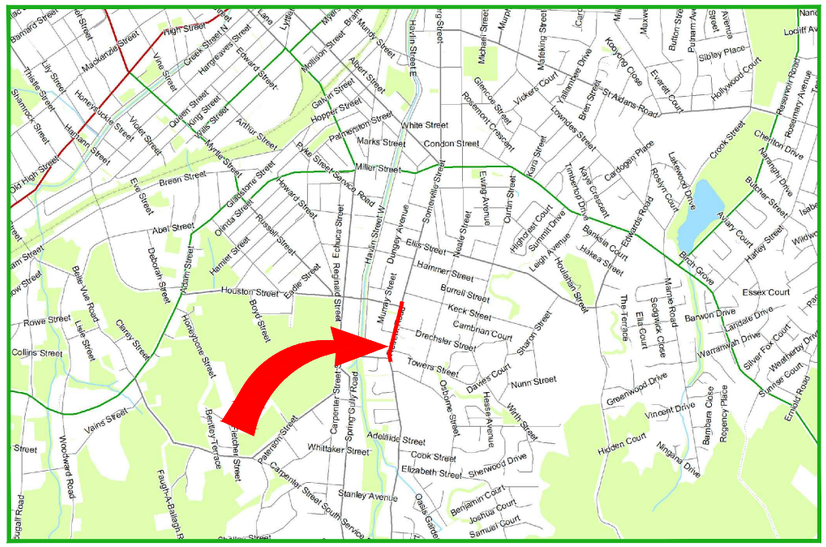
SOMERVILLE STREET, FLORA HILL

GB4867

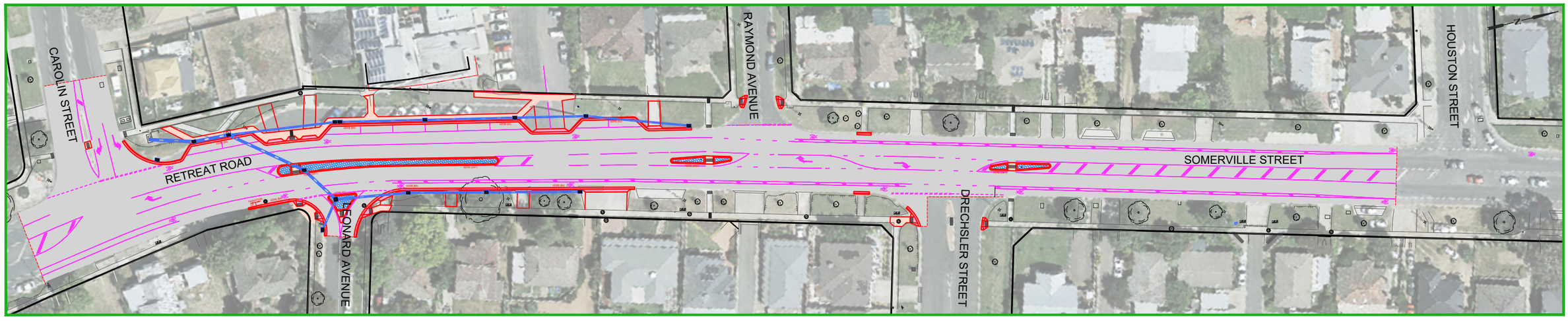
ROAD RECONSTRUCTION

MAY 2022



LOCALITY MAP

DOCUMENT CONTROL				
SHEET No.	SHEET DESC.	24/05/22	xx/xx/xx	xx/xx/xx
		DRAFT	TENDER	CONSTRUCTION
		REVISION	REVISION	REVISION
1	COVER SHEET	A		
2	GENERAL NOTES	A		
3	REMOVAL PAGE	A		
4	DETAIL LAYOUT	A		
5	DETAIL LAYOUT	A		
6	DETAIL LAYOUT	A		
7	DETAIL LAYOUT	A		
8	ROAD LONGITUDINAL SECTION	A		
9	ROAD LONGITUDINAL SECTION	A		
10	ROAD LONGITUDINAL SECTION	A		
11	ROAD LONGITUDINAL SECTION	A		
12	ROAD CROSS SECTIONS	A		
13	ROAD CROSS SECTIONS	A		
14	ROAD CROSS SECTIONS	A		
15	DRAINAGE LONGITUDINAL SECTION	A		
16	DRAINAGE LONGITUDINAL SECTION	A		
17	DRAINAGE LONGITUDINAL SECTION	A		
18	DRAINAGE LONGITUDINAL SECTION	A		
19	PIT SCHEDULE	A		
20	SETOUT	A		



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

SOMERVILLE STREET
FLORA HILL
ROAD RECONSTRUCTION

COVER SHEET

Survey	ADRIAN CUMMINS	JUNE '21
Design	M. JENNINGS	DEC '21
Checked	A. SMITH	-/-/21
Approved by	N. SARTORI	-/-/21
Scale: -	Revision : A	
Original sheet size: A3	File : GB4867.dwg	
Sheet: 1 OF 20	Reference: GB4867	

PRELIMINARY DESIGN DRAFT 3

Plot Date: 25/05/2022

Plotted By: MEGAN JENNINGS

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.

GENERAL CONSTRUCTION NOTES

1. All kerb, footpath and pram crossing constructions shall have bedding/boxing inspected by the Superintendent's Representative prior to pouring of concrete.
2. If property stormwater outlets (not already identified on plan) are located during construction, it is the Contractors responsibility to connect them into council underground drainage or back of kerb (As per IDM SD 510 & IDM SD 505) to the approval of the Superintendent's Representative.
3. Renewal of gas and water property service conduits to be 100mmØPVC (sewer grade).
4. All redundant footpath, kerb and road seal to be saw cut and removed from site.
5. Naturestrip is to be: 50mm depth (15% compaction), Spread and rake Seed (COGB approved seed blend) at rate 40g/m2

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.

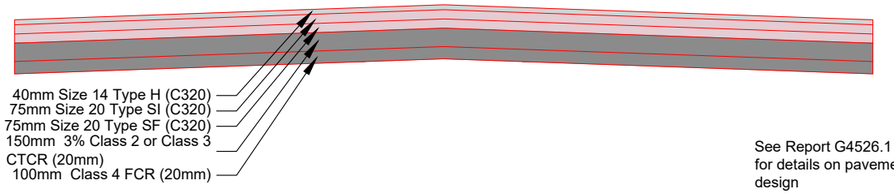
   Compaction shall be to 100% of the maximum dry density ratio determined by the modified compaction test.
7. Proof rolling of the Subgrade, Sub base and Base must be undertaken as per Section 12.7.15 of the IDM. Proof rolling will be at the expense of the contractor in accordance with AS3798 and the requirements 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.

SUBGRADE CONSTRUCTION NOTES

1. The existing pavement (including asphalt & seal layers) to be pulverised to a depth of 200mm ensuring that all asphalt is ground to a suitable size for workability.
2. Pulverised material to be windrowed and mixed to create a consistent mix over the full width of road before spreading, trimming and lightly compacting/shaping to form desired finished road level.
3. After completion of excavation to subgrade finished level, subgrade material shall be inspected by the Superintendent's Representative before any stabilising commences. The nominated stabilising product, blend and spread rate shall be confirmed at this point once the formed subgrade material has been visually assessed by the Superintendent's Representative.
4. Prior to spreading stabilising product, subgrade to be ripped to 200mm depth and moisture conditioned moderately before spreading of 12kg/m2 triple blended cementitious binder product. ie (20/60/20 GP/Slag/Lime).
5. Selected binder to be spread and mixed evenly through (using mechanical stabiliser machine) at the selected stabilising depth, ensuring optimum moisture content is achieved. Where practically possible it is preferred that moisture is added during the mixing process by connecting a water cart to the mechanical stabiliser machine.
6. Within 4 hours of binder being added, subgrade material should be graded & trimmed to level and compacted to a minimum density ratio of 98% Modified Maximum Dry Density.
7. The Superintendents Representative may request density testing results of the subgrade as well as Unconfined Compressive Strength (UCS) Tests to confirm that the stabilising has achieved a satisfactory result.

SIGNAGE, GUIDE POSTS, LINEMARKING & RRPMS

1. All existing signage, linemarking guideposts and RRPMs within Works site are to be removed as per the 'demolition plan'
2. All proposed Signage, linemarking, guideposts and RRPMs are to be installed as per the 'Linemarking and signage plan'
3. All signs to be installed shall be Class 1 high intensity type and comply with the requirements of AS1743-2001.
4. All guideposts are to have delineators satisfying the requirements of AS1906.2 section 3.



See Report G4526.1 AA for details on pavement design

PAVEMENT DETAIL
1:20

DIAL 1100 BEFORE YOU DIG

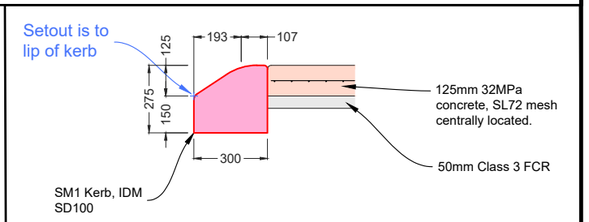
IMPORTANT!
The location of underground services have been derived from available information, however accuracy cannot be guaranteed. All existing service information should therefore be treated as indicative only, and service locations must be arranged prior to commencement of any excavation. The contractor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

SERVICE AUTHORITY ASSETS WITHIN THE WORKS AREA

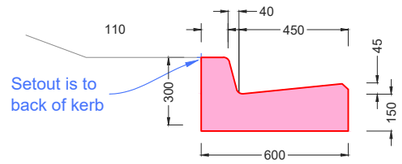
1. SERVICE AUTHORITY UNDERGROUND INFRASTRUCTURE
   - The location of underground services has been derived from available information, and shown on the plans. However accuracy cannot be guaranteed. All existing service information should therefore be treated as indicative only and exact service locations must be arranged onsite prior to commencement of any excavation. The contractor will be held responsible for any damage caused to underground services.
2. PIT LIDS and VALVE COVER LEVELS and LOCATION
   - All service pit lids or valve covers within the works area are to be raised or lowered to match design surface level unless noted otherwise on the construction plans, or by approval from the Superintendent.
   - Any service authority marker posts found within the works area are to be relocated adjacent to their current position to a point 150mm offset from the nearest property boundary.
3. SERVICE AUTHORITY ASSET RENEWAL
   - Any sewer pit covers and or water valve covers within the works area are to be renewed to Coliban Water standards unless noted otherwise.
   - PSM covers are to be renewed to CoGB standards using a 300x300mm galvanised steel checker plate flat cover.
   - All other valve covers or pits within the works area are not to be renewed unless noted otherwise on the construction plans, or by agreement with the Superintendent.

