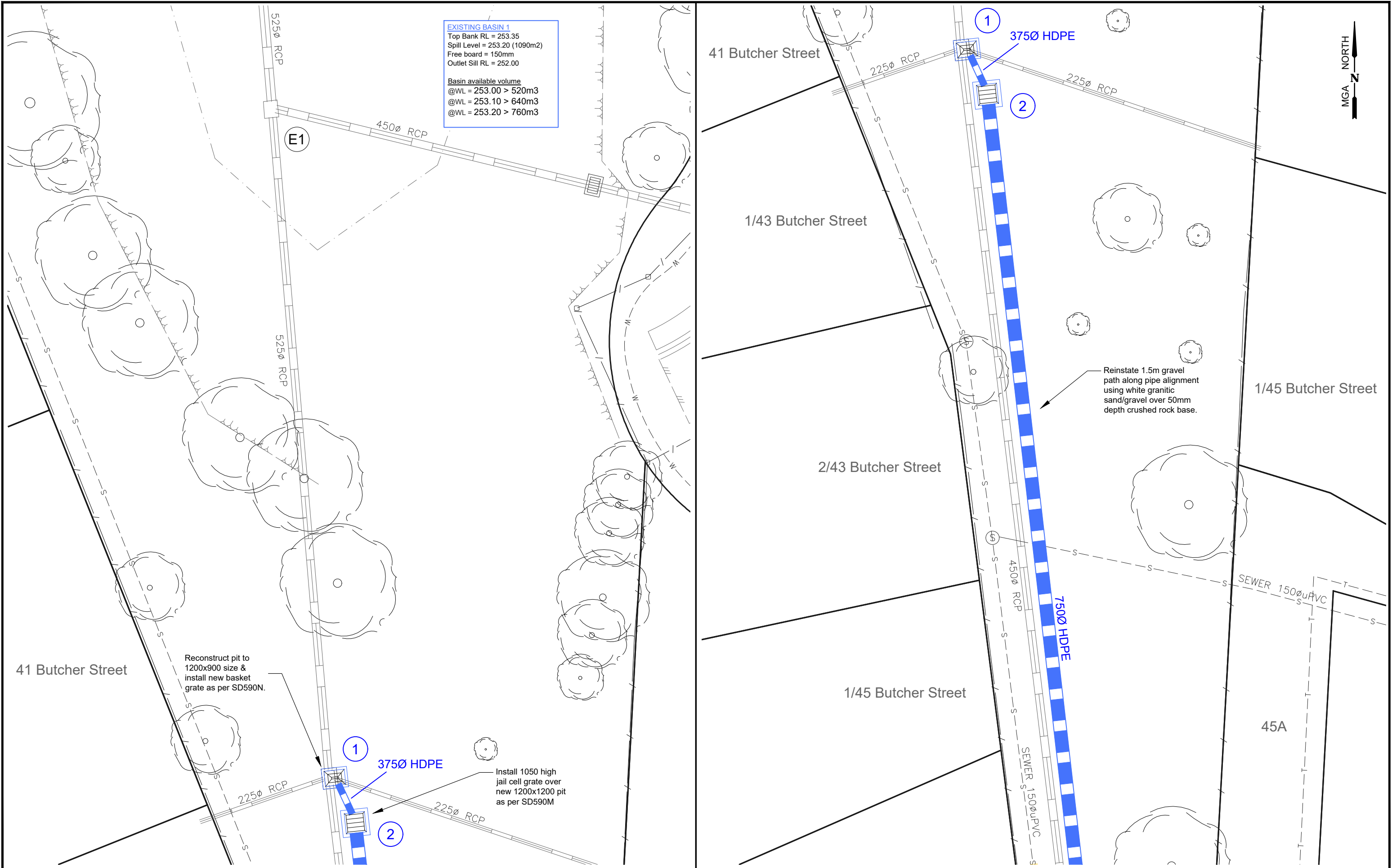


**CITY OF GREATER BENDIGO**  
**PAPERBARK COURT**  
**STRATHDALE**  
**DRAINAGE UPGRADE**  
**OVERALL LAYOUT & CONTROL**

Survey	H. WHYTOCK	JUNE 2022
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Checked	A. SMITH	-/-22
Approved by	N. SARTORI	-/-22
Scale:	AS SHOWN	Revision : A
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**PRELIMINARY DESIGN**  
**DRAFT 6**

