

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

	STORMWATER DRAIN, PIT & PROPERTY INLET
	SWALE DRAIN
	SEWER & MAINTENANCE STRUCTURES
	HOUSE DRAIN
	ELECTRICITY (U.GROUND)
	ELECTRICITY (O.HEAD)
	GAS
	TELSTRA
	WATER
	RECYCLE WATER
	AG DRAIN
	SERVICE CONDUITS
	TACTILE PAVERS
	EXISTING STORMWATER DRAIN
	EXISTING MAIN DRAIN
	EXISTING SWALE DRAIN
	EXISTING SEWER & MAINTENANCE STRUCTURES
	EXISTING HOUSE DRAIN
	EXISTING ELECTRICITY (UNDER GROUND)
	EXISTING ELECTRICITY OVERHEAD
	EXISTING GAS
	EXISTING TELSTRA
	EXISTING WATER
	EXISTING RECYCLED WATER
	EXISTING AG DRAIN
	EXISTING SERVICE CONDUITS
	EXISTING TACTILE PAVERS
	FUTURE STORMWATER DRAIN
	FUTURE MAIN DRAIN
	FUTURE SWALE DRAIN
	FUTURE SEWER & MAINTENANCE STRUCTURES
	FUTURE HOUSE DRAIN
	FUTURE ELECTRICITY (UNDER GROUND)
	FUTURE ELECTRICITY OVERHEAD
	FUTURE GAS
	FUTURE TELSTRA
	FUTURE WATER
	FUTURE RECYCLED WATER
	FUTURE AG DRAIN
	FUTURE SERVICE CONDUITS
	ZERO LOT LINES
	EXISTING SURFACE LEVEL
	FINISHED BUILDING LINE LEVEL
	FINISHED RIDGE LINE LEVEL
	CHAINAGE
	TOP OF RETAINING WALL LEVEL
	BOTTOM OF RETAINING WALL LEVEL
	EXISTING RETAINING WALL
	RETAINING WALL
	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
	PERMANENT SURVEY MARK
	TEMPORARY BENCH MARK
	PROPOSED DRIVEWAY & FOOTPATH
	PROPOSED SHARED FOOTPATH
	PROPOSED ROAD PAVING
	EXISTING ROAD PAVING

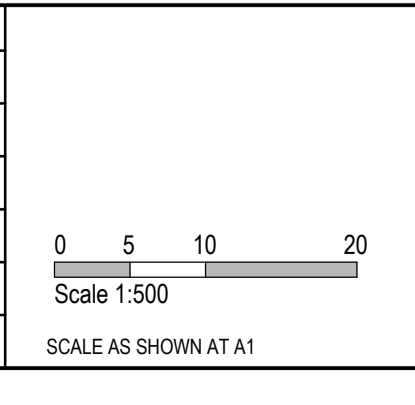
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1	08.11.18	DRAINAGE AMENDED, PITS 31-34	KM/KM	AB
2	29.03.19	IRRIGATION CONDUITS ADDED	MA/MA	AB
3	18.04.19	LOTS 335 & 338 GWR CONNECTION LOCATION	MA/MA	AB
4	26.06.19	AS CONSTRUCTED	KM/KU	AB

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.

Quality Management ISO 9001  
 OHS Management AS/NZS 4801  
 Environmental Management ISO 14001

Global Mark com.au

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

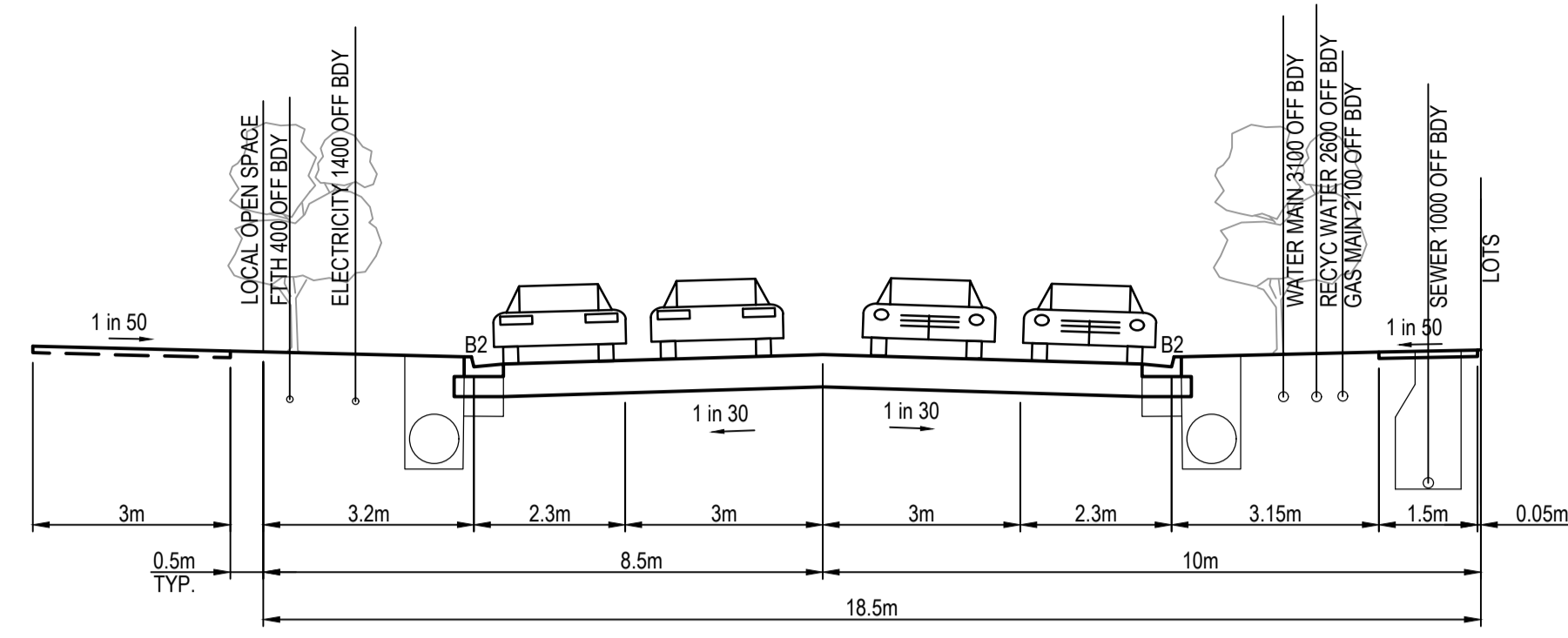


**SMEC**  
 Member of the Surlana Jurong Group  
 ABN 47 065 475 149  
 Level 10, 71 Queens Road  
 Melbourne, VIC 3004  
 Ph 03 9514 1500

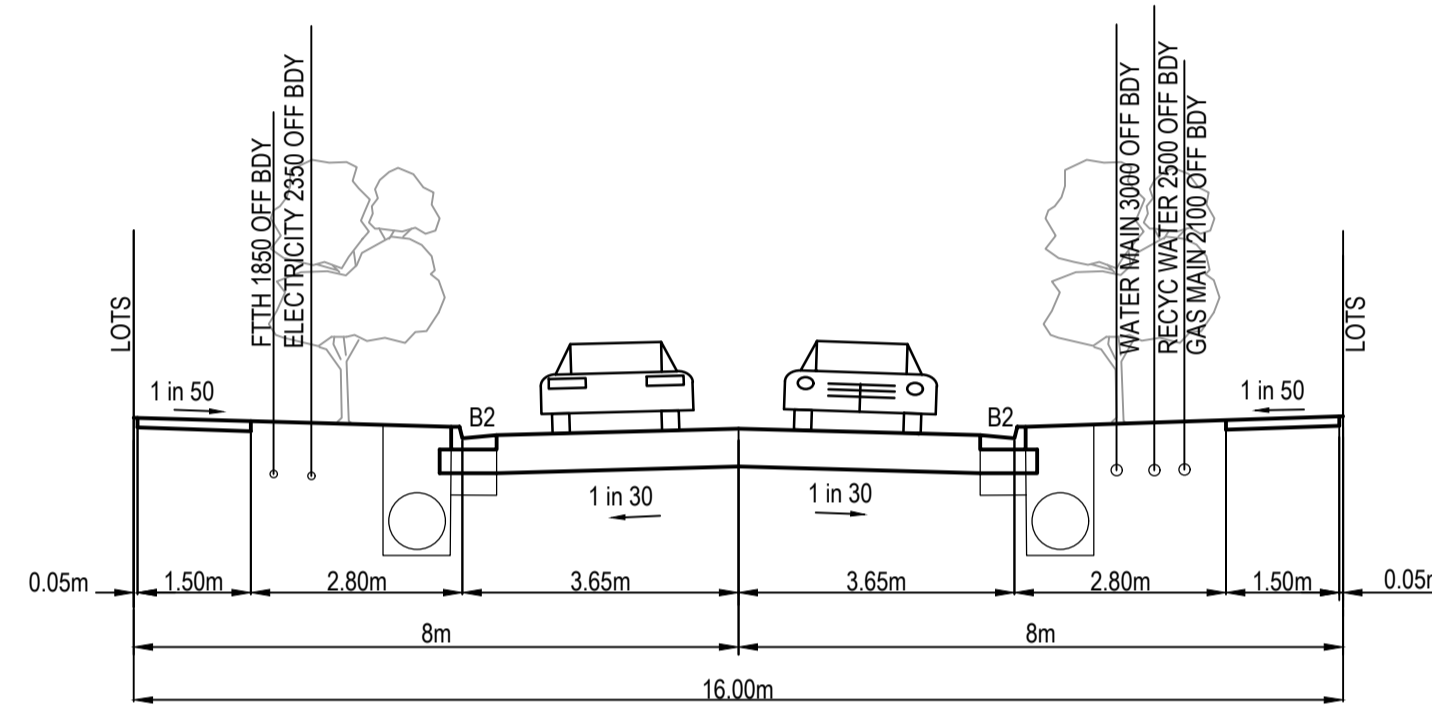
**mirvac**

Olivine Estate - Stage 3  
 Whittlesea City Council  
 Road and Drainage  
 Layout Plan

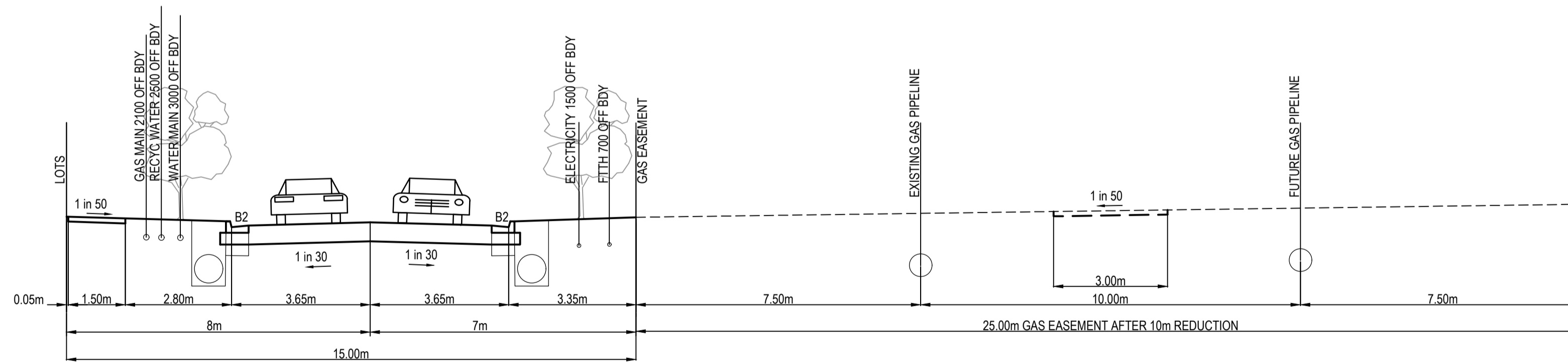
MELWAYS REF: 9 M2  
 PROJECT / DRAWING No: 1700E-03-02  
 SHEET No: 02 of 27  
 REVISION: 4



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



**16m ACCESS STREET**  
COLISEUM AVENUE, OLYMPIC DRIVE, EASTROW AVENUE & ACADEMY LANE



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

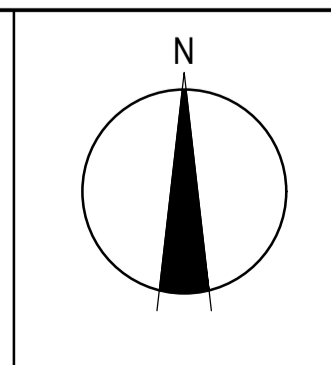
**WARNING**  
**BEWARE OF UNDERGROUND SERVICES**  
The locations of underground services are approximate only and their exact position should be proven on site.  
No guarantee is given that all existing services are shown.  
Locate all underground services before commencement of works  
**DIAL 1100 BEFORE YOU DIG**  
www.1100.com.au

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DES/DT	APPROVAL
0	12.09.18	ISSUED FOR CONSTRUCTION	KMRB	AB
1	26.06.45	AS CONSTRUCTED	KMKU	AB

**AS CONSTRUCTED**

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

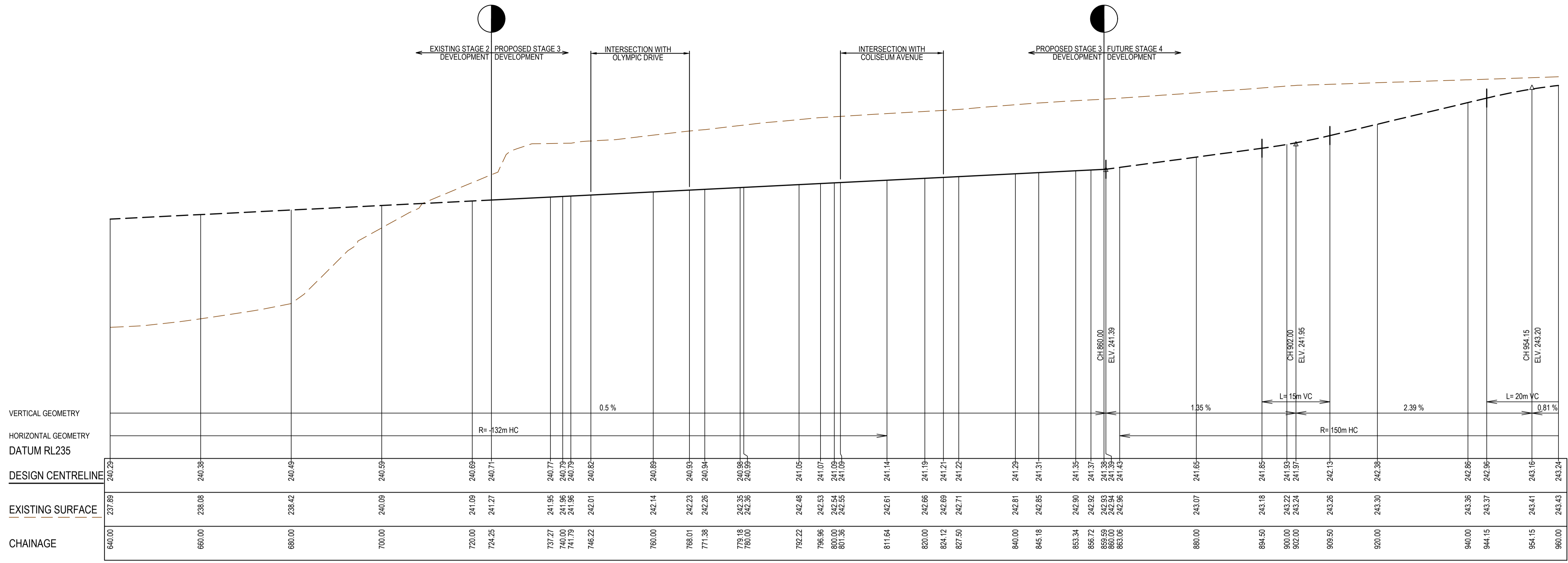
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SCALE AS SHOWN AT 1			



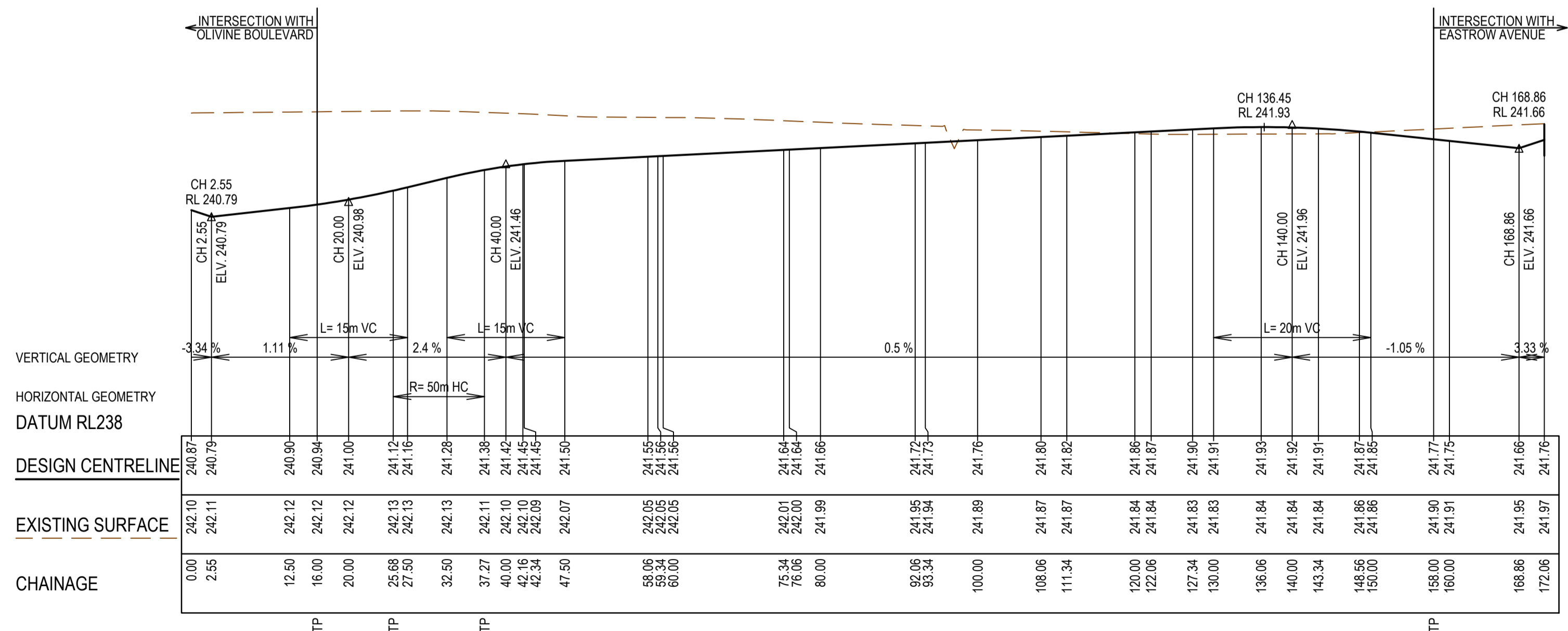
**SMEC**  
Member of the **Surbana Jurong Group**  
© ABN 47 065 475 149  
Level 10, 71 Queens Road  
Melbourne, VIC 3004  
Ph 03 9514 1500



Olivine Estate - Stage 3 Whittlesea City Council Road and Drainage Typical Cross Sections		MELWAYS REF <b>9 M2</b>	PROJECT / DRAWING No. <b>1700E-03-03</b>	SHEET No. <b>03 of 27</b>	REVISION <b>1</b>
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OLIVINE BOULEVARD LONGITUDINAL SECTION

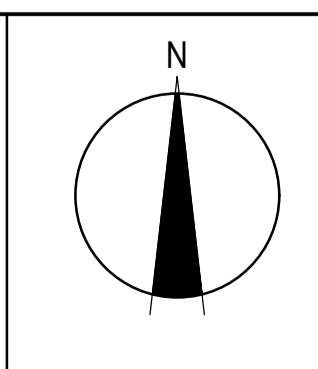
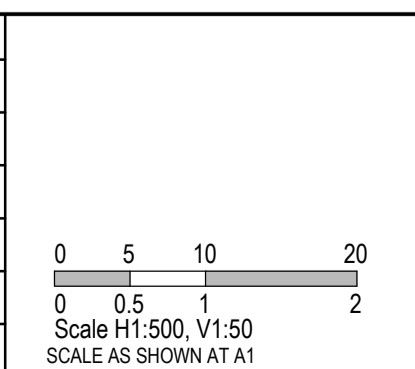


OLYMPIC DRIVE LONGITUDINAL SECTION

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1	26.06.16	AS CONSTRUCTED	KM/KU	AB

**AS CONSTRUCTED**

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

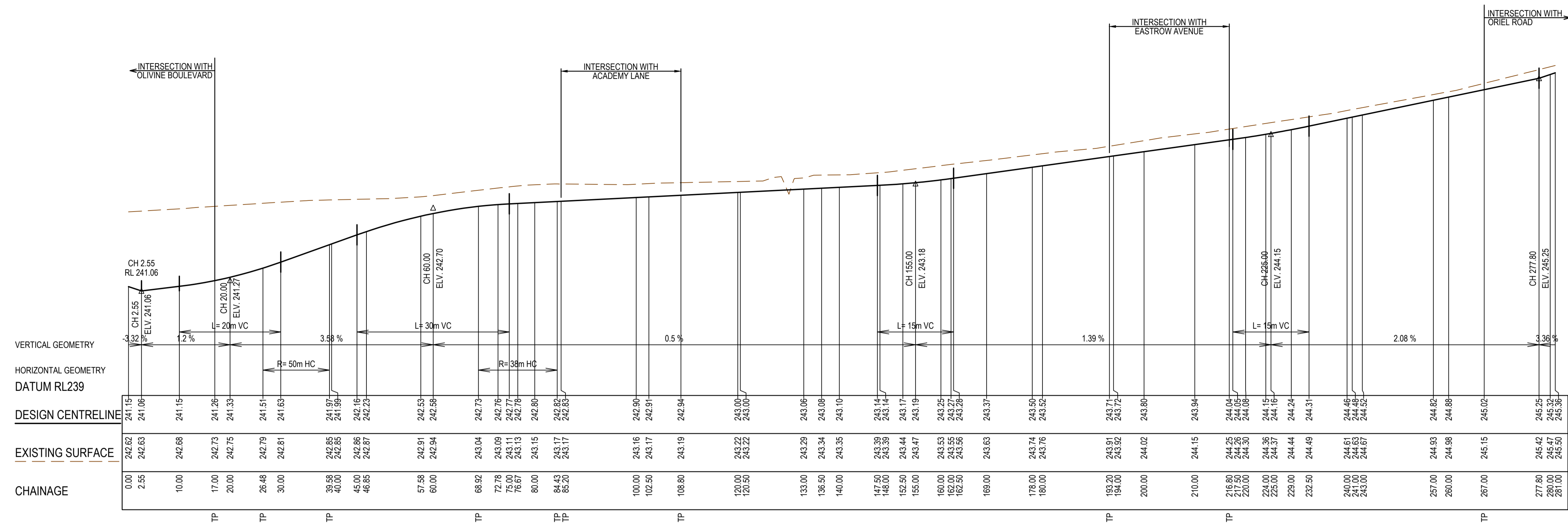


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Level 10, 71 Queens Road  
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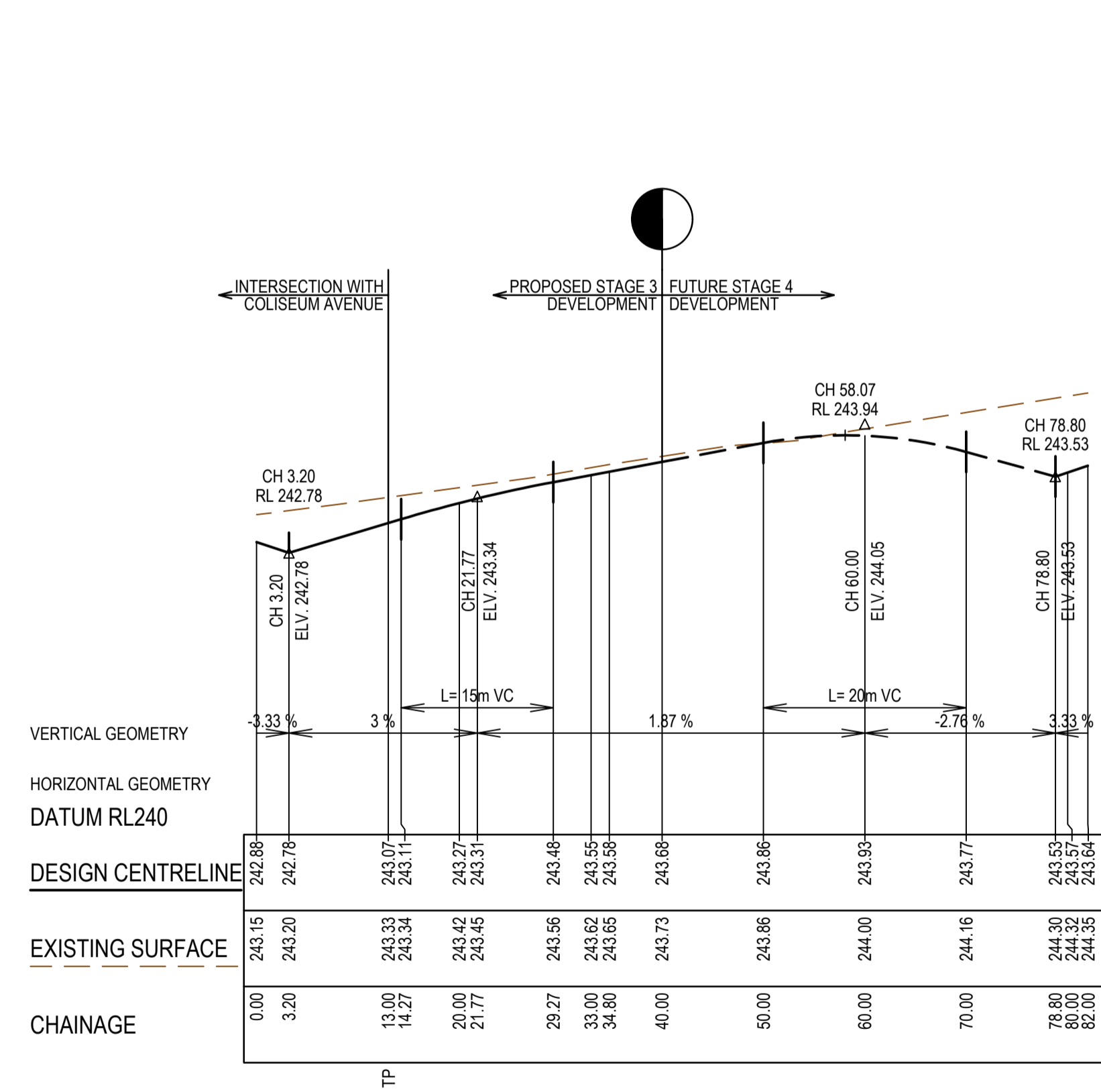


Olivine Estate - Stage 3  
Whittlesea City Council  
Road and Drainage  
Longitudinal Sections - 1

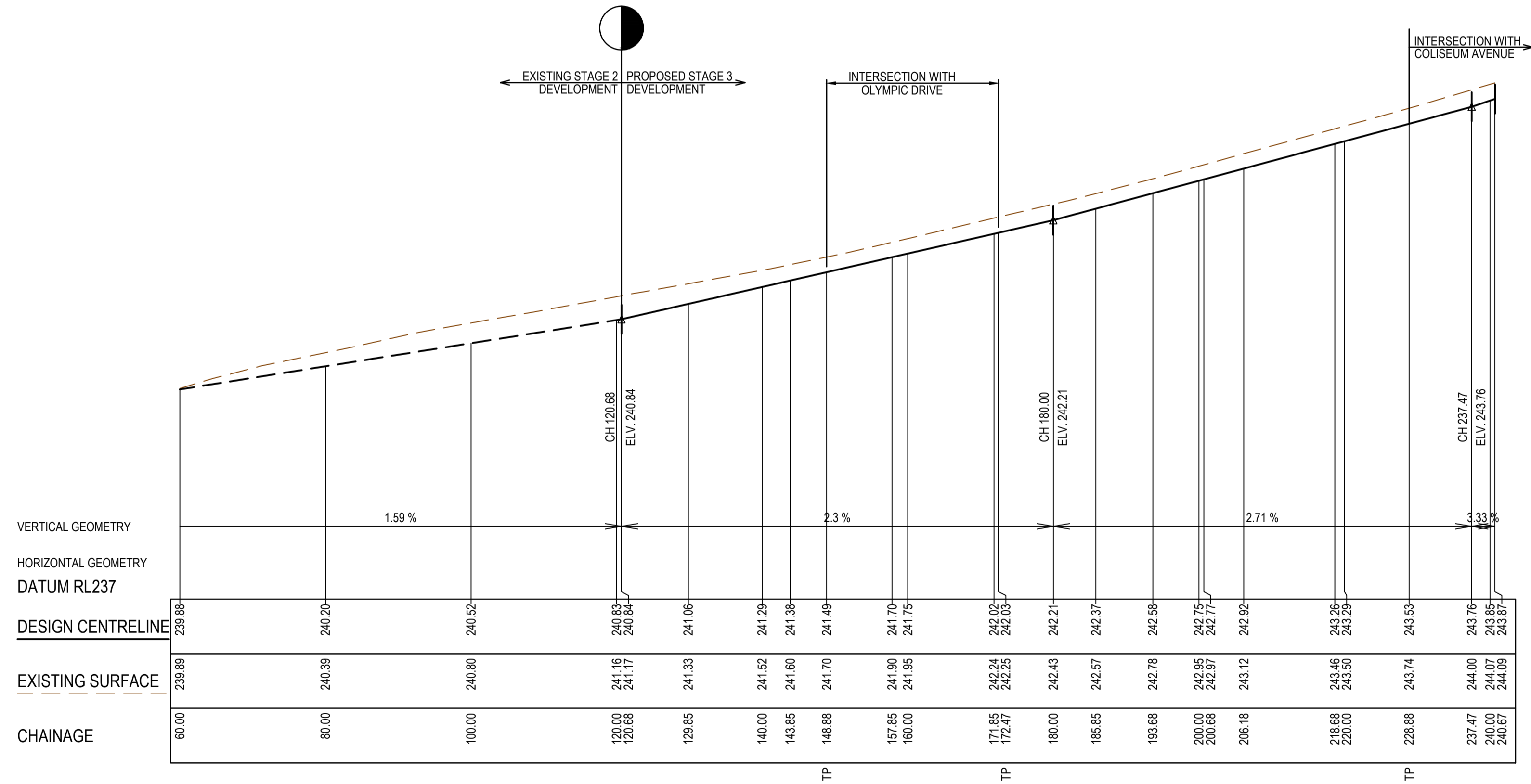
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COLISEUM AVENUE LONGITUDINAL SECTION



ACADEMY LANE LONGITUDINAL SECTION



EASTROW AVENUE LONGITUDINAL SECTION

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1	26.06.47	AS CONSTRUCTED	KM/KU	AB

**AS CONSTRUCTED**

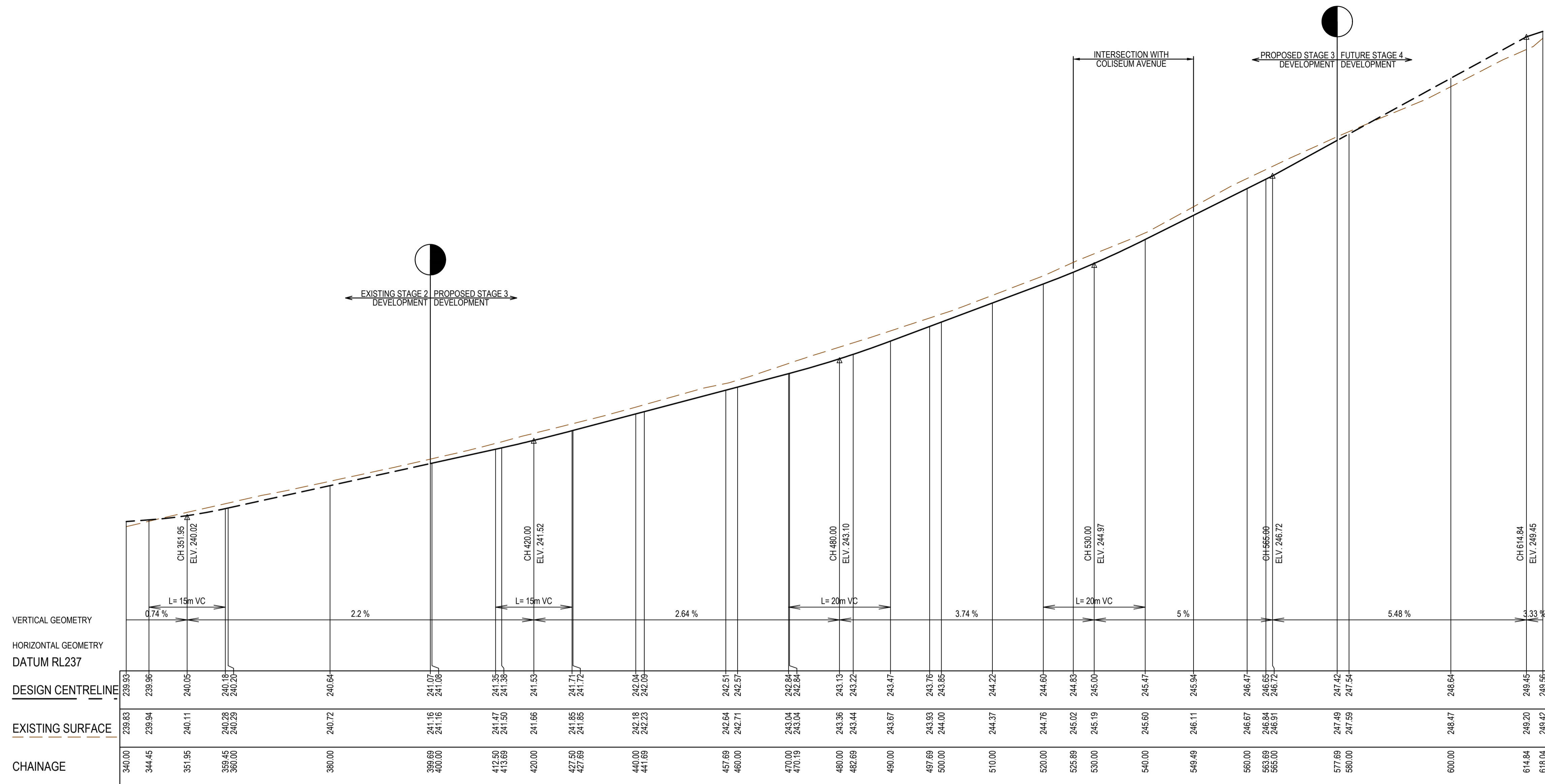
TITLE	NAME
DRAFTER	R.Barua
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows
REFERENCE No. 1	
REFERENCE No. 2	

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Scale H1:500, V1:50  
SCALE AS SHOWN AT 1

Member of the Surlana Jurong Group  
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Olivine Estate - Stage 3  
Whittlesea City Council  
Road and Drainage  
Longitudinal Sections - 2

MELBOURNE REF <b>9 M2</b>	PROJECT / DRAWING No. <b>1700E-03-05</b>	SHEET No. <b>05 of 27</b>	REVISION <b>1</b>
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ORIEL ROAD LONGITUDINAL SECTION

OLYMPIC DRIVE DESIGN LINE

IP	CHAINAGE	X COORD	Y COORD	Z COORD	TYPE	BEARING	LENGTH	RADIUS
1	0.000	323148.217	5843126.442	240.871	IP	83°14'25.97"		
2	25.681	323173.720	5843129.465	241.118	TC	83°14'25.97"		
3	31.478	323179.502	5843130.150	241.255	IP		11.593	50.000
4	37.275	323185.287	5843129.488	241.380	CT	96°31'31.48"		
5	172.059	323319.198	5843114.171		IP	96°31'31.48"		

EASTROW AVENUE DESIGN LINE

IP	CHAINAGE	X COORD	Y COORD	Z COORD	TYPE	BEARING	LENGTH	RADIUS
1	120.675	323314.652	5843074.430	240.844	IP	6°31'31.48"		
2	240.675	323328.289	5843193.653	243.872	IP	6°31'31.48"		

ACADEMY LANE DESIGN LINE

IP	CHAINAGE	X COORD	Y COORD	Z COORD	TYPE	BEARING	LENGTH	RADIUS
1	0.000	323220.989	5843205.926	242.885	IP	6°31'31.48"		
2	40.000	323225.535	5843245.667	243.676	IP	6°31'31.48"		

ORIEL ROAD DESIGN LINE

IP	CHAINAGE	X COORD	Y COORD	Z COORD	TYPE	BEARING	LENGTH	RADIUS
1	399.688	323388.114	5843047.909	241.070	IP	6°31'31.48"		
2	577.689	323408.343	5843224.757	247.415	IP	6°31'31.48"		

COLISEUM AVENUE DESIGN LINE

IP	CHAINAGE	X COORD	Y COORD	Z COORD	TYPE	BEARING	LENGTH	RADIUS
1	0.000	323130.702	5843178.075	241.145	IP	58°07'06.42"		
2	26.481	323153.187	5843192.061	241.509	TC	58°07'06.42"		
3	33.031	323158.781	5843195.540	241.736	IP		13.100	50.000
4	39.581	323165.085	5843197.452	241.970	CT	73°07'47.80"		
5	69.916	323193.159	5843205.965	242.726	TC	73°07'47.80"		
6	76.675	323200.688	5843208.248	242.783	IP		15.517	38.000
7	84.433	323208.505	5843207.354	242.822	CT	96°31'31.48"		
8	280.998	323403.797	5843185.016	245.357	IP	96°31'31.48"		

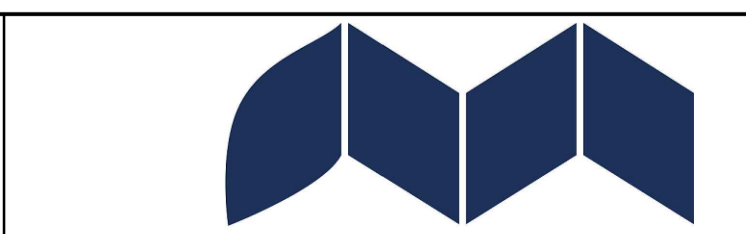
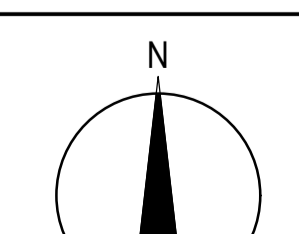
OLIVINE BOULEVARD DESIGN LINE

IP	CHAINAGE	X COORD	Y COORD	Z COORD	TYPE	BEARING	LENGTH	RADIUS
1	724.246	323148.037	5843093.651	240.706	IP	7°26'59.74"		
2	767.943	323153.919	5843138.634	240.925	IP		87.393	-132.000
3	811.639	323130.905	5843177.729	241.143	CT	329°30'57.92"		
4	859.587	323106.581	5843219.049	241.383	IP	329°30'57.92"		

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	12.09.18	ISSUED FOR CONSTRUCTION	KM/RB	AB
1	26.06.48	AS CONSTRUCTED	KM/KU	AB

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

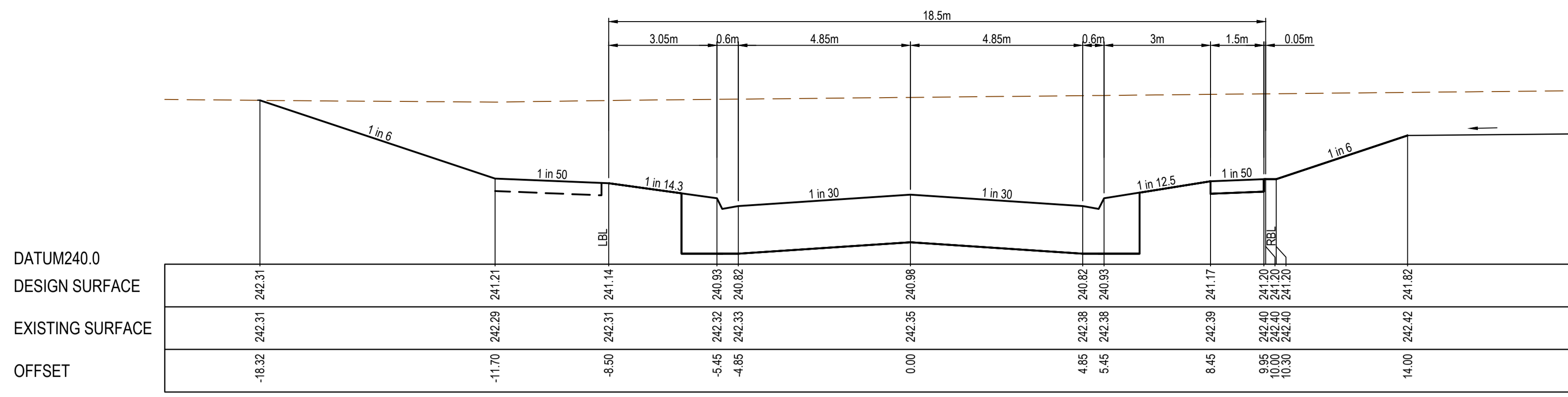
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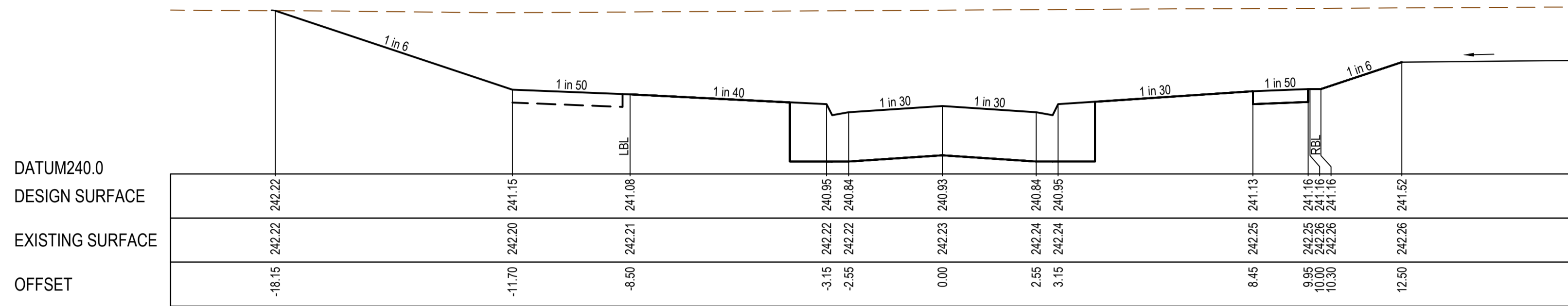
Olivine Estate - Stage 3  
Whittlesea City Council  
Road and Drainage  
Longitudinal Sections - 3