FOOTPATH CONSTRUCTION NOTES

1. Footpath to be constructed to IDM SD205 unless noted otherwise.
2. Expansion joints as per IDM SD210 to be constructed at any joins with existing footpath/driveways or bridges or where noted.
3. IDM SD210 expansion joints along new sections of footpath are to be at a maximum separation of 14m centres as per IDM SD205.
4. Tool joints are to be at 1.5m centres for 1.5m wide footpath, 2.5m centres for 2.5m wide footpath and to be constructed as per IDM SD210 unless noted otherwise.
5. Batter work and associated top soiling is to be limited to 2.0m from design edge of the footpath or unless otherwise noted. This width cannot be altered without consent from the superintendent.
6. Plant and equipment is to be kept within the finished works area to avoid unnecessary damage to nature strips.
7. Pedestrian crossings are to be as per CoGB SD192.
8. All TGSIs are to be black (if on plain concrete), or white (if on black concrete) and shall be fibre reinforced polymer type and positioned in accordance with AS1428 unless noted otherwise or by direction from the Superintendent.
9. Any residential mailboxes found to be in conflict with councils proposed assets (within the road reserve) shall be relocated to a position within the property in consultation with the landowner. Should the mailbox be a brick or concrete structure, the mailbox shall be demolished and consultation with the Superintendent shall be sought prior to reconstruction of a similar structure within the property.
10. Once works are completed, contractor must undertake a site walk with the Superintendent to identify any hazards or level differences with the works area. Once the site walk is complete, the area may be opened to public use.
11. All fill material is to be clean clay based soil, free of vegetative matter and is to be approved by the Superintendent prior to use.
12. All earthworks are to be in accordance with VicRoads Specification Section 204.



SM1 KERB PROFILE - IDM SD100
1:40



B4 KERB PROFILE - CoGB SD190
1:40

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. Refer to CoGB SD 392.
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.

AMENDMENTS			
Revision	Description	Approved by	Date
-	-	-	-

CITY OF GREATER BENDIGO

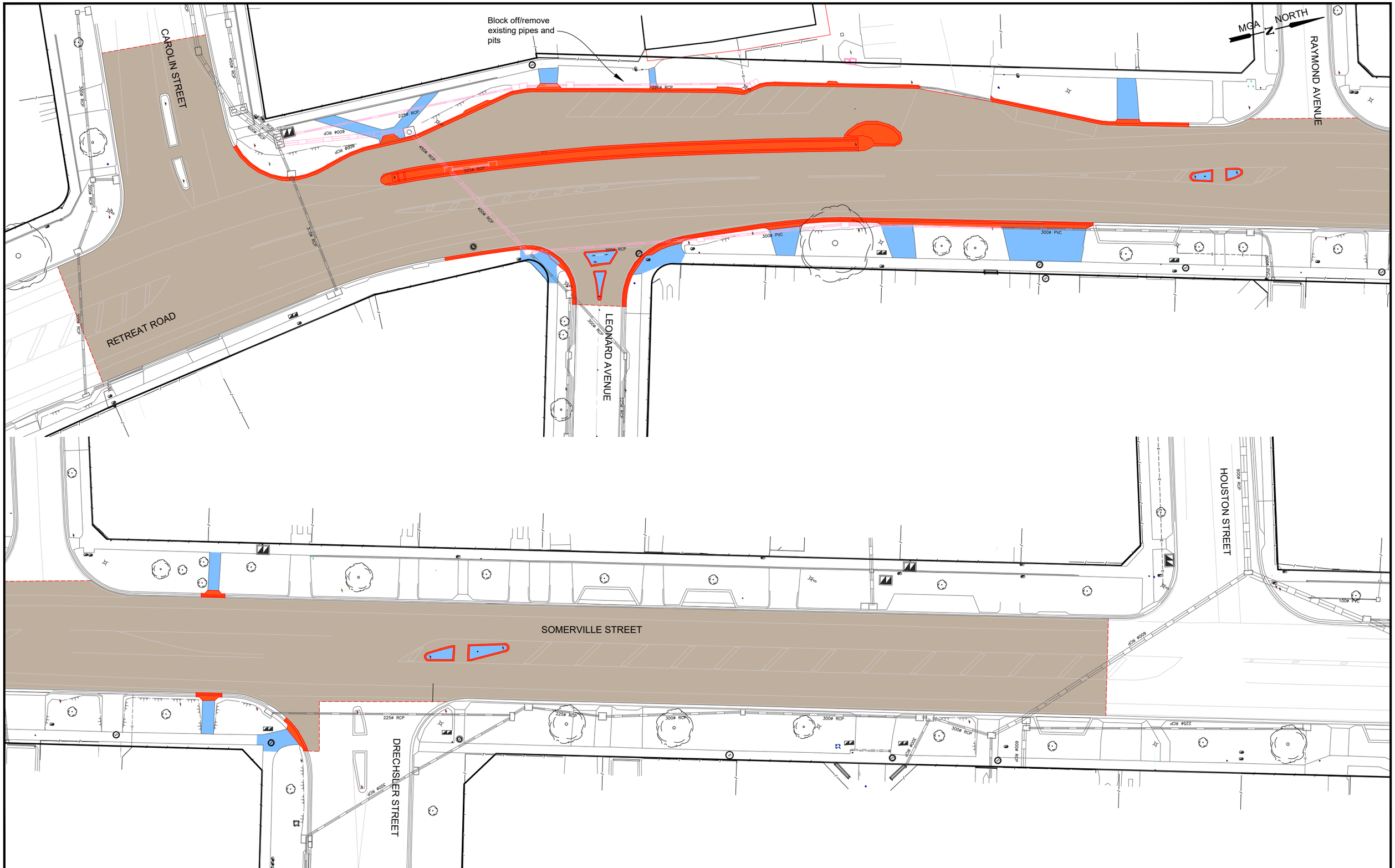
SOMERVILLE STREET
FLORA HILL
ROAD RECONSTRUCTION

GENERAL NOTES

Survey	ADRIAN CUMMINS	JUNE '21
Design	M. JENNINGS	DEC '21
Checked	A. SMITH	-/-/21
Approved by	N. SARTORI	-/-/21
Scale: -	Revision : A	
Original sheet size: A3	File : GB4867.dwg	
Sheet: 2 OF 20	Reference: GB4867	

PRELIMINARY DESIGN DRAFT 3

Plot Date: 25/05/2022
Plotted By: MEGAN JENNINGS



LEGEND

- Removal: Pavement
- Removal: Kerb
- Removal: Concrete
- Removal: Linemarking
- Removal: Sawcut
- Removal: Pipe
- Removal: Tree

AMENDMENTS

Revision	Description	Approved by	Date
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CITY OF GREATER BENDIGO

SOMERVILLE STREET
FLORA HILL
ROAD RECONSTRUCTION

REMOVAL PLAN

Survey	ADRIAN CUMMINS	JUNE '21
Design	M. JENNINGS	DEC '21
Checked	A. SMITH	-/-/21
Approved by	N. SARTORI	-/-/21
Scale: 1:500	Revision : A	
Original sheet size: A3	File : GB4867.dwg	
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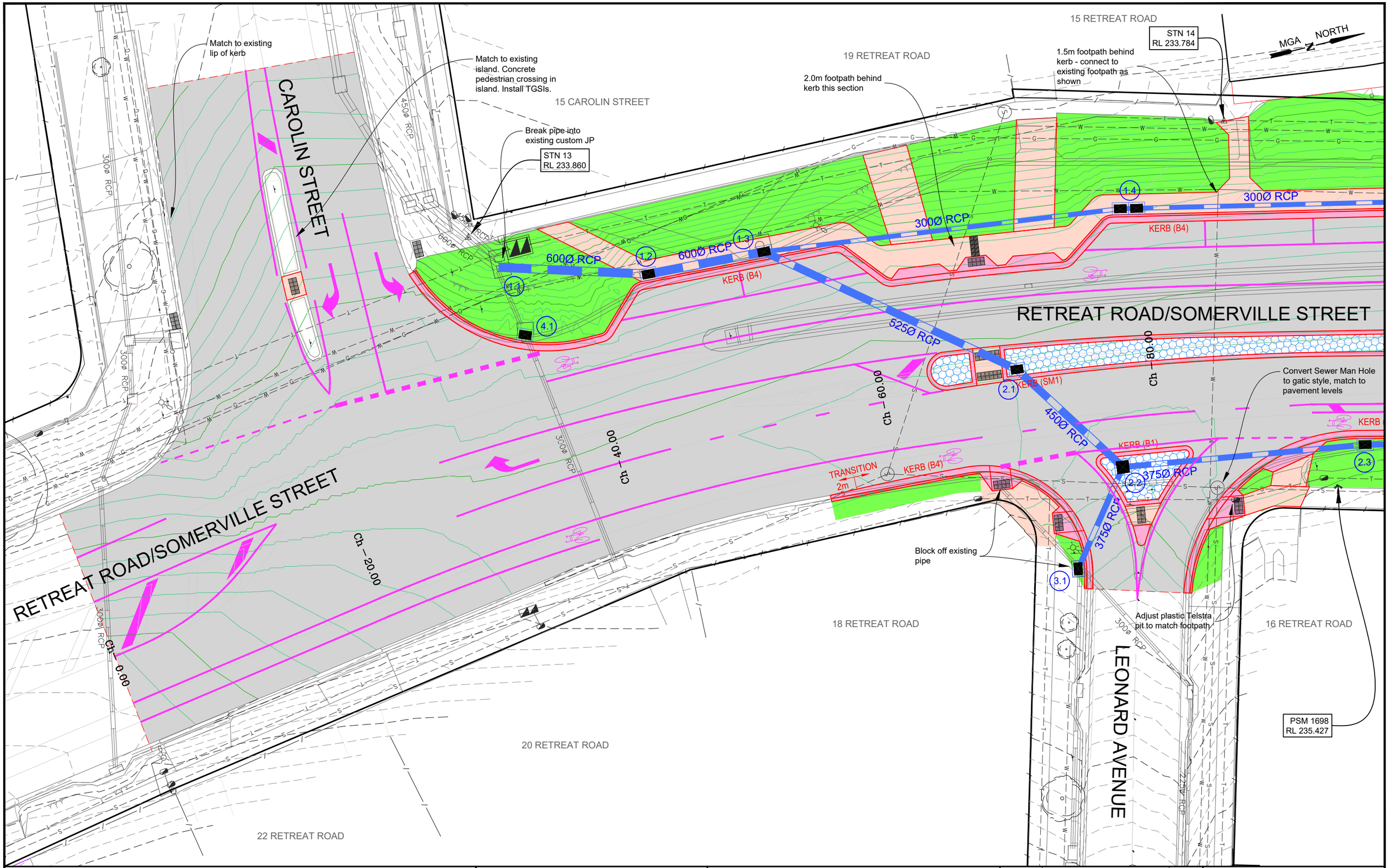
Plot Date: 25/05/2022
Plotted By: MEGAN JENNINGS



