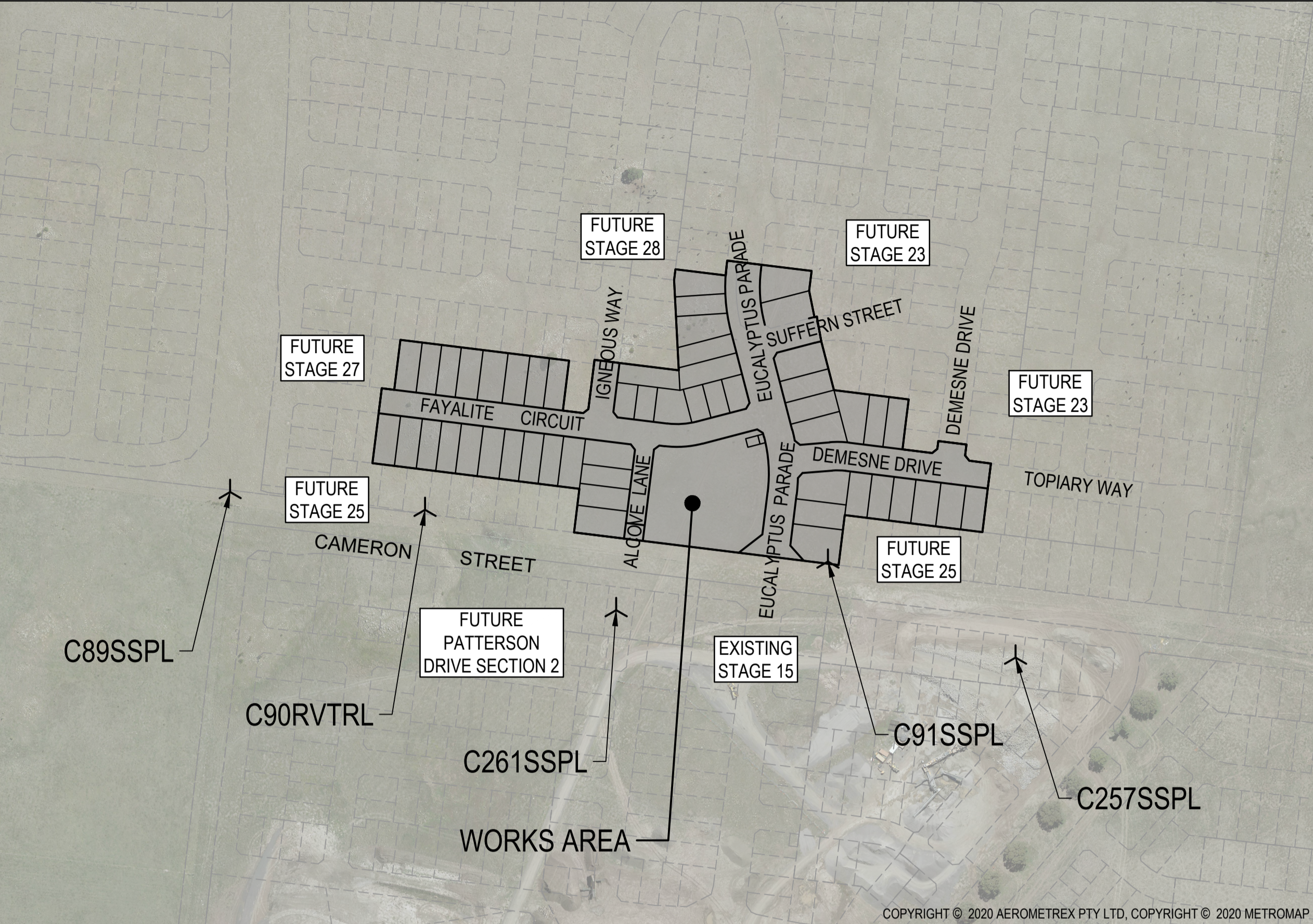


# Olivine Estate Stage 22



- GENERAL NOTES (WHITTLESEA CITY COUNCIL)**
- THE WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT COUNCIL STANDARD DRAWINGS AND SPECIFICATIONS. WORKS TO BE CARRIED OUT TO THE SATISFACTION OF COUNCIL'S SURVEILLANCE COORDINATOR OR HIS REPRESENTATIVE.
  - THE CONTRACTOR IS RESPONSIBLE FOR SAFETY OF WORK ON SITE IN ACCORDANCE WITH APPROPRIATE LEGISLATION. THEY SHALL ERECT AND MAINTAIN ALL SHORING, PLANKING AND STRUTTING, DEWATERING DEVICES, BARRICADES, SIGNS, LIGHTS, ETC. NECESSARY TO KEEP WORKS IN A SAFE AND STABLE CONDITION, AND TO PROTECT THE PUBLIC FROM HAZARDS ASSOCIATED WITH THE WORKS.
  - THE CONTRACTOR SHALL:
    - COMPLY WITH THE SAFETY REQUIREMENTS OF THE MINES ACT, GENERAL REGULATIONS AND STATUTORY RULES, AND THE MINES (TRENCHES) REGULATIONS 1982.
    - NOTIFY THE OCCUPATIONAL HEALTH AND SAFETY AUTHORITY OF THEIR INTENTION TO COMMENCE TRENCHING OPERATIONS WHERE TRENCHES ARE 1.5 METRES OR DEEPER.
    - ENSURE THAT THE MINE MANAGER OR THEIR DEPUTY AS REQUIRED BY THE REGULATIONS IS IN ATTENDANCE WHEN TRENCHING OPERATIONS ARE IN PROGRESS.
  - THE CONTRACTOR IS TO NOTIFY COUNCIL'S SENIOR SURVEILLANCE ENGINEER AND ALL SERVICE AUTHORITIES SEVEN (7) DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
  - ALL ROAD CHAINAGES ARE MEASURED ALONG THE ROAD CENTRELINE EXCEPT KERB RETURNS AND COURTHHEADS, WHERE LIP OF KERB CHAINAGES ARE SPECIFIED. ALL DIMENSIONS AND RADII ARE GIVEN TO THE LIP OF KERB. DO NOT SCALE OFF THESE DRAWINGS, WRITTEN DIMENSIONS ONLY SHALL BE USED.
  - ALL LEVELS ARE TO AUSTRALIAN HEIGHT DATUM.
  - THE CONTRACTOR SHALL COOPERATE WITH OTHER AUTHORITIES AND SHALL ENSURE THAT ALL SERVICES ARE INSTALLED PRIOR TO THE FINAL PAVEMENT COURSE. THE CONTRACTOR SHALL CHECK WITH THE SUPERINTENDENT THE EXACT LOCATION OF ALL SERVICES PRIOR TO THE INSTALLATION OF CONDUITS.
  - ANY EXISTING PAVEMENT OR DRAINAGE WORKS DAMAGED DURING CONSTRUCTION OR THE MAINTENANCE PERIOD TO BE REINSTATED TO THE SATISFACTION OF THE COUNCIL REPRESENTATIVE.
  - 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. APPROPRIATE SILTATION CONTROL IS TO BE CARRIED OUT DURING THE CONSTRUCTION AND MAINTENANCE PERIODS.
  - 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.
  - ALL TREES AND SHRUBS TO BE RETAINED UNLESS PRIOR APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT AUTHORITY BECAUSE ROAD CONSTRUCTION NECESSITATES THEIR REMOVAL, OR REMOVAL IS DIRECTED BY THE AUTHORISED ENGINEER. TREES TO BE REMOVED ARE TO BE SUITABLY LABELLED. WHEN IT IS PROPOSED TO REMOVE EXISTING TREES IN ROAD RESERVES OR COUNCIL RESERVES, CONSULTATION IS TO OCCUR WITH COUNCIL'S PARKS AND GARDENS DEPARTMENT.
  - VICROADS ROADWORK SIGNING CODE OF PRACTICE WHICH COMPLIES WITH THE AUSTRALIAN STANDARD 1742.3-2002 IS TO BE ADHERED TO DURING THE CONSTRUCTION WORKS.
  - 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), R (RECYCLED WATER) AND C (COUNCIL COMMUNICATION) AS PER STANDARD DRAWING EDM 303.
  - ALL EARTHWORKS TO BE CARRIED OUT IN ACCORDANCE WITH COUNCIL'S EARTHWORK SPECIFICATION AND THE EARTHWORKS SECTION OF SMEC'S CONTRACT SPECIFICATION.
  - BATTERS INTO ALLOTMENTS SHALL NOT BE STEEPER THAN 1 IN 6 UNLESS NOTED OTHERWISE.
  - ALL EXCAVATED OR FILLED AREAS OUTSIDE THE ROAD RESERVE AND NATURESTRIPS TO BE STRIPPED OF TOPSOIL AND STOCKPILED PRIOR TO EARTHWORK COMMENCING.
  - NO FILLING OR STOCKPILING OF MATERIAL IS TO BE PLACED ON ANY RESERVE UNLESS DIRECTED BY THE SUPERINTENDENT.
  - NO TOPSOIL TO BE REMOVED FROM SITE UNLESS OTHERWISE APPROVED.
  - LOTS SHALL BE EVENLY GRADED TO ENSURE MINIMUM LOT FALLS AS SPECIFIED ON DRAWINGS ARE ACHIEVED.
  - ALL DRAINAGE PIPES TO BE CLASS 2 RCP UNLESS NOTED OTHERWISE. ALL DRAINAGE PIPE UP TO AND INCLUDING 750mm IN DIAMETER SHALL BE RUBBER RING JOINTED. PIPES ABOVE THIS SIZE MAY BE FLUSH JOINTED WITH EXTERNAL SEALING BANDS. RUBBER RING PIPES TO BE PRESSURE RESISTANT, I.E. SPECIFIC MANUFACTURERS RUBBER RING TO BE USED, SUITED TO PRESSURE CONDITIONS AND THE PIPES ARE NOT TO HAVE ANY PLUGS.
  - ALL PITS GRATER THAN OR EQUAL TO 1000mm DEPTH TO BE PROVIDED WITH STEP IRONS IN ACCORDANCE WITH EDM 609.
  - ALL DRAINAGE TRENCHES UNDER ROAD PAVEMENTS, KERB & CHANNEL, PARKING BAYS, DRIVEWAYS, FOOTPATHS AND BEHIND KERBS & CHANNEL SHALL BE BACKFILLED WITH COMPACTED CRUSHED ROCK AS SPECIFIED. OFFSETS TO DRAINAGE IN EASEMENTS AS SHOWN ARE TO THE CENTRELINE OF THE DRAIN.
  - AG DRAINS TO BE PROVIDED BEHIND ALL KERBS AND SHALL HAVE SUITABLE OUTLET. CONSTRUCTION TO BE IN ACCORDANCE WITH EDM 605-608.
  - HOUSE DRAINS ARE TO BE CONNECTED DIRECT TO UNDERGROUND DRAIN UNLESS NOTED OTHERWISE.
  - PROPERTY INLET PITS AS PER EDM 701-704.
  - DRIVEWAYS TO BE CONSTRUCTED IN ACCORDANCE WITH COUNCILS STANDARDS AND CLEAR OF DRAINAGE PITS, SEWER MAINTENANCE HOLES AND EXISTING TREES.
  - FOOTPATHS ARE TO BE OFFSET 50mm FROM THE BUILDING LINE.
  - ALL PAVEMENT MARKINGS AND TRAFFIC SIGNS SHOULD BE TO AS1742.2 AND 1742.1 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.
  - UPON COMPLETION OF CONSTRUCTION, THE WHOLE SITE SHALL BE CLEANED UP AND GRADED OVER. ALL RUBBISH IS TO BE REMOVED AND THE SITE IS TO BE LEFT IN A CLEAN AND TIDY CONDITION TO THE SATISFACTION OF THE SUPERINTENDENT.
  - ALL SERVICE TRENCHES UNDER FOOTPATH, ROAD PAVEMENTS, VEHICLE CROSSINGS AND OTHER ROAD STRUCTURES ARE TO BE BACKFILLED IN ACCORDANCE WITH RELEVANT COUNCIL AND AUTHORITY STANDARDS. FOOTPATHS ARE TO BE CONTINUOUSLY REINFORCED CONCRETE IN ACCORDANCE WITH EDM 403 UNLESS OTHERWISE SPECIFIED.
  - A BUILDING PERMIT MUST BE OBTAINED FOR ANY STRUCTURE/RETAINING WALL EXCEEDING 1.0m IN HEIGHT PRIOR TO COMMENCEMENT OF CONSTRUCTION, IN ACCORDANCE WITH THE BUILDING CODE OF AUSTRALIA. COPY OF BUILDING PERMITS AND 'CERTIFICATE OF COMPLIANCE - CONSTRUCTION' (REGARDLESS OF HEIGHT) FOR ALL COMPONENTS OF RETAINING WALL INCLUDING AG DRAINS TO BE SUBMITTED TO COUNCIL PRIOR TO STATEMENT OF COMPLIANCE.

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TBM SETOUT TABLE				
POINT	EAST	NORTHING	ELEVATION	DESCRIPTION
C89SSPL	322,731.47	5,844,398.54	247.61	STAR PICKET
C90RVTRL	322,156.34	5,844,387.18	249.01	RIVET
C91SSPL	323,111.41	5,844,354.26	246.33	STAR PICKET
C257SSPL	323,230.60	5,844,293.25	247.43	STAR PICKET
C261SSPL	322,976.76	5,844,323.39	244.79	STAR PICKET

**WARNING**  
SAFETY MEASURES REQUIRED

Please note there are risks attached to the construction of this project, and any ongoing maintenance of structures. Consider the safety of all. For potential risks, consequences and controls refer to Safety In Design Risk Register SID P4.E6. 1700E-022-500

**ASSESS THE RISK - STAY SAFE**

**WARNING**  
BEWARE OF UNDERGROUND SERVICES

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**AS CONSTRUCTED PLANS**

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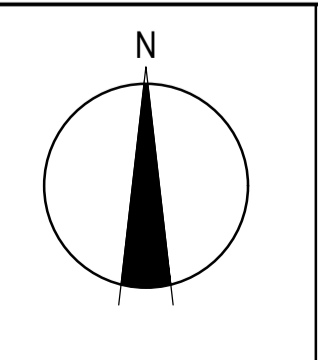
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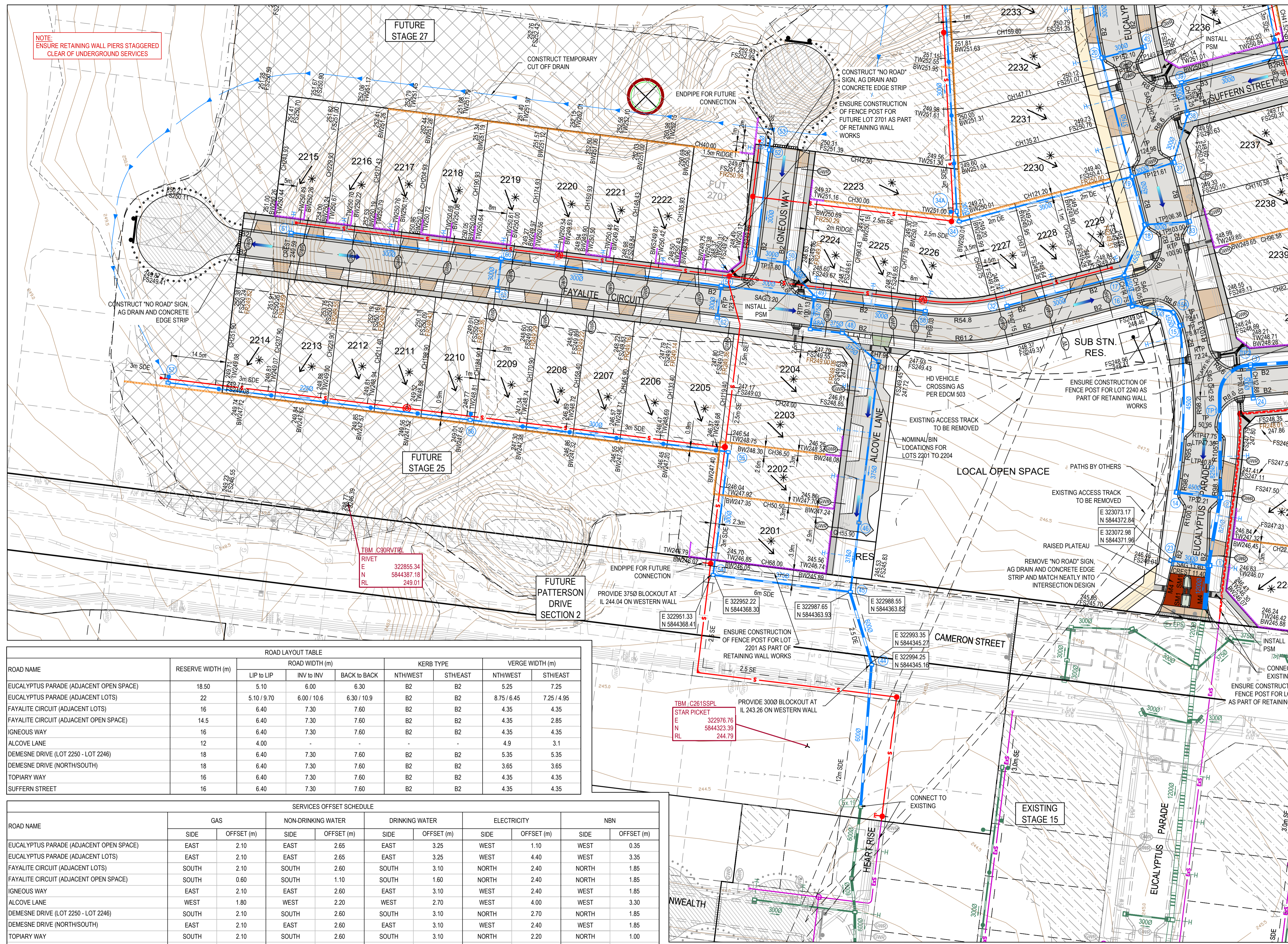
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Olivine Estate - Stage 22  
Whittlesea City Council  
Road and Drainage  
Cover Plan & General Notes

MELBOURNE REF <b>367 G11</b>	PROJECT / DRAWING No. <b>1700E-022-101</b>	SHEET No. <b>01 of 43</b>	REVISION <b>3</b>
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NOTE: ENSURE RETAINING WALL PIERS STAGGERED CLEAR OF UNDERGROUND SERVICES



FOR CONTINUATION REFER 1700E-022-112

**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
	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
	BW159.60 BOTTOM OF RETAINING WALL LEVEL
	TW159.60 TOP 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

**ROAD LAYOUT TABLE**

ROAD NAME	RESERVE WIDTH (m)	ROAD WIDTH (m)			KERB TYPE		VERGE WIDTH (m)	
		LIP to LIP	INV to INV	BACK to BACK	NTH/WEST	STH/EAST	NTH/WEST	STH/EAST
EUCALYPTUS PARADE (ADJACENT OPEN SPACE)	18.50	5.10	6.00	6.30	B2	B2	5.25	7.25
EUCALYPTUS PARADE (ADJACENT LOTS)	22	5.10/9.70	6.00/10.6	6.30/10.9	B2	B2	8.75/6.45	7.25/4.95
FAYALITE CIRCUIT (ADJACENT LOTS)	16	6.40	7.30	7.60	B2	B2	4.35	4.35
FAYALITE CIRCUIT (ADJACENT OPEN SPACE)	14.5	6.40	7.30	7.60	B2	B2	4.35	2.85
IGNEOUS WAY	16	6.40	7.30	7.60	B2	B2	4.35	4.35
ALCOVE LANE	12	4.00	-	-	-	-	4.9	3.1
DEMESNE DRIVE (LOT 2250 - LOT 2246)	18	6.40	7.30	7.60	B2	B2	5.35	5.35
DEMESNE DRIVE (NORTH/SOUTH)	18	6.40	7.30	7.60	B2	B2	3.65	3.65
TOPIARY WAY	16	6.40	7.30	7.60	B2	B2	4.35	4.35
SUFFERN STREET	16	6.40	7.30	7.60	B2	B2	4.35	4.35

**SERVICES OFFSET SCHEDULE**

ROAD NAME	GAS		NON-DRINKING WATER		DRINKING WATER		ELECTRICITY		NBN	
	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)
EUCALYPTUS PARADE (ADJACENT OPEN SPACE)	EAST	2.10	EAST	2.65	EAST	3.25	WEST	1.10	WEST	0.35
EUCALYPTUS PARADE (ADJACENT LOTS)	EAST	2.10	EAST	2.65	EAST	3.25	WEST	4.40	WEST	3.35
FAYALITE CIRCUIT (ADJACENT LOTS)	SOUTH	2.10	SOUTH	2.60	SOUTH	3.10	NORTH	2.40	NORTH	1.85
FAYALITE CIRCUIT (ADJACENT OPEN SPACE)	SOUTH	0.60	SOUTH	1.10	SOUTH	1.60	NORTH	2.40	NORTH	1.85
IGNEOUS WAY	EAST	2.10	EAST	2.60	EAST	3.10	WEST	2.40	WEST	1.85
ALCOVE LANE	WEST	1.80	WEST	2.20	WEST	2.70	WEST	4.00	WEST	3.30
DEMESNE DRIVE (LOT 2250 - LOT 2246)	SOUTH	2.10	SOUTH	2.60	SOUTH	3.10	NORTH	2.70	NORTH	1.85
DEMESNE DRIVE (NORTH/SOUTH)	EAST	2.10	EAST	2.60	EAST	3.10	WEST	2.40	WEST	1.85
TOPIARY WAY	SOUTH	2.10	SOUTH	2.60	SOUTH	3.10	NORTH	2.20	NORTH	1.00
SUFFERN STREET	SOUTH	2.10	SOUTH	2.60	SOUTH	3.10	NORTH	2.50	NORTH	1.85

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OH&S Management AS/NZS 4500  
Environmental Management ISO 14001  
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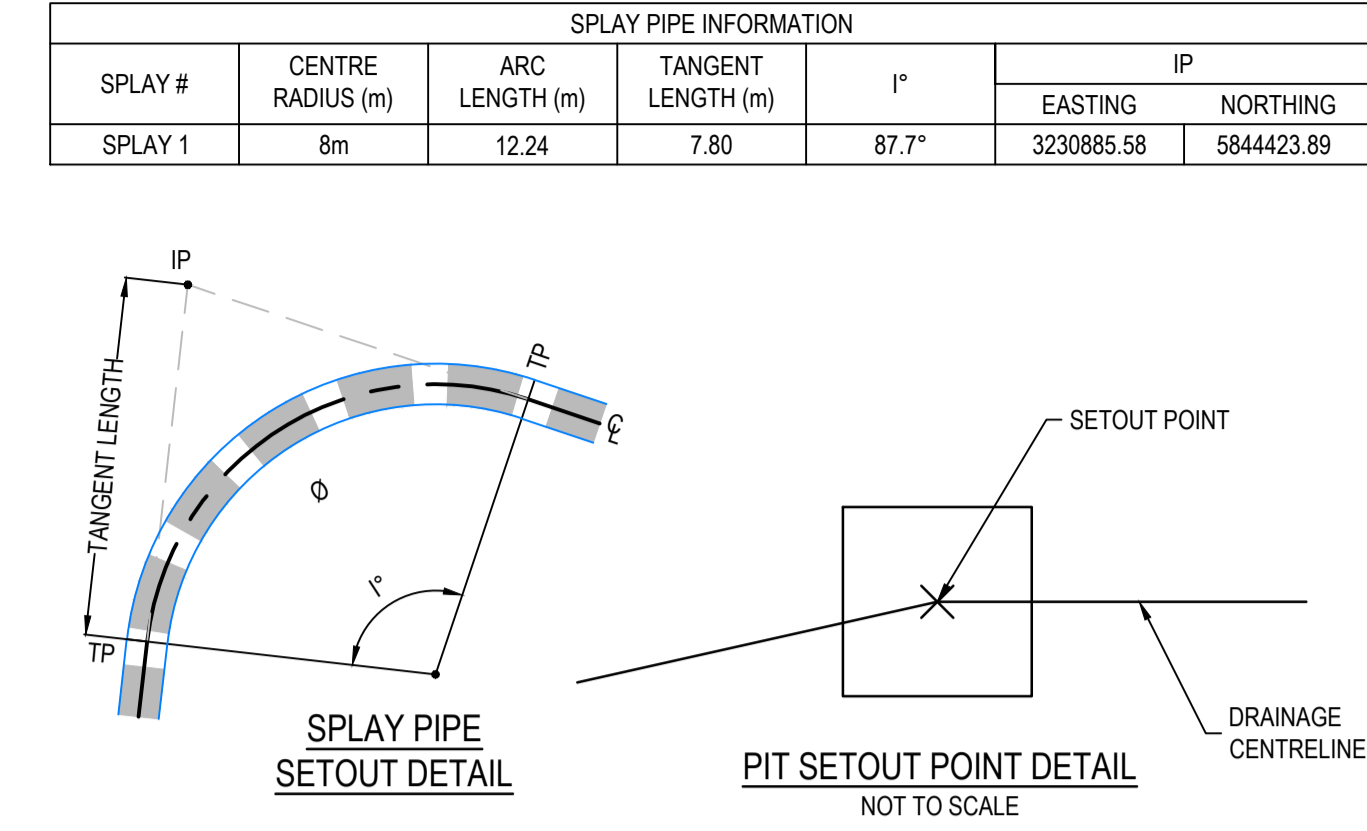
**mirvac**

Olivine Estate - Stage 22  
Whittlesea City Council  
Road and Drainage  
Layout Plan - 1

MELWAYS REF: 367 G11  
PROJECT / DRAWING No: 1700E-022-111  
SHEET No: 02 of 43  
REVISION: 6

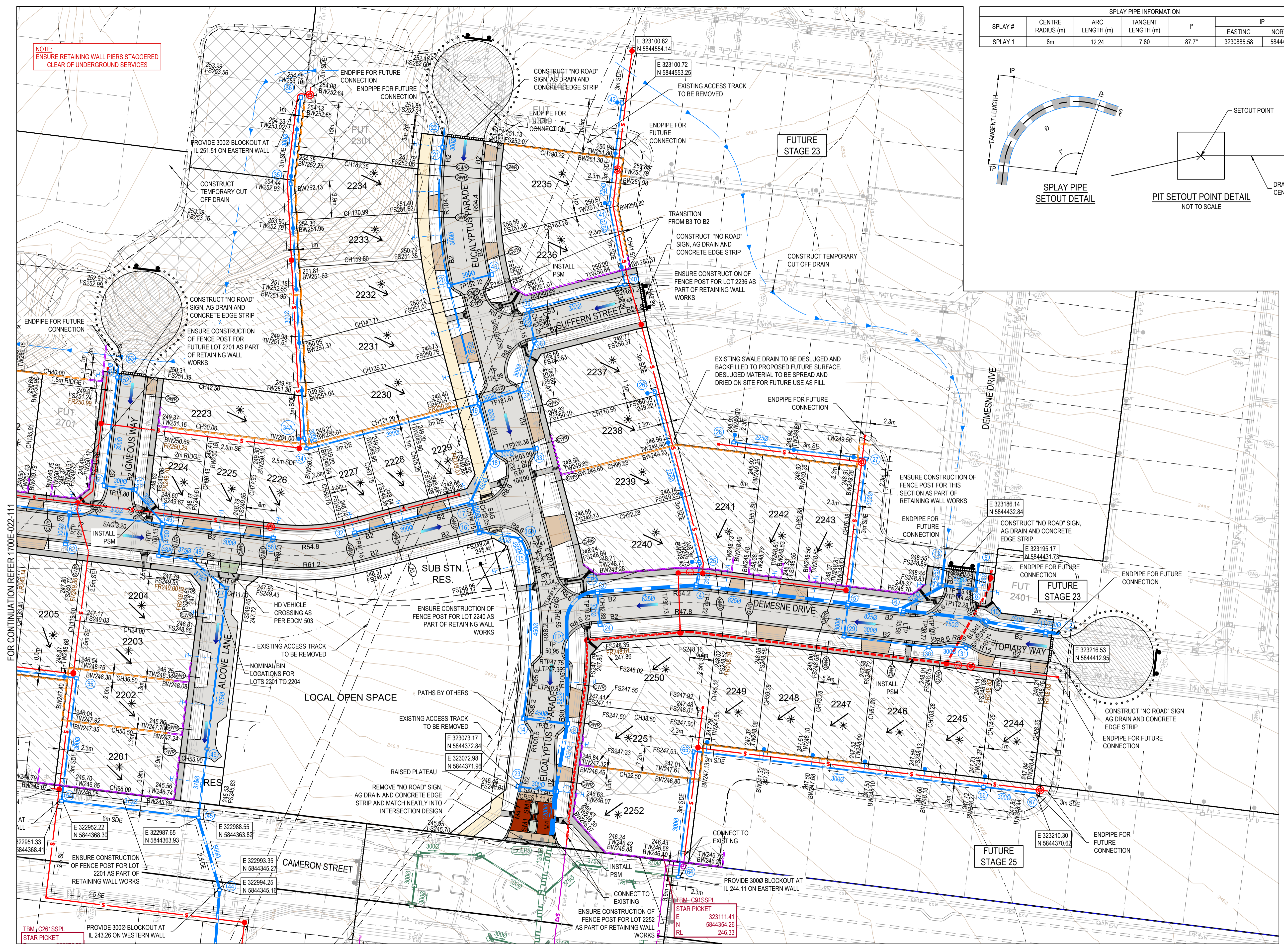
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**NOTE:**  
ENSURE RETAINING WALL PIERS STAGGERED  
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LEGEND - LAYOUT PLAN	
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	EXISTING MAIN DRAIN
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	EXISTING HOUSE DRAIN
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	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
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	PROPOSED SHARED FOOTPATH
	PROPOSED ROAD PAVING
	EXISTING ROAD PAVING

FOR CONTINUATION REFER 1700E-022-111

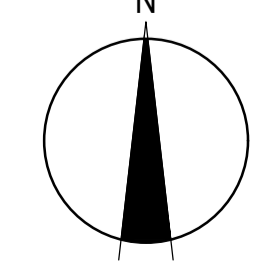


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			PLAN OF SUB. NO.
			PERMIT REF. NO.
<b>AS CONSTRUCTED</b>			0 5 10 20 Scale 1:500 SCALE AS SHOWN AT 1

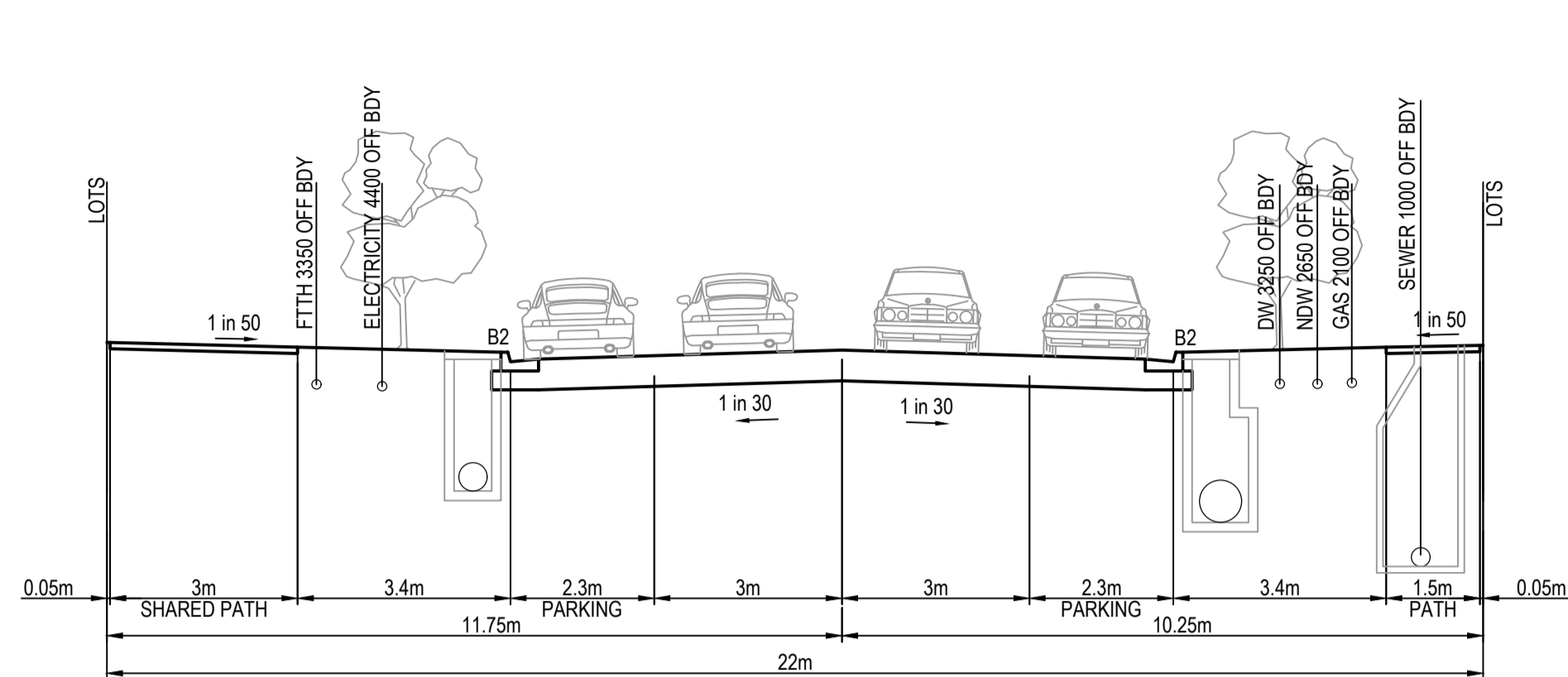


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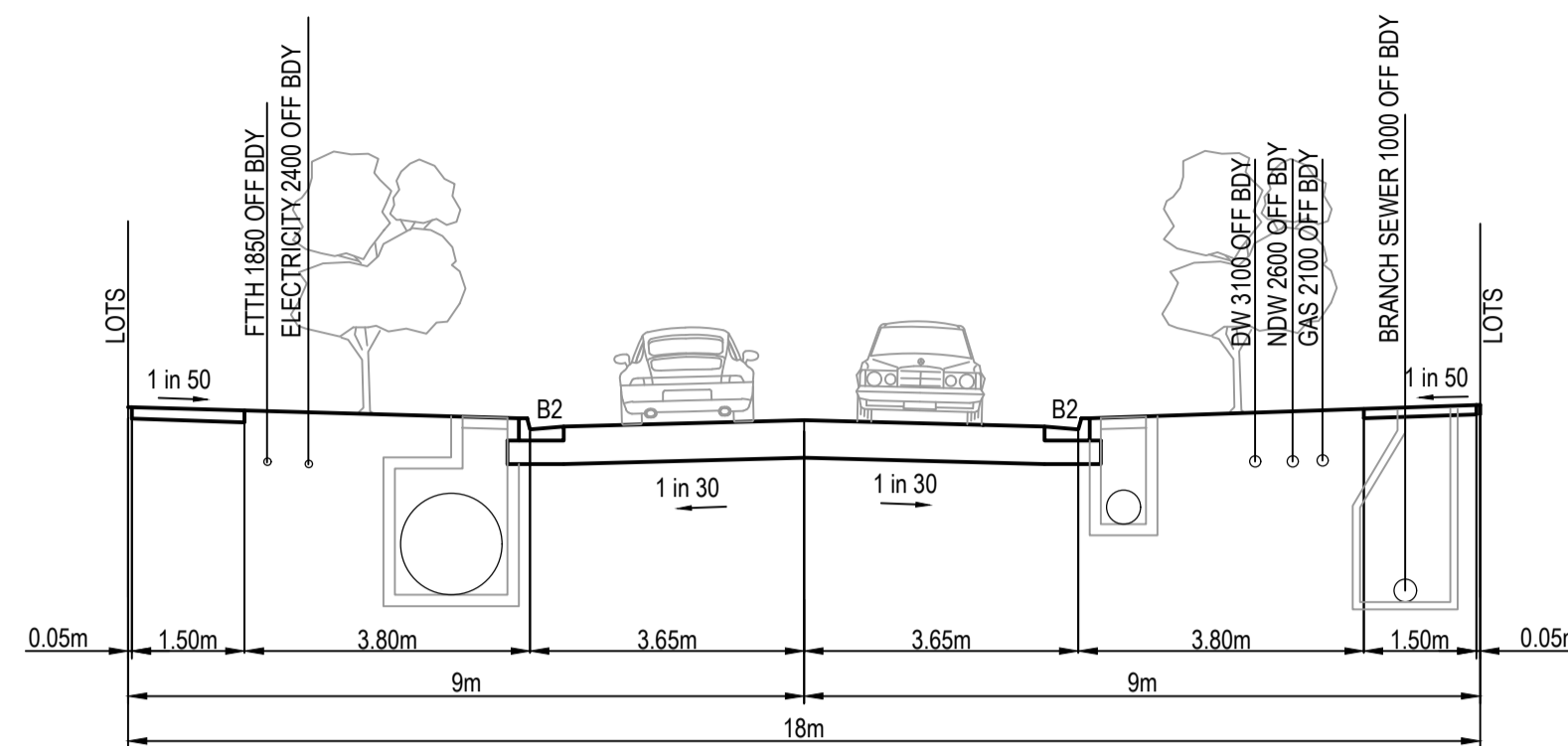
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Whittlesea City Council  
Road and Drainage  
Layout Plan - 2

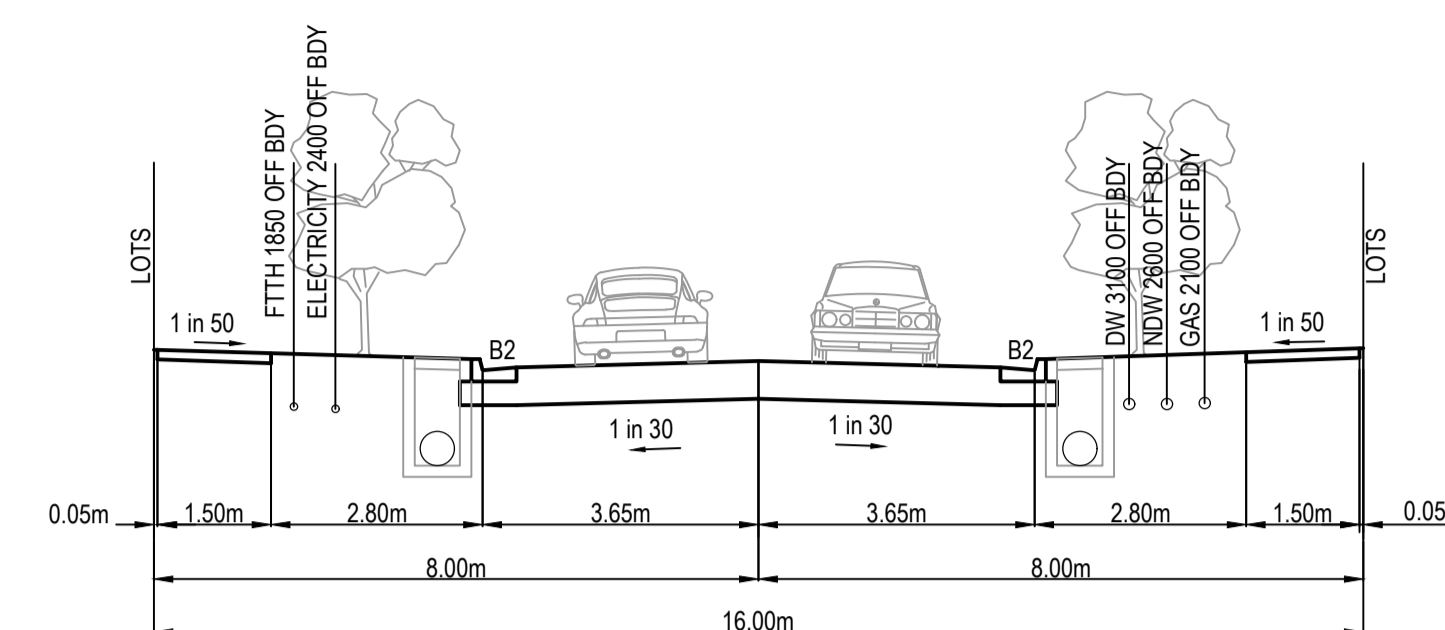
MELBOURNE REF	PROJECT / DRAWING No	SHEET No	REVISION
367 G11	1700E-022-112	03 of 43	7



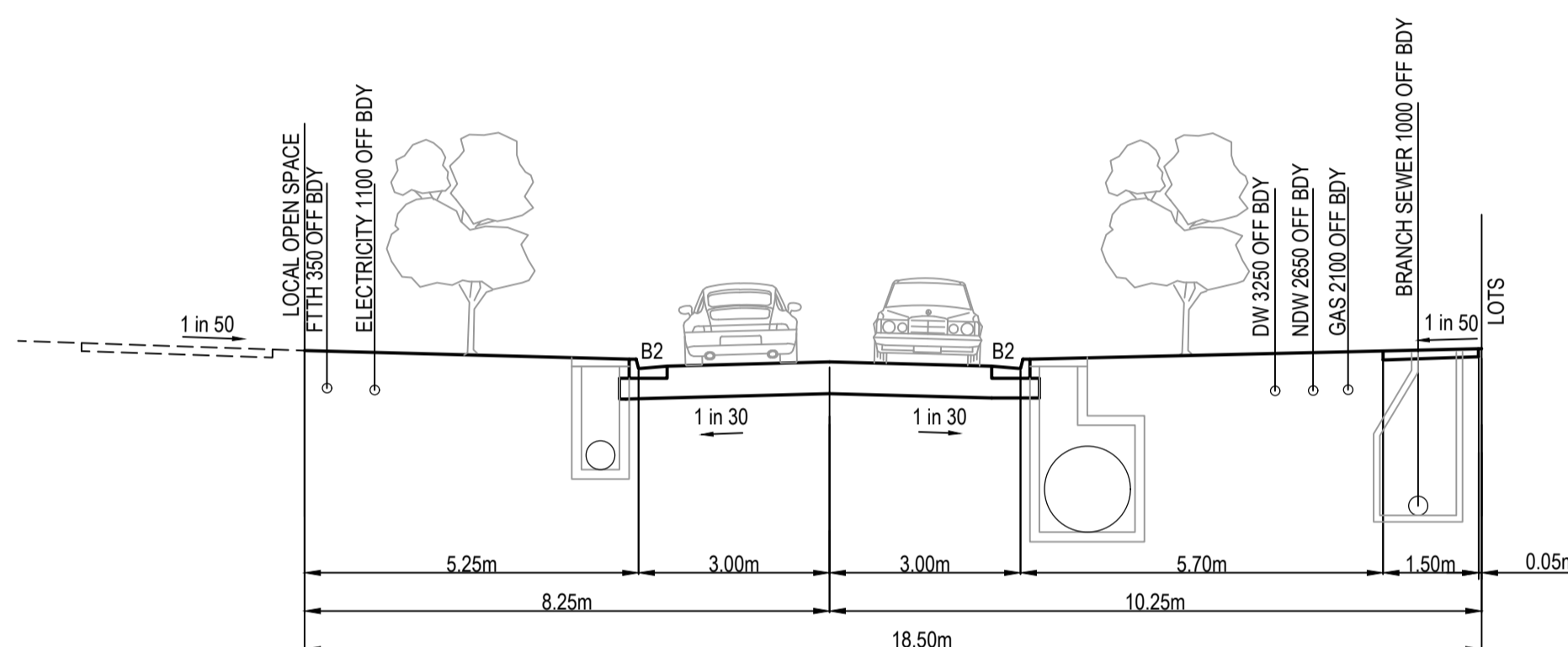
**22m MODIFIED ACCESS STREET 2 WITH SHARED PATH**  
EUCALYPTUS PARADE (ADJACENT LOTS)



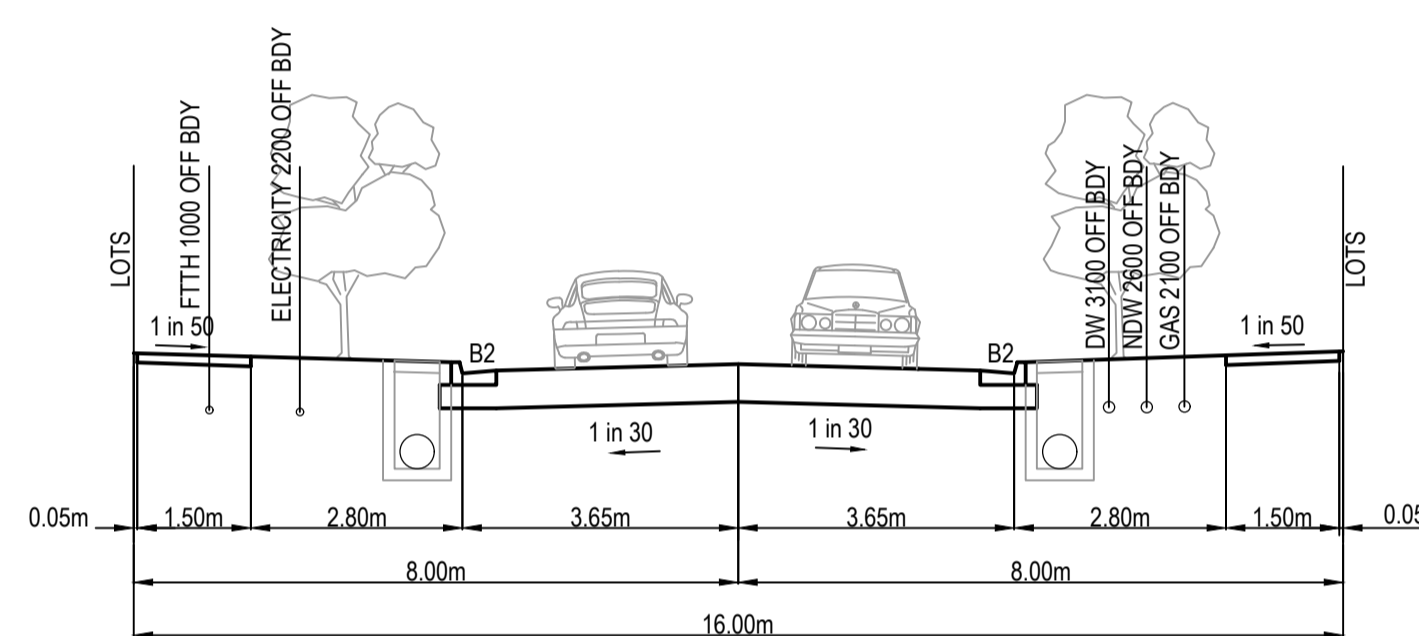
**18m ACCESS STREET**  
DEMESNE DRIVE (NORTH/SOUTH)



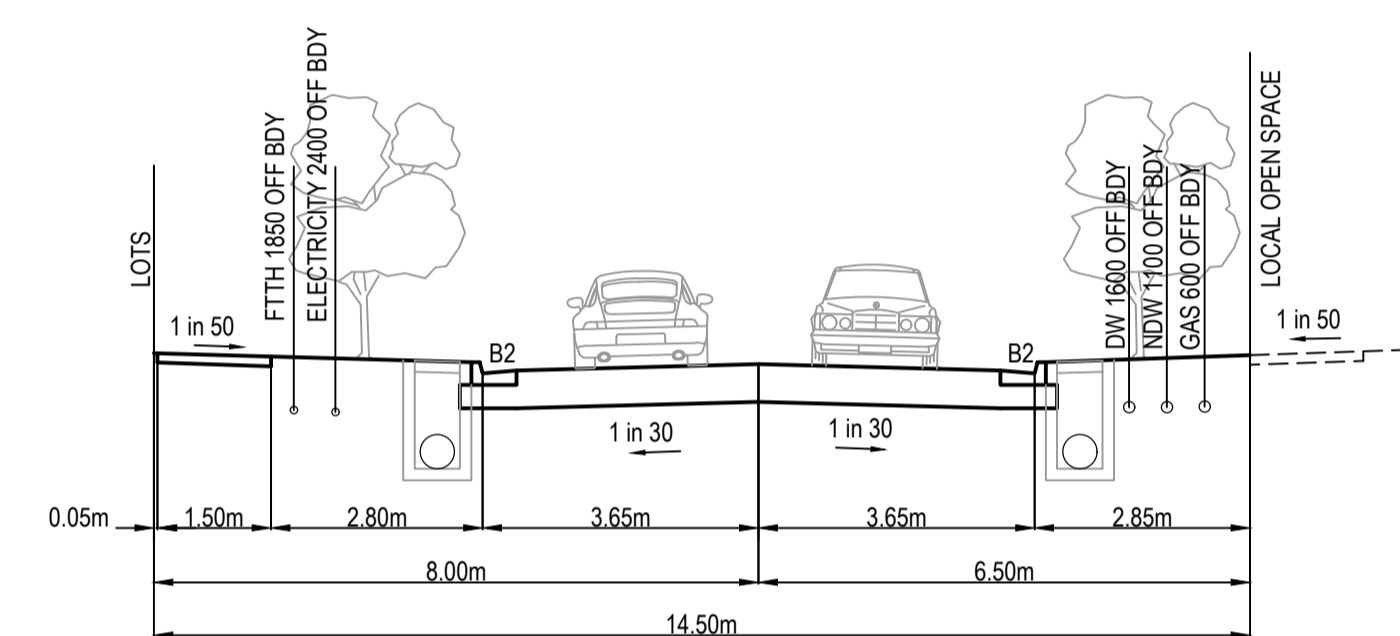
**16m ACCESS STREET**  
FAYALITE CIRCUIT (ADJACENT LOTS), IGNEOUS WAY



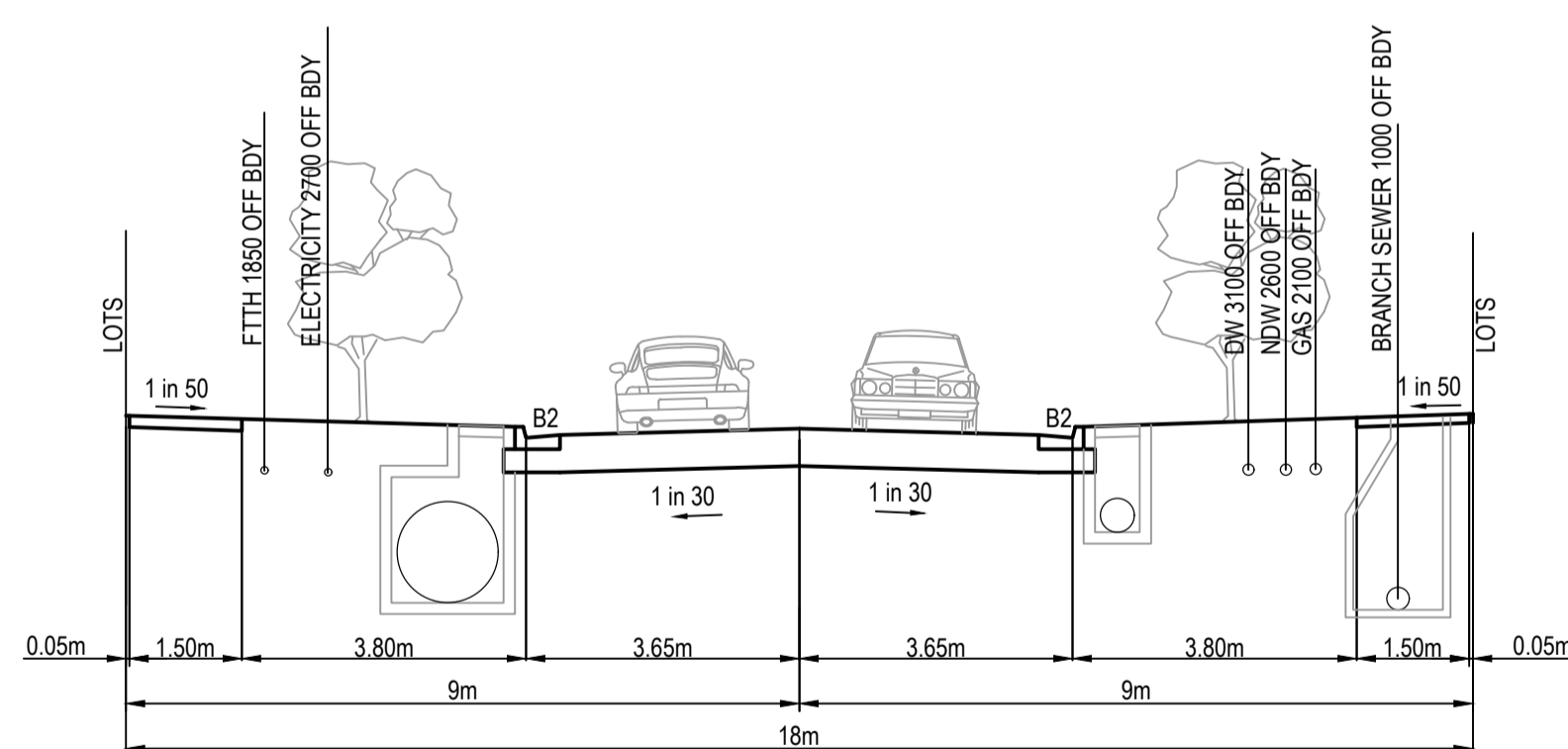
**18.5m ACCESS STREET**  
EUCALYPTUS PARADE (ADJACENT OPEN SPACE)



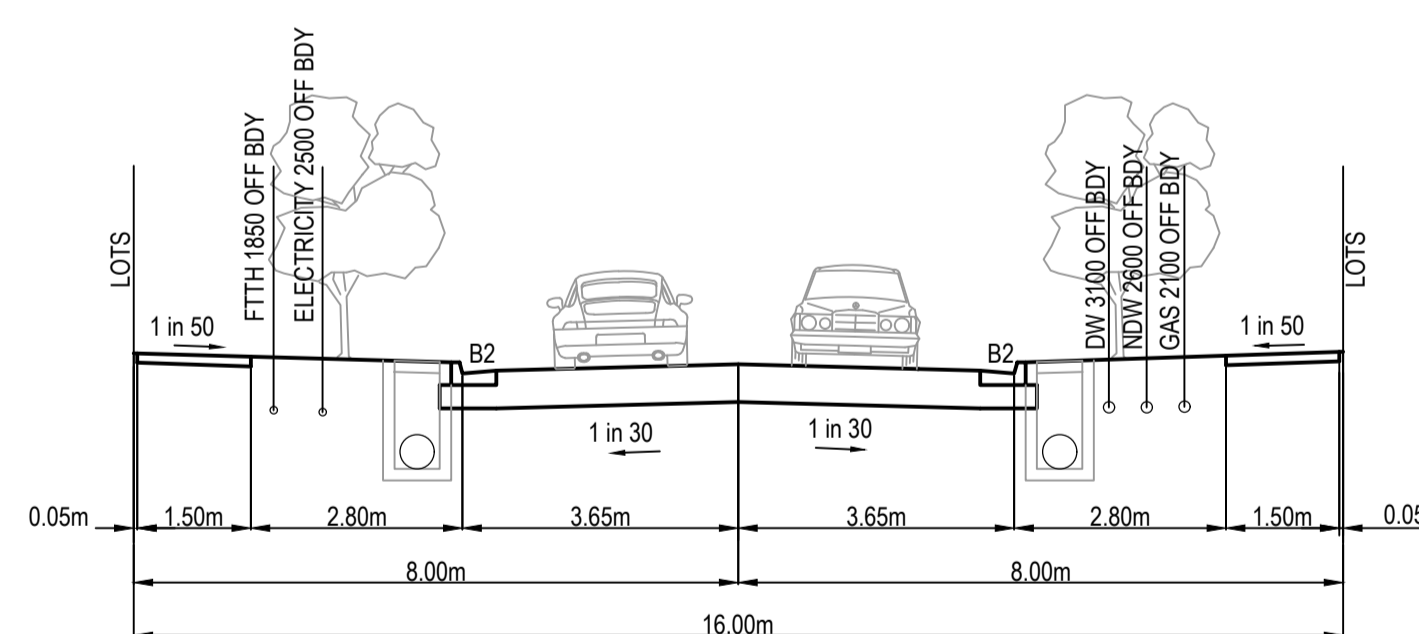
**16m ACCESS STREET**  
TOPIARY WAY



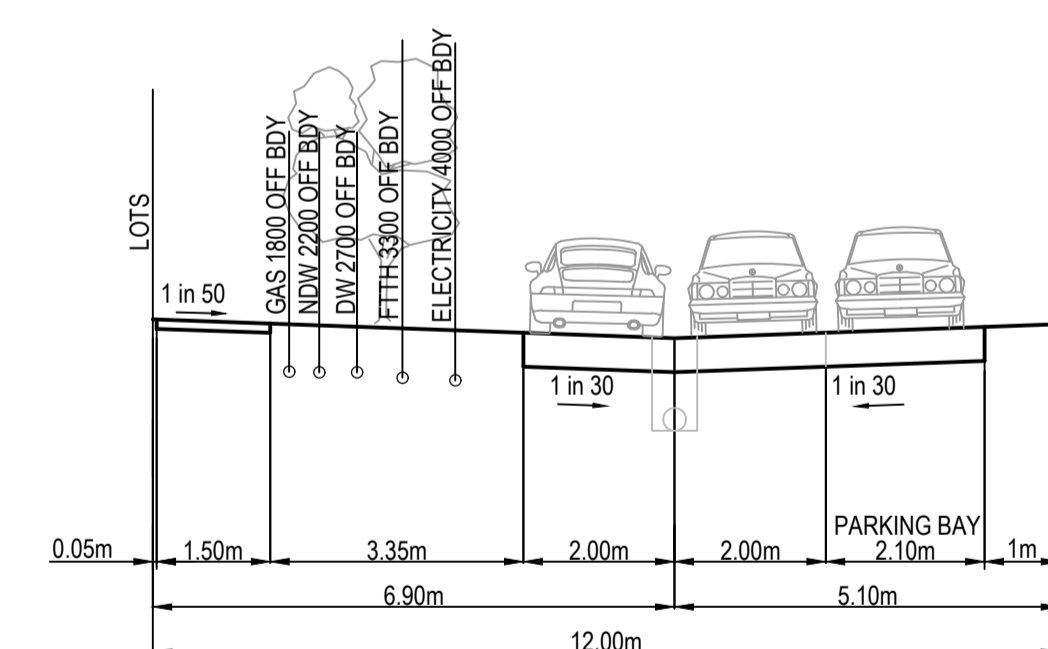
**14.5m ACCESS STREET**  
FAYALITE CIRCUIT (ADJACENT OPEN SPACE)



**18m ACCESS STREET**  
DEMESNE DRIVE (LOT 2250 - LOT 2246)



**16m ACCESS STREET**  
SUFFERN STREET



**12m ACCESS LANE**  
ALCOVE LANE

**AS CONSTRUCTED PLANS**

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**AS CONSTRUCTED**

PLAN OF SUB. NO.

PERMIT REF. NO.

SCALE AS SHOWN AT A1



Member of the Surlana Jurong Group

ABN 47 065 475 149

Collins Square, Tower 4, Level 20, 727 Collins St  
Melbourne, VIC, 3008, Australia  
03 9514 1500



Olivine Estate - Stage 22  
Whittlesea City Council  
Road and Drainage  
Typical Cross Sections

MELWAYS REF: 367 G11  
PROJECT / DRAWING No: 1700E-022-113

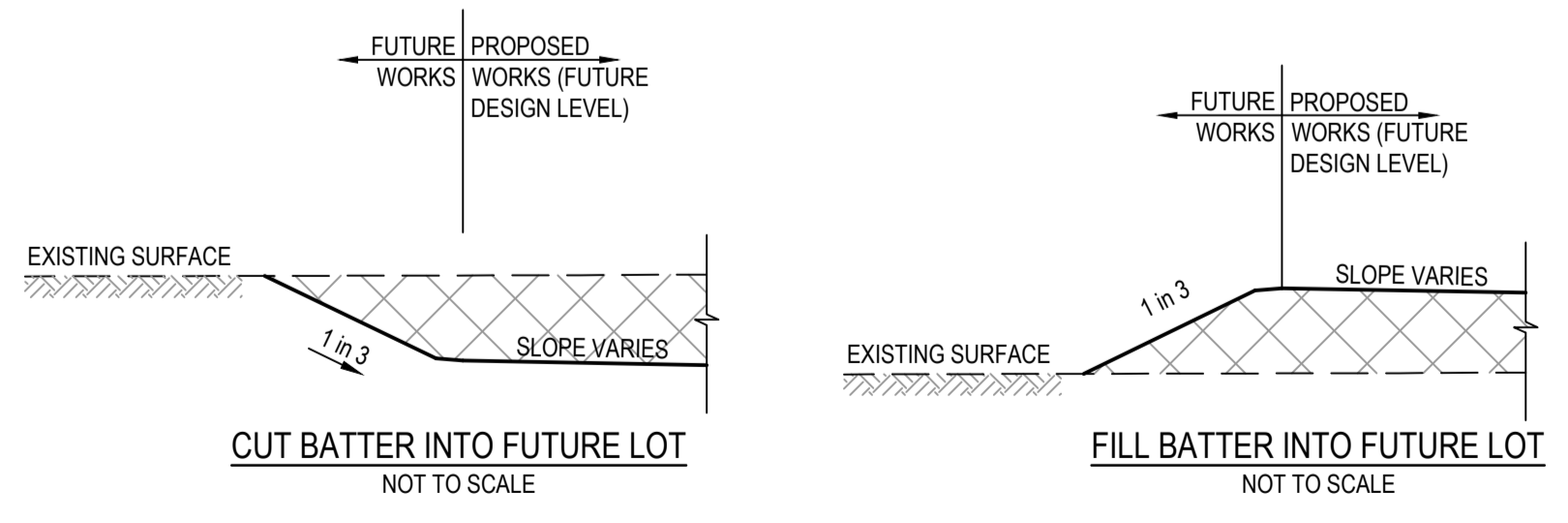
SHEET No: 04 of 43  
REVISION: 3



**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
	FR140.35 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

FOR CONTINUATION REFER 1700E-022-132



**WARNING**  
**BEWARE OF UNDERGROUND SERVICES**

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

**AS CONSTRUCTED PLANS**

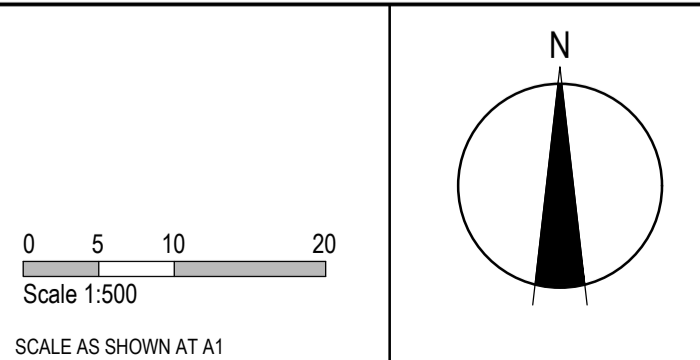
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Quality Management ISO 9001  
OH&S Management AS/NZS 4500  
Environmental Management ISO 14001

PLAN OF SUB. NO.  
PERMIT REF. NO.

**AS CONSTRUCTED**

Scale 1:500  
SCALE AS SHOWN AT 1



**SMEC**  
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ABN 47 065 475 149  
Collins Square, Tower 4, Level 20, 727 Collins St  
Melbourne, VIC, 3008, Australia  
03 9514 1500

**mirvac**

Olive Estate - Stage 22  
Whittlesea City Council  
Road and Drainage  
Earthworks & Retaining Wall - 1

MELBAYS REF: 367 G11  
PROJECT / DRAWING No: 1700E-022-131  
SHEET No: 05 of 43  
REVISION: 5



**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
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	141.34 EXISTING SURFACE LEVEL
	FS140.35 FINISHED BUILDING LINE LEVEL
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	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
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	DIRECTION OF FALL
	OVERLAND FLOW
	GRADED IN DIRECTION OF FALL TO LEVEL INDICATED
	EDGE STRIP, SUBSOIL DRAIN, "NO ROAD" SIGN & BARRIER
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	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

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FOR CONTINUATION REFER 1700E-022-131

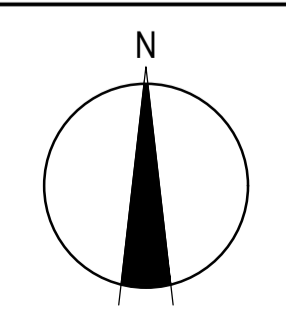
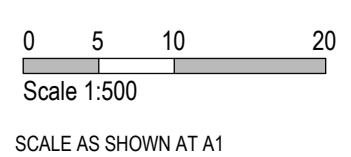
**AS CONSTRUCTED PLANS**

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PLAN OF SUB. NO.  
 PERMIT REF. NO.