**AS CONSTRUCTED**

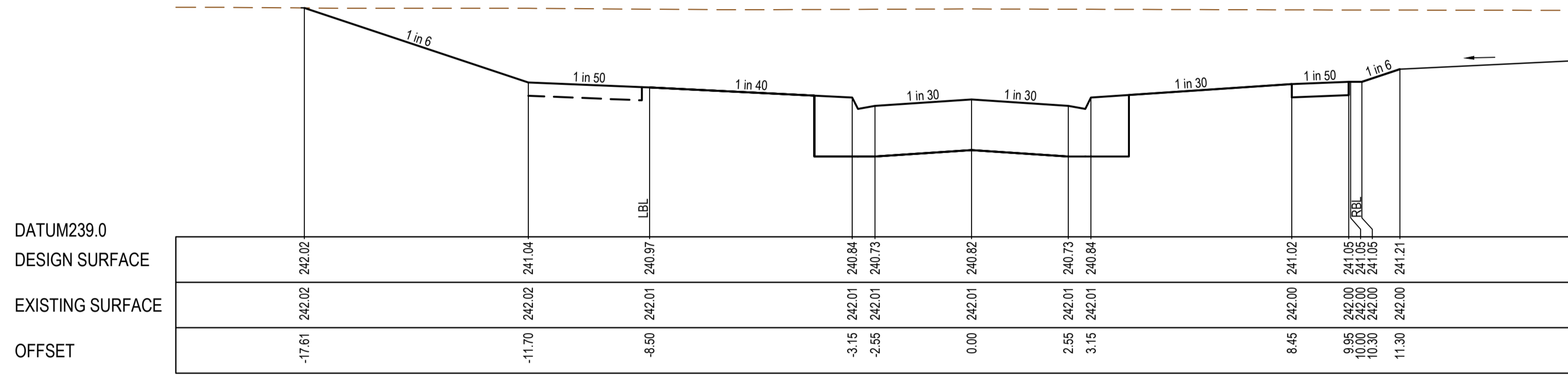
MELWAYS REF	PROJECT / DRAWING No	SHEET No	REVISION
9 M2	1700E-03-06	06 of 27	1



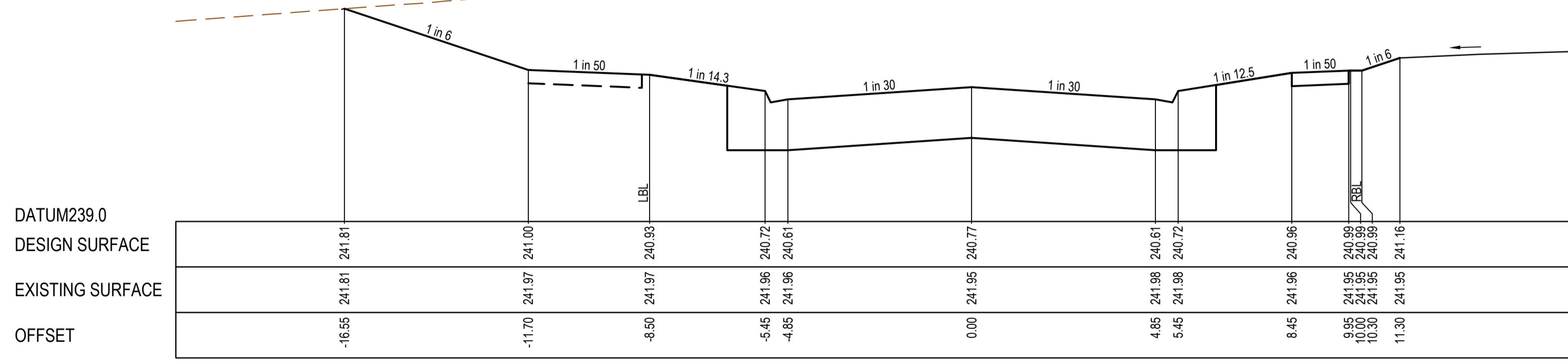
CH 779.18



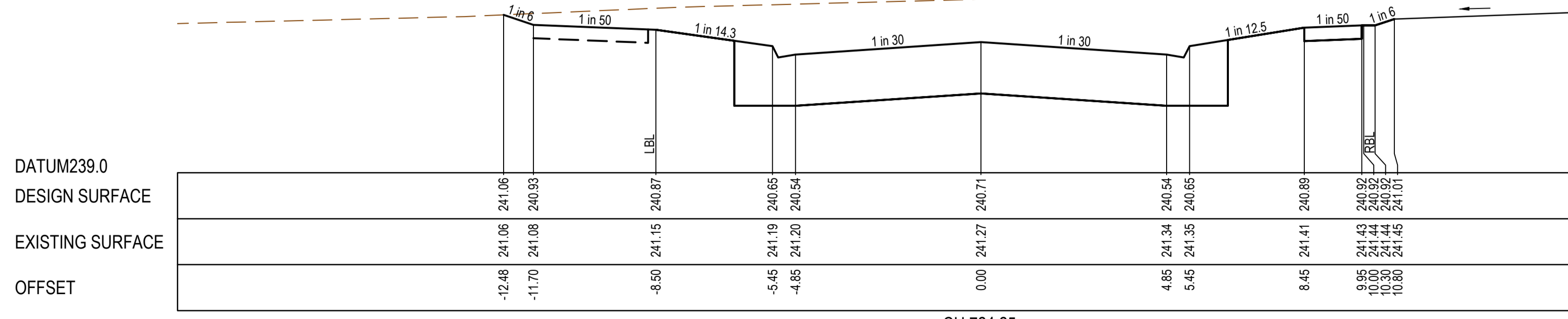
TP CH 768.01



TP CH 746.22



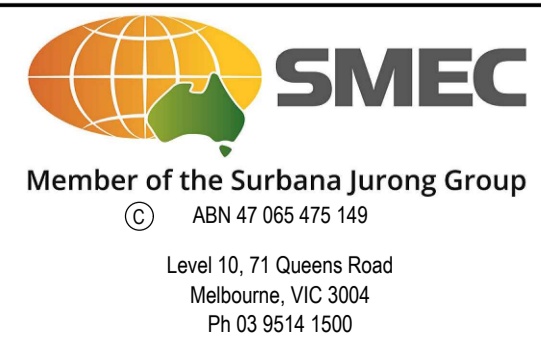
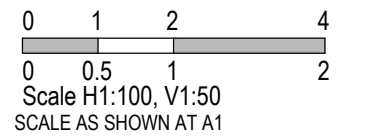
CH 737.27



CH 724.25

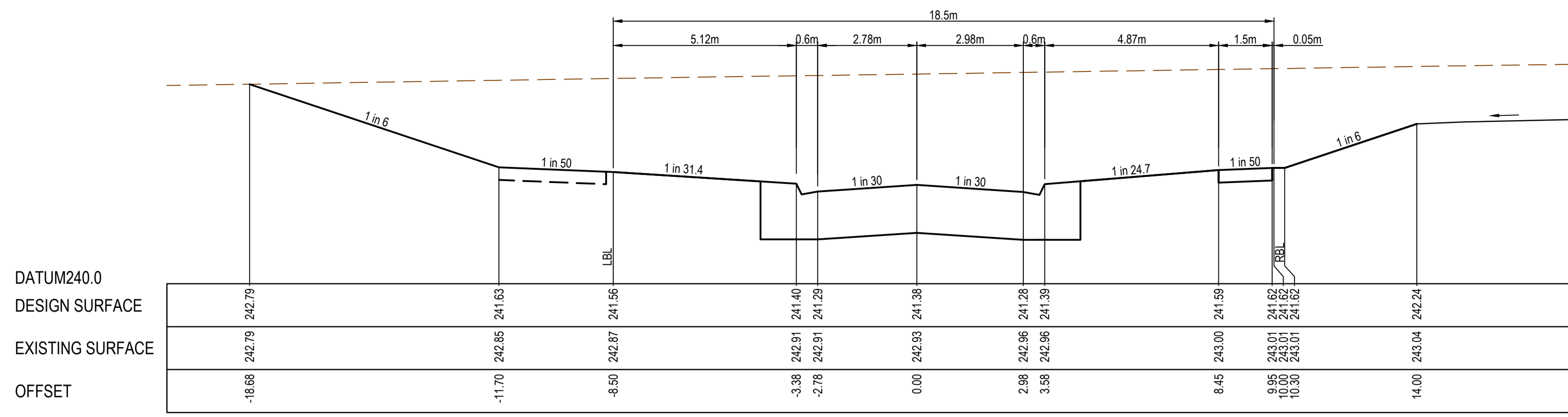
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1	26.06.49	AS CONSTRUCTED	KMKU	AB

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DRAFTER	R.Barua		
DESIGNER	K.Moore		
CHECKED	Z.Gosev		
AUTHORISED	A.Burrows		
REFERENCE No. 1			
REFERENCE No. 2			

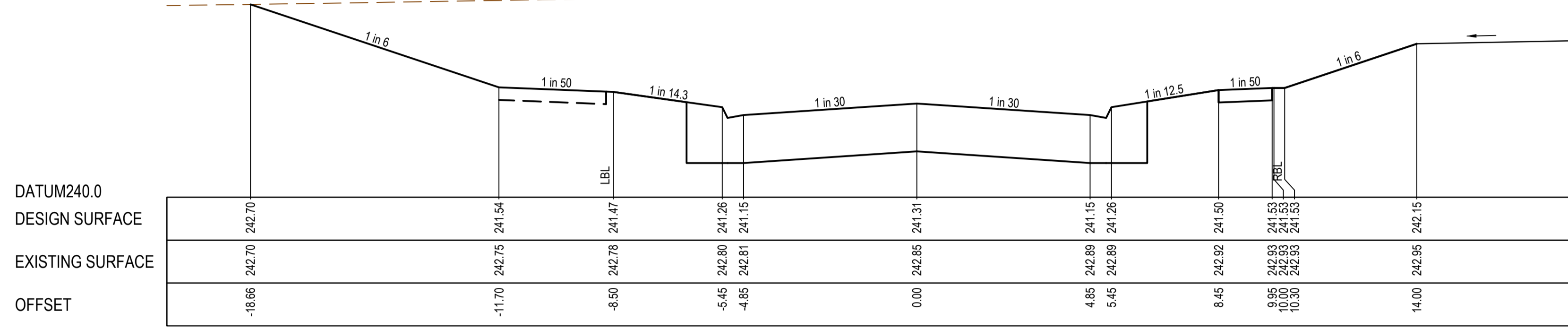


Olivine Estate - Stage 3  
Whittlesea City Council  
Road and Drainage  
Cross Sections: Olivine Boulevard  
Ch 724.25 - Ch 779.18

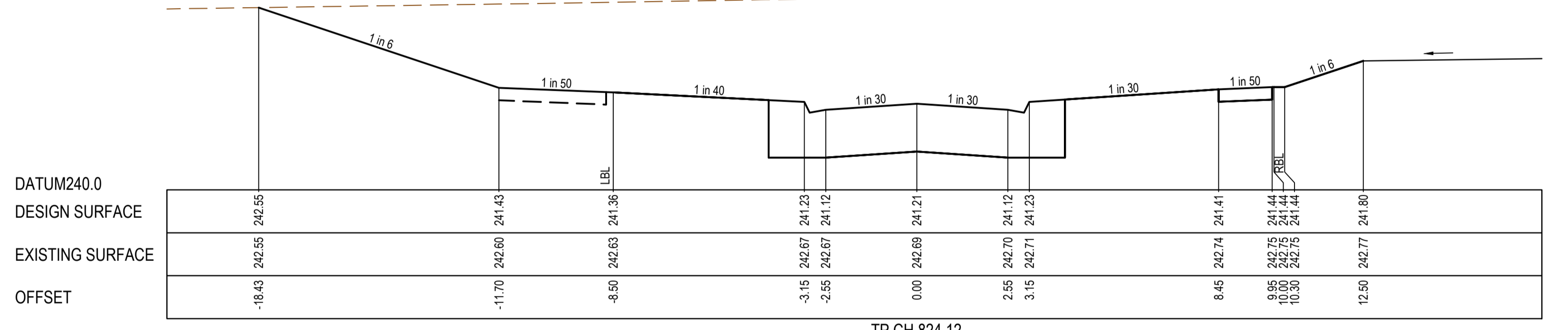
MELWAYS REF	PROJECT / DRAWING No	SHEET No	REVISION
9 M2	1700E-03-07	07 of 27	1



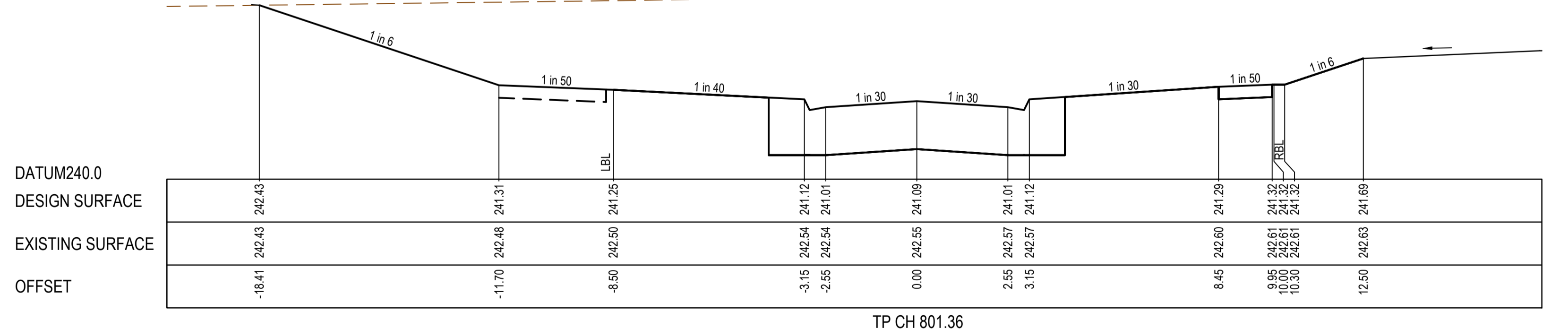
CH 859.59



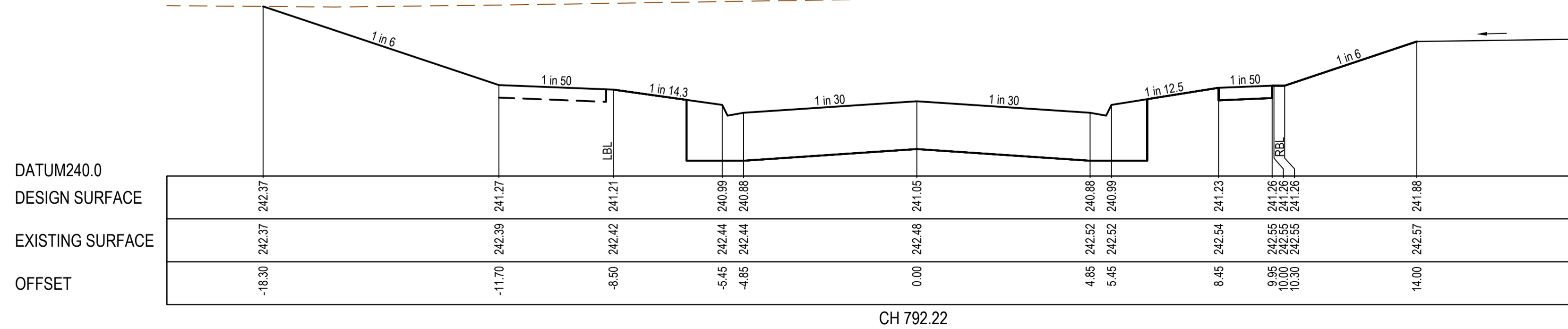
CH 845.18



TP CH 824.12



TP CH 801.36

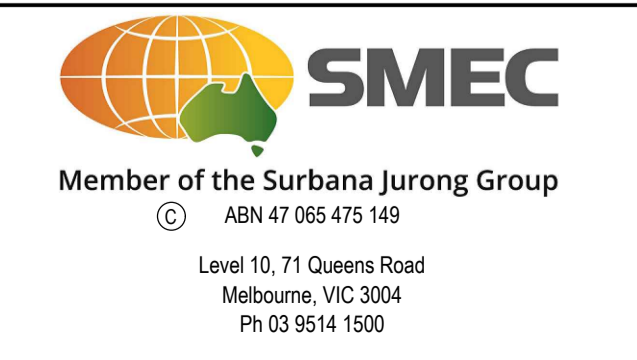
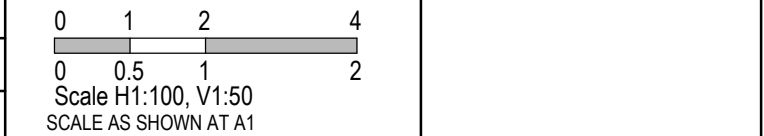


CH 792.22

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
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1	26.06.50	AS CONSTRUCTED	KM/KU	AB

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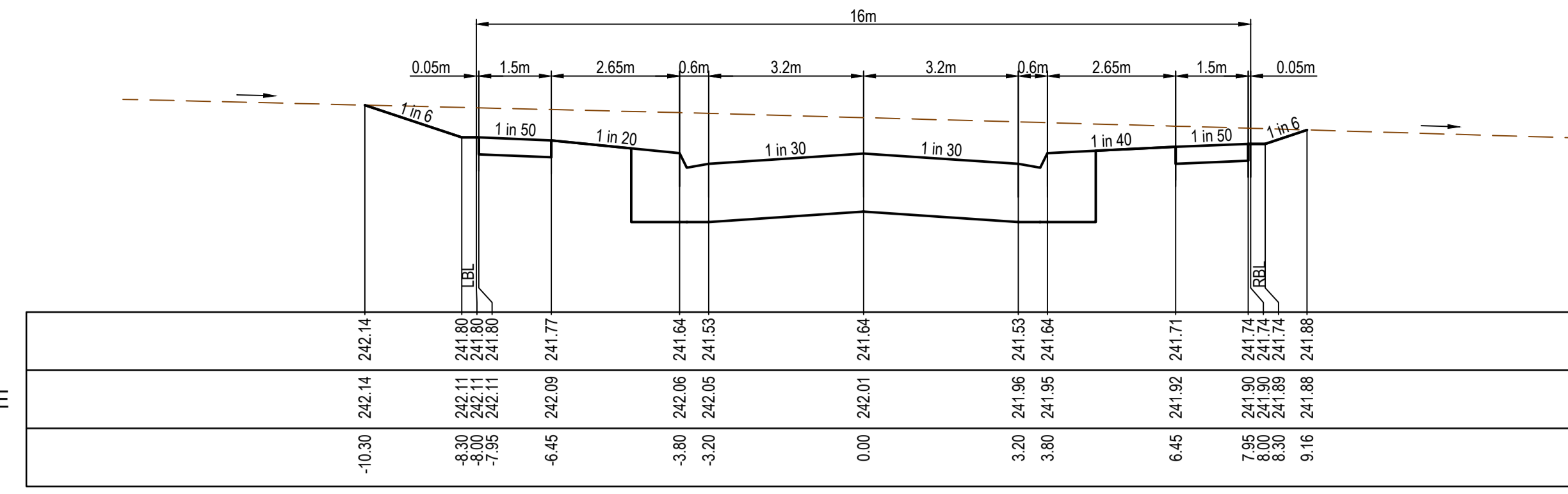
TITLE	NAME
DRAFTER	R.Barua
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows
REFERENCE No. 1	
REFERENCE No. 2	



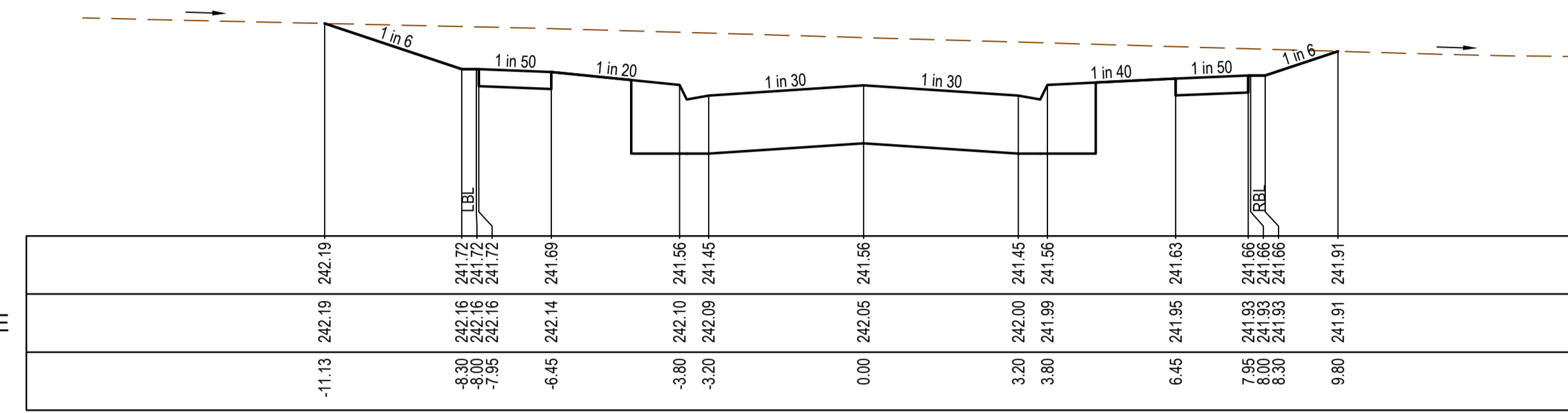
Olivine Estate - Stage 3  
Whittlesea City Council  
Road and Drainage  
Cross Sections: Olivine Boulevard  
Ch 779.22 - Ch 859.59

MELWAYS REF 9 M2	PROJECT / DRAWING No. 1700E-03-08	SHEET No. 08 of 27	REVISION 1
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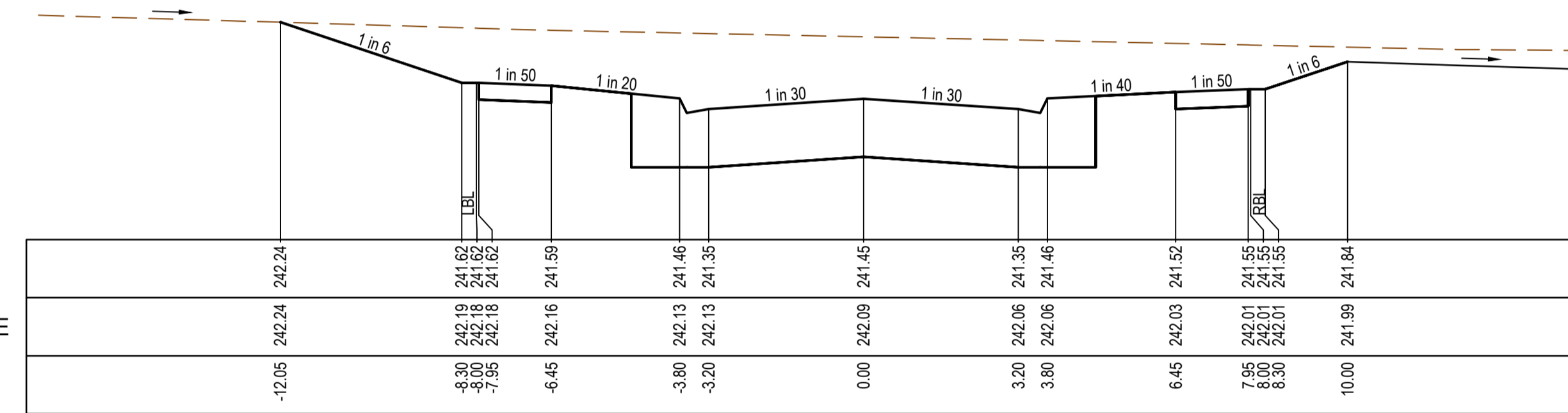




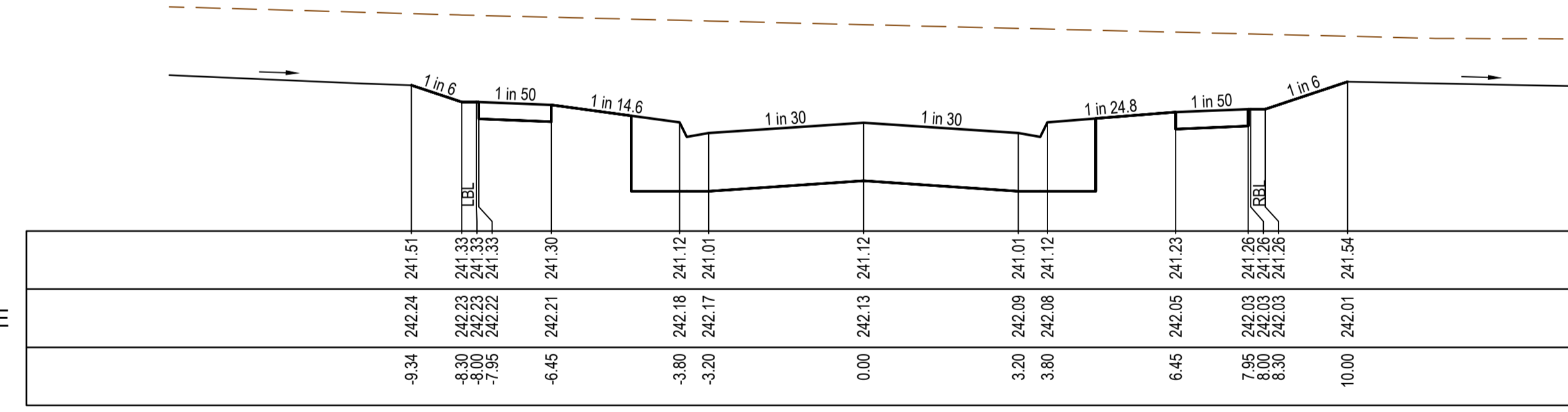
CH 75.34



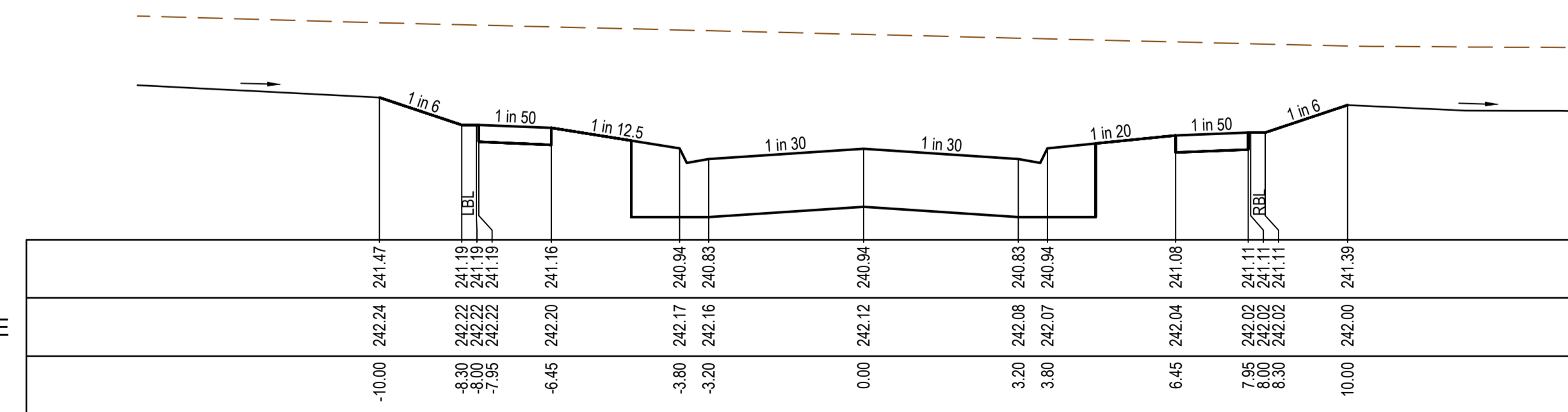
CH 59.34



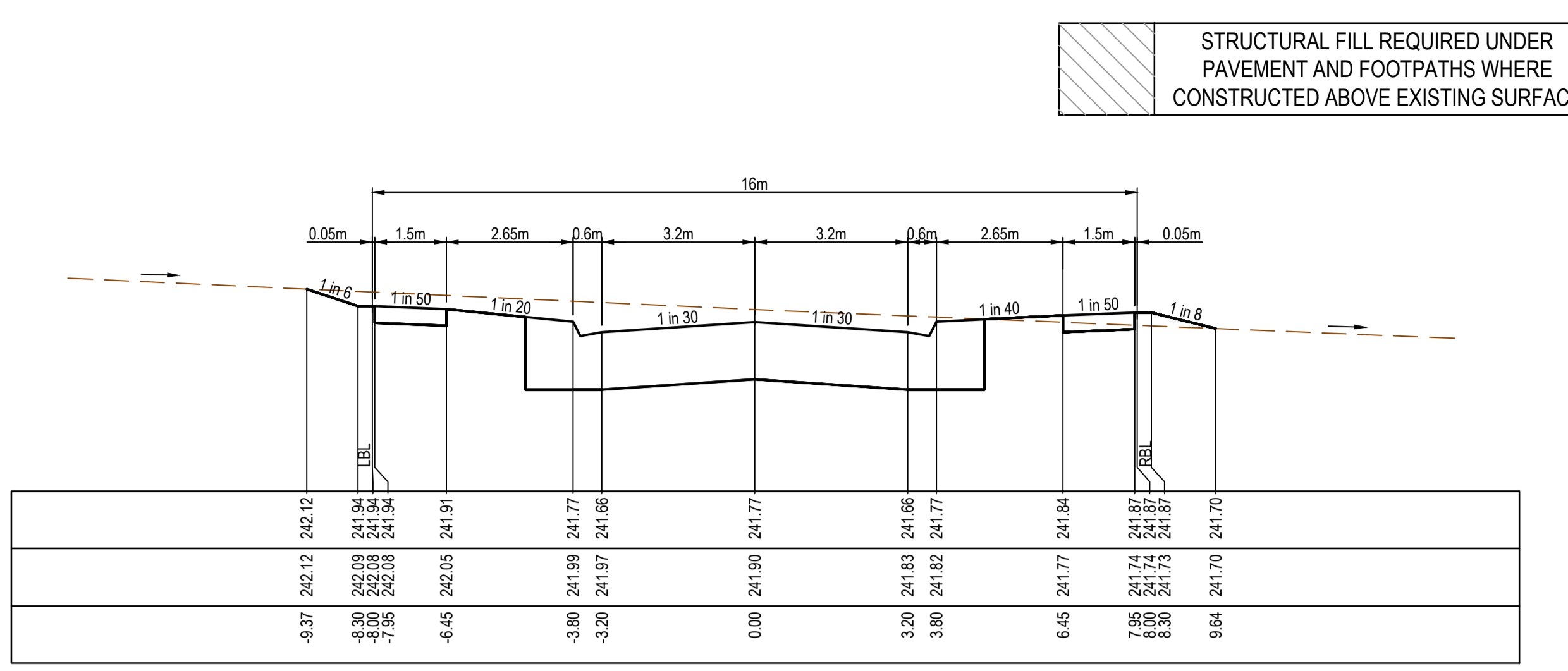
CH 42.34



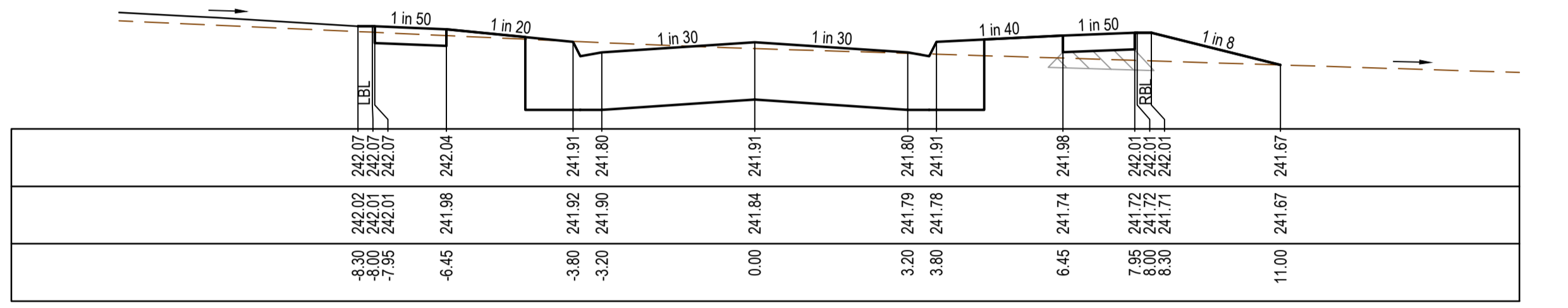
TP CH 25.68



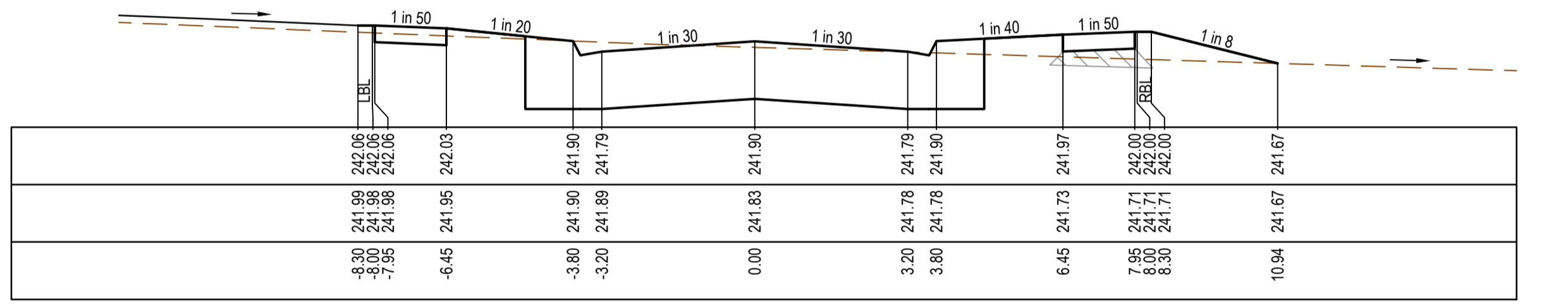
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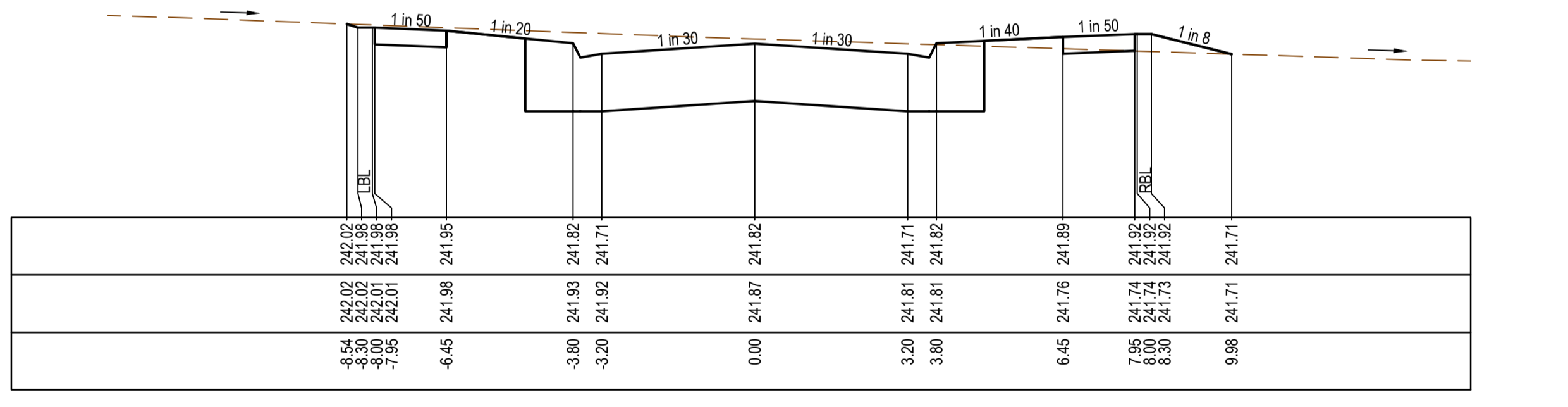
TP CH 158.00



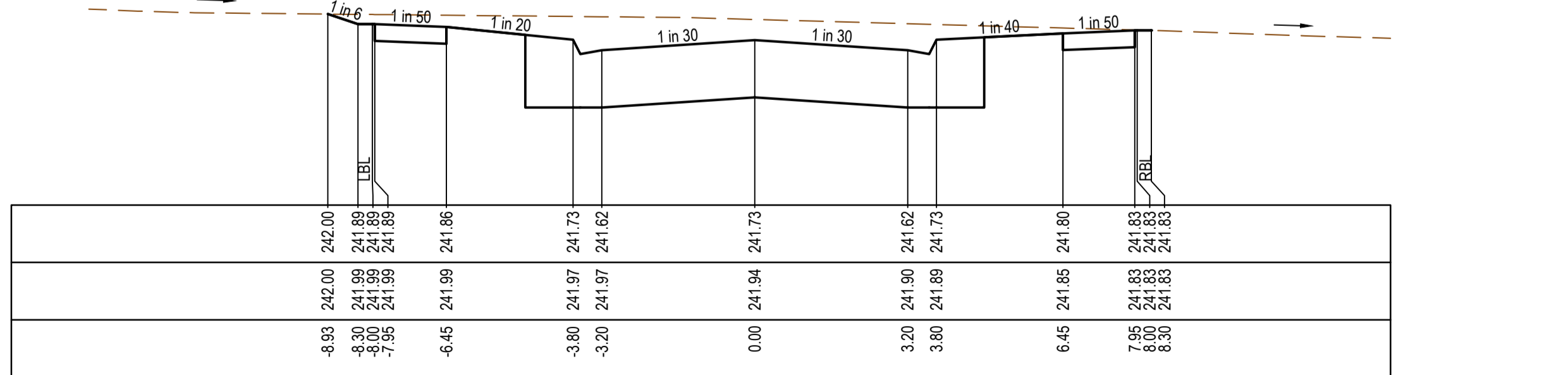
CH 143.34



CH 127.34



CH 111.34



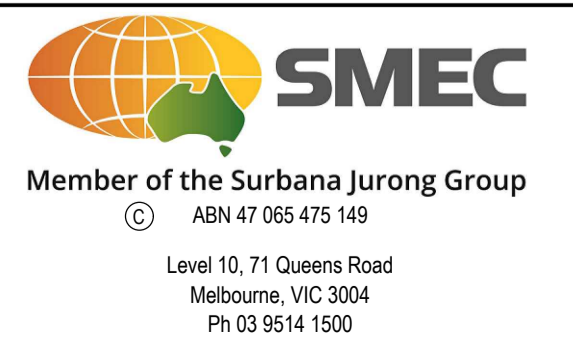
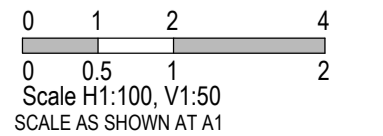
CH 93.34

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

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	12.09.18	ISSUED FOR CONSTRUCTION	KM/RB	AB
1	26.06.51	AS CONSTRUCTED	KM/KU	AB

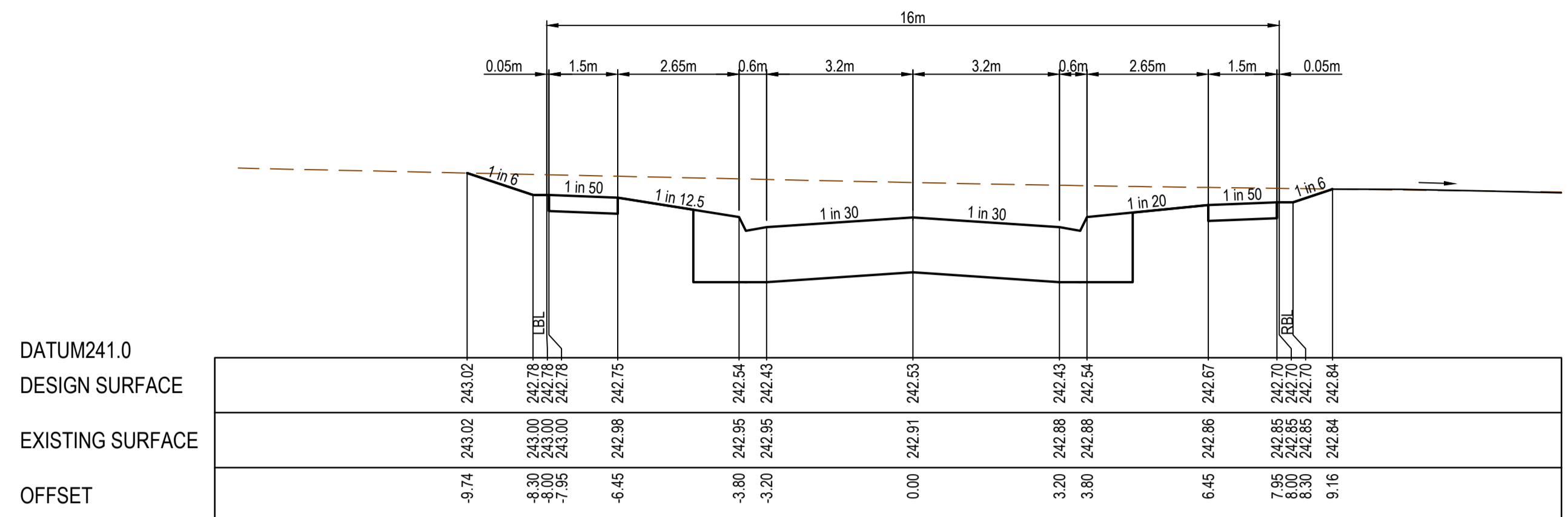
**AS CONSTRUCTED**

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Quality Management ISO 9001	Site Management AS/NZS 1800	DRAFTER	R.Barua
Environmental Management ISO 14001		DESIGNER	K.Moore
		CHECKED	Z.Gosev
		AUTHORISED	A.Burrows
		REFERENCE No. 1	
		REFERENCE No. 2	