LEGEND

- Concrete: Footpath/Driveway Plain, 125mm, SL72, 25Mpa, As per IDM SD205, SD210,
- Concrete: Kerb, As per IDM SD100, CoGB SD190, SD191, SD192
- Concrete: Stenciled Cobble, 125mm, SL72, 25Mpa, As per IDM SD205, SD210,
- Pavement: As per pavement detail
- Concrete: Industrial Driveway, Plain, 150mm, SL82, 32Mpa, As per IDM SD250
- Landscape: Instant Turf
- Landscape: Soil & Seed
- Design Contour 0.10m interval
- Existing Contour 0.10m interval

AMENDMENTS

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CITY OF GREATER BENDIGO

SOMERVILLE STREET
FLORA HILL
ROAD RECONSTRUCTION

DETAIL PLAN

Survey	ADRIAN CUMMINS	JUNE '21
Design	M. JENNINGS	DEC '21
Checked	A. SMITH	-/-/21
Approved by	N. SARTORI	-/-/21
Scale: 1:250	Revision : A	
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PRELIMINARY DESIGN DRAFT 3

Plot Date: 25/05/2022
Plotted By: MEGAN JENNINGS

11-13 RETREAT ROAD

MGA NORTH

RAYMOND AVENUE

Match to existing footpath

9 RETREAT ROAD

7 RETREAT ROAD

STN 15
RL 234.568

STN 16
RL 234.840

Reconstruct pedestrian crossings

Reconstruct crossover

Install TGSIs

300Ø RCP

300Ø RCP

300Ø RCP

1.5

1.6

1.7

1.8

8.00

2.30

3.02

3.50

2.76

3.50

1.95

KERB (B4)

KERB (B4)

KERB (B4)

KERB (SM1)

KERB (SM1)

RETREAT ROAD/SOMERVILLE STREET

Ch 100.00

Ch 120.00

Ch 140.00

Ch 160.00

Ch 180.00

300Ø PVC

300Ø PVC

2.3

2.4

2.5

Match to existing lip of kerb

16 RETREAT ROAD

14 RETREAT ROAD

12 RETREAT ROAD

10 RETREAT ROAD

8 RETREAT ROAD

STN 12
RL 236.277

STN 11
RL 235.990

PSM 1698
RL 235.427

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MGA NORTH

5 RETREAT ROAD
3 RETREAT ROAD
96 SOMERVILLE STREET
94 SOMERVILLE STREET
92 SOMERVILLE STREET
90 SOMERVILLE STREET

STN 17
RL 234.463

Install TGSIs

SOMERVILLE STREET

Ch 200.00
Ch 220.00
Ch 240.00
Ch 260.00
Ch 280.00

KERB (SM1)

1.50
2.10
3.50
2.84
3.50
2.10
1.50

Reconstruct pedestrian crossing

225ø RCP
225ø RCP
300ø RCP

DRECHSLER STREET

STN 10
RL 235.445

PSM 477
RL 235.669

6 RETREAT ROAD
2 DRECHSLER STREET
81 SOMERVILLE STREET
1/79 SOMERVILLE STREET

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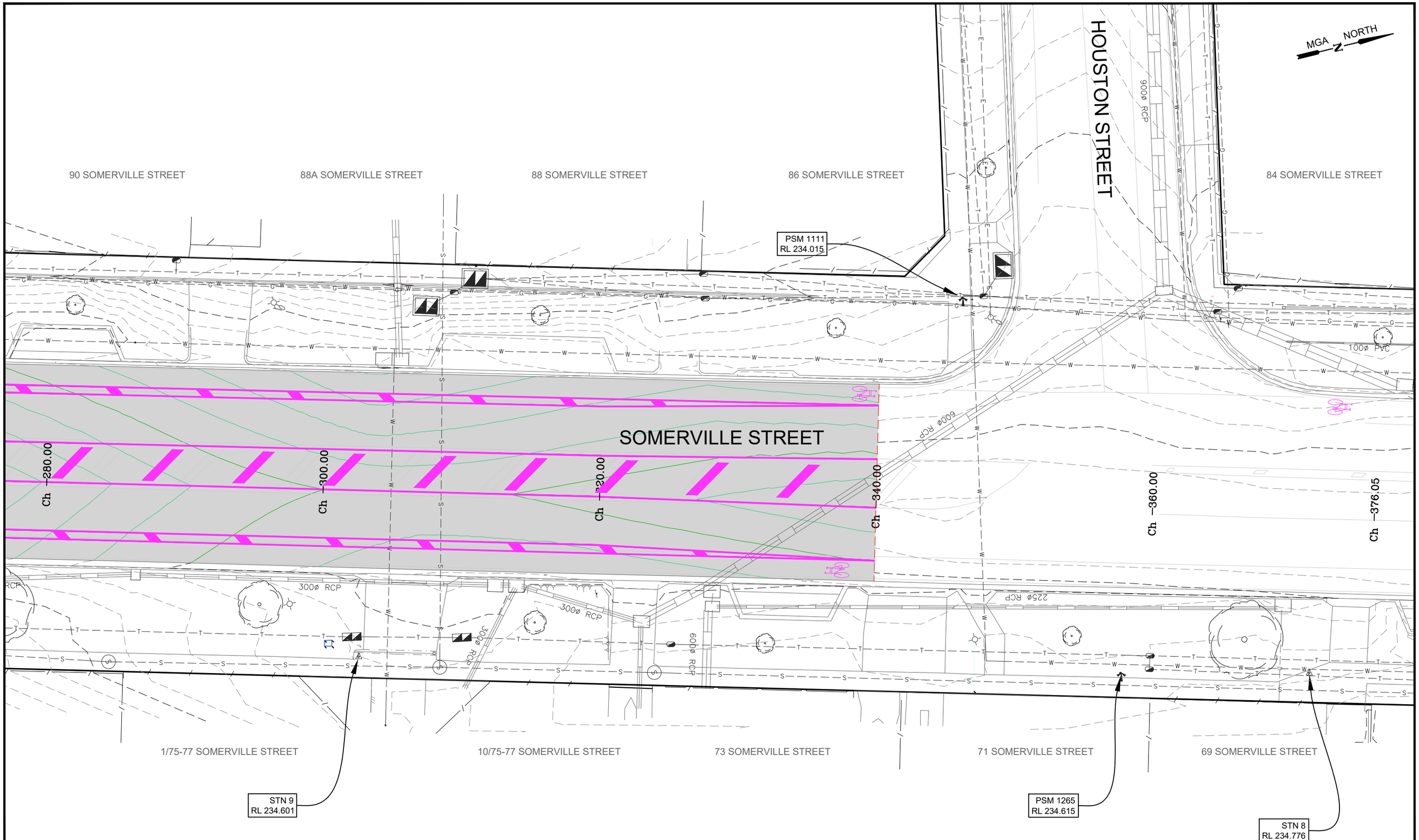

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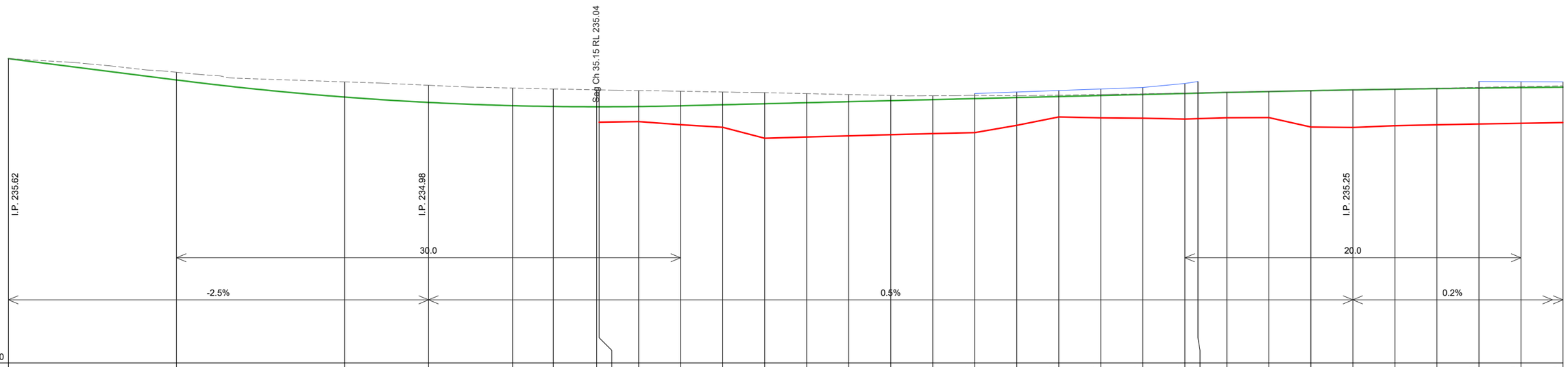
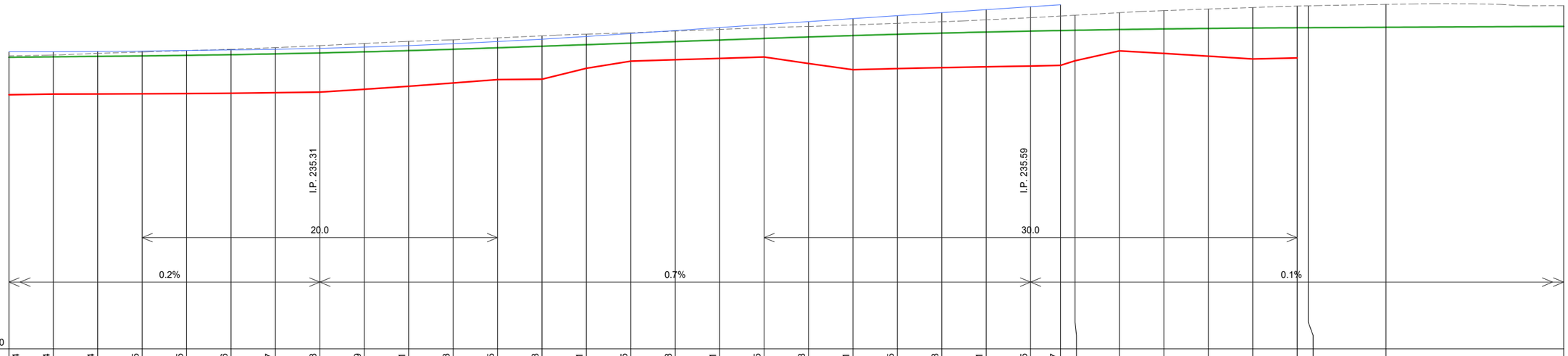

