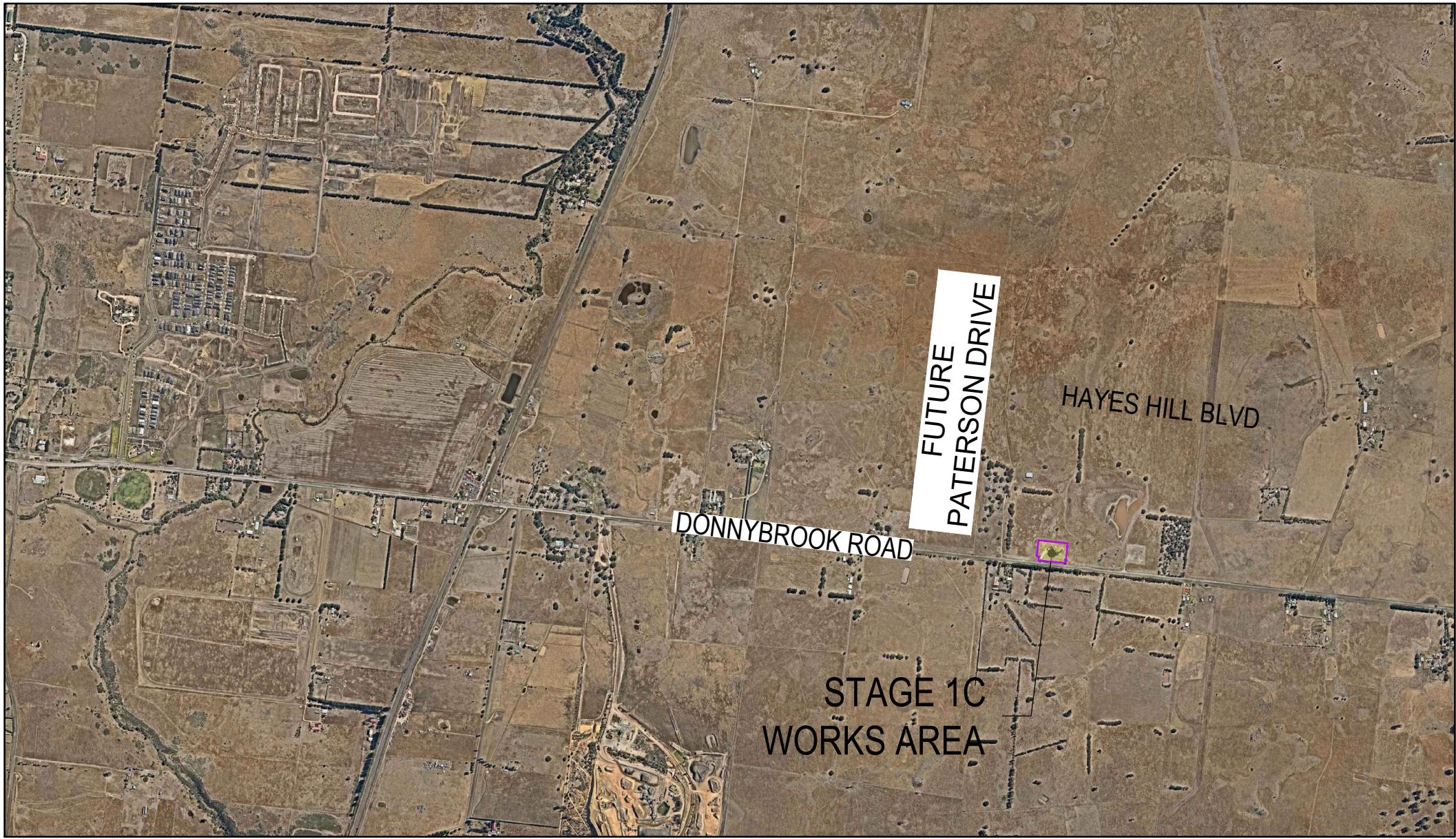


Olivine Estate

Stage 1C



Drawing Index

- 1700E-01C-01 Cover Plan
- 1700E-01C-02 Layout Plan & Typical Cross Sections
- 1700E-01C-03 Longsections, Intersection Details & Lip Profiles
- 1700E-01C-04 Cross Sections - Grovedon Circuit Ch 242.54 - Ch 280.54
- 1700E-01C-05 Cross Sections - Grovedon Circuit Ch 294.74 - Ch 346.54
- 1700E-01C-06 Cross Sections - Woodlet Way
- 1700E-01C-07 Drainage Longsections & Pit Schedule
- 1700E-01C-08 Signs & Linemarking Plan
- 1700E-01C-09 General Notes & Pavement Details
- 1700E-01C-10 Earthworks Plan
- 1700E-01C-85 Safety in Design

GENERAL NOTES (WHITTLESEA CITY COUNCIL)

- THE WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE VPA MANUAL AND SPECIFICATIONS. WORKS TO BE CARRIED OUT TO THE SATISFACTION OF COUNCIL'S SUPERVISING OFFICER.
- THE CONTRACTOR IS RESPONSIBLE FOR SAFETY OF WORK ON SITE IN ACCORDANCE WITH APPROPRIATE LEGISLATION. THEY SHALL ERECT AND MAINTAIN ALL SHORING, PLANKING AND STRUTTING, DEWATERING DEVICES, BARRICADES, SIGNS, LIGHTS, ETC. NECESSARY TO KEEP WORKS IN A SAFE AND STABLE CONDITION, AND TO PROTECT THE PUBLIC FROM HAZARDS ASSOCIATED WITH THE WORKS.
- THE CONTRACTOR SHALL:
 - COMPLY WITH THE SAFETY REQUIREMENTS OF THE MINES ACT, GENERAL REGULATIONS AND STATUTORY RULES, AND THE MINES (TRENCHES) REGULATIONS 1982.
 - NOTIFY THE OCCUPATIONAL HEALTH AND SAFETY AUTHORITY OF HIS INTENTION TO COMMENCE TRENCHING OPERATIONS WHERE TRENCHES ARE 1.5 METRES OR DEEPER.
 - ENSURE THAT THE MINE MANAGER OR HIS DEPUTY AS REQUIRED BY THE REGULATIONS IS IN ATTENDANCE WHEN TRENCHING OPERATIONS ARE IN PROGRESS.
- THE CONTRACTOR IS TO NOTIFY COUNCIL AND ALL SERVICE AUTHORITIES SEVEN (7) DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- THE LOCATION OF EXISTING SERVICES SHOULD BE DETERMINED BY THE CONTRACTOR PRIOR TO COMMENCING ANY EXCAVATION BY CONTACTING ALL RELEVANT SERVICE AUTHORITIES. ANY EXISTING SERVICES SHOWN ON THE DRAWINGS ARE OFFERED AS A GUIDE ONLY AND ARE NOT GUARANTEED AS CORRECT.
- REDGUM TREES MARKED ON THE APPROVED PLANS FOR REMOVAL MUST BE REMOVED IN ACCORDANCE WITH COUNCIL'S PLANNING PERMIT. NO EXCAVATION SHALL BE CARRIED OUT WITHIN 5.0m OF ANY EXISTING TREE WITHOUT WRITTEN APPROVAL FROM COUNCIL'S SUPERVISING OFFICER.
- ALL ROAD CHAINAGES ARE MEASURED ALONG THE ROAD CENTRELINE EXCEPT KERB RETURNS AND COURTHEADS, WHERE LIP OF KERB CHAINAGES ARE SPECIFIED. ALL DIMENSIONS AND RADII ARE GIVEN TO THE LIP OF KERB. DO NOT SCALE OFF THESE DRAWINGS. WRITTEN DIMENSIONS ONLY SHALL BE USED.
- ALL LEVELS ARE TO AUSTRALIAN HEIGHT DATUM.
- WHEN ENGAGED IN BLASTING OPERATIONS THE CONTRACTOR SHALL NOT BLAST WITHIN 4.5m OF AN EXISTING LINE OF WATER, GAS OR SEWER PIPES OR WITHIN 15m OF ANY COMPLETED PART OF THE WORKS WITHOUT THE CONSENT OF THE SUPERINTENDENT. BLASTING REQUIRES A BLASTING PERMIT FROM COUNCIL.
- ALL EXCAVATED OR FILLED AREAS OUTSIDE THE ROAD RESERVES TO BE STRIPPED OF TOPSOIL AND STOCKPILED PRIOR TO EARTHWORKS COMMENCING. THESE AREAS SHALL BE SURFACED WITH A 100mm MINIMUM TO 200mm MAXIMUM LAYER OF TOPSOIL AS SPECIFIED.
- NO TOPSOIL TO BE REMOVED FROM SITE.
- NO FILL OR STOCKPILING OF MATERIAL IS TO BE PLACED ON ANY RESERVE UNLESS DIRECTED BY THE SUPERINTENDENT.
- FILLING ON ALLOTMENTS AND UNDER ROAD PAVEMENTS TO HAVE LEVEL 1 SUPERVISION IN ACCORDANCE WITH AS3798-1996. INDIVIDUAL LOT CERTIFICATES ARE TO BE PROVIDED TO THE SUPERINTENDENT.
- FILLING UNDER DRIVEWAYS AND FOOTPATH IS TO BE APPROVED BY THE SUPERINTENDENT AND CONSTRUCTED IN LAYERS 150mm DEPTH. COMPACTION ACHIEVING 98% AUSTRALIAN STANDARD DENSITY.
- CUT AND FILL BATTERS ARE NOT TO EXCEED 1 in 6 UNLESS SHOWN OTHERWISE.
- ALLOTMENTS TO BE GRADED TO ENSURE A MINIMUM GRADE OF 1 in 150.
- ALL DRAINAGE PIPES UP TO AND INCLUDING 750mm IN DIAMETER SHALL BE RUBBER RING JOINTED. PIPES ABOVE THIS SIZE MUST BE FLUSH JOINTED WITH EXTERNAL SEALING BANDS.
- ALL DRAINAGE TRENCHES UNDER ROAD PAVEMENTS, KERB & CHANNEL, PARKING BAYS, DRIVEWAYS, FOOTPATHS AND BEHIND KERBS & CHANNEL SHALL BE BACKFILLED WITH CRUSHED ROCK AS SPECIFIED.
- ALL PITS GREATER THAN OR EQUAL TO 900mm DEPTH TO BE PROVIDED WITH STEP IRONS IN ACCORDANCE WITH SD1041 AND COUNCIL STANDARD DRAWING EDCM 609.
- PROPERTY INLETS AS PER WHITTLESEA CITY COUNCIL STANDARD DRAWING EDCM 701-704 AND ARE TO BE LOCATED 1.0m FROM LOW SIDE BOUNDARY UNLESS SHOWN OTHERWISE.
- ALL HOUSE DRAIN CONNECTIONS ARE TO BE LOCATED NO CLOSER THAN 7.0m FROM THE SIDE BOUNDARY OR FROM EASEMENT ALONG THE SIDE BOUNDARY UNLESS NOTED OTHERWISE AND CONNECTED DIRECTLY TO UNDERGROUND DRAIN OR PIT. HOUSE DRAIN LOCATION TO BE MARKED (50mm STAMPED IMPRESSION) ON THE TOP OF THE KERB. SUBSOIL DRAINS SHALL BE INSTALLED BEHIND OR BELOW ALL KERB AND CHANNEL AS PER STANDARD DRAWING EDCM 202.
- CONDUIT LOCATIONS ARE SUBJECT TO AMENDMENT AND CONDUITS SHALL NOT BE LAID UNTIL WRITTEN APPROVAL IS GIVEN BY THE SUPERINTENDENT. CONDUITS TO BE EXTENDED TO PROPERTY LINE AND ARE REQUIRED WHEN CONNECTIONS EXTEND UNDER ROAD PAVEMENT, FOOTPATH OR OTHER INFRASTRUCTURE. BOTH KERBS ARE TO BE MARKED WITH THE LETTERS H (PROPERTY STORMWATER CONNECTION), E (ELECTRICAL), G (GAS), T (TELEPHONE), W (WATER) AND C (COUNCIL COMMUNICATION) AS PER STANDARD DRAWING EDCM 303.
- ALL SERVICING TRENCHES UNDER ROADS, DRIVEWAYS, FOOTPATHS ETC. ARE TO BE BACKFILLED & COMPACTED WITH F.C.R. IN THE CASE OF TRENCHES UNDER ROADS WHERE BACKFILLING HAS NOT ACHIEVED THE SPECIFIED COMPACTION OR SHOWS EXCESSIVE MOVEMENT UNDER PROFFROLLING, THE BACKFILLING SHALL BE REMOVED AND REPLACED WITH 2% STABILISED COMPACTED F.C.R. ALL SERVICES ARE TO BE PLACED PRIOR TO THE CAPPING LAYER.
- NO TELSTRA PITS ARE TO BE LOCATED IN THE FOOTPATH.
- VEHICULAR CROSSINGS TO BE LOCATED CLEAR OF DRAINAGE PITS, SEWER MAINTENANCE HOLES AND EXISTING TREES. VEHICLE CROSSINGS TO BE 1.5m FROM PROPERTY BOUNDARY OR EASEMENT UNLESS OTHERWISE SHOWN. VEHICULAR CROSSINGS TO BE CONSTRUCTED AS PER WHITTLESEA CITY COUNCIL'S SPECIFICATIONS AND EDCM 501 TO 503.
- ALL PEDESTRIAN CROSSING THROUGH SPLITTER ISLANDS TO BE IN ACCORDANCE WITH SD606.
- ALL STREET SIGNS TO BE IN ACCORDANCE WITH SD812. STREET SIGNS TO BE ATTACHED TO LIGHT POLES USING 'SINGLE DIRECTION COLLAR' OR '90° RIGHT ANGLE COLLAR' UNLESS SHOWN OTHERWISE.
- ALL PAVEMENT MARKINGS AND TRAFFIC SIGNS SHOULD BE TO AS1742.2 AND AS1742.1 STANDARD RESPECTIVELY. TEMPORARY LINEMARKING TO BE PLACED DURING MAINTENANCE PERIOD PRIOR TO PLACEMENT OF WEARING COURSE. FINAL LINEMARKING TO BE LONG LIFE ROAD MARKING WITH LONGITUDINAL LINES IN THERMOPLASTIC AND TRANSVERSE MARKINGS IN COLD APPLIED.
- THE CAPPING LAYER MUST BE DEMONSTRATED THROUGH TESTING THAT ITS PROPERTIES (CBR, PERMEABILITY, ETC.) SATISFY LIMITS AS OUTLINED IN THE TECHNICAL SPECIFICATION TABLE 20.3.5B WITH A MINIMUM MODULAS OF 100MPa.
- UPON COMPLETION OF CONSTRUCTION THE WHOLE SITE SHALL BE CLEANED UP, GRADED, ALL RUBBISH REMOVED AND LEFT IN A CLEAN AND TIDY CONDITION TO THE SATISFACTION OF THE SUPERINTENDENT.
- ALL FOOTPATHS & SHARED PATHS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH EDCM 401.