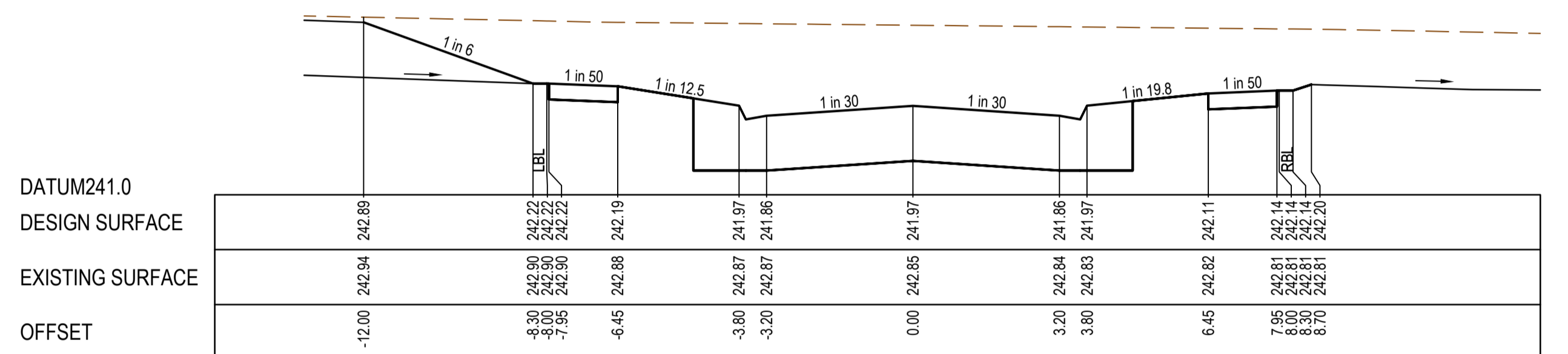


Olivine Estate - Stage 3  
Whittlesea City Council  
Road and Drainage  
Cross Sections: Olympic Drive  
Ch 16.00 - Ch 158.00

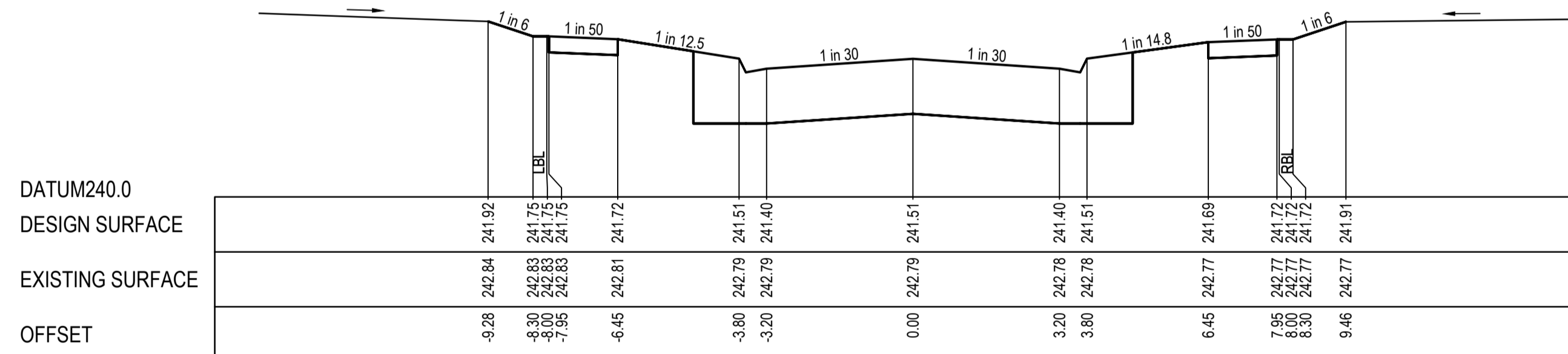
MELWAYS REF <b>9 M2</b>	PROJECT / DRAWING No. <b>1700E-03-09</b>	SHEET No. <b>09 of 27</b>	REVISION <b>1</b>
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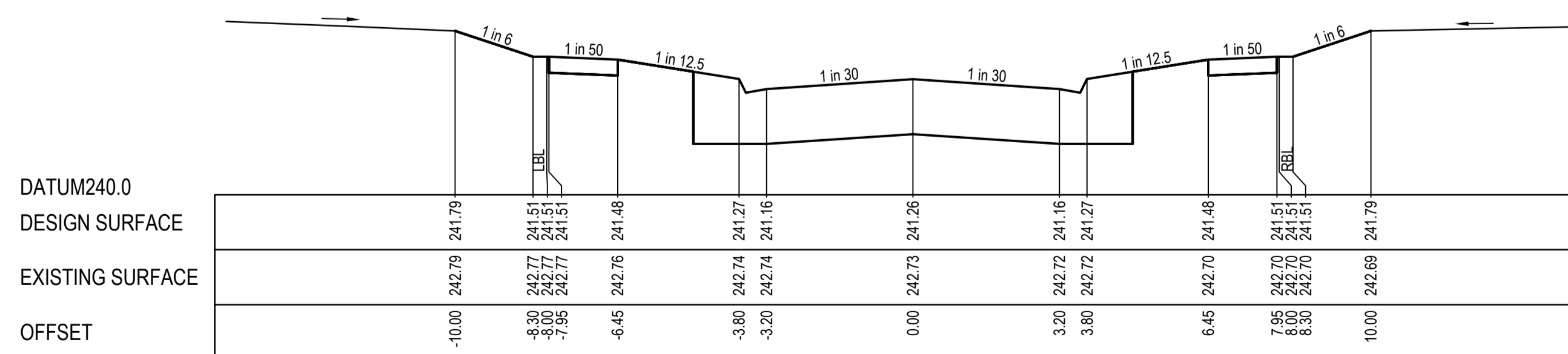
CH 57.58



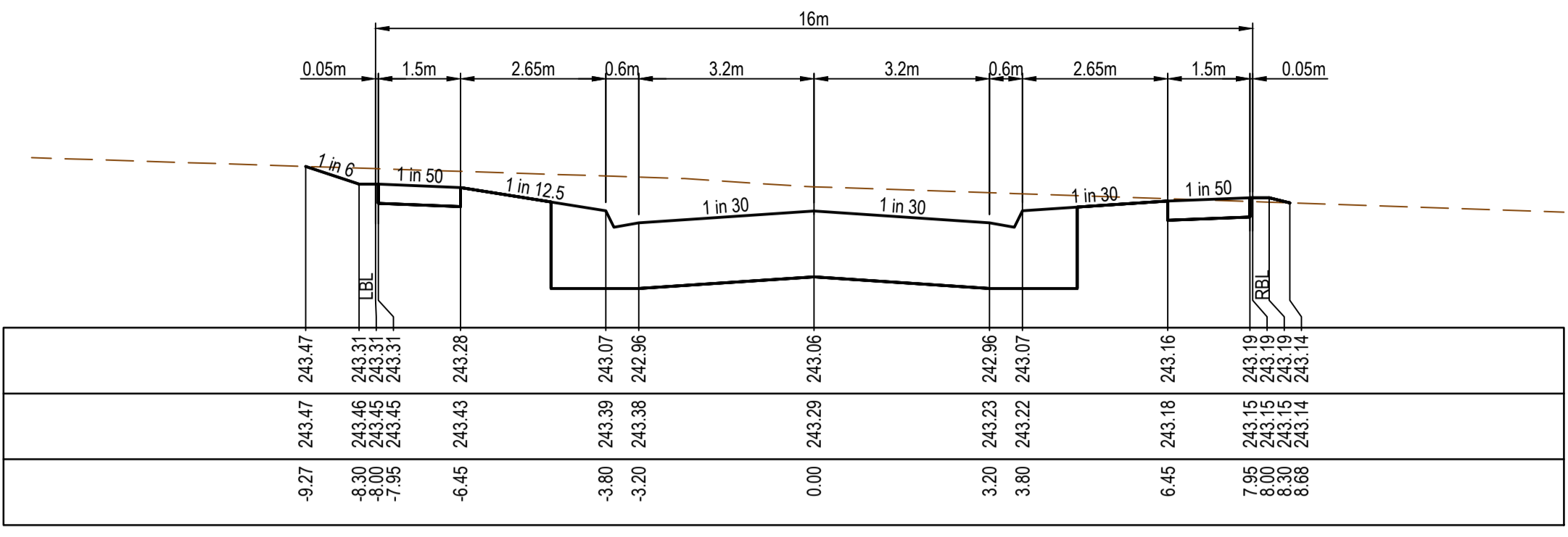
TP CH 39.58



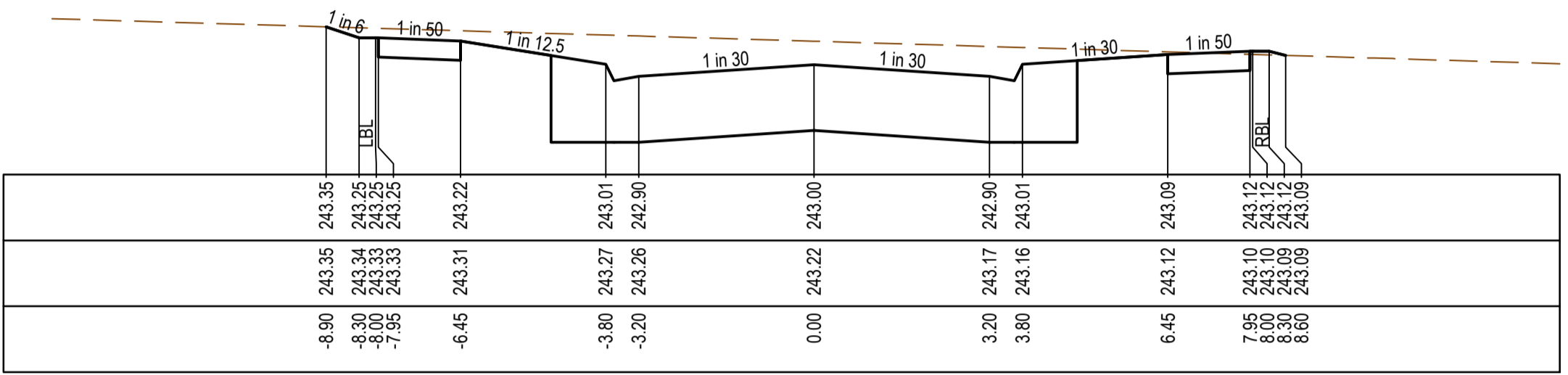
TP CH 26.48



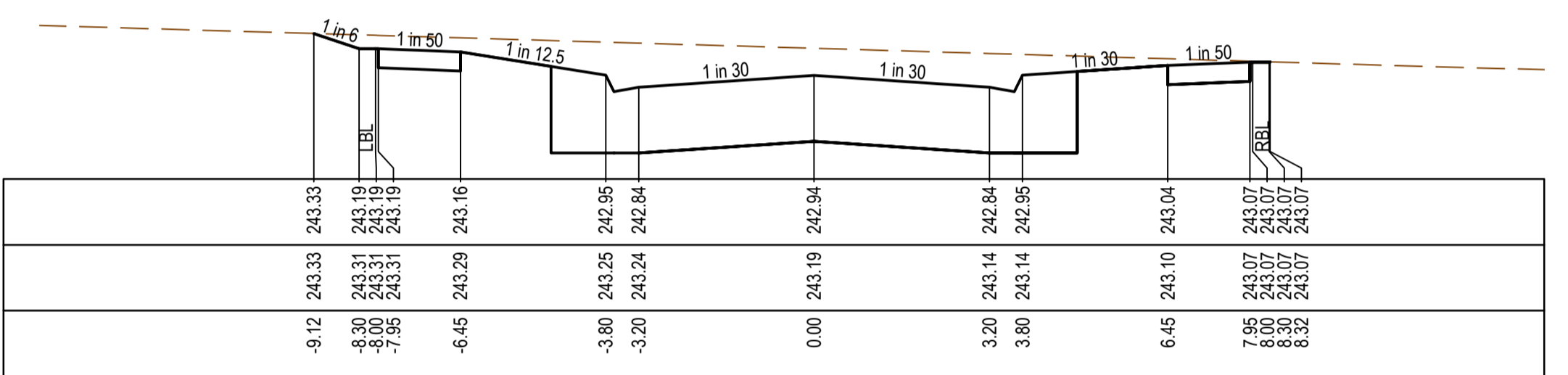
TP CH 17.00



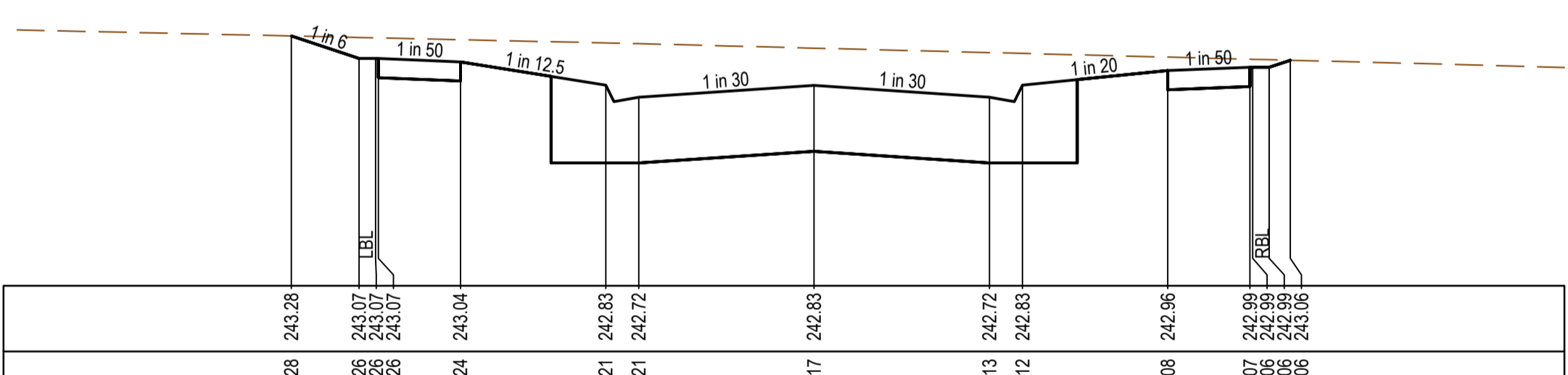
CH 133.00



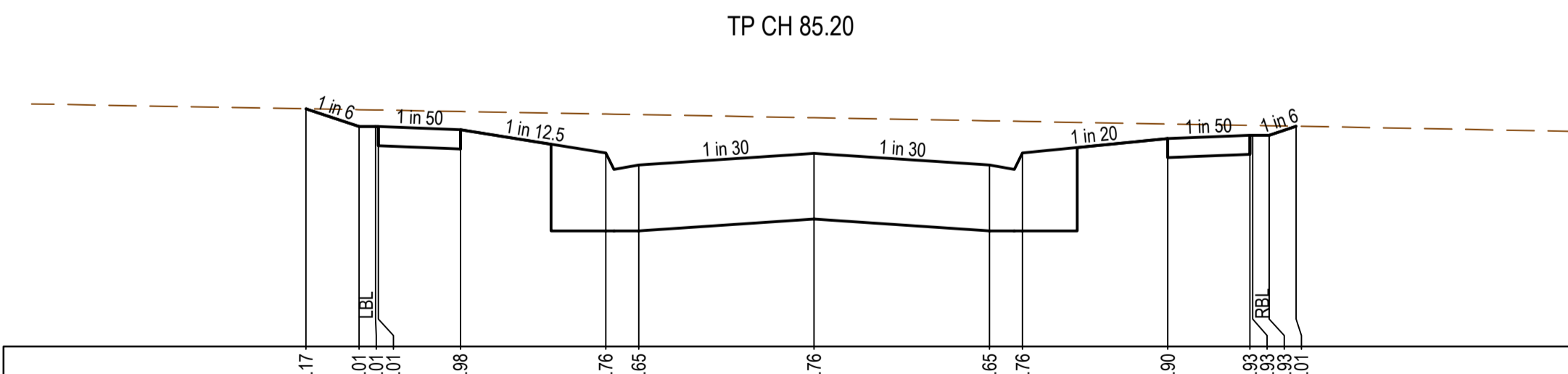
CH 120.50



TP CH 108.80



TP CH 85.20

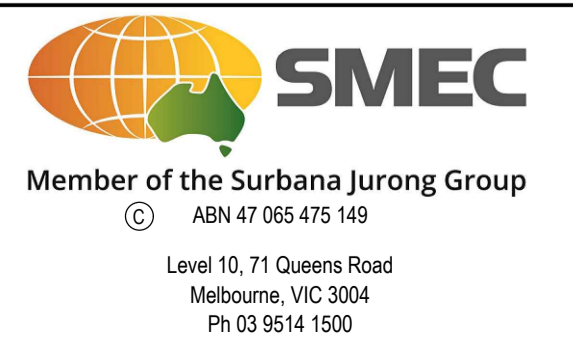
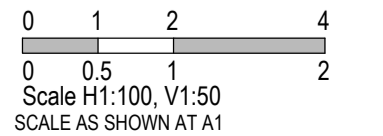


CH 72.78

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	12.09.18	ISSUED FOR CONSTRUCTION	KMRB	AB
1	26.06.52	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.

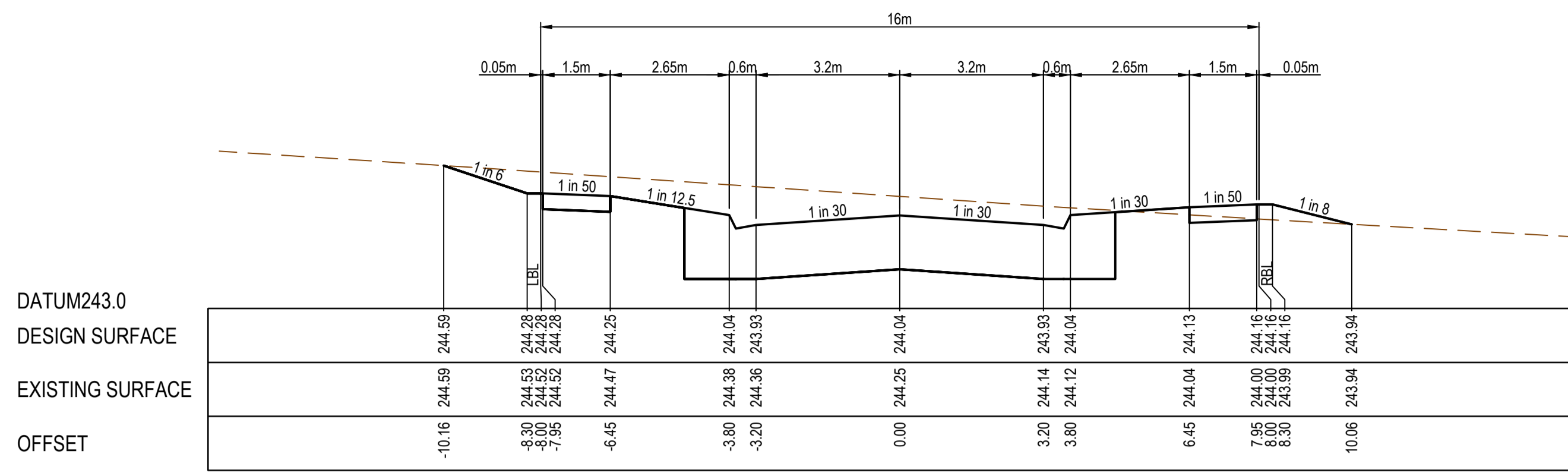
TITLE: DRAFTER: R.Barua  
 DESIGNER: K.Moore  
 CHECKED: Z.Gosev  
 AUTHORISED: A.Burrows  
 REFERENCE No. 1  
 REFERENCE No. 2



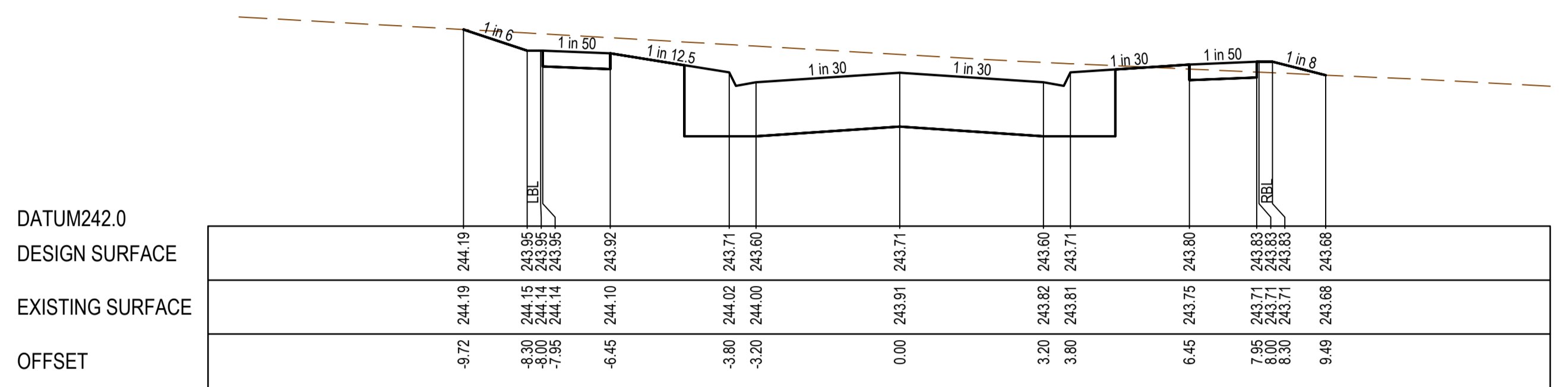
Olivine Estate - Stage 3  
Whittlesea City Council  
Road and Drainage  
Cross Sections: Coliseum Avenue  
Ch 17.00 - Ch 133.00

MELBOURNE REF: 9 M2 PROJECT / DRAWING No: 1700E-03-10 SHEET No: 10 of 27 REVISION: 1

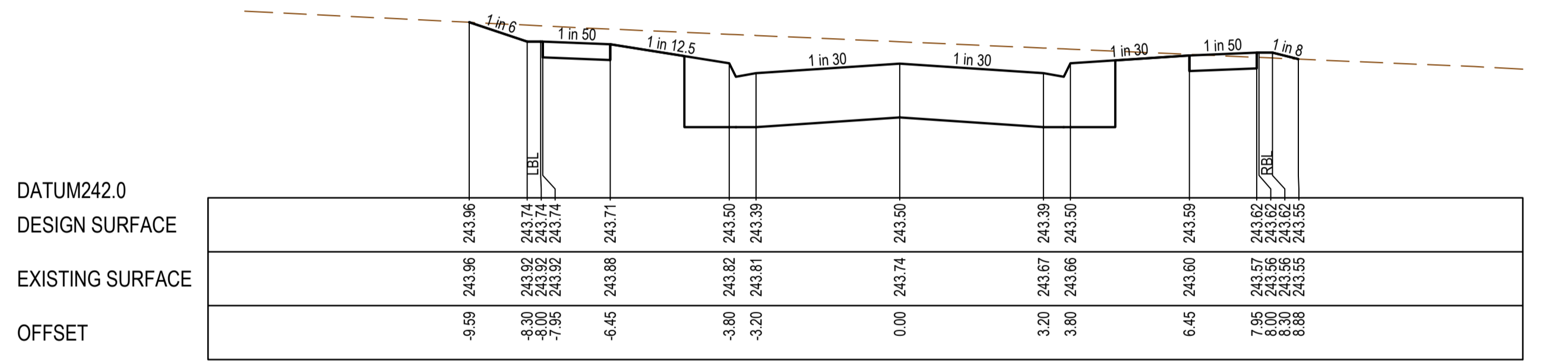
STRUCTURAL FILL REQUIRED UNDER PAVEMENT AND FOOTPATHS WHERE CONSTRUCTED ABOVE EXISTING SURFACE



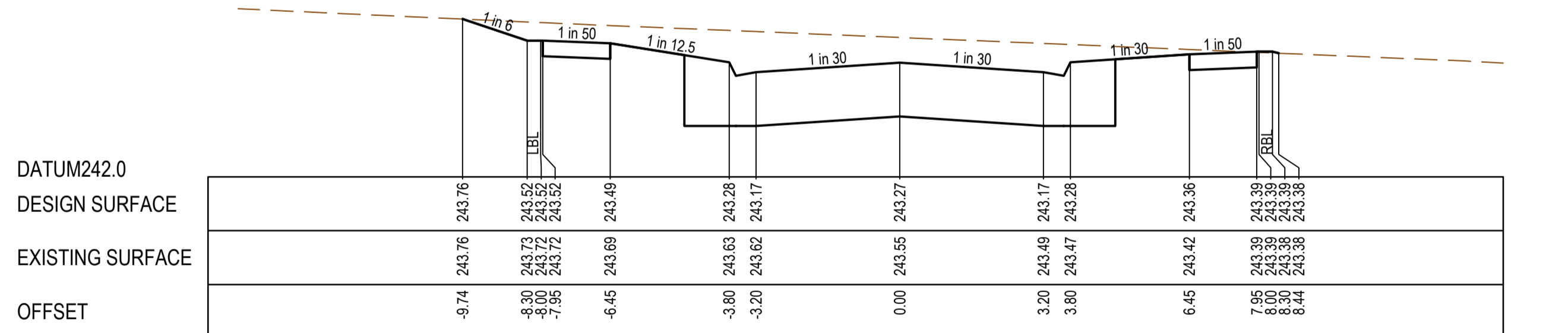
TP CH 216.80



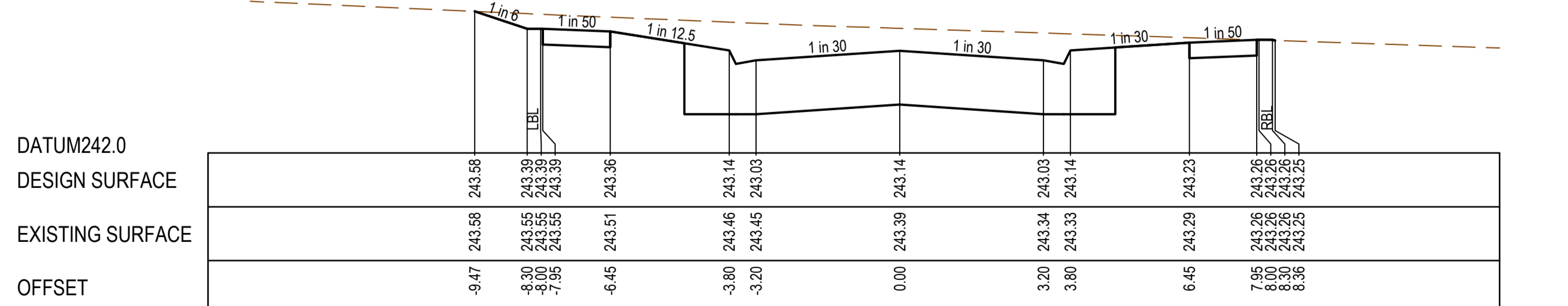
TP CH 193.20



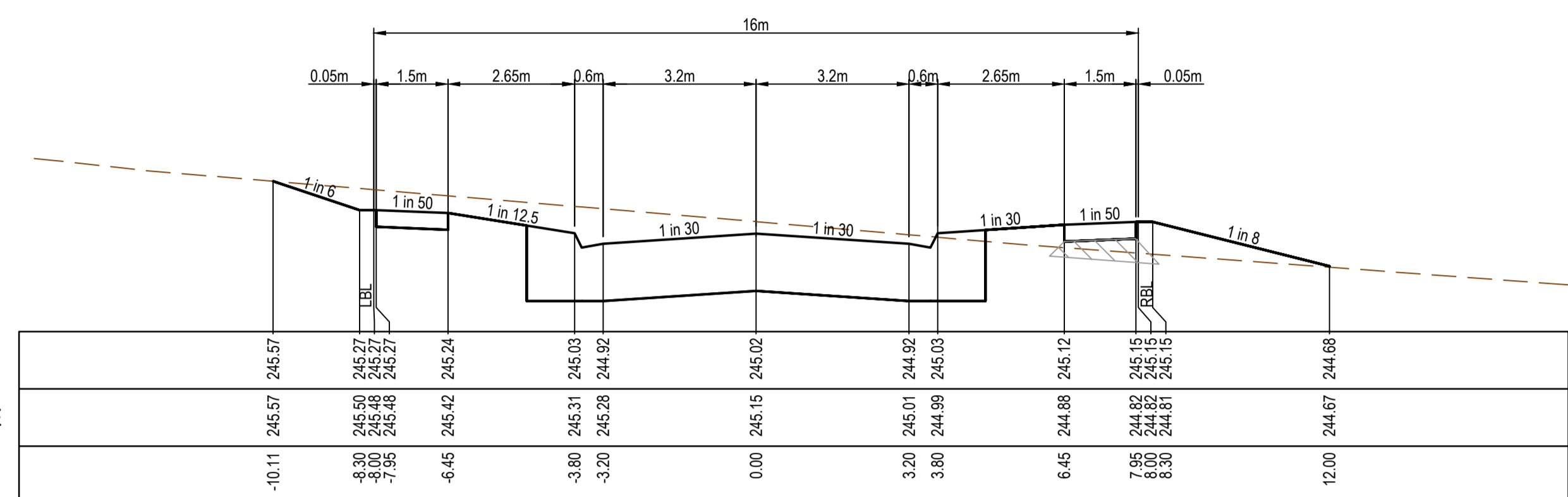
CH 178.00



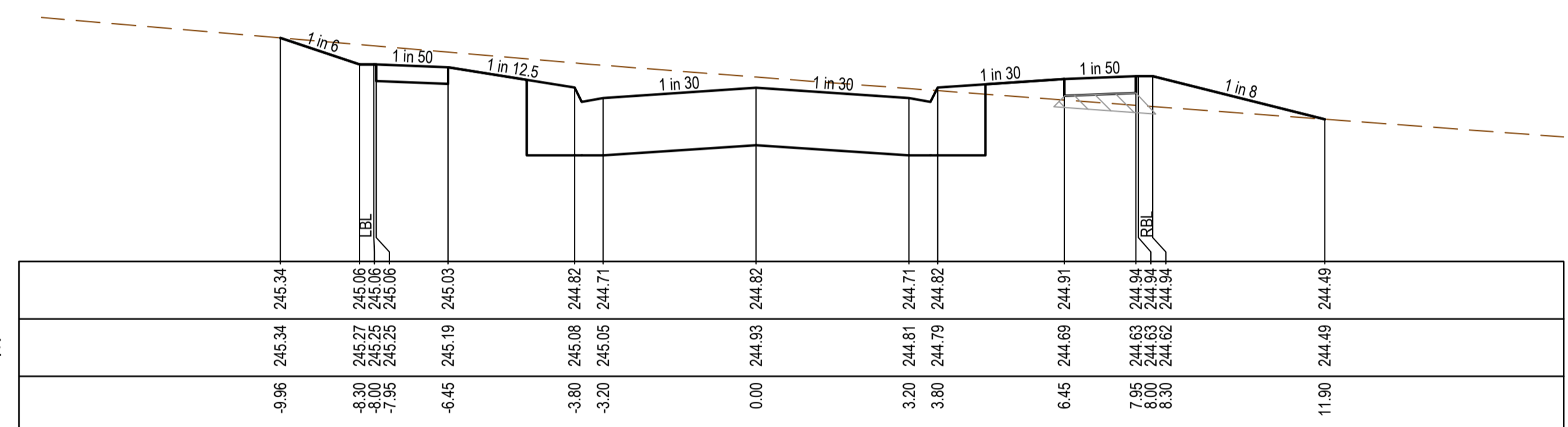
CH 162.00



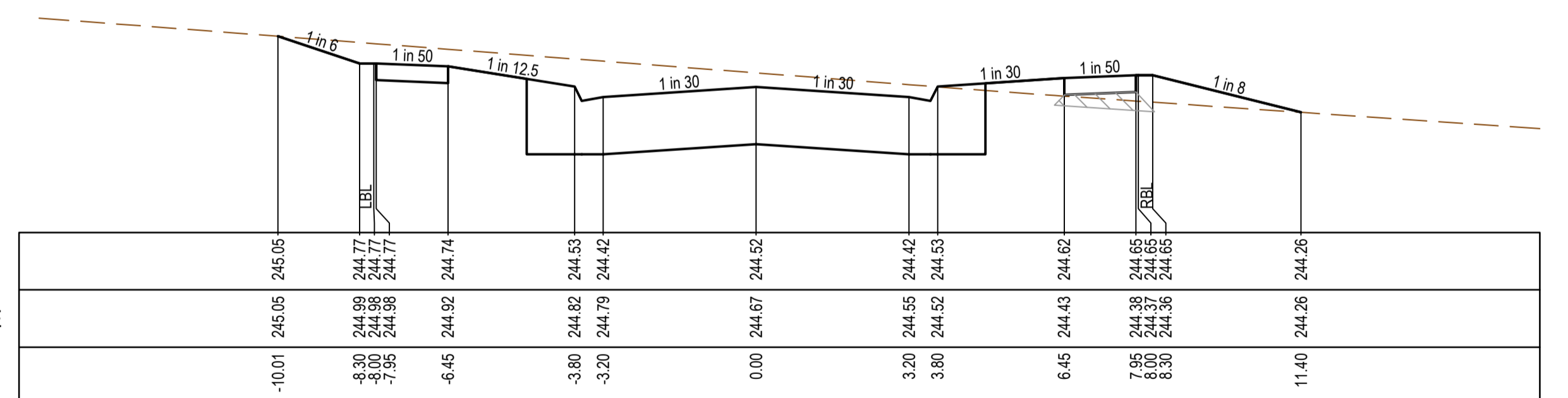
CH 148.00



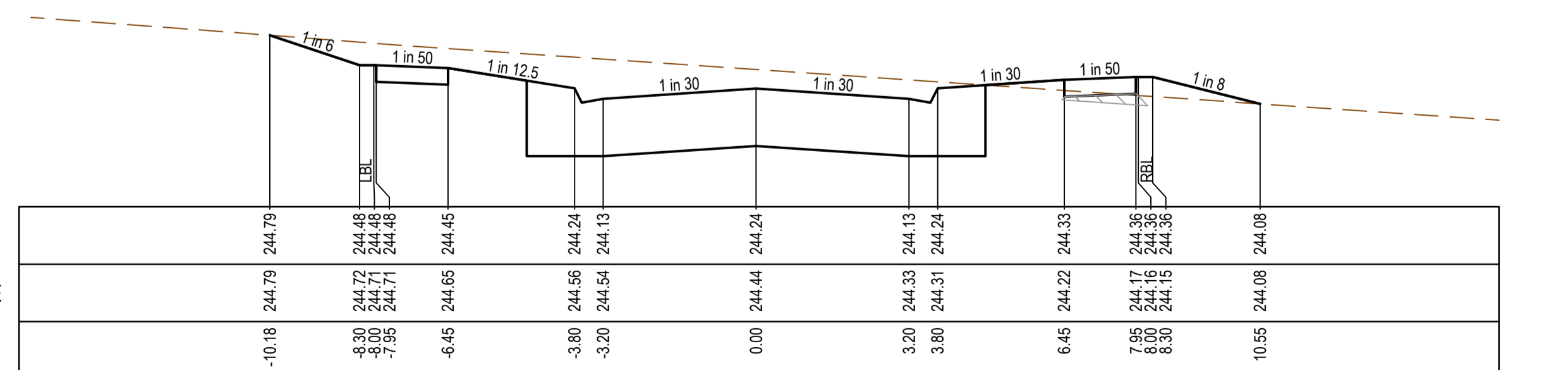
TP CH 267.00



CH 257.00



CH 243.00



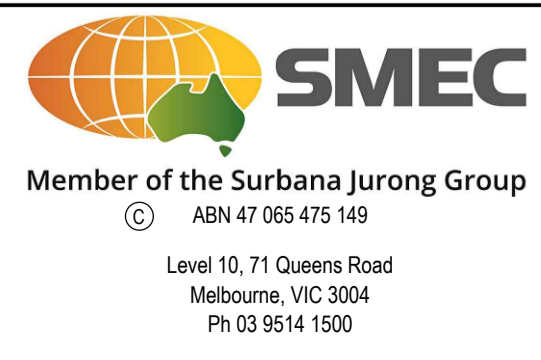
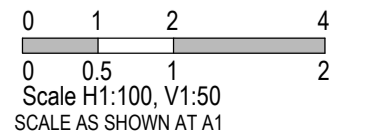
CH 229.00

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
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1	26.06.53	AS CONSTRUCTED	KMKU	AB

**AS CONSTRUCTED**

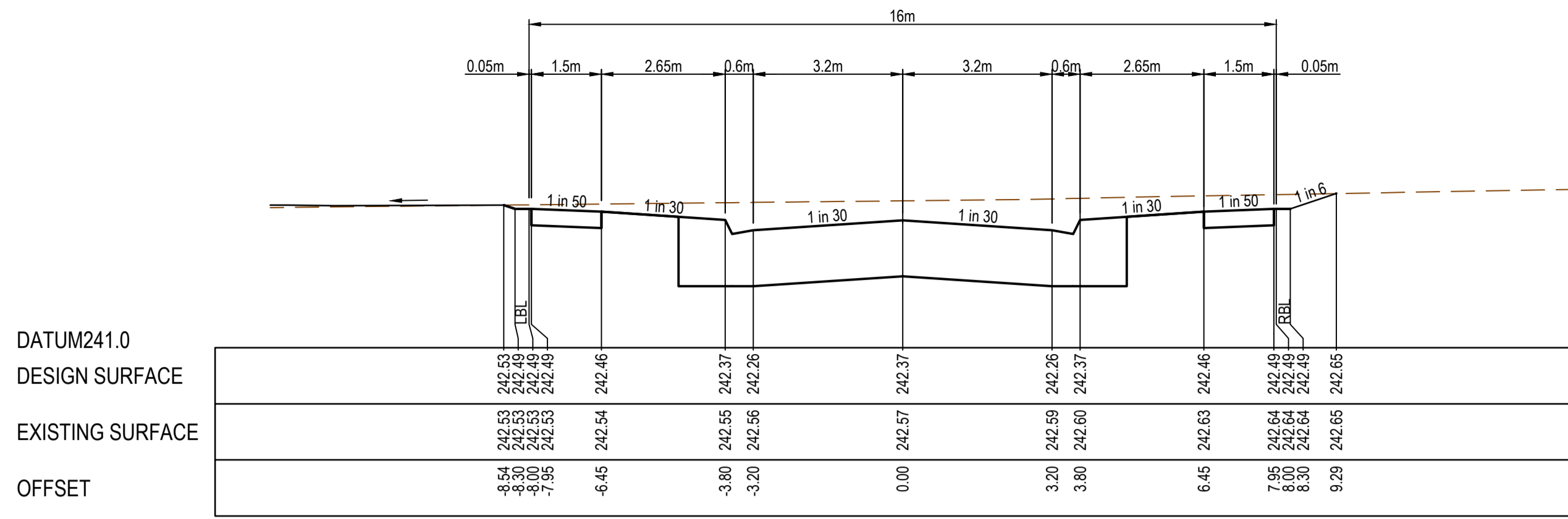
All setting out should be carried out in accordance with MPA/Council's standard drawings or as nominated on hard copy plans provided by SMEC. Any digital information supplied by this office is for information only. Any discrepancies should be discussed with the superintendent.