Sag Ch 35.15 RL 235.04
I.P. 235.62
I.P. 234.98
I.P. 235.25
30.0
20.0
-2.5%
0.5%
0.2%
R.L. 232.00

| | | |


I.P. 235.31
20.0
I.P. 235.59
30.0
0.2%
0.7%
0.1%
R.L. 232.00

| | | |

EAST BK												
WEST BK												
DES CL	235.63	235.64	235.65	235.66	235.67	235.67	235.64	235.60	235.55	235.39	235.19	234.99
NS CL	235.86	235.92	235.91	235.89	235.81	235.78	235.68	235.58	235.61	235.26	235.09	234.92
CHAINAGE	180.00	190.00	200.00	210.00	220.00	221.49	230.00	235.00	240.00	250.00	260.00	270.00

SOMERVILLE STREET LONGITUDINAL SECTION CH 180.000 To 270.000
SCALES: H 1:250 V 1:50 (A3)

AMENDMENTS			
Revision	Description	Approved by	Date
-	-	-	-

CITY OF GREATER BENDIGO

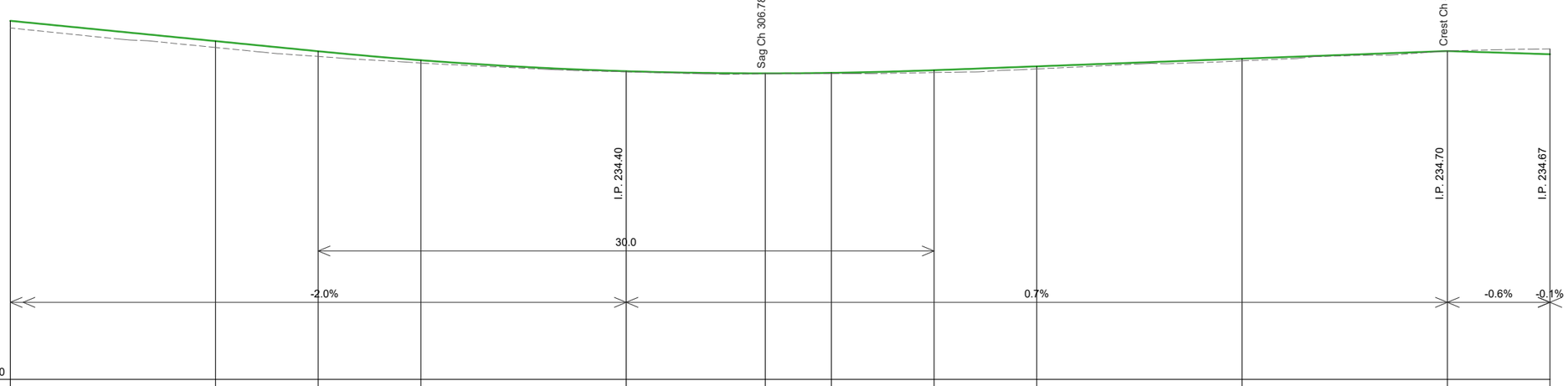
SOMERVILLE STREET
FLORA HILL
ROAD RECONSTRUCTION

LONGITUDINAL SECTION

Survey	ADRIAN CUMMINS	JUNE '21
Design	M. JENNINGS	DEC '21
Checked	A. SMITH	-/-/21
Approved by	N. SARTORI	-/-/21
Scale: -	Revision : A	
Original sheet size: A3	File : GB4867.dwg	
Sheet: 10 OF 20	Reference: GB4867	

PRELIMINARY DESIGN
DRAFT 3

Plot Date: 25/05/2022
Plotted By: MEGAN JENNINGS



R.L. 231.50

EAST BK											
WEST BK											
DES CL	234.99	234.79	234.69	234.61	234.50	234.48	234.48	234.51	234.55	234.62	234.70	234.67
NS CL	234.92	234.73	234.64	234.58	234.49	234.48	234.48	234.49	234.52	234.60	234.70	234.72
CHAINAGE	270.00	280.00	285.00	290.00	300.00	306.78	310.00	315.00	320.00	330.00	340.00	345.00

SOMERVILLE STREET LONGITUDINAL SECTION CH 270.000 To 345.000
SCALES: H 1:250 V 1:50 (A3)

AMENDMENTS			
Revision	Description	Approved by	Date
-	-	-	-

CITY OF GREATER BENDIGO

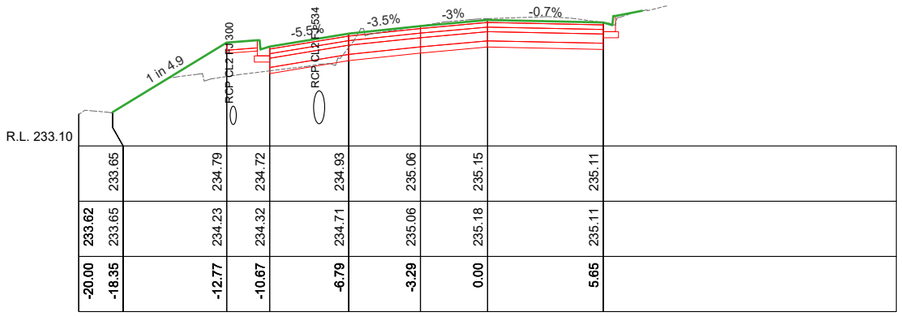
SOMERVILLE STREET
FLORA HILL
ROAD RECONSTRUCTION

LONGITUDINAL SECTION

Survey	ADRIAN CUMMINS	JUNE '21
Design	M. JENNINGS	DEC '21
Checked	A. SMITH	-/-/21
Approved by	N. SARTORI	-/-/21
Scale: -	Revision : A	
Original sheet size: A3	File : GB4867.dwg	
Sheet: 11 OF 20	Reference: GB4867	

PRELIMINARY DESIGN
DRAFT 3

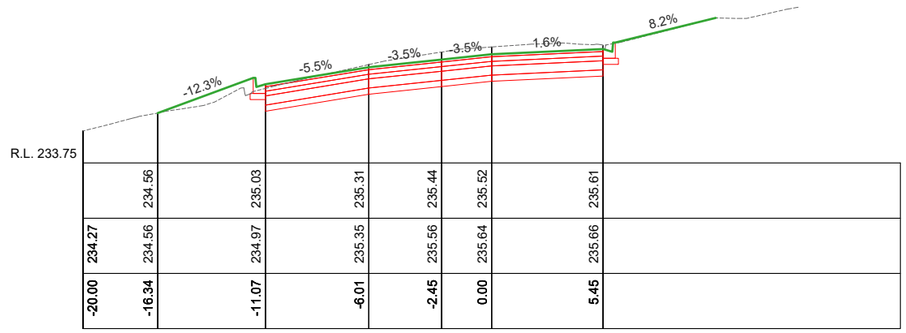
Plot Date: 25/05/2022
Plotted By: MEGAN JENNINGS



R.L. 233.10

	233.65	234.79	234.72	234.93	235.06	235.15	235.11
233.62	233.65	234.23	234.32	234.71	235.06	235.18	235.11
-20.00	-18.35	-12.77	-10.67	-6.79	-3.29	0.00	5.65

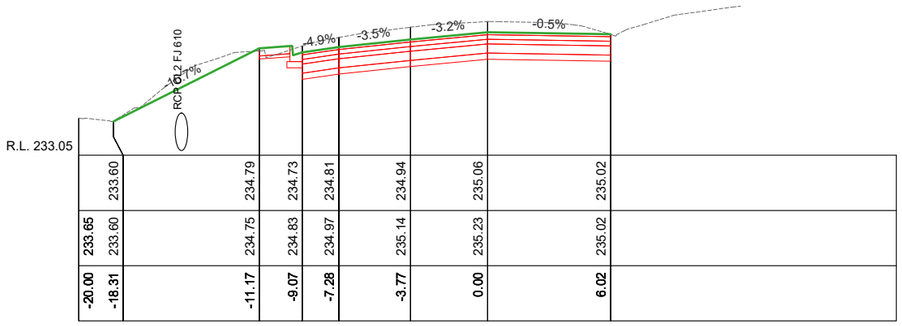
Ch 60.00



R.L. 233.75

	234.56	235.03	235.31	235.44	235.52	235.61	
234.27	234.56	234.97	235.35	235.56	235.64	235.66	
-20.00	-16.34	-11.07	-6.01	-2.45	0.00	5.45	

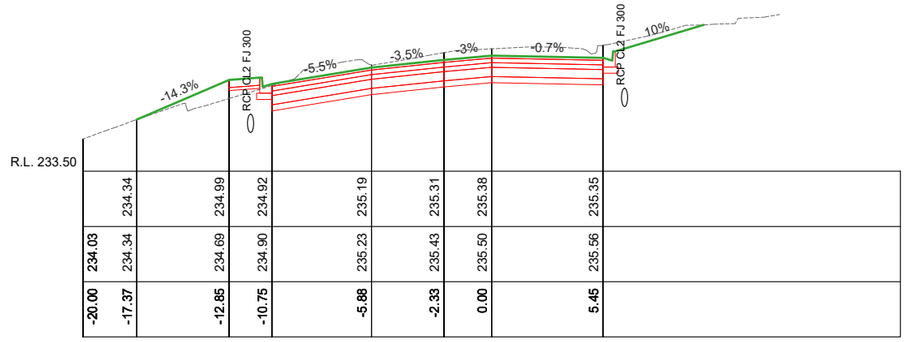
Ch 140.00



R.L. 233.05

	233.60	234.79	234.73	234.81	234.94	235.06	235.02
233.65	233.60	234.75	234.83	234.97	235.14	235.23	235.02
-20.00	-18.31	-11.17	-9.07	-7.28	-3.77	0.00	6.02