Plot Date: 16/09/2022  
Plotted By: LEIGH OLIVER



**LEGEND**


**AMENDMENTS**

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-	-	-	-

**CITY OF GREATER BENDIGO**

**PAPERBARK COURT  
STRATHDALE  
DRAINAGE UPGRADE**

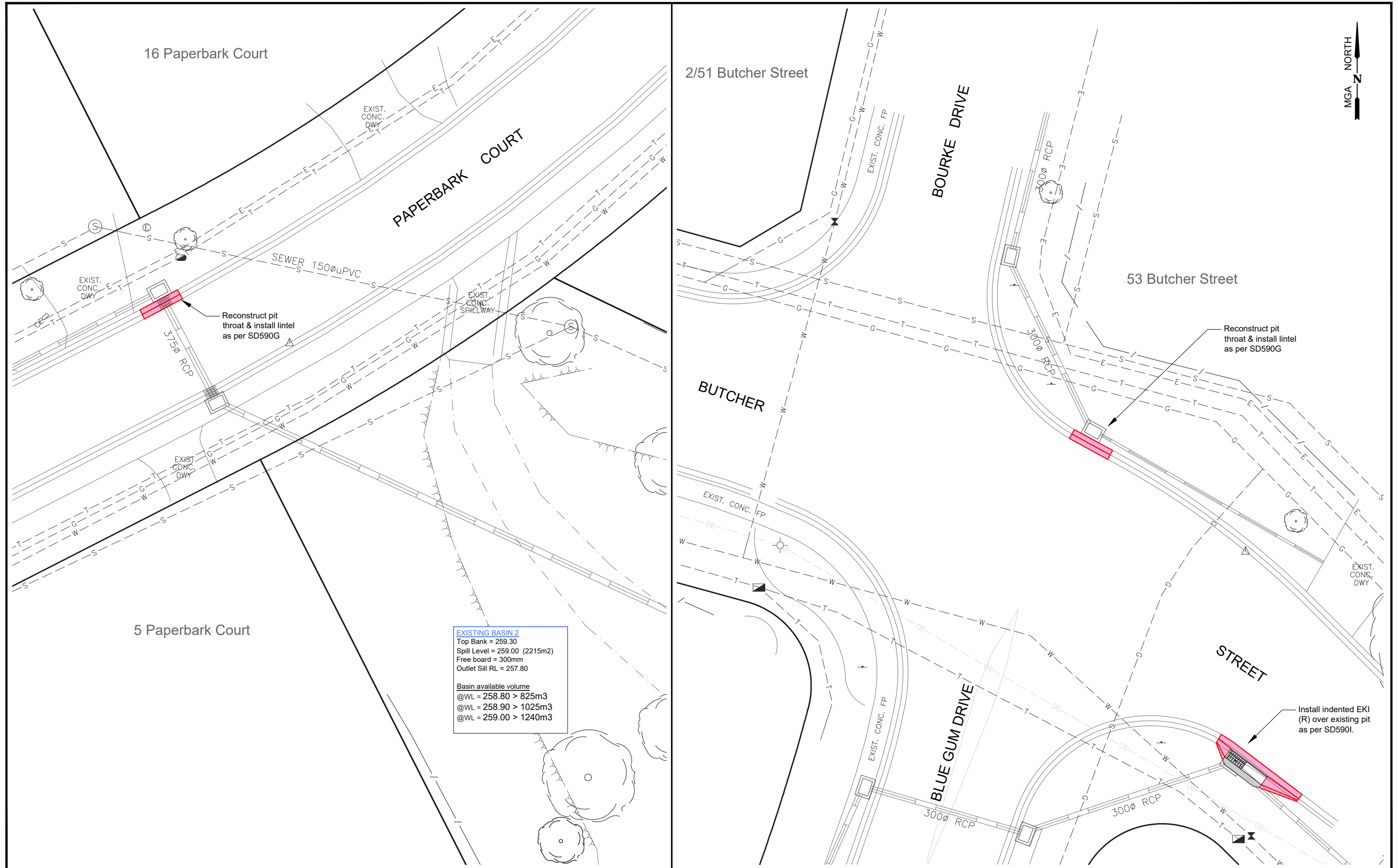
DETAIL LAYOUT

Survey	H. WHYTECK	JUNE 2022
Design	L. OLIVER	JULY 2022
Checked	A. SMITH	-/-22
Approved by	N. SARTORI	-/-22
Scale: 1:200	Revision: A	
Original sheet size: A3	File: GB4919.dwg	
Sheet: 4 OF 11	Reference: <b>GB4919</b>	

Plot Date: 16/09/2022  
Plotted By: LEIGH OLIVER

**PRELIMINARY DESIGN  
DRAFT 6**





**LEGEND**

Concrete: Footpath/Driveway Plain, 125mm, SL72, 25Mpa, As per IDM SD205, SD210,	Pavement: As per pavement detail	Landscape: Instant Turf	Design Contour 0.10m interval
Concrete: Kerb, As per IDM SD100, CoGB SD190, SD191, SD192	Tree removals	Landscape: Native mulch	Existing Contour 0.10m interval
Concrete: Stenciled Cobble, 125mm, SL72, 25Mpa, As per IDM SD205, SD210,	Proposed drainage		

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**CITY OF GREATER BENDIGO**

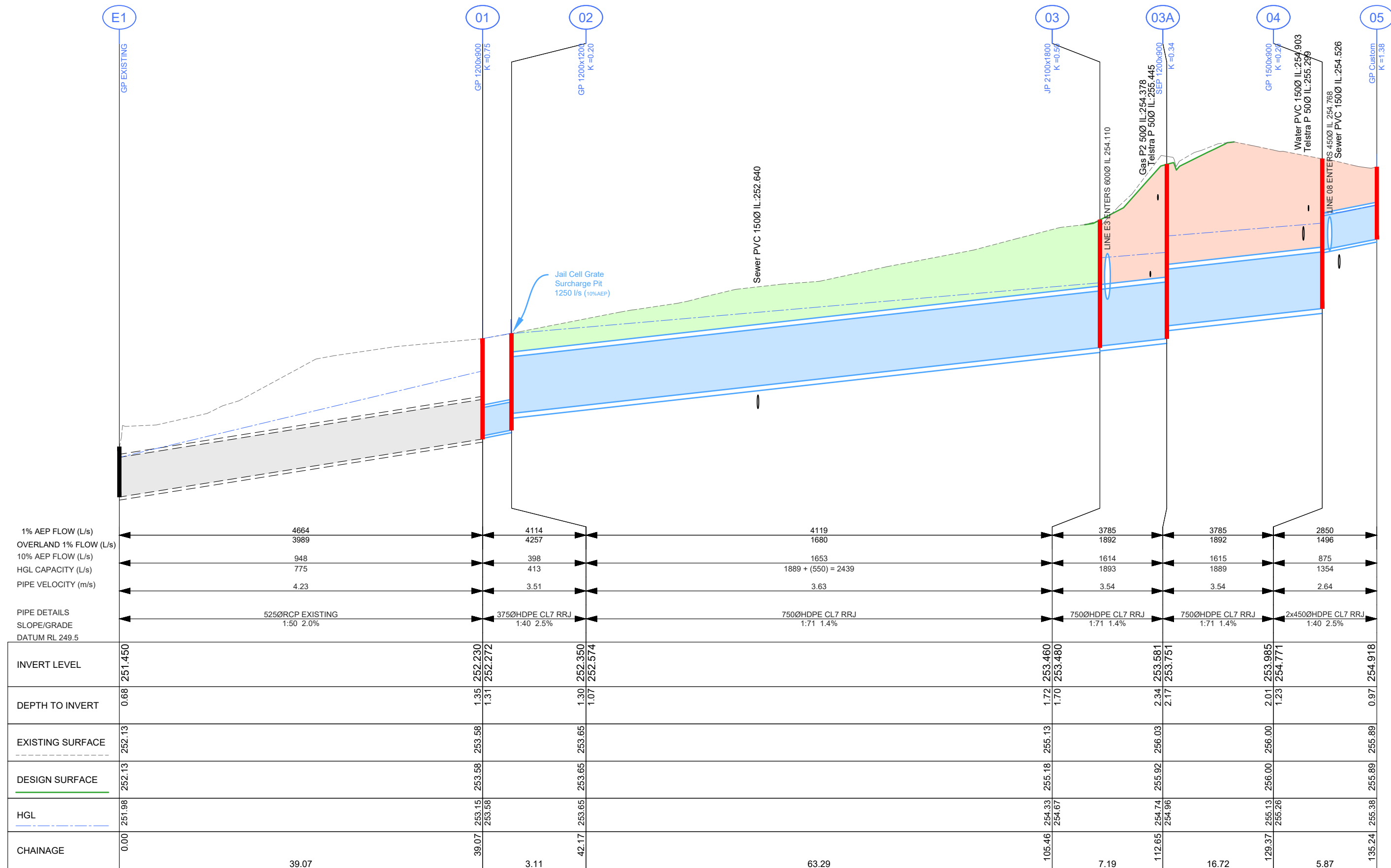
**PAPERBARK COURT  
STRATHDALE  
DRAINAGE UPGRADE**