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

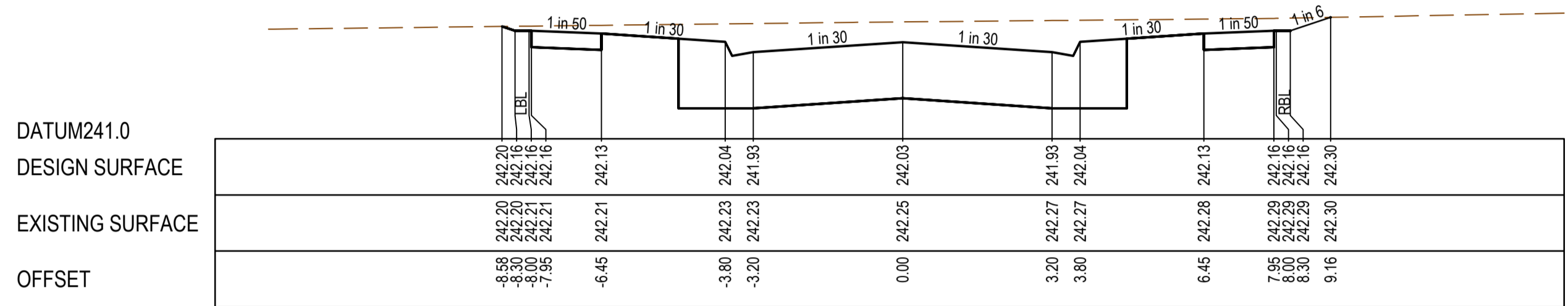


Olivine Estate - Stage 3  
Whittlesea City Council  
Road and Drainage  
Cross Sections: Coliseum Avenue  
Ch 148.00 - Ch 267.00

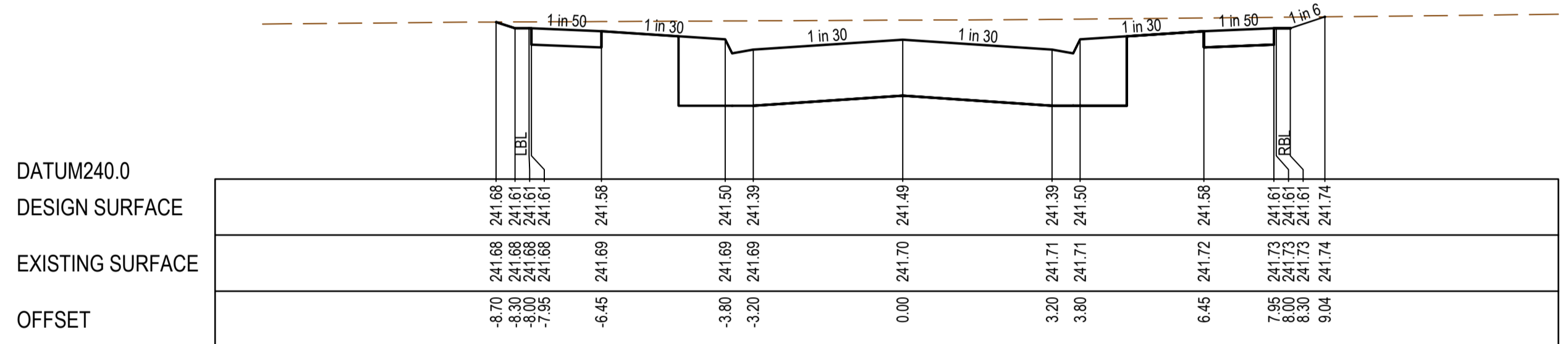
MELWAYS REF <b>9 M2</b>	PROJECT / DRAWING No. <b>1700E-03-11</b>	SHEET No. <b>11 of 27</b>	REVISION <b>1</b>
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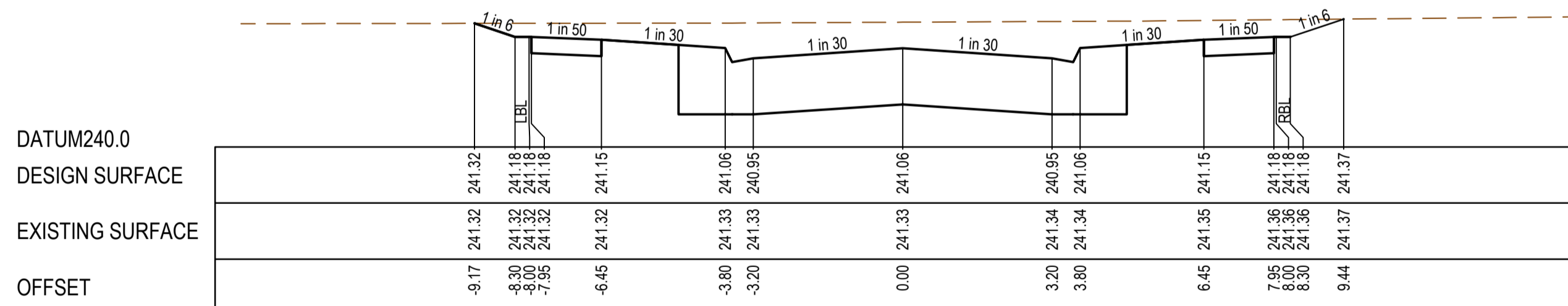
CH 185.85



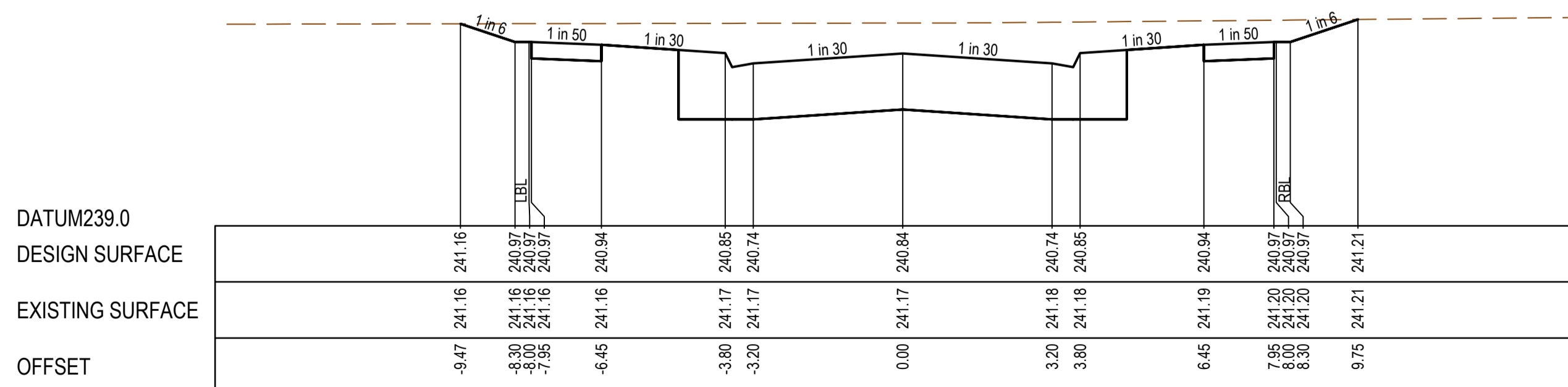
TP CH 172.47



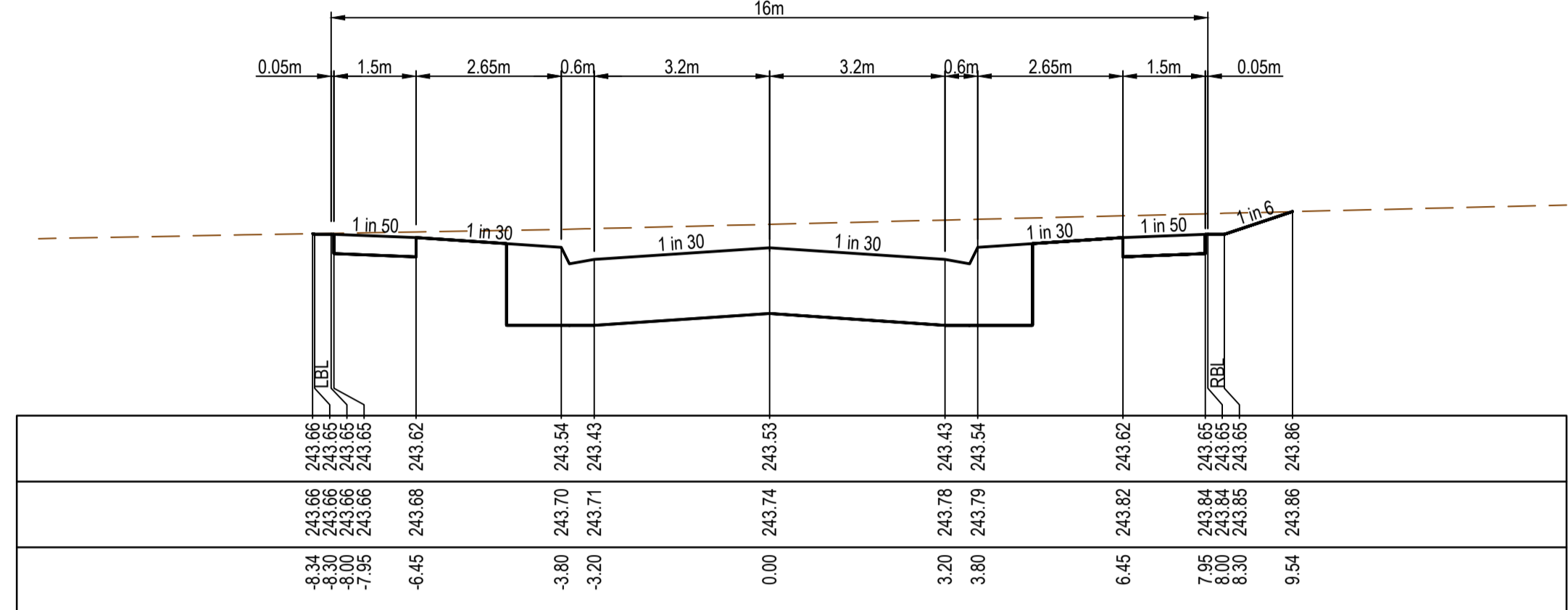
TP CH 148.88



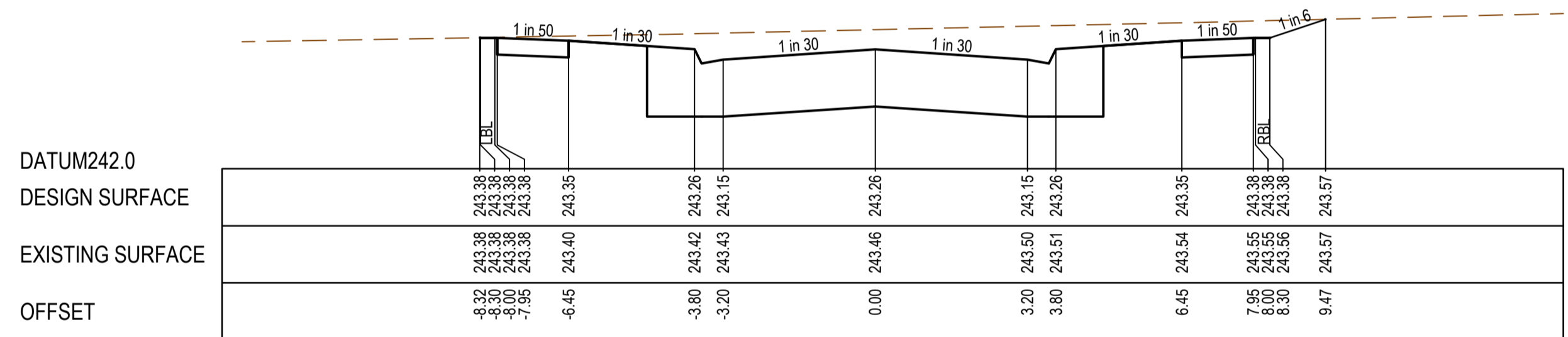
CH 129.85



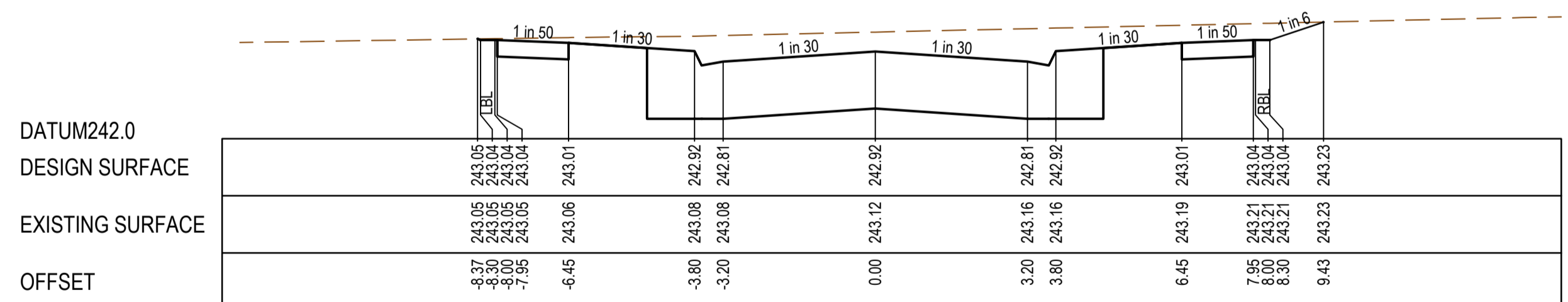
CH 120.68



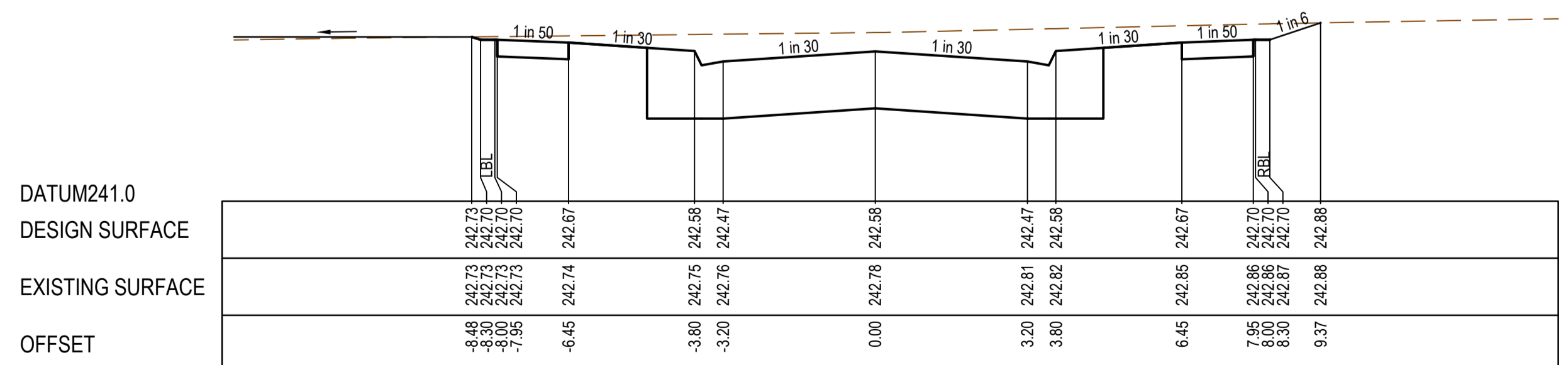
TP CH 228.88



CH 218.68



CH 206.18

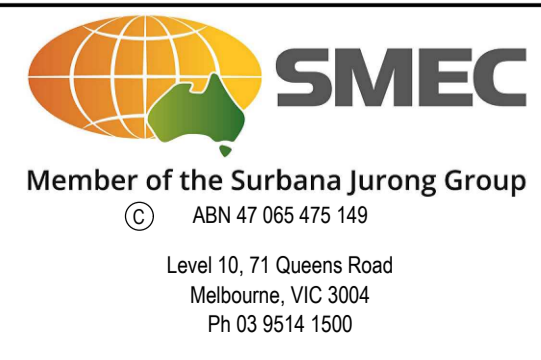
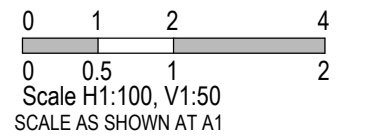


CH 193.68

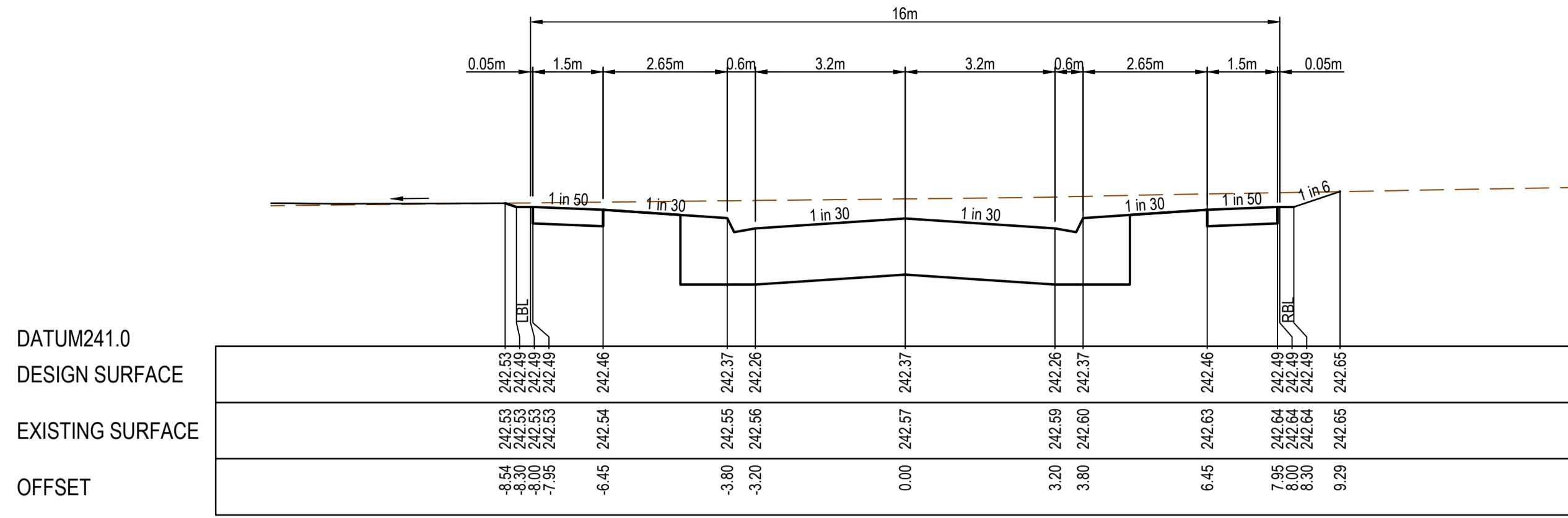
REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	12.09.18	ISSUED FOR CONSTRUCTION	KM/RB	AB
1	26.06.54	AS CONSTRUCTED	KM/KU	AB

**AS CONSTRUCTED**

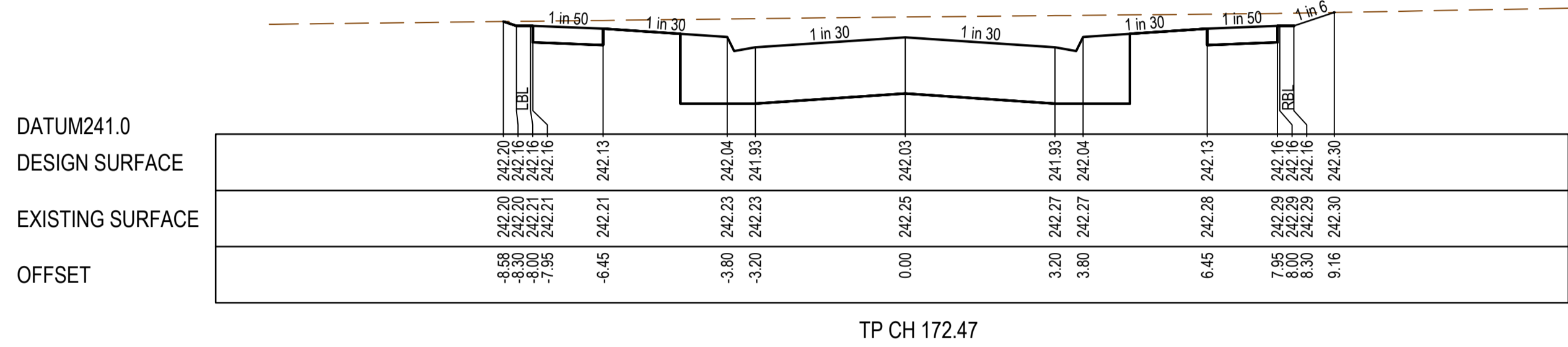
All setting out should be carried out in accordance with MPA/Council's standard drawings or as nominated on hard copy plans provided by SMEC. Any digital information supplied by this office is for information only. Any discrepancies should be discussed with the superintendent.		TITLE	NAME
DESIGNER	R.Barua	DRAFTER	K.Moore
CHECKED	Z.Gosev	AUTHORISED	A.Burrows
REFERENCE No. 1		REFERENCE No. 2	



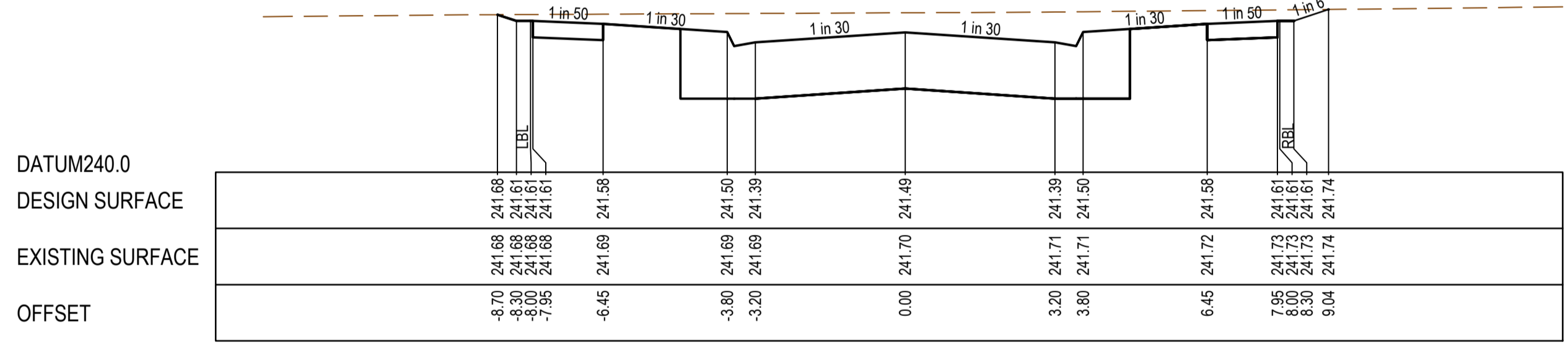
Olivine Estate - Stage 3 Whittlesea City Council Road and Drainage Cross Sections: Eastrow Avenue Ch 120.68 - Ch 228.88		MELWAYS REF <b>9 M2</b>	PROJECT / DRAWING No. <b>1700E-03-12</b>	SHEET No. <b>12 of 27</b>	REVISION <b>0</b>
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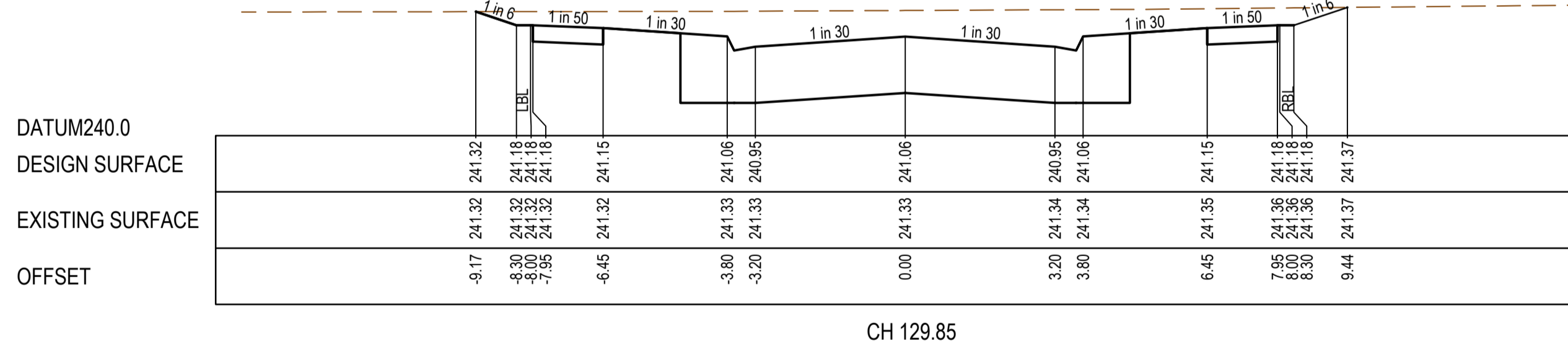
CH 185.85



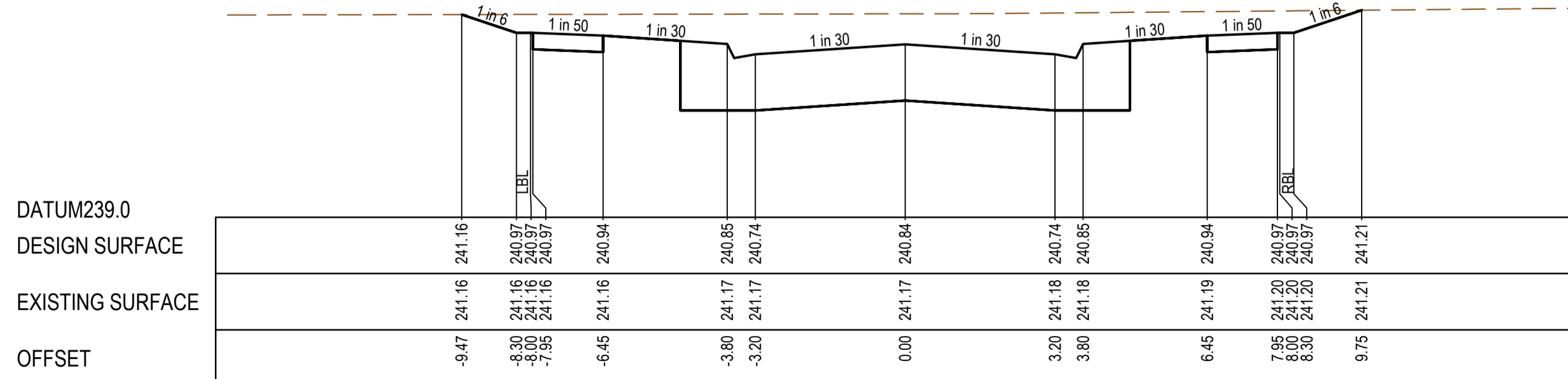
TP CH 172.47



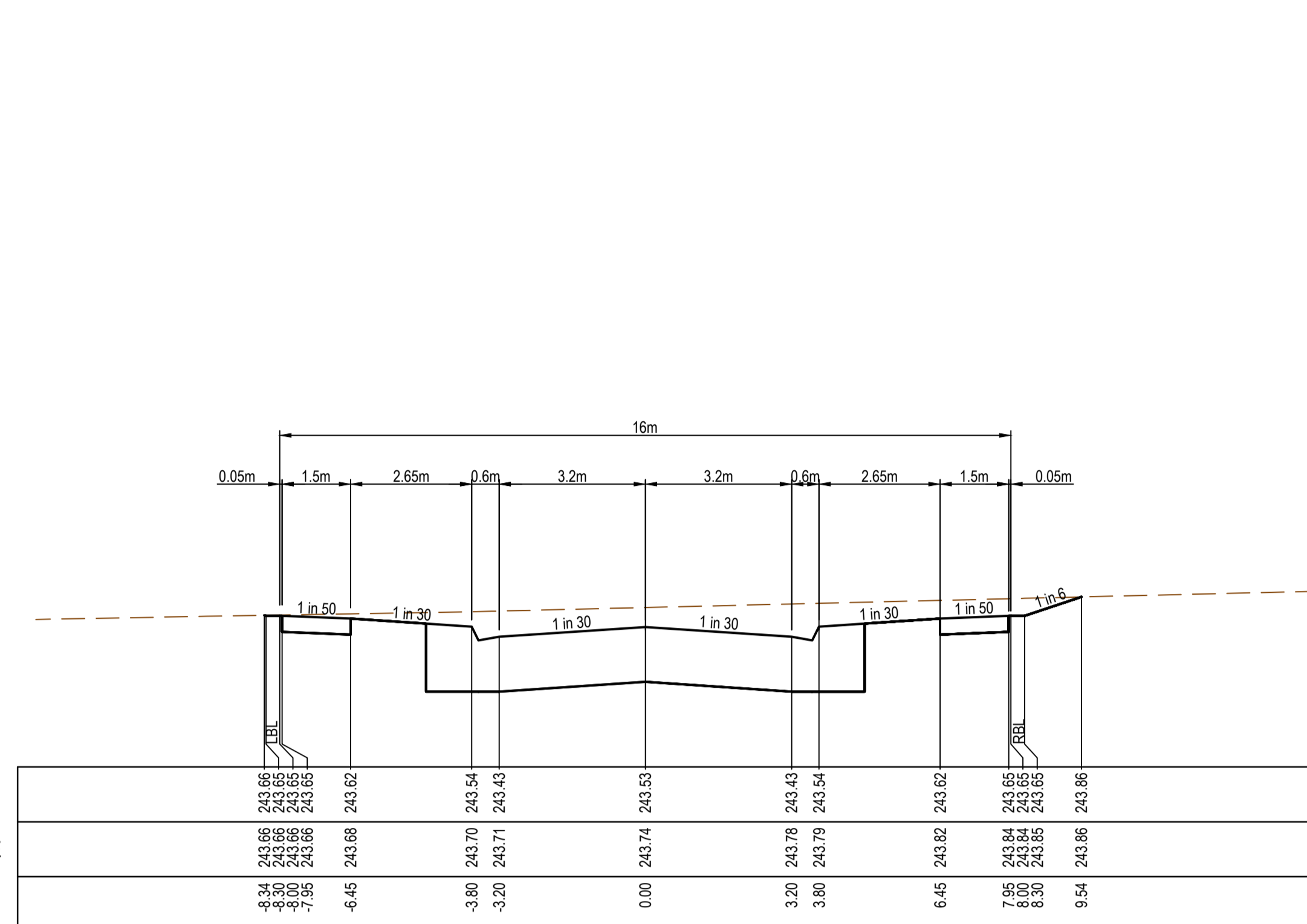
TP CH 148.88



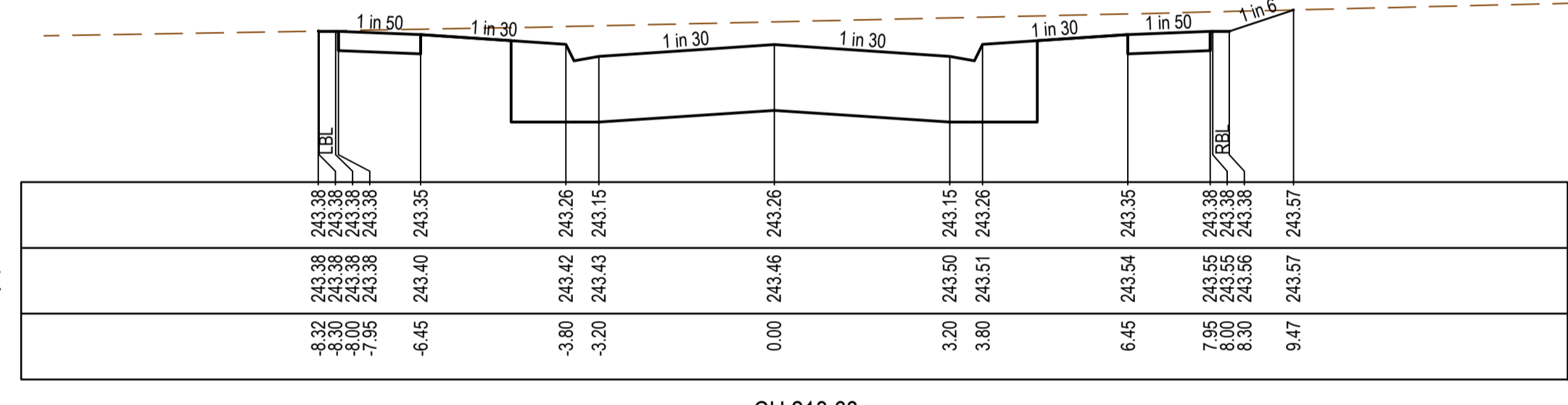
CH 129.85



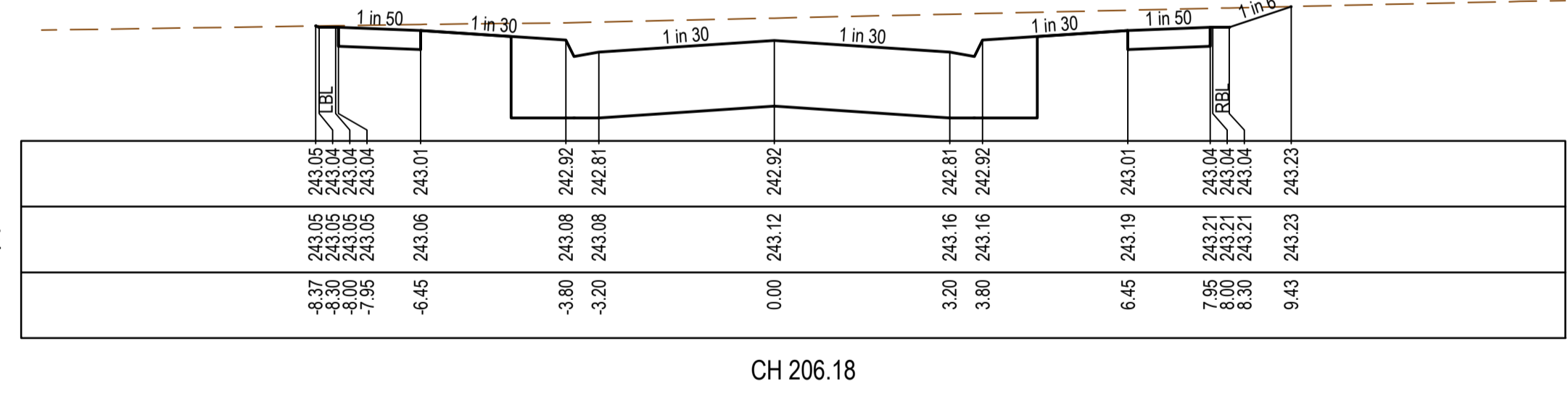
CH 120.68



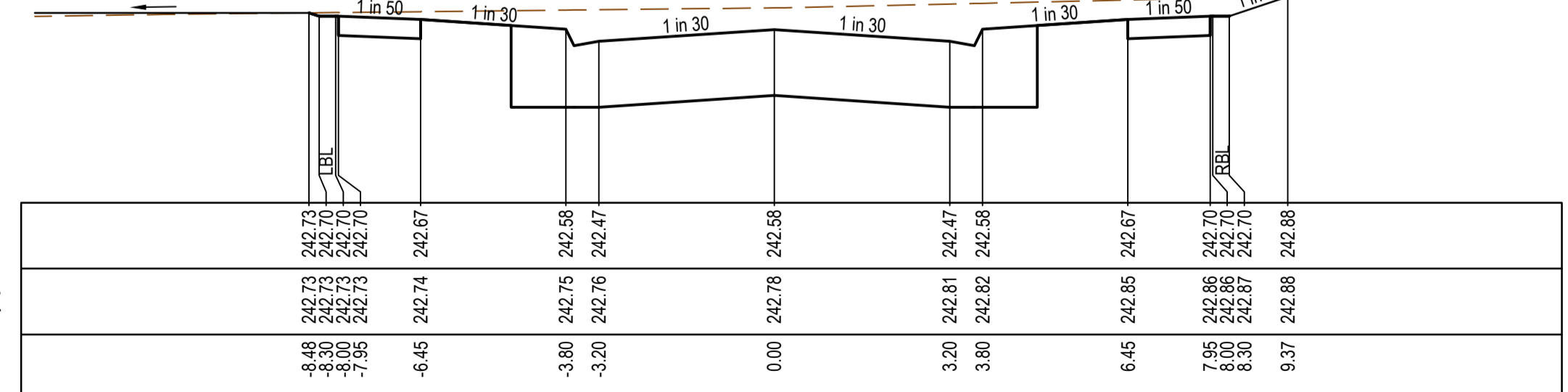
TP CH 228.88



CH 218.68



CH 206.18

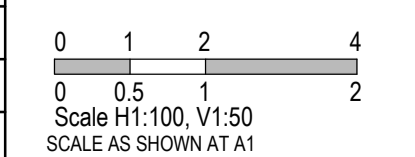


CH 193.68

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
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1	26.06.54	AS CONSTRUCTED	KM/KU	AB

**AS CONSTRUCTED**

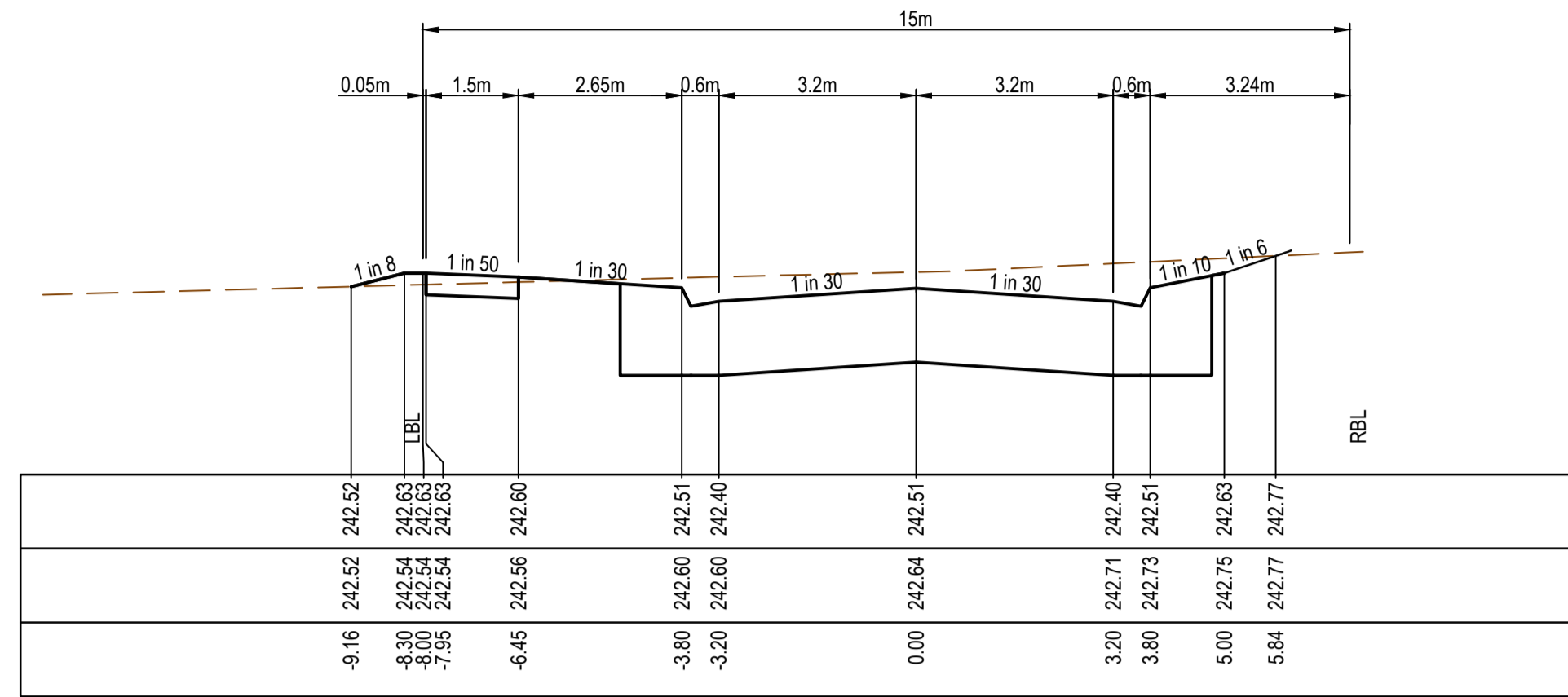
All setting out should be carried out in accordance with MPA/Council's standard drawings or as nominated on hard copy plans provided by SMEC. Any digital information supplied by this office is for information only. Any discrepancies should be discussed with the superintendent.		TITLE	NAME
DRAFTER	R.Barua		
DESIGNER	K.Moore		
CHECKED	Z.Gosev		
AUTHORISED	A.Burrows		
REFERENCE No. 1			
REFERENCE No. 2			



Olivine Estate - Stage 3  
Whittlesea City Council  
Road and Drainage  
Cross Sections: Eastrow Avenue  
Ch 120.68 - Ch 228.88

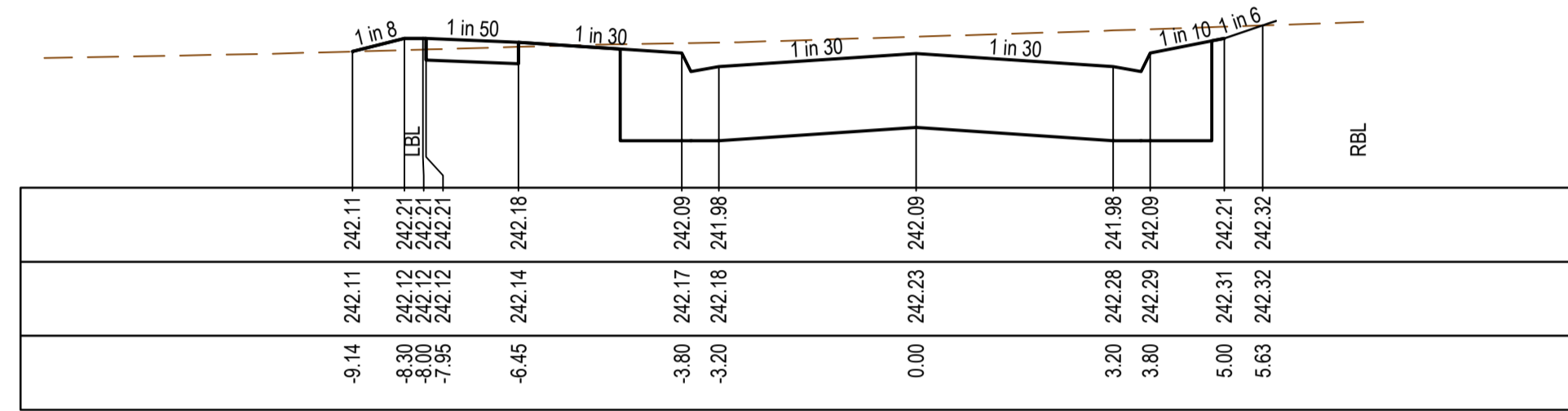
MELWAYS REF	PROJECT / DRAWING No	SHEET No	REVISION
9 M2	1700E-03-12	12 of 27	1