**AS CONSTRUCTED**

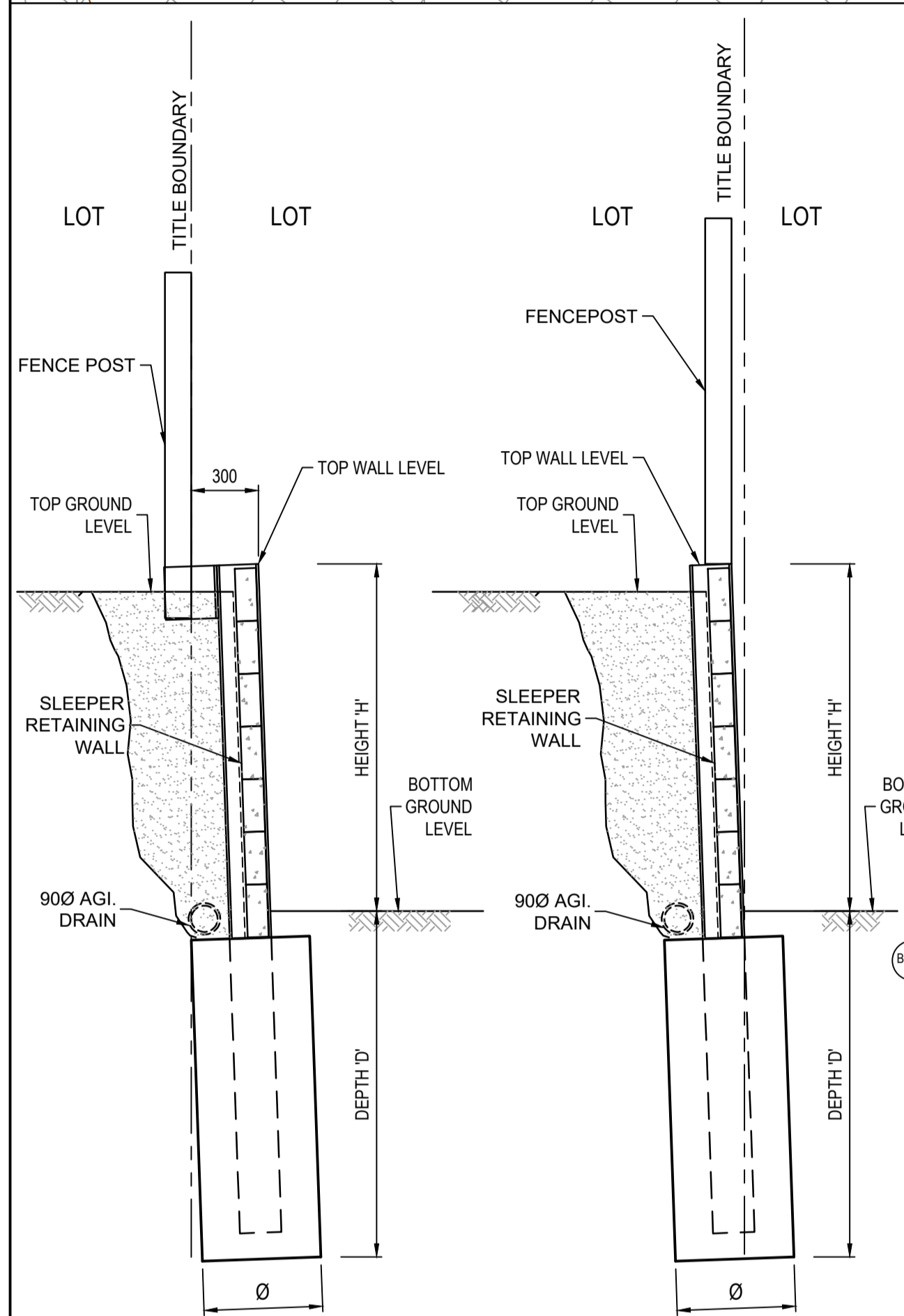
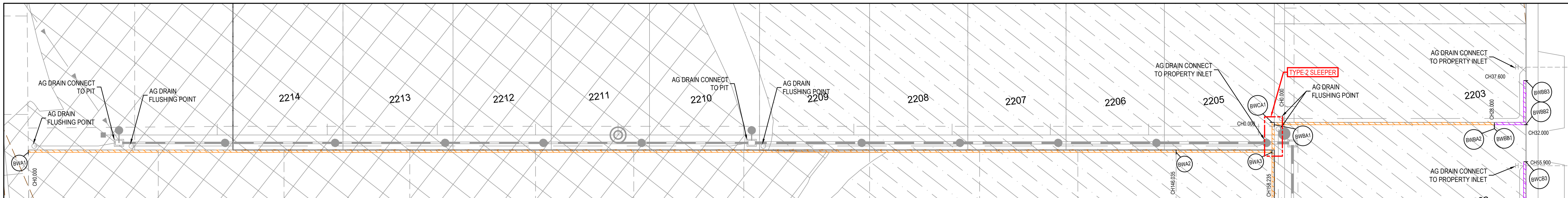


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 Melbourne, VIC, 3008, Australia  
 03 9514 1500



Olivine Estate - Stage 22  
 Whittlesea City Council  
 Road and Drainage  
 Earthworks & Retaining Wall - 2

MELBOURNE REF <b>367 G11</b>	PROJECT / DRAWING No. <b>1700E-022-132</b>	SHEET No. <b>06 of 43</b>	REVISION <b>4</b>
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**ALIGNMENT BWA**

Point no	Easting	Northing	RL
BWA1	322796.056	5844419.711	247.870
BWA2	322940.992	5844401.828	247.202
BWA3	322953.100	5844400.334	247.400

**ALIGNMENT BWBA**

Point no	Easting	Northing	RL
BWBA1	322953.826	5844403.771	248.297
BWBA2	322981.616	5844400.343	248.110

**ALIGNMENT BWBB**

Point no	Easting	Northing	RL
BWBB1	322981.616	5844400.343	248.110
BWBB2	322985.585	5844399.853	248.084
BWBB3	322986.271	5844405.411	248.420

**ALIGNMENT BWCA**

Point no	Easting	Northing	RL
BWCA1	322953.565	5844404.106	248.752
BWCA2	322951.814	5844389.913	247.350
BWCA3	322979.901	5844386.448	247.258

**ALIGNMENT BWCB**

Point no	Easting	Northing	RL
BWCB1	322979.901	5844386.448	247.258
BWCB2	322983.871	5844385.958	247.245
BWCB3	322985.010	5844395.188	247.802

**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 - CONCRETE SLEEPER
	RETAINING WALL - ROCK
	AG DRAIN

**LEGEND**

	EXISTING SURFACE
	DESIGN LINE
	RETAINING WALL - CONCRETE SLEEPER
	RETAINING WALL - ROCK

**RETAINING WALL DESIGN AND APPROVALS REQUIREMENTS**

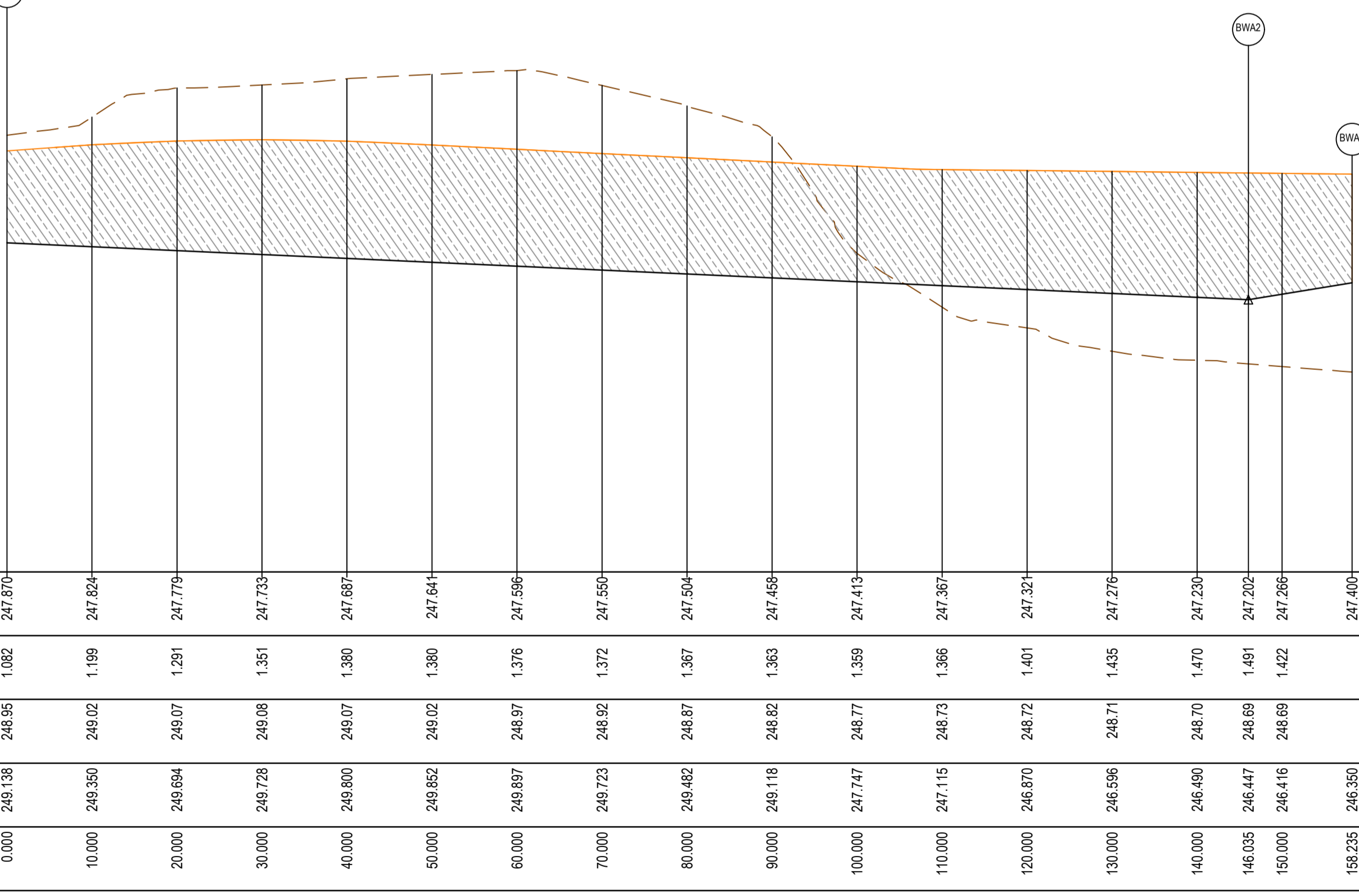
NOTE: RETAINING WALL DETAILS AND DESIGN CERTIFICATION TO BE SUBMITTED TO COUNCIL PRIOR TO COMMENCEMENT OF CONSTRUCTION OF WALLS

**RETAINING WALLS**

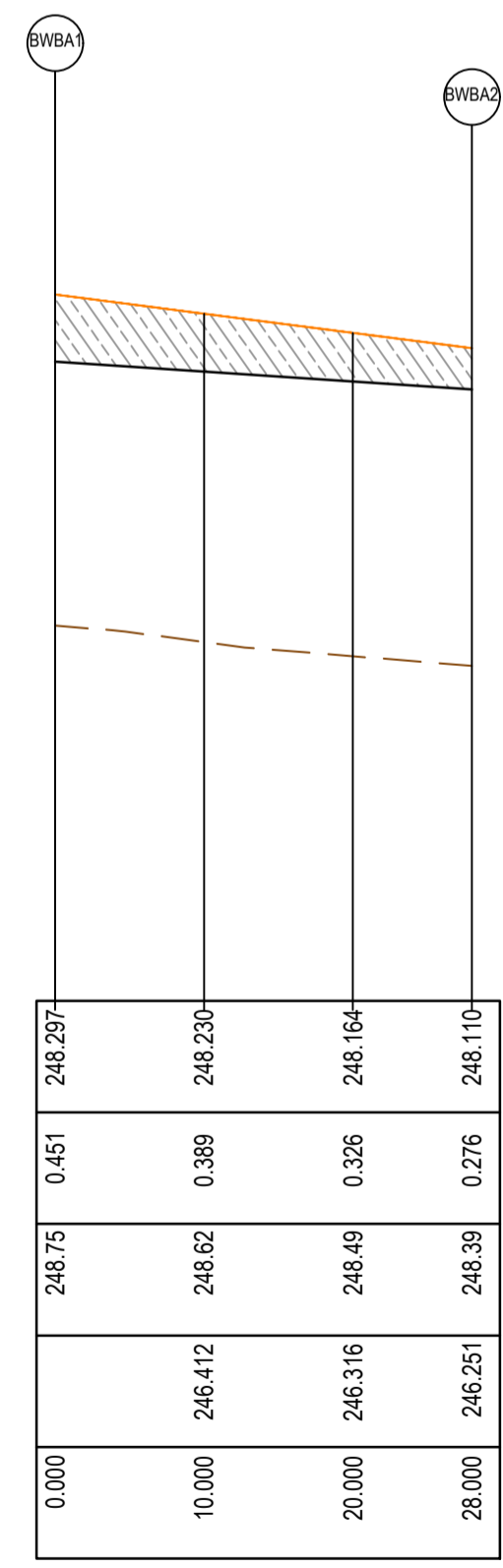
- CONTRACTOR TO OBTAIN ANY RELEVANT BUILDING PERMITS. COPY OF BUILDING PERMIT TO BE PROVIDED TO PRINCIPAL.
- CONTRACTOR TO PROVIDE STRUCTURAL ENGINEER INSPECTION AND CERTIFICATION FOR CONSTRUCTION OF ALL WALLS, IRRESPECTIVE OF NEED FOR PERMIT OR OTHERWISE.
- CONTRACTOR TO ENSURE ALL REQUIREMENTS OF BUILDING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

TYPE 1 SLEEPER RETAINING WALL  
SCALE: NTS

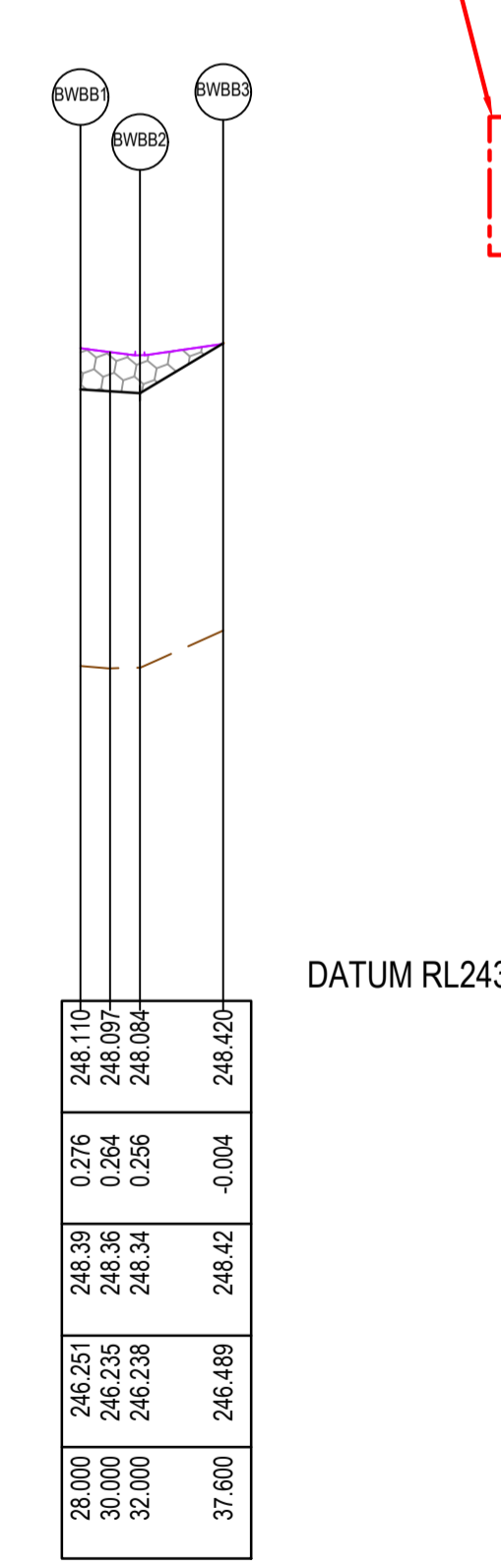
TYPE 2 SLEEPER RETAINING WALL  
SCALE: NTS



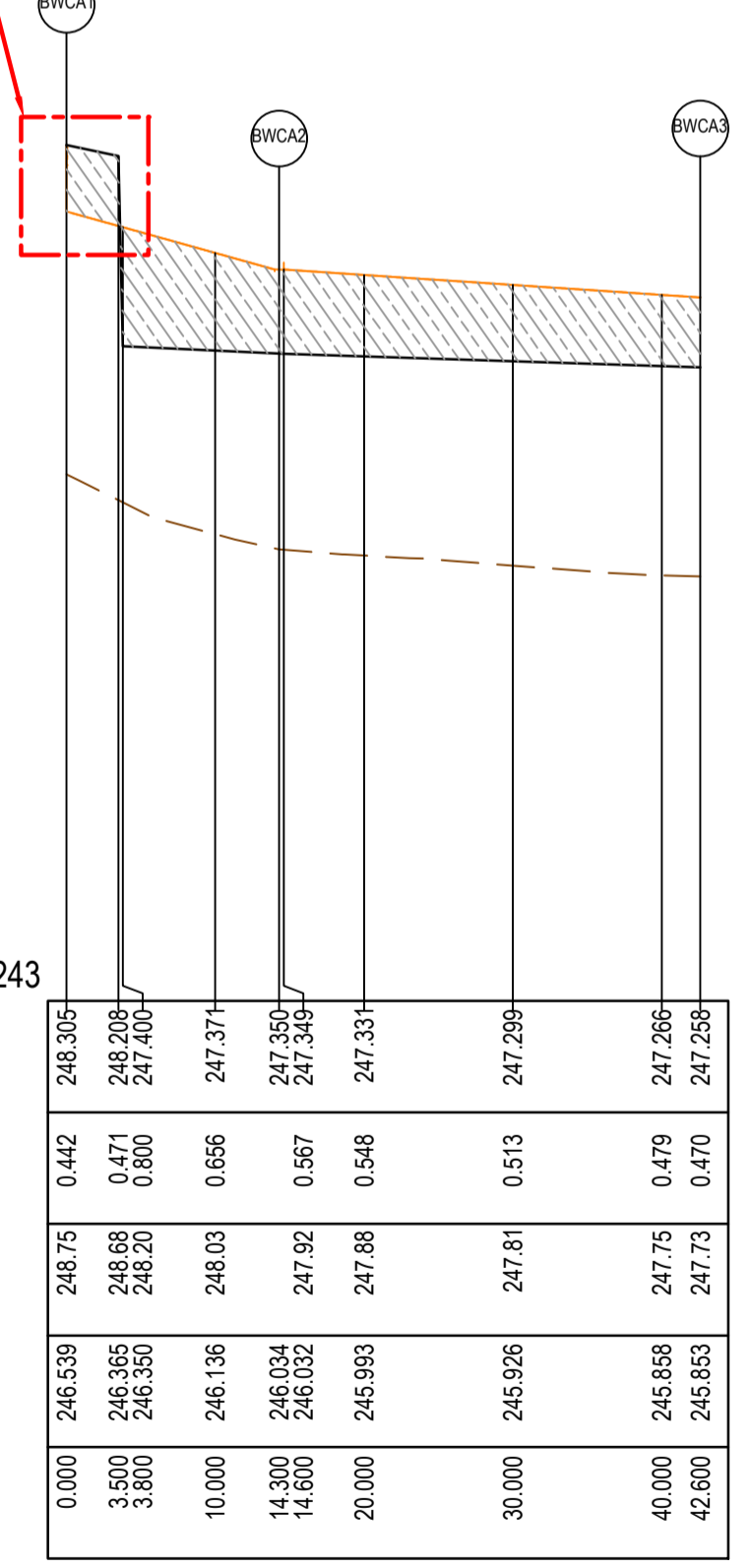
RETAINING WALL BWA - LONGITUDINAL SECTION



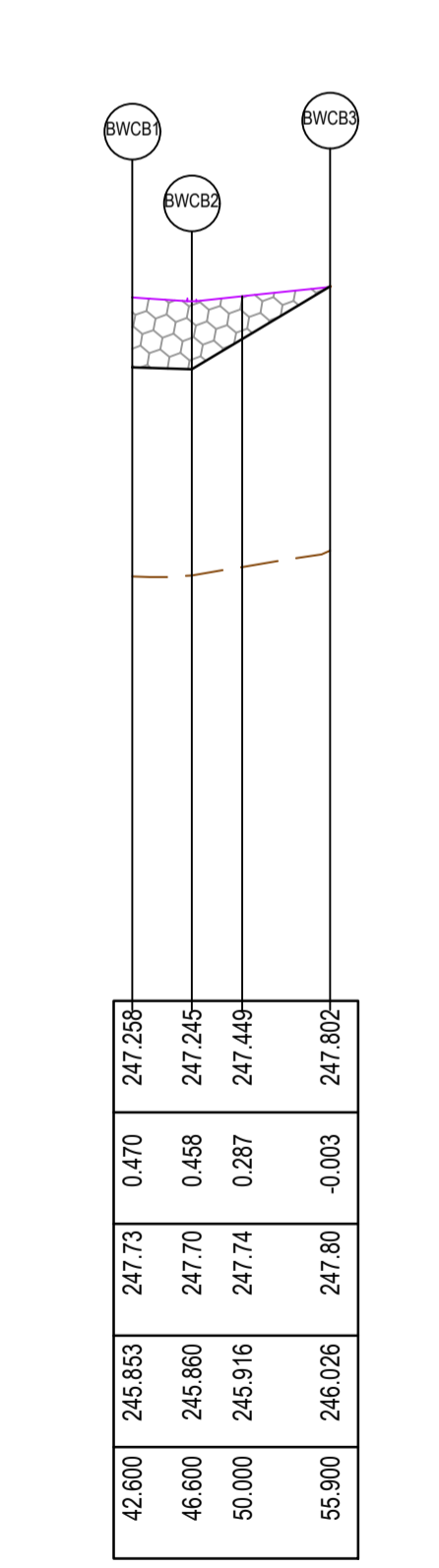
RETAINING WALL BWBA - LONGITUDINAL SECTION



RETAINING WALL BWBB - LONGITUDINAL SECTION



RETAINING WALL BWCA - LONGITUDINAL SECTION



RETAINING WALL BWCB - LONGITUDINAL SECTION

**AS CONSTRUCTED PLANS**  
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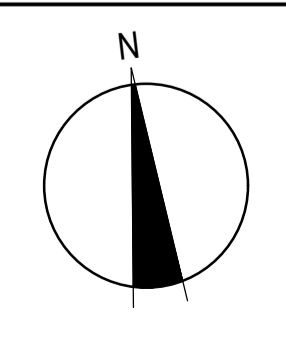
Quality Management ISO 9001  
OH&S Management AS/NZS 4801  
Environmental Management ISO 14001

PLAN OF SUB. NO.  
PERMIT REF. NO.

**AS CONSTRUCTED**

SCALE AS SHOWN AT A1

Scale 1:250  
Scale 1:500, V1:50  
Scale 1:250

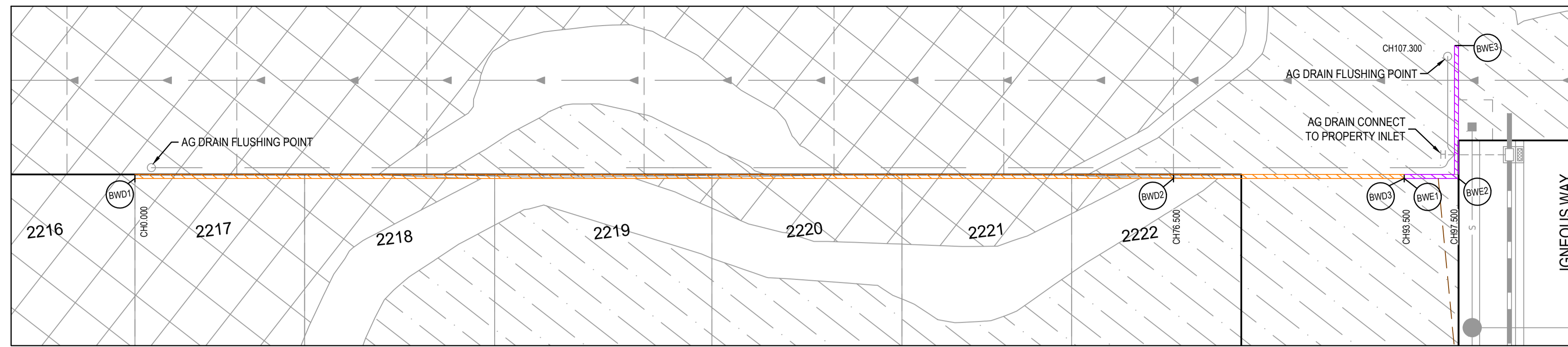


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03 9514 1500

**mirvac**

Olivine Estate - Stage 22  
Whittlesea City Council  
Road and Drainage  
Retaining Wall Setout Plan - 1

MELWAYS REF: 367 G11  
PROJECT / DRAWING No: 1700E-022-133  
SHEET No: 07 of 43  
REVISION: 2



**ALIGNMENT BWD**

Point no	Easting	Northing	RL
BWD1	322865.899	5844491.700	251.263
BWD2	322941.824	5844482.332	250.978
BWD3	322958.696	5844480.251	250.984

**ALIGNMENT BWE**

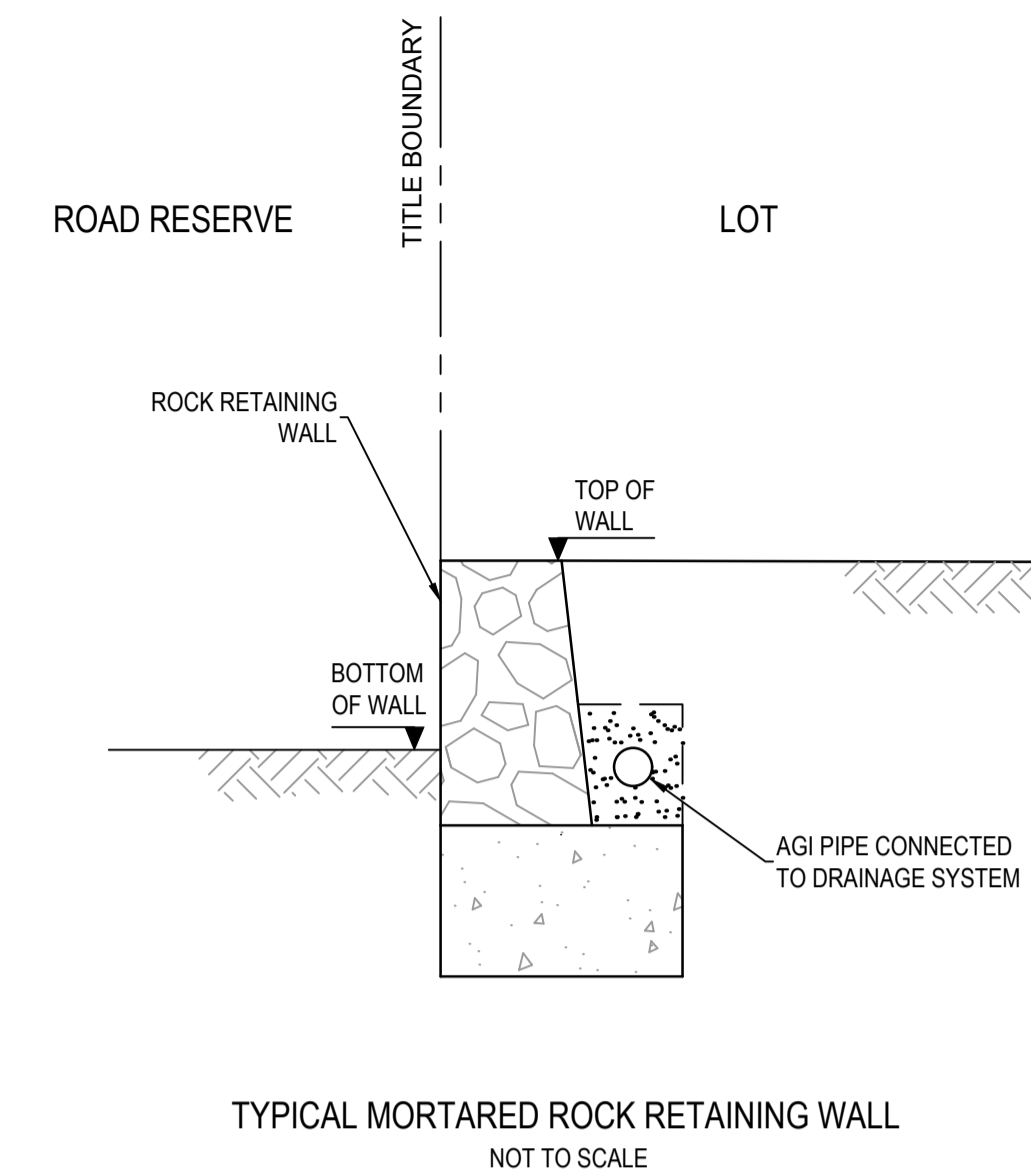
Point no	Easting	Northing	RL
BWE1	322958.696	5844480.251	250.984
BWE2	322962.666	5844479.761	251.238
BWE3	322963.866	5844489.487	251.775

**LEGEND**

- EXISTING SURFACE
- DESIGN LINE
- RETAINING WALL - CONCRETE SLEEPER
- RETAINING WALL - ROCK

**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)
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	CHAINAGE
	TOP OF RETAINING WALL LEVEL
	BOTTOM OF RETAINING WALL LEVEL
	EXISTING RETAINING WALL
	RETAINING WALL - CONCRETE SLEEPER
	RETAINING WALL - ROCK
	AG DRAIN

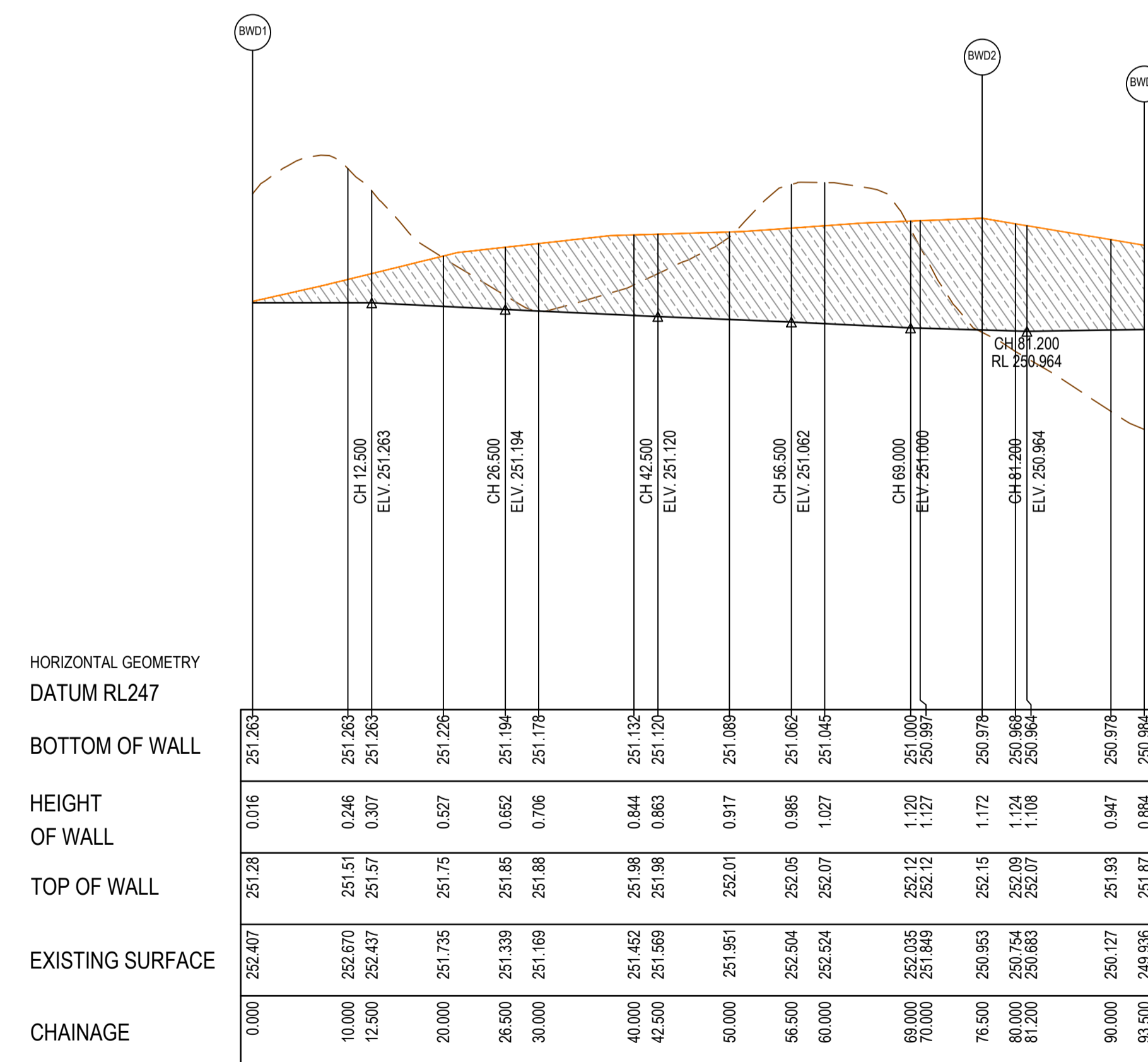


**RETAINING WALL DESIGN AND APPROVALS REQUIREMENTS**

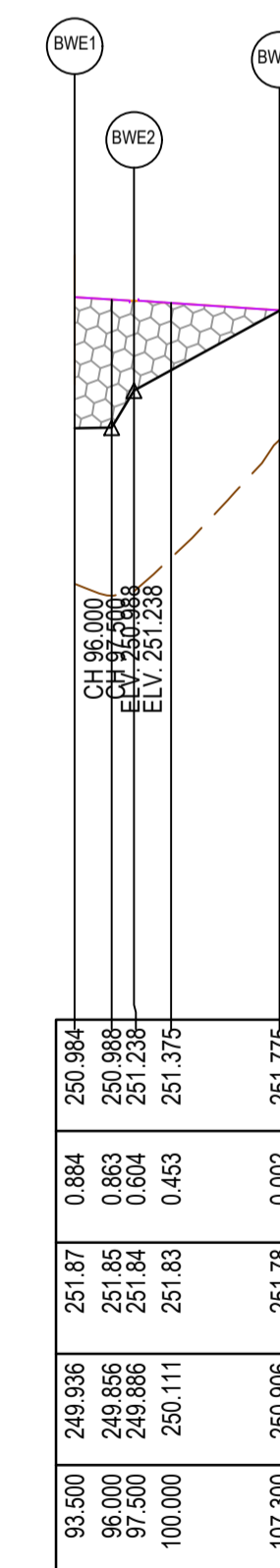
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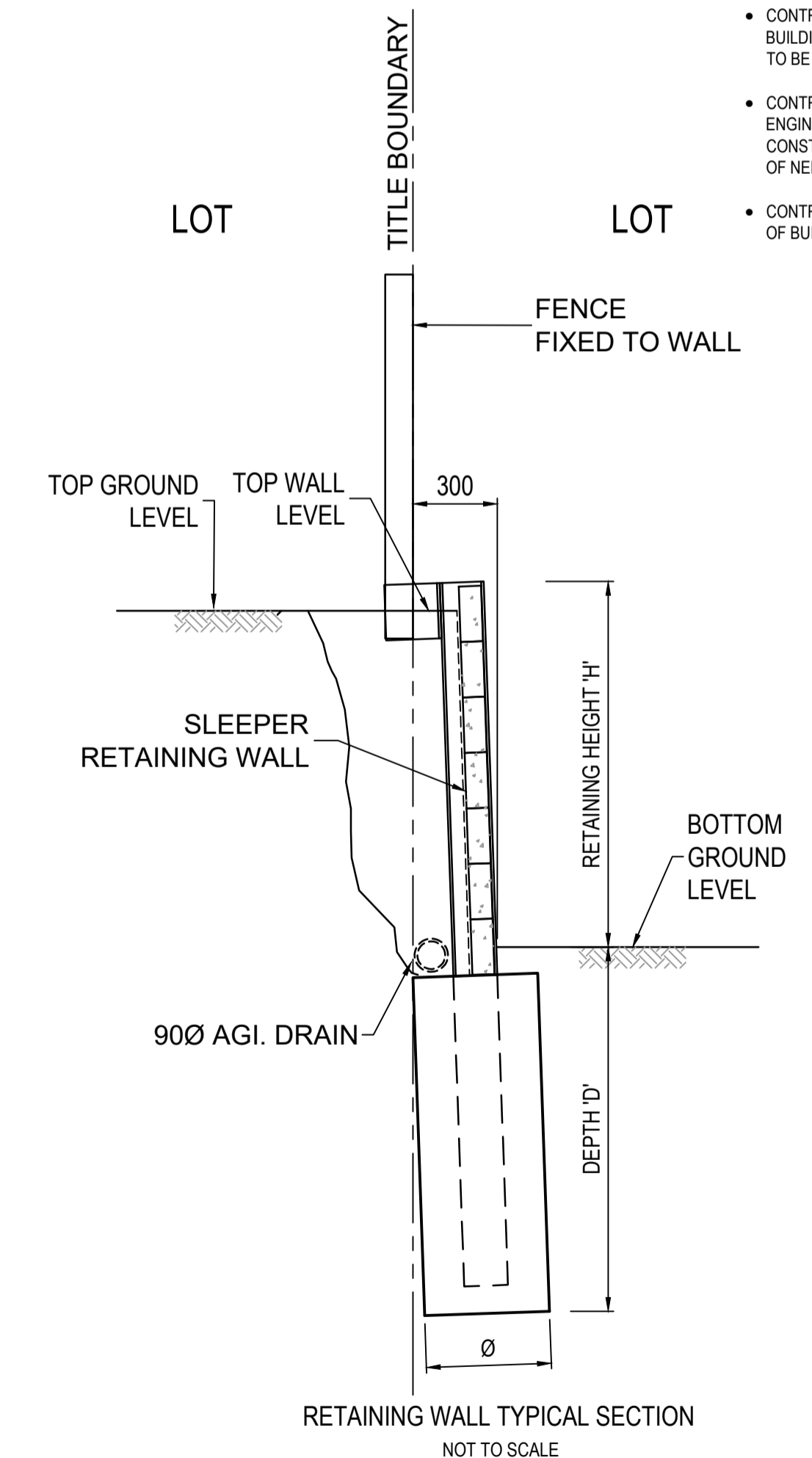


RETAINING WALL BWD - LONGITUDINAL SECTION



RETAINING WALL BWE - LONGITUDINAL SECTION

RETAINING WALL LONG SECTIONS REMOVED



**AS CONSTRUCTED PLANS**

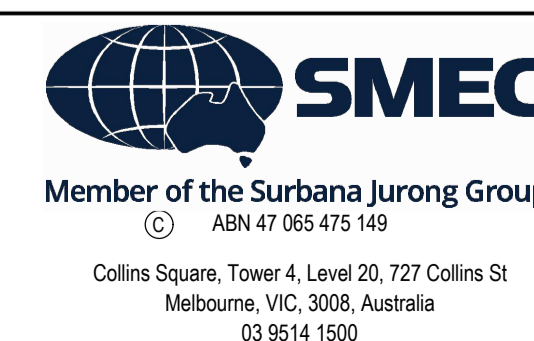
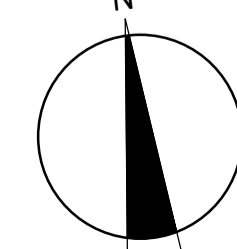
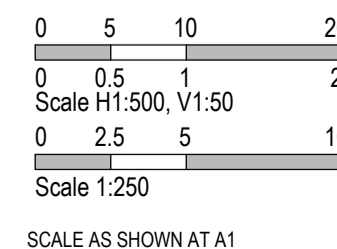
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PLAN OF SUB. NO.

PERMIT REF. NO.

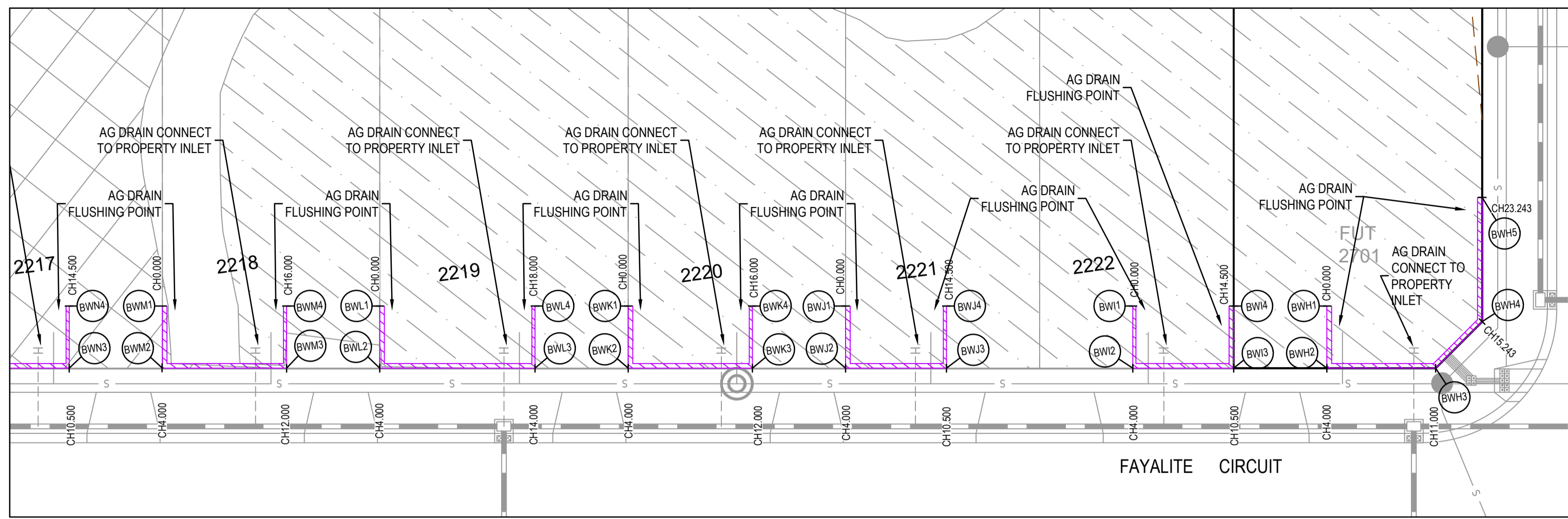
**AS CONSTRUCTED**



Olivine Estate - Stage 22  
Whittlesea City Council  
Road and Drainage  
Retaining Wall Setout Plan - 2

MELWAYS REF	PROJECT / DRAWING No	SHEET No	REVISION
367 G11	1700E-022-134	08 of 43	3





**ALIGNMENT BWH**

Point no	Easting	Northing	RL
BWH1	322949.349	5844453.494	250.416
BWH2	322948.859	5844449.524	249.747
BWH3	322955.806	5844448.667	249.719
BWH4	322959.151	5844451.277	249.864
BWH5	322960.131	5844459.217	250.182

**ALIGNMENT BWJ**

Point no	Easting	Northing	RL
BWJ1	322918.582	5844457.290	250.504
BWJ2	322918.092	5844453.320	249.904
BWJ3	322924.544	5844452.524	249.872
BWJ4	322925.033	5844456.494	250.472

**ALIGNMENT BWL**

Point no	Easting	Northing	RL
BWL1	322888.808	5844460.963	250.648
BWL2	322888.318	5844456.994	250.048
BWL3	322898.243	5844455.769	250.004
BWL4	322898.733	5844459.739	250.604

**ALIGNMENT BWI**

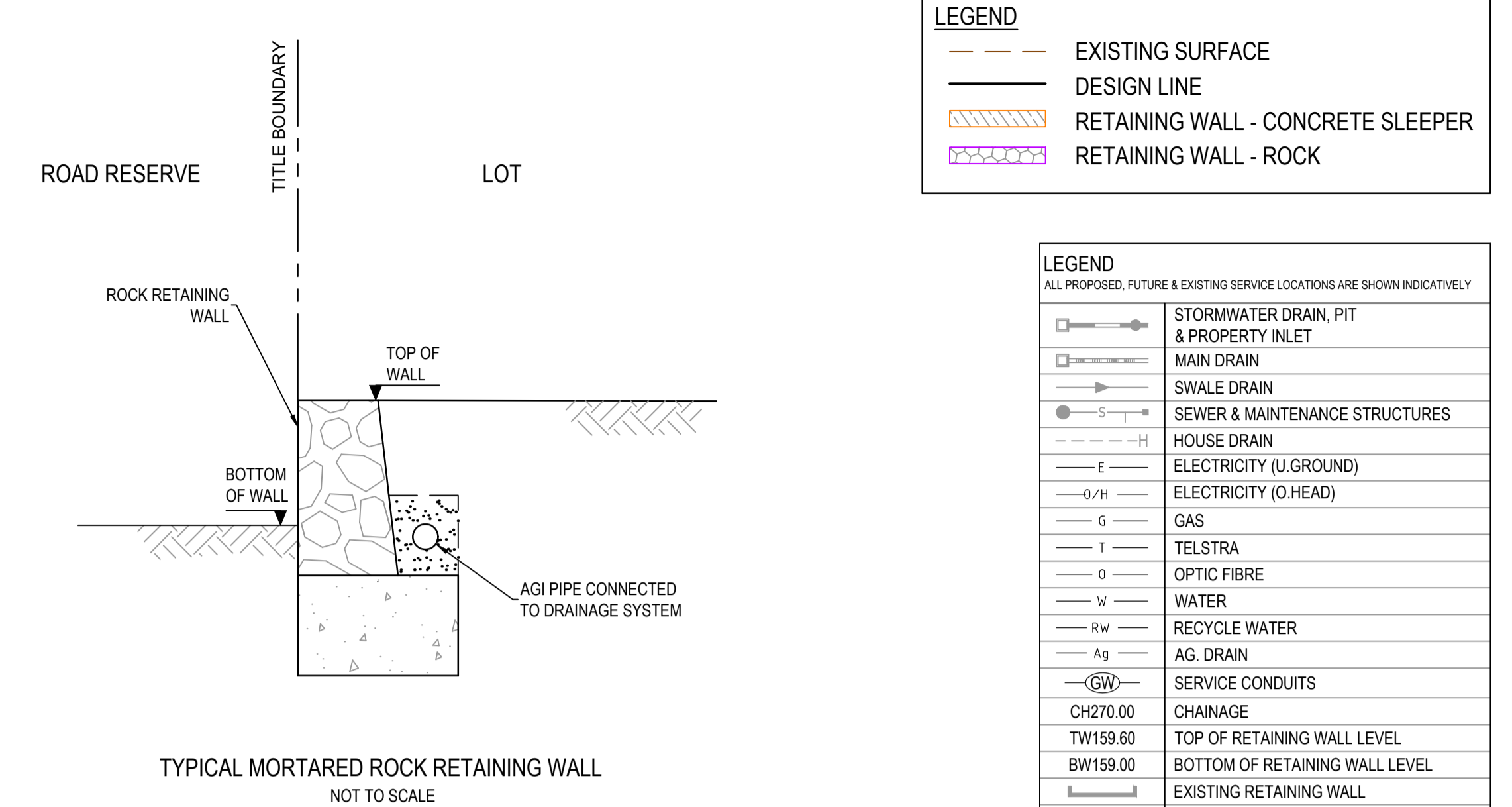
Point no	Easting	Northing	RL
BWI1	322936.943	5844455.024	250.409
BWI2	322936.453	5844451.055	249.812
BWI3	322942.904	5844450.259	249.779
BWI4	322943.392	5844454.213	250.443

**ALIGNMENT BWK**

Point no	Easting	Northing	RL
BWK1	322904.688	5844459.004	250.574
BWK2	322904.198	5844455.034	249.974
BWK3	322912.138	5844454.055	249.934
BWK4	322912.627	5844458.025	250.534

**ALIGNMENT BWM**

Point no	Easting	Northing	RL
BWM1	322874.913	5844462.678	250.724
BWM2	322874.424	5844458.708	250.124
BWM3	322882.363	5844457.728	250.084
BWM4	322882.853	5844461.698	250.684



**LEGEND**

---	EXISTING SURFACE
---	DESIGN LINE
▨	RETAINING WALL - CONCRETE SLEEPER
▩	RETAINING WALL - ROCK

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

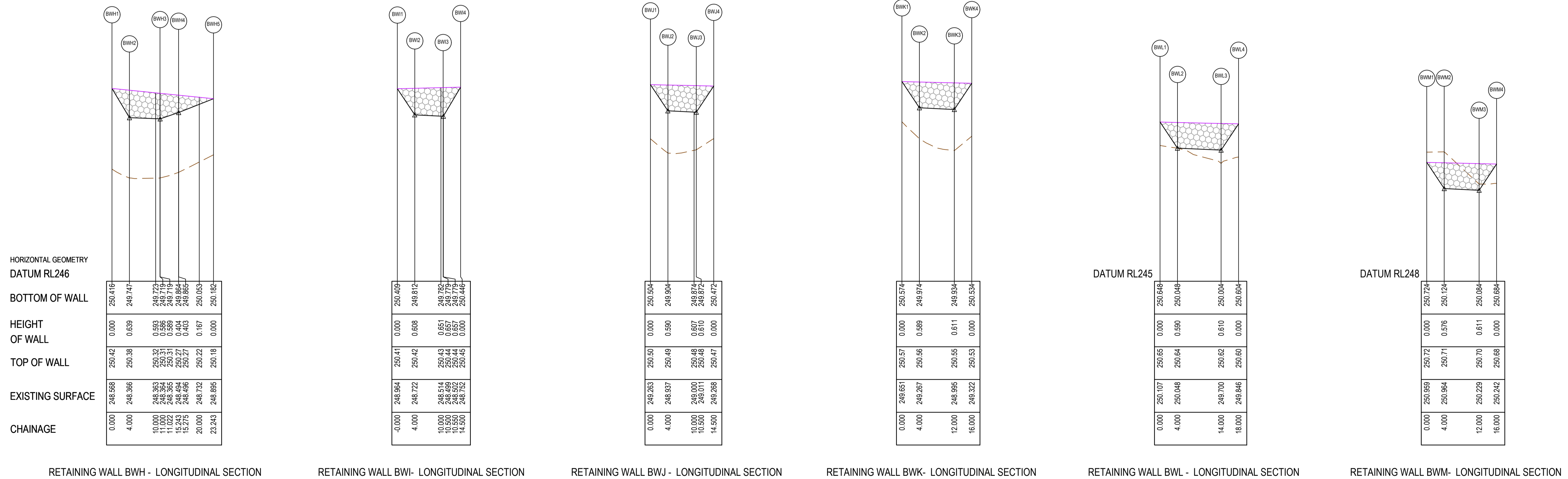
⊕	STORMWATER DRAIN, PIT & PROPERTY INLET
—	MAIN DRAIN
—	SWALE DRAIN
—	SEWER & MAINTENANCE STRUCTURES
—	HOUSE DRAIN
E	ELECTRICITY (U.GROUND)
-D/H	ELECTRICITY (O.HEAD)
G	GAS
T	TELSTRA
o	OPTIC FIBRE
w	WATER
RW	RECYCLE WATER
Ag	AG. DRAIN
GW	SERVICE CONDUITS
CH270.00	CHAINAGE
TW159.60	TOP OF RETAINING WALL LEVEL
BW159.00	BOTTOM OF RETAINING WALL LEVEL
▨	EXISTING RETAINING WALL
▨	RETAINING WALL - CONCRETE SLEEPER
▩	RETAINING WALL - ROCK
Ag	AG. DRAIN

**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

**RETAINING WALLS**

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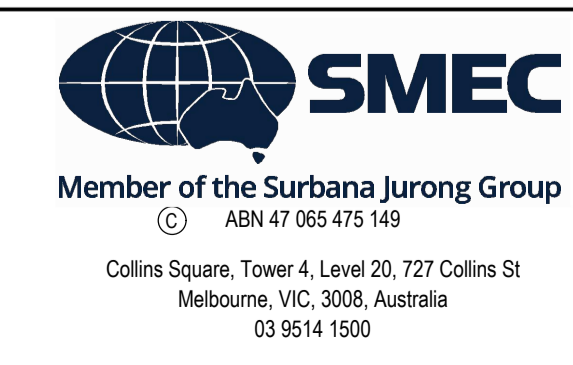
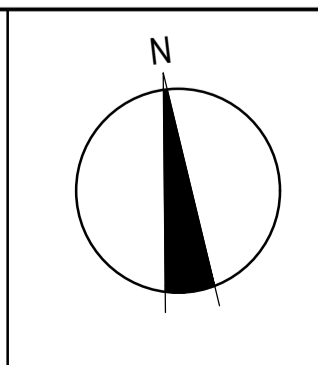


**AS CONSTRUCTED PLANS**

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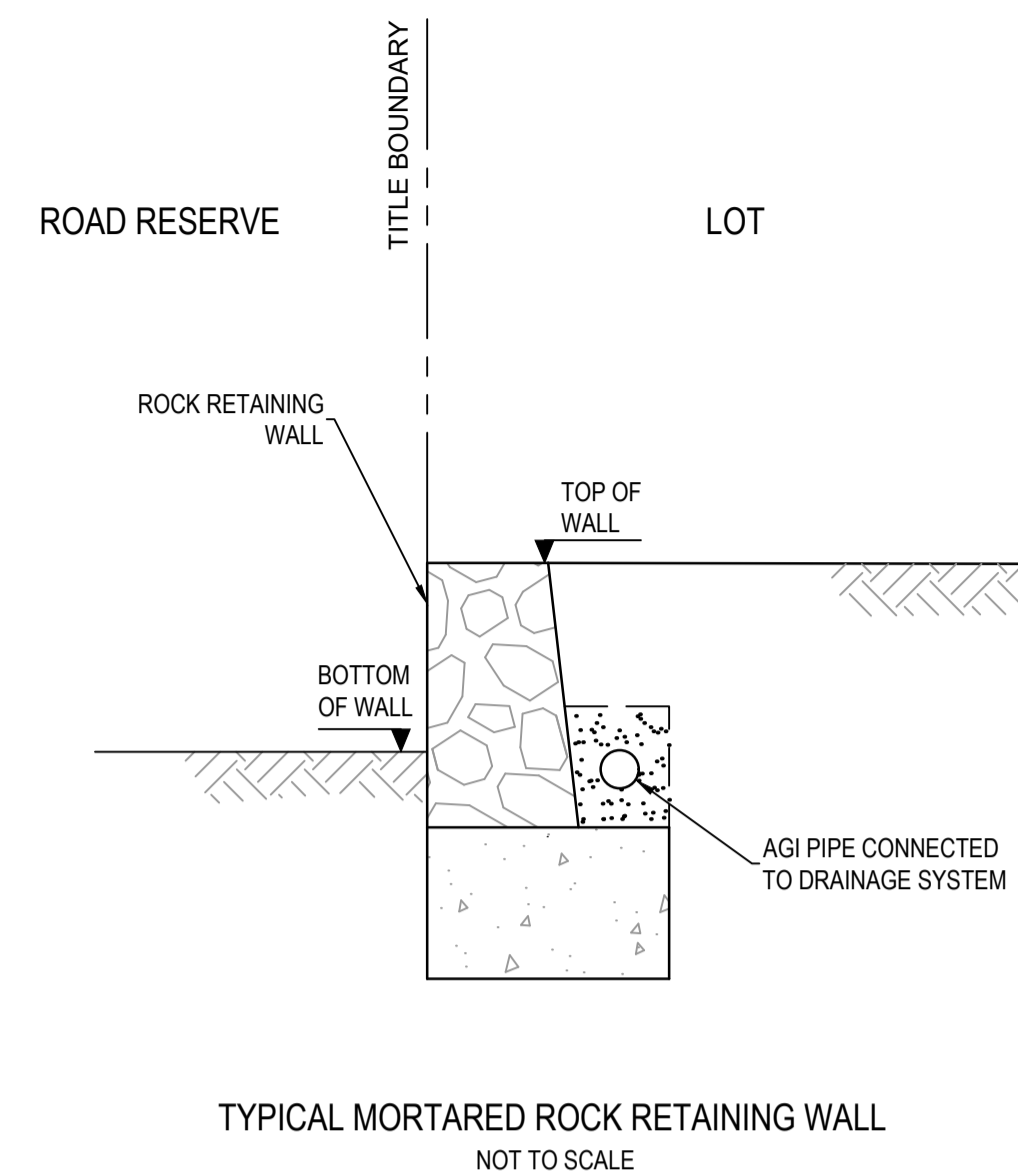
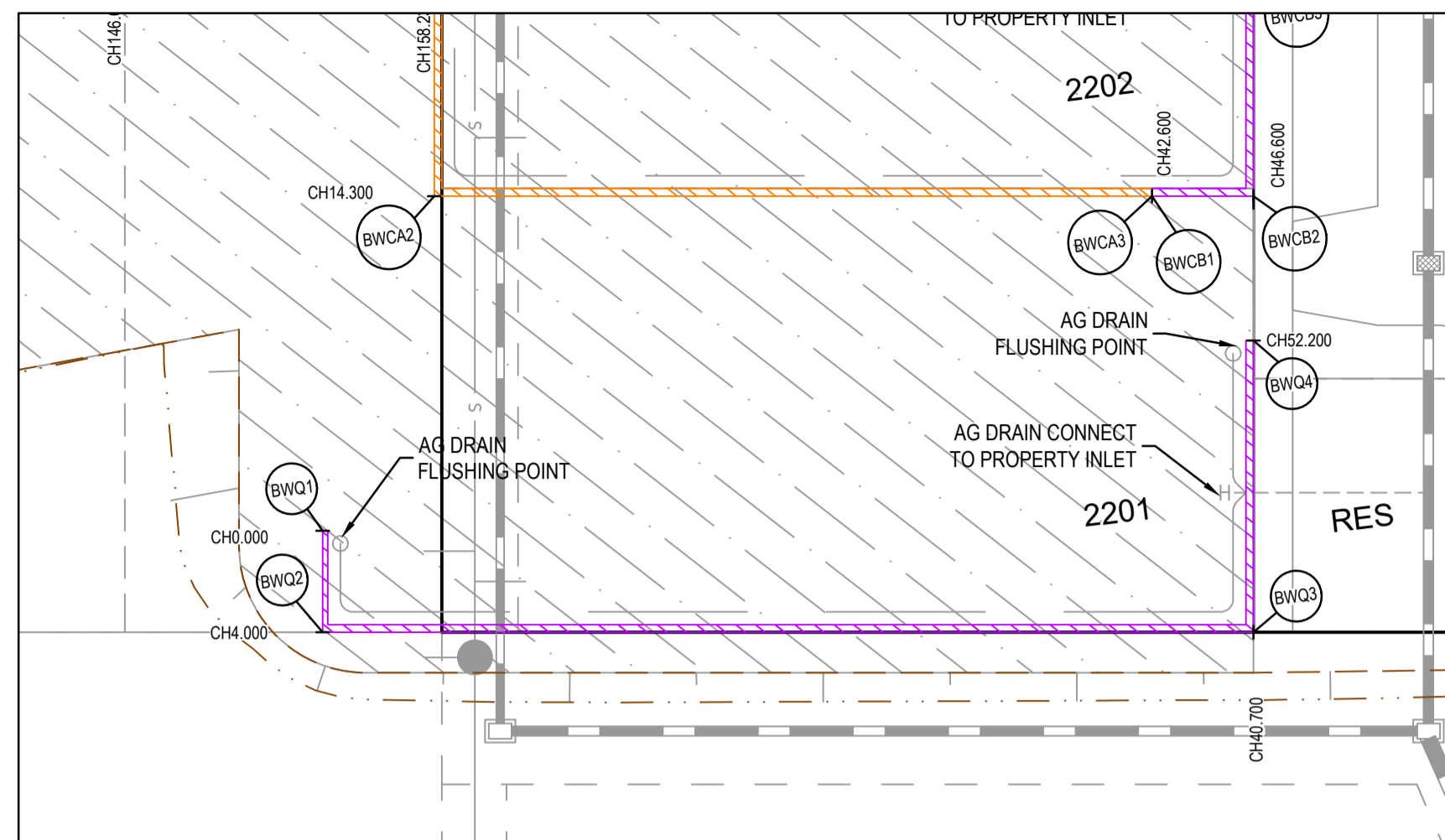
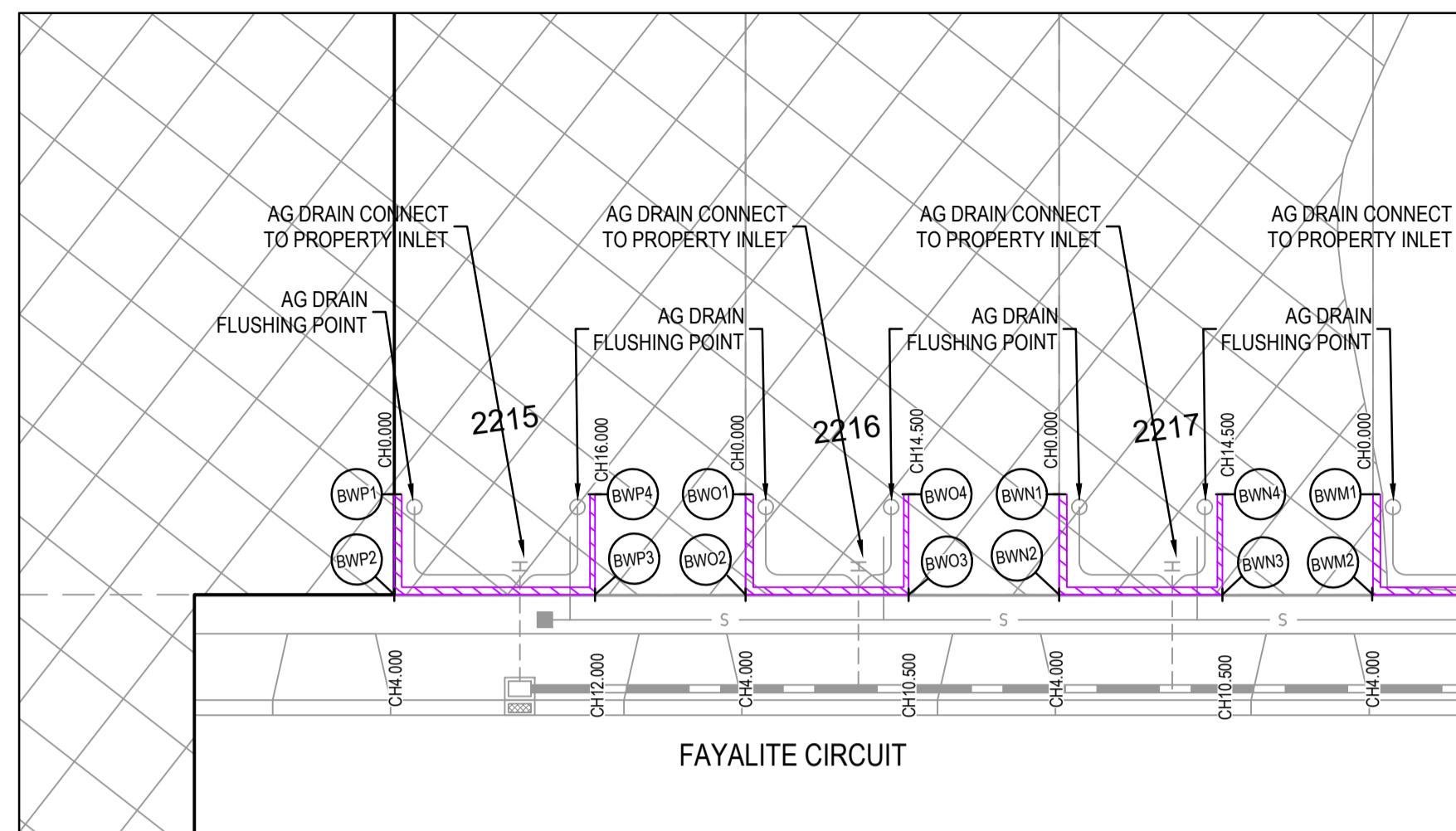


PLAN OF SUB. NO.
PERMIT REF. NO.
<b>AS CONSTRUCTED</b>
SCALE AS SHOWN AT A1



Olivine Estate - Stage 22  
Whittlesea City Council  
Road and Drainage  
Retaining Wall Setout Plan - 3

MELWAYS REF <b>367 G11</b>	PROJECT / DRAWING No. <b>1700E-022-135</b>	SHEET No. <b>09 of 43</b>	REVISION <b>4</b>
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LEGEND	
	EXISTING SURFACE
	DESIGN LINE
	RETAINING WALL - CONCRETE SLEEPER
	RETAINING WALL - ROCK

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 - CONCRETE SLEEPER
	RETAINING WALL - ROCK
	AG DRAIN

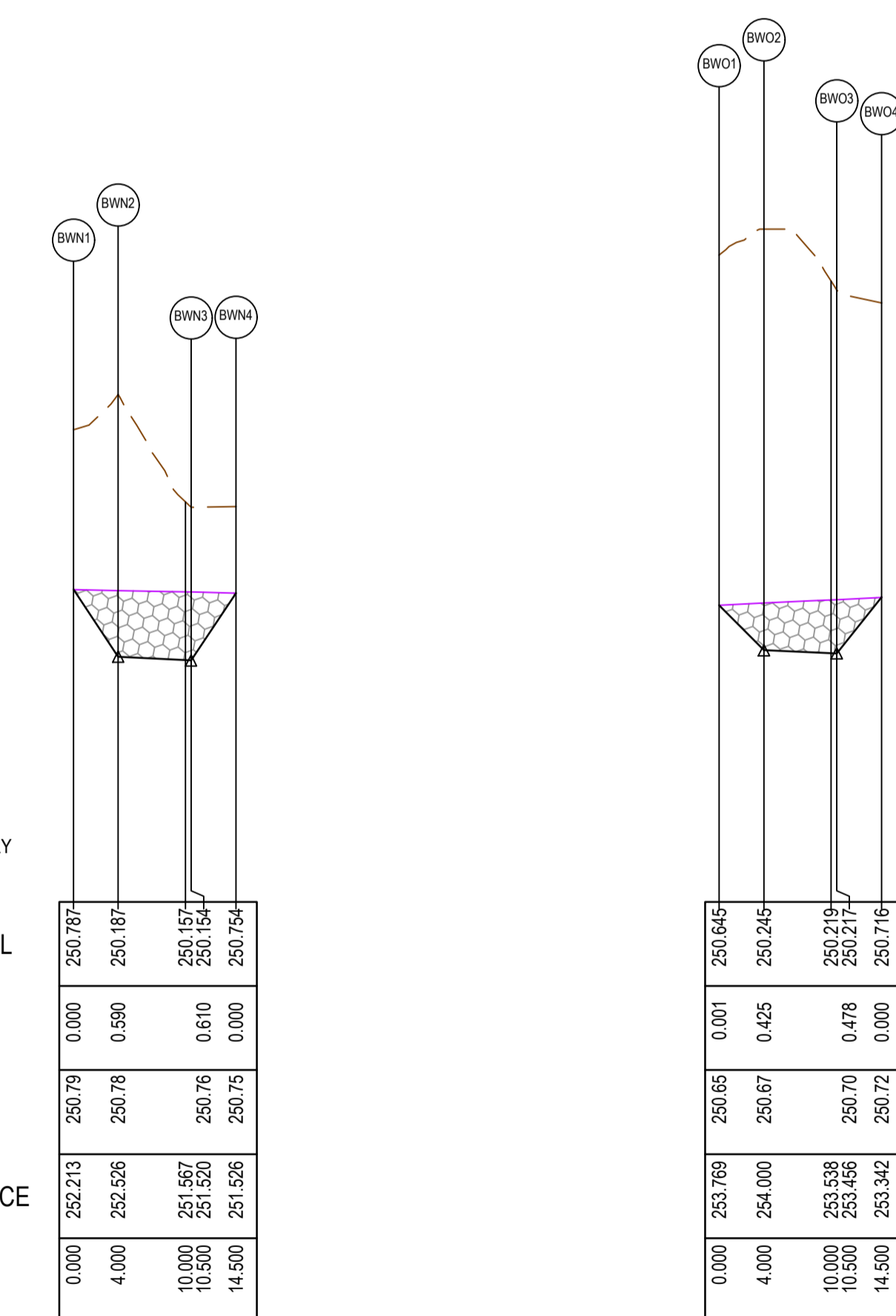
TYPICAL MORTARED ROCK RETAINING WALL  
NOT TO SCALE

**RETAINING WALL DESIGN AND APPROVALS REQUIREMENTS**

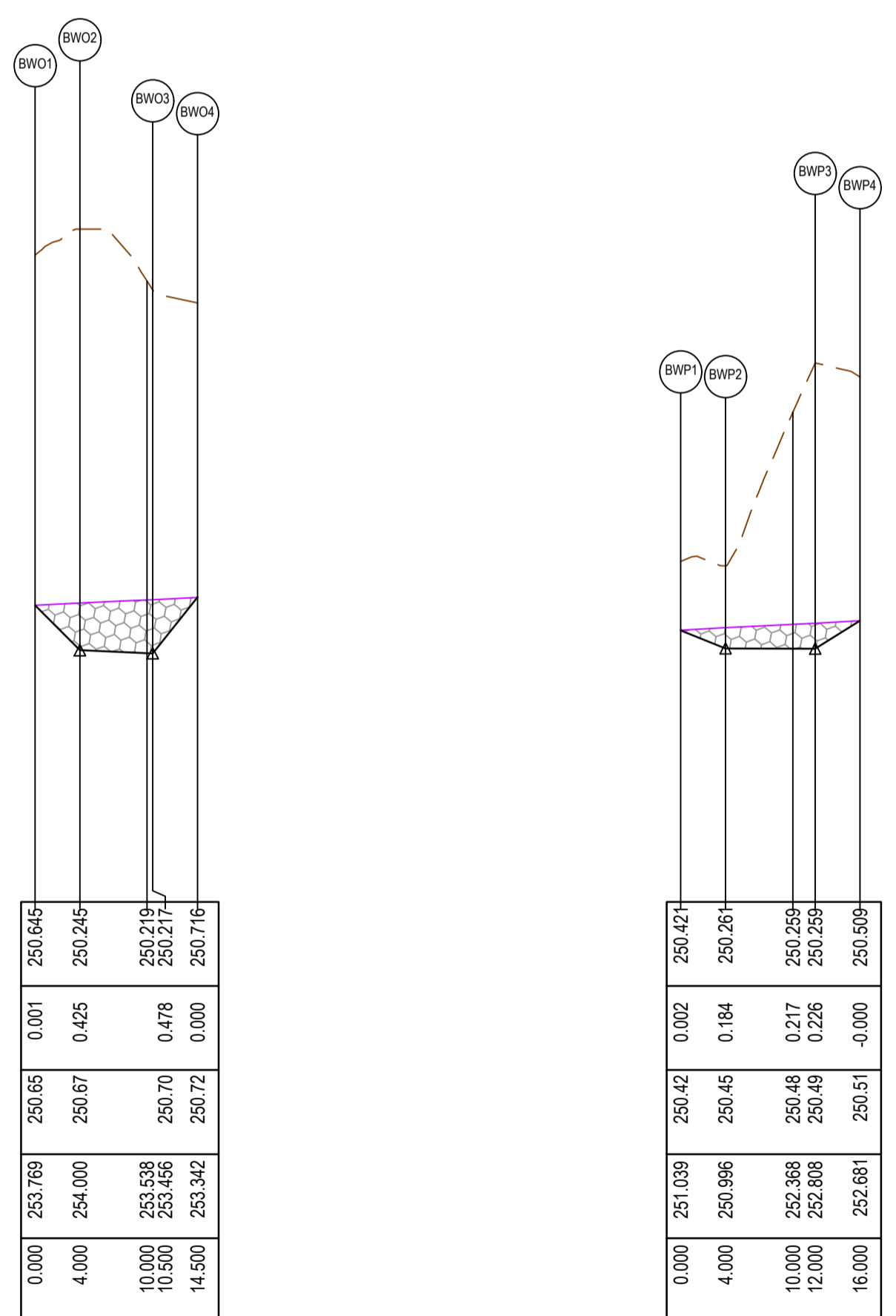
NOTE: RETAINING WALL DETAILS AND DESIGN CERTIFICATION TO BE SUBMITTED TO COUNCIL PRIOR TO COMMENCEMENT OF CONSTRUCTION OF WALLS

**RETAINING WALLS**

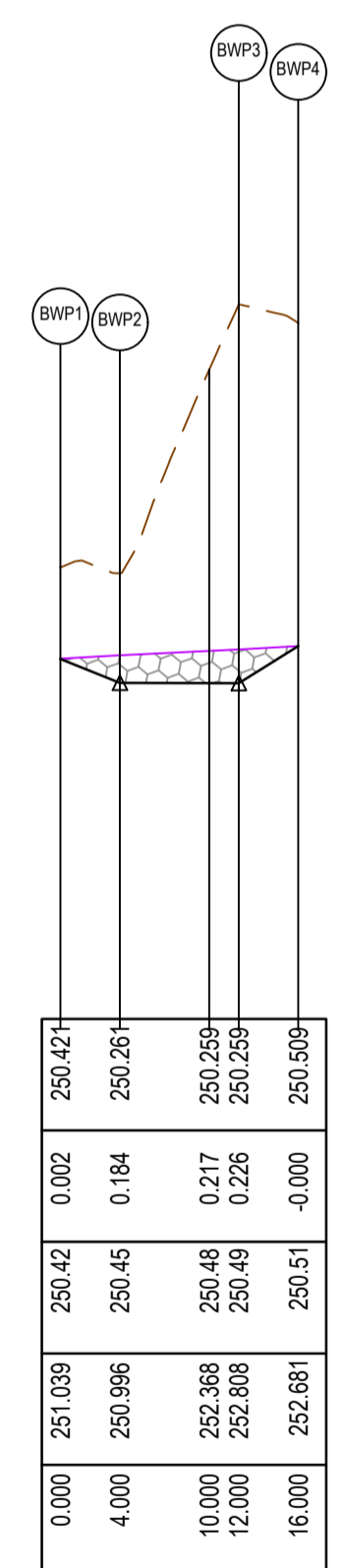
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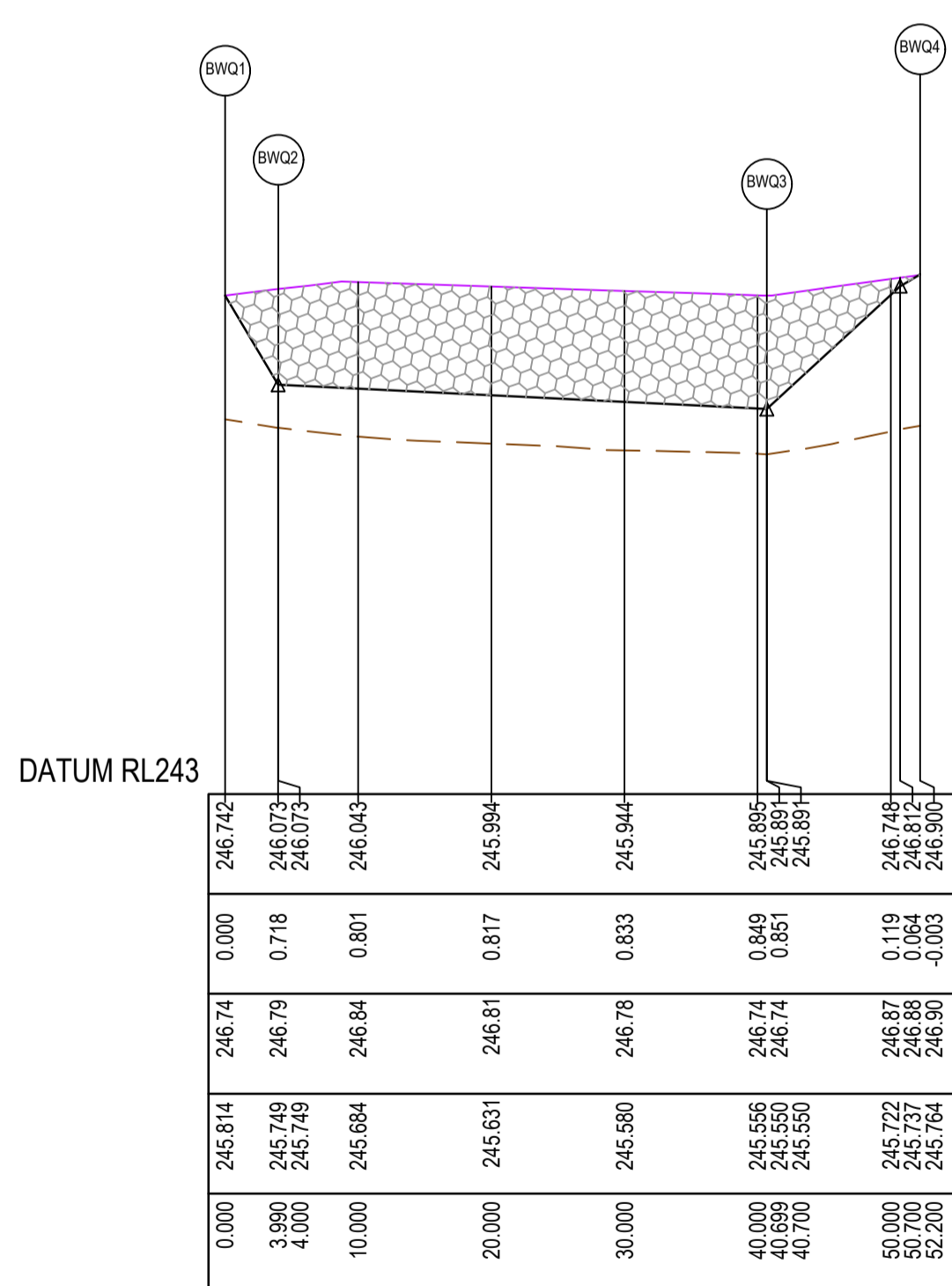
RETAINING WALL BWN- LONGITUDINAL SECTION



RETAINING WALL BWO - LONGITUDINAL SECTION



RETAINING WALL BWP - LONGITUDINAL SECTION



RETAINING WALL BWQ - LONGITUDINAL SECTION

**ALIGNMENT BWN**

Point no	Easting	Northing	RL
BWN1	322862.507	5844464.208	250.787
BWN2	322862.018	5844460.238	250.187
BWN3	322868.469	5844459.443	250.154
BWN4	322868.959	5844463.412	250.754

**ALIGNMENT BWO**

Point no	Easting	Northing	RL
BWO1	322850.101	5844465.739	250.645
BWO2	322849.612	5844461.769	250.245
BWO3	322856.063	5844460.973	250.217
BWO4	322856.553	5844464.943	250.716

**ALIGNMENT BWP**

Point no	Easting	Northing	RL
BWP1	322836.207	5844467.453	250.421
BWP2	322835.717	5844463.483	250.261
BWP3	322843.657	5844462.504	250.259
BWP4	322844.147	5844466.474	250.509

**ALIGNMENT BWQ**

Point no	Easting	Northing	RL
BWQ1	322945.831	5844377.352	246.742
BWQ2	322945.341	5844373.382	246.073
BWQ3	322981.765	5844368.888	245.891
BWQ4	322983.173	5844380.301	246.900