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DRAINAGE LONGITUDINAL SECTION  
SCALES: HORIZONTAL 1:400 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

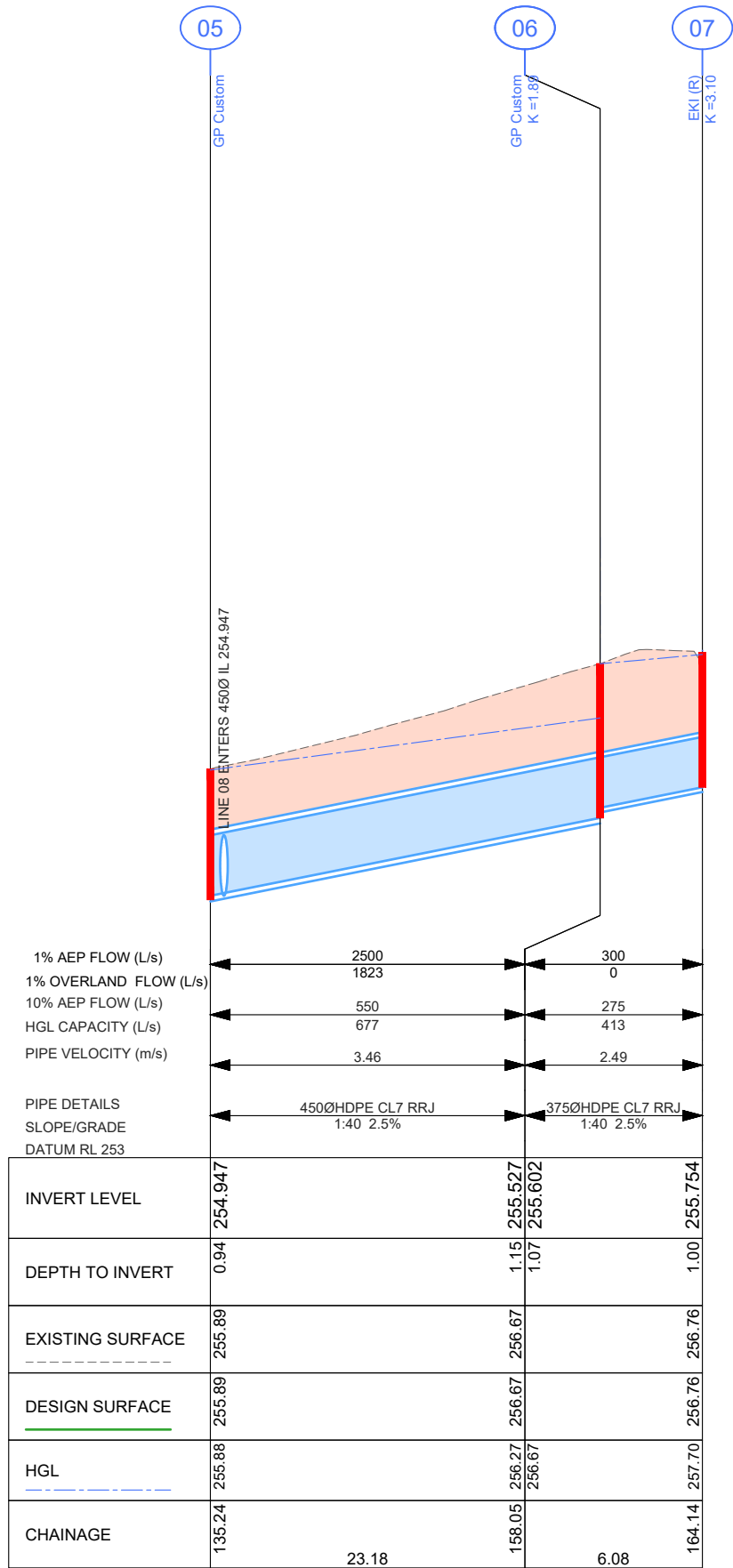


PAPERBARK COURT  
STRATHDALE  
DRAINAGE UPGRADE  
DRAINAGE LONGITUDINAL SECTION