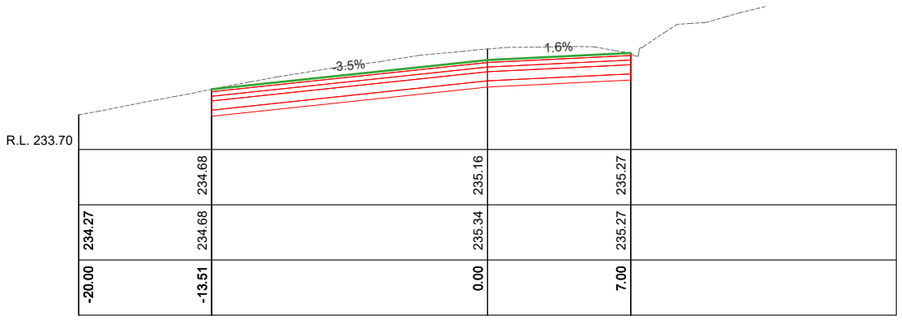
Ch 40.00



R.L. 233.50

	234.34	234.99	234.92	235.19	235.31	235.38	235.35
234.03	234.34	234.69	234.90	235.23	235.43	235.50	235.56
-20.00	-17.37	-12.85	-10.75	-5.88	-2.33	0.00	5.45

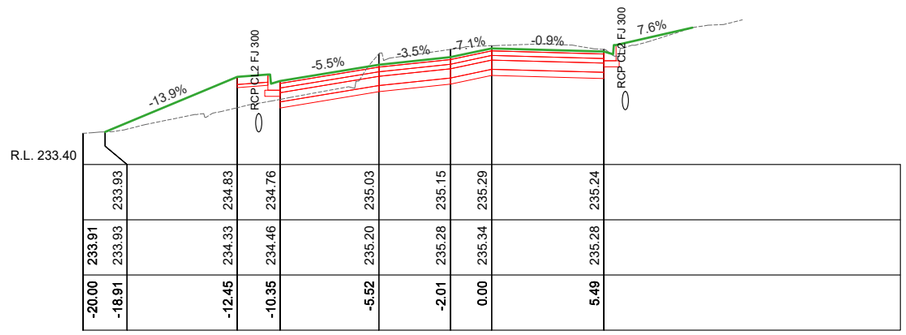
Ch 120.00



R.L. 233.70

	234.68	235.16	235.27	
234.27	234.68	235.34	235.27	
-20.00	-13.51	0.00	7.00	

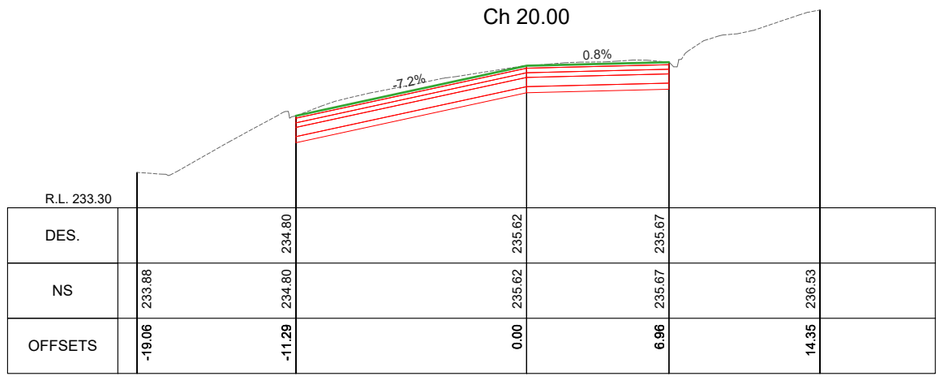
Ch 20.00



R.L. 233.40

	233.93	234.83	234.76	235.03	235.15	235.29	235.24
233.91	233.93	234.33	234.46	235.20	235.28	235.34	235.28
-20.00	-18.91	-12.45	-10.35	-5.52	-2.01	0.00	5.49

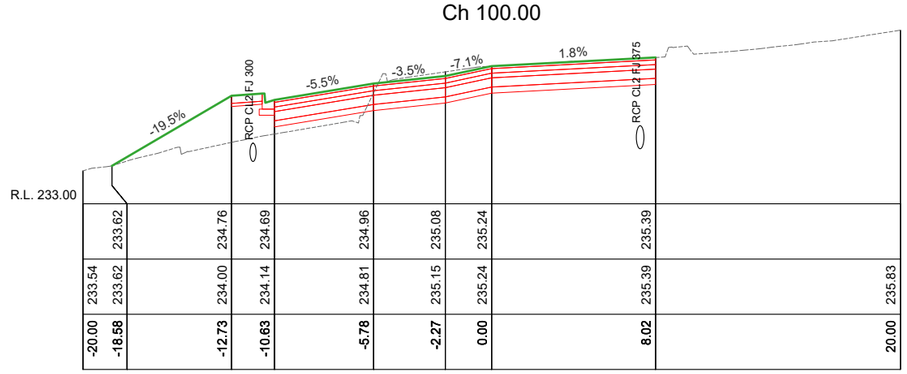
Ch 100.00



R.L. 233.30

DES.		234.80	235.62	235.67		
NS	233.88	234.80	235.62	235.67	236.53	
OFFSETS	-19.06	-11.29	0.00	6.96	14.35	

Ch 0.00



R.L. 233.00

	233.62	234.76	234.69	234.96	235.08	235.24	235.39
233.54	233.62	234.00	234.14	234.81	235.15	235.24	235.39	235.83
-20.00	-18.58	-12.73	-10.63	-5.78	-2.27	0.00	8.02	20.00

Ch 80.00

SOMERVILLE STREET CROSS SECTIONS
SCALES: H 1:300 V 1:100 (A3)

AMENDMENTS			
Revision	Description	Approved by	Date
-	-	-	-

CITY OF GREATER BENDIGO

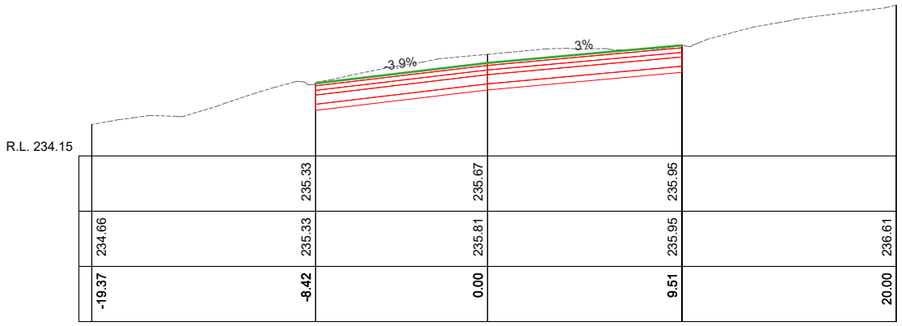
SOMERVILLE STREET
FLORA HILL
ROAD RECONSTRUCTION

CROSS SECTIONS

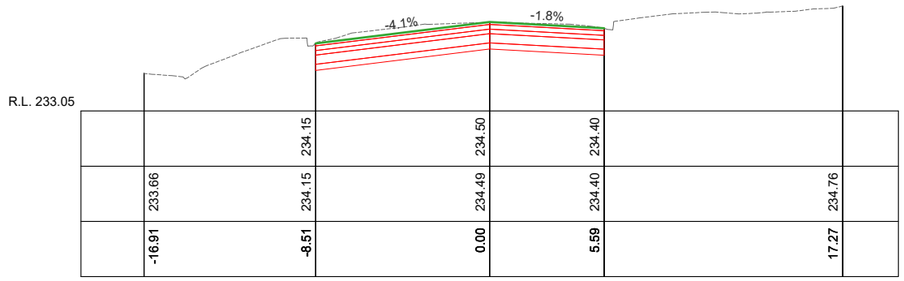
Survey	ADRIAN CUMMINS	JUNE '21
Design	M. JENNINGS	DEC '21
Checked	A. SMITH	-/-/21
Approved by	N. SARTORI	-/-/21
Scale: -	Revision : A	
Original sheet size: A3	File : GB4867.dwg	
Sheet: 12 OF 20	Reference: GB4867	

PRELIMINARY DESIGN DRAFT 3

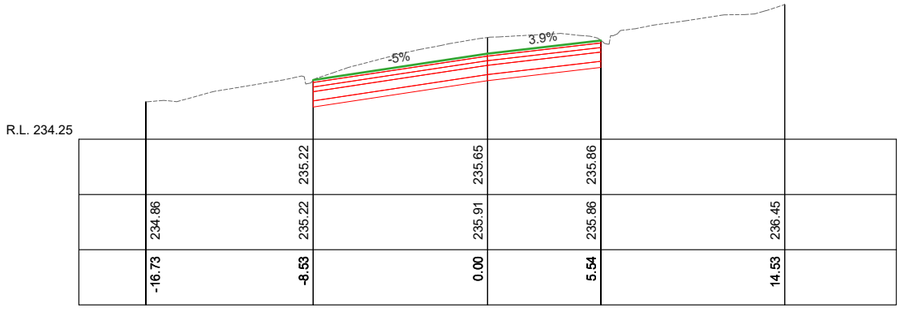
Plot Date: 25/05/2022
Plotted By: MEGAN JENNINGS