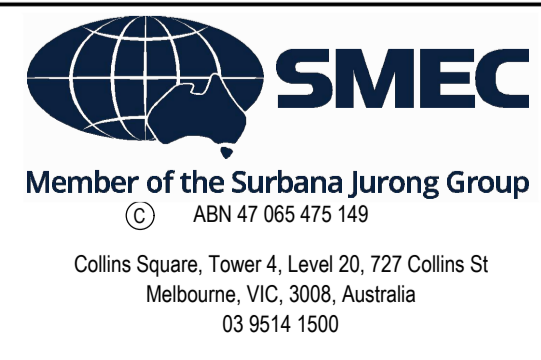
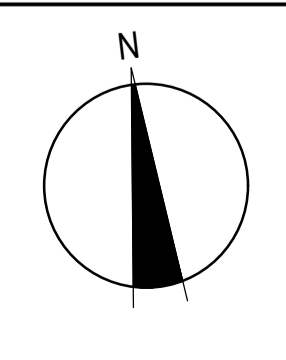
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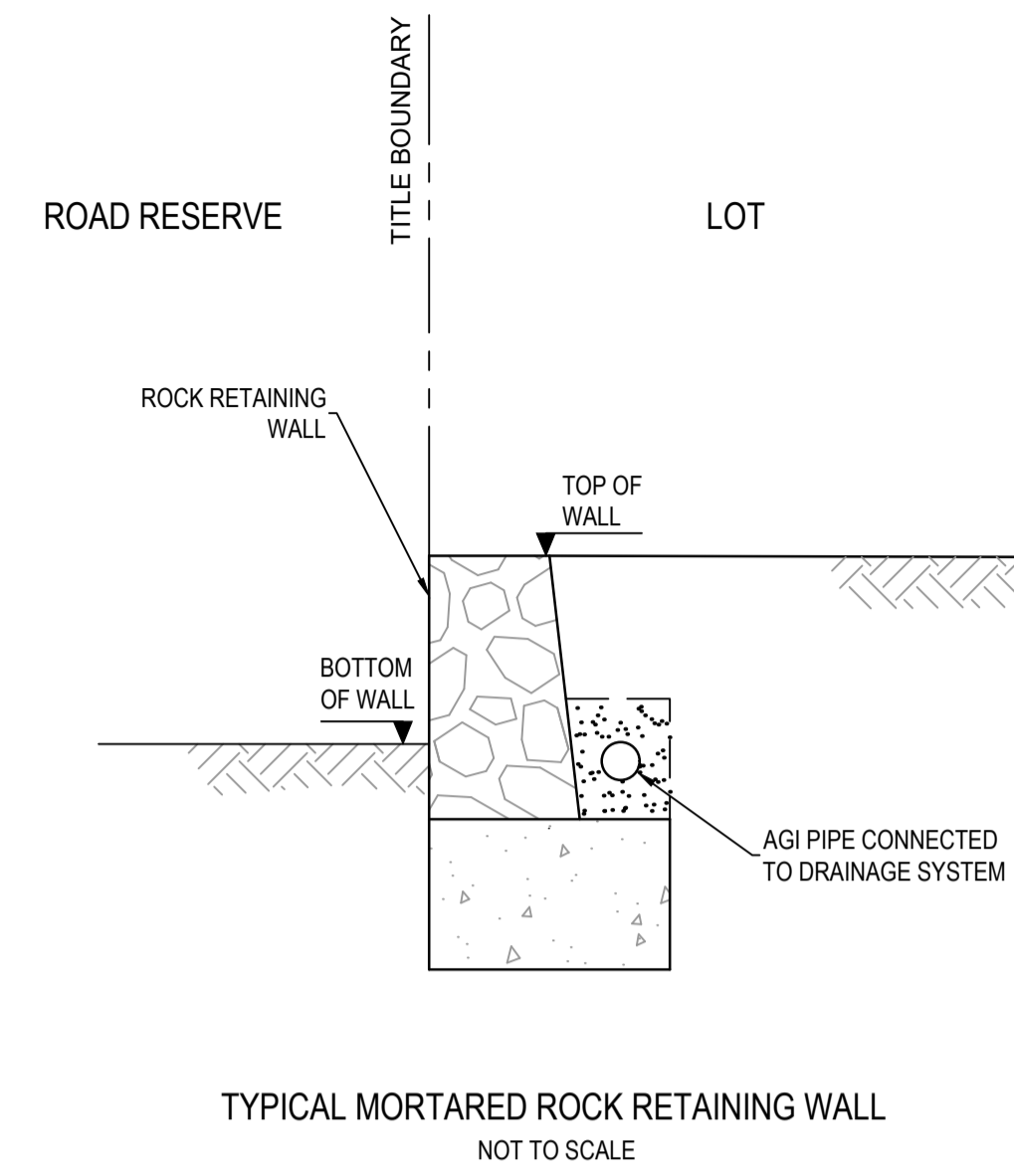
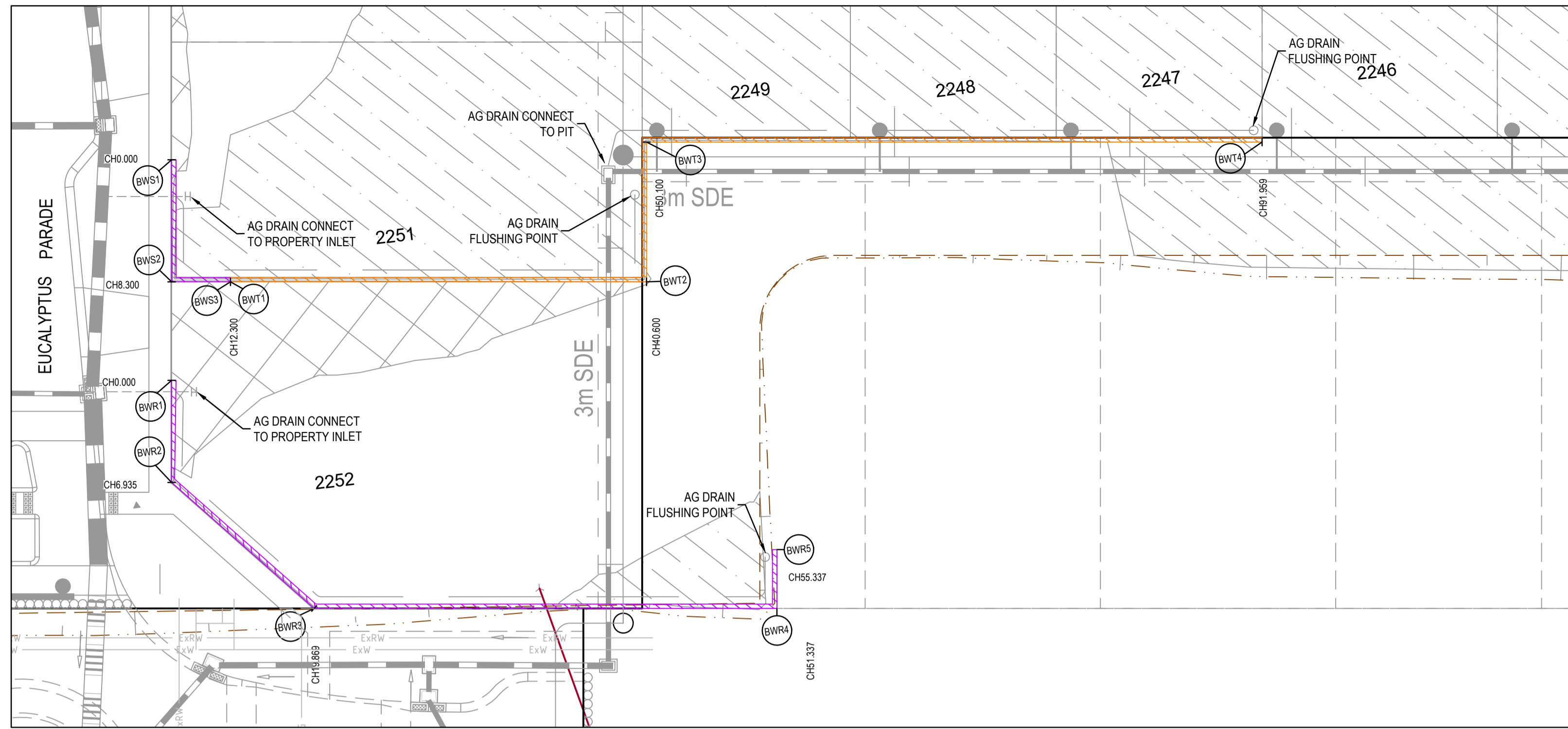
**AS CONSTRUCTED**

PLAN OF SUB. NO.	
PERMIT REF. NO.	
SCALE	SCALE AS SHOWN AT A1



Olivine Estate - Stage 22  
Whittlesea City Council  
Road and Drainage  
Retaining Wall Setout Plan - 4

MELWAYS REF	PROJECT / DRAWING No	SHEET No	REVISION
367 G11	1700E-022-136	10 of 43	3



LEGEND	
	EXISTING SURFACE
	DESIGN LINE
	RETAINING WALL - CONCRETE SLEEPER
	RETAINING WALL - ROCK

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 - CONCRETE SLEEPER
	RETAINING WALL - ROCK
	AG DRAIN

**RETAINING WALL DESIGN AND APPROVALS REQUIREMENTS**

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**ALIGNMENT BWR**

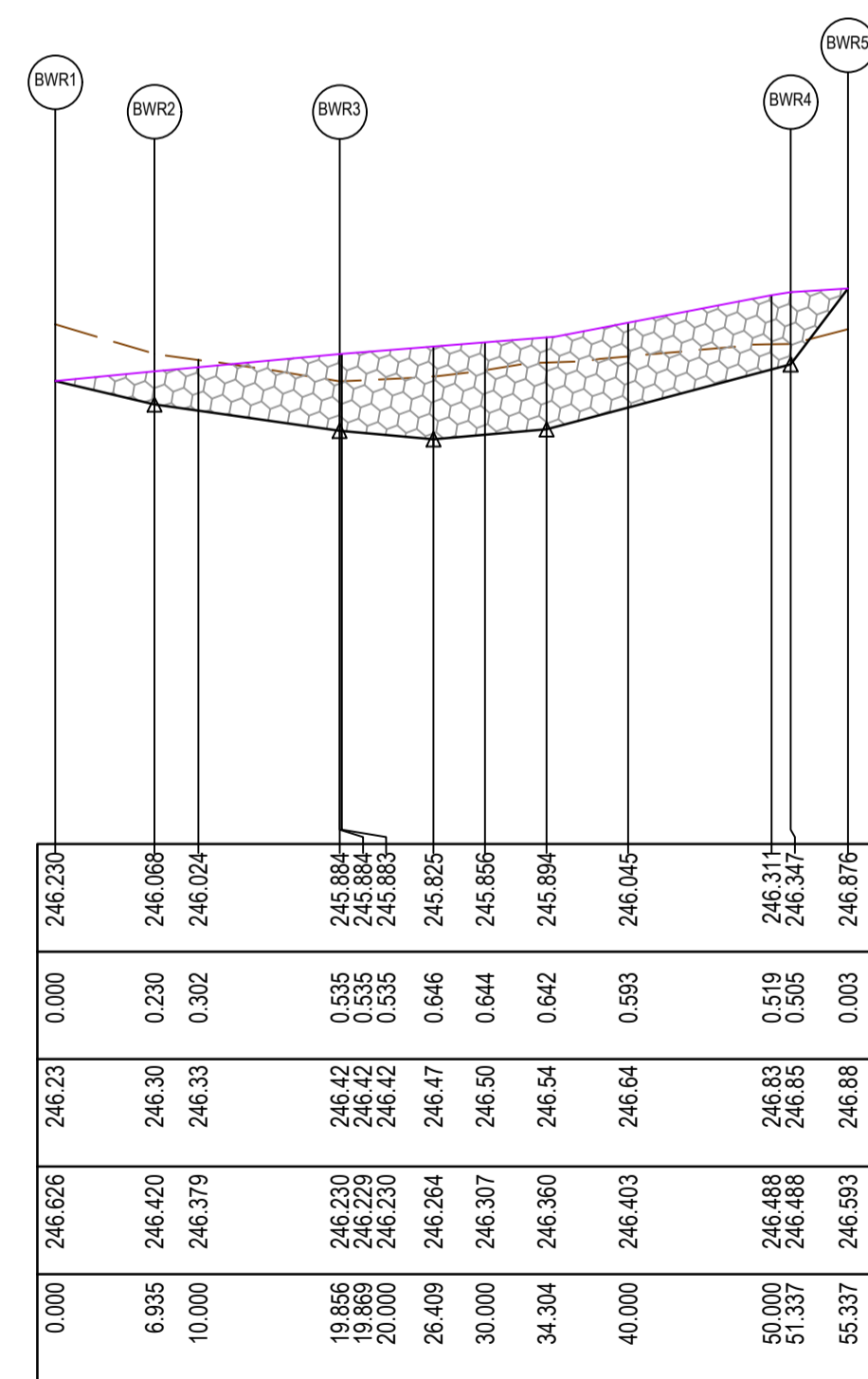
Point no	Easting	Northing	RL
BWR1	323088.313	5844371.359	246.230
BWR2	323087.464	5844364.477	246.068
BWR3	323096.034	5844354.789	245.884
BWR4	323127.265	5844350.936	246.347
BWR5	323127.755	5844354.906	246.876

**ALIGNMENT BWS**

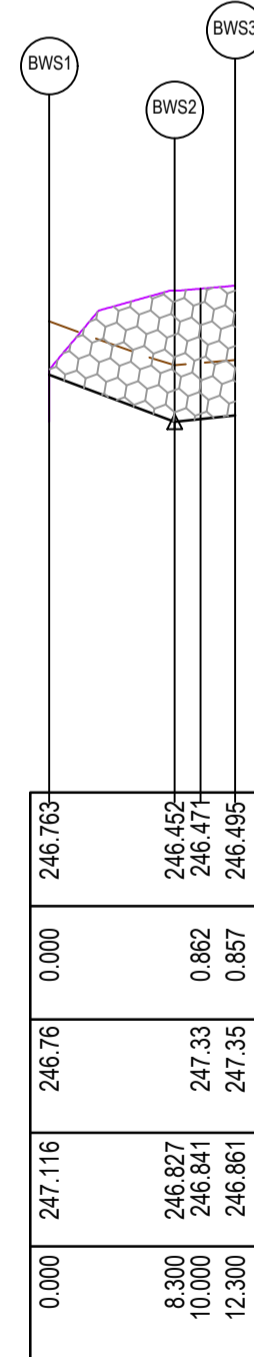
Point no	Easting	Northing	RL
BWS1	323090.150	5844386.246	246.763
BWS2	323089.133	5844378.009	246.452
BWS3	323093.103	5844377.519	246.495

**ALIGNMENT BWT**

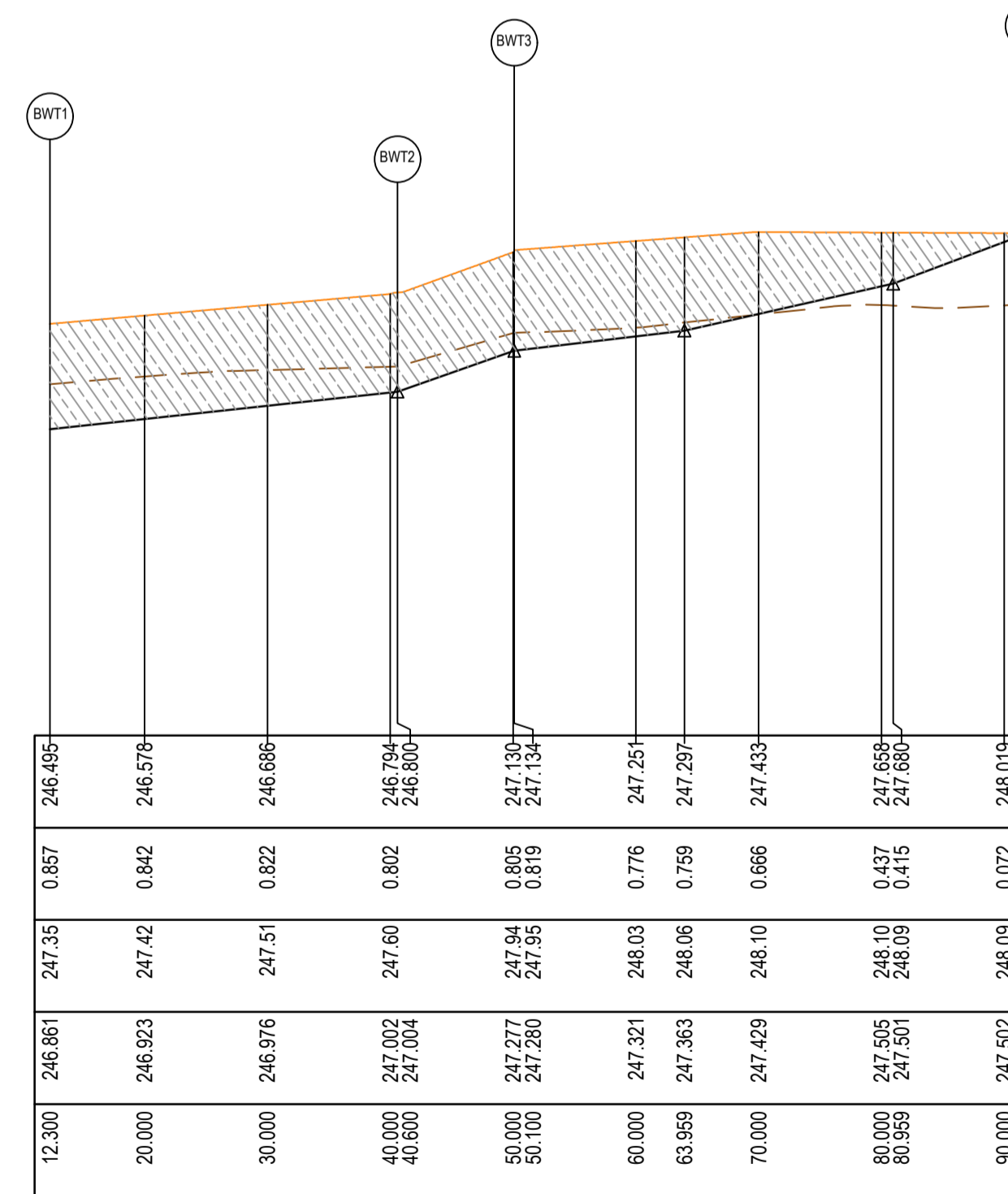
Point no	Easting	Northing	RL
BWT1	323093.103	5844377.519	246.495
BWT2	323121.190	5844374.054	246.800
BWT3	323122.354	5844383.482	247.134
BWT4	323163.898	5844378.356	247.090



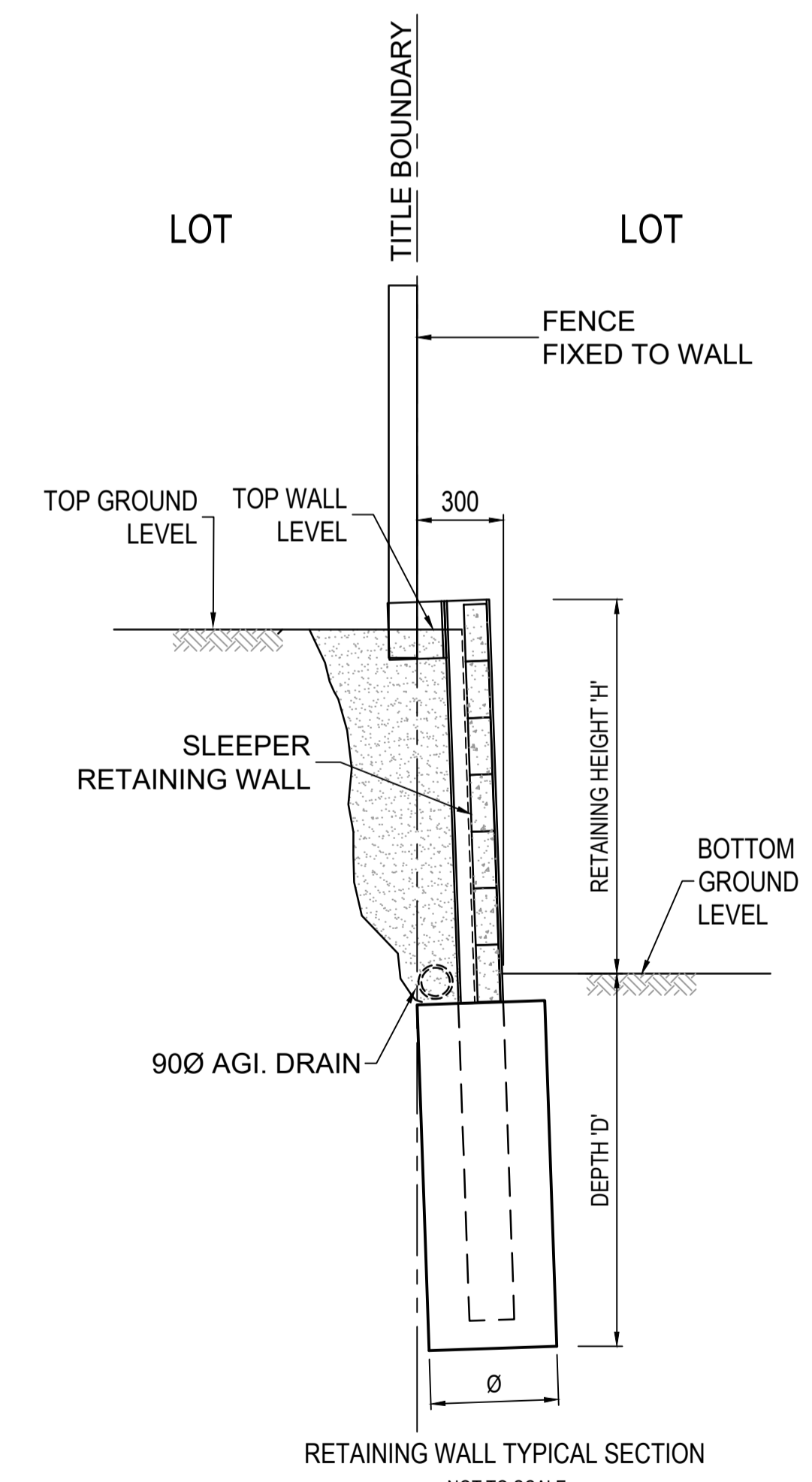
RETAINING WALL BWR - LONGITUDINAL SECTION



RETAINING WALL BWS - LONGITUDINAL SECTION



RETAINING WALL BWT - LONGITUDINAL SECTION



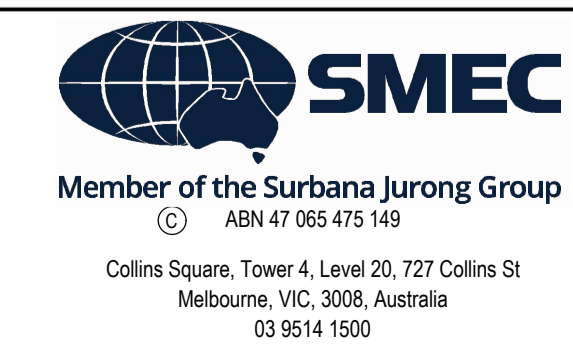
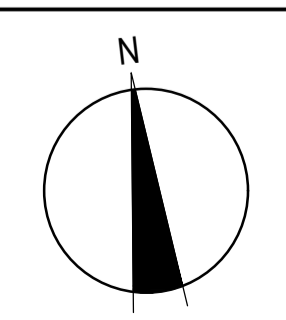
RETAINING WALL TYPICAL SECTION NOT TO SCALE

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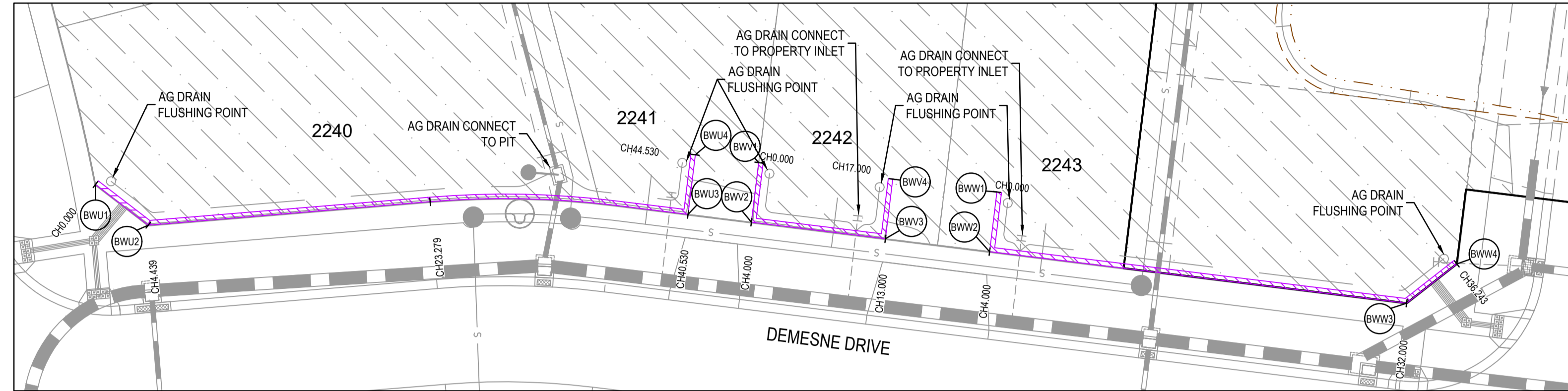
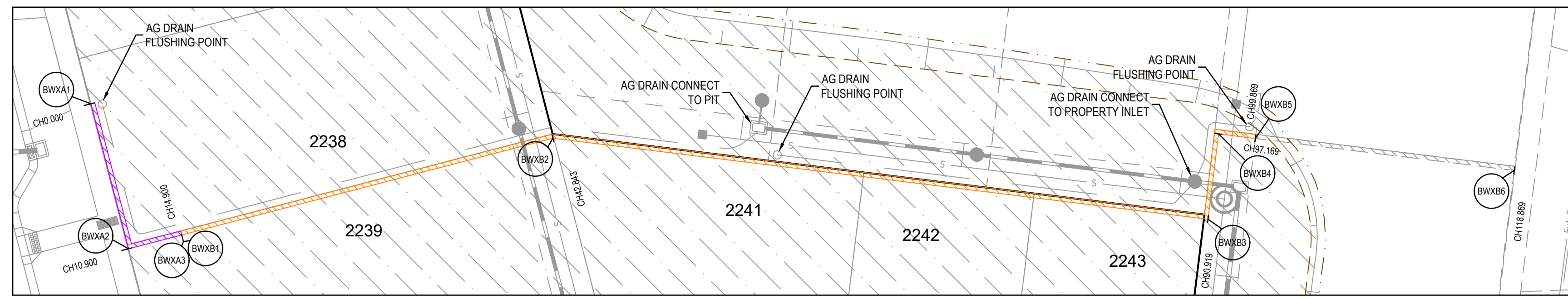


PLAN OF SUB. NO.	0 5 10 20
PERMIT REF. NO.	0 0.5 1 2
	Scale H1:500, V1:50
	0 2.5 5 10
	Scale 1:250
	SCALE AS SHOWN AT A1



Olivine Estate - Stage 22  
Whittlesea City Council  
Road and Drainage  
Retaining Wall Setout Plan - 5

MELWAYS REF	PROJECT / DRAWING No	SHEET No	REVISION
367 G11	1700E-022-137	11 of 43	2



**ALIGNMENT BWU**

Point no	Easting	Northing	RL
BWU1	323090.233	5844431.214	248.684
BWU2	323093.753	5844428.510	248.285
BWU3	323112.532	5844430.071	248.384
BWU4	323124.849	5844429.825	248.438
BWU5	323129.719	5844429.225	248.459
BWU6	323130.208	5844433.194	248.736

Curve no	I	Radius	Arc	A	B	X	Y	I	Mid point	RL
BWU3 - BWU4	11.785	60.000	12.341	0.317	0.238	3.084	3.076	3.085	248.411	

**ALIGNMENT BWV**

Point no	Easting	Northing	RL
BWV1	323134.426	5844432.674	248.767
BWV2	323133.937	5844428.704	248.480
BWV3	323142.869	5844427.602	248.525
BWV4	323143.359	5844431.572	248.812

**ALIGNMENT BWW**

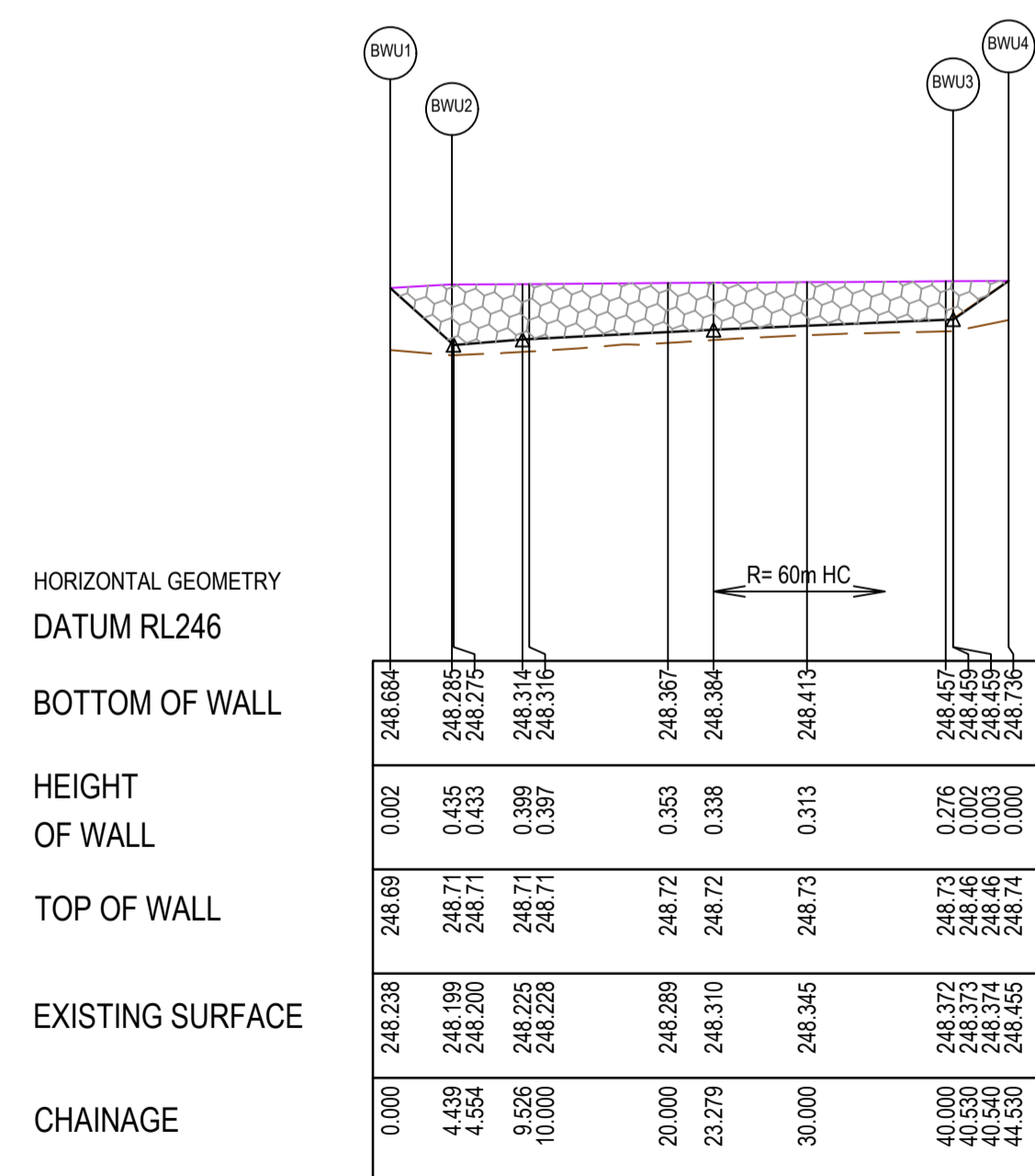
Point no	Easting	Northing	RL
BWW1	323150.306	5844430.715	248.797
BWW2	323149.816	5844426.745	248.560
BWW3	323177.605	5844423.316	248.703
BWW4	323180.950	5844425.926	248.830

**ALIGNMENT BWXA**

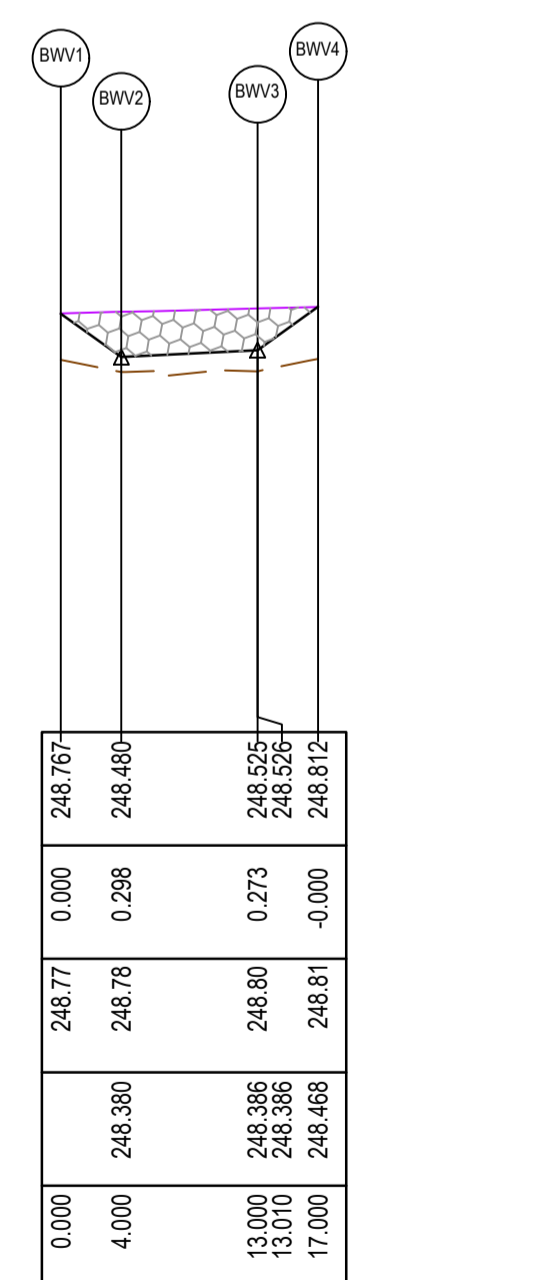
Point no	Easting	Northing	RL
BWXA1	323081.556	5844465.464	250.005
BWXA2	323084.299	5844454.915	249.654
BWXA3	323088.170	5844455.921	249.601

**ALIGNMENT BWXB**

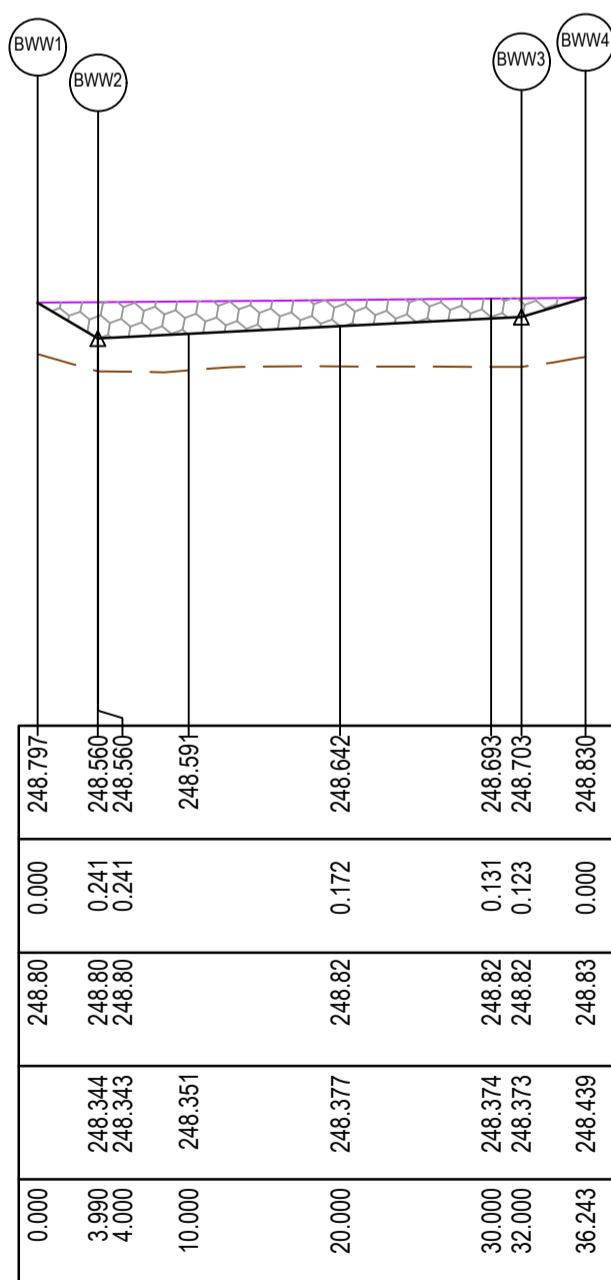
Point no	Easting	Northing	RL
BWXB1	323088.170	5844455.921	249.601
BWXB2	323115.214	5844462.955	249.231
BWXB3	323162.928	5844457.067	249.265
BWXB4	323163.693	5844463.270	249.311
BWXB5	323186.373	5844462.940	249.332
BWXB6	323185.230	5844460.613	249.478



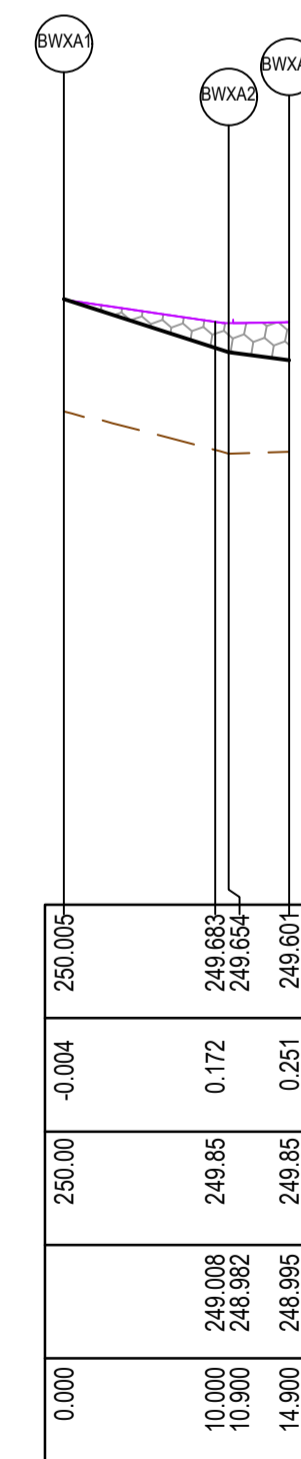
RETAINING WALL BWU - LONGITUDINAL SECTION



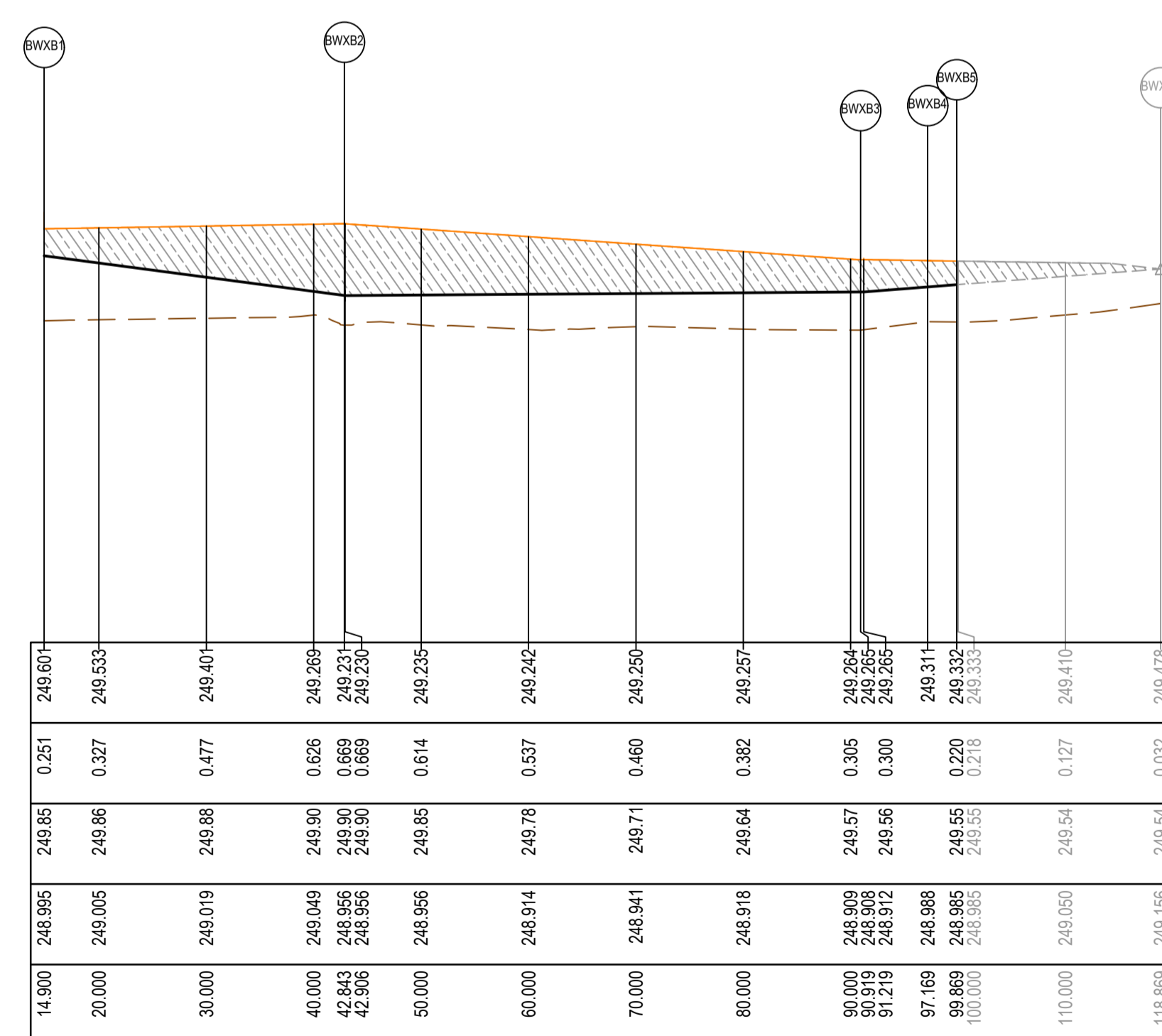
RETAINING WALL BWV - LONGITUDINAL SECTION



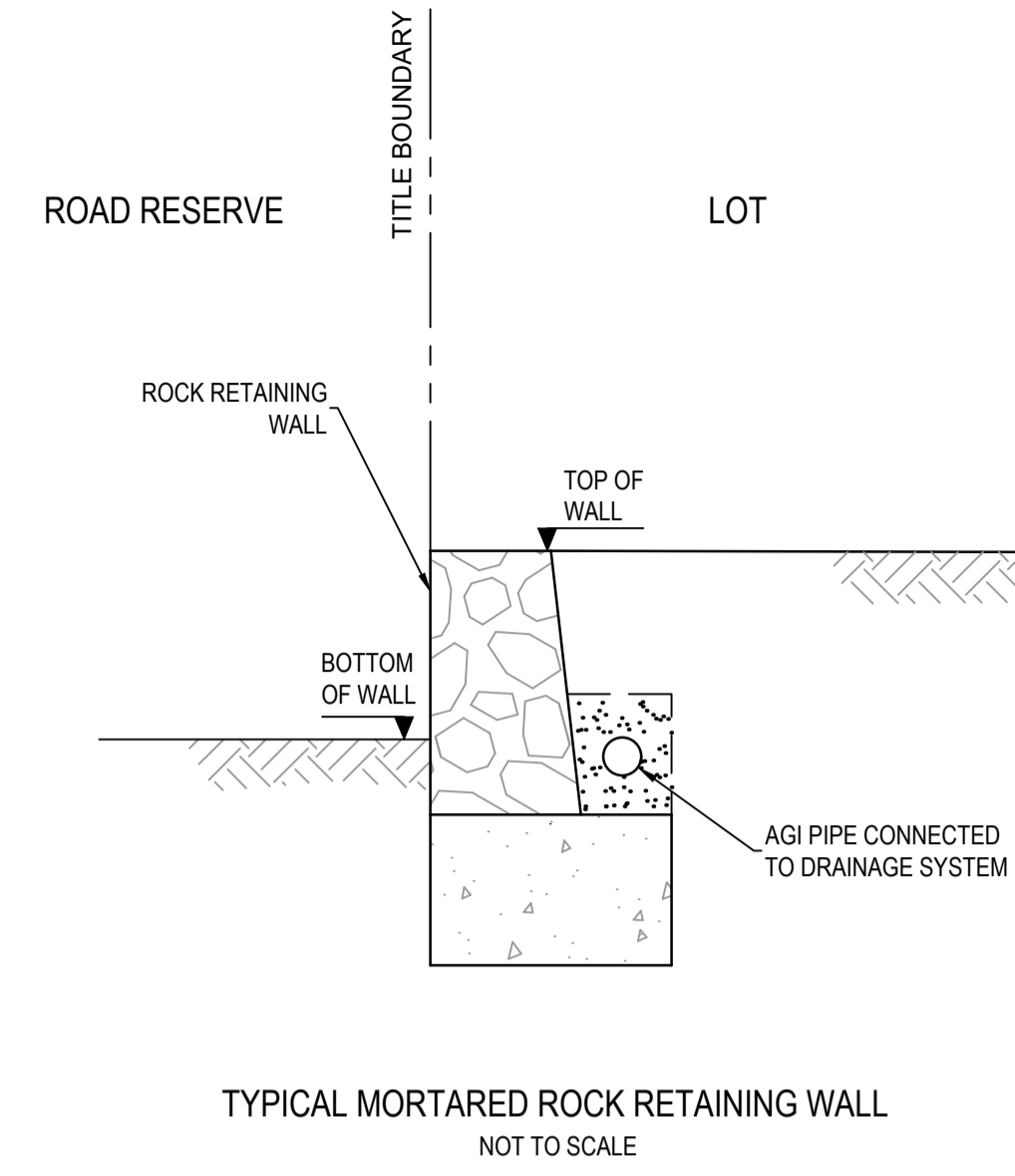
RETAINING WALL BWW - LONGITUDINAL SECTION



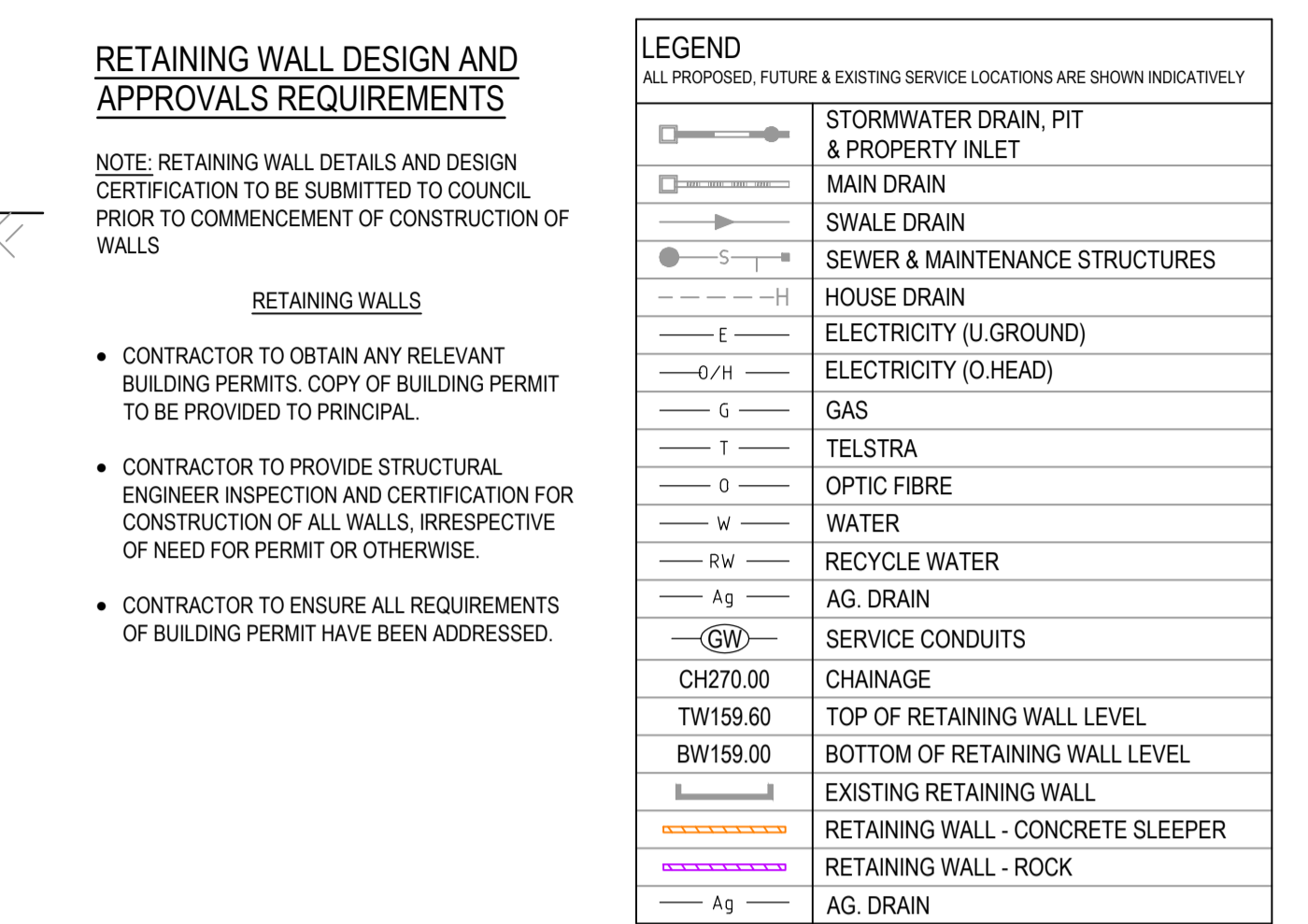
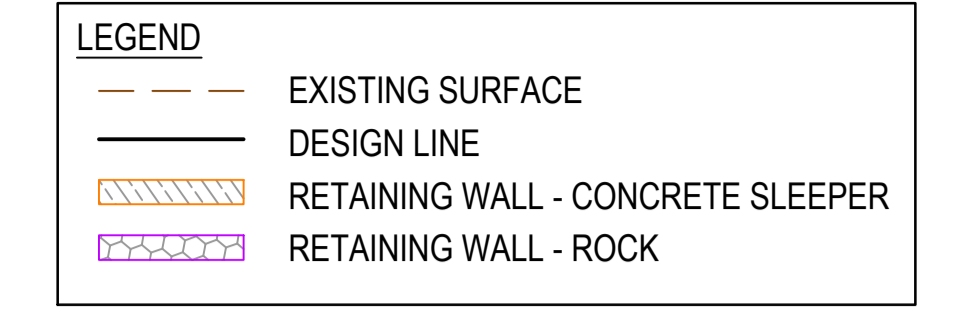
RETAINING WALL BWXA - LONGITUDINAL SECTION



RETAINING WALL BWXB - LONGITUDINAL SECTION



TYPICAL MORTARED ROCK RETAINING WALL  
NOT TO SCALE

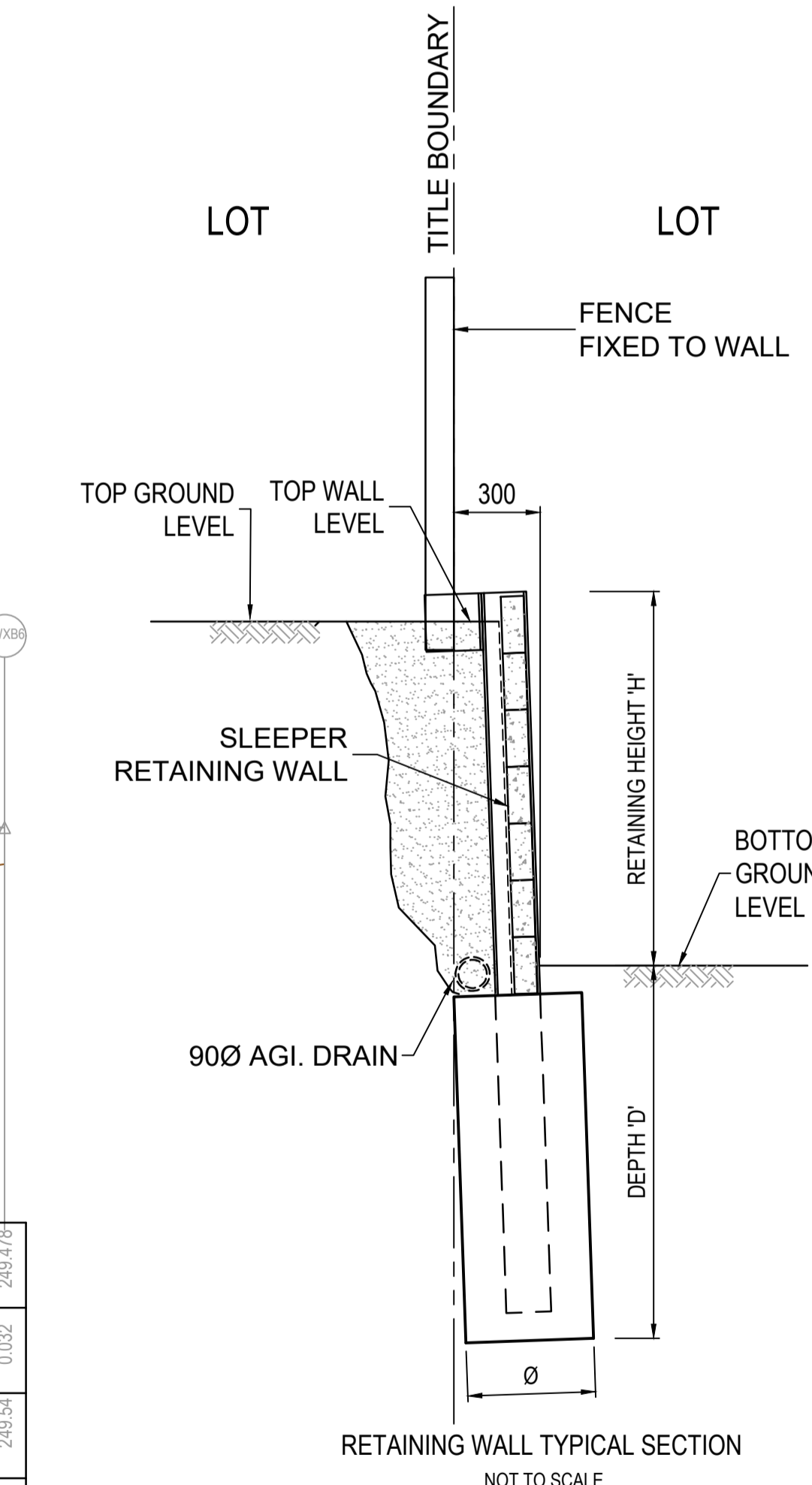


**RETAINING WALL DESIGN AND APPROVALS REQUIREMENTS**

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RETAINING WALL TYPICAL SECTION  
NOT TO SCALE

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PLAN OF SUB. NO.

PERMIT REF. NO.

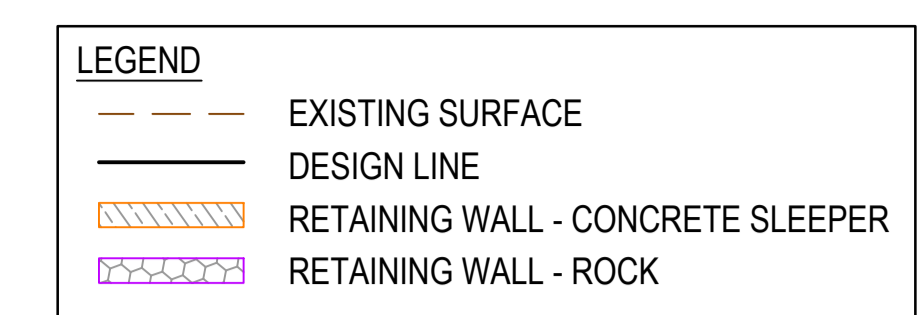
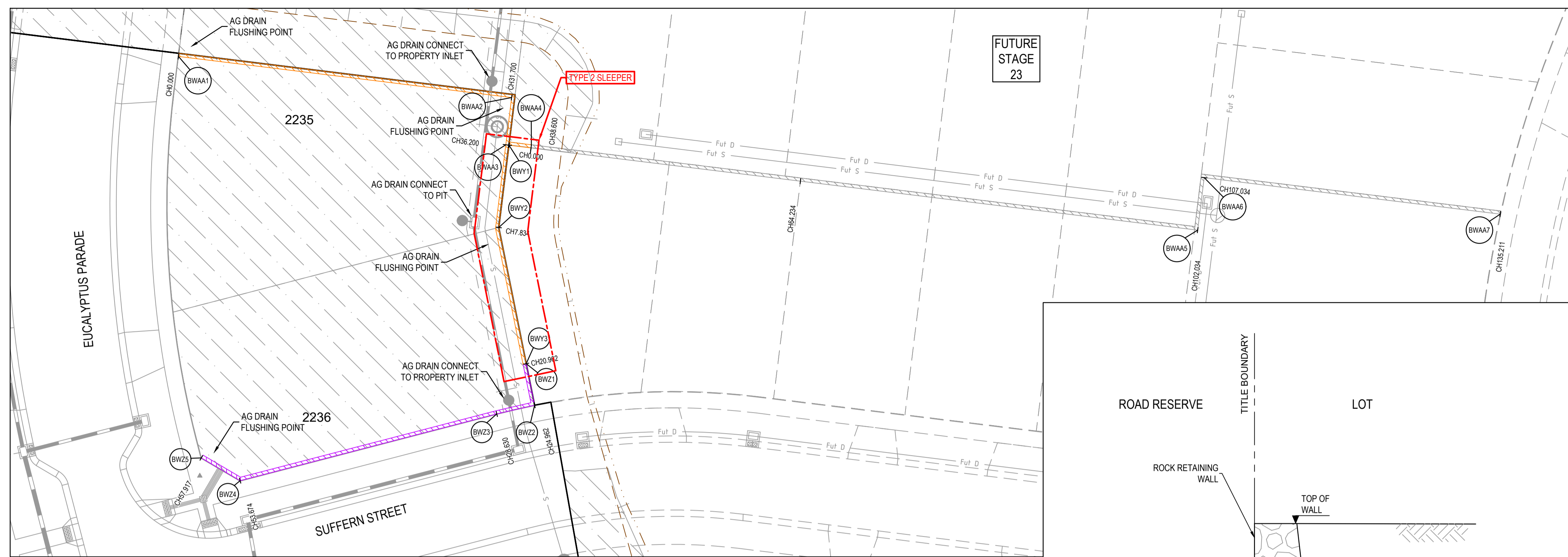
Olivine Estate - Stage 22  
Whittlesea City Council  
Road and Drainage  
Retaining Wall Setout Plan - 6

MELWAYS REF: 367 G11

PROJECT / DRAWING No: 1700E-022-138

SHEET No: 12 of 43

REVISION: 2



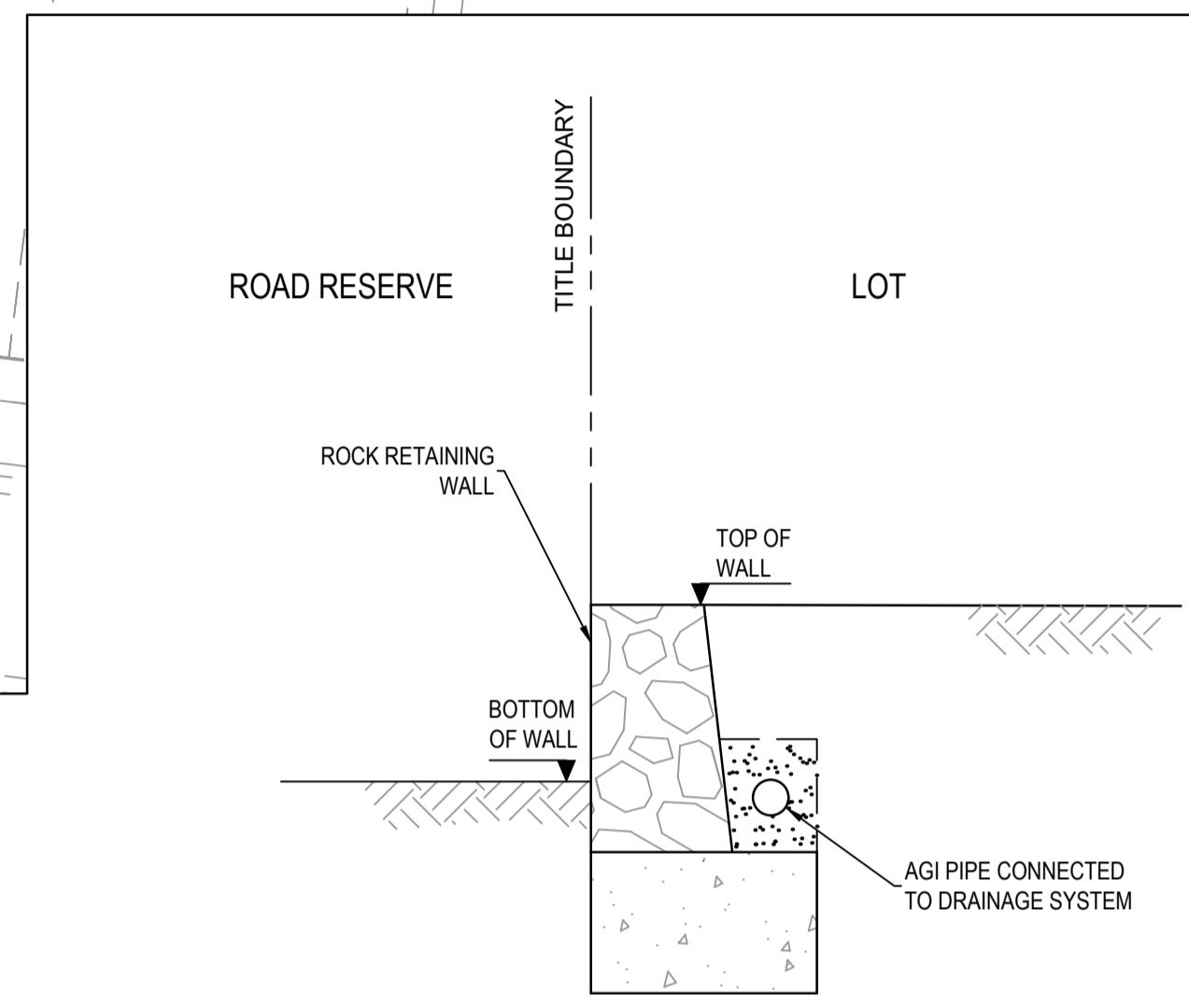
**LEGEND**  
ALL PROPOSED, FUTURE & EXISTING SERVICE LOCATIONS ARE SHOWN INDICATIVELY

	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
	CH270.00 CHAINAGE
	TW159.60 TOP OF RETAINING WALL LEVEL
	BW159.00 BOTTOM OF RETAINING WALL LEVEL
	EXISTING RETAINING WALL
	RETAINING WALL - CONCRETE SLEEPER
	RETAINING WALL - ROCK
	AG DRAIN

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**ALIGNMENT BWY**

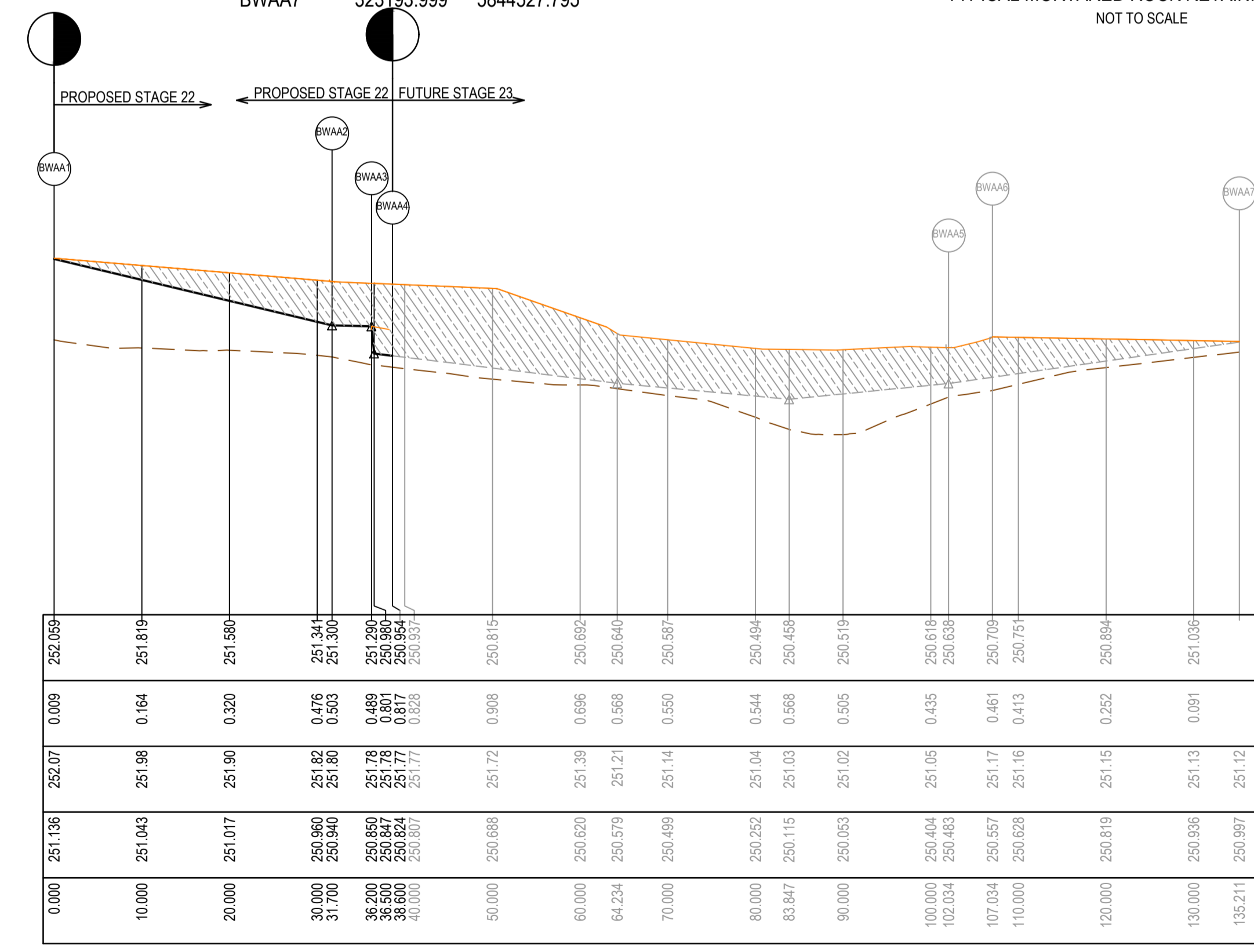
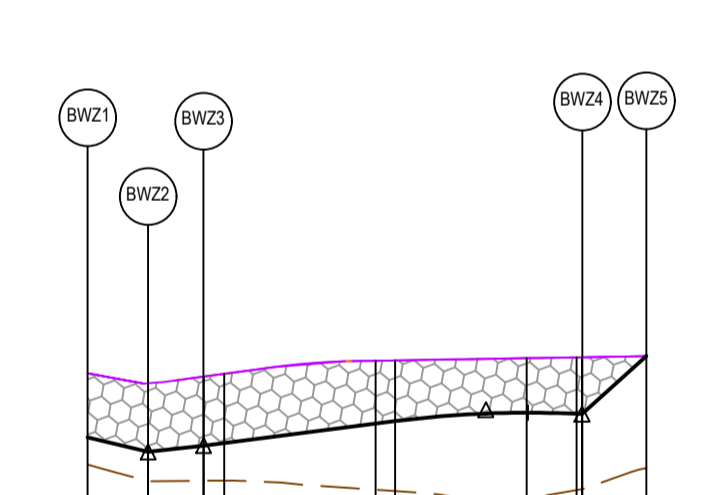
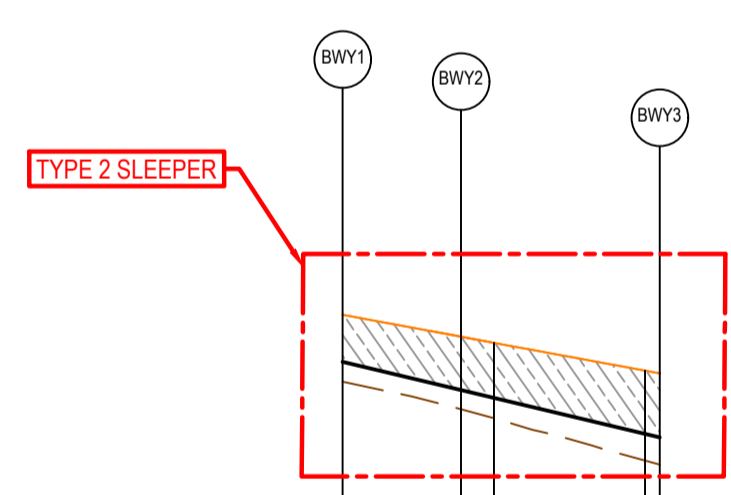
Point no	Easting	Northing	RL
BWY1	323100.381	5844534.308	250.980
BWY2	323099.422	5844526.533	250.825
BWY3	323102.016	5844513.663	250.565

**ALIGNMENT BWZ**

Point no	Easting	Northing	RL
BWZ1	323102.016	5844513.663	250.565
BWZ2	323102.806	5844509.742	250.486
BWZ3	323099.232	5844508.918	250.583
BWZ4	323074.994	5844502.614	250.896
BWZ5	323071.335	5844504.762	251.017

**ALIGNMENT BWAA**

Point no	Easting	Northing	RL
BWAA1	323069.173	5844542.692	252.059
BWAA2	323100.635	5844538.811	251.300
BWAA3	323100.084	5844534.344	251.290
BWAA4	323102.466	5844534.051	250.954
BWAA5	323165.422	5844526.283	250.638
BWAA6	323166.035	5844531.245	250.709
BWAA7	323193.999	5844527.795	

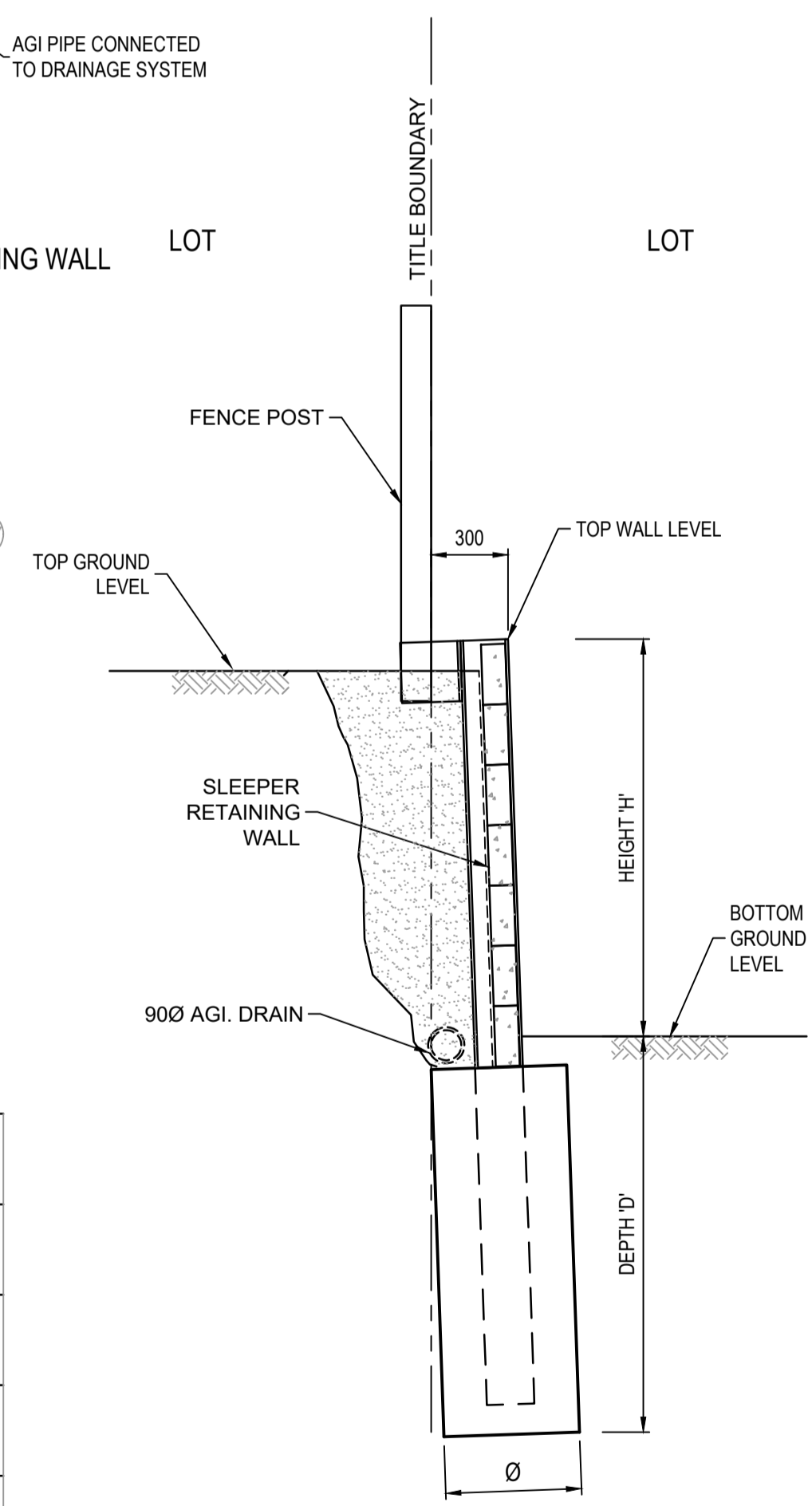


**HORIZONTAL GEOMETRY DATUM RL248**

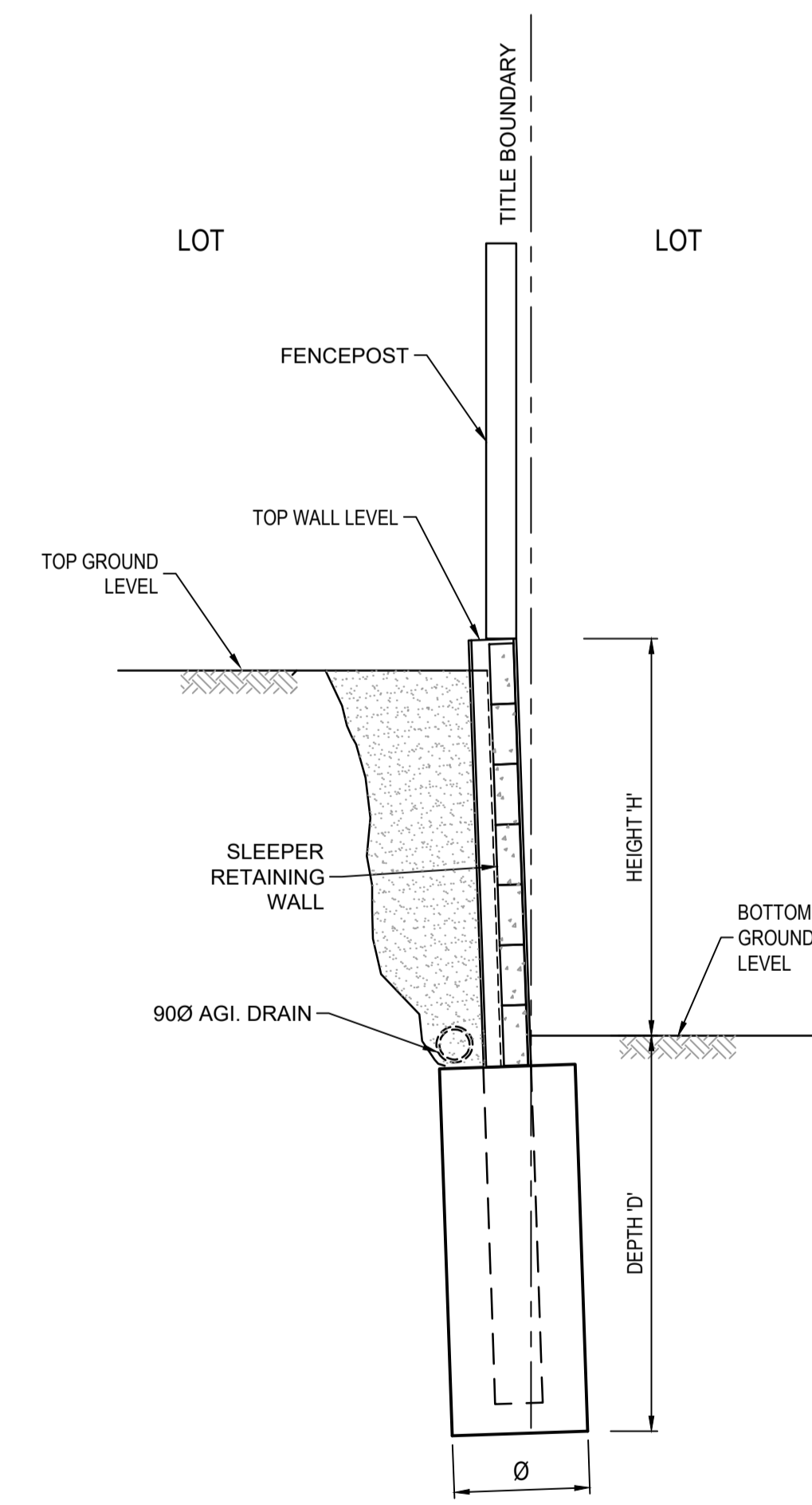
Point no	Easting	Northing	RL
BWY1	323100.381	5844534.308	250.980
BWY2	323099.422	5844526.533	250.825
BWY3	323102.016	5844513.663	250.565

Point no	Easting	Northing	RL
BWY1	323100.381	5844534.308	250.980
BWY2	323099.422	5844526.533	250.825
BWY3	323102.016	5844513.663	250.565

Point no	Easting	Northing	RL
BWZ1	323102.016	5844513.663	250.565
BWZ2	323102.806	5844509.742	250.486
BWZ3	323099.232	5844508.918	250.583
BWZ4	323074.994	5844502.614	250.896
BWZ5	323071.335	5844504.762	251.017



TYPE 1 SLEEPER RETAINING WALL SCALE: NTS



TYPE 2 SLEEPER RETAINING WALL SCALE: NTS

RETAINING WALL BWY - LONGITUDINAL SECTION RETAINING WALL BWZ - LONGITUDINAL SECTION

RETAINING WALL BWAA - LONGITUDINAL SECTION

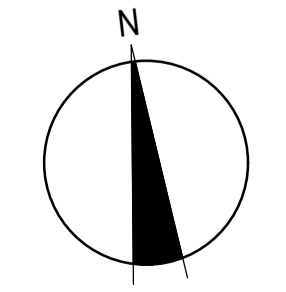
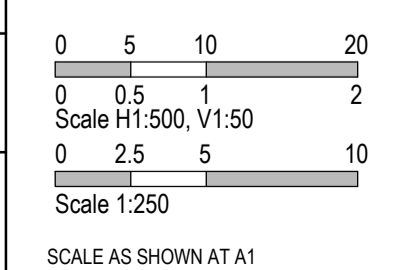
**AS CONSTRUCTED PLANS**

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 OHS Management AS/NZS 4500  
 Environmental Management ISO 14001  
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PLAN OF SUB. NO.  
 PERMIT REF. NO.