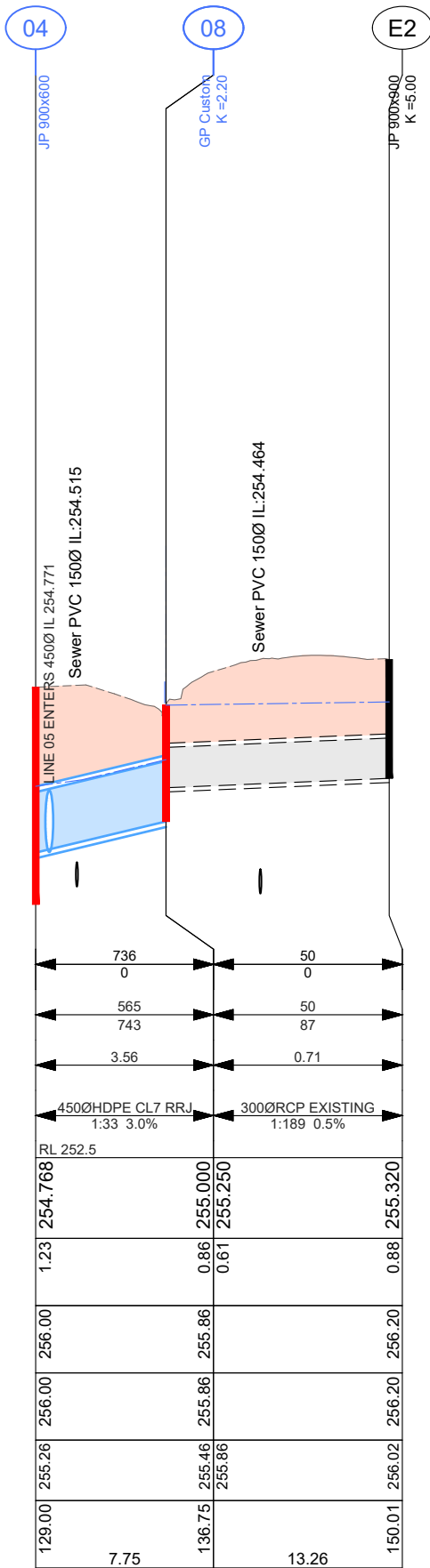
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PRELIMINARY DESIGN  
DRAFT 6

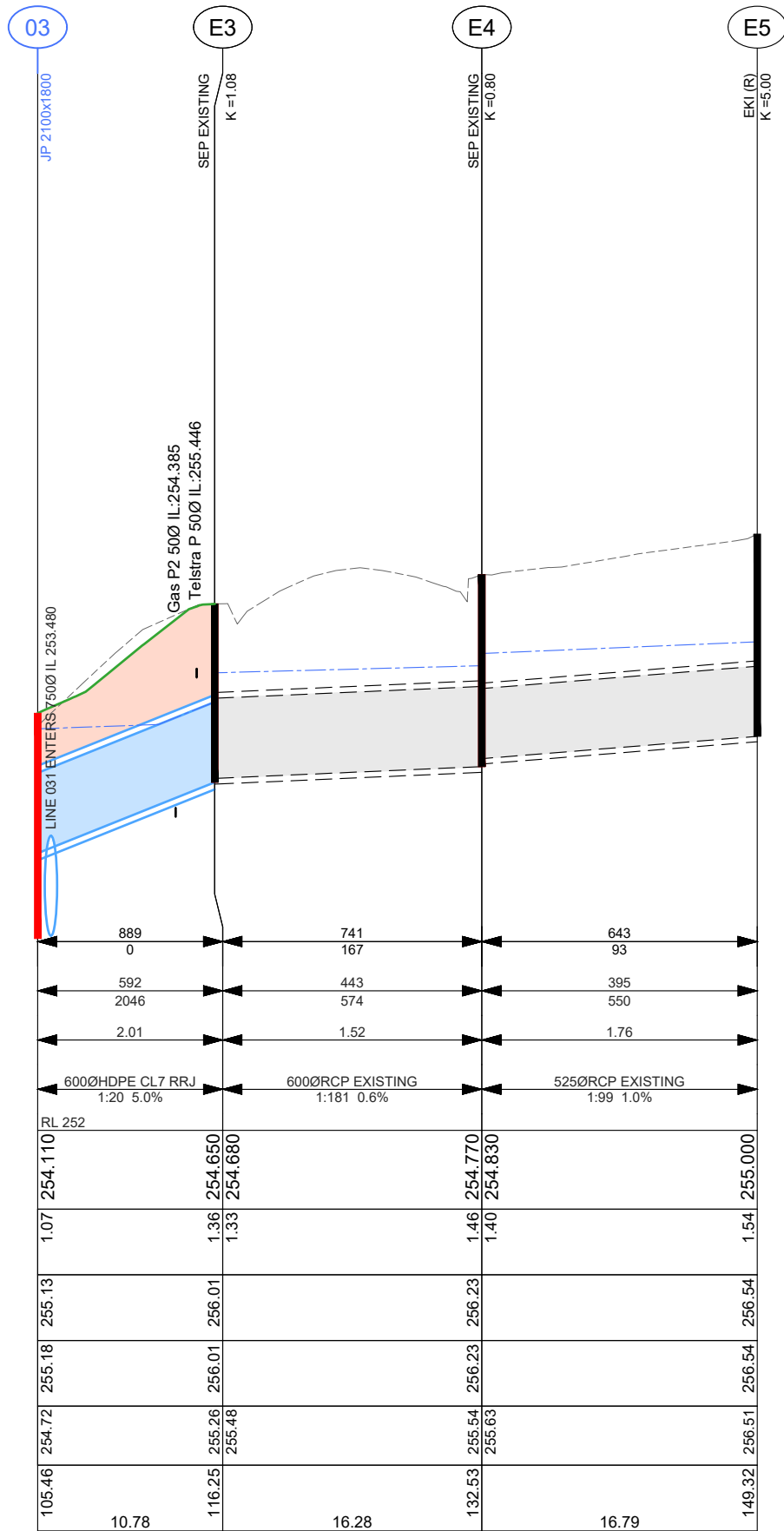
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DRAINAGE LONGITUDINAL SECTION  
SCALES: HORIZONTAL 1:400 VERTICAL 1:50