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EXISTING SURFACE  
OFFSET



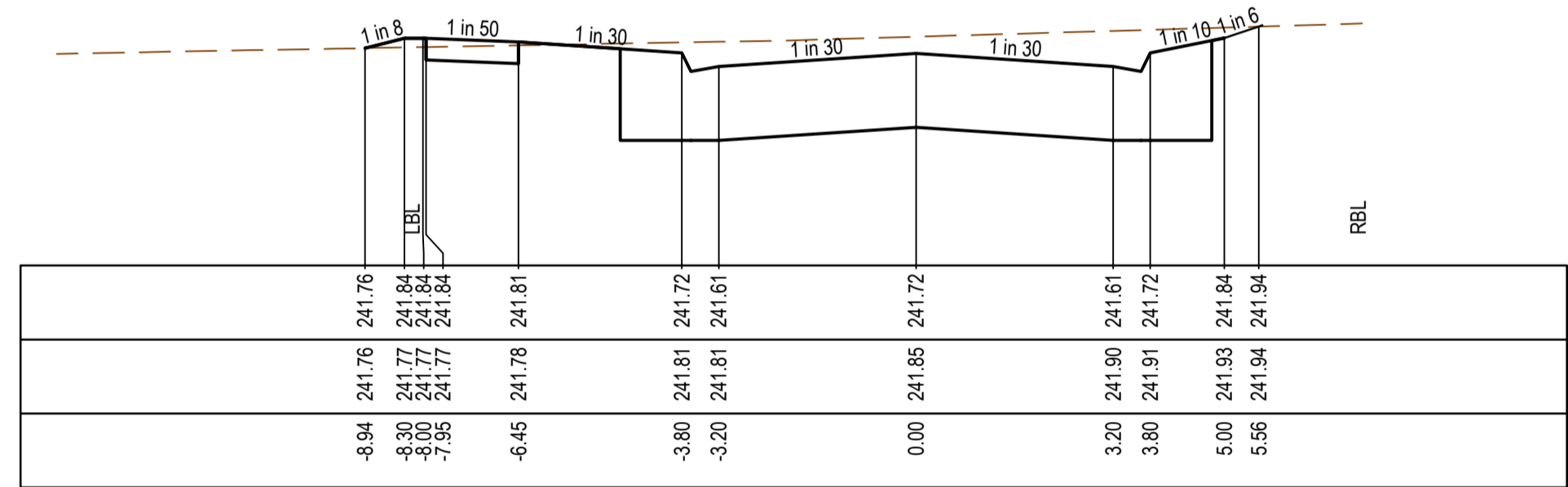
CH 457.69

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EXISTING SURFACE  
OFFSET



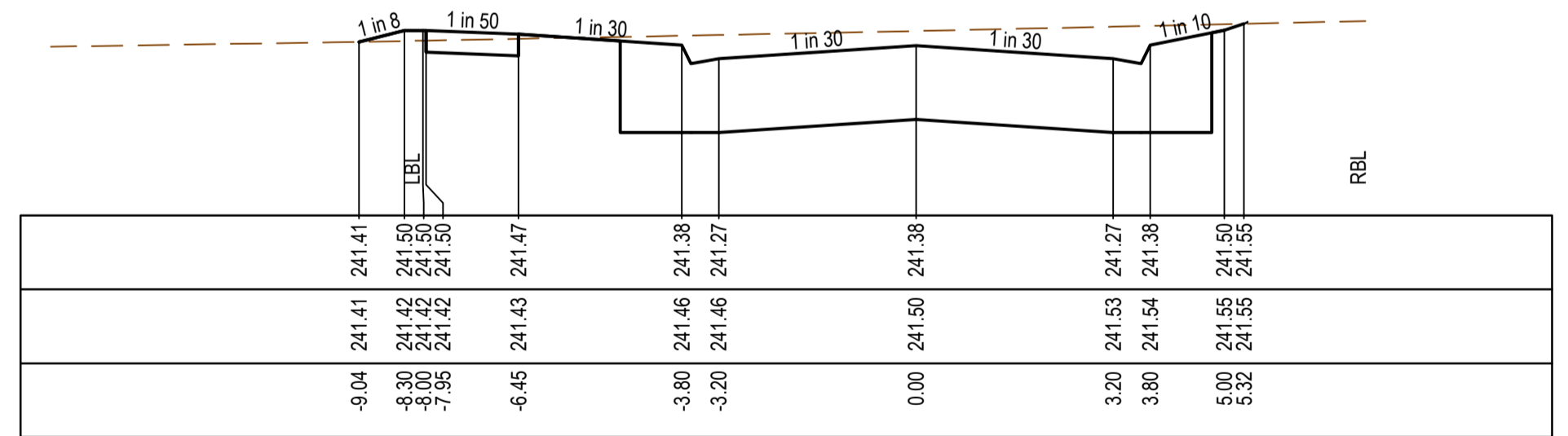
CH 441.69

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DESIGN SURFACE  
EXISTING SURFACE  
OFFSET



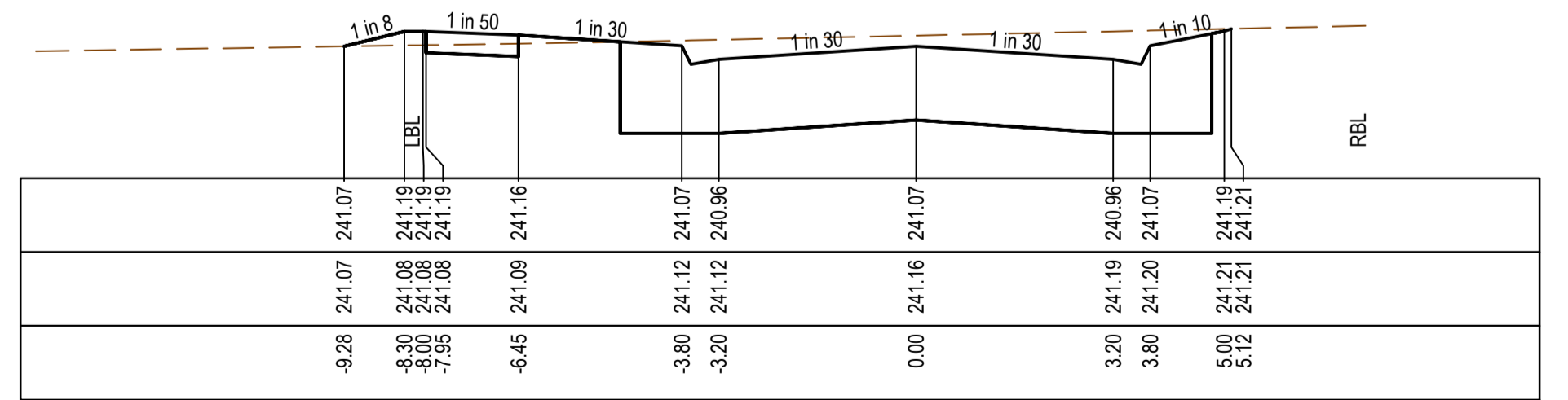
CH 427.69

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DESIGN SURFACE  
EXISTING SURFACE  
OFFSET



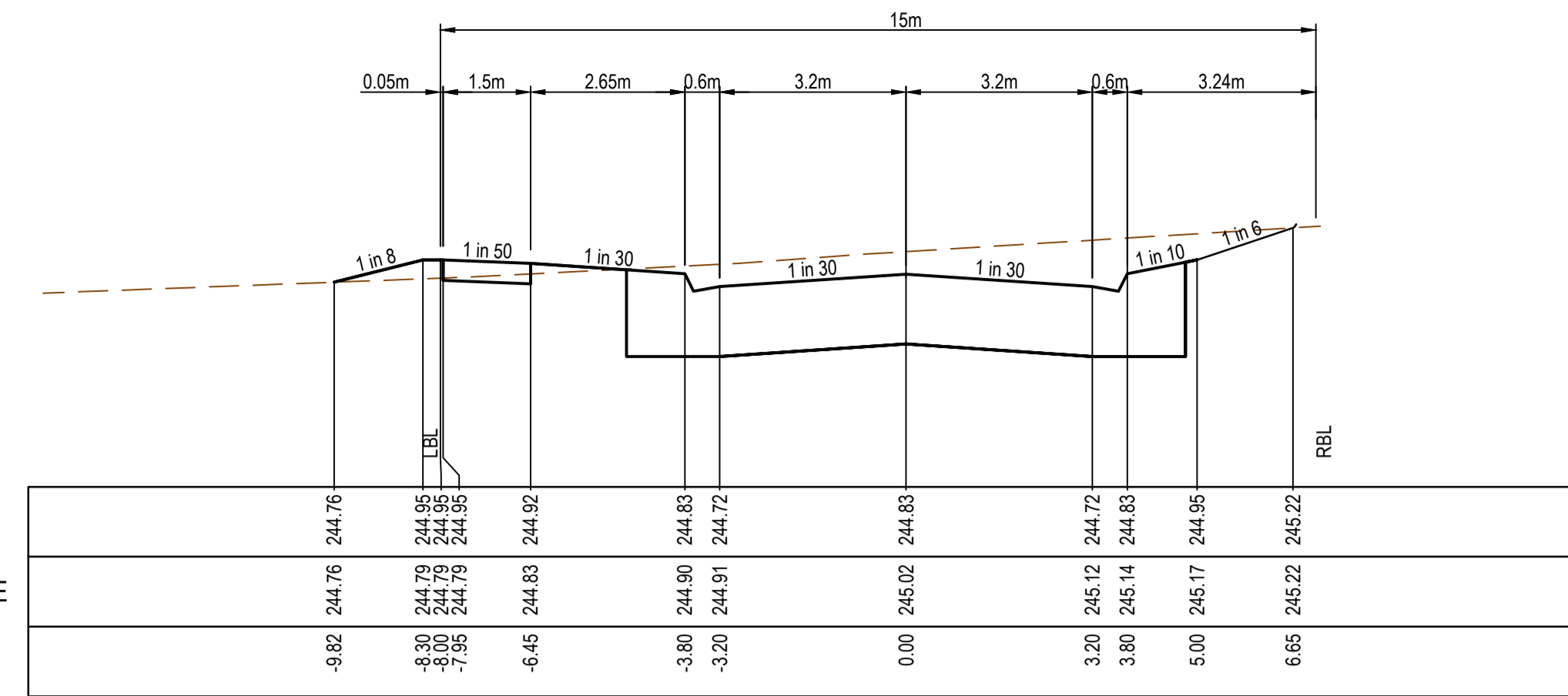
CH 413.69

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DESIGN SURFACE  
EXISTING SURFACE  
OFFSET



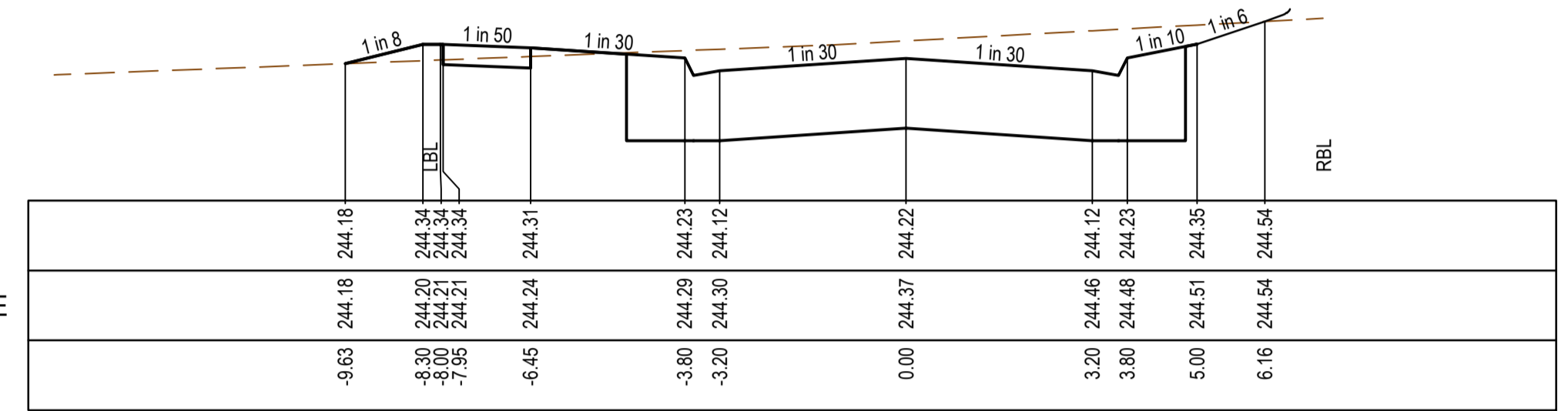
CH 399.69

DATUM243.0  
DESIGN SURFACE  
EXISTING SURFACE  
OFFSET



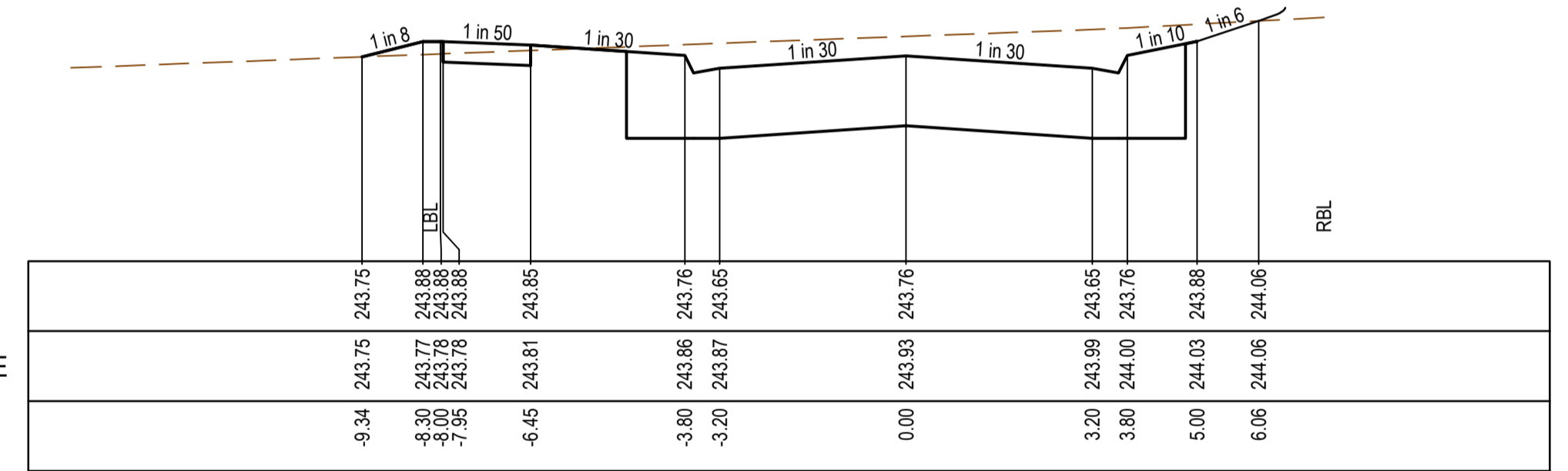
TP CH 525.89

DATUM243.0  
DESIGN SURFACE  
EXISTING SURFACE  
OFFSET



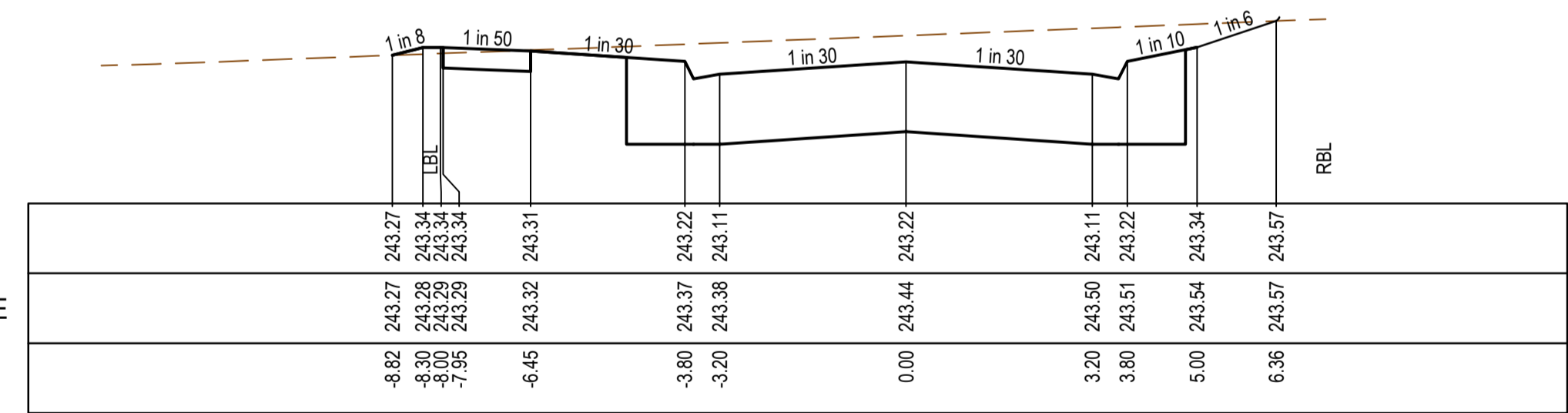
CH 510.00

DATUM242.0  
DESIGN SURFACE  
EXISTING SURFACE  
OFFSET



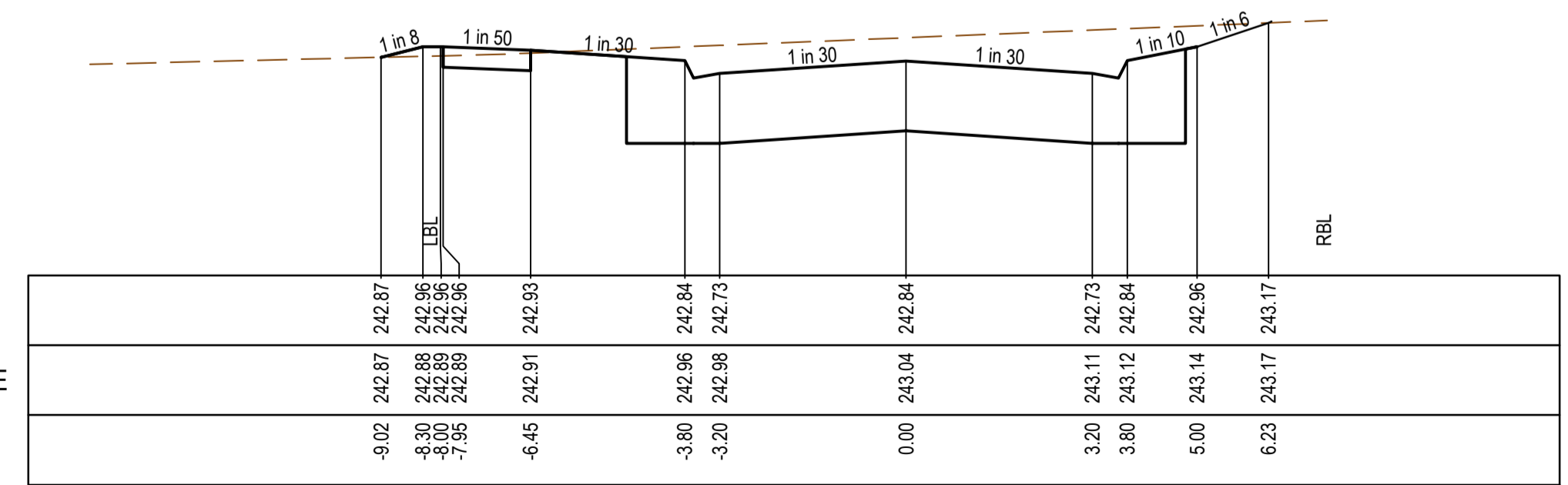
CH 497.69

DATUM242.0  
DESIGN SURFACE  
EXISTING SURFACE  
OFFSET



CH 482.69

DATUM241.0  
DESIGN SURFACE  
EXISTING SURFACE  
OFFSET



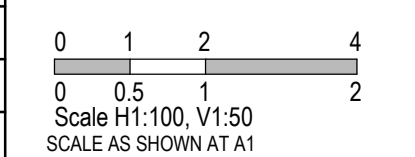
CH 470.19

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	12.09.18	ISSUED FOR CONSTRUCTION	KM/RB	AB
1	26.06.55	AS CONSTRUCTED	KM/KU	AB

**AS CONSTRUCTED**

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

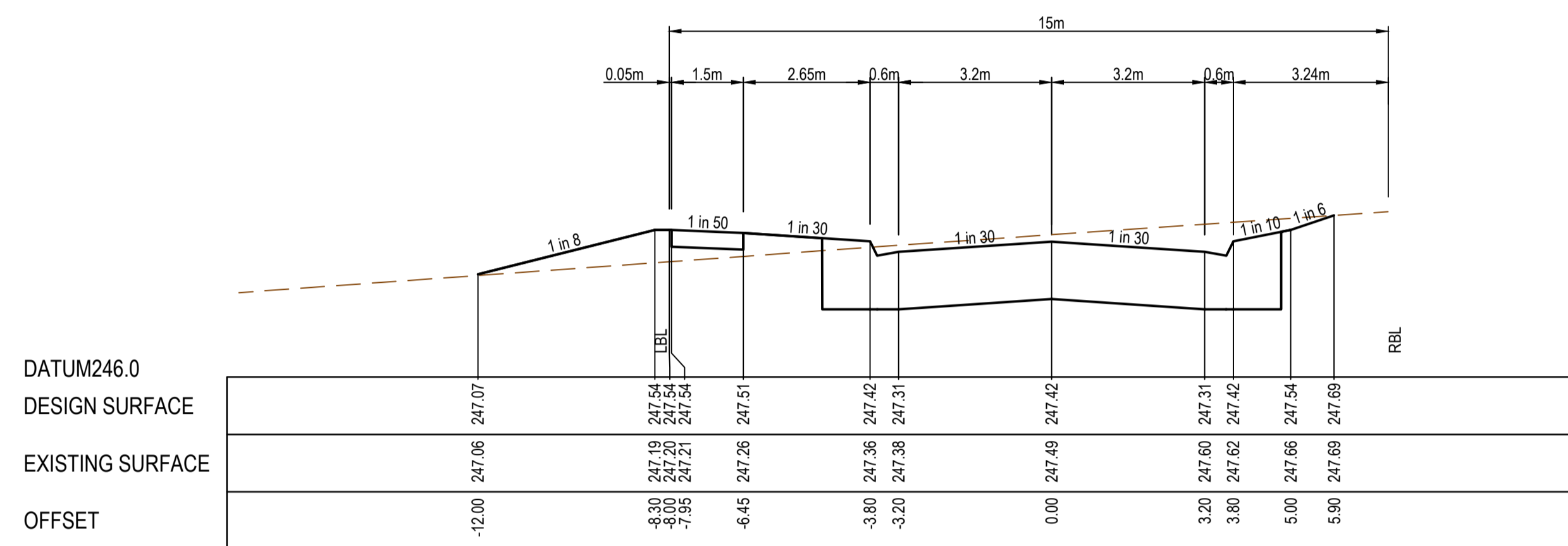


Member of the Surbana Jurong Group  
ABN 47 065 475 149  
Level 10, 71 Queens Road  
Melbourne, VIC 3004  
Ph 03 9514 1500

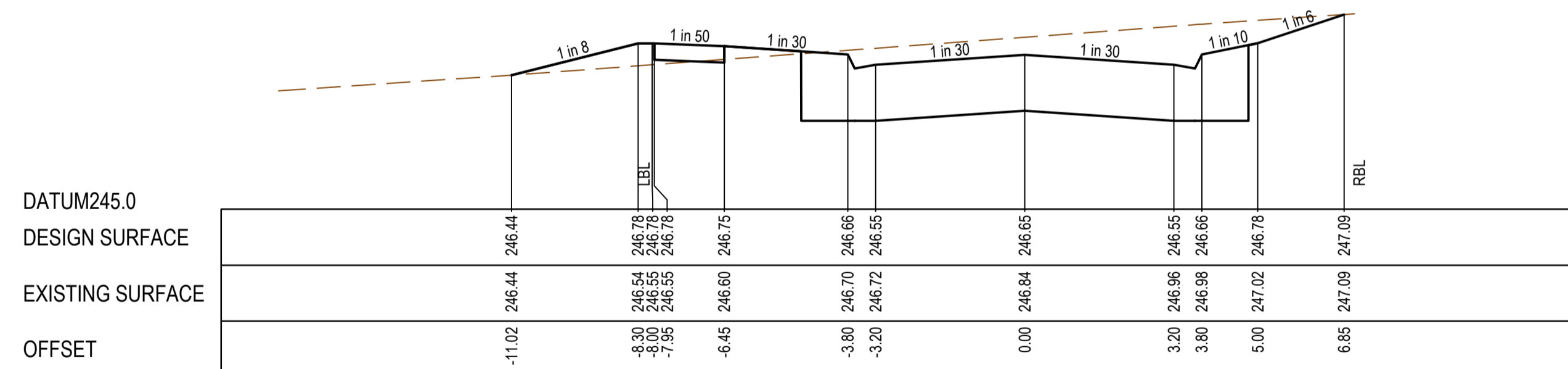
Olivine Estate - Stage 3  
Whittlesea City Council  
Road and Drainage  
Cross Sections: Oriel Road  
Ch 399.69 - Ch 525.89

MELWAYS REF	PROJECT / DRAWING No.	SHEET No.	REVISION
9 M2	1700E-03-13	13 of 27	1

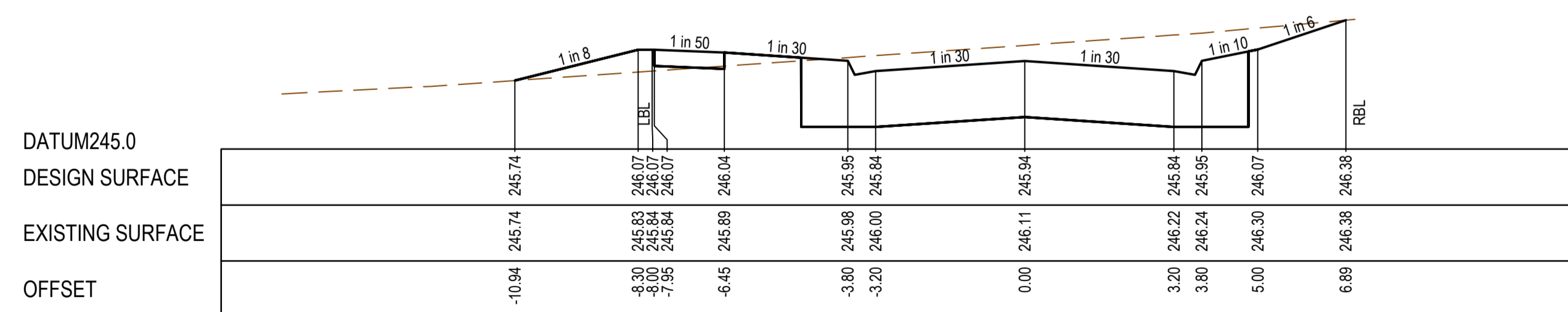
STRUCTURAL FILL REQUIRED UNDER PAVEMENT AND FOOTPATHS WHERE CONSTRUCTED ABOVE EXISTING SURFACE



CH 577.69

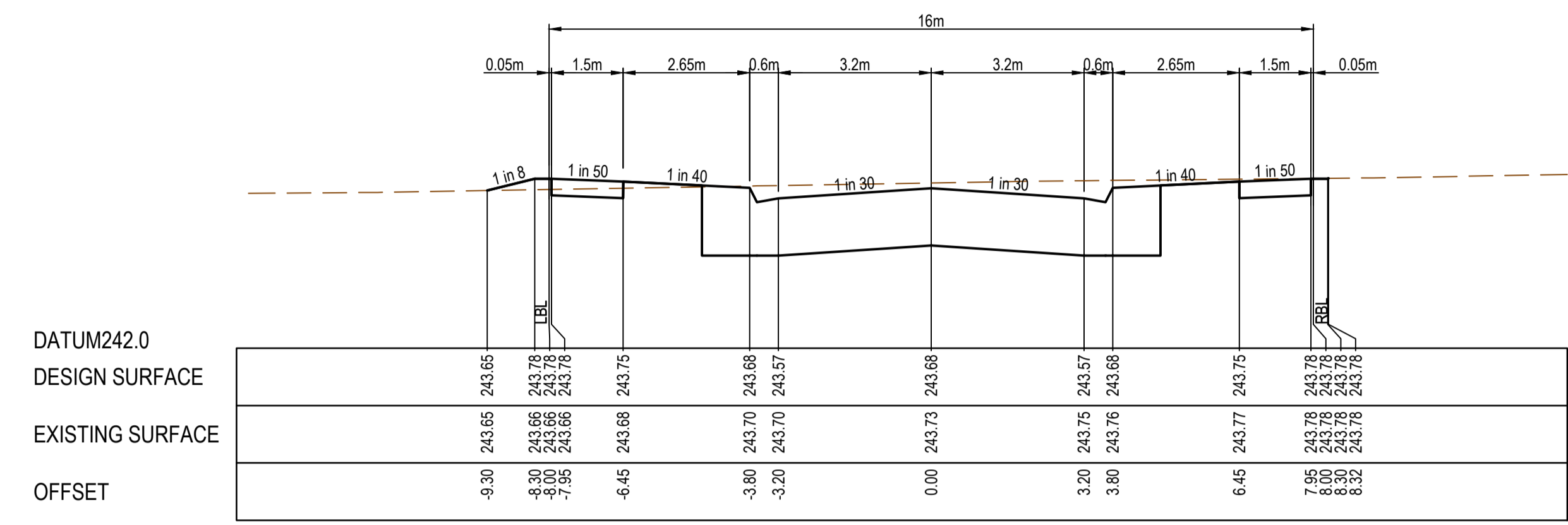


CH 563.69

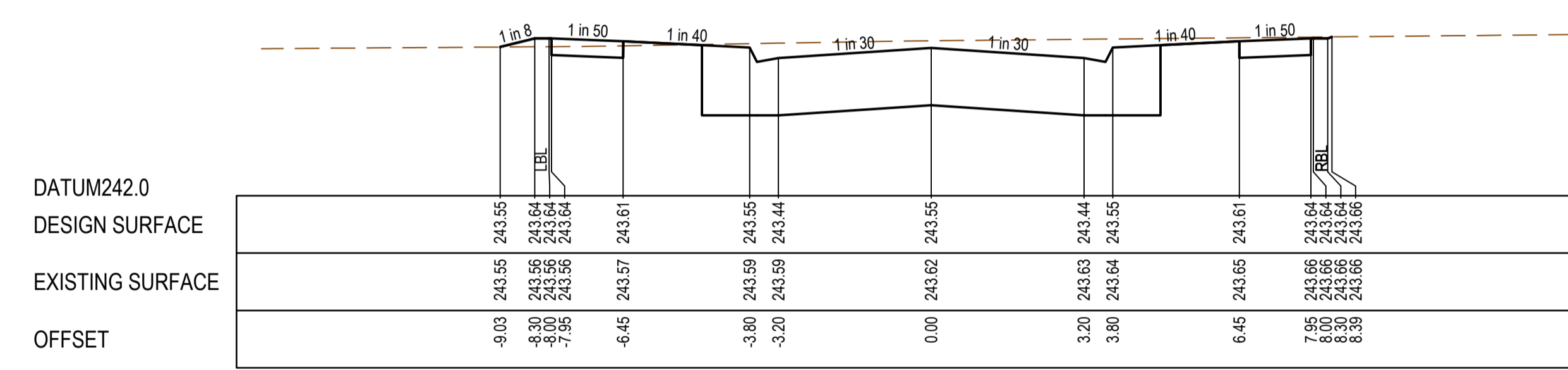


CH 549.49

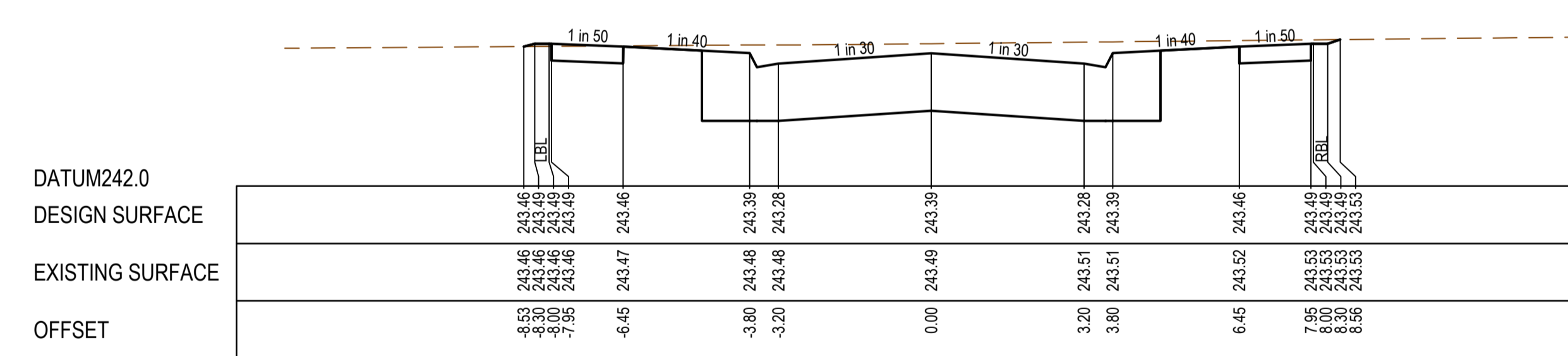
**ORIEL ROAD**



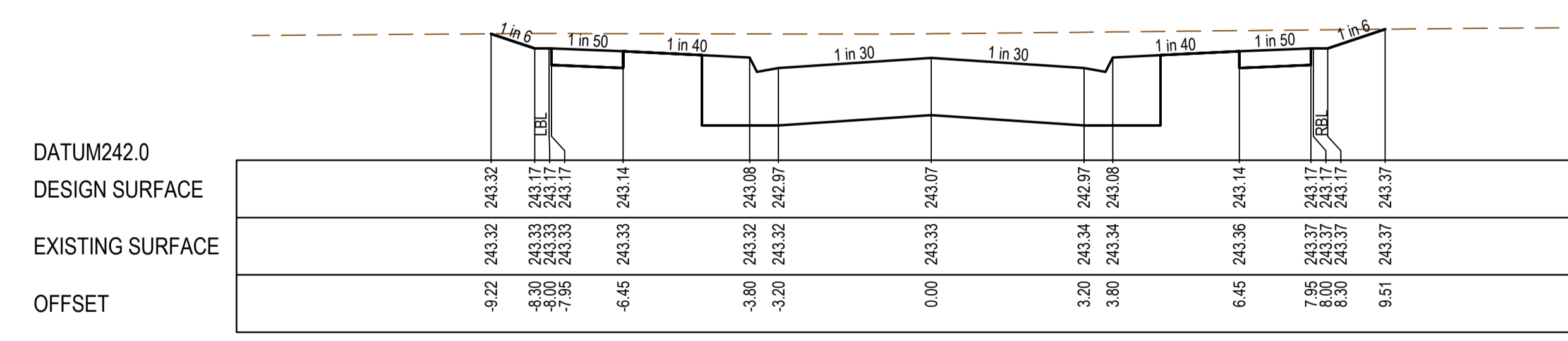
CH 40.00



CH 33.00



CH 25.00



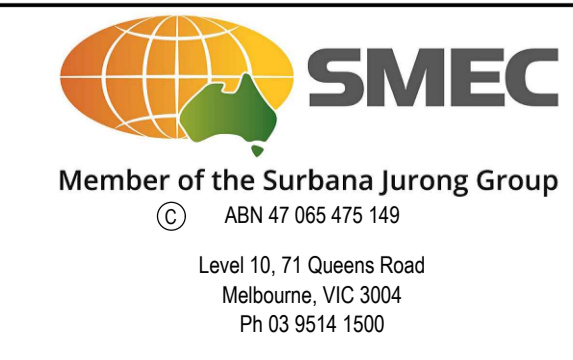
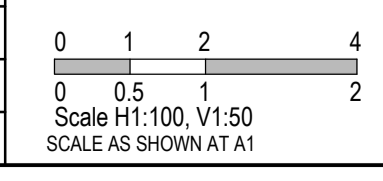
TP CH 13.00