**AS CONSTRUCTED**

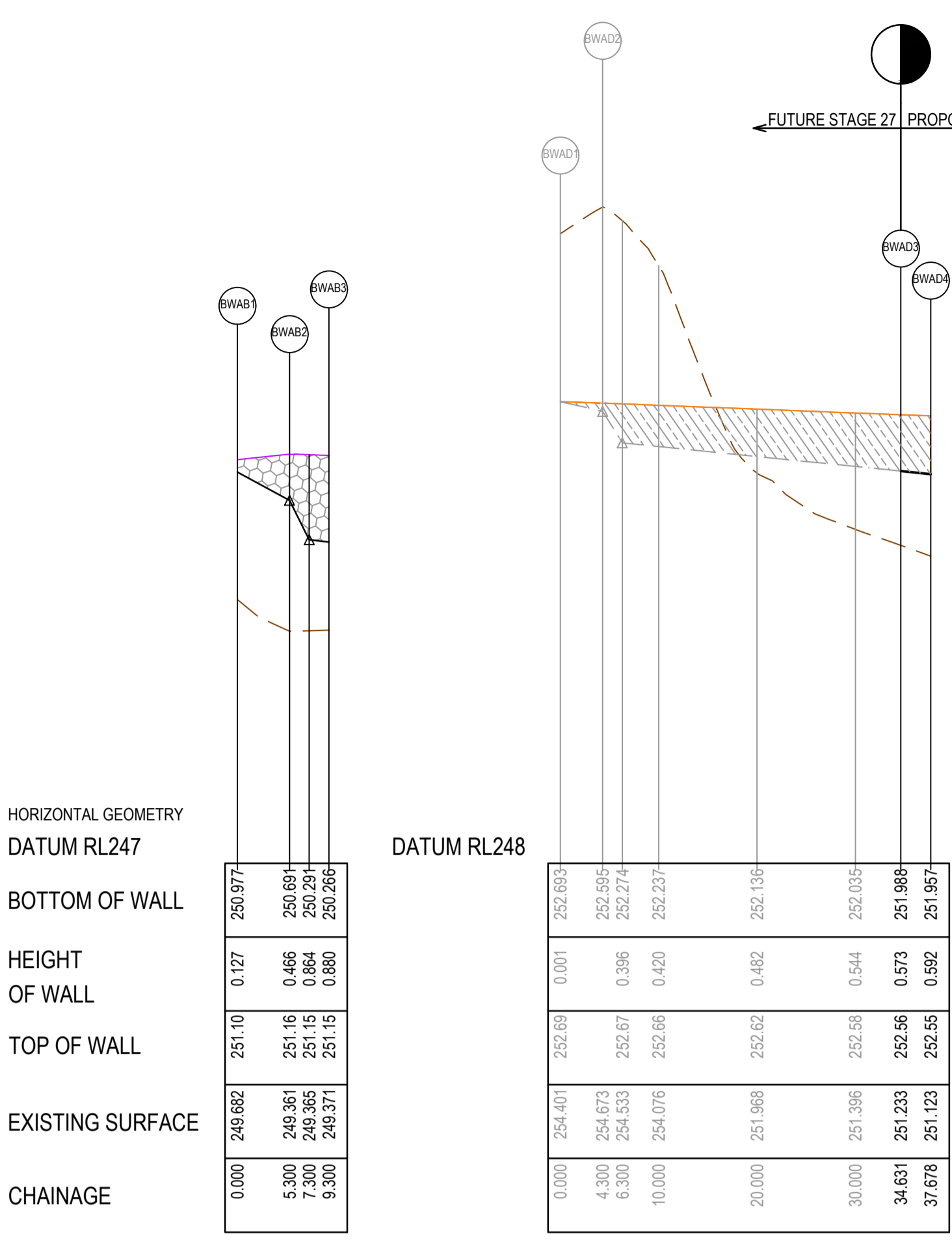
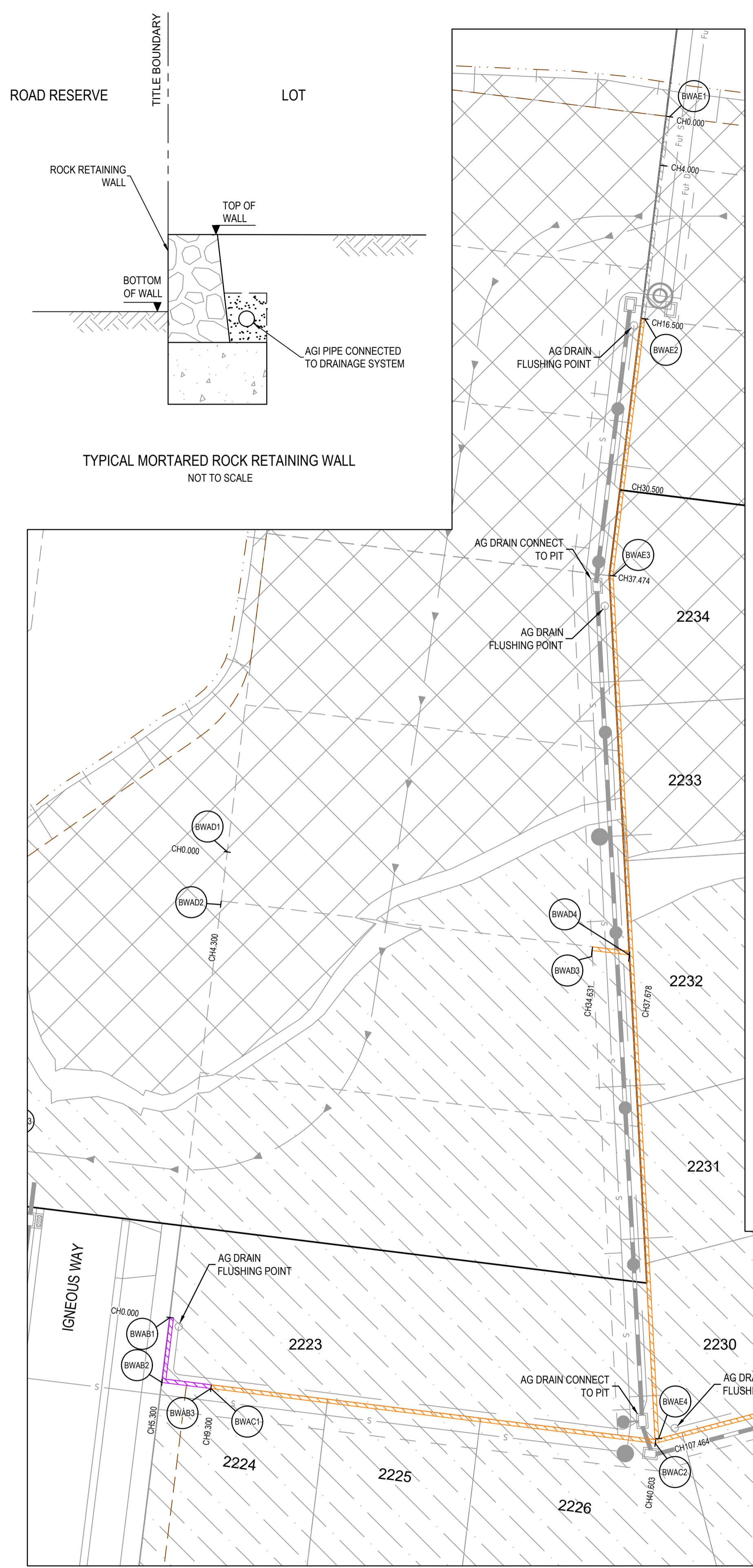


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 03 9514 1500

**mirvac**

Olivine Estate - Stage 22  
 Whittlesea City Council  
 Road and Drainage  
 Retaining Wall Setout Plan - 7

MELWAYS REF	PROJECT / DRAWING No	SHEET No	REVISION
367 G11	1700E-022-139	13 of 43	2



**ALIGNMENT BWAB**

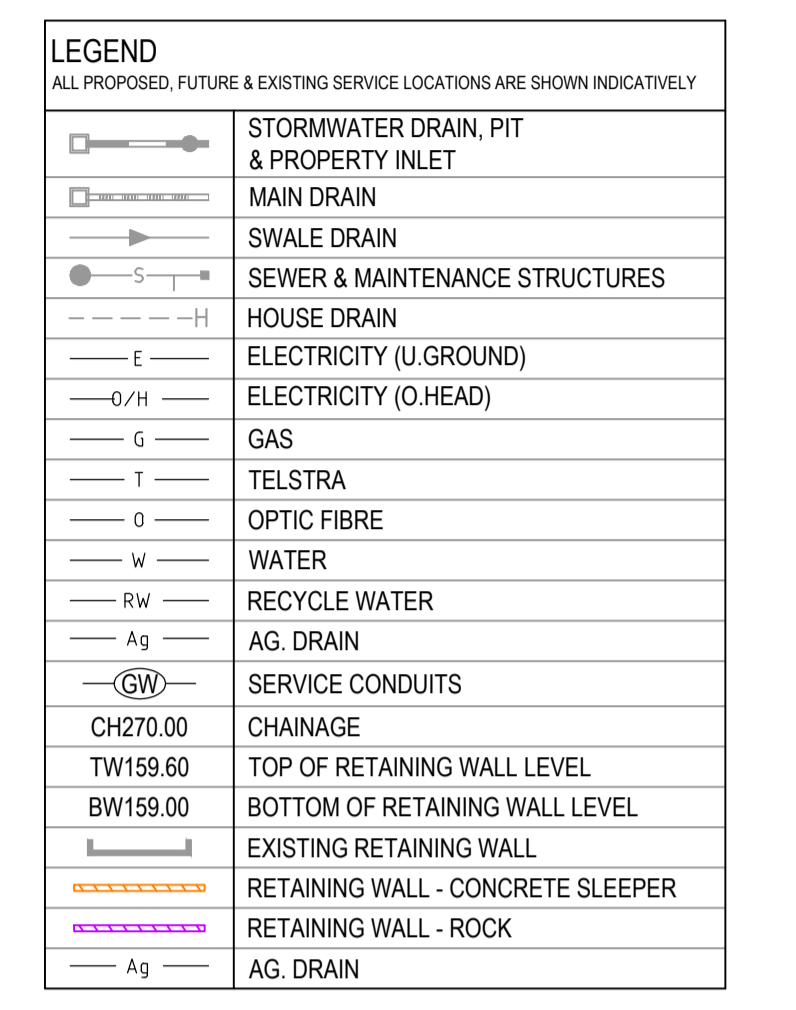
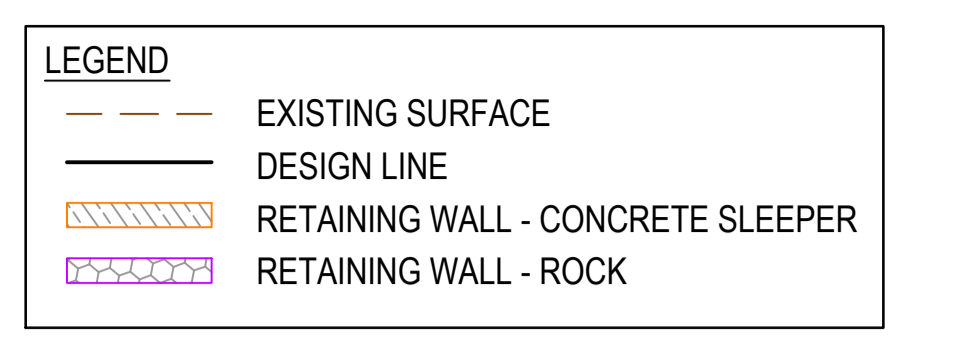
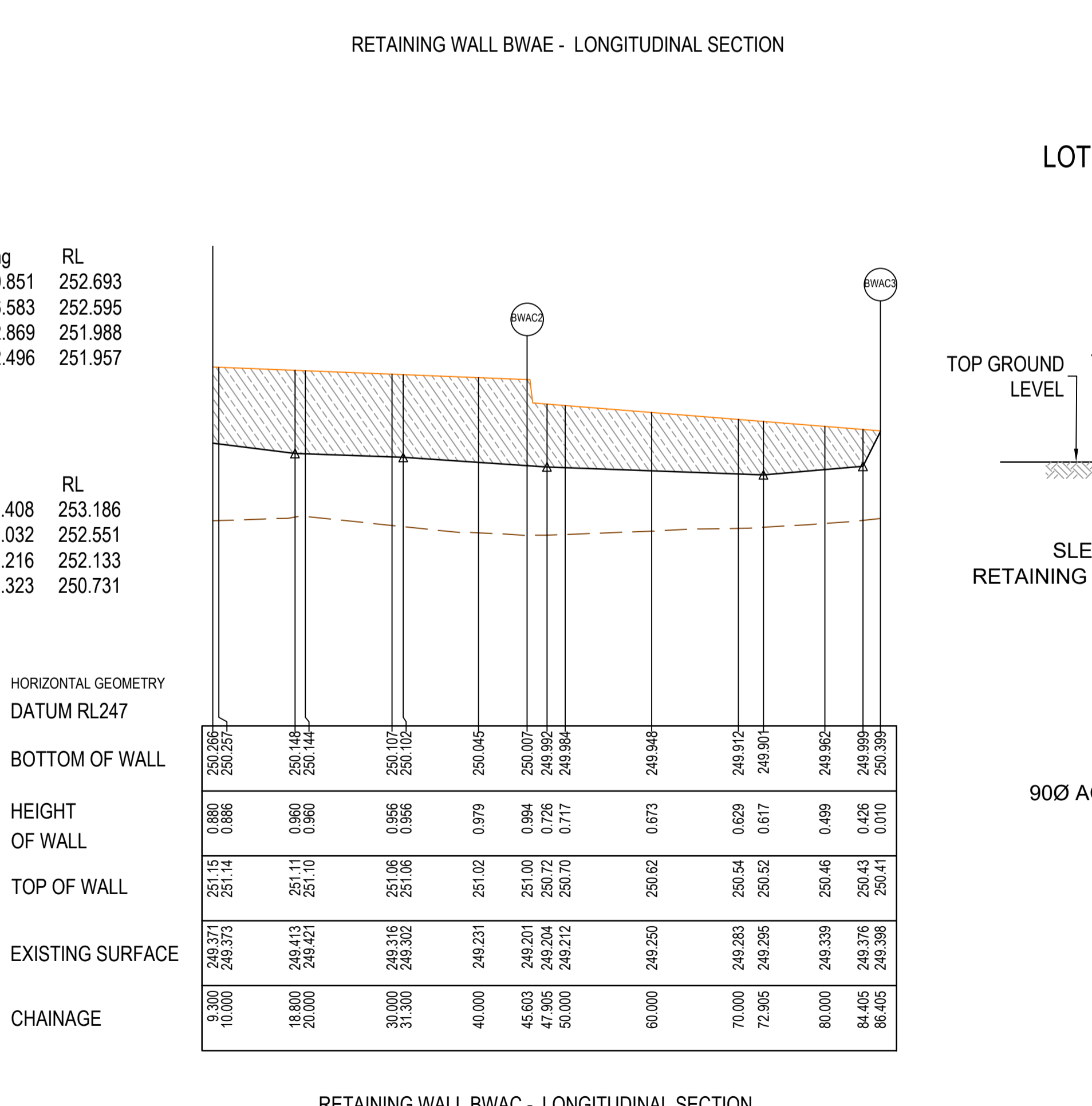
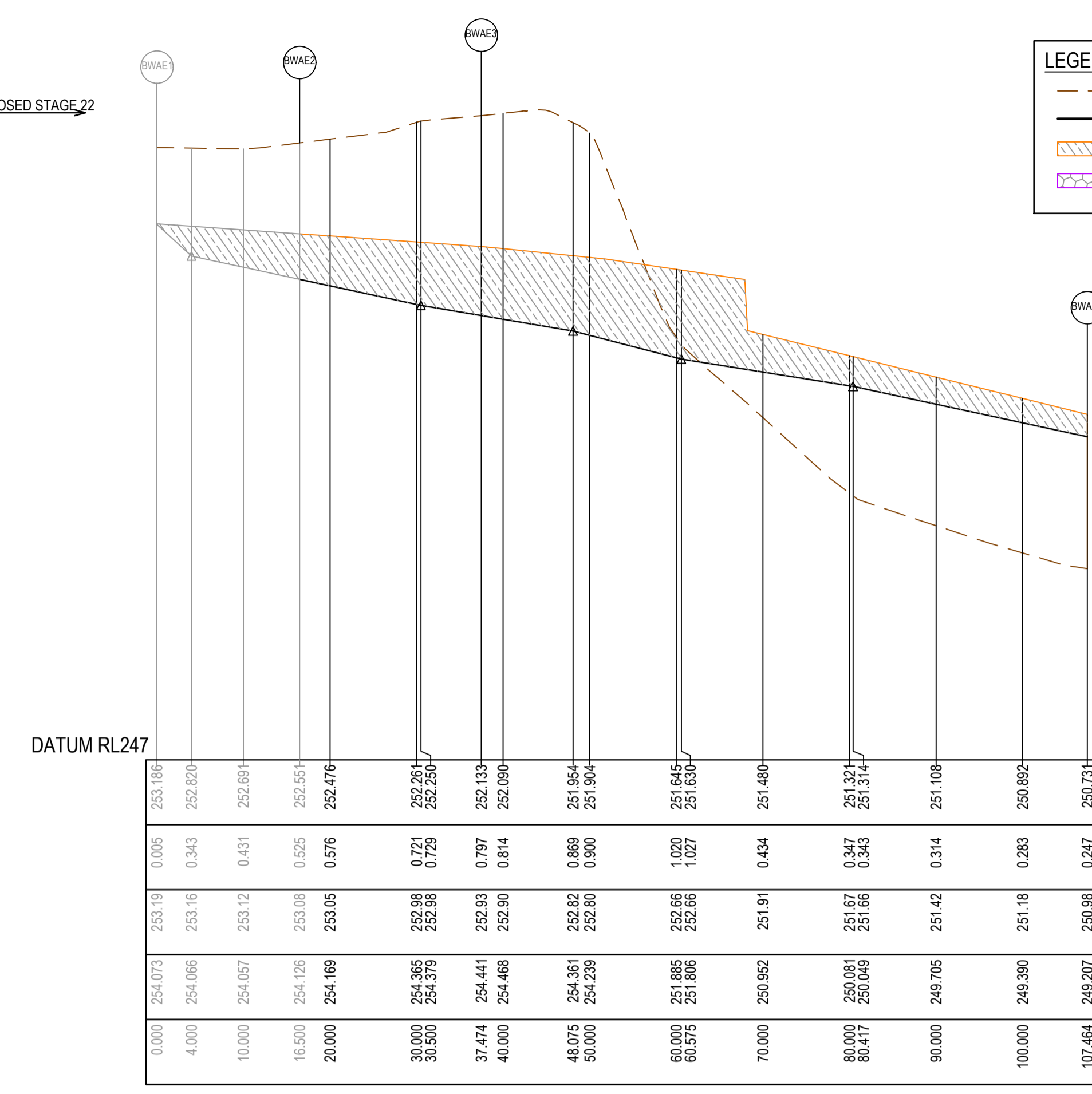
Point no	Easting	Northing	RL
BWAB1	322977.970	5844473.137	250.977
BWAB2	322977.321	5844467.877	250.691
BWAB3	322981.291	5844467.387	250.266

**ALIGNMENT BWAD**

Point no	Easting	Northing	RL
BWAD1	322982.623	5844510.851	252.693
BWAD2	322982.096	5844506.583	252.595
BWAD3	323012.199	5844502.869	251.988
BWAD4	323015.223	5844502.496	251.957

**ALIGNMENT BWAE**

Point no	Easting	Northing	RL
BWAE1	323018.486	5844570.408	253.186
BWAE2	323016.465	5844554.032	252.551
BWAE3	323013.897	5844533.216	252.133
BWAE4	323017.597	5844463.323	250.731

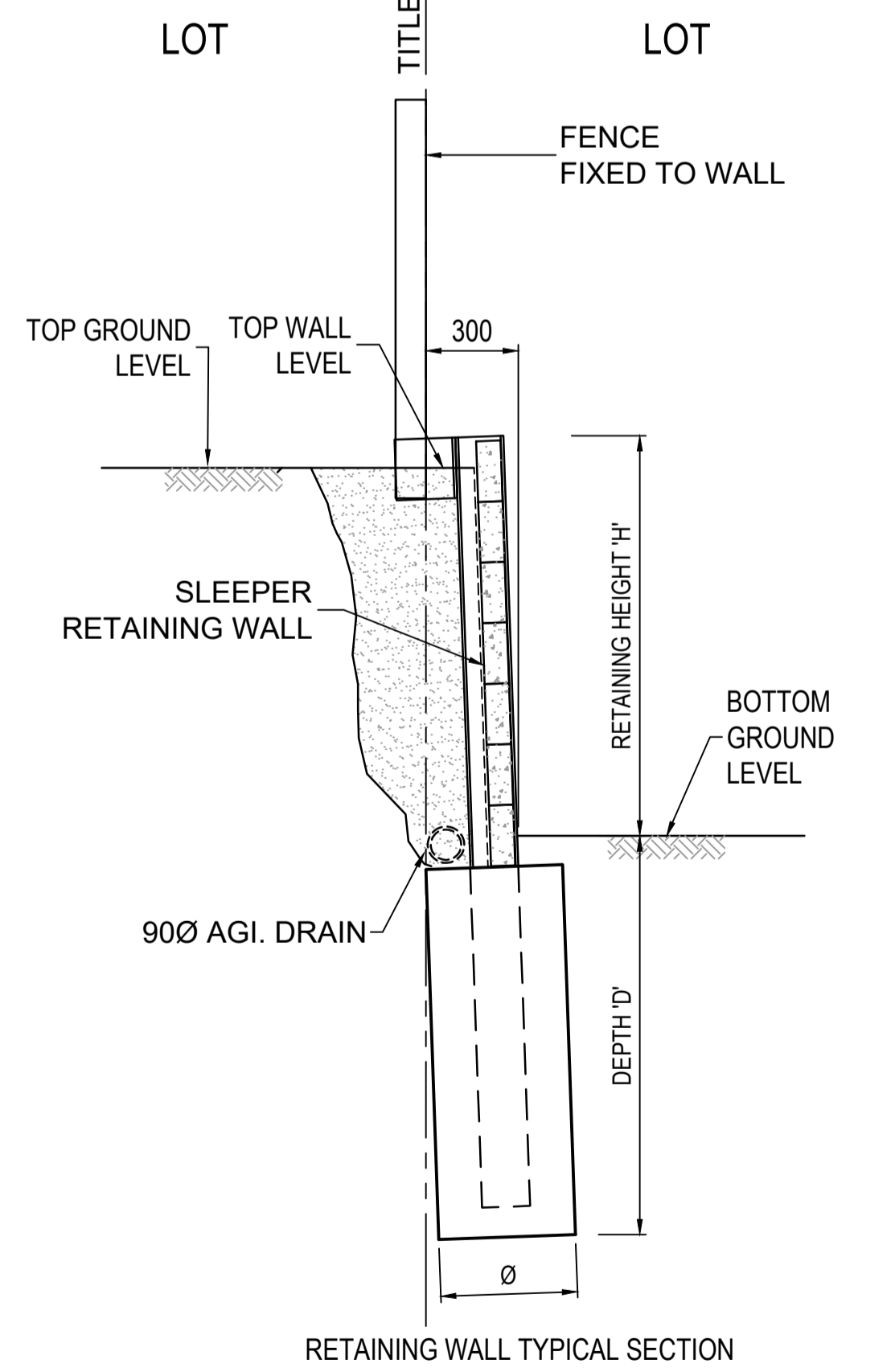


**RETAINING WALL DESIGN AND APPROVALS REQUIREMENTS**

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

**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.



**AS CONSTRUCTED PLANS**

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

PLAN OF SUB. NO.  
 PERMIT REF. NO.

**AS CONSTRUCTED**

SCALE AS SHOWN AT A1

0 5 10 20  
 0 0.5 1 2  
 Scale H1:500, V1:50  
 0 2.5 5 10  
 Scale 1:250

N

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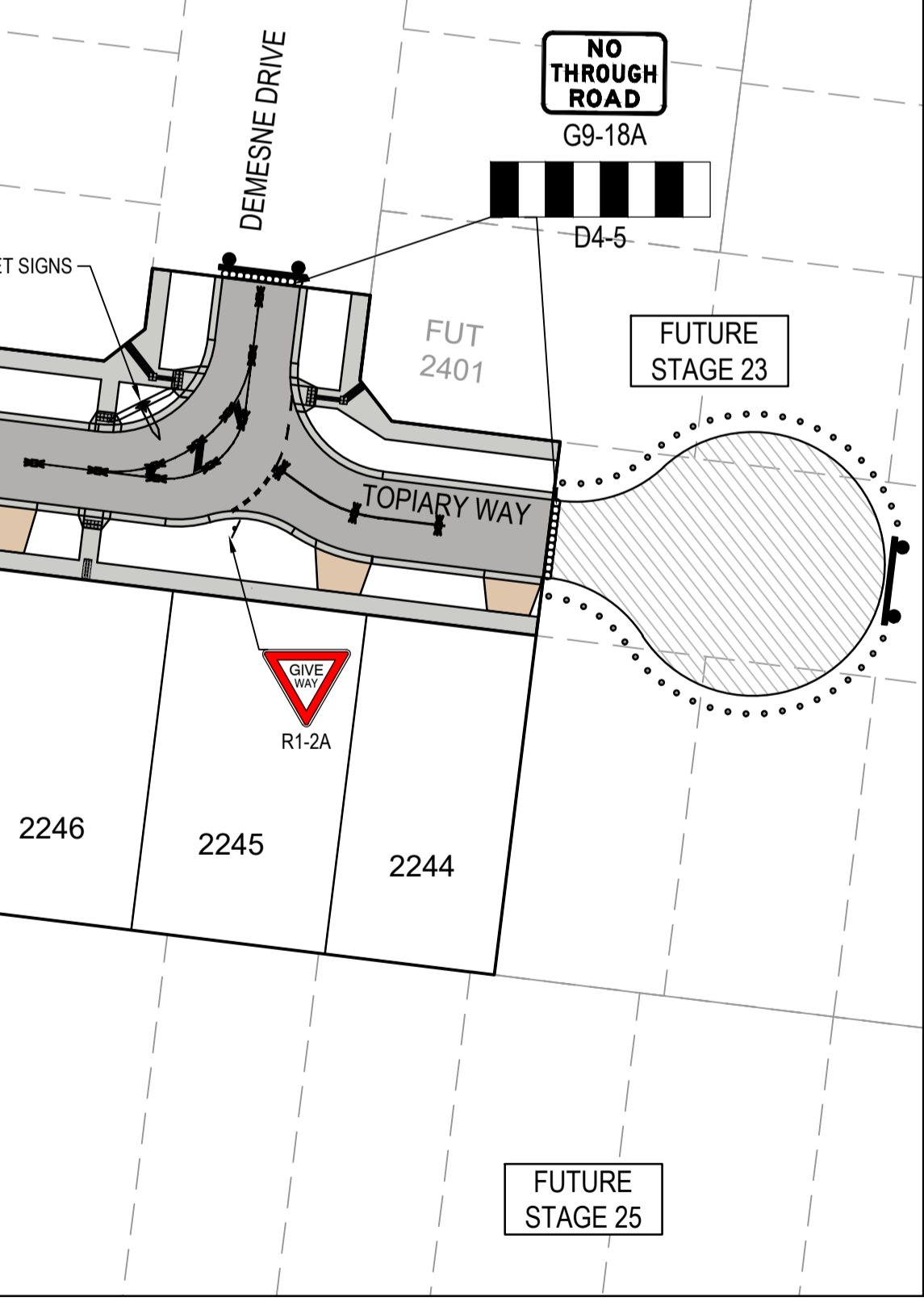
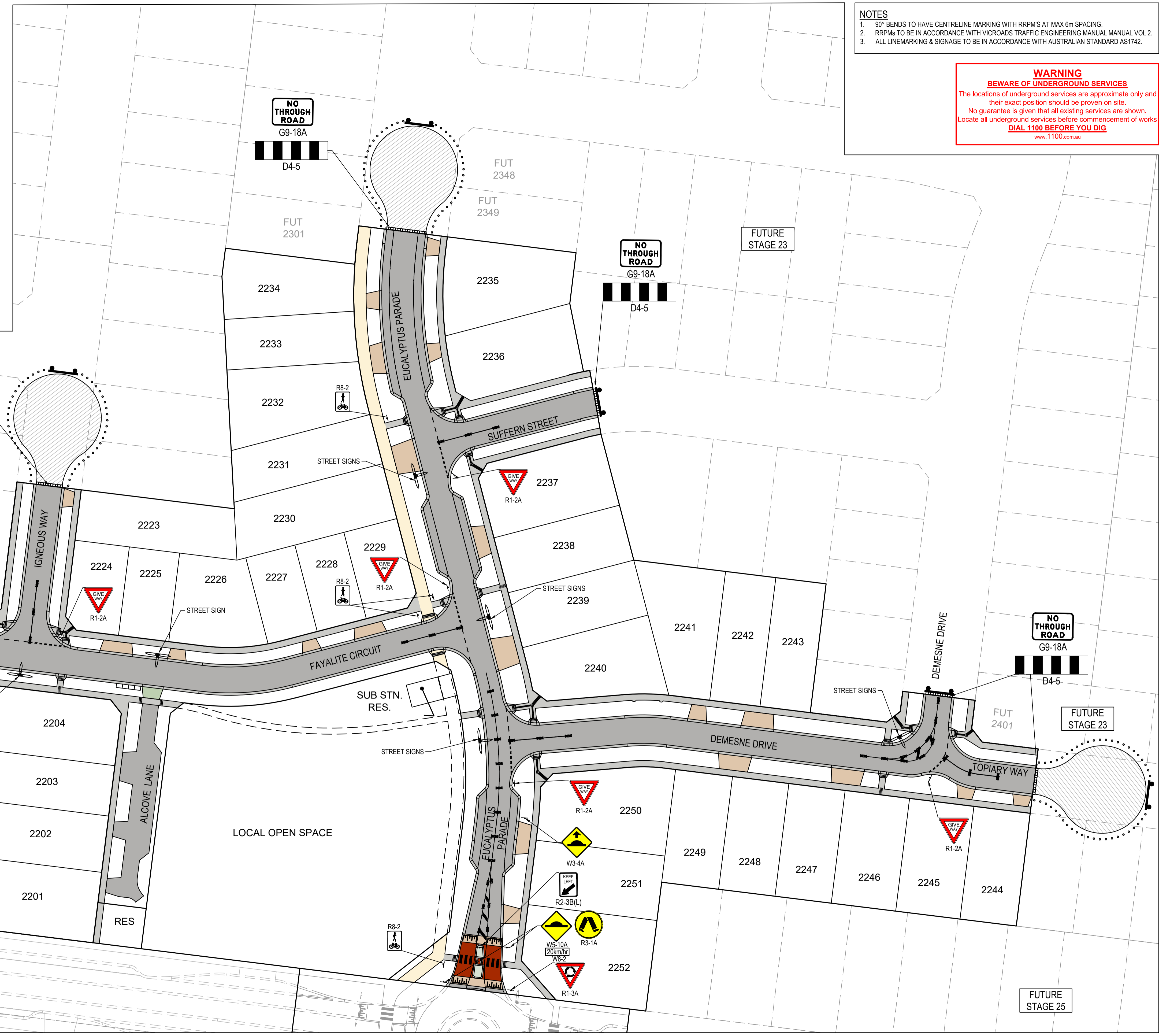
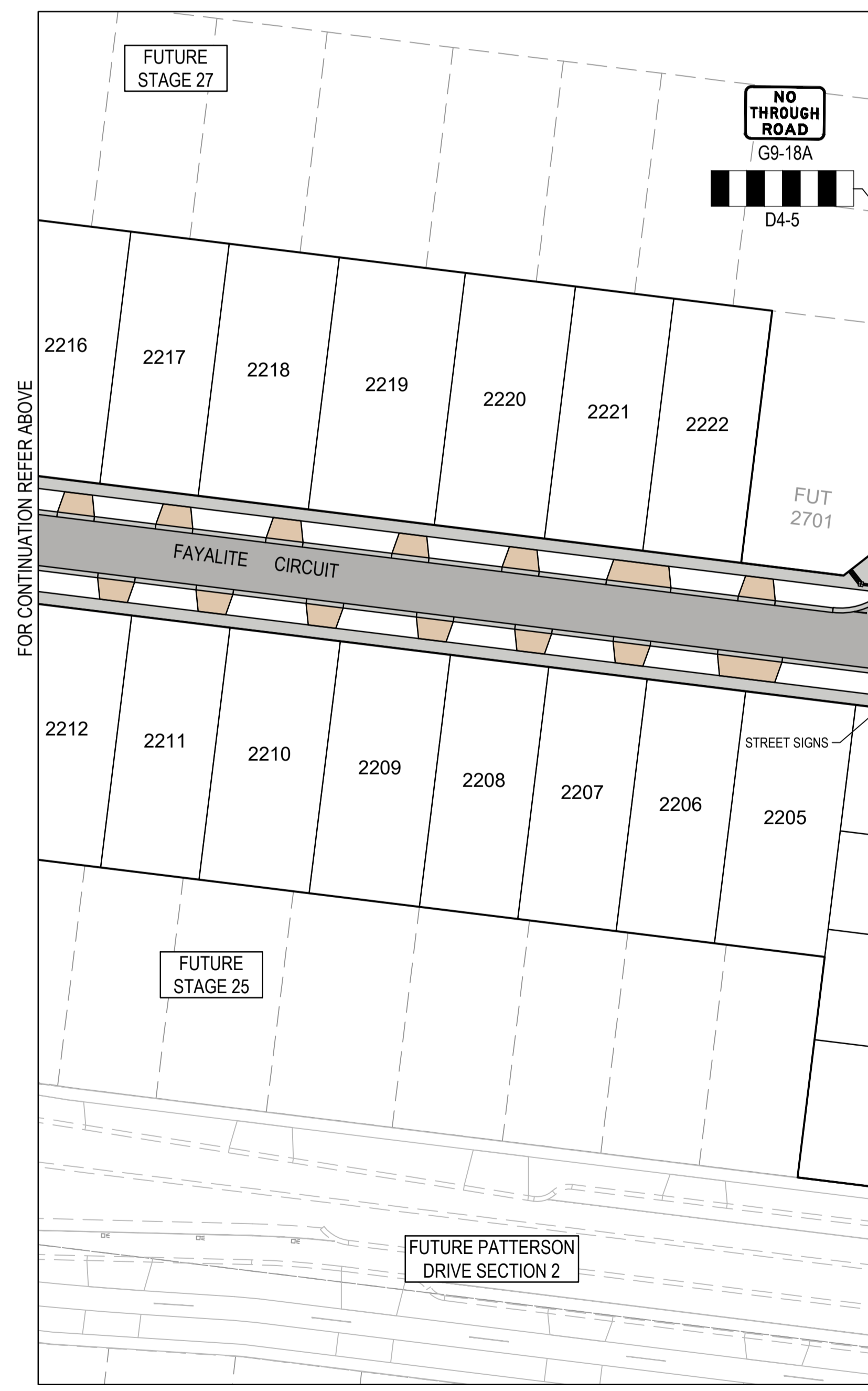
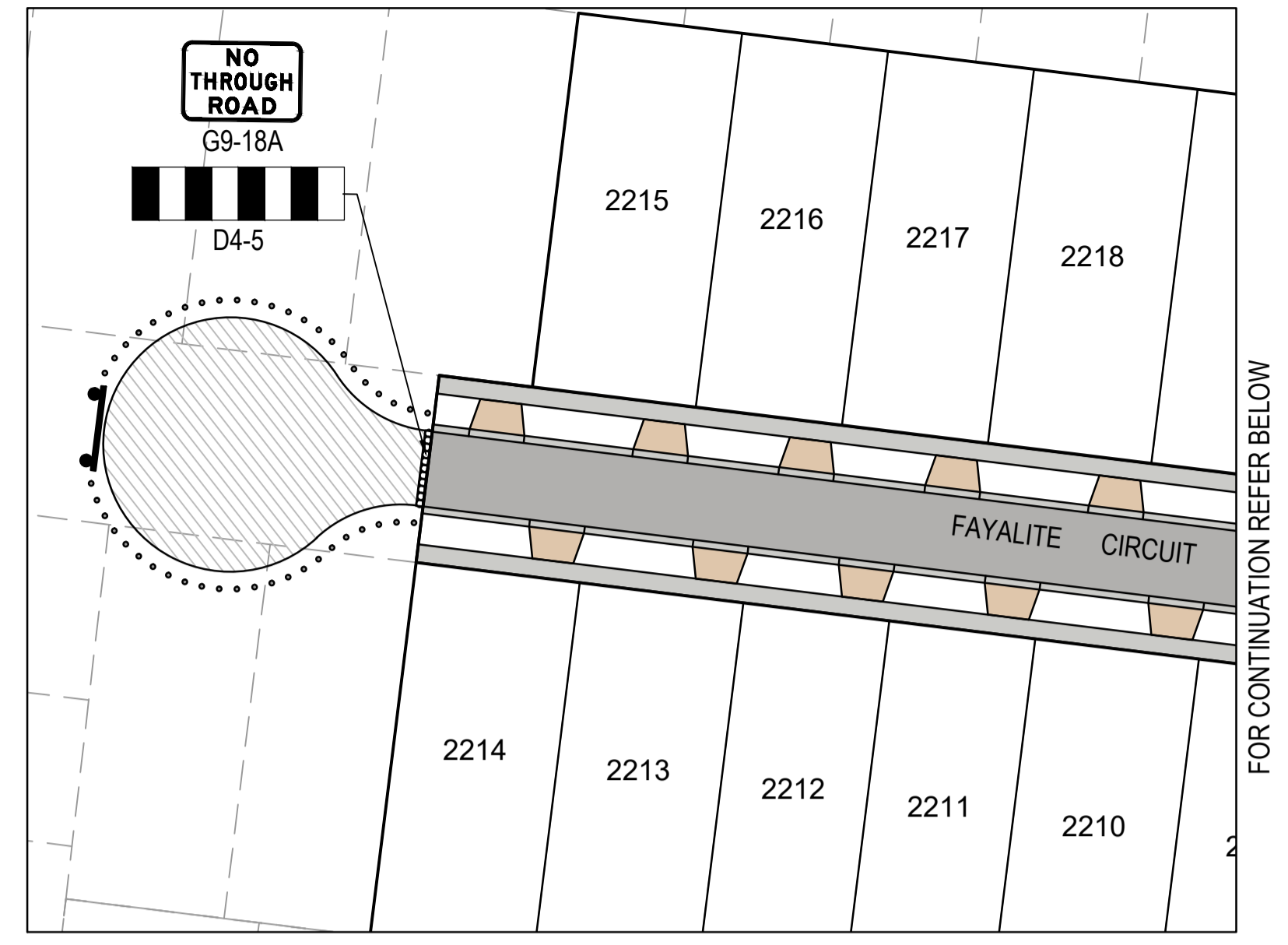
Olivine Estate - Stage 22  
 Whittlesea City Council  
 Road and Drainage  
 Retaining Wall Setout Plan - 8

MELBAYS REF: 367 G11  
 PROJECT / DRAWING No: 1700E-022-140  
 SHEET No: 14 of 43  
 REVISION: 2



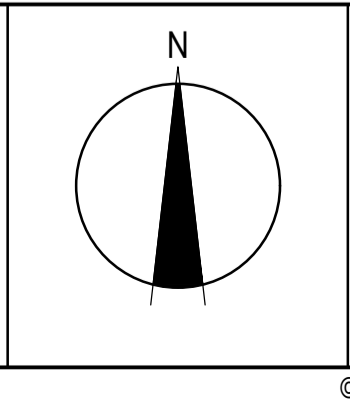
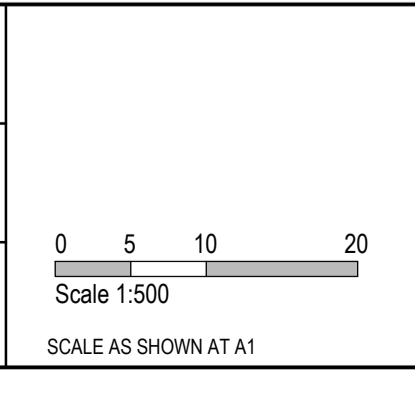
- NOTES**
- 90° BENDS TO HAVE CENTRELINE MARKING WITH RRPMS AT MAX 6m SPACING.
  - RRPMs TO BE IN ACCORDANCE WITH VICROADS TRAFFIC ENGINEERING MANUAL MANUAL VOL 2.
  - ALL LINEMARKING & SIGNAGE TO BE IN ACCORDANCE WITH AUSTRALIAN STANDARD AS1742.

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



**AS CONSTRUCTED PLANS**  
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PLAN OF SUB. NO. \_\_\_\_\_  
 PERMIT REF. NO. \_\_\_\_\_  
**AS CONSTRUCTED**



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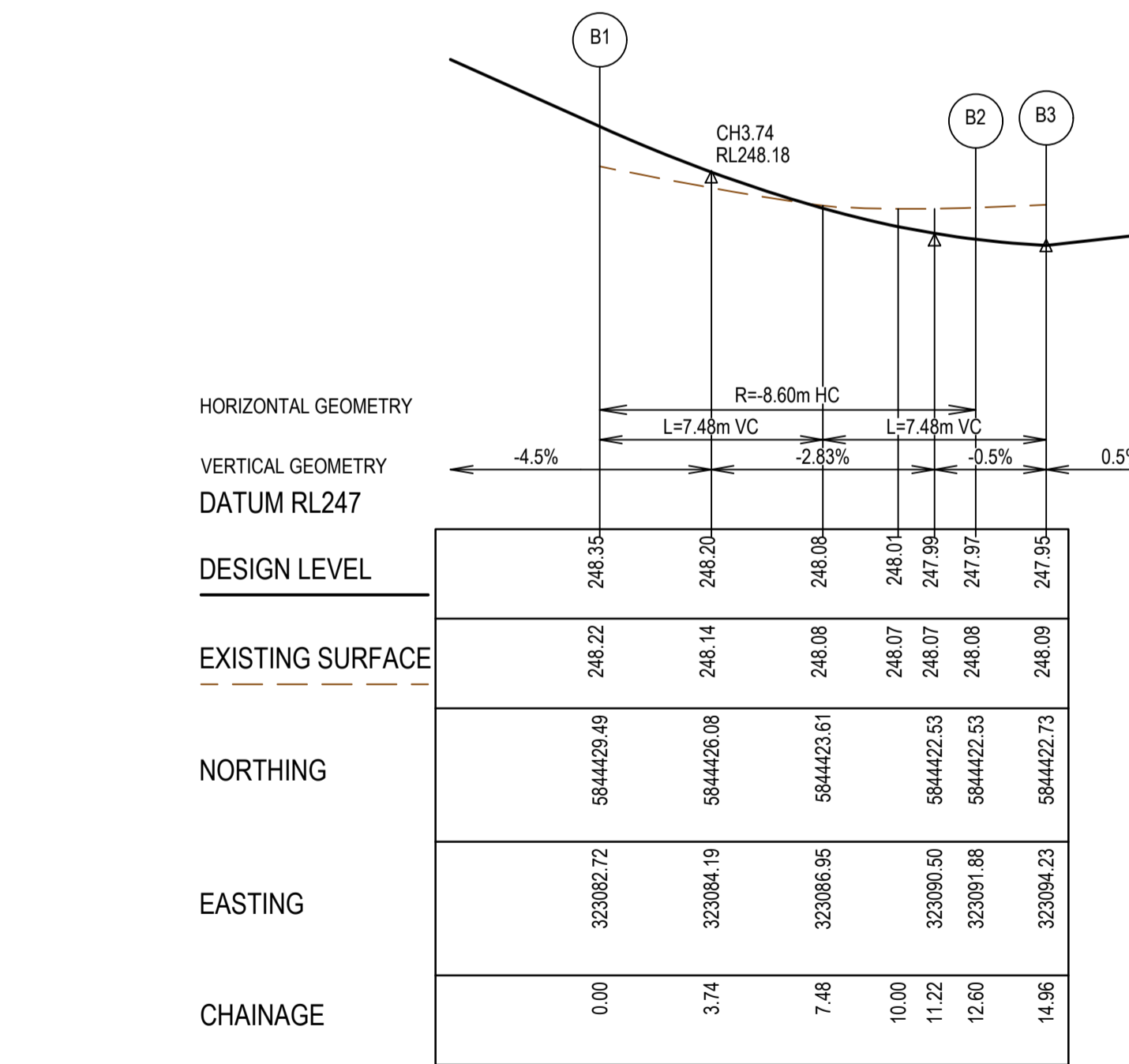
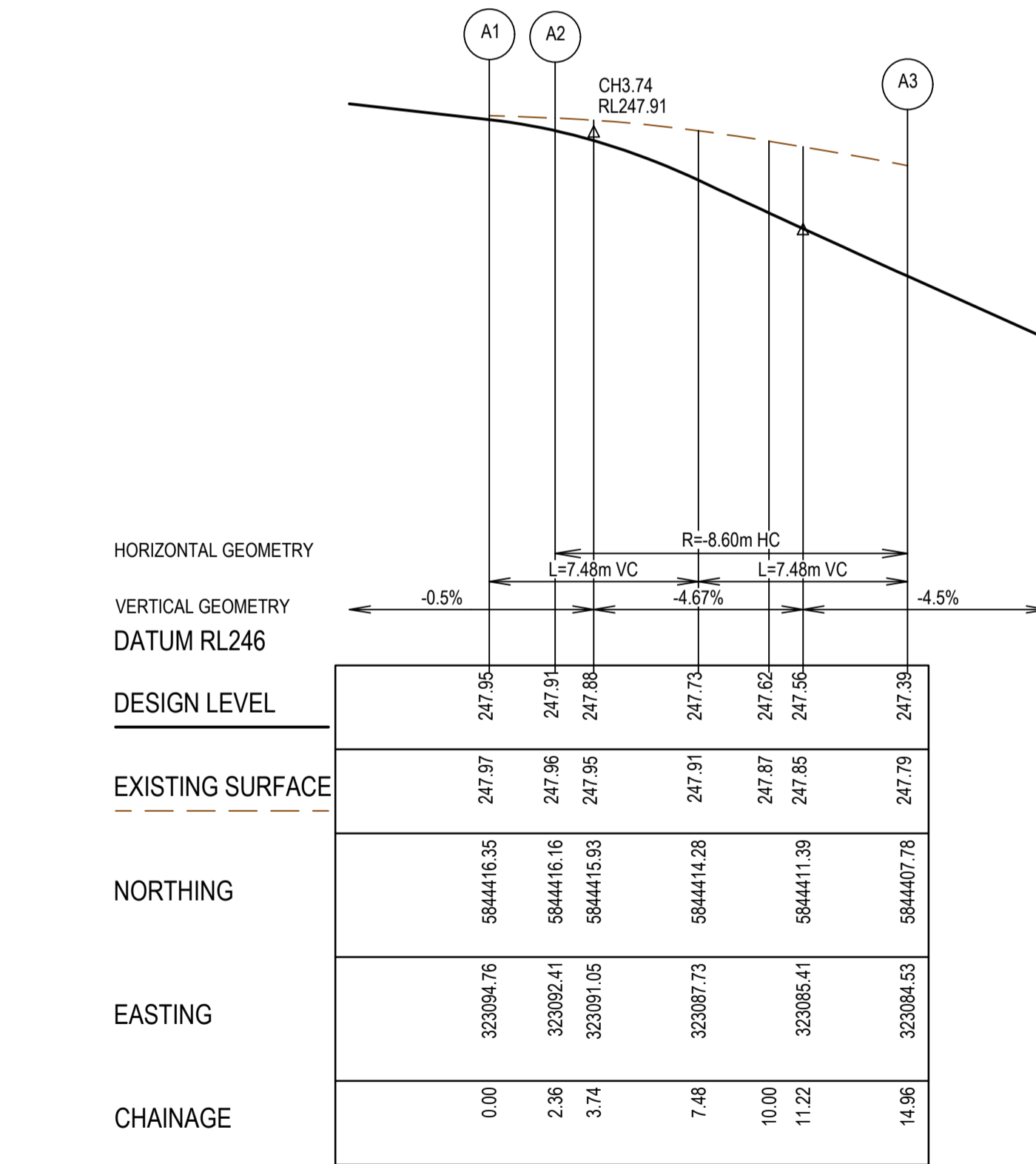
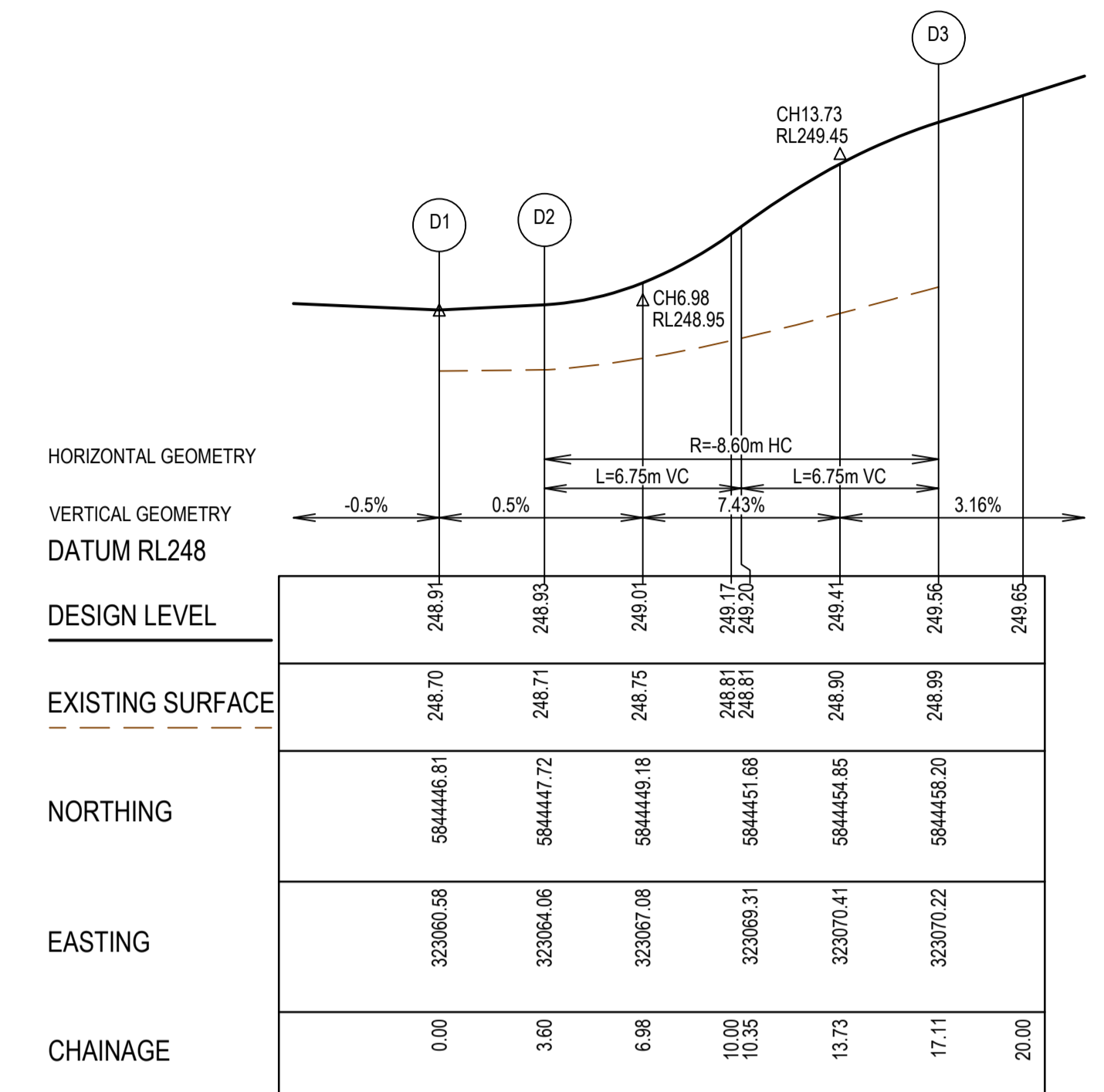
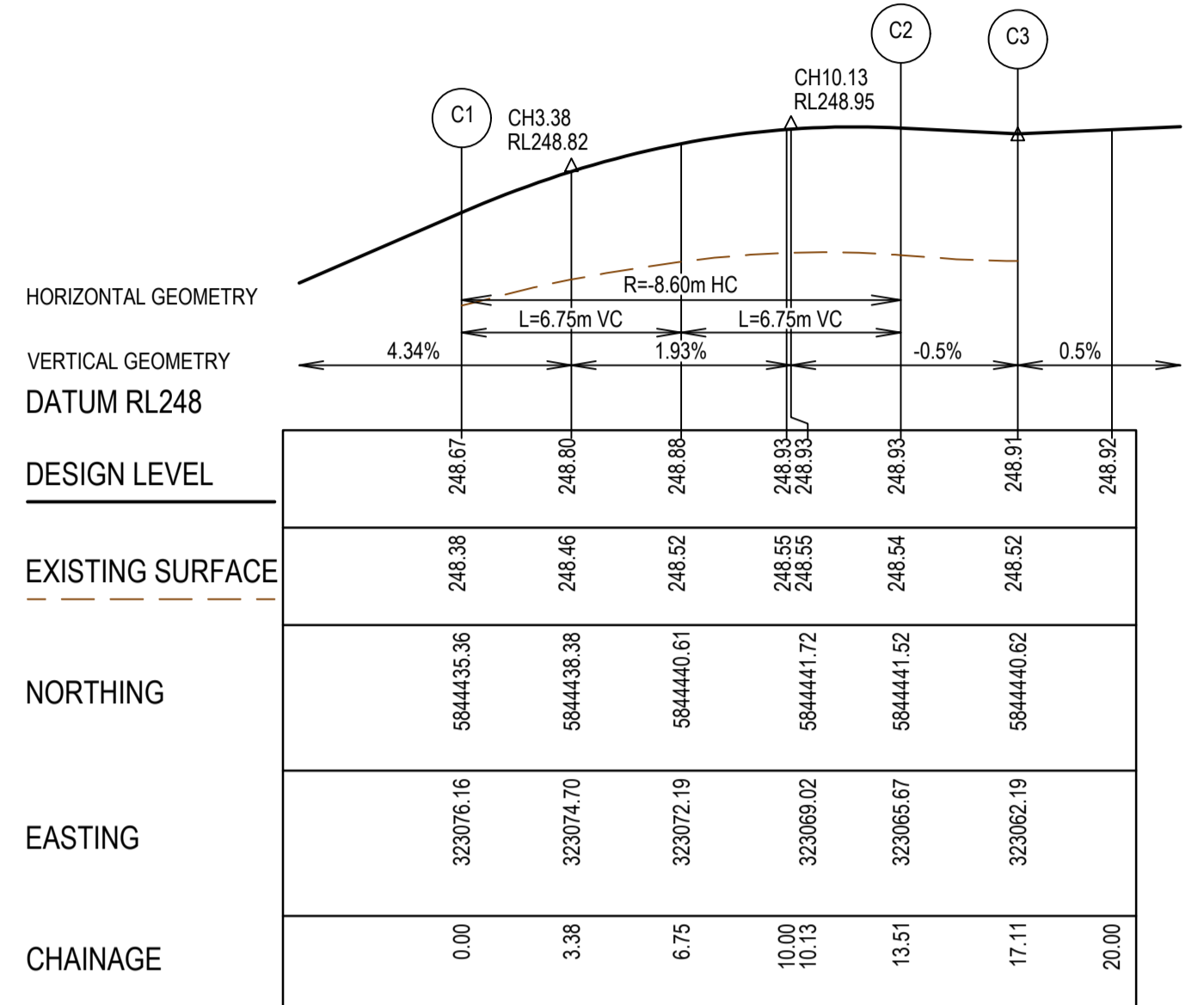
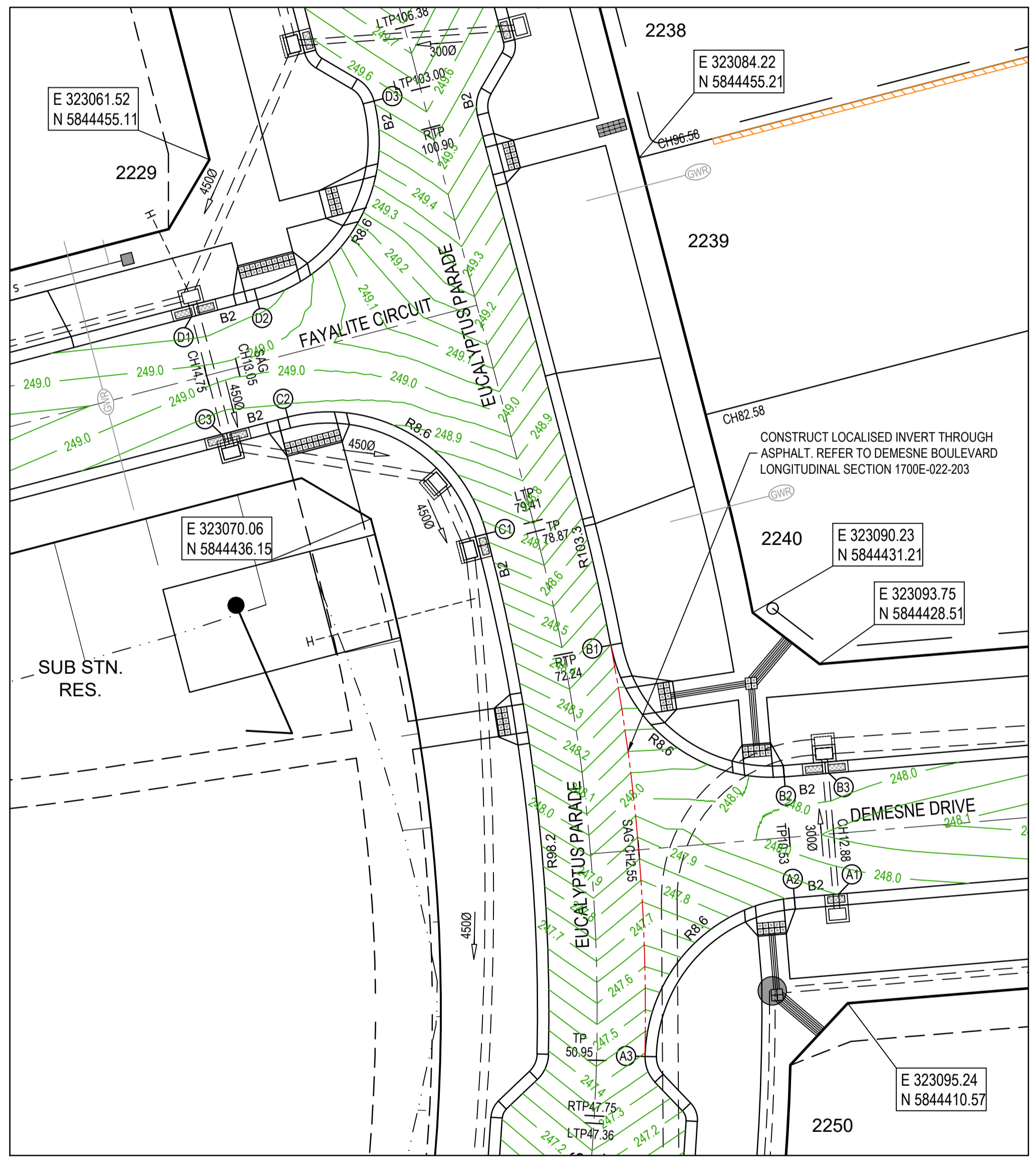
Olivine Estate - Stage 22  
 Whittlesea City Council  
 Road and Drainage  
 Signage & Linemarking Plan

MELWAYS REF 367 G11	PROJECT / DRAWING No. 1700E-022-171	SHEET No. 15 of 43	REVISION 5
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- NOTES**
1. ALL VEHICLE CROSSINGS AND PRAM CROSSINGS TO BE MINIMUM OF 0.75m FROM PITS.
  2. ALL PRAM CROSSINGS TO BE MINIMUM OF 2.0m FROM VEHICLE CROSSINGS.
  3. VEHICLE EXCLUSION MEASURES BETWEEN ROAD RESERVE AND RESERVE TO FORM PART OF THE LANDSCAPE WORKS.

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

	STORMWATER DRAIN, PIT & PROPERTY INLET
	MAIN DRAIN
	SEWER & MAINTENANCE STRUCTURES
	HOUSE DRAIN
	SERVICE CONDUITS
	TACTILE PAVERS
	EXISTING STORMWATER DRAIN
	EXISTING MAIN DRAIN
	EXISTING SEWER & MAINTENANCE STRUCTURES
	EXISTING SERVICE CONDUITS
	EXISTING TACTILE PAVERS
	FUTURE STORMWATER DRAIN
	FUTURE MAIN DRAIN
	FUTURE SEWER & MAINTENANCE STRUCTURES
	FUTURE HOUSE DRAIN
	FUTURE SERVICE CONDUITS
	FUTURE TACTILE PAVERS
	EXISTING RETAINING WALL
	RETAINING WALL
	FUTURE RETAINING WALL
	EDGE STRIP, SUBSOIL DRAIN, 'NO ROAD' SIGN & BARRIER
	PERMANENT SURVEY MARK
	TEMPORARY BENCH MARK
	PROPOSED DRIVEWAY & FOOTPATH



CONSTRUCT LOCALISED INVERT THROUGH ASPHALT. REFER TO DEMESNE BOULEVARD LONGITUDINAL SECTION 1700E-022-203

**AS CONSTRUCTED PLANS**

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Quality Management ISO 9001  
OH&S Management AS/NZS 4500  
Environmental Management ISO 14001

PLAN OF SUB. NO.  
PERMIT REF. NO.