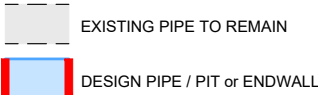


DRAINAGE LONGITUDINAL SECTION  
SCALES: HORIZONTAL 1:400 VERTICAL 1:50



DRAINAGE LONGITUDINAL SECTION  
SCALES: HORIZONTAL 1:400 VERTICAL 1:50

LEGEND



- 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



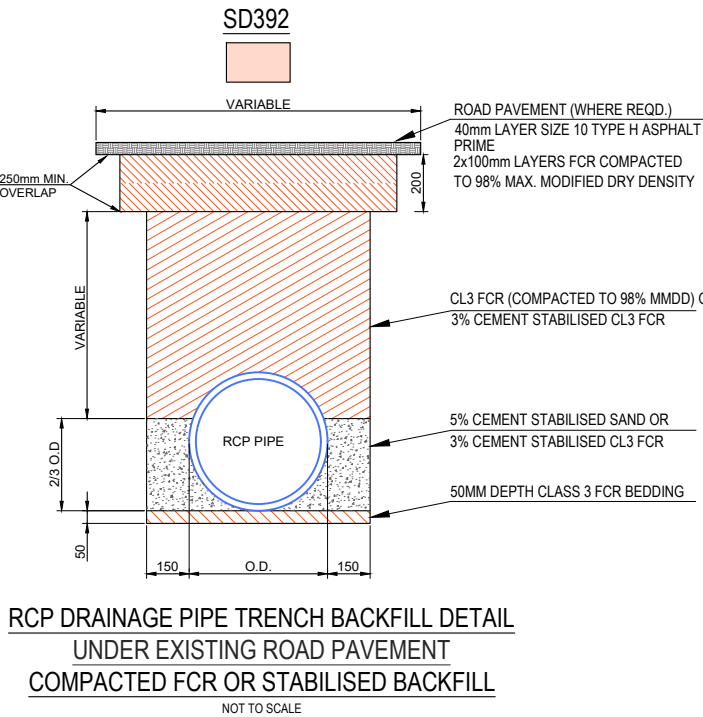
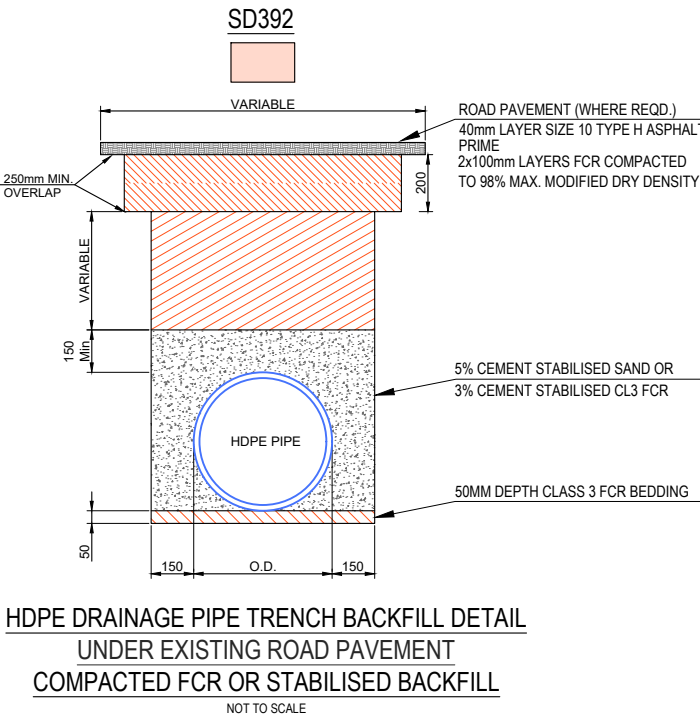
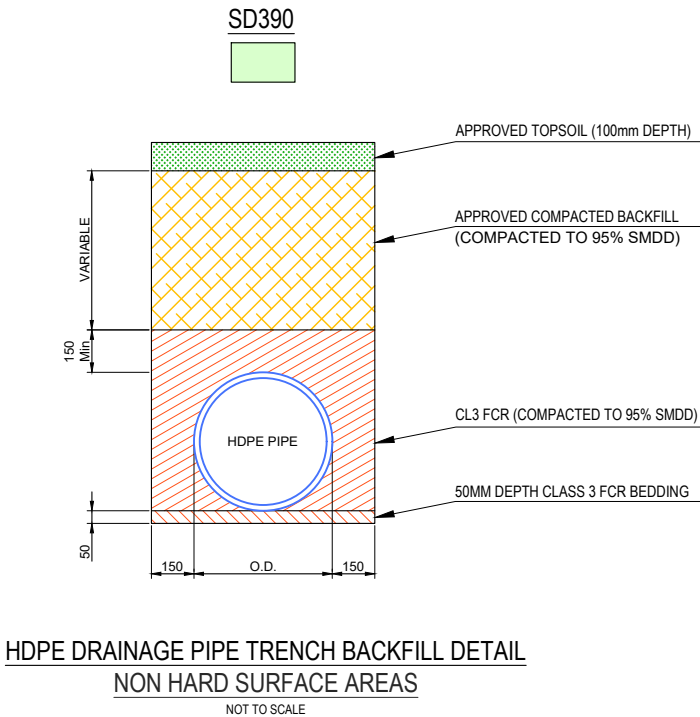
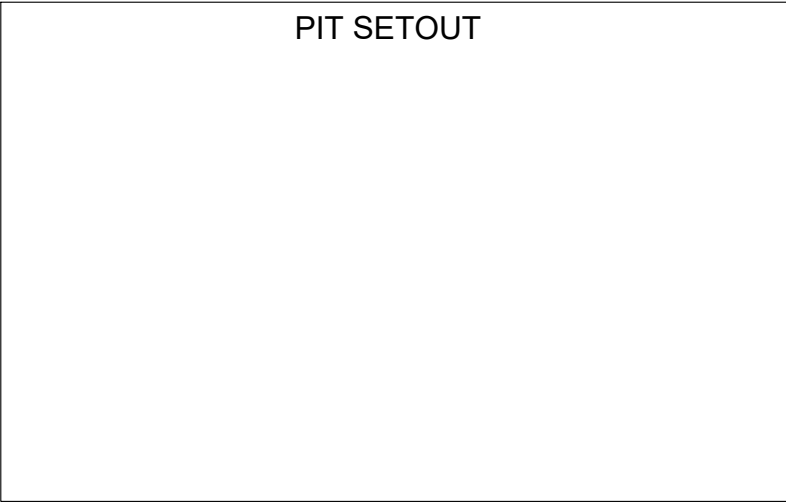
PAPERBARK COURT  
STRATHDALE  
DRAINAGE UPGRADE  
DRAINAGE LONGITUDINAL SECTION