**ACADEMY LANE**

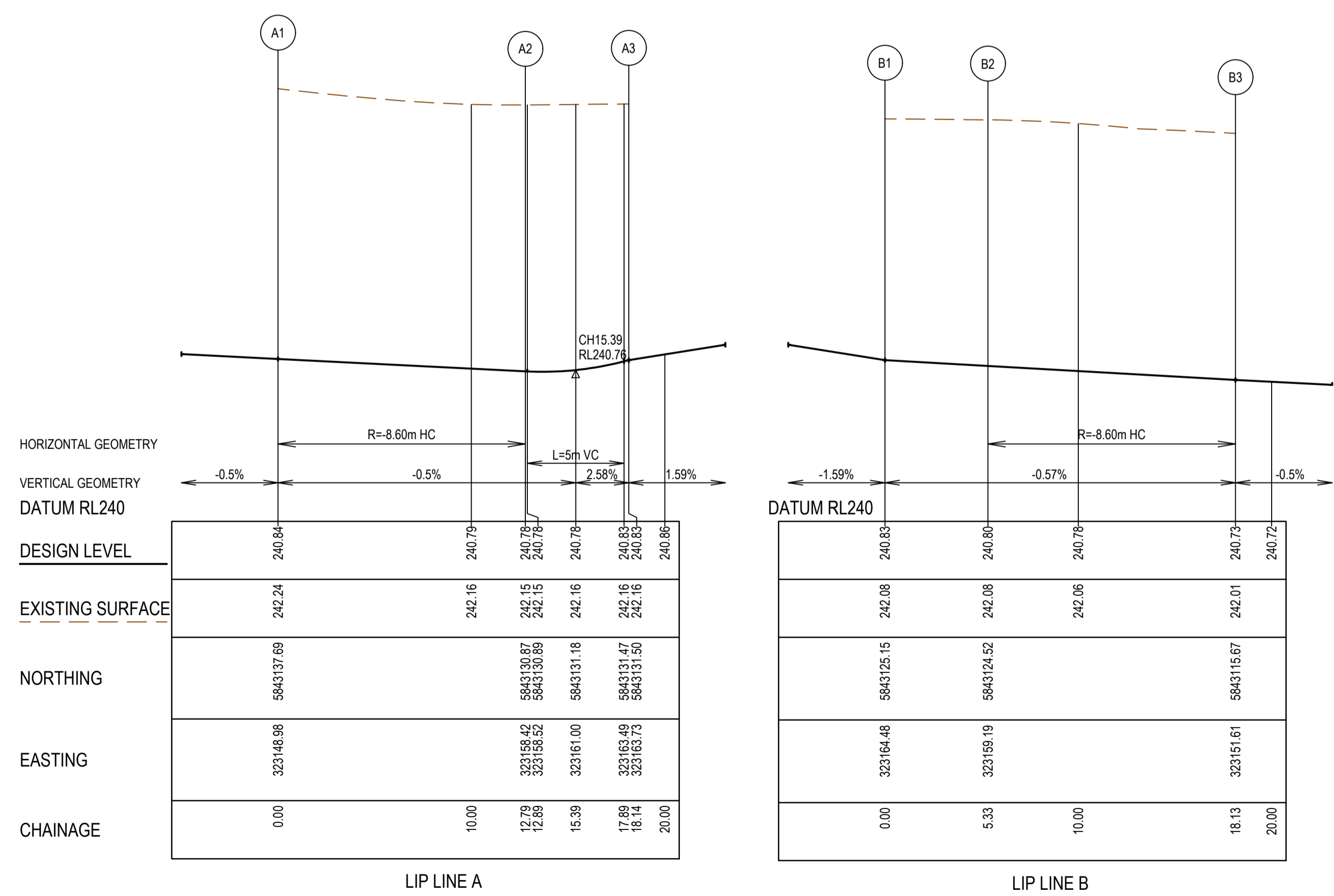
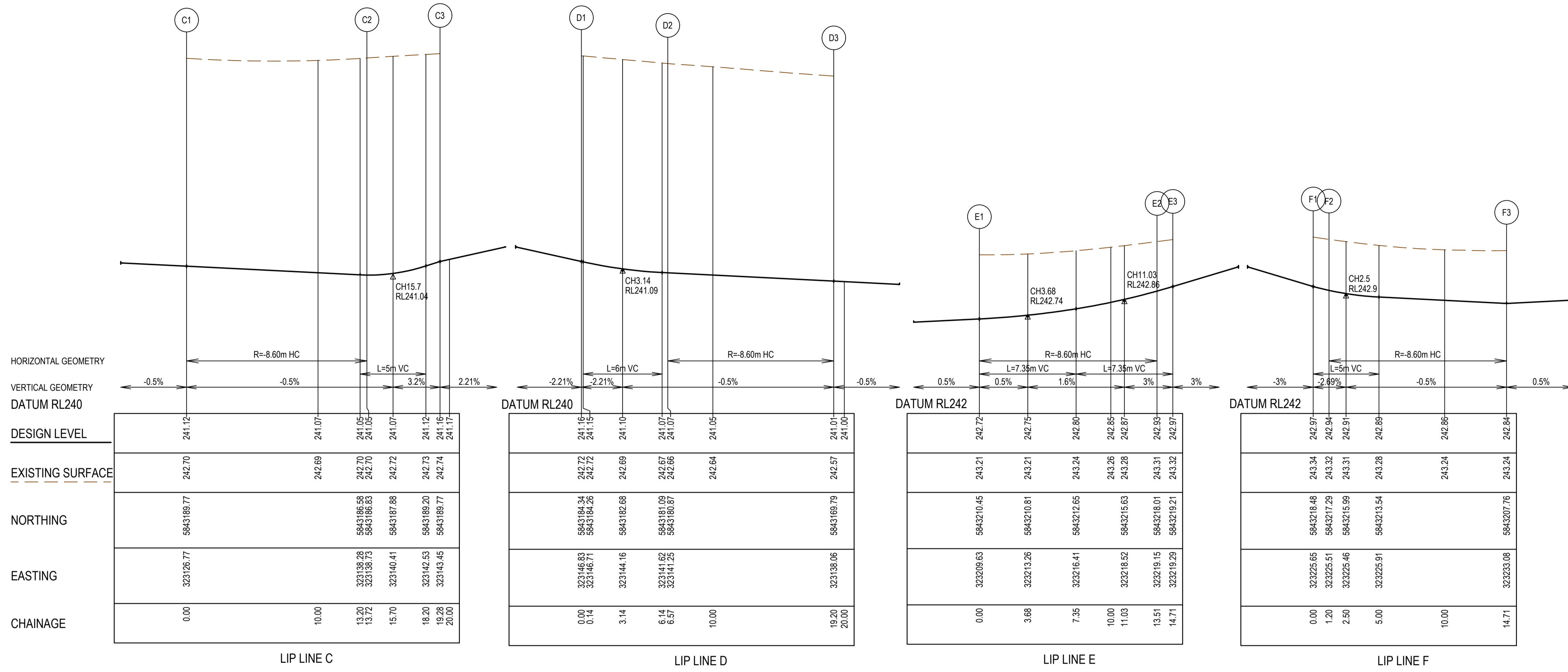
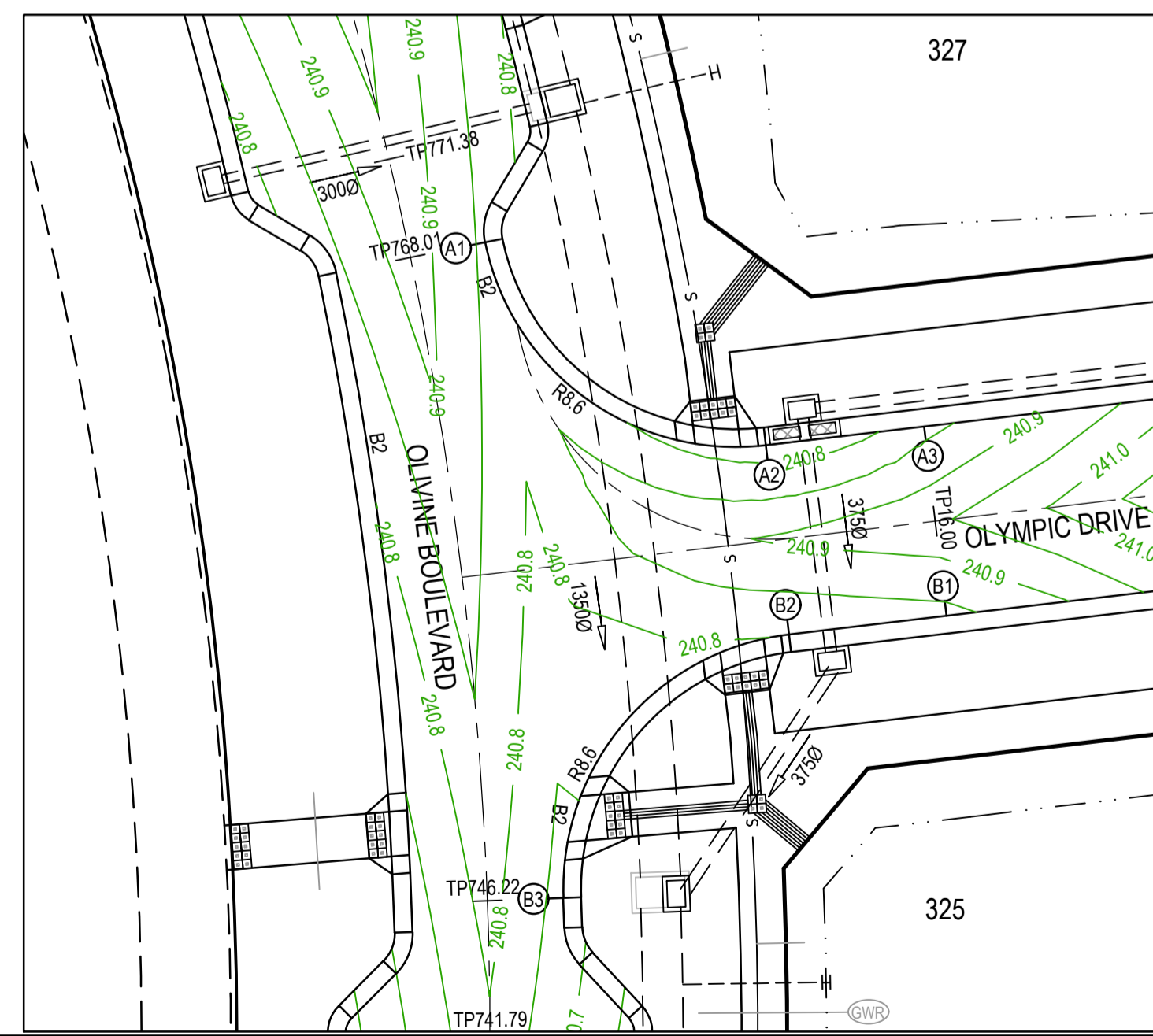
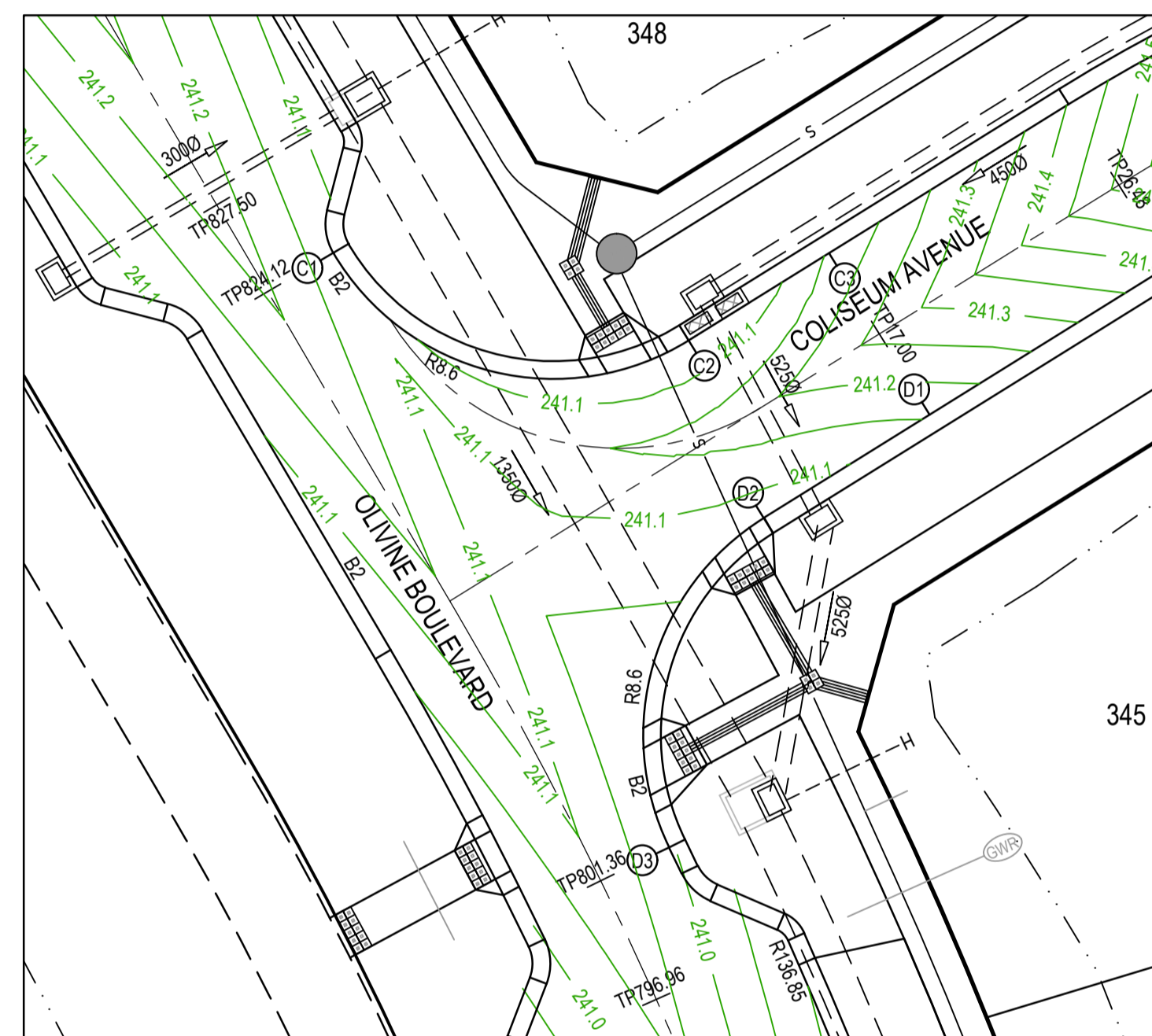
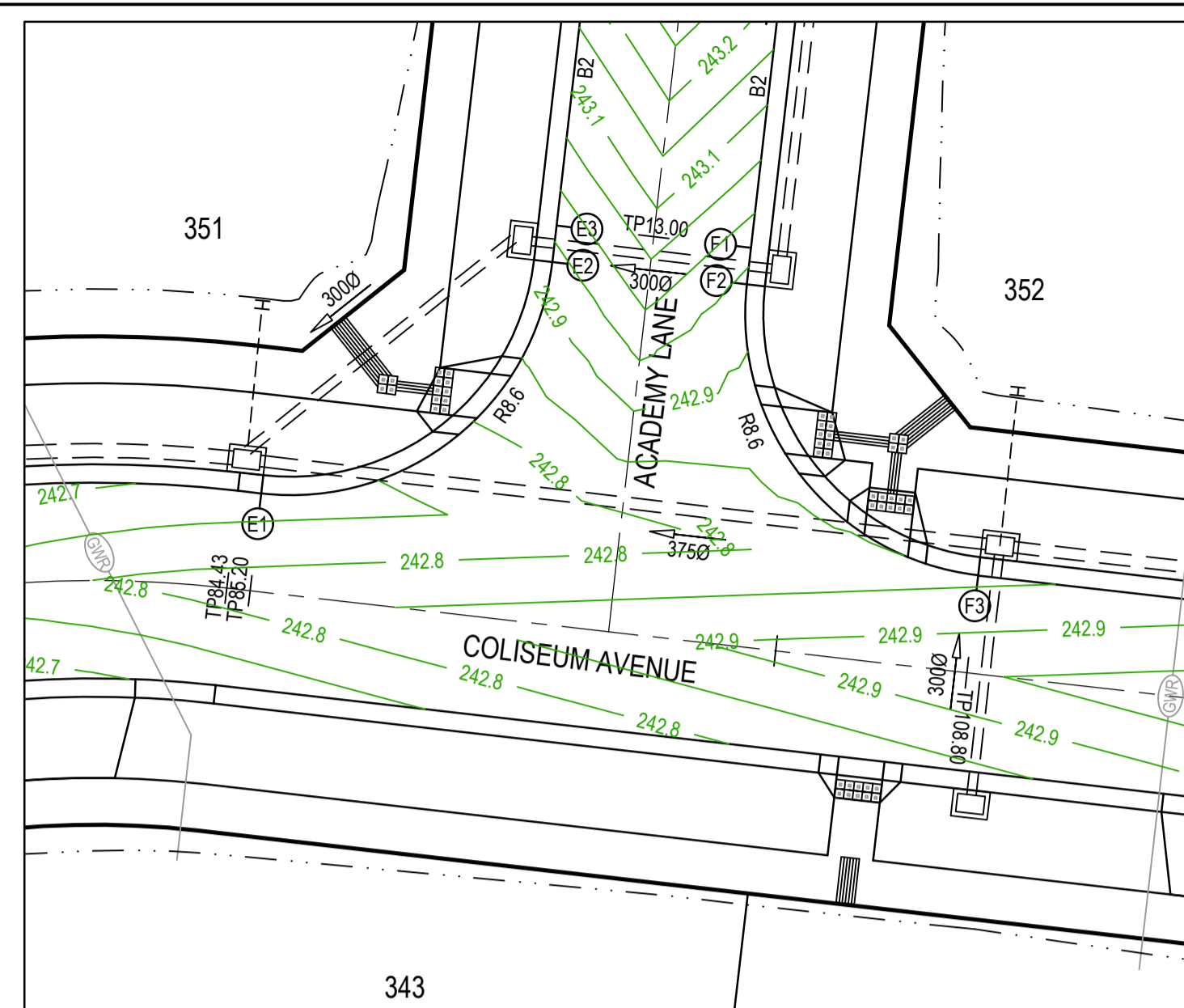
REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	12.09.18	ISSUED FOR CONSTRUCTION	KM/RB	AB
1	26.06.56	AS CONSTRUCTED	KM/KU	AB

**AS CONSTRUCTED**

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



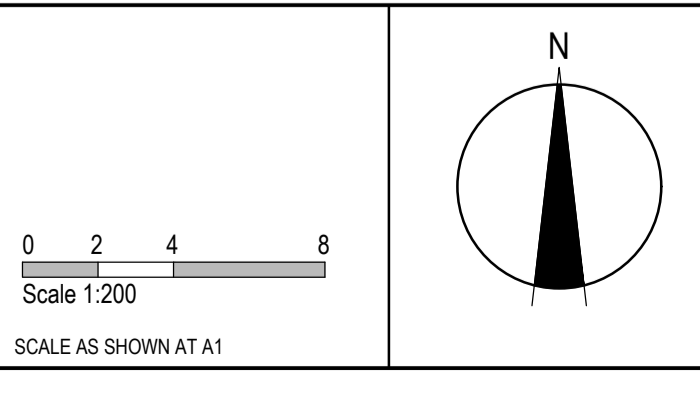
Olivine Estate - Stage 3 Whittlesea City Council Road and Drainage Cross Sections: Oriel Road & Academy Lane Ch 549.49 - Ch 577.69 & Ch 13.00 - Ch 40.00			
MELWAYS REF <b>9 M2</b>	PROJECT / DRAWING No. <b>1700E-03-14</b>	SHEET No. <b>14 of 27</b>	REVISION <b>1</b>



REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	12.09.18	ISSUED FOR CONSTRUCTION	KMRB	AB
1	26.06.19	AS CONSTRUCTED	KMKU	AB

**AS CONSTRUCTED**

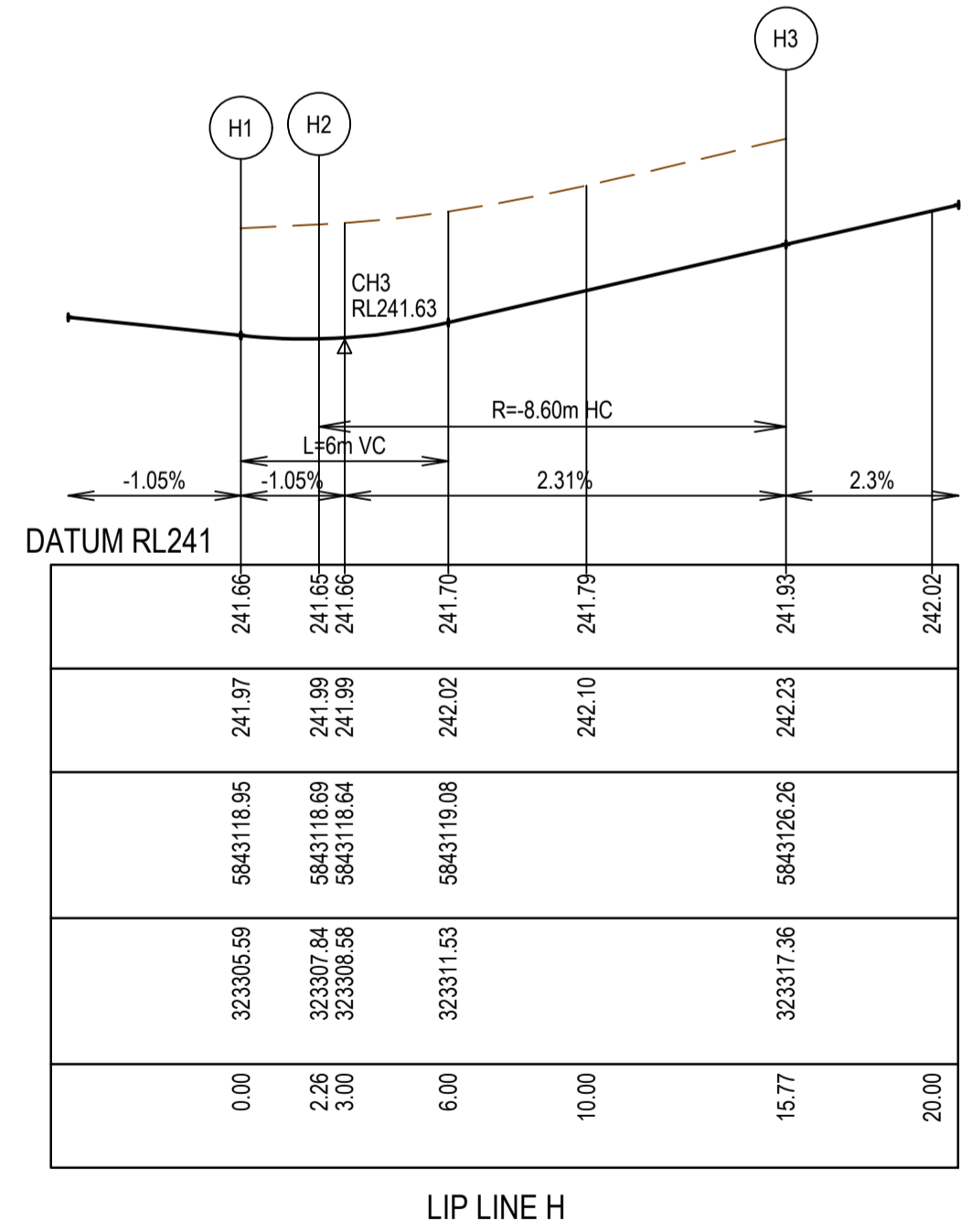
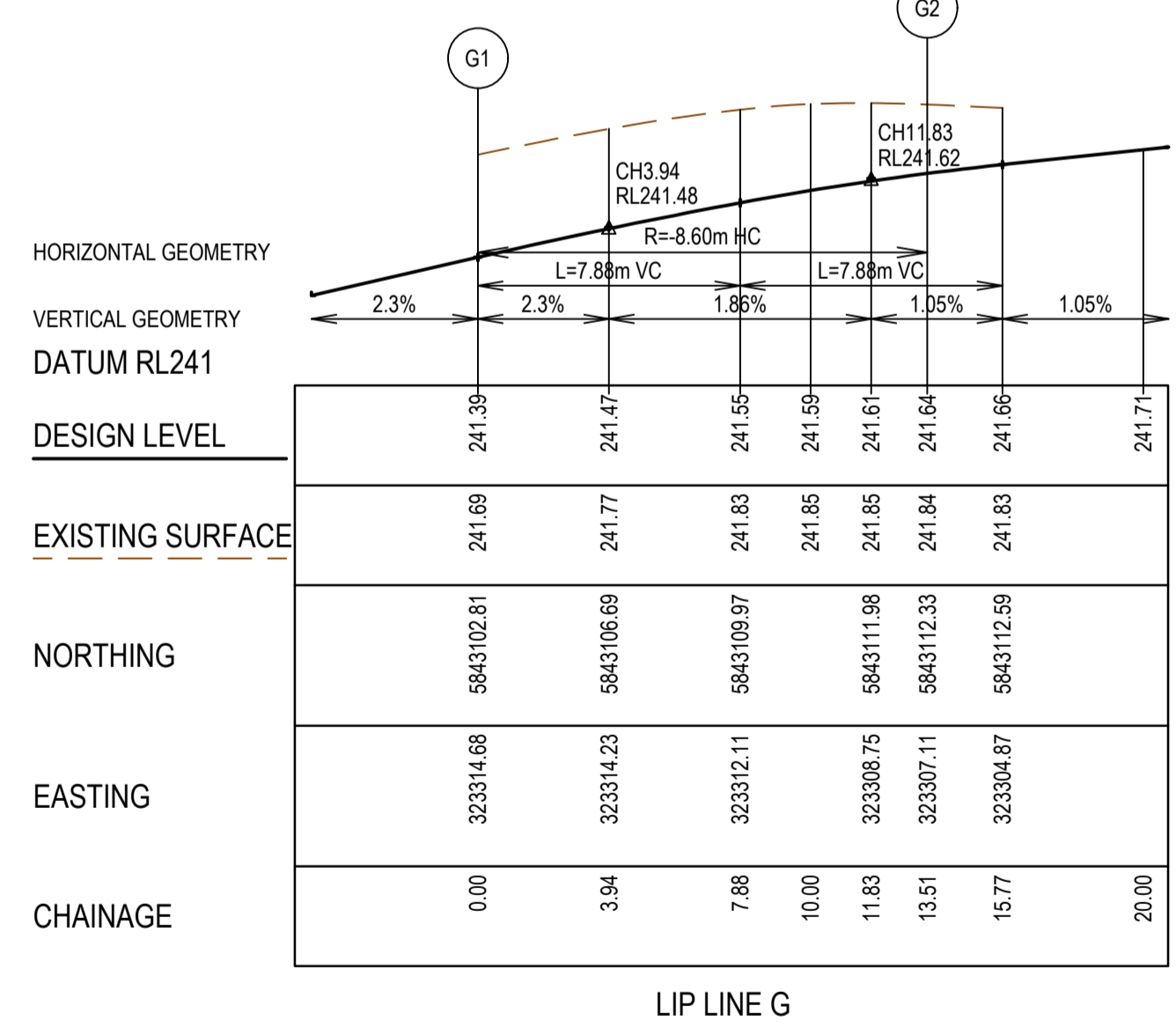
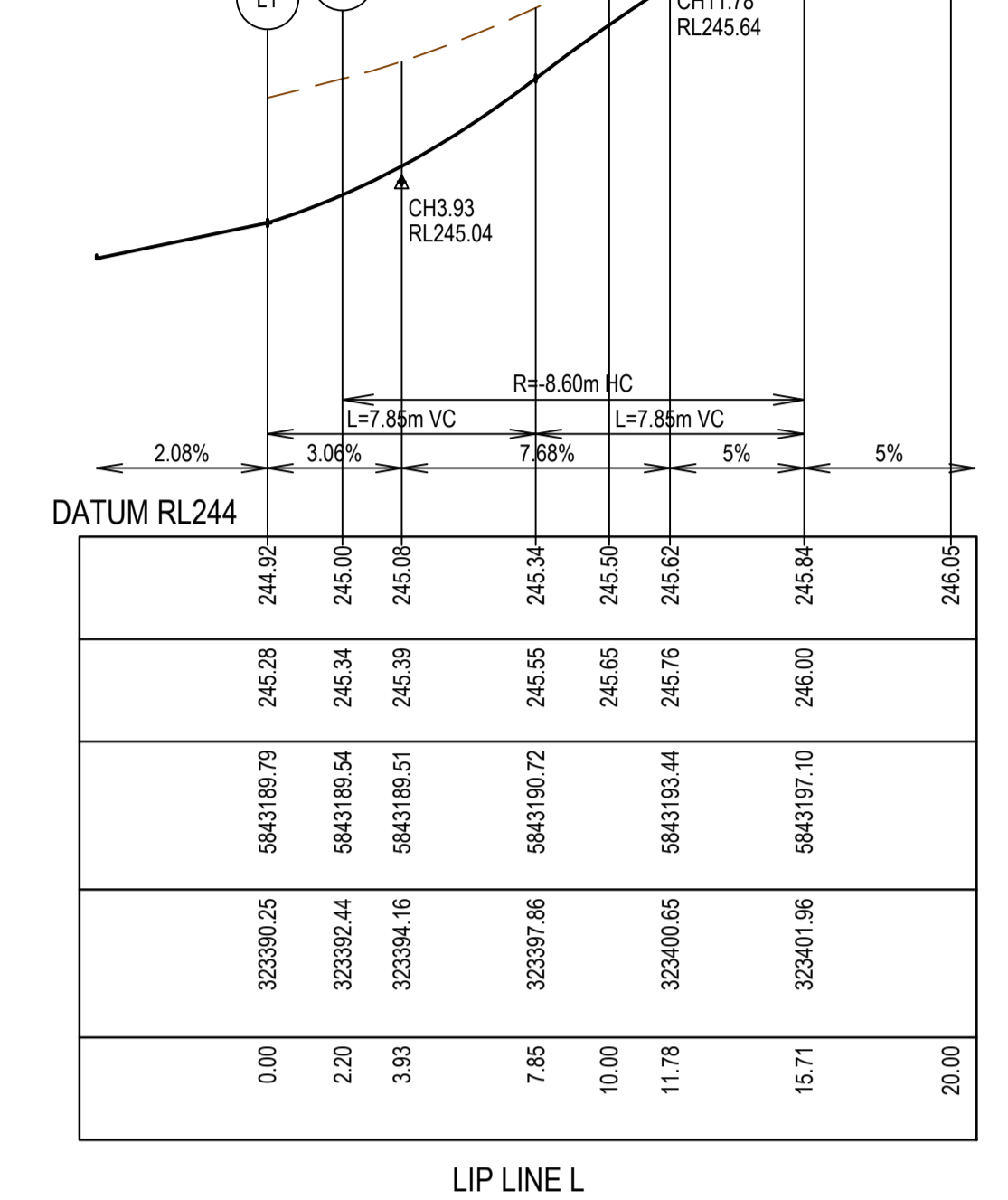
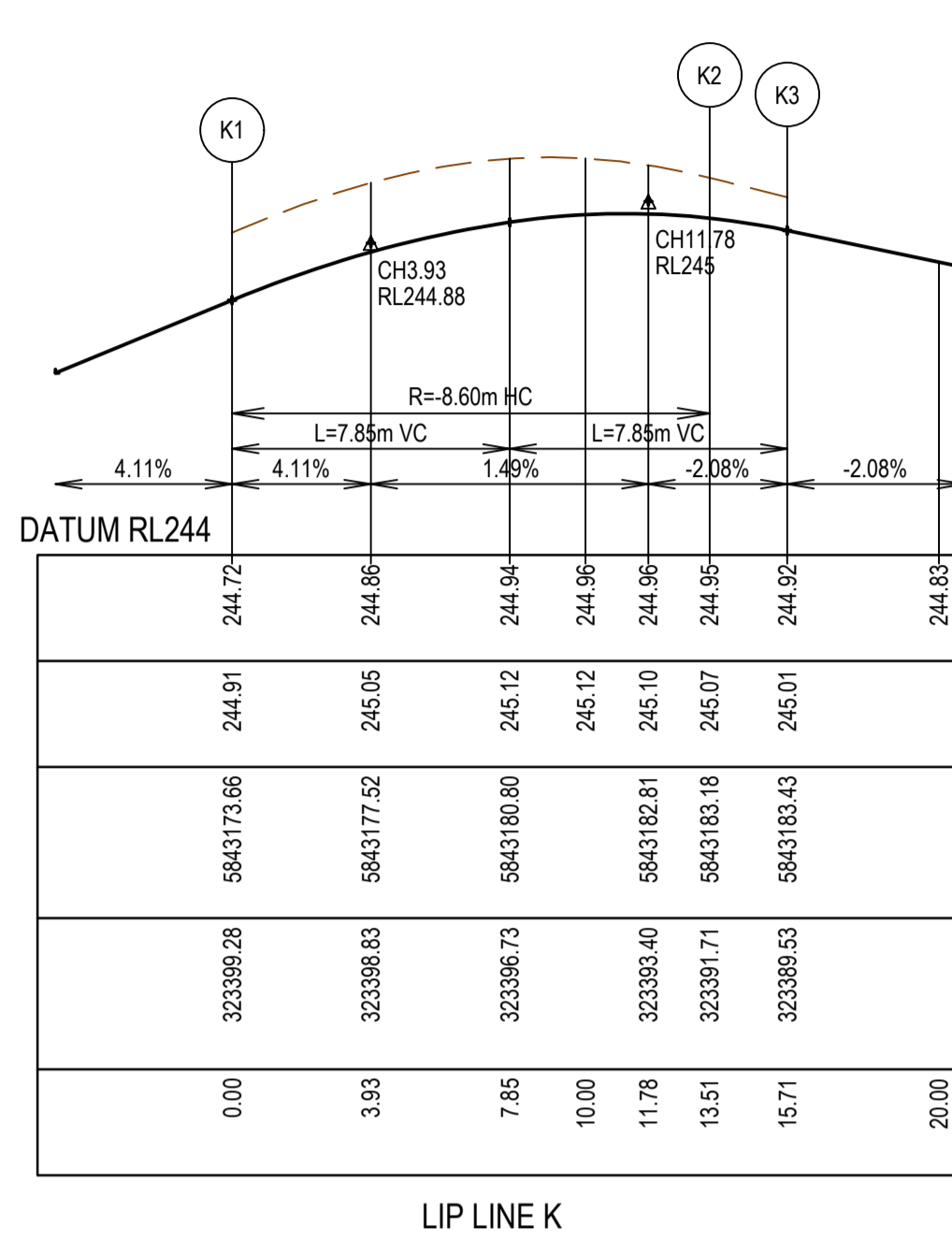
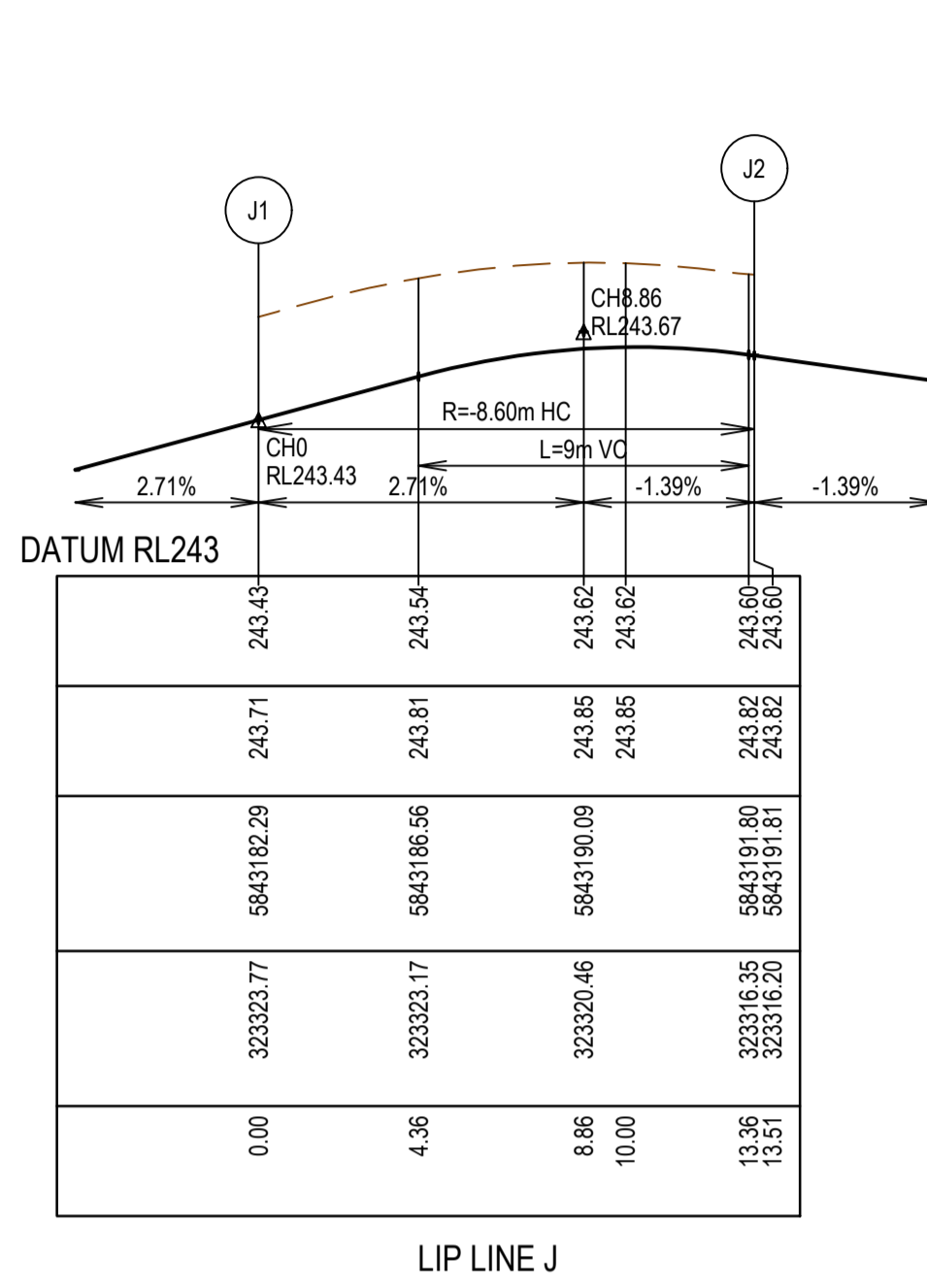
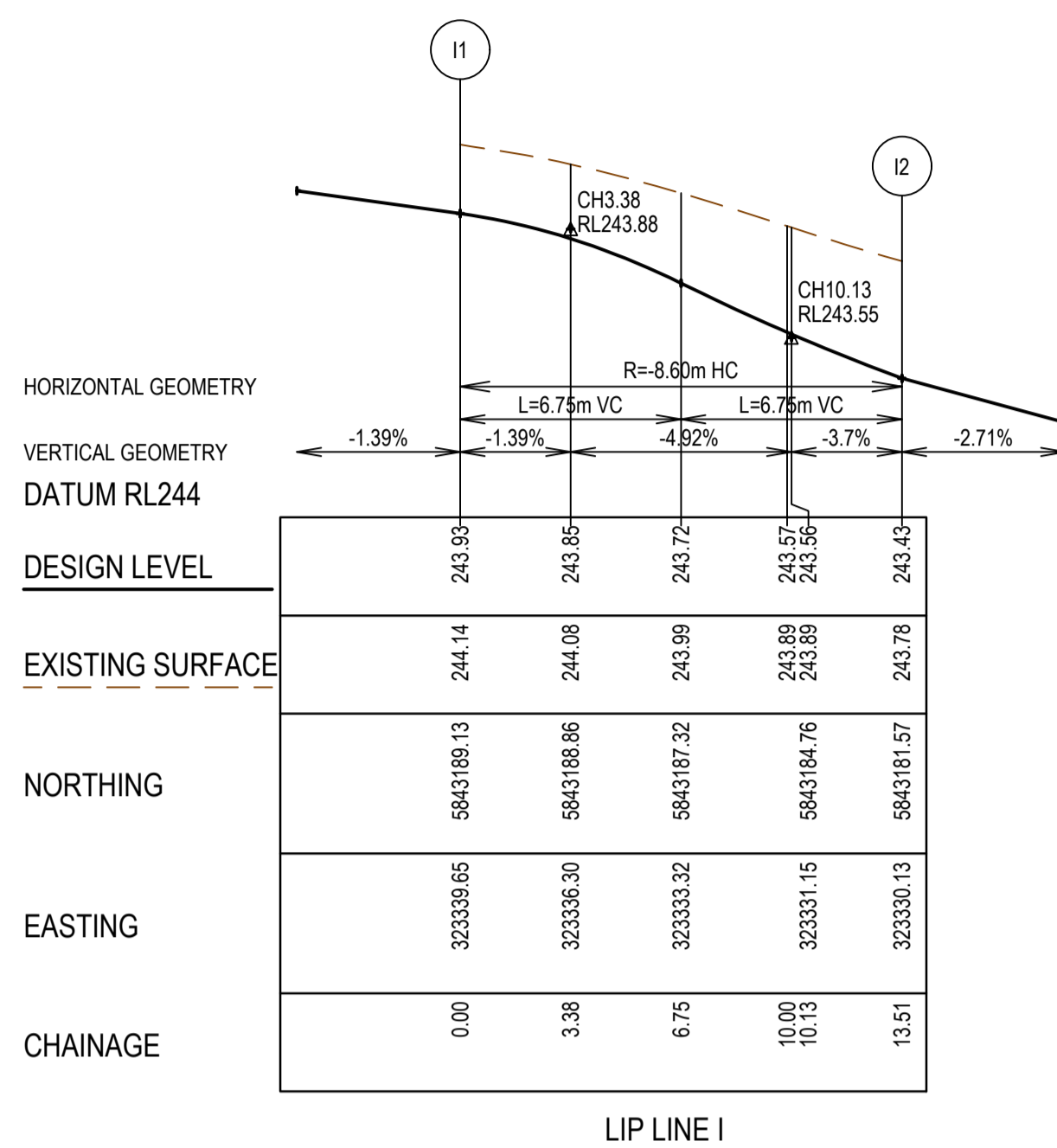
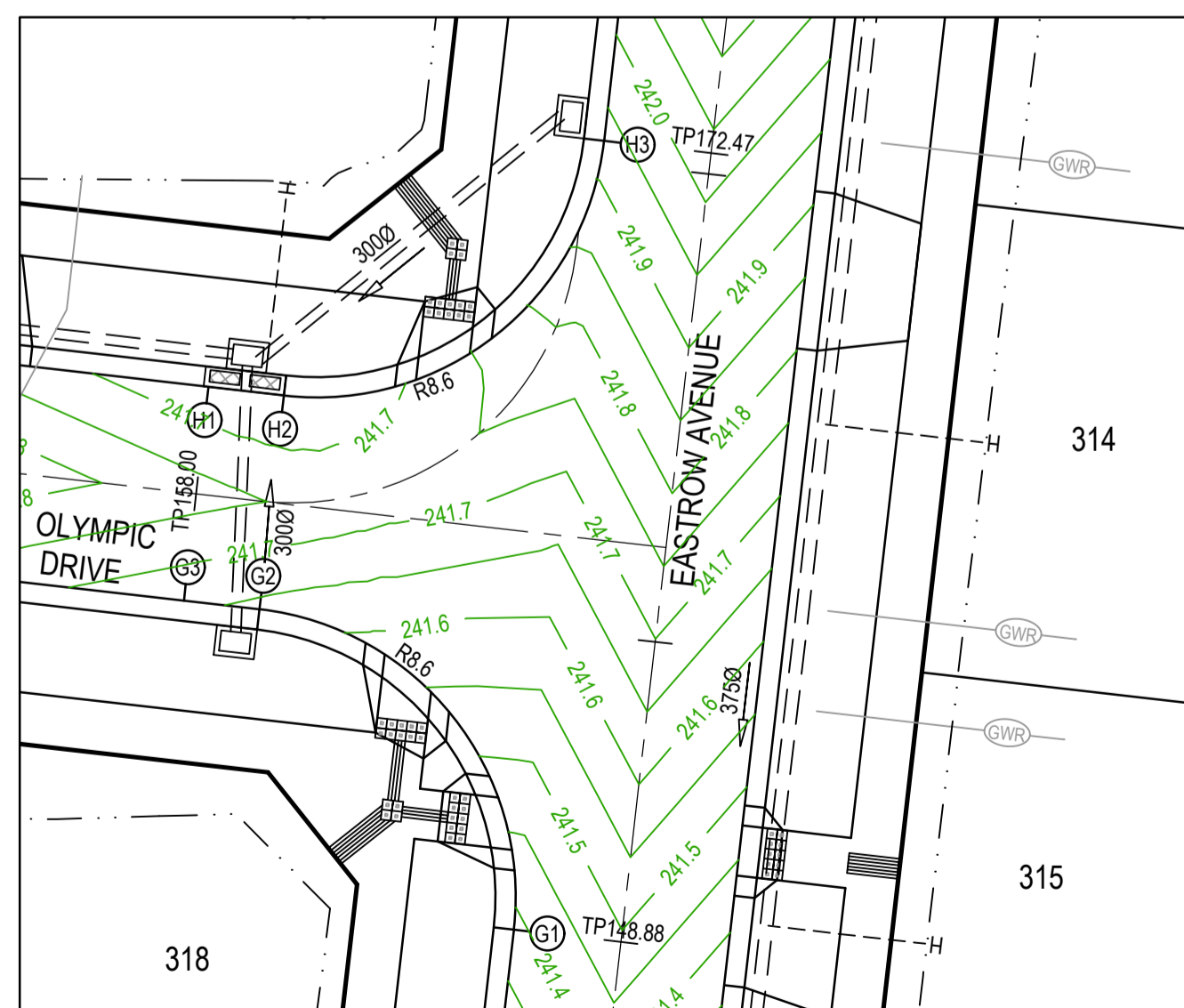
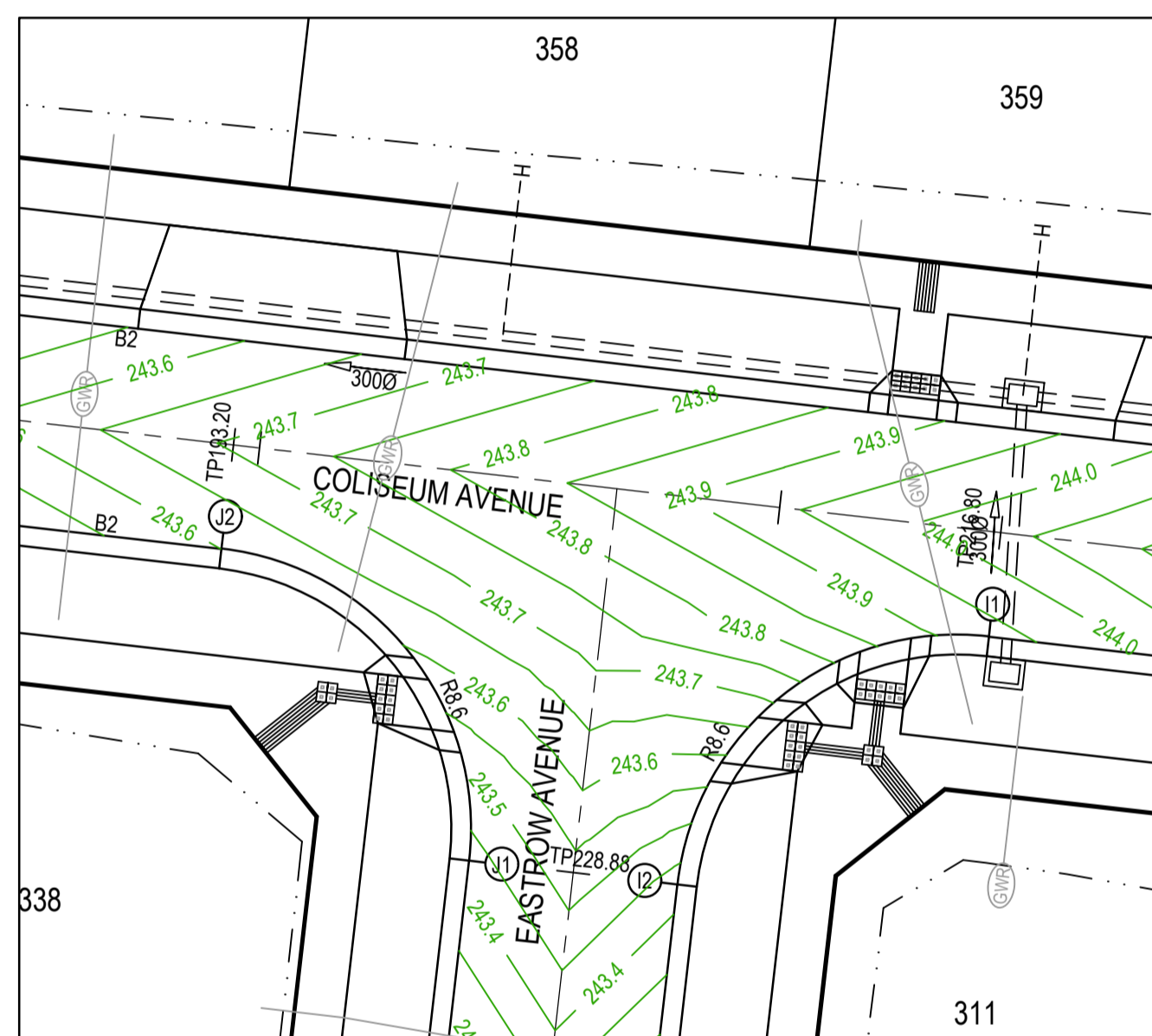
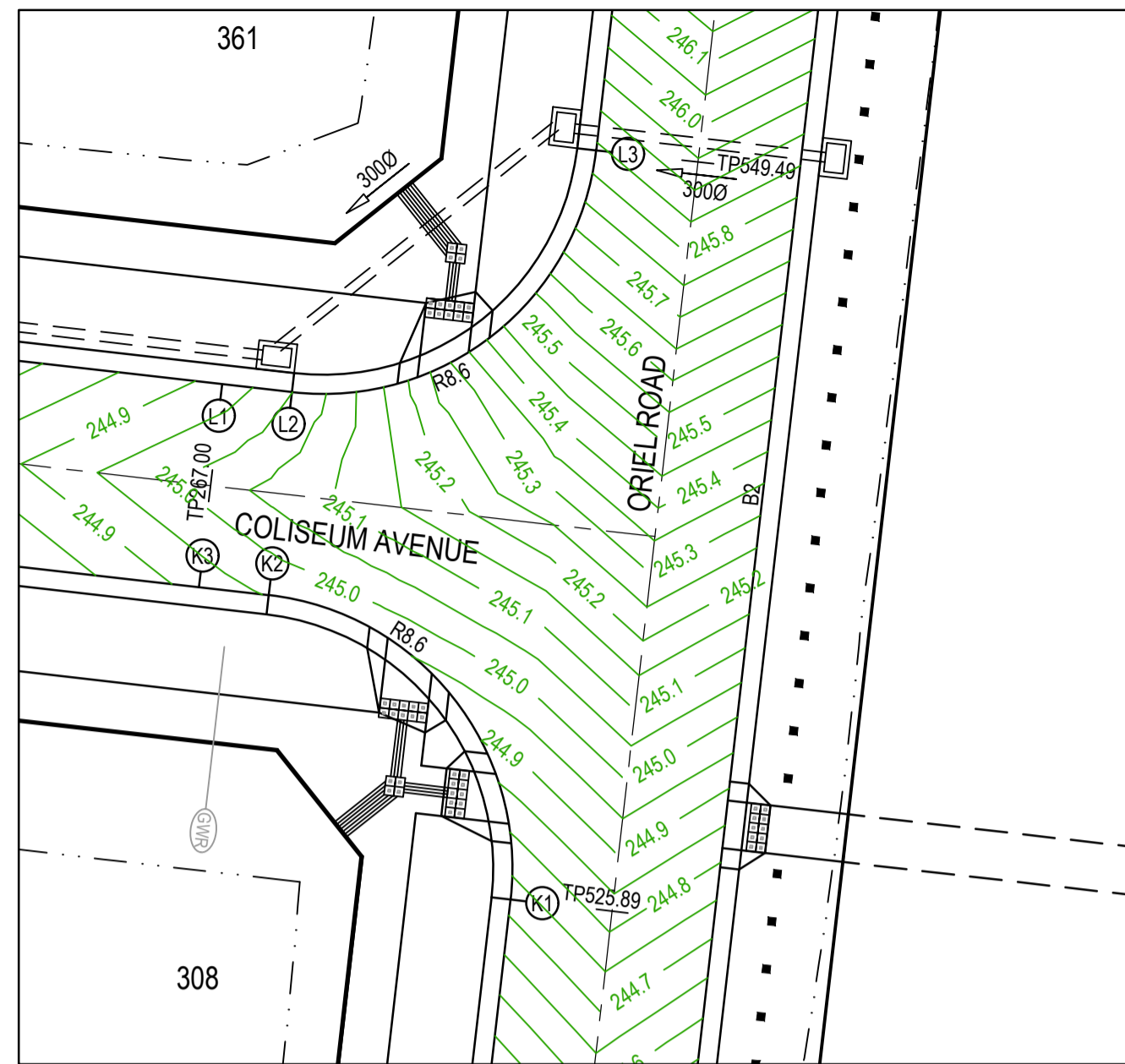
TITLE	NAME
DRAFTER	R.Barua
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows
REFERENCE No. 1	
REFERENCE No. 2	