**AS CONSTRUCTED**

SCALE AS SHOWN AT A1

0 2 4 8  
0 0.2 0.4 0.8  
Scale H1:200, V1:20  
0 2 4 8  
Scale 1:200

SCALE AS SHOWN AT A1

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**mirvac**

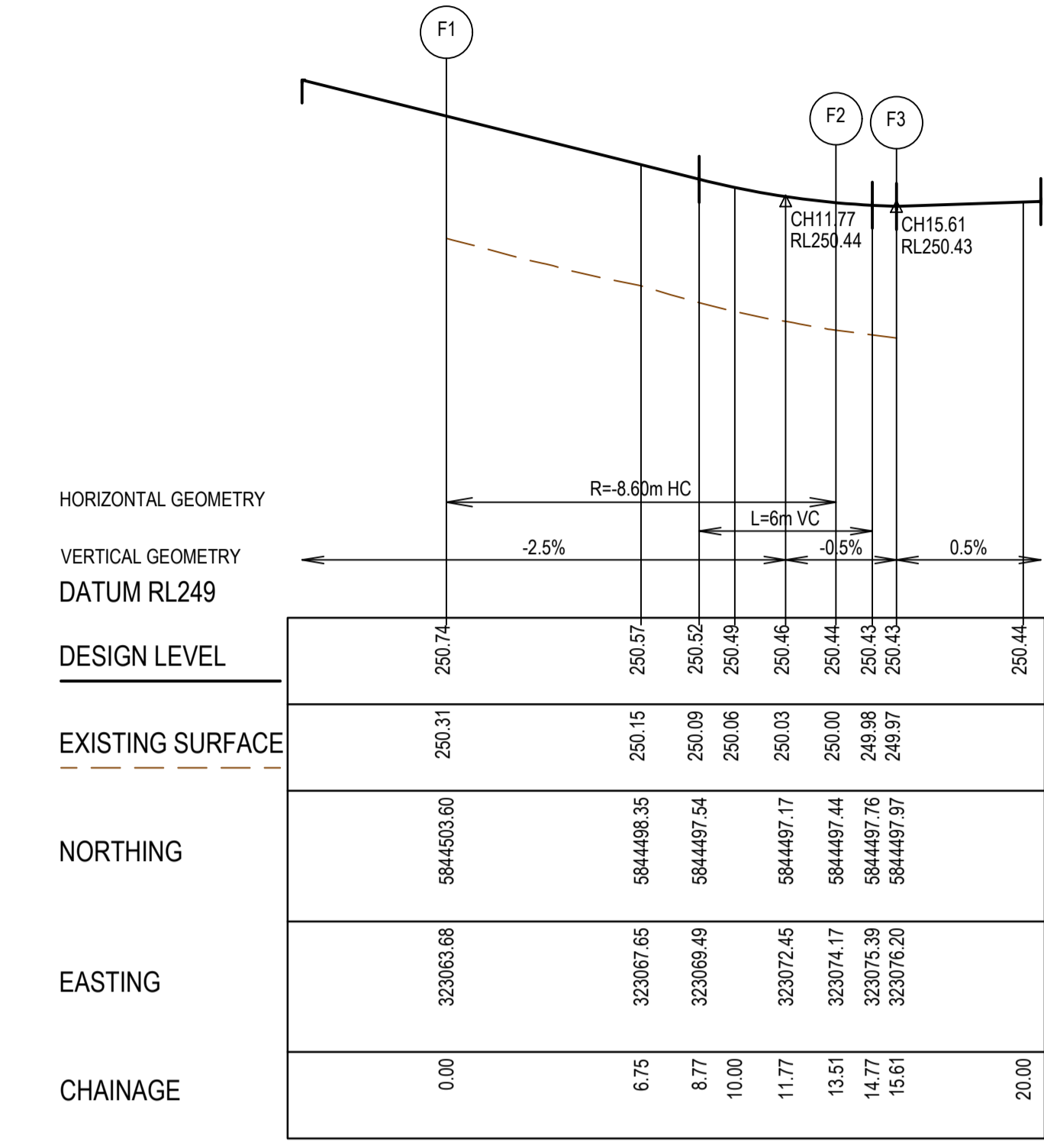
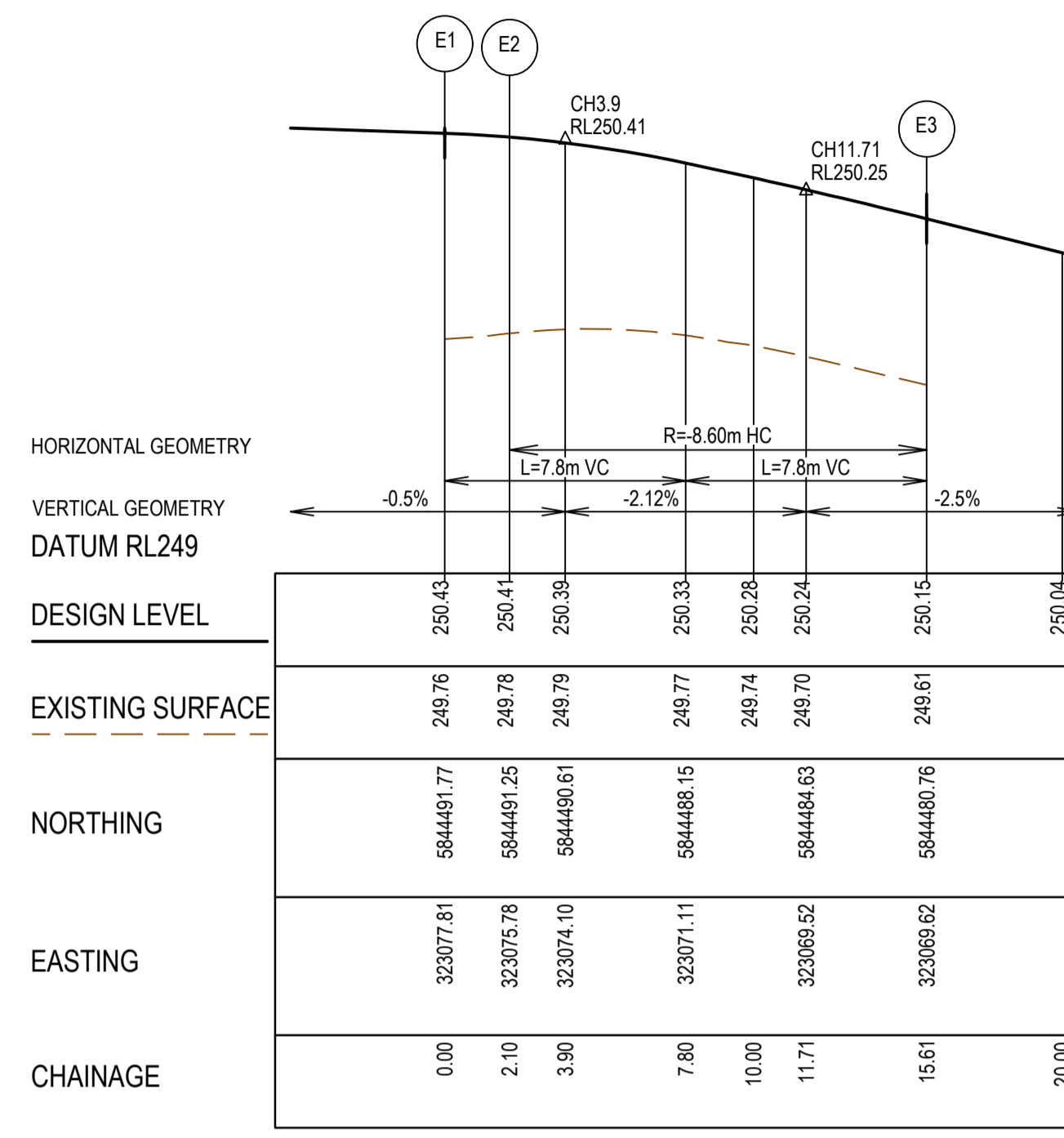
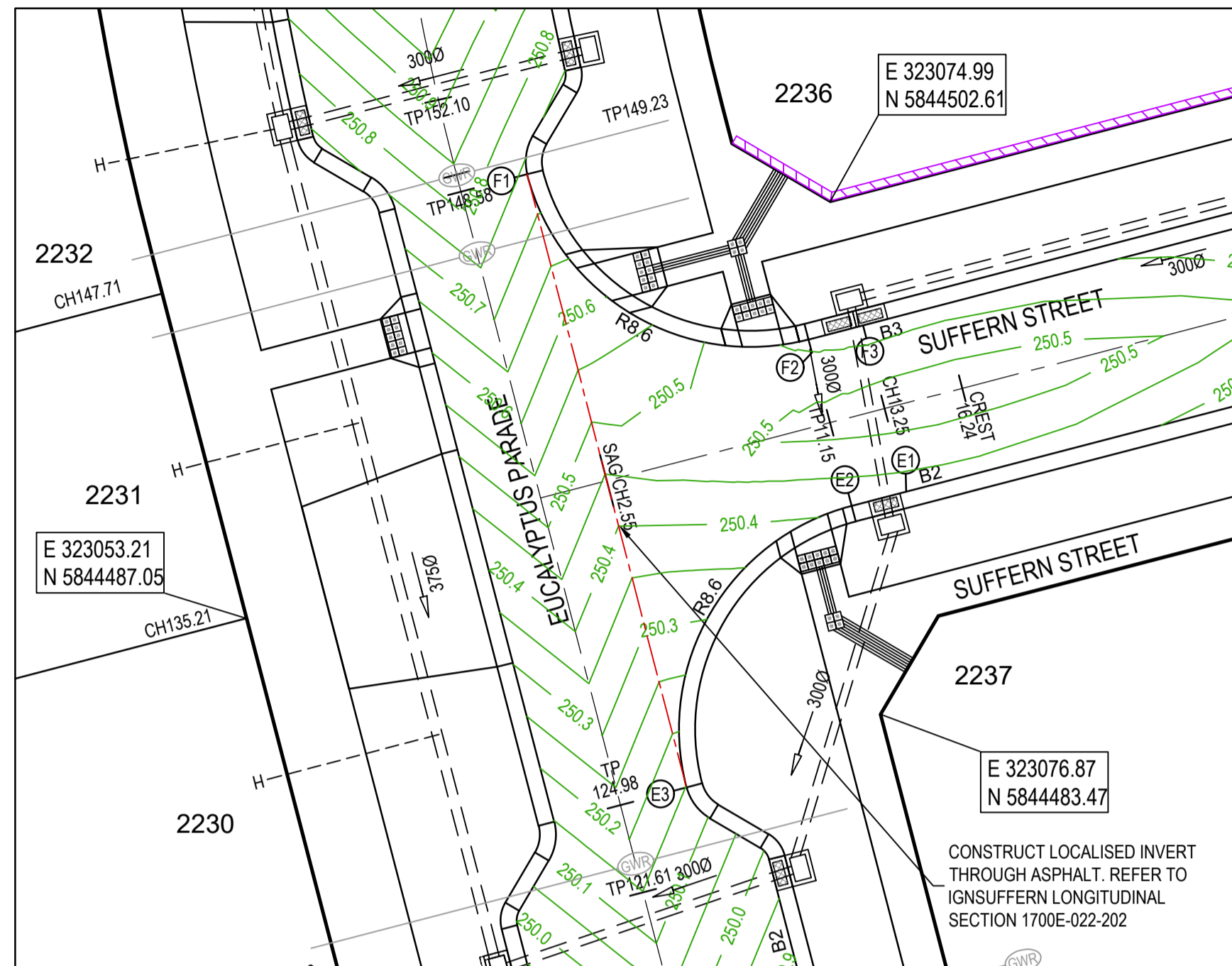
Olivine Estate - Stage 22  
Whittlesea City Council  
Road and Drainage  
Intersection Detail plan - 1

MELBOURNE REF: 367 G11  
PROJECT / DRAWING No: 1700E-022-181

SHEET No: 16 of 43  
REVISION: 4

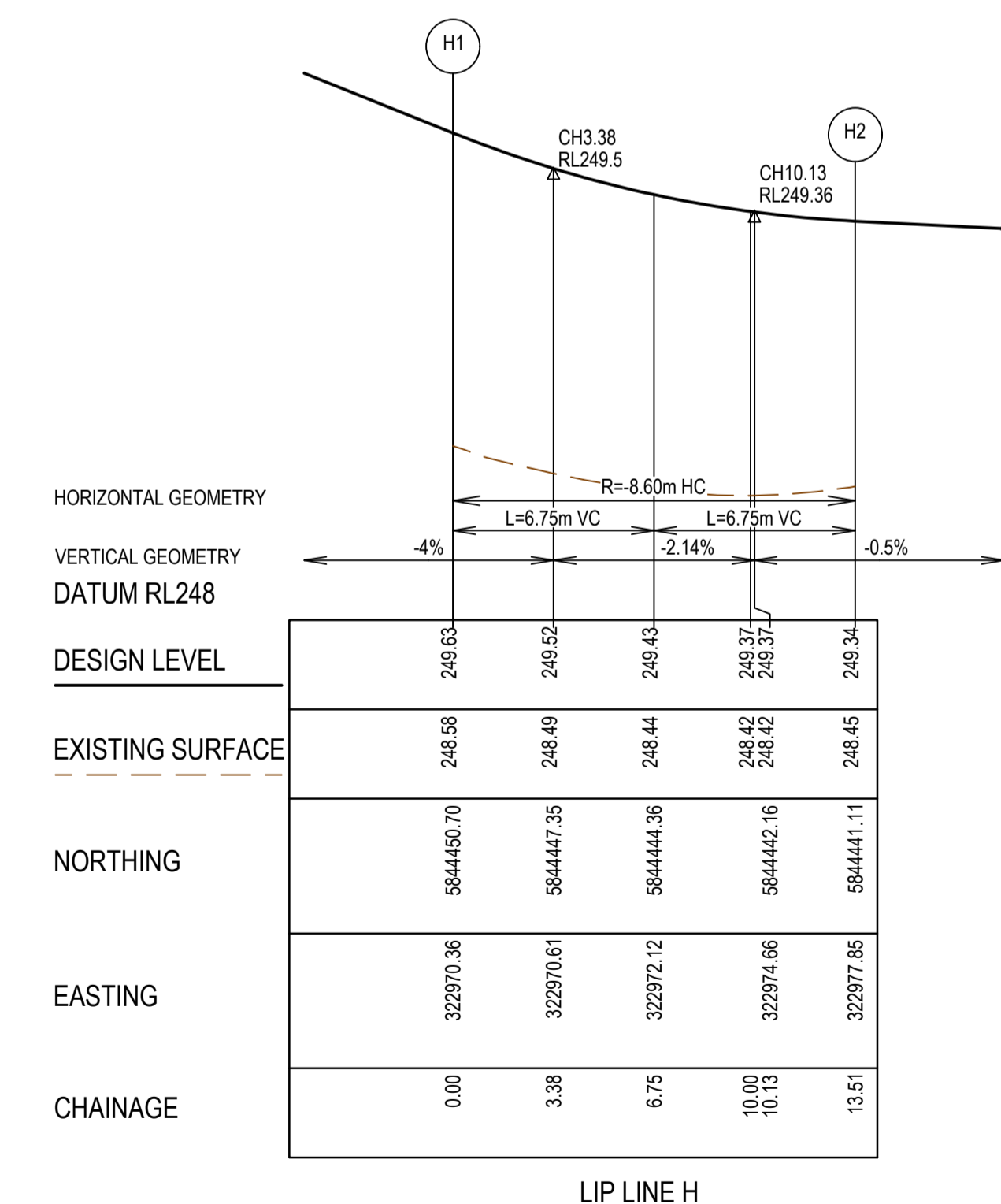
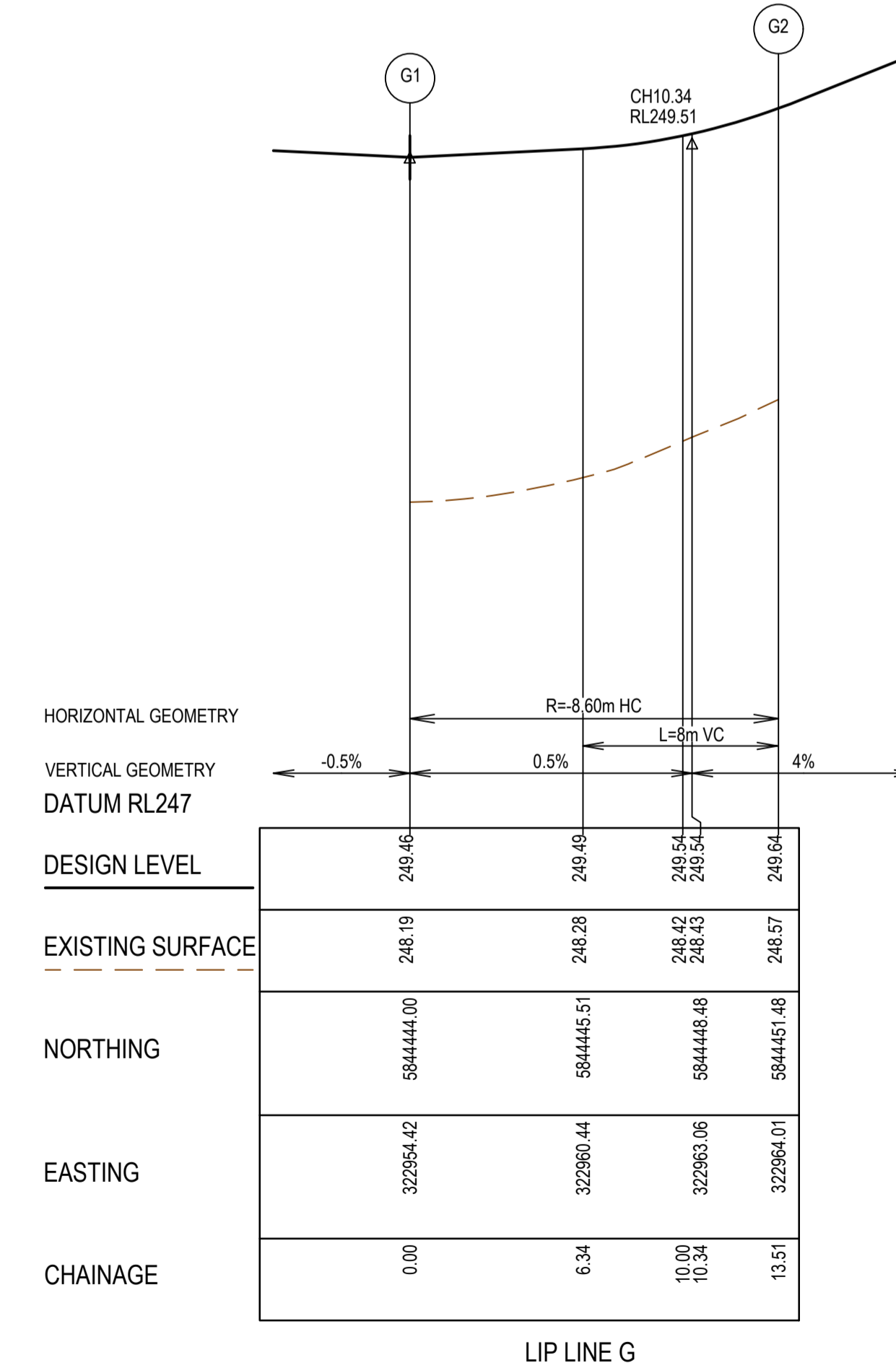
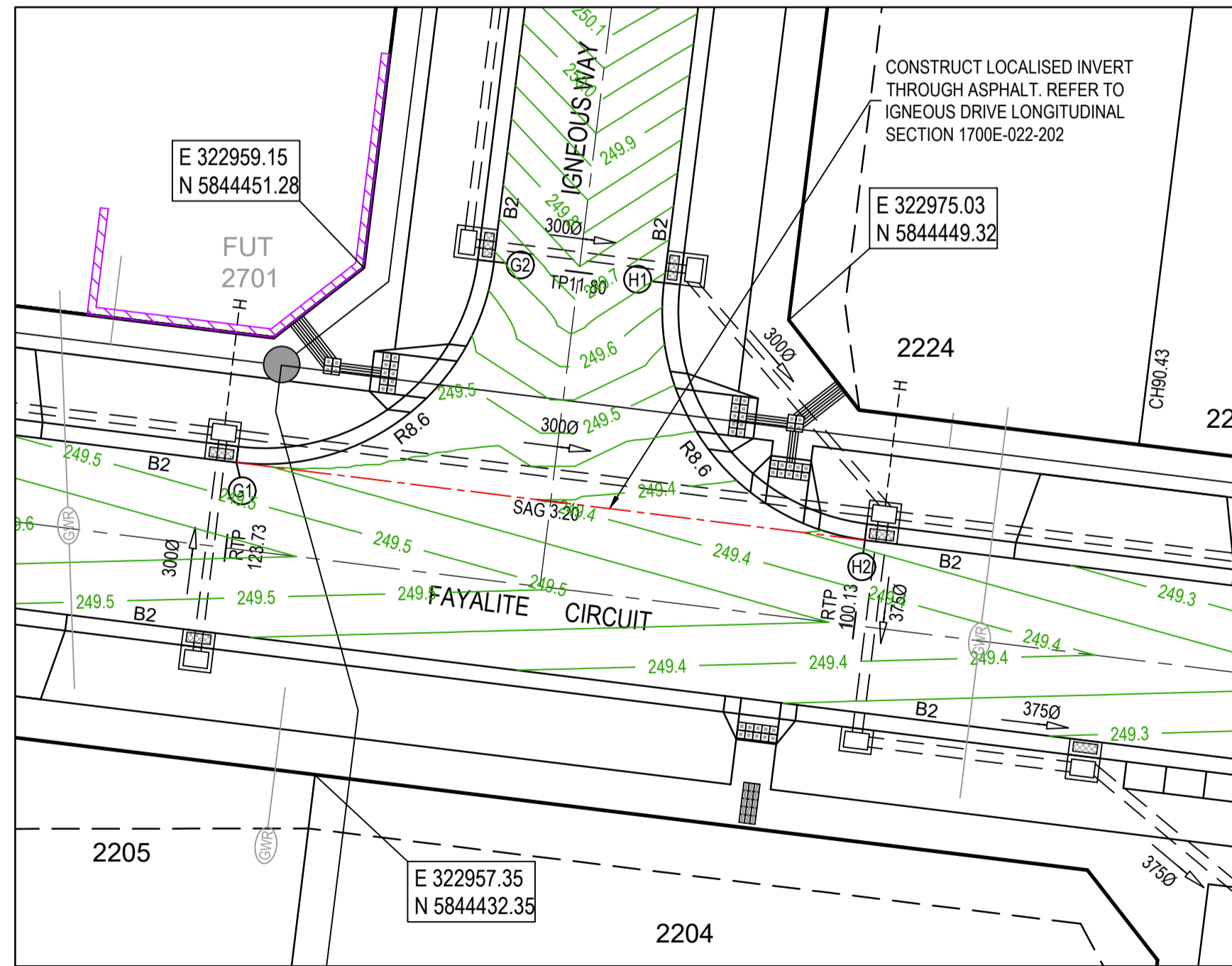


- NOTES**
- ALL VEHICLE CROSSINGS AND PRAM CROSSINGS TO BE MINIMUM OF 0.75m FROM PITS.
  - ALL PRAM CROSSINGS TO BE MINIMUM OF 2.0m FROM VEHICLE CROSSINGS.
  - VEHICLE EXCLUSION MEASURES BETWEEN ROAD RESERVE AND RESERVE TO FORM PART OF THE LANDSCAPE WORKS.



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

[Symbol]	STORMWATER DRAIN, PIT & PROPERTY INLET
[Symbol]	MAIN DRAIN
[Symbol]	SEWER & MAINTENANCE STRUCTURES
[Symbol]	HOUSE DRAIN
[Symbol]	SERVICE CONDUITS
[Symbol]	TACTILE PAVERS
[Symbol]	EXISTING STORMWATER DRAIN
[Symbol]	EXISTING MAIN DRAIN
[Symbol]	EXISTING SEWER & MAINTENANCE STRUCTURES
[Symbol]	EXISTING SERVICE CONDUITS
[Symbol]	EXISTING TACTILE PAVERS
[Symbol]	FUTURE STORMWATER DRAIN
[Symbol]	FUTURE MAIN DRAIN
[Symbol]	FUTURE SEWER & MAINTENANCE STRUCTURES
[Symbol]	FUTURE HOUSE DRAIN
[Symbol]	FUTURE SERVICE CONDUITS
[Symbol]	FUTURE TACTILE PAVERS
[Symbol]	EXISTING RETAINING WALL
[Symbol]	RETAINING WALL
[Symbol]	FUTURE RETAINING WALL
[Symbol]	EDGE STRIP, SUBSOIL DRAIN, 'NO ROAD' SIGN & BARRIER
[Symbol]	PERMANENT SURVEY MARK
[Symbol]	TEMPORARY BENCH MARK
[Symbol]	PROPOSED DRIVEWAY & FOOTPATH



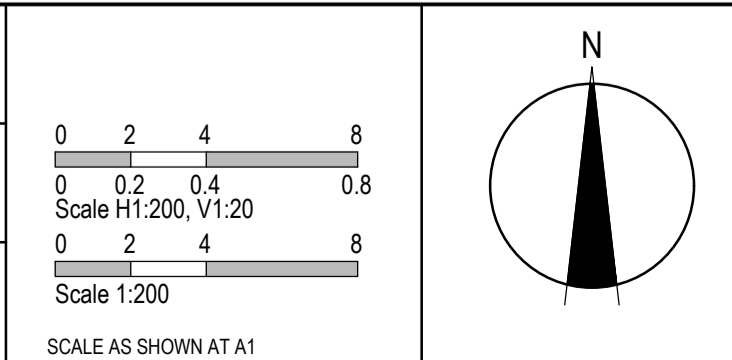
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 OHS Management AS/NZS 4500  
 Environmental Management ISO 14001

PLAN OF SUB. NO.  
 PERMIT REF. NO.

**AS CONSTRUCTED**



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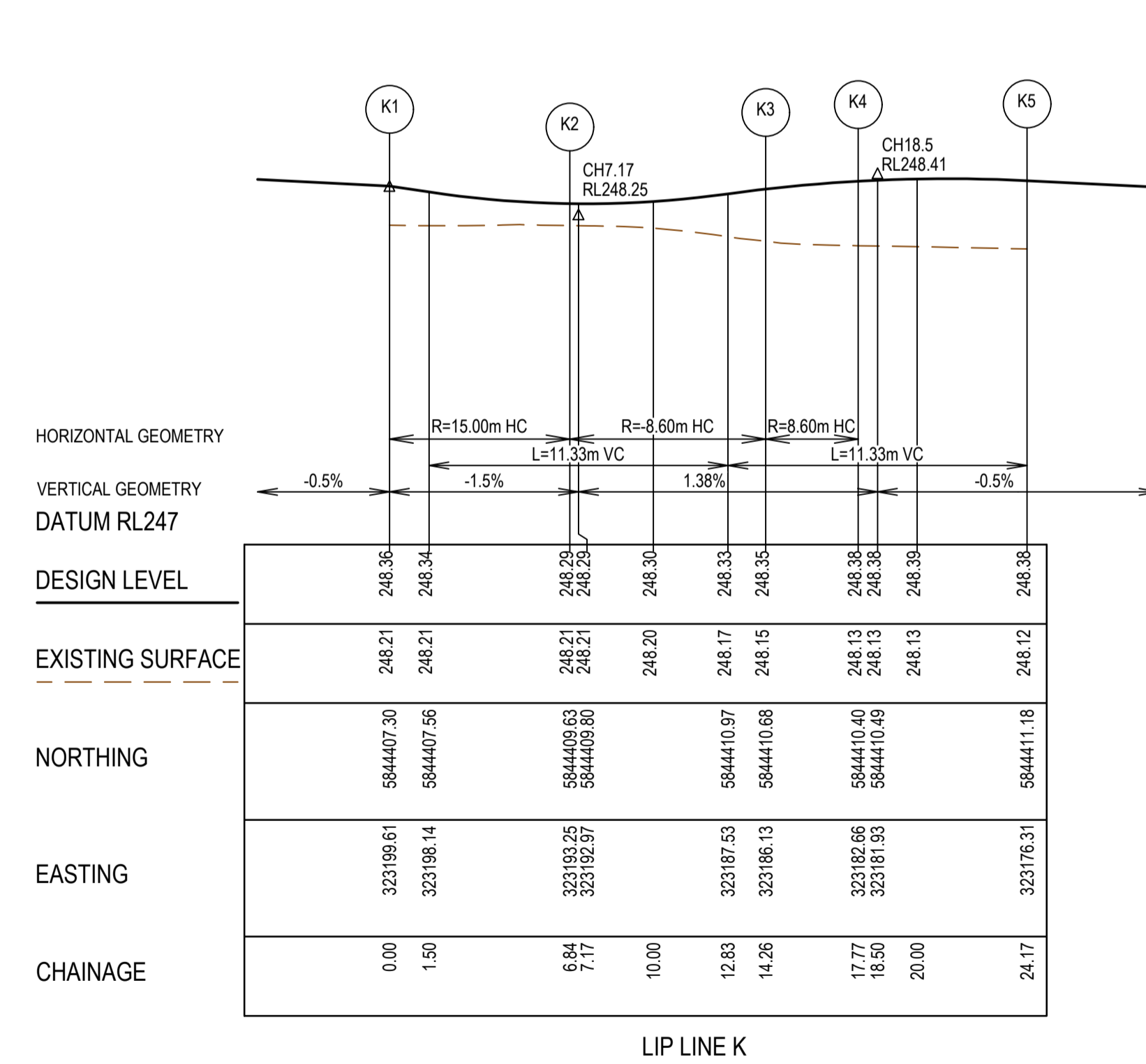
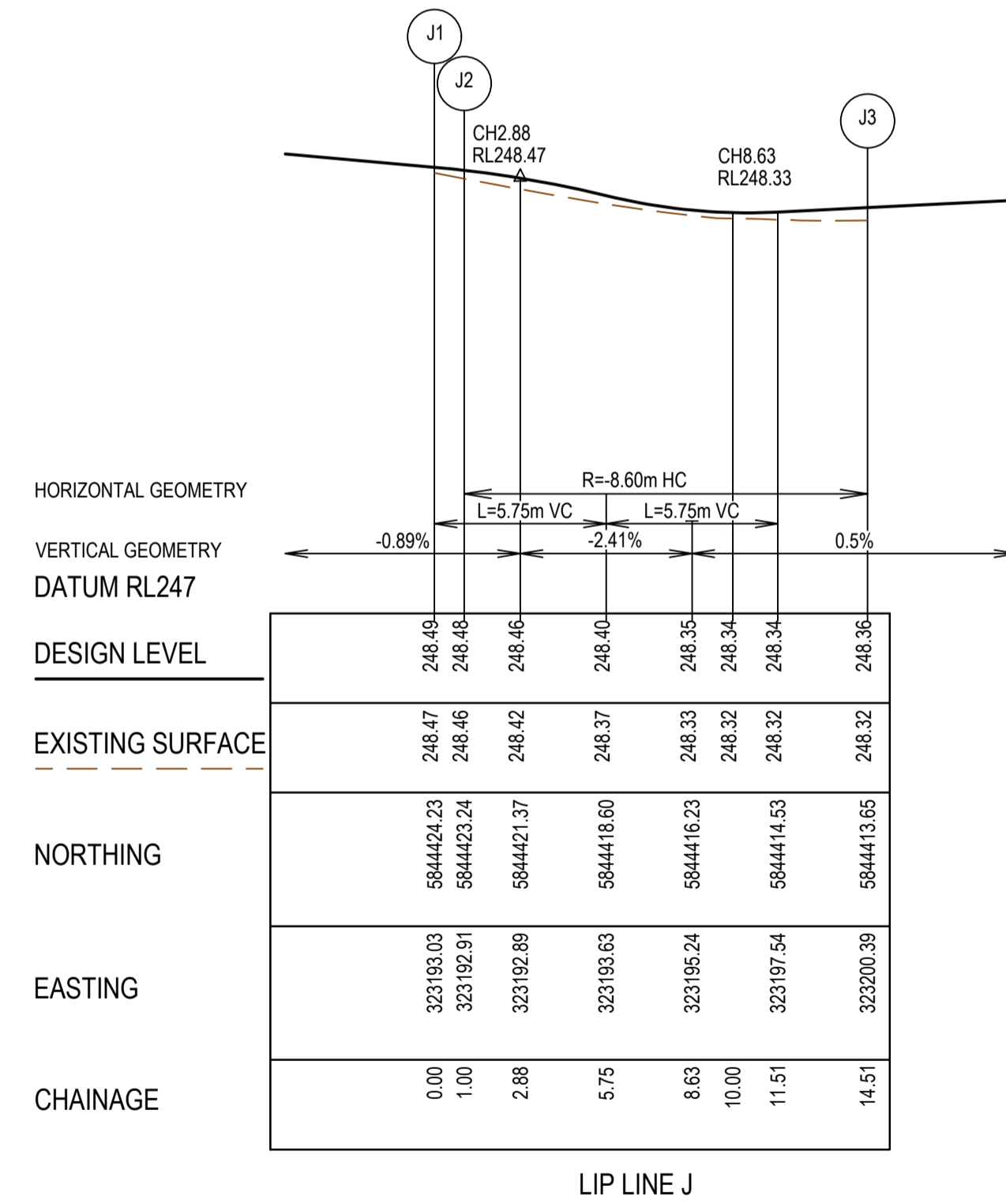
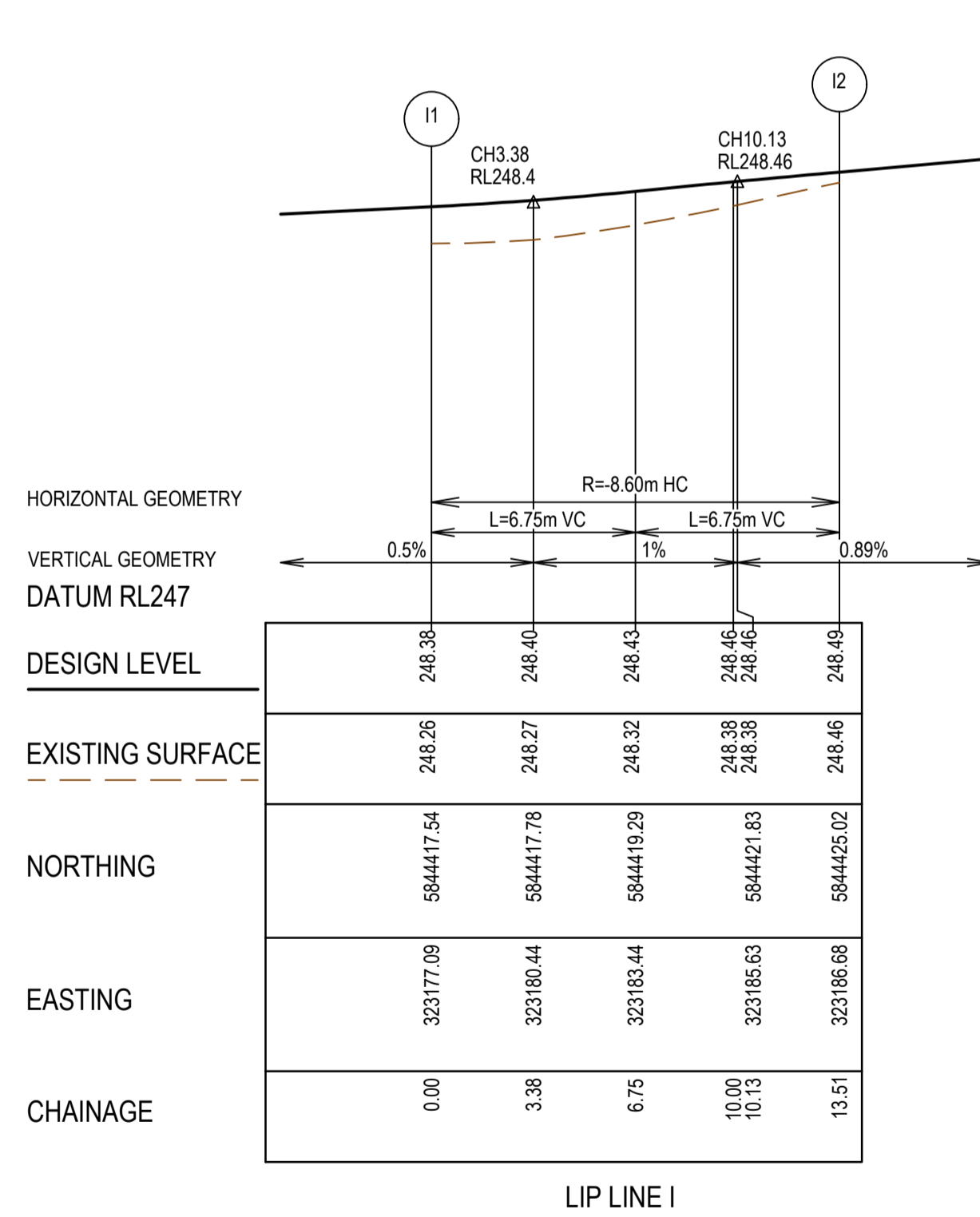
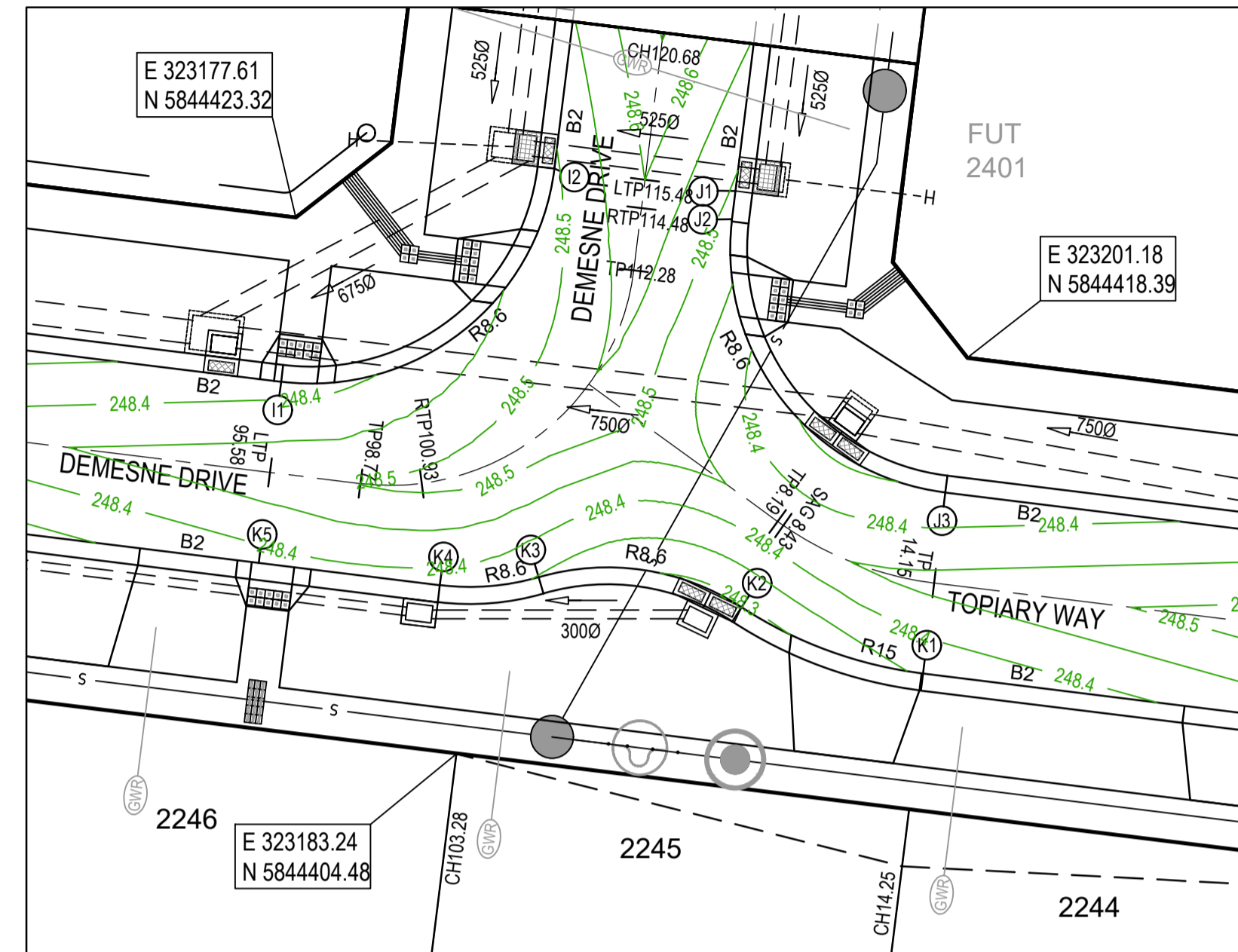
Olivine Estate - Stage 22  
 Whittlesea City Council  
 Road and Drainage  
 Intersection Detail plan - 2

MELWAYS REF: 367 G11  
 PROJECT / DRAWING No: 1700E-022-182  
 SHEET No: 17 of 43  
 REVISION: 3

- NOTES**
- ALL VEHICLE CROSSINGS AND PRAM CROSSINGS TO BE MINIMUM OF 0.75m FROM PITS.
  - ALL PRAM CROSSINGS TO BE MINIMUM OF 2.0m FROM VEHICLE CROSSINGS.
  - VEHICLE EXCLUSION MEASURES BETWEEN ROAD RESERVE AND RESERVE TO FORM PART OF THE LANDSCAPE WORKS.

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

	STORMWATER DRAIN, PIT & PROPERTY INLET
	MAIN DRAIN
	SEWER & MAINTENANCE STRUCTURES
	HOUSE DRAIN
	SERVICE CONDUITS
	TACTILE PAVERS
	EXISTING STORMWATER DRAIN
	EXISTING MAIN DRAIN
	EXISTING SEWER & MAINTENANCE STRUCTURES
	EXISTING SERVICE CONDUITS
	EXISTING TACTILE PAVERS
	FUTURE STORMWATER DRAIN
	FUTURE MAIN DRAIN
	FUTURE SEWER & MAINTENANCE STRUCTURES
	FUTURE HOUSE DRAIN
	FUTURE SERVICE CONDUITS
	FUTURE TACTILE PAVERS
	EXISTING RETAINING WALL
	RETAINING WALL
	FUTURE RETAINING WALL
	EDGE STRIP, SUBSOIL DRAIN, 'NO ROAD' SIGN & BARRIER
	PERMANENT SURVEY MARK
	TEMPORARY BENCH MARK
	PROPOSED DRIVEWAY & FOOTPATH



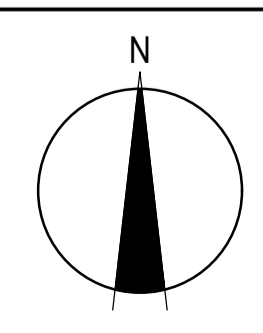
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**AS CONSTRUCTED**

PLAN OF SUB. NO.	
PERMIT REF. NO.	
Scale 1:200	
Scale AS SHOWN AT 1	



Olivine Estate - Stage 22  
Whittlesea City Council  
Road and Drainage  
Intersection Detail plan - 3

MELWAYS REF	PROJECT / DRAWING No	SHEET No	REVISION
367 G11	1700E-022-183	18 of 43	2

- NOTES**
1. ALL VEHICLE CROSSINGS AND PRAM CROSSINGS TO BE MINIMUM OF 0.75m FROM PITS.
  2. ALL PRAM CROSSINGS TO BE MINIMUM OF 2.0m FROM VEHICLE CROSSINGS.
  3. VEHICLE EXCLUSION MEASURES BETWEEN ROAD RESERVE AND RESERVE TO FORM PART OF THE LANDSCAPE WORKS.

**ALIGNMENT BB**

Point no	Easting	Northing	RL
BB1	323076.083	5844363.699	245.811
BB2	323075.749	5844363.438	245.794
BB3	323075.431	5844360.858	245.737
BB4	323075.953	5844360.189	245.743
BB5	323077.243	5844360.030	245.742
BB6	323077.912	5844360.552	245.737
BB7	323078.227	5844363.139	245.794
BB8	323077.965	5844363.467	245.811

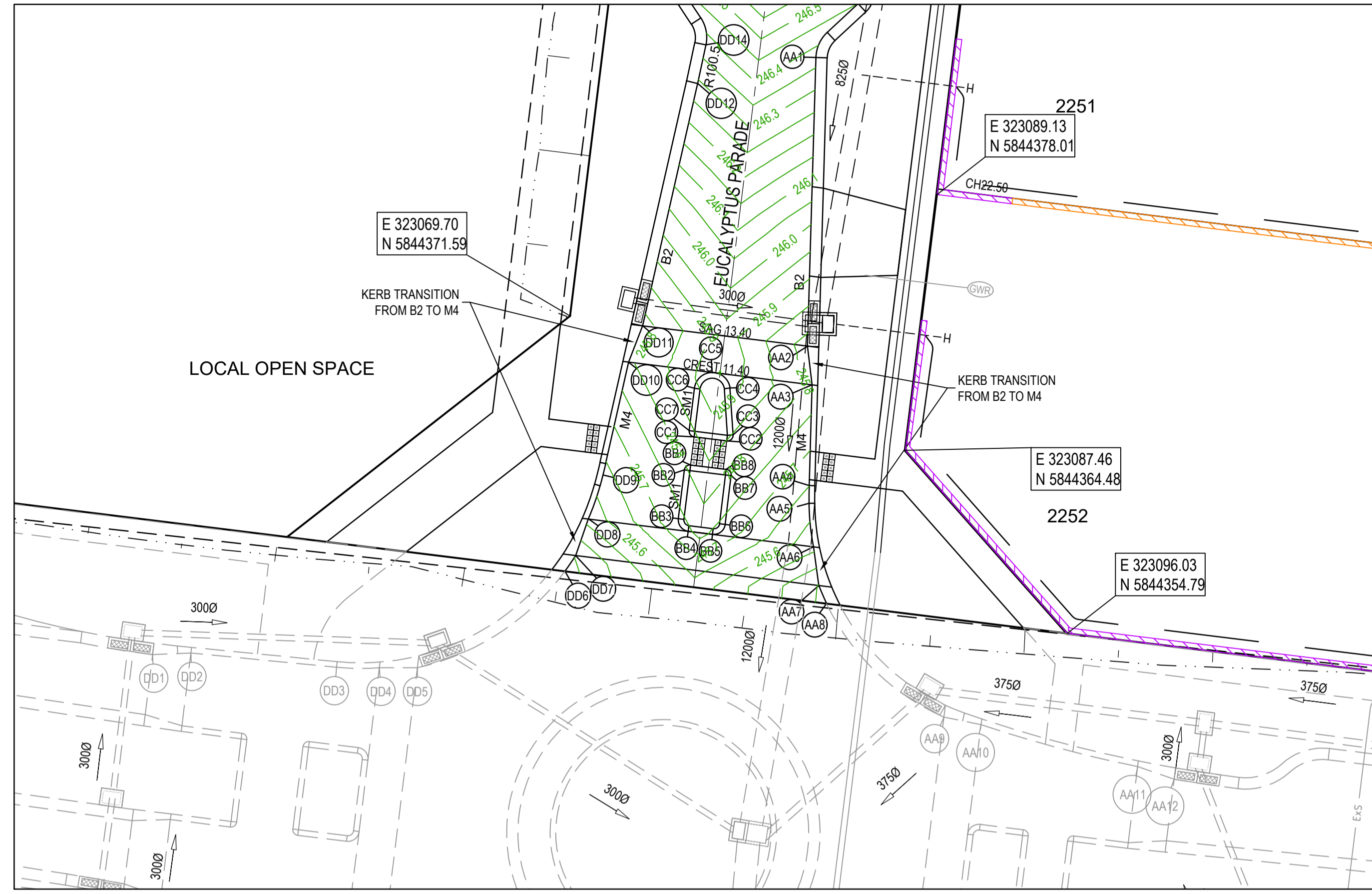
Curve no	I	Radius	Arc	A	B	X	Y	I	Mid point RL
BB1 - BB2	90.000	0.300	0.471	0.088	0.065	0.115	0.097	0.118	245.802
BB3 - BB4	90.000	0.600	0.942	0.176	0.130	0.230	0.195	0.236	245.734
BB5 - BB6	90.000	0.600	0.942	0.176	0.130	0.230	0.195	0.236	245.734
BB7 - BB8	88.856	0.300	0.465	0.086	0.063	0.113	0.097	0.116	245.802

**ALIGNMENT CC**

Point no	Easting	Northing	RL
CC1	323076.267	5844365.188	245.844
CC2	323077.996	5844364.975	245.849
CC3	323078.332	5844365.274	245.847
CC4	323078.167	5844367.761	245.916
CC5	323077.222	5844368.589	245.936
CC6	323076.282	5844367.755	245.890
CC7	323076.006	5844365.522	245.840

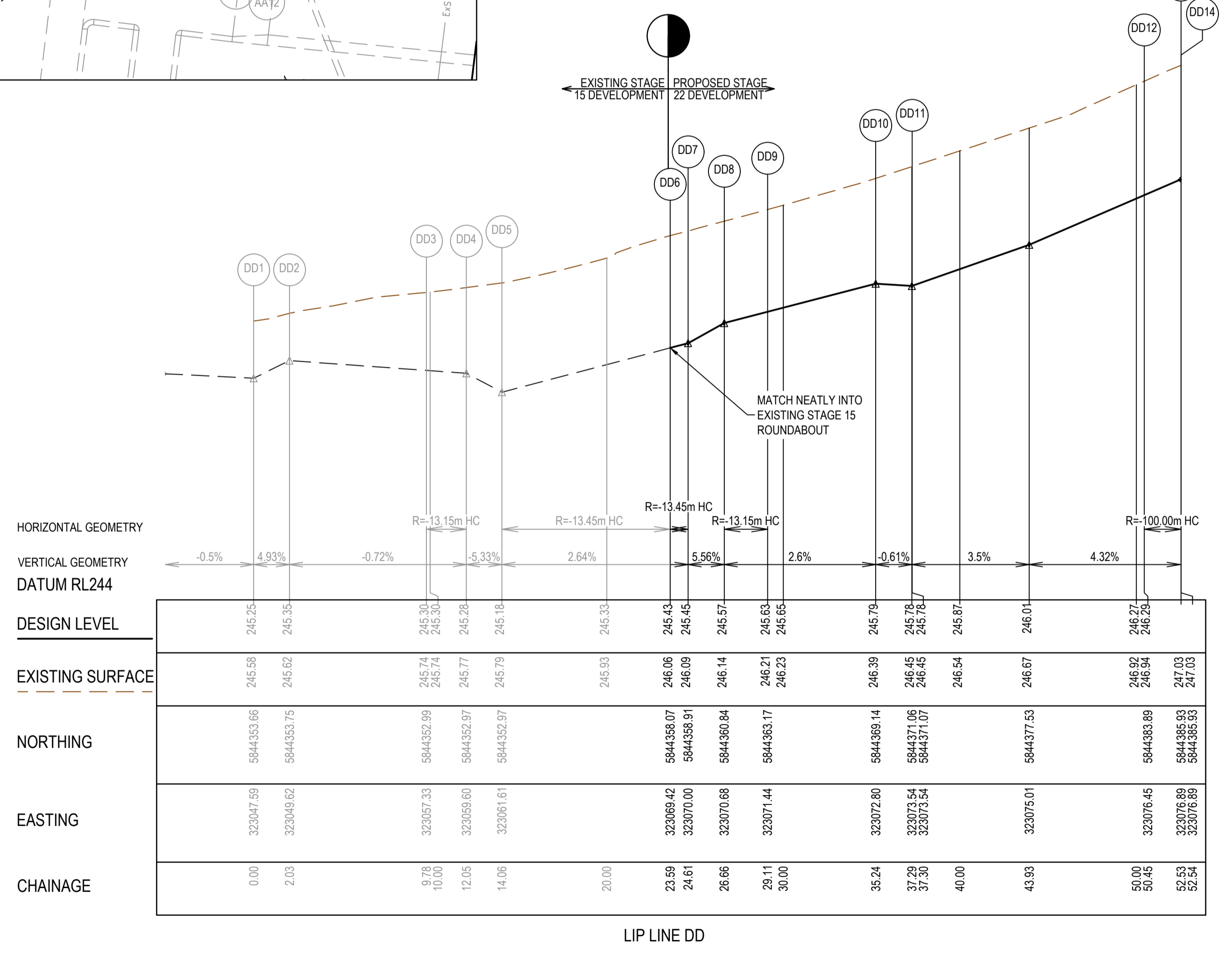
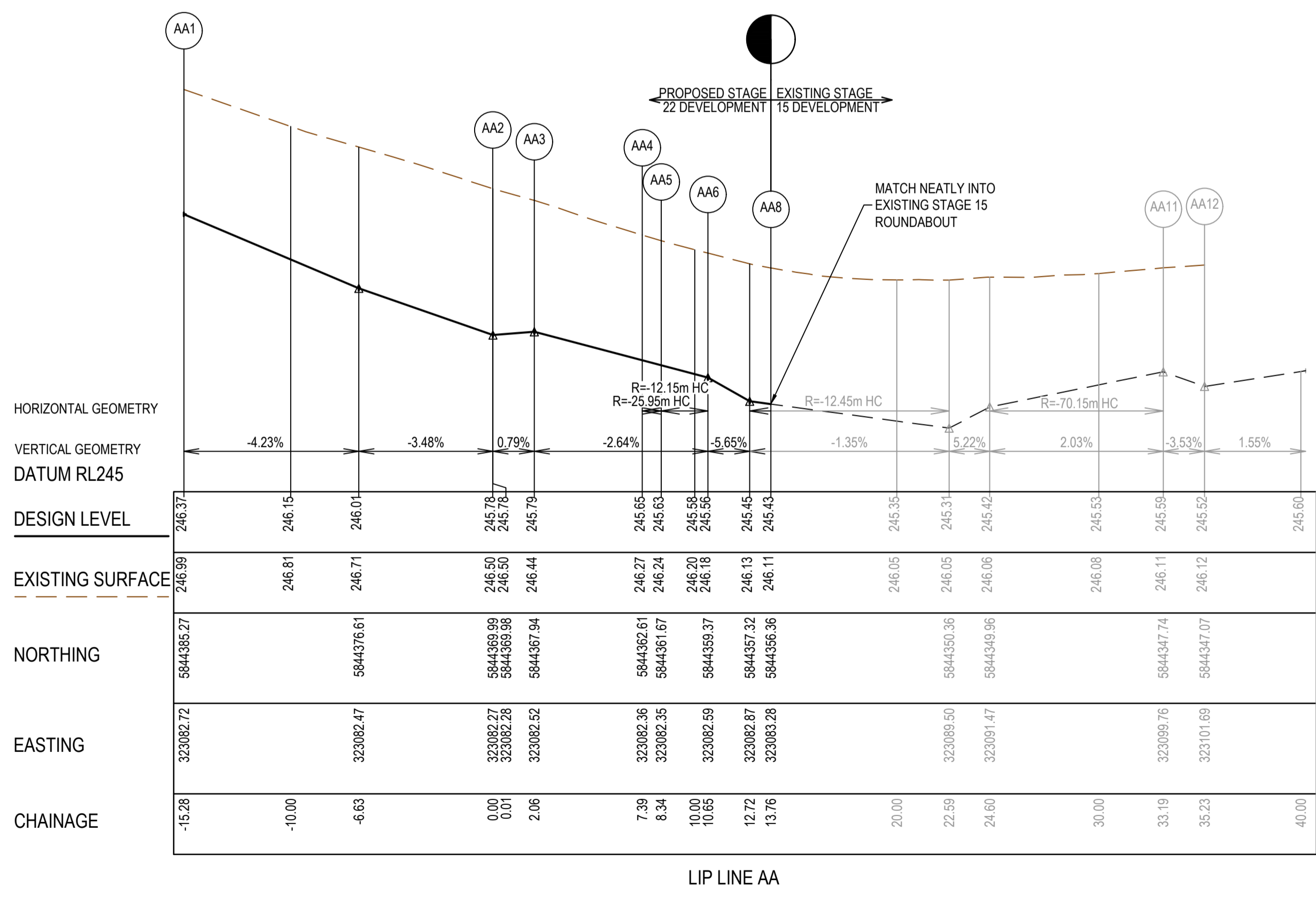
  

Curve no	I	Radius	Arc	A	B	X	Y	I	Mid point RL
CC2 - CC3	97.271	0.300	0.509	0.102	0.075	0.124	0.102	0.127	245.844
CC4 - CC5	82.791	0.950	1.373	0.237	0.176	0.336	0.292	0.343	245.940
CC5 - CC6	82.791	0.950	1.373	0.237	0.176	0.336	0.292	0.343	245.910
CC7 - CC1	90.000	0.300	0.471	0.088	0.065	0.115	0.097	0.118	245.839



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

	STORMWATER DRAIN, PIT & PROPERTY INLET
	MAIN DRAIN
	SEWER & MAINTENANCE STRUCTURES
	HOUSE DRAIN
	SERVICE CONDUITS
	TACTILE PAVERS
	EXISTING STORMWATER DRAIN
	EXISTING MAIN DRAIN
	EXISTING SEWER & MAINTENANCE STRUCTURES
	EXISTING SERVICE CONDUITS
	EXISTING TACTILE PAVERS
	FUTURE STORMWATER DRAIN
	FUTURE MAIN DRAIN
	FUTURE SEWER & MAINTENANCE STRUCTURES
	FUTURE HOUSE DRAIN
	FUTURE SERVICE CONDUITS
	FUTURE TACTILE PAVERS
	EXISTING RETAINING WALL
	RETAINING WALL
	FUTURE RETAINING WALL
	EDGE STRIP, SUBSOIL DRAIN, 'NO ROAD' SIGN & BARRIER
	PERMANENT SURVEY MARK
	TEMPORARY BENCH MARK
	PROPOSED DRIVEWAY & FOOTPATH



**AS CONSTRUCTED PLANS**

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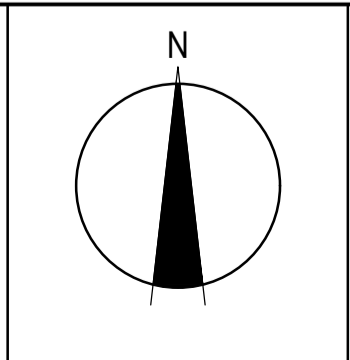
Quality Management - ISO 9001  
 OHS Management - AS/NZS 4500  
 Environmental Management - ISO 14001

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**AS CONSTRUCTED**

PLAN OF SUB. NO.  
 PERMIT REF. NO.

0 2 4 8  
 0 0.2 0.4 0.8  
 Scale H1:200, V1:20  
 0 2 4 8  
 Scale 1:200  
 SCALE AS SHOWN AT A1

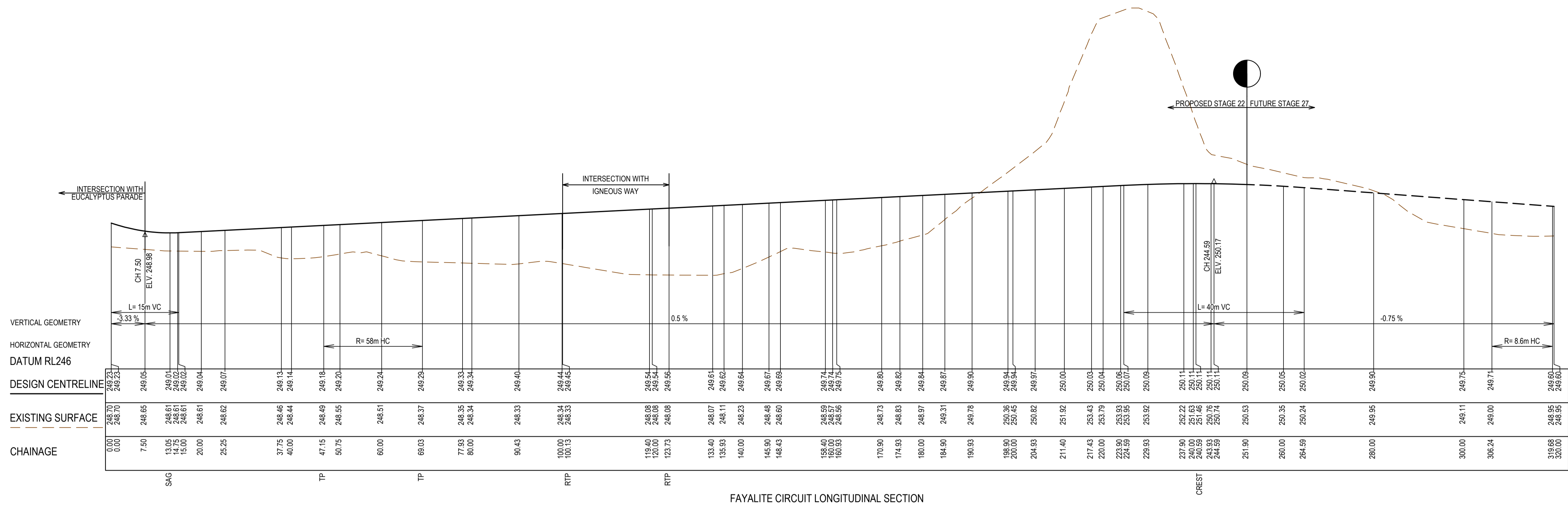


**SMEC**  
 Member of the Surlana Jurong Group  
 ABN 47 065 475 149  
 Collins Square, Tower 4, Level 20, 727 Collins St  
 Melbourne, VIC, 3008, Australia  
 03 9514 1500

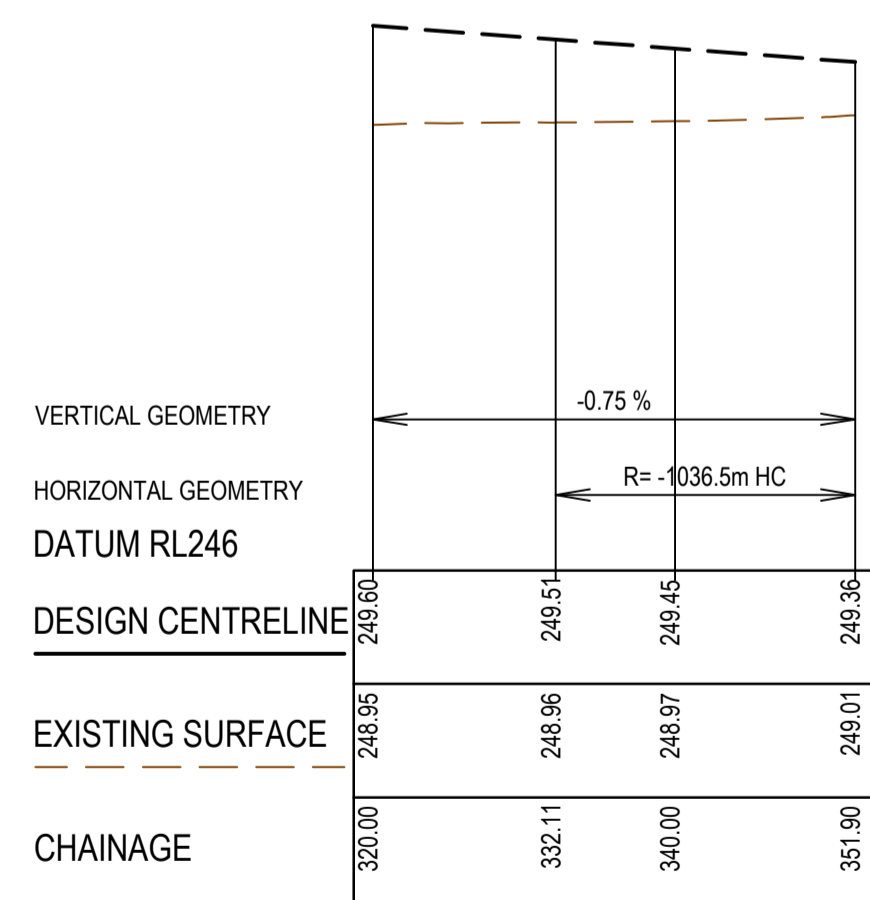
**mirvac**

Olivine Estate - Stage 22  
 Whittlesea City Council  
 Road and Drainage  
 Intersection Detail plan - 4

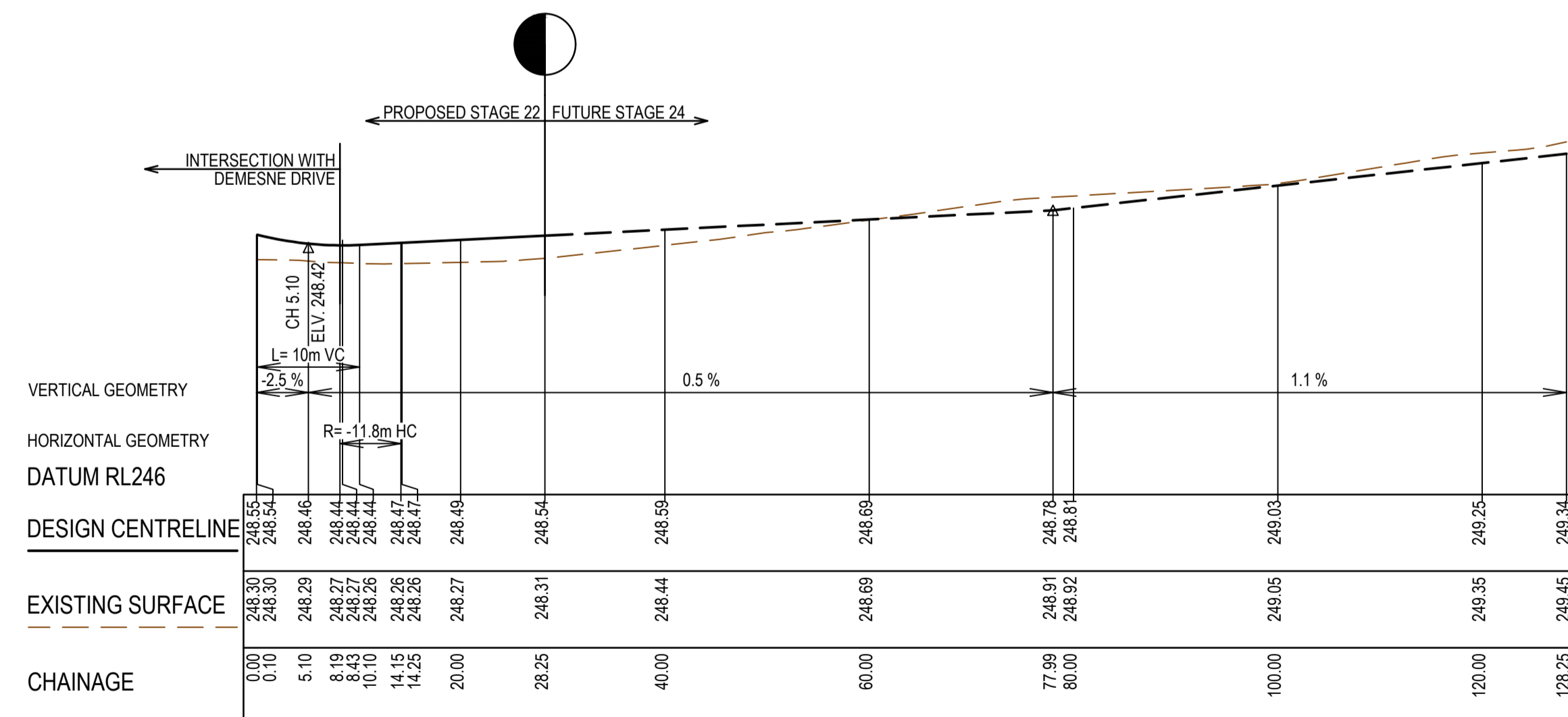
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 PROJECT / DRAWING No: 1700E-022-184  
 SHEET No: 19 of 43  
 REVISION: 1



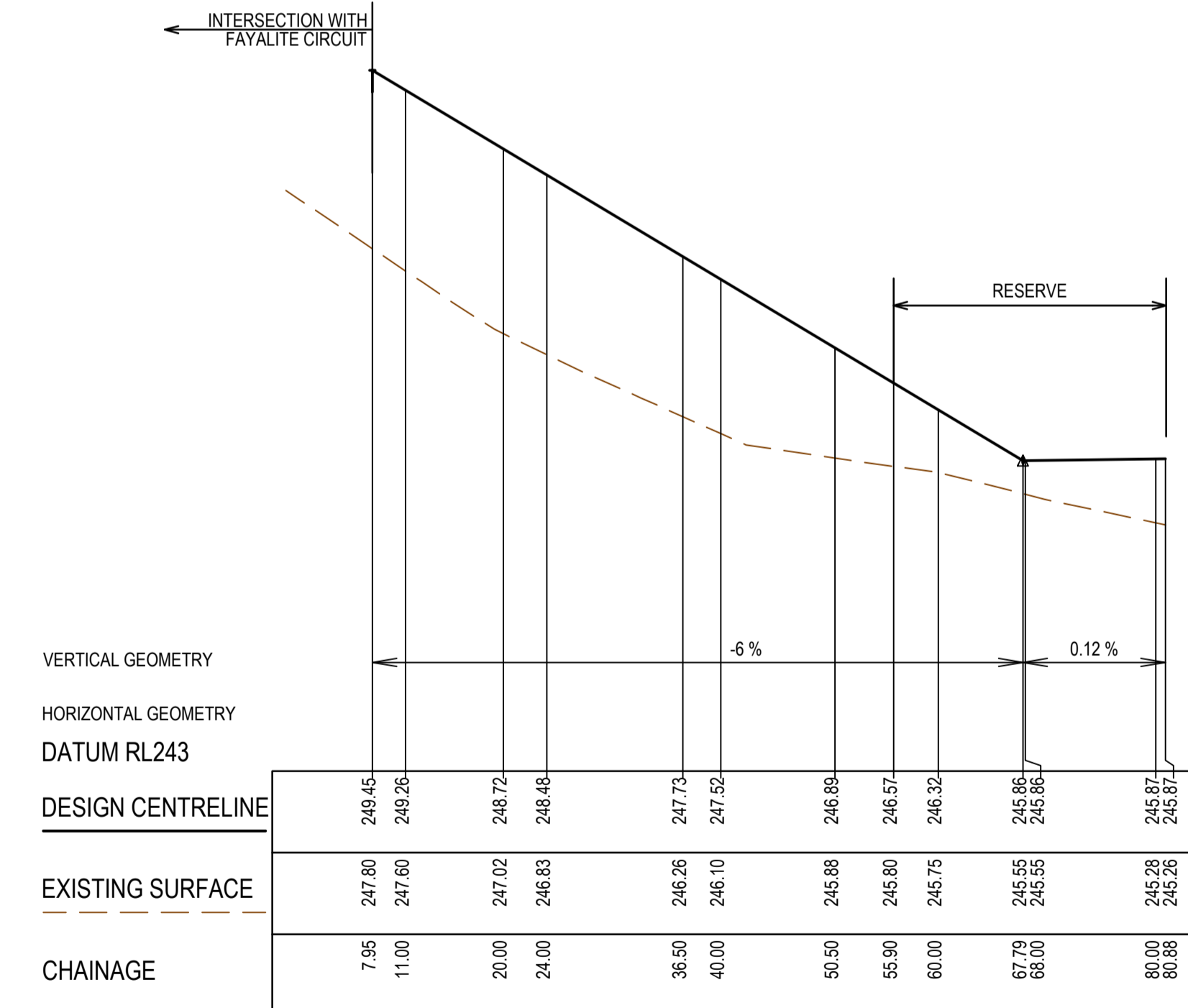
FAYALITE CIRCUIT LONGITUDINAL SECTION



FAYALITE CIRCUIT LONGITUDINAL SECTION



TOPIARY WAY LONGITUDINAL SECTION



ALCOVE LANE LONGITUDINAL SECTION

**AS CONSTRUCTED PLANS**

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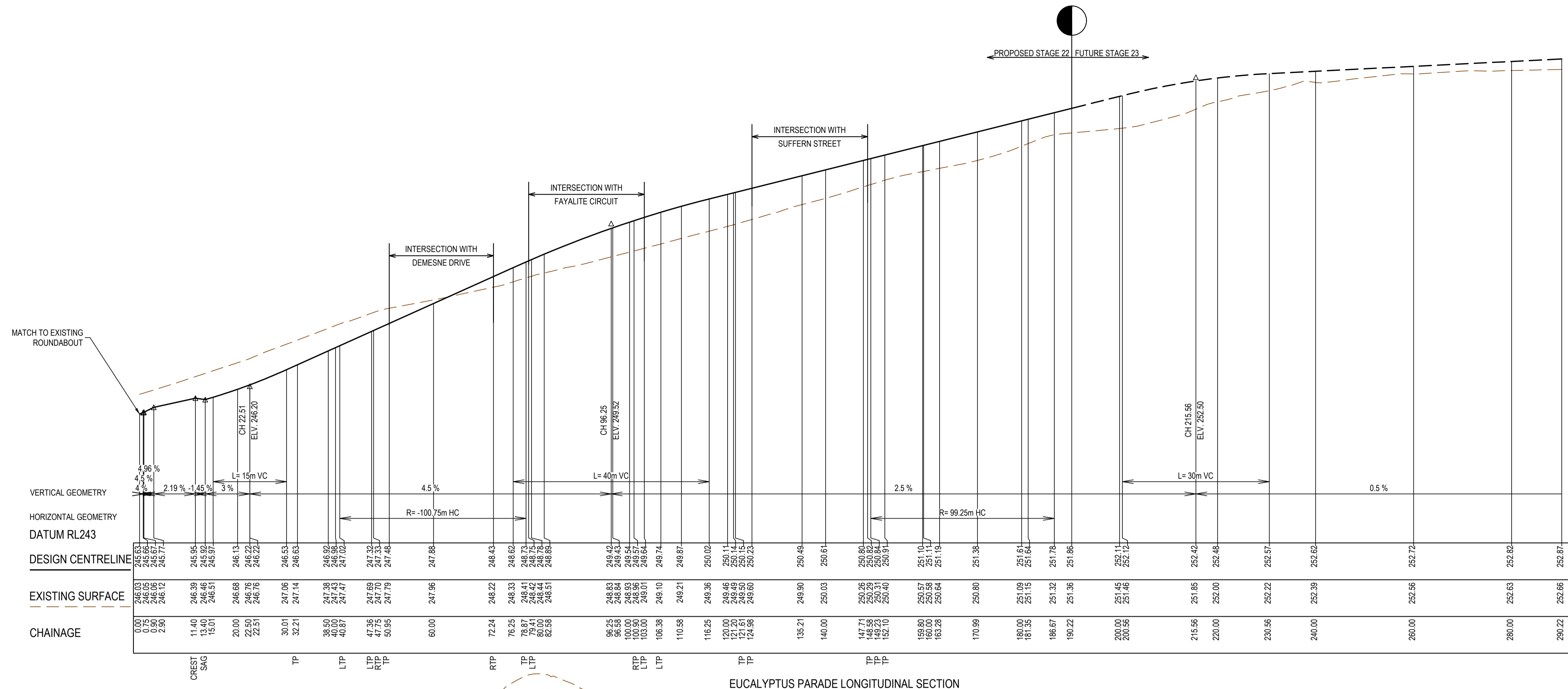
**AS CONSTRUCTED**

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PERMIT REF. NO.  
Scale H1:500, V1:50  
SCALE AS SHOWN AT A1

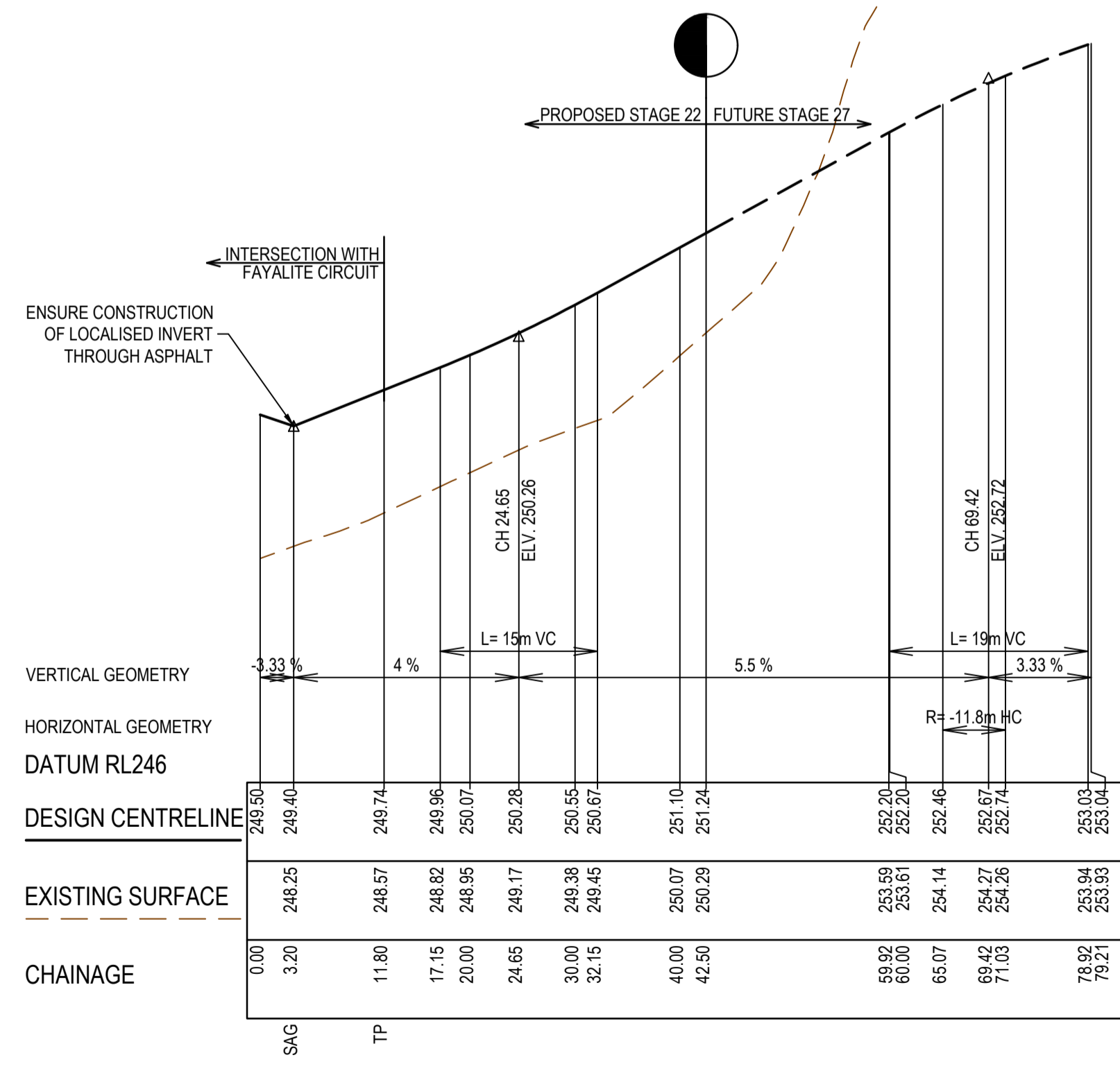


Olivine Estate - Stage 22  
Whittlesea City Council  
Road and Drainage  
Longitudinal Section - 1  
Fayalite Circuit, Topiary Way & Alcove Lane

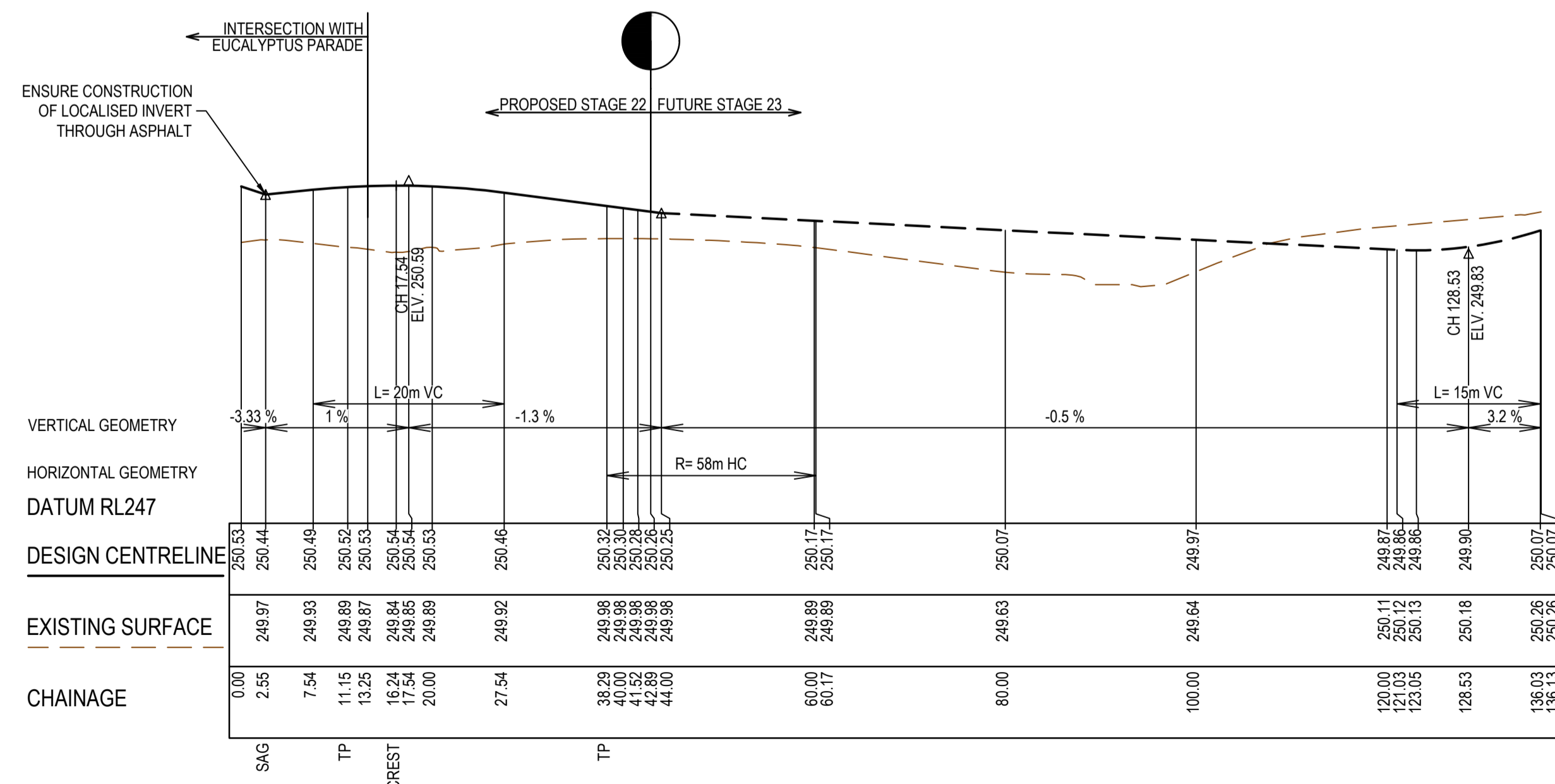
MELWAYS REF: 367 G11  
PROJECT / DRAWING No: 1700E-022-201  
SHEET No: 20 of 43  
REVISION: 3



EUCALYPTUS PARADE LONGITUDINAL SECTION



IGNEOUS WAY LONGITUDINAL SECTION



SUFFERN STREET LONGITUDINAL SECTION

**AS CONSTRUCTED PLANS**

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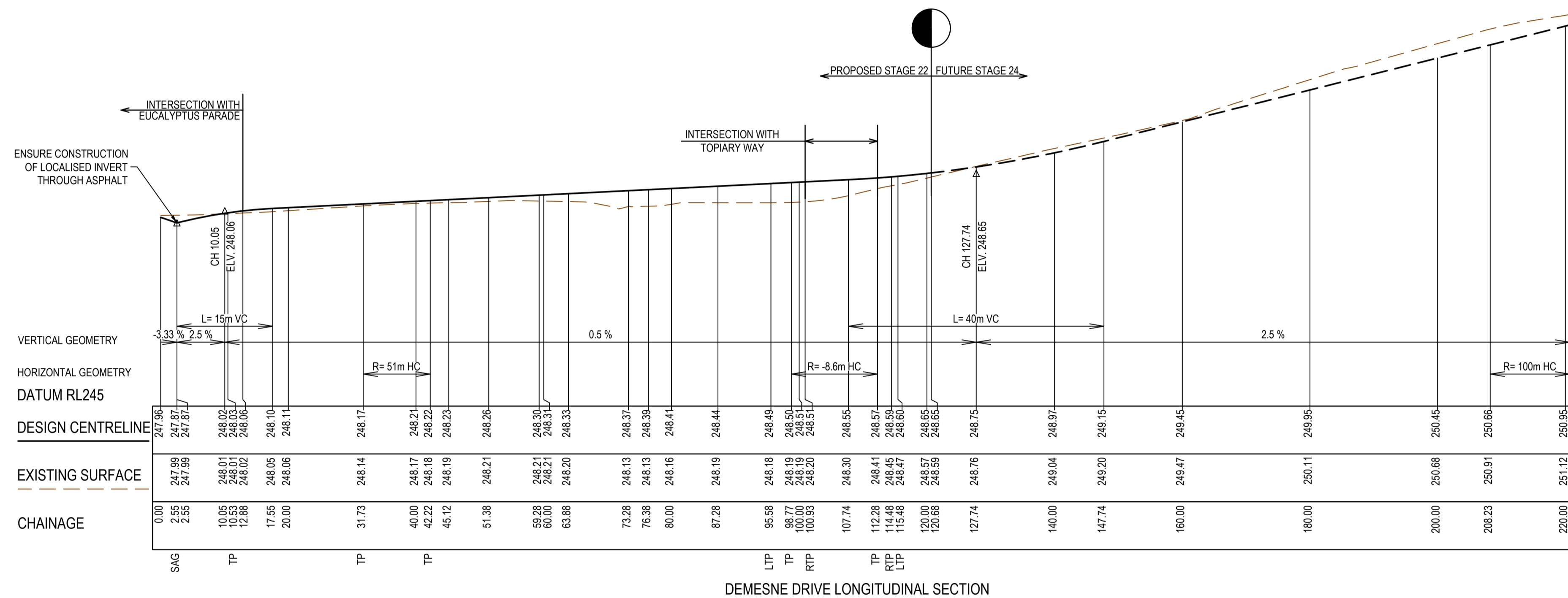
**AS CONSTRUCTED**

PLAN OF SUB. NO.  
PERMIT REF. NO.  
Scale H:1,500, V:1,500  
SCALE AS SHOWN AT A1

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ABN 47 065 475 149  
Collins Square, Tower 4, Level 20, 727 Collins St  
Melbourne, VIC, 3008, Australia  
03 9514 1500

Olivine Estate - Stage 22  
Whittlesea City Council  
Road and Drainage  
Longitudinal Section - 2  
Eucalyptus Parade, Igneous Way & Suffern Street

MELWAYS REF <b>367 G11</b>	PROJECT / DRAWING No. <b>1700E-022-202</b>	SHEET No. <b>21 of 43</b>	REVISION <b>3</b>
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DEMESNE DRIVE LONGITUDINAL SECTION

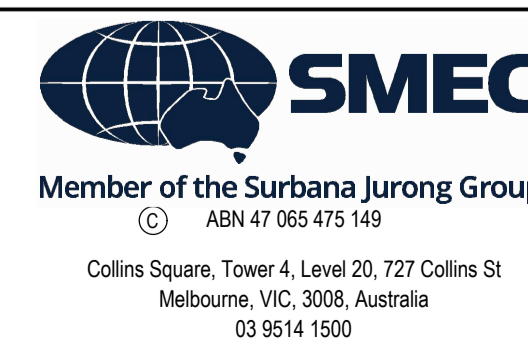
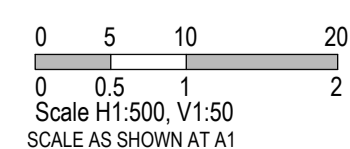
**AS CONSTRUCTED PLANS**

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**AS CONSTRUCTED**

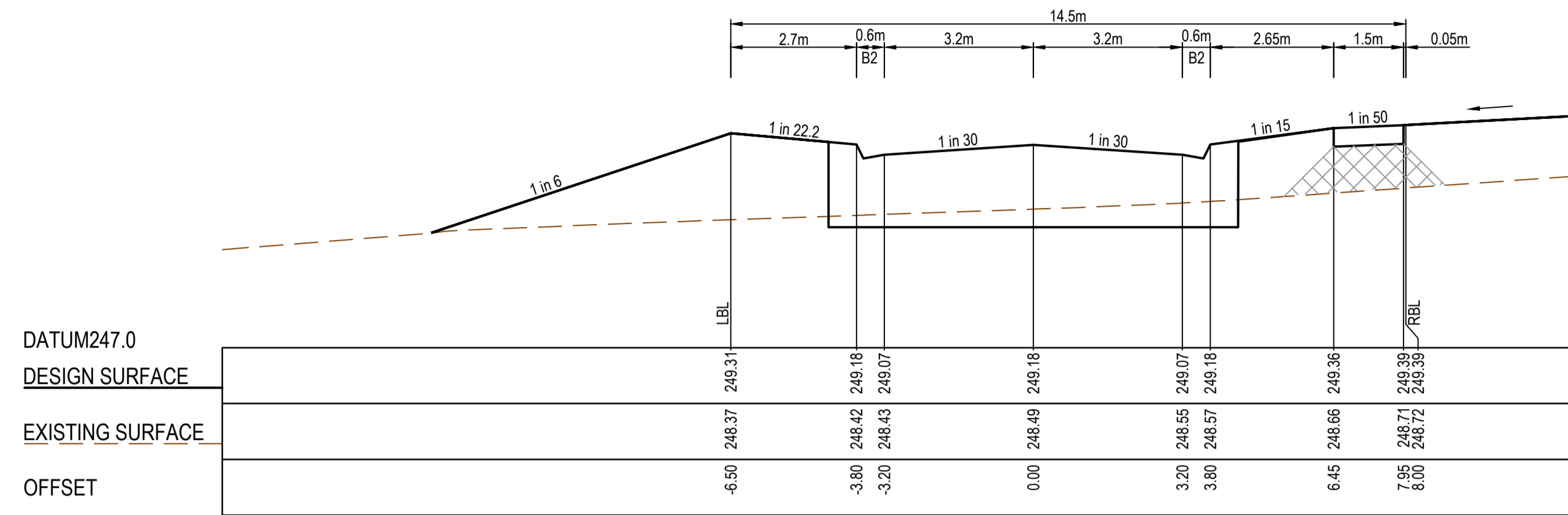
PLAN OF SUB. NO.  
PERMIT REF. NO.