Survey	H. WHYTEOCK	JUNE 2022
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PRELIMINARY DESIGN  
DRAFT 6

Plot Date: 16/09/2022  
Plotted By: LEIGH OLIVER

PIT SCHEDULE										
Pit No.	Pit Type	Standard Drawing	Pit Width	Pit Length	Outlet Diameter	Outlet Invert RL	Inlet Diameter	Inlet Invert RL	Pit Depth	Pit Lid Level
			(mm)	(mm)	(mm)	(m)	(mm)	(m)	(m)	(m)
01	Grated Pit	SD590A-D-N 900 x 1200 BASKET GRATE	900	1200	525	252.230	375	252.272	1.351	253.581
02	Grated Pit	SD590A-D-M 1050H x 1400 x 1400 JAIL CELL CAGE	1200	1200	375	252.350	750	252.574	1.298	253.648
03	Junction Pit	SD590B-D-L-T 900x600 CLASS C FIBREPOLYMER LID	1800	2100	750	253.460	750	253.480	1.716	255.176
							600	254.110		
03A	Side Entry Pit	SD590B-D-G-T CLASS C FIBREPOLYMER LID	900	1200	750	253.581	750	253.751	2.343	255.924
04	Grated Pit	SD590A-D-V R&S CLASS D WEAVED GRATE	900	1500	750	253.985	450	254.771	2.013	255.998
							450	254.768		
05	Grated Pit	EKI TYPE 4 EKI (L) & CLASS D WEAVED GRATE	-	-	450	254.918	450	254.947	0.972	255.890
06	Grated Pit	EKI TYPE 2 EKI (L)	-	-	450	255.527	375	255.602	1.145	256.672
07	Side Entry Pit	EKI TYPE 1 EKI (R)	-	-	375	255.754			1.004	256.757
08	Grated Pit	EKI TYPE 3 EKI (R) & R&S CLASS D WEAVED GRATE	-	-	450	255.000	300	255.250	0.864	255.864
E1	Grated Pit	EXIST.	-	-			525	251.450	0.675	252.125
E2	Junction Pit	EXISTING	900	900	300	255.320			0.883	256.203
E3	Side Entry Pit	EXISTING	-	-	600	254.650	600	254.680	1.359	256.009
E4	Side Entry Pit	EXISTING	-	-	600	254.770	525	254.830	1.461	256.231
E5	Side Entry Pit	SD590I INDENTED EKI (R)	-	-	525	255.000			1.540	256.540




HDPE DRAINAGE PIPE TRENCH BACKFILL DETAIL  
NON HARD SURFACE AREAS

HDPE DRAINAGE PIPE TRENCH BACKFILL DETAIL  
UNDER EXISTING ROAD PAVEMENT  
COMPACTED FCR OR STABILISED BACKFILL

RCP DRAINAGE PIPE TRENCH BACKFILL DETAIL  
UNDER EXISTING ROAD PAVEMENT  
COMPACTED FCR OR STABILISED BACKFILL

AMENDMENTS			
Revision	Description	Approved by	Date
-	-	-	-



CITY OF GREATER BENDIGO

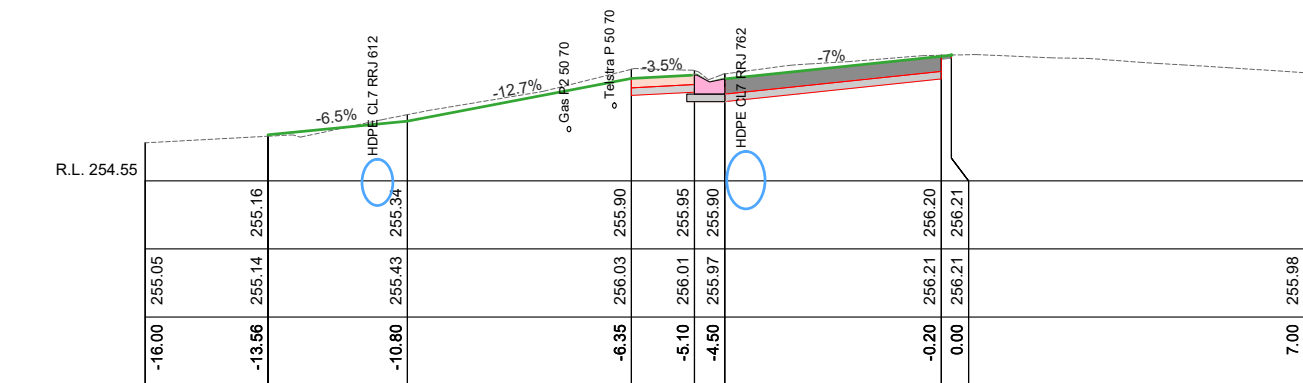
PAPERBARK COURT  
STRATHDALE  
DRAINAGE UPGRADE