ROAD LAYOUT TABLE								
ROAD NAME	RESERVE WIDTH (m)	ROAD WIDTH (m)			KERB TYPE		VERGE WIDTH (m)	
		LIP to LIP	INV to INV	BACK to BACK	NTH/WEST	STH/EAST	NTH/WEST	STH/EAST
GROVEDON CIRCUIT	13.50	4.60	5.50	5.80	B2	B2	4.75	3.25
WOODLET WAY	16.00	6.40	7.30	7.60	B2	B2	4.35	4.35

SERVICES OFFSET SCHEDULE										
ROAD NAME	GAS		NON DRINKING WATER		DRINKING WATER		ELECTRICITY		NBN	
	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)
GROVEDON CIRCUIT	NORTH	2.10	NORTH	2.60	NORTH	3.10	SOUTH	1.50	SOUTH	0.70
WOODLET WAY	EAST	2.10	EAST	2.50	EAST	3.00	WEST	2.60	WEST	1.85

*STREET TREES TO BE INSTALLED IN THE CENTRE OF NATURE STRIPS

WARNING
SAFETY MEASURES REQUIRED
Please note there are risks attached to the construction of this project, and any ongoing maintenance of structures. Consider the safety of all. For potential risks, consequences and controls refer to Safety in Design Risk Register SID P4.E6. 1700E-05A-01
ASSESS THE RISK - STAY SAFE

WARNING
BWARE OF UNDERGROUND SERVICES
The locations 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. Locate all underground services before commencement of works
DIAL 1100 BEFORE YOU DIG
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AS CONSTRUCTED PLANS

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TITLE	NAME
DRAFTER	R.Barua
DESIGNER	S.MacLaren
CHECKED	K.Moore
AUTHORISED	A.Burrows
REFERENCE No. 1	
REFERENCE No. 2	

SCALE AS SHOWN AT A1

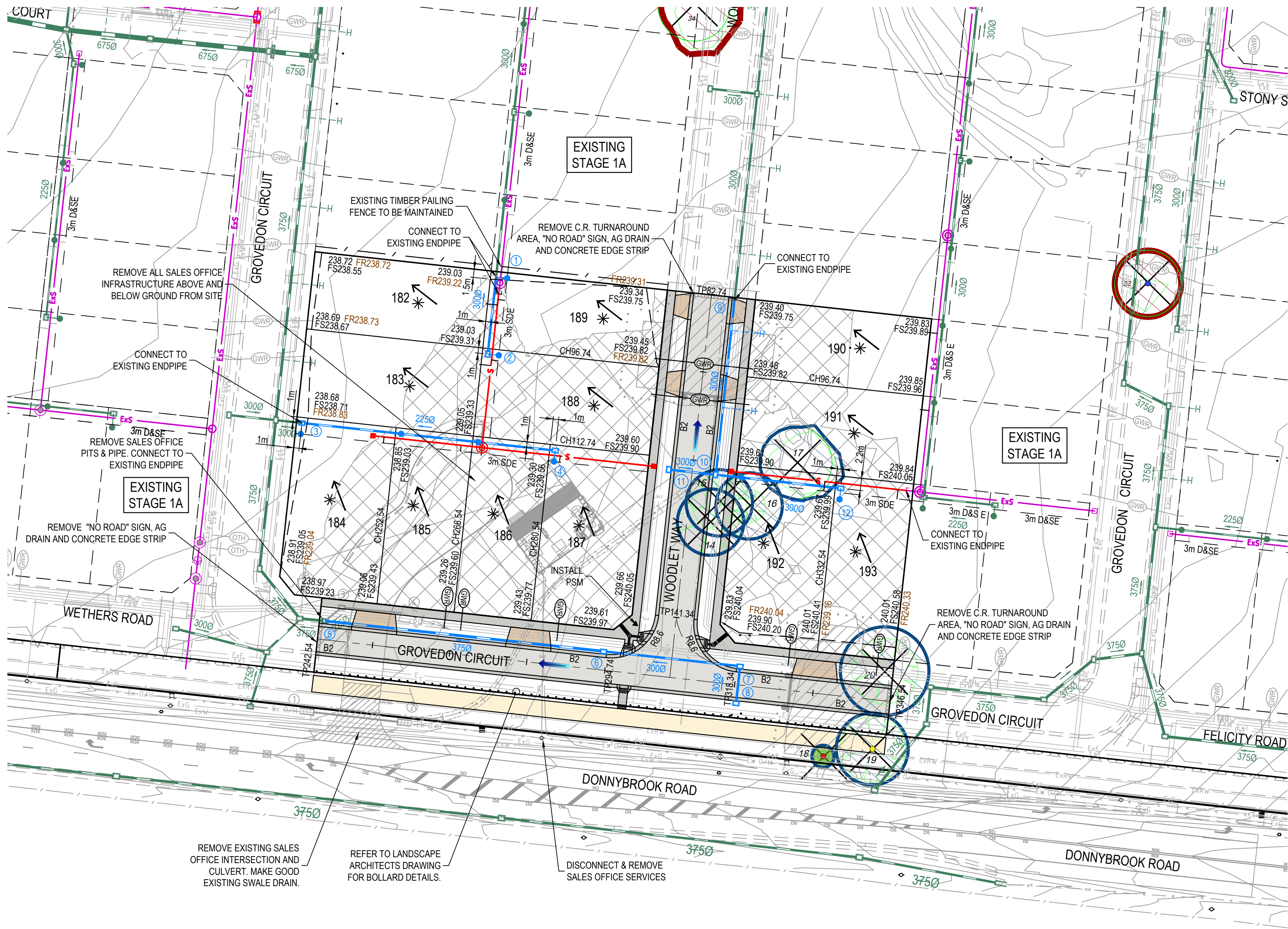
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Olivine Estate - Stage 1C
Whittlesea City Council
Road and Drainage
Cover Plan

MELWAYS REF 8 M2	PROJECT / DRAWING No. 1700E-01C-01	SHEET No. 01 of 11	REVISION 1
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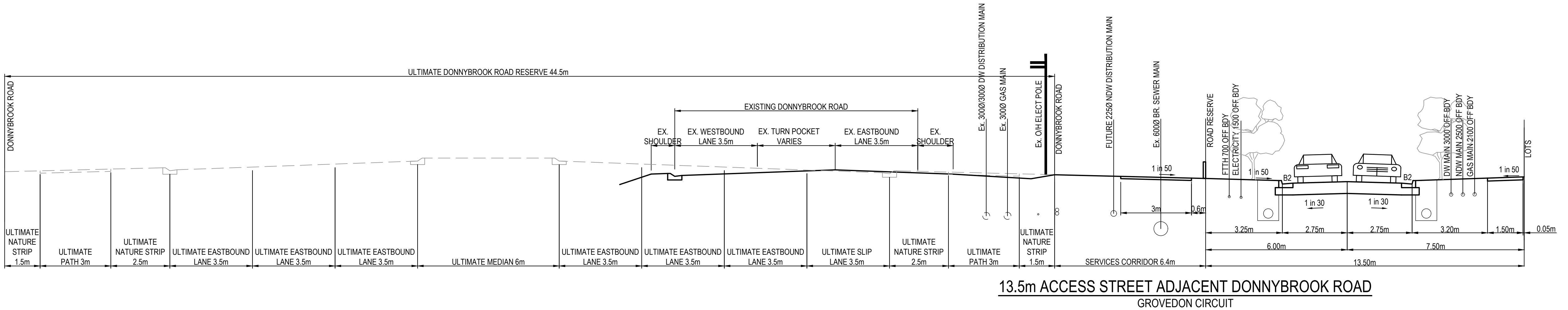
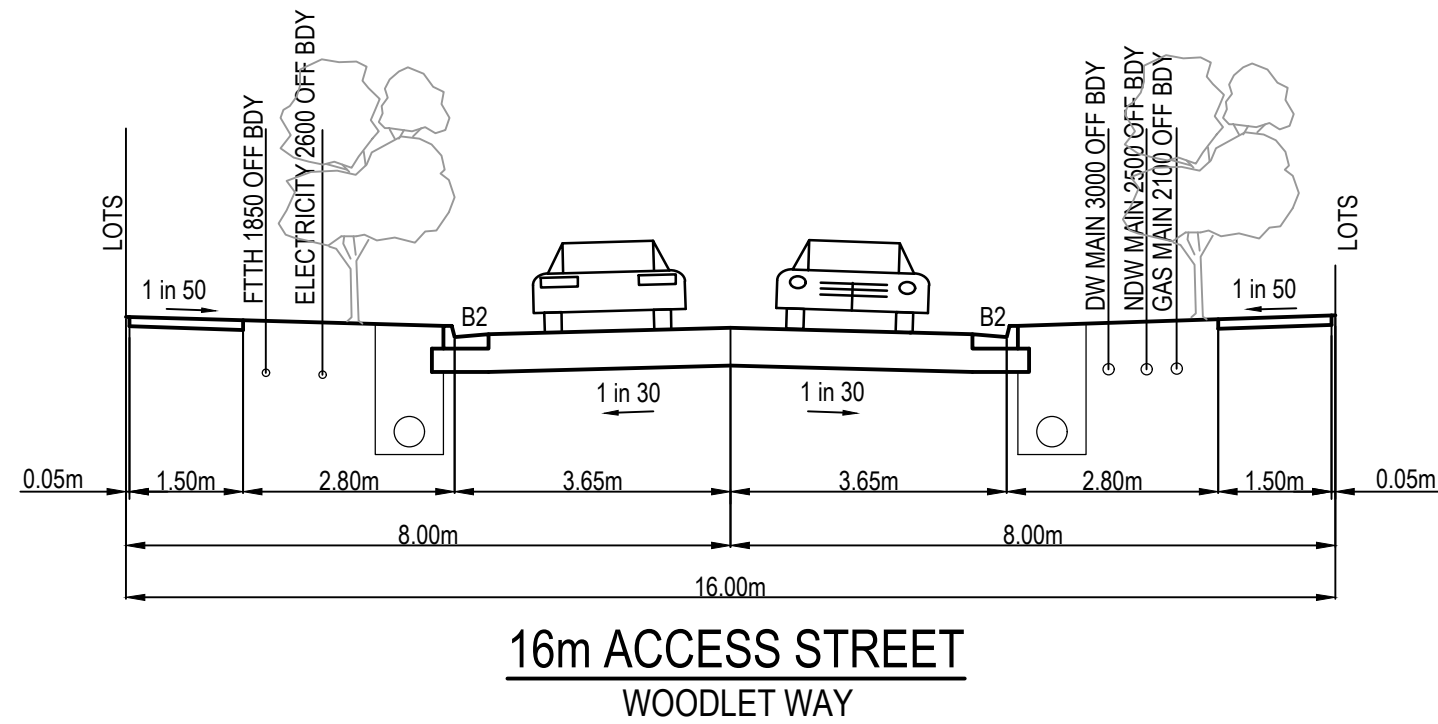


LEGEND - LAYOUT PLAN	
ALL PROPOSED, FUTURE & EXISTING SERVICE LOCATIONS ARE SHOWN INDICATIVELY	
	STORMWATER DRAIN, PIT & PROPERTY INLET
	MAIN DRAIN
	SWALE DRAIN
	SEWER & MAINTENANCE STRUCTURES
	HOUSE DRAIN
	ELECTRICITY (U. GROUND)
	GAS
	TELSTRA
	WATER
	RECYCLE WATER
	AG. DRAIN
	SERVICE CONDUITS
	TACTILE PAVERS
	EXISTING STORMWATER DRAIN
	EXISTING MAIN DRAIN
	EXISTING SWALE DRAIN
	EXISTING SEWER & MAINTENANCE STRUCTURES
	EXISTING HOUSE DRAIN
	EXISTING ELECTRICITY (UNDER GROUND)
	EXISTING GAS
	EXISTING TELSTRA
	EXISTING WATER
	EXISTING RECYCLED WATER
	EXISTING AG. DRAIN

	SERVICES CONDUITS
	EXISTING TACTILE PAVERS
	FUTURE STORMWATER DRAIN
	FUTURE MAIN DRAIN
	FUTURE SWALE DRAIN
	FUTURE SEWER & MAINTENANCE STRUCTURES
	FUTURE HOUSE DRAIN
	FUTURE ELECTRICITY (UNDER GROUND)
	FUTURE GAS
	FUTURE TELSTRA
	FUTURE WATER
	FUTURE RECYCLED WATER
	FUTURE AG. DRAIN
	FUTURE SERVICE CONDUITS
	FUTURE TACTILE PAVERS
	ZERO LOT LINES
	EXISTING SURFACE LEVEL
	FINISHED BUILDING LINE LEVEL
	FINISHED RIDGE LINE LEVEL
	CHAINAGE
	TOP OF RETAINING WALL LEVEL
	BOTTOM OF RETAINING WALL LEVEL
	EXISTING RETAINING WALL
	RETAINING WALL - CONCRETE SLEEPER
	RETAINING WALL - ROCK
	FUTURE RETAINING WALL

	STRUCTURAL FILL > 200mm DEEP
	EXISTING STRUCTURAL FILL > 200mm DEEP
	CUT > 200mm DEEP
	DIRECTION OF FALL
	OVERLAND FLOW
	GRADED IN DIRECTION OF FALL TO LEVEL INDICATED
	EDGE STRIP, SUBSOIL DRAIN, 'NO ROAD' SIGN & BARRIER
	EXISTING RED GUMTREE & CANOPY TO BE REMOVED
	EXISTING OTHER SPECIES TREE & CANOPY TO BE REMOVED
	EXISTING RED GUM TO BE RETAINED
	EXISTING OTHER SPECIES TO BE RETAINED
	PERMANENT SURVEY MARK
	TEMPORARY BENCH MARK
	PROPOSED DRIVEWAY & FOOTPATH
	PROPOSED SHARED FOOTPATH
	PROPOSED ROAD PAVING

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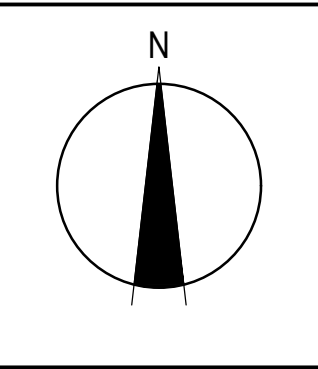
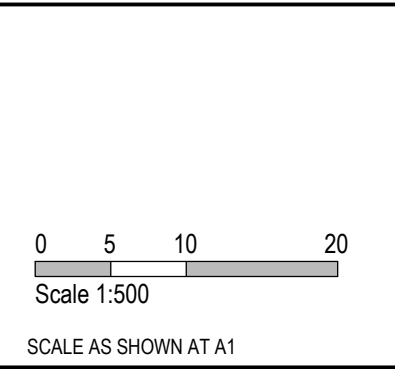
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Quality Management ISO 9001
O&M Management AS/NZS 1801
Environmental Management ISO 14001

TITLE	NAME
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DESIGNER	S.MacLaren
CHECKED	K.Moore
AUTHORISED	A.Burrows
REFERENCE No. 1	
REFERENCE No. 2	

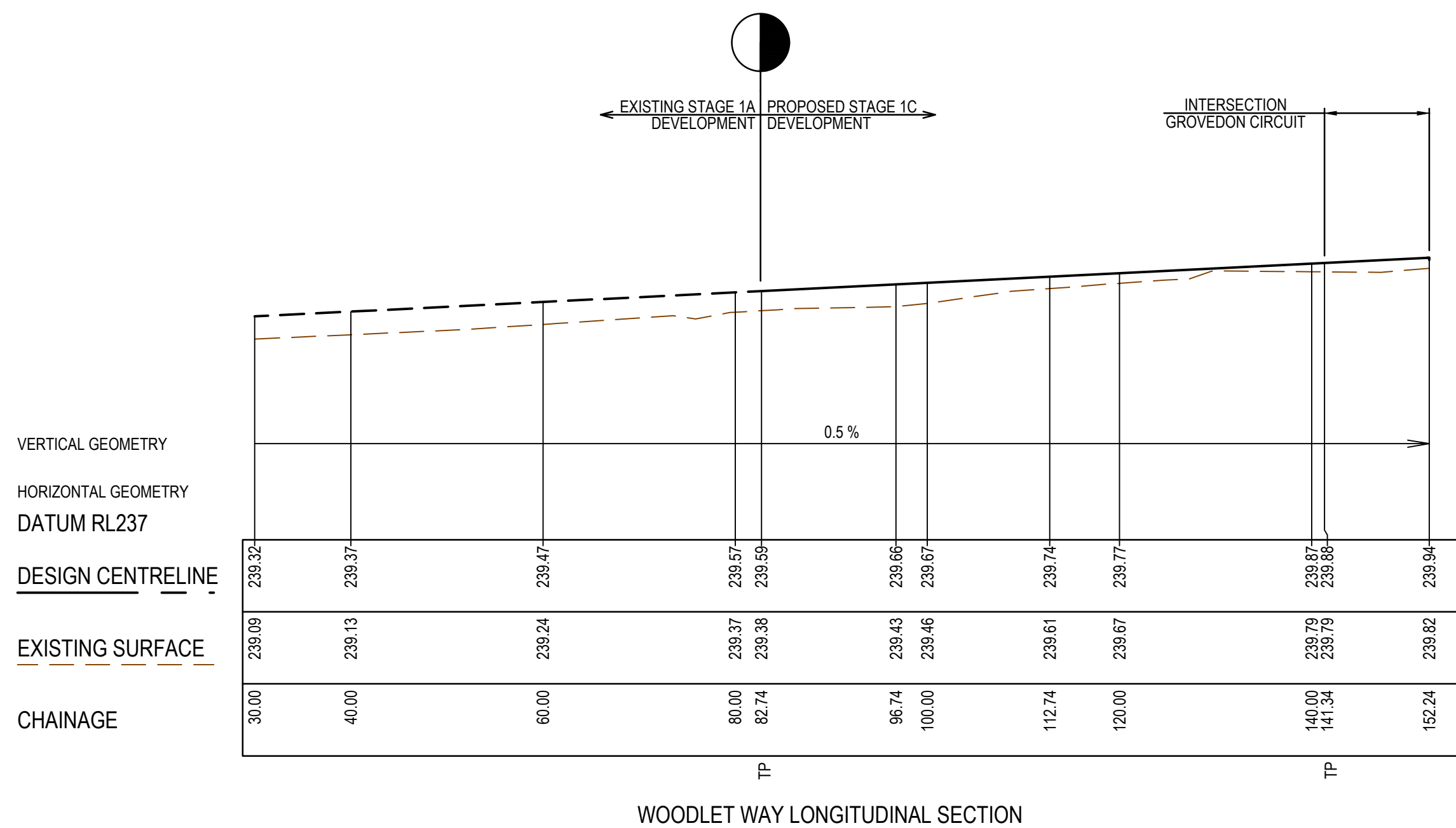


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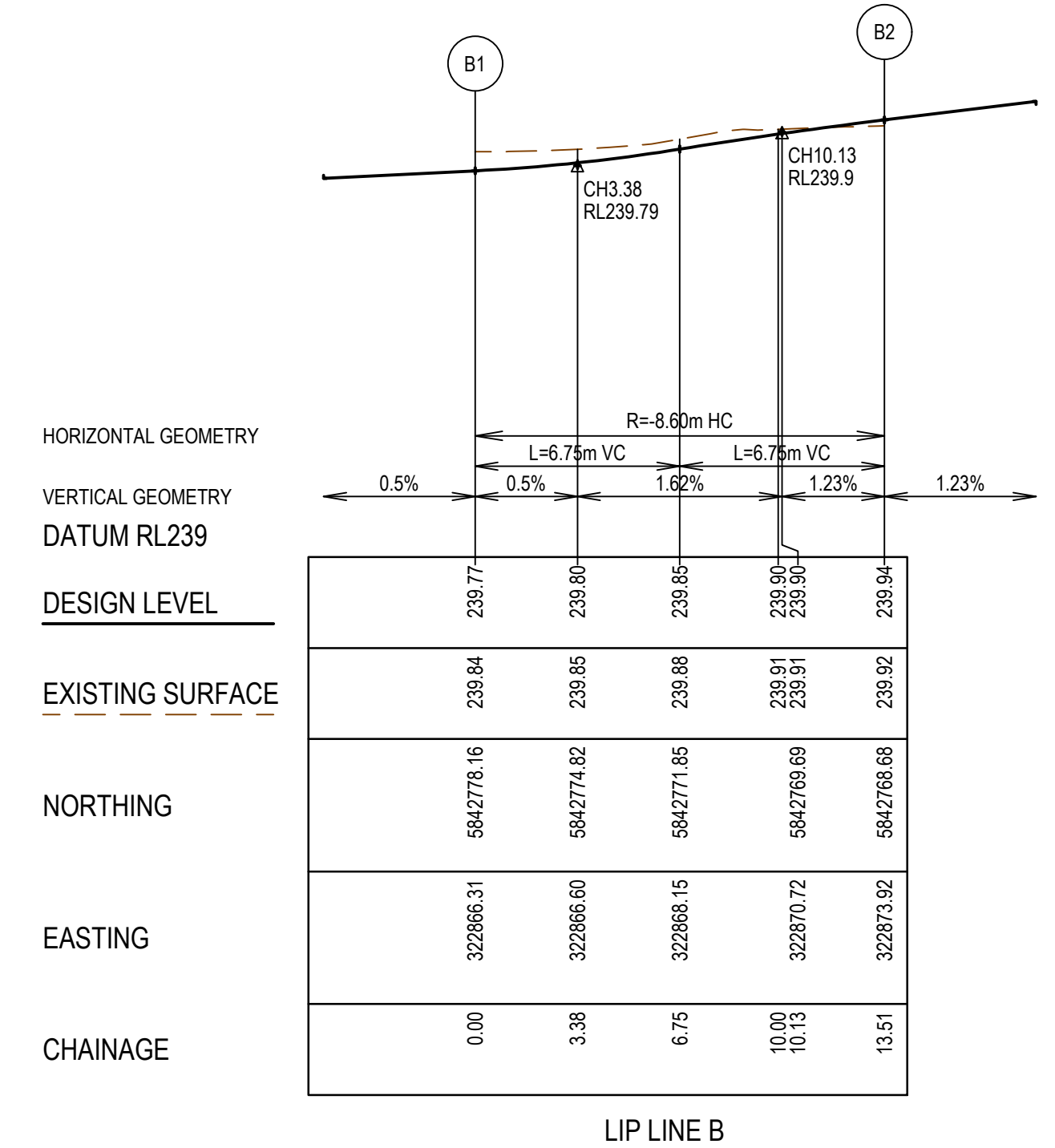
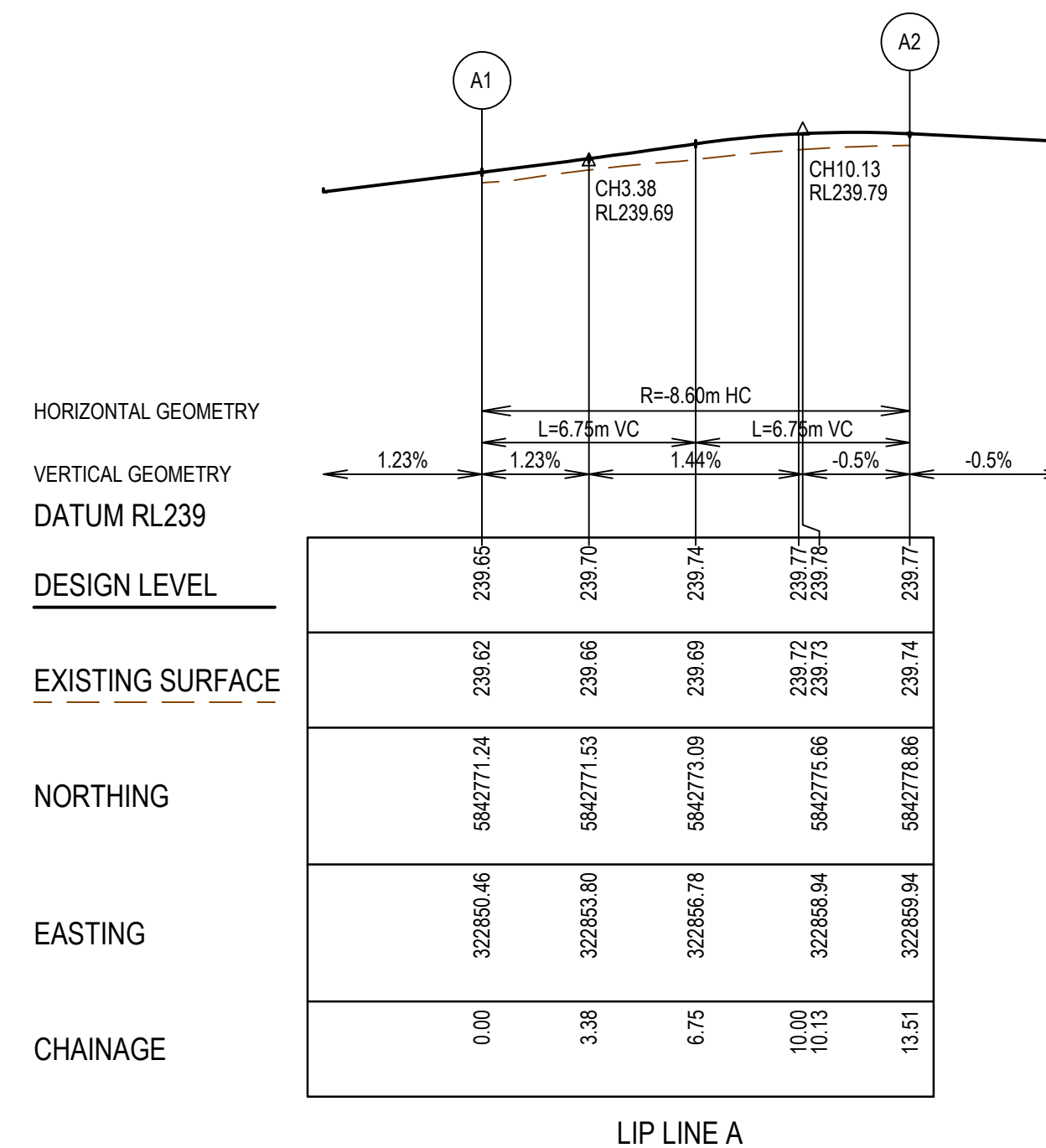
Olivine Estate - Stage 1C
Whittlesea City Council
Road and Drainage
Layout Plan & Typical Cross Sections

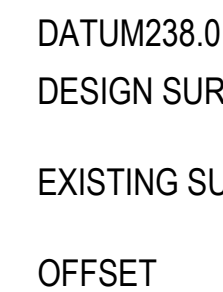
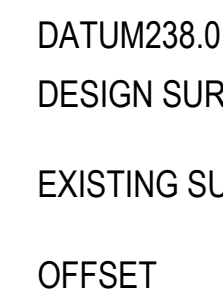
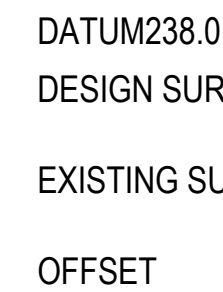
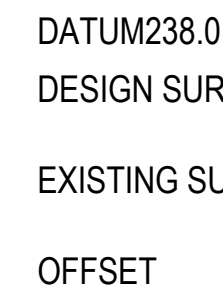
MELBAYS REF 8 M2	PROJECT / DRAWING No. 1700E-01C-02	SHEET No. 02 of 11	REVISION 1
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IP	CHAINAGE	X COORD	Y COORD	Z COORD	TYPE	BEARING	LENGTH	RADIUS
1	82.736	322869.469	5842836.767	239.589	IP	186°12'55.55"		
2	152.236	322861.944	5842767.675	239.939	IP	186°12'55.55"		

IP	CHAINAGE	X COORD	Y COORD	Z COORD	TYPE	BEARING	LENGTH	RADIUS
1	242.545	322798.320	5842774.605	239.089	IP	96°12'55.54"		
2	346.545	322901.709	5842763.345	240.365	IP	96°12'55.54"		





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OHS Management • AS/NZS 4801



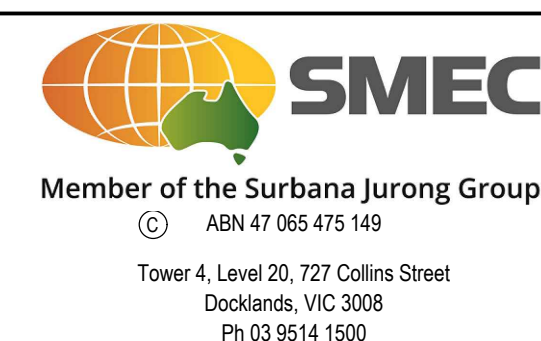
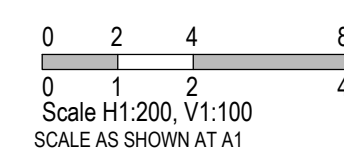
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Environmental Management

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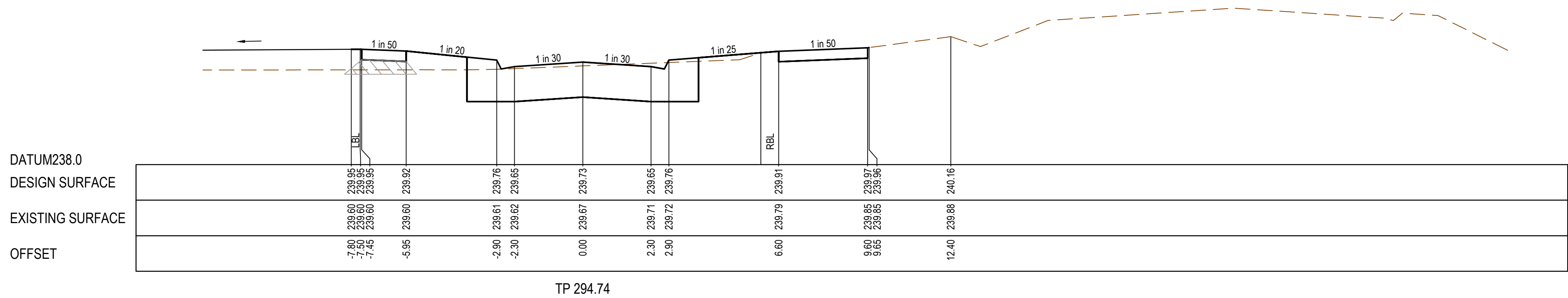
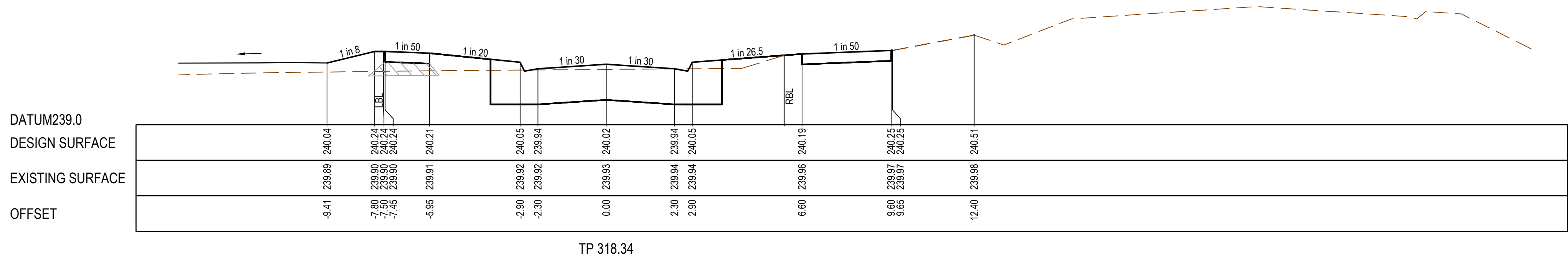
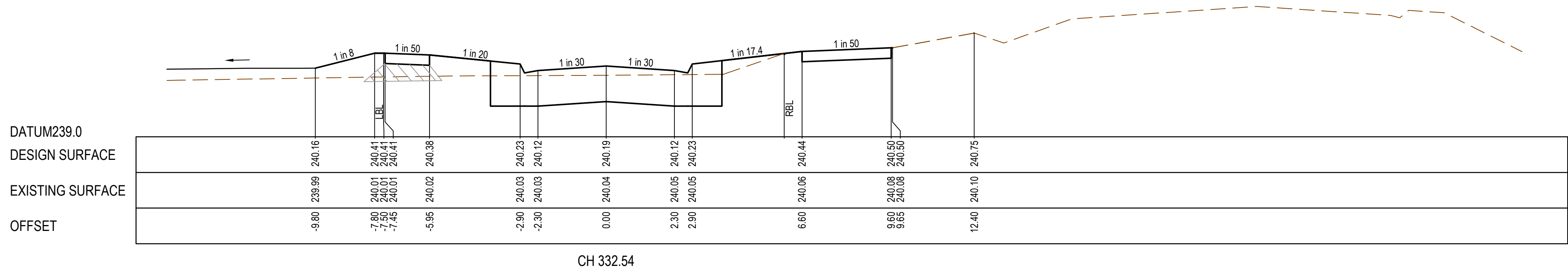
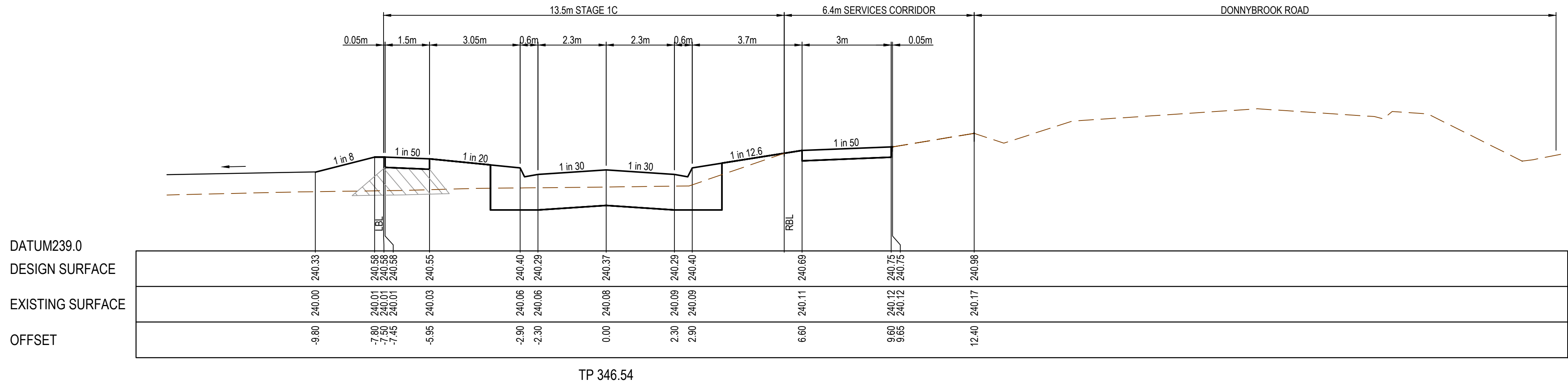
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AUTHORISED	A.Burrows
REFERENCE No. 1	
REFERENCE No. 2	



Olivine Estate - Stage 1C
Whittlesea City Council
Road and Drainage
Cross Sections - Grovedon Circuit
Ch 242.54 - Ch 280.54

MELWAYS REF 8 M2	PROJECT / DRAWING No. 1700E-01C-04	SHEET No. 04 of 11	REVISION 1
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FILLING UNDER FOOTPATHS MUST BE TYPE A
SELECTED MATERIAL IN ACCORDANCE WITH
VICROADS STANDARD SPECIFICATION 204.



AS CONSTRUCTED PLANS

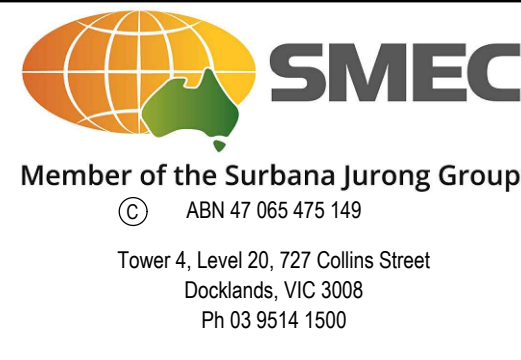
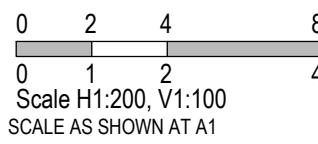
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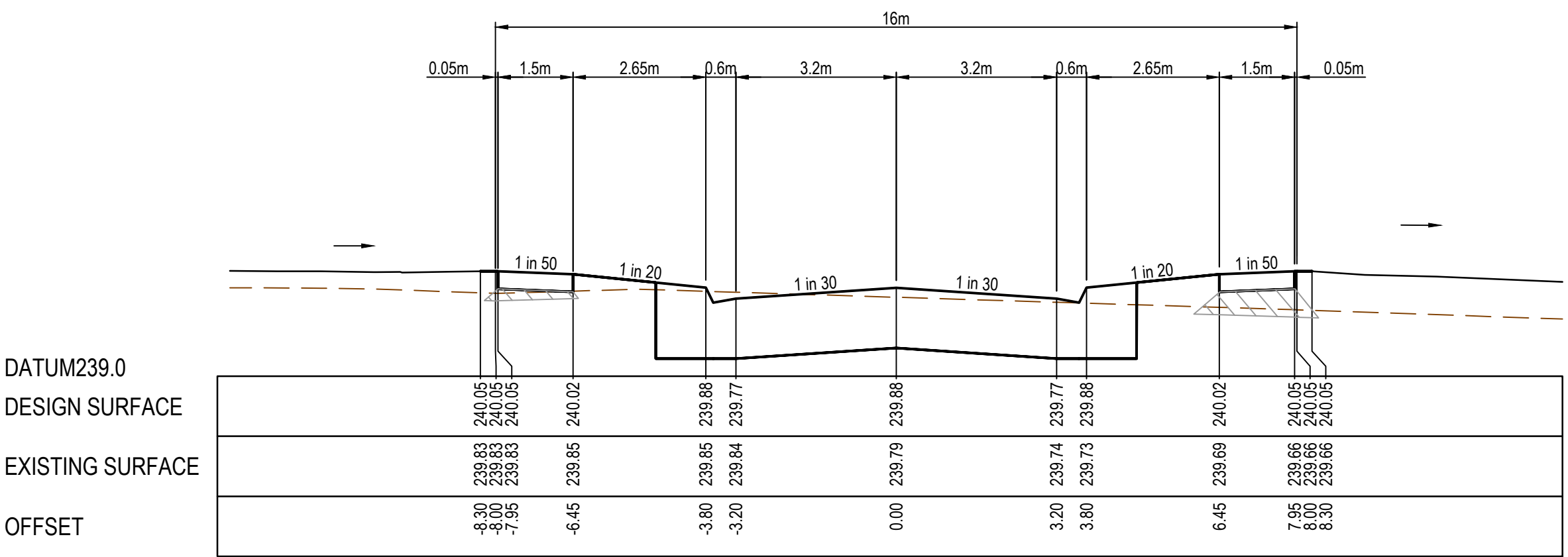
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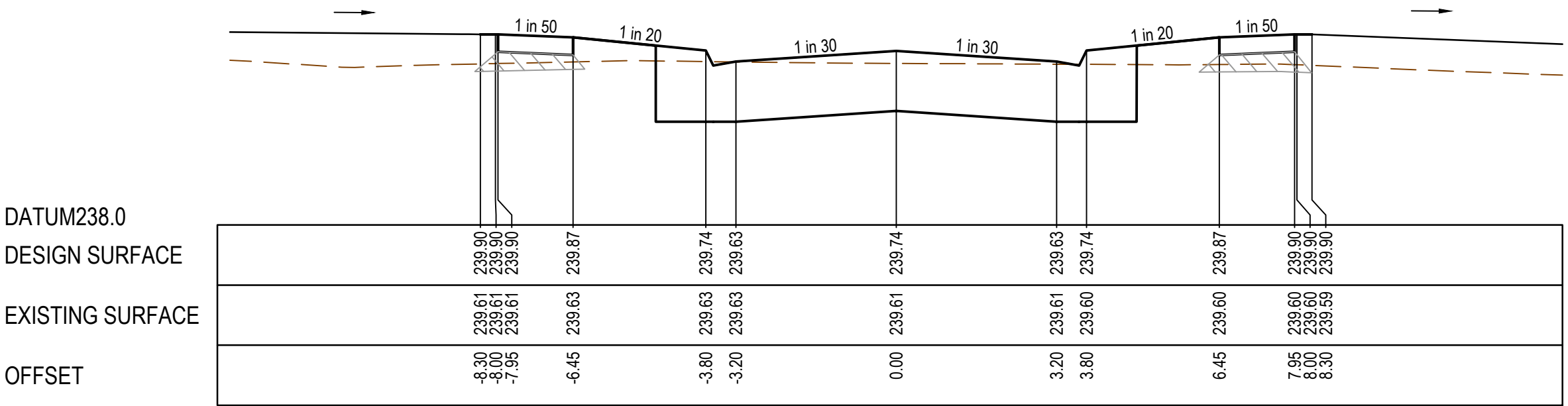
Olivine Estate - Stage 1C
Whittlesea City Council
Road and Drainage
Cross Sections - Grovedon Circuit
Ch 294.74 - Ch 346.54

MELWAYS REF	PROJECT / DRAWING No.	SHEET No.	REVISION
8 M2	1700E-01C-05	05 of 11	1

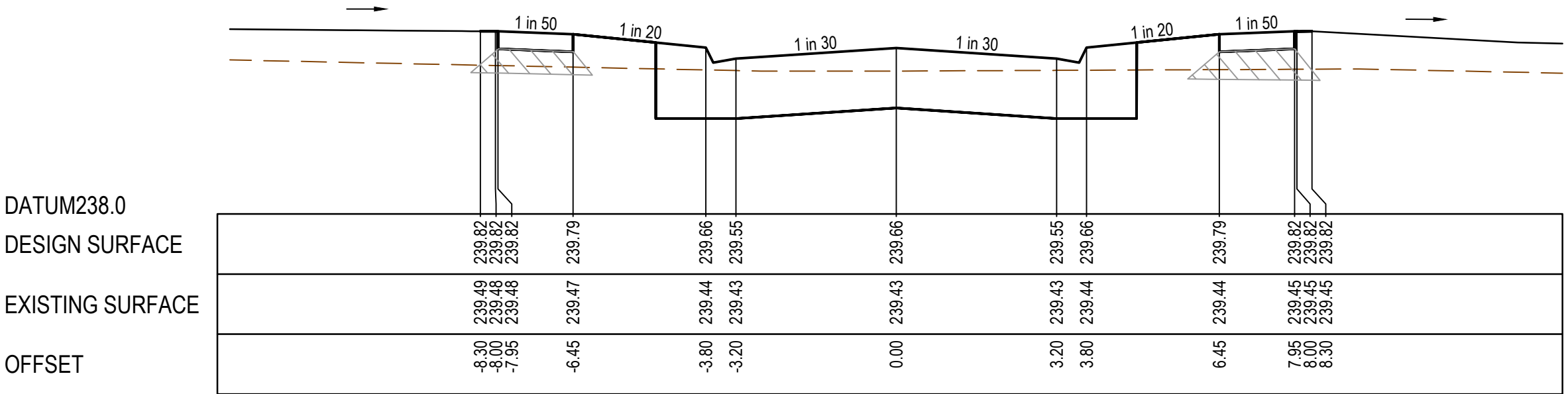
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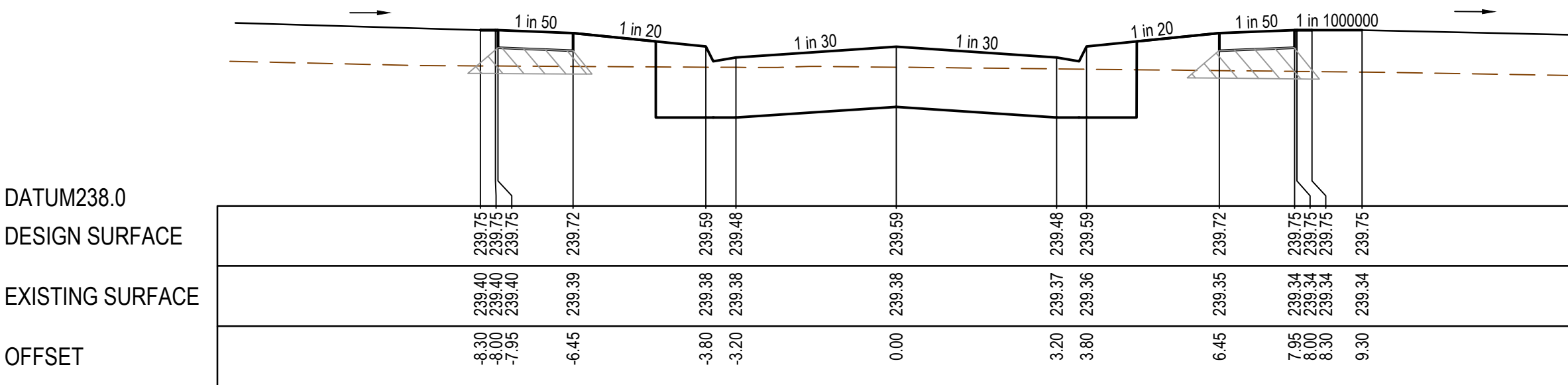
CH 141.34