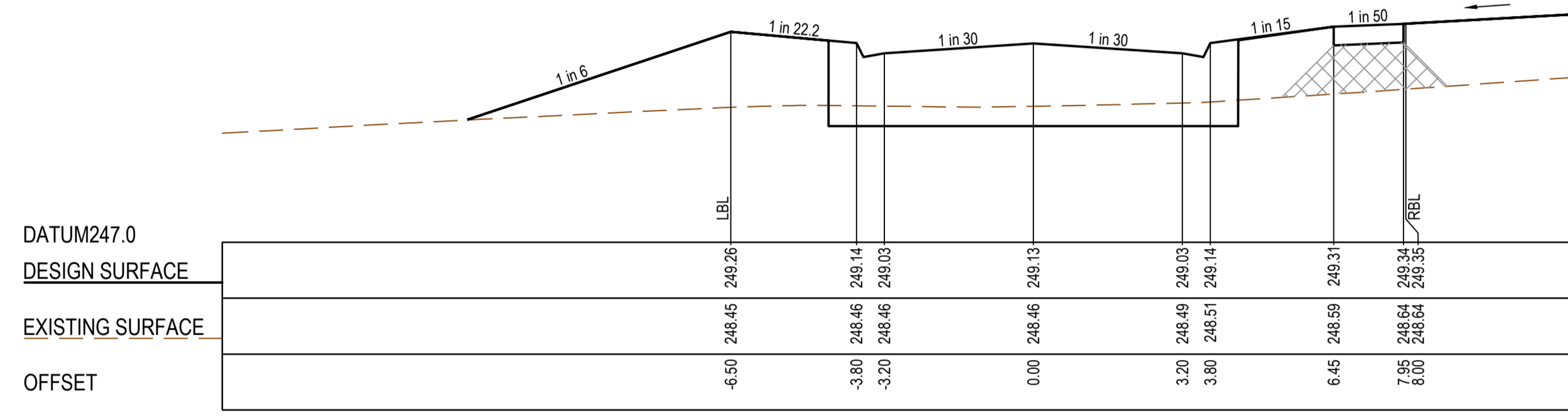
Olivine Estate - Stage 22  
Whittlesea City Council  
Road and Drainage  
Longitudinal Section - 3  
Demesne Drive

MELWAYS REF <b>367 G11</b>	PROJECT / DRAWING No. <b>1700E-022-203</b>	SHEET No. <b>22 of 43</b>	REVISION <b>2</b>
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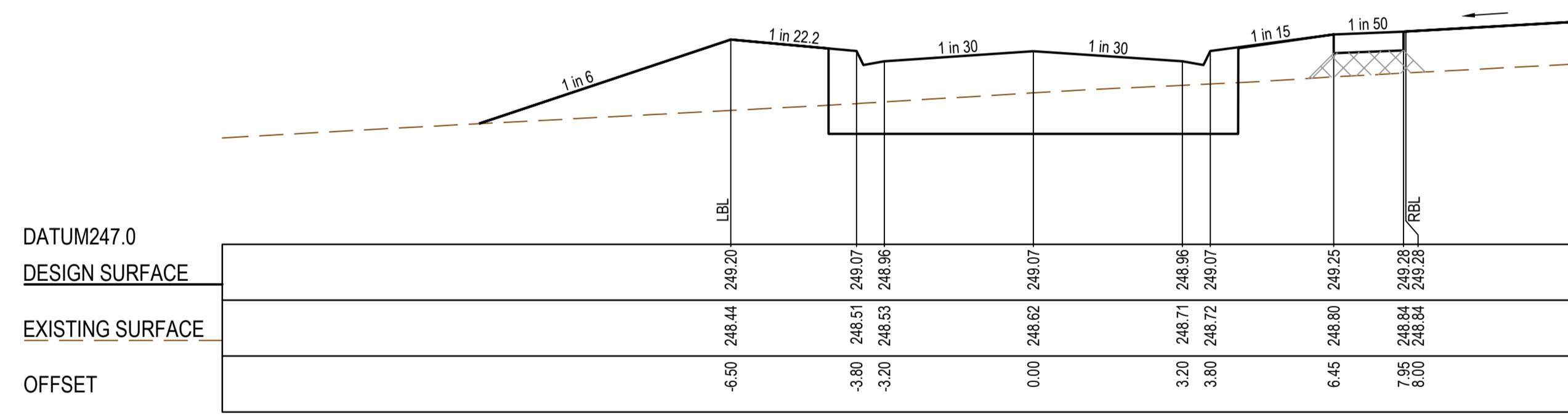
STRUCTURAL FILL REQUIRED UNDER PAVEMENT AND FOOTPATHS WHERE CONSTRUCTED ABOVE EXISTING SURFACE



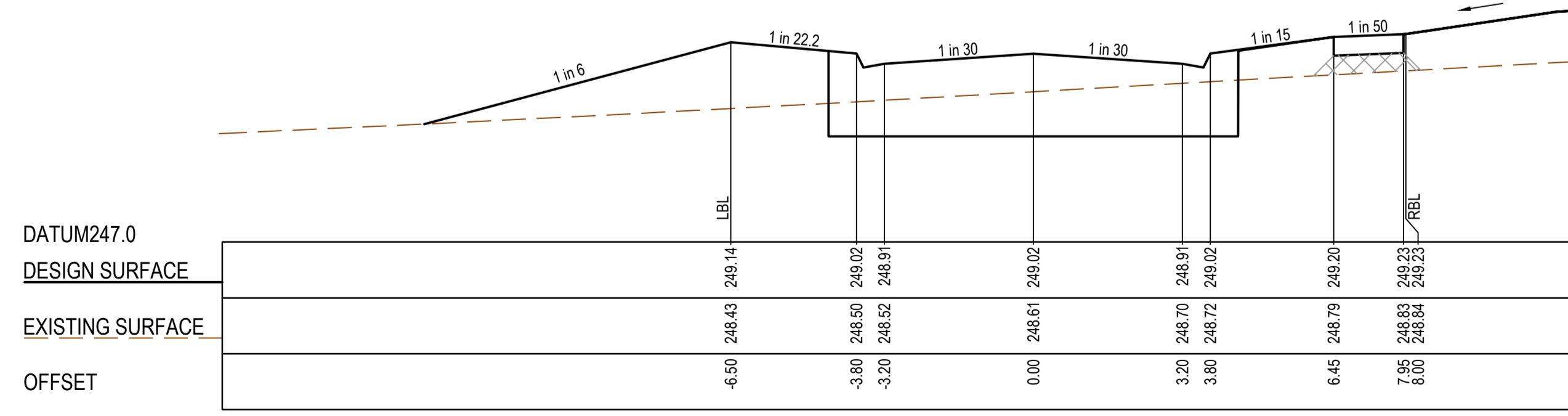
TPCH 47.15



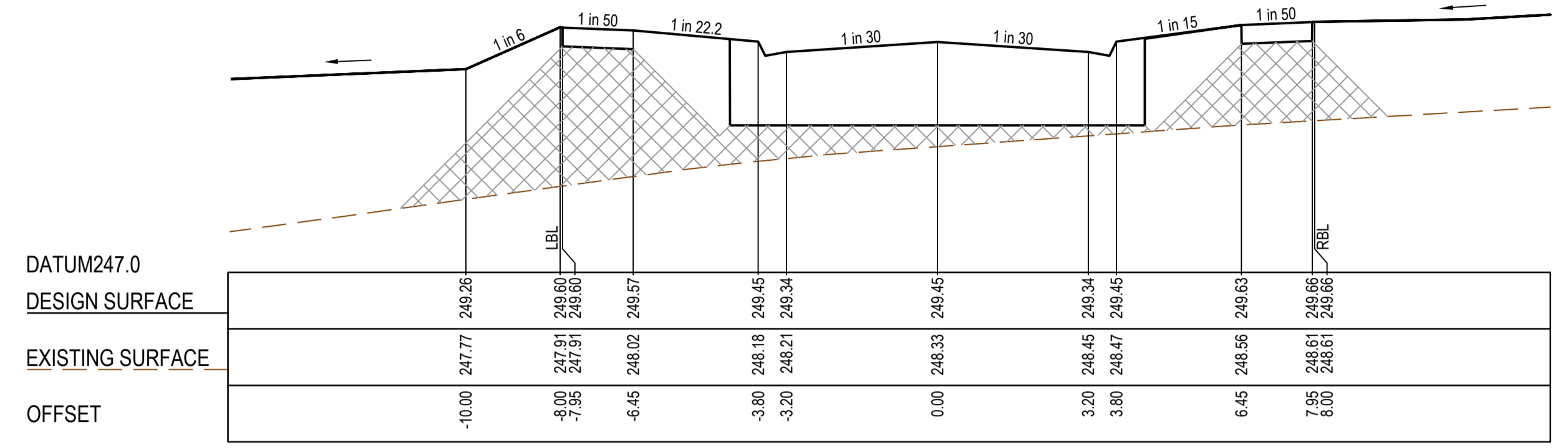
CH 37.75



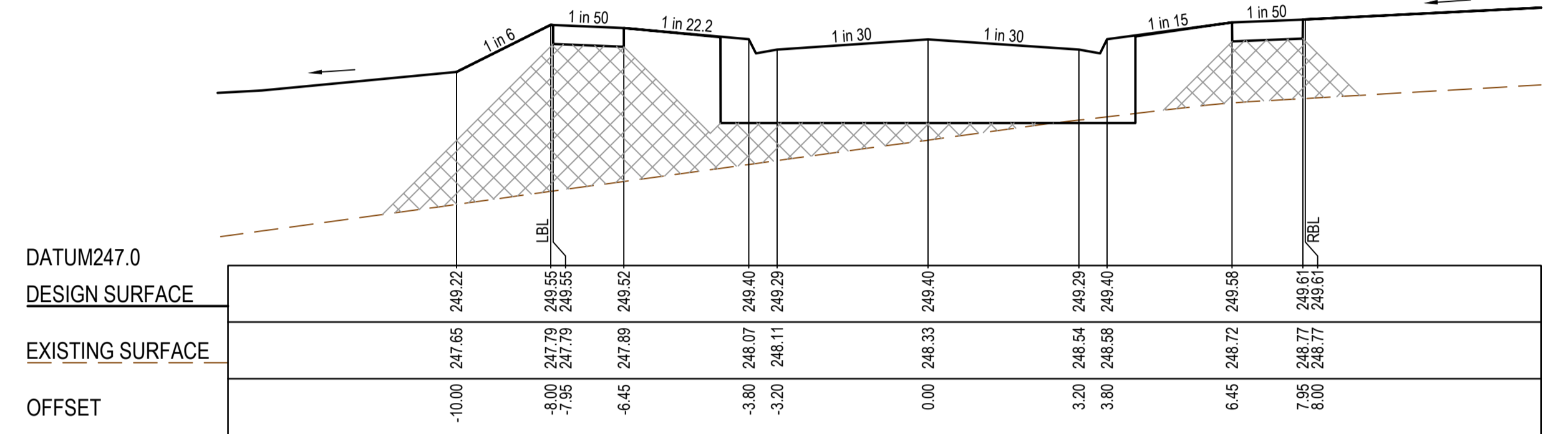
CH 25.25



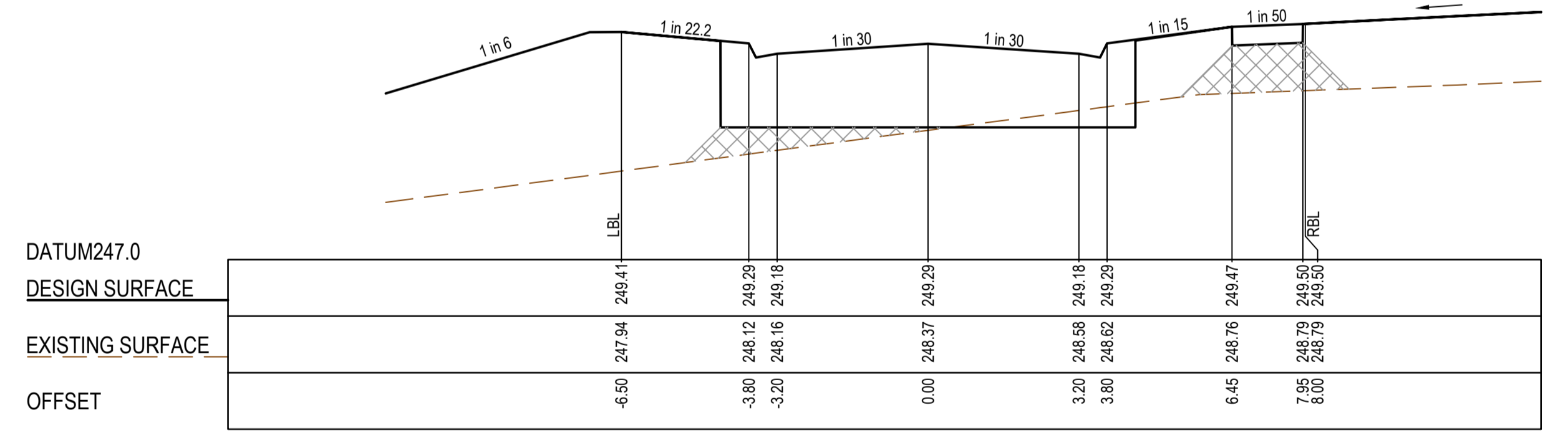
CH 14.75



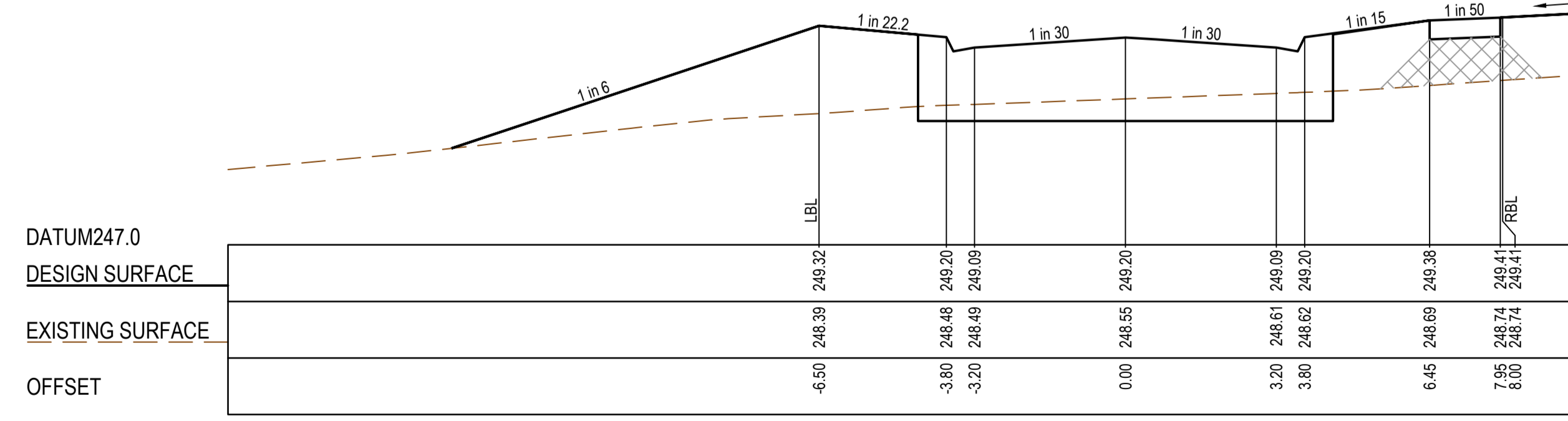
RTPCH 100.13



CH 90.43



CH 69.03



TPCH 50.75

**AS CONSTRUCTED PLANS**

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**AS CONSTRUCTED**

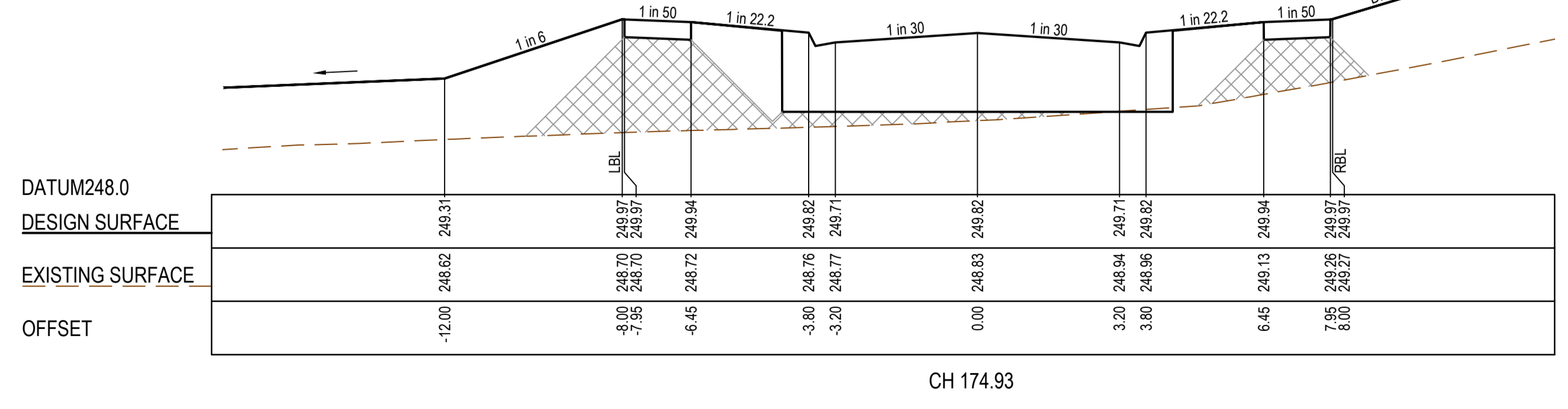
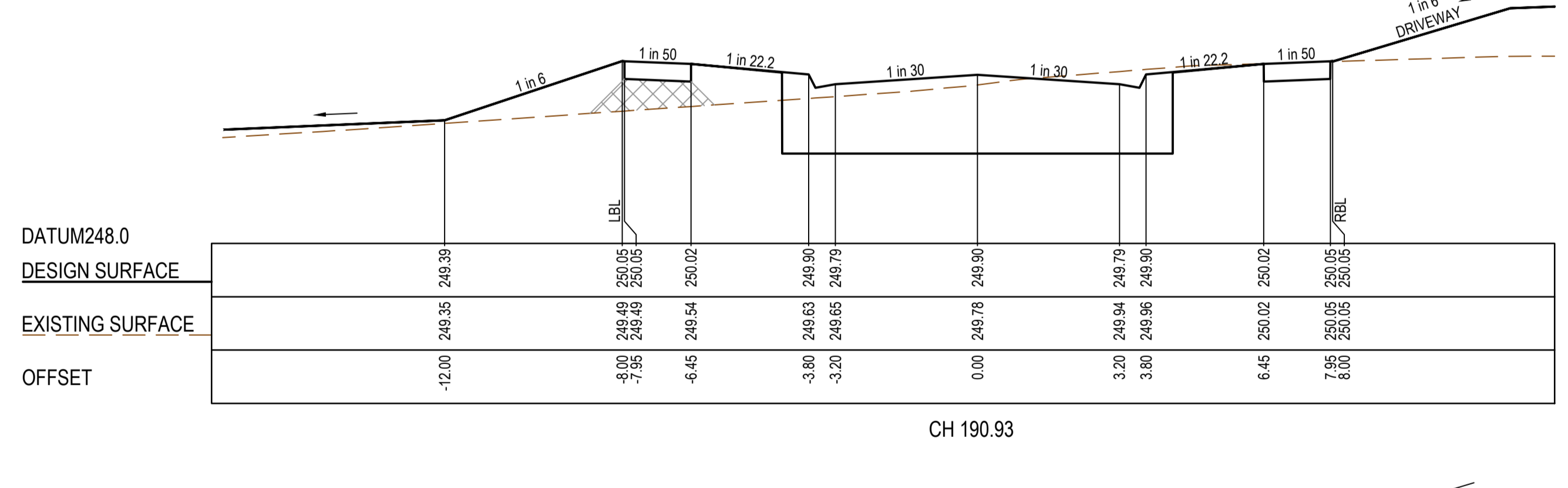
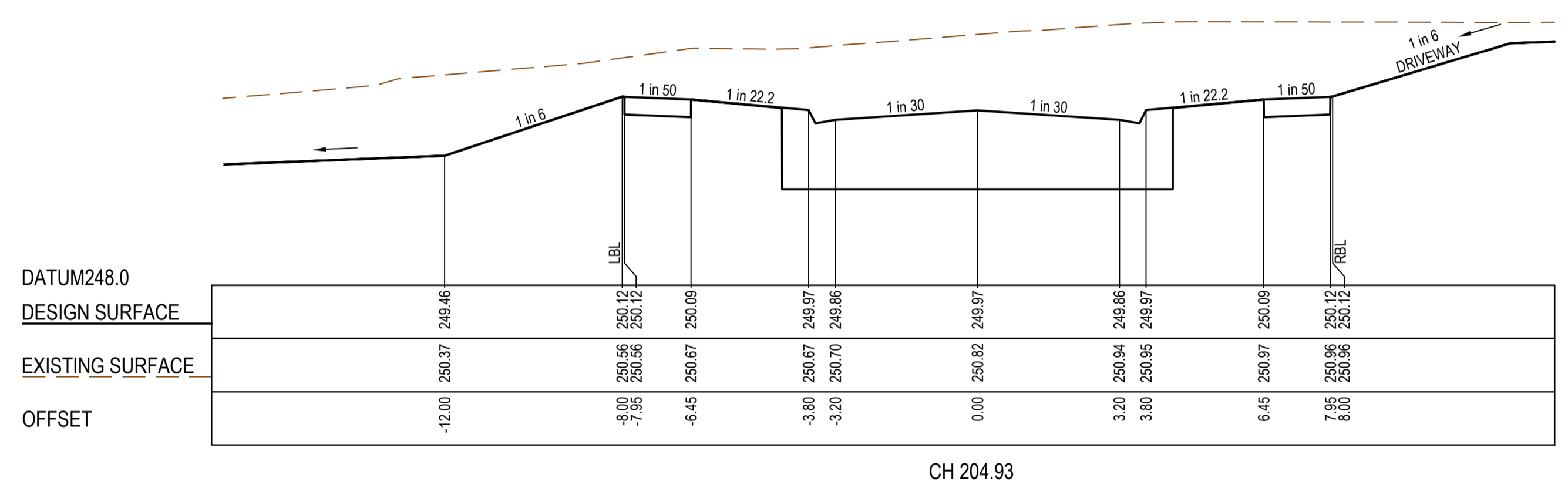
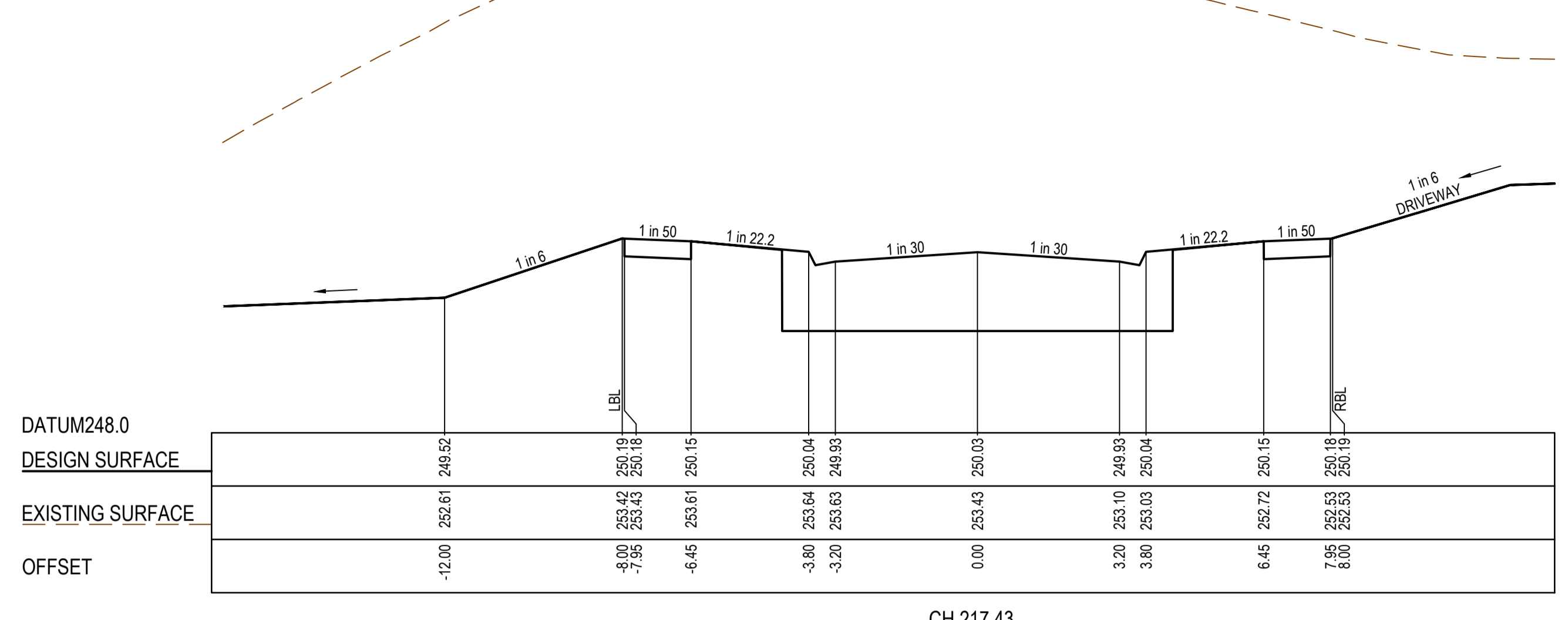
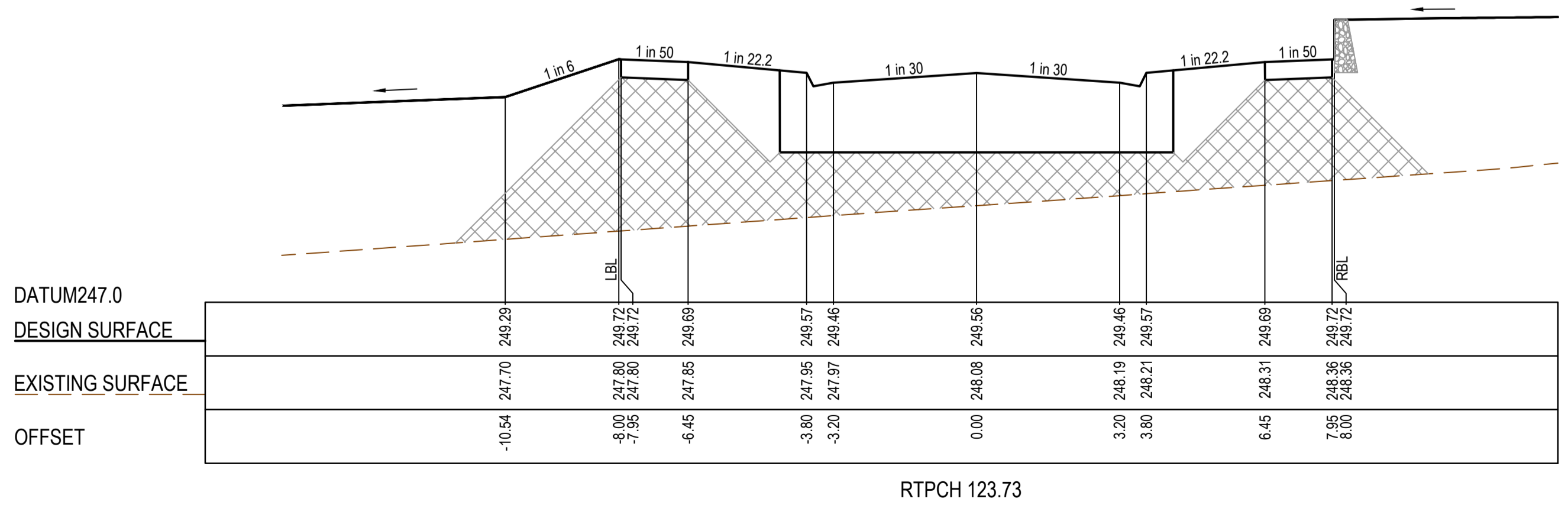
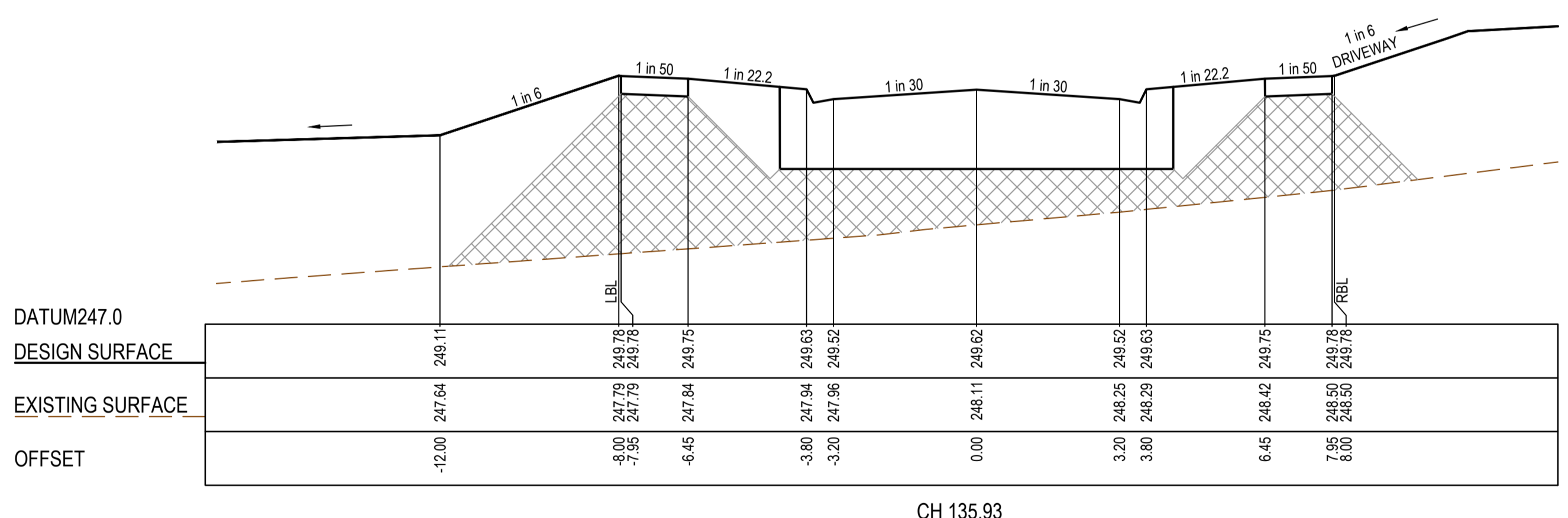
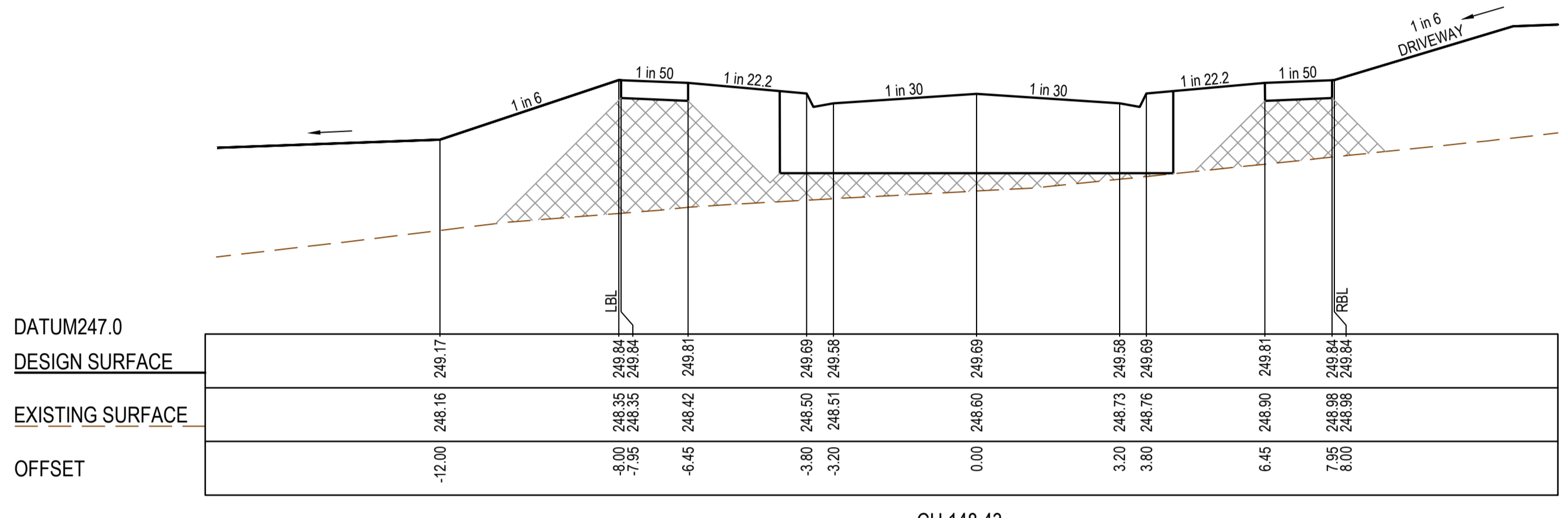
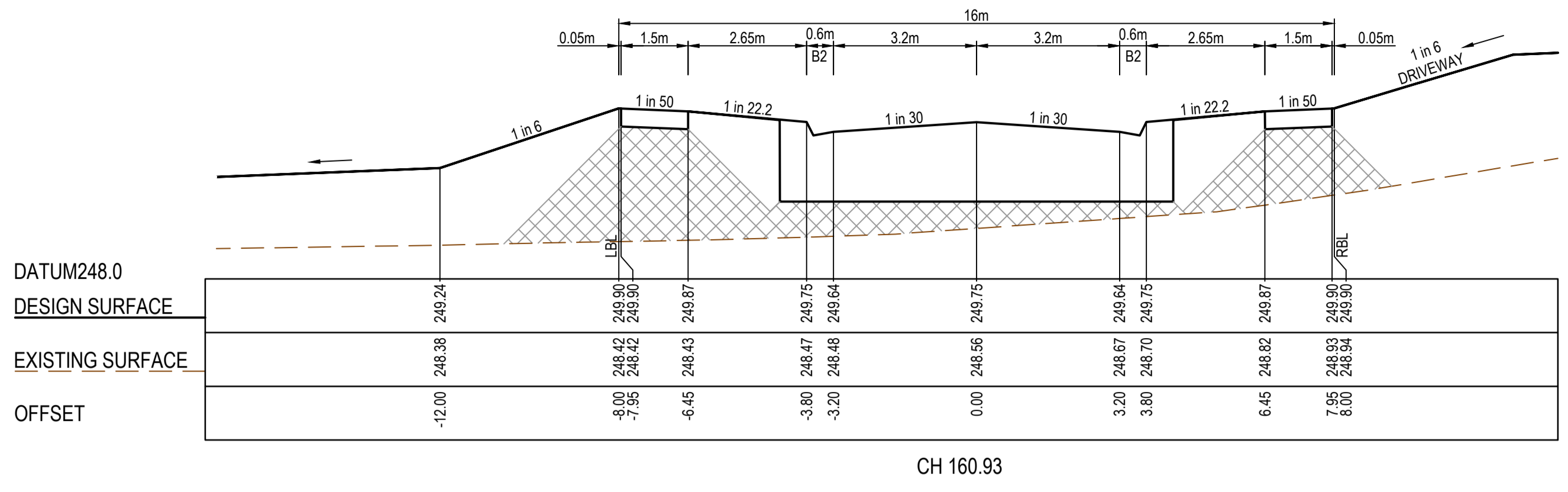
PLAN OF SUB. NO.  
PERMIT REF. NO.  
Scale H1:100, V1:50  
SCALE AS SHOWN AT 1



Olivine Estate - Stage 22  
Whittlesea City Council  
Road and Drainage  
Cross Sections: Fayalite Circuit - 1  
Ch 14.75 - Ch 100.13

MELWAYS REF 367 G11	PROJECT / DRAWING No. 1700E-022-251	SHEET No. 23 of 43	REVISION 3
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STRUCTURAL FILL REQUIRED UNDER PAVEMENT AND FOOTPATHS WHERE CONSTRUCTED ABOVE EXISTING SURFACE



**AS CONSTRUCTED PLANS**

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**AS CONSTRUCTED**

PLAN OF SUB. NO.	
PERMIT REF. NO.	
Scale	0 1 2 4 0 0.5 1 2 Scale H1:100, V1:50 SCALE AS SHOWN AT A1

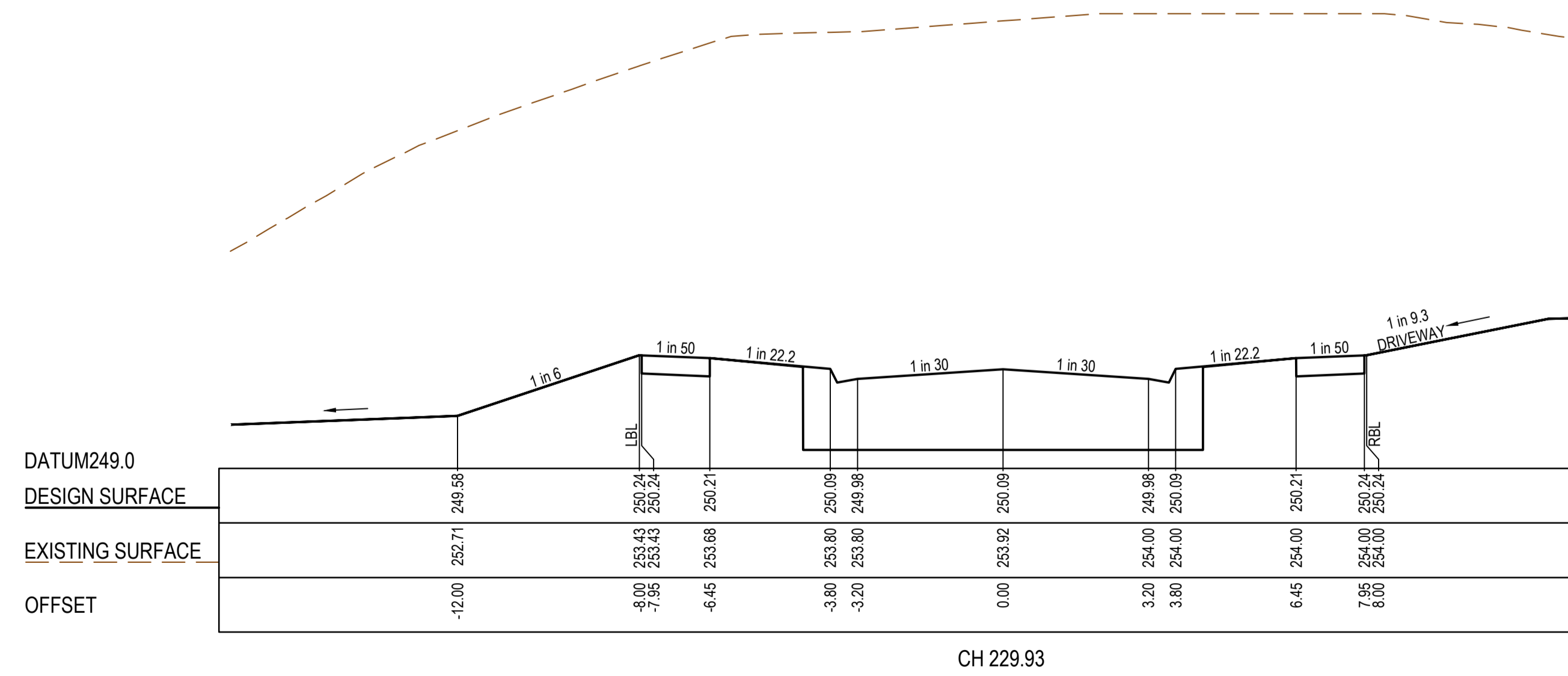
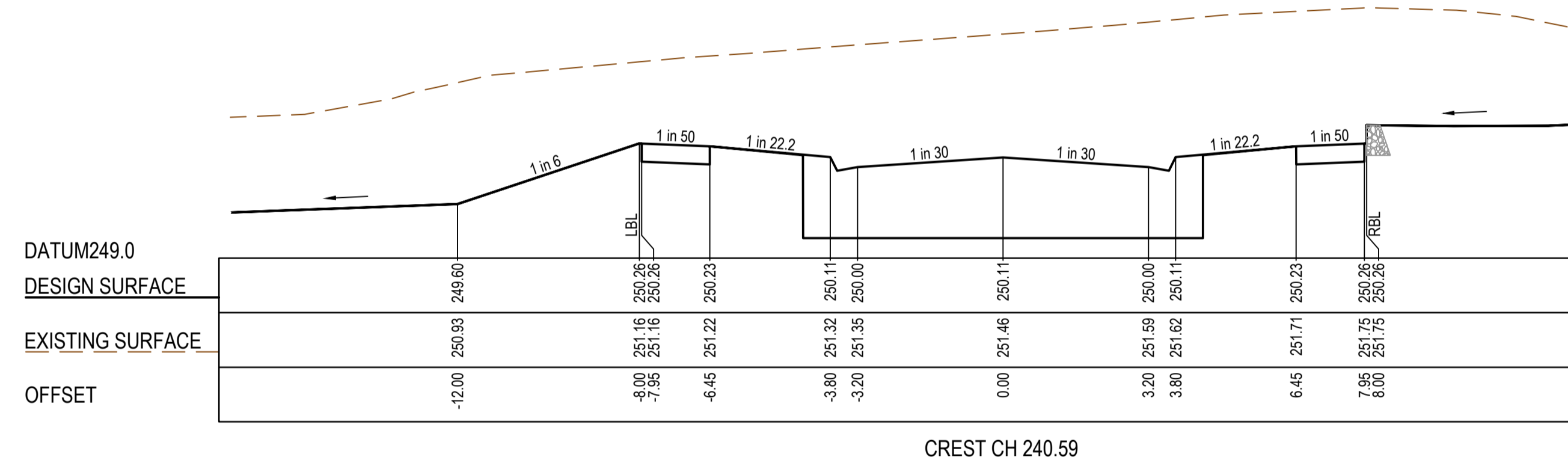
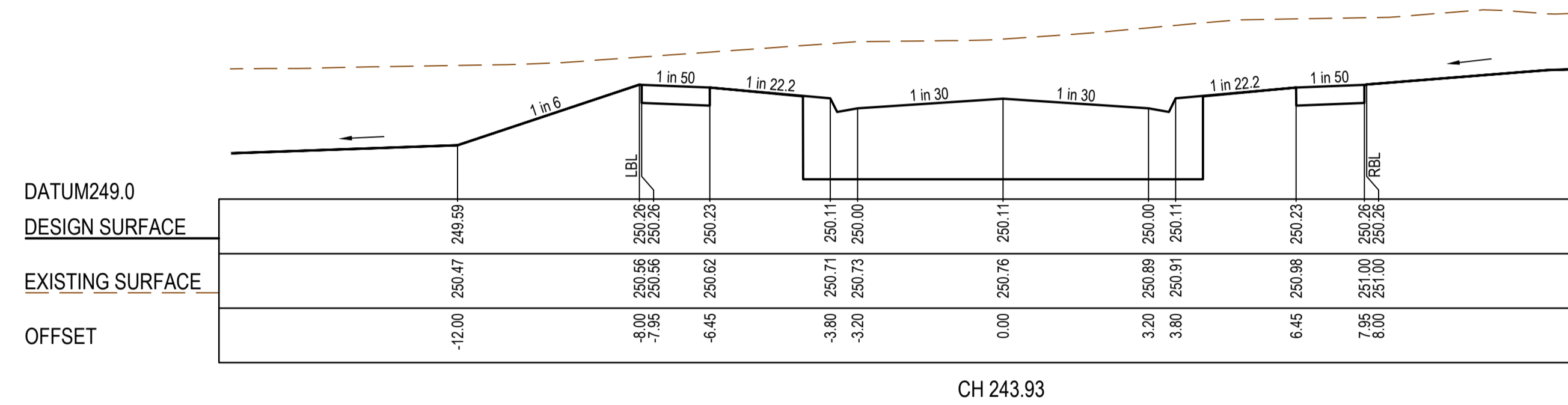
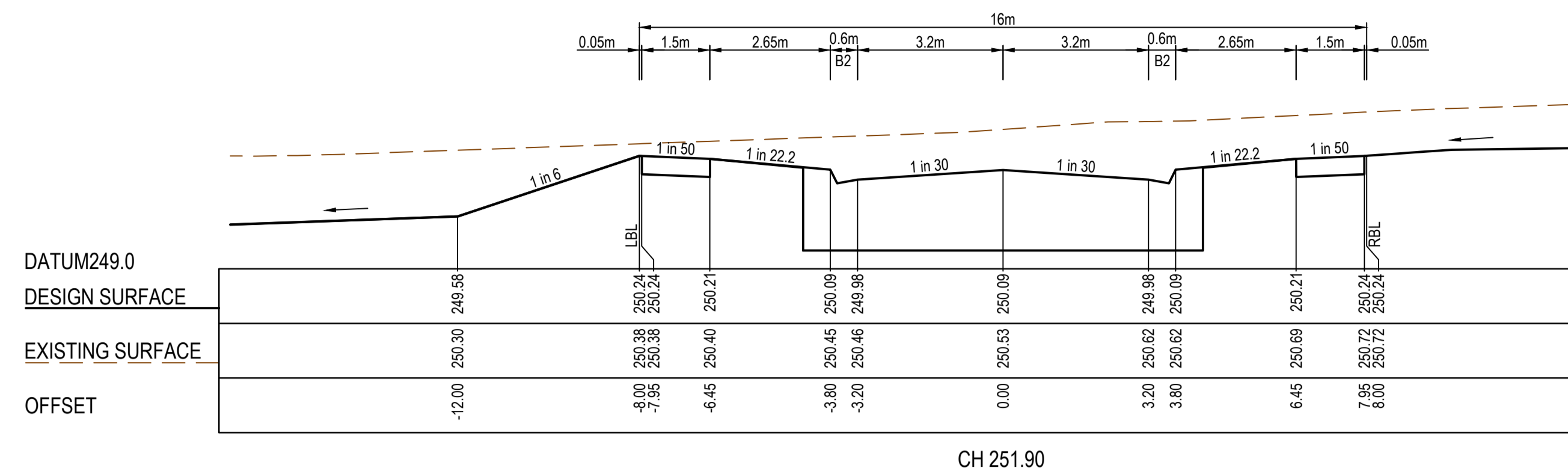


Olivine Estate - Stage 22  
Whittlesea City Council  
Road and Drainage  
Cross Sections: Fayalite Circuit - 2  
Ch 123.73 - Ch 217.43

MELWAYS REF	PROJECT / DRAWING No	SHEET No.	REVISION
367 G11	1700E-022-252	24 of 43	3



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



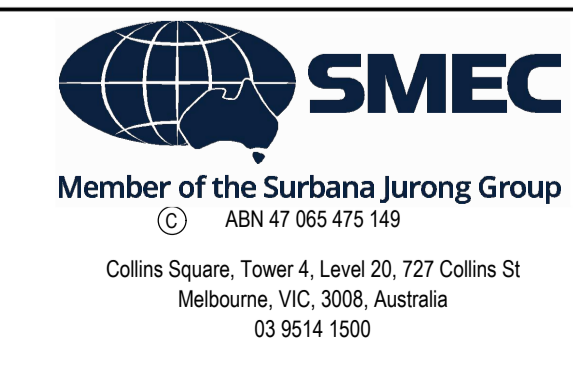
**AS CONSTRUCTED PLANS**

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**AS CONSTRUCTED**

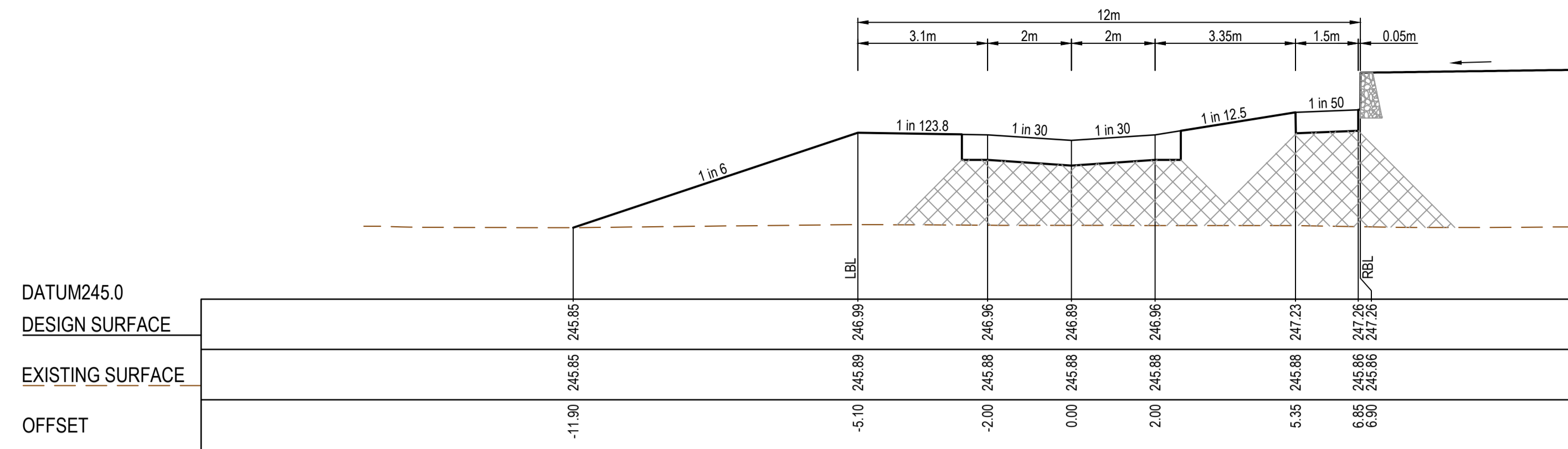
PLAN OF SUB. NO.	
PERMIT REF. NO.	
Scale H:1:100, V:1:50	
SCALE AS SHOWN AT 1	



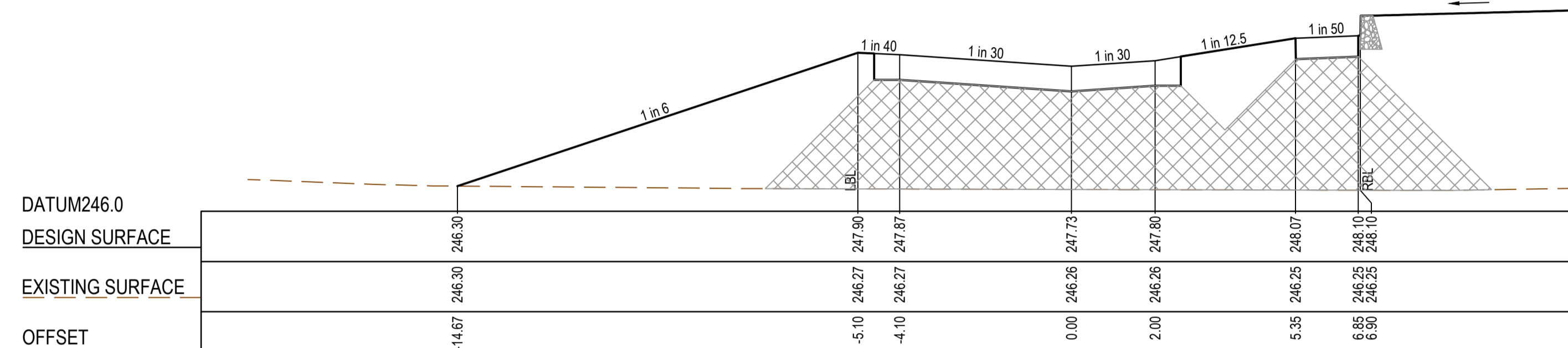
Olivine Estate - Stage 22  
Whittlesea City Council  
Road and Drainage  
Cross Sections: Fayalite Circuit - 3  
Ch 229.93 - Ch 251.90

MELBAYS REF	PROJECT / DRAWING No	SHEET No	REVISION
367 G11	1700E-022-253	25 of 43	3

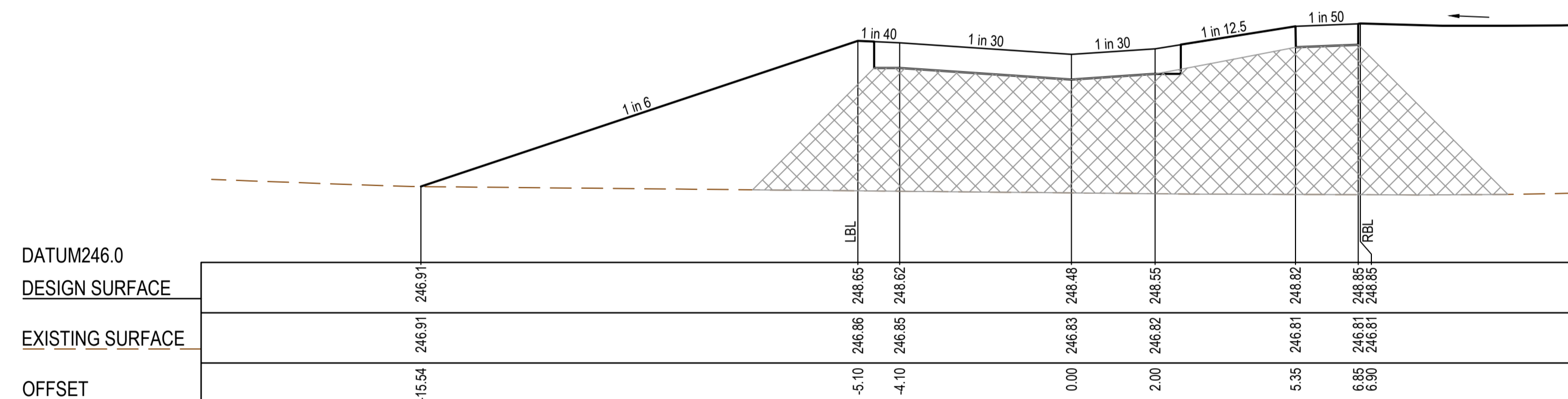
STRUCTURAL FILL REQUIRED UNDER PAVEMENT AND FOOTPATHS WHERE CONSTRUCTED ABOVE EXISTING SURFACE



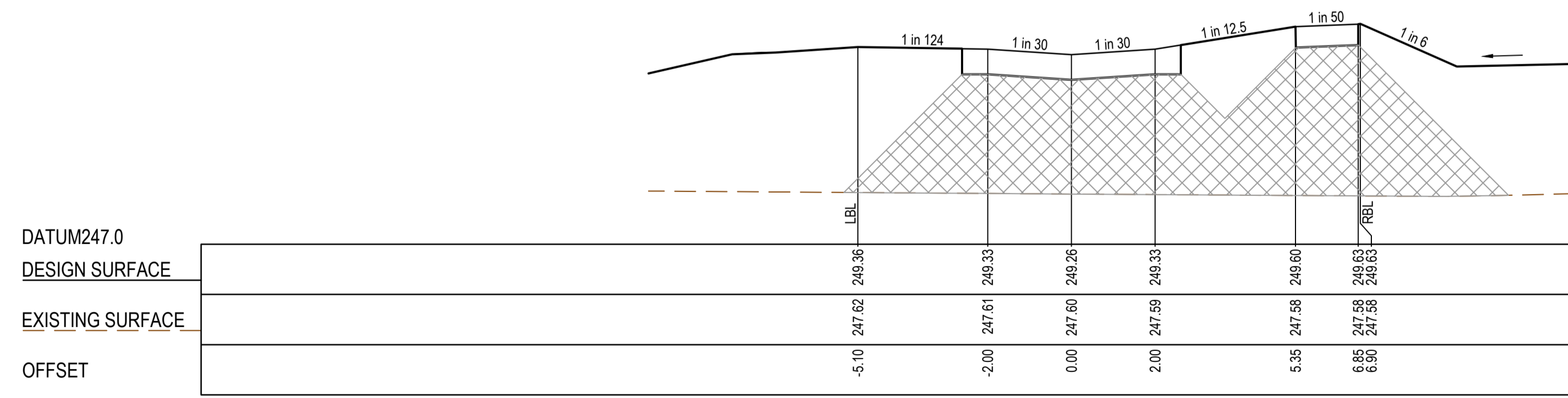
CH 50.50



CH 36.50

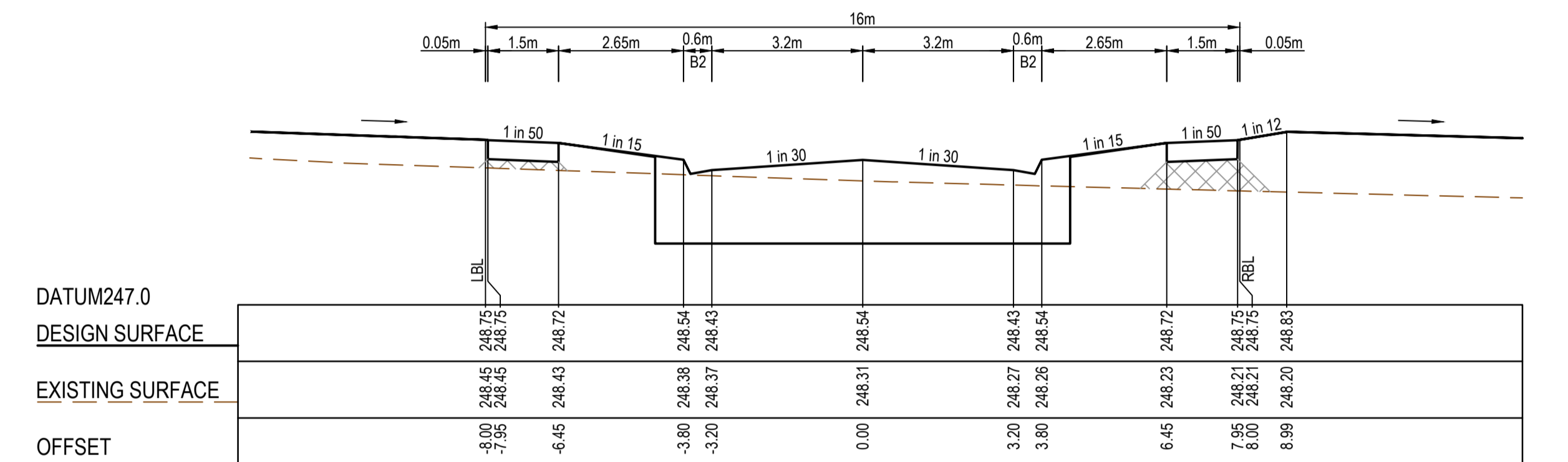


CH 24.00

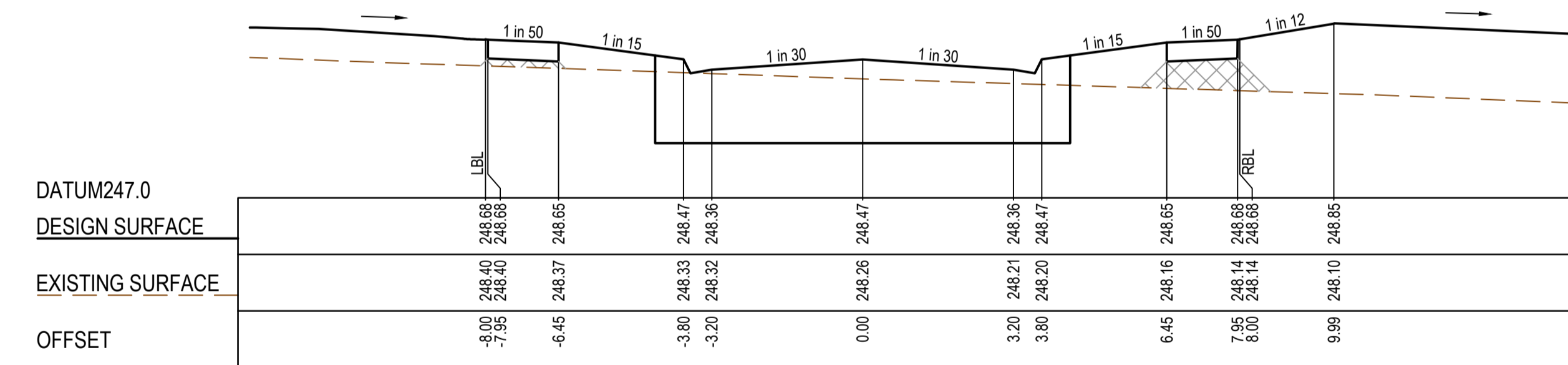


CH 11.00

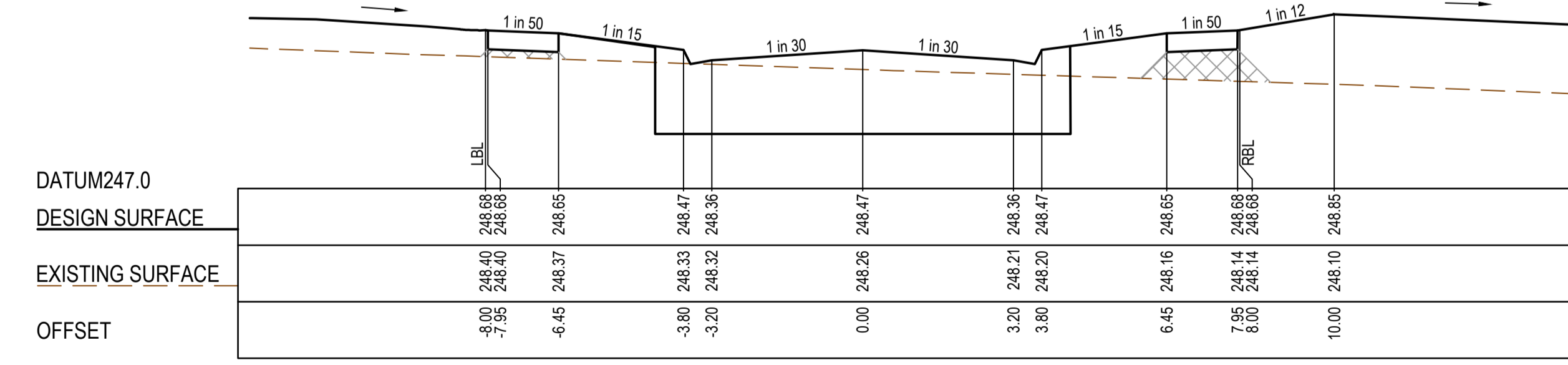
ALCOVE LANE



CH 28.25



CH 14.25



TPCH 14.15

TOPIARY WAY

**AS CONSTRUCTED PLANS**

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**AS CONSTRUCTED**

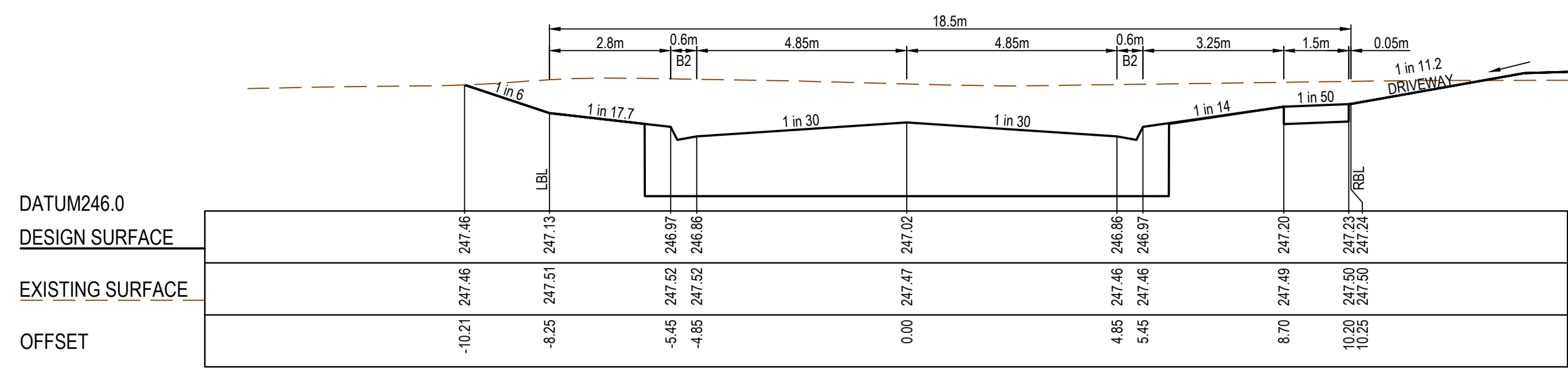
PLAN OF SUB. NO.  
PERMIT REF. NO.  
Scale H:1:100, V:1:50  
SCALE AS SHOWN AT 1



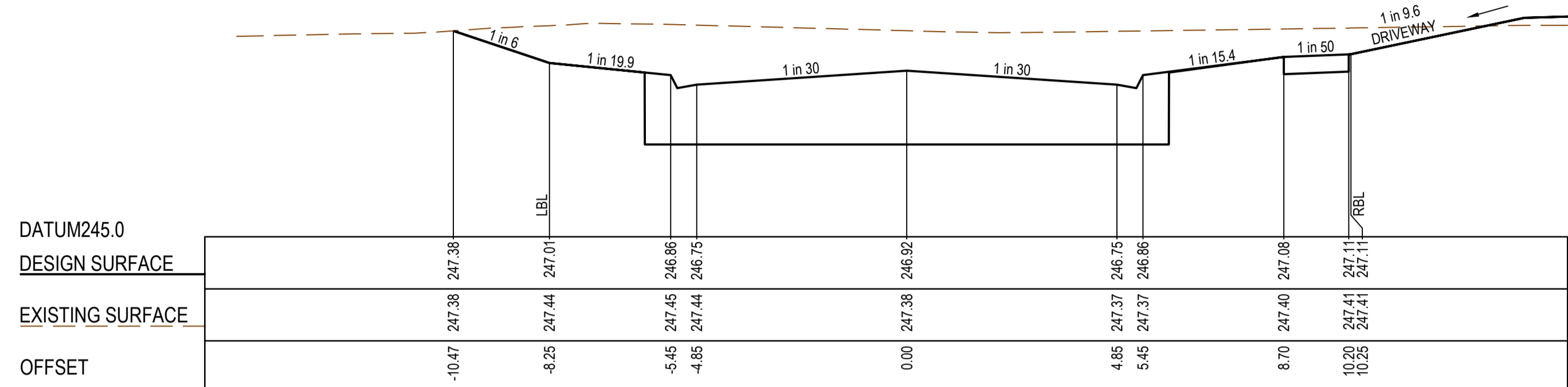
Olivine Estate - Stage 22  
Whittlesea City Council  
Road and Drainage  
Cross Sections: Alcove Lane & Topiary Way

MELWAYS REF 367 G11	PROJECT / DRAWING No. 1700E-022-254	SHEET No. 26 of 43	REVISION 2
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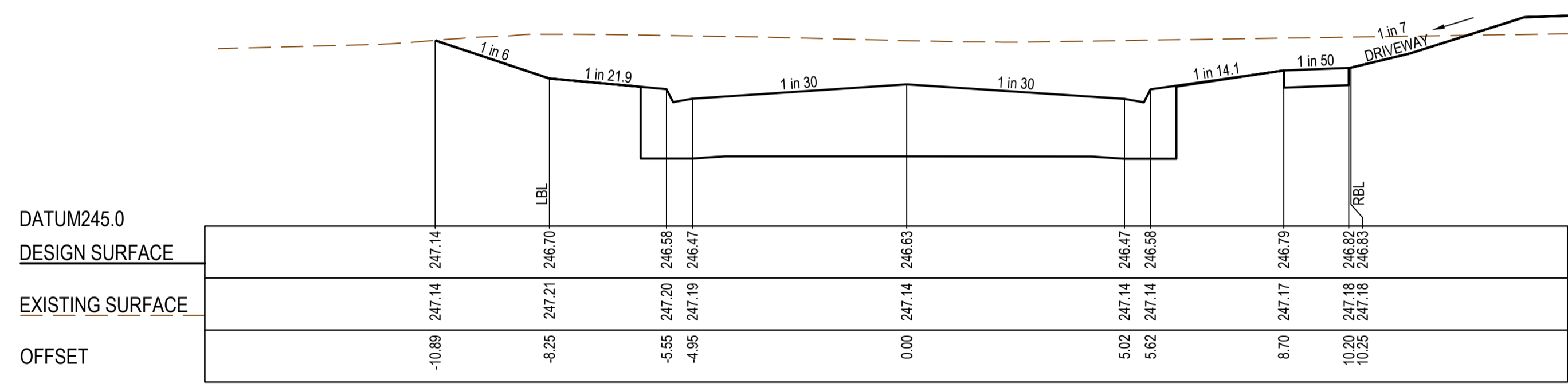
STRUCTURAL FILL REQUIRED UNDER PAVEMENT AND FOOTPATHS WHERE CONSTRUCTED ABOVE EXISTING SURFACE



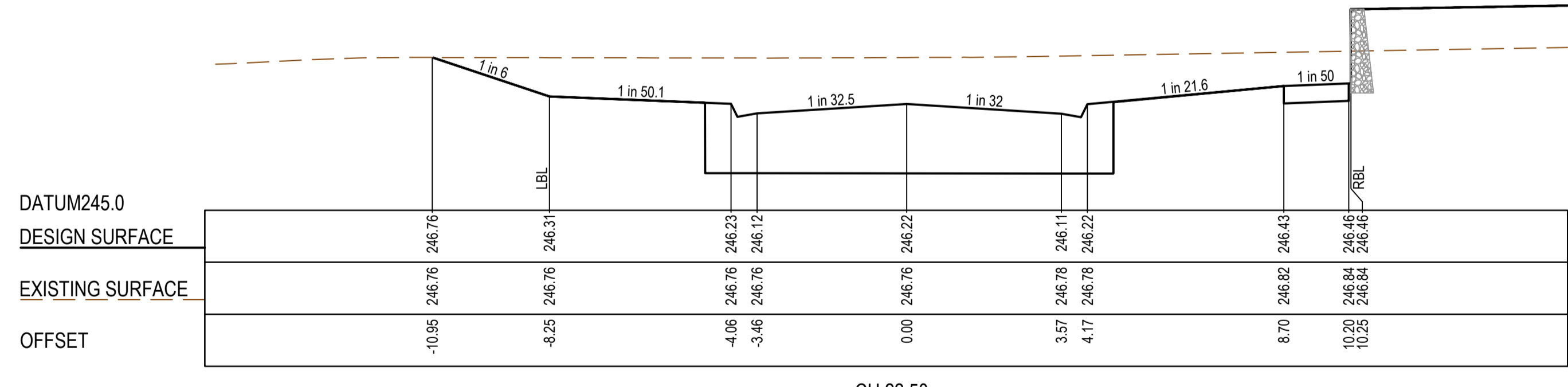
TPCH 40.87



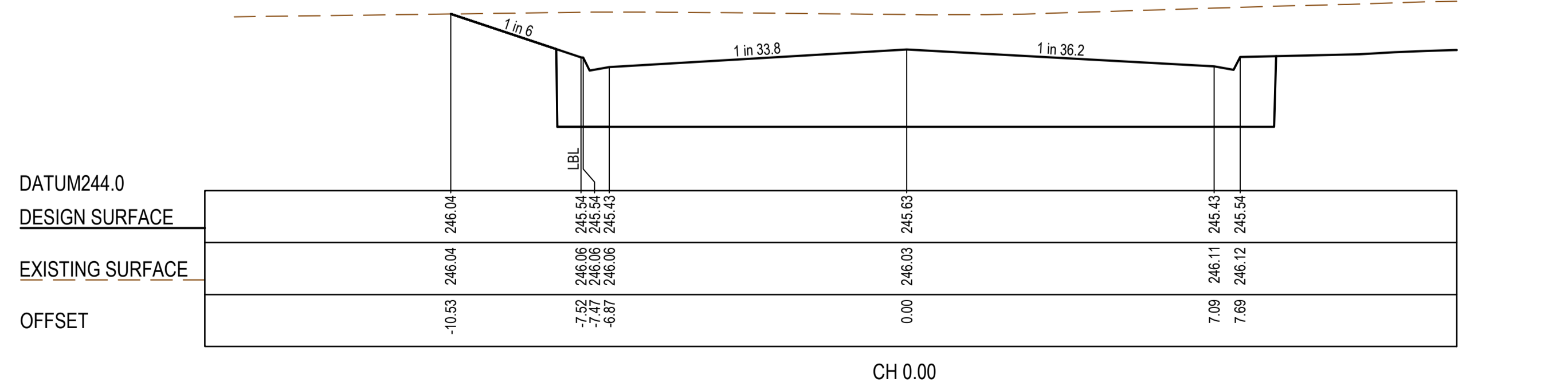
CH 38.50



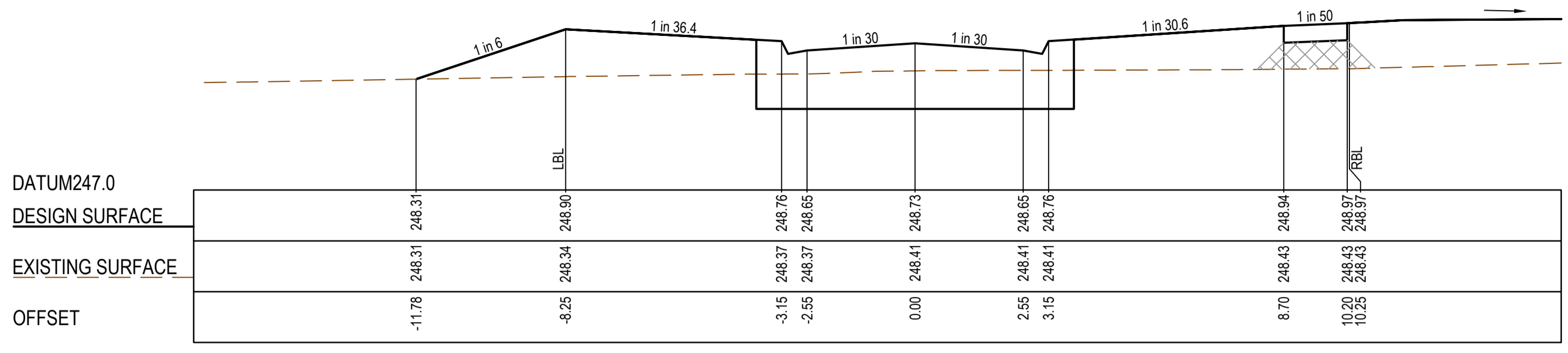
TPCH 32.21



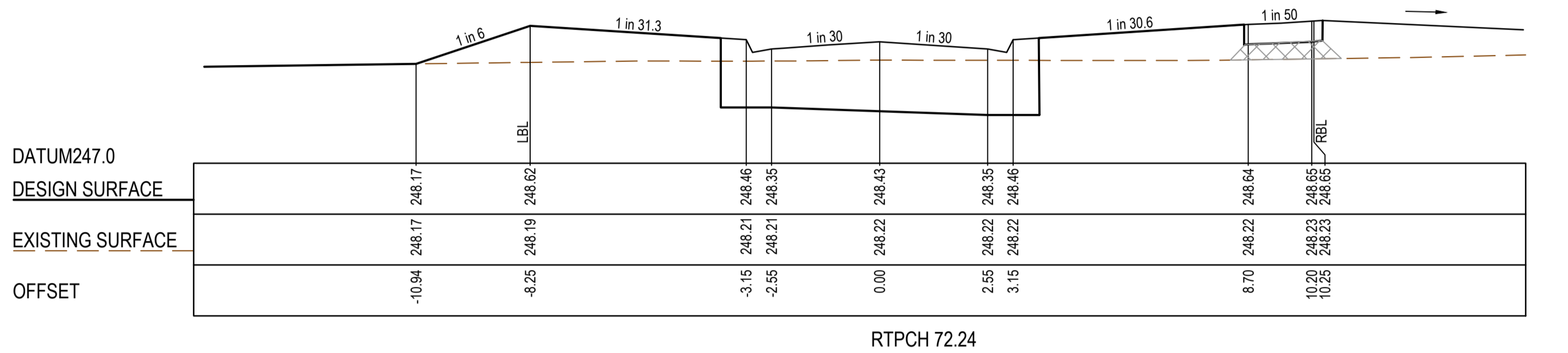
CH 22.50



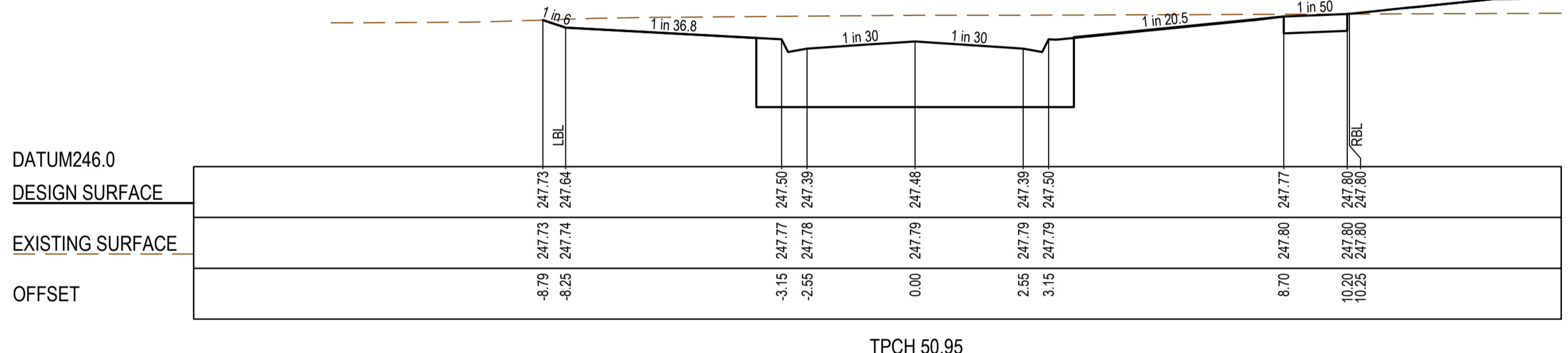
CH 0.00



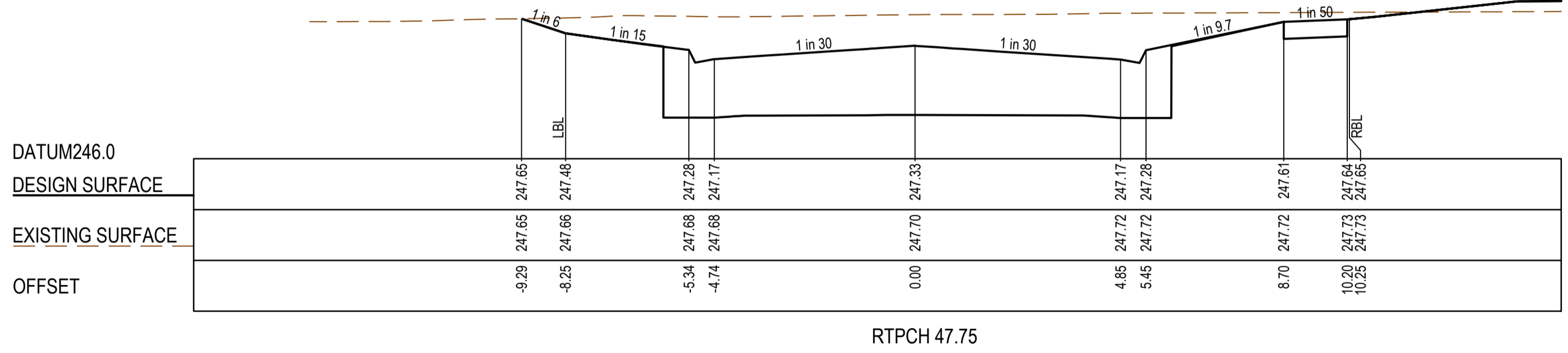
TPCH 78.87



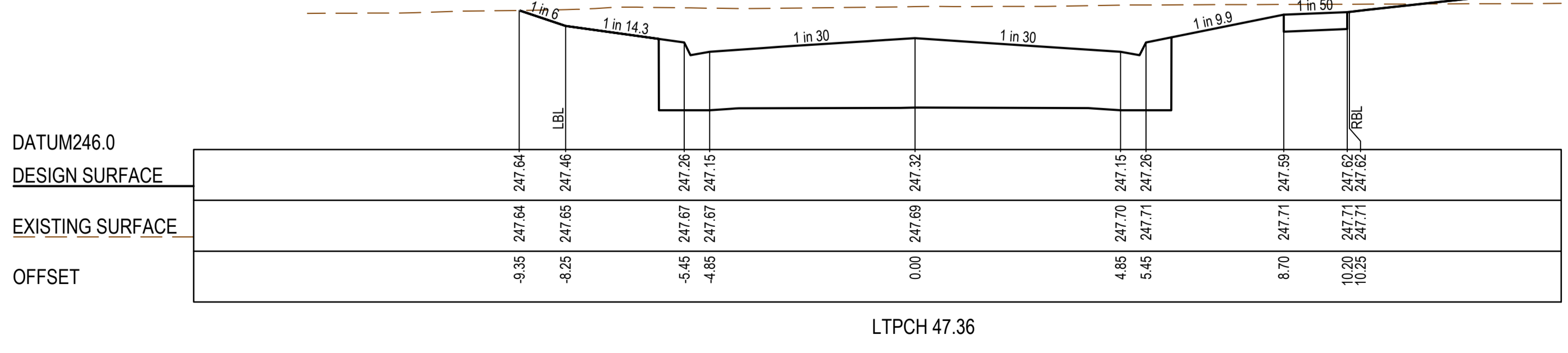
RTPCH 72.24



TPCH 50.95



RTPCH 47.75



LTPCH 47.36

**AS CONSTRUCTED PLANS**  
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Quality Management ISO 9001  
 OHS Management AS/NZS 4801  
 Environmental Management ISO 14001  
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PLAN OF SUB. NO.  
 PERMIT REF. NO.

**AS CONSTRUCTED**

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 Scale H1:100, V1:50  
 SCALE AS SHOWN AT 1

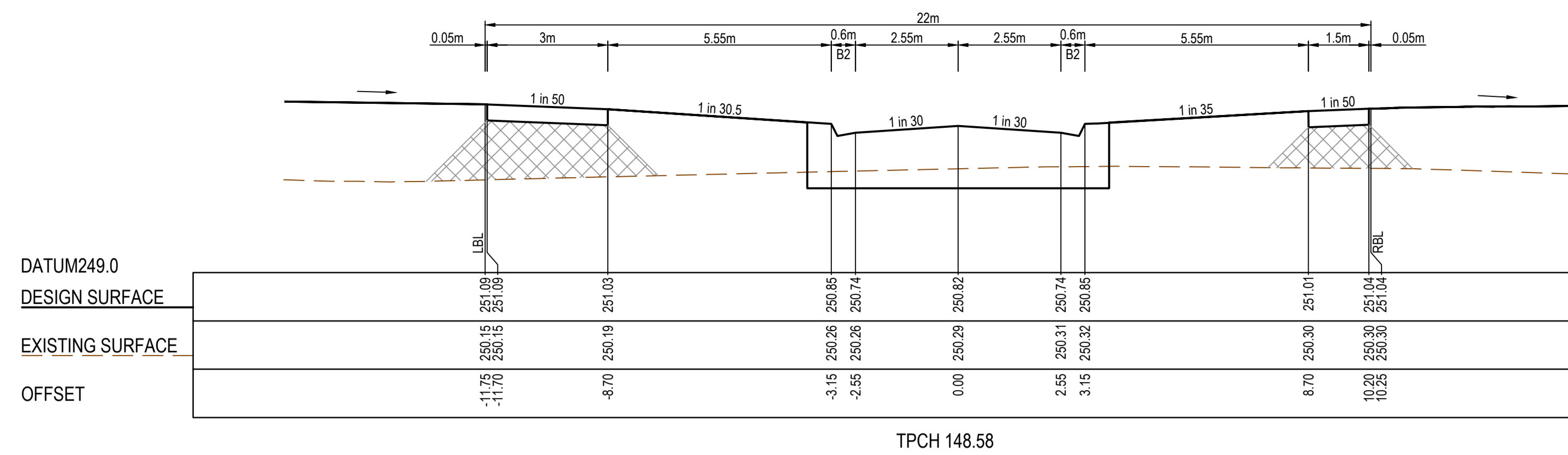
**SMEC**  
 Member of the Surlana Jurong Group  
 ABN 47 065 475 149  
 Collins Square, Tower 4, Level 20, 727 Collins St  
 Melbourne, VIC, 3008, Australia  
 03 9514 1500

**mirvac**

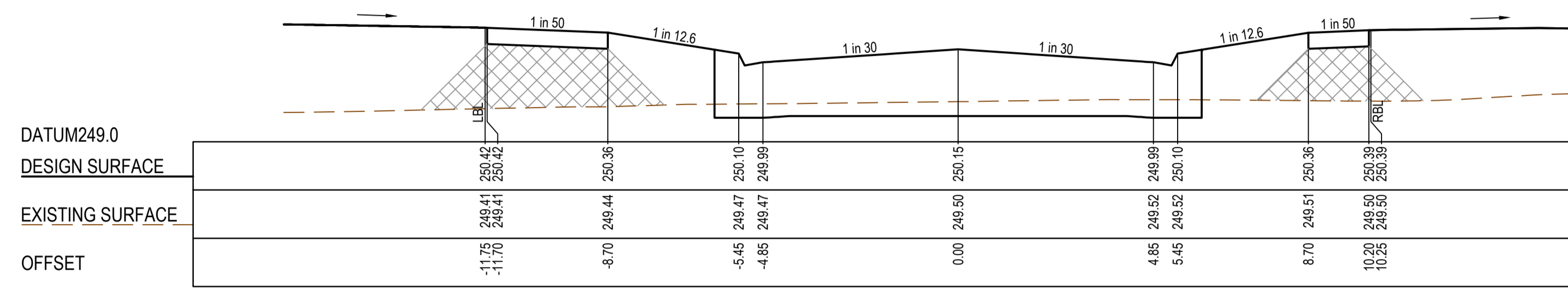
Olivine Estate - Stage 22  
 Whittlesea City Council  
 Road and Drainage  
 Cross Sections: Eucalyptus Parade - 1  
 Ch 0.00 - Ch 78.87

MELWAYS REF: 367 G11  
 PROJECT / DRAWING No: 1700E-022-255  
 SHEET No: 27 of 43  
 REVISION: 1

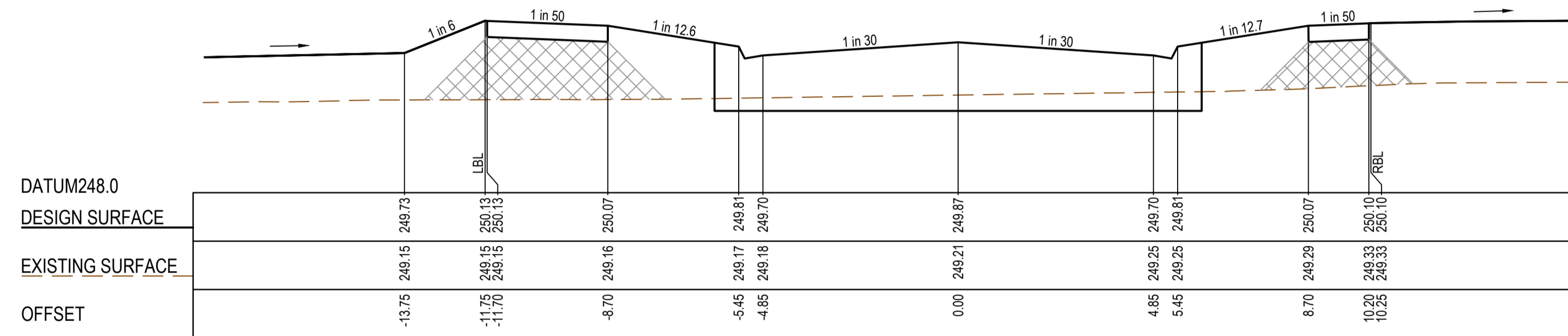
STRUCTURAL FILL REQUIRED UNDER PAVEMENT AND FOOTPATHS WHERE CONSTRUCTED ABOVE EXISTING SURFACE



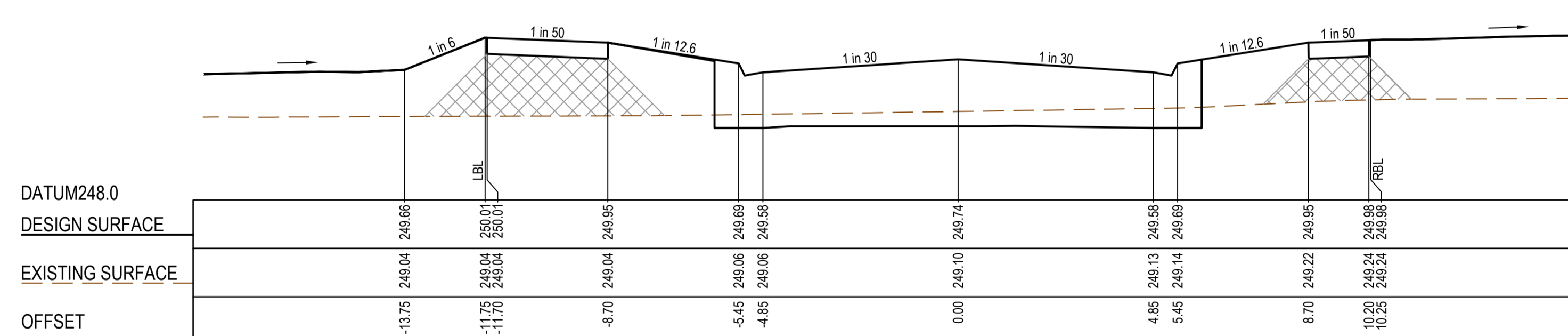
TPCH 148.58



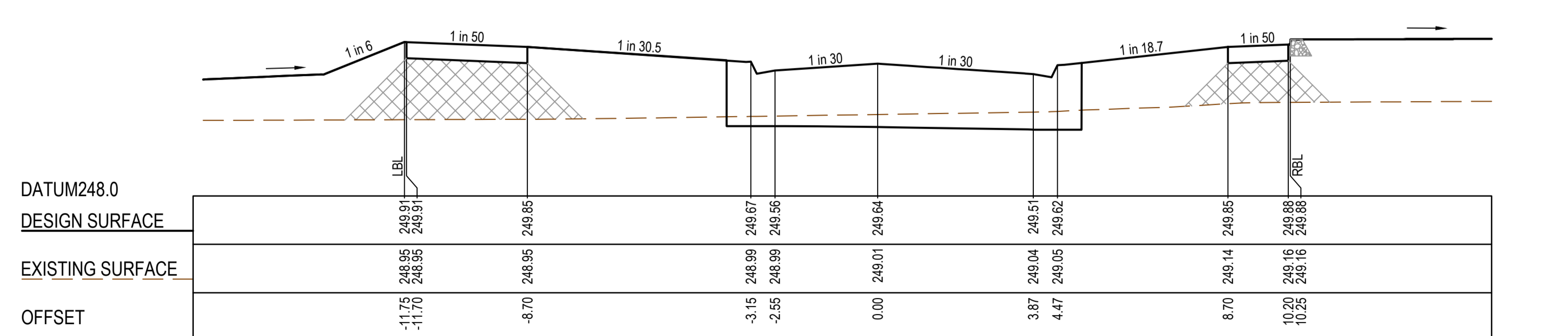
TPCH 121.61



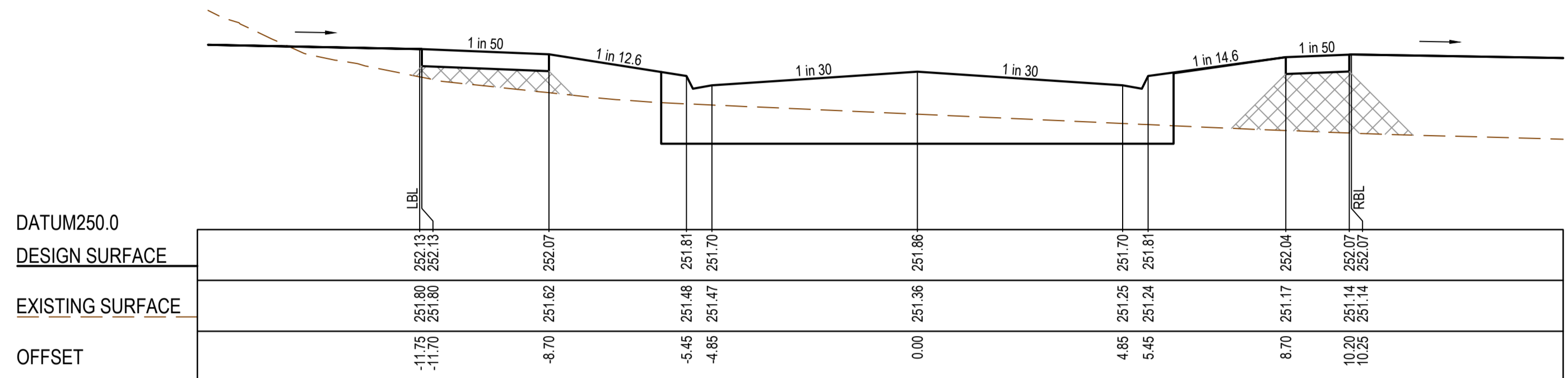
CH 110.58



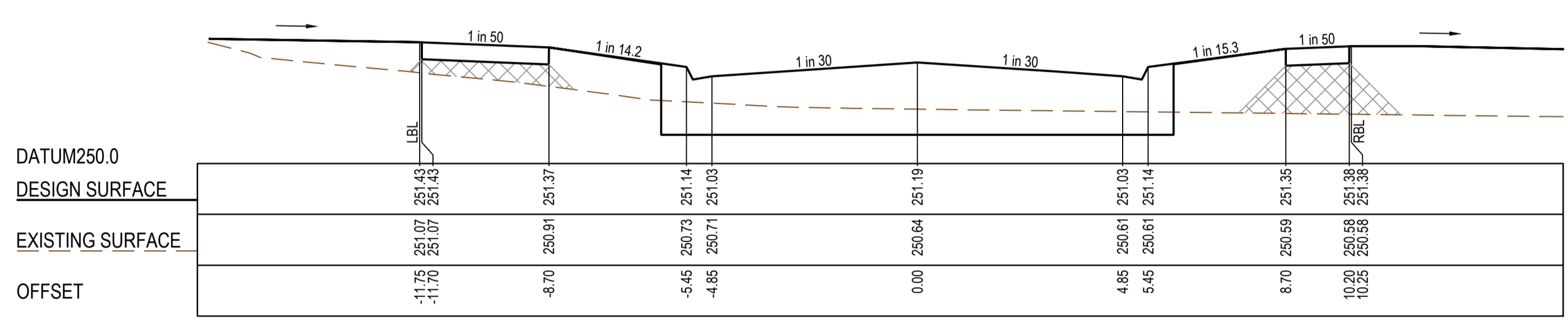
LTPCH 106.38



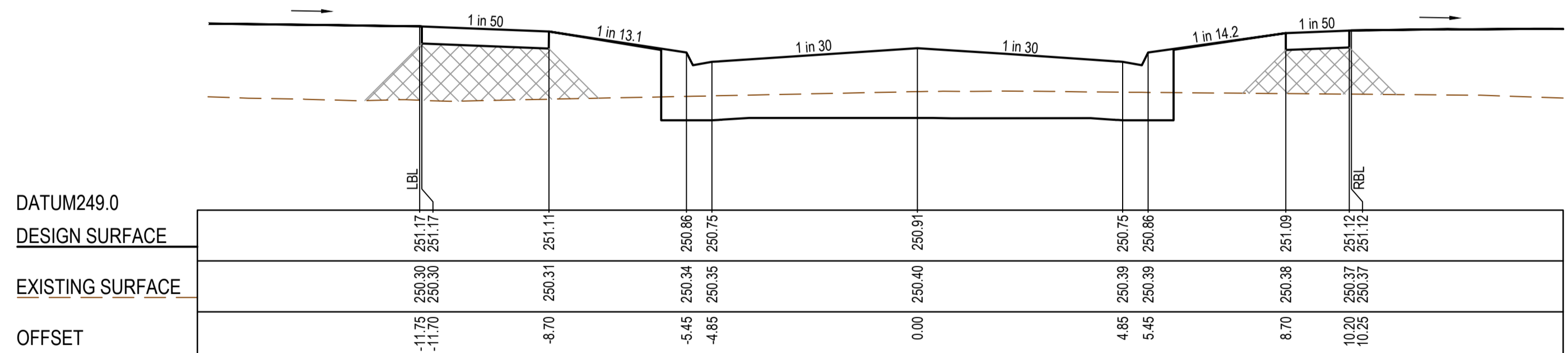
LTPCH 103.00



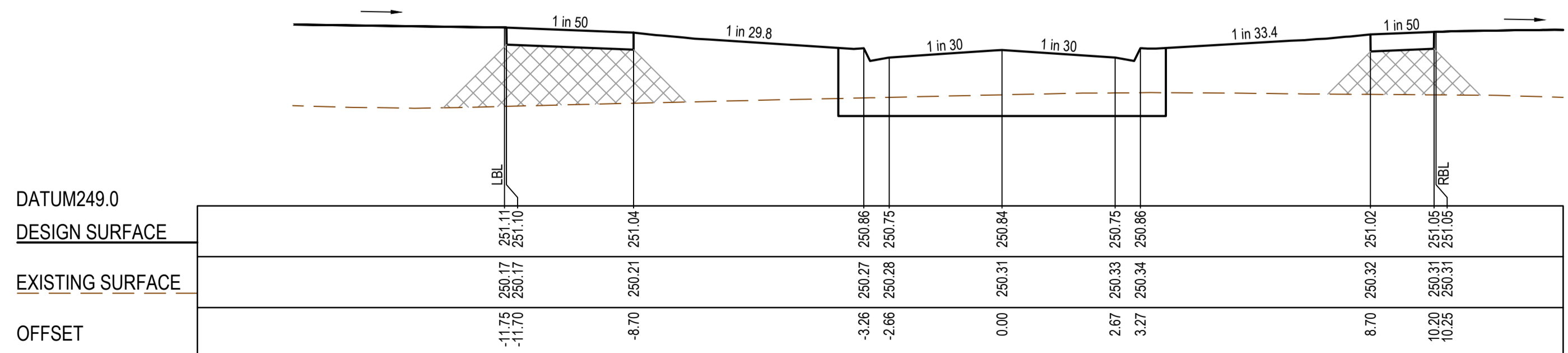
CH 190.22



CH 163.28



TPCH 152.10



TPCH 149.24

**AS CONSTRUCTED PLANS**

The purpose of these as-constructed plans is to update the design drawings to show significant changes which occurred during construction. Note that the levels shown on these plans are design levels, and have not been verified by survey. All information shown on these plans should be verified on site. SMEC Australia Pty Ltd accept no responsibility for loss or damages resulting from the inappropriate usage of these plans.



**AS CONSTRUCTED**

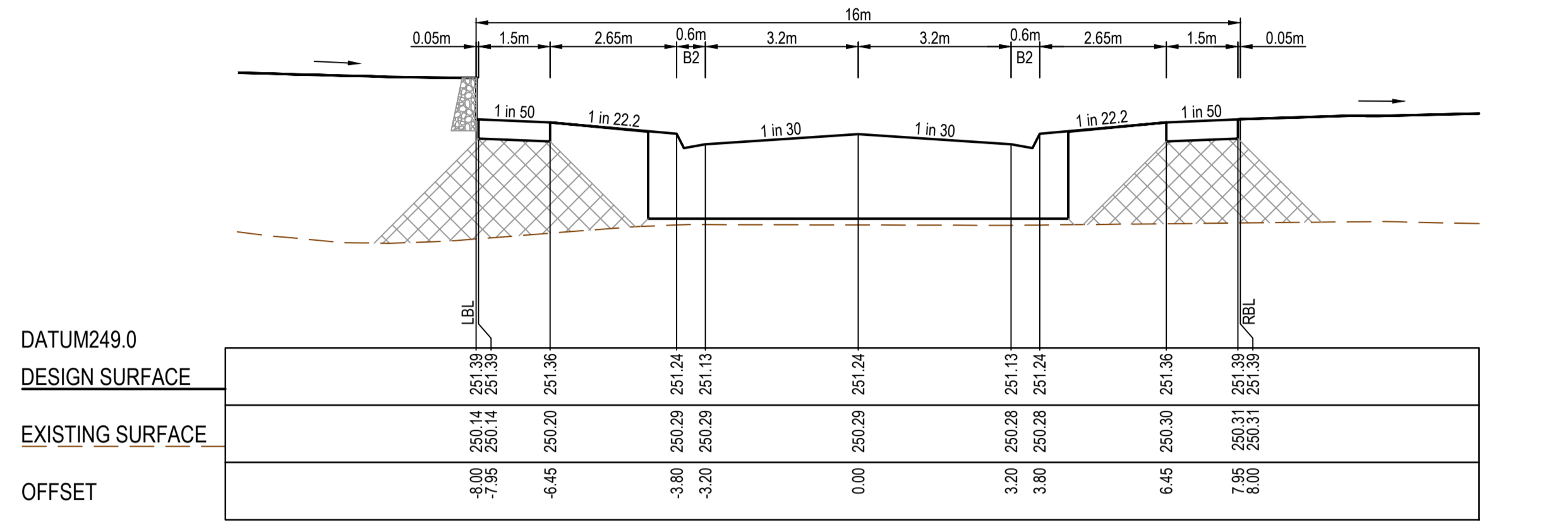
PLAN OF SUB. NO.  
PERMIT REF. NO.  
0 1 2 4  
0 0.5 1 2  
Scale H1:100, V1:50  
SCALE AS SHOWN AT A1



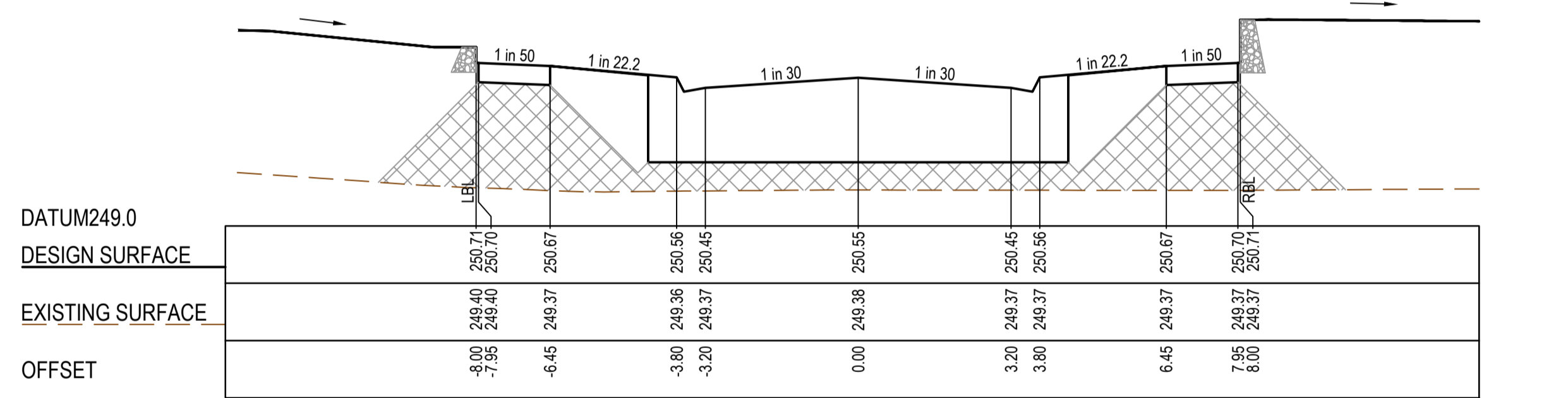
Olivine Estate - Stage 22  
Whittlesea City Council  
Road and Drainage  
Cross Sections: Eucalyptus Parade - 2  
Ch 103.00 - Ch 190.22

MELWAYS REF	PROJECT / DRAWING No	SHEET No	REVISION
367 G11	1700E-022-256	28 of 43	1

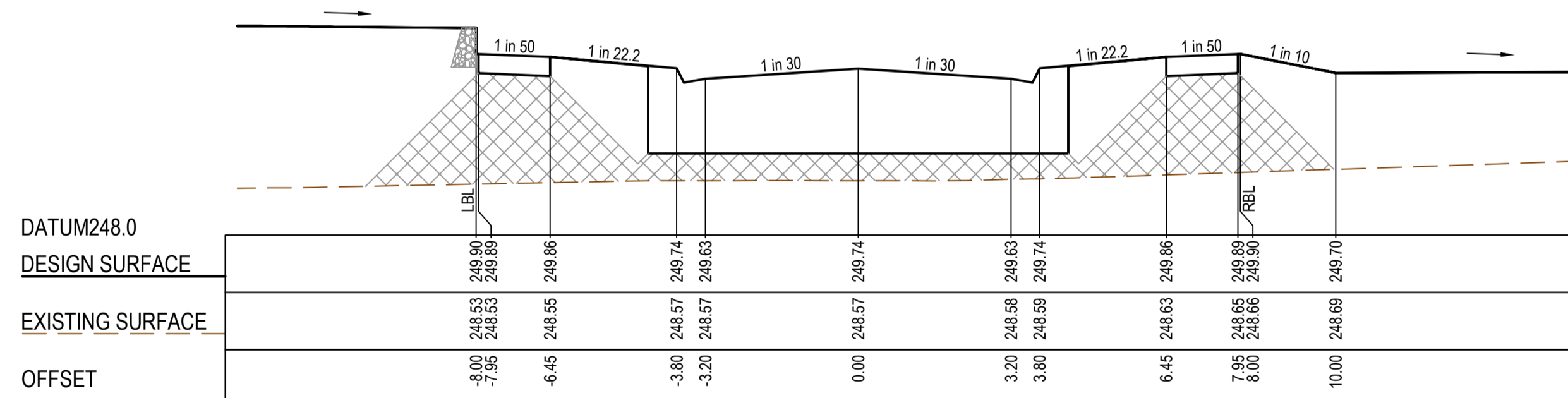
STRUCTURAL FILL REQUIRED UNDER PAVEMENT AND FOOTPATHS WHERE CONSTRUCTED ABOVE EXISTING SURFACE



CH 42.50

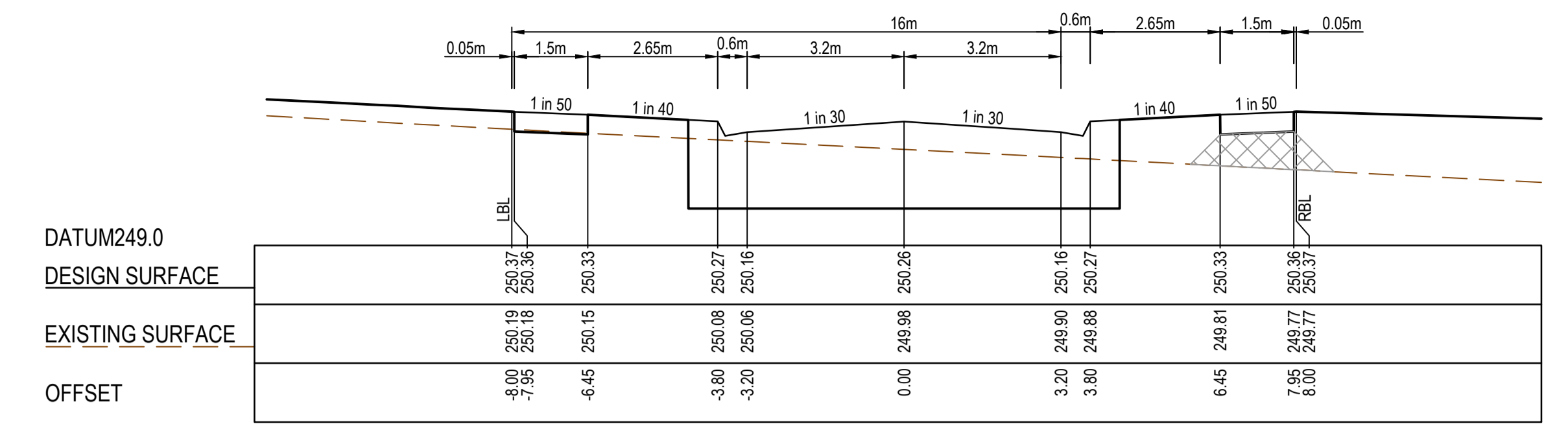


CH 30.00

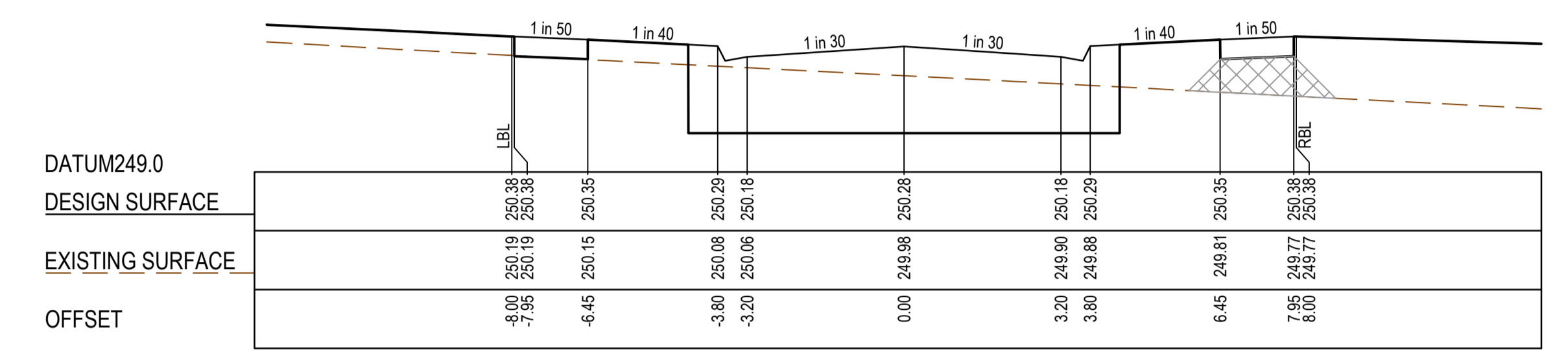


TPCH 11.80

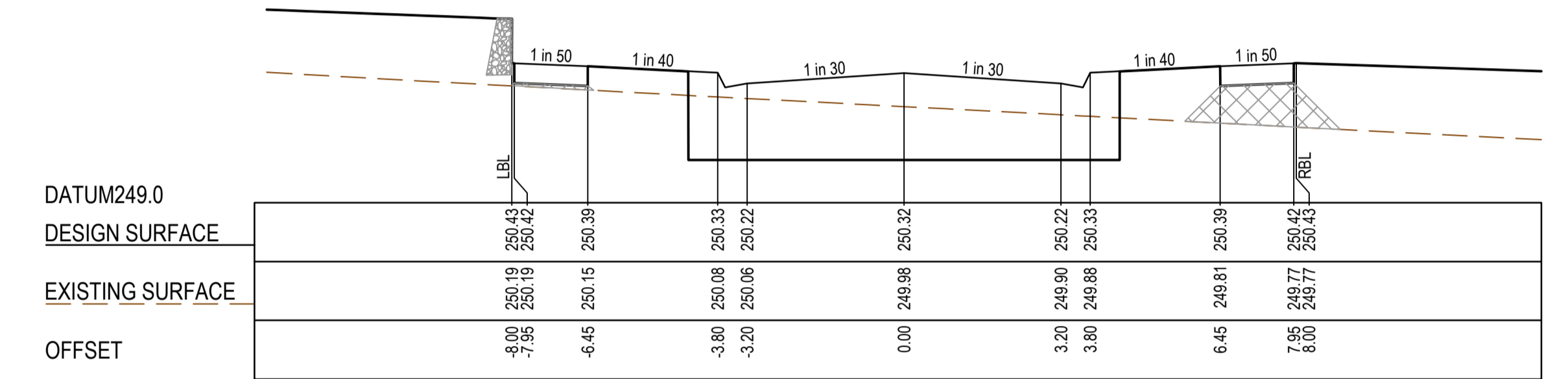
IGNEOUS WAY



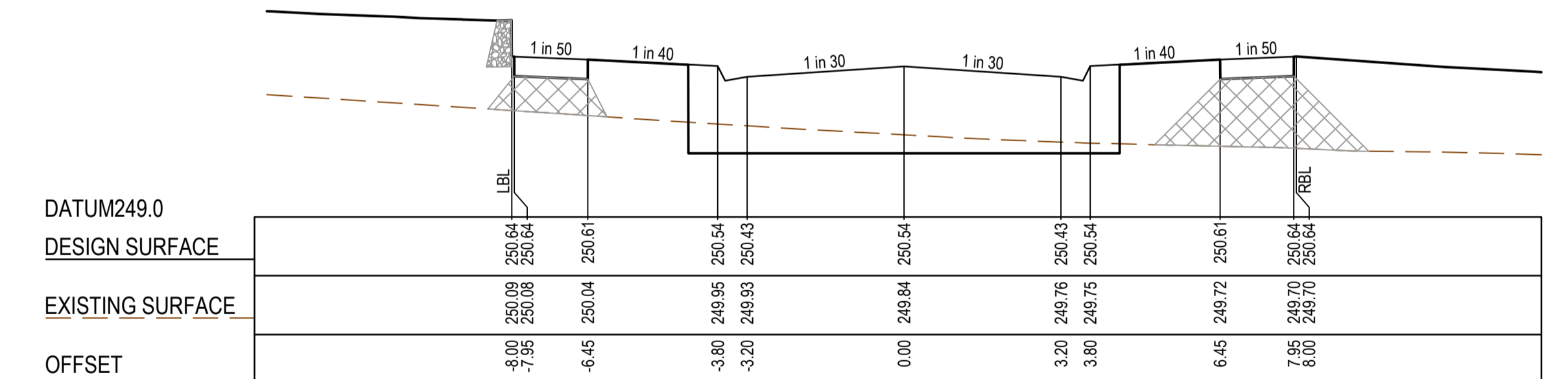
CH 42.89



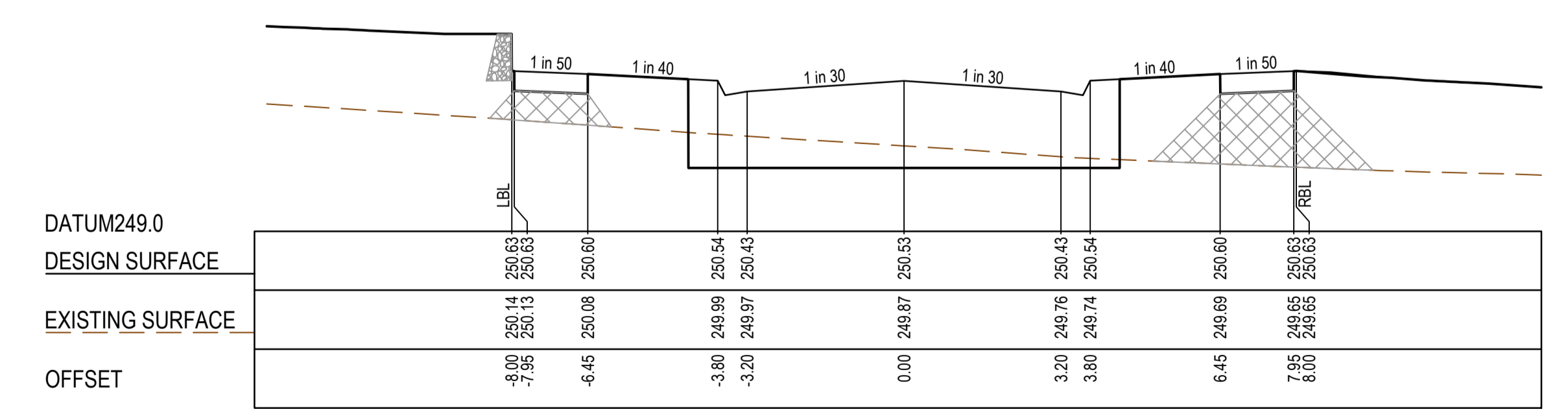
CH 41.52



TPCH 38.29



CREST CH 16.24



CH 13.25

**AS CONSTRUCTED PLANS**  
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Quality Management ISO 9001  
 OHS Management AS/NZS 4801  
 Environmental Management ISO 14001  
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PLAN OF SUB. NO.  
 PERMIT REF. NO.

**AS CONSTRUCTED**

0 1 2 4  
 0 0.5 1 2  
 Scale H1:100, V1:50  
 SCALE AS SHOWN AT 1

**SMEC**  
 Member of the Surlana Jurong Group  
 ABN 47 065 475 149  
 Collins Square, Tower 4, Level 20, 727 Collins St  
 Melbourne, VIC, 3008, Australia  
 03 9514 1500

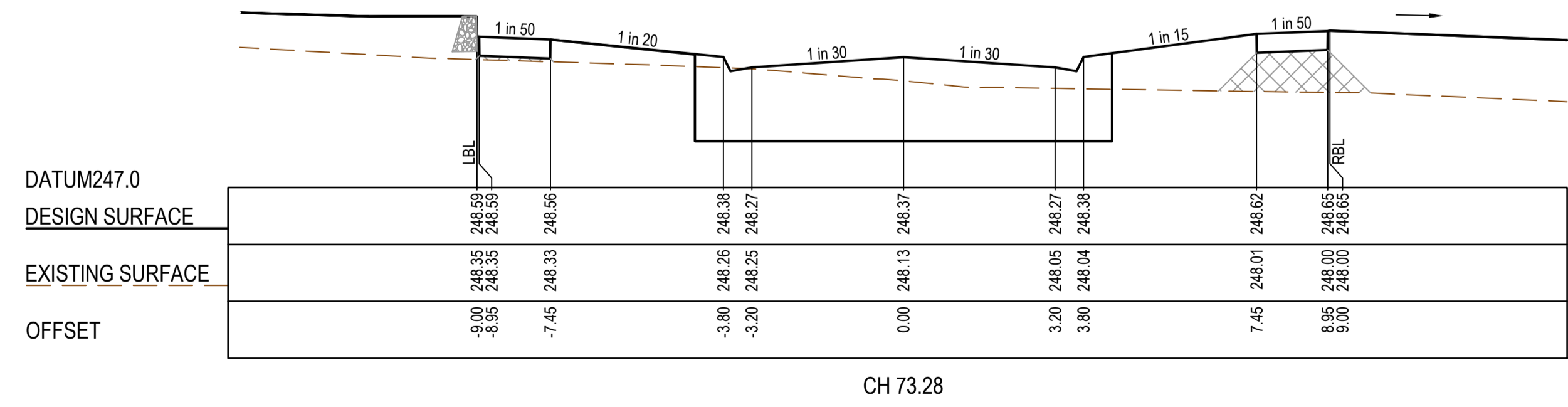
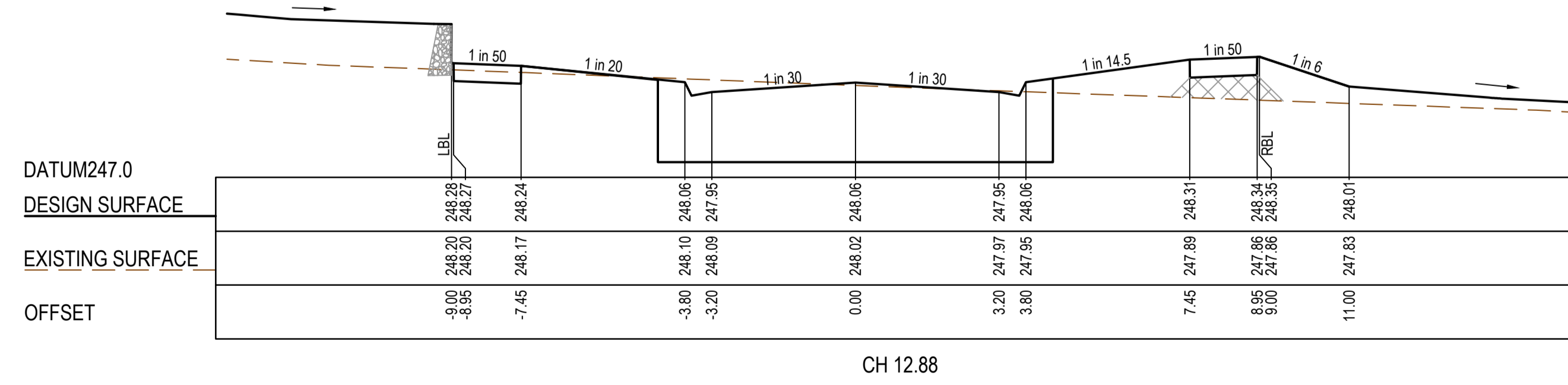
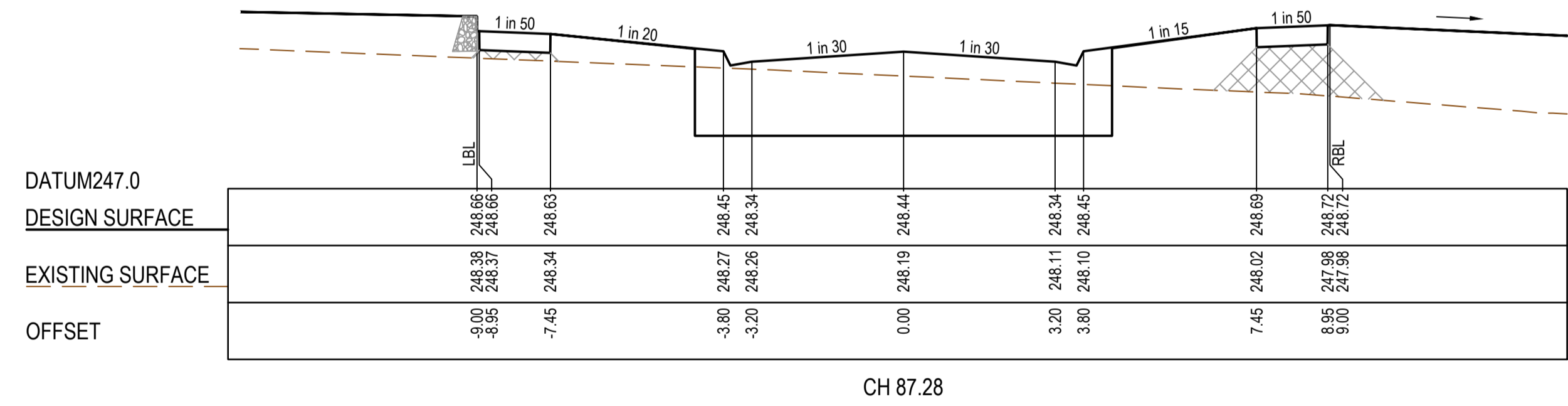
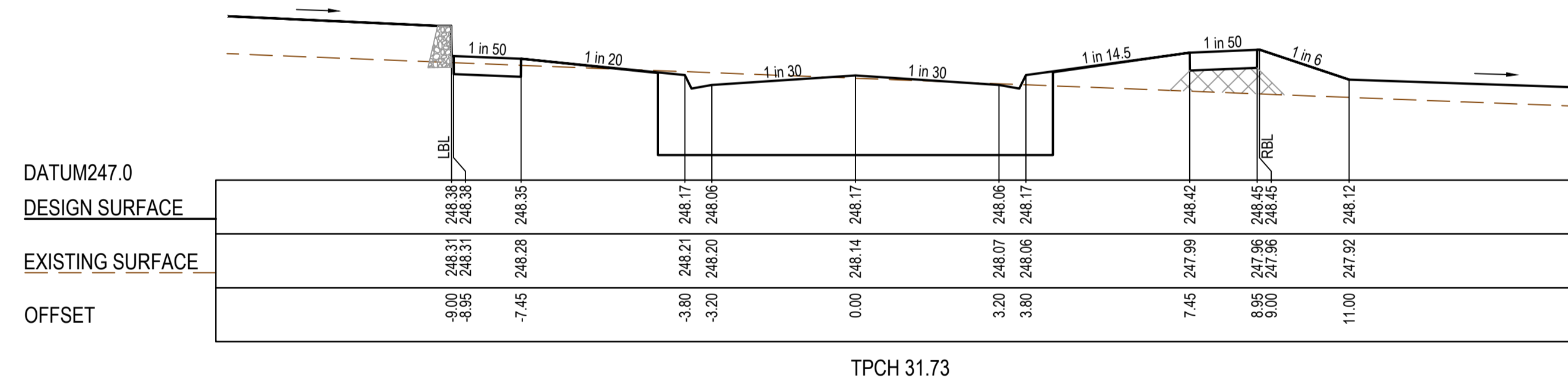
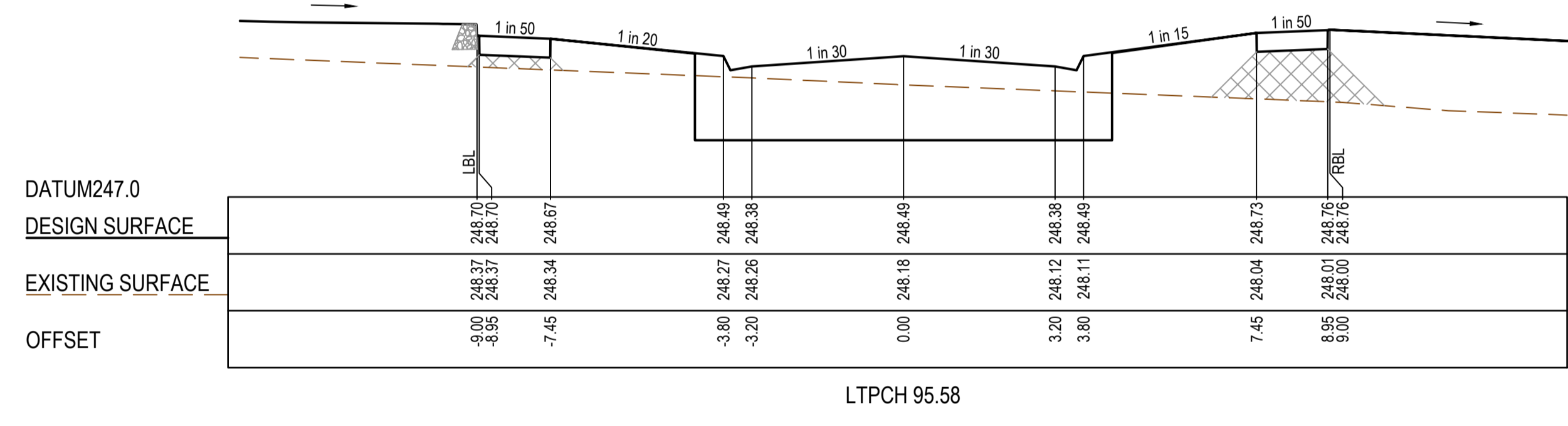
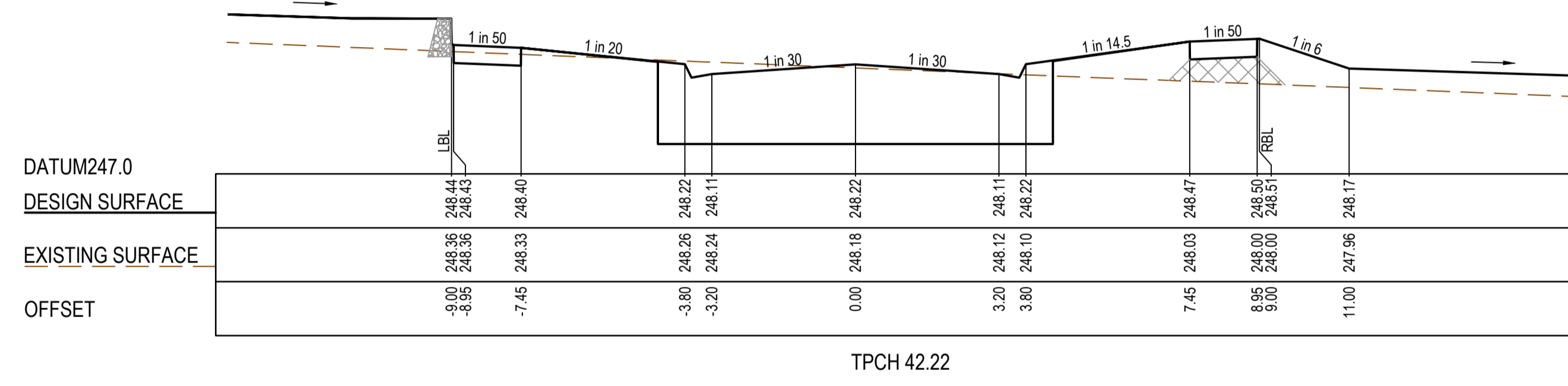
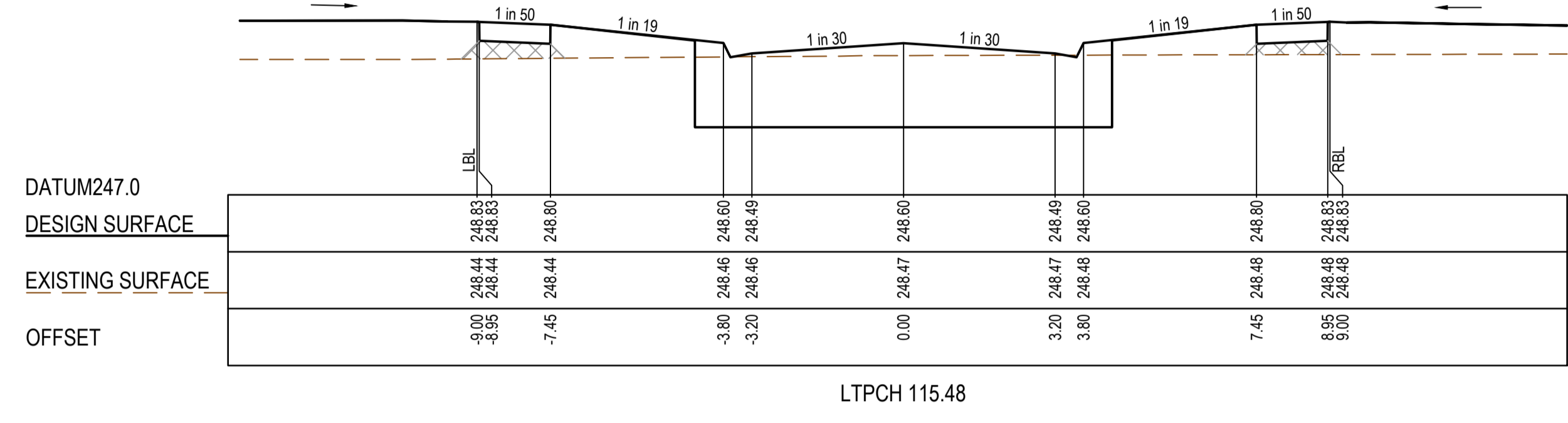
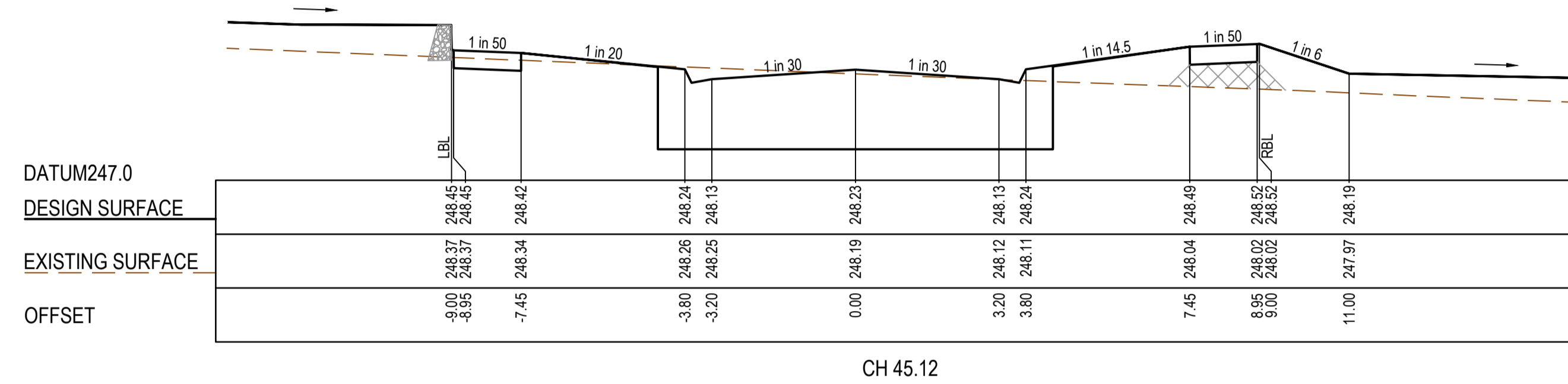
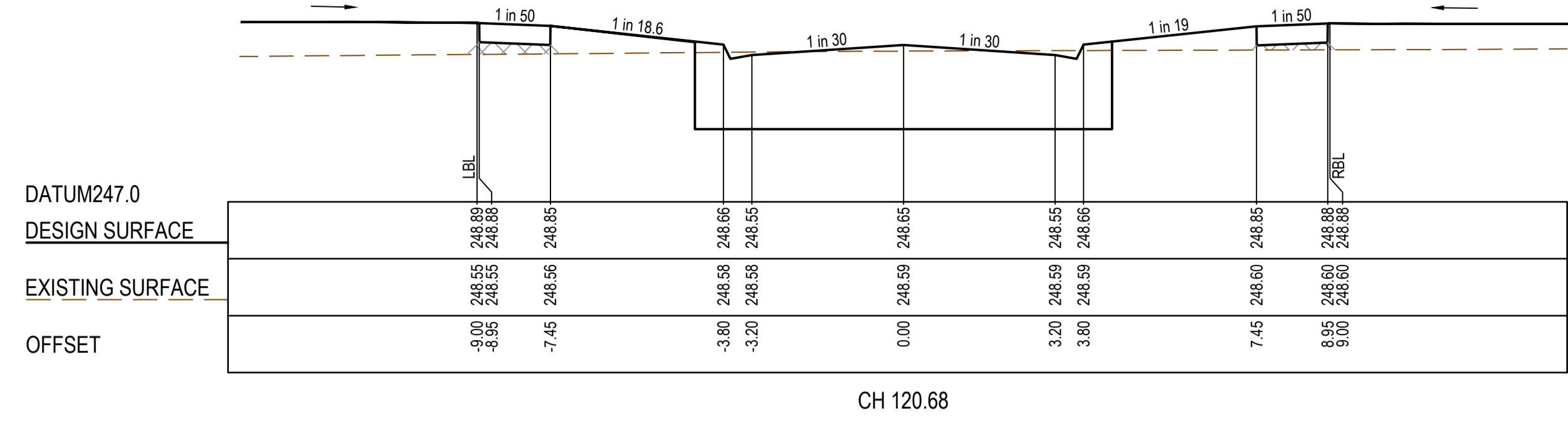
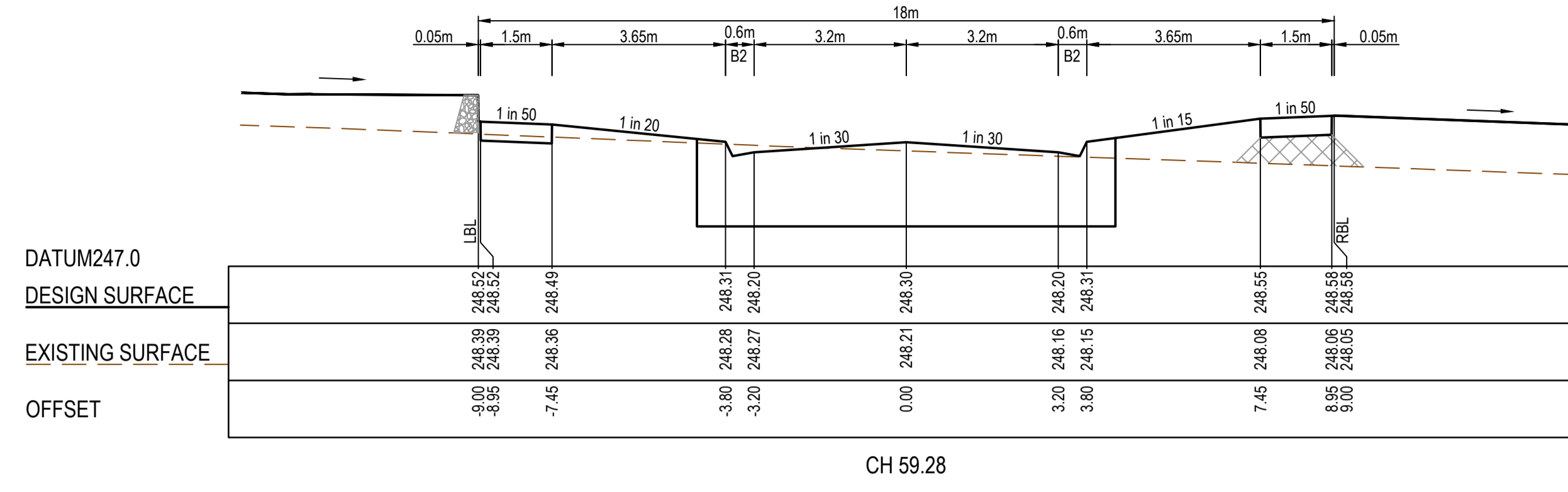
**mirvac**

Olivine Estate - Stage 22  
 Whittlesea City Council  
 Road and Drainage  
 Cross Sections: Igneous Way & Suffern Street

MELWAYS REF: 367 G11  
 PROJECT / DRAWING No: 1700E-022-257

SHEET No: 29 of 43  
 REVISION: 2

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



**AS CONSTRUCTED PLANS**  
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PLAN OF SUB. NO.  
 PERMIT REF. NO.  
**AS CONSTRUCTED**

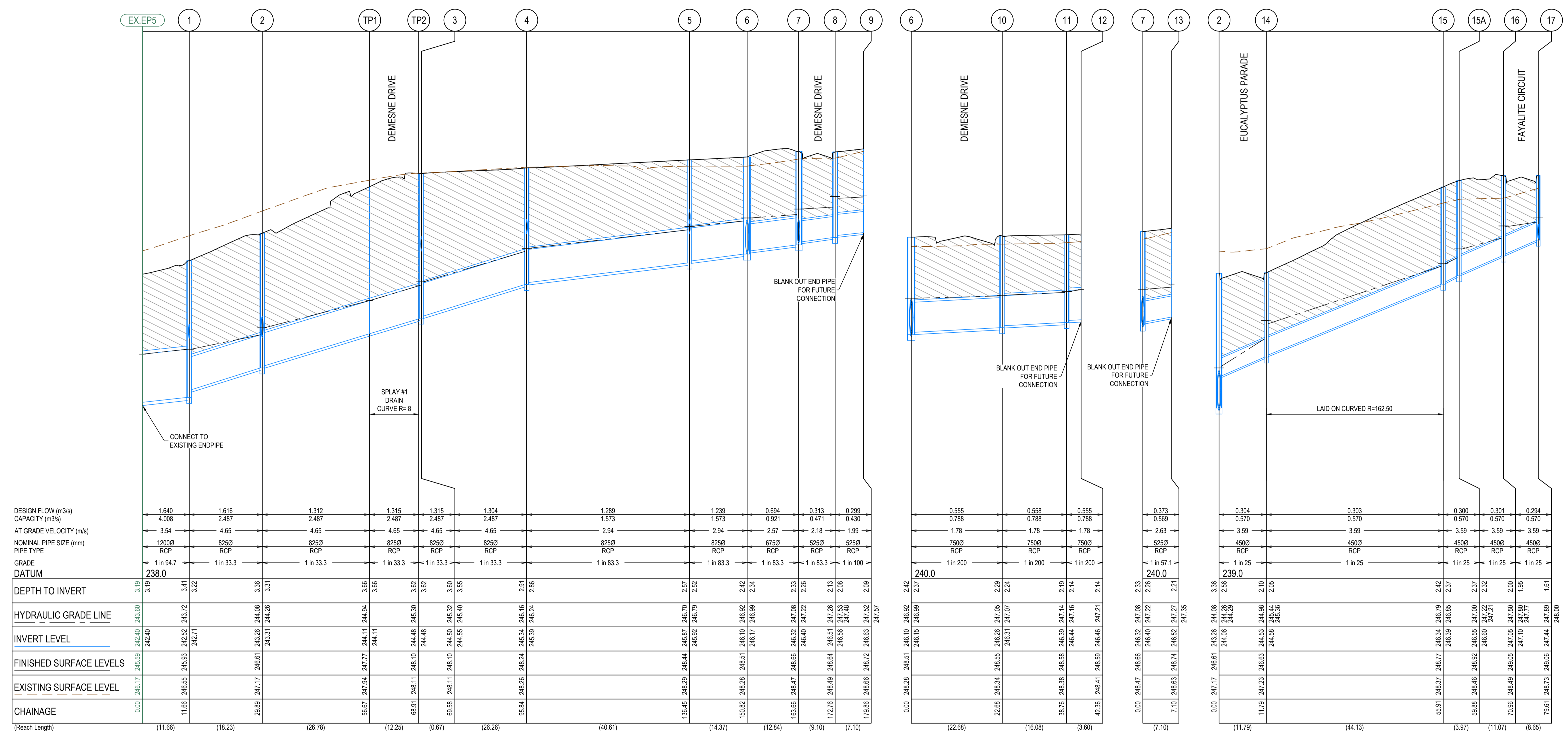
**SMEC**  
 Member of the Surlana Jurong Group  
 ABN 47 065 475 149  
 Collins Square, Tower 4, Level 20, 727 Collins St  
 Melbourne, VIC, 3008, Australia  
 03 9514 1500

**mirvac**

Olivine Estate - Stage 22  
 Whittlesea City Council  
 Road and Drainage  
 Cross Sections: Demesne Drive

MELWAYS REF	PROJECT / DRAWING No	SHEET No	REVISION
367 G11	1700E-022-258	30 of 43	2

**CRUSHED ROCK BACKFILL**  
 CRB INDICATES CRUSHED ROCK BACKFILL COMPACTED IN ACCORDANCE WITH COUNCIL STANDARDS & SPECIFICATIONS, CLASS 3 UNLESS SPECIFIED OTHERWISE



**AS CONSTRUCTED PLANS**

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

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**AS CONSTRUCTED**

PLAN OF SUB. NO.  
 PERMIT REF. NO.

0 5 10 20  
 0 0.5 1 2  
 Scale H1:500, V1:50  
 SCALE AS SHOWN AT A1

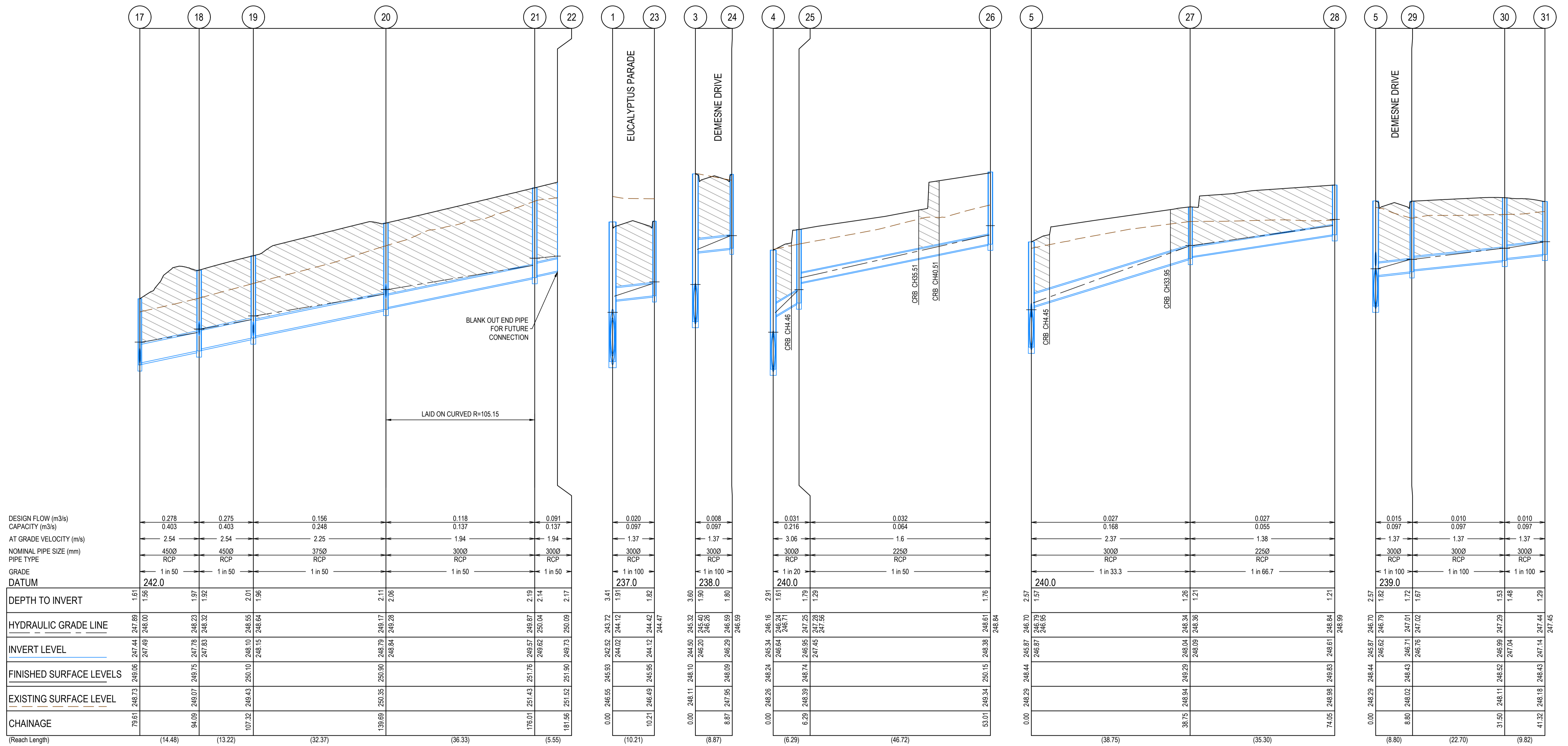
**SMEC**  
 Member of the Surlana Jurong Group  
 ABN 47 065 475 149  
 Collins Square, Tower 4, Level 20, 727 Collins St  
 Melbourne, VIC, 3008, Australia  
 03 9514 1500

**mirvac**

Olivine Estate - Stage 22  
 Whittlesea City Council  
 Road and Drainage  
 Drainage Longitudinal Sections - 1

MELWAYS REF <b>367 G11</b>	PROJECT / DRAWING No. <b>1700E-022-301</b>	SHEET No. <b>31 of 43</b>	REVISION <b>3</b>
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**CRUSHED ROCK BACKFILL**  
 CRB INDICATES CRUSHED ROCK BACKFILL COMPACTED IN ACCORDANCE WITH COUNCIL STANDARDS & SPECIFICATIONS, CLASS 3 UNLESS SPECIFIED OTHERWISE



**AS CONSTRUCTED PLANS**

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**AS CONSTRUCTED**

PLAN OF SUB. NO.  
 PERMIT REF. NO.  
 Scale: 0 5 10 20  
 0 0.5 1 2  
 Scale H1:500, V1:50  
 SCALE AS SHOWN AT 1

**SMEC**  
 Member of the Surlana Jurong Group  
 ABN 47 065 475 149  
 Collins Square, Tower 4, Level 20, 727 Collins St  
 Melbourne, VIC, 3008, Australia  
 03 9514 1500

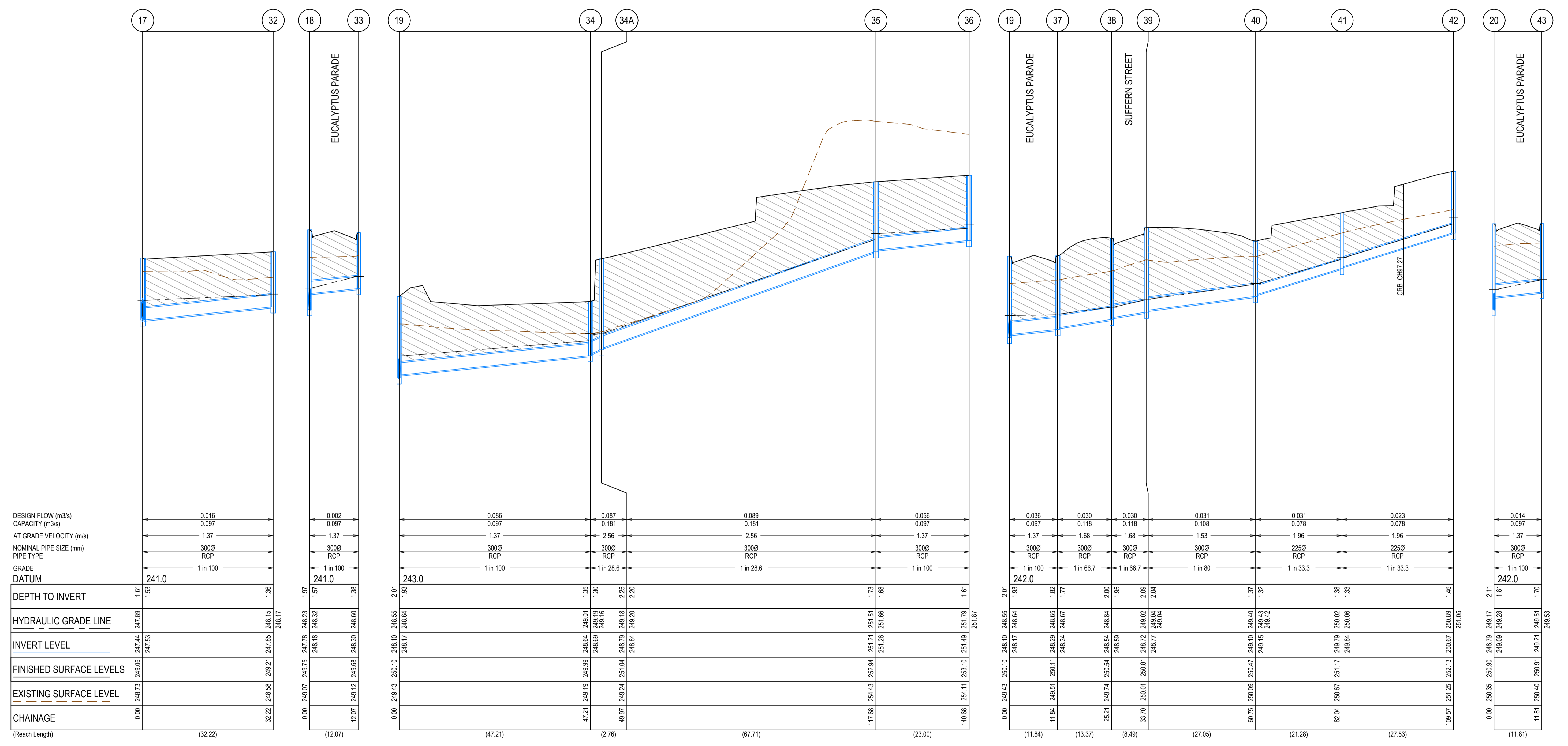


Olivine Estate - Stage 22  
 Whittlesea City Council  
 Road and Drainage  
 Drainage Longitudinal Sections - 2

MELWAYS REF <b>367 G11</b>	PROJECT / DRAWING No. <b>1700E-022-302</b>	SHEET No. <b>32 of 43</b>	REVISION <b>2</b>
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**CRUSHED ROCK BACKFILL**  
 CRB INDICATES CRUSHED ROCK BACKFILL COMPACTED IN ACCORDANCE WITH COUNCIL STANDARDS & SPECIFICATIONS, CLASS 3 UNLESS SPECIFIED OTHERWISE



**AS CONSTRUCTED PLANS**

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**AS CONSTRUCTED**

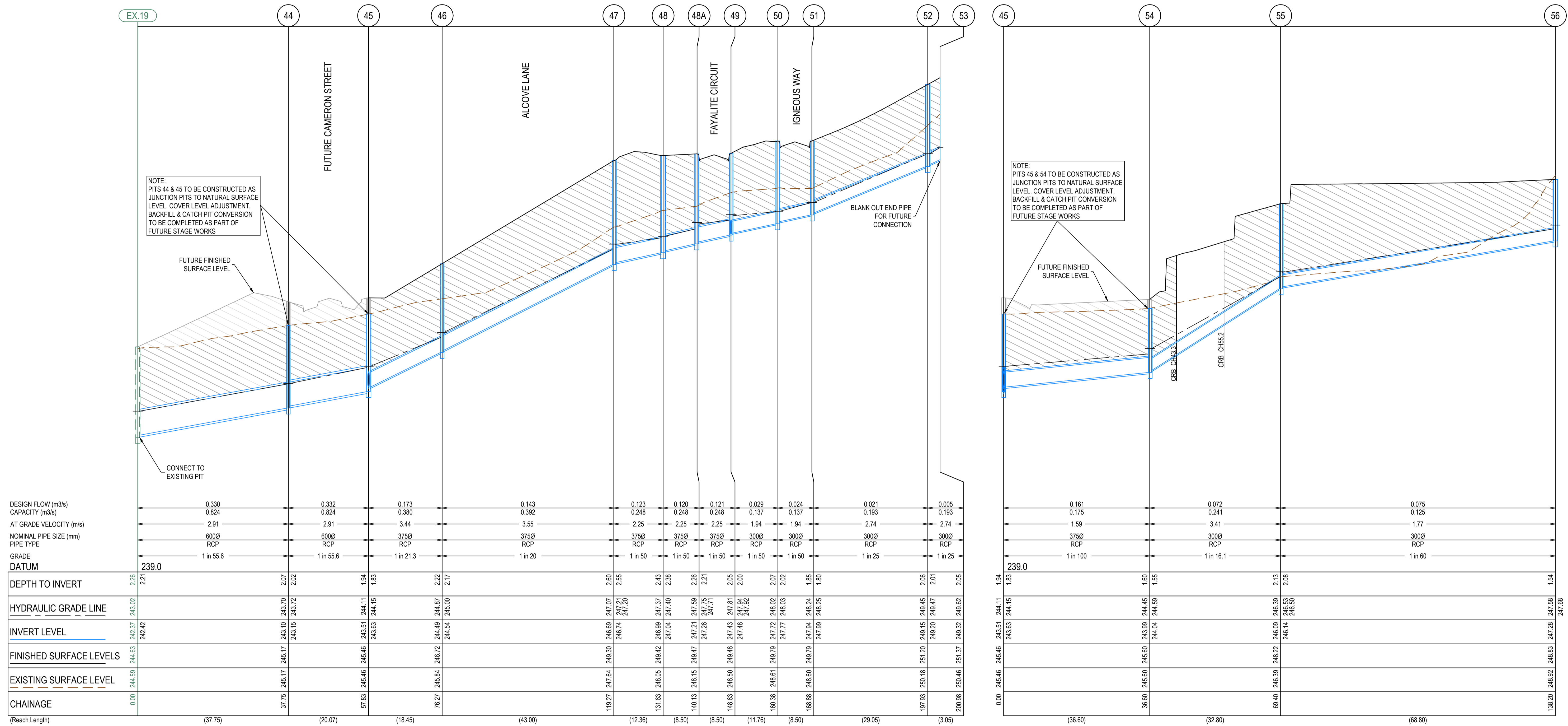
PLAN OF SUB. NO.	
PERMIT REF. NO.	
Scale H:1:500, V:1:50	
SCALE AS SHOWN AT A1	



Olivine Estate - Stage 22  
 Whittlesea City Council  
 Road and Drainage  
 Drainage Longitudinal Sections - 3

MELWAYS REF	PROJECT / DRAWING No	SHEET No	REVISION
367 G11	1700E-022-303	33 of 43	2

**CRUSHED ROCK BACKFILL**  
 CRB INDICATES CRUSHED ROCK BACKFILL COMPACTED IN ACCORDANCE WITH COUNCIL STANDARDS & SPECIFICATIONS, CLASS 3 UNLESS SPECIFIED OTHERWISE



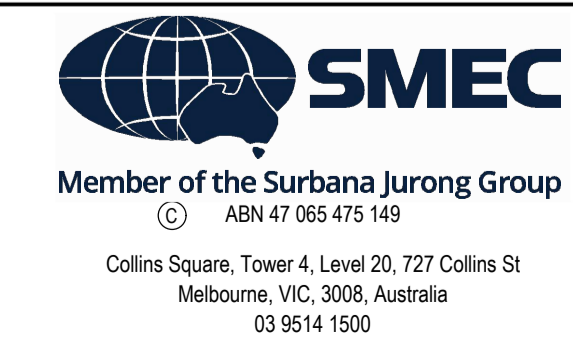
**AS CONSTRUCTED PLANS**

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**AS CONSTRUCTED**

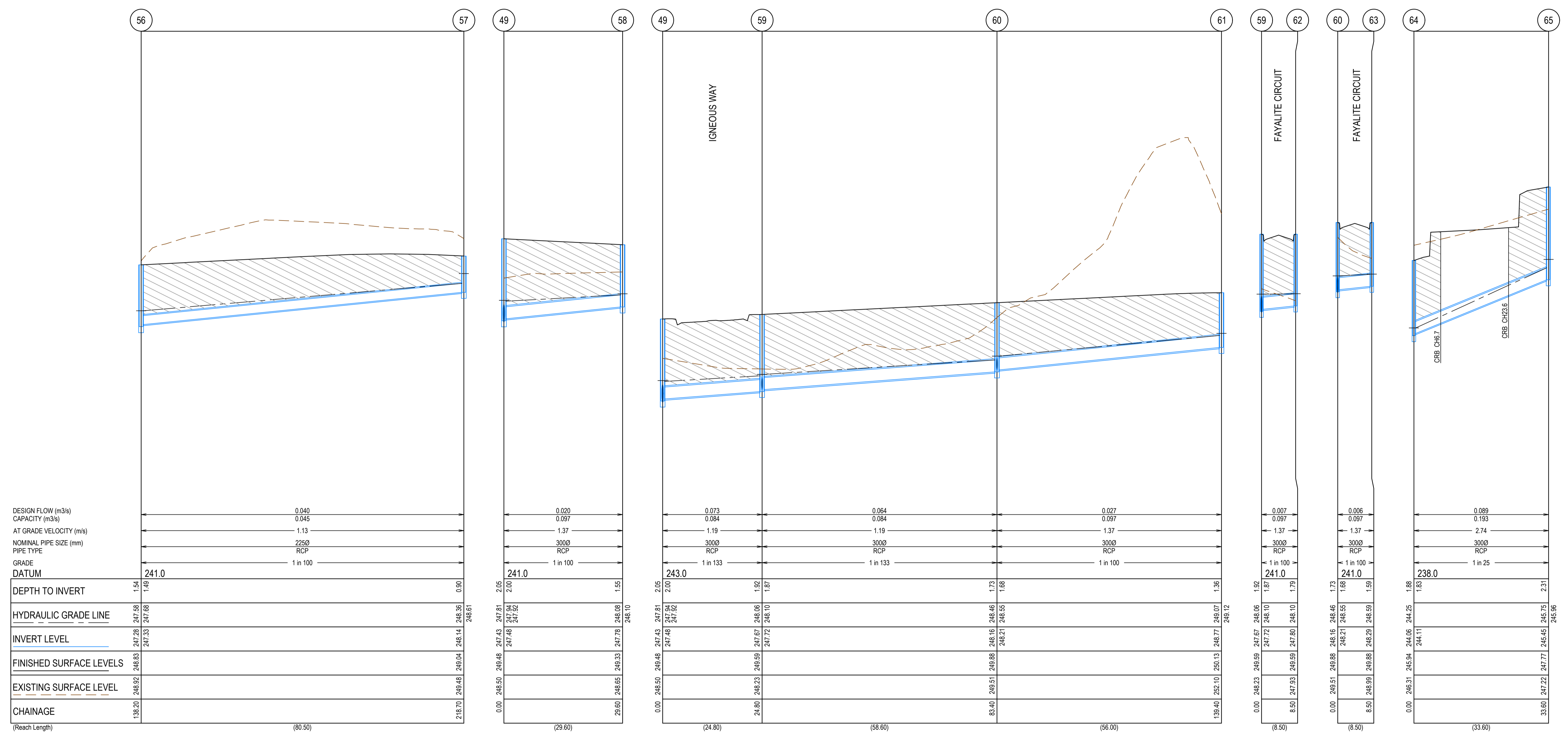
PLAN OF SUB. NO.	
PERMIT REF. NO.	
Scale H1:500, V1:50	SCALE AS SHOWN AT A1



Olivine Estate - Stage 22  
 Whittlesea City Council  
 Road and Drainage  
 Drainage Longitudinal Sections - 4

MELWAYS REF	PROJECT / DRAWING No	SHEET No	REVISION
367 G11	1700E-022-304	34 of 43	3

**CRUSHED ROCK BACKFILL**  
 CRB INDICATES CRUSHED ROCK BACKFILL COMPACTED IN ACCORDANCE WITH COUNCIL STANDARDS & SPECIFICATIONS, CLASS 3 UNLESS SPECIFIED OTHERWISE



**AS CONSTRUCTED PLANS**

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**AS CONSTRUCTED**

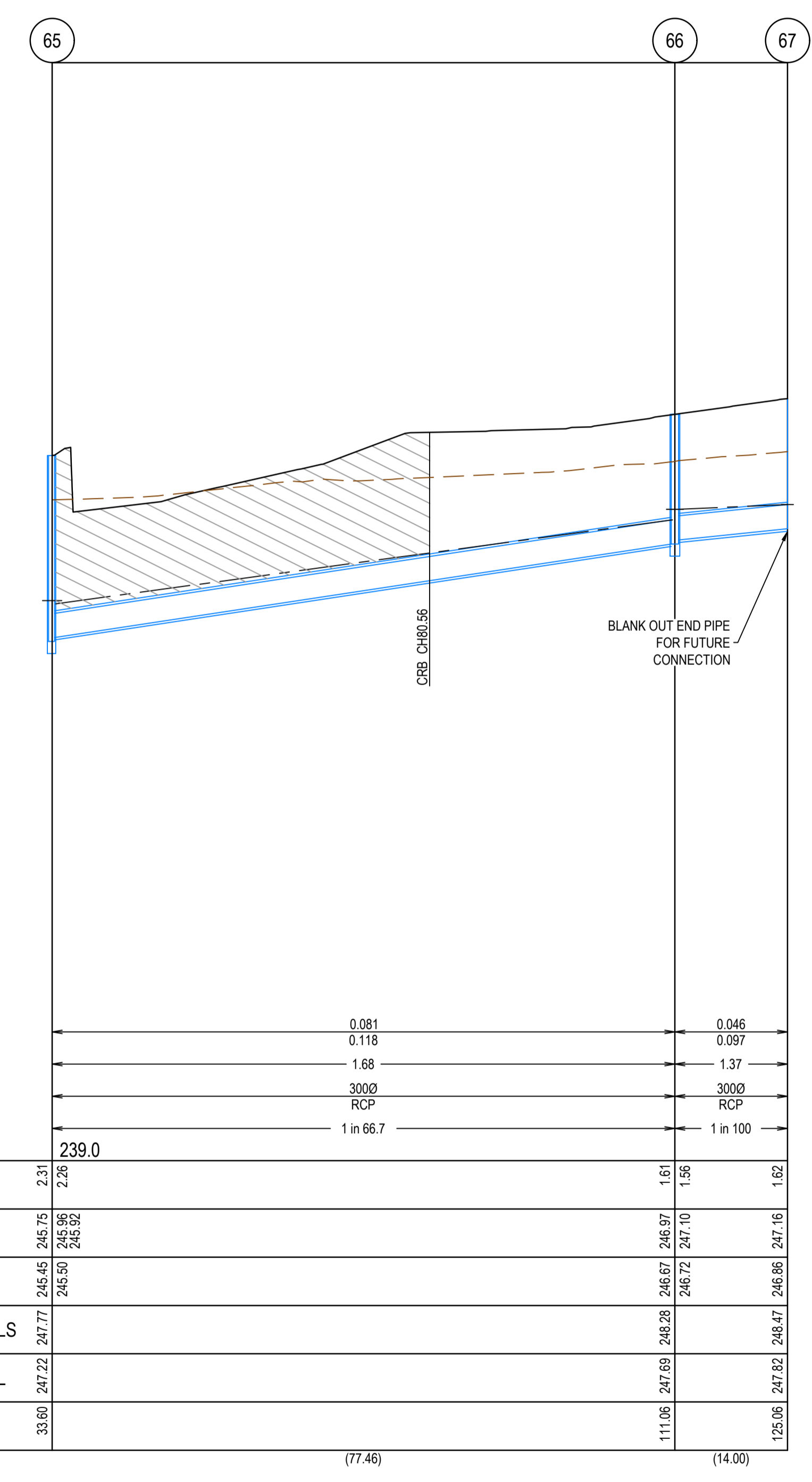
PLAN OF SUB. NO.	
PERMIT REF. NO.	
Scale H:1,500, V:1,50	
SCALE AS SHOWN AT 1	



Olivine Estate - Stage 22  
 Whittlesea City Council  
 Road and Drainage  
 Drainage Longitudinal Sections - 5

MELWAYS REF	PROJECT / DRAWING No	SHEET No	REVISION
367 G11	1700E-022-305	35 of 43	3

**CRUSHED ROCK BACKFILL**  
 CRB INDICATES CRUSHED ROCK BACKFILL COMPACTED IN ACCORDANCE WITH COUNCIL STANDARDS & SPECIFICATIONS, CLASS 3 UNLESS SPECIFIED OTHERWISE



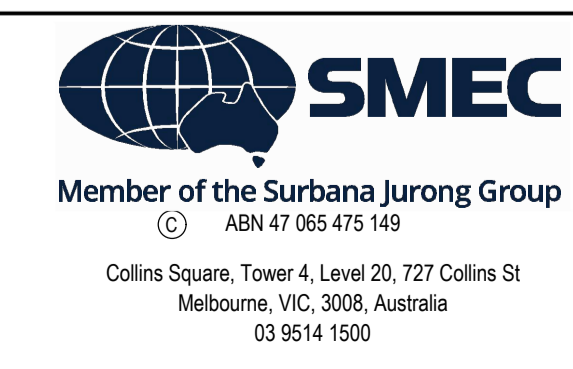
**AS CONSTRUCTED PLANS**

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**AS CONSTRUCTED**

PLAN OF SUB. NO.	
PERMIT REF. NO.	
Scale H1:500, V1:50	SCALE AS SHOWN AT A1



Olivine Estate - Stage 22  
 Whittlesea City Council  
 Road and Drainage  
 Drainage Longitudinal Sections - 6

MELWAYS REF	PROJECT / DRAWING No	SHEET No	REVISION
367 G11	1700E-022-306	36 of 43	1

PIT NUMBER	TYPE	PIT SCHEDULE										REMARKS	
		INTERNAL		INLET		OUTLET		F.S.L.	DEPTH	STANDARD DRAWING			
		WIDTH (mm)	LENGTH (mm)	DIAMETER (mm)	INV R.L. (m)	DIAMETER (mm)	INV R.L. (m)						
Ex.EP5	ENDPIPE			1200	242.4			245.59	3.19				CONNECT TO EXISTING ENDPIPE
1	DOUBLE SIDE ENTRY PIT	1500	900	825	242.71	1200	242.52	245.93	3.41	EDCM 602 & 607			PIT TO BE HAUNCHED TO 600x900 COVER
				300	244.02								
2	SIDE ENTRY PIT	1200	900	825	243.31	825	243.26	246.62	3.36	EDCM 601 & 607			PIT TO BE HAUNCHED TO 600x900 COVER
				450	244.06								
3	DOUBLE SIDE ENTRY PIT	1200	900	825	244.55	825	244.5	248.1	3.6	EDCM 602 & 607			PIT TO BE HAUNCHED TO 600x900 COVER
				300	246.2								
4	SIDE ENTRY PIT	1200	900	825	245.39	825	245.34	248.24	2.91	EDCM 601 & 607			PIT TO BE HAUNCHED TO 600x900 COVER
				300	246.64								
5	SIDE ENTRY PIT	1200	900	825	245.92	825	245.87	248.44	2.57	EDCM 601 & 607			PIT TO BE HAUNCHED TO 600x900 COVER
				300	246.87								
				300	246.62								
6	SIDE ENTRY PIT	1200	1600	675	246.17	825	246.1	248.51	2.42	EDCM 601 & VR SD 1023			PIT TO BE HAUNCHED TO 600x900 COVER
				750	246.15								
7	SIDE ENTRY PIT	1500	900	525	246.4	675	246.32	248.66	2.33	EDCM 601 & 607			PIT TO BE HAUNCHED TO 600x900 COVER. PROVIDE CLASS D BOLT DOWN LID
				525	246.4								
8	SIDE ENTRY PIT	900	900	525	246.56	525	246.51	248.64	2.13	EDCM 601 & 607			PIT TO BE HAUNCHED TO 600x900 COVER. PROVIDE CLASS D BOLT DOWN LID
9	ENDPIPE					525	246.63	248.72	2.09				BLANK OFF ENDPIPE
10	DOUBLE SIDE ENTRY PIT	1050	900	750	246.31	750	246.26	248.55	2.29	EDCM 602 & 607			PIT TO BE HAUNCHED TO 600x900 COVER
11	SIDE ENTRY PIT	1050	900	750	246.44	750	246.39	248.58	2.19	EDCM 601 & 607			PIT TO BE HAUNCHED TO 600x900 COVER
12	ENDPIPE					750	246.46	248.59	2.14				BLANK OFF ENDPIPE
13	ENDPIPE					525	246.52	248.74	2.21				BLANK OFF ENDPIPE
14	SIDE ENTRY PIT	750	900	450	244.58	450	244.53	246.63	2.1	EDCM 601 & 607			PIT TO BE HAUNCHED TO 600x900 COVER
15	SIDE ENTRY PIT	900	900	450	246.39	450	246.34	248.77	2.43	EDCM 601 & 607			PIT TO BE HAUNCHED TO 600x900 COVER
15A	JUNCTION PIT	900	900	450	246.6	450	246.55	248.93	2.37	EDCM 607			PIT TO BE HAUNCHED TO 600x900 COVER
16	DOUBLE SIDE ENTRY PIT	900	900	450	247.1	450	247.05	249.05	2.01	EDCM 602 & 607			PIT TO BE HAUNCHED TO 600x900 COVER
17	DOUBLE SIDE ENTRY PIT	600	900	450	247.49	450	247.44	249.06	1.62	EDCM 602 & 605			
				300	247.53								
18	SIDE ENTRY PIT	750	900	450	247.83	450	247.78	249.75	1.97	EDCM 601 & 607			PIT TO BE HAUNCHED TO 600x900 COVER
				300	248.2								
19	SIDE ENTRY PIT	750	900	375	248.15	450	248.1	250.1	2.01	EDCM 601 & 607			PIT TO BE HAUNCHED TO 600x900 COVER
				300	248.18								
				300	248.18								
20	SIDE ENTRY PIT	600	900	300	248.84	375	248.79	250.9	2.11	EDCM 601 & 605			
				300	249.11								
21	SIDE ENTRY PIT	600	900	300	249.62	300	249.57	251.76	2.19	EDCM 601 & 605			
22	ENDPIPE					300	249.73	251.9	2.17				BLANK OFF ENDPIPE
23	DOUBLE SIDE ENTRY PIT	600	900			300	244.13	245.95	1.82	EDCM 602 & 605			
24	SIDE ENTRY PIT	600	900			300	246.29	248.09	1.8	EDCM 601 & 605			
25	JUNCTION PIT	900	600	225	247.45	300	246.95	248.75	1.8	EDCM 605			
26	JUNCTION PIT	900	600			225	248.38	250.15	1.76	EDCM 605			
27	JUNCTION PIT	900	600	225	248.09	300	248.04	249.29	1.26	EDCM 605			
28	JUNCTION PIT	600	900			225	248.62	249.83	1.21	EDCM 605			
29	SIDE ENTRY PIT	600	900	300	246.76	300	246.71	248.43	1.72	EDCM 601 & 605			
30	JUNCTION PIT	600	900	300	247.04	300	246.99	248.52	1.53	EDCM 605			
31	DOUBLE SIDE ENTRY PIT	600	900			300	247.14	248.43	1.29	EDCM 602 & 605			
32	SIDE ENTRY PIT	600	900			300	247.85	249.21	1.36	EDCM 601 & 605			
33	SIDE ENTRY PIT	600	900			300	248.3	249.68	1.38	EDCM 601 & 605			
34	JUNCTION PIT	600	900	300	248.69	300	248.64	249.99	1.35	EDCM 605			
34A	JUNCTION PIT	600	900	300	248.84	300	248.79	251.04	2.25	EDCM 605			
35	JUNCTION PIT	900	600	300	251.26	300	251.21	252.94	1.73	EDCM 605			
36	JUNCTION PIT	600	900			300	251.49	253.1	1.61	EDCM 605			PROVIDE 300 DIA BLOCKOUT AT IL 251.54 ON EASTERN WALL
37	SIDE ENTRY PIT	600	900	300	248.34	300	248.29	250.11	1.82	EDCM 601 & 605			
38	SIDE ENTRY PIT	600	900	300	248.59	300	248.54	250.54	2	EDCM 602 & 605			
39	DOUBLE SIDE ENTRY PIT	600	900	300	248.77	300	248.72	250.81	2.09	EDCM 605			
40	JUNCTION PIT	600	900	225	249.16	300	249.11	250.47	1.37	EDCM 605			
41	JUNCTION PIT	600	900	225	249.84	225	249.79	251.17	1.38	EDCM 605			
42	JUNCTION PIT	900	600			225	250.67	252.13	1.46	EDCM 605			
43	SIDE ENTRY PIT	600	900			300	249.21	250.91	1.7	EDCM 601 & 605			
Ex.19	JUNCTION PIT	900	900	600	242.42			244.63					CONNECT INTO EXISTING PIT
44	JUNCTION PIT	600	900	600	243.15	600	243.1	245.17	2.07	EDCM 605			CONSTRUCT PIT TO EXISTING LEVEL. PIT TO BE RAISED TO ULTIMATE LEVEL WITH CATCH PIT TO BE CONSTRUCTED AS PART OF FUTURE WORKS. PROVIDE 300 DIA BLOCKOUT AT IL 243.26 ON WESTERN WALL
45	JUNCTION PIT	600	900	375	243.63	600	243.51	245.46	1.94	EDCM 605			CONSTRUCT PIT TO EXISTING LEVEL. PIT TO BE RAISED TO ULTIMATE LEVEL WITH CATCH PIT TO BE CONSTRUCTED AS PART OF FUTURE WORKS.
				375	243.63								
46	GRATED PIT	600	900	375	244.54	375	244.49	246.72	2.22	EDCM 605			GRATED JUNCTION PIT LID. REFER TO DETAIL
47	GRATED PIT	600	900	375	246.74	375	246.69	249.3	2.6	EDCM 605			GRATED JUNCTION PIT LID. REFER TO DETAIL
48	SIDE ENTRY PIT	600	900	375	247.04	375	246.99	249.42	2.43	EDCM 601 & 605			
48A	JUNCTION PIT	600	900	375	247.26	375	247.21	249.47	2.26	EDCM 605			
49	SIDE ENTRY PIT	600	900	300	247.48	375	247.43	249.48	2.05	EDCM 601 & 605			
				300	247.5								
				300	247.5								
50	SIDE ENTRY PIT	600	900	300	247.77	300	247.72	249.79	2.07	EDCM 601 & 605			
51	SIDE ENTRY PIT	600	900	300	247.99	300	247.94	249.79	1.85	EDCM 601 & 605			

52	SIDE ENTRY PIT	600	900	300	249.2	300	249.15	251.2	2.06	EDCM 601 & 605			
53	ENDPIPE					300	249.32	251.37	2.05				BLANK OFF ENDPIPE
54	JUNCTION PIT	600	900	300	244.04	375	243.99	245.6	1.6	EDCM 605			CONSTRUCT PIT TO EXISTING LEVEL. PIT TO BE RAISED TO ULTIMATE LEVEL WITH CATCH PIT TO BE CONSTRUCTED AS PART OF FUTURE WORKS. PROVIDE 375 DIA BLOCKOUT AT IL 244.04 ON WESTERN WALL
				375	244.04								
55	JUNCTION PIT	900	600	300	246.14	300	246.09	248.22	2.13	EDCM 605			
56	JUNCTION PIT	600	900	225	247.34	300	247.29	248.83	1.54	EDCM 605			
57	JUNCTION PIT	600	900			225	248.14	249.04	0.9	EDCM 605			
58	SIDE ENTRY PIT	600	900			300	247.78	249.33	1.55	EDCM 601 & 605			
59	SIDE ENTRY PIT	600	900	300	247.72	300	247.67	249.59	1.92	EDCM 601 & 605			
				300	247.74								
60	SIDE ENTRY PIT	600	900	300	248.21	300	248.16	249.88	1.73	EDCM 601 & 605			
				300	248.23								
61	JUNCTION PIT	600	900			300	248.77	250.13	1.37	EDCM 605			
62	SIDE ENTRY PIT	600	900			300	247.8	249.59	1.79	EDCM 601 & 605			
63	SIDE ENTRY PIT	600	900			300	248.29	249.88	1.59	EDCM 601 & 605			
64	JUNCTION PIT	600	900	300	244.11			245.94		EDCM 601 & 605			CATCH PIT TO BE CONSTRUCTED AS PART OF FUTURE WORKS. PROVIDE 300 DIA BLOCKOUT AT IL 244.11 ON EASTERN WALL
65	JUNCTION PIT	600	900	300	245.5	300	245.45	247.77	2.31	EDCM 605			
66	JUNCTION PIT	900	600	300	246.72	300	246.67	248.28	1.61	EDCM 605			
67	ENDPIPE					300	246.86	248.47	1.62				BLANK OFF ENDPIPE

### AS CONSTRUCTED PLANS

The purpose of these as-constructed plans is to update the design drawings to show significant changes which occurred during construction. Note that the levels shown on these plans are design levels, and have not been verified by survey. All information shown on these plans should be verified on site. SMEC Australia Pty Ltd accept no responsibility for loss or damages resulting from the inappropriate usage of these plans.

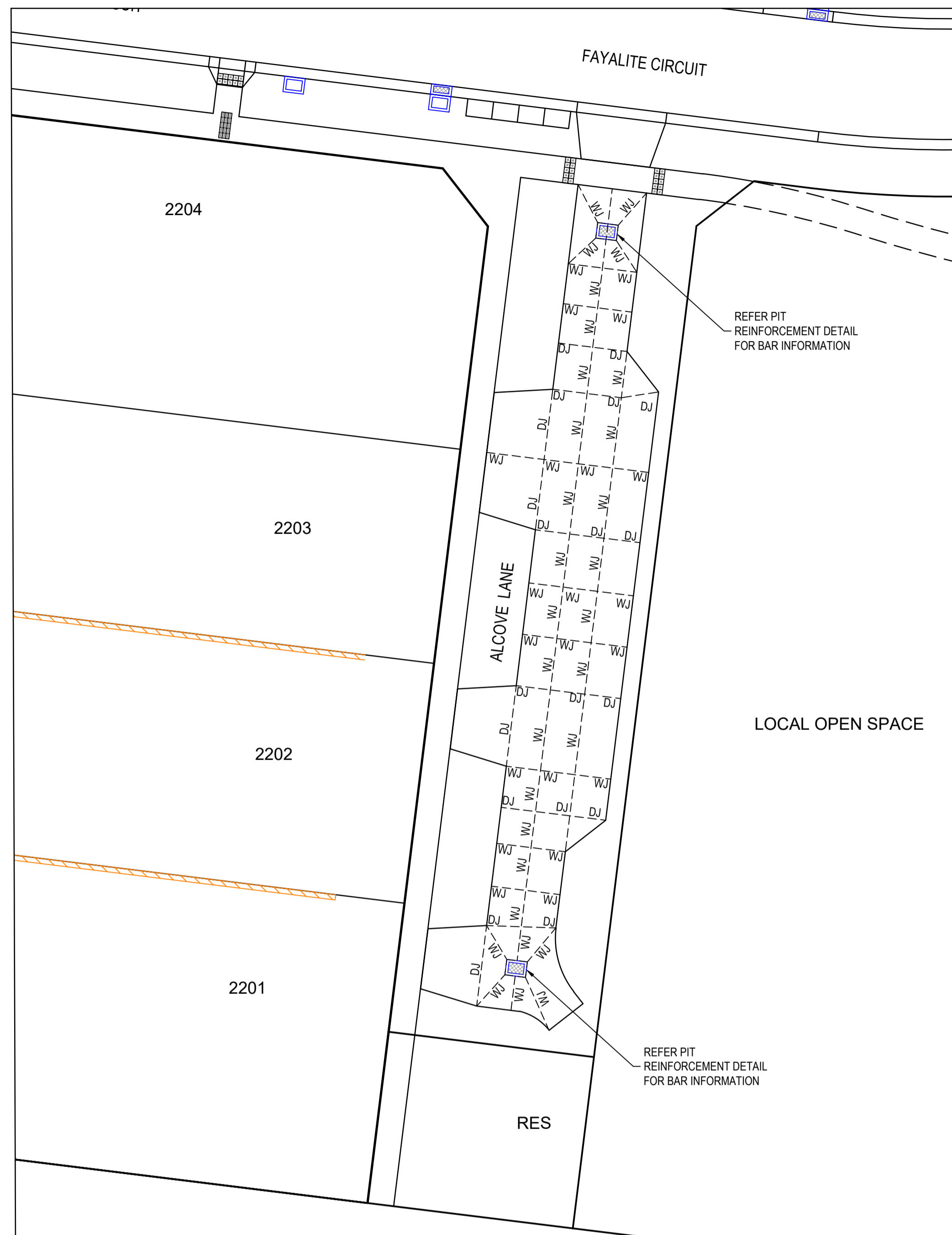


PLAN OF SUB. NO.  
PERMIT REF. NO.

**AS CONSTRUCTED**

SCALE AS SHOWN AT A1

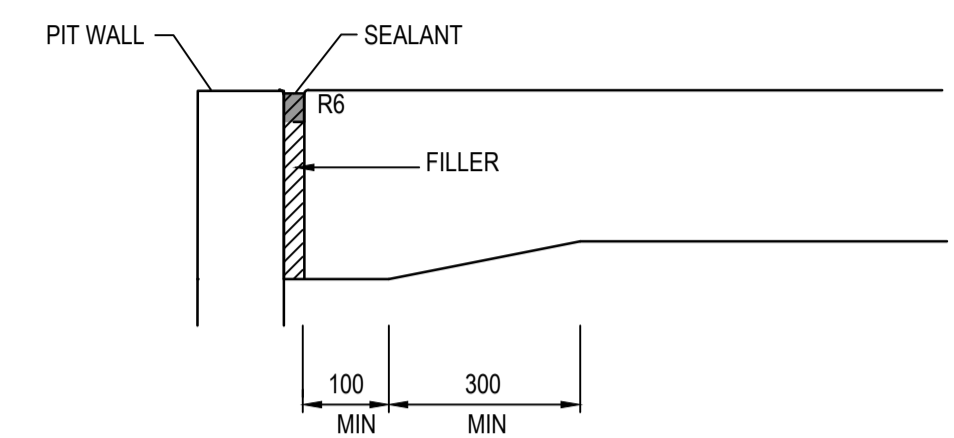




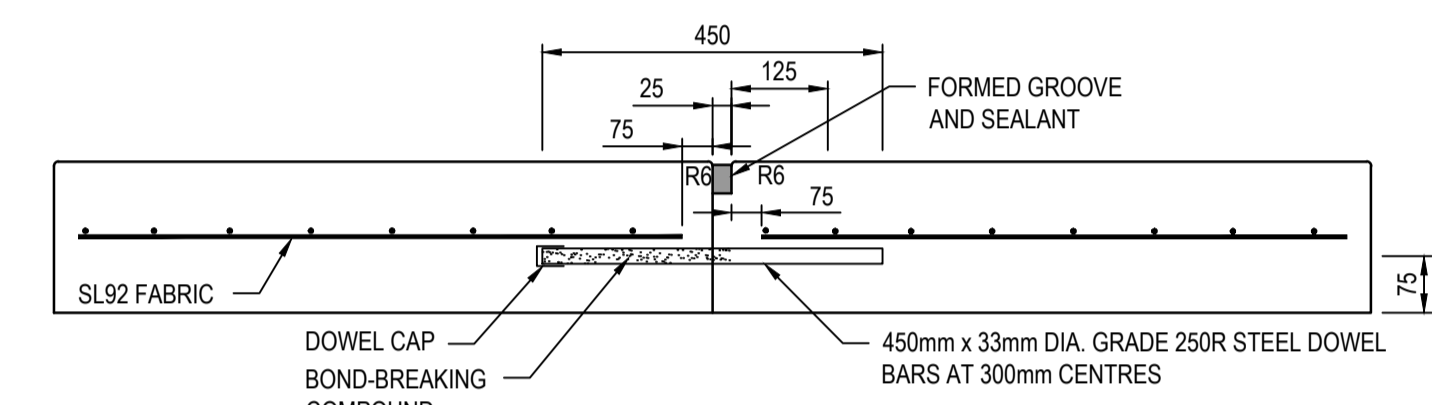
PLAN  
1:200

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

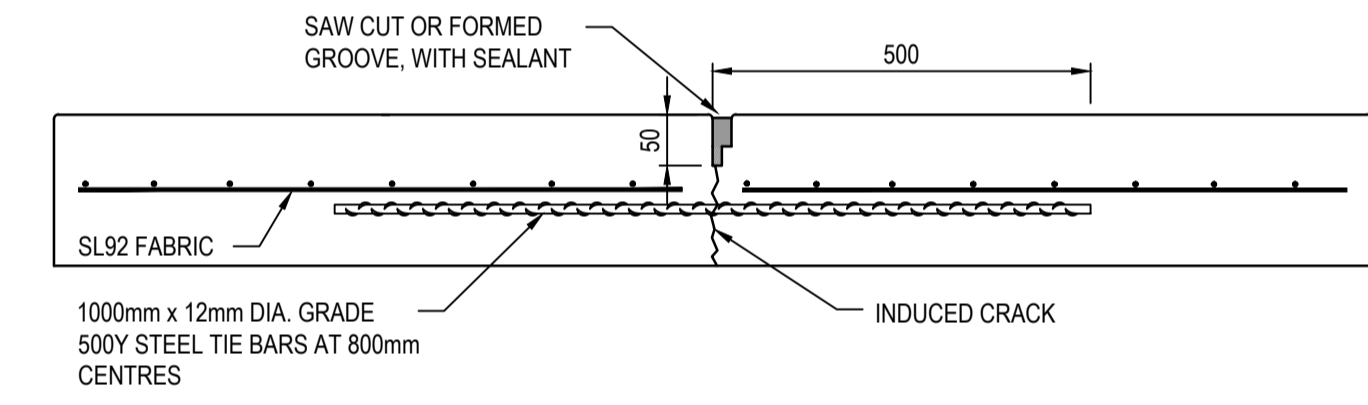
- JOINT DETAIL NOTES:**
1. SAW JOINTS ARE TO BE PLACED AT A MAXIMUM 5m SPACING AT INTERSECTIONS AND CONSTRUCTED 18-24 HOURS AFTER POURING.
  2. TRANSVERSE/CONTRACTION JOINTS ARE TO BE PLACED AT A MAXIMUM SPACING OF 12m.
  3. ISOLATION JOINTS ARE TO BE PLACED AROUND PITS.
  4. ALL JOINTS SHALL BE LOCATED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



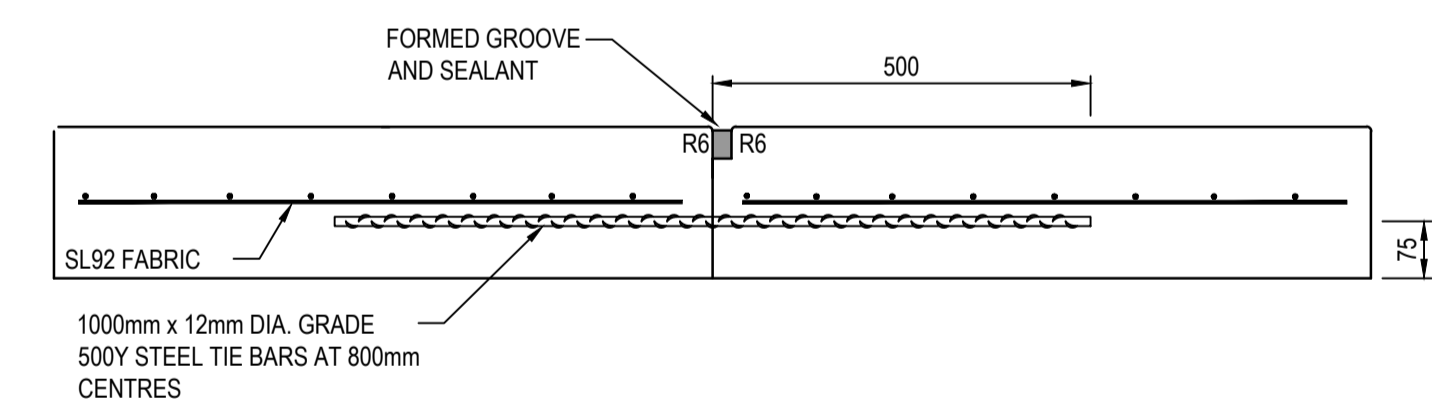
ISOLATION JOINT (IJ)



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

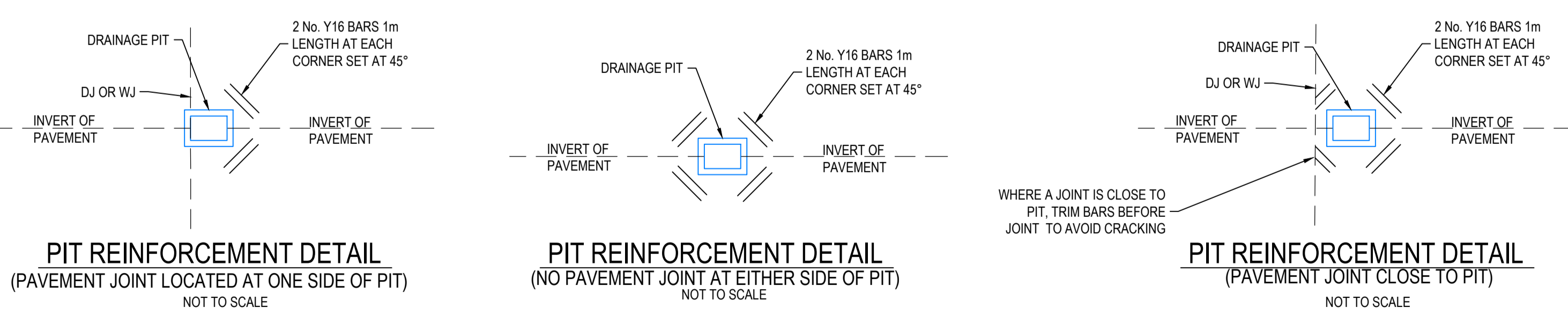


LONGITUDINAL WARPING JOINT - WEAKENED PLANE JOINT (WJ)



LONGITUDINAL WARPING JOINT - CONSTRUCTION JOINT (WCJ)

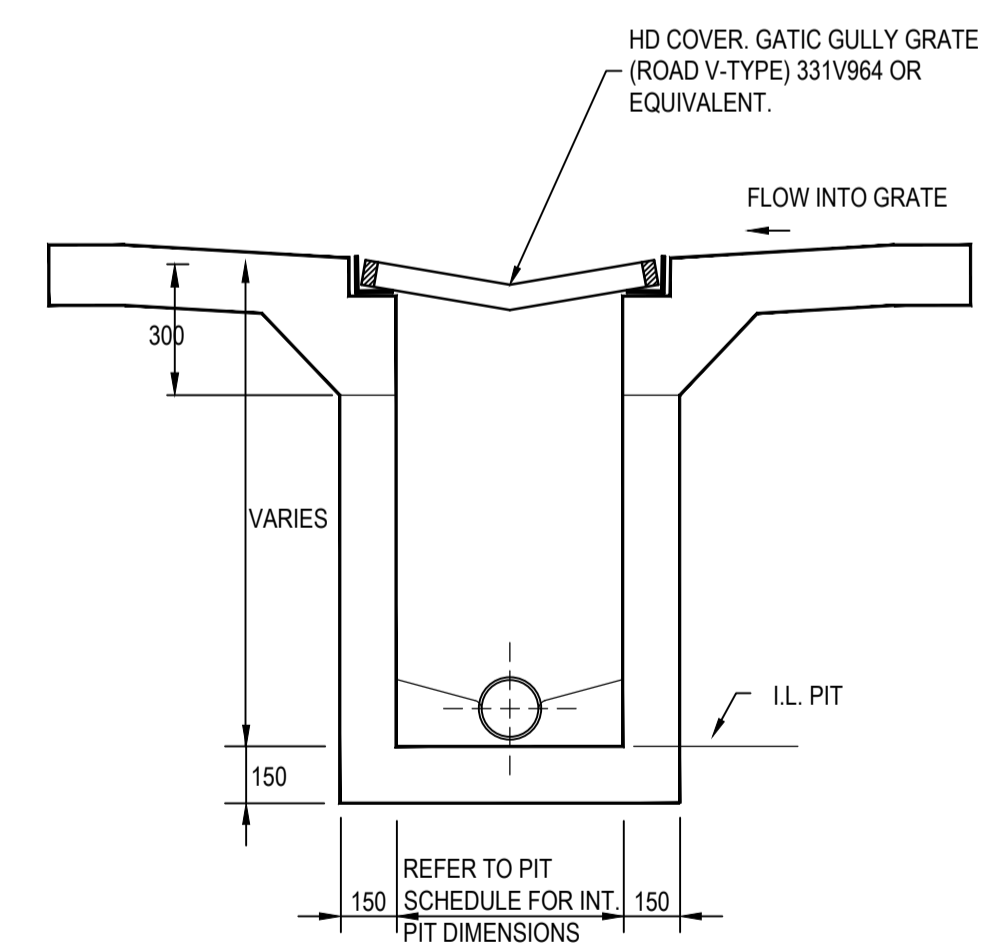
CONCRETE JOINTING DETAILS  
NOT TO SCALE



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

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

PIT REINFORCEMENT DETAIL  
(PAVEMENT JOINT CLOSE TO PIT)  
NOT TO SCALE



GRATED INLET PIT DETAILS  
(IN CONCRETE PAVEMENT)  
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

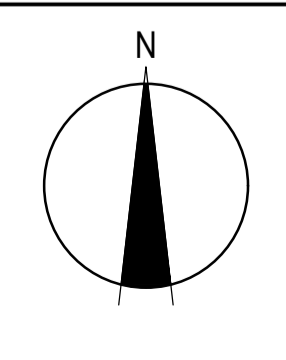
**AS CONSTRUCTED PLANS**

The purpose of these as-constructed plans is to update the design drawings to show significant changes which occurred during construction. Note that the levels shown on these plans are design levels, and have not been verified by survey. All information shown on these plans should be verified on site. SMEC Australia Pty Ltd accept no responsibility for loss or damages resulting from the inappropriate usage of these plans.



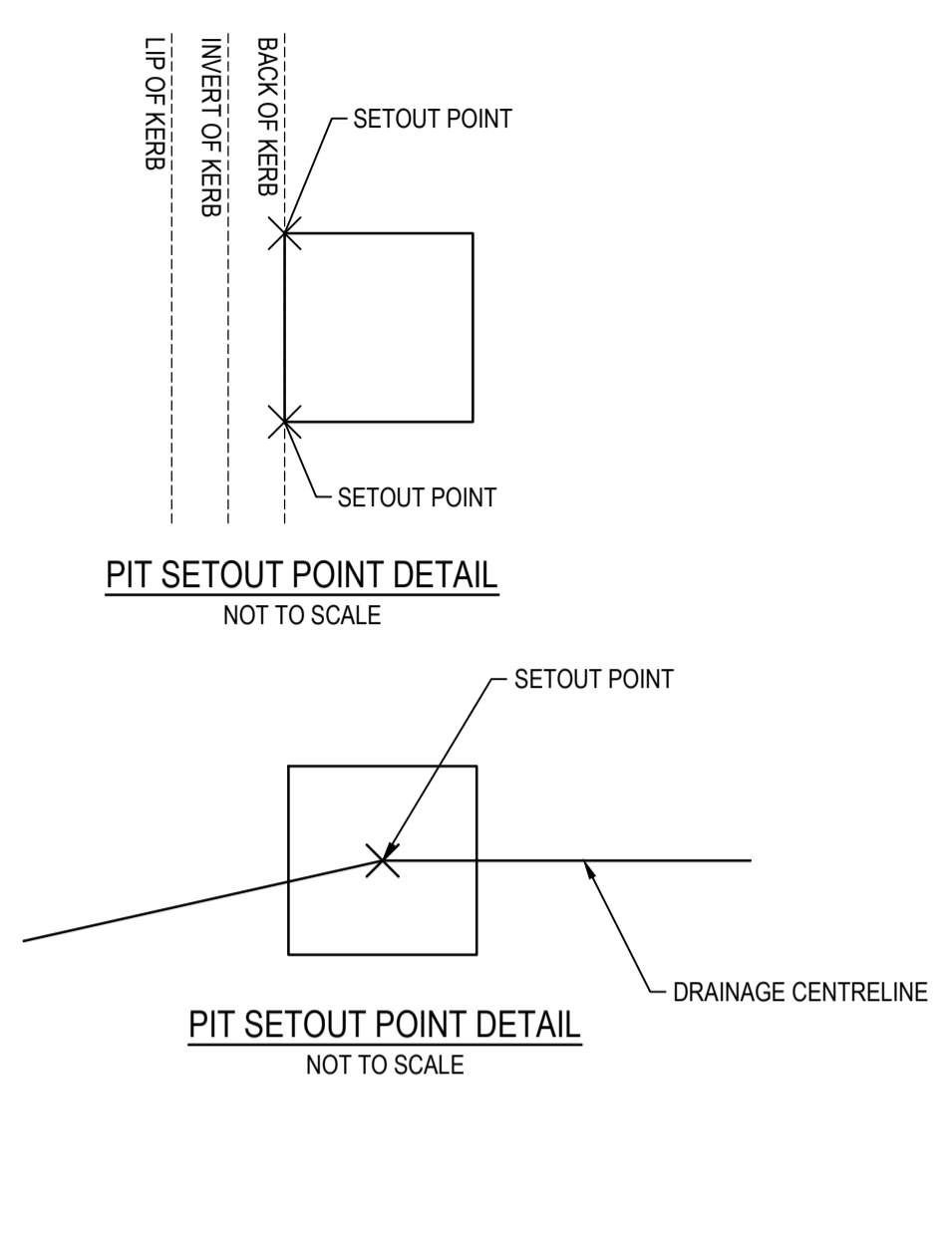
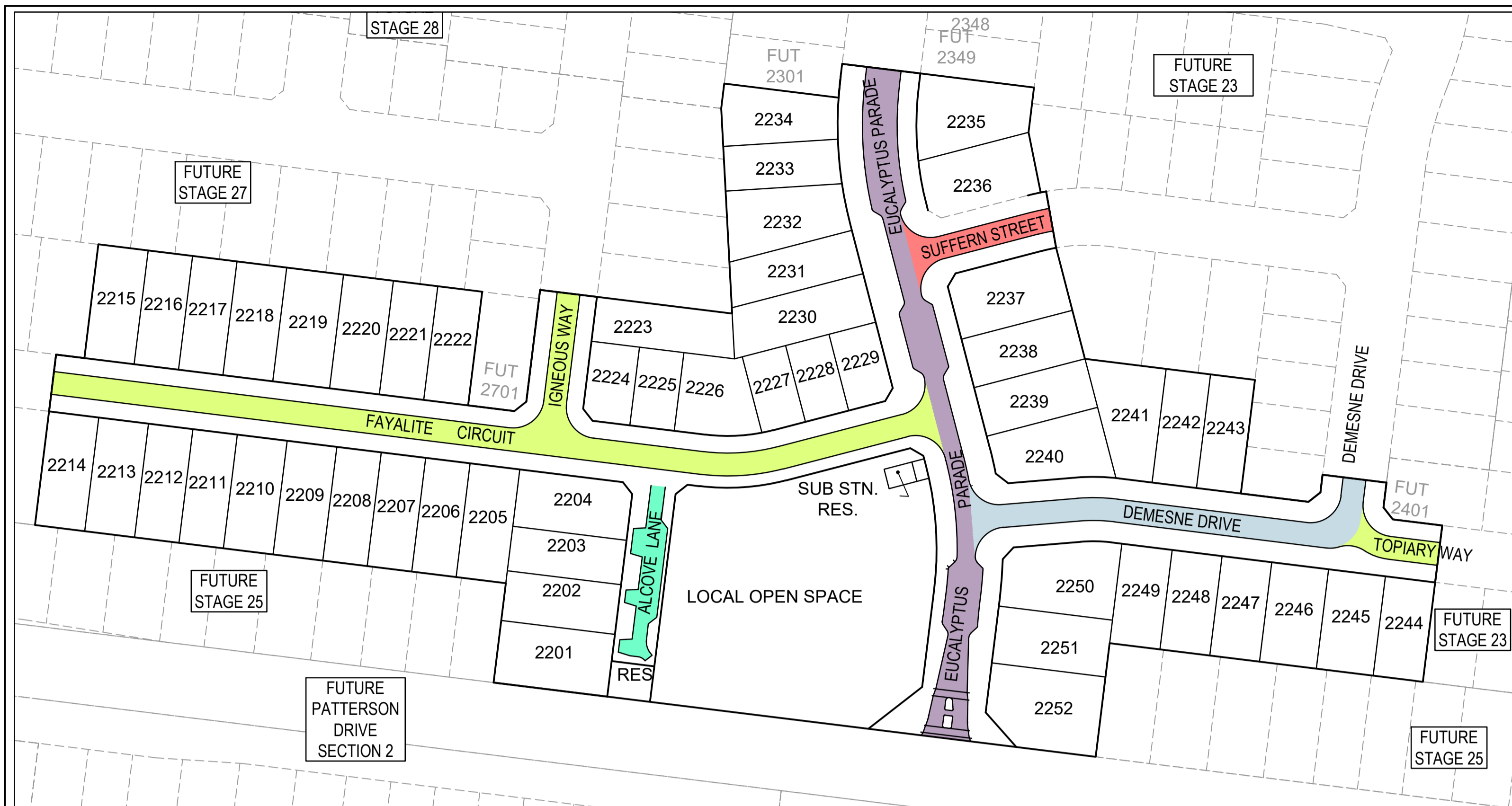
**AS CONSTRUCTED**

PLAN OF SUB. NO.	
PERMIT REF. NO.	
Scale 1:200	
SCALE AS SHOWN AT A1	



Olivine Estate - Stage 22  
Whittlesea City Council  
Road and Drainage  
Concrete Jointing Details

MELWAYS REF 367 G11	PROJECT / DRAWING No. 1700E-022-401	SHEET No. 38 of 43	REVISION 3
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NOTES  
 1. REFER TO EDMC STANDARD DRAWINGS 605, 606 & 607 FOR PIT DETAILS.  
 2. GRATE FRAME TO BE "BIKE SAFE" TO AS3996-1992

**ROAD PAVEMENT COMPOSITION - ACCESS PLACE TYPE 1 (SUFFERN STREET)**

PAVEMENT LAYER	LAYER THICKNESS (mm)	MATERIAL
A ASPHALT WEARING COURSE	30	SIZE 10 TYPE L ASPHALT (CLASS 320 BINDER)
B ASPHALT BASE COURSE	30	SIZE 10 TYPE N ASPHALT (CLASS 320 BINDER)
C SAMII SEAL	6.7	SIZE 10 S18RF
D PRIME	YES	
E BASE COURSE	130	SIZE 20 CLASS 2 CRUSHED ROCK COMPACTED TO A MINIMUM DENSITY OF 98% MDD (MODIFIED) AS1289.5.2.1
F UPPER SUBBASE	100	CLASS 3 CRUSHED ROCK (OR HIGHER QUALITY MATERIAL) COMPACTED TO A MINIMUM DENSITY OF 98% MDD (MODIFIED) AS1289.5.2.1
G LOWER SUBBASE	160	CLASS 4 CRUSHED ROCK (OR HIGHER QUALITY MATERIAL) COMPACTED TO A MINIMUM DENSITY OF 98% MDD (MODIFIED) AS1289.5.2.1
H CAPPING LAYER	150	IMPORTED TYPE A FILL WITH CBR≥8% SWELL≤1.5% PERMEABILITY k≤5x10 <sup>-10</sup> m/s COMPACTED TO 98% MDD (STANDARD)
I CONSTRUCTION LAYER	150	IMPORTED TYPE A FILL WITH CBR≥8% SWELL≤1.5% PERMEABILITY k≤5x10 <sup>-10</sup> m/s COMPACTED TO 98% MDD (STANDARD)
J SUBGRADE		SUBGRADE CLAY AS FOUND (DESIGN CBR = 2% EXPANSIVE)

**ROAD PAVEMENT COMPOSITION - ACCESS PLACE TYPE 2 (FAYALITE CIRCUIT, IGNEOUS WAY & TOPIARY WAY)**

PAVEMENT LAYER	LAYER THICKNESS (mm)	MATERIAL
A ASPHALT WEARING COURSE	30	SIZE 10 TYPE L ASPHALT (CLASS 320 BINDER)
B ASPHALT BASE COURSE	30	SIZE 10 TYPE N ASPHALT (CLASS 320 BINDER)
C SAMII SEAL	6.7	SIZE 10 S18RF
D PRIME	YES	
E BASE COURSE	130	SIZE 20 CLASS 2 CRUSHED ROCK COMPACTED TO A MINIMUM DENSITY OF 98% MDD (MODIFIED) AS1289.5.2.1
F UPPER SUBBASE	110	CLASS 3 CRUSHED ROCK (OR HIGHER QUALITY MATERIAL) COMPACTED TO A MINIMUM DENSITY OF 98% MDD (MODIFIED) AS1289.5.2.1
G LOWER SUBBASE	180	CLASS 4 CRUSHED ROCK (OR HIGHER QUALITY MATERIAL) COMPACTED TO A MINIMUM DENSITY OF 98% MDD (MODIFIED) AS1289.5.2.1
H CAPPING LAYER	150	IMPORTED TYPE A FILL WITH CBR≥8% SWELL≤1.5% PERMEABILITY k≤5x10 <sup>-10</sup> m/s COMPACTED TO 98% MDD (STANDARD)
I CONSTRUCTION LAYER	150	IMPORTED TYPE A FILL WITH CBR≥8% SWELL≤1.5% PERMEABILITY k≤5x10 <sup>-10</sup> m/s COMPACTED TO 98% MDD (STANDARD)
J SUBGRADE		SUBGRADE CLAY AS FOUND (DESIGN CBR = 2% EXPANSIVE)

**ROAD PAVEMENT COMPOSITION - ACCESS STREET LEVEL 2 TYPE 3 (DEMESNE DRIVE)**

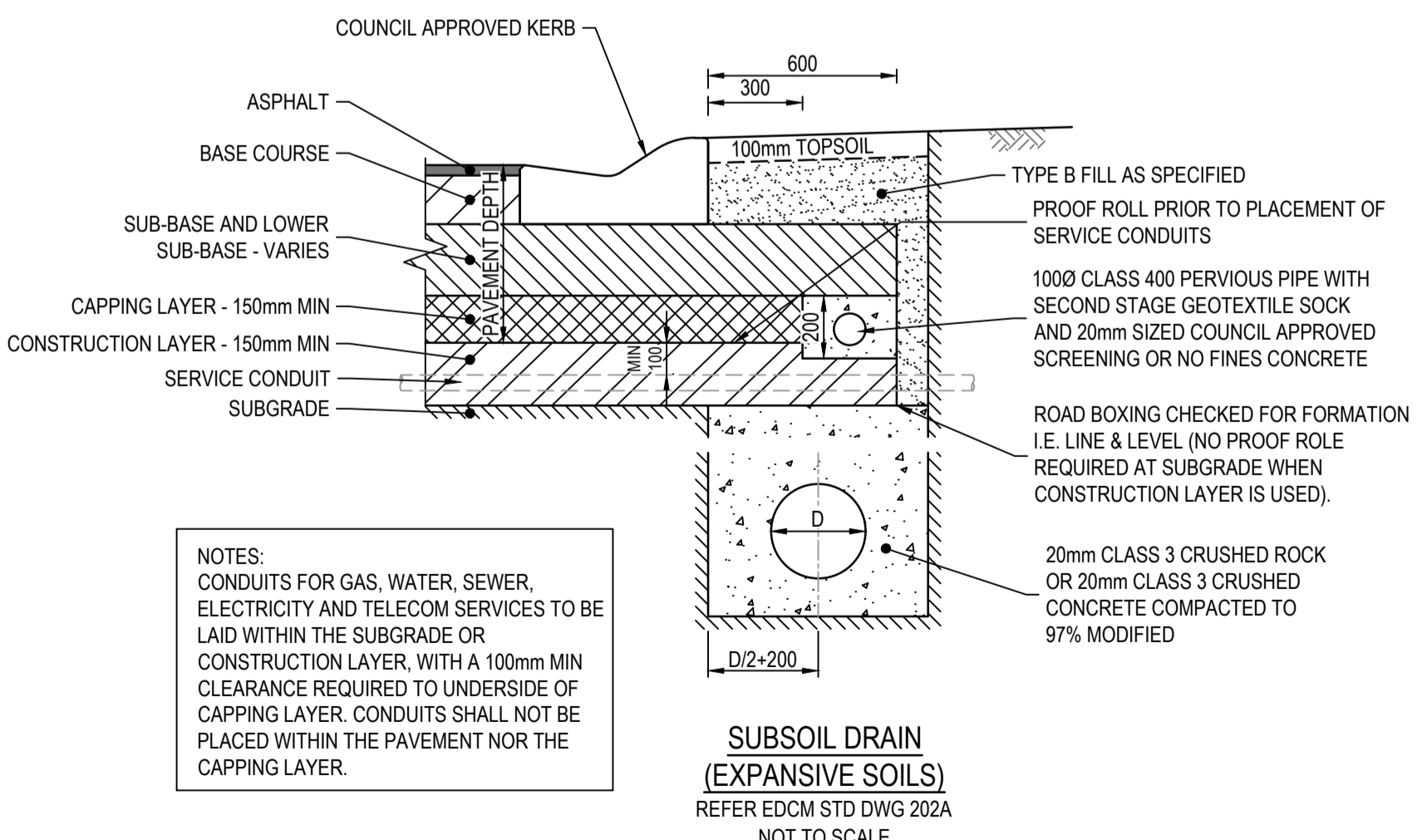
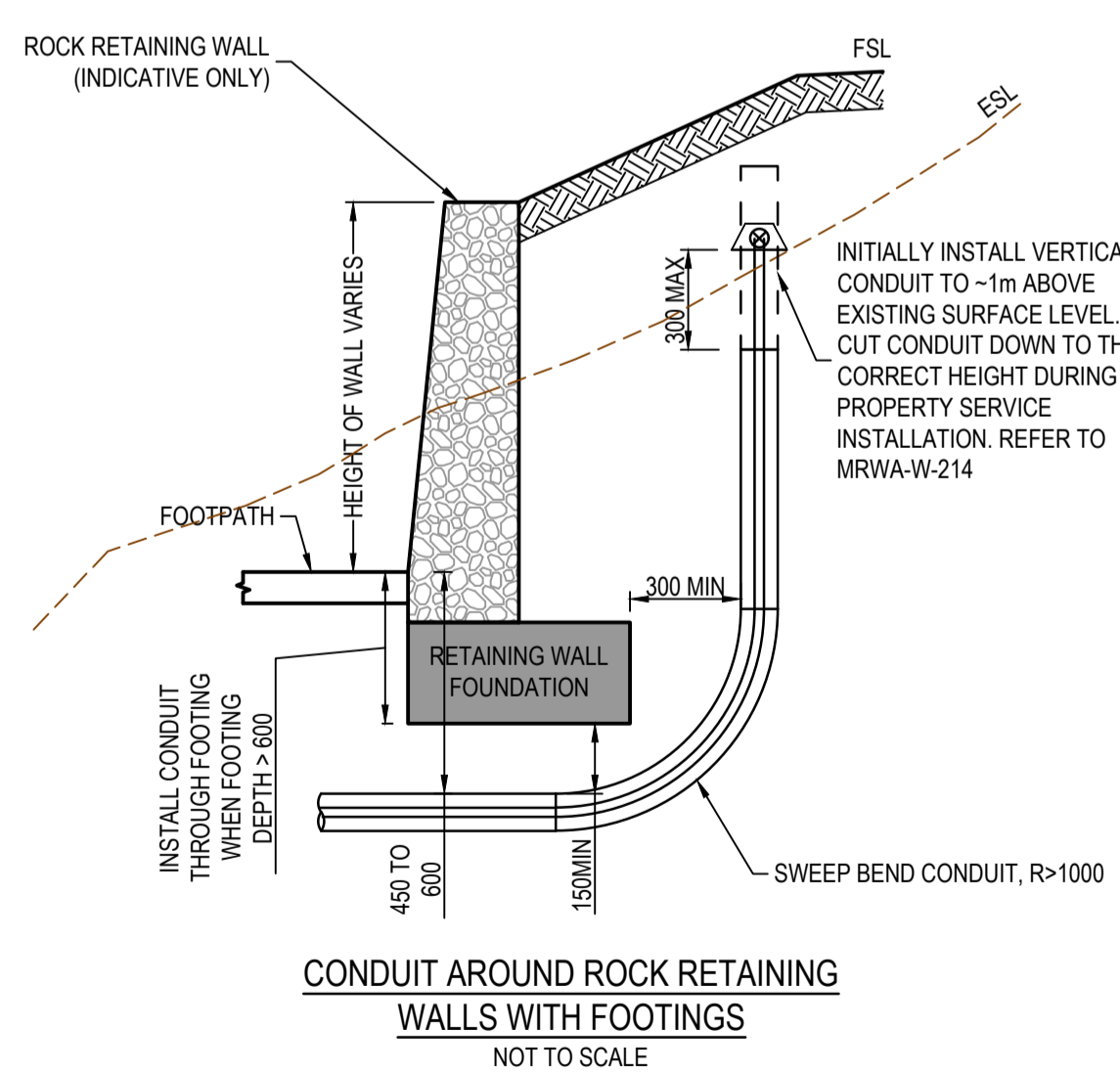