PIT SCHEDULE & SETOUT

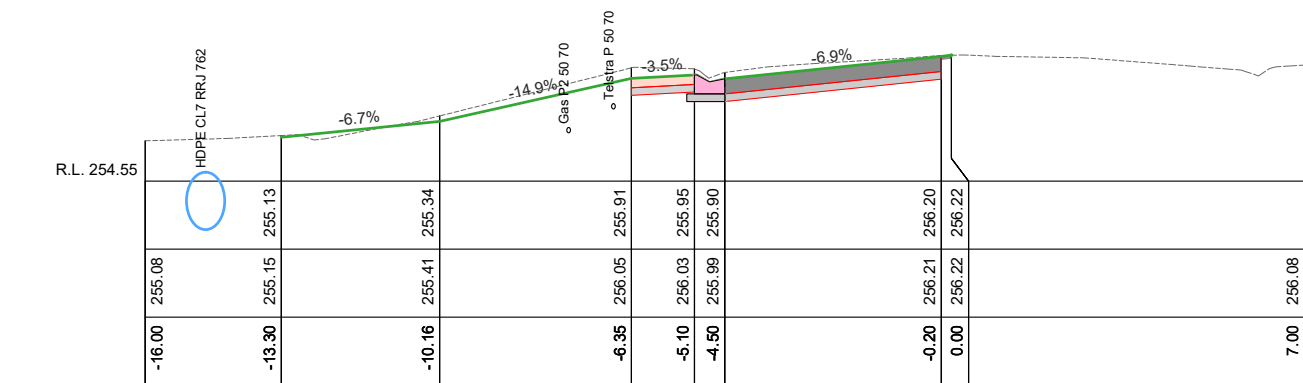
Survey	H. WHYTOK	JUNE 2022
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Approved by	N. SARTORI	-/-/22
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PRELIMINARY DESIGN  
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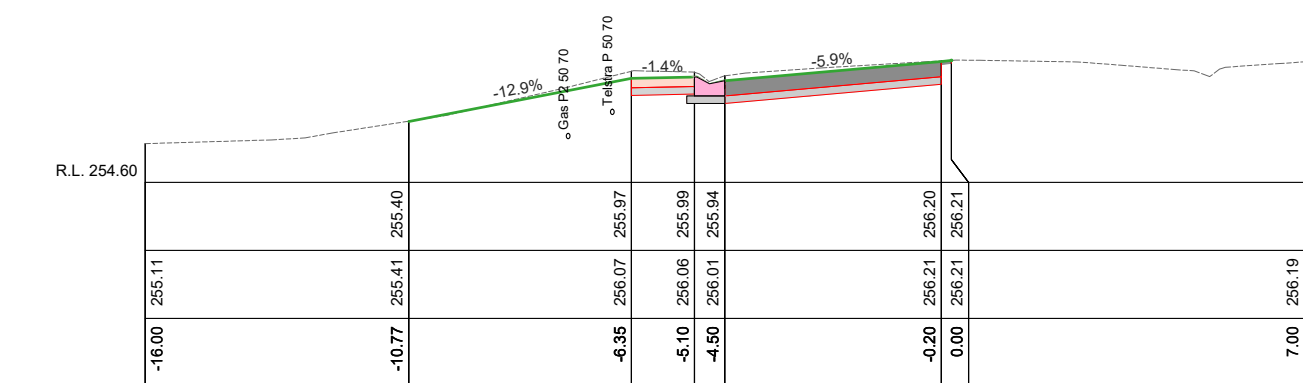
Plot Date: 16/09/2022  
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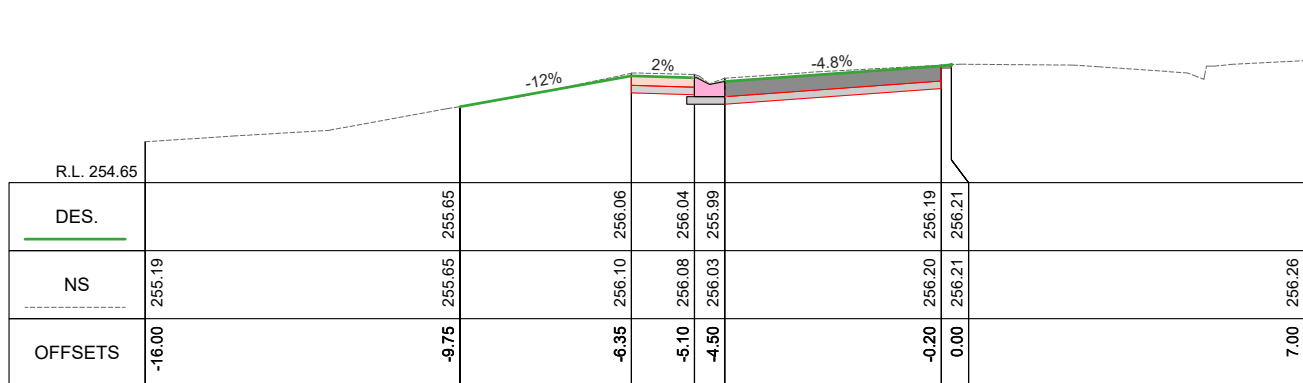
Ch 12.50