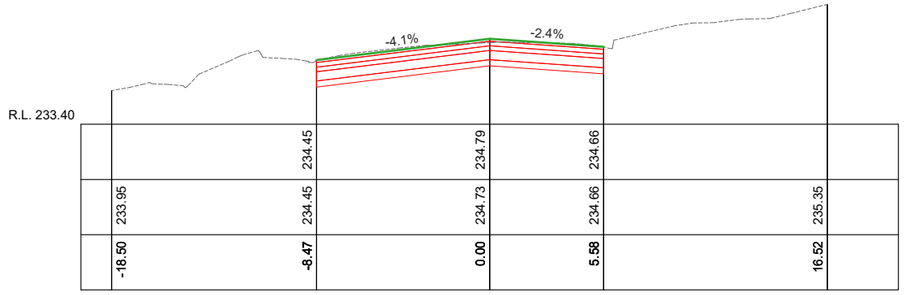
Ch 220.00



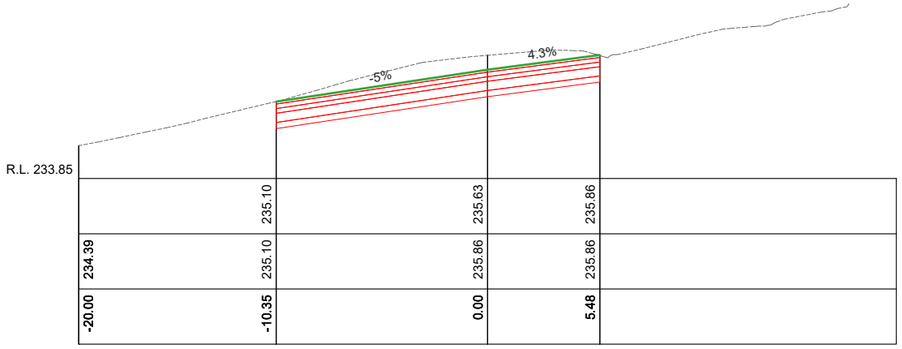
Ch 300.00



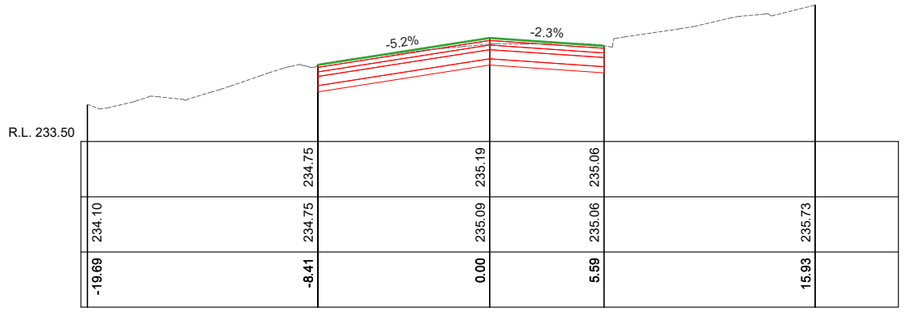
Ch 200.00



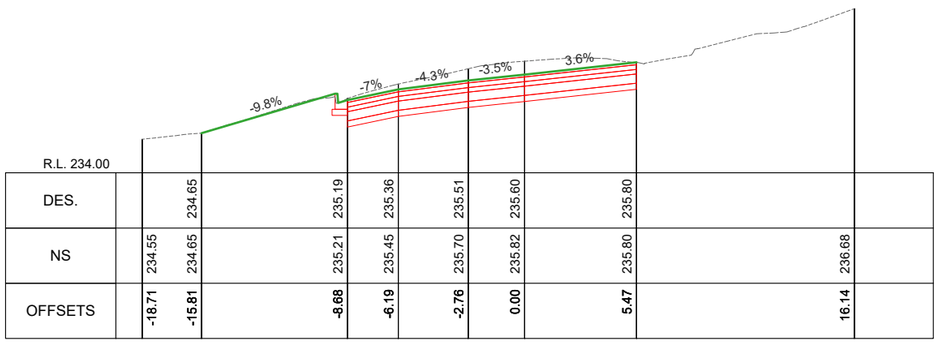
Ch 280.00



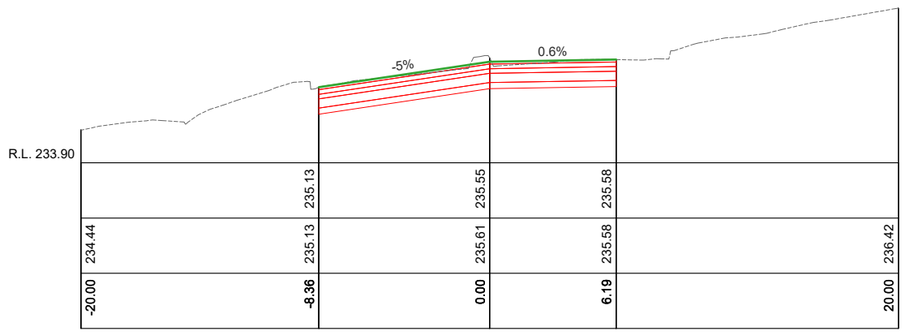
Ch 180.00



Ch 260.00



Ch 160.00



Ch 240.00

SOMERVILLE STREET CROSS SECTIONS
SCALES: H 1:300 V 1:100 (A3)

AMENDMENTS			
Revision	Description	Approved by	Date
-	-	-	-

CITY OF GREATER BENDIGO

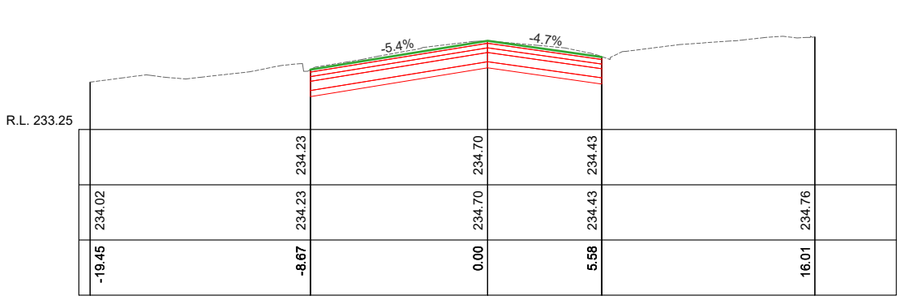
SOMERVILLE STREET
FLORA HILL
ROAD RECONSTRUCTION

CROSS SECTIONS

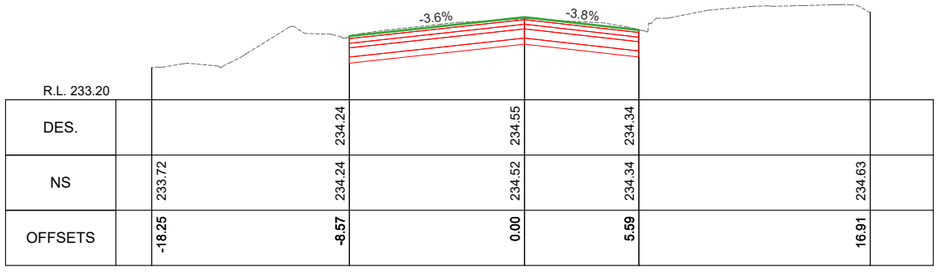
Survey	ADRIAN CUMMINS	JUNE '21
Design	M. JENNINGS	DEC '21
Checked	A. SMITH	-/-/21
Approved by	N. SARTORI	-/-/21
Scale: -	Revision : A	
Original sheet size: A3	File : GB4867.dwg	
Sheet: 13 OF 20	Reference: GB4867	

PRELIMINARY DESIGN
DRAFT 3

Plot Date: 25/05/2022
Plotted By: MEGAN JENNINGS



Ch 340.00



Ch 320.00

SOMERVILLE STREET CROSS SECTIONS
SCALES: H 1:300 V 1:100 (A3)

AMENDMENTS			
Revision	Description	Approved by	Date
-	-	-	-

CITY OF GREATER BENDIGO

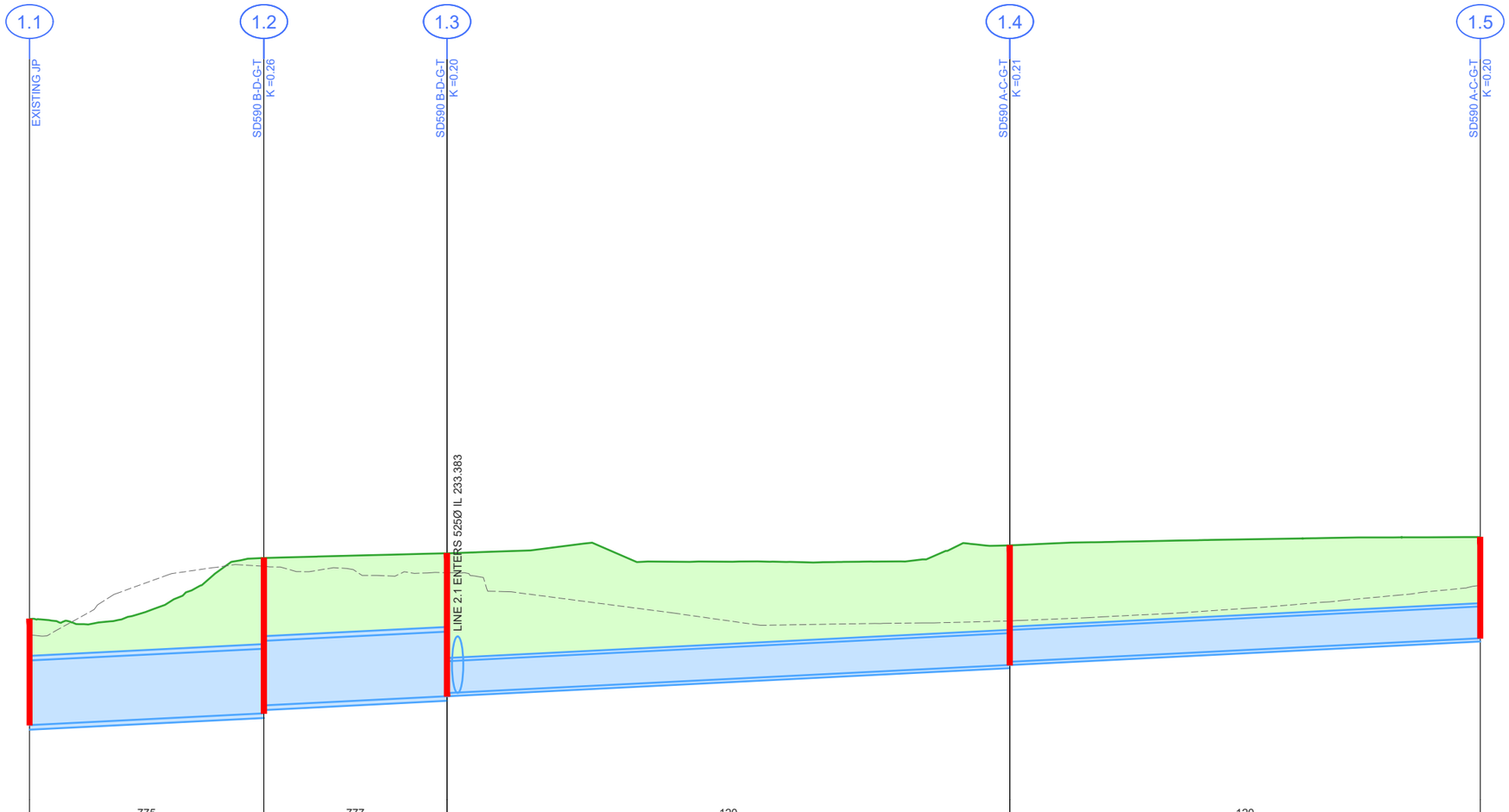
SOMERVILLE STREET
FLORA HILL
ROAD RECONSTRUCTION