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

MELWAYS REF <b>9 M2</b>	PROJECT / DRAWING No. <b>1700E-03-15</b>	SHEET No. <b>15 of 27</b>	REVISION <b>1</b>
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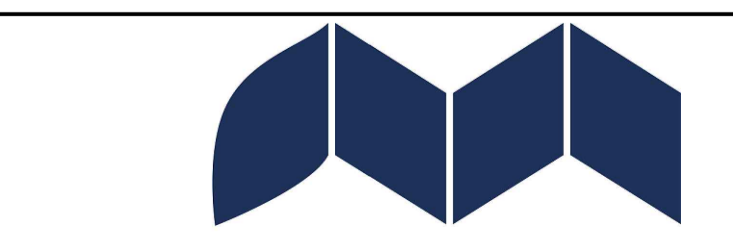
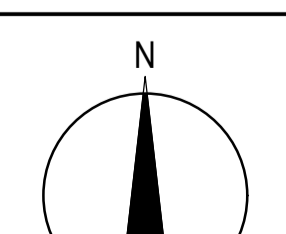




REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	12.09.18	ISSUED FOR CONSTRUCTION	KM/RB	AB
1	26.06.58	AS CONSTRUCTED	KM/KU	AB

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	R.Barua
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows
REFERENCE No. 1	
REFERENCE No. 2	

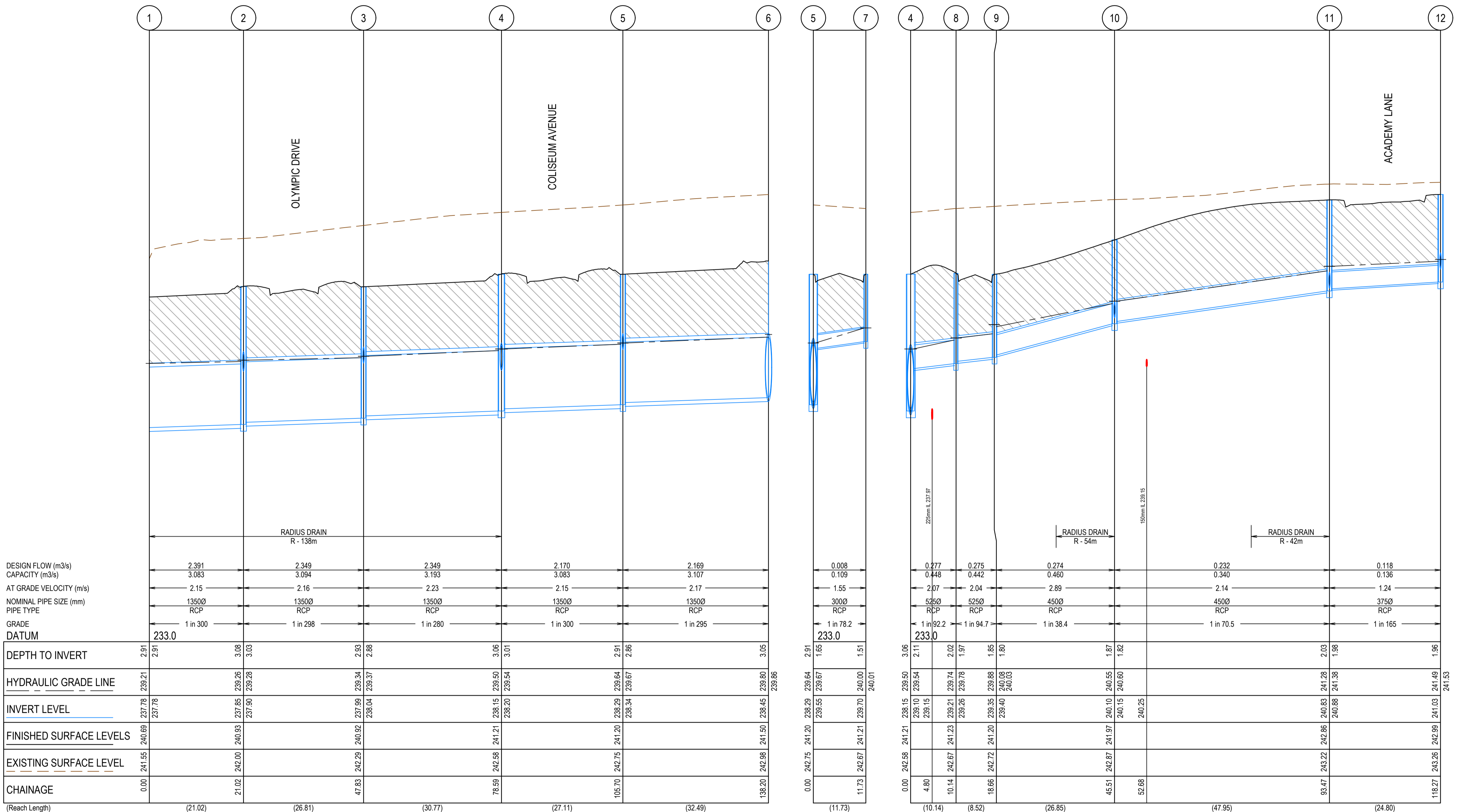


Olivine Estate - Stage 3  
Whittlesea City Council  
Road and Drainage  
Intersection Detail Plan &  
Lip Profiles - 2



**NOTE**

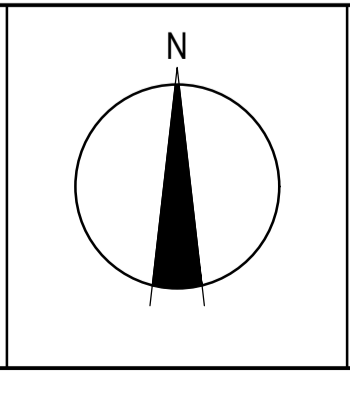
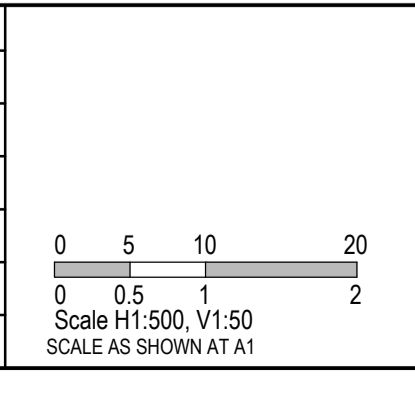
- ALL DRAINS TO BE BACKFILLED IN ACCORDANCE WITH CLAUSE 35.1.7 OF COUNCIL'S SPECIFICATION
- WHERE DRAINS ARE UNDER ANY PAVED AREA OR BEHIND THE KERB AND CHANNEL THE DRAINS IS TO BE BACKFILLED AS FOLLOWS
  - 30mm NOM. SIZE CLASS 3 FCR TO 100mm ABOVE THE TOP OF PIPE.
  - LOW PERMEABILITY CLASS 4 FCR FROM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



REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	12.09.18	ISSUED FOR CONSTRUCTION	KM/RB	AB
1	26.06.59	AS CONSTRUCTED	KM/KU	AB

**AS CONSTRUCTED**

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



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

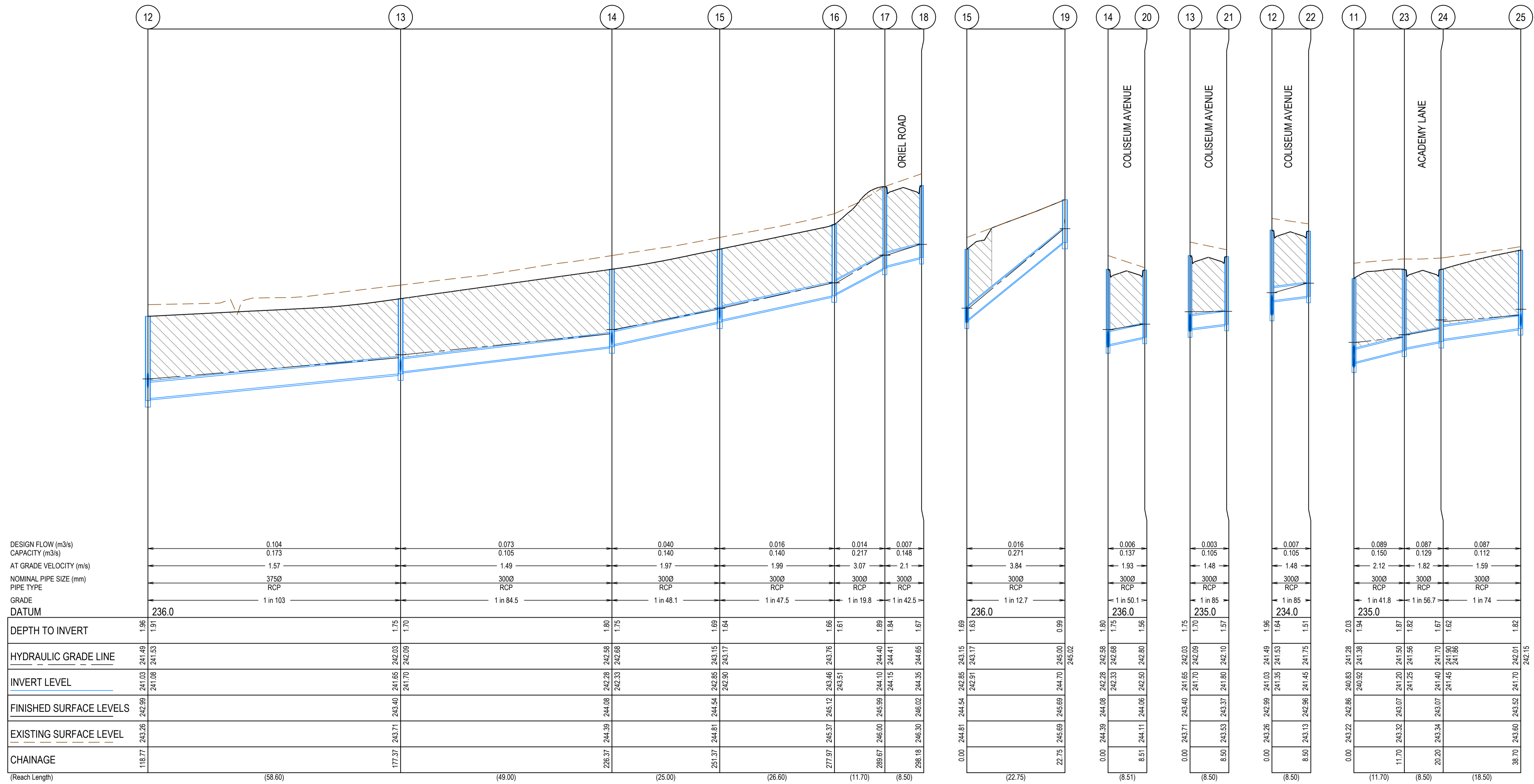


Olivine Estate - Stage 3  
Whittlesea City Council  
Road and Drainage  
Drainage Longitudinal Sections - 1

MELWAYS REF <b>9 M2</b>	PROJECT / DRAWING No. <b>1700E-03-17</b>	SHEET No. <b>17 of 27</b>	REVISION <b>1</b>
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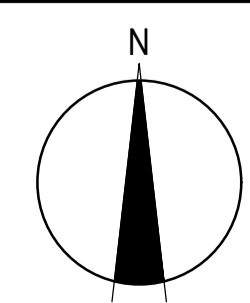
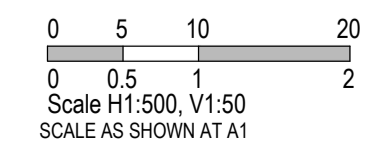
**NOTE**

- 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 FOR TO 100mm ABOVE THE TOP OF PIPE.
  - LOW PERMEABILITY CLASS 4 FOR FROM 100mm ABOVE THE TOP OF PIPE TO UNDERSIDE OF PAVEMENT



REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	12.09.18	ISSUED FOR CONSTRUCTION	KMRB	AB
1	26.06.60	AS CONSTRUCTED	KMKU	AB

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

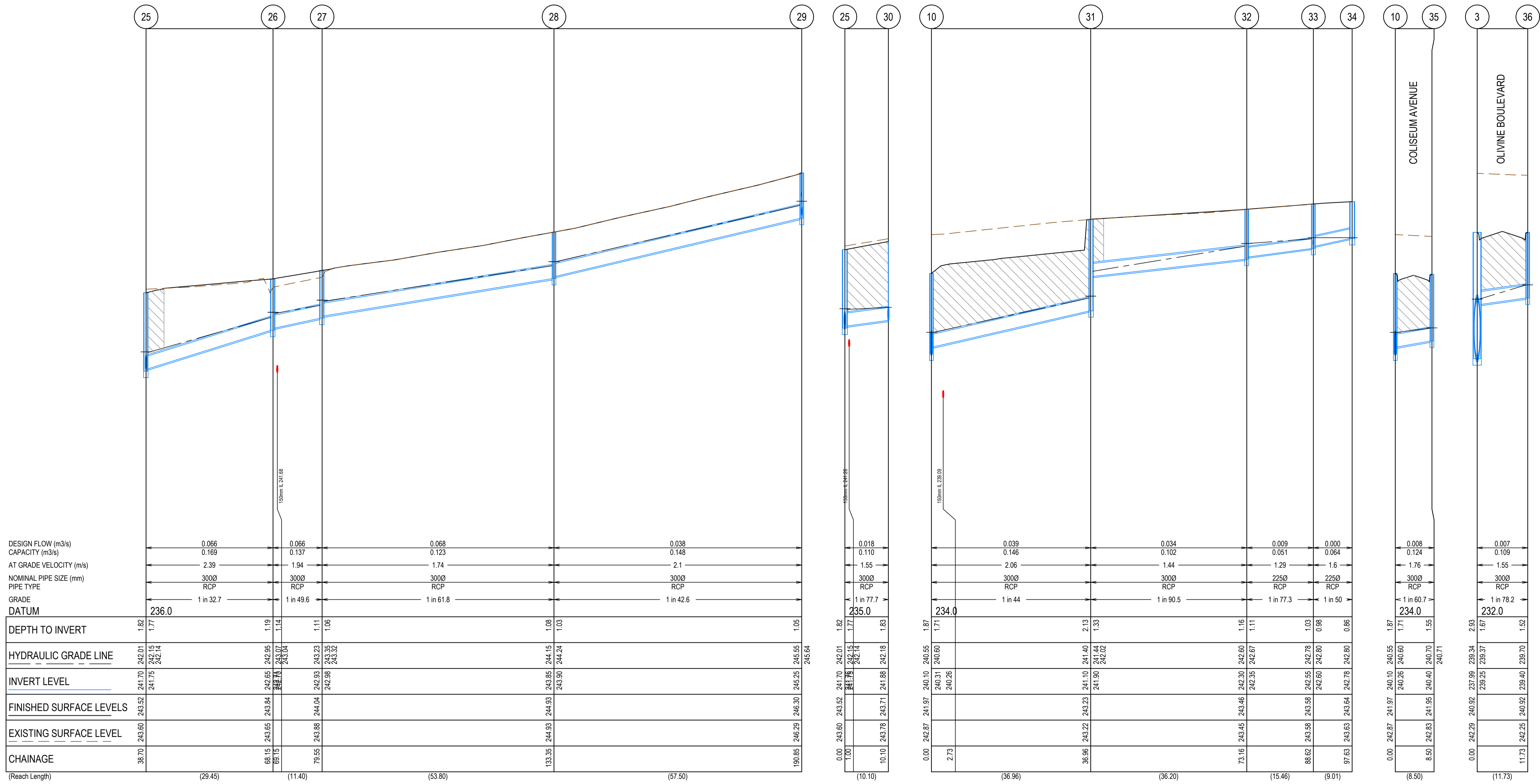


Olivine Estate - Stage 3  
Whittlesea City Council  
Road and Drainage  
Drainage Longitudinal Sections - 2

MELWAYS REF <b>9 M2</b>	PROJECT / DRAWING No. <b>1700E-03-18</b>	SHEET No. <b>18 of 27</b>	REVISION <b>1</b>
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**NOTE**

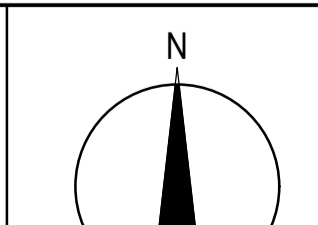
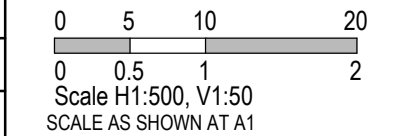
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  - LOW PERMEABILITY CLASS 4 FOR FROM 100mm ABOVE THE TOP OF PIPE TO UNDERSIDE OF PAVEMENT



REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	12.09.18	ISSUED FOR CONSTRUCTION	KM/RB	AB
1	08.11.18	DRAINAGE AMENDED, PITS 31-34	KM/KM	AB
2	26.06.45	AS CONSTRUCTED	KM/KU	AB

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



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

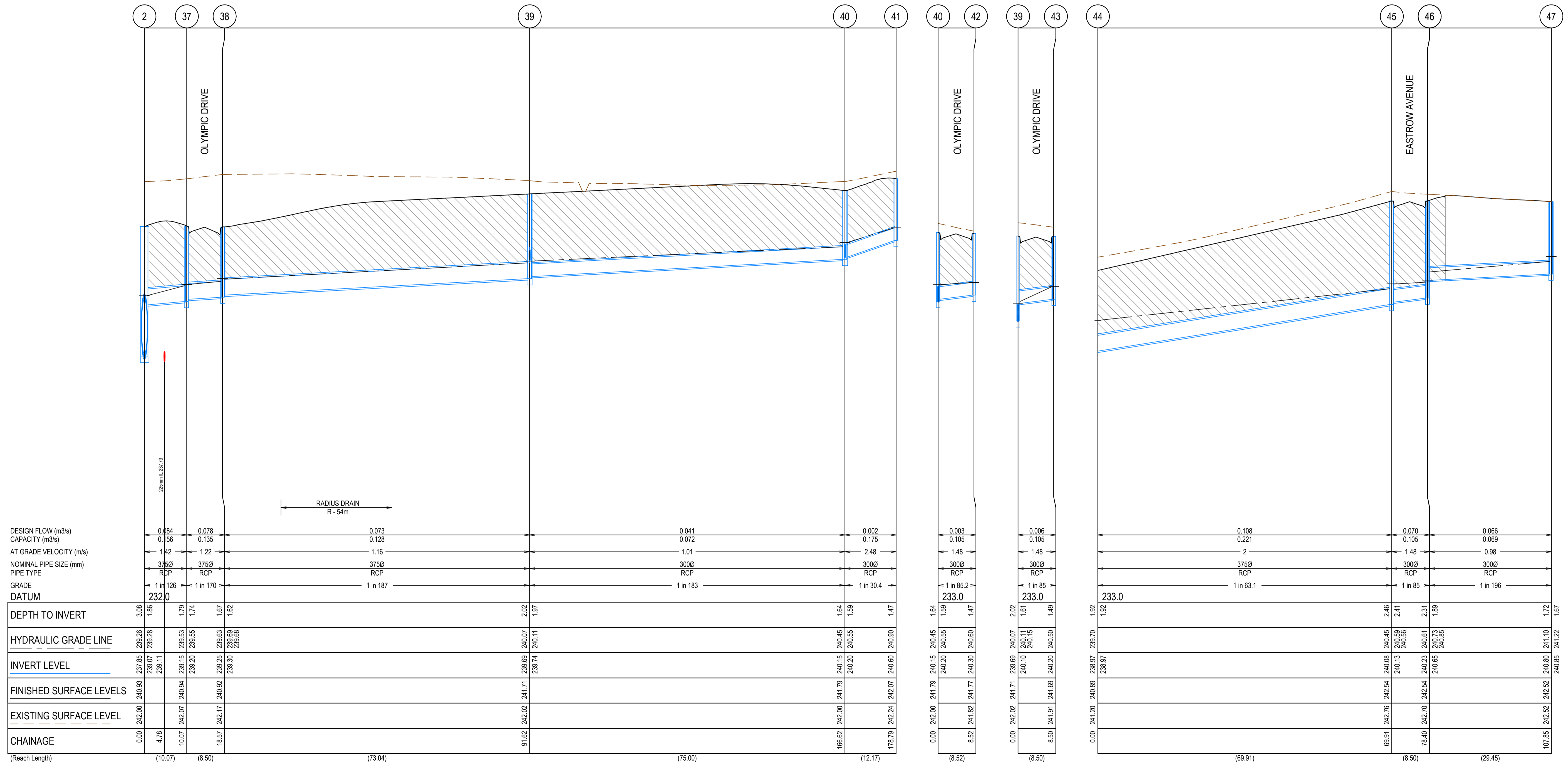


Olivine Estate - Stage 3  
Whittlesea City Council  
Road and Drainage  
Drainage Longitudinal Sections - 3

MELWAYS REF <b>9 M2</b>	PROJECT / DRAWING No. <b>1700E-03-19</b>	SHEET No. <b>19 of 27</b>	REVISION <b>2</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 FOR TO 100mm ABOVE THE TOP OF PIPE.
  - LOW PERMEABILITY CLASS 4 FOR FROM 100mm ABOVE THE TOP OF PIPE TO UNDERSIDE OF PAVEMENT



REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	12.09.18	ISSUED FOR CONSTRUCTION	KM/RB	AB
1	03.04.19	DRAINAGE AMENDED, PITS 46-50	KM/KM	AB
2	26.06.45	AS CONSTRUCTED	KM/KU	AB

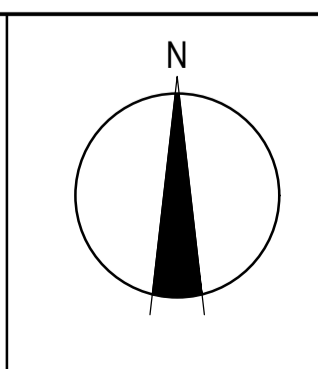
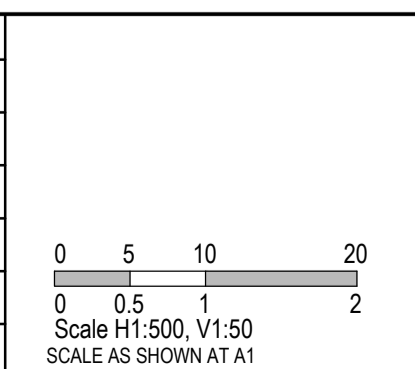
**AS CONSTRUCTED**

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

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



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

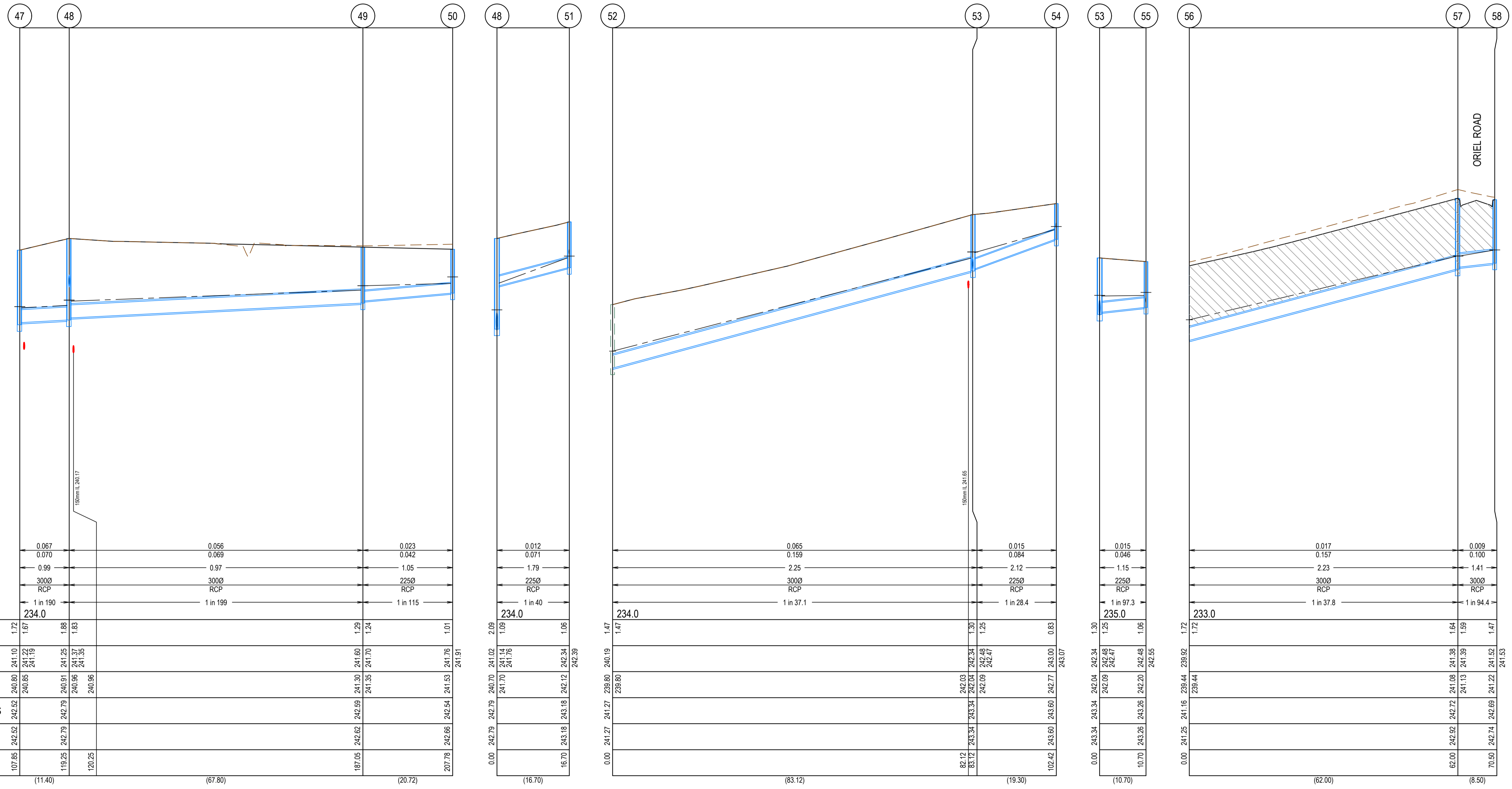


Olivine Estate - Stage 3  
 Whittlesea City Council  
 Road and Drainage  
 Drainage Longitudinal Sections - 4

MELWAYS REF <b>9 M2</b>	PROJECT / DRAWING No. <b>1700E-03-20</b>	SHEET No. <b>20 of 27</b>	REVISION <b>2</b>
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**NOTE**

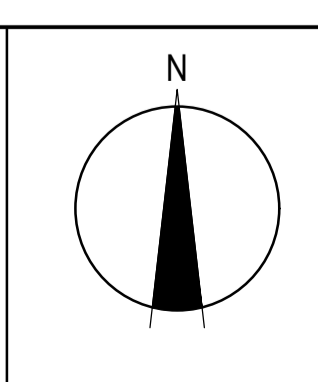
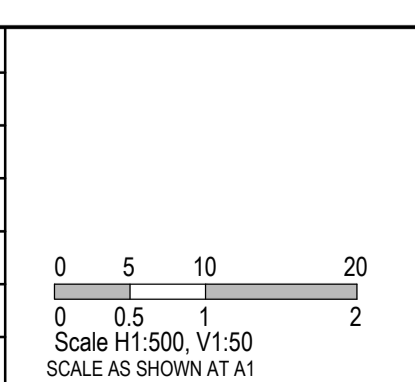
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- WHERE DRAINS ARE UNDER ANY PAVED AREA OR BEHIND THE KERB AND CHANNEL THE DRAINS IS TO BE BACKFILLED AS FOLLOWS
  - 30mm NOM. SIZE CLASS 3 FOR TO 100mm ABOVE THE TOP OF PIPE.
  - LOW PERMEABILITY CLASS 4 FOR FROM 100mm ABOVE THE TOP OF PIPE TO UNDERSIDE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



REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGNER	APPROVAL
0	12.09.18	ISSUED FOR CONSTRUCTION	KMIRB	AB
1	03.04.19	DRAINAGE AMENDED, PITS 46-50	KMKM	AB
2	26.06.45	AS CONSTRUCTED	KMKU	AB

**AS CONSTRUCTED**

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



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



Olivine Estate - Stage 3  
Whittlesea City Council  
Road and Drainage  
Drainage Longitudinal Sections - 5

MELWAYS REF <b>9 M2</b>	PROJECT / DRAWING No. <b>1700E-03-21</b>	SHEET No. <b>21 of 27</b>	REVISION <b>2</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	ENDPIPE			1350	237.78			240.7	0		CONNECT TO EXISTING ENDPIPE
2	JUNCTION PIT	1650	1050	1350	237.9	1350	237.85	240.93	3.08	EDCM 607	HAUNCH PIT. COVER 1050x900
				375	239.07						
3	GRATED ENTRY PIT	1650	900	1350	238.04	1350	237.99	240.92	2.93	EDCM 601 & 607	HAUNCH UNDER KERB. PIT COVER 1050x900
				300	239.25						
4	JUNCTION PIT	1650	1200	1350	238.2	1350	238.15	241.21	3.06	EDCM 607	HAUNCH PIT. COVER 1050x900
				525	239.1						
5	GRATED ENTRY PIT	1650	900	1350	238.34	1350	238.29	241.2	2.91	EDCM 601 & 607	HAUNCH UNDER KERB. PIT COVER 1050x900
				300	239.55						
6	ENDPIPE			1350	238.45	1350	238.45	241.5	3.05		
7	GRATED ENTRY PIT	600	900			300	239.7	241.21	1.51	EDCM 601 & 605	
8	GRATED ENTRY PIT	600	900	525	239.26	525	239.21	241.23	2.02	EDCM 601 & 605	
9	DOUBLE GRATED ENTRY PIT	600	900	450	239.4	525	239.35	241.2	1.85	EDCM 602 & 605	
10	GRATED ENTRY PIT	600	900	450	240.15	450	240.1	241.97	1.87	EDCM 601 & 605	
				300	240.26						
				300	240.26						
11	GRATED ENTRY PIT	600	900	375	240.88	450	240.83	242.86	2.03	EDCM 601 & 605	
				300	240.92						
12	GRATED ENTRY PIT	600	900	375	241.08	375	241.03	242.99	1.96	EDCM 601 & 605	
				300	241.35						
13	GRATED ENTRY PIT	600	900	300	241.7	375	241.65	243.4	1.75	EDCM 601 & 605	
				300	241.7						
14	GRATED ENTRY PIT	600	900	300	242.33	300	242.28	244.08	1.8	EDCM 601 & 605	
				300	242.33						
15	GRATED ENTRY PIT	600	900	300	242.9	300	242.85	244.54	1.69	EDCM 601 & 605	
				300	242.91						
16	GRATED ENTRY PIT	600	900	300	243.51	300	243.46	245.12	1.66	EDCM 601 & 605	
17	GRATED ENTRY PIT	600	900	300	244.15	300	244.1	245.99	1.89	EDCM 601 & 605	
18	GRATED ENTRY PIT	600	900			300	244.35	246.02	1.67	EDCM 601 & 605	
19	JUNCTION PIT	600	900			300	244.7	245.69	0.99	EDCM 605	
20	GRATED ENTRY PIT	600	900			300	242.5	244.06	1.56	EDCM 601 & 605	
21	GRATED ENTRY PIT	600	900			300	241.8	243.37	1.57	EDCM 601 & 605	
22	GRATED ENTRY PIT	600	900			300	241.45	242.97	1.52	EDCM 601 & 605	
23	GRATED ENTRY PIT	600	900	300	241.25	300	241.2	243.07	1.87	EDCM 601 & 605	
24	GRATED ENTRY PIT	600	900	300	241.45	300	241.4	243.07	1.67	EDCM 601 & 605	
25	GRATED ENTRY PIT	600	900	300	241.75	300	241.7	243.52	1.82	EDCM 601 & 605	
				300	241.75						
26	JUNCTION PIT	600	900	300	242.7	300	242.65	243.84	1.19	EDCM 605	
27	JUNCTION PIT	600	900	300	242.98	300	242.93	244.04	1.11	EDCM 605	TEMPORARY GRATED COVER
28	JUNCTION PIT	600	900	300	243.9	300	243.85	244.93	1.08	EDCM 605	
29	JUNCTION PIT	600	900	225	245.3	300	245.25	246.3	1.05	EDCM 605	
30	ENDPIPE			300	241.88	300	241.88	243.71	1.83		BLANK OFF ENDPIPE
31	JUNCTION PIT	600	900	300	241.9	300	241.1	243.23	2.13	EDCM 605	TEMPORARY GRATED COVER
32	JUNCTION PIT	600	900	225	242.35	300	242.3	243.46	1.16	EDCM 605	
33	JUNCTION PIT	600	900	225	242.6	225	242.55	243.58	1.03	EDCM 605	
34	JUNCTION PIT	600	900			225	242.78	243.64	0.86	EDCM 605	
35	GRATED ENTRY PIT	600	900			300	240.4	241.95	1.55	EDCM 601 & 605	
36	GRATED ENTRY PIT	600	900			300	239.4	240.93	1.53	EDCM 601 & 605	
37	GRATED ENTRY PIT	600	900	375	239.2	375	239.15	240.94	1.79	EDCM 601 & 605	
38	DOUBLE GRATED ENTRY PIT	600	900	375	239.3	375	239.25	240.92	1.67	EDCM 602 & 605	
39	GRATED ENTRY PIT	600	900	300	239.74	375	239.69	241.71	2.02	EDCM 601 & 605	
				300	240.1						
40	DOUBLE GRATED ENTRY PIT	600	900	300	240.2	300	240.15	241.79	1.64	EDCM 602 & 605	
				300	240.2						
41	GRATED ENTRY PIT	600	900			300	240.6	242.07	1.47	EDCM 601 & 605	
42	GRATED ENTRY PIT	600	900			300	240.3	241.77	1.47	EDCM 601 & 605	
43	GRATED ENTRY PIT	600	900			300	240.2	241.69	1.49	EDCM 601 & 605	
44	ENDPIPE			375	238.97			240.89	0		CONNECT TO EXISTING ENDPIPE
45	GRATED ENTRY PIT	600	900	300	240.13	375	240.08	242.54	2.46	EDCM 601 & 605	
46	GRATED ENTRY PIT	600	900	300	240.65	300	240.23	242.54	2.31	EDCM 605	
47	JUNCTION PIT	600	900	300	240.85	300	240.80	242.52	1.72	EDCM 605	
48	JUNCTION PIT	600	900	300	240.96	300	240.91	242.79	1.88	EDCM 605	
				225	241.70						
49	JUNCTION PIT	600	900	225	241.35	300	241.30	242.59	1.29	EDCM 605	
50	JUNCTION PIT	600	900			225	241.53	242.54	1.01	EDCM 605	
51	JUNCTION PIT	600	900			225	242.12	243.18	1.06	EDCM 605	
52	ENDPIPE			300	239.8			241.27	0		CONNECT TO EXISTING JUNCTION PIT
53	JUNCTION PIT	600	900	225	242.09	300	242.04	243.34	1.3	EDCM 605	
				225	242.09						
54	JUNCTION PIT	600	900			225	242.77	243.6	0.83	EDCM 605	
55	JUNCTION PIT	600	900			225	242.2	243.26	1.06	EDCM 605	
56	ENDPIPE			300	239.44			241.16	0		CONNECT TO EXISTING ENDPIPE
57	GRATED ENTRY PIT	600	900	300	241.13	300	241.08	242.72	1.64	EDCM 605	
58	GRATED ENTRY PIT	600	900			300	241.22	242.69	1.47	EDCM 605	

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	12.09.18	ISSUED FOR CONSTRUCTION	KMIRB	AB
1	08.11.18	DRAINAGE AMENDED, PITS 31-34	KMKM	AB
2	03.04.19	DRAINAGE AMENDED, PITS 46-50	KMKM	AB
3	26.06.45	AS CONSTRUCTED	KMKU	AB

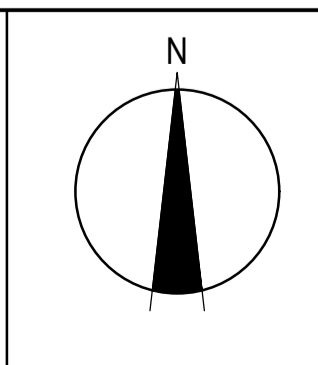
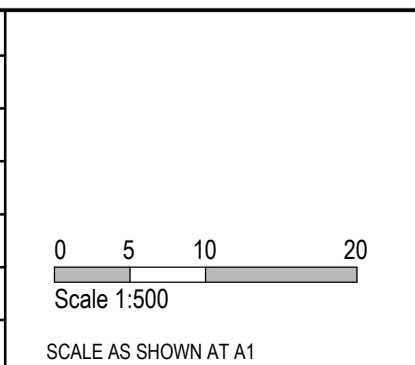

**AS CONSTRUCTED**

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

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 3  
 Whittlesea City Council  
 Road and Drainage  
 Pit Schedule

MELWAYS REF <b>9 M2</b>	PROJECT / DRAWING No. <b>1700E-03-22</b>	SHEET No. <b>22 of 27</b>	REVISION <b>3</b>
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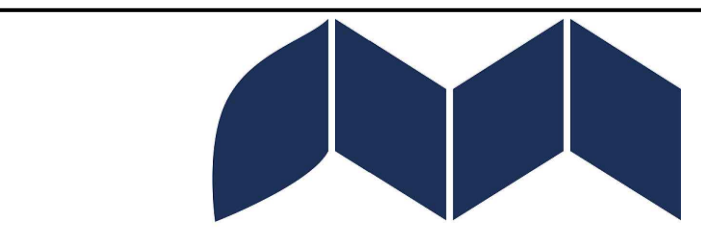
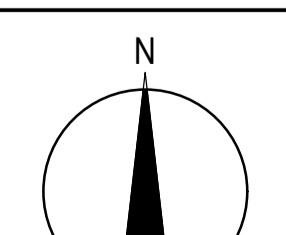
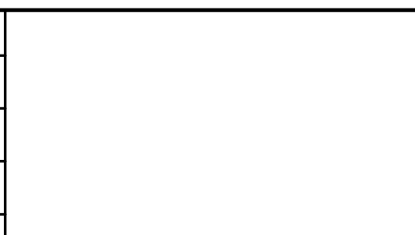
**NOTES**

- 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	DES/DT	APPROVAL
0	12.09.18	ISSUED FOR CONSTRUCTION	KM/RB	AB
1	26.06.45	AS CONSTRUCTED	KM/KU	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.

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DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows
REFERENCE No. 1	
REFERENCE No. 2	



Olivine Estate - Stage 3  
Whittlesea City Council  
Road and Drainage  
Signs & Linemarking Plan

**AS CONSTRUCTED**



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MELWAYS REF 9 M2 PROJECT / DRAWING No. 1700E-03-23 SHEET No. 23 of 27 REVISION 1

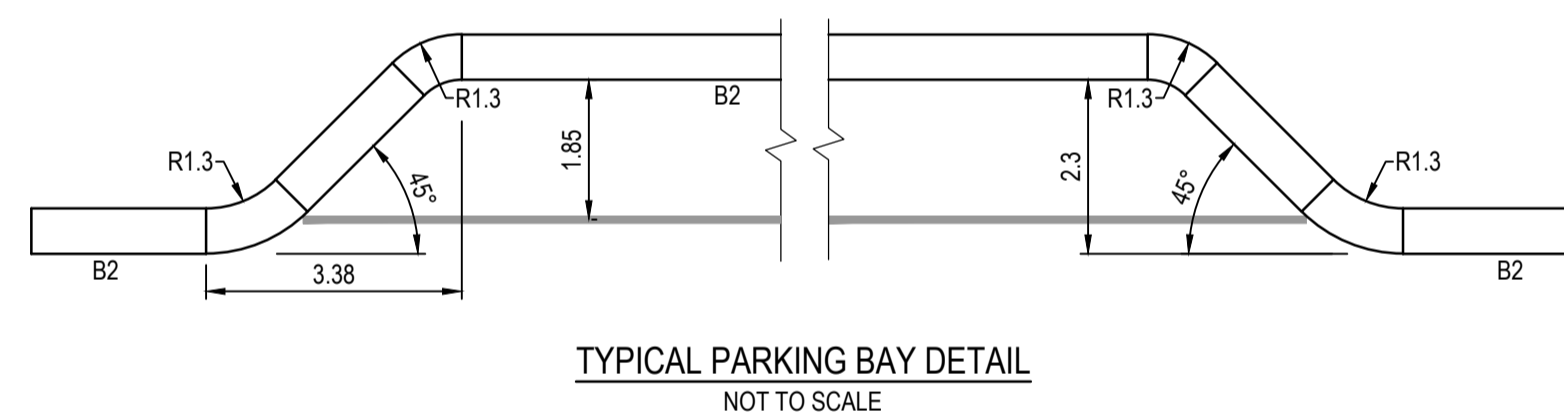
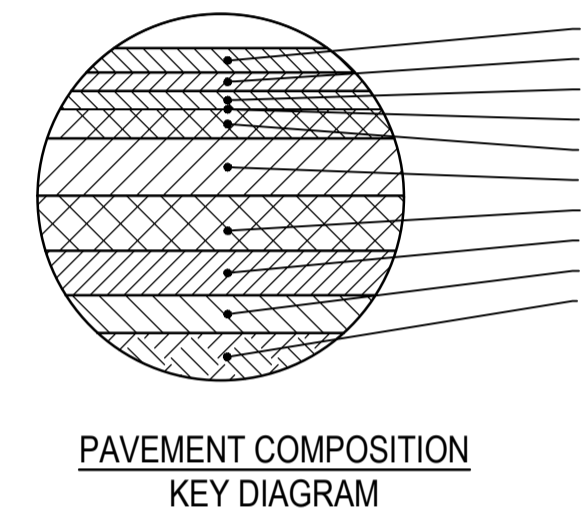
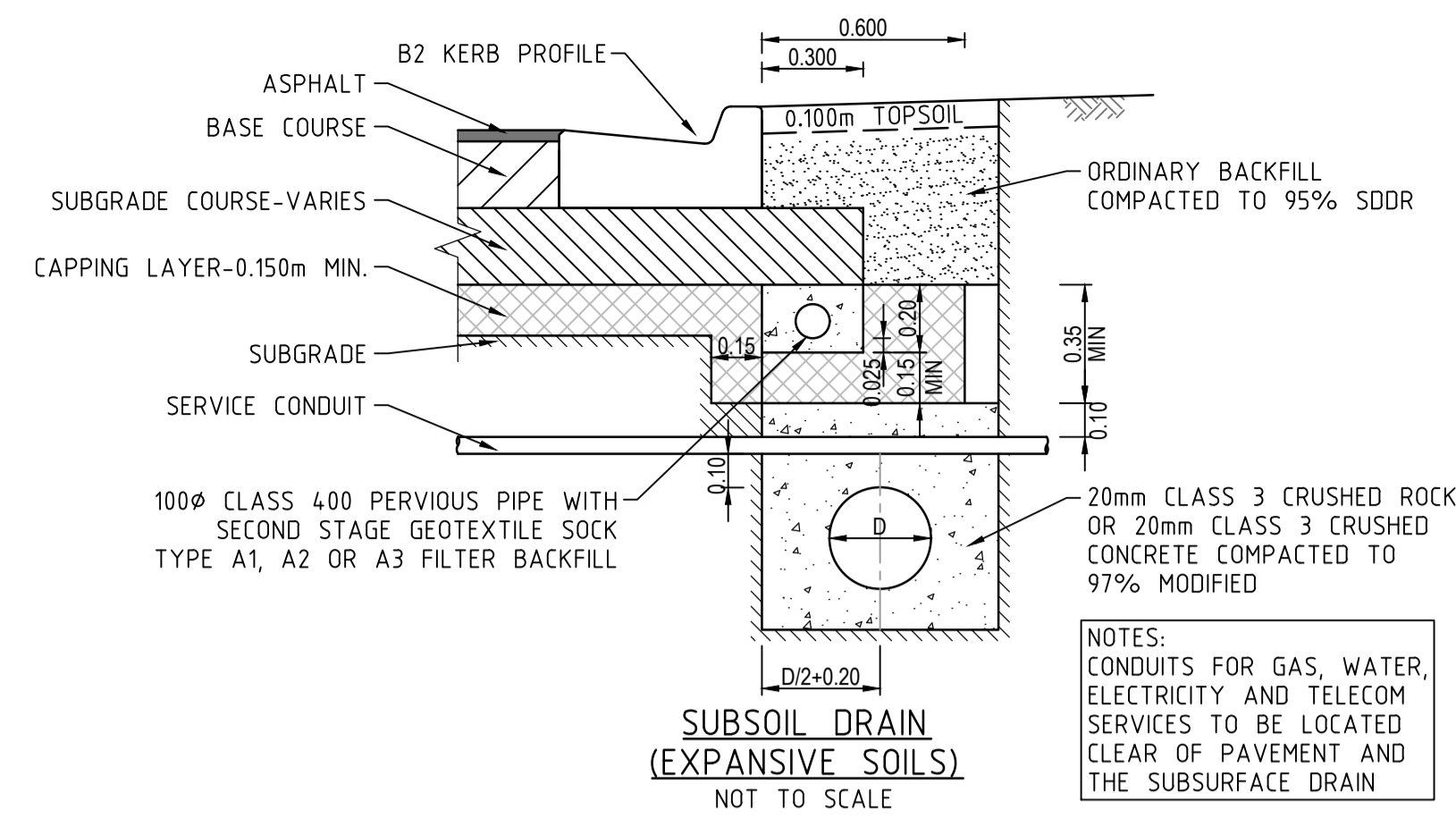


OLIVINE BOULEVARD  
PAVEMENT COMPOSITION

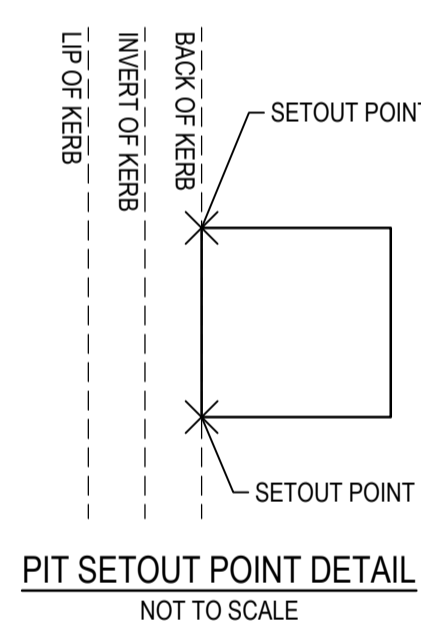
PAVEMENT LAYER	LAYER THICKNESS (mm)	MATERIAL
A WEARING COURSE	40	SIZE 10 TYPE N ASPHALT (CLASS 170 BINDER)
B INTERMEDIATE COURSE 1	40	SIZE 10 TYPE N ASPHALT (CLASS 170 BINDER)
C INTERMEDIATE COURSE 2	-	-
D SAMI SEAL	10	SIZE 10 S18RF
E PRIME	-	-
F BASE COURSE	110	SIZE 20 CLASS 2 CRUSHED ROCK, COMPACTED 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 <sub>2%</sub> ≥8% SWELL≤1.5% PERMEABILITY k <sub>s</sub> ≤5x10 <sup>-9</sup> m/s. OR LIME STABILISED SITE WON CLAY WHICH CONFORMS TO THE PARAMETERS ABOVE.
J SUBGRADE	-	CBR 1.5% EXPANSIVE

OLYMPIC DRIVE, EASTROW AVENUE, ORIEL ROAD, COLISEUM AVENUE, ACADEMY LANE PAVEMENT COMPOSITION

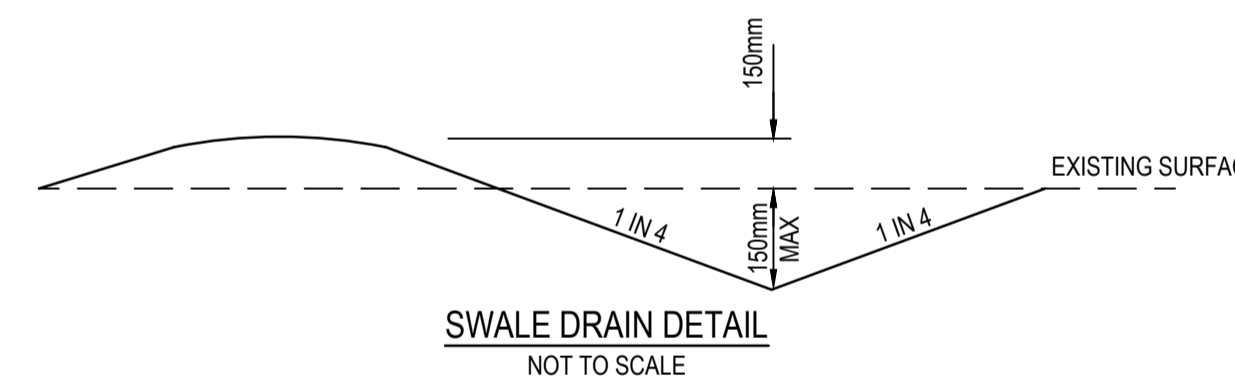
PAVEMENT LAYER	LAYER THICKNESS (mm)	MATERIAL
A WEARING COURSE	30	SIZE 10 TYPE N ASPHALT (CLASS 170 BINDER)
B INTERMEDIATE COURSE 1	30	SIZE 10 TYPE N ASPHALT (CLASS 170 BINDER)
C INTERMEDIATE COURSE 2	-	-
D SAMI SEAL	10	SIZE 10 S18RF
E PRIME	-	-
F BASE COURSE	130	SIZE 20 CLASS 2 CRUSHED ROCK COMPACTED 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 <sub>2%</sub> ≥8% SWELL≤1.5% PERMEABILITY k <sub>s</sub> ≤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)



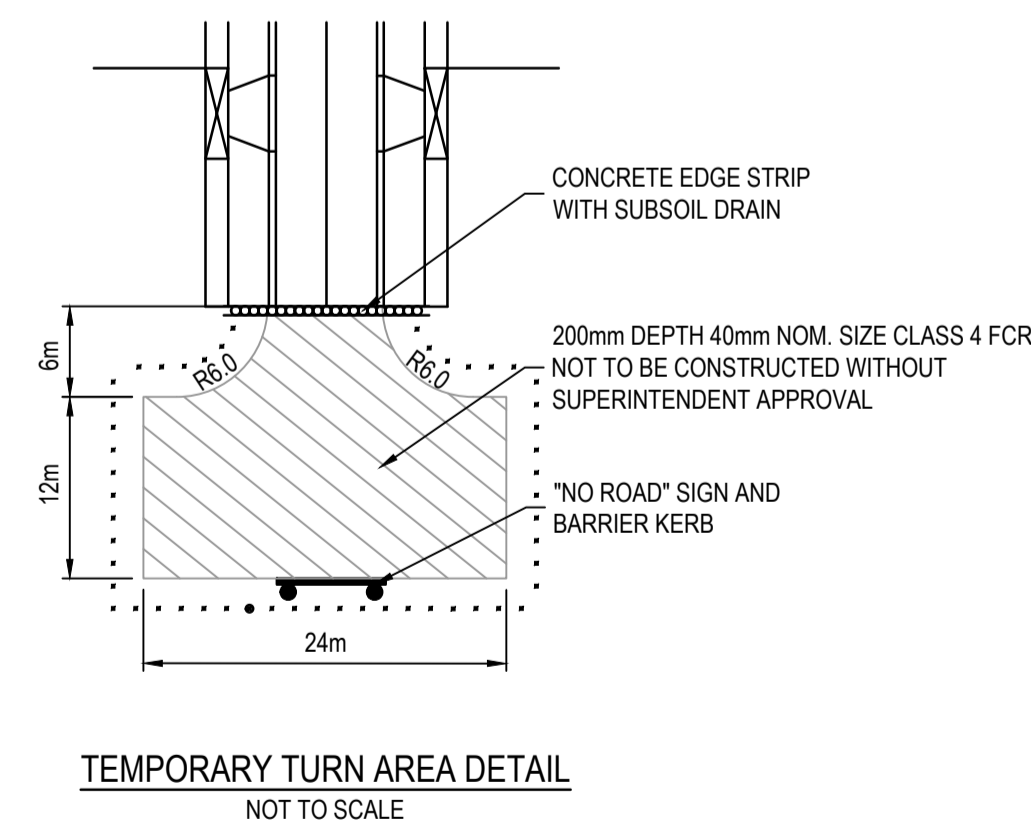
TYPICAL PARKING BAY DETAIL  
NOT TO SCALE



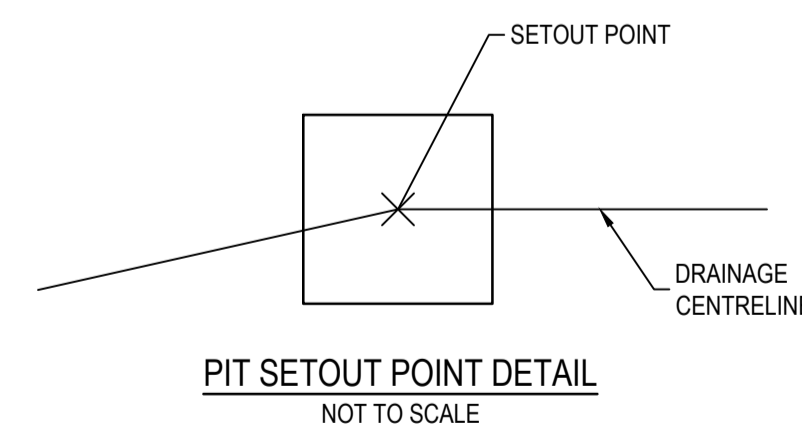
PIT SETOUT POINT DETAIL  
NOT TO SCALE



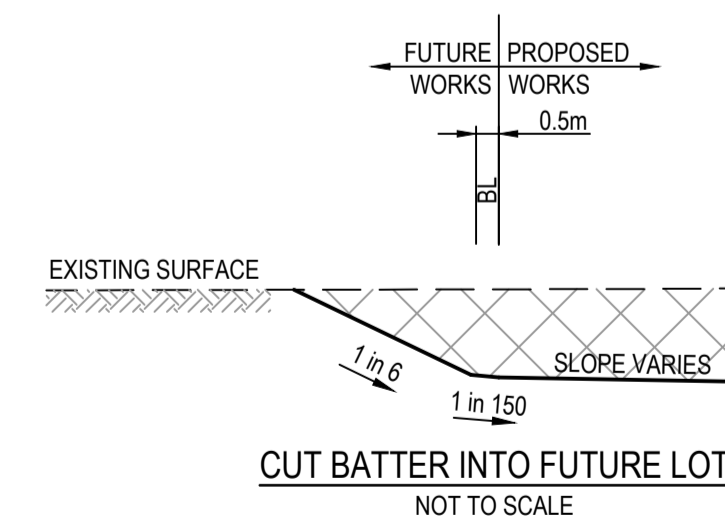
SWALE DRAIN DETAIL  
NOT TO SCALE



TEMPORARY TURN AREA DETAIL  
NOT TO SCALE



PIT SETOUT POINT DETAIL  
NOT TO SCALE



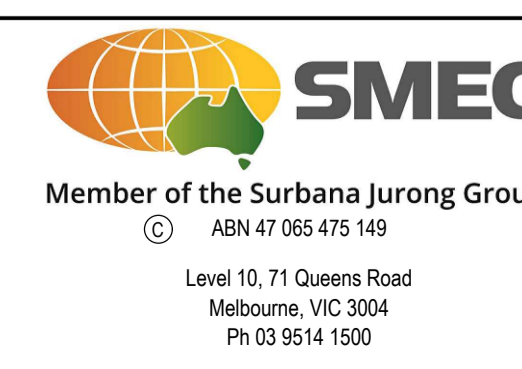
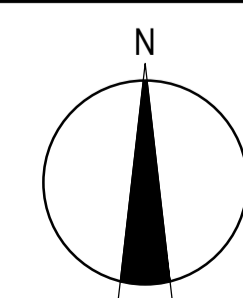
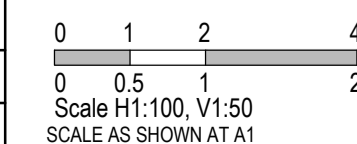
CUT BATTER INTO FUTURE LOT  
NOT TO SCALE

**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	12.09.18	ISSUED FOR CONSTRUCTION	KM/RB	AB
1	26.06.45	AS CONSTRUCTED	KM/KU	AB

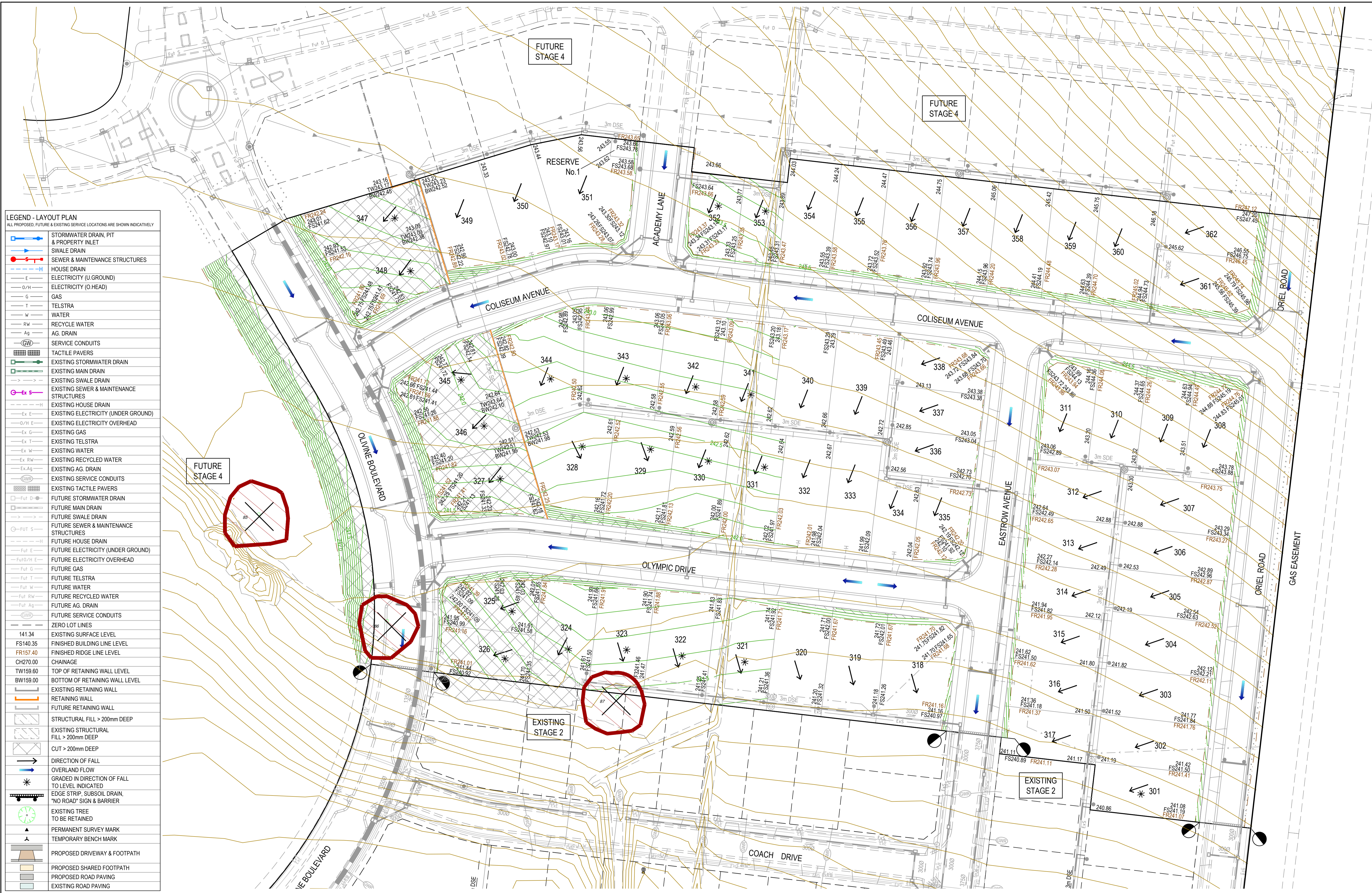
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TITLE	NAME
DRAFTER	R.Barua
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows
REFERENCE No. 1	
REFERENCE No. 2	



Olivine Estate - Stage 3  
Whittlesea City Council  
Road and Drainage  
General Notes and Details

MELWAYS REF 9 M2	PROJECT / DRAWING No. 1700E-03-24	SHEET No. 24 of 27	REVISION 1
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**LEGEND - LAYOUT PLAN**  
ALL PROPOSED, FUTURE & EXISTING SERVICE LOCATIONS ARE SHOWN INDICATIVELY

	STORMWATER DRAIN, PIT & PROPERTY INLET
	SWALE DRAIN
	SEWER & MAINTENANCE STRUCTURES
	HOUSE DRAIN
	ELECTRICITY (U.GROUND)
	ELECTRICITY (O.HEAD)
	GAS
	TELSTRA
	WATER
	RECYCLE WATER
	AG DRAIN
	SERVICE CONDUITS
	TACTILE PAVERS
	EXISTING STORMWATER DRAIN
	EXISTING MAIN DRAIN
	EXISTING SWALE DRAIN
	EXISTING SEWER & MAINTENANCE STRUCTURES
	EXISTING HOUSE DRAIN
	EXISTING ELECTRICITY (UNDER GROUND)
	EXISTING ELECTRICITY OVERHEAD
	EXISTING GAS
	EXISTING TELSTRA
	EXISTING WATER
	EXISTING RECYCLED WATER
	EXISTING AG DRAIN
	EXISTING SERVICE CONDUITS
	EXISTING TACTILE PAVERS
	FUTURE STORMWATER DRAIN
	FUTURE MAIN DRAIN
	FUTURE SWALE DRAIN
	FUTURE SEWER & MAINTENANCE STRUCTURES
	FUTURE HOUSE DRAIN
	FUTURE ELECTRICITY (UNDER GROUND)
	FUTURE ELECTRICITY OVERHEAD
	FUTURE GAS
	FUTURE TELSTRA
	FUTURE WATER
	FUTURE RECYCLED WATER
	FUTURE AG DRAIN
	FUTURE SERVICE CONDUITS
	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
	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
	PERMANENT SURVEY MARK
	TEMPORARY BENCH MARK
	PROPOSED DRIVEWAY & FOOTPATH
	PROPOSED SHARED FOOTPATH
	PROPOSED ROAD PAVING
	EXISTING ROAD PAVING

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	12.09.18	ISSUED FOR CONSTRUCTION	KM/RB	AB
1	08.11.18	DRAINAGE AMENDED, PITS 31-34	KM/KM	AB
2	26.06.45	AS CONSTRUCTED	KM/KU	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.

Quality Management ISO 9001  
 OHS Management AS/NZS 4801  
 Environmental Management ISO 14001

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

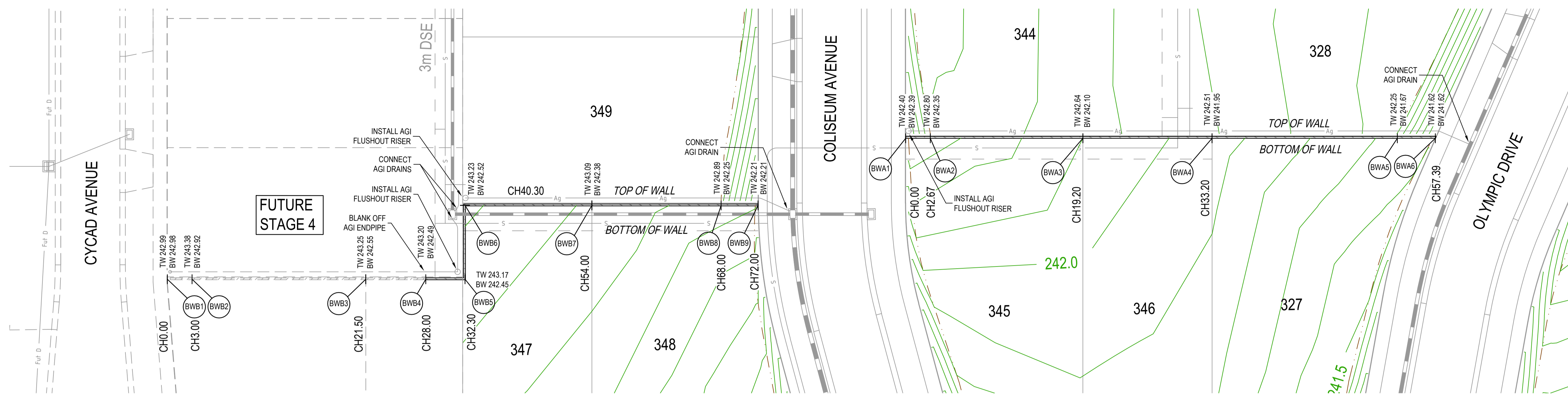
0 5 10 20  
 Scale 1:500  
 SCALE AS SHOWN AT A1

**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**

Olive Estate - Stage 3  
 Whittlesea City Council  
 Road and Drainage  
 Earthworks Plan

MELWAYS REF 9 M2 PROJECT / DRAWING No 1700E-03-25 SHEET No 25 of 27 REVISION 2



PLAN  
SCALE 1:250

**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

**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
	RETAINING WALL - CONCRETE SLEEPER

**Alignment BWA**

Point no	Easting	Northing	RL
BWA1	323174.125	5843191.833	242.385
BWA2	323174.898	5843189.283	242.346
BWA3	323179.696	5843173.461	242.100
BWA4	323183.759	5843160.064	241.950
BWA5	323189.587	5843140.846	241.672
BWA6	323190.780	5843136.912	241.615

**Alignment BWB**

Point no	Easting	Northing	RL
BWB1	323136.248	5843263.945	
BWB2	323137.119	5843261.074	242.920
BWB3	323142.487	5843243.370	242.550
BWB4	323144.374	5843237.150	242.490
BWB5	323145.622	5843233.035	242.450
BWB6	323153.277	5843235.366	242.520
BWB7	323157.253	5843222.246	242.380
BWB8	323161.316	5843208.848	242.250
BWB9	323162.477	5843205.020	242.210

DATUM RL240

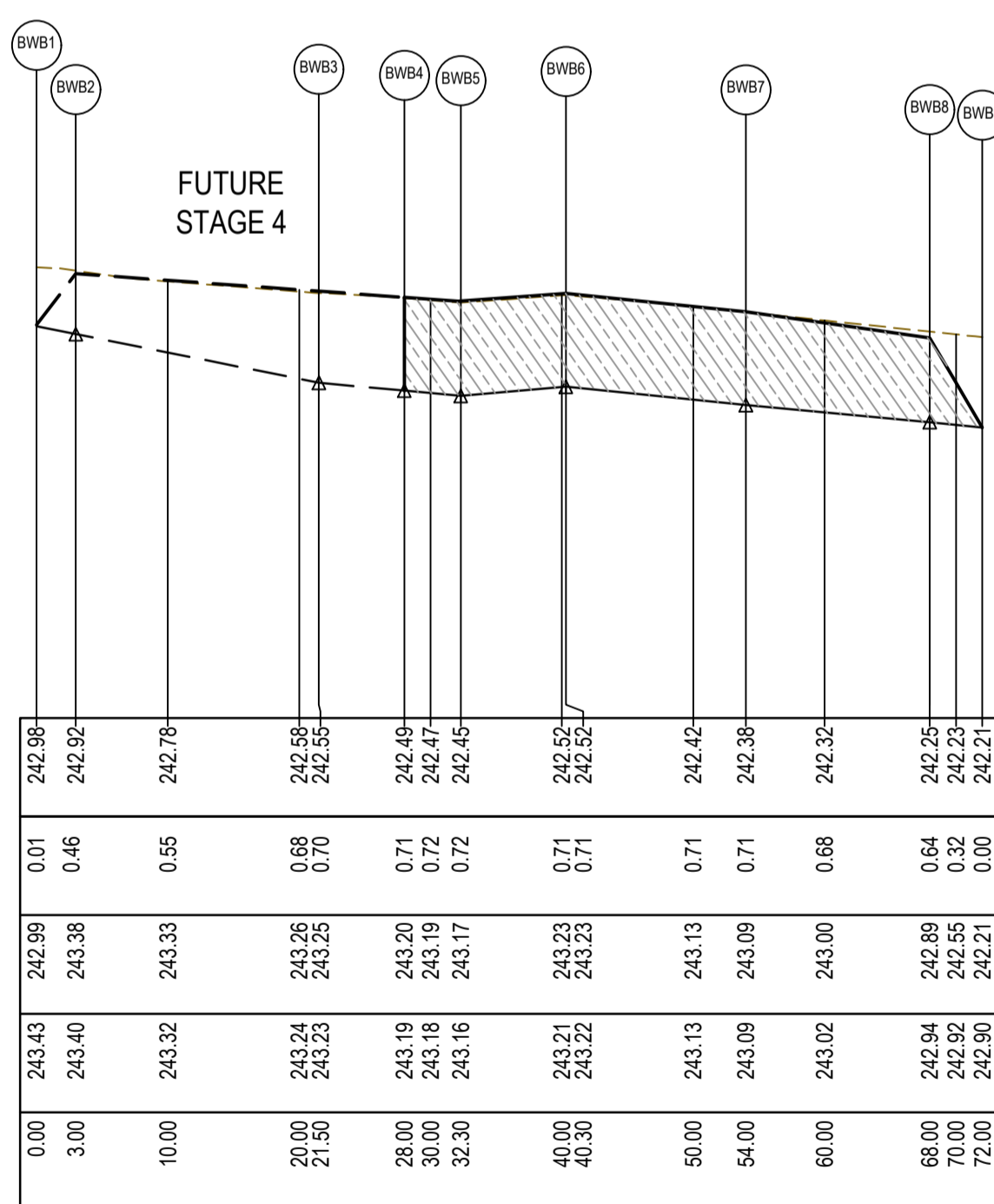
BOTTOM OF WALL

HEIGHT OF WALL

TOP OF WALL

EXISTING SURFACE

CHAINAGE



RETAINING WALL - LONGITUDINAL SECTION

HORIZONTAL SCALE 1:500 @ A1

VERTICAL SCALE 1:50 @ A1

HORIZONTAL GEOMETRY

DATUM RL239

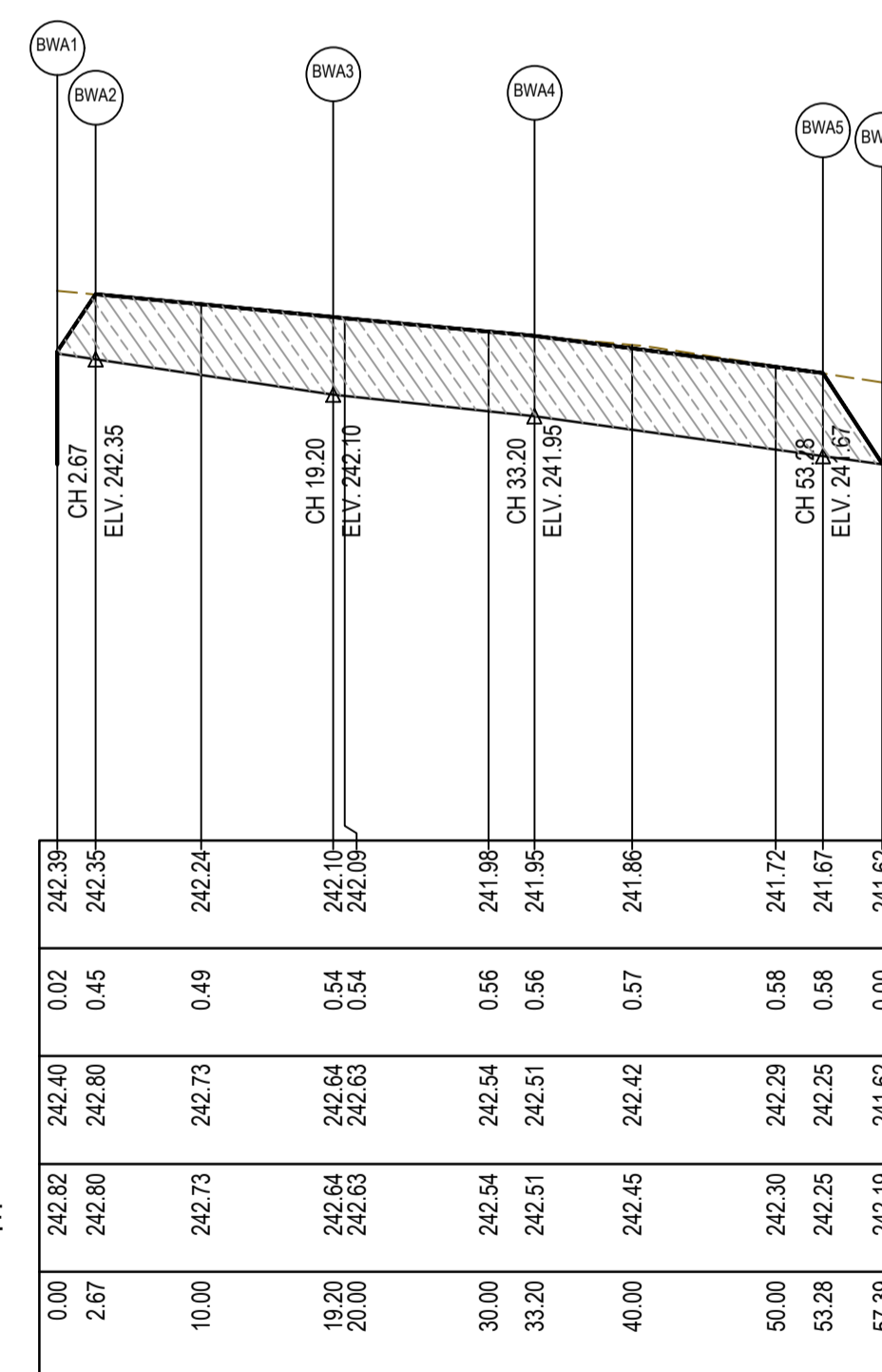
BOTTOM OF WALL

HEIGHT OF WALL

TOP OF WALL

EXISTING SURFACE

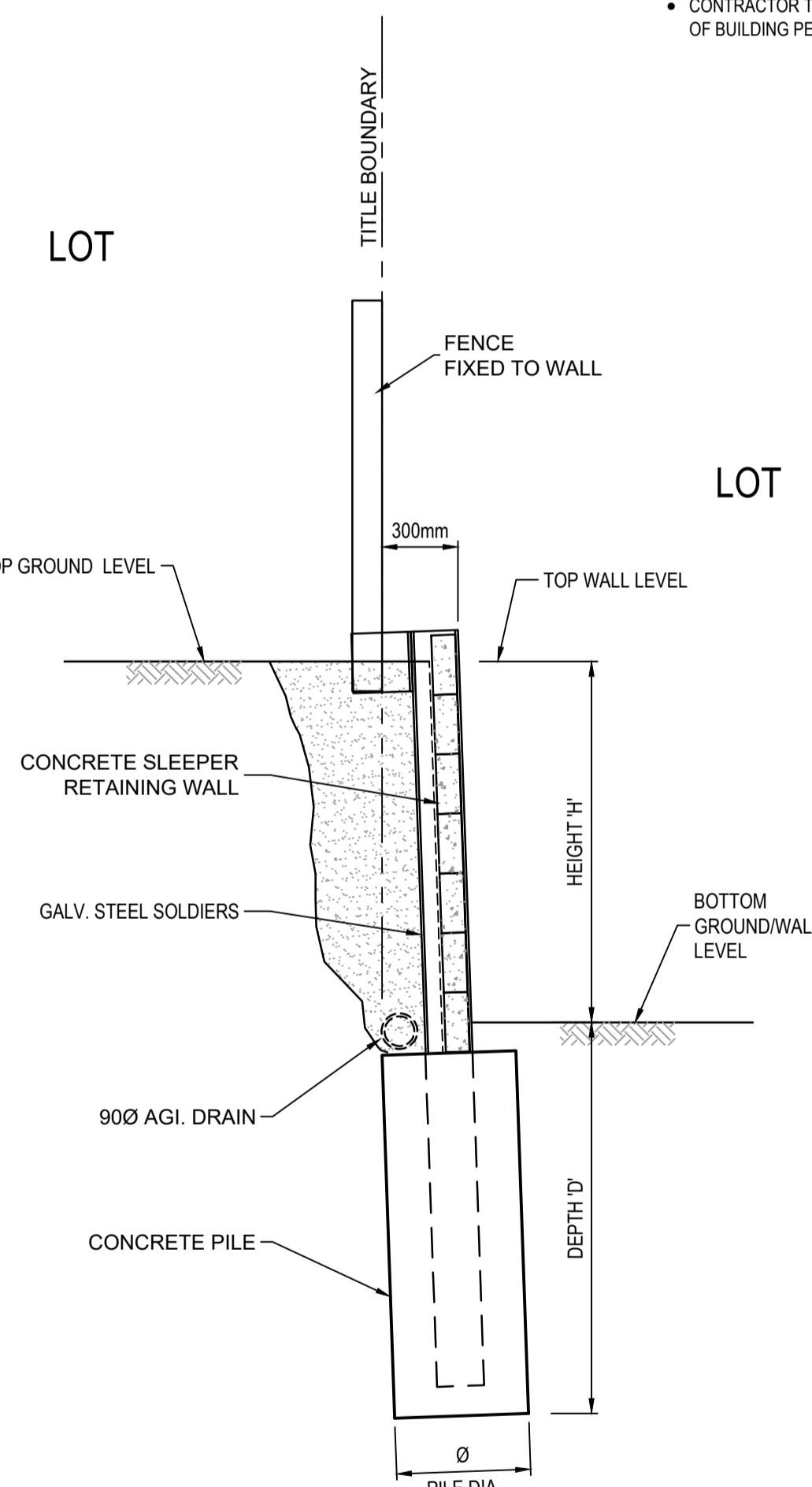
CHAINAGE



RETAINING WALL - LONGITUDINAL SECTION

HORIZONTAL SCALE 1:500 @ A1

VERTICAL SCALE 1:50 @ A1



RETAINING HEIGHT 'H'	EMBEDMENT DEPTH 'D'	FOOTING DIAMETER 'Ø'	SOLDIER SIZE 'S'

RETAINING WALL TYPICAL SECTION  
NOT TO SCALE

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	12.09.18	ISSUED FOR CONSTRUCTION	KMRB	AB
1	26.06.45	AS CONSTRUCTED	KMKU	AB

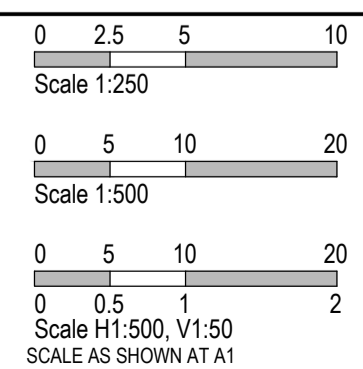
AS CONSTRUCTED

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Quality Management ISO 9001  
OHS Management AS/NZS 1801  
Environmental Management ISO 14001

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



**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 3  
Whittlesea City Council  
Road and Drainage  
Retaining Wall  
Longitudinal Sections

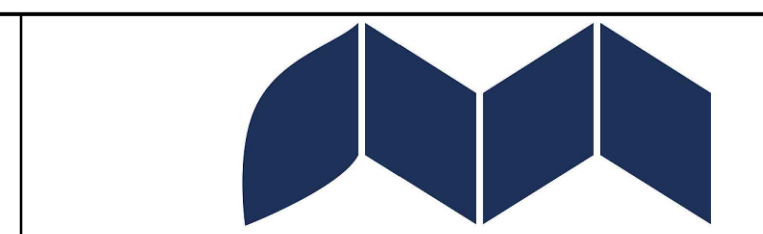
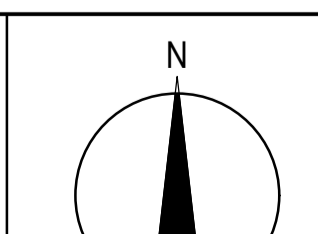
MELWAYS REF 9 M2 PROJECT / DRAWING No. 1700E-03-26 SHEET No. 26 of 27 REVISION 1

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	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)	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	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	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	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	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.	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	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.	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.	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	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.	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	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	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	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	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	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	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	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	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	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	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	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	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	N	1	1	1	Authority

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	12.09.18	ISSUED FOR CONSTRUCTION	KM/RB	AB
1	26.06.45	AS CONSTRUCTED	KM/KU	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	R.Barua
DESIGNER	K.Moore
CHECKED	Z.Gosev
AUTHORISED	A.Burrows
REFERENCE No. 1	
REFERENCE No. 2	



Olivine Estate - Stage 3  
Whittlesea City Council  
Road and Drainage  
Safety in Design

**AS CONSTRUCTED**



QUALITY MANAGEMENT ISO 9001	OHS MANAGEMENT AS/NZS 4500	ENVIRONMENTAL MANAGEMENT ISO 14001
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MELWAYS REF	PROJECT / DRAWING No.	SHEET No.	REVISION
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