Ch 10.00

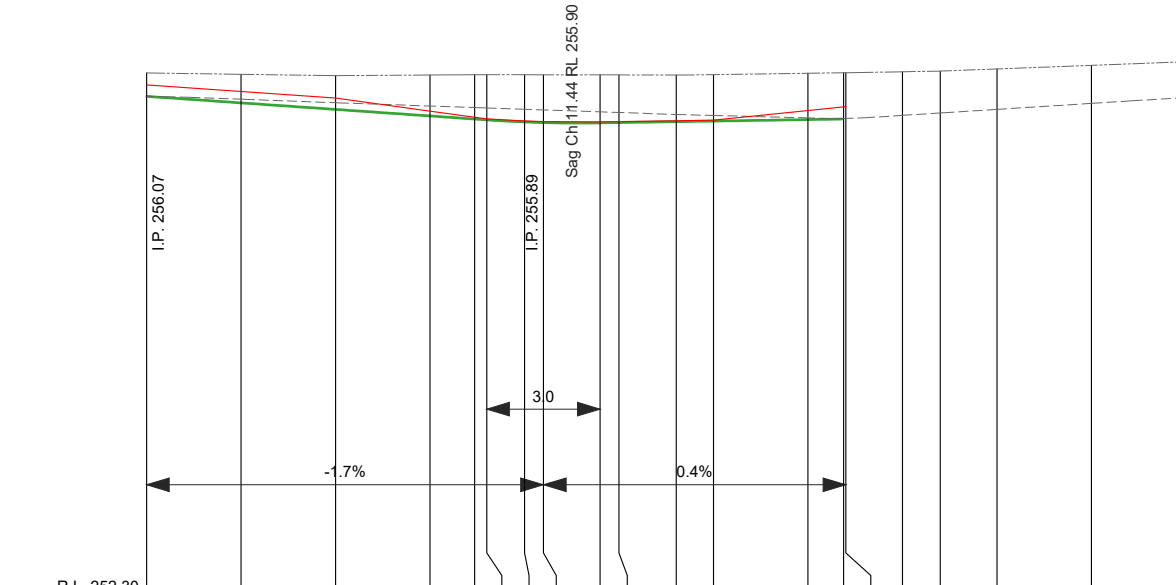


Ch 7.50



Ch 5.00

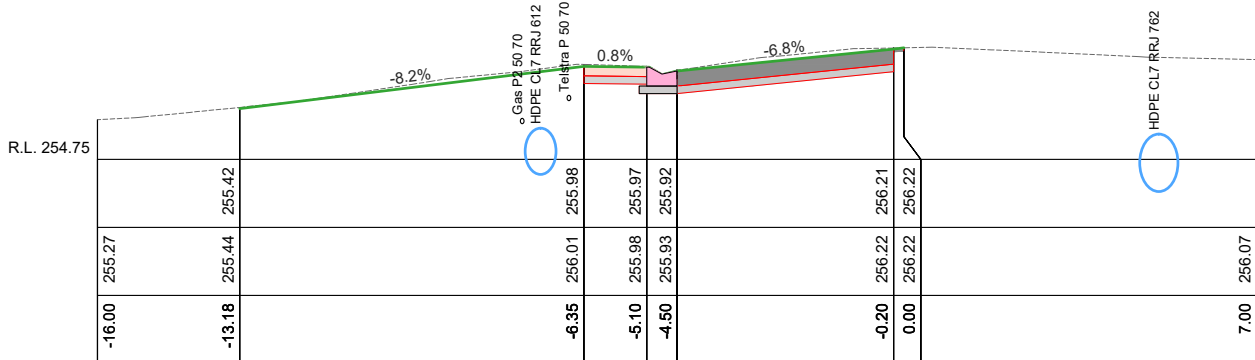
BUTCHER STREET CROSS SECTIONS  
SCALES: H 1:150 V 1:100 (A3)



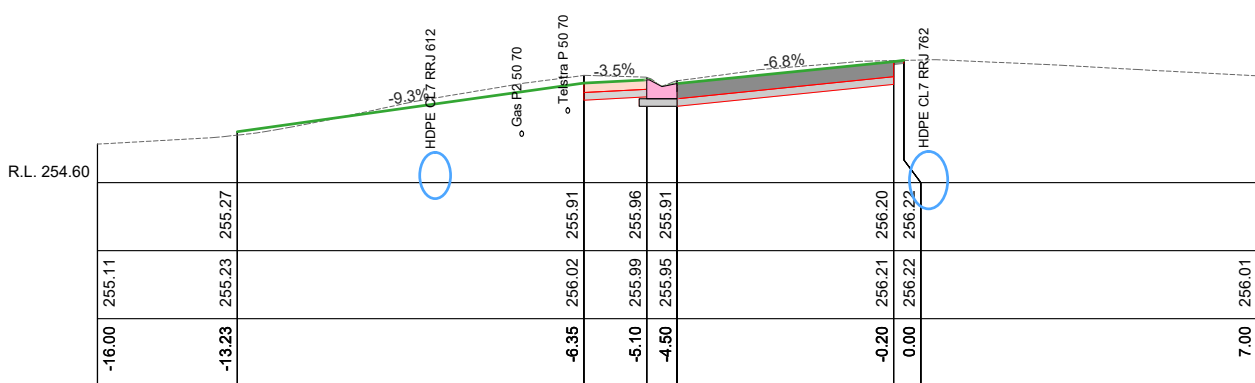
R.L. 252.30

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NS LEB	256.07	256.05	256.03	256.01	255.92	255.92	255.99	255.98	255.97	255.97	255.95	255.95	255.93	255.93	255.93	255.95	255.96	255.99	256.03	256.06
DES LEB	256.07	256.03	255.99	255.94	255.92	255.92	255.99	255.90	255.90	255.90	255.91	255.91	255.92	255.92	255.92	255.95	255.96	255.99	256.03	256.06
NS CL	256.23	256.22	256.21	256.21	256.22	256.22	256.22	256.21	256.21	256.21	256.21	256.22	256.22	256.23	256.23	256.23	256.24	256.25	256.28	256.30
CHAINAGE	0.00	2.50	5.00	7.50	8.68	9.00	10.00	10.50	12.00	12.50	14.01	15.00	17.50	18.44	18.50	20.00	21.00	22.50	25.00	27.50

BUTCHER STREET LONGITUDINAL SECTION CH 0.000 To 27.500  
SCALES: H 1:200 V 1:50 (A3)




Ch 17.50



Ch 15.00

AMENDMENTS			
Revision	Description	Approved by	Date
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## CITY OF GREATER BENDIGO

### PAPERBARK COURT STRATHDALE DRAINAGE UPGRADE

KERB / PATH LONG & CROSS SECTIONS

Survey	H. WHYTOCK	JUNE 2022
Design	L. OLIVER	JULY 2022
Checked	A. SMITH	-/-22
Approved by	N. SARTORI	-/-22
Scale:	AS SHOWN	Revision : A
Original sheet size:	A3	File : GB4919.dwg
Sheet:	Reference:	
10 OF 11	GB4919	

PRELIMINARY DESIGN  
DRAFT 6

Plot Date: 16/09/2022  
Plotted By: LEIGH OLIVER