CROSS SECTIONS

Survey	ADRIAN CUMMINS	JUNE '21
Design	M. JENNINGS	DEC '21
Checked	A. SMITH	-/-/21
Approved by	N. SARTORI	-/-/21
Scale: -	Revision : A	
Original sheet size: A3	File : GB4867.dwg	
Sheet: 14 OF 20	Reference: GB4867	

PRELIMINARY DESIGN
DRAFT 3

Plot Date: 25/05/2022
Plotted By: MEGAN JENNINGS



HGL CAPACITY (L/s)		775		777		120		120	
PIPE DETAILS SLOPE/GRADE DATUM RL 231.5		600ØRCP CL2 FJ 1:100 1.0%		600ØRCP CL2 FJ 1:99 1.0%		300ØRCP CL2 FJ 1:100 1.0%		300ØRCP CL2 FJ 1:100 1.0%	
INVERT LEVEL	233.080	233.191	233.266	233.353	233.383	233.648	233.678	233.900	
DEPTH TO INVERT	1.00	1.47	1.39	1.35	1.32	1.13	1.10	0.96	
EXISTING SURFACE	233.93	234.58		234.52		234.06		234.40	
DESIGN SURFACE	234.08	234.66		234.70		234.78		234.86	
CHAINAGE	0.00	11.07		19.72		46.30		68.53	
		11.07		8.65		26.58		22.22	

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

Revision	Description	Approved by	Date
-	-	-	-

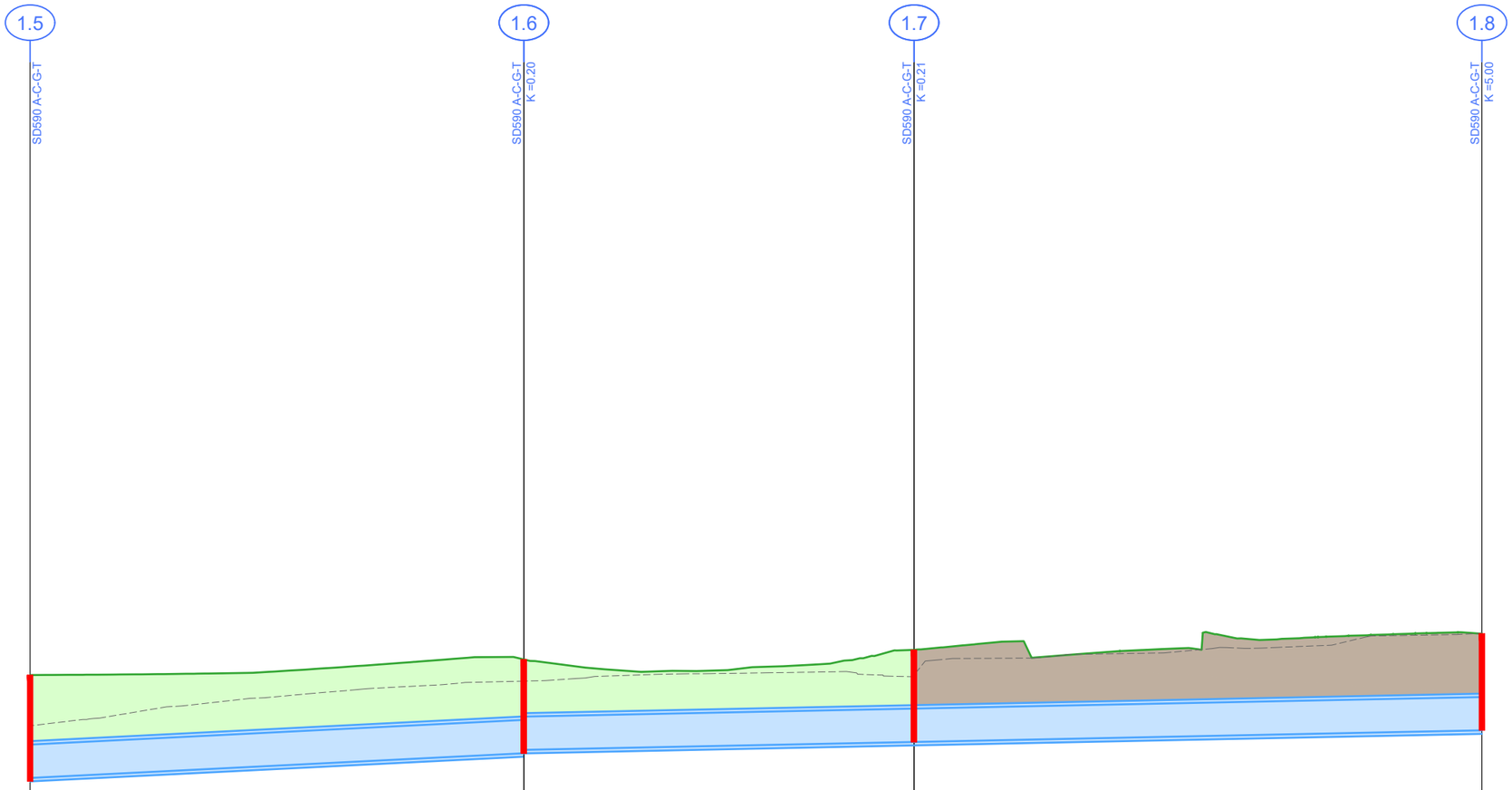
CITY OF GREATER BENDIGO

SOMERVILLE STREET
FLORA HILL
ROAD RECONSTRUCTION
DRAINAGE LONGITUDINAL SECTION

Survey	ADRIAN CUMMINS	JUNE '21
Design	M. JENNINGS	DEC '21
Checked	A. SMITH	-/-/21
Approved by	N. SARTORI	-/-/21
Scale: -	Revision : A	
Original sheet size: A3	File : GB4867.dwg	
Sheet: 15 OF 20	Reference: GB4867	

PRELIMINARY DESIGN
DRAFT 3

Plot Date: 25/05/2022
Plotted By: MEGAN JENNINGS



HGL CAPACITY (L/s)	120	76	76	
PIPE DETAILS SLOPE/GRADE DATUM RL 232.5	300ØRCP CL2 FJ 1:100 1.0%	300ØRCP CL2 FJ 1:246 0.4%	300ØRCP CL2 FJ 1:245 0.4%	
INVERT LEVEL	233.930	234.152 / 234.182	234.253	234.358
DEPTH TO INVERT	0.93	0.84 / 0.81	0.83	0.87
EXISTING SURFACE	234.40	234.80	234.86	235.23
DESIGN SURFACE	234.86	235.00	235.08	235.23
CHAINAGE	68.53	90.75	108.31	133.88
	22.22	17.56	25.56	

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

Revision	Description	Approved by	Date
-	-	-	-

CITY OF GREATER BENDIGO

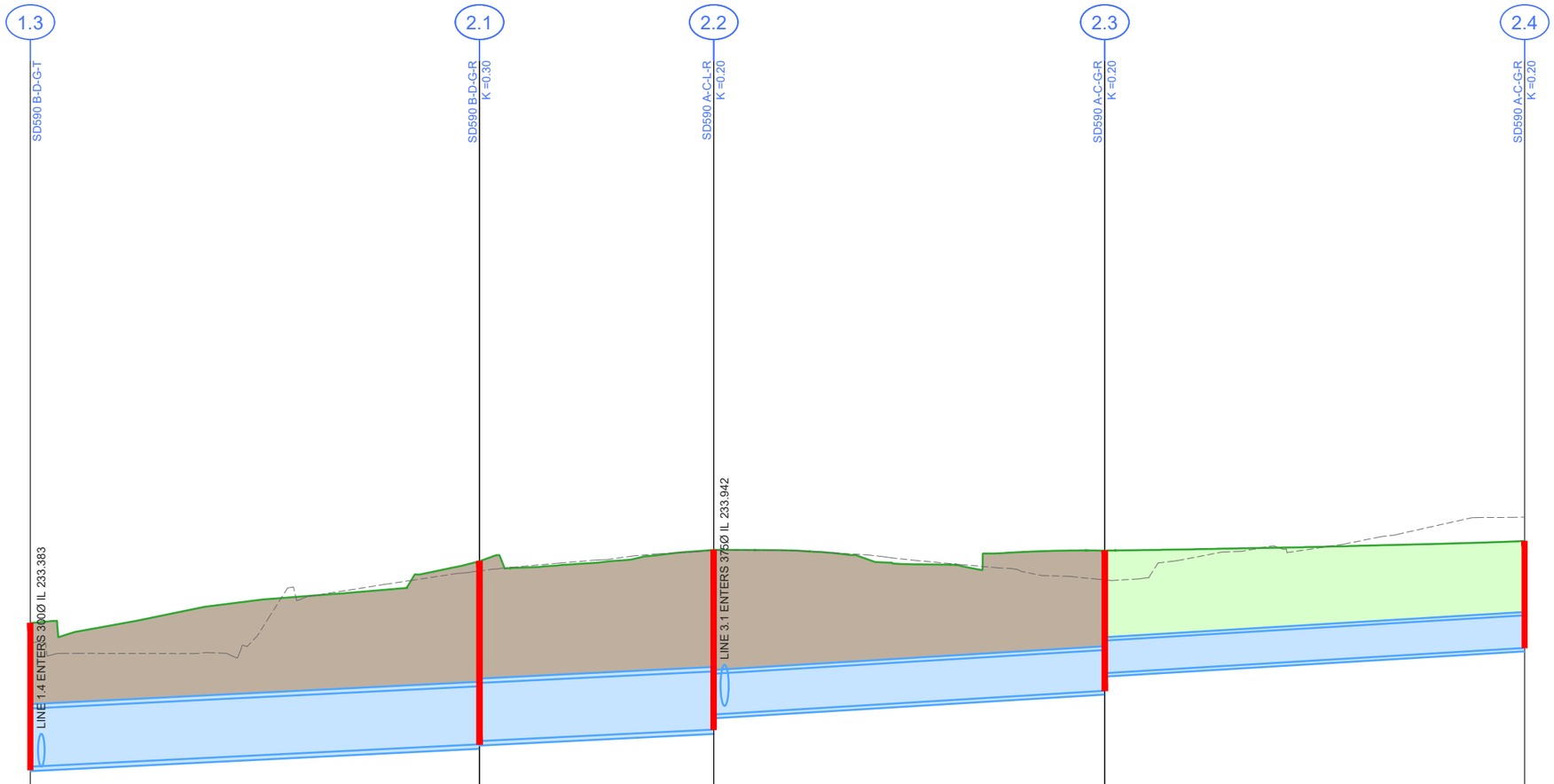
SOMERVILLE STREET
FLORA HILL
ROAD RECONSTRUCTION