CH 112.74



CH 96.74



CH 82.74

AS CONSTRUCTED PLANS

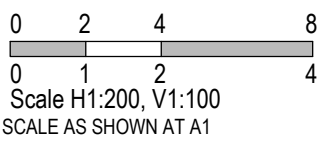
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Olivine Estate - Stage 1C
Whittlesea City Council
Road and Drainage
Cross Sections - Woodlet Way

MELWAYS REF 8 M2	PROJECT / DRAWING No. 1700E-01C-06	SHEET No. 06 of 11	REVISION 2
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NOTE

1.

ALL DRAINS TO BE BACKFILLED IN ACCORDANCE WITH CLAUSE 35.1.7 OF COUNCIL'S SPECIFICATION.

2.

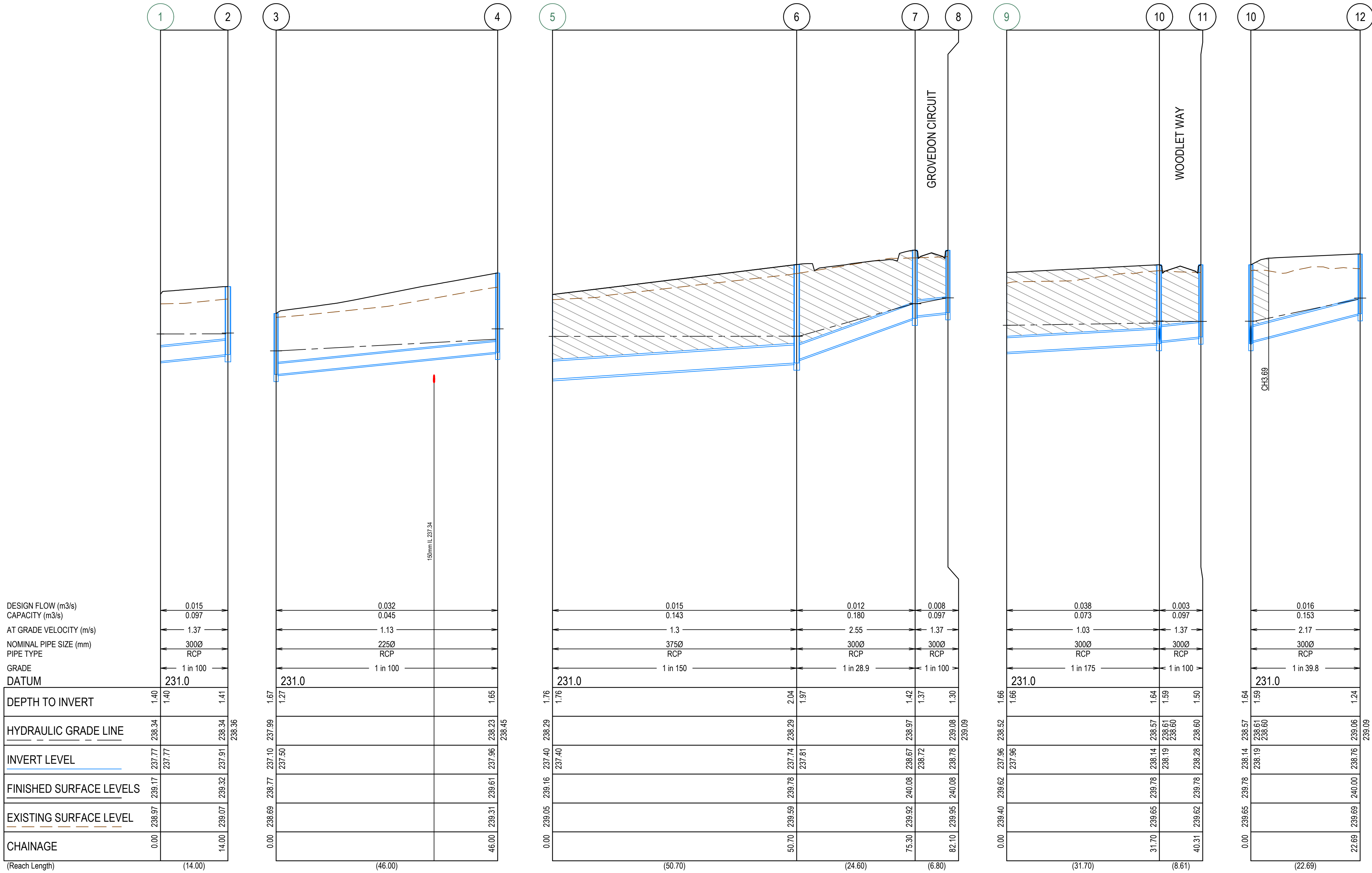
WHERE DRAINS ARE UNDER ANY PAVED AREA OR BEHIND THE KERB AND CHANNEL THE DRAINS IS TO BE BACKFILLED AS FOLLOWS

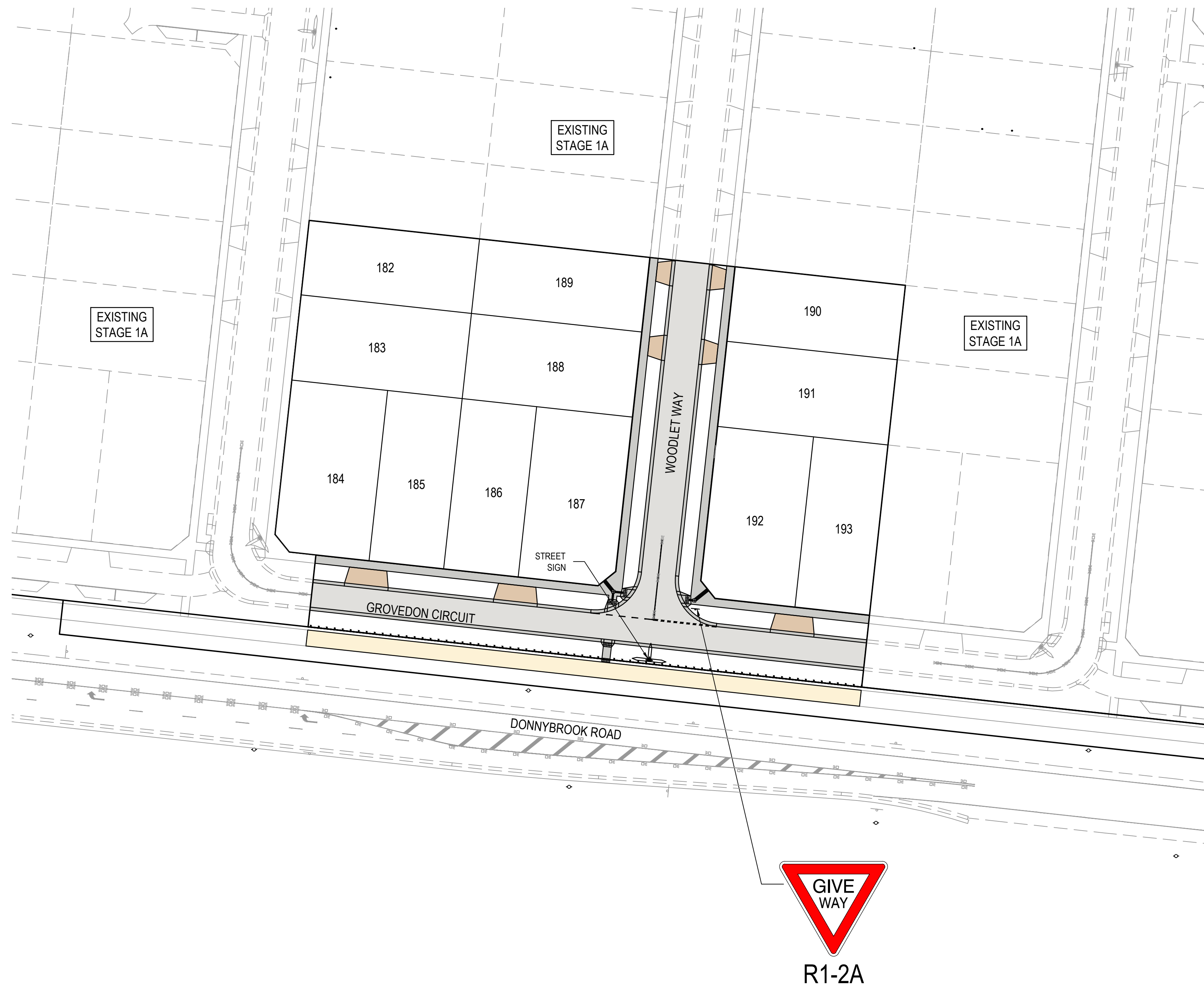
2.1.

30mm NOM. SIZE CLASS 3 FCR TO 100mm ABOVE THE TOP OF PIPE.

2.2.

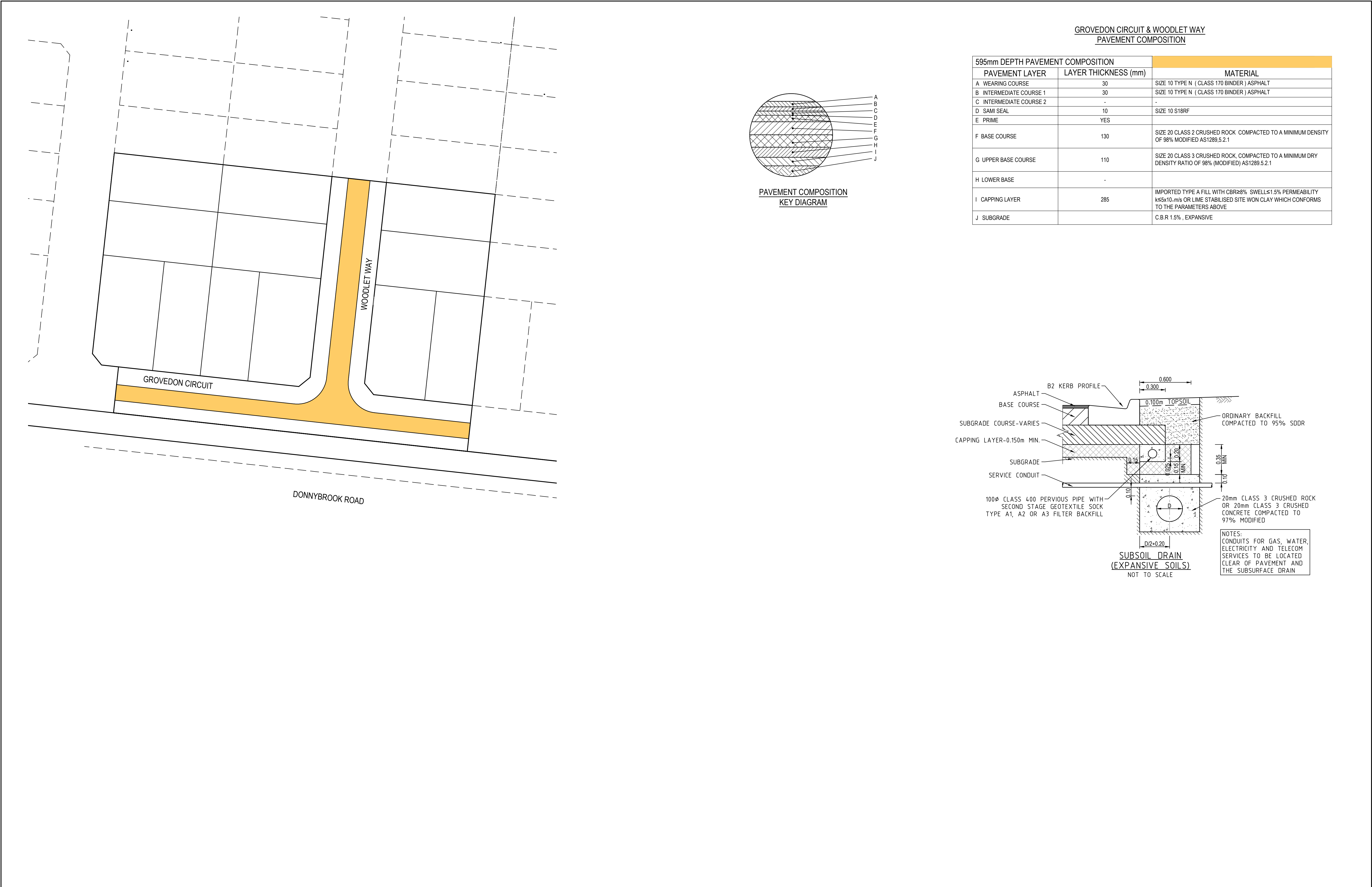
LOW PERMEABILITY CLASS 4 FCR FROM 100mm ABOVE THE TOP OF PIPE TO UNDERSIDE OF PAVEMENT





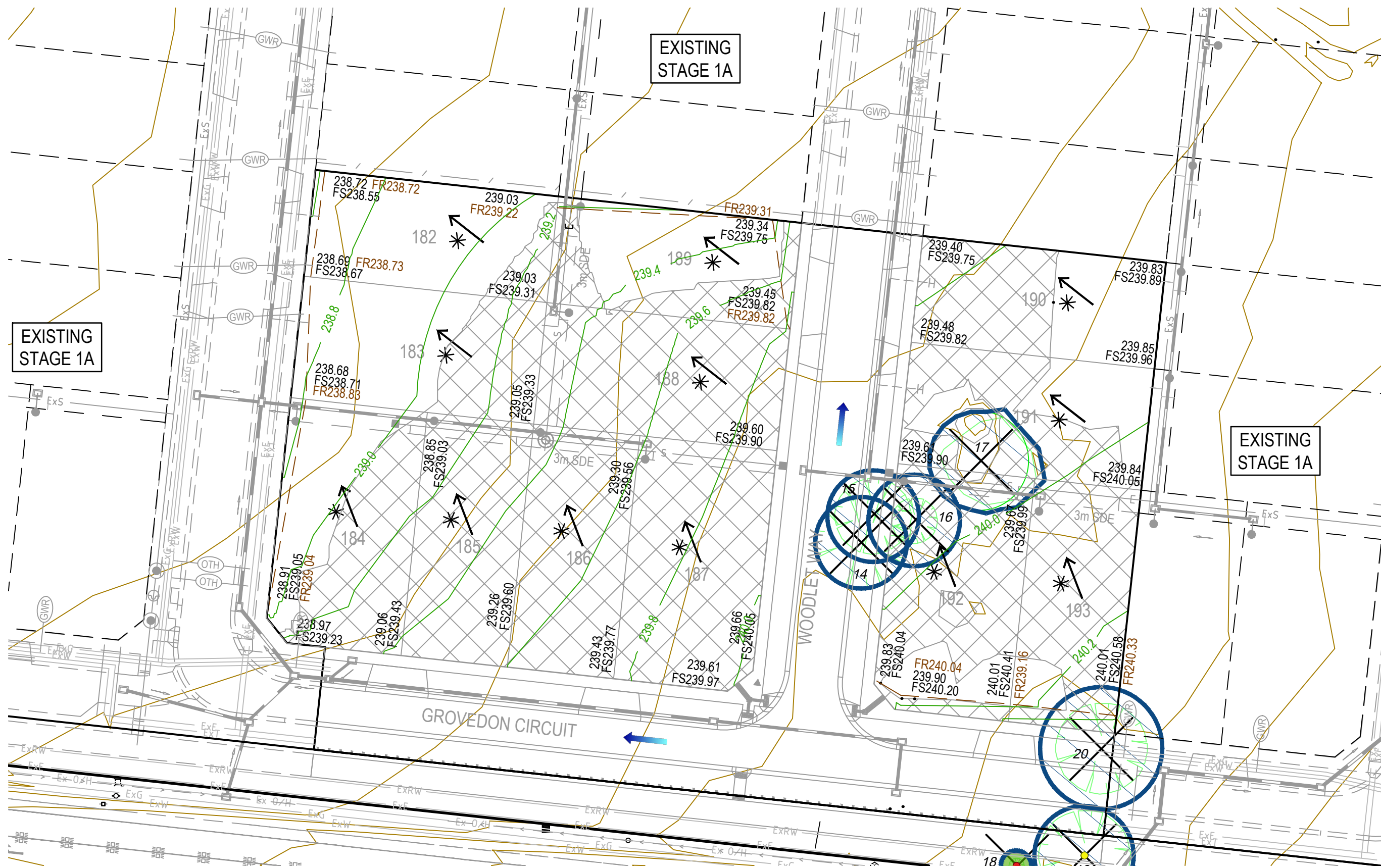
- NOTES**
1. 90° BENDS TO HAVE CENTRELINE MARKING WITH RRPMS AT MAX 6m SPACING.
 2. RRPMS TO BE IN ACCORDANCE WITH VICROADS TRAFFIC ENGINEERING MANUAL VOL 2.
 3. ALL LINEMARKING & SIGNAGE TO BE IN ACCORDANCE WITH AUSTRALIAN STANDARD AS1742.

<p>AS CONSTRUCTED PLANS</p> <p>The purpose of these as-constructed plans is to update the design drawings to show significant changes which occurred during construction. Note that the levels shown on these plans are design levels, and have not been verified by survey. All information shown on these plans should be verified on site. SMEC Australia Pty Ltd accept no responsibility for loss or damages resulting from the inappropriate usage of these plans.</p>	<p>All setting out should be carried out in accordance with MPA/Council's standard drawings or as nominated on hard copy plans provided by SMEC. Any digital information supplied by this office is for information only. Any discrepancies should be discussed with the superintendent.</p>	<table><tr><th>TITLE</th><th>NAME</th></tr><tr><td>DRAFTER</td><td>R.Barua</td></tr><tr><td>DESIGNER</td><td>S.MacLaren</td></tr><tr><td>CHECKED</td><td>K.Moore</td></tr><tr><td>AUTHORISED</td><td>A.Burrows</td></tr><tr><td>REFERENCE No. 1</td><td></td></tr><tr><td>REFERENCE No. 2</td><td></td></tr></table>	TITLE	NAME	DRAFTER	R.Barua	DESIGNER	S.MacLaren	CHECKED	K.Moore	AUTHORISED	A.Burrows	REFERENCE No. 1		REFERENCE No. 2		<p>0 5 10 20</p> <p>Scale 1:500</p> <p>SCALE AS SHOWN AT A1</p>	<p>N</p>	<p>SMEC</p> <p>Member of the Surbana Jurong Group</p> <p>ABN 47 065 475 149</p> <p>Tower 4, Level 20, 727 Collins Street Docklands, VIC 3008 Ph 03 9514 1500</p>		<p>Olivine Estate - Stage 1C Whittlesea City Council Road and Drainage Signs & Linemarking Plan</p>	<table><tr><td>MELWAYS REF 8 M2</td><td>PROJECT / DRAWING No. 1700E-01C-08</td><td>SHEET No. 08 of 11</td><td>REVISION 1</td></tr></table>	MELWAYS REF 8 M2	PROJECT / DRAWING No. 1700E-01C-08	SHEET No. 08 of 11	REVISION 1
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MELWAYS REF 8 M2	PROJECT / DRAWING No. 1700E-01C-08	SHEET No. 08 of 11	REVISION 1																							



GROVEDON CIRCUIT & WOODLET WAY
PAVEMENT COMPOSITION

595mm DEPTH PAVEMENT COMPOSITION		
PAVEMENT LAYER	LAYER THICKNESS (mm)	MATERIAL
A WEARING COURSE	30	SIZE 10 TYPE N (CLASS 170 BINDER) ASPHALT
B INTERMEDIATE COURSE 1	30	SIZE 10 TYPE N (CLASS 170 BINDER) ASPHALT
C INTERMEDIATE COURSE 2	-	-
D SAMI SEAL	10	SIZE 10 S18RF
E PRIME	YES	
F BASE COURSE	130	SIZE 20 CLASS 2 CRUSHED ROCK COMPACTED TO A MINIMUM DENSITY OF 98% MODIFIED AS1289.5.2.1
G UPPER BASE COURSE	110	SIZE 20 CLASS 3 CRUSHED ROCK, COMPACTED TO A MINIMUM DRY DENSITY RATIO OF 98% (MODIFIED) AS1289.5.2.1
H LOWER BASE	-	
I CAPPING LAYER	285	IMPORTED TYPE A FILL WITH CBR≥8% SWELL≤1.5% PERMEABILITY k≤5x10.m/s OR LIME STABILISED SITE WON CLAY WHICH CONFORMS TO THE PARAMETERS ABOVE
J SUBGRADE		C.B.R 1.5% , EXPANSIVE



LEGEND - LAYOUT PLAN	
ALL PROPOSED, FUTURE & EXISTING SERVICE LOCATIONS ARE SHOWN INDICATIVELY	
	STORMWATER DRAIN, PIT & PROPERTY INLET
	MAIN DRAIN
	SWALE DRAIN
	SEWER & MAINTENANCE STRUCTURES
	HOUSE DRAIN
	ELECTRICITY (U.GROUND)
	GAS
	TELSTRA
	WATER
	RECYCLE WATER
	AG. DRAIN
	SERVICE CONDUITS
	TACTILE PAVERS
	EXISTING STORMWATER DRAIN
	EXISTING MAIN DRAIN
	EXISTING SWALE DRAIN
	EXISTING SEWER & MAINTENANCE STRUCTURES
	EXISTING HOUSE DRAIN
	EXISTING ELECTRICITY (UNDER GROUND)
	EXISTING GAS
	EXISTING TELSTRA
	EXISTING WATER
	EXISTING RECYCLED WATER
	EXISTING AG. DRAIN
	EXISTING SERVICE CONDUITS
	EXISTING TACTILE PAVERS
	FUTURE STORMWATER DRAIN
	FUTURE MAIN DRAIN
	FUTURE SWALE DRAIN
	FUTURE SEWER & MAINTENANCE STRUCTURES
	FUTURE HOUSE DRAIN
	FUTURE ELECTRICITY (UNDER GROUND)
	FUTURE GAS
	FUTURE TELSTRA
	FUTURE WATER
	FUTURE RECYCLED WATER
	FUTURE AG. DRAIN
	FUTURE SERVICE CONDUITS
	FUTURE TACTILE PAVERS
	ZERO LOT LINES
	141.34 EXISTING SURFACE LEVEL
	FS140.35 FINISHED BUILDING LINE LEVEL
	FR157.40 FINISHED RIDGE LINE LEVEL
	CH270.00 CHAINAGE
	TW159.60 TOP OF RETAINING WALL LEVEL
	BW159.00 BOTTOM OF RETAINING WALL LEVEL
	EXISTING RETAINING WALL
	RETAINING WALL
	FUTURE RETAINING WALL
	STRUCTURAL FILL > 200mm DEEP
	EXISTING STRUCTURAL FILL > 200mm DEEP
	CUT > 200mm DEEP
	DIRECTION OF FALL
	OVERLAND FLOW
	GRADED IN DIRECTION OF FALL TO LEVEL INDICATED
	EDGE STRIP, SUBSOIL DRAIN, "NO ROAD" SIGN & BARRIER
	EXISTING RED GUMTREE & CANOPY TO BE REMOVED
	EXISTING OTHER SPECIES TREE & CANOPY TO BE REMOVED
	EXISTING RED GUM TO BE RETAINED
	EXISTING OTHER SPECIES TO BE RETAINED
	PERMANENT SURVEY MARK
	TEMPORARY BENCH MARK

WARNING
BEWARE OF UNDERGROUND SERVICES
The locations 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.
Locate all underground services before commencement of works
DIAL 1100 BEFORE YOU DIG
www.1100.com.au

AS CONSTRUCTED PLANS

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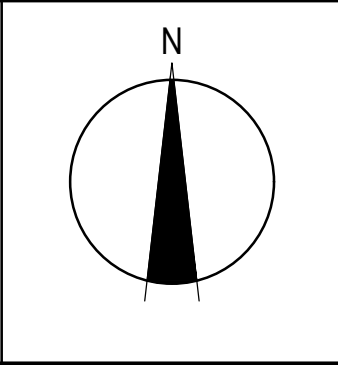
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TITLE	NAME
DRAFTER	R.Barua
DESIGNER	S.MacLaren
CHECKED	K.Moore
AUTHORISED	A.Burrows
REFERENCE No. 1	
REFERENCE No. 2	

051020

Scale 1:500

SCALE AS SHOWN AT A1



SMEC
Member of the Surlana Jurong Group
© ABN 47 065 475 149
Tower 4, Level 20, 727 Collins Street
Docklands, VIC 3008
Ph 03 9514 1500



Olivine Estate - Stage 1C
Whittlesea City Council
Road and Drainage
Earthworks Plan

MELWAYS REF 8 M2	PROJECT / DRAWING No. 1700E-01C-10	SHEET No. 10 of 11	REVISION 1
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PHASE	DISCIPLINE CODE	RISK REGISTER -Construction- Operations- Maintenance			RISK OWNER	POTENTIAL CONSEQUENCES	POTENTIAL ELIMINATION MEASURE, DESIGN INITIATIVE or CONTROL (Identify any Standard or Code of practice used)	HOW ISSUE ADDRESSED IN DESIGN AND/OR CONSTRUCTION OF THE WORKS	IS THE RISK ELIMINATED YES/NO	Residual Risk Likelihood (0-5)	Residual Risk Consequence (0-5)	Residual Risk Rating	RESIDUAL RISK OWNER
			Road Furniture / Roadside features										
Construction	RD	#N/A	Construction close to live traffic	New works will be constructed adjacent to live traffic when abutting existing stages.	Contractor	Disruptions to live traffic, construction incident involving live traffic.	Provide safe temporary traffic control (TCP)	TCP provided within contract	N	5	3	15	Constructor
Construction	RD	#N/A	Culverts	Potential risk from culverts under construction and height / fall hazards	Contractor	Falling from a height	Temporary barriers to be provided	Temporary barrier provided in contract	N	2	5	10	Constructor
Construction	US	#N/A	Utilities become a hazard within clear zones	Vehicle conflict with utility / pit	Contractor	Personal injury, vehicle damage	Sequence works and protect with temp barrier or traffic control (TCP)	TCP provided within contract	N	1	5	5	Constructor
Operational	RD	#N/A	Sight Lines	Inadequate drivers response time.	Road Authority	Increased potential for accidents	Ensure design complies with relevant standard. Undertake thorough Safety Audit	Vis lines checked and discussed with approval authority as part of design approval process	N	1	4	4	Road Authority
Operational	LS	#N/A	Signs and street lights	Potential for drivers / riders to strike signs and street lights	Road Authority	Increased potential for accidents	Ensure design complies with relevant standard. Undertake thorough Safety Audit	Refer to appropriate standard for sign and lighting offsets	N	1	4	4	Road Authority
Operational	RF	#N/A	Headwalls	Potential vehicle conflict within clear zone	Road Authority	Increased potential for accidents	Establish adequate clear zone provision	Adequate barrier provided as per appropriate standard where within clear zone. Culvert headwall selection in accordance with authority standard	N	2	4	8	Road Authority
Operational	RD	#N/A	Culverts	Potential fall hazard during maintenance, by vehicles and pedestrians	Relevant Authority	Falling from a height	Barriers to be provided in accordance with road standards	Barriers to be provided and safe batter slopes (>1:3)	N	2	5	10	Constructor
			Retaining Walls										
Construction	RW	#N/A	Retaining Wall Alignment	Falling from height during construction or commissioning of walls and adjacent structures eg. sewer manholes	Contractor	Falling from a height	Provide temporary and permanent fencing at top of wall.	Provide fencing (at heights) during design process	N	1	1	1	Constructor
Operational	RW	#N/A	Retaining Wall Alignment	Lack of safe access/setback from road	Road/ Local Authority	Increased potential for accidents	Establish adequate and accessible clear zone provision. Provide guardrail where required	Wall located in suitable position during design process and approved by authority	N	1	1	1	Authority
Operational	RW	#N/A	Retaining Wall Height	Potential for falling from height	Road/ Local Authority	Personal injury	Provide temporary and permanent fencing at top of wall.	Provide fencing (at heights) during design process	N	1	5	5	Authority
Operational	RW	#N/A	Retaining Wall Design	Potential for wall failure	Road/ Local Authority	Increased potential for accidents	Structural design in accordance with standards, geotechnical conditions, end use and good practise.	Refer to structural drawings and calculations	N	1	5	5	Authority
			Drainage										
Operational	DR	#N/A	Grated Pits	Trip/fall hazard with large spaced grate	Relevant Authority	Increased potential for accidents	Provide pedestrian/bicycle friendly grates where applicable. Refer to pit schedule	Design in accordance with authority and manufacturers standards	N	3	2	6	Authority
Operational	DR	#N/A	Non Standard Large Pits	Potential for pit failure	Relevant Authority	Increased risk to maintenance crews/ vehicles	Structural design in accordance with relevant design principles.	Refer to structural drawings and calculations	N	1	4	4	Authority
Operational	DR	#N/A	Culvert Endwalls/Headwalls	Potential for falling from height	Relevant Authority	Increased potential for accidents	Fencing to be provided where culverts/headwalls are at height in accordance with relevant authority standards	Allow for fencing in Design Process	N	1	4	4	Authority
Operational	DR	#N/A	Culvert Endwall/Headwall Outlets	Children playing in large pipes / watercourses and access for maintenance	Relevant Authority	Increased potential for accidents	Grate provided to authority standards	Design in accordance with authority and manufacturers standards	N	2	5	10	Authority
Maintenance	DR	#N/A	Access to Pits	Lack of safe access for maintenance	Relevant Authority	Increased risk to maintenance crews	Provide safe working conditions for maintenance. Provide safe landing/ access arrangements as per relevant authority standards	Where possible design pit in location for easy access and outside of permanent water bodies	N	2	5	10	Authority
Maintenance	DR	#N/A	Deep Pits	Lack of safe entry for maintenance	Relevant Authority	Increased potential for accidents	Contractor to be certified for work in confined spaces, step irons to be provided to appropriate authority standards. Refer to pit schedule	Design in accordance with authority standards	N	1	5	5	Authority
Maintenance	DR	#N/A	Access to drains / culverts	Lack of safe access for maintenance	Relevant Authority	Increased risk to maintenance crews	Provide safe working conditions for maintenance. Access as approved by authority	Design pit in location for easy access as agreed with authority	N	2	3	6	
			Sewer										
Construction	SE	#N/A	Sewer Manhole located adjacent to Retaining Wall Alignment	Falling from height during construction or commissioning of adjacent sewer manholes	Contractor	Falling from a height	Provide temporary fencing until such time that permanent fencing is constructed	Provide fencing (at heights) during design process	N	1	1	1	Constructor
Maintenance	SE	#N/A	Deep Manholes	Lack of safe entry for maintenance	Relevant Authority	Increased potential for accidents	Contractor to be certified for work in confined spaces, landings and step access provided as per authority standards and schedule	Design in accordance with authority standards. Refer pit schedule on drawings	N	1	5	5	Authority
Maintenance	SE	#N/A	Access to Manholes	Lack of safe access for maintenance	Relevant Authority	Increased risk to maintenance crews	Provide safe working conditions for maintenance. Manholes located in compliance with authority standards	Where possible design manhole in location for easy access	N	1	5	5	Authority
Maintenance	SE	#N/A	Pump Station Access	Lack of safe access for maintenance	Relevant Authority	Increased risk to maintenance crews	Provide safe working conditions for maintenance	Design pump station in location for easy access	N	2	4	8	Authority
			Electricity										
Operational	ES	#N/A	Electrical Design	Location of assets within clear zones e.g.. pits/ substations	Relevant Authority	Increased potential for accidents	Electrical designed by sub consultant with appropriate accreditation and in accordance with authority standards	Pits designed below ground. Where above ground adequate offset from vehicle clear zones has been provided or barrier protection provided	N	2	3	6	Authority
			Telstra										
Operational	TE	#N/A	Telstra Design	Location of assets within clear zones e.g.. pits	Relevant Authority	Increased potential for accidents	Telecommunications designed by authority consultant with appropriate accreditation and in accordance with authority standards	Pits designed below ground. Where above ground adequate offset from vehicle clear zones has been provided or barrier protection provided	N	2	3	6	Authority
			Water										
Operational	WA	#N/A	Water Design	Location of assets within clear zones e.g.. pits/ substations	Relevant Authority	Increased potential for accidents	Water pits designed in accordance with authority standards	Pits designed below ground. Where above ground adequate offset from vehicle clear zones has been provided or barrier protection provided	N	2	3	6	Authority
			Gas										
Operational	GA	#N/A	Gas Design	Location of assets within clear zones e.g.. pits/ substations	Relevant Authority	Increased potential for accidents	Water pits designed in accordance with authority standards	Pits designed below ground. Where above ground adequate offset from vehicle clear zones has been provided or barrier protection provided	N	1	1	1	Authority
												0	

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Quality Management - ISO 9001

Site Management - AS/NZS 1801

Environmental Management - ISO 14001

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TITLE

NAME

DRAFTER

R.Barua

DESIGNER

S.MacLaren

CHECKED

K.Moore


AUTHORISED

A.Burrows

REFERENCE No. 1

REFERENCE No. 2

SCALE AS SHOWN AT A1




SMEC

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Olivine Estate - Stage 1C

Whittlesea City Council

Road and Drainage

Safety in Design

MELWAYS REF

8 M2

PROJECT / DRAWING No.

1700E-01C-85

SHEET No.

11 of 11

REVISION

1

DWG PATH: V:_Vault\Projects_Urban\1700E-Olivine\1700E-01C\DWgs\1700E-01C-85.dwg PRINTED BY: LC20143 on 03/03/2021 at 02:42:14 PM