

# Olivine Estate

## Stage 2



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TBM SETOUT TABLE				
POINT	EAST	NORTHING	ELEVATION	DESCRIPTION
C34SSPL	323383.546	5842934.15	238.735	STEEL STAR PICKET
C68PM7L	323210.099	5842698.35	237.616	PERMANENT MARK PM77
C75PM50L	322900.181	5842750.808	240.178	PERMANENT MARK PM50
C76SSPL	323262.295	5842715.378	236.886	STEEL STAR PICKET
C77RVTRG	323038.436	5842738.371	243.696	RIVET IN ROCK
C78SSPG	322835.256	5842759.893	239.488	STEEL STAR PICKET
C79SSPL	322866.202	5842778.237	238.207	STEEL STAR PICKET
C80SPK8G	322654.654	5842776.01	238.428	SPIKE IN BITUMEN
C81SSPL	322549.258	5842791.748	235.563	STEEL STAR PICKET
C82SSPL	322570.163	5842989.303	236.275	STEEL STAR PICKET
C83SSPL	322595.579	5843198.908	239.115	STEEL STAR PICKET
C84RVTRL	322617.683	5843412.157	242.457	RIVET IN ROCK
C85SSPL	322640.995	5843611.461	239.572	STEEL STAR PICKET
C93SSPL	323276.817	5842944.336	237.989	STEEL STAR PICKET
C104RVTRL	322946.48	5843298.043	243.686	RIVET IN ROCK
C106SSPL	322762.605	5842991.952	238.464	STEEL STAR PICKET
C107SSPL	322900.731	5843023.612	240.323	STEEL STAR PICKET
C108SSPL	323208.79	5843072.045	241.058	STEEL STAR PICKET
C109SSPL	322932.732	5843474.686	243.559	STEEL STAR PICKET

### GENERAL NOTES (WHITTLESEA CITY COUNCIL)

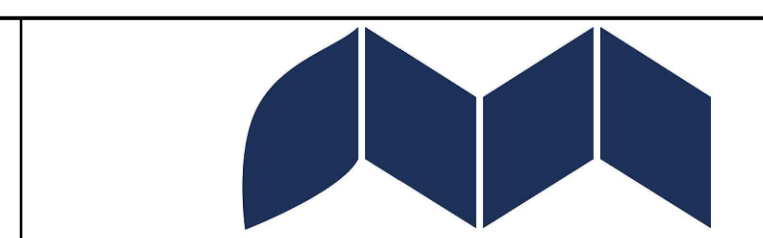
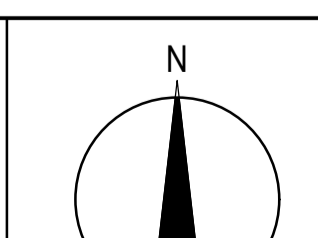
1. THE WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE VPA MANUAL AND SPECIFICATIONS. WORKS TO BE CARRIED OUT TO THE SATISFACTION OF COUNCIL'S SUPERVISING OFFICER.
2. THE CONTRACTOR IS RESPONSIBLE FOR SAFETY OF WORK ON SITE IN ACCORDANCE WITH APPROPRIATE LEGISLATION. THEY SHALL ERECT AND MAINTAIN ALL 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.
3. THE CONTRACTOR SHALL:
  - 3.1. COMPLY WITH THE SAFETY REQUIREMENTS OF THE MINES ACT, GENERAL REGULATIONS AND STATUTORY RULES, AND THE MINES (TRENCHES) REGULATIONS 1982.
  - 3.2. NOTIFY THE OCCUPATIONAL HEALTH AND SAFETY AUTHORITY OF HIS INTENTION TO COMMENCE TRENCHING OPERATIONS WHERE TRENCHES ARE 1.5 METRES OR DEEPER.
  - 3.3. ENSURE THAT THE MINE MANAGER OR HIS DEPUTY AS REQUIRED BY THE REGULATIONS IS IN ATTENDANCE WHEN TRENCHING OPERATIONS ARE IN PROGRESS.
4. THE CONTRACTOR IS TO NOTIFY COUNCIL AND ALL SERVICE AUTHORITIES SEVEN (7) DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
5. 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.
6. 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.
7. 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.
8. ALL LEVELS ARE TO AUSTRALIAN HEIGHT DATUM.
9. 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.
10. 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.
11. NO TOPSOIL TO BE REMOVED FROM SITE.
12. NO FILL OR STOCKPILING OF MATERIAL IS TO BE PLACED ON ANY RESERVE UNLESS DIRECTED BY THE SUPERINTENDENT.
13. 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.
14. FILLING UNDER DRIVEWAYS AND FOOTPATHS IS TO BE APPROVED BY THE SUPERINTENDENT AND CONSTRUCTED IN LAYERS 150mm DEPTH. COMPACTION ACHIEVING 98% AUSTRALIAN STANDARD DENSITY.
15. CUT AND FILL BATTERS ARE NOT TO EXCEED 1 in 6 UNLESS SHOWN OTHERWISE.
16. ALLOTMENTS TO BE GRADED TO ENSURE A MINIMUM GRADE OF 1 in 150.
17. 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.
18. ALL DRAINAGE TRENCHES UNDER ROAD PAVEMENTS, KERB & CHANNEL, PARKING BAYS, DRIVEWAYS, FOOTPATHS AND BEHIND KERBS & CHANNEL SHALL BE BACKFILLED WITH CRUSHED ROCK AS SPECIFIED.
19. ALL PITS GREATER THAN OR EQUAL TO 900mm DEPTH TO BE PROVIDED WITH STEP IRONS IN ACCORDANCE WITH EDM 609 PROPERTY INLETS AS PER WHITTLESEA CITY COUNCIL STANDARD DRAWING EDM 701-704 AND ARE TO BE LOCATED 1.0m FROM LOW SIDE BOUNDARY UNLESS SHOWN OTHERWISE.
21. 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.
22. SUBSOIL DRAINS SHALL BE INSTALLED BEHIND OR BELOW ALL KERBS AND CHANNEL AS PER STANDARD DRAWING EDM 202.
23. 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 EDM 303.
24. 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.
25. NO TELSTRA PITS ARE TO BE LOCATED IN THE FOOTPATH.
26. 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 EDM 501 TO 503.
27. ALL PEDESTRIAN CROSSING THROUGH SPLITTER ISLANDS TO BE IN ACCORDANCE WITH SD606.
28. 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.
29. 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.
30. 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 MODULUS OF 100MPa.
31. 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.
32. ALL FOOTPATHS & SHARED PATHS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH EDM 401.

**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](http://www.1100.com.au)

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DES/DT	APPROVAL
0	30.08.18	ISSUED FOR CONSTRUCTION	KMKM	AB
1	26.06.19	AS CONSTRUCTED	KMKM	AB

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.

TITLE	NAME
DRAFTER	S.Sathasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows

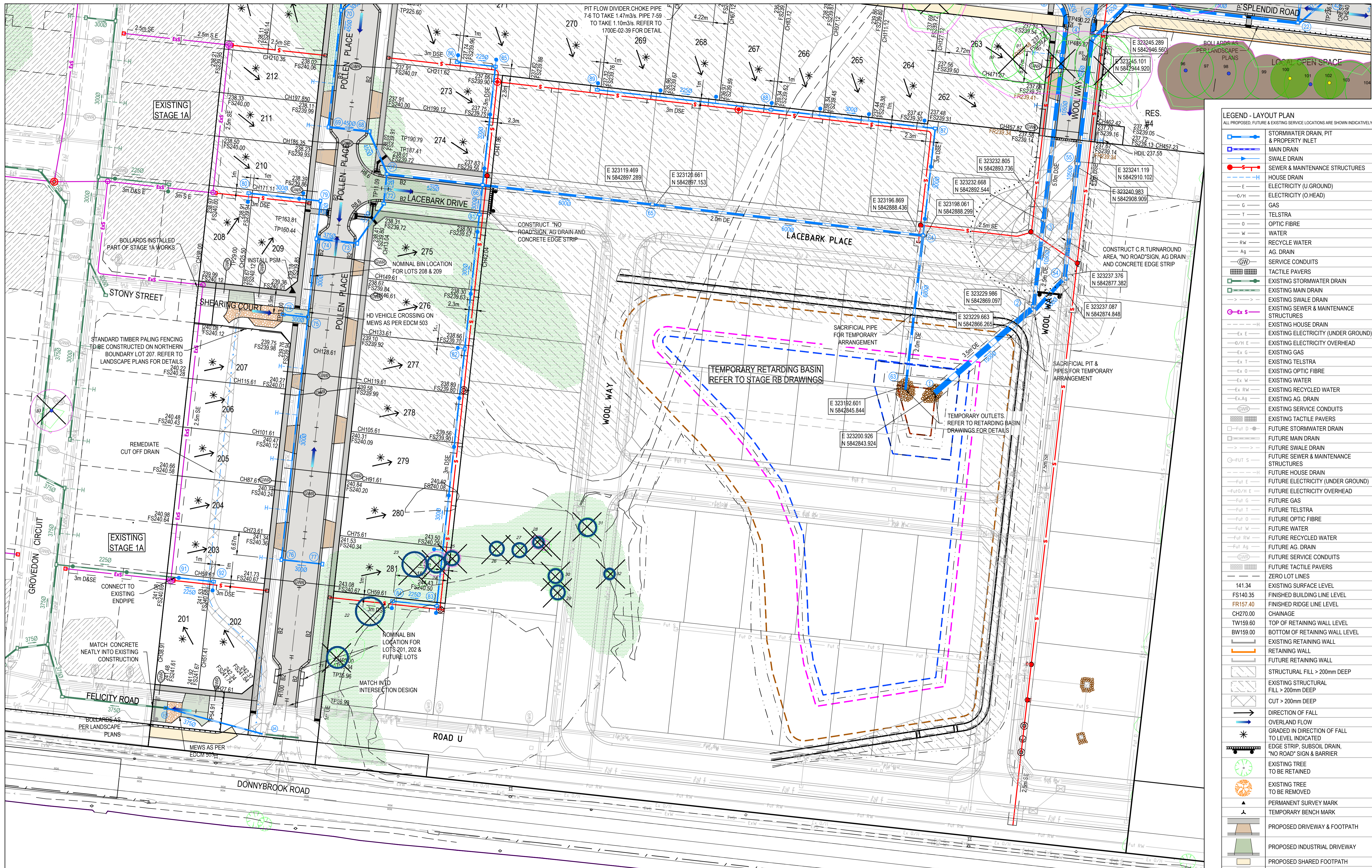


Olivine Estate - Stage 2  
 Whittlesea City Council  
 Road and Drainage  
 Cover Plan

**AS CONSTRUCTED**



MELWAYS REF	PROJECT / DRAWING No.	SHEET No.	REVISION
9 J2	1700E-02-01	01 of 44	1



**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)
	ELECTRICITY (O. HEAD)
	GAS
	TELSTRA
	OPTIC FIBRE
	WATER
	RECYCLE WATER
	AG. DRAIN
	SEWER CONDUITS
	TACTILE PAVERS
	EXISTING STORMWATER DRAIN
	EXISTING MAIN DRAIN
	EXISTING SWALE DRAIN
	EXISTING SEWER & MAINTENANCE STRUCTURES
	EXISTING HOUSE DRAIN
	EXISTING ELECTRICITY (UNDER GROUND)
	EXISTING ELECTRICITY OVERHEAD
	EXISTING GAS
	EXISTING TELSTRA
	EXISTING OPTIC FIBRE
	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 ELECTRICITY OVERHEAD
	FUTURE GAS
	FUTURE TELSTRA
	FUTURE OPTIC FIBRE
	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 TREE TO BE RETAINED
	EXISTING TREE TO BE REMOVED
	PERMANENT SURVEY MARK
	TEMPORARY BENCH MARK
	PROPOSED DRIVEWAY & FOOTPATH
	PROPOSED INDUSTRIAL DRIVEWAY
	PROPOSED SHARED FOOTPATH
	PROPOSED ROAD PAVING
	EXISTING ROAD PAVING

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
1	17.10.18	IRRIGATION CONDUITS AND KIOSK DRAIN INVERT LEVEL ADDED	KM/RB	AB
2	18.02.19	IRRIGATION CONDUIT LOCATION AMENDED	MA/MA	AB
3	20.03.19	EXPOSED AGGREGATE ON MEWS	MA/MA	AB
4	25.03.19	WOOL WAY TURNAROUND AMENDED FOR SEWER EDUCATION TRUCK	KM/RB	AB
5	26.06.21	AS CONSTRUCTED	KM/KU	AB

TITLE	NAME
DRAFTER	S.Sathasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows

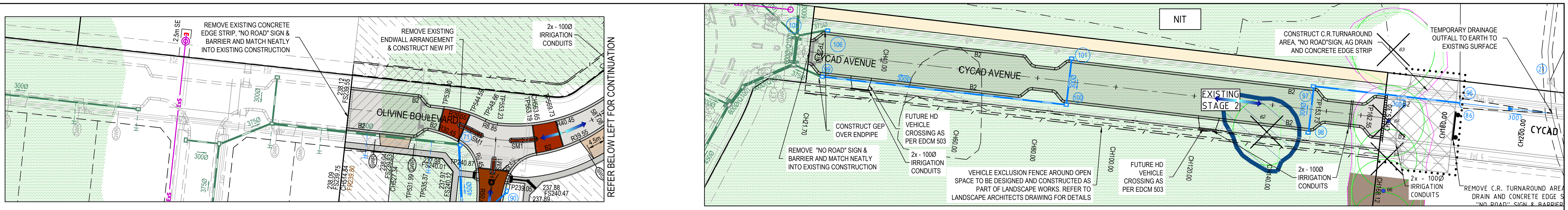
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**SMEC**  
 Member of the Surlana Jurong Group  
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 Melbourne, VIC 3004  
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**mirvac**

Olivine Estate - Stage 2  
 Whittlesea City Council  
 Road and Drainage  
 Layout Plan - 1

MELWAYS REF 9 J2	PROJECT / DRAWING No. 1700E-02-02	SHEET No. 02 of 44	REVISION 5
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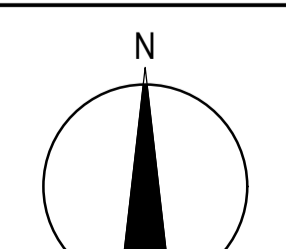
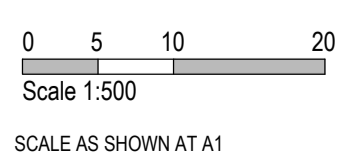
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0	30.08.18	ISSUED FOR CONSTRUCTION	KMKM	AB
1	12.10.18	IRRIGATION CONDUITS ADDED	KMKM	AB
2	30.01.19	DRIVEWAY LOCATION AMENDED FOR LOTS 270, 225 & 224	MA/MA	AB
3	18.02.19	IRRIGATION CONDUIT LOCATION AMENDED	MA/MA	AB
4	26.06.21	AS CONSTRUCTED	KMKU	AB

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.

TITLE	NAME
DRAFTER	S.Sathiasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows

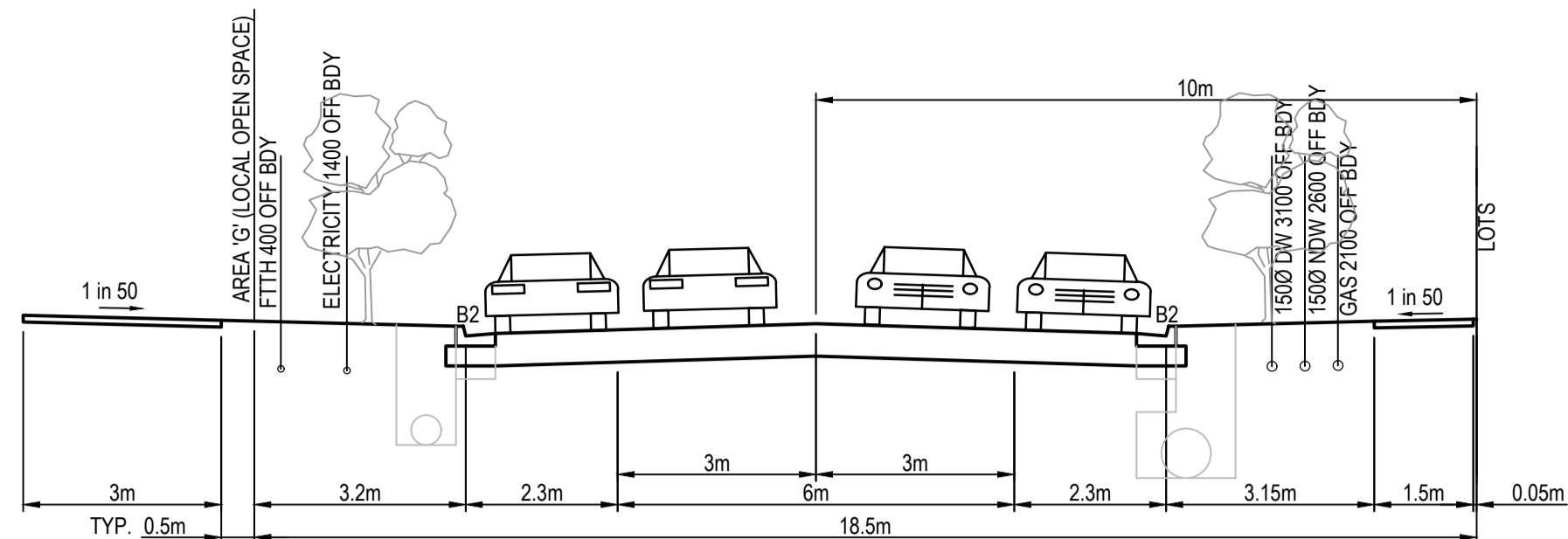


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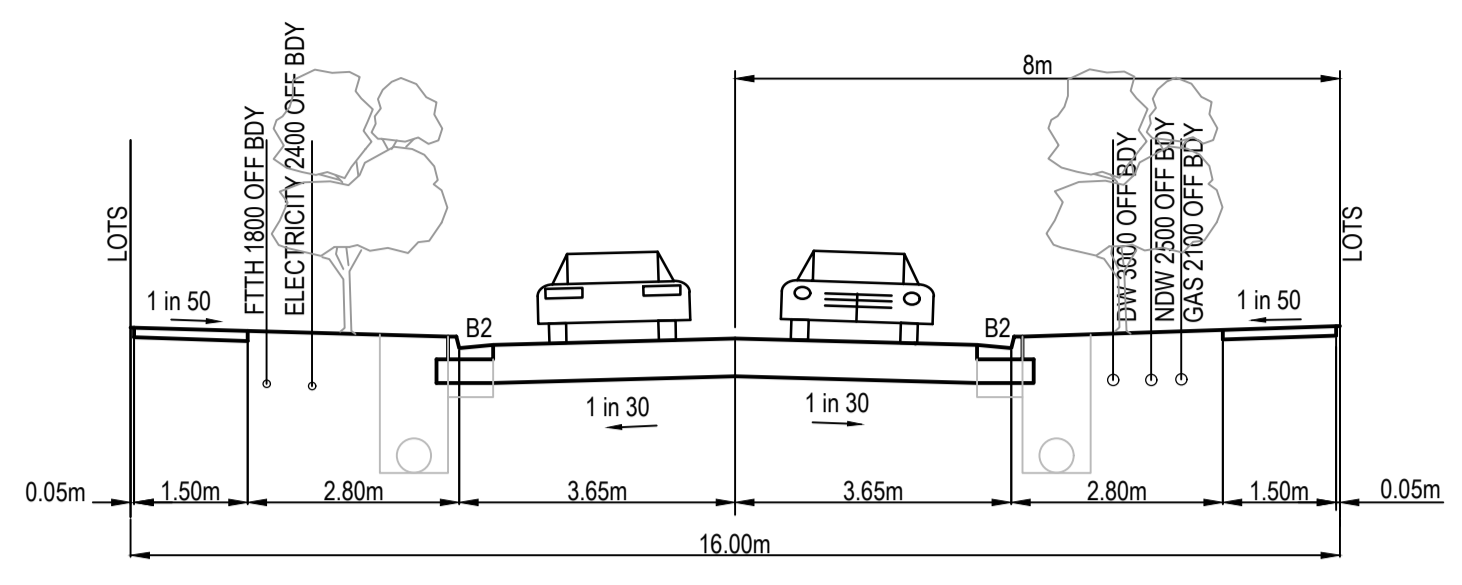
**mirvac**

Olivine Estate - Stage 2  
Whittlesea City Council  
Road and Drainage  
Layout Plan - 2

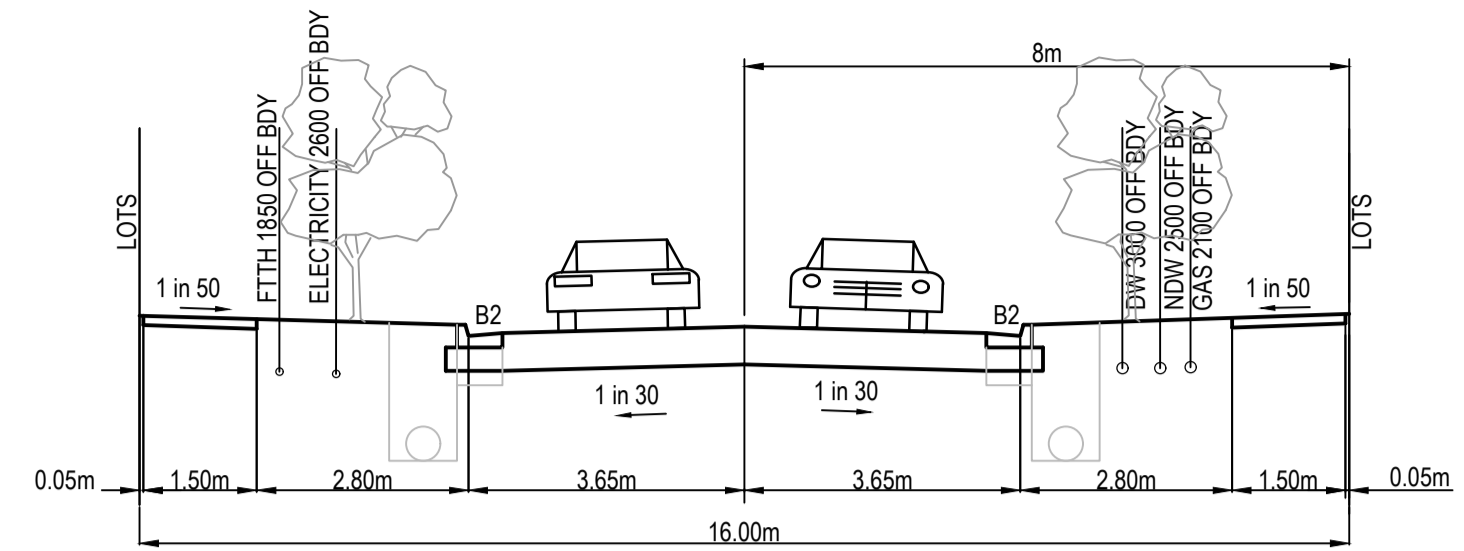
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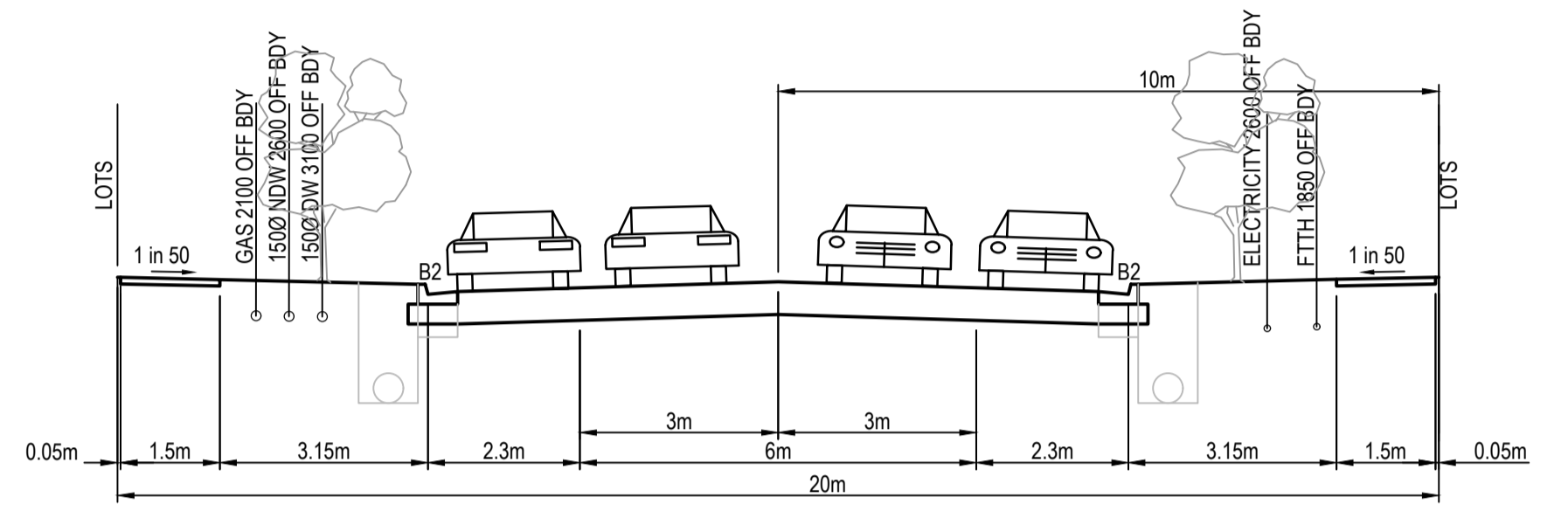
**18.5m MODIFIED ACCESS STREET 2**  
OLIVINE BOULEVARD ADJOINING LOTS & LOCAL OPEN SPACE



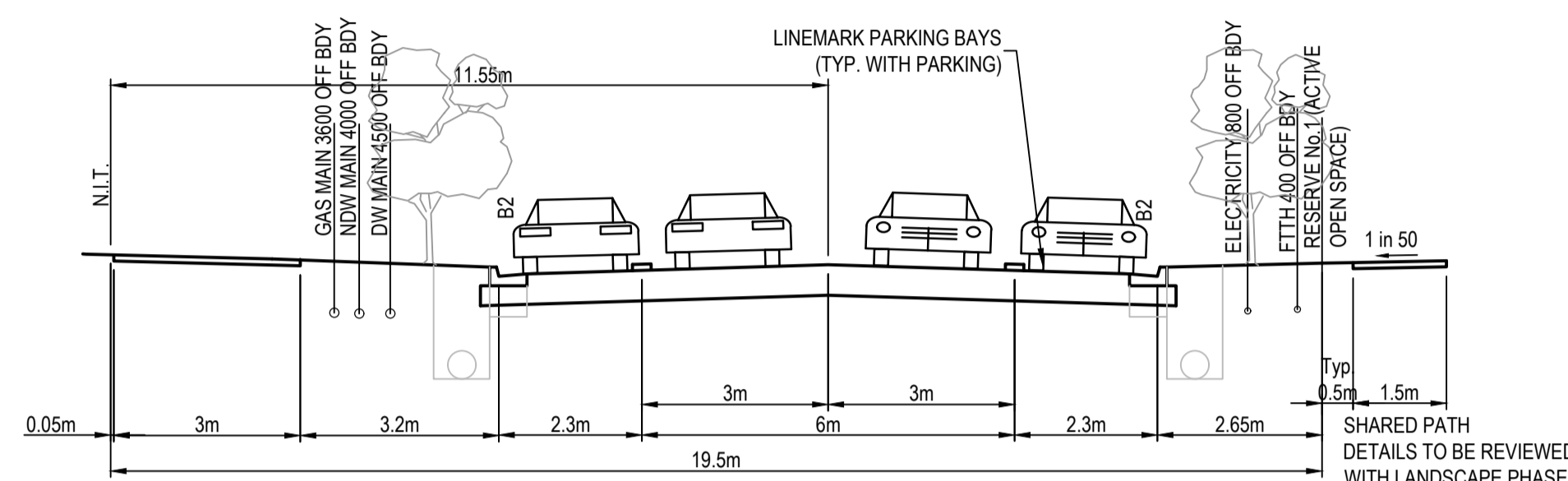
**16m ACCESS STREET**  
EASTROW AVENUE



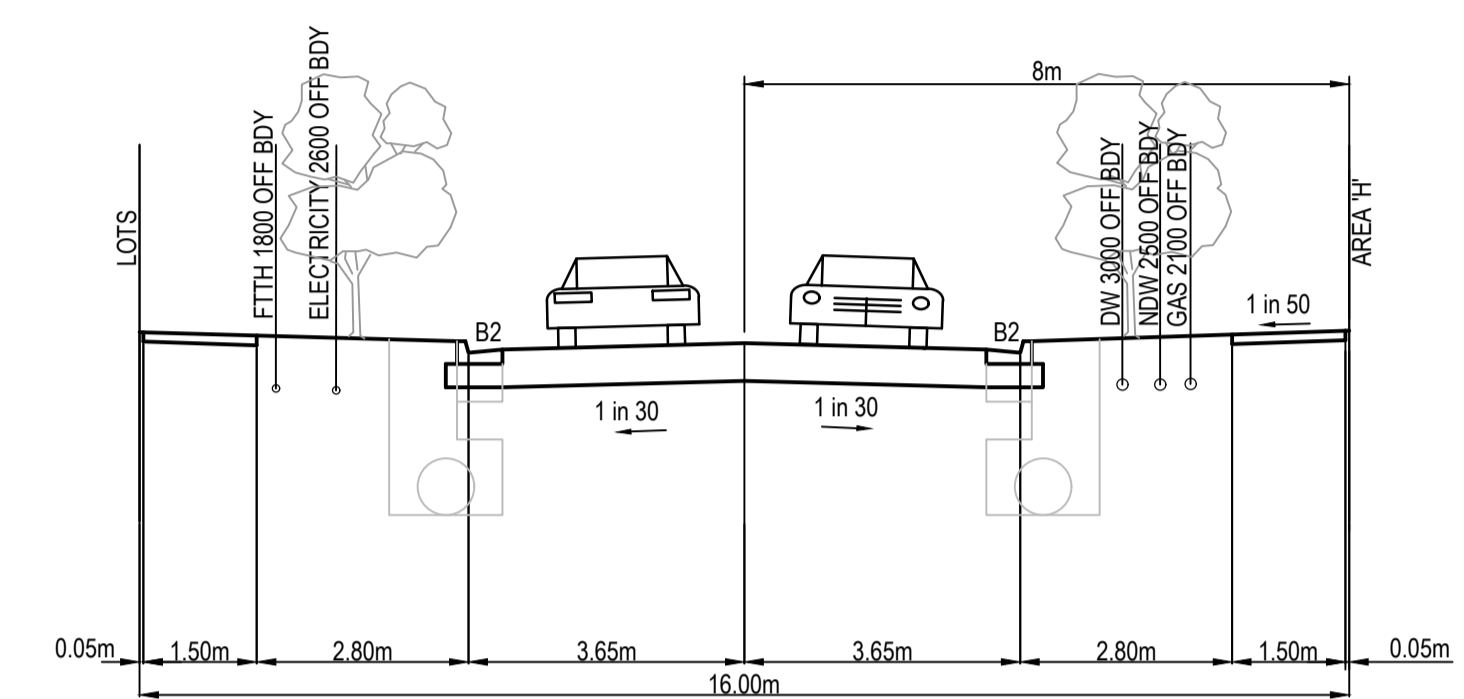
**16m ACCESS STREET**  
LACEBARK & COACH DRIVES



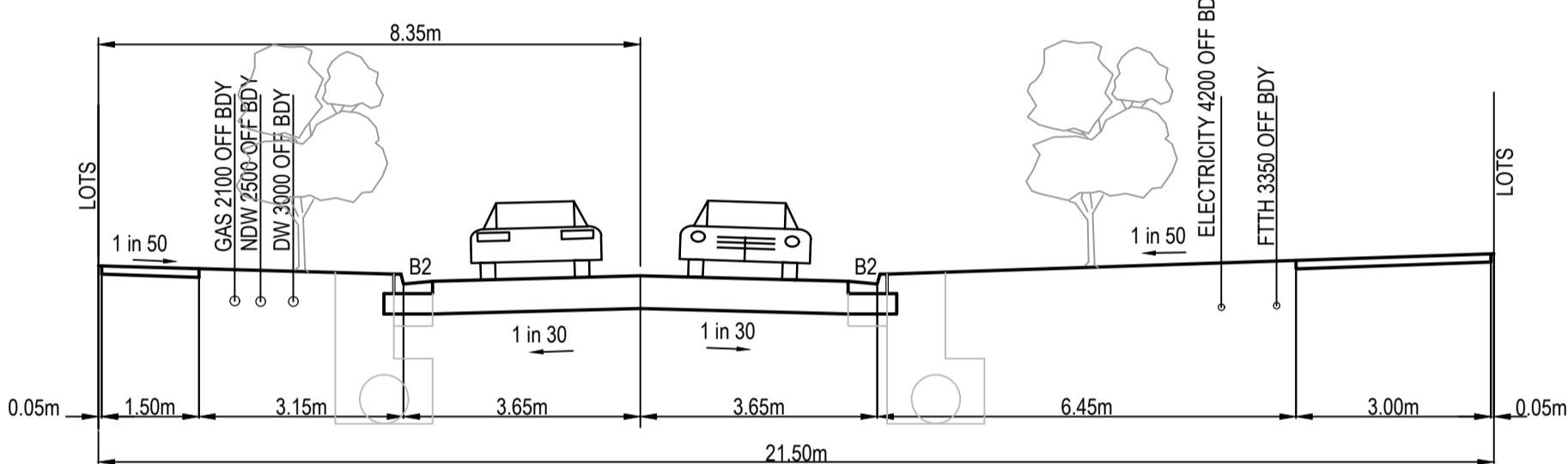
**20m MODIFIED ACCESS STREET 2**  
POLLEN PLACE



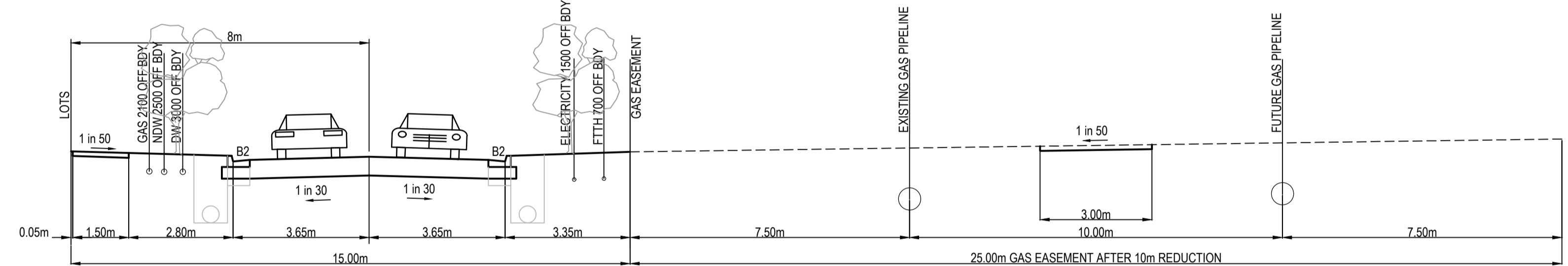
**19.5m MODIFIED ACCESS STREET 2 WITH SHARED PATH**  
CYCAD AVENUE



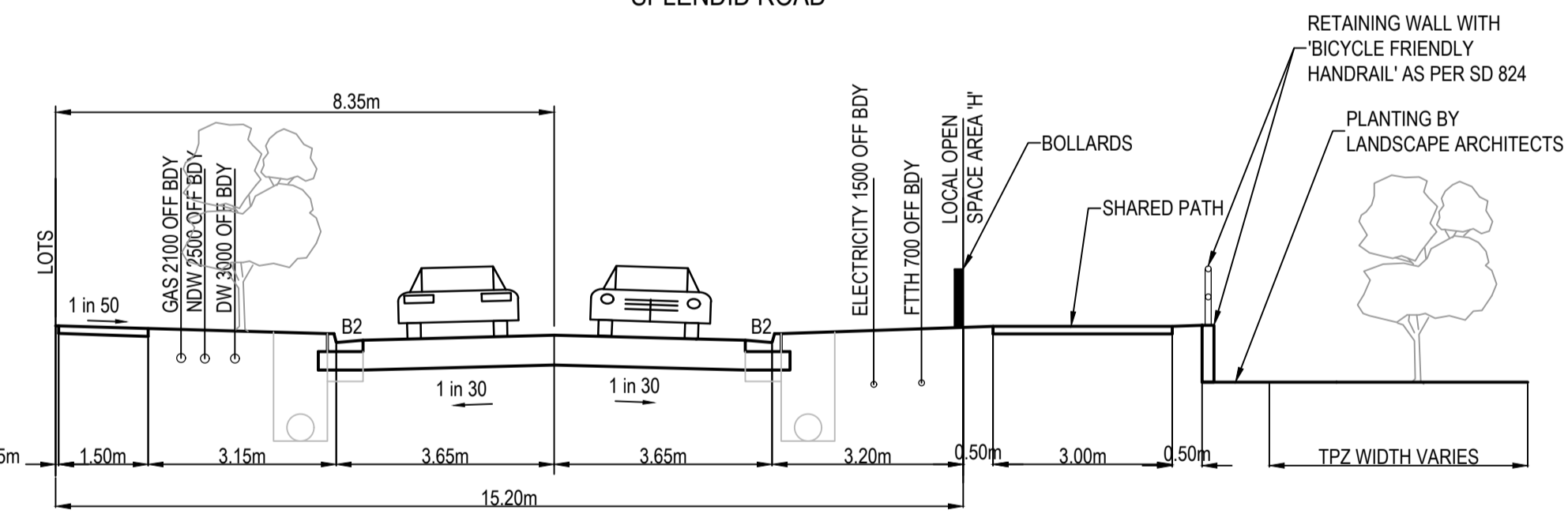
**16m ACCESS STREET - LARGE DRAINS**  
WOOL WAY



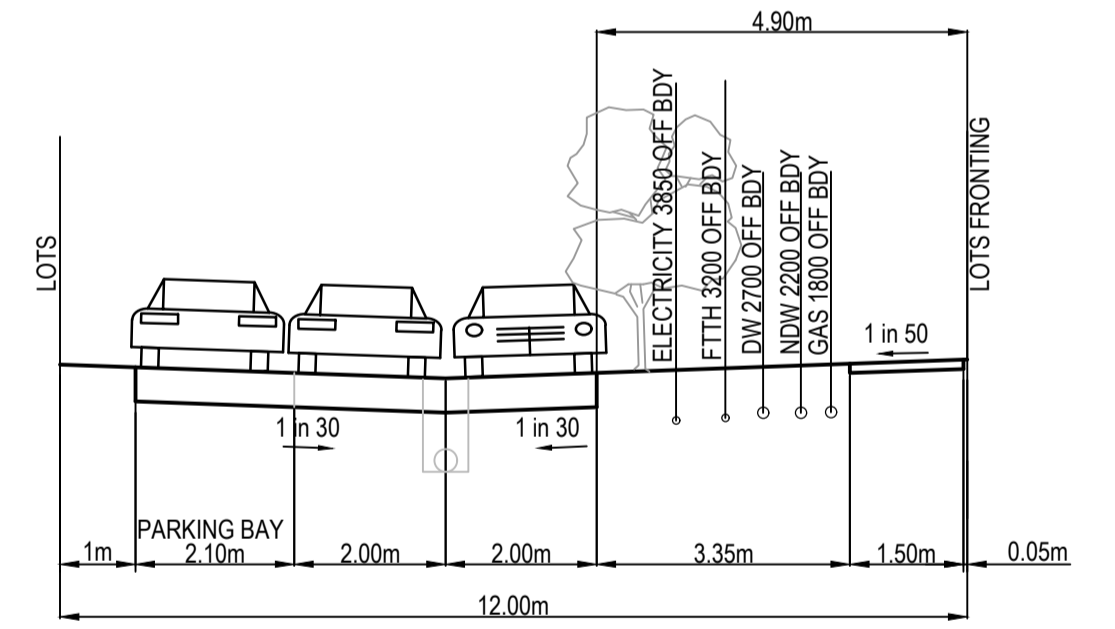
**21.5m MODIFIED ACCESS STREET 1 WITH OFF ROAD SHARED PATH**  
SPLENDID ROAD



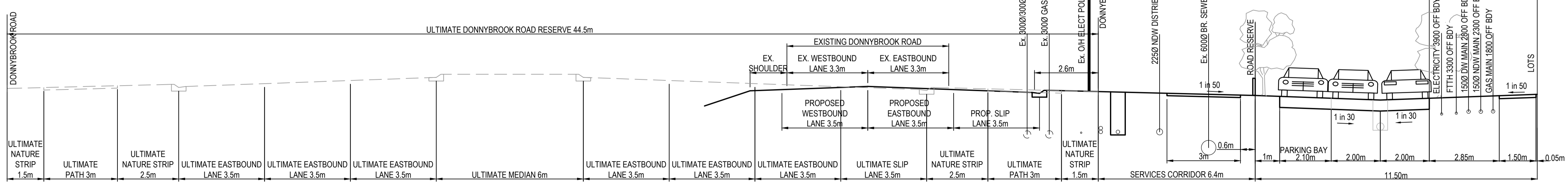
**15m MODIFIED ACCESS STREET 1 ADJACENT GAS EASEMENT**  
ORIEL ROAD ADJACENT GAS EASEMENT



**15.2m MODIFIED ACCESS STREET 1 ADJOINING OPEN SPACE**  
SPLENDID ROAD



**12m ACCESS LANE**  
SHEARING COURT



**11.5m ACCESS LANE ADJACENT DONNYBROOK ROAD**  
FELICITY ROAD

**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

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	30.08.18	ISSUED FOR CONSTRUCTION	KMKM	AB
1	26.06.19	AS CONSTRUCTED	KMKM	AB

Quality Management ISO 9001 Global-Mark.com.au®	OHS Management AS/NZS 1881 Global-Mark.com.au®	Environmental Management ISO 14001 Global-Mark.com.au®
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TITLE	NAME
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AUTHORISED	A.Burrows

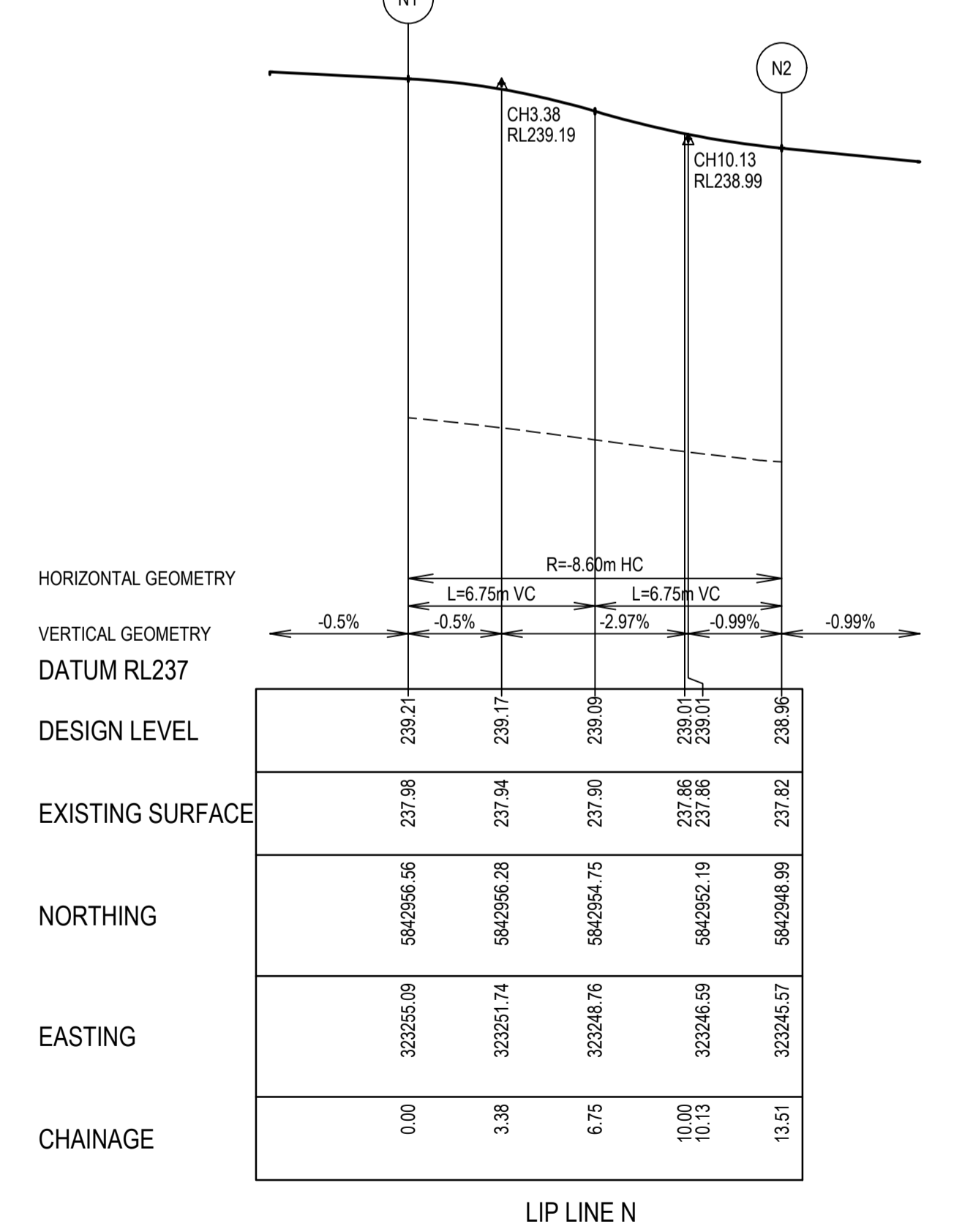
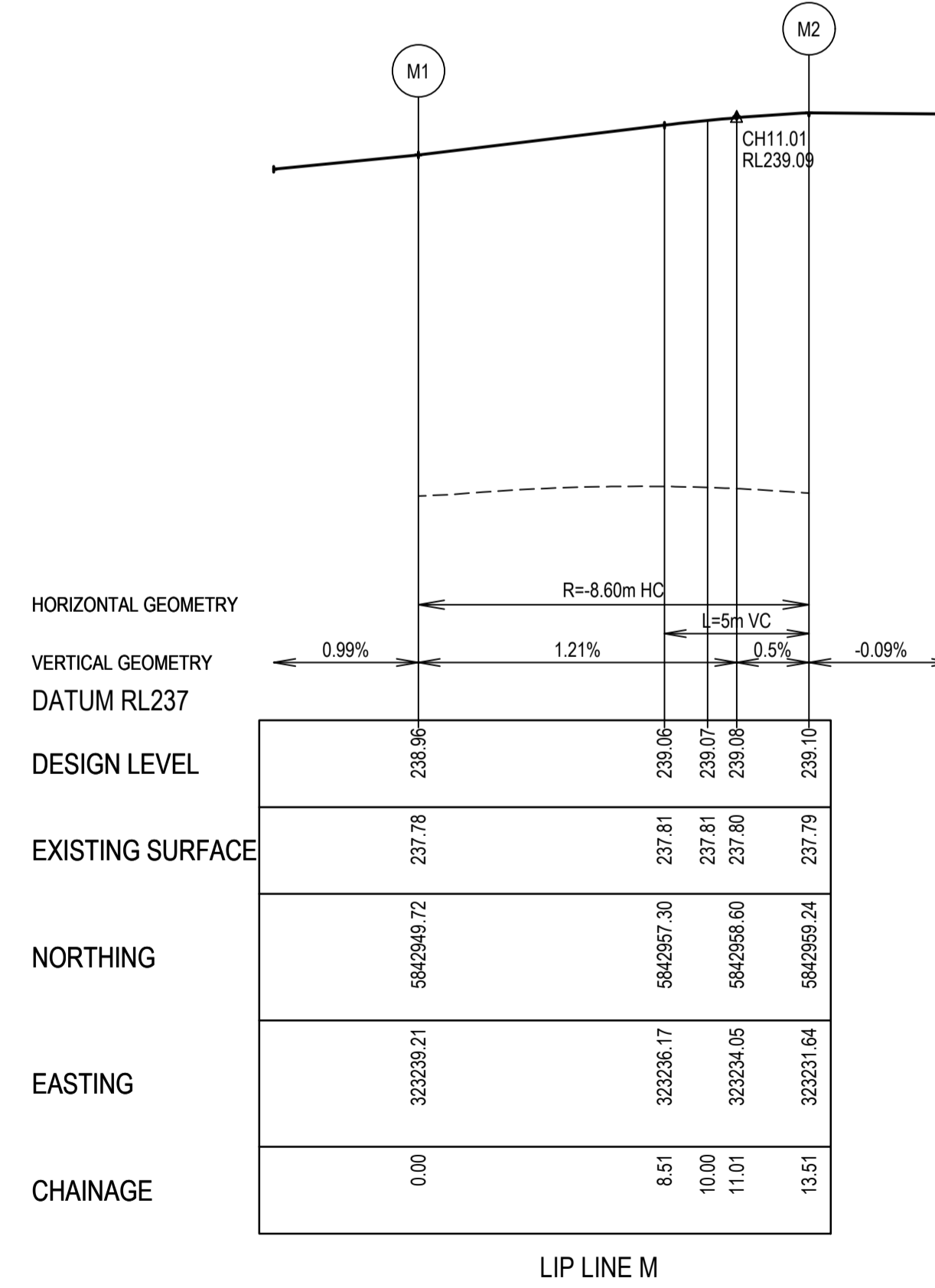
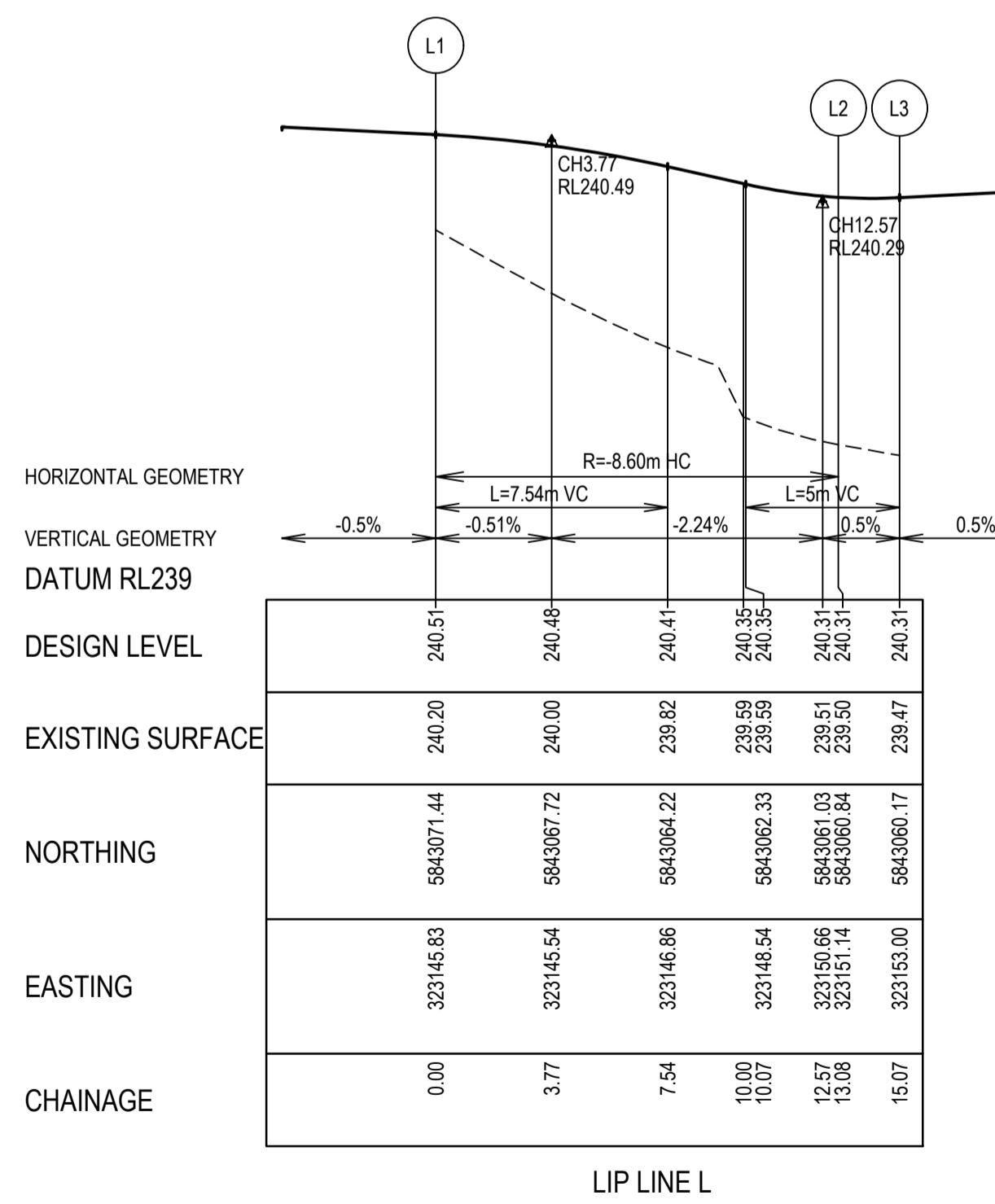
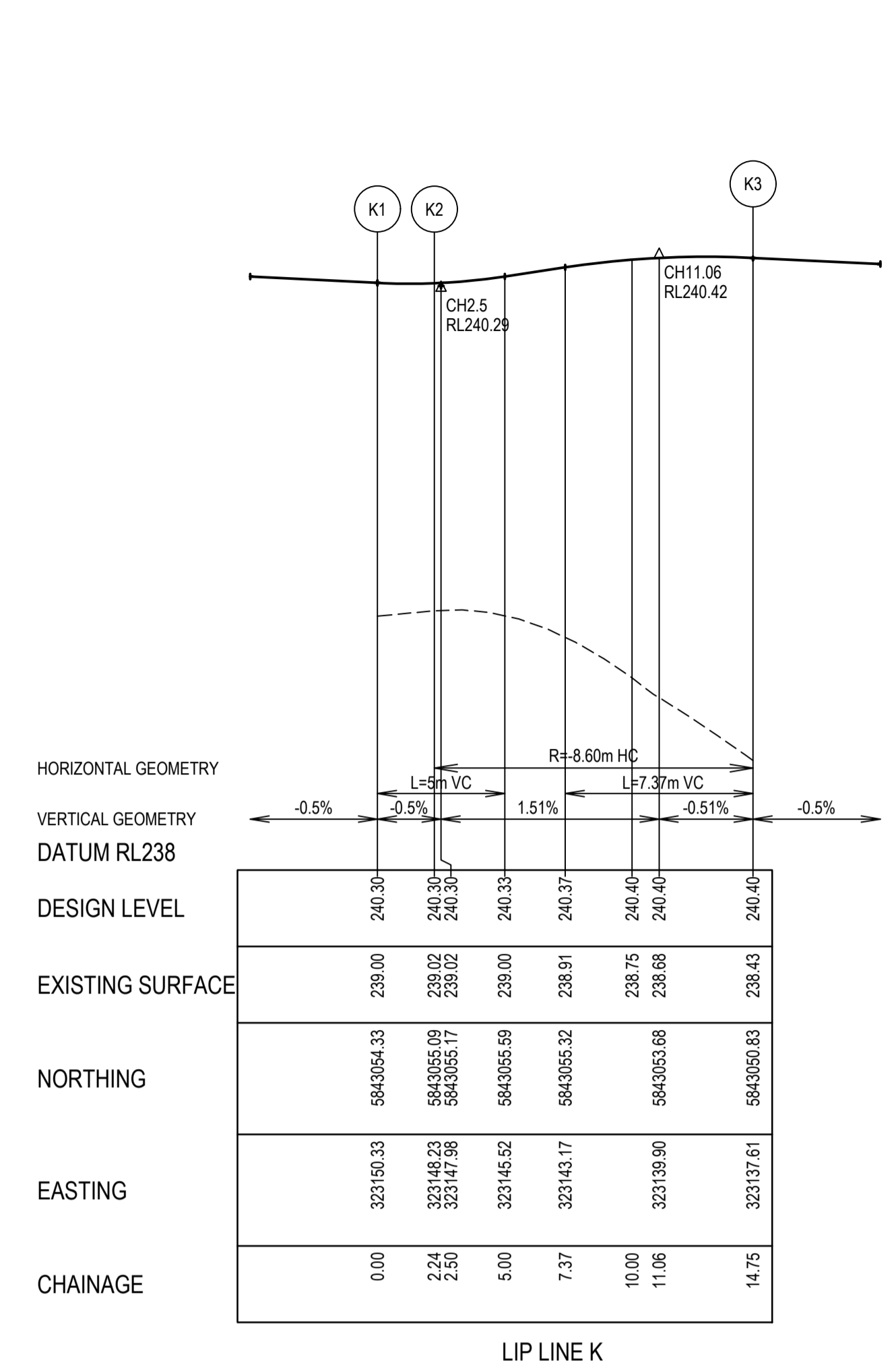
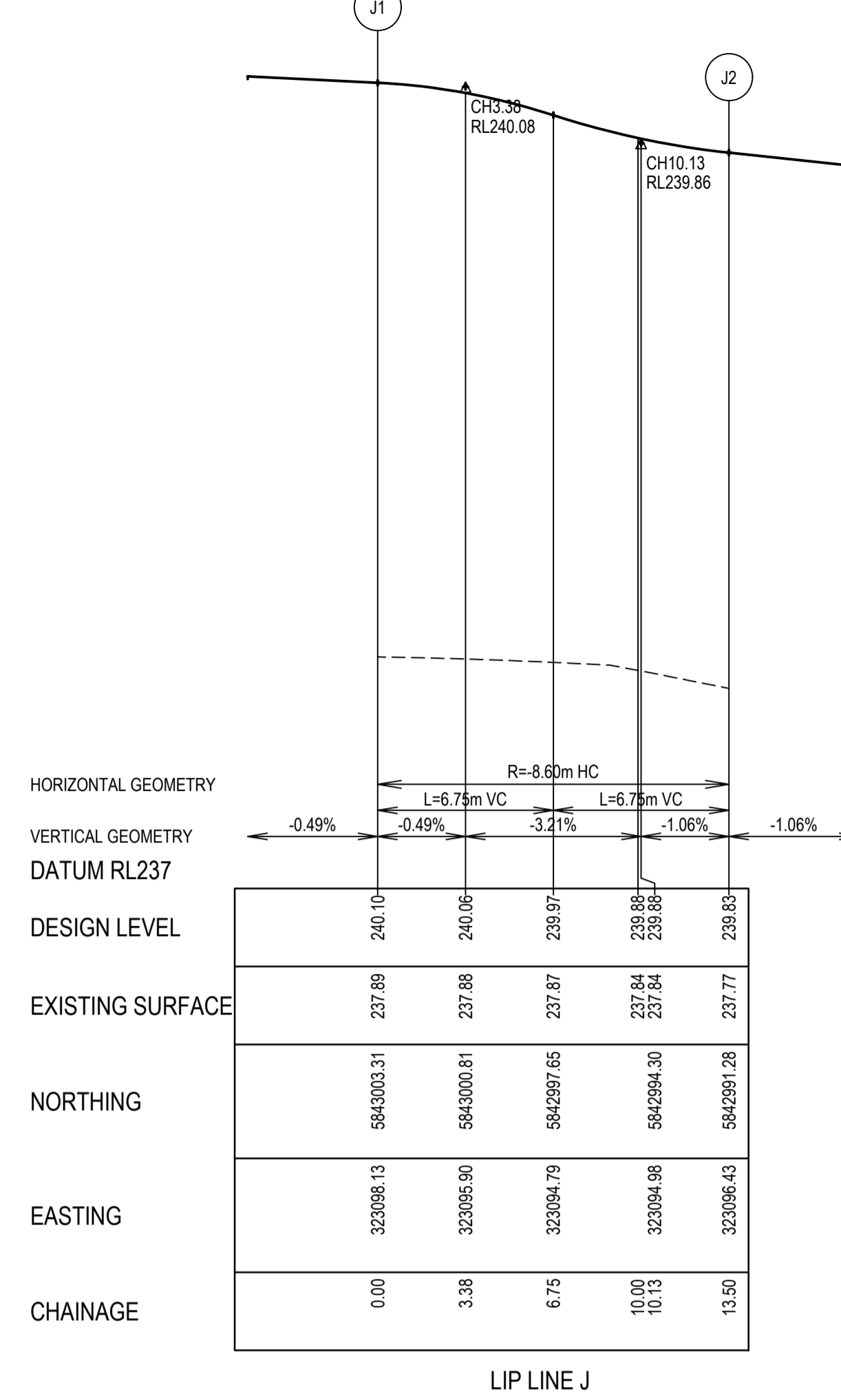
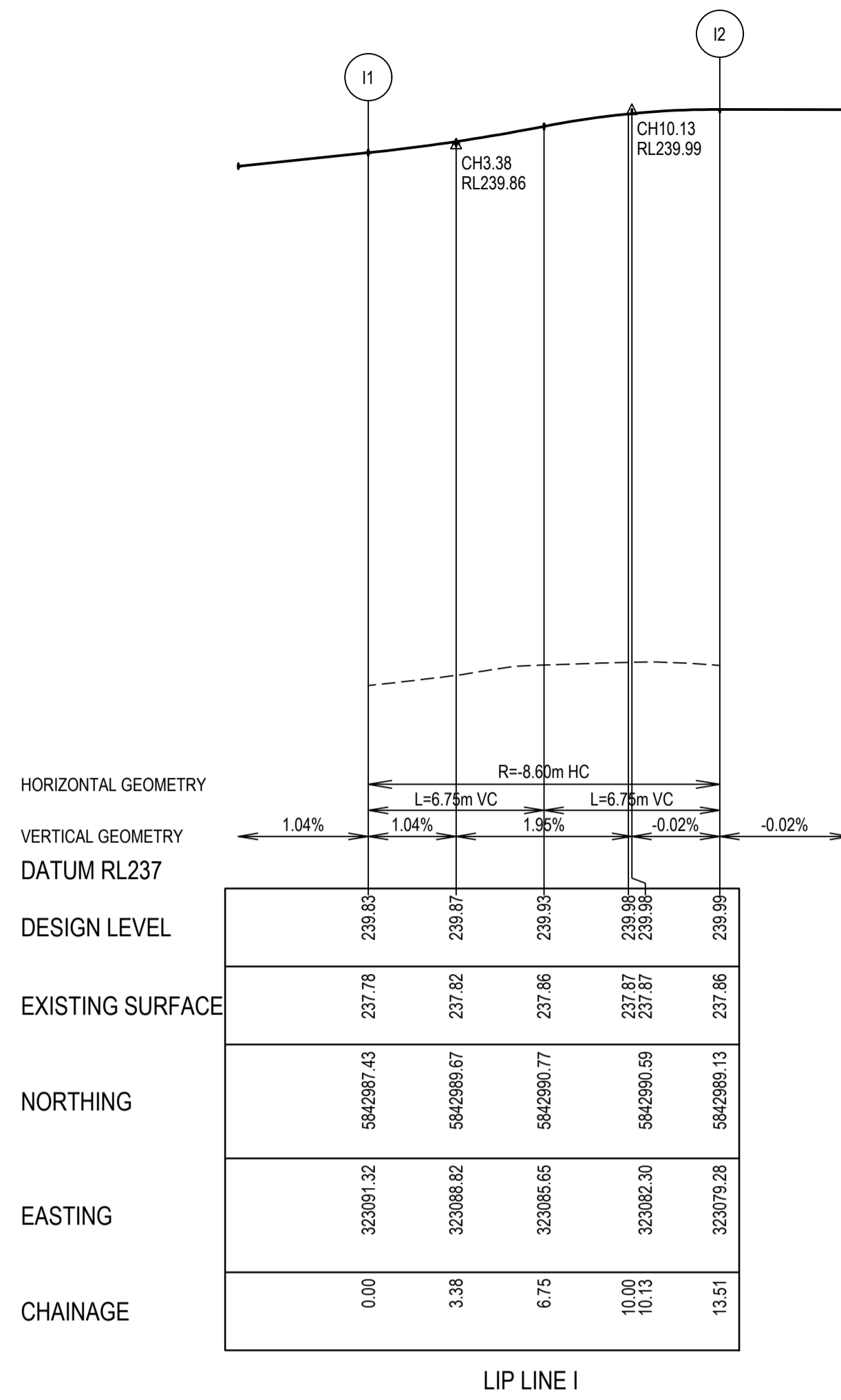
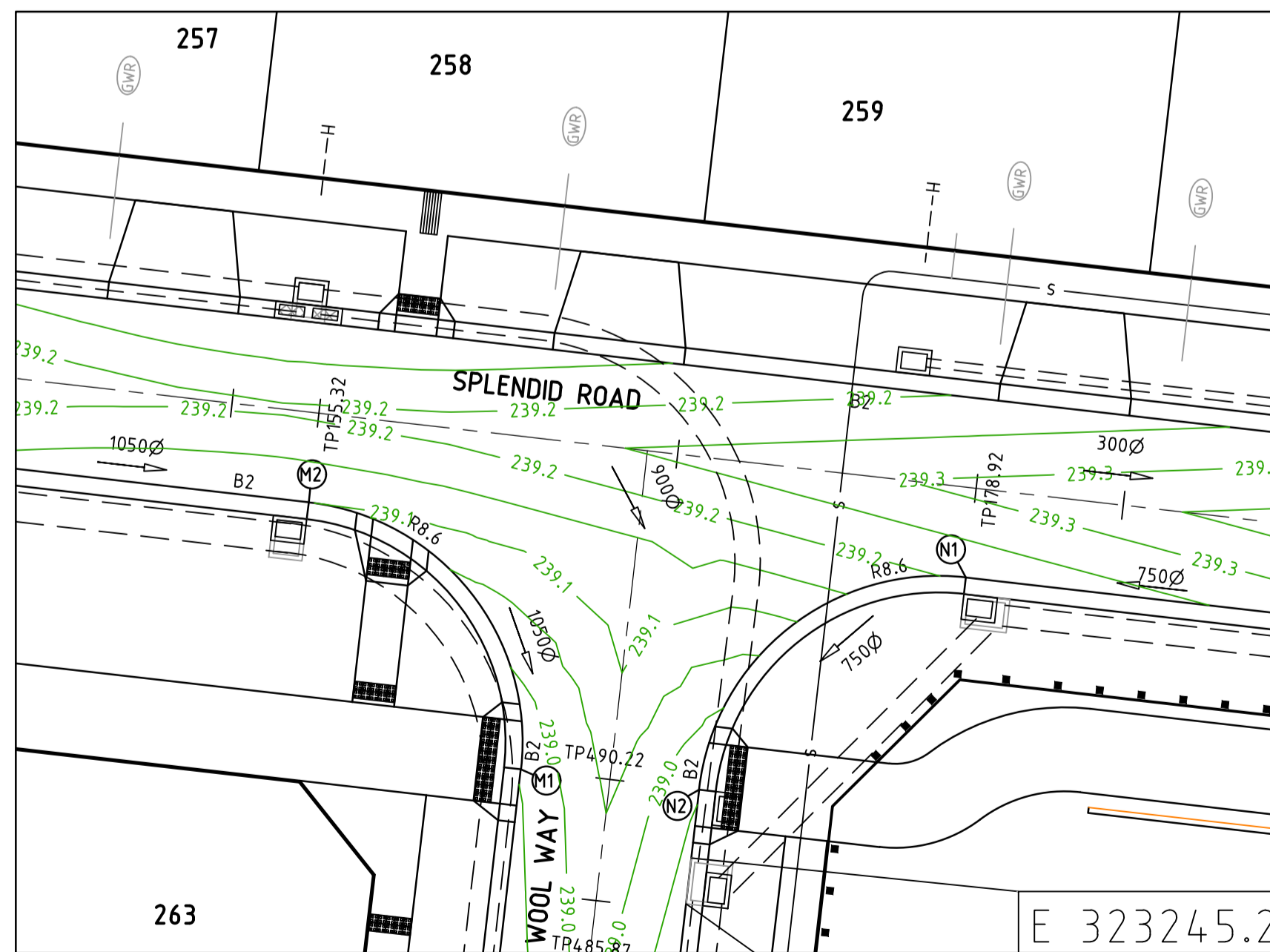
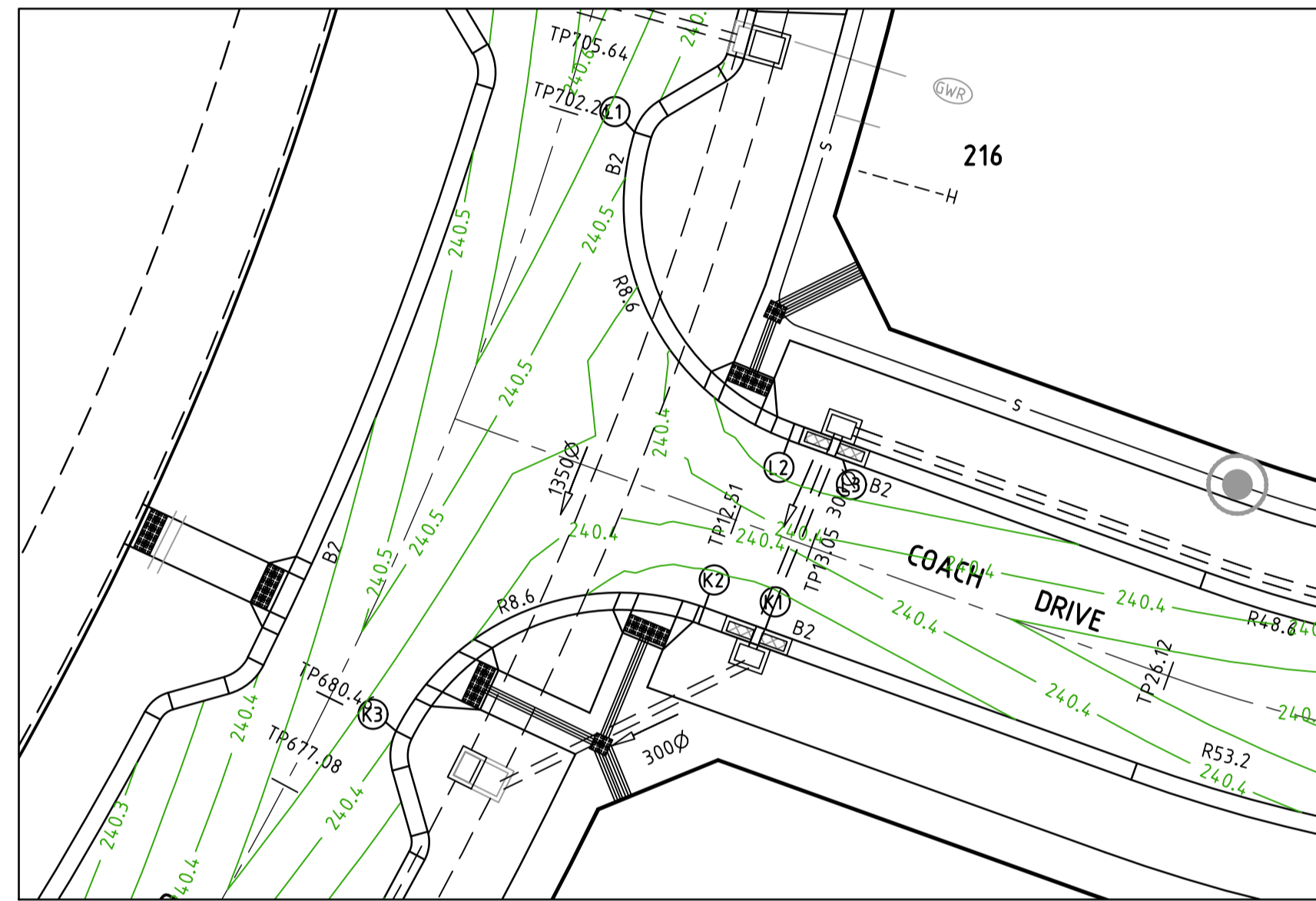
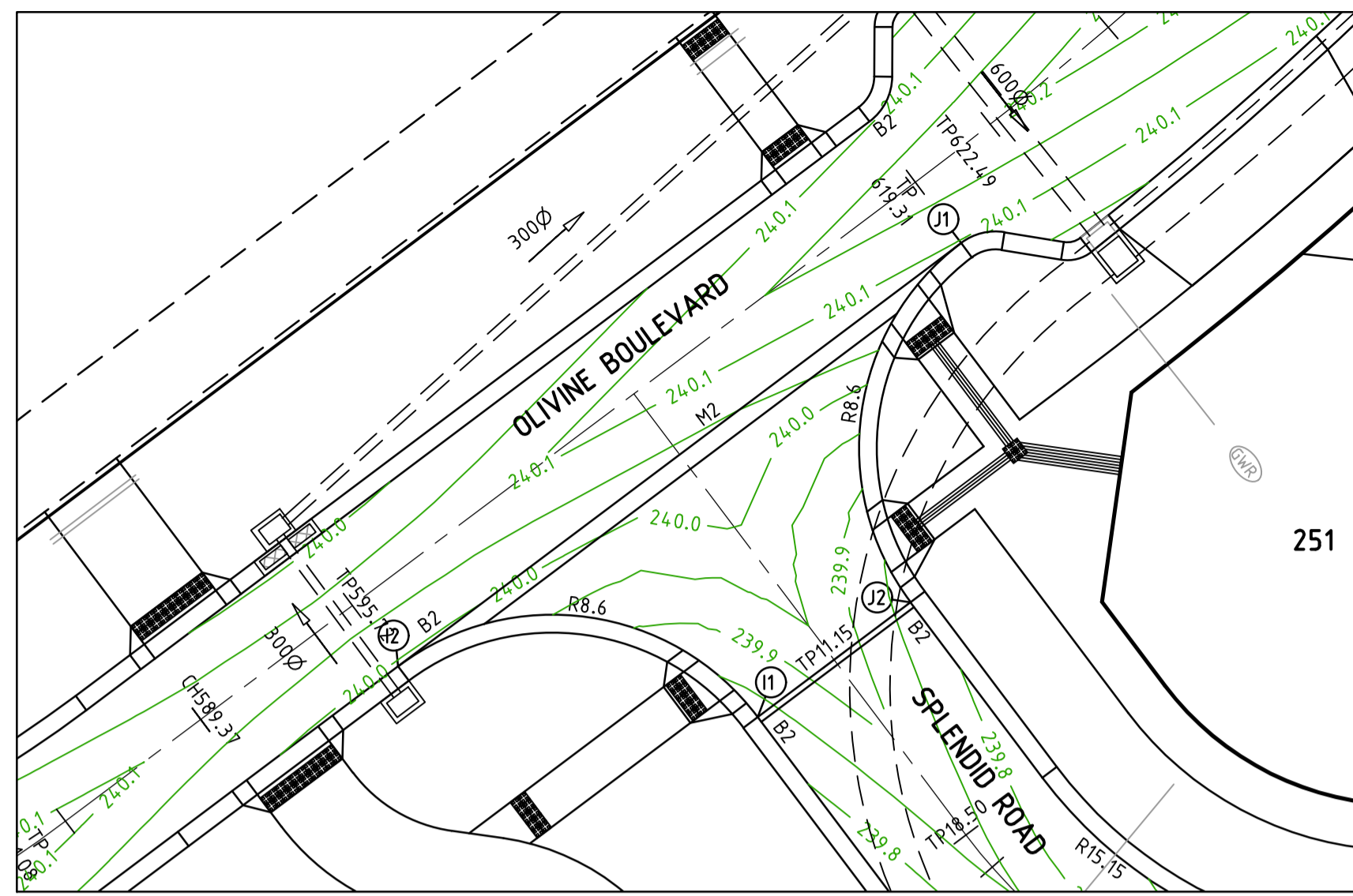
**SMEC**  
Member of the **Surbana Jurong Group**  
ABN 47 065 475 149  
Level 10, 71 Queens Road  
Melbourne, VIC 3004  
Ph 03 9514 1500

**mirvac**

Olivine Estate - Stage 2  
Whittlesea City Council  
Road and Drainage  
Typical Cross Sections

MELWAYS REF <b>9 J2</b>	PROJECT / DRAWING No. <b>1700E-02-04</b>	SHEET No. <b>04 of 44</b>	REVISION <b>1</b>
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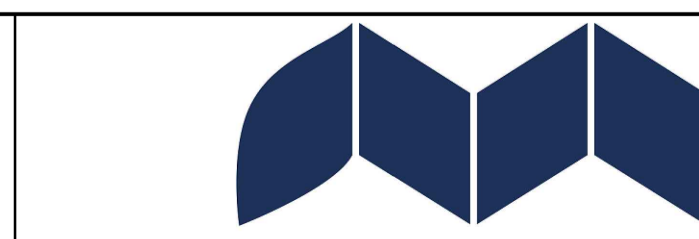
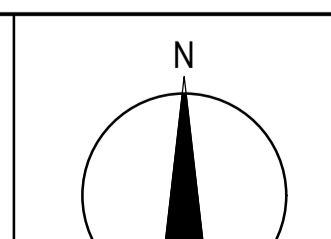




REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	30.08.18	ISSUED FOR CONSTRUCTION	KMKM	AB
1	26.06.21	AS CONSTRUCTED	KMKM	AB

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.

TITLE	NAME
DRAFTER	S.Sathasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows



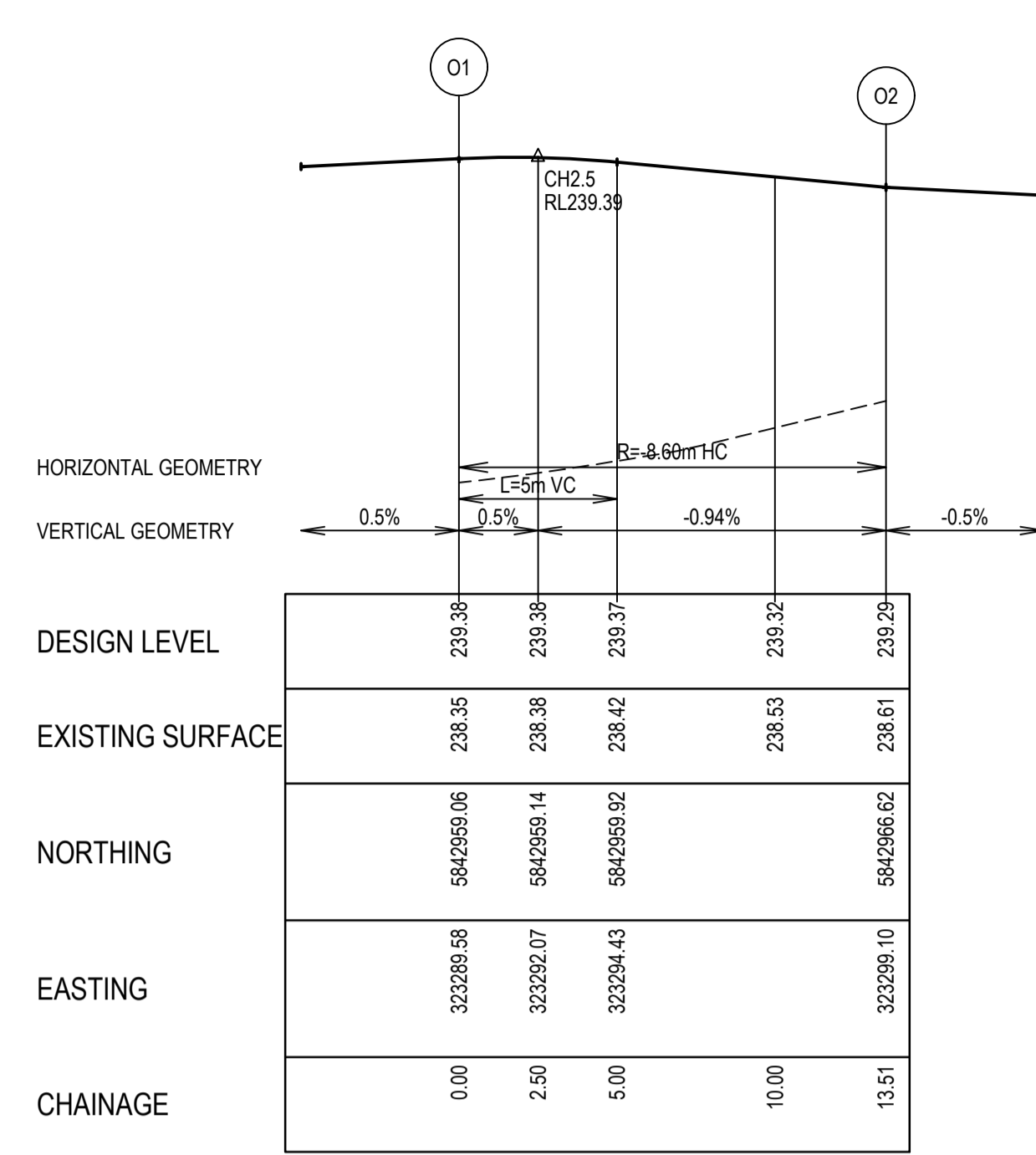
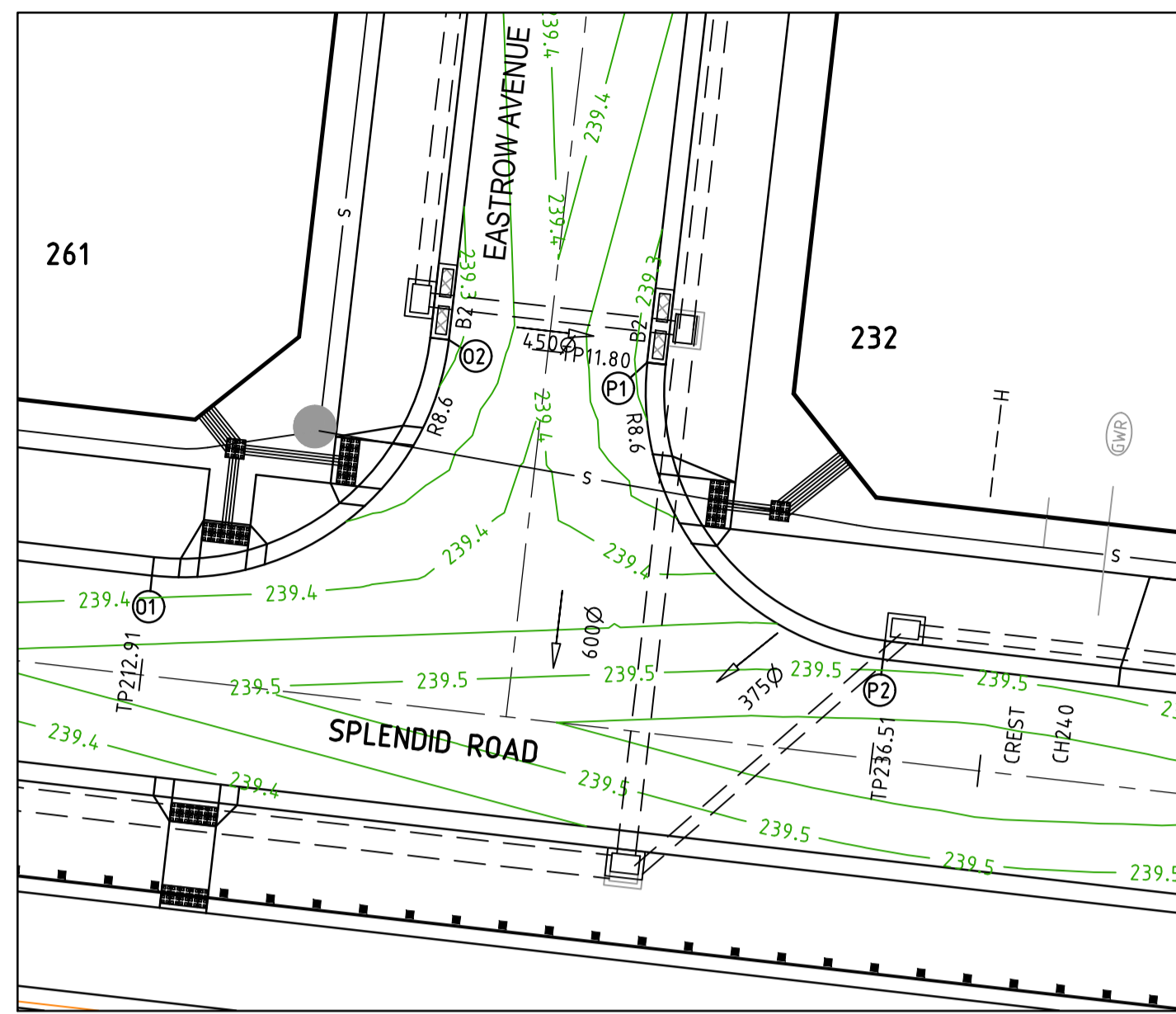
Olivine Estate - Stage 2  
Whittlesea City Council  
Road and Drainage  
Intersection Detail Plan - 2

**AS CONSTRUCTED**

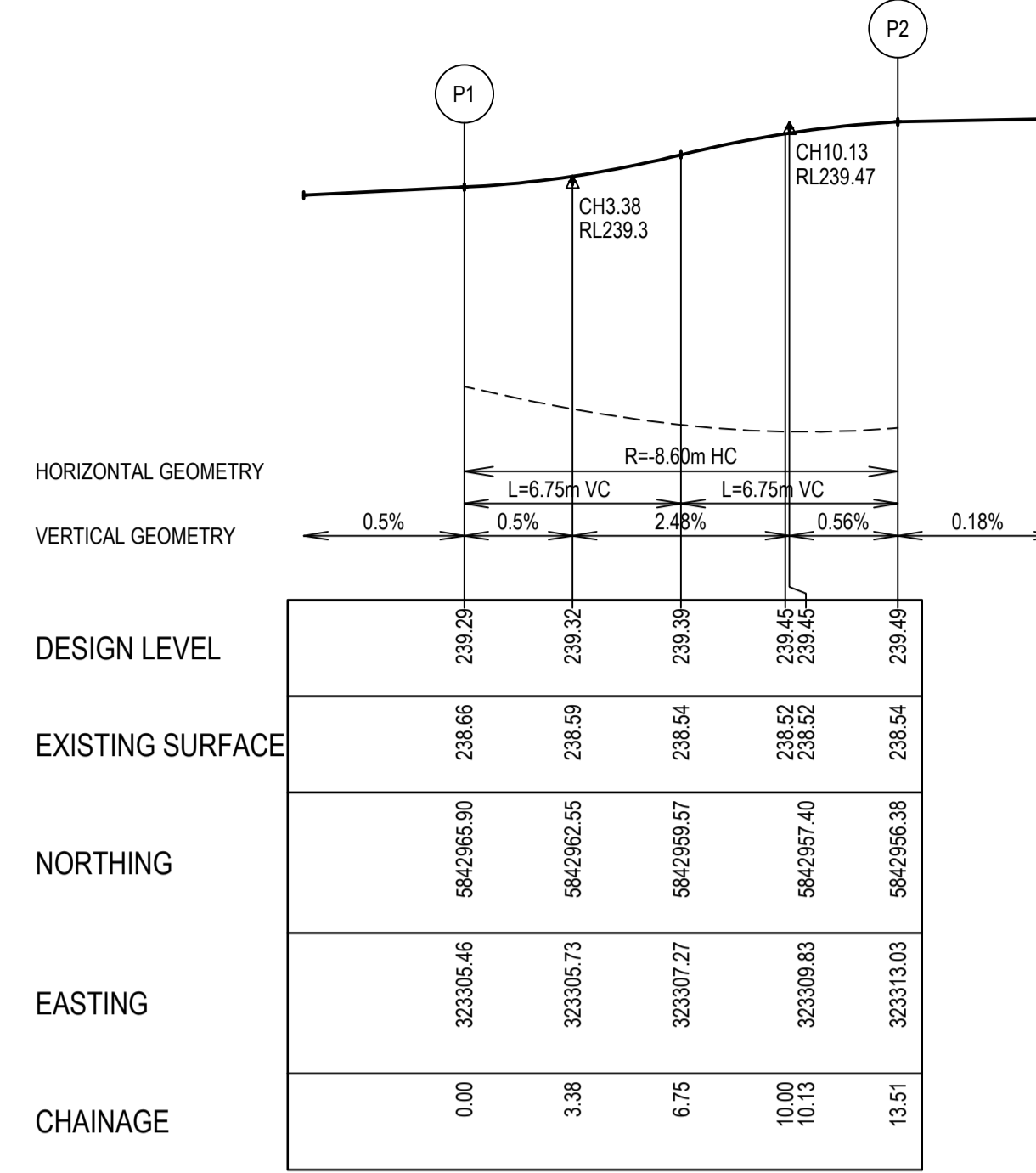
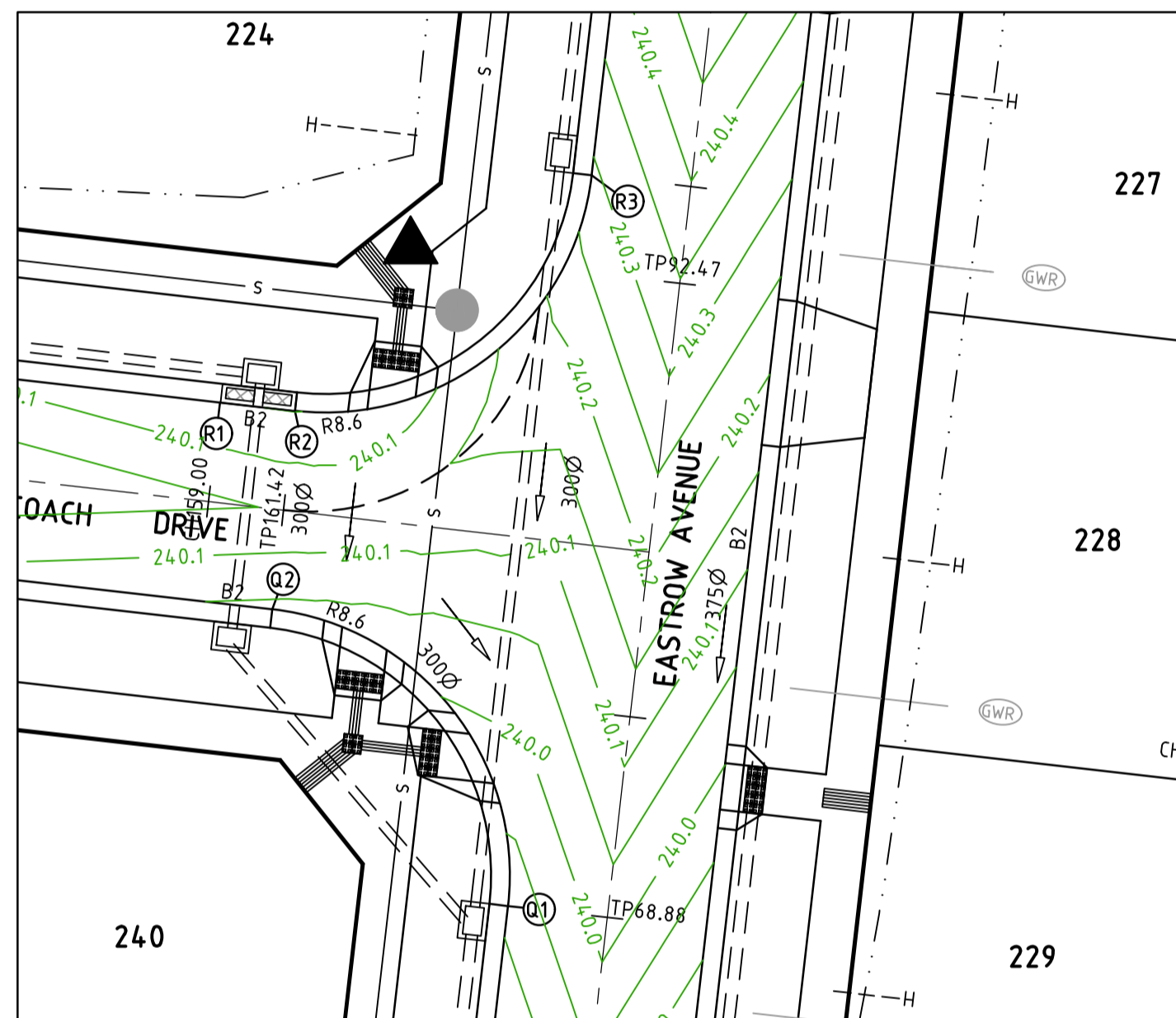


MELWAYS REF	PROJECT / DRAWING No	SHEET No	REVISION
9 J2	1700E-02-06	06 of 44	1

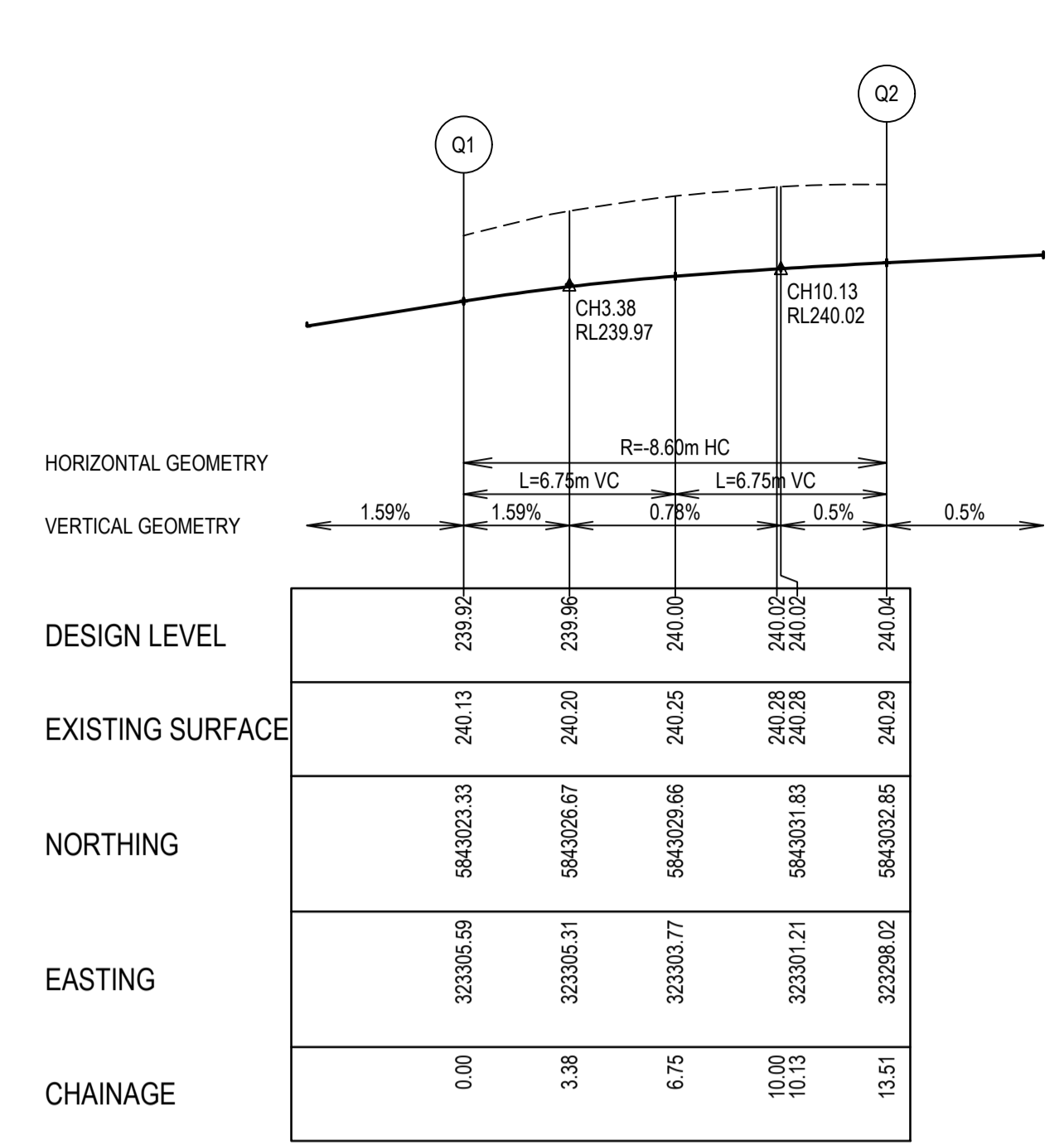
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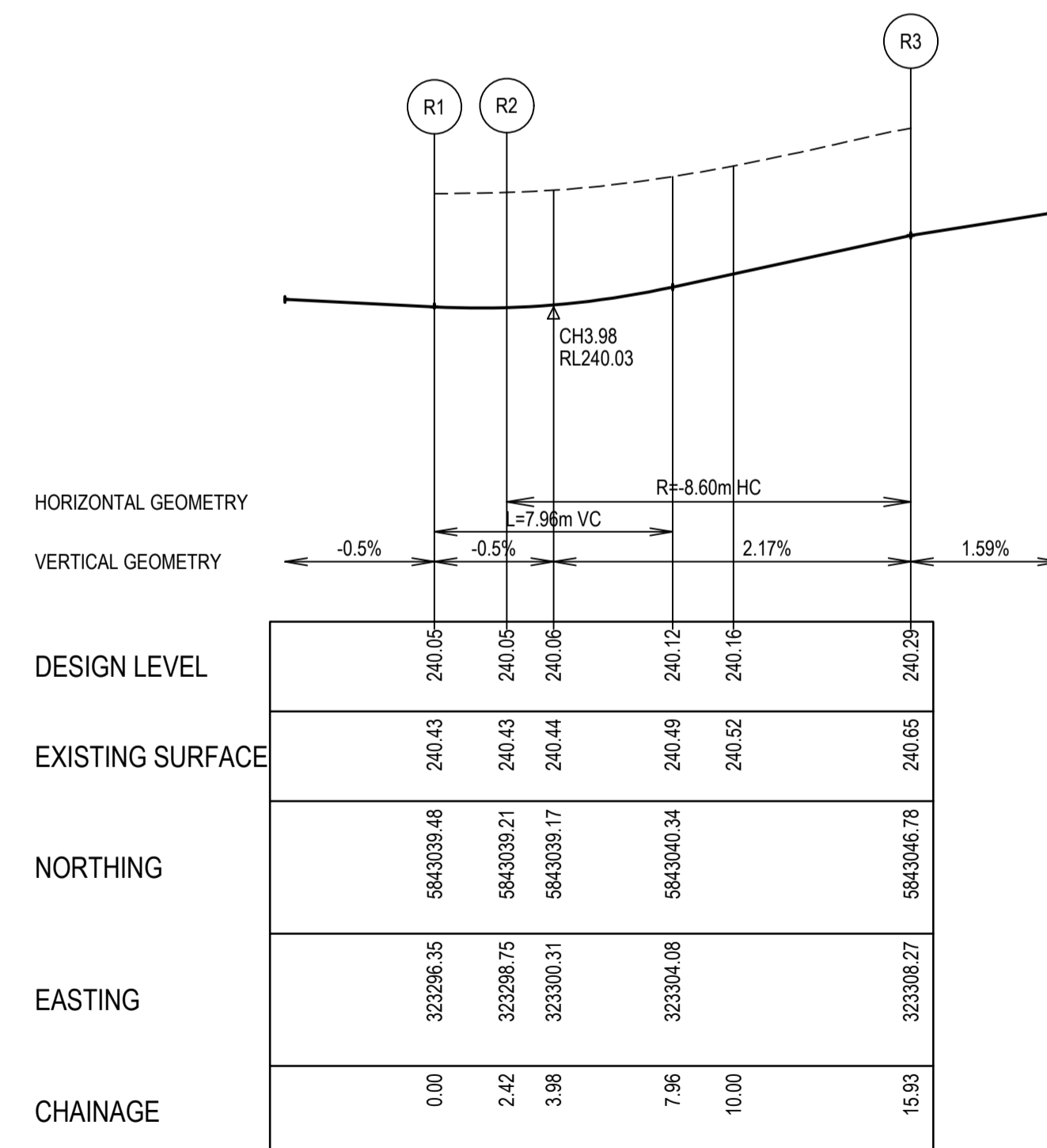
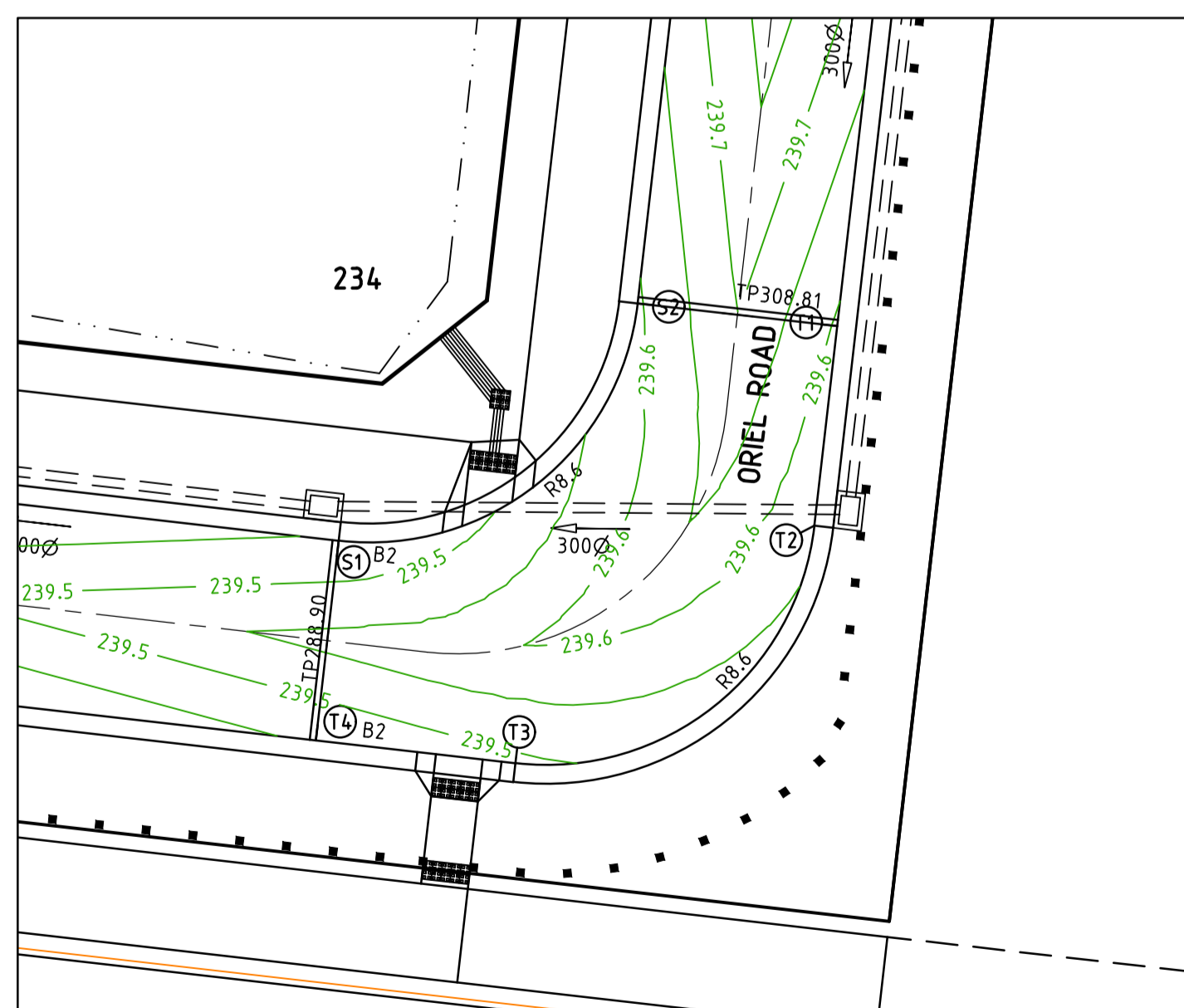
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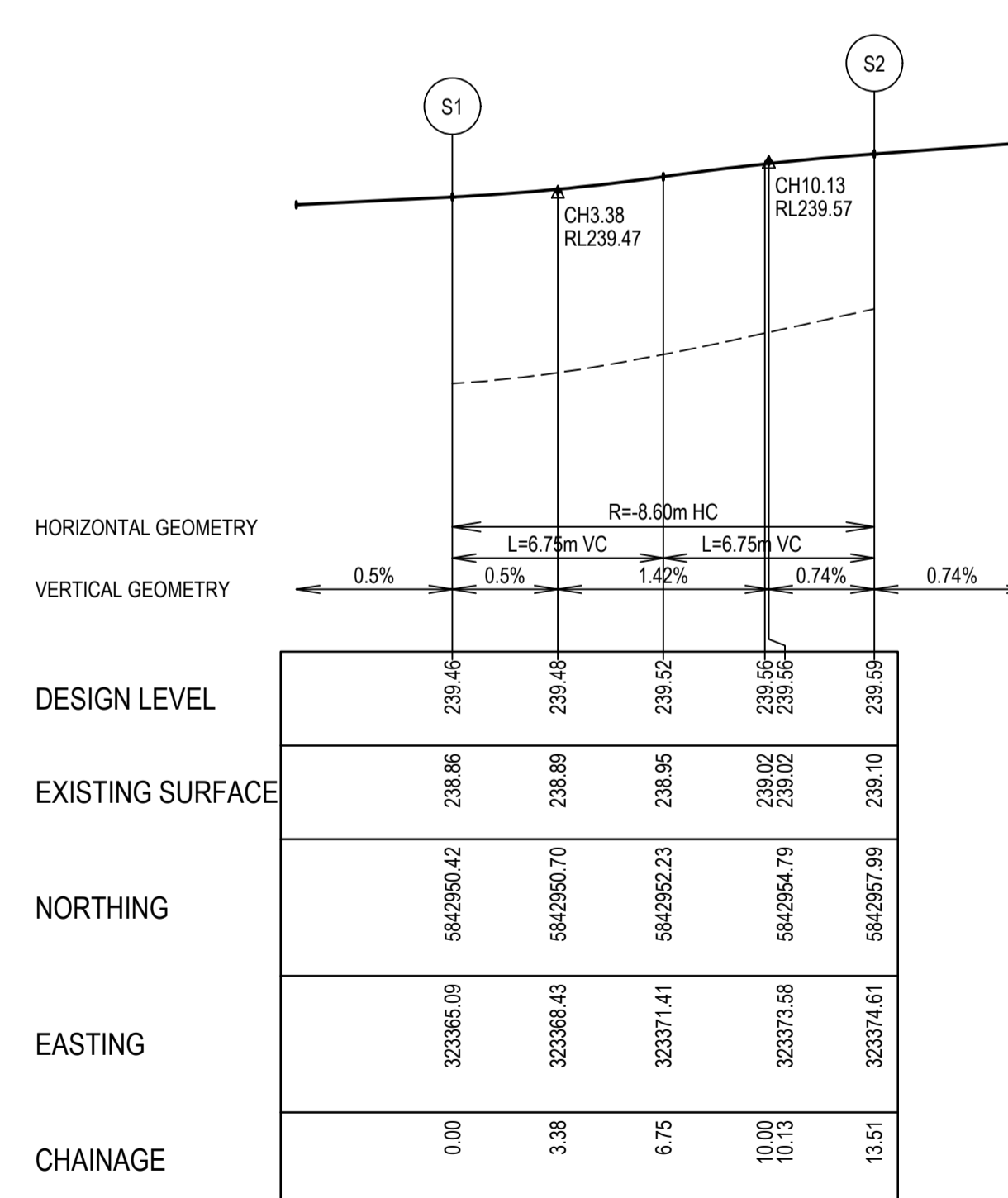
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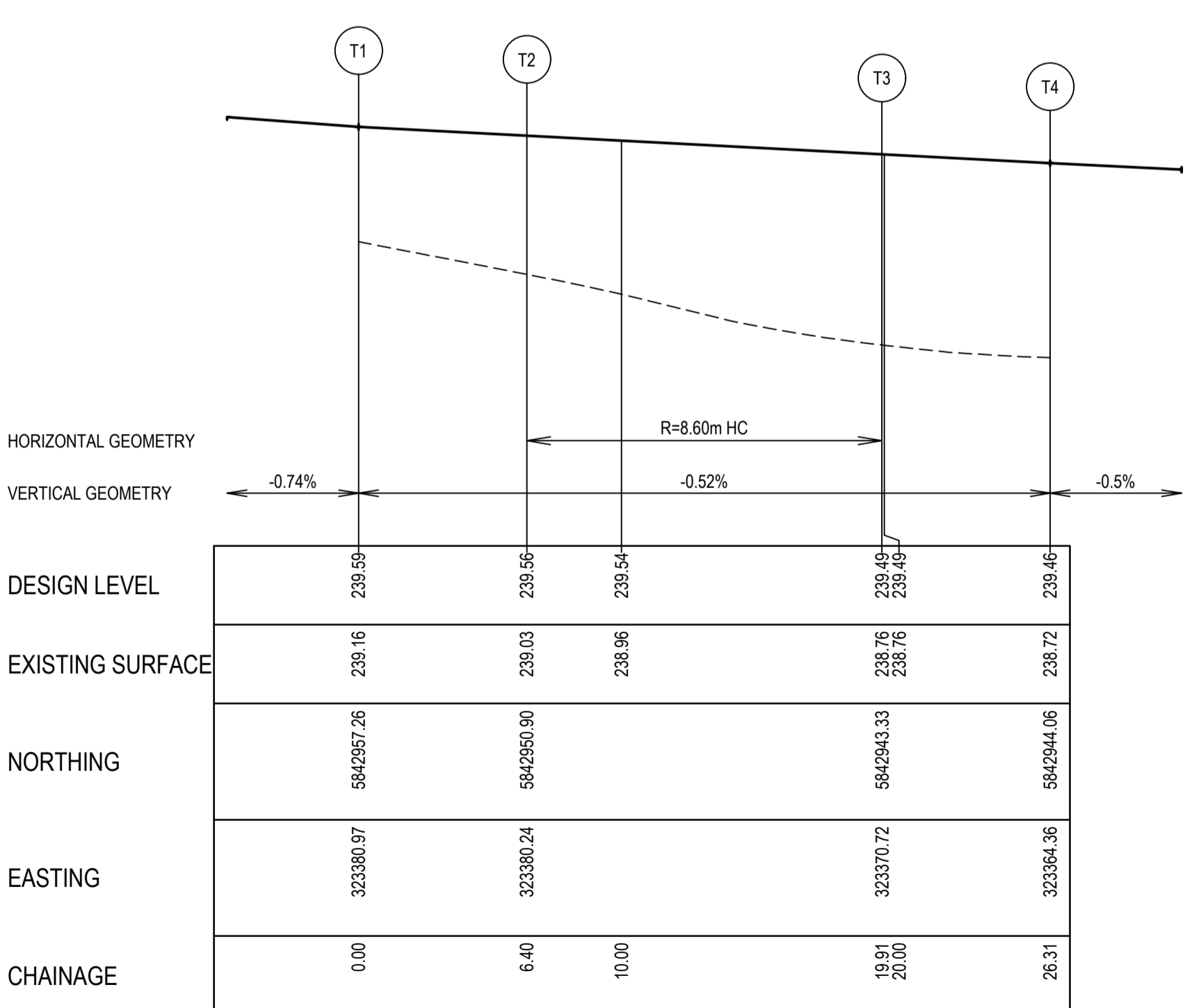
LIP LINE Q



LIP LINE R



LIP LINE S



LIP LINE T

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	30.08.18	ISSUED FOR CONSTRUCTION	KMKM	AB
1	26.06.22	AS CONSTRUCTED	KMKM	AB

**AS CONSTRUCTED**

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TITLE	NAME
DRAFTER	S.Sathasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows

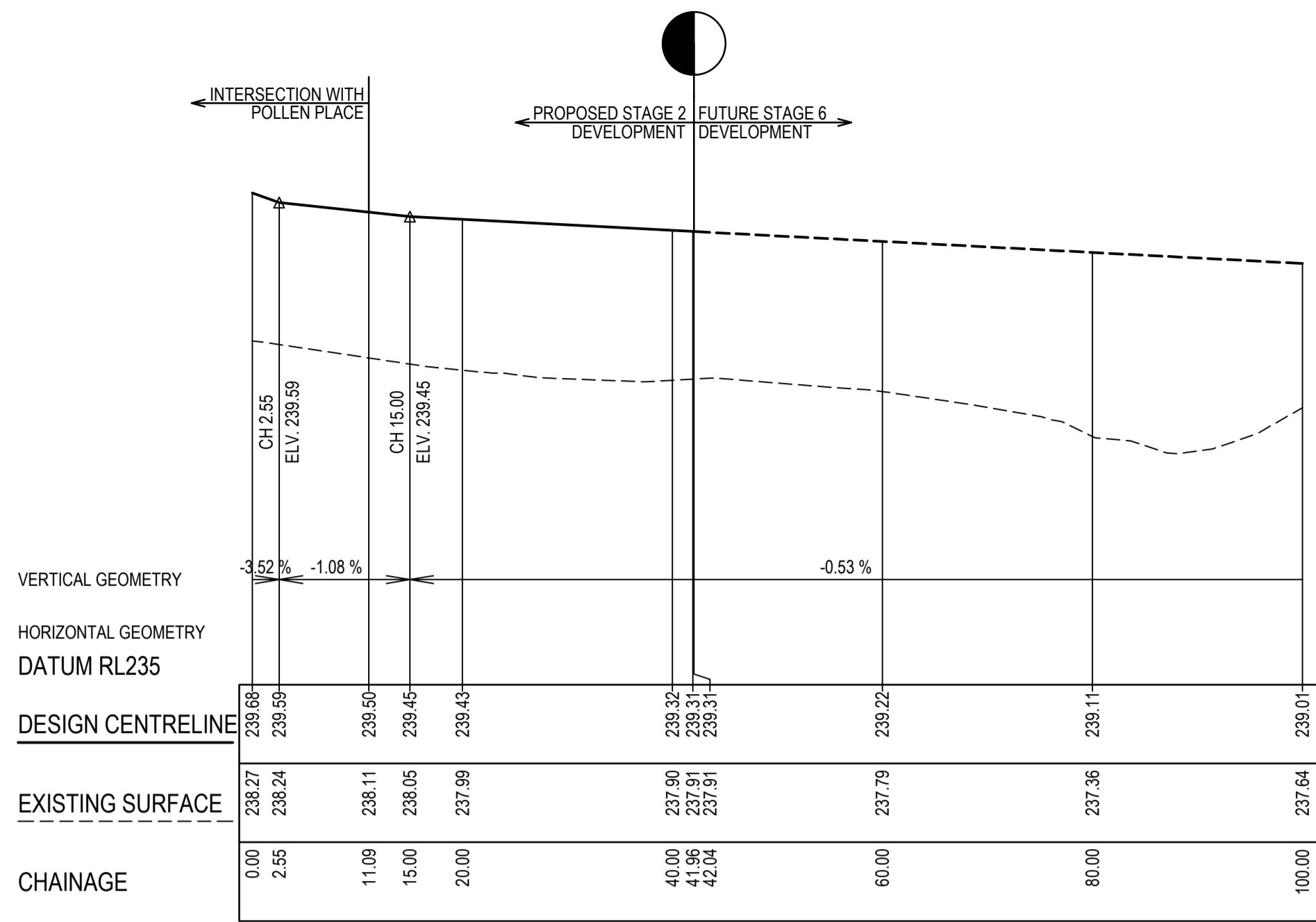
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SCALE AS SHOWN AT 1

**SMEC**  
Member of the Surlana Jurong Group  
ABN 47 065 475 149  
Level 10, 71 Queens Road  
Melbourne, VIC 3004  
Ph 03 9514 1500

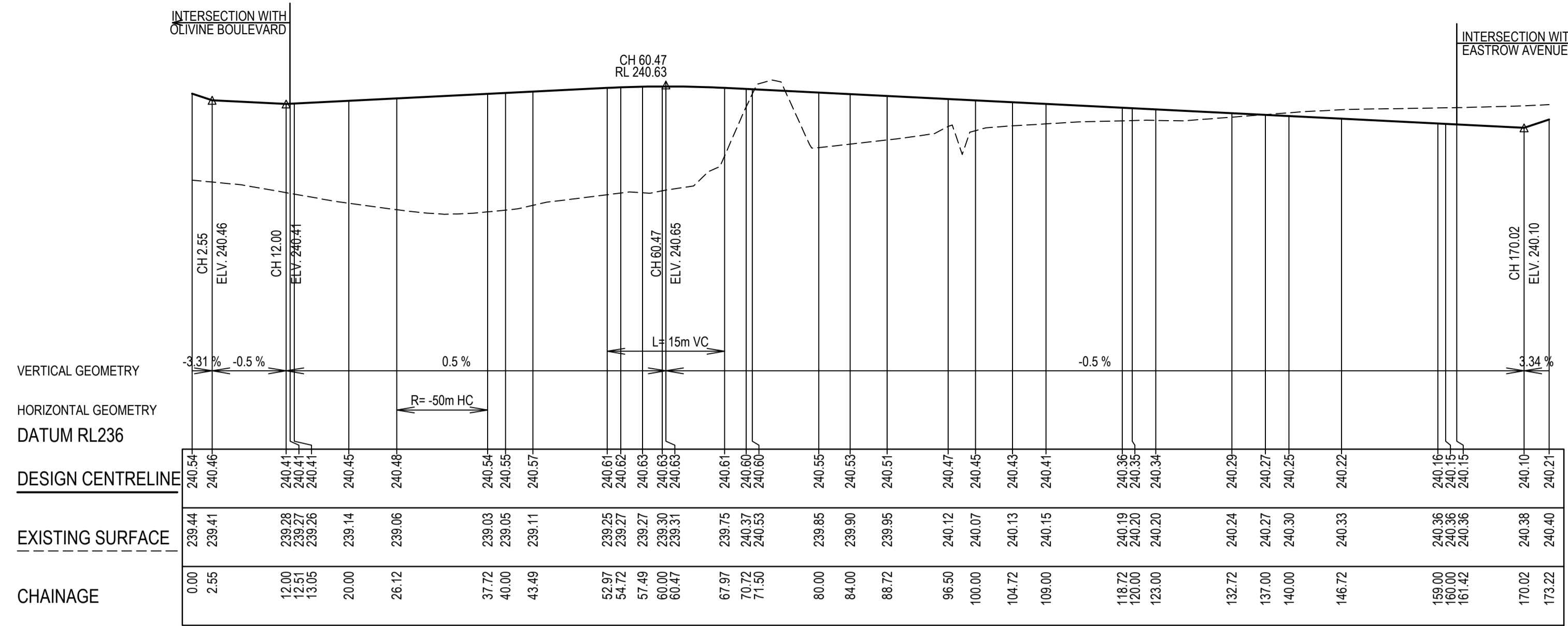
**mirvac**

Olivine Estate - Stage 2  
Whittlesea City Council  
Road and Drainage  
Intersection Detail Plan - 3

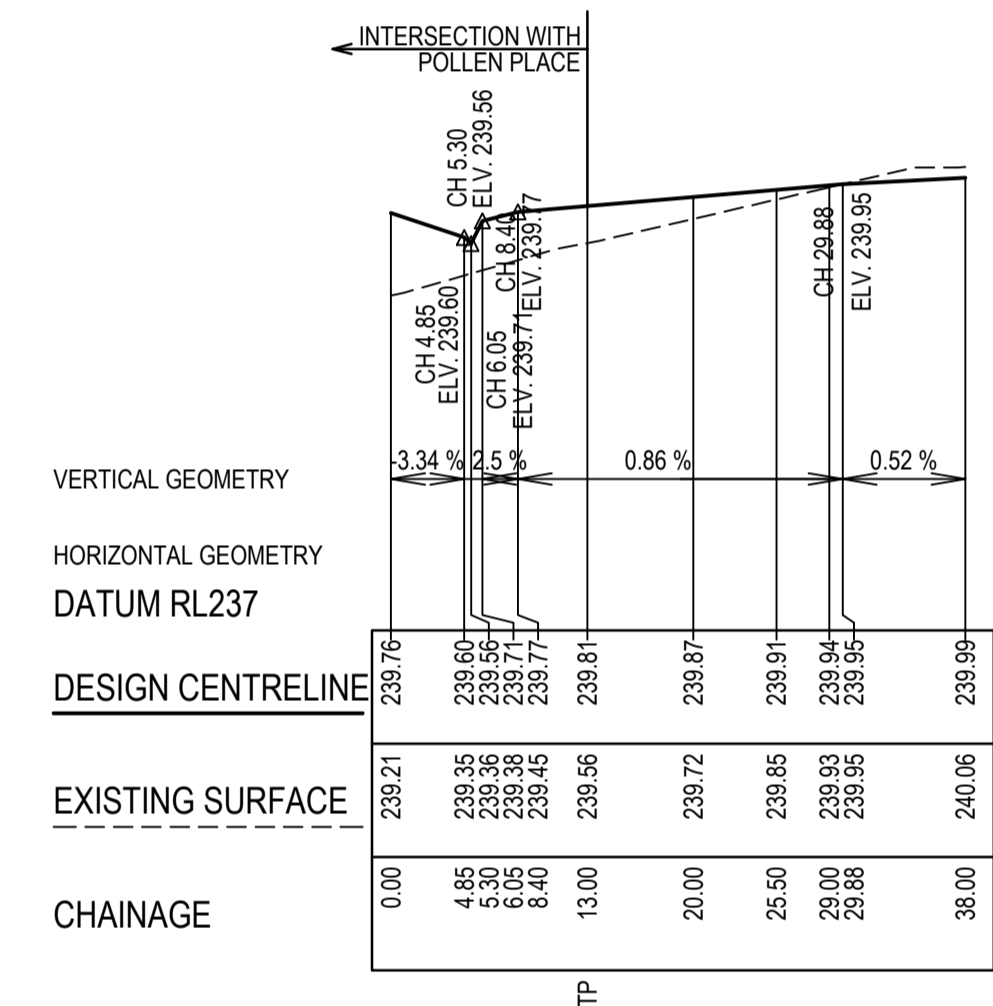
MELWAYS REF	PROJECT / DRAWING No	SHEET No	REVISION
9 J2	1700E-02-07	07 of 44	1



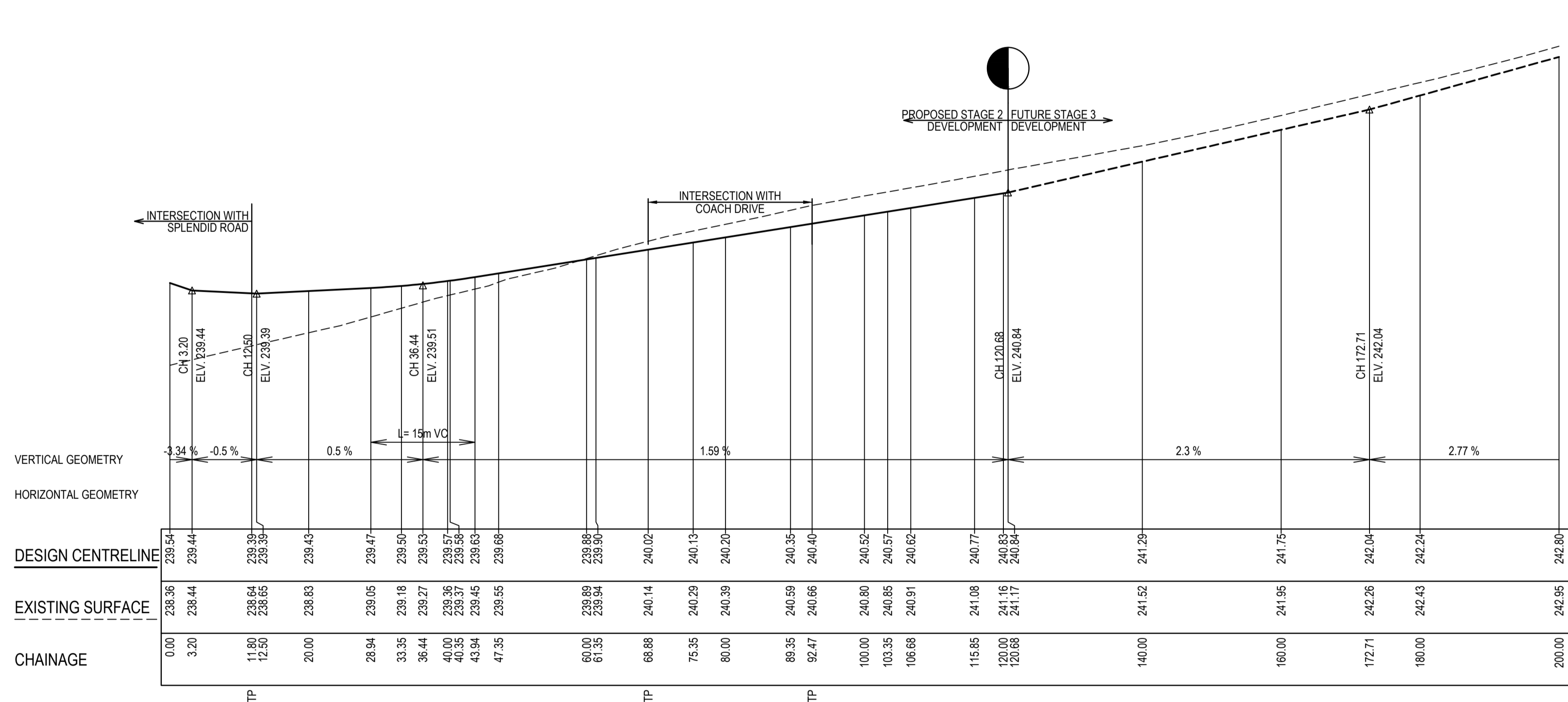
LACEBARK DRIVE LONGITUDINAL SECTION



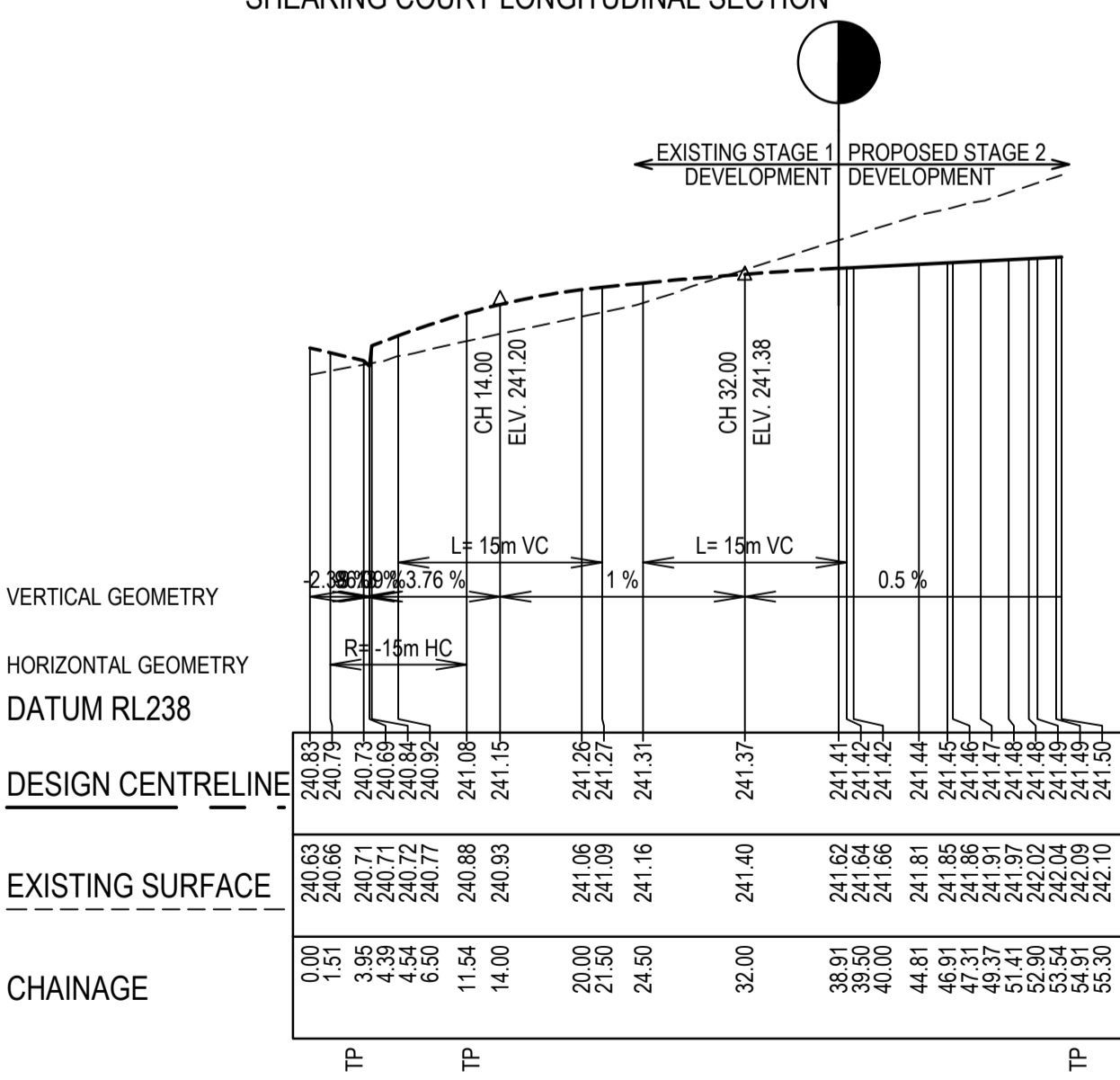
COACH DRIVE LONGITUDINAL SECTION



SHEARING COURT LONGITUDINAL SECTION



EASTROW AVENUE LONGITUDINAL SECTION



FELICITY ROAD LONGITUDINAL SECTION

COACH DRIVE DESIGN LINE

IP CHAINAGE	X COORD	Y COORD	Z COORD	TYPE	BEARING	LENGTH	RADIUS
1	0.000	323139.645	5843061.580	IP	109°49'04.85"		
	26.117	323164.215	5843052.725	TC	109°49'04.85"		
2	31.917	323169.696	5843050.750	IP		11.600	-50.000
	37.717	323175.484	5843050.088	CT	96°31'31.57"		
3	173.217	323310.106	5843034.689	IP	96°31'31.57"		

FELICITY ROAD DESIGN LINE

IP CHAINAGE	X COORD	Y COORD	Z COORD	TYPE	BEARING	LENGTH	RADIUS
1	38.910	322977.165	5842754.222	IP	96°12'55.55"		
2	55.305	322993.463	5842752.447	IP	96°12'55.55"		

SHEARING COURT DESIGN LINE

IP CHAINAGE	X COORD	Y COORD	Z COORD	TYPE	BEARING	LENGTH	RADIUS
1	0.000	323027.446	5842964.929	IP	276°12'55.55"		
2	38.000	322989.670	5842868.043	IP	276°12'55.55"		

EASTROW AVENUE DESIGN LINE

IP CHAINAGE	X COORD	Y COORD	Z COORD	TYPE	BEARING	LENGTH	RADIUS
1	0.000	323300.938	5842954.537	IP	6°31'31.48"		
2	120.675	323314.652	5843074.430	IP	6°31'31.48"		

LACEBARK DRIVE DESIGN LINE

IP CHAINAGE	X COORD	Y COORD	Z COORD	TYPE	BEARING	LENGTH	RADIUS
1	0.000	323031.665	5842903.659	IP	96°31'31.48"		
2	42.043	323073.436	5842898.881	IP	96°31'31.48"		

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	30.08.18	ISSUED FOR CONSTRUCTION	KMKM	AB
1	26.06.23	AS CONSTRUCTED	KMKU	AB

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.

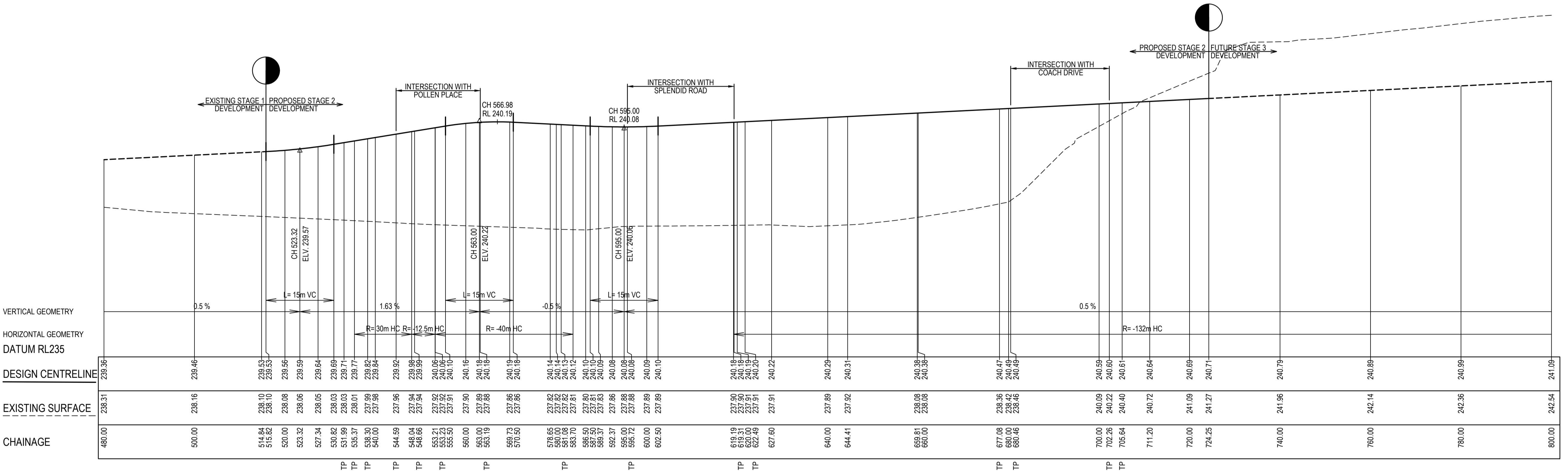
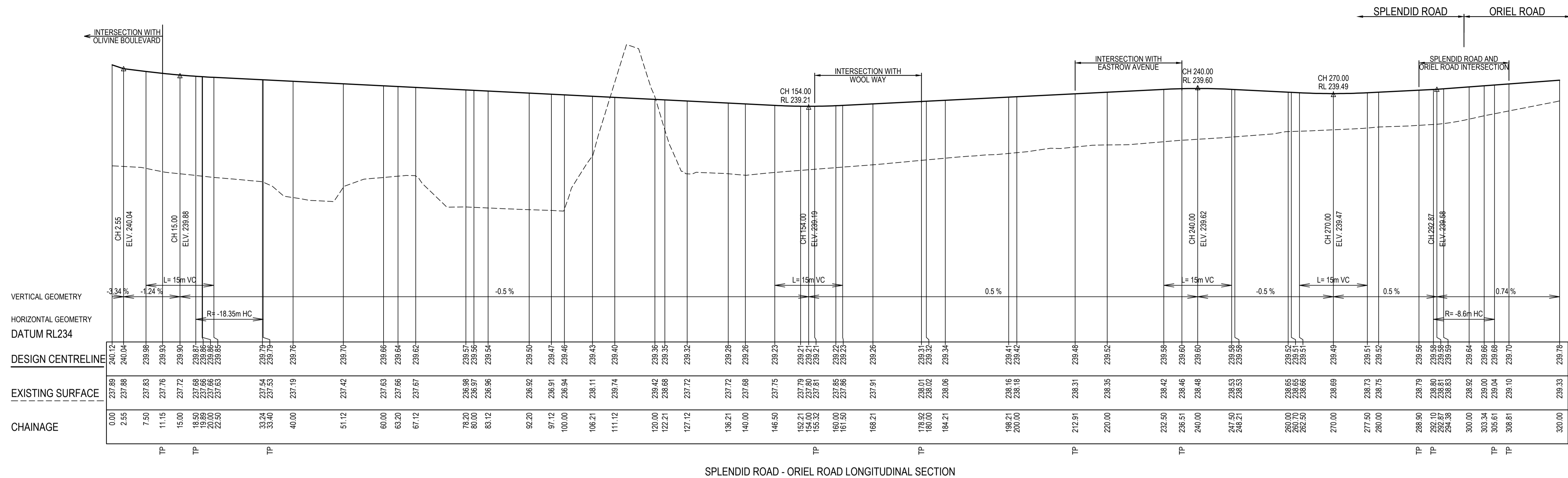
TITLE	NAME
DRAFTER	S.Sathasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows



Member of the Surbana Jurong Group  
ABN 47 065 475 149  
Level 10, 71 Queens Road  
Melbourne, VIC 3004  
Ph 03 9514 1500

Olivine Estate - Stage 2  
Whittlesea City Council  
Road and Drainage  
Longitudinal Sections - 1





SPLENDID ROAD - ORIEL ROAD DESIGN LINE

IP	CHAINAGE	X COORD	Y COORD	Z COORD	TYPE	BEARING	LENGTH	RADIUS
1	0.000	323087.173	5842998.263	240.123	IP	143°03'05.88"		
2	25.950	323103.035	5842977.174	239.829	IP	14.901	-18.350	
3	33.400	323110.873	5842976.278	239.791	CT	96°31'31.50"		
4	292.105	323367.901	5842946.878	239.579	CT	96°31'31.50"		
5	298.859	323376.446	5842945.900	239.627	IP	13.509	-8.600	
6	305.614	323377.423	5842954.444	239.677	CT	6°31'31.48"		
7	399.689	323388.114	5843047.910	241.070	IP	6°31'31.48"		

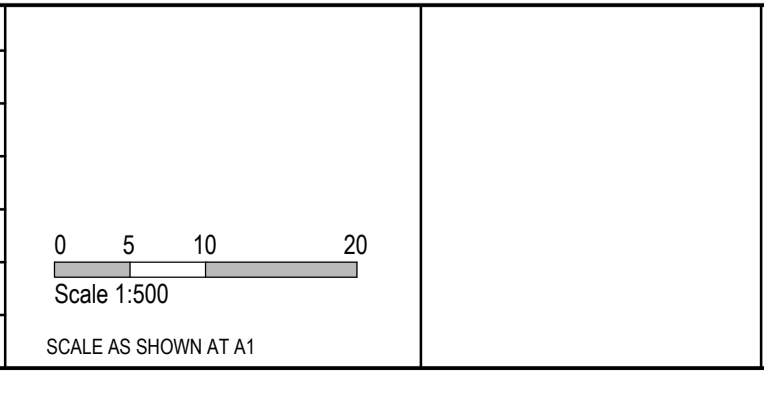
OLIVINE BOULEVARD DESIGN LINE

IP	CHAINAGE	X COORD	Y COORD	Z COORD	TYPE	BEARING	LENGTH	RADIUS
1	514.837	323002.189	5842983.999	239.530	IP	98°12'55.53"		
2	535.367	323022.598	5842981.776	239.769	TC	96°12'55.53"		
3	541.704	323028.994	5842981.080	239.872	IP	12.674	30.000	
4	548.041	323034.542	5842977.822	239.976	CT	120°25'17.86"		
5	548.042	323034.542	5842977.822	239.976	CT	120°25'17.86"		
6	550.626	323036.803	5842976.494	240.018	IP	5.169	-12.499	
7	553.211	323039.407	5842976.187	240.060	CT	96°43'36.08"		
8	553.211	323039.407	5842976.187	240.060	CT	96°43'36.08"		
9	568.456	323055.326	5842974.310	240.190	IP	30.491	-40.000	
10	583.702	323068.136	5842983.945	240.117	CT	53°03'06.40"		
11	619.187	323096.495	5843005.274	240.181	TC	53°03'06.40"		
12	671.716	323140.842	5843038.629	240.444	IP	105.059	-132.000	
13	724.246	323148.037	5843093.651	240.706	IP	7°27'00.37"		

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	30.08.18	ISSUED FOR CONSTRUCTION	KMKM	AB
1	26.06.24	AS CONSTRUCTED	KMKM	AB

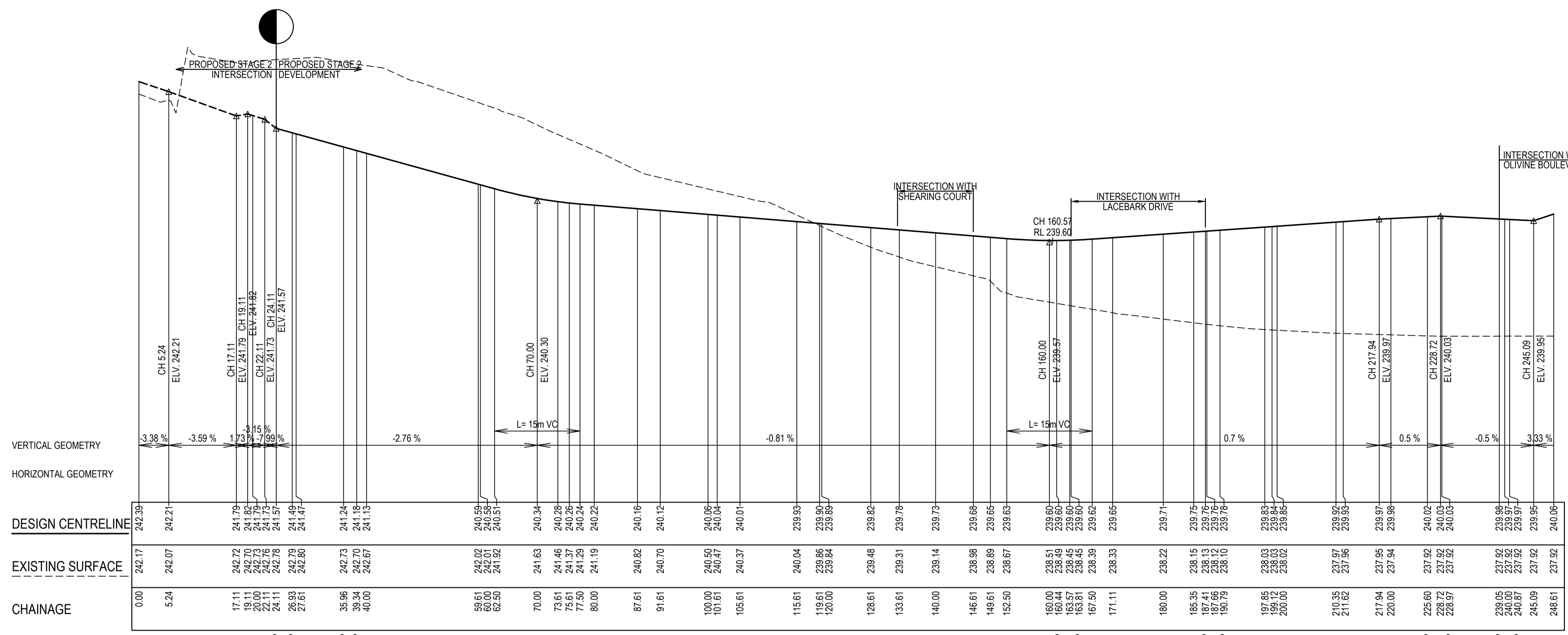
**AS CONSTRUCTED**

TITLE	NAME
DRAFTER	S.Sathasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows



Olivine Estate - Stage 2  
Whittlesea City Council  
Road and Drainage  
Longitudinal Sections - 2

MELWAYS REF <b>9 J2</b>	PROJECT / DRAWING No. <b>1700E-02-09</b>	SHEET No. <b>09 of 44</b>	REVISION <b>1</b>
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**WOOL WAY DESIGN LINE**

IP CHAINAGE	X COORD	Y COORD	Z COORD	TYPE	BEARING	LENGTH	RADIUS
1 457.225	323238.638	5842916.575	238.891	IP	6°31'31.48"		
2 502.020	323243.729	5842961.081	239.254	IP	6°31'31.48"		

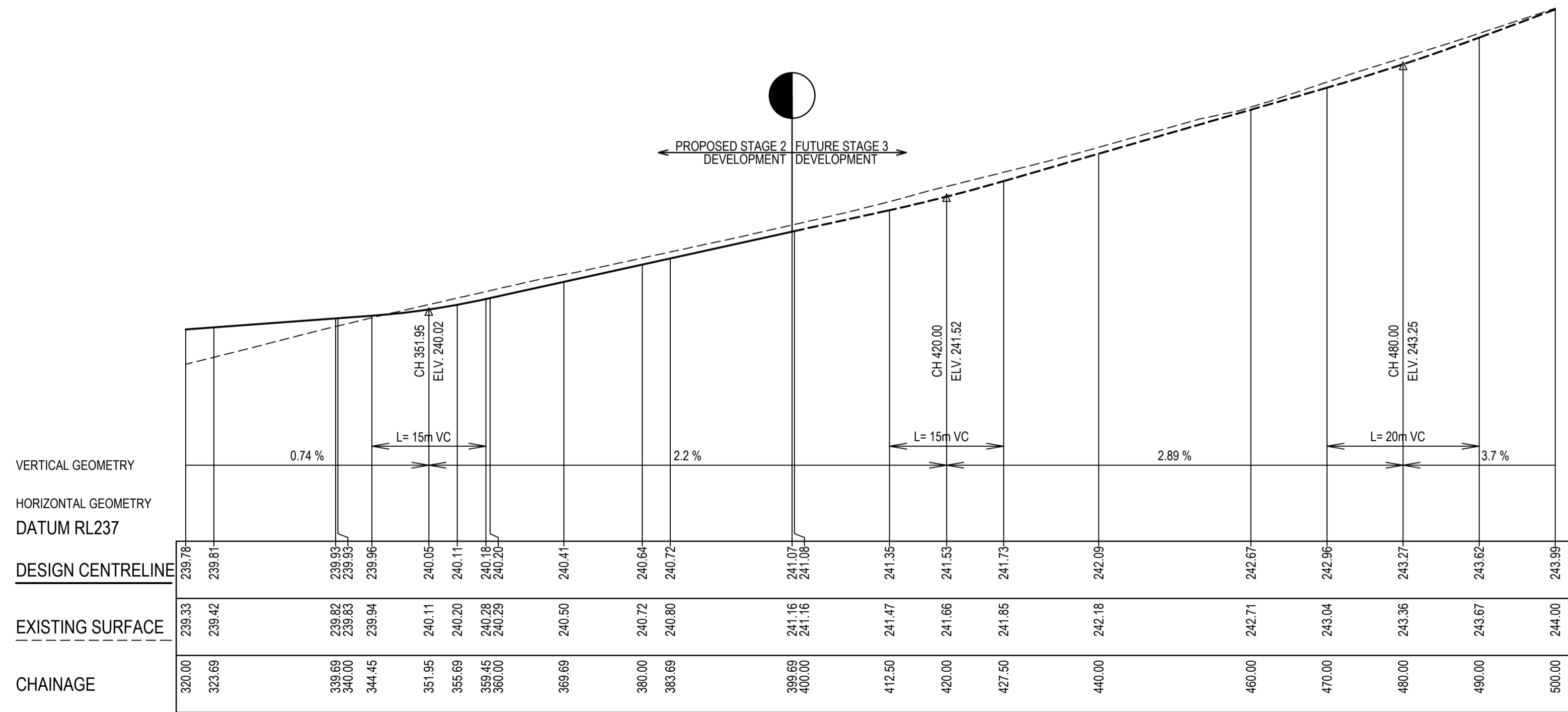
**SPLENDID ROAD - ORIEL ROAD DESIGN LINE**

IP CHAINAGE	X COORD	Y COORD	Z COORD	TYPE	BEARING	LENGTH	RADIUS
1 0.000	323087.173	5842998.263	240.123	IP	143°03'05.88"		
18.499	323098.293	5842983.479	239.870	TC	143°03'05.88"		
2 25.950	323103.035	5842977.174	239.829	IP	14.901	-18.350	
33.400	323110.873	5842976.278	239.791	CT	96°31'31.50"		
292.105	323367.901	5842946.878	239.579	TC	96°31'31.50"		
3 298.859	323376.446	5842945.900	239.627	IP	13.509	-8.600	
305.614	323377.423	5842954.444	239.677	CT	6°31'31.48"		
4 399.689	323388.114	5843047.910	241.070	IP	6°31'31.48"		

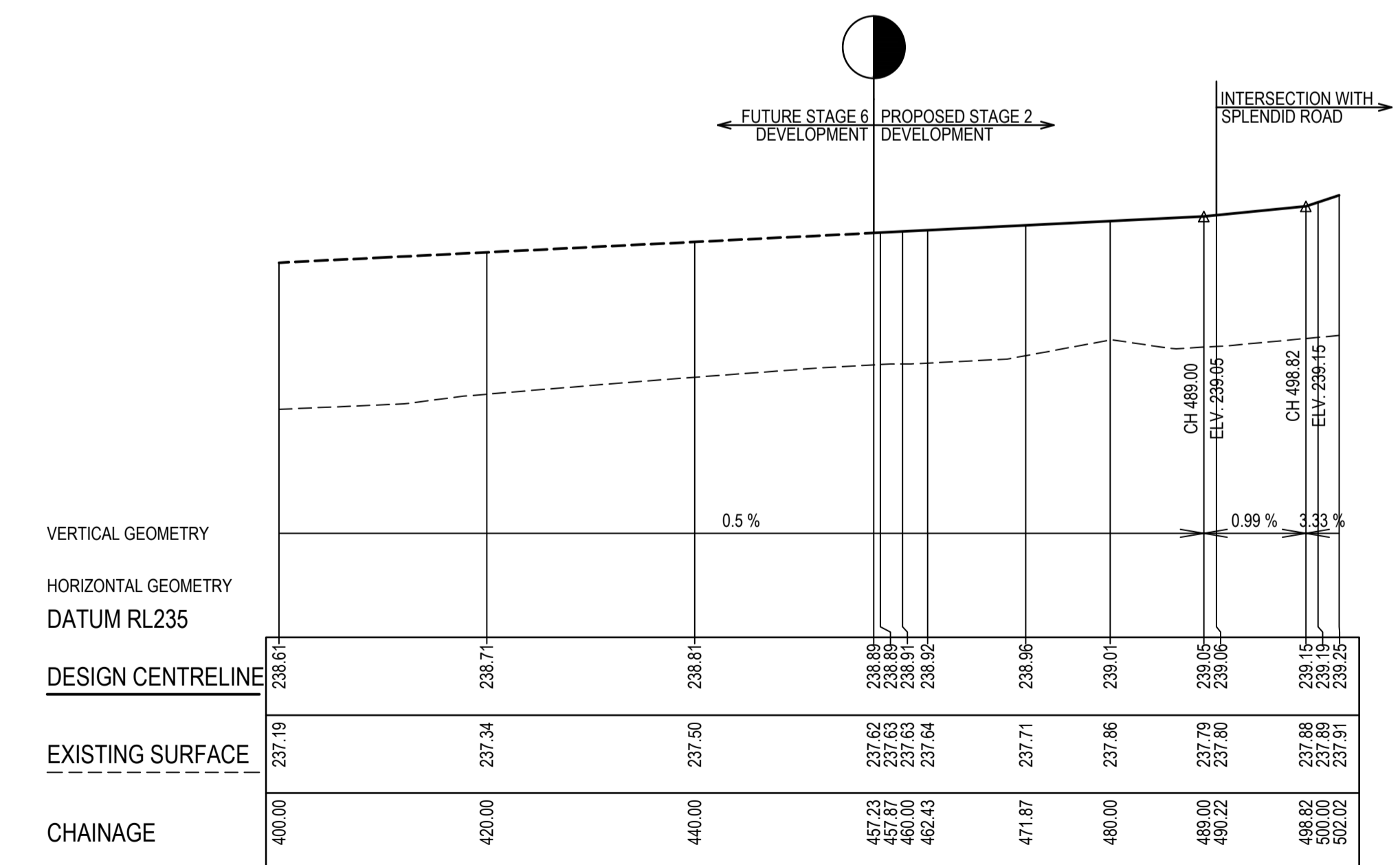
**POLLEN PLACE DESIGN LINE**

IP CHAINAGE	X COORD	Y COORD	Z COORD	TYPE	BEARING	LENGTH	RADIUS
1 24.114	323015.255	5842752.990	241.567	IP	6°12'55.55"		
2 248.613	323039.561	5842976.170	240.063	IP	6°12'55.55"		

POLLEN PLACE LONGITUDINAL SECTION



ORIEL ROAD LONGITUDINAL SECTION



WOOL WAY LONGITUDINAL SECTION

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	30.08.18	ISSUED FOR CONSTRUCTION	KMKM	AB
1	26.06.25	AS CONSTRUCTED	KMKU	AB

**AS CONSTRUCTED**

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**QUALITY MANAGEMENT ISO 9001**

**ORIEL MANAGEMENT AS/NZS 1800**

**ENVIRONMENTAL MANAGEMENT ISO 14001**

Global-Mark.com.au®

TITLE	NAME
DRAFTER	S.Sathasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows

Scale 1:500

SCALE AS SHOWN AT 1

**SMEC**

Member of the Surbana Jurong Group

ABN 47 065 475 149

Level 10, 71 Queens Road  
Melbourne, VIC 3004  
Ph 03 9514 1500

**mirvac**

Olivine Estate - Stage 2  
Whittlesea City Council  
Road and Drainage  
Longitudinal Sections - 3

MELWAYS REF: 9 J2

PROJECT / DRAWING No: 1700E-02-10

SHEET No: 10 of 44

REVISION: 1



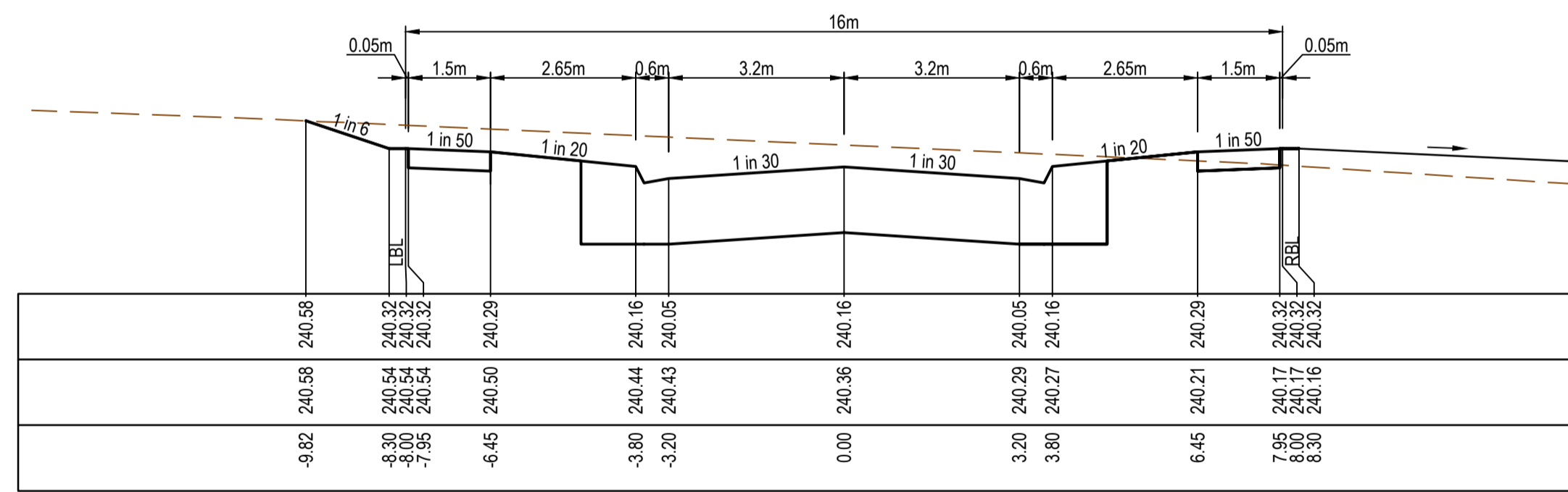
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DATUM239.0

DESIGN SURFACE

EXISTING SURFACE

OFFSET



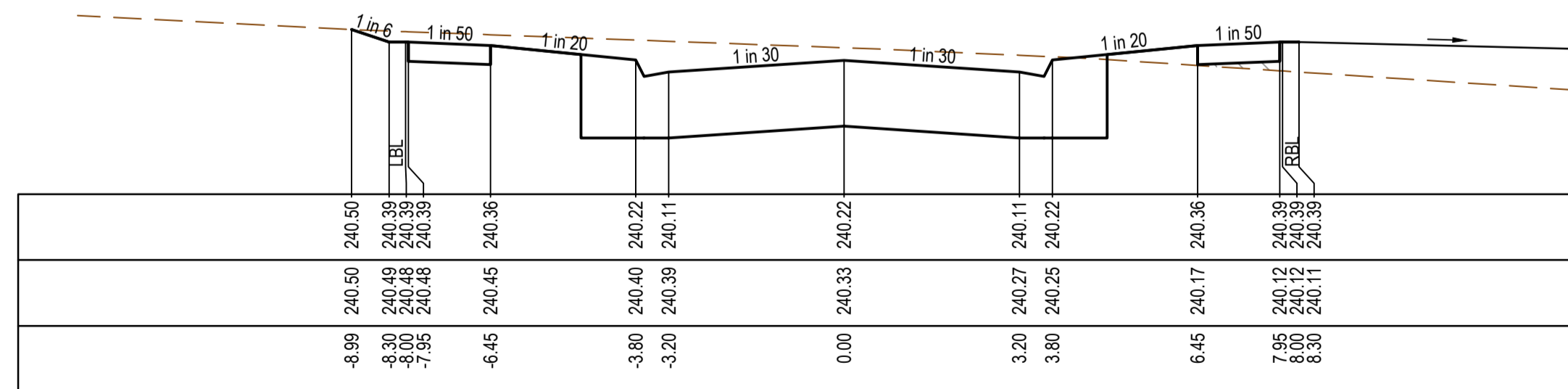
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DATUM239.0

DESIGN SURFACE

EXISTING SURFACE

OFFSET



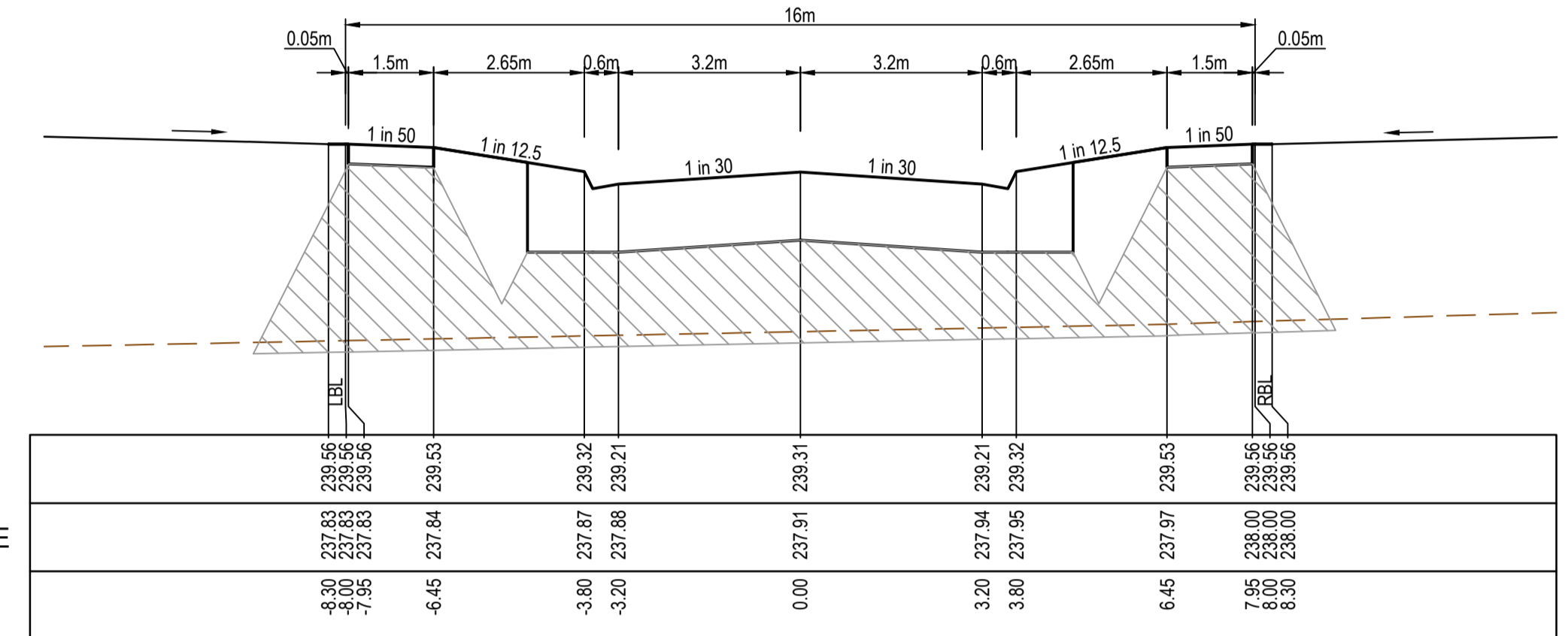
CH 146.72  
COACH DRIVE

DATUM237.0

DESIGN SURFACE

EXISTING SURFACE

OFFSET



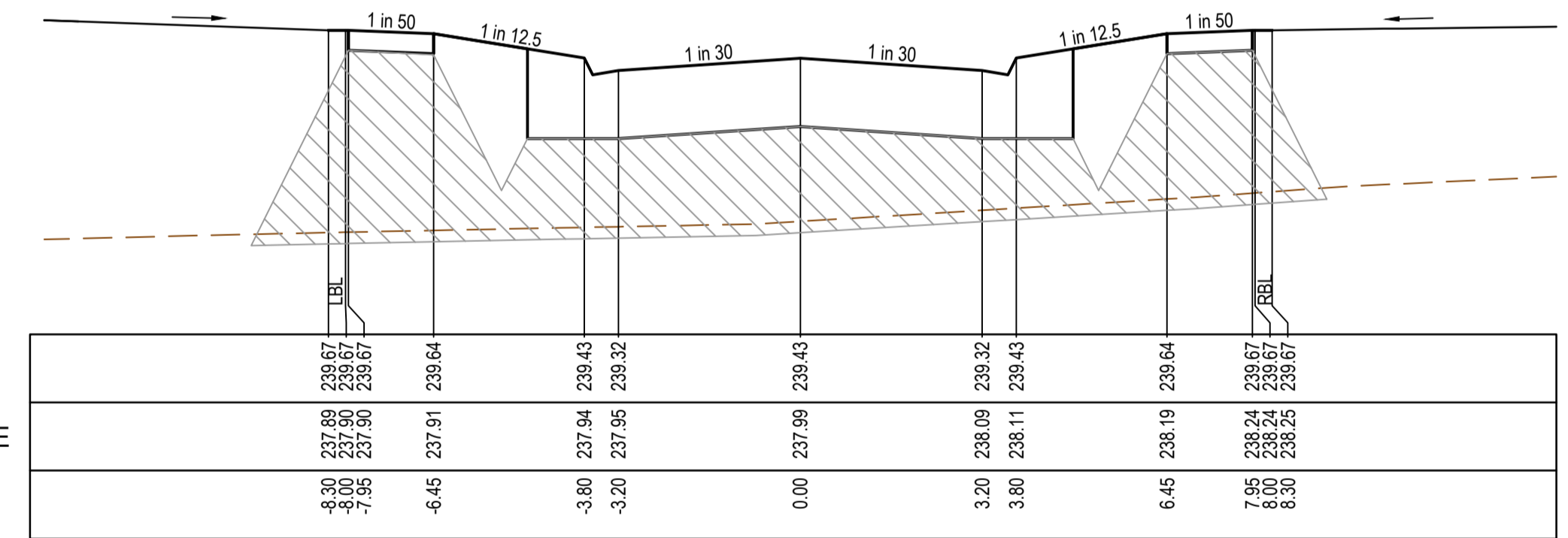
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DATUM237.0

DESIGN SURFACE

EXISTING SURFACE

OFFSET



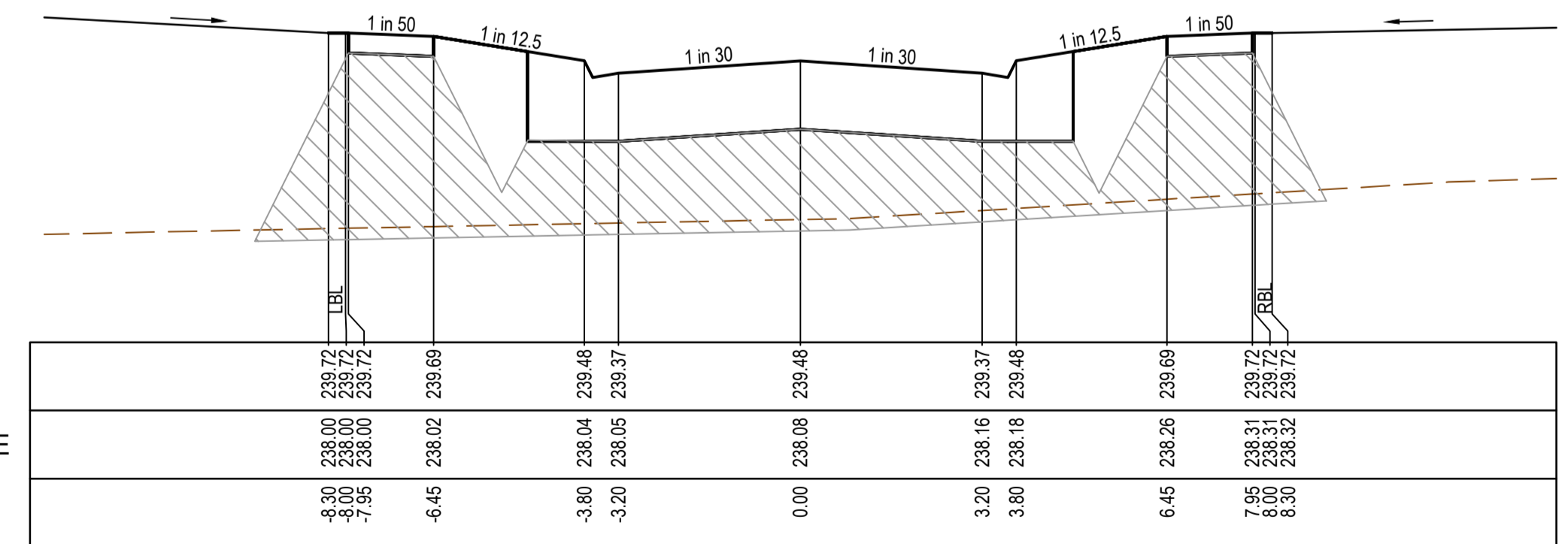
CH 20.00

DATUM237.0

DESIGN SURFACE

EXISTING SURFACE

OFFSET

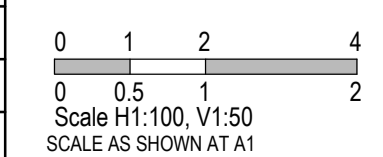


CH 13.04  
LACEBARK DRIVE

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	30.08.18	ISSUED FOR CONSTRUCTION	KMKM	AB
1	26.06.27	AS CONSTRUCTED	KMKU	AB

**AS CONSTRUCTED**

TITLE	NAME
DRAFTER	S.Sathasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows



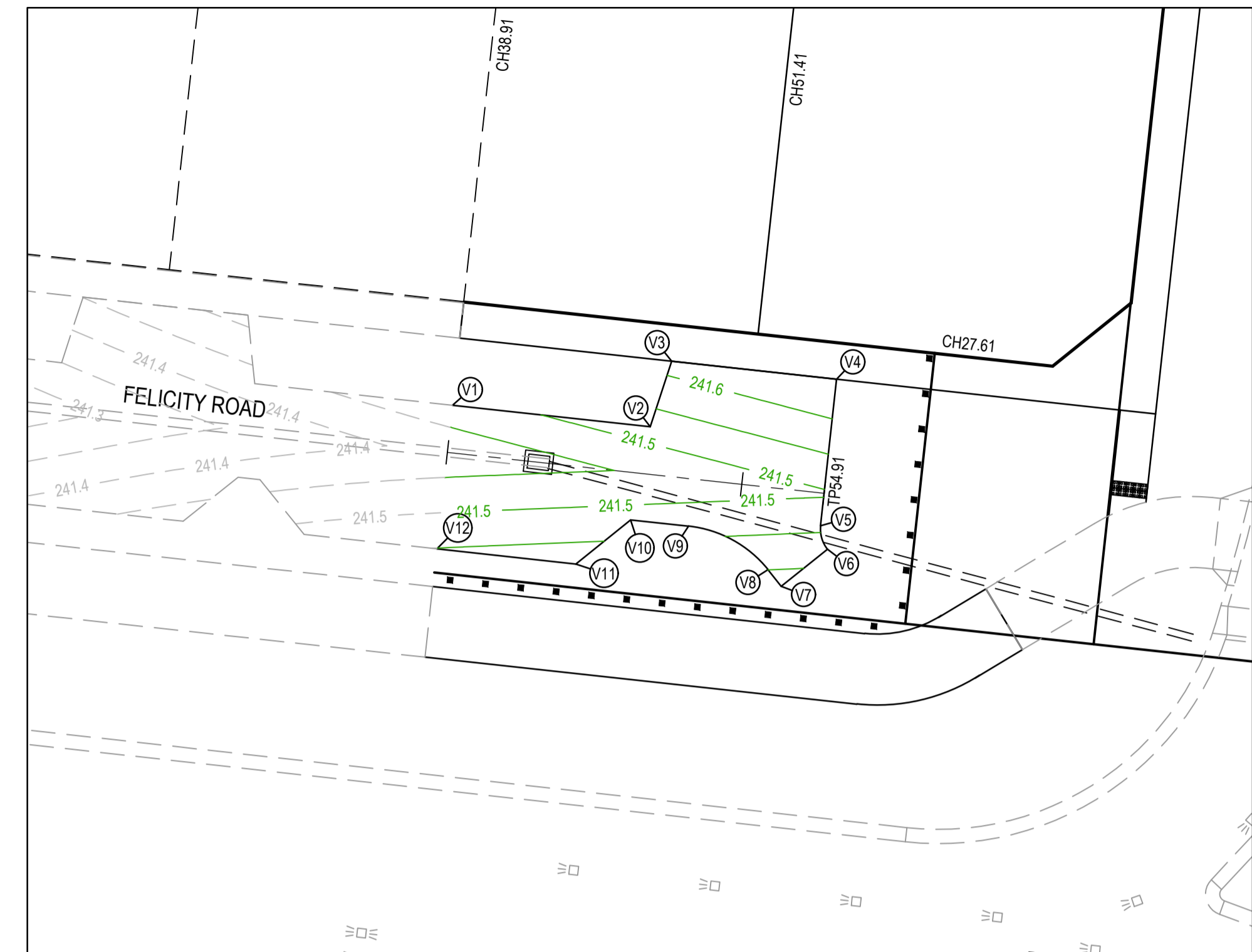
**SMEC**  
Member of the Surbana Jurong Group  
ABN 47 065 475 149  
Level 10, 71 Queens Road  
Melbourne, VIC 3004  
Ph 03 9514 1500

**mirvac**

Olivine Estate - Stage 2  
Whittlesea City Council  
Road and Drainage  
Cross Sections: Coach Drive Ch 146.72 - Ch 159.00  
& Lacebark Drive

MELWAYS REF <b>9 J2</b>	PROJECT / DRAWING No. <b>1700E-02-12</b>	SHEET No. <b>12 of 44</b>	REVISION <b>1</b>
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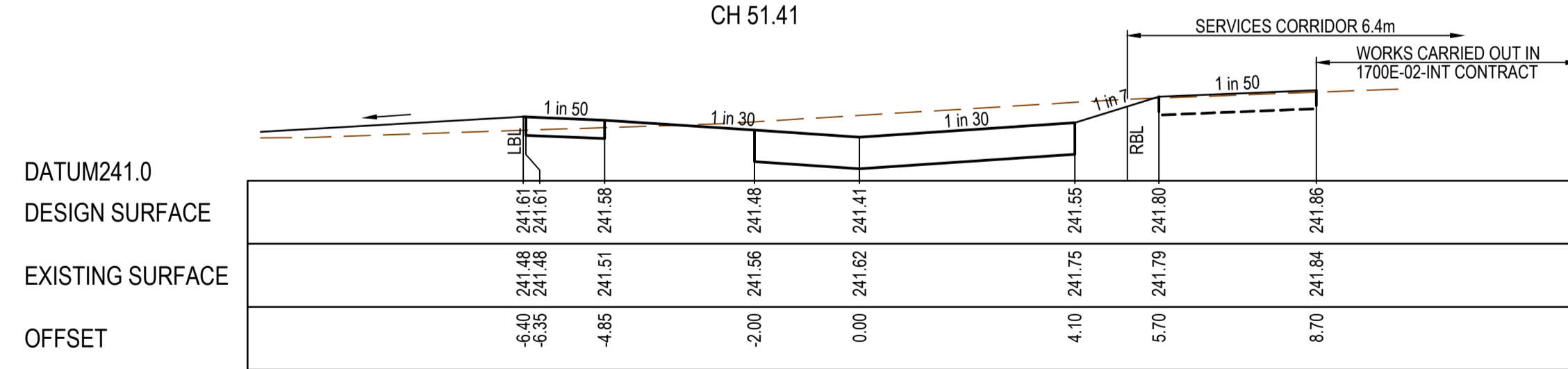
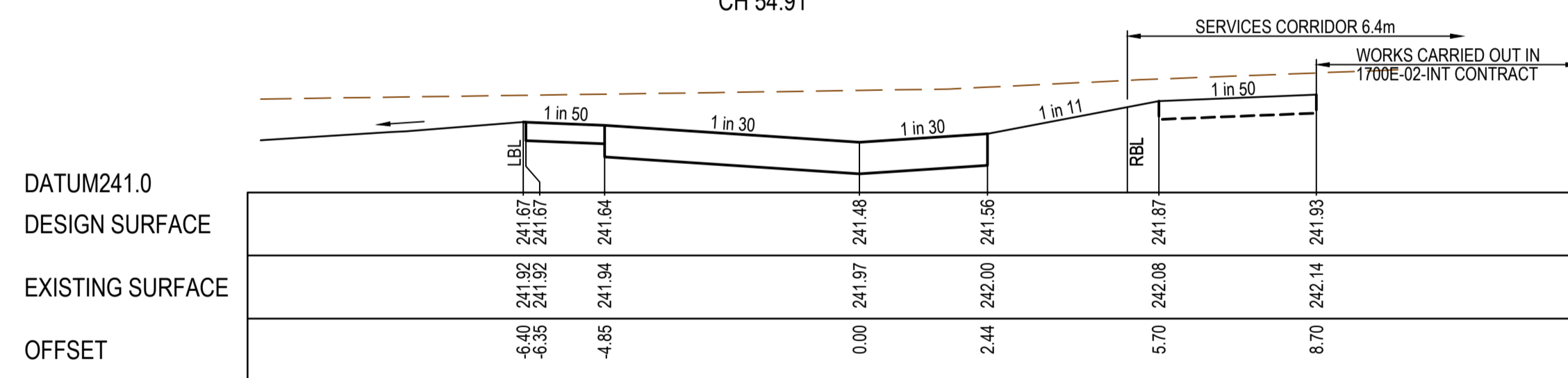
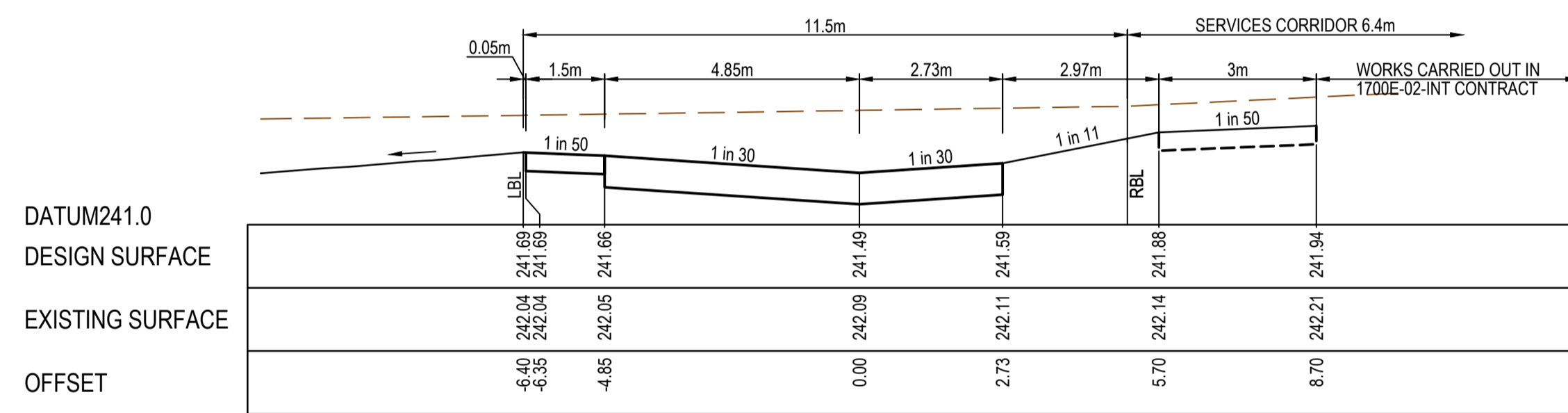




Alignment V

Point no	Easting	Northing	RL
V1	322977.381	5842756.210	241.481
V2	322985.732	5842755.300	241.523
V3	322986.637	5842758.069	241.621
V4	322993.596	5842757.311	241.656
V5	322992.921	5842751.118	241.540
V6	322993.211	5842750.128	241.574
V7	322991.262	5842748.562	241.624
V8	322990.699	5842749.263	241.600
V9	322987.343	5842751.101	241.533
V10	322984.901	5842751.367	241.521
V11	322982.586	5842749.507	241.581
V12	322976.721	5842750.146	241.551

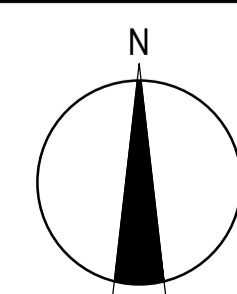
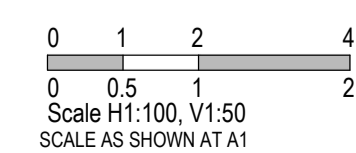
Curve no	L	Radius	Arc	A	B	X	Y	I	Mid point RL
V5 - V6	45.000	1.348	1.059	0.103	0.077	0.263	0.253	0.265	241.558
V8 - V9	45.000	5.000	3.927	0.381	0.285	0.975	0.938	0.982	241.556



REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	30.08.18	ISSUED FOR CONSTRUCTION	KMKM	AB
1	26.06.23	AS CONSTRUCTED	KMKU	AB

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.

TITLE	NAME
DRAFTER	S.Sathasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows

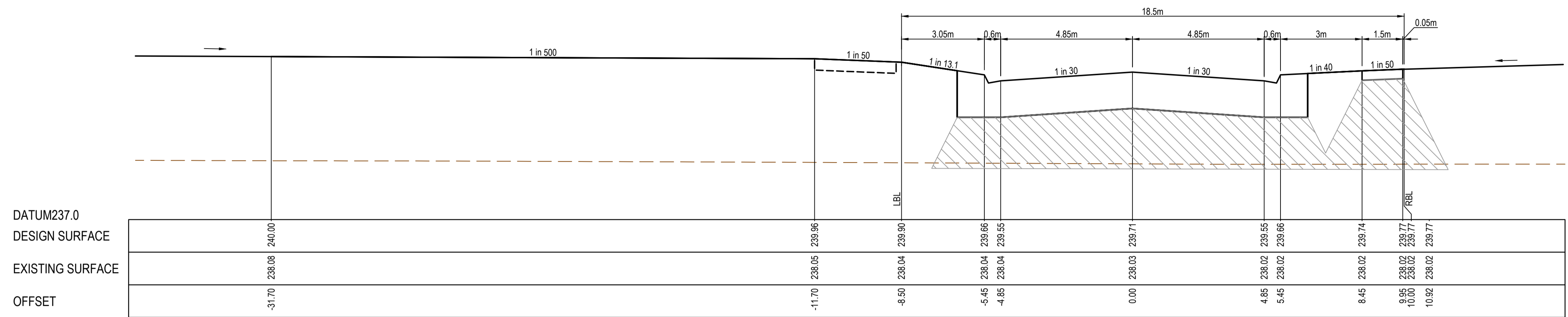


Member of the Surbana Jurong Group  
 ABN 47 065 475 149  
 Level 10, 71 Queens Road  
 Melbourne, VIC 3004  
 Ph 03 9514 1500

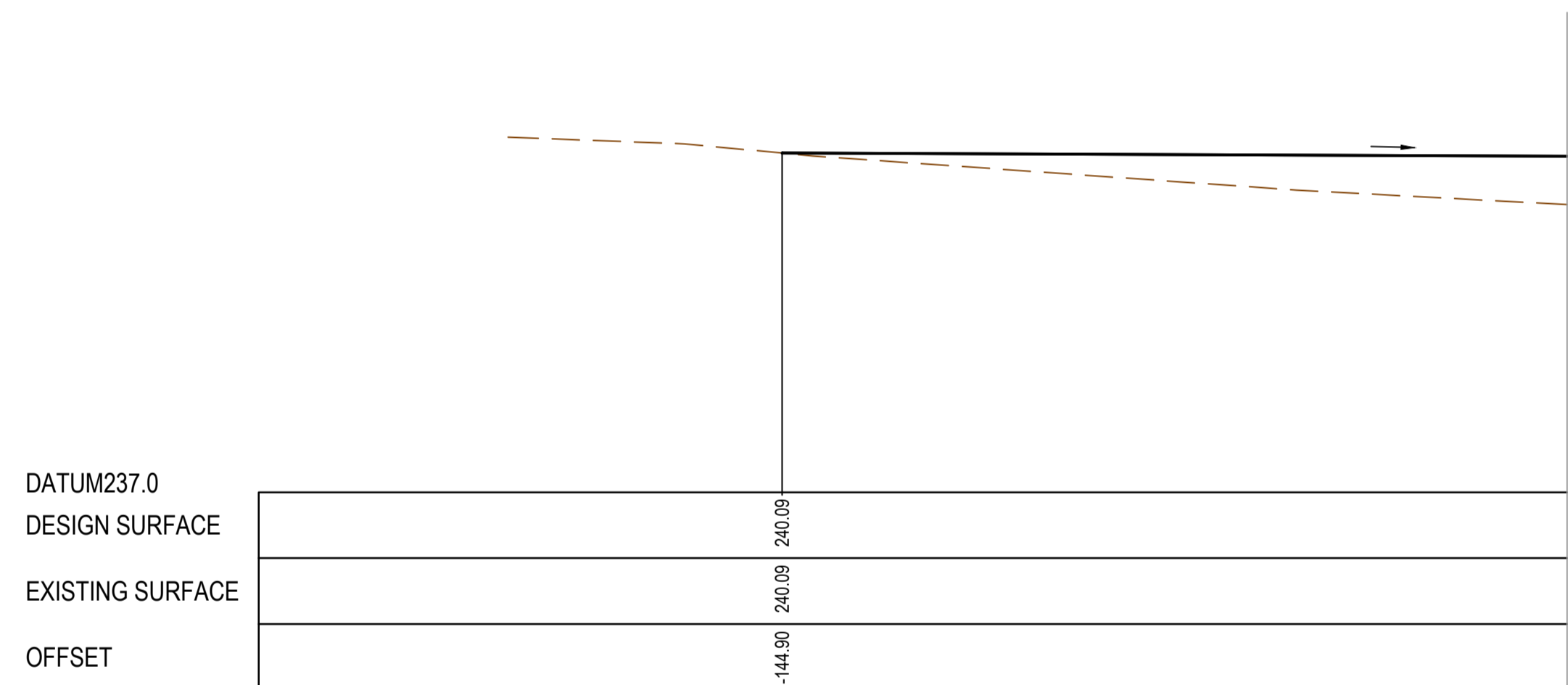
Olivine Estate - Stage 2  
 Whittlesea City Council  
 Road and Drainage  
 Cross Sections: Felicity Road

MELWAYS REF 9 J2	PROJECT / DRAWING No. 1700E-02-14	SHEET No. 14 of 44	REVISION 1
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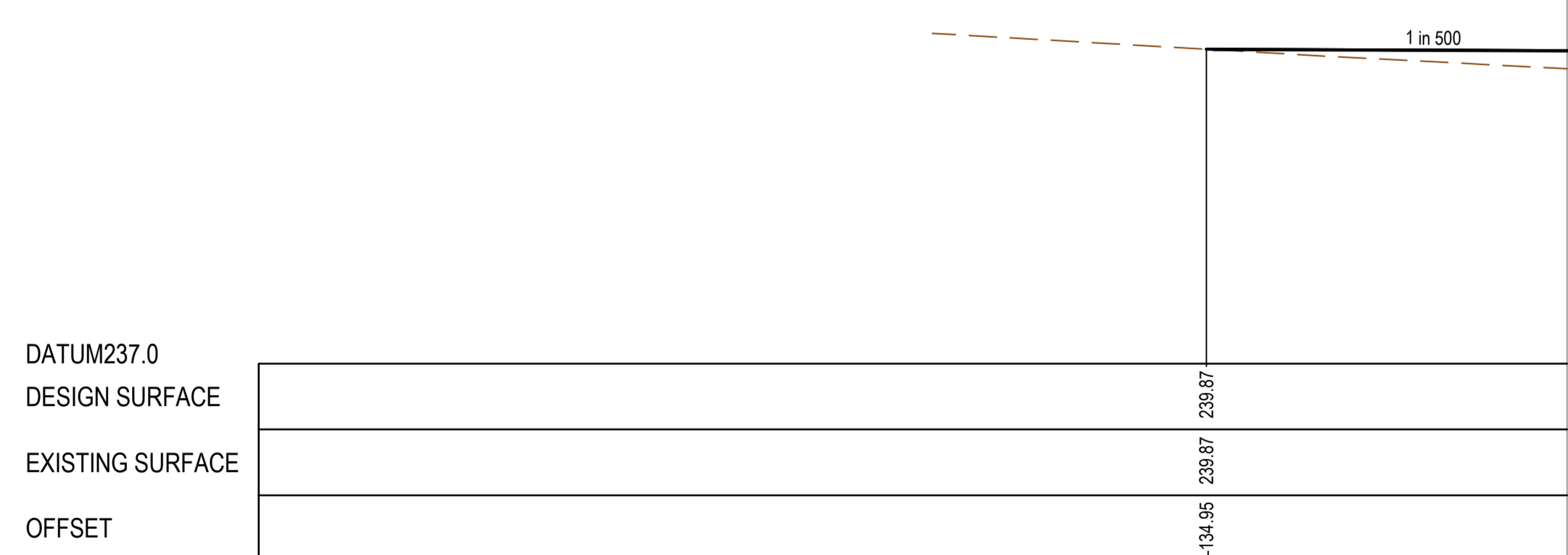
STRUCTURAL FILL REQUIRED UNDER PAVEMENT AND FOOTPATHS WHERE CONSTRUCTED ABOVE EXISTING SURFACE



CH 531.99



CH 527.34

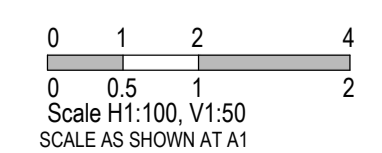


CH 514.84

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	30.08.18	ISSUED FOR CONSTRUCTION	KMKM	AB
1	26.06.30	AS CONSTRUCTED	KMKU	AB

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TITLE	NAME
DRAFTER	S.Sathasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows

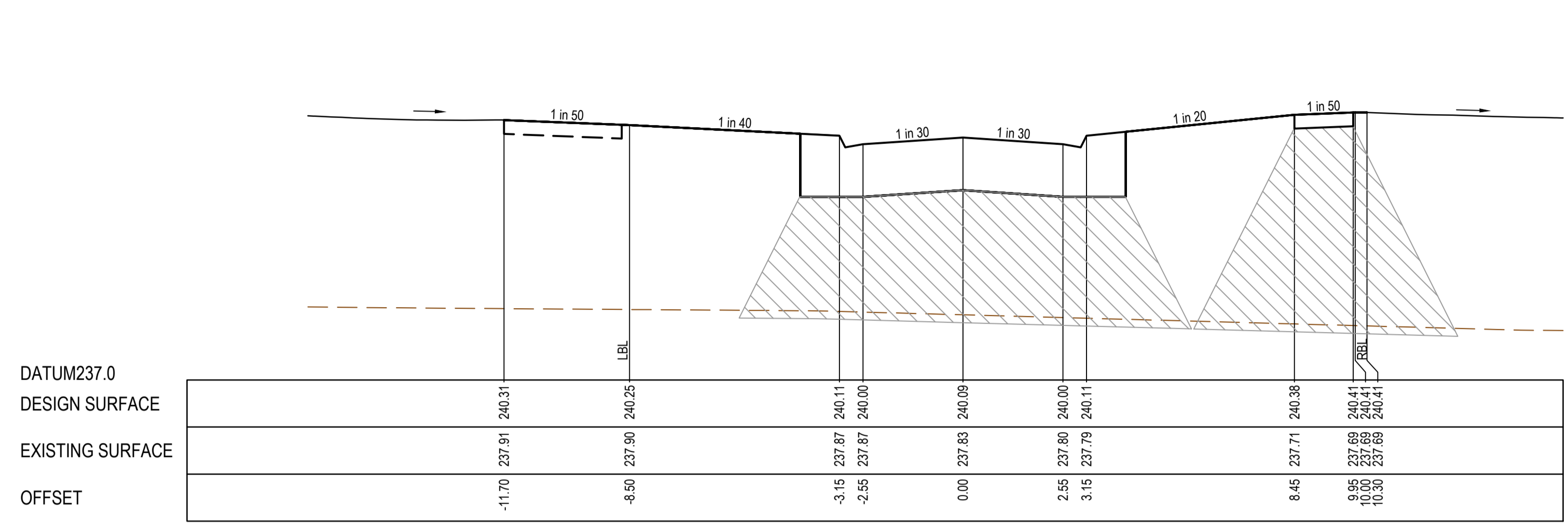


Member of the Surbana Jurong Group  
 ABN 47 065 475 149  
 Level 10, 71 Queens Road  
 Melbourne, VIC 3004  
 Ph 03 9514 1500

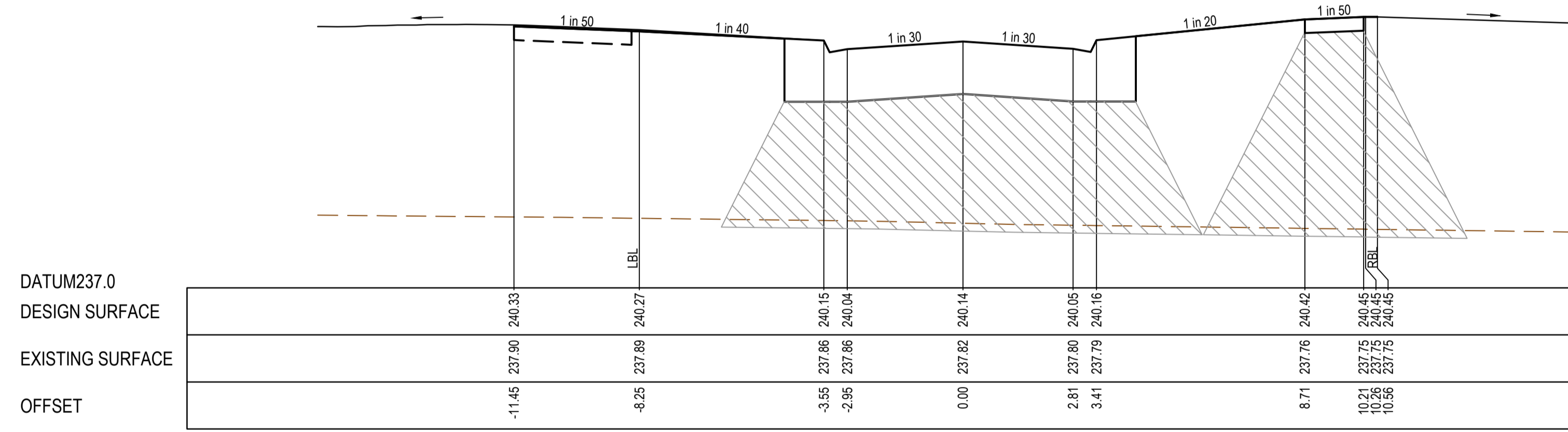
Olivine Estate - Stage 2  
 Whittlesea City Council  
 Road and Drainage  
 Cross Sections: Olivine Boulevard  
 Ch 514.84 - Ch 532.00

MELWAYS REF 9 J2	PROJECT / DRAWING No. 1700E-02-15	SHEET No. 15 of 44	REVISION 1
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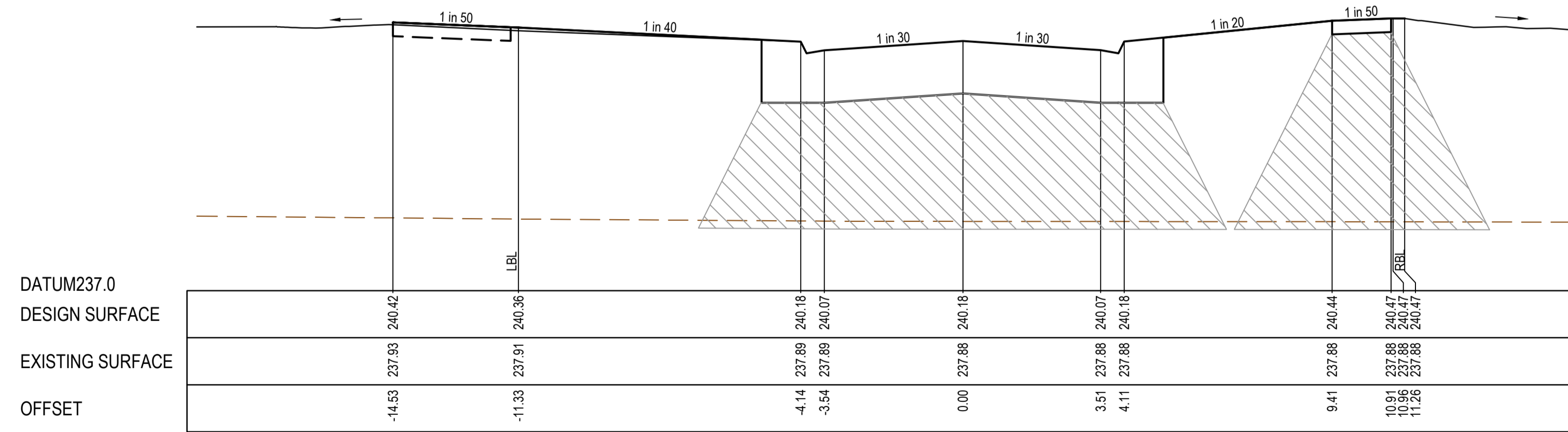
STRUCTURAL FILL REQUIRED UNDER PAVEMENT AND FOOTPATHS WHERE CONSTRUCTED ABOVE EXISTING SURFACE



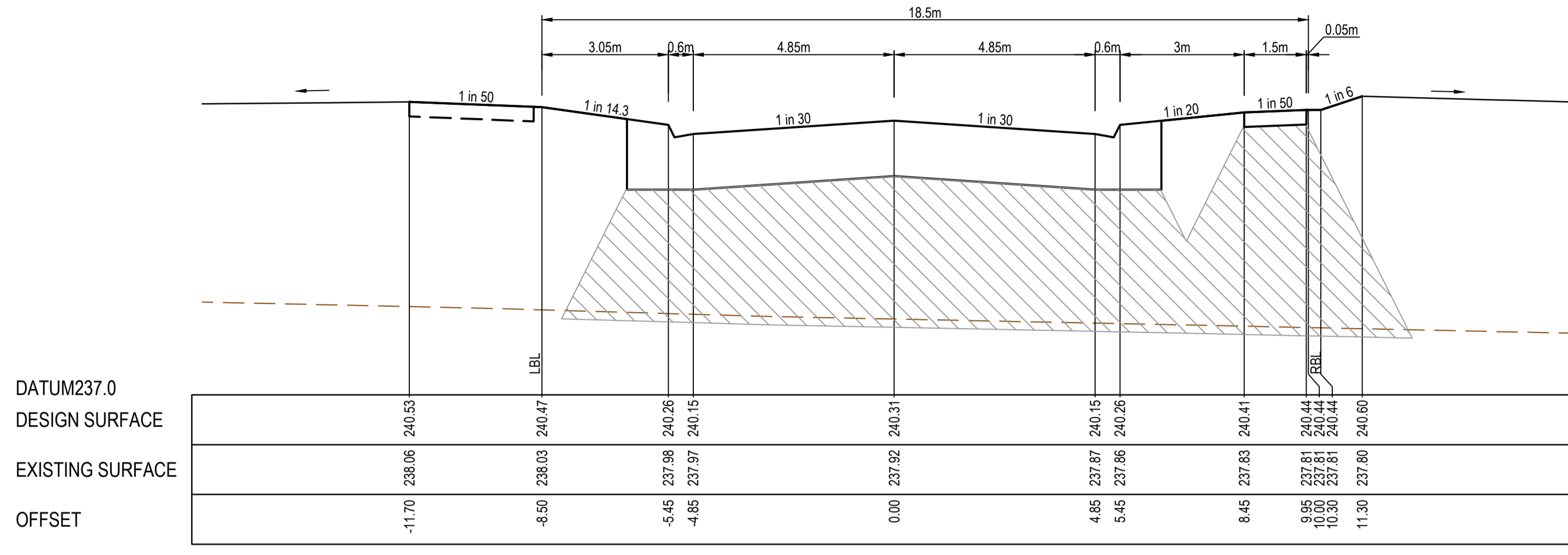
CH 589.37



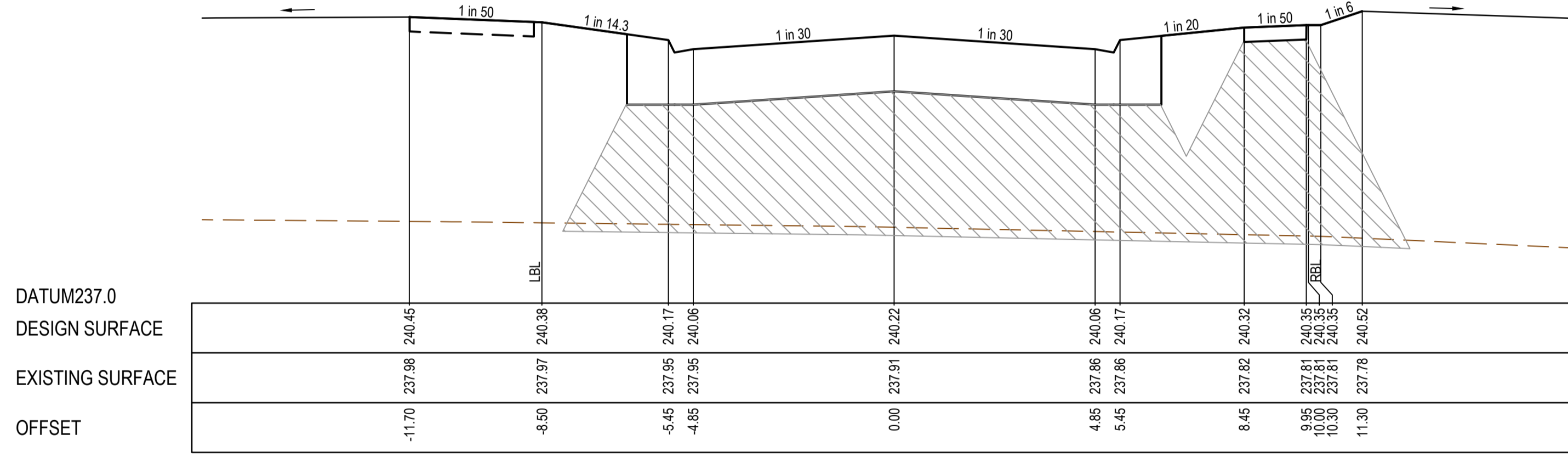
CH 578.65



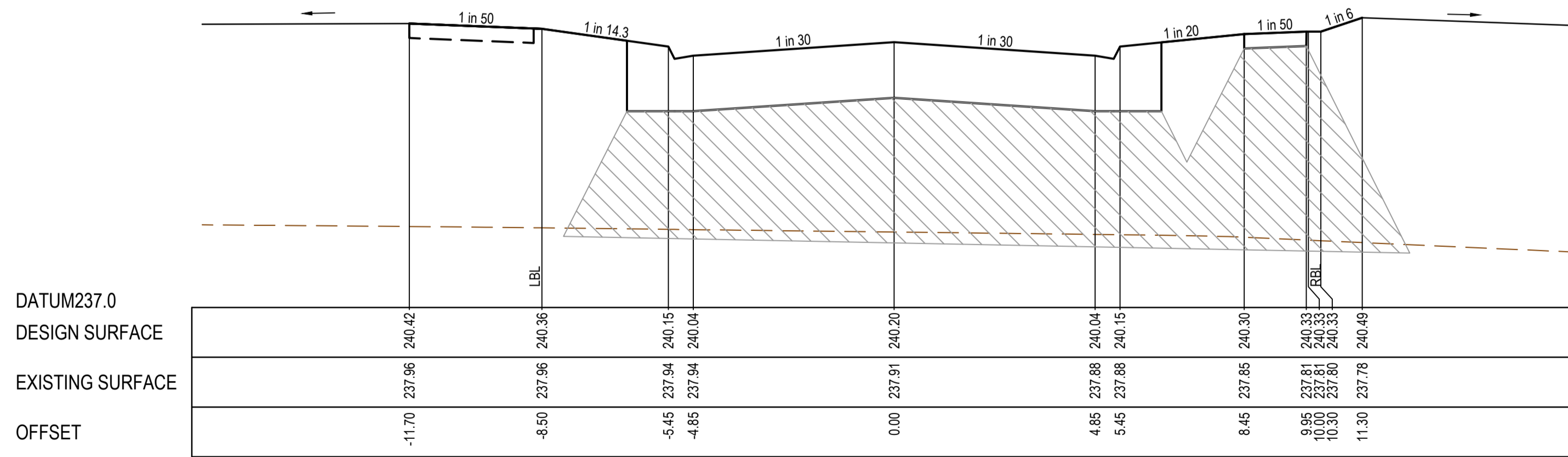
CH 563.19



CH 644.41



CH 627.60

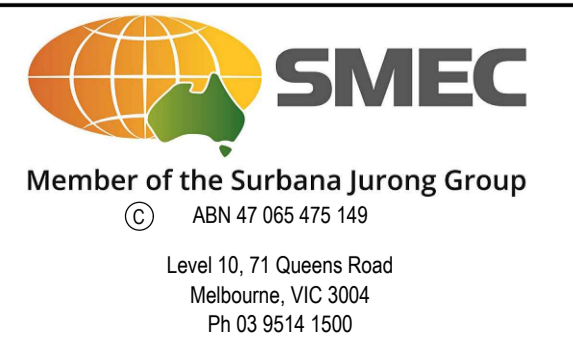
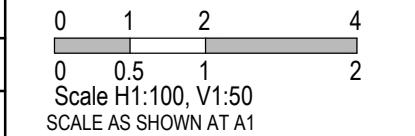


CH 622.49

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DES/DT	APPROVAL
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1	26.06.31	AS CONSTRUCTED	KMKM	AB

**AS CONSTRUCTED**

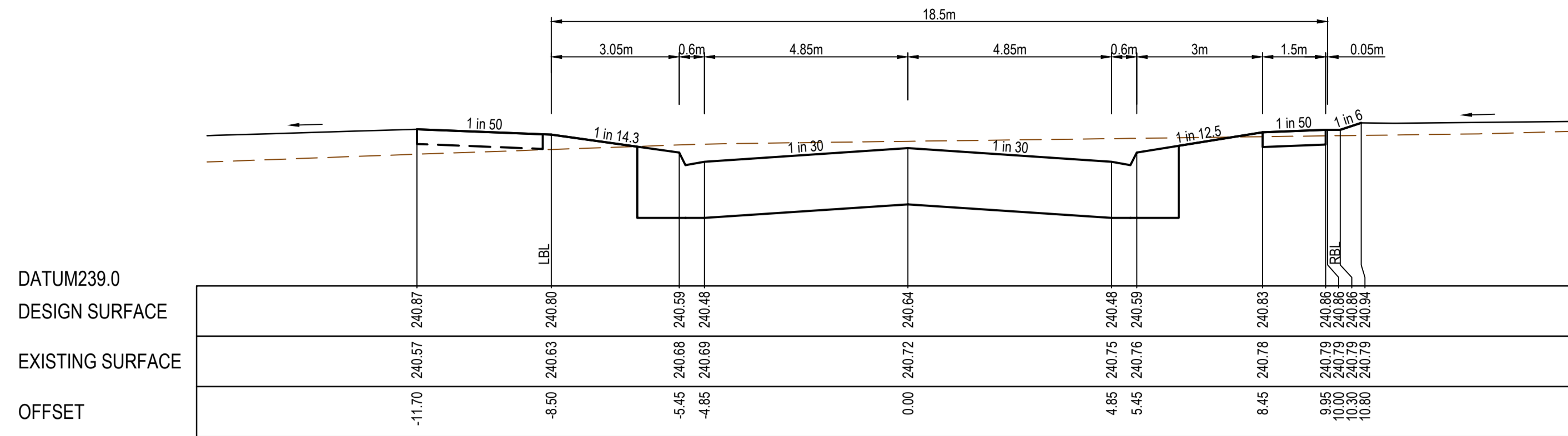
All setting out should be carried out in accordance with MPA/Council's standard drawings or as nominated on hard copy plans provided by SMEC. Any digital information supplied by this office is for information only. Any discrepancies should be discussed with the superintendent.		TITLE	NAME
Quality Management - ISO 9001	Drift Management - AS/NZS 1881	DRAFTER	S.Sathasivam
Environmental Management - ISO 14001		DESIGNER	K.Moore
		CHECKED	Z.Gosev
		AUTHORISED	A.Burrows



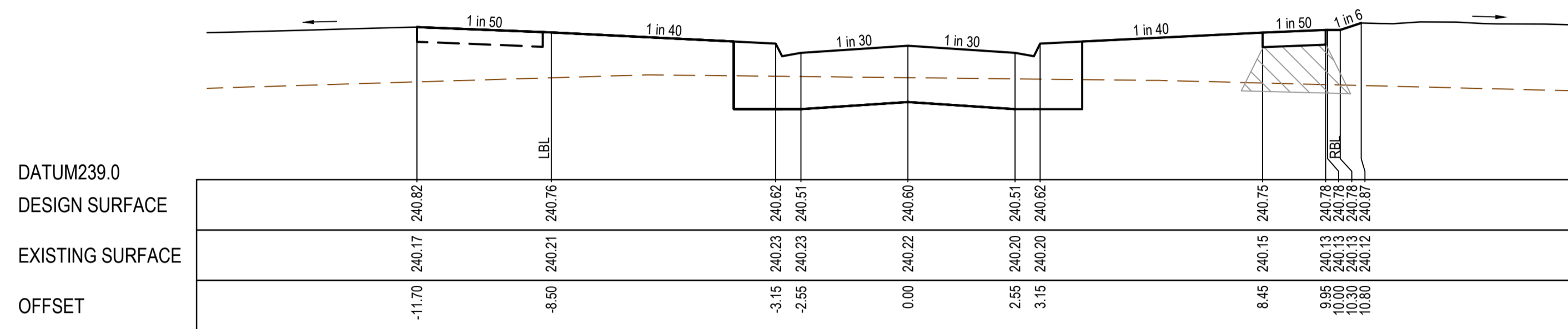
Olivine Estate - Stage 2 Whittlesea City Council Road and Drainage Cross Sections: Olivine Boulevard Ch 563.65 - Ch 644.41		MELWAYS REF 9 J2	PROJECT / DRAWING No. 1700E-02-16	SHEET No. 16 of 44	REVISION 1
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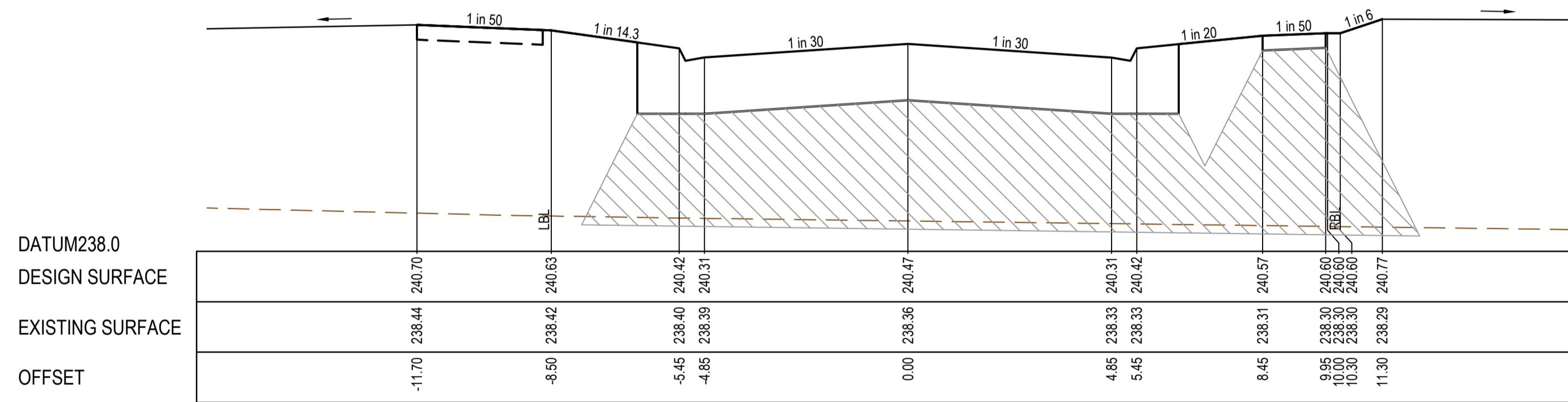
STRUCTURAL FILL REQUIRED UNDER PAVEMENT AND FOOTPATHS WHERE CONSTRUCTED ABOVE EXISTING SURFACE



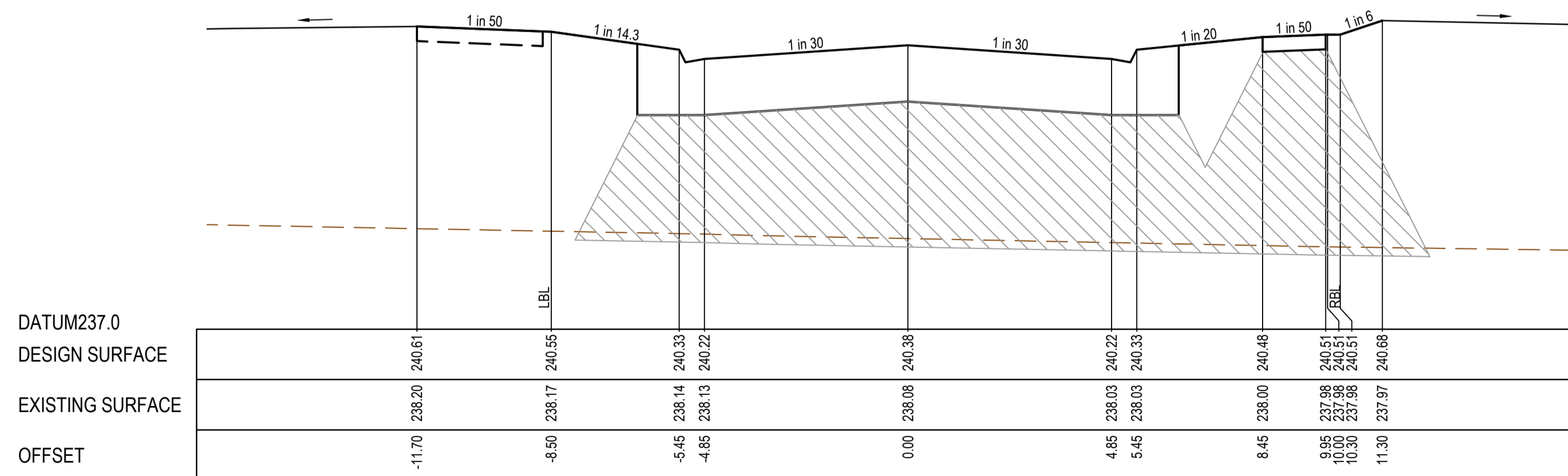
CH 711.20



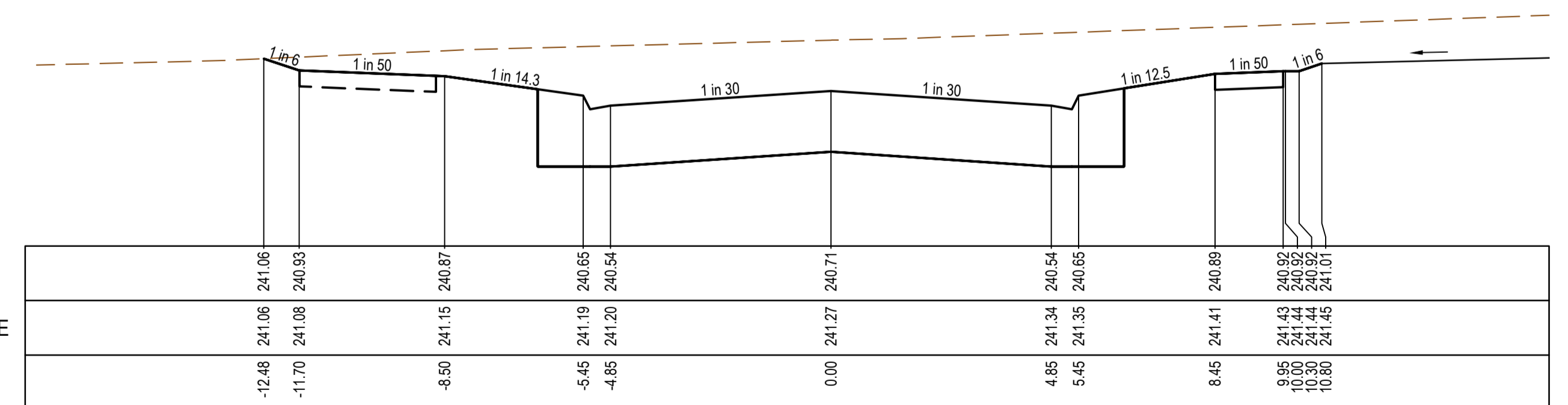
CH 702.26



CH 677.08



CH 659.81

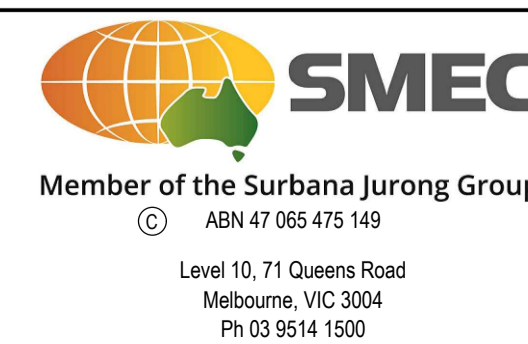
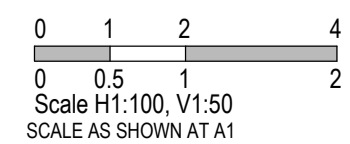


CH 724.25

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	30.08.18	ISSUED FOR CONSTRUCTION	KMKM	AB
1	26.06.32	AS CONSTRUCTED	KMKU	AB

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.

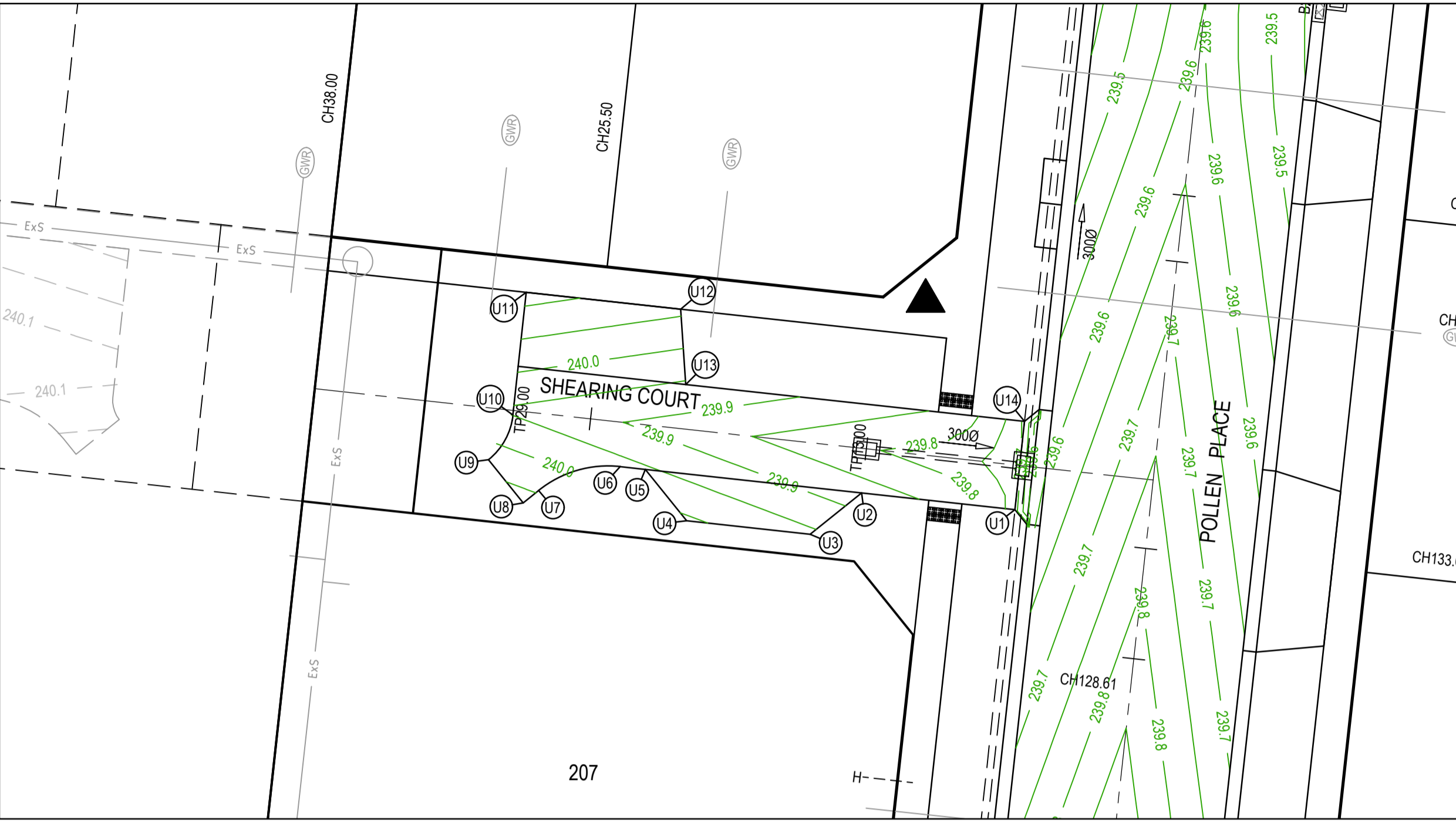
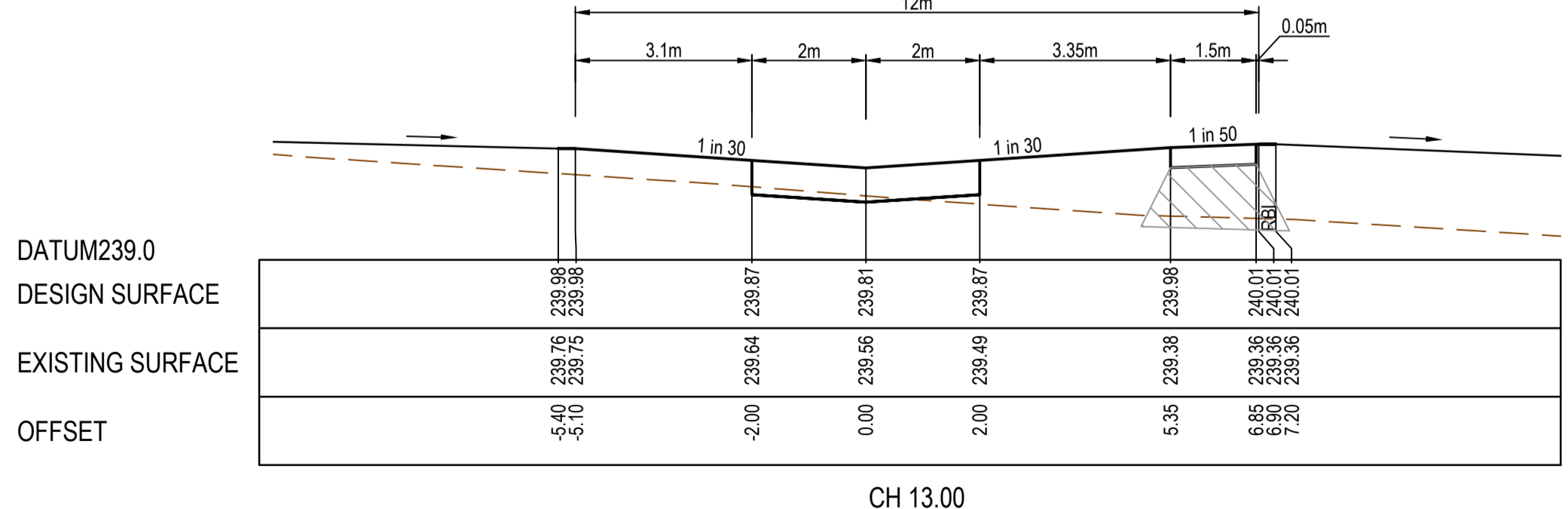
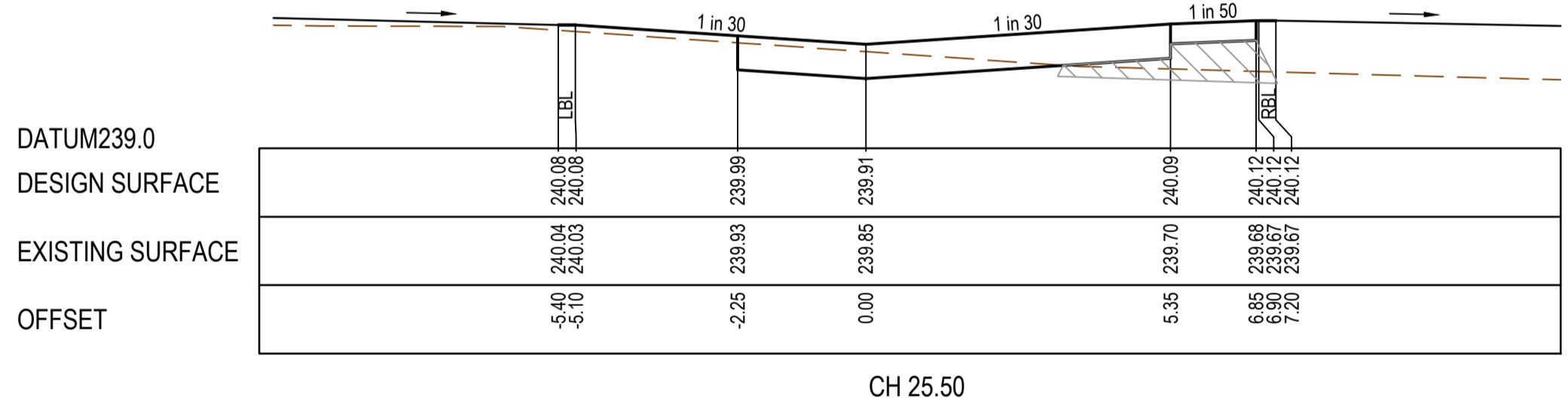
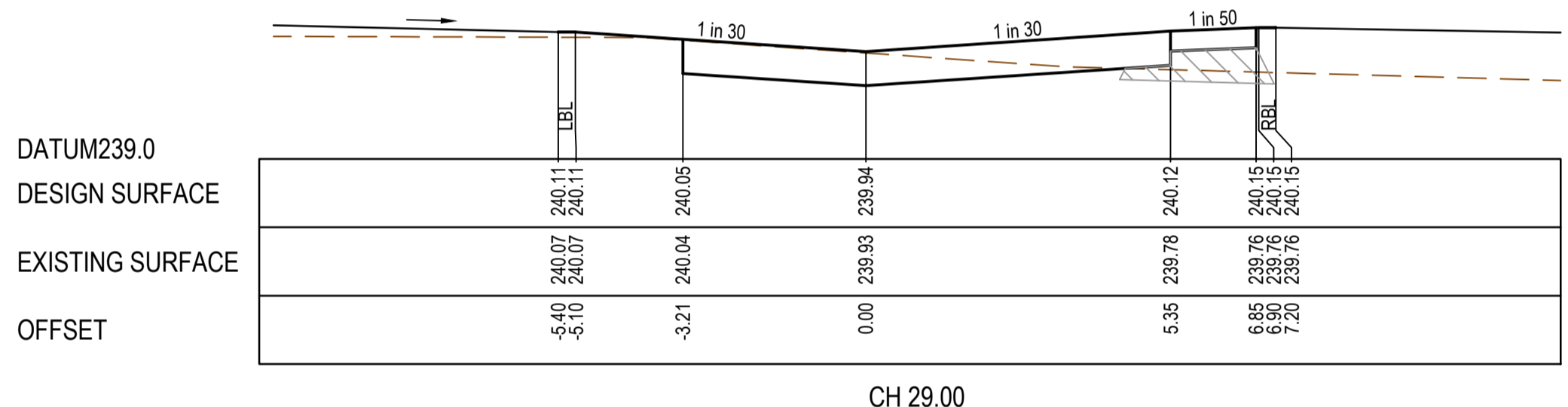
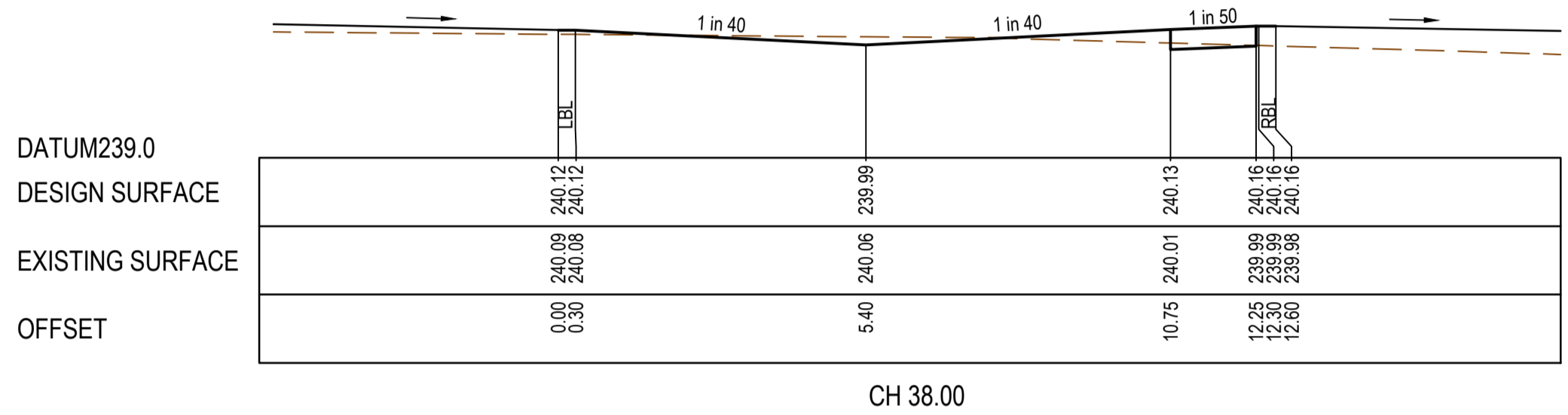
TITLE	NAME
DRAFTER	S.Sathasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows



Olivine Estate - Stage 2  
Whittlesea City Council  
Road and Drainage  
Cross Sections: Olivine Boulevard  
Ch 659.81 - Ch 724.25

MELWAYS REF	PROJECT / DRAWING No	SHEET No	REVISION
9 J2	1700E-02-17	17 of 44	1

STRUCTURAL FILL REQUIRED UNDER PAVEMENT AND FOOTPATHS WHERE CONSTRUCTED ABOVE EXISTING SURFACE



Alignment U

Point no	Easting	Northing	RL
U1	323021.215	5842863.595	239.723
U2	323014.306	5842864.348	239.872
U3	323011.991	5842862.488	239.960
U4	323006.424	5842863.094	240.008
U5	323004.564	5842865.409	239.956
U6	323003.431	5842865.532	239.966
U7	322999.757	5842864.459	240.045
U8	322999.057	5842863.896	240.072
U9	322997.491	5842865.845	240.028
U10	322998.594	5842867.859	239.950
U11	322999.196	5842873.387	240.121
U12	323006.155	5842872.629	240.061
U13	323006.379	5842869.235	239.944
U14	323021.648	5842867.572	239.694

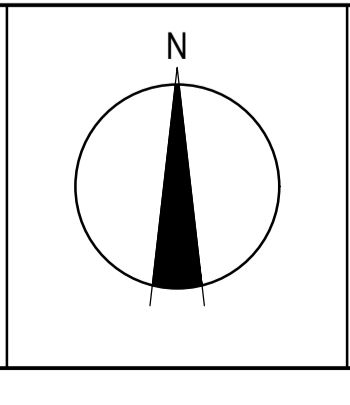
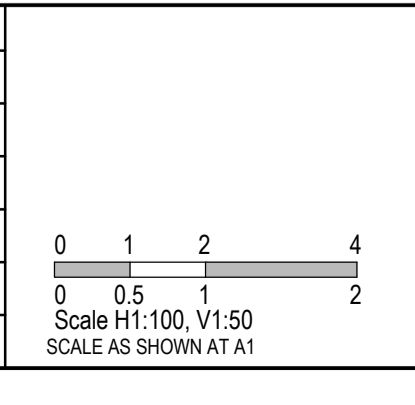
Curve no	l	Radius	Arc	A	B	X	Y	l	Mid point RL
U6 - U7	45.000	5.000	3.927	0.381	0.285	0.975	0.938	0.982	239.995
U9 - U10	45.000	3.000	2.356	0.228	0.171	0.585	0.563	0.589	239.990

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	30.08.18	ISSUED FOR CONSTRUCTION	KMKM	AB
1	26.06.33	AS CONSTRUCTED	KMKU	AB

**AS CONSTRUCTED**

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TITLE	NAME
DRAFTER	S.Sathasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows

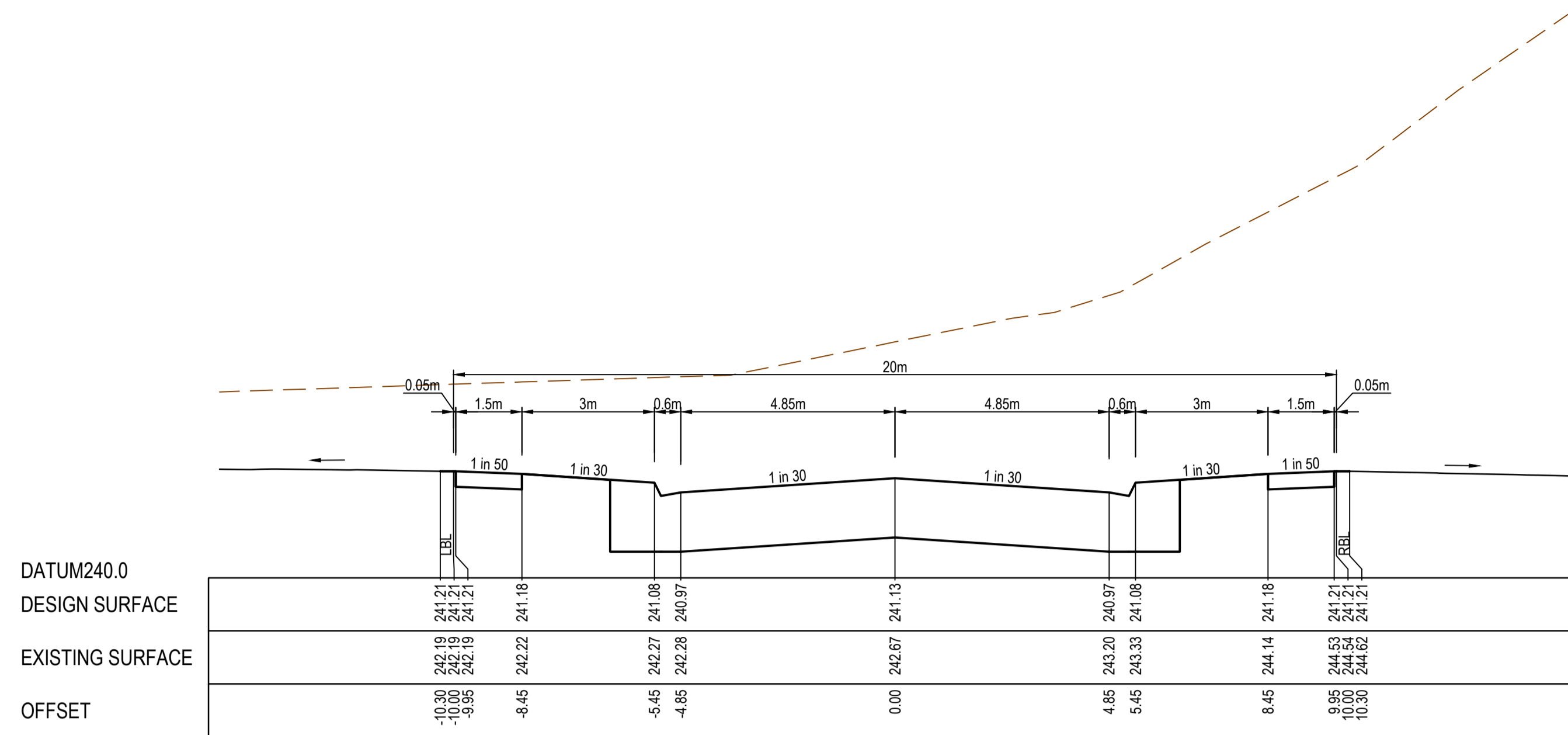


Member of the Surbana Jurong Group  
 ABN 47 065 475 149  
 Level 10, 71 Queens Road  
 Melbourne, VIC 3004  
 Ph 03 9514 1500

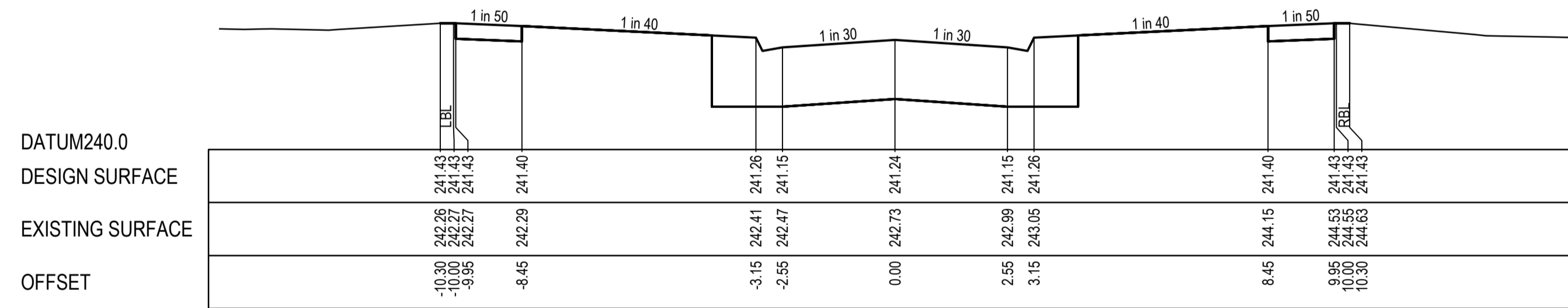


Olivine Estate - Stage 2  
 Whittlesea City Council  
 Road and Drainage  
 Cross Sections: Shearing Court

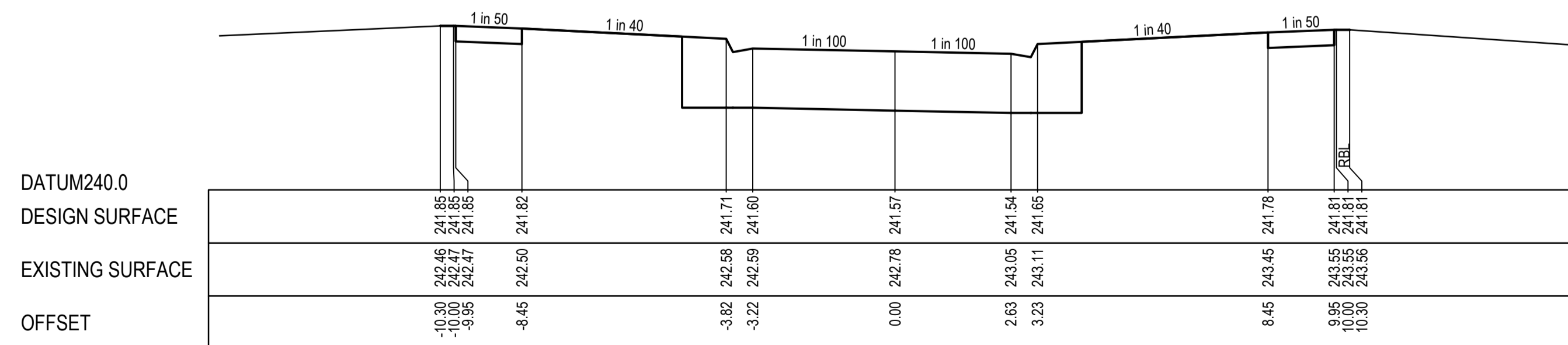
MELWAYS REF <b>9 J2</b>	PROJECT / DRAWING No. <b>1700E-02-18</b>	SHEET No. <b>18 of 44</b>	REVISION <b>1</b>
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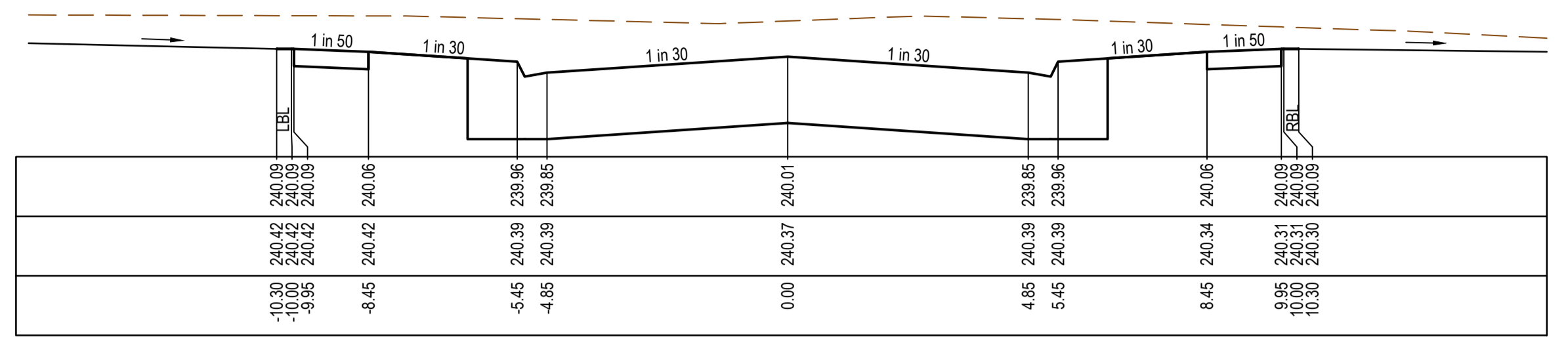
CH 40.00



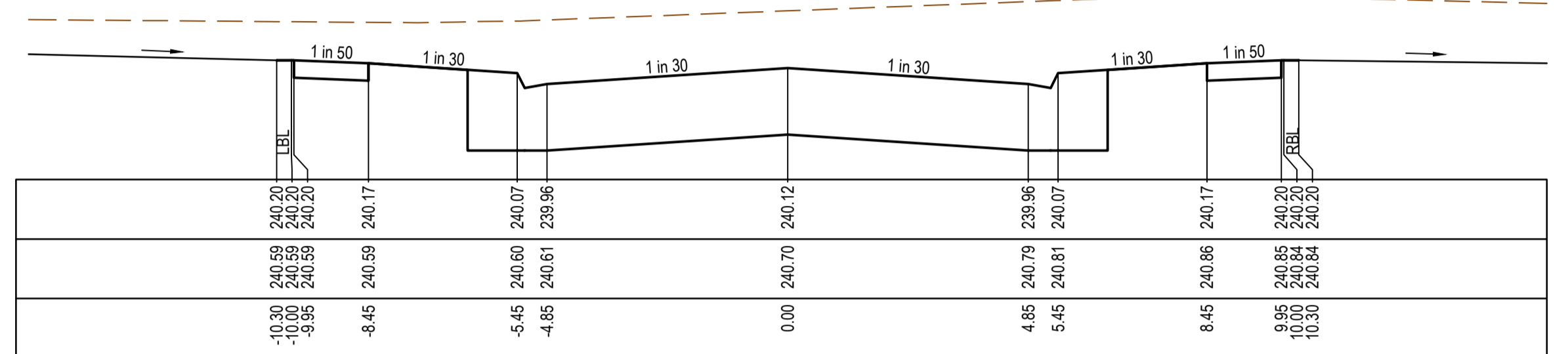
CH 35.96



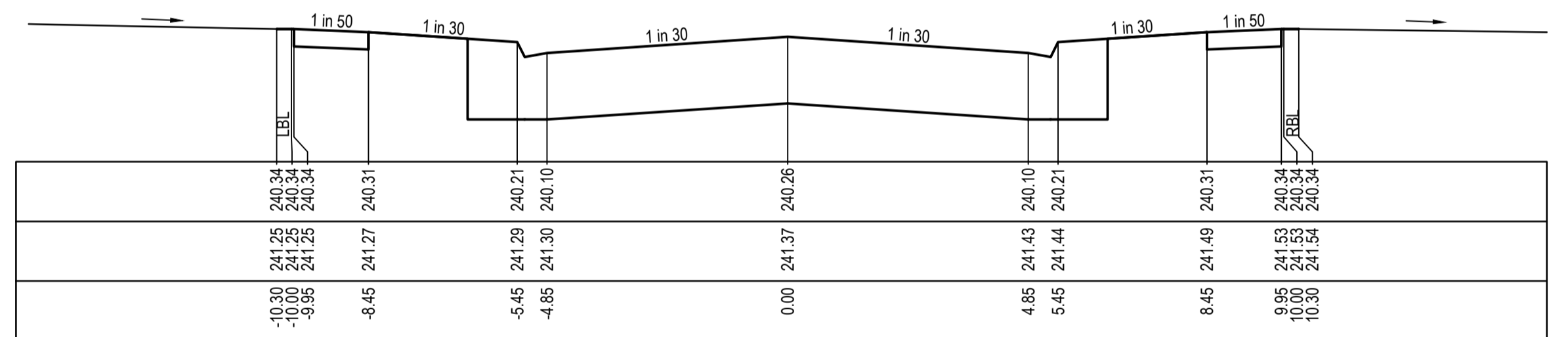
CH 24.11



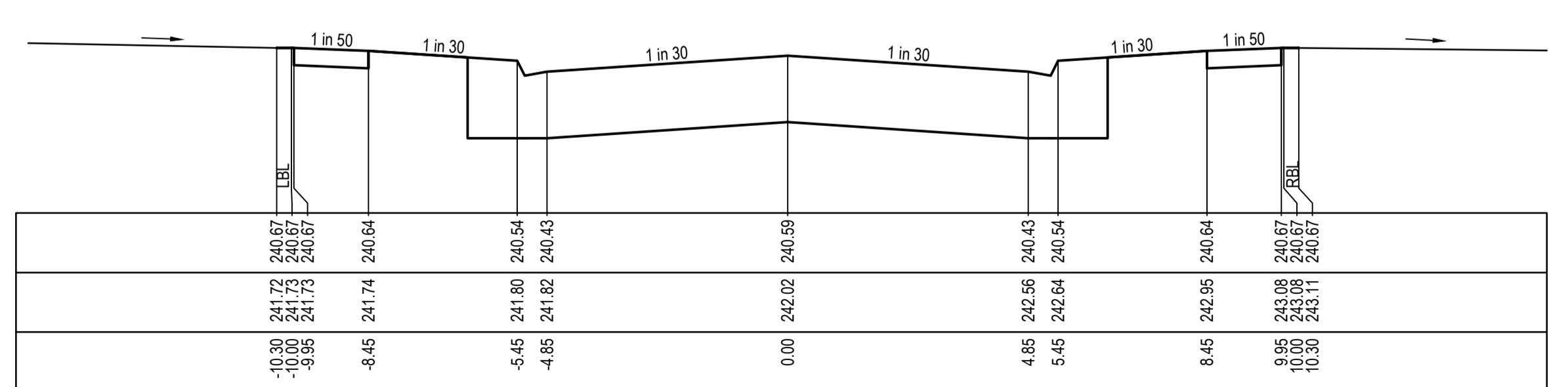
CH 105.61



CH 91.61



CH 75.61



CH 59.61

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	30.08.18	ISSUED FOR CONSTRUCTION	KMKM	AB
1	26.06.34	AS CONSTRUCTED	KMKU	AB

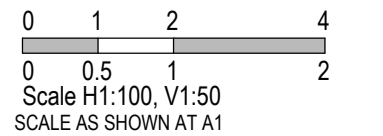
**AS CONSTRUCTED**

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Quality Management - ISO 9001  
 OHS Management - AS/NZS 1800  
 Environmental Management - ISO 14001

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TITLE	NAME
DRAFTER	S.Sathasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows



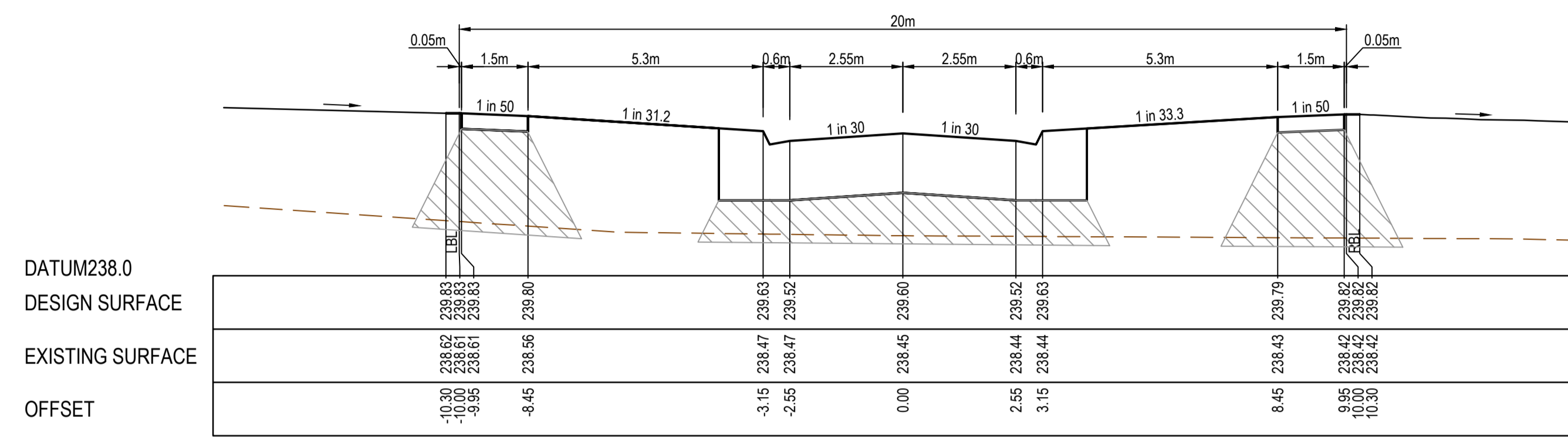
**SMEC**  
 Member of the Surbana Jurong Group  
 ABN 47 065 475 149  
 Level 10, 71 Queens Road  
 Melbourne, VIC 3004  
 Ph 03 9514 1500

**mirvac**

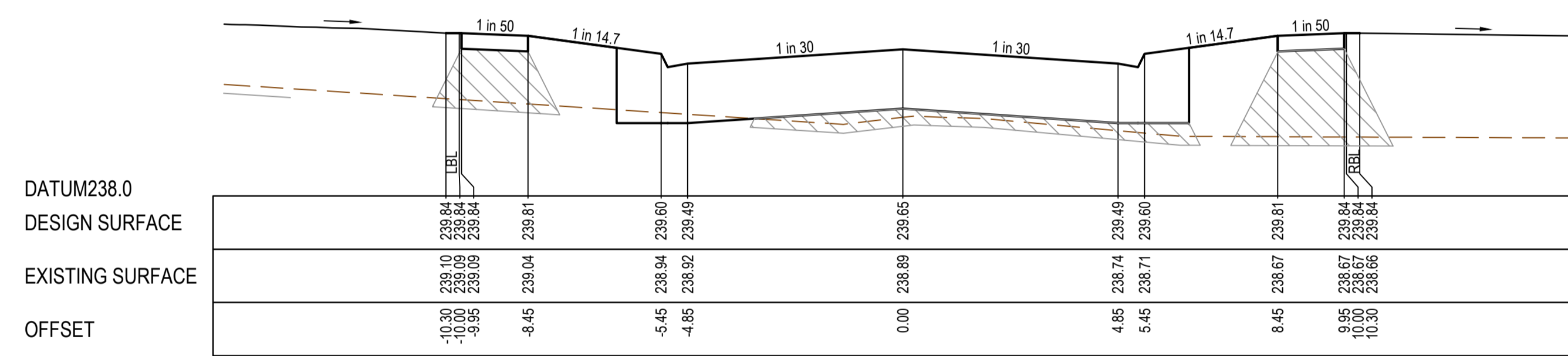
Olivine Estate - Stage 2  
 Whittlesea City Council  
 Road and Drainage  
 Cross Sections: Pollen Place  
 Ch 24.11 - Ch 105.61

MELWAYS REF: 9 J2  
 PROJECT / DRAWING No: 1700E-02-19  
 SHEET No: 19 of 44  
 REVISION: 1

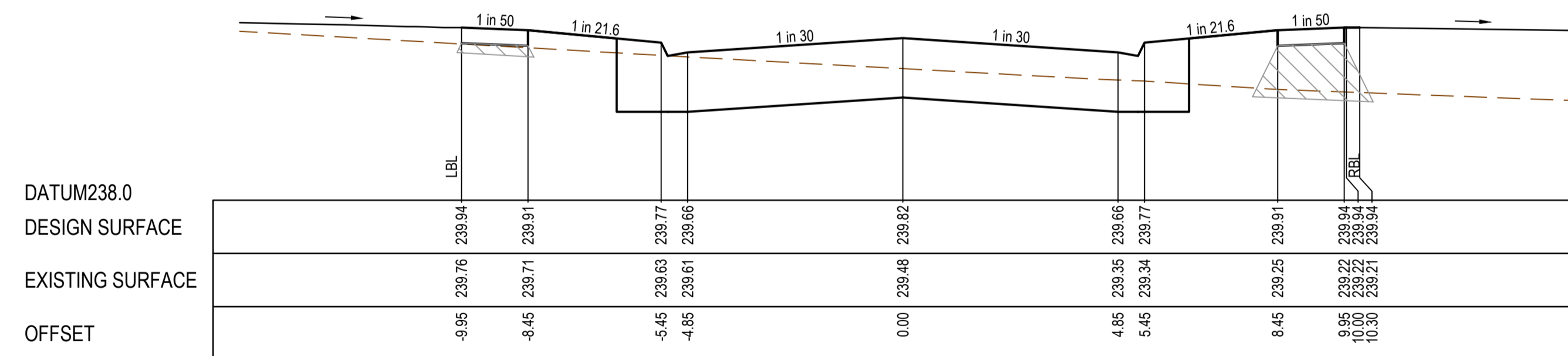
STRUCTURAL FILL REQUIRED UNDER PAVEMENT AND FOOTPATHS WHERE CONSTRUCTED ABOVE EXISTING SURFACE



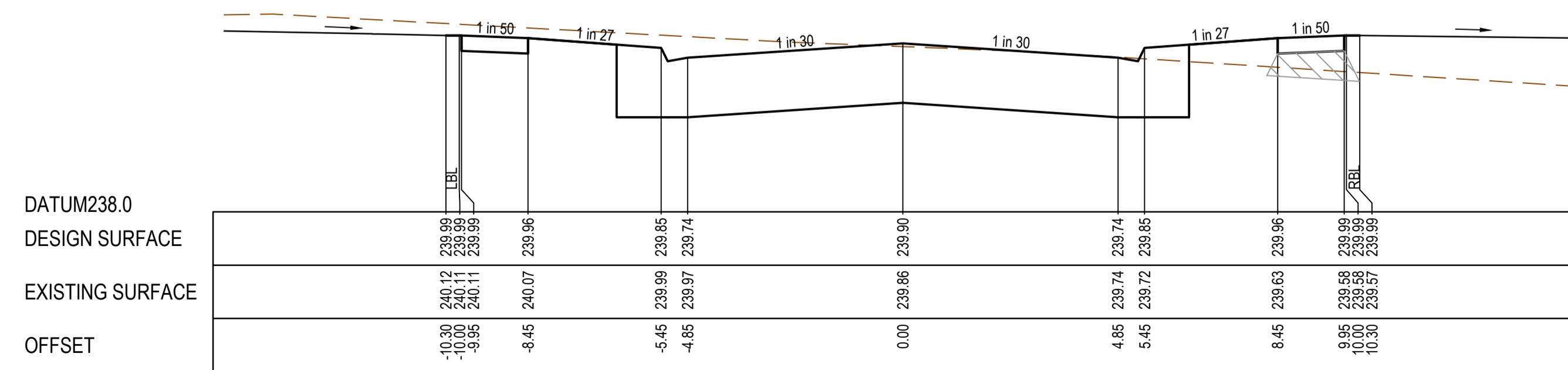
CH 163.81



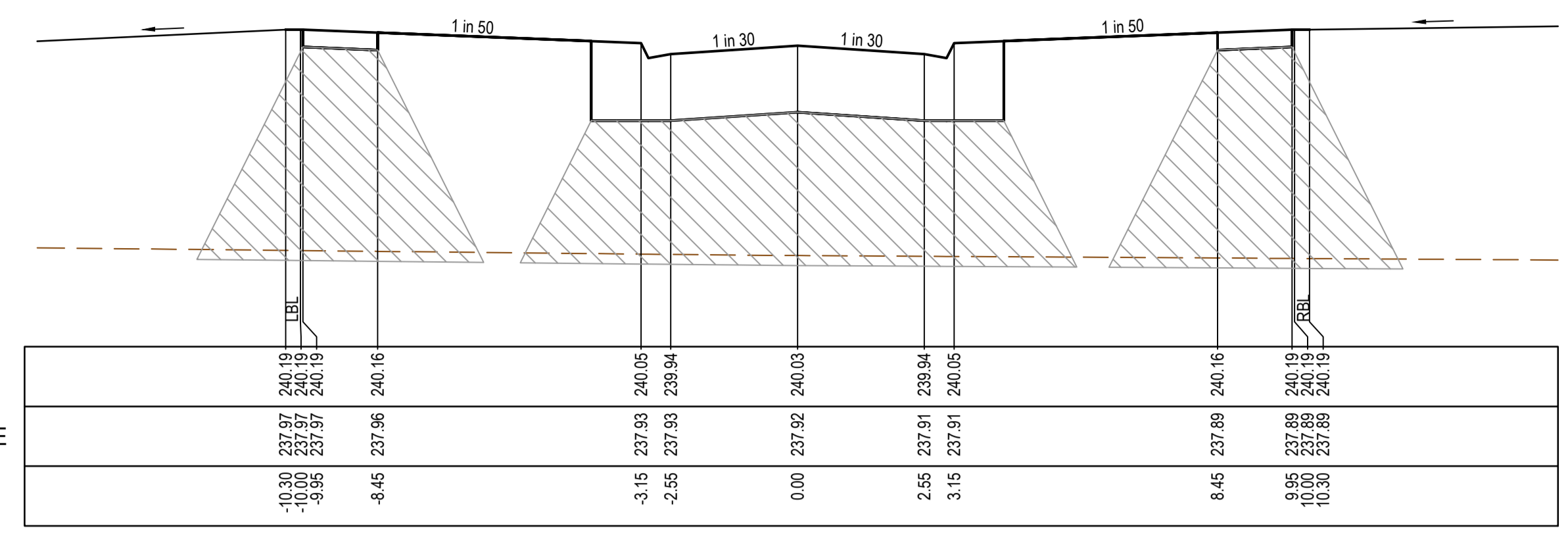
CH 149.61



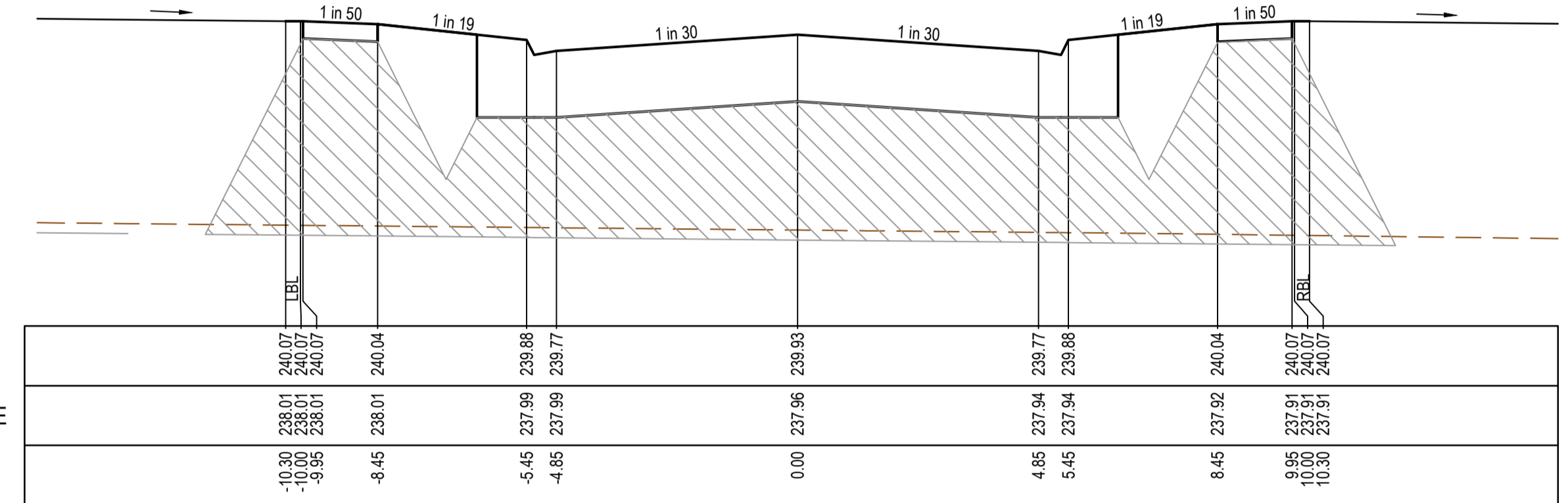
CH 128.61



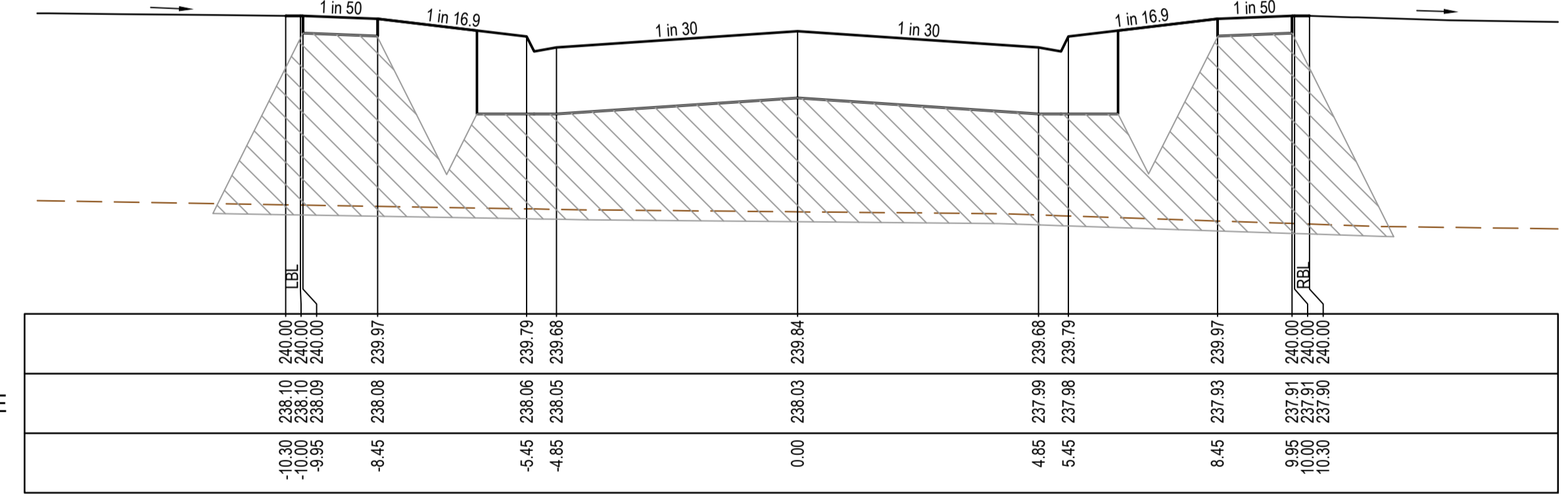
CH 119.61



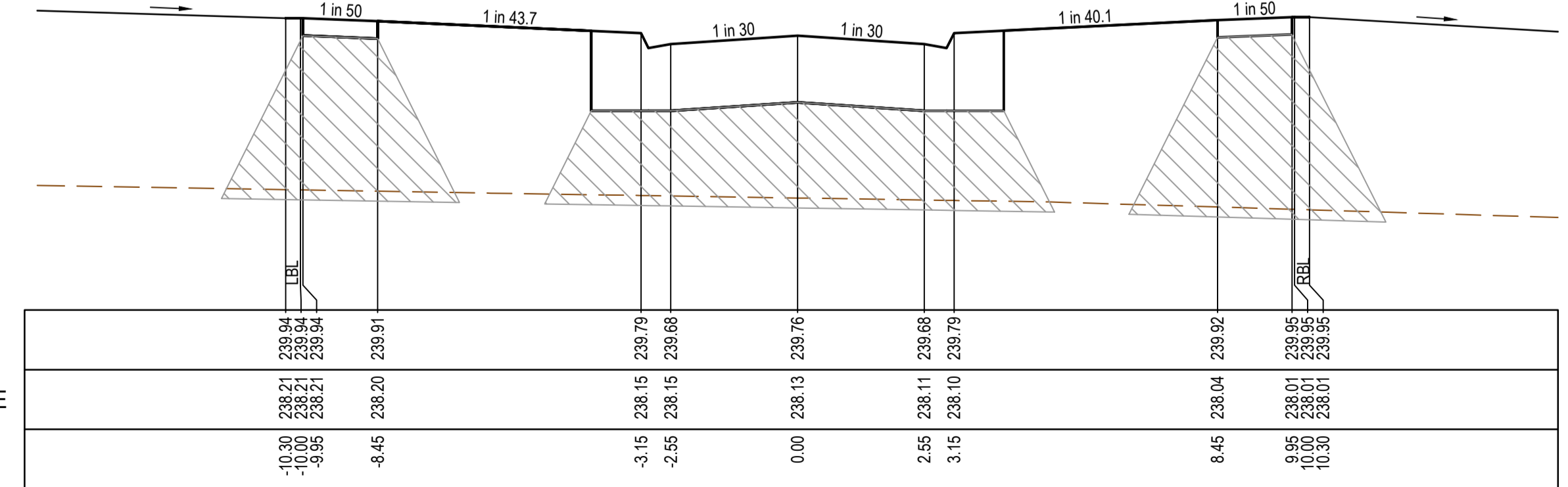
CH 228.97



CH 211.62



CH 199.12



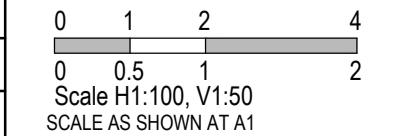
CH 187.41

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	30.08.18	ISSUED FOR CONSTRUCTION	KMKM	AB
1	26.06.35	AS CONSTRUCTED	KMKU	AB

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Quality Management ISO 9001  
 OHS Management AS/NZS 1880  
 Environmental Management ISO 14001  
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TITLE	NAME
DRAFTER	S.Sathasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows



**SMEC**  
 Member of the Surbana Jurong Group  
 ABN 47 065 475 149  
 Level 10, 71 Queens Road  
 Melbourne, VIC 3004  
 Ph 03 9514 1500

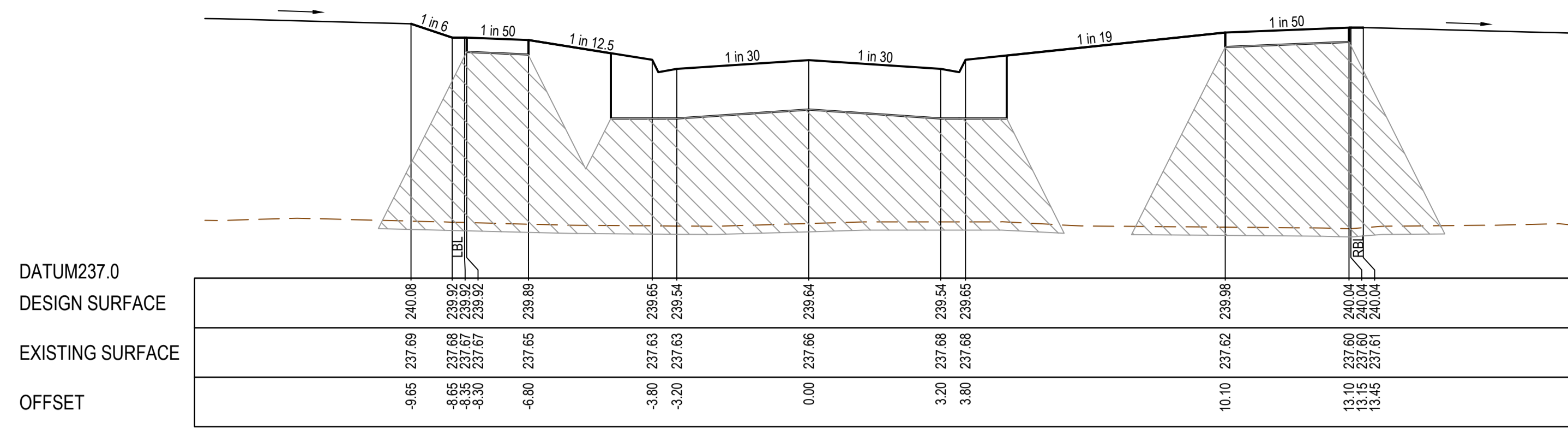
**mirvac**

Olivine Estate - Stage 2  
 Whittlesea City Council  
 Road and Drainage  
 Cross Sections: Pollen Place  
 Ch 119.61 - Ch 228.97

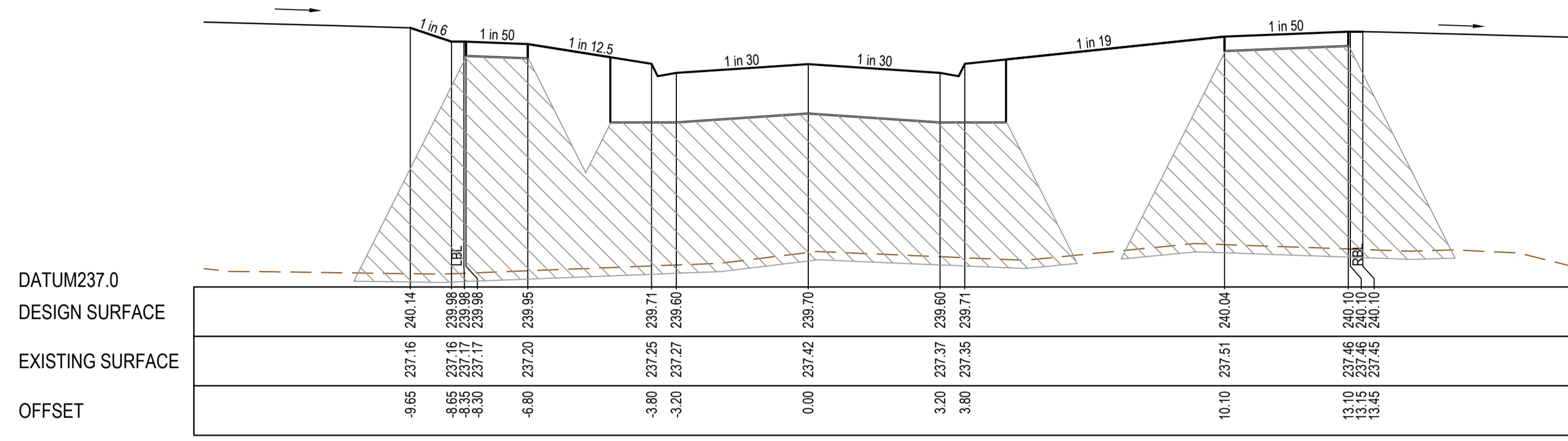
MELWAYS REF	PROJECT / DRAWING No	SHEET No	REVISION
9 J2	1700E-02-20	20 of 44	1



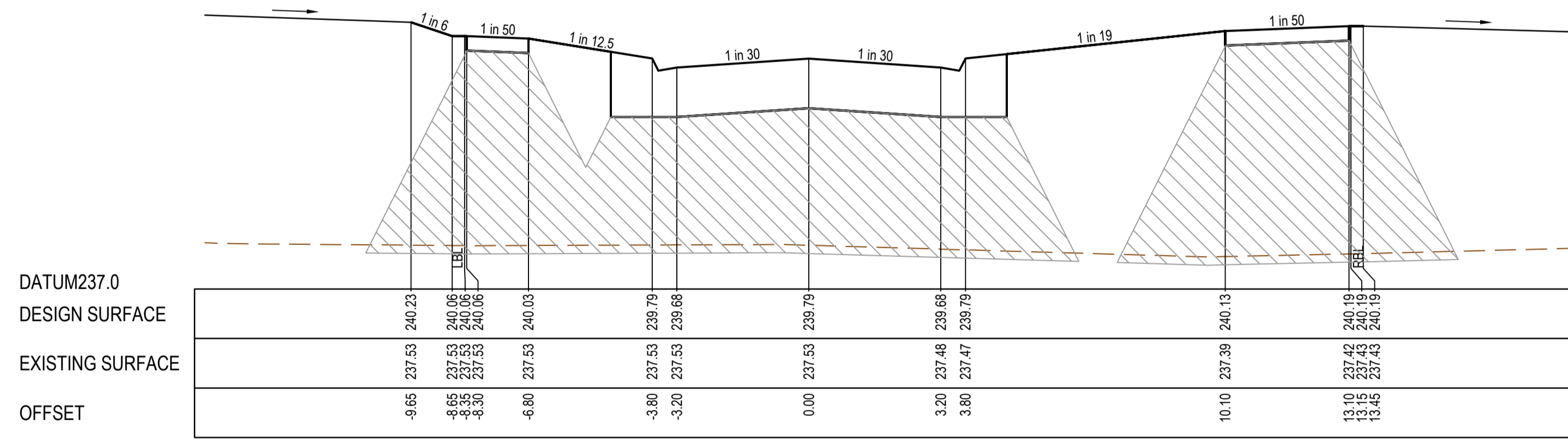
STRUCTURAL FILL REQUIRED UNDER PAVEMENT AND FOOTPATHS WHERE CONSTRUCTED ABOVE EXISTING SURFACE



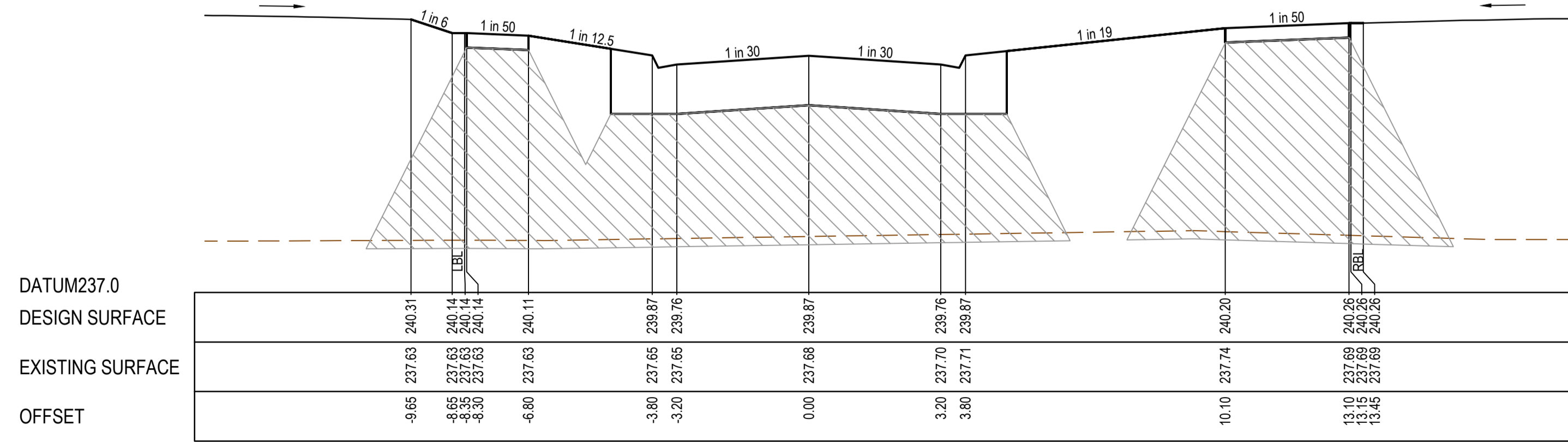
CH 63.20



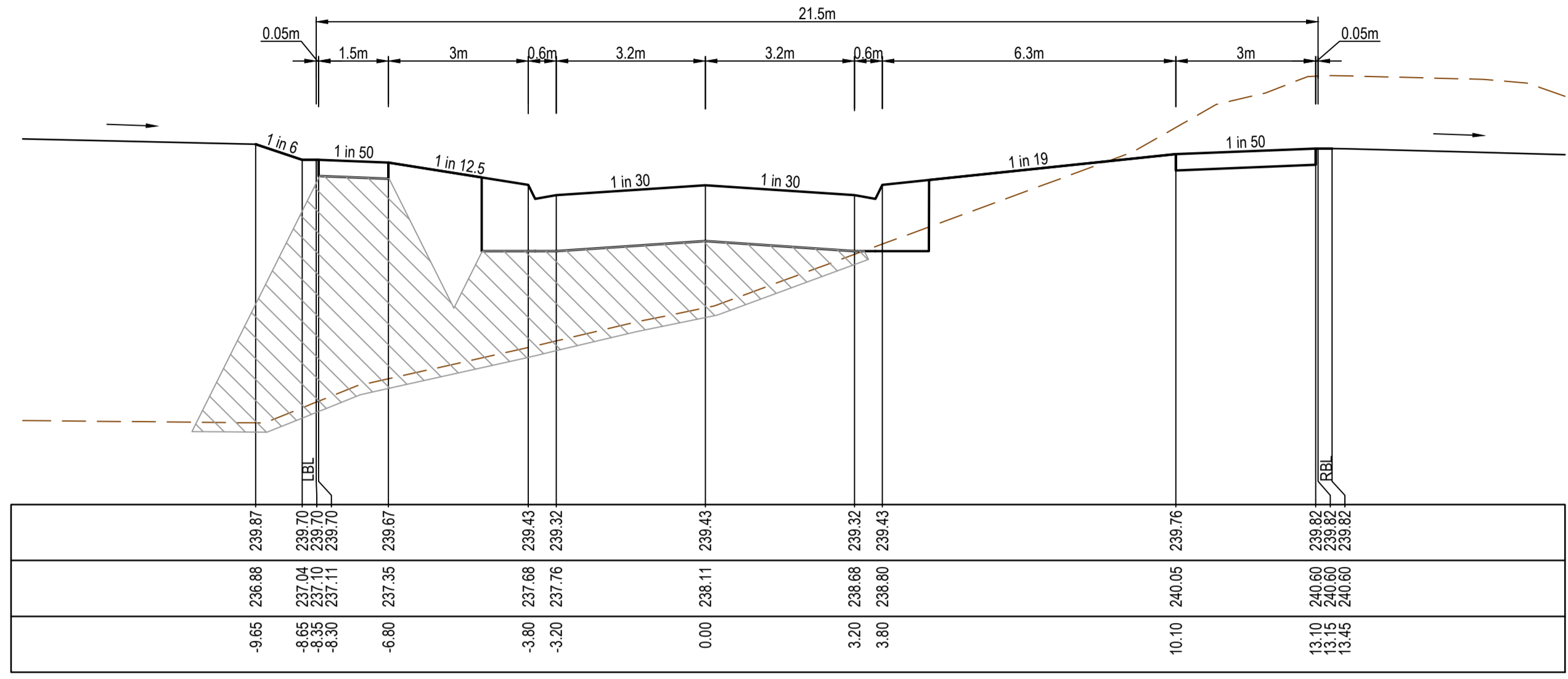
CH 51.12



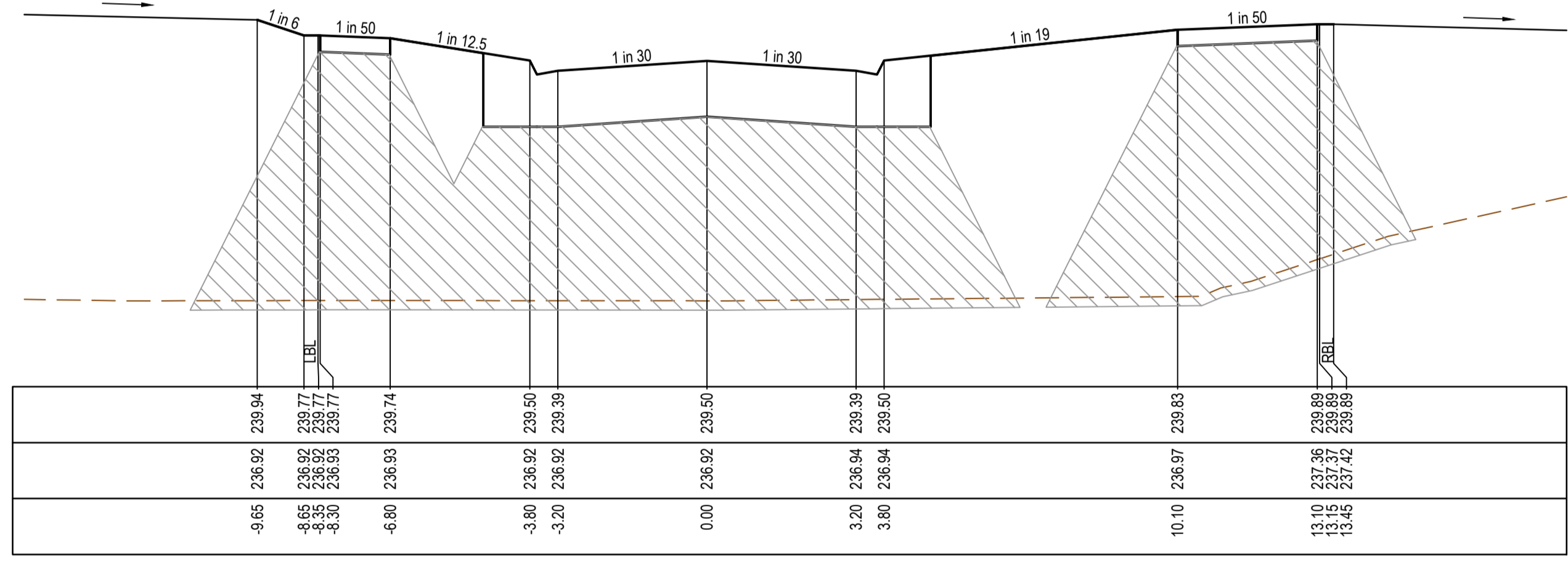
CH 33.40



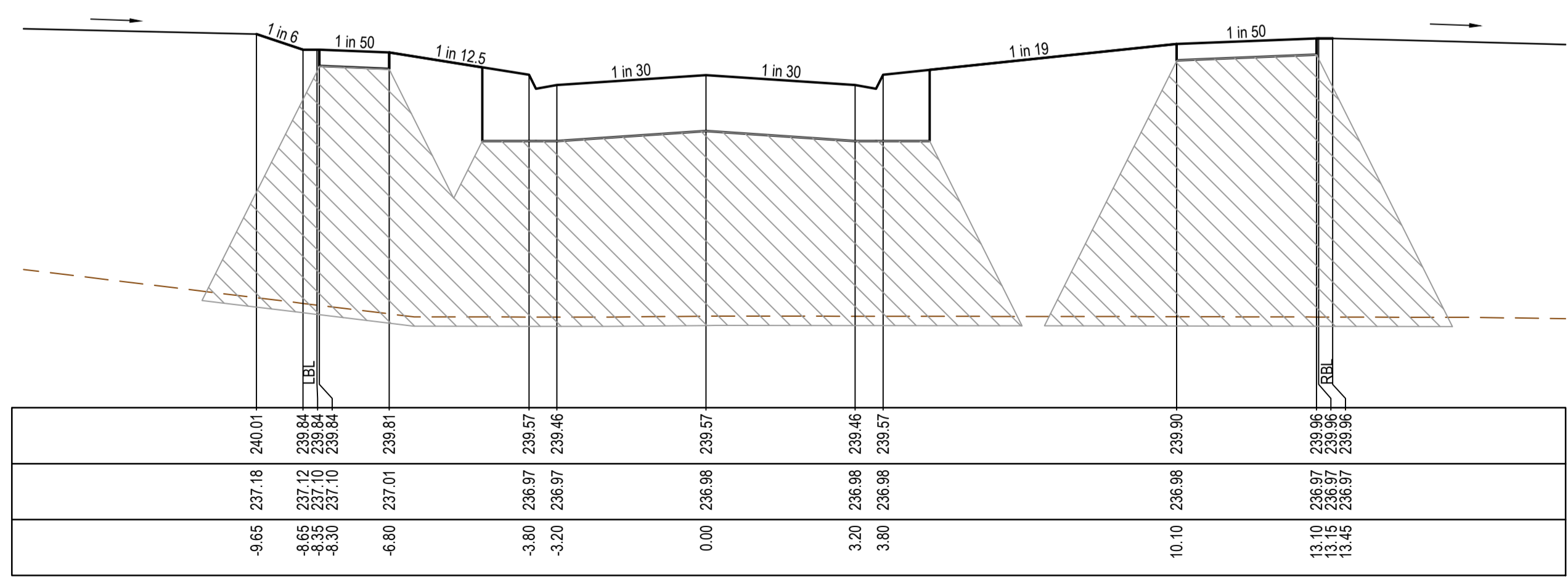
CH 18.50



CH 106.21



CH 92.20



CH 78.20

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	30.08.18	ISSUED FOR CONSTRUCTION	KMKM	AB
1	26.06.37	AS CONSTRUCTED	KMKU	AB

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**AS CONSTRUCTED**

Quality Management ISO 9001  
 OHS Management AS/NZS 1880  
 Environmental Management ISO 14001  
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TITLE	NAME
DRAFTER	S.Sathasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows

**SMEC**  
 Member of the Surbana Jurong Group  
 ABN 47 065 475 149  
 Level 10, 71 Queens Road  
 Melbourne, VIC 3004  
 Ph 03 9514 1500

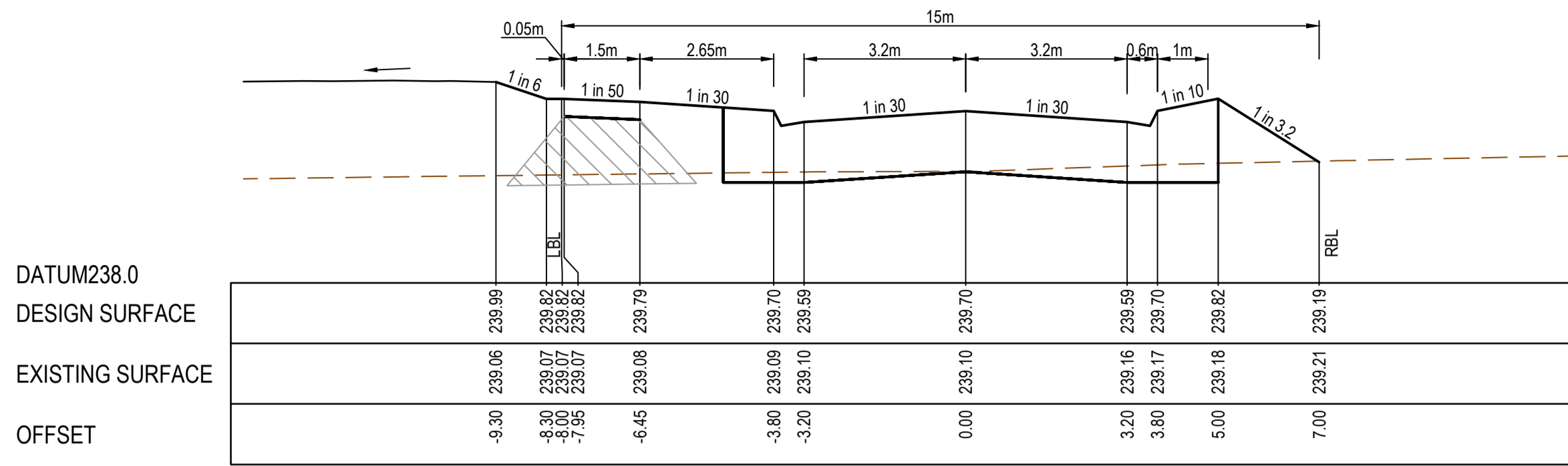
**mirvac**

Olivine Estate - Stage 2  
 Whittlesea City Council  
 Road and Drainage  
 Cross Sections: Splendid Road  
 Ch 18.50 - Ch 106.21

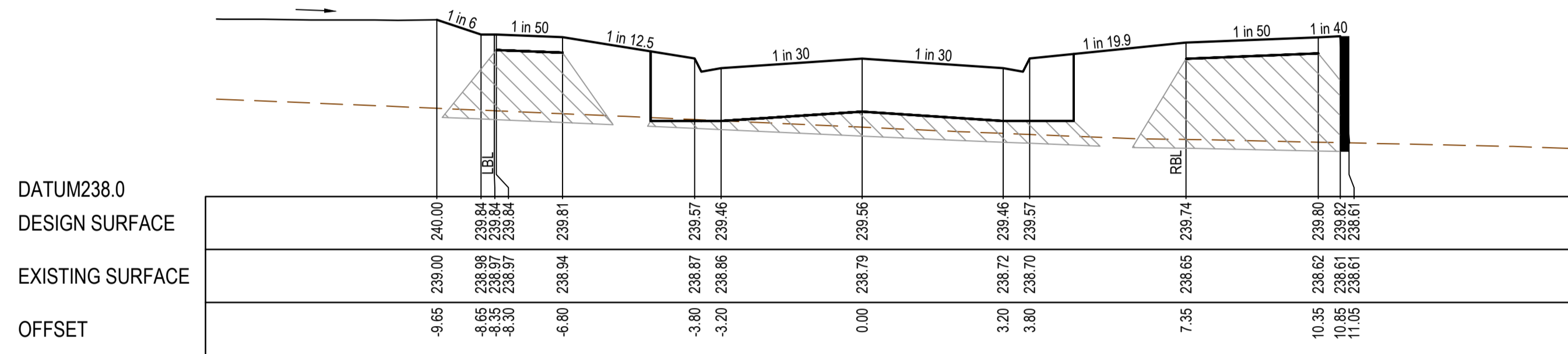
MELWAYS REF	PROJECT / DRAWING No.	SHEET No.	REVISION
9 J2	1700E-02-22	22 of 44	1



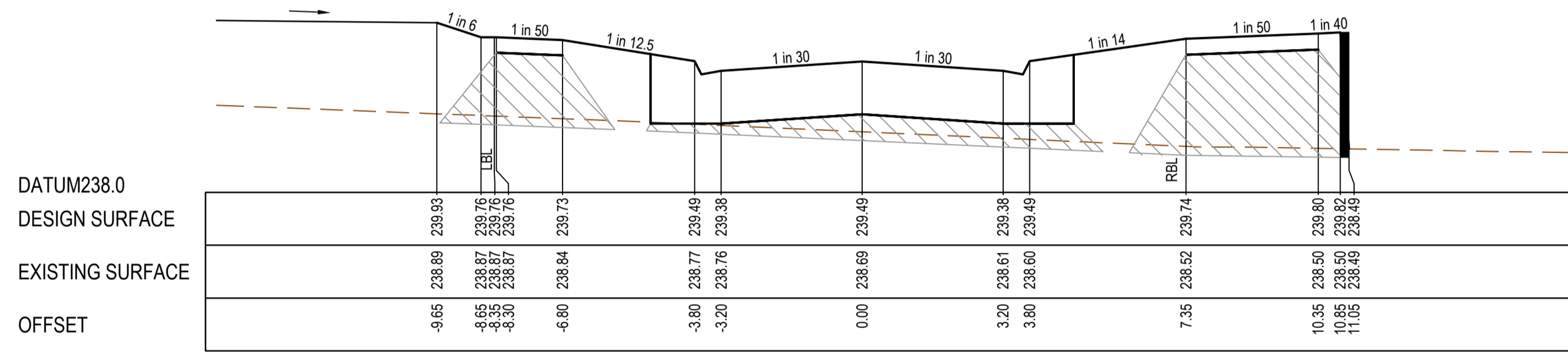
STRUCTURAL FILL REQUIRED UNDER PAVEMENT AND FOOTPATHS WHERE CONSTRUCTED ABOVE EXISTING SURFACE



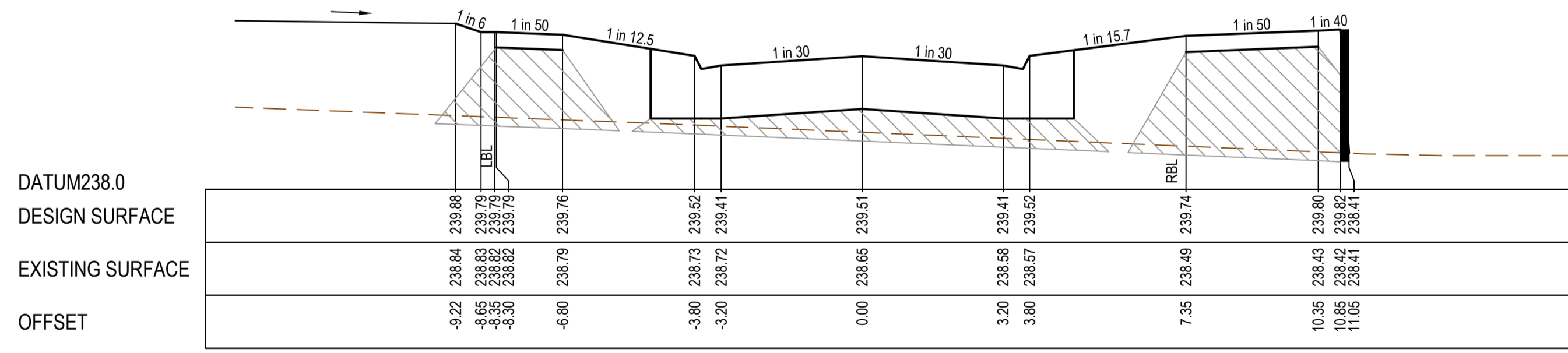
CH 308.81  
ORIEL ROAD



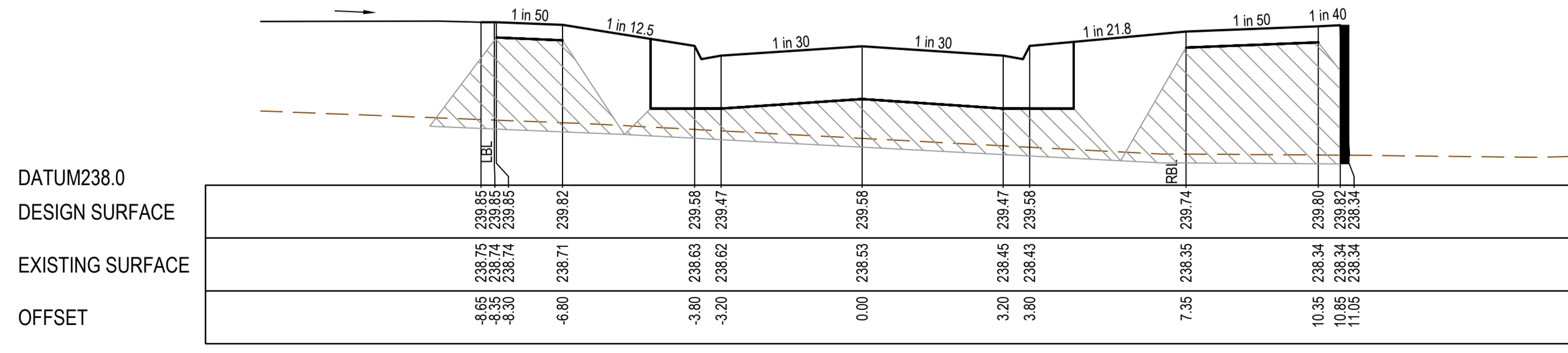
CH 288.90



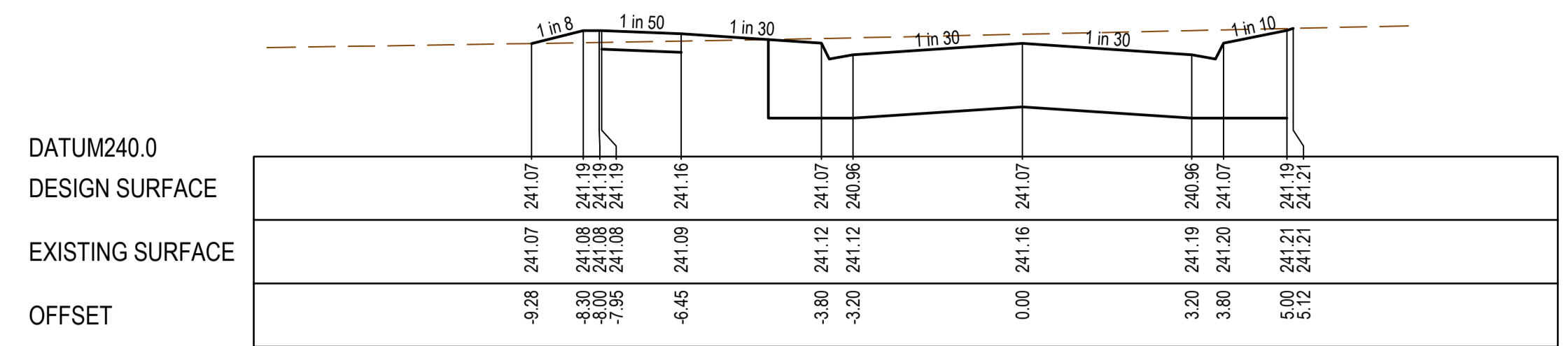
CH 270.00



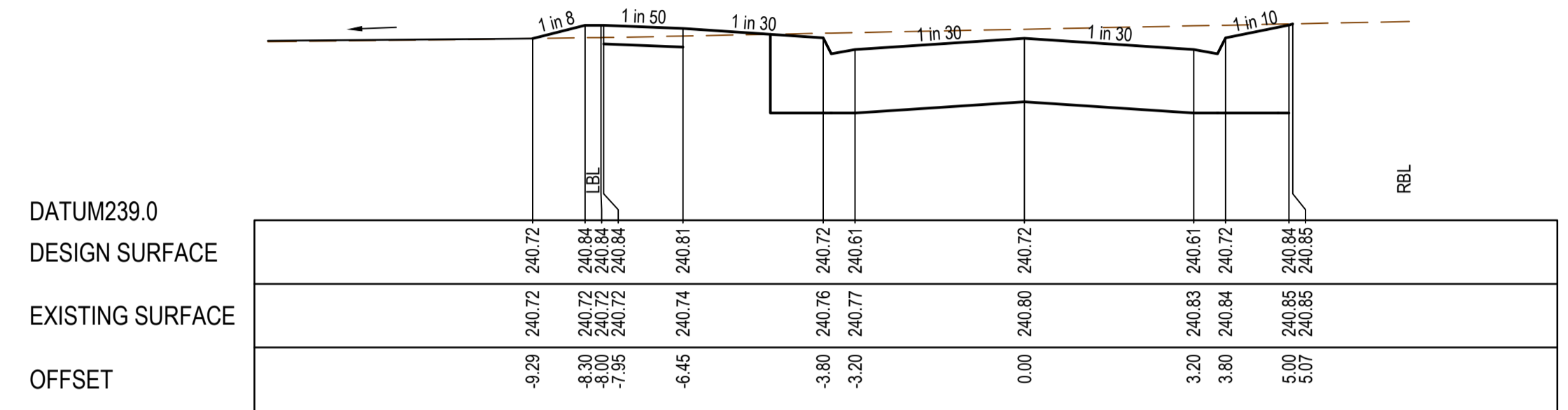
CH 260.70



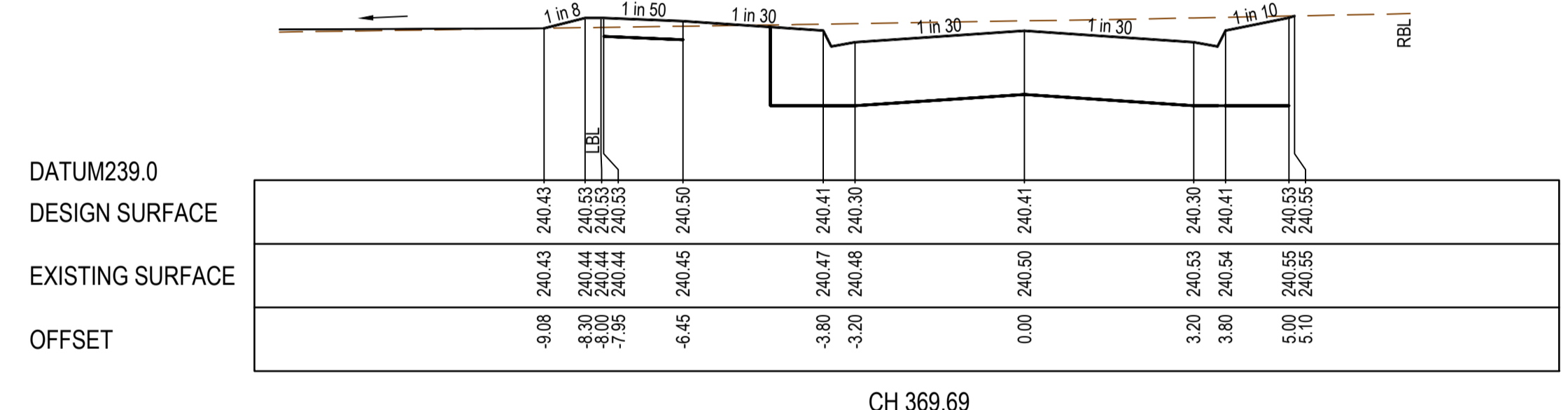
CH 248.21



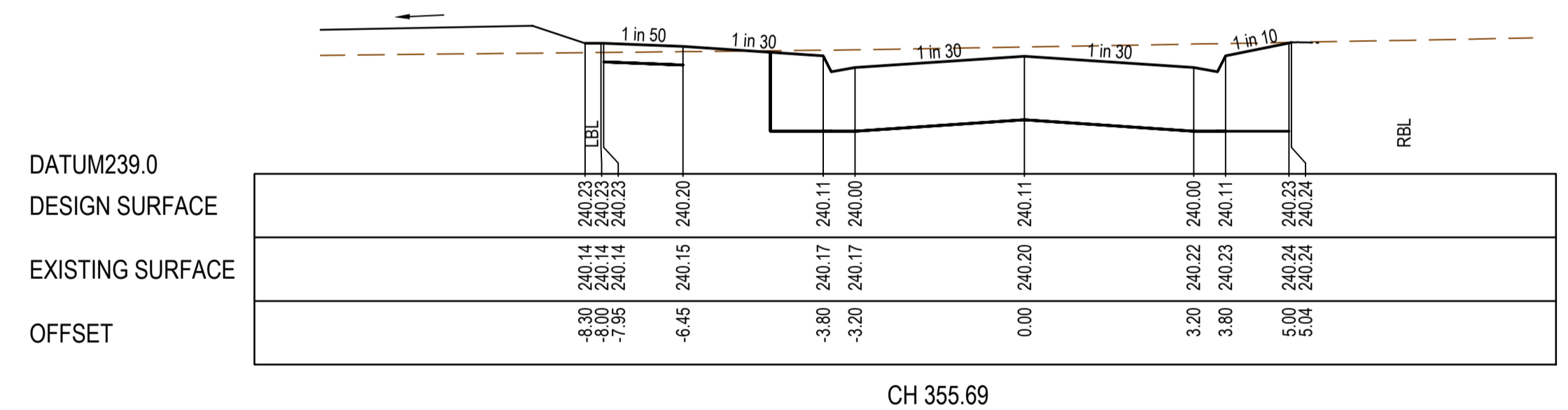
CH 399.69



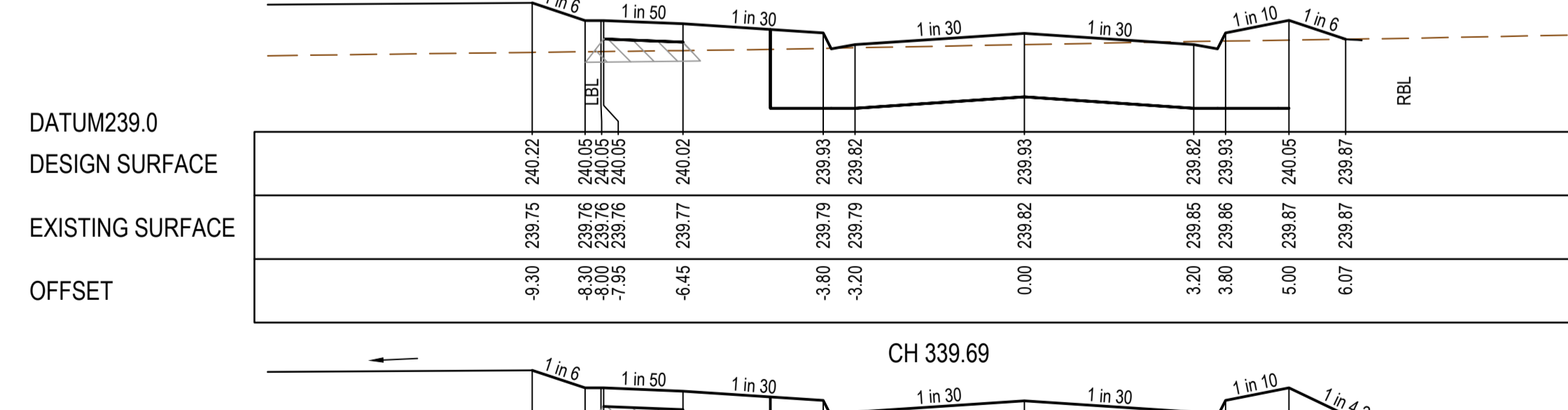
CH 383.69



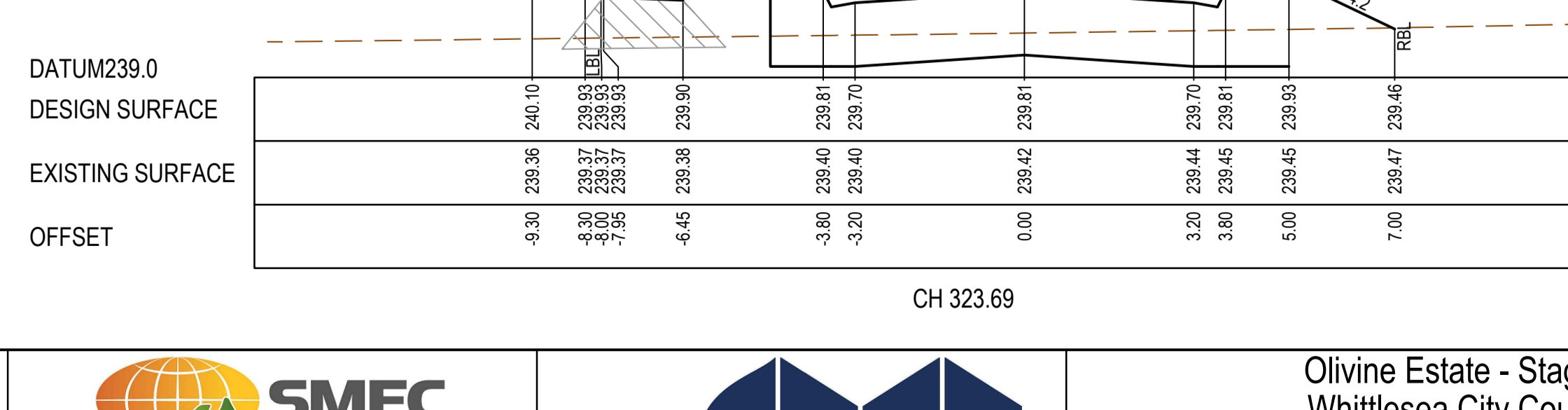
CH 369.69



CH 355.69



CH 339.69

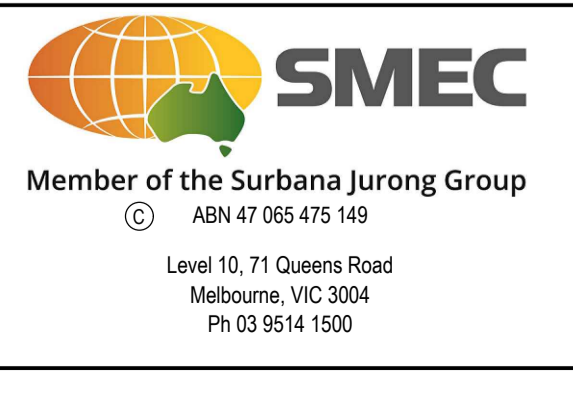
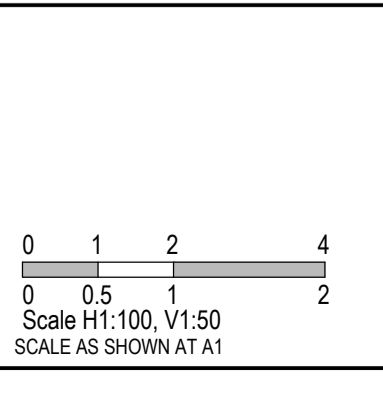


CH 323.69

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
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1	26.06.39	AS CONSTRUCTED	KMKU	AB

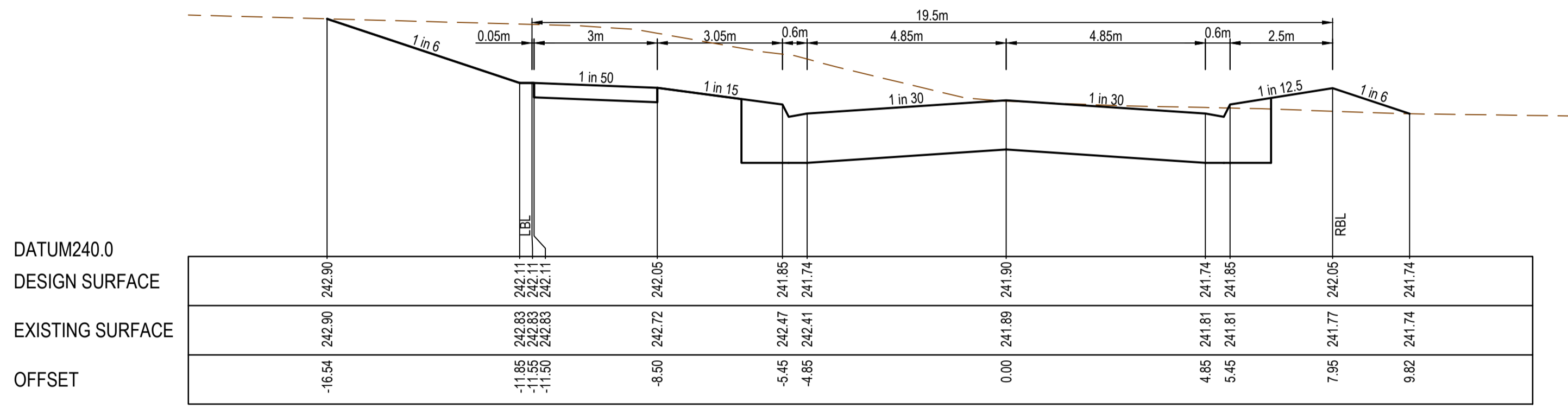
**AS CONSTRUCTED**

TITLE	NAME
DRAFTER	S.Sathasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows

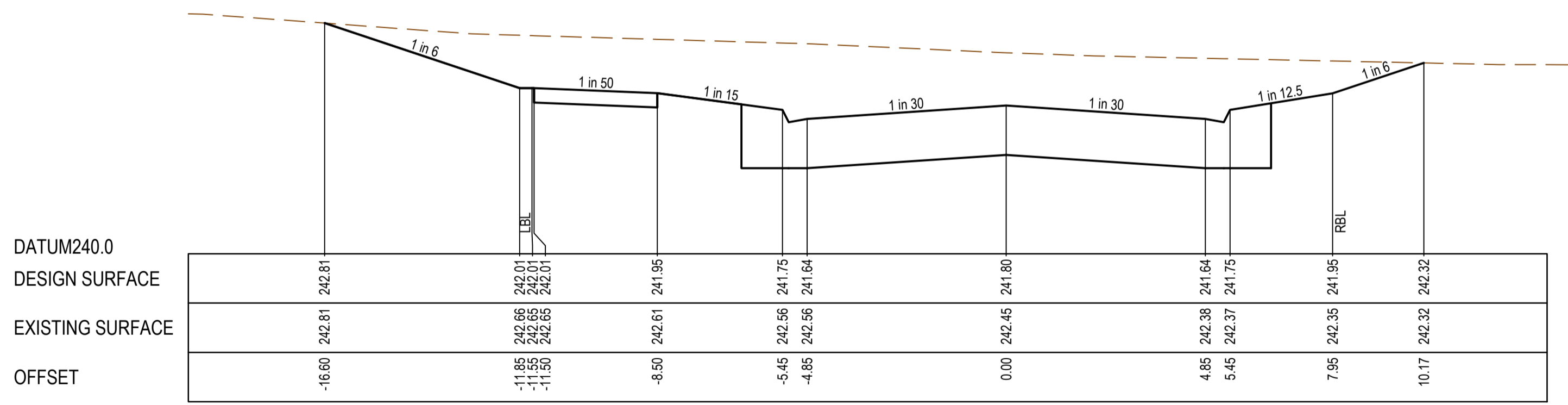


Olivine Estate - Stage 2 Whittlesea City Council Road and Drainage Cross Sections: Splendid Road/Oriol Road Ch 248.21 - Ch 399.69	
MELWAYS REF 9 J2	PROJECT / DRAWING No. 1700E-02-24
SHEET No. 24 of 44	REVISION 1

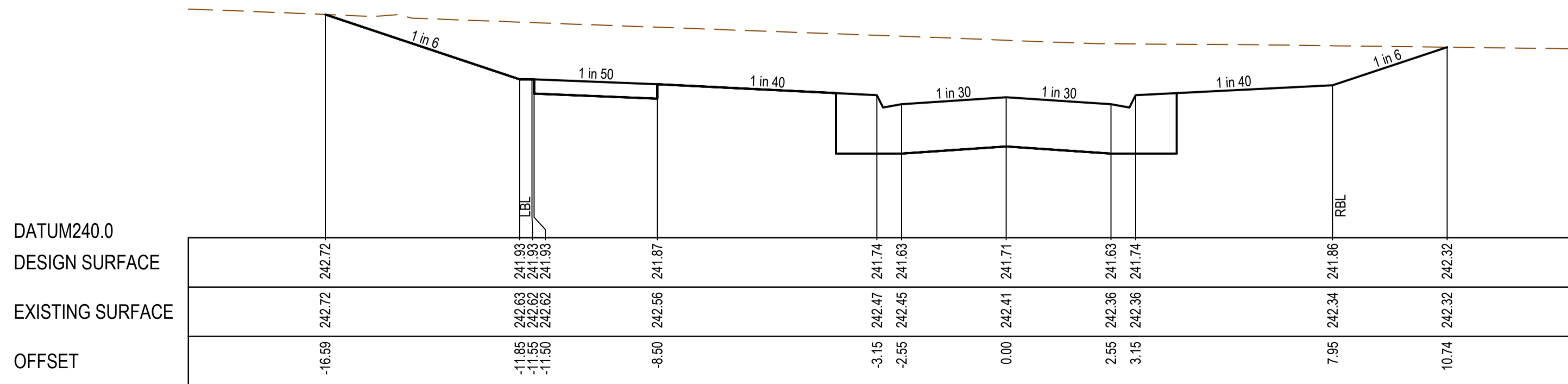




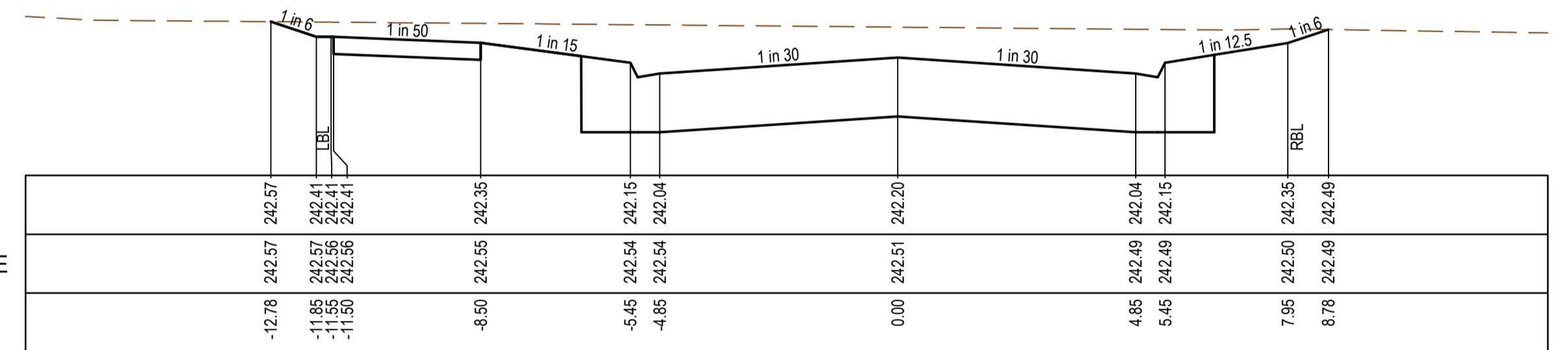
CH 60.00



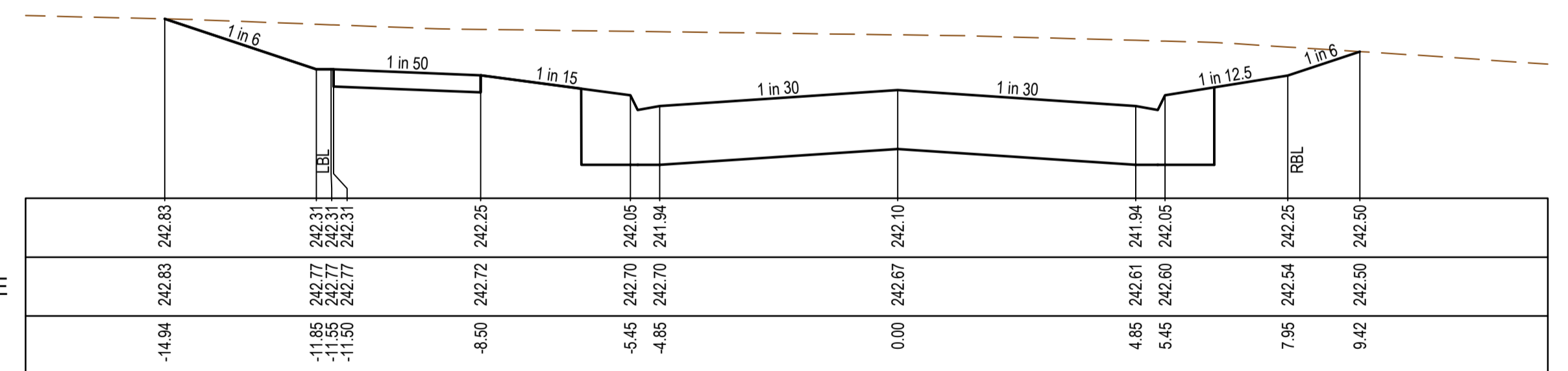
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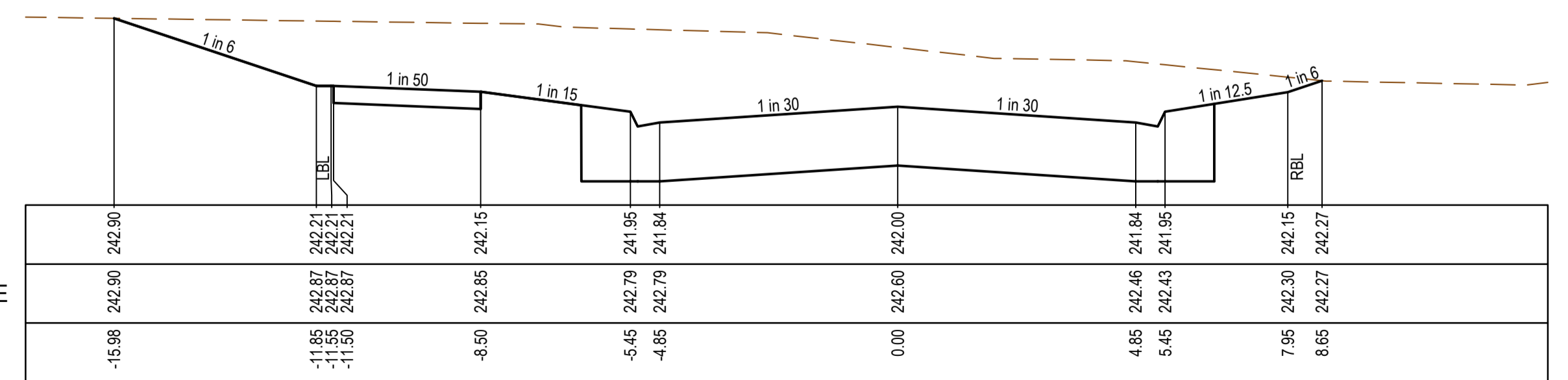
CH 21.70



CH 120.00



CH 100.00



CH 80.00

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	30.08.18	ISSUED FOR CONSTRUCTION	KMKM	AB
1	26.06.40	AS CONSTRUCTED	KMKU	AB

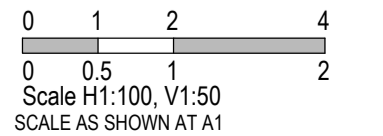
**AS CONSTRUCTED**

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Quality Management ISO 9001  
 OHS Management AS/NZS 1880  
 Environmental Management ISO 14001

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TITLE	NAME
DRAFTER	S.Sathasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows



**SMEC**  
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 ABN 47 065 475 149  
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 Ph 03 9514 1500

**mirvac**

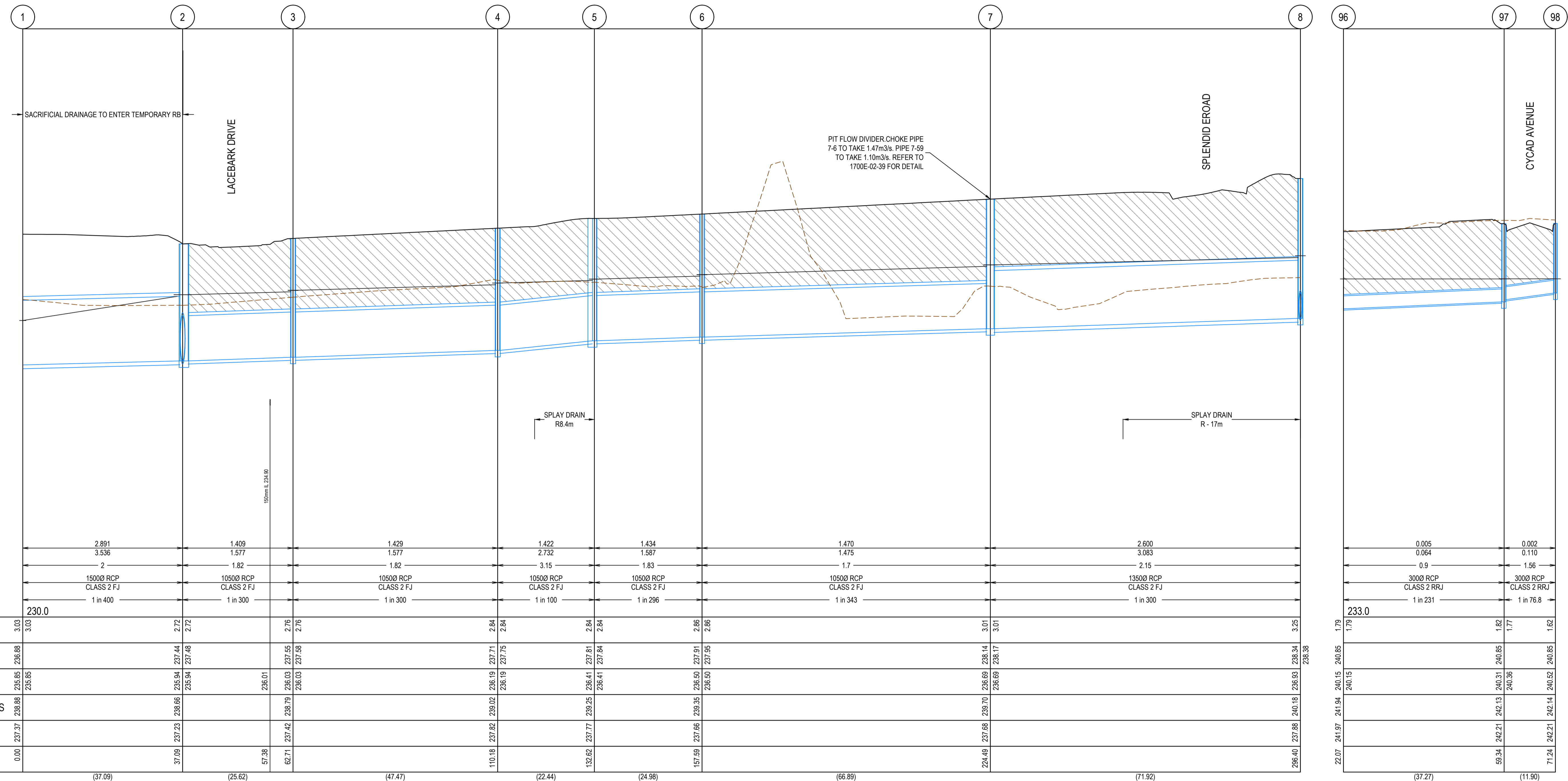
Olivine Estate - Stage 2  
 Whittlesea City Council  
 Road and Drainage  
 Cross Sections: Cycad Avenue  
 Ch 25.95 - Ch 120.00

MELWAYS REF: 9 J2  
 PROJECT / DRAWING No: 1700E-02-25  
 SHEET No: 25 of 44  
 REVISION: 1



**NOTE**

- ALL DRAINS TO BE BACKFILLED IN ACCORDANCE WITH CLAUSE 35.1.7 OF COUNCIL'S SPECIFICATION.
- WHERE DRAINS ARE UNDER ANY PAVED AREA OR BEHIND THE KERB AND CHANNEL THE DRAINS IS TO BE BACKFILLED AS FOLLOWS
  - 30mm NOM. SIZE CLASS 3 FCR TO 100mm ABOVE THE TOP OF PIPE.
  - LOW PERMEABILITY CLASS 4 FCR FROM 100mm ABOVE THE TOP OF PIPE TO UNDERSIDE OF PAVEMENT



DESIGN FLOW (m3/s)	CAPACITY (m3/s)	AT GRADE VELOCITY (m/s)	NOMINAL PIPE SIZE (mm)	PIPE TYPE	GRADE	DATUM
2.891	3.536	2	1500Ø RCP	CLASS 2 FJ	1 in 400	230.0
1.409	1.577	1.82	1050Ø RCP	CLASS 2 FJ	1 in 300	
1.429	1.577	1.82	1050Ø RCP	CLASS 2 FJ	1 in 300	
1.422	2.732	3.15	1050Ø RCP	CLASS 2 FJ	1 in 100	
1.434	1.587	1.83	1050Ø RCP	CLASS 2 FJ	1 in 296	
1.470	1.475	1.7	1050Ø RCP	CLASS 2 FJ	1 in 343	
2.600	3.083	2.15	1350Ø RCP	CLASS 2 FJ	1 in 300	
0.005	0.064	0.9	300Ø RCP	CLASS 2 RRJ	1 in 231	
0.002	0.110	1.56	300Ø RCP	CLASS 2 RRJ	1 in 76.8	

DEPTH TO INVERT	HYDRAULIC GRADE LINE	INVERT LEVEL	FINISHED SURFACE LEVELS	EXISTING SURFACE LEVEL	CHAINAGE
3.03	236.88	235.85	236.88	237.37	0.00
2.72	237.44	235.94	238.66	237.23	37.09
2.76	237.55	236.03	238.79	237.42	62.71
2.84	237.71	236.19	239.02	237.82	110.18
2.84	237.75	236.19	239.02	237.82	132.62
2.86	237.91	236.50	239.35	237.66	157.59
2.86	237.95	236.50	239.35	237.66	224.49
3.01	238.14	236.69	240.18	237.68	224.49
3.01	238.17	236.69	240.18	237.68	296.40
3.25	238.34	236.93	240.85	240.15	296.40
1.79	240.85	240.15	241.94	241.97	22.07
1.62	240.85	240.31	242.13	242.21	59.34
1.77	240.85	240.36	242.13	242.21	71.24
1.62	240.85	240.52	242.14	242.21	71.24

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	30.08.18	ISSUED FOR CONSTRUCTION	KMKM	AB
1	26.06.42	AS CONSTRUCTED	KMKU	AB

TITLE	NAME
DRAFTER	S.Sathasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows

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 OHS Management AS/NZS 1881  
 Environmental Management ISO 14001

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Scale: 0 5 10 20  
 0 0.5 1 1.50  
 SCALE AS SHOWN AT 1

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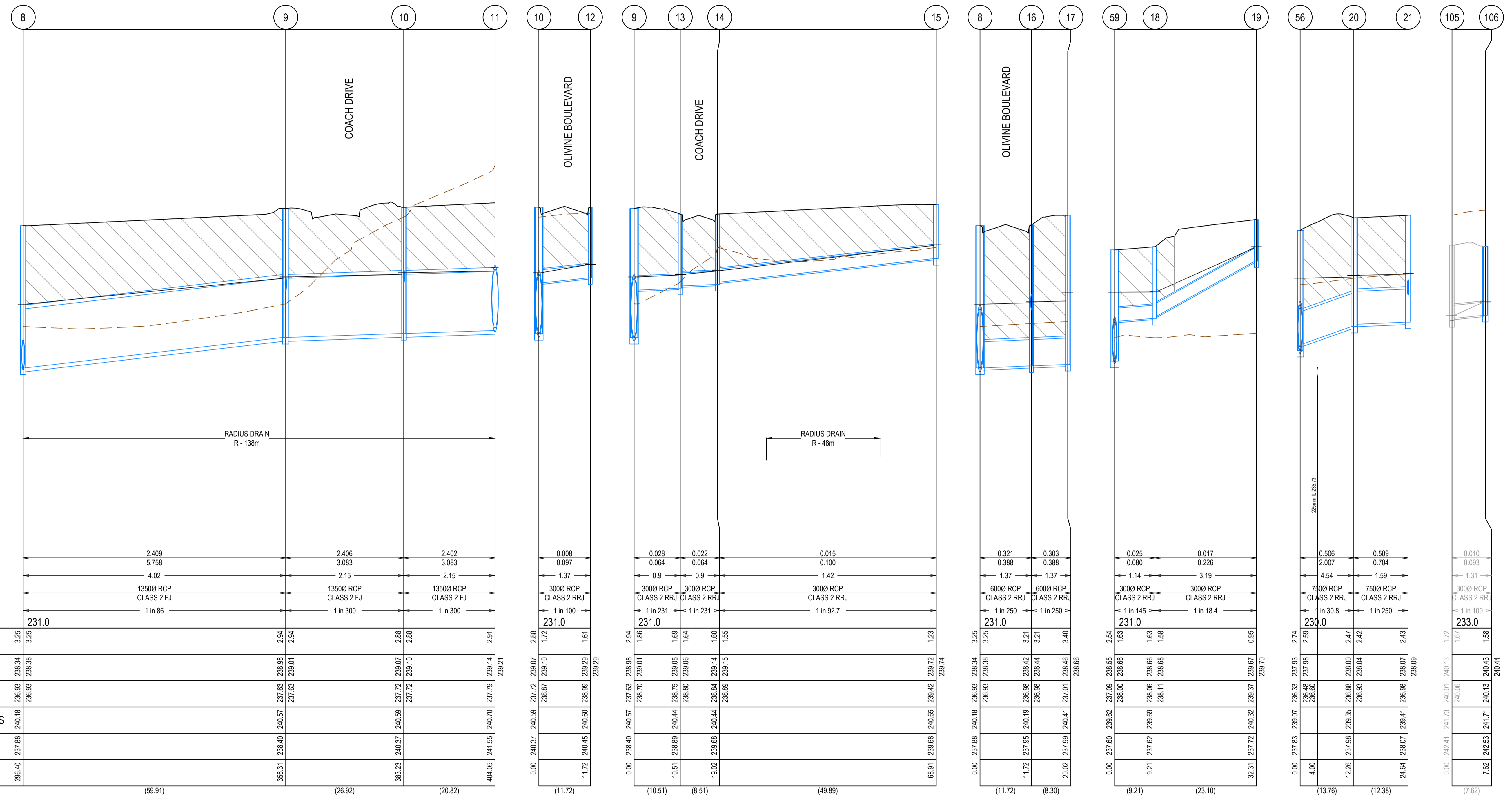


Olivine Estate - Stage 2  
 Whittlesea City Council  
 Road and Drainage  
 Drainage Longitudinal Sections - 1

MELWAYS REF: 9 J2  
 PROJECT / DRAWING No: 1700E-02-27  
 SHEET No: 27 of 44  
 REVISION: 1

**NOTE**

- ALL DRAINS TO BE BACKFILLED IN ACCORDANCE WITH CLAUSE 35.1.7 OF COUNCIL'S SPECIFICATION.
- WHERE DRAINS ARE UNDER ANY PAVED AREA OR BEHIND THE KERB AND CHANNEL THE DRAINS IS TO BE BACKFILLED AS FOLLOWS
  - 30mm NOM. SIZE CLASS 3 FCR TO 100mm ABOVE THE TOP OF PIPE.
  - LOW PERMEABILITY CLASS 4 FCR FROM 100mm ABOVE THE TOP OF PIPE TO UNDERSIDE OF PAVEMENT

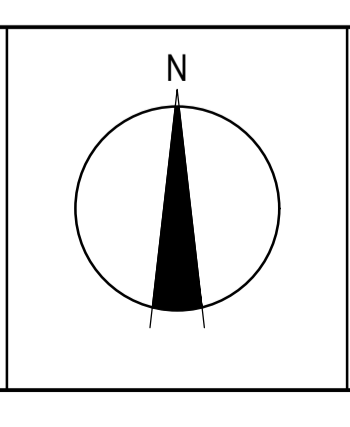


DESIGN FLOW (m3/s)	CAPACITY (m3/s)	AT GRADE VELOCITY (m/s)	NOMINAL PIPE SIZE (mm)	PIPE TYPE	GRADE	DATUM
2.409	5.758	4.02	13500 RCP	CLASS 2 FJ	1 in 86	231.0
2.406	3.083	2.15	13500 RCP	CLASS 2 FJ	1 in 300	231.0
2.402	3.083	2.15	13500 RCP	CLASS 2 FJ	1 in 300	231.0
0.008	0.097	1.37	3000 RCP	CLASS 2 RRJ	1 in 100	231.0
0.028	0.064	0.9	3000 RCP	CLASS 2 RRJ	1 in 231	231.0
0.022	0.064	0.9	3000 RCP	CLASS 2 RRJ	1 in 231	231.0
0.015	0.100	1.42	3000 RCP	CLASS 2 RRJ	1 in 92.7	231.0
0.321	0.388	1.37	6000 RCP	CLASS 2 RRJ	1 in 250	231.0
0.303	0.388	1.37	6000 RCP	CLASS 2 RRJ	1 in 250	231.0
0.025	0.080	1.14	3000 RCP	CLASS 2 RRJ	1 in 145	231.0
0.017	0.226	3.19	3000 RCP	CLASS 2 RRJ	1 in 18.4	231.0
0.506	2.007	4.54	7500 RCP	CLASS 2 RRJ	1 in 30.8	230.0
0.509	0.704	1.59	7500 RCP	CLASS 2 RRJ	1 in 250	230.0
0.010	0.093	1.31	3000 RCP	CLASS 2 RRJ	1 in 109	233.0

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	30.08.18	ISSUED FOR CONSTRUCTION	KMKM	AB
1	26.06.43	AS CONSTRUCTED	KMKM	AB

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TITLE	NAME
DRAFTER	S.Sathasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows



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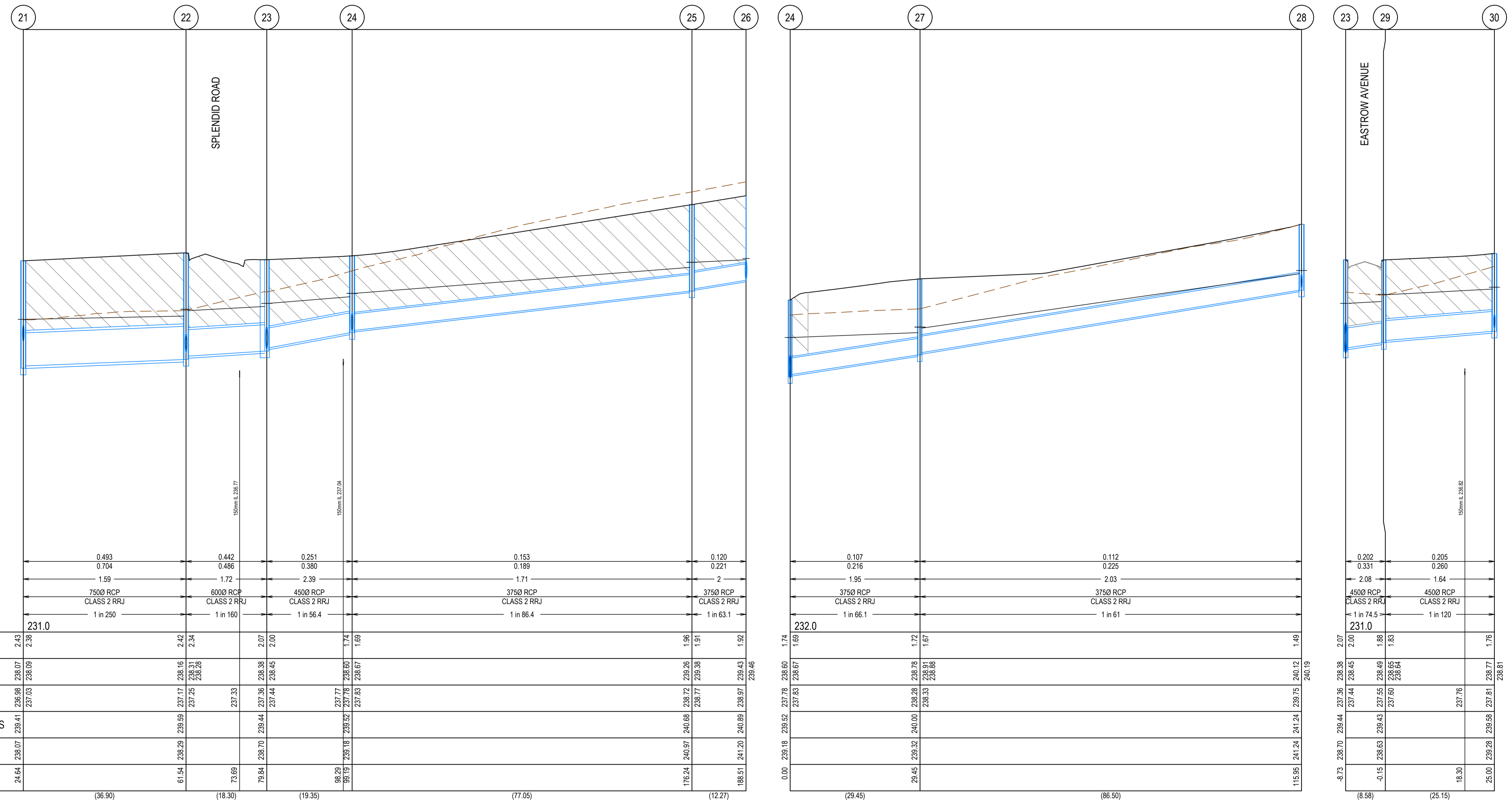
**mirvac**

Olivine Estate - Stage 2  
Whittlesea City Council  
Road and Drainage  
Drainage Longitudinal Sections - 2

MELWAYS REF: 9 J2 PROJECT / DRAWING No: 1700E-02-28 SHEET No: 28 of 44 REVISION: 1

**NOTE**

- ALL DRAINS TO BE BACKFILLED IN ACCORDANCE WITH CLAUSE 35.1.7 OF COUNCIL'S SPECIFICATION.
- WHERE DRAINS ARE UNDER ANY PAVED AREA OR BEHIND THE KERB AND CHANNEL THE DRAINS IS TO BE BACKFILLED AS FOLLOWS
  - 30mm NOM. SIZE CLASS 3 FOR TO 100mm ABOVE THE TOP OF PIPE.
  - LOW PERMEABILITY CLASS 4 FOR FROM 100mm ABOVE THE TOP OF PIPE TO UNDERSIDE OF PAVEMENT



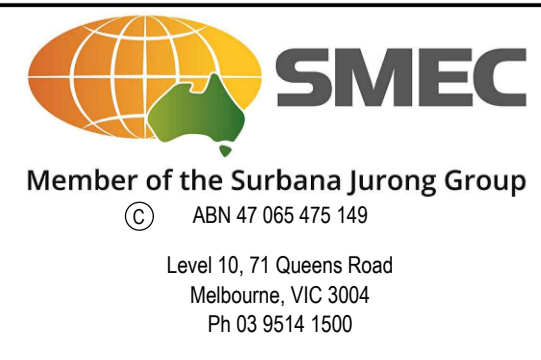
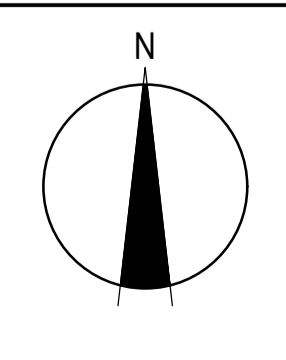
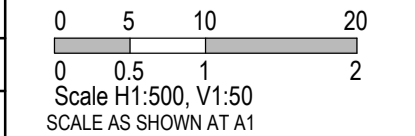
DESIGN FLOW (m3/s)	0.493	0.442	0.251	0.153	0.120
CAPACITY (m3/s)	0.704	0.486	0.380	0.189	0.221
AT GRADE VELOCITY (m/s)	1.59	1.72	2.39	1.71	2
NOMINAL PIPE SIZE (mm)	7500 RCP	6000 RCP	4500 RCP	3750 RCP	3750 RCP
PIPE TYPE	CLASS 2 RRJ	CLASS 2 RRJ	CLASS 2 RRJ	CLASS 2 RRJ	CLASS 2 RRJ
GRADE	1 in 250	1 in 160	1 in 56.4	1 in 86.4	1 in 63.1
DATUM	231.0				
DEPTH TO INVERT	2.43	2.38	2.42	1.96	1.92
HYDRAULIC GRADE LINE	238.07	238.09	238.16	238.26	239.43
INVERT LEVEL	236.96	237.17	237.25	237.77	238.77
FINISHED SURFACE LEVELS	238.07	238.29	238.59	238.70	240.97
EXISTING SURFACE LEVEL	238.07	238.29	238.59	238.70	240.97
CHAINAGE	24.64	61.54	73.69	79.84	176.24
(Reach Length)	(36.90)	(18.30)	(19.35)	(77.05)	(12.27)

DESIGN FLOW (m3/s)	0.107	0.112	0.202	0.205
CAPACITY (m3/s)	0.216	0.225	0.331	0.260
AT GRADE VELOCITY (m/s)	1.95	2.03	2.08	1.64
NOMINAL PIPE SIZE (mm)	3750 RCP	3750 RCP	4500 RCP	4500 RCP
PIPE TYPE	CLASS 2 RRJ	CLASS 2 RRJ	CLASS 2 RRJ	CLASS 2 RRJ
GRADE	1 in 66.1	1 in 61	1 in 74.5	1 in 120
DATUM	231.0			
DEPTH TO INVERT	1.74	1.67	2.07	1.76
HYDRAULIC GRADE LINE	237.83	238.67	238.38	238.81
INVERT LEVEL	237.83	238.67	237.44	237.65
FINISHED SURFACE LEVELS	239.16	240.00	239.43	239.28
EXISTING SURFACE LEVEL	239.16	240.00	239.43	239.28
CHAINAGE	0.00	29.45	8.73	25.00
(Reach Length)	(29.45)	(86.50)	(8.58)	(25.15)

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	30.08.18	ISSUED FOR CONSTRUCTION	KMKM	AB
1	26.06.44	AS CONSTRUCTED	KMKM	AB

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TITLE	NAME
DRAFTER	S.Sathasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows

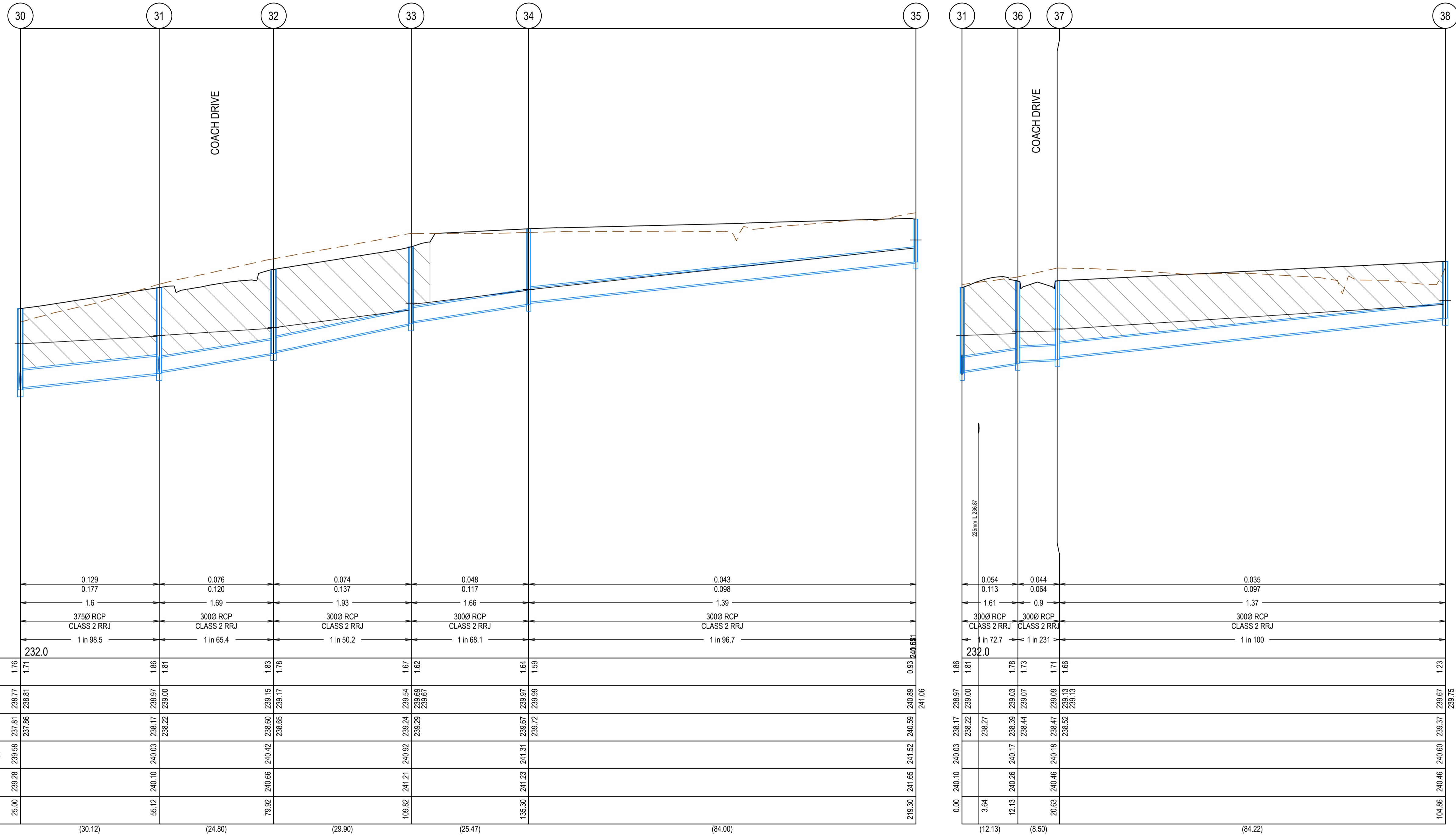


Olivine Estate - Stage 2  
Whittlesea City Council  
Road and Drainage  
Drainage Longitudinal Sections - 3

MELWAYS REF 9 J2	PROJECT / DRAWING No. 1700E-02-29	SHEET No. 29 of 44	REVISION 1
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**NOTE**

- ALL DRAINS TO BE BACKFILLED IN ACCORDANCE WITH CLAUSE 35.1.7 OF COUNCIL'S SPECIFICATION.
- WHERE DRAINS ARE UNDER ANY PAVED AREA OR BEHIND THE KERB AND CHANNEL THE DRAINS IS TO BE BACKFILLED AS FOLLOWS
  - 30mm NOM. SIZE CLASS 3 FCR TO 100mm ABOVE THE TOP OF PIPE.
  - LOW PERMEABILITY CLASS 4 FCR FROM 100mm ABOVE THE TOP OF PIPE TO UNDERSIDE OF PAVEMENT



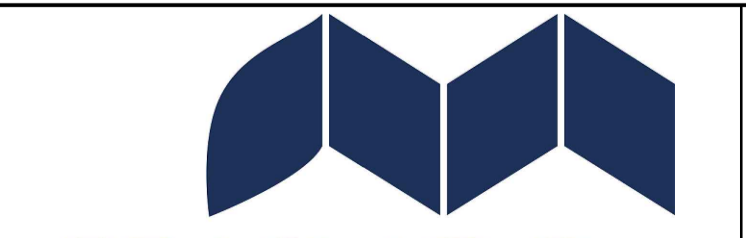
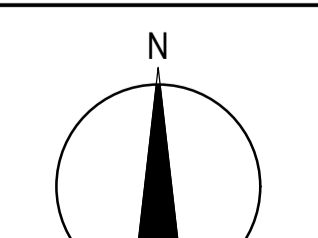
DESIGN FLOW (m3/s)	0.129	0.076	0.074	0.048	0.043
CAPACITY (m3/s)	0.177	0.120	0.137	0.117	0.098
AT GRADE VELOCITY (m/s)	1.6	1.69	1.93	1.66	1.39
NOMINAL PIPE SIZE (mm)	3750 RCP	3000 RCP	3000 RCP	3000 RCP	3000 RCP
PIPE TYPE	CLASS 2 RRJ	CLASS 2 RRJ	CLASS 2 RRJ	CLASS 2 RRJ	CLASS 2 RRJ
GRADE	1 in 98.5	1 in 65.4	1 in 50.2	1 in 68.1	1 in 96.7
DATUM	232.0				
DEPTH TO INVERT	1.76	1.71	1.83	1.64	1.59
HYDRAULIC GRADE LINE	238.77	238.81	239.15	239.97	240.89
INVERT LEVEL	237.81	238.17	238.60	239.24	239.67
FINISHED SURFACE LEVELS	238.58	240.03	240.42	241.21	241.31
EXISTING SURFACE LEVEL	238.81	238.97	239.15	239.54	239.97
CHAINAGE	25.00	55.12	79.92	109.82	135.30
(Reach Length)	(30.12)	(24.80)	(29.90)	(25.47)	(84.00)

DESIGN FLOW (m3/s)	0.054	0.044	0.035
CAPACITY (m3/s)	0.113	0.064	0.097
AT GRADE VELOCITY (m/s)	1.61	0.9	1.37
NOMINAL PIPE SIZE (mm)	3000 RCP	3000 RCP	3000 RCP
PIPE TYPE	CLASS 2 RRJ	CLASS 2 RRJ	CLASS 2 RRJ
GRADE	1 in 72.7	1 in 231	1 in 100
DATUM	232.0		
DEPTH TO INVERT	1.86	1.81	1.66
HYDRAULIC GRADE LINE	238.17	239.00	239.67
INVERT LEVEL	238.27	238.27	239.37
FINISHED SURFACE LEVELS	240.03	240.60	240.60
EXISTING SURFACE LEVEL	238.27	238.27	239.37
CHAINAGE	0.00	104.86	123.75
(Reach Length)	(12.13)	(8.50)	(84.22)

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	30.08.18	ISSUED FOR CONSTRUCTION	KMKM	AB
1	26.06.45	AS CONSTRUCTED	KMKU	AB

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.

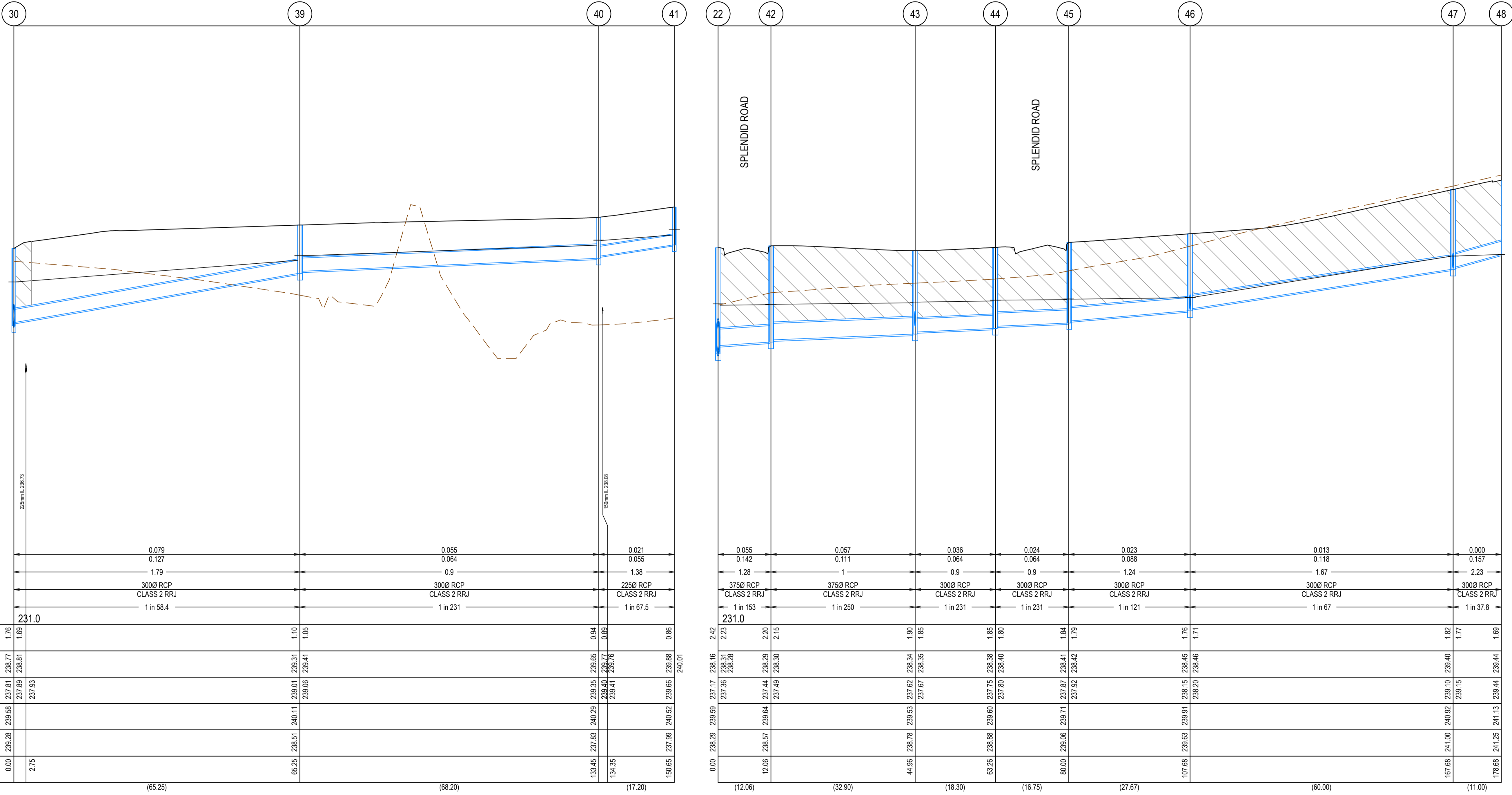
TITLE	NAME
DRAFTER	S.Sathasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows



Olivine Estate - Stage 2  
Whittlesea City Council  
Road and Drainage  
Drainage Longitudinal Sections - 4

**NOTE**

- ALL DRAINS TO BE BACKFILLED IN ACCORDANCE WITH CLAUSE 35.1.7 OF COUNCIL'S SPECIFICATION.
- WHERE DRAINS ARE UNDER ANY PAVED AREA OR BEHIND THE KERB AND CHANNEL THE DRAINS IS TO BE BACKFILLED AS FOLLOWS
  - 30mm NOM. SIZE CLASS 3 FCR TO 100mm ABOVE THE TOP OF PIPE.
  - LOW PERMEABILITY CLASS 4 FCR FROM 100mm ABOVE THE TOP OF PIPE TO UNDERSIDE OF PAVEMENT



DESIGN FLOW (m3/s)	0.079	0.055	0.021
CAPACITY (m3/s)	0.127	0.064	0.055
AT GRADE VELOCITY (m/s)	1.79	0.9	1.38
NOMINAL PIPE SIZE (mm)	3000 RCP	3000 RCP	2250 RCP
PIPE TYPE	CLASS 2 RRJ	CLASS 2 RRJ	CLASS 2 RRJ
GRADE	1 in 58.4	1 in 231	1 in 67.5
DATUM	231.0		
DEPTH TO INVERT	1.76 1.69	1.10 1.05	0.94 0.88 0.88
HYDRAULIC GRADE LINE	237.81 237.81 237.81	239.01 239.06 239.41	239.35 239.40 239.41 239.41
INVERT LEVEL	237.81 237.81 237.81	239.01 239.06 239.41	239.35 239.40 239.41 239.41
FINISHED SURFACE LEVELS	239.28 239.56	240.11 239.51	240.29 237.83
EXISTING SURFACE LEVEL	239.28	239.51	237.83
CHAINAGE	0.00 2.75	65.25 65.25	133.45 134.35 150.65

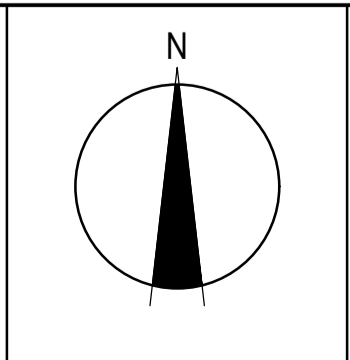
DESIGN FLOW (m3/s)	0.055	0.057	0.036	0.024	0.023	0.013	0.000
CAPACITY (m3/s)	0.142	0.111	0.064	0.064	0.088	0.118	0.157
AT GRADE VELOCITY (m/s)	1.28	1	0.9	0.9	1.24	1.67	2.23
NOMINAL PIPE SIZE (mm)	3750 RCP	3750 RCP	3000 RCP	3000 RCP	3000 RCP	3000 RCP	3000 RCP
PIPE TYPE	CLASS 2 RRJ	CLASS 2 RRJ	CLASS 2 RRJ	CLASS 2 RRJ	CLASS 2 RRJ	CLASS 2 RRJ	CLASS 2 RRJ
GRADE	1 in 153	1 in 250	1 in 231	1 in 231	1 in 121	1 in 67	1 in 37.8
DATUM	231.0						
DEPTH TO INVERT	2.42 2.23	2.20 2.15	1.90 1.85	1.85 1.80	1.84 1.79	1.76 1.71	1.82 1.77 1.69
HYDRAULIC GRADE LINE	237.17 237.36 238.31 238.36	237.44 237.49 238.29 238.30	237.62 237.67 238.34 238.35	237.75 237.80 238.38 238.40	237.87 237.92 238.41 238.42	238.15 238.20 238.45 238.46	239.10 239.15 239.44 239.44
INVERT LEVEL	237.17 237.36 238.31 238.36	237.44 237.49 238.29 238.30	237.62 237.67 238.34 238.35	237.75 237.80 238.38 238.40	237.87 237.92 238.41 238.42	238.15 238.20 238.45 238.46	239.10 239.15 239.44 239.44
FINISHED SURFACE LEVELS	239.29 239.59	239.64 239.57	239.53 239.53	239.60 239.60	239.71 239.06	239.91 239.63	240.92 241.00
EXISTING SURFACE LEVEL	239.29	239.57	239.53	239.60	239.06	239.63	241.00
CHAINAGE	0.00 12.06	32.90 32.90	44.96 44.96	63.26 63.26	80.00 80.00	107.68 107.68	178.66 178.66

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DES/DT	APPROVAL
0	30.08.18	ISSUED FOR CONSTRUCTION	KMKM	AB
1	26.06.46	AS CONSTRUCTED	KMKM	AB

**AS CONSTRUCTED**

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.

TITLE	NAME
DRAFTER	S.Sathasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows



**SMEC**  
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Level 10, 71 Queens Road  
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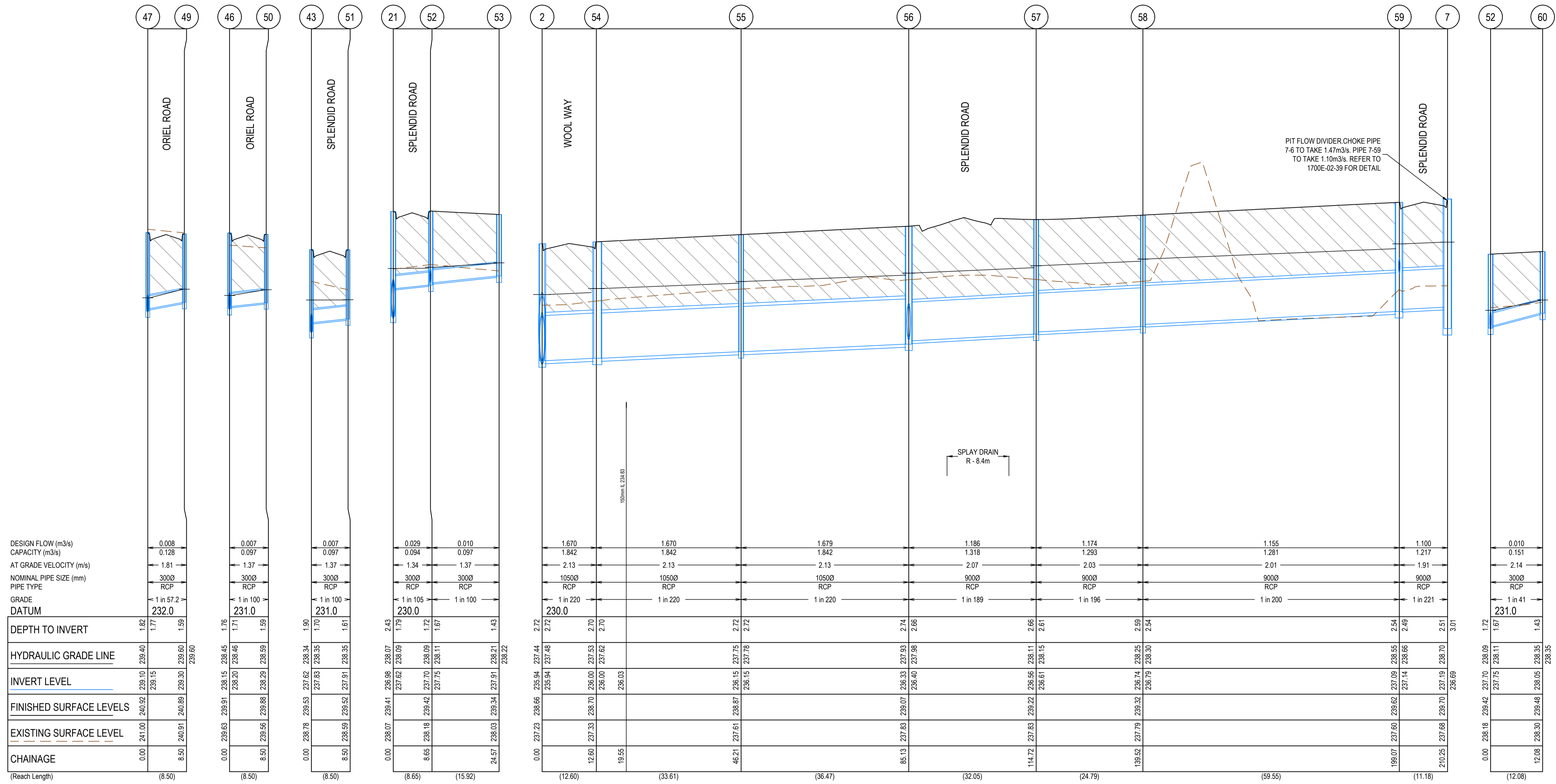
**mirvac**

Olivine Estate - Stage 2  
Whittlesea City Council  
Road and Drainage  
Drainage Longitudinal Sections - 5

MELWAYS REF <b>9 J2</b>	PROJECT / DRAWING No. <b>1700E-02-31</b>	SHEET No. <b>31 of 44</b>	REVISION <b>1</b>
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**NOTE**

- ALL DRAINS TO BE BACKFILLED IN ACCORDANCE WITH CLAUSE 35.1.7 OF COUNCIL'S SPECIFICATION.
- WHERE DRAINS ARE UNDER ANY PAVED AREA OR BEHIND THE KERB AND CHANNEL THE DRAINS IS TO BE BACKFILLED AS FOLLOWS
  - 30mm NOM. SIZE CLASS 3 FCR TO 100mm ABOVE THE TOP OF PIPE.
  - LOW PERMEABILITY CLASS 4 FCR FROM 100mm ABOVE THE TOP OF PIPE TO UNDERSIDE OF PAVEMENT



PIT FLOW DIVIDER CHOKE PIPE  
7-6 TO TAKE 1.47m3/s. PIPE 7-59  
TO TAKE 1.10m3/s. REFER TO  
1700E-02-39 FOR DETAIL

SPLAY DRAIN  
R - 8.4m

150mm L 234.83

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	30.08.18	ISSUED FOR CONSTRUCTION	KMKM	AB
1	26.06.47	AS CONSTRUCTED	KMKU	AB

**AS CONSTRUCTED**

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TITLE	NAME
DRAFTER	S.Sathasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows

Quality Management ISO 9001  
 OHS Management AS/NZS 1881  
 Environmental Management ISO 14001  
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Scale 1:500, V1:50  
 SCALE AS SHOWN AT A1

**SMEC**  
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**mirvac**

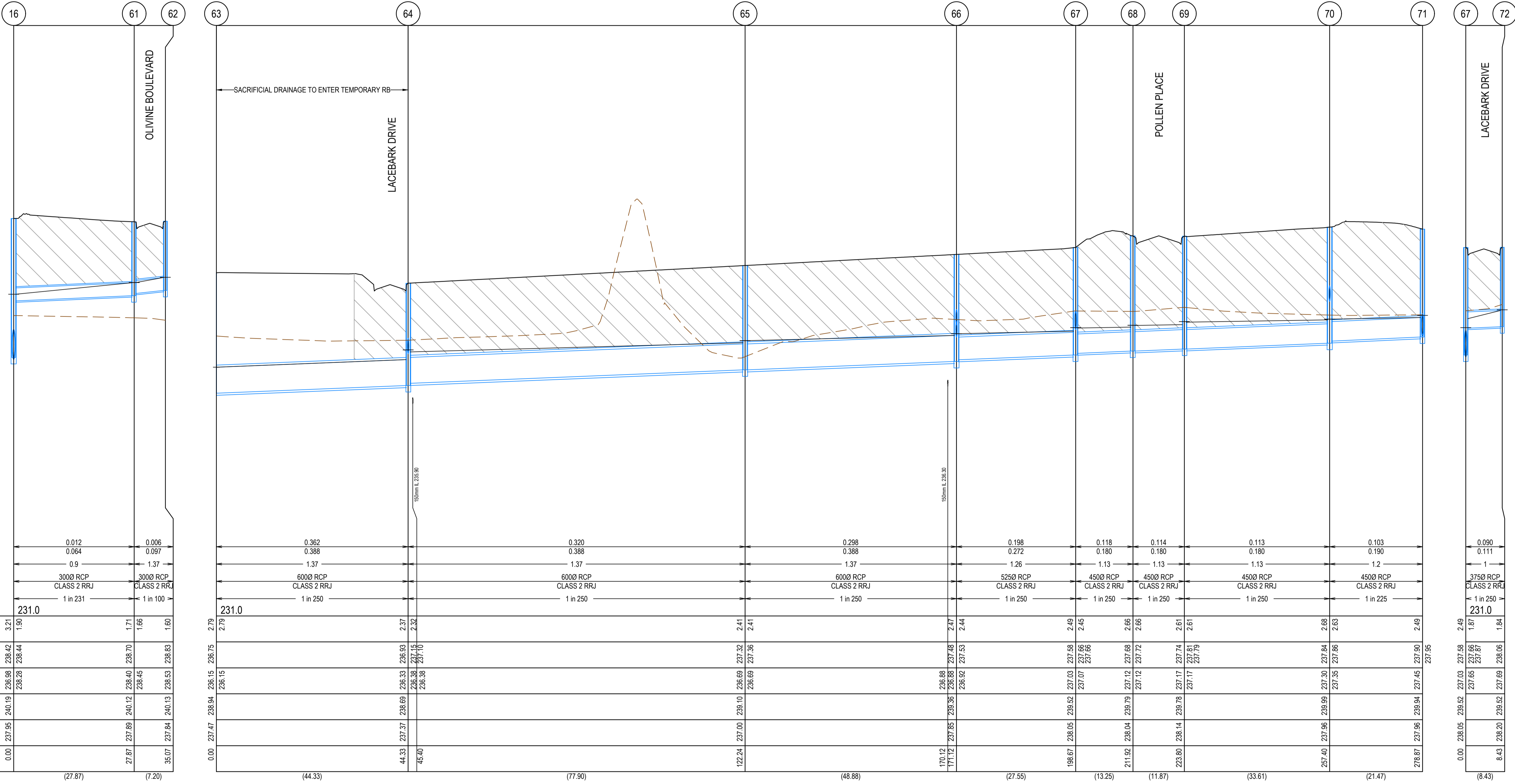
Olivine Estate - Stage 2  
 Whittlesea City Council  
 Road and Drainage  
 Drainage Longitudinal Sections - 6

MELWAYS REF <b>9 J2</b>	PROJECT / DRAWING No. <b>1700E-02-32</b>	SHEET No. <b>32 of 44</b>	REVISION <b>1</b>
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**NOTE**

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- WHERE DRAINS ARE UNDER ANY PAVED AREA OR BEHIND THE KERB AND CHANNEL THE DRAINS IS TO BE BACKFILLED AS FOLLOWS
  - 30mm NOM. SIZE CLASS 3 FCR TO 100mm ABOVE THE TOP OF PIPE.
  - LOW PERMEABILITY CLASS 4 FCR FROM 100mm ABOVE THE TOP OF PIPE TO UNDERSIDE OF PAVEMENT

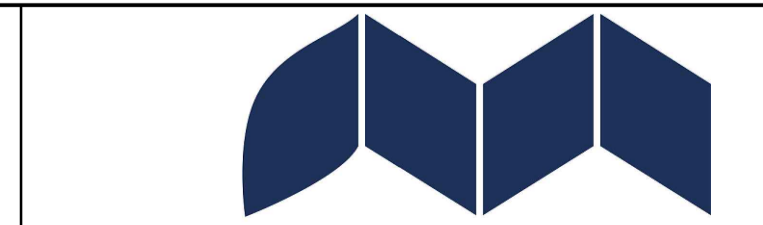
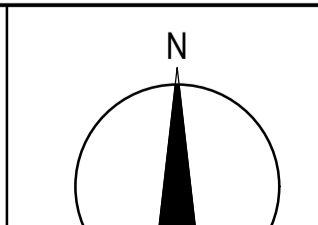


DESIGN FLOW (m3/s)	CAPACITY (m3/s)	AT GRADE VELOCITY (m/s)	NOMINAL PIPE SIZE (mm)	PIPE TYPE	GRADE	DATUM	DEPTH TO INVERT	HYDRAULIC GRADE LINE	INVERT LEVEL	FINISHED SURFACE LEVELS	EXISTING SURFACE LEVEL	CHAINAGE
0.012	0.064	0.9	3000 RCP	CLASS 2 RRJ	1 in 231	231.0	3.21	238.42	238.44	240.19	237.95	0.00
0.006	0.097	1.37	3000 RCP	CLASS 2 RRJ	1 in 100	231.0	1.90	238.44	238.45	240.13	237.84	(27.87)
0.362	0.388	1.37	6000 RCP	CLASS 2 RRJ	1 in 250	231.0	2.79	236.15	236.33	238.69	237.85	(44.33)
0.320	0.388	1.37	6000 RCP	CLASS 2 RRJ	1 in 250	231.0	2.37	236.69	236.38	238.69	237.85	(77.90)
0.298	0.388	1.37	6000 RCP	CLASS 2 RRJ	1 in 250	231.0	2.41	236.69	236.88	238.85	237.85	(48.88)
0.198	0.272	1.26	5250 RCP	CLASS 2 RRJ	1 in 250	231.0	2.44	236.92	237.07	238.05	237.85	(27.55)
0.118	0.180	1.13	4500 RCP	CLASS 2 RRJ	1 in 250	231.0	2.49	237.07	237.12	238.04	237.78	(13.25)
0.114	0.180	1.13	4500 RCP	CLASS 2 RRJ	1 in 250	231.0	2.66	237.12	237.17	238.14	237.81	(11.87)
0.113	0.180	1.13	4500 RCP	CLASS 2 RRJ	1 in 250	231.0	2.68	237.35	237.40	238.99	237.96	(33.61)
0.103	0.190	1.2	4500 RCP	CLASS 2 RRJ	1 in 225	231.0	2.63	237.45	237.50	239.52	237.96	(21.47)
0.090	0.111	1	3750 RCP	CLASS 2 RRJ	1 in 250	231.0	2.49	237.58	237.65	238.06	237.69	(8.43)

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	30.08.18	ISSUED FOR CONSTRUCTION	KMKM	AB
1	26.06.48	AS CONSTRUCTED	KMKM	AB

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.

TITLE	NAME
DRAFTER	S.Sathasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows



Olivine Estate - Stage 2  
Whittlesea City Council  
Road and Drainage  
Drainage Longitudinal Sections - 7

**AS CONSTRUCTED**

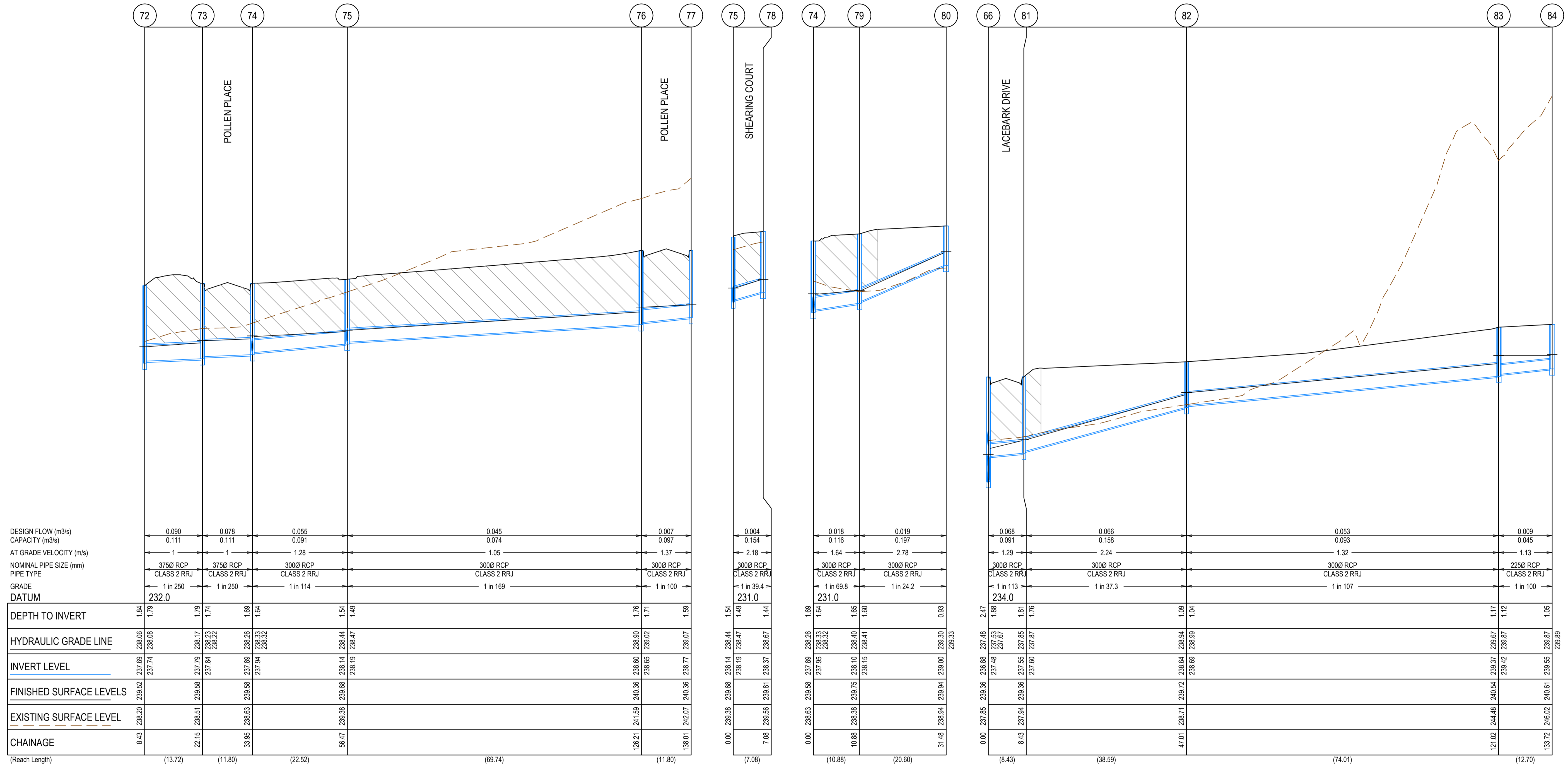


SCALE
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SCALE AS SHOWN AT A1

MELWAYS REF	PROJECT / DRAWING No.	SHEET No.	REVISION
9 J2	1700E-02-33	33 of 44	1

**NOTE**

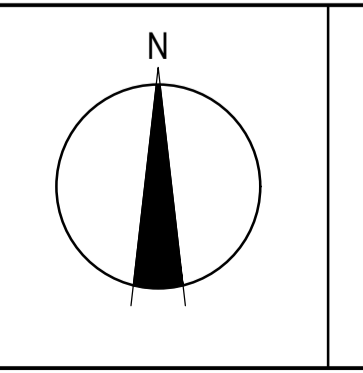
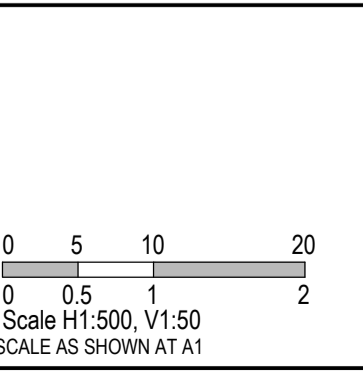
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- WHERE DRAINS ARE UNDER ANY PAVED AREA OR BEHIND THE KERB AND CHANNEL THE DRAINS IS TO BE BACKFILLED AS FOLLOWS
  - 30mm NOM. SIZE CLASS 3 FCR TO 100mm ABOVE THE TOP OF PIPE.
  - LOW PERMEABILITY CLASS 4 FCR FROM 100mm ABOVE THE TOP OF PIPE TO UNDERSIDE OF PAVEMENT



REV	DATE	AMENDMENT / REVISION DESCRIPTION	DES/DT	APPROVAL
0	30.08.18	ISSUED FOR CONSTRUCTION	KMKM	AB
1	26.06.49	AS CONSTRUCTED	KMKU	AB

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TITLE	NAME
DRAFTER	S.Sathasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows



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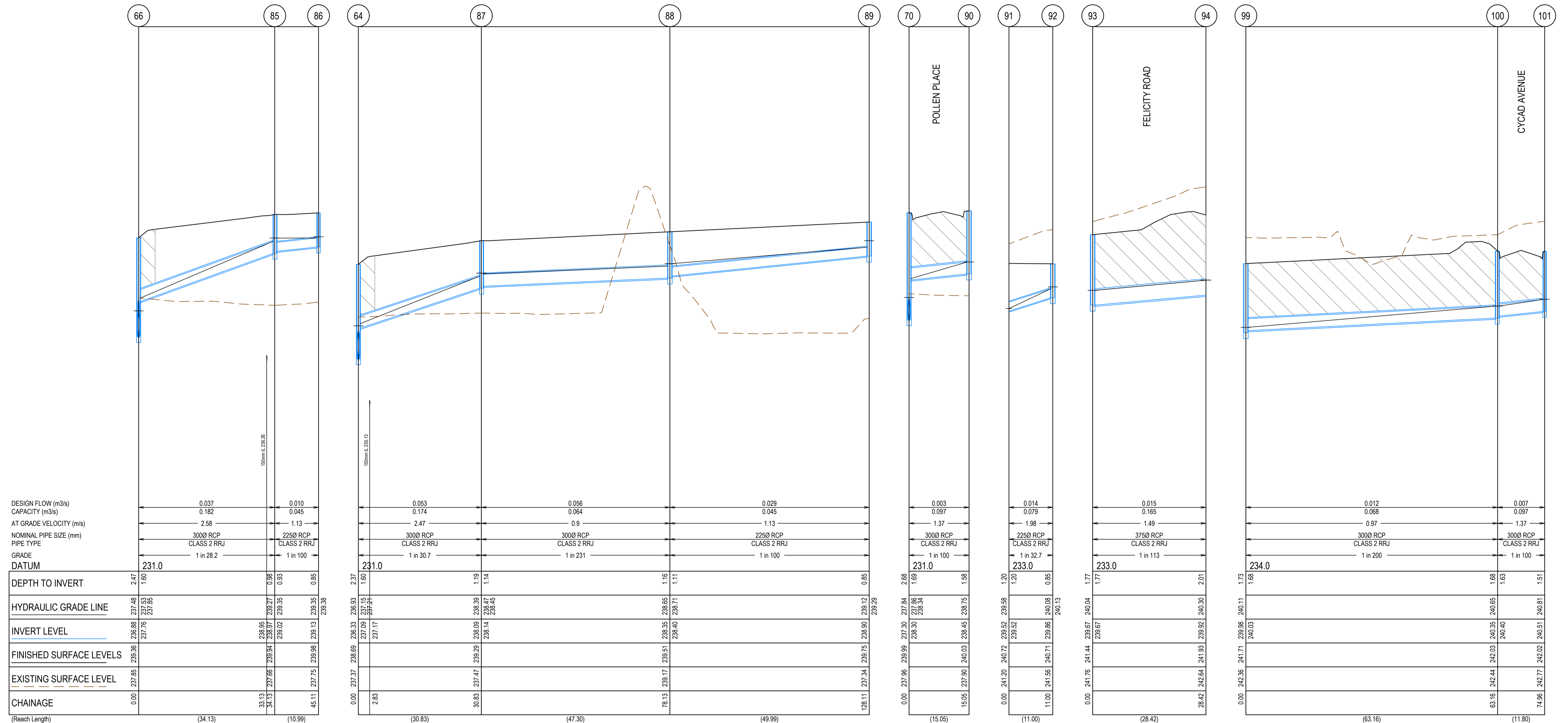


Olivine Estate - Stage 2  
Whittlesea City Council  
Road and Drainage  
Drainage Longitudinal Sections - 8

MELWAYS REF: 9 J2 PROJECT / DRAWING No: 1700E-02-34 SHEET No: 34 of 44 REVISION: 1

**NOTE**

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  - 30mm NOM. SIZE CLASS 3 FCR TO 100mm ABOVE THE TOP OF PIPE.
  - LOW PERMEABILITY CLASS 4 FCR FROM 100mm ABOVE THE TOP OF PIPE TO UNDERSIDE OF PAVEMENT



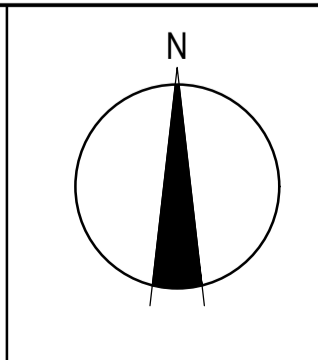
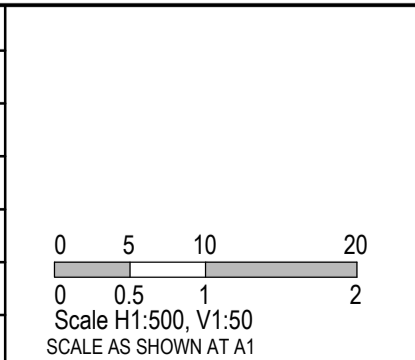
REV	DATE	AMENDMENT / REVISION DESCRIPTION	DES/DT	APPROVAL
0	30.08.18	ISSUED FOR CONSTRUCTION	KMKM	AB
1	26.06.50	AS CONSTRUCTED	KMKU	AB

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 OHS Management AS/NZS 1881  
 Environmental Management ISO 14001

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TITLE	NAME
DRAFTER	S.Sathasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows



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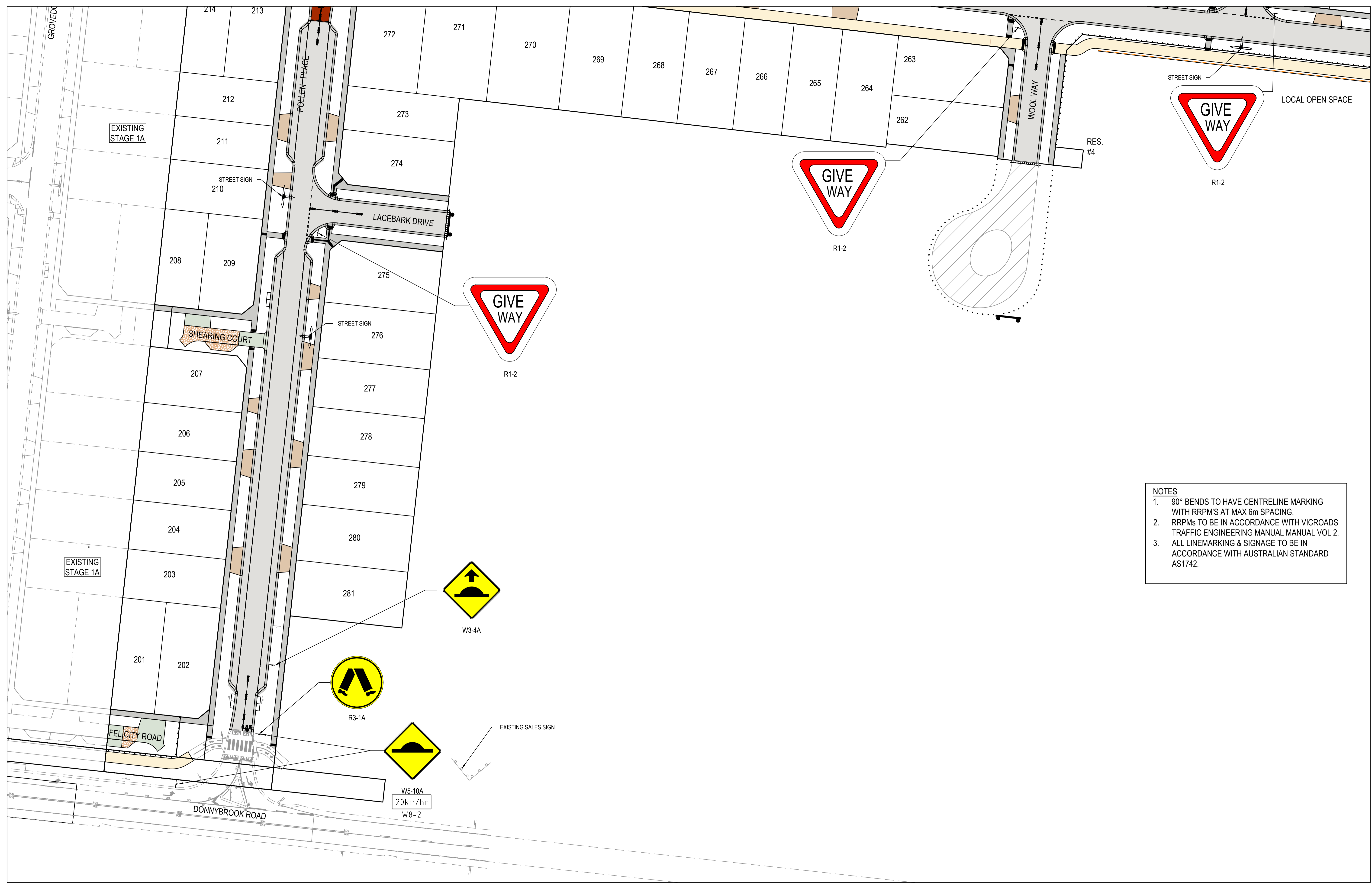


Olivine Estate - Stage 2  
 Whittlesea City Council  
 Road and Drainage  
 Drainage Longitudinal Sections - 9

MELWAYS REF <b>9 J2</b>	PROJECT / DRAWING No. <b>1700E-02-35</b>	SHEET No. <b>35 of 44</b>	REVISION <b>1</b>
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NAME	PIT TYPE	INTERNAL WD	LEN	INLET DIA	INV LEV	OUTLET DIA	INV LEV	PIT SETOUT RL	DEPTH	STD DWG	REMARKS
1	ENDWALL			1500	235.85			238.88	3.03	SD820	TEMPORARY ENDWALL
2	JUNCTION PIT	1200	2550	1050	235.94	1500	235.94	238.66	2.72	EDCM 607	HAUNCH UNDER KERB. PIT COVER 600X900
3	JUNCTION PIT	1200	900	1050	236.03	1050	236.03	238.79	2.76	EDCM 607	HAUNCH UNDER KERB. PIT COVER 600X900
4	GRATED ENTRY PIT	1200	900	1050	236.19	1050	236.19	239.02	2.84	EDCM 601 & 607	HAUNCH UNDER KERB. PIT COVER 600X900
5	GRATED ENTRY PIT	1200	900	1050	236.41	1050	236.41	239.25	2.84	EDCM 602 & 607	HAUNCH IN NATURESTRIP. PIT COVER 600X900
6	GRATED ENTRY PIT	1200	900	1050	236.50	1050	236.50	239.35	2.86	EDCM 601 & 607	HAUNCH IN NATURESTRIP. PIT COVER 600X900
7	GRATED ENTRY PIT	1650	1650	1350	236.69	1050	236.69	239.70	3.01	EDCM 601 & 607	HAUNCH IN NATURESTRIP. PIT COVER 600X900
8	GRATED ENTRY PIT	1650	900	1350	236.93	1350	236.93	240.18	3.25	EDCM 601 & 607	HAUNCH UNDER KERB. HD PIT COVER 1050X900
9	JUNCTION PIT	1650	1200	1350	237.63	1350	237.63	240.57	2.94	EDCM 607	HAUNCH IN NATURESTRIP. PIT COVER 600X900
10	GRATED ENTRY PIT	1650	900	1350	237.72	1350	237.72	240.60	2.88	EDCM 601 & 607	HAUNCH UNDER KERB. HD PIT COVER 1050X900
11	ENDPIPE			1350	237.84	1350	237.79	240.70	2.91		BLANK OFF ENDPipe FOR FUTURE CONNECTION
12	GRATED ENTRY PIT	600	900	300	238.99	300	238.99	240.60	1.61	EDCM 601 & 605	
13	DOUBLE GRATED ENTRY PIT	600	900	300	238.80	300	238.75	240.44	1.69	EDCM 602 & 605	
14	DOUBLE GRATED ENTRY PIT	600	900	300	238.89	300	238.84	240.44	1.60	EDCM 602 & 605	
15	JUNCTION PIT	600	900	300	239.42	300	239.42	240.65	1.23	EDCM 605	
16	GRATED ENTRY PIT	600	900	600	236.98	600	236.98	240.19	3.21	EDCM 601 & 605	
17	GRATED PIT	900	900	600	237.01	600	237.01	240.41	3.40	EDCM 605	900X900 HD COVER. PROVIDE GATIC GULLY GRATE (ROAD v-TYPE) 331V964 OR SIMILAR
18	GRATED ENTRY PIT	600	900	300	238.11	300	238.06	239.69	1.63	EDCM 601 & 605	
19	JUNCTION PIT	600	900	300	239.37	300	239.37	240.32	0.95	EDCM 605	
20	GRATED ENTRY PIT	900	1350	750	236.93	750	236.88	239.35	2.47	EDCM 601 & 607	HAUNCH IN NATURESTRIP. PIT COVER 600X900
21	GRATED ENTRY PIT	900	900	750	237.03	750	236.98	239.41	2.43	EDCM 601 & 607	HAUNCH IN NATURESTRIP. PIT COVER 600X900
22	GRATED ENTRY PIT	900	900	600	237.25	750	237.18	239.59	2.42	EDCM 601 & 607	HAUNCH IN NATURESTRIP. PIT COVER 600X900
23	DOUBLE GRATED ENTRY PIT	750	900	450	237.44	600	237.36	239.44	2.07	EDCM 602 & 607	HAUNCH IN NATURESTRIP. PIT COVER 600X900
24	GRATED ENTRY PIT	600	900	375	237.83	450	237.78	239.52	1.74	EDCM 601 & 605	
25	GRATED ENTRY PIT	600	900	375	238.78	375	238.73	240.68	1.96	EDCM 601 & 605	
26	ENDPIPE			375	239.02	375	238.97	240.89	1.92		BLANK OFF ENDPipe FOR FUTURE CONNECTION
27	JUNCTION PIT	600	900	375	238.33	375	238.28	240.00	1.72	EDCM 605	
28	GRATED PIT	600	900	300	239.80	375	239.75	241.24	1.50	EDCM 605	600X900 HD COVER. PROVIDE GATIC GULLY GRATE (ROAD v-TYPE) 331V964 OR SIMILAR
29	DOUBLE GRATED ENTRY PIT	600	900	450	237.60	450	237.55	239.43	1.88	EDCM 602 & 605	
30	GRATED ENTRY PIT	600	900	375	237.86	450	237.81	239.58	1.76	EDCM 601 & 605	
31	GRATED ENTRY PIT	600	900	300	237.89	300	237.82	240.03	1.86	EDCM 601 & 605	
32	GRATED ENTRY PIT	600	900	300	238.65	300	238.60	240.43	1.83	EDCM 601 & 605	
33	JUNCTION PIT	600	900	300	239.30	300	239.25	240.92	1.67	EDCM 605	
34	JUNCTION PIT	600	900	300	239.72	300	239.67	241.31	1.64	EDCM 605	
35	JUNCTION PIT	600	900	300	240.59	300	240.59	241.52	0.93	EDCM 605	
36	GRATED ENTRY PIT	600	900	300	238.44	300	238.39	240.17	1.78	EDCM 601 & 605	
37	DOUBLE GRATED ENTRY PIT	600	900	300	238.52	300	238.47	240.18	1.71	EDCM 602 & 605	
38	GRATED ENTRY PIT	600	900	300	239.37	300	239.37	240.60	1.23	EDCM 601 & 605	
39	JUNCTION PIT	600	900	300	239.06	300	239.01	240.11	1.10	EDCM 605	
40	JUNCTION PIT	600	900	225	239.40	300	239.35	240.29	0.94	EDCM 605	
41	JUNCTION PIT	600	900	225	239.66	225	239.66	240.52	0.86	EDCM 605	
42	GRATED ENTRY PIT	600	900	375	237.49	375	237.44	239.64	2.20	EDCM 601 & 605	
43	DOUBLE GRATED ENTRY PIT	600	900	300	237.67	375	237.62	239.53	1.90	EDCM 602 & 605	
44	GRATED ENTRY PIT	600	900	300	237.80	300	237.75	239.60	1.85	EDCM 601 & 605	
45	GRATED ENTRY PIT	600	900	300	237.92	300	237.87	239.71	1.84	EDCM 601 & 605	
46	GRATED ENTRY PIT	600	900	300	238.20	300	238.15	239.91	1.76	EDCM 601 & 605	
47	GRATED ENTRY PIT	600	900	300	239.15	300	239.10	240.92	1.82	EDCM 601 & 605	
48	ENDPIPE			300	239.44	300	239.44	241.13	1.69		BLANK OFF ENDPipe FOR FUTURE CONNECTION
49	GRATED ENTRY PIT	600	900	300	239.30	300	239.30	240.89	1.59	EDCM 601 & 605	
50	GRATED ENTRY PIT	600	900	300	238.29	300	238.29	239.88	1.59	EDCM 601 & 605	

NAME	PIT TYPE	INTERNAL WD	LEN	INLET DIA	INV LEV	OUTLET DIA	INV LEV	PIT SETOUT RL	DEPTH	STD DWG	REMARKS
51	DOUBLE GRATED ENTRY PIT	600	900	300	237.91	300	237.91	239.52	1.61	EDCM 602 & 605	
52	GRATED ENTRY PIT	600	900	300	237.75	300	237.75	239.42	1.72	EDCM 601 & 605	
53	GRATED ENTRY PIT	600	900	300	237.91	300	237.91	239.34	1.43	EDCM 601 & 605	
54	JUNCTION PIT	1200	2250	1050	236.00	1050	236.00	238.71	2.71	EDCM 607	HAUNCH UNDER KERB. PIT COVER 600X900
55	JUNCTION PIT	1200	900	1050	236.15	1050	236.15	238.87	2.72	EDCM 607	HAUNCH UNDER KERB. PIT COVER 600X900
56	GRATED ENTRY PIT	1200	1350	750	236.48	1050	236.33	239.07	2.74	EDCM 601 & 607	HAUNCH UNDER KERB. PIT COVER 600X900
57	GRATED ENTRY PIT	1200	900	900	236.61	900	236.56	239.22	2.66	EDCM 601 & 607	HAUNCH UNDER KERB. PIT COVER 600X900
58	GRATED ENTRY PIT	1200	900	900	236.79	900	236.74	239.33	2.59	EDCM 601 & 607	HAUNCH UNDER KERB. PIT COVER 600X900
59	GRATED ENTRY PIT	1200	1650	900	238.00	900	237.09	239.62	2.54	EDCM 601 & 607	HAUNCH UNDER KERB. PIT COVER 600X900
60	GRATED ENTRY PIT	600	900	300	238.05	300	238.05	239.48	1.43	EDCM 601 & 605	
61	DOUBLE GRATED ENTRY PIT	600	900	300	238.45	300	238.40	240.12	1.71	EDCM 602 & 605	
62	GRATED ENTRY PIT	600	900	300	238.53	300	238.53	240.13	1.60	EDCM 601 & 605	
63	ENDWALL			600	236.15			238.94	0.00	SD820	TEMPORARY ENDWALL
64	JUNCTION PIT	750	900	600	236.38	600	236.33	238.69	2.37	EDCM 607	HAUNCH UNDER KERB. PIT COVER 600X900
65	JUNCTION PIT	750	900	600	236.69	600	236.69	239.10	2.41	EDCM 607	HAUNCH UNDER KERB. PIT COVER 600X900
66	GRATED ENTRY PIT	750	900	525	236.92	600	236.88	239.36	2.47	EDCM 601 & 607	HAUNCH UNDER KERB. PIT COVER 600X900
67	GRATED ENTRY PIT	750	900	450	237.07	525	237.03	239.52	2.49	EDCM 601 & 607	HAUNCH UNDER KERB. PIT COVER 600X900
68	GRATED ENTRY PIT	750	900	450	237.12	450	237.12	239.79	2.66	EDCM 601 & 607	HAUNCH IN NATURESTRIP. PIT COVER 600X900
69	GRATED ENTRY PIT	600	900	450	237.17	450	237.17	239.78	2.61	EDCM 601 & 605	
70	GRATED ENTRY PIT	750	900	450	237.36	450	237.31	239.99	2.69	EDCM 601 & 607	HAUNCH IN NATURESTRIP. PIT COVER 600X900
71	GRATED ENTRY PIT	750	900	450	237.50	450	237.45	239.94	2.49	EDCM 601 & 607	CONSTRUCT PIT ON EXISTING DRAIN. HAUNCH PIT COVER 600X900
72	GRATED ENTRY PIT	600	900	375	237.74	375	237.69	239.53	1.84	EDCM 601 & 605	
73	DOUBLE GRATED ENTRY PIT	600	900	375	237.84	375	237.79	239.58	1.79	EDCM 602 & 605	
74	DOUBLE GRATED ENTRY PIT	600	900	300	237.94	375	237.89	239.58	1.69	EDCM 602 & 605	
75	JUNCTION PIT	600	900	300	238.19	300	238.14	239.68	1.54	EDCM 605	HD LID
76	GRATED ENTRY PIT	600	900	300	238.65	300	238.60	240.36	1.76	EDCM 601 & 605	
77	GRATED ENTRY PIT	600	900	300	238.77	300	238.77	240.36	1.59	EDCM 601 & 605	
78	GRATED PIT	600	900	300	238.37	300	238.37	239.81	1.44	EDCM 605	600X900 HD COVER. PROVIDE GATIC GULLY GRATE (ROAD v-TYPE) 331V964 OR SIMILAR
79	JUNCTION PIT	600	900	300	238.15	300	238.10	239.75	1.65	EDCM 605	
80	JUNCTION PIT	600	900	300	239.01	300	239.01	239.94	0.93	EDCM 605	
81	GRATED ENTRY PIT	600	900	300	237.60	300	237.55	239.36	1.81	EDCM 601 & 605	
82	JUNCTION PIT	600	900	300	238.69	300	238.64	239.72	1.09	EDCM 605	
83	JUNCTION PIT	600	900	225	239.42	300	239.37	240.54	1.17	EDCM 605	
84	JUNCTION PIT	600	900	225	239.55	225	239.55	240.61	1.05	EDCM 605	
85	JUNCTION PIT	600	900	225	239.02	300	238.97	239.94	0.98	EDCM 605	
86	JUNCTION PIT	600	900	225	239.13	225	239.13	239.98	0.85	EDCM 605	
87	JUNCTION PIT	600	900	300	238.14	300	238.09	239.29	1.19	EDCM 605	
88	JUNCTION PIT	600	900	225	238.40	300	238.35	239.51	1.16	EDCM 605	
89	JUNCTION PIT	600	900	225	238.90	225	238.90	239.75	0.85	EDCM 605	
90	GRATED ENTRY PIT	600	900	300	238.45	300	238.45	240.03	1.58	EDCM 601 & 605	

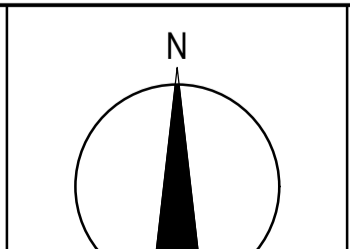
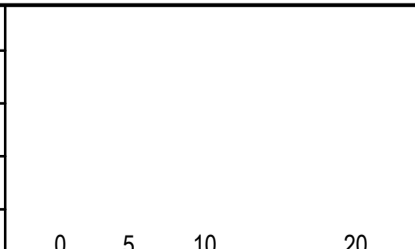


- NOTES**
- 90° BENDS TO HAVE CENTRELINE MARKING WITH RRPMS AT MAX 6m SPACING.
  - RRPMs TO BE IN ACCORDANCE WITH VICROADS TRAFFIC ENGINEERING MANUAL VOL 2.
  - ALL LINEMARKING & SIGNAGE TO BE IN ACCORDANCE WITH AUSTRALIAN STANDARD AS1742.

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	30.08.18	ISSUED FOR CONSTRUCTION	KM/KM	AB
1	20.03.19	EXPOSED AGGREGATE ON MEWS	MA/MA	AB
2	25.03.19	WOOL WAY TURNAROUND AMENDED FOR SEWER EDUCATION TRUCK	KM/RB	AB
3	08.04.19	PEDESTRIAN CROSSING SIGN ADDED	MA/MA	AB
4	26.06.21	AS CONSTRUCTED	KM/KU	AB

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TITLE	NAME
DRAFTER	S.Sathasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows



Olivine Estate - Stage 2  
Whittlesea City Council  
Road and Drainage  
Signs & Linemarking Plan - 1

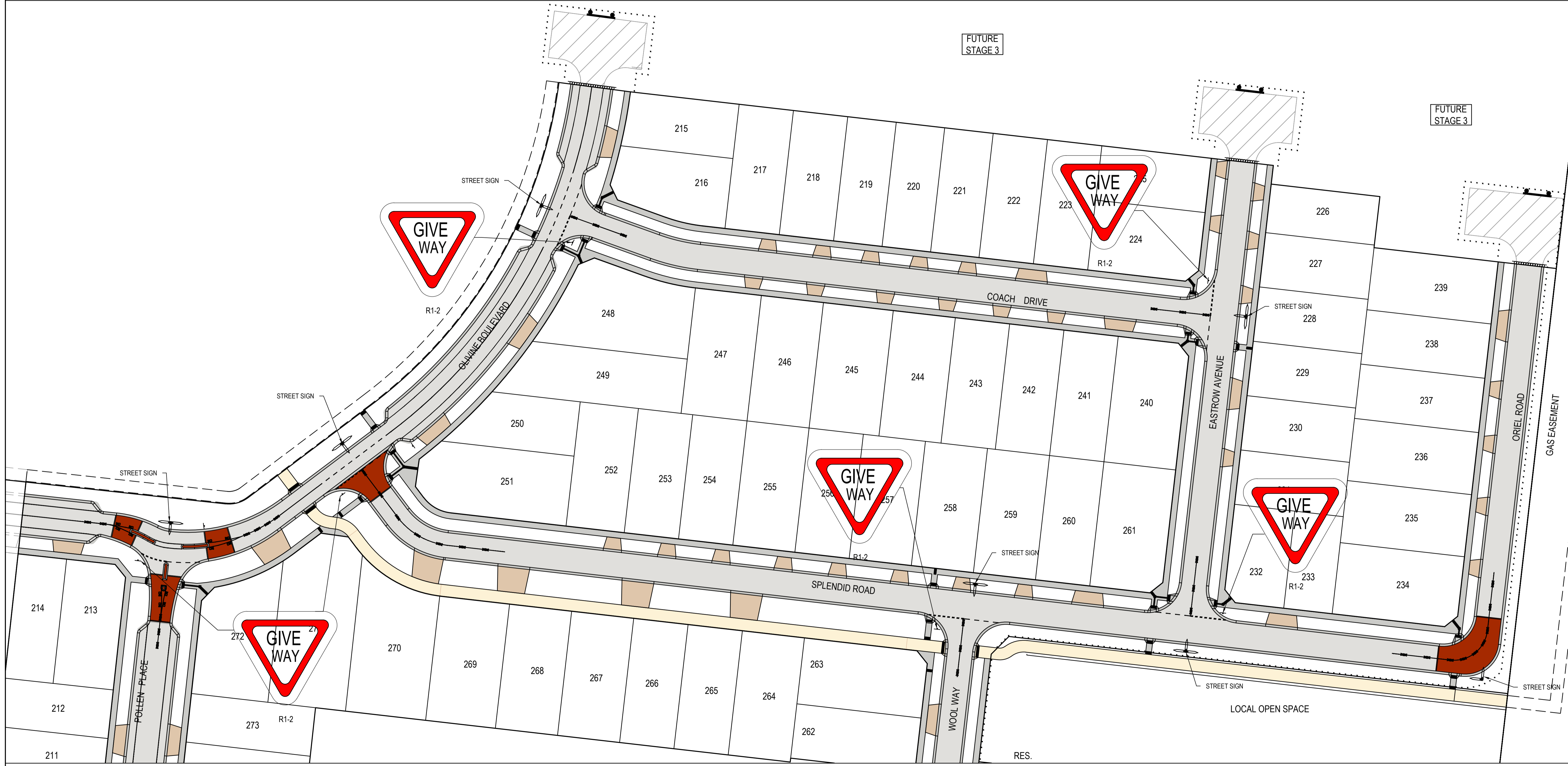
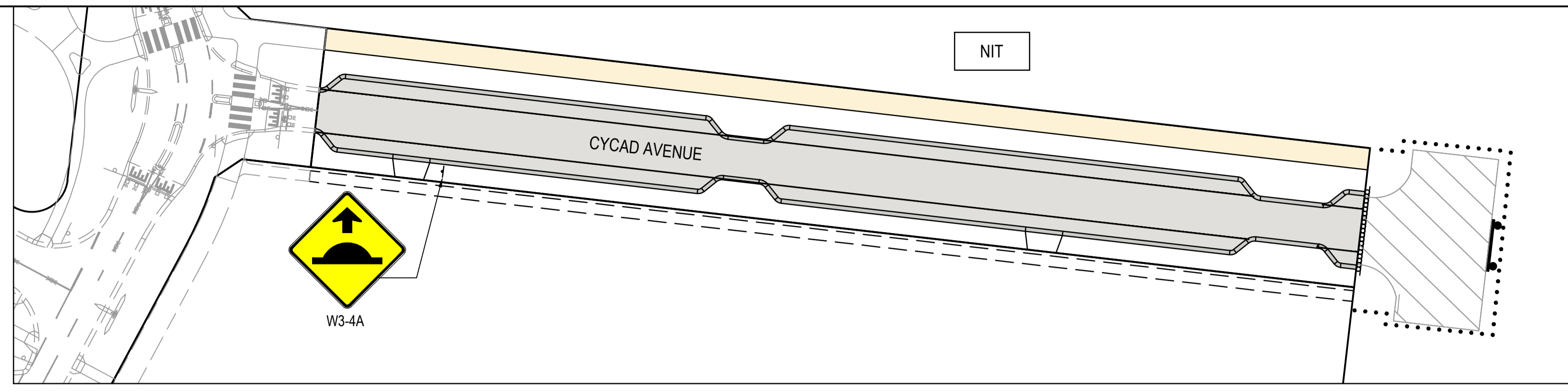
**AS CONSTRUCTED**



MELWAYS REF <b>9 J2</b>	PROJECT / DRAWING No. <b>1700E-02-37</b>	SHEET No. <b>37 of 44</b>	REVISION <b>4</b>
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**NOTES**

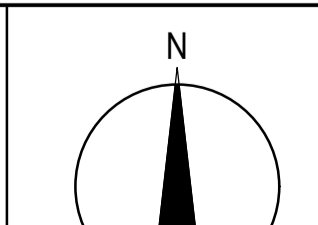
- 90° BENDS TO HAVE CENTRELINE MARKING WITH RRPMS AT MAX 6m SPACING.
- RRPMs TO BE IN ACCORDANCE WITH VICROADS TRAFFIC ENGINEERING MANUAL VOL 2.
- ALL LINEMARKING & SIGNAGE TO BE IN ACCORDANCE WITH AUSTRALIAN STANDARD AS1742.



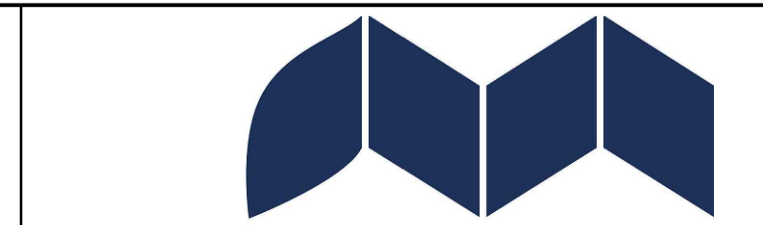
REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	30.08.18	ISSUED FOR CONSTRUCTION	KMKM	AB
1	30.01.19	DRIVEWAY LOCATION AMENDED FOR LOTS 270, 225 & 224	MA/MA	AB
1	26.06.51	AS CONSTRUCTED	KMKU	AB

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TITLE	NAME
DRAFTER	S.Sathasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows



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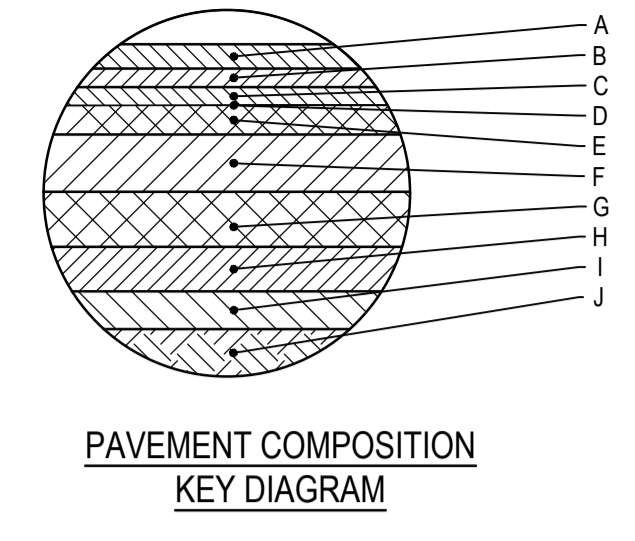
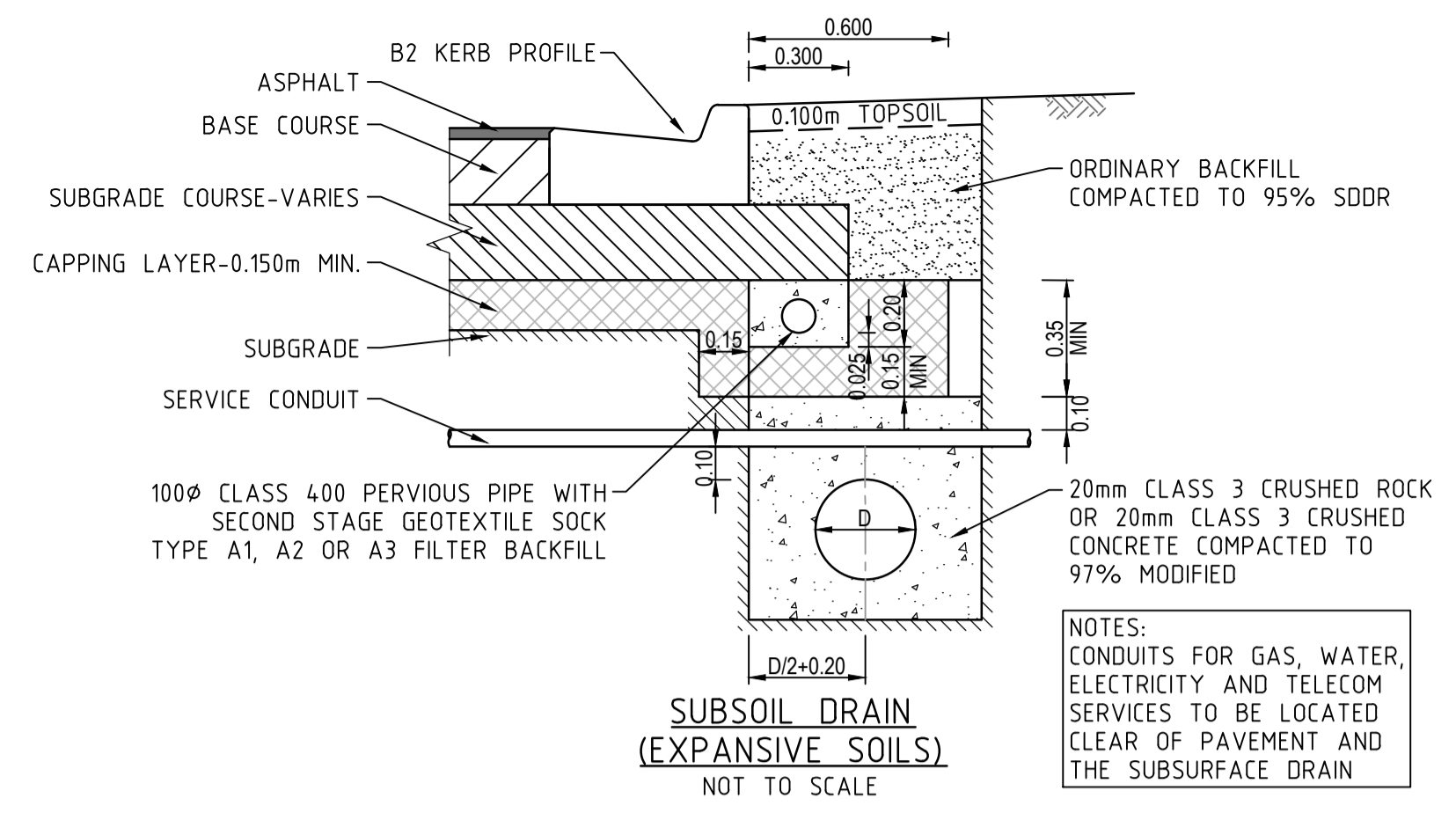
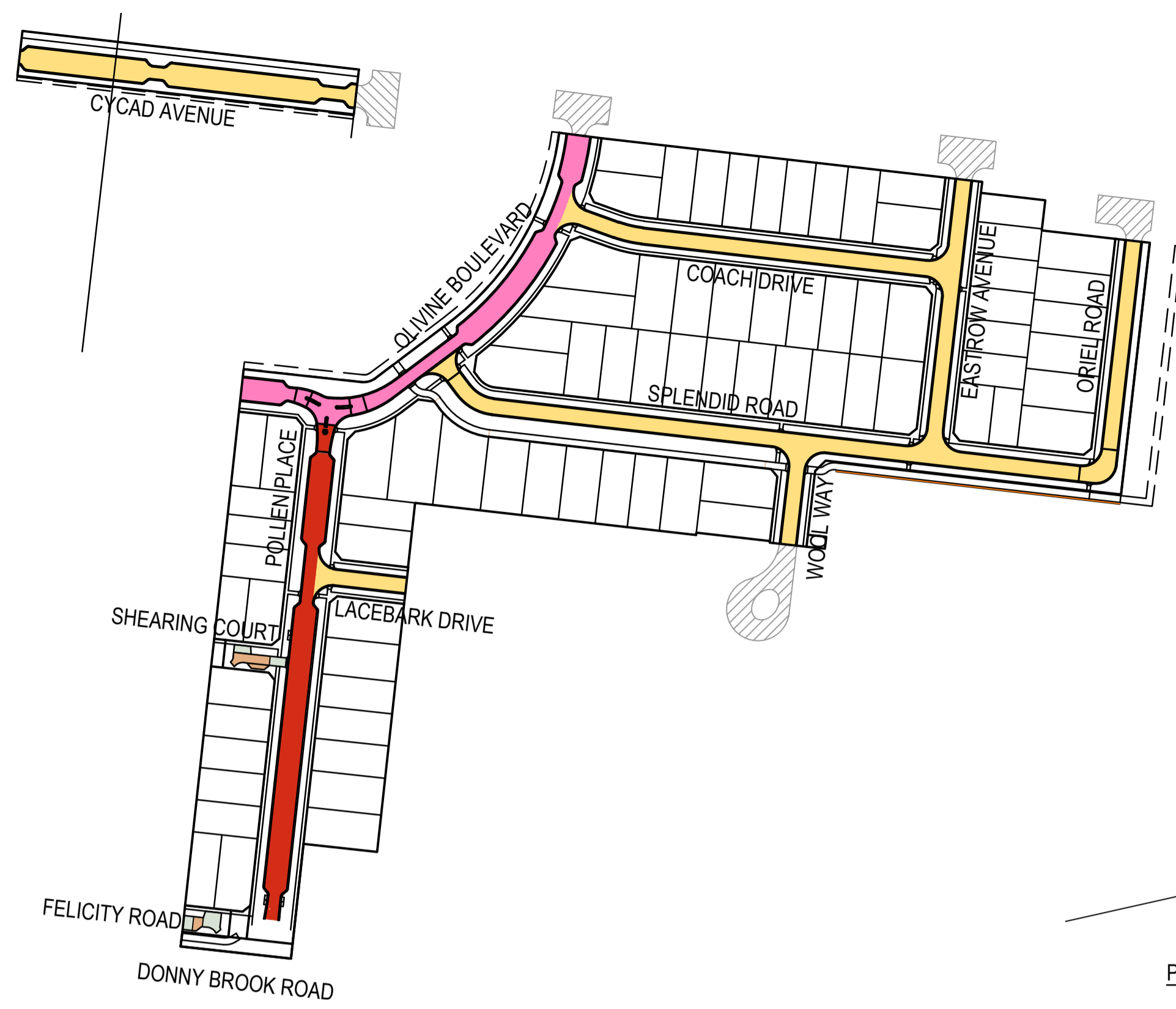


Olivine Estate - Stage 2  
Whittlesea City Council  
Road and Drainage  
Signs & Linemarking Plan - 2

**AS CONSTRUCTED**

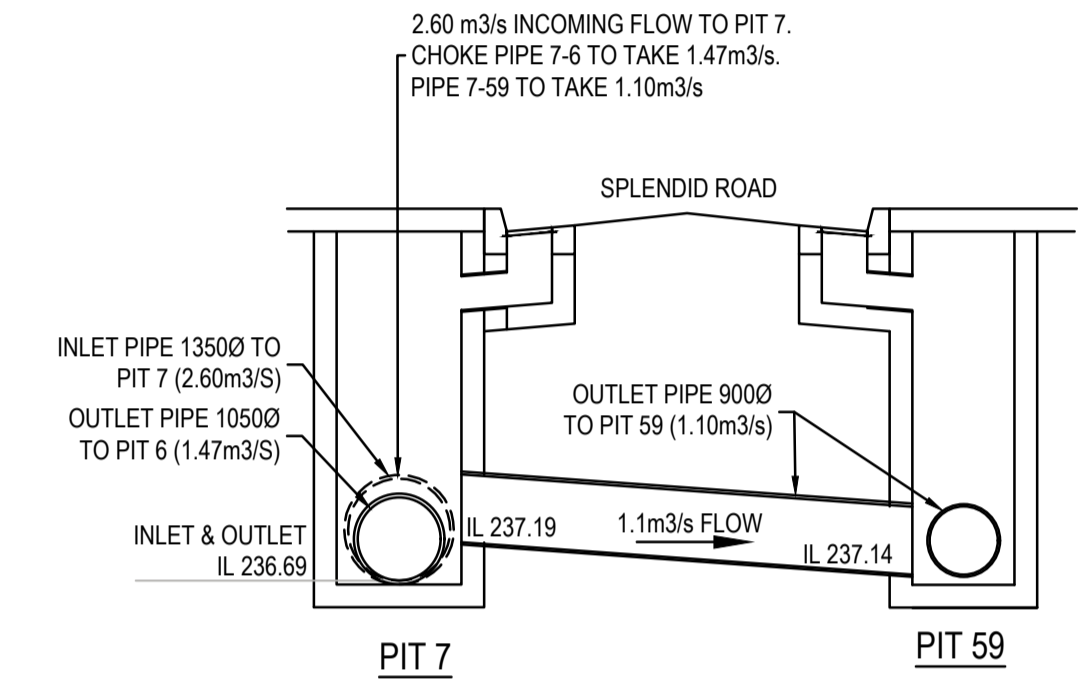
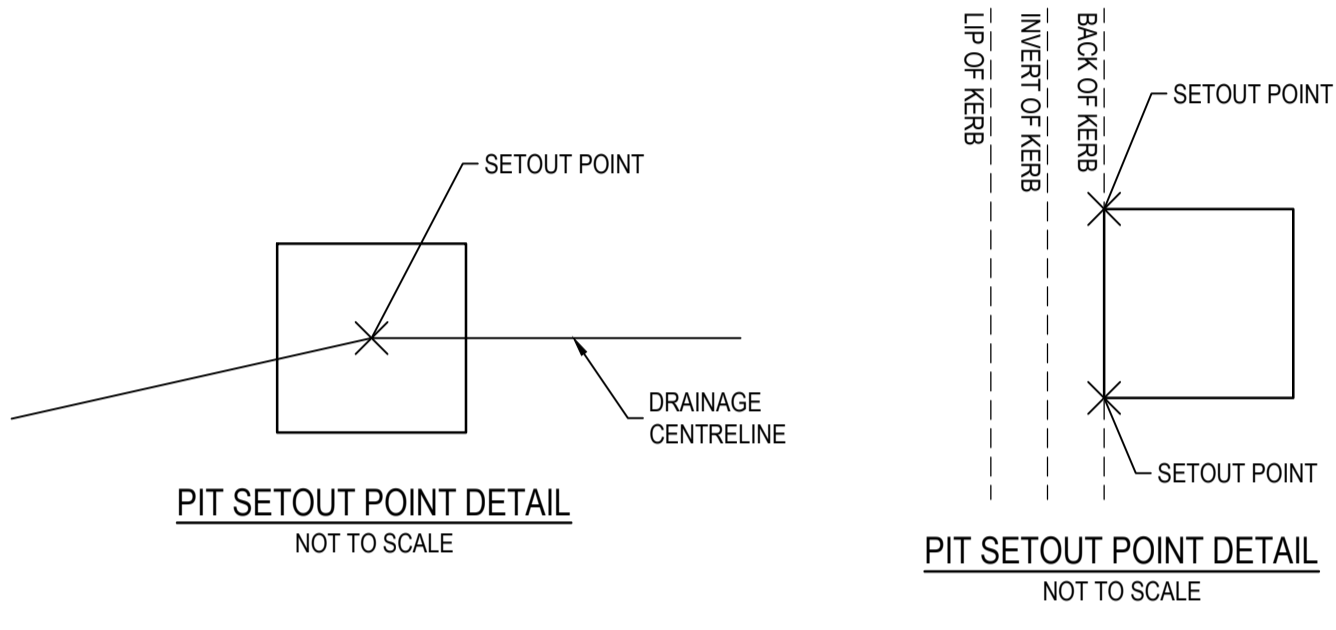


MELWAYS REF 9 J2	PROJECT / DRAWING No. 1700E-02-38	SHEET No. 38 of 44	REVISION 3
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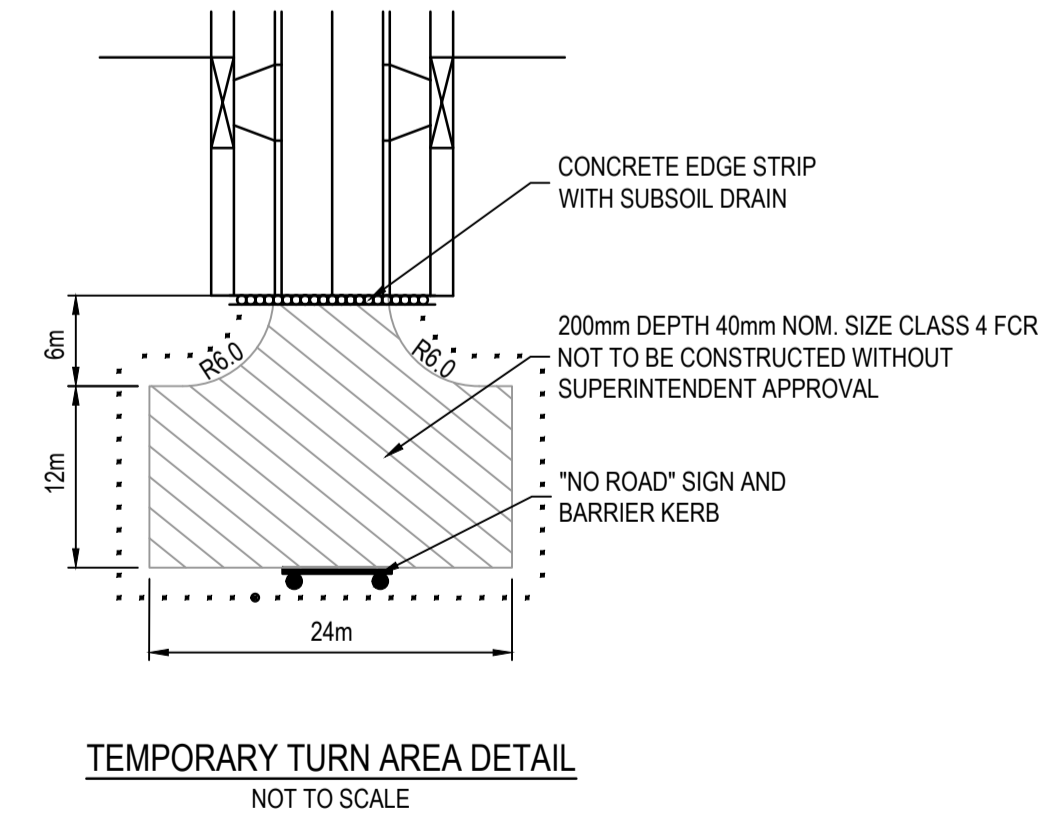
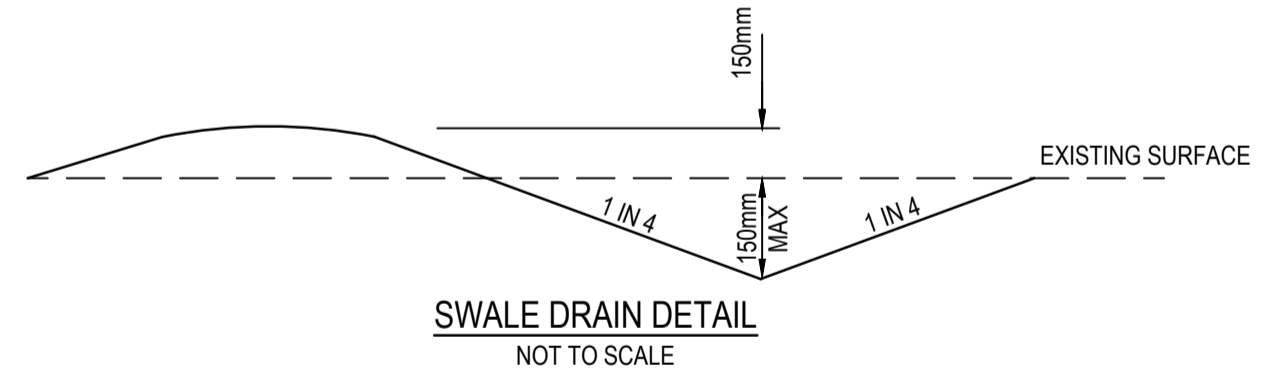
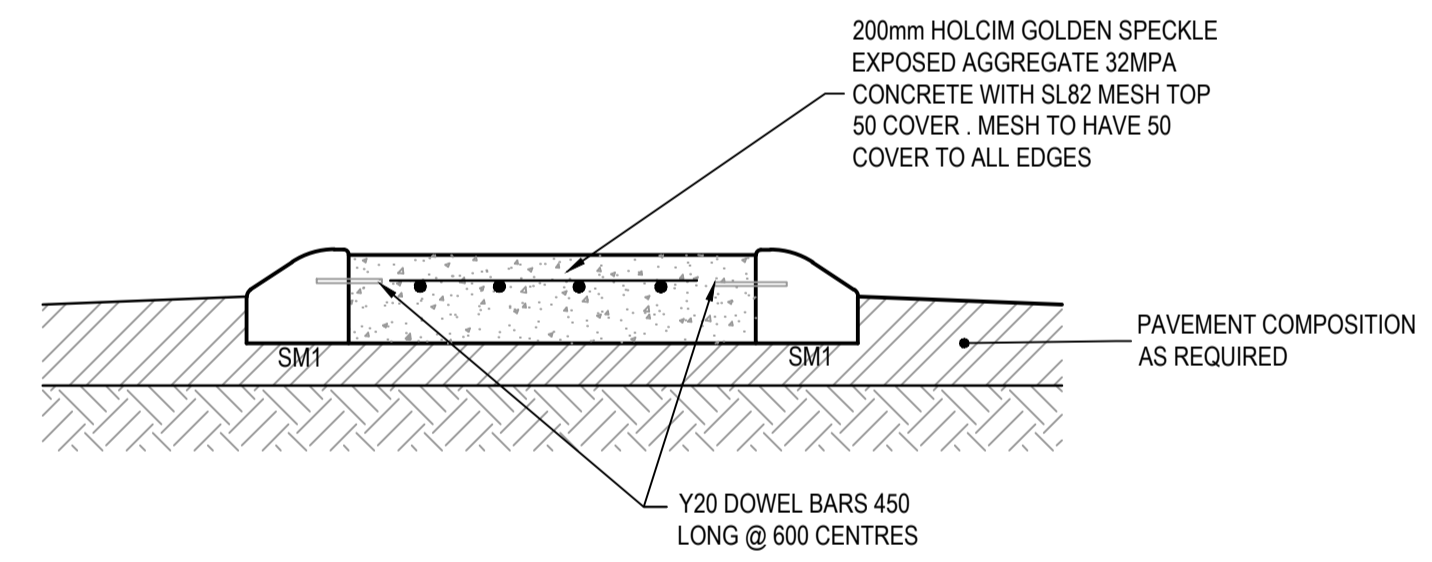
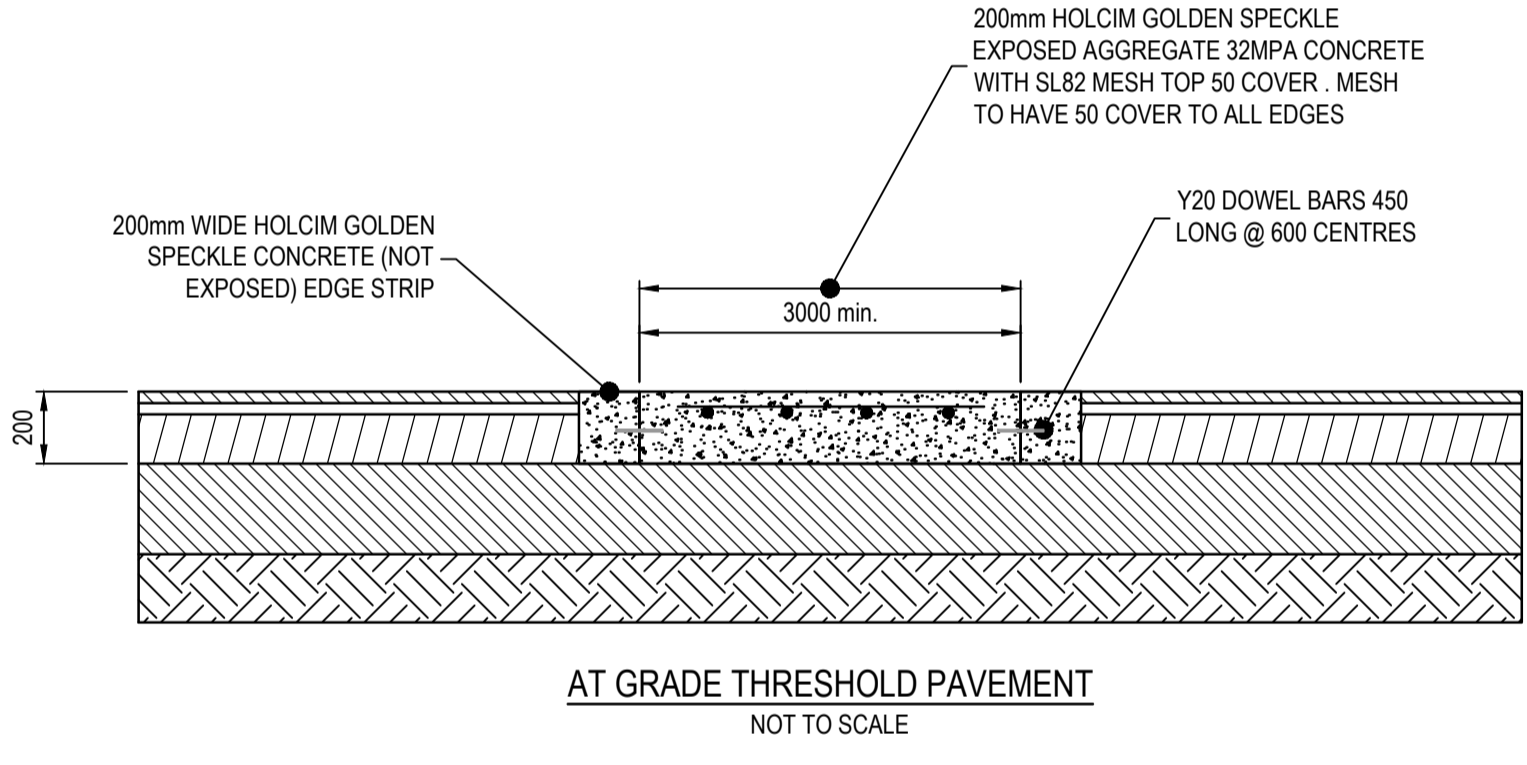
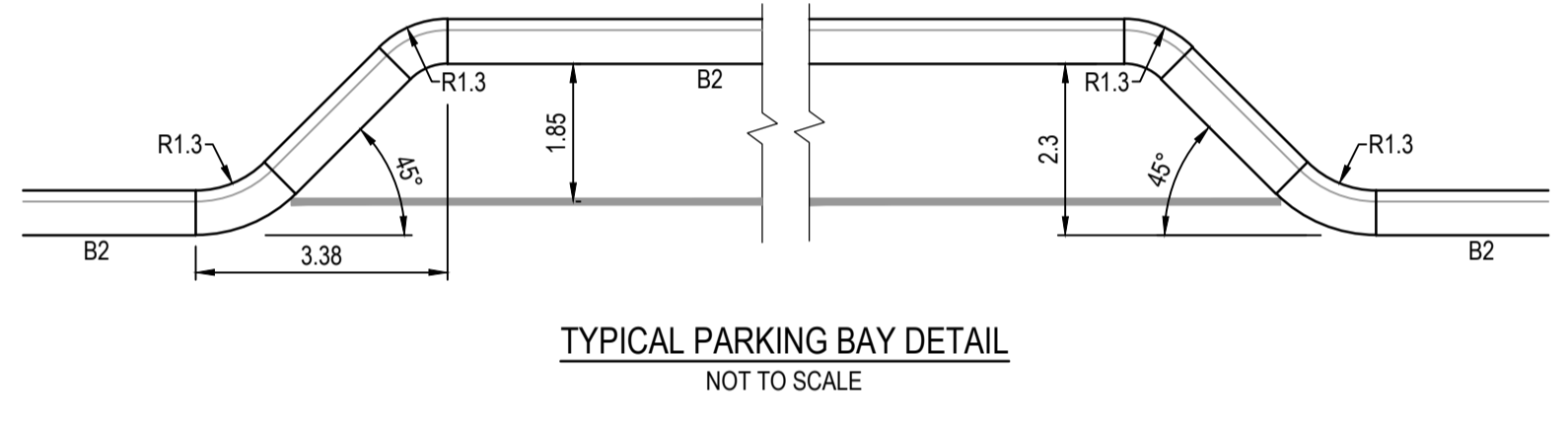
**OLIVINE BOULEVARD PAVEMENT COMPOSITION**

670mm DEPTH PAVEMENT COMPOSITION		
PAVEMENT LAYER	LAYER THICKNESS (mm)	MATERIAL
A WEARING COURSE	40	SIZE 10 TYPE N ASPHALT (CLASS 170 BINDER)
B INTERMEDIATE COURSE 1	40	SIZE 10 TYPE N ASPHALT (CLASS 170 BINDER)
C INTERMEDIATE COURSE 2	-	-
D SAMI SEAL	10	SIZE 10 S18RF
E PRIME	-	-
F BASE COURSE	110	SIZE 20 CLASS 2 CRUSHED ROCK, COMPACTED TO A MINIMUM DENSITY RATIO OF 98% (MODIFIED) AS1289.5.2.1
G UPPER BASE COURSE	70	CLASS CC3 CRUSHED CONCRETE COMPACTED TO A MINIMUM DENSITY RATIO OF 98% (MODIFIED) AS1289.5.2.1
H LOWER SUBBASE	100	CLASS 3 CRUSHED ROCK COMPACTED TO A MINIMUM DENSITY RATIO OF 98% (MODIFIED) AS1289.5.2.1. THE LOWER SUBBASE LAYER MAY BE ELIMINATED AND REPLACED WITH A SINGLE UPPER SUBBASE LAYER 170mm IN THICKNESS
I CAPPING LAYER	300	IMPORTED TYPE A FILL WITH CBR≥8% SWELL≤1.5% PERMEABILITY k≤5x10 <sup>-9</sup> m/s. OR LIME STABILISED SITE WON CLAY WHICH CONFORMS TO THE PARAMETERS ABOVE.
J SUBGRADE	-	CBR 1.5% EXPANSIVE



**POLLEN PLACE PAVEMENT COMPOSITION**

670mm DEPTH PAVEMENT COMPOSITION		
PAVEMENT LAYER	LAYER THICKNESS (mm)	MATERIAL
A WEARING COURSE	30	SIZE 10 TYPE N ASPHALT (CLASS 170 BINDER)
B INTERMEDIATE COURSE 1	30	SIZE 10 TYPE N ASPHALT (CLASS 170 BINDER)
C INTERMEDIATE COURSE 2	-	-
D SAMI SEAL	10	SIZE 10 S18RF
E PRIME	-	-
F BASE COURSE	130	SIZE 20 CLASS 2 CRUSHED ROCK, COMPACTED TO A MINIMUM DENSITY RATIO OF 98% (MODIFIED) AS1289.5.2.1
G UPPER BASE COURSE	70	CLASS CC3 CRUSHED CONCRETE COMPACTED TO A MINIMUM DENSITY RATIO OF 98% (MODIFIED) AS1289.5.2.1
H LOWER SUBBASE	100	CLASS 3 CRUSHED ROCK COMPACTED TO A MINIMUM DENSITY RATIO OF 98% (MODIFIED) AS1289.5.2.1. THE LOWER SUBBASE LAYER MAY BE ELIMINATED AND REPLACED WITH A SINGLE UPPER SUBBASE LAYER 170mm IN THICKNESS
I CAPPING LAYER	300	IMPORTED TYPE A FILL WITH CBR≥8% SWELL≤1.5% PERMEABILITY k≤5x10 <sup>-9</sup> m/s. OR LIME STABILISED SITE WON CLAY WHICH CONFORMS TO THE PARAMETERS ABOVE.
J SUBGRADE	-	CBR 1.5% EXPANSIVE



**COACH DRIVE, SPLENDID ROAD, ORIEL ROAD, WOOL WAY, CYCAD AVENUE & LACBREAK DRIVE PAVEMENT COMPOSITION**

595mm DEPTH PAVEMENT COMPOSITION		
PAVEMENT LAYER	LAYER THICKNESS (mm)	MATERIAL
A WEARING COURSE	30	SIZE 10 TYPE N ASPHALT (CLASS 170 BINDER)
B INTERMEDIATE COURSE 1	30	SIZE 10 TYPE N ASPHALT (CLASS 170 BINDER)
C INTERMEDIATE COURSE 2	-	-
D SAMI SEAL	10	SIZE 10 S18RF
E PRIME	-	-
F BASE COURSE	130	SIZE 20 CLASS 2 CRUSHED ROCK COMPACTED TO A MINIMUM DRY DENSITY RATIO OF 98% (MODIFIED) AS1289.5.2.1
G UPPER BASE COURSE	-	-
H LOWER BASE	110	CLASS 3 CRUSHED ROCK COMPACTED TO A MINIMUM DRY DENSITY RATIO OF 98% (MODIFIED) AS1289.5.2.1
I CAPPING LAYER	285	IMPORTED TYPE A FILL WITH CBR≥8% SWELL≤1.5% PERMEABILITY k≤5x10 <sup>-9</sup> m/s. OR LIME STABILISED SITE WON CLAY WHICH CONFORMS TO THE PARAMETERS ABOVE.
J SUBGRADE	-	SUBGRADE CLAY AS FOUND (C.B.R = 2%) (IF REQUIRED, SUBGRADE IMPROVEMENT WORKS TO BE UNDERTAKEN TO COUNCIL'S SATISFACTION)

**MEWS COMPOSITION - EXPOSED AGGREGATE**

300mm DEPTH PAVEMENT COMPOSITION		
PAVEMENT LAYER	LAYER THICKNESS (mm)	MATERIAL
CONCRETE	200	200mm HANSON WAGGA (5-7mm) WITH COLOUR ADDITIVE ABILOX TRIVERBLENDE BEIGE 4.15% EXPOSED AGGREGATE 32MPa CONCRETE WITH SL82 MESH TOP 50 COVER. MESH TO HAVE 50 COVER TO ALL EDGES
SUB BASE	100	CLASS 3 CRUSHED ROCK OR CLASS 3 CRUSHED CONCRETE MECHANICALLY COMPACTED

**MEWS COMPOSITION - EDCM503**

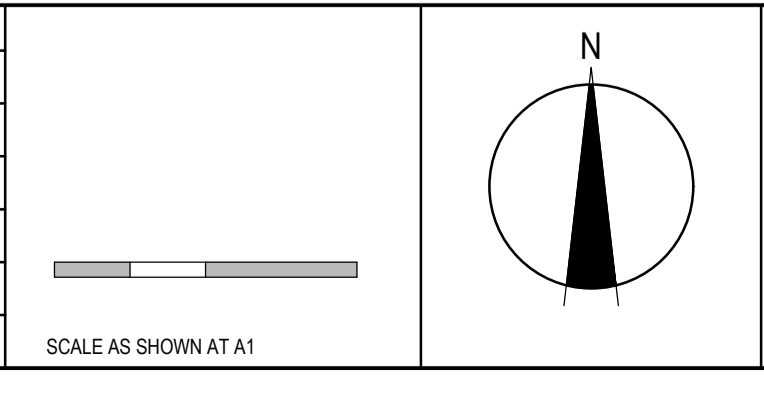
300mm DEPTH PAVEMENT COMPOSITION		
PAVEMENT LAYER	LAYER THICKNESS (mm)	MATERIAL
CONCRETE	200	N25 CONCRETE WITH SL82 MESH TOP 50 COVER. MESH TO HAVE 50 COVER TO ALL EDGES
SUB BASE	100	CLASS 3 CRUSHED ROCK OR CLASS 3 CRUSHED CONCRETE MECHANICALLY COMPACTED

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	30.08.18	ISSUED FOR CONSTRUCTION	KMKM	AB
1	20.03.19	EXPOSED AGGREGATE ON MEWS AS CONSTRUCTED	MA/MA	AB
1	26.06.51	AS CONSTRUCTED	KMIKU	AB

**AS CONSTRUCTED**

TITLE	NAME
DRAFTER	S.Sathasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows

Quality Management - ISO 9001  
 OHS Management - AS/NZS 4501  
 Environmental Management - ISO 14001

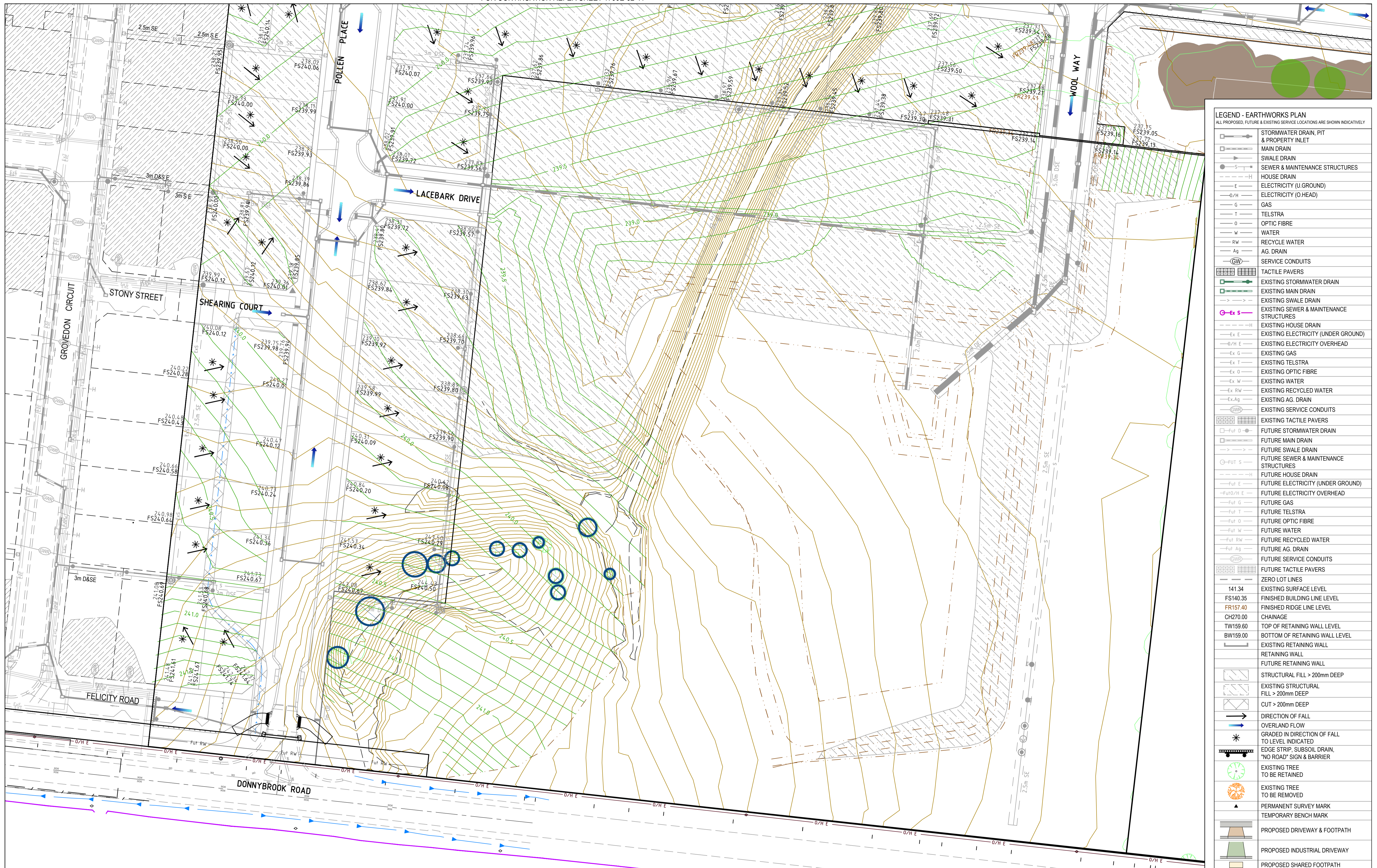


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Level 10, 71 Queens Road  
Melbourne, VIC 3004  
Ph 03 9514 1500

**mirvac**

Olivine Estate - Stage 2  
Whittlesea City Council  
Road and Drainage  
Pavement Compositions

MELWAYS REF: 9 J2 PROJECT / DRAWING No: 1700E-02-39 SHEET No: 39 of 44 REVISION: 2



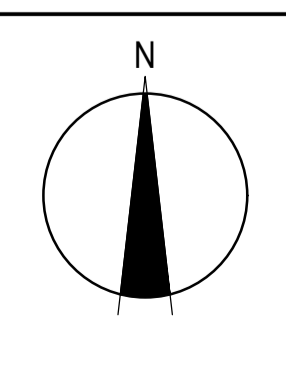
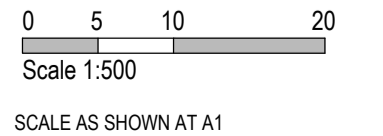
**LEGEND - EARTHWORKS PLAN**  
ALL PROPOSED, FUTURE & EXISTING SERVICE LOCATIONS ARE SHOWN INDICATIVELY

	STORMWATER DRAIN, PIT & PROPERTY INLET
	MAIN DRAIN
	SWALE DRAIN
	SEWER & MAINTENANCE STRUCTURES
	HOUSE DRAIN
	ELECTRICITY (U. GROUND)
	ELECTRICITY (O. HEAD)
	GAS
	TELSTRA
	OPTIC FIBRE
	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 ELECTRICITY OVERHEAD
	EXISTING GAS
	EXISTING TELSTRA
	EXISTING OPTIC FIBRE
	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 ELECTRICITY OVERHEAD
	FUTURE GAS
	FUTURE TELSTRA
	FUTURE OPTIC FIBRE
	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 TREE TO BE RETAINED
	EXISTING TREE TO BE REMOVED
	PERMANENT SURVEY MARK
	TEMPORARY BENCH MARK
	PROPOSED DRIVEWAY & FOOTPATH
	PROPOSED INDUSTRIAL DRIVEWAY
	PROPOSED SHARED FOOTPATH
	PROPOSED ROAD PAVING
	EXISTING ROAD PAVING

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGNER	APPROVAL
0	30.08.18	ISSUED FOR CONSTRUCTION	KMKM	AB
1	26.06.51	AS CONSTRUCTED	KMKU	AB

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TITLE	NAME
DRAFTER	S.Sathasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows



**SMEC**  
Member of the Surbana Jurong Group  
ABN 47 065 475 149  
Level 10, 71 Queens Road  
Melbourne, VIC 3004  
Ph 03 9514 1500

**mirvac**

Olivine Estate - Stage 2  
Whittlesea City Council  
Road and Drainage  
Earthworks Plan - 1

MELWAYS REF 9 J2	PROJECT / DRAWING No. 1700E-02-40	SHEET No. 40 of 44	REVISION 1
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REFER ABOVE RIGHT FOR CONTINUATION

REFER BELOW LEFT FOR CONTINUATION

FOR CONTINUATION REFER SHEET 1700E-02-40

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	30.08.18	ISSUED FOR CONSTRUCTION	KMKM	AB
1	30.01.19	DRIVEWAY LOCATION AMENDED FOR LOTS 270, 225 & 224	MA/MA	AB
1	26.06.51	AS CONSTRUCTED	KMKU	AB

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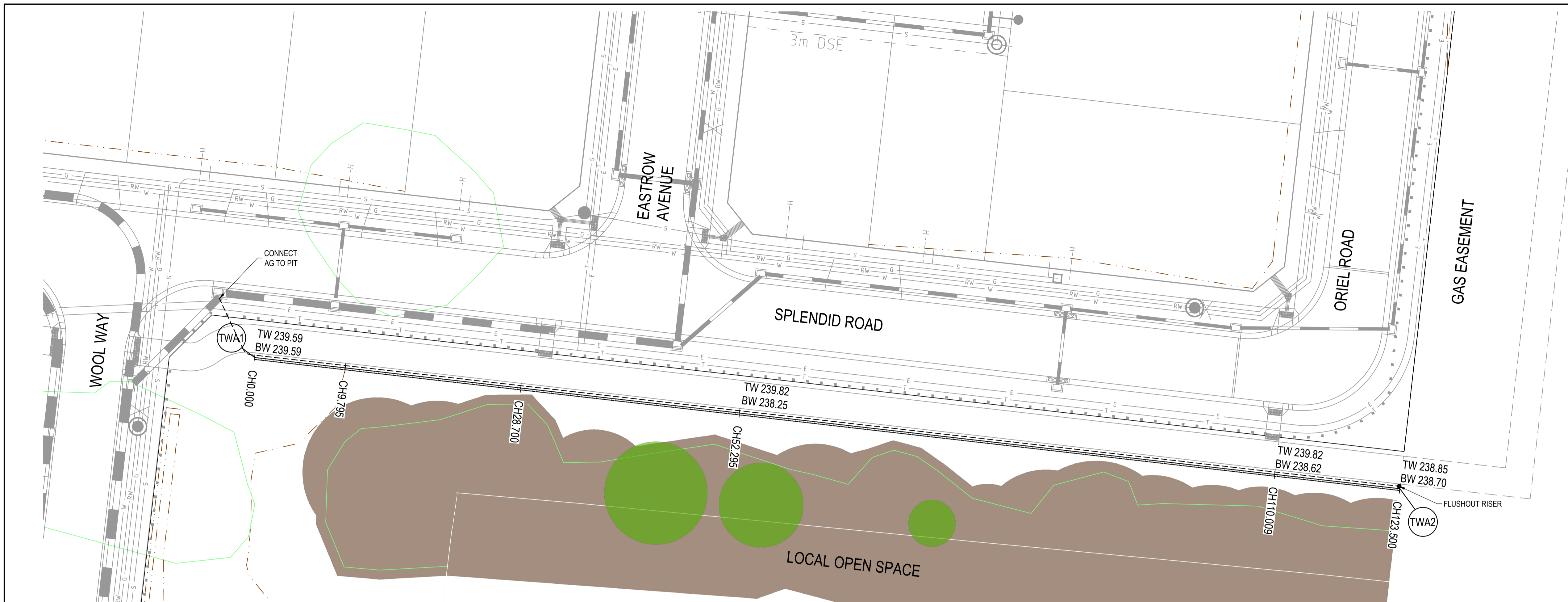
TITLE	NAME
DRAFTER	S.Sathasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows

0 5 10 20  
Scale 1:500  
SCALE AS SHOWN AT A1

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© ABN 47 065 475 149  
Level 10, 71 Queens Road  
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Olivine Estate - Stage 2  
Whittlesea City Council  
Road and Drainage  
Earthworks Plan - 2

MELWAYS REF 9 J2	PROJECT / DRAWING No. 1700E-02-41	SHEET No. 41 of 44	REVISION 3
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**LEGEND**  
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)
	ELECTRICITY (O.HEAD)
	GAS
	TELSTRA
	OPTIC FIBRE
	WATER
	RECYCLE WATER
	AG. DRAIN
	SERVICE CONDUITS
	CHAINAGE
	TOP OF RETAINING WALL LEVEL
	BOTTOM OF RETAINING WALL LEVEL
	EXISTING RETAINING WALL
	RETAINING WALL
	EXISTING TREE TO BE RETAINED
	EXISTING TREE TO BE REMOVED

**RETAINING WALL DESIGN AND APPROVALS REQUIREMENTS**

NOTE: RETAINING WALL DETAILS AND DESIGN CERTIFICATION TO BE SUBMITTED TO COUNCIL PRIOR TO COMMENCEMENT OF CONSTRUCTION OF WALLS

**ROCK RETAINING WALLS**

- CONTRACTOR TO OBTAIN ANY RELEVANT BUILDING PERMITS, COPY OF BUILDING PERMIT TO BE PROVIDED TO PRINCIPAL.
- CONTRACTOR TO PROVIDE STRUCTURAL ENGINEER INSPECTION AND CERTIFICATION FOR CONSTRUCTION OF ALL WALLS, IRRESPECTIVE OF NEED FOR PERMIT OR OTHERWISE.
- CONTRACTOR TO ENSURE ALL REQUIREMENTS OF BUILDING PERMIT HAVE BEEN ADDRESSED.

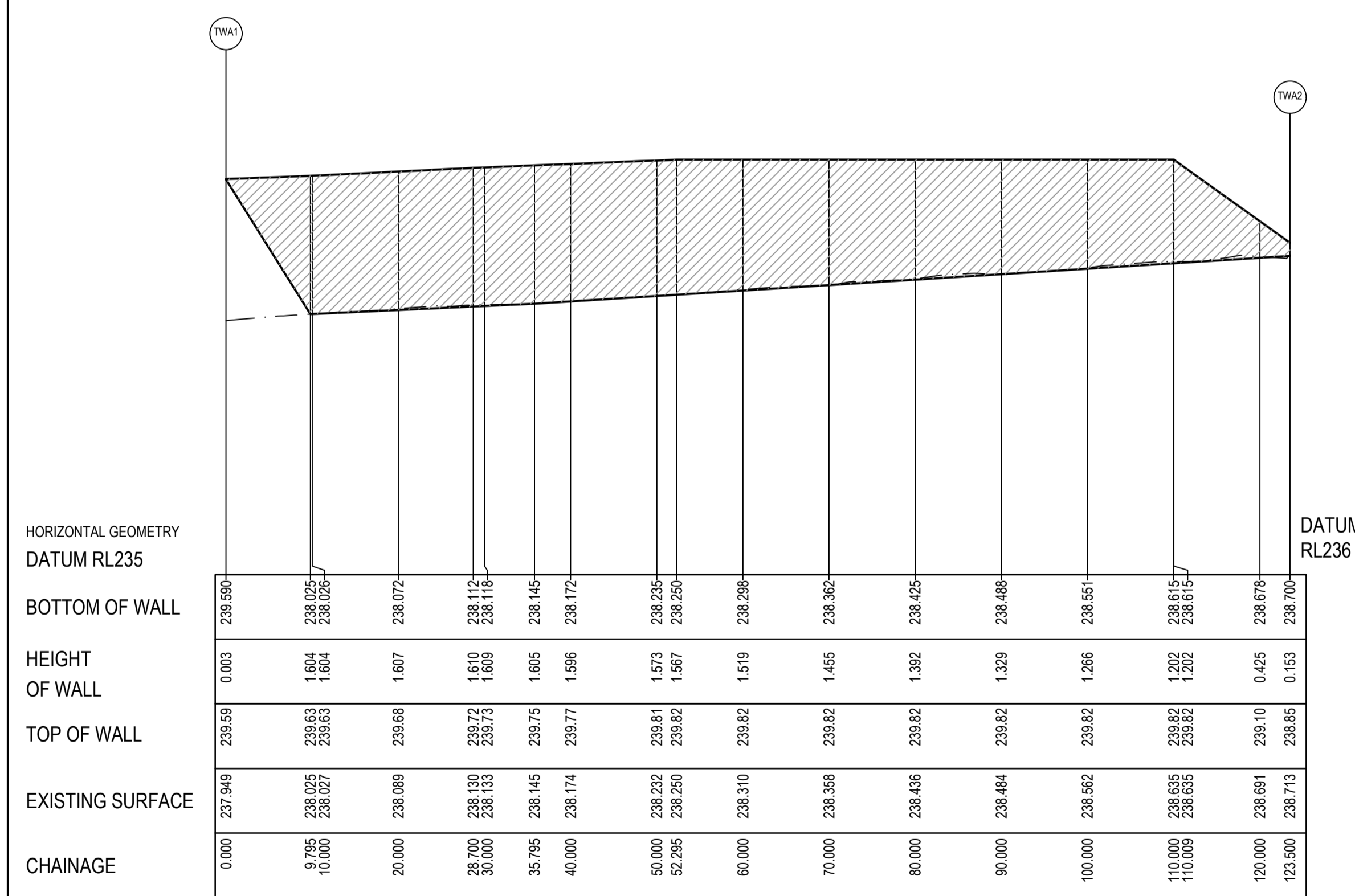
**LEGEND**

	EXISTING SURFACE
	DESIGN LINE
	BOTTOM OF WALL
	RETAINING WALL - ROCK

PLAN  
SCALE 1:250

Alignment TWA

Point no	Easting	Northing	RL
TWA1	323259.467	5842948.360	239.593
TWA2	323382.167	5842934.325	238.853



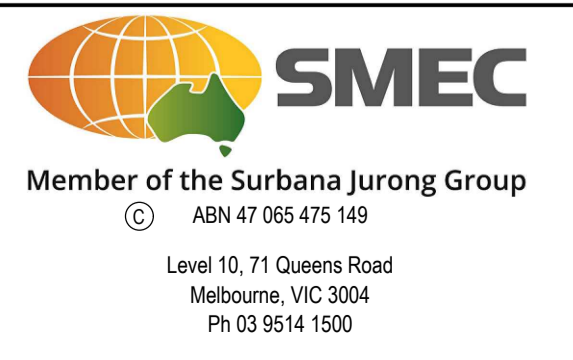
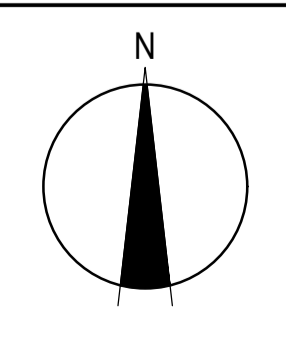
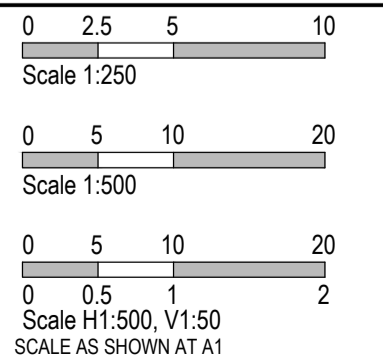
RETAINING WALL - LONGITUDINAL SECTION  
HORIZONTAL SCALE 1:500 @ A1  
VERTICAL SCALE 1:50 @ A1

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DES/DT	APPROVAL
0	30.08.18	ISSUED FOR CONSTRUCTION	KMKM	AB
1	26.06.51	AS CONSTRUCTED	KMKU	AB

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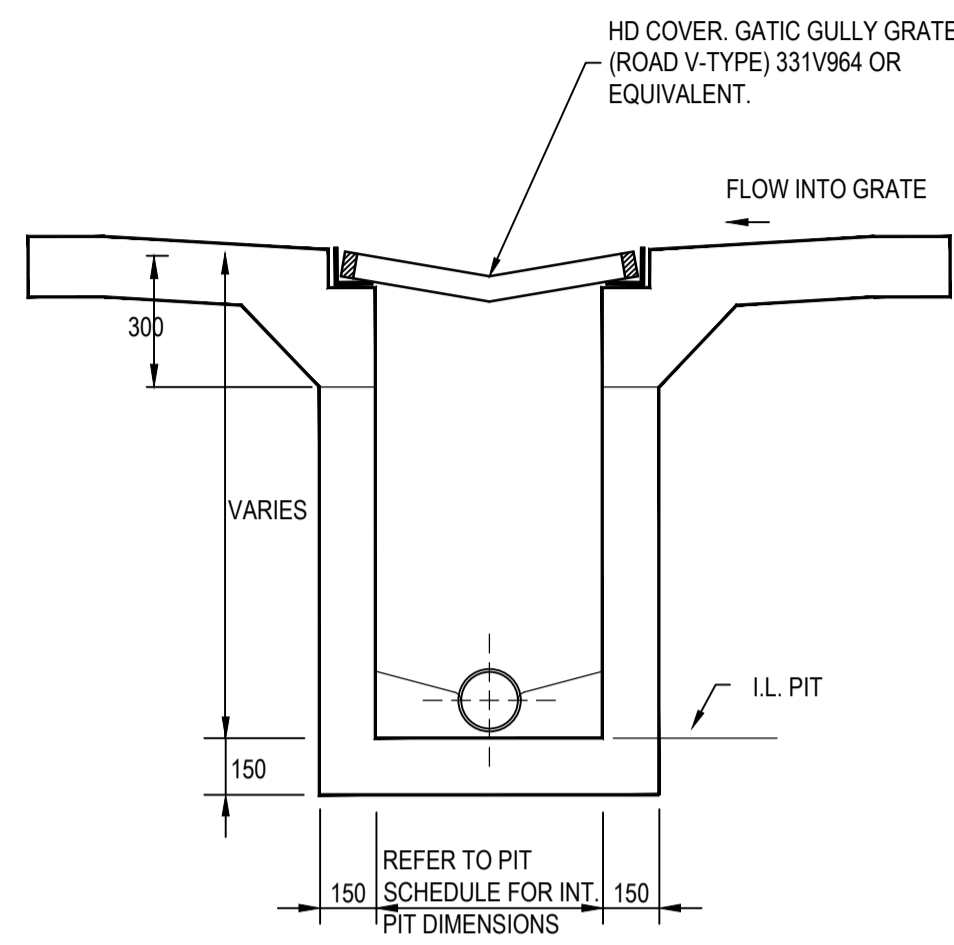


TITLE	NAME
DRAFTER	S.Sathasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows

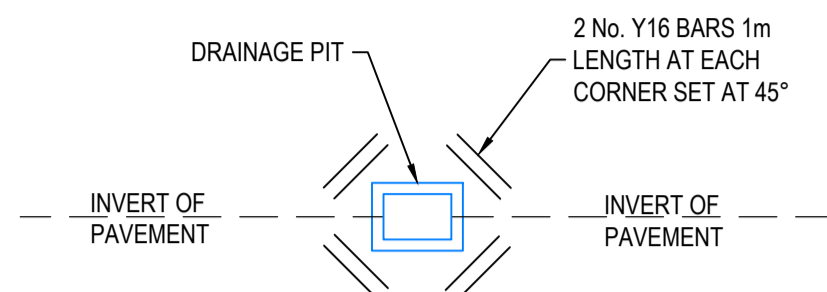


Olivine Estate - Stage 2  
Whittlesea City Council  
Road and Drainage  
Retaining Wall Longitudinal Section

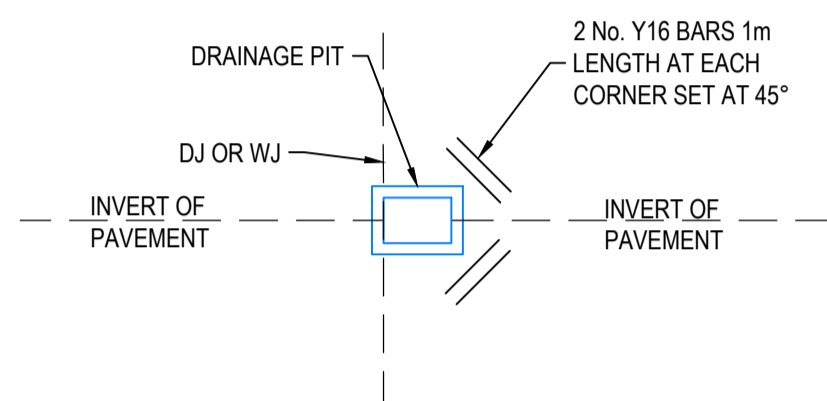
MELWAYS REF 9 J2	PROJECT / DRAWING No. 1700E-02-42	SHEET No. 42 of 44	REVISION 1
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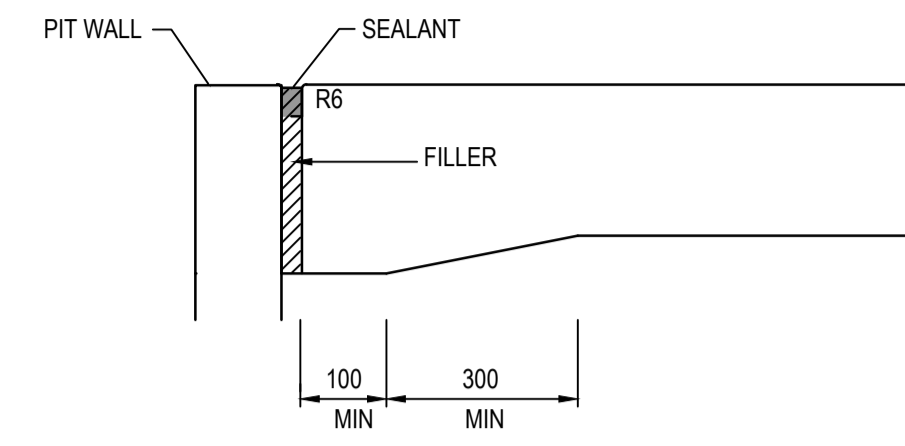
**GRADED INLET PIT DETAILS**  
(IN CONCRETE PAVEMENT)  
NOT TO SCALE



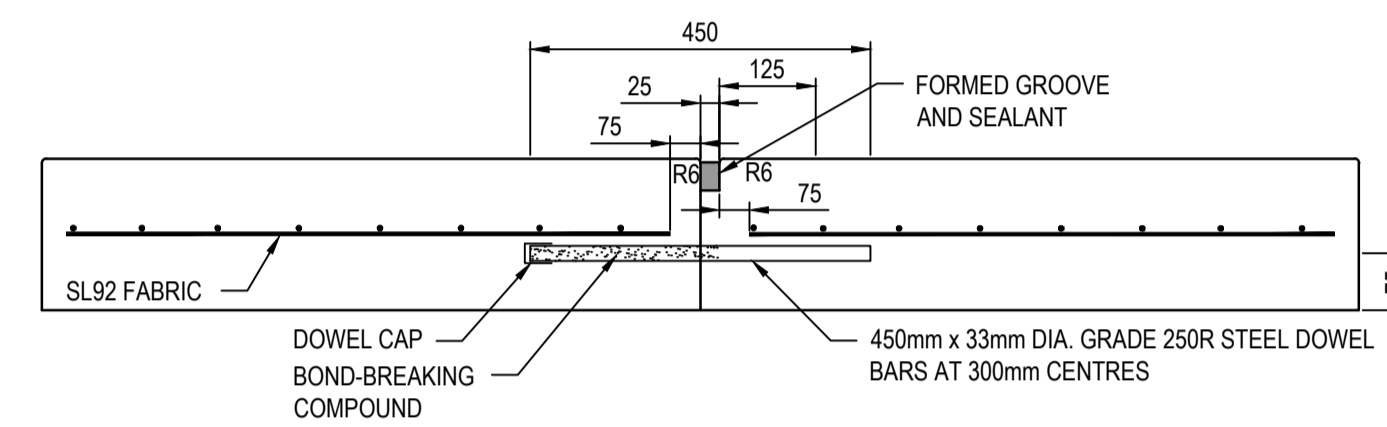
**PIT REINFORCEMENT DETAIL**  
(NO PAVEMENT JOINT AT EITHER SIDE OF PIT)  
NOT TO SCALE



**PIT REINFORCEMENT DETAIL**  
(PAVEMENT JOINT LOCATED AT ONE SIDE OF PIT)  
NOT TO SCALE



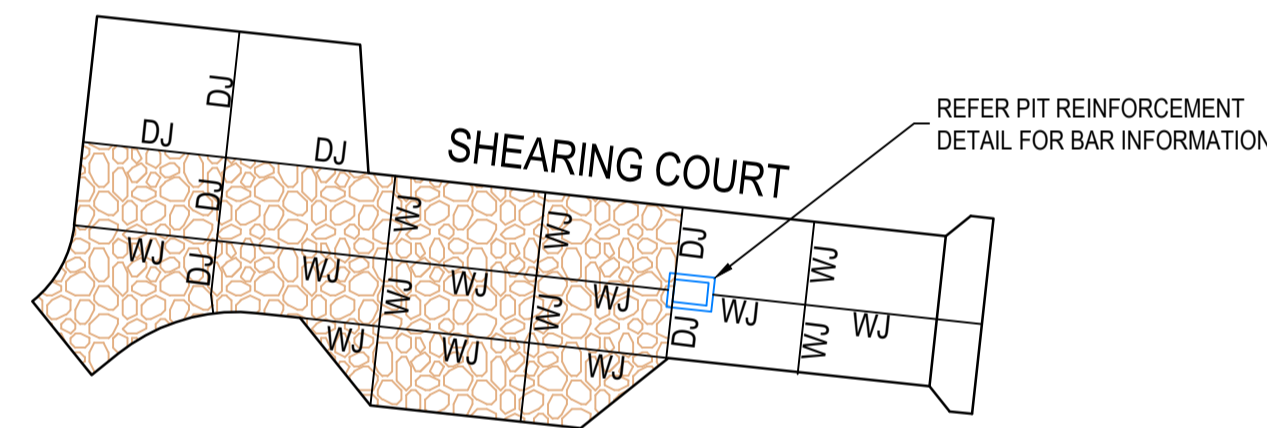
**ISOLATION JOINT (IJ)**



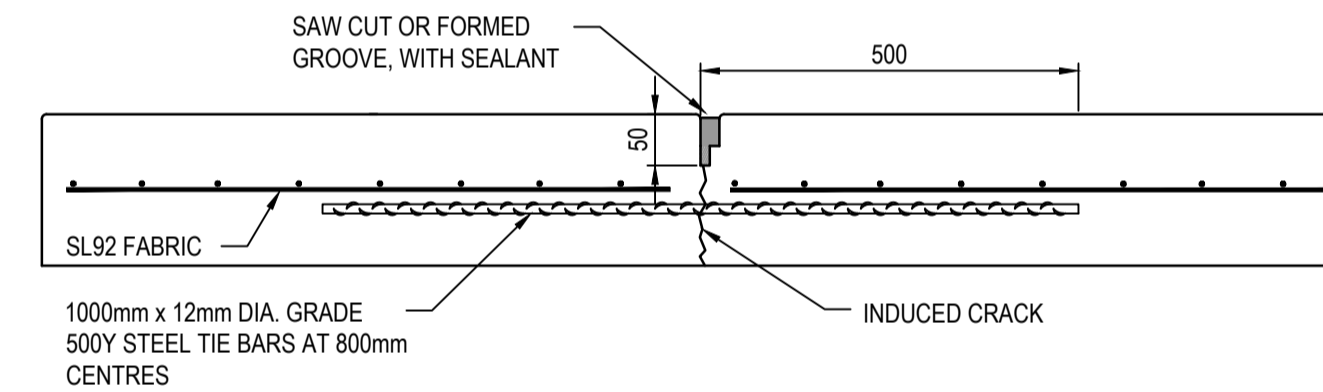
**TRANSVERSE CONTRACTION JOINT - DOWELLED BUTT JOINT AT CONSTRUCTION JOINT (DJ)**

- JOINT DETAIL NOTES:**
- SAW JOINTS ARE TO BE PLACED AT A MAXIMUM 5m SPACING AT INTERSECTIONS AND CONSTRUCTED 18-24 HOURS AFTER POURING.
  - TRANSVERSE/CONTRACTION JOINTS ARE TO BE PLACED AT A MAXIMUM SPACING OF 12m.
  - ISOLATION JOINTS ARE TO BE PLACED AROUND PITS.
  - ALL JOINTS SHALL BE LOCATED AND SPACED IN ACCORDANCE WITH "CEMENT AND CONCRETE ASSOCIATION OF AUSTRALIA - CONCRETE PAVEMENT DESIGN FOR RESIDENTIAL STREETS 1997".

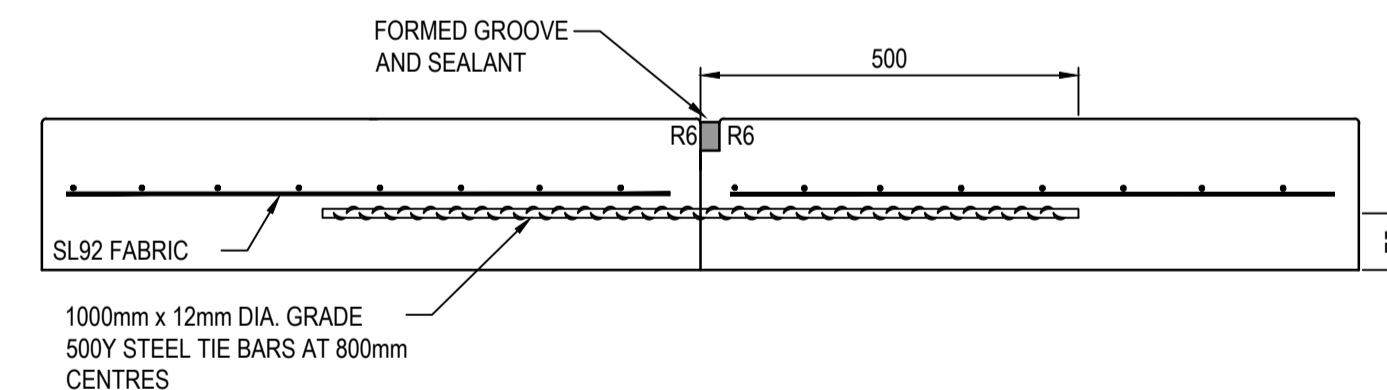
**NOTE:**  
CONCRETE SHALL BE CURED IN ACCORDANCE WITH AS3600 AND NOT TO BE TRAFFICKED UNTIL AT LEAST SEVEN DAYS AFTER POURING.



**PLAN**  
1:200

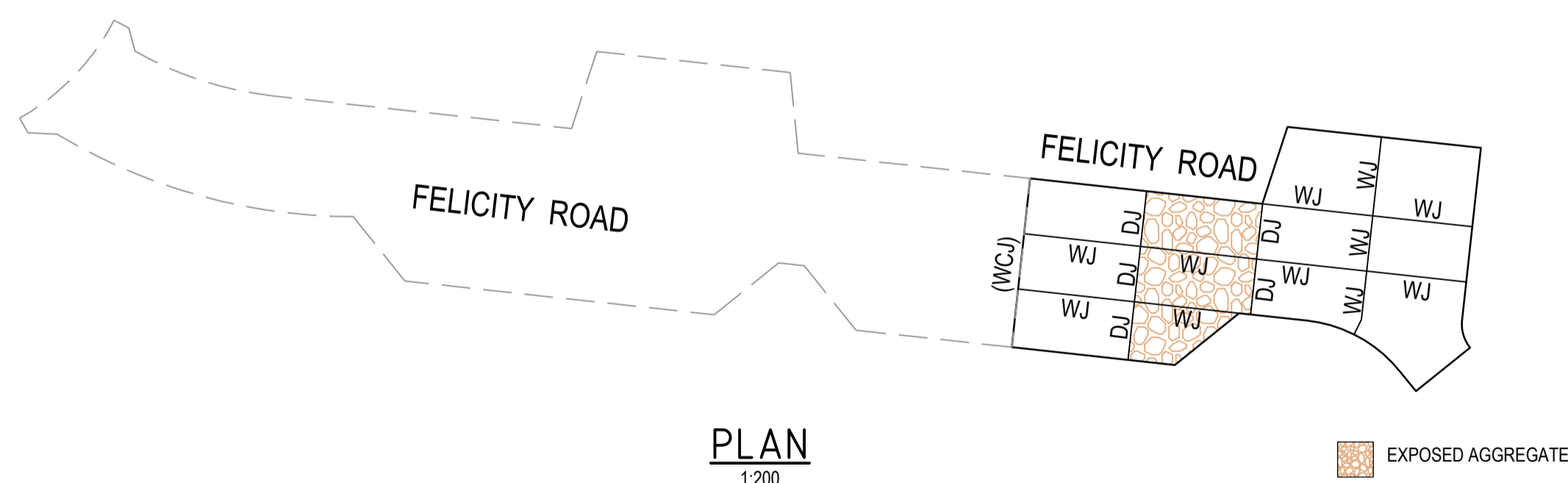


**LONGITUDINAL WARPING JOINT - WEAKENED PLANE JOINT (WJ)**



**LONGITUDINAL WARPING JOINT - CONSTRUCTION JOINT (WCJ)**

**CONCRETE JOINTING DETAILS**  
NOT TO SCALE



**PLAN**  
1:200

EXPOSED AGGREGATE

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DES/DT	APPROVAL
0	30.08.18	ISSUED FOR CONSTRUCTION	KM/KM	AB
1	20.03.19	EXPOSED AGGREGATE ON MEWS	MA/MA	AB
1	26.06.51	AS CONSTRUCTED	KM/KU	AB

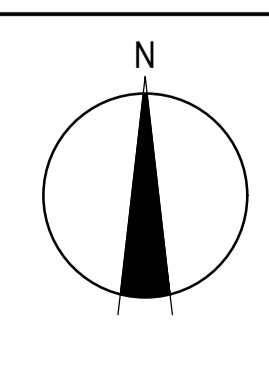
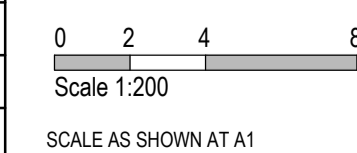
**AS CONSTRUCTED**

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Quality Management ISO 9001  
 OHS Management AS/NZS 1881  
 Environmental Management ISO 14001

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TITLE	NAME
DRAFTER	S.Sathasivam
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows



**SMEC**  
Member of the Surbana Jurong Group  
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 Ph 03 9514 1500



Olivine Estate - Stage 2  
 Whittlesea City Council  
 Road and Drainage  
 Concrete Jointing Details

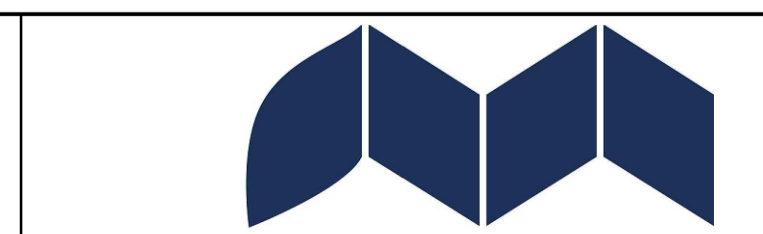
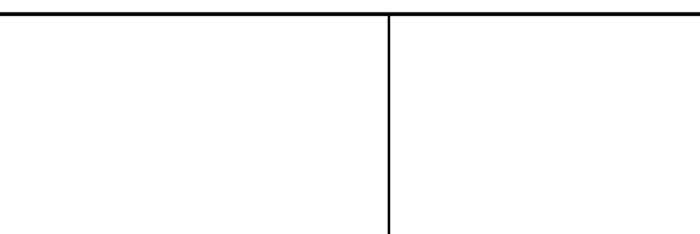
MELWAYS REF	PROJECT / DRAWING No.	SHEET No.	REVISION
9 J2	1700E-02-43	43 of 44	2

PHASE	DISCIPLINE CODE	RISK REGISTER -Construction- Operations- Maintenance	POTENTIAL RISK	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	
			<b>Road Furniture / Roadside features</b>										
Construction	RD	#N/A	Construction close to live traffic	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	Contractor	Potential risk from culverts under construction and height / fall hazards	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	Contractor	Vehicle conflict with utility / pit	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	Road Authority	Inadequate drivers response time.	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	Road Authority	Potential for drivers / riders to strike signs and street lights	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	Road Authority	Potential vehicle conflict within clear zone	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	Relevant Authority	Potential fall hazard during maintenance, by vehicles and pedestrians	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
			<b>Retaining Walls</b>										
Construction	RW	#N/A	Retaining Wall Alignment	Contractor	Falling from height during construction or commissioning of walls and adjacent structures eg. sewer manholes	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	Road/ Local Authority	Lack of safe access/setback from road	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	Road/ Local Authority	Potential for falling from height	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	Road/ Local Authority	Potential for wall failure	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
			<b>Drainage</b>										
Operational	DR	#N/A	Grated Pits	Relevant Authority	Trip/fall hazard with large spaced grate	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	Relevant Authority	Potential for pit failure	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	Relevant Authority	Potential for falling from height	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	Relevant Authority	Children playing in large pipes / watercourses and access for maintenance	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	Relevant Authority	Lack of safe access for maintenance	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	Relevant Authority	Lack of safe entry for maintenance	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	Relevant Authority	Lack of safe access for maintenance	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	Authority
			<b>Sewer</b>										
Construction	SE	#N/A	Sewer Manhole located adjacent to Retaining Wall Alignment	Contractor	Falling from height during construction or commissioning of adjacent sewer manholes	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	Relevant Authority	Lack of safe entry for maintenance	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	Relevant Authority	Lack of safe access for maintenance	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	Relevant Authority	Lack of safe access for maintenance	Increased risk to maintenance crews	Provide safe working conditions for maintenance	Design pump station in location for easy access	N	2	4	8	Authority
			<b>Electricity</b>										
Operational	ES	#N/A	Electrical Design	Relevant Authority	Location of assets within clear zones e.g. pits/ substations	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
			<b>Telstra</b>										
Operational	TE	#N/A	Telstra Design	Relevant Authority	Location of assets within clear zones e.g. pits	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
			<b>Water</b>										
Operational	WA	#N/A	Water Design	Relevant Authority	Location of assets within clear zones e.g. pits/ substations	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
			<b>Gas</b>										
Operational	GA	#N/A	Gas Design	Relevant Authority	Location of assets within clear zones e.g. pits/ substations	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		

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	30.08.18	ISSUED FOR CONSTRUCTION	KMKM	AB
1	26.06.51	AS CONSTRUCTED	KMKM	AB

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DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows



Olivine Estate - Stage 2  
Whittlesea City Council  
Road and Drainage  
Safety In Design

**AS CONSTRUCTED**



SCALE AS SHOWN AT A1

MELBOURNE, VIC 3004  
Ph 03 9514 1500

MELWAYS REF 9 J2

PROJECT / DRAWING No. 1700E-02-85

SHEET No. 44 of 44  
REVISION 1