DRAINAGE LONGITUDINAL SECTION

Survey	ADRIAN CUMMINS	JUNE '21
Design	M. JENNINGS	DEC '21
Checked	A. SMITH	-/-/21
Approved by	N. SARTORI	-/-/21
Scale: -	Revision : A	
Original sheet size: A3	File : GB4867.dwg	
Sheet: 16 OF 20	Reference: GB4867	

PRELIMINARY DESIGN
DRAFT 3

Plot Date: 25/05/2022
Plotted By: MEGAN JENNINGS



HGL CAPACITY (L/s)	545	543	239	132
PIPE DETAILS SLOPE/GRADE DATUM RL 232	525ØRCP CL2 FJ 1:101 1.0%	525ØRCP CL2 FJ 1:102 1.0%	375ØRCP CL2 FJ 1:82 1.2%	300ØRCP CL2 FJ 1:83 1.2%
INVERT LEVEL	233.383 / 233.588	233.618 / 233.724	233.862 / 234.080	234.242 / 234.474
DEPTH TO INVERT	1.32 / 1.68	1.65 / 1.65	1.51 / 1.29	1.13 / 0.98
EXISTING SURFACE	234.52 / 235.18	235.37	235.10	235.68
DESIGN SURFACE	234.70 / 235.27	235.38	235.37	235.46
CHAINAGE	19.72 / 40.37	51.14	69.11	88.42
	20.65	10.77	17.98	19.30

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

Revision	Description	Approved by	Date
-	-	-	-

CITY OF GREATER BENDIGO

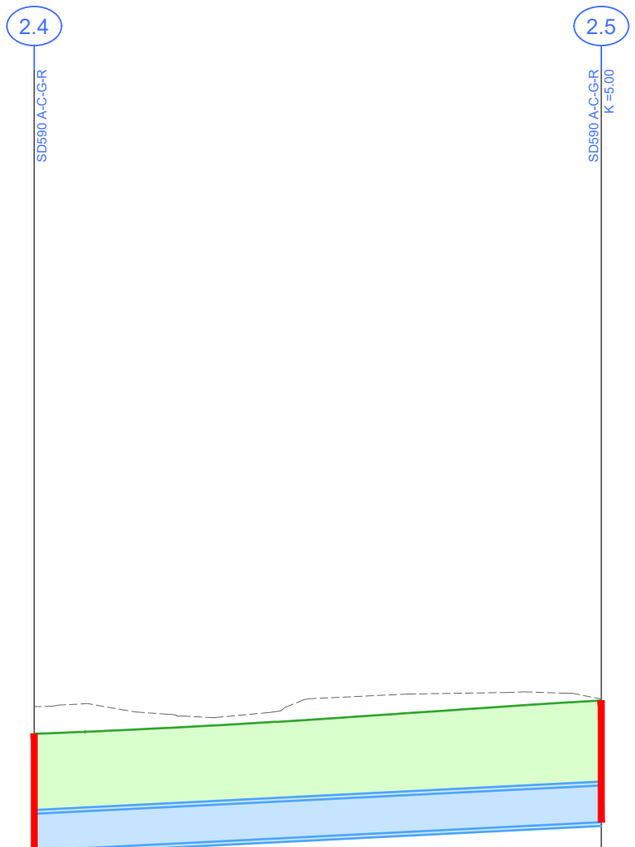
SOMERVILLE STREET
FLORA HILL
ROAD RECONSTRUCTION

DRAINAGE LONGITUDINAL SECTION

Survey	ADRIAN CUMMINS	JUNE '21
Design	M. JENNINGS	DEC '21
Checked	A. SMITH	-/-/21
Approved by	N. SARTORI	-/-/21
Scale: -	Revision : A	
Original sheet size: A3	File : GB4867.dwg	
Sheet: 17 OF 20	Reference: GB4867	

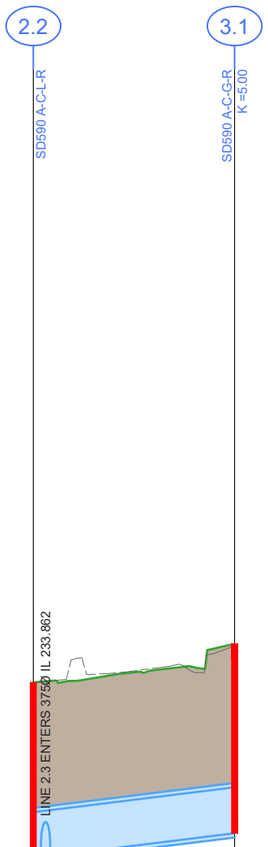
PRELIMINARY DESIGN
DRAFT 3

Plot Date: 25/05/2022
Plotted By: MEGAN JENNINGS



HGL CAPACITY (L/s)	120	
PIPE DETAILS SLOPE/GRADE DATUM RL 233	300ØRCP CL2 FJ 1:100 1.0%	
INVERT LEVEL	234.504	234.735
DEPTH TO INVERT	0.95	0.99
EXISTING SURFACE	235.68	235.74
DESIGN SURFACE	235.46	235.73
CHAINAGE	88.42	111.54
	23.12	

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



HGL CAPACITY (L/s)	342	
PIPE DETAILS SLOPE/GRADE DATUM RL 232.5	375ØRCP CL2 FJ 1:40 2.5%	
INVERT LEVEL	233.942	234.145
DEPTH TO INVERT	1.43	1.54
EXISTING SURFACE	235.37	235.67
DESIGN SURFACE	235.38	235.69
CHAINAGE	51.14	59.35
	8.21	

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

Revision	Description	Approved by	Date
-	-	-	-

CITY OF GREATER BENDIGO

SOMERVILLE STREET
FLORA HILL
ROAD RECONSTRUCTION

DRAINAGE LONGITUDINAL SECTION

Survey	ADRIAN CUMMINS	JUNE '21
Design	M. JENNINGS	DEC '21
Checked	A. SMITH	-/-/21
Approved by	N. SARTORI	-/-/21
Scale: -	Revision : A	
Original sheet size: A3	File : GB4867.dwg	
Sheet: 18 OF 20	Reference: GB4867	

PRELIMINARY DESIGN
DRAFT 3

Plot Date: 25/05/2022
Plotted By: MEGAN JENNINGS

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	EXISTING JP	900	1200			600	233.080	1.003	234.083	
1.2	SD590 B-D-G-T	900	900	600	233.191	600	233.266	1.468	234.659	Class B fibreglass lid
1.3	SD590 B-D-G-T	900	900	600	233.353	300	233.383	1.350	234.703	Class B fibreglass lid
						525	233.383			
1.4	SD590 A-C-G-T	600	900	300	233.648	300	233.678	1.130	234.778	Class B fibreglass lid
1.5	SD590 A-C-G-T	600	900	300	233.900	300	233.930	0.956	234.856	Class B fibreglass lid
1.6	SD590 A-C-G-T	600	900	300	234.152	300	234.182	0.844	234.996	Class B fibreglass lid
1.7	SD590 A-C-G-T	600	900	300	234.253	300	234.253	0.829	235.083	Class B fibreglass lid
1.8	SD590 A-C-G-T	600	900	300	234.358			0.871	235.229	Class B fibreglass lid
2.1	SD590 B-D-G-R	900	900	525	233.588	525	233.618	1.683	235.271	Create tray in SM1 kerb for SEP
2.2	SD590 A-C-L-R	900	900	525	233.724	375	233.942	1.651	235.375	Construct JP in island
						375	233.862			
2.3	SD590 A-C-G-R	600	900	375	234.080	300	234.242	1.287	235.368	
2.4	SD590 A-C-G-R	600	900	300	234.474	300	234.504	0.982	235.456	
2.5	SD590 A-C-G-R	600	900	300	234.735			0.992	235.728	
3.1	SD590 A-C-G-R	600	900	375	234.145			1.545	235.690	

AMENDMENTS

Revision	Description	Approved by	Date
-	-	-	-

CITY OF GREATER BENDIGO

SOMERVILLE STREET
FLORA HILL
ROAD RECONSTRUCTION

PIT SCHEDULE

Survey	ADRIAN CUMMINS	JUNE '21
Design	M. JENNINGS	DEC '21
Checked	A. SMITH	-/-/21
Approved by	N. SARTORI	-/-/21
Scale: -	Revision : A	
Original sheet size: A3	File : GB4867.dwg	
Sheet: 19 OF 20	Reference: GB4867	

PRELIMINARY DESIGN
DRAFT 3

Plot Date: 25/05/2022
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AMENDMENTS			
Revision	Description	Approved by	Date
-	-	-	-

CITY OF GREATER BENDIGO

SOMERVILLE STREET
FLORA HILL
ROAD RECONSTRUCTION

SETOUT

Survey	ADRIAN CUMMINS	JUNE '21
Design	M. JENNINGS	DEC '21
Checked	A. SMITH	-/-/21
Approved by	N. SARTORI	-/-/21
Scale: -	Revision : A	
Original sheet size: A3	File : GB4867.dwg	
Sheet: 20 OF 20	Reference: GB4867	

PRELIMINARY DESIGN DRAFT 3

Plot Date: 25/05/2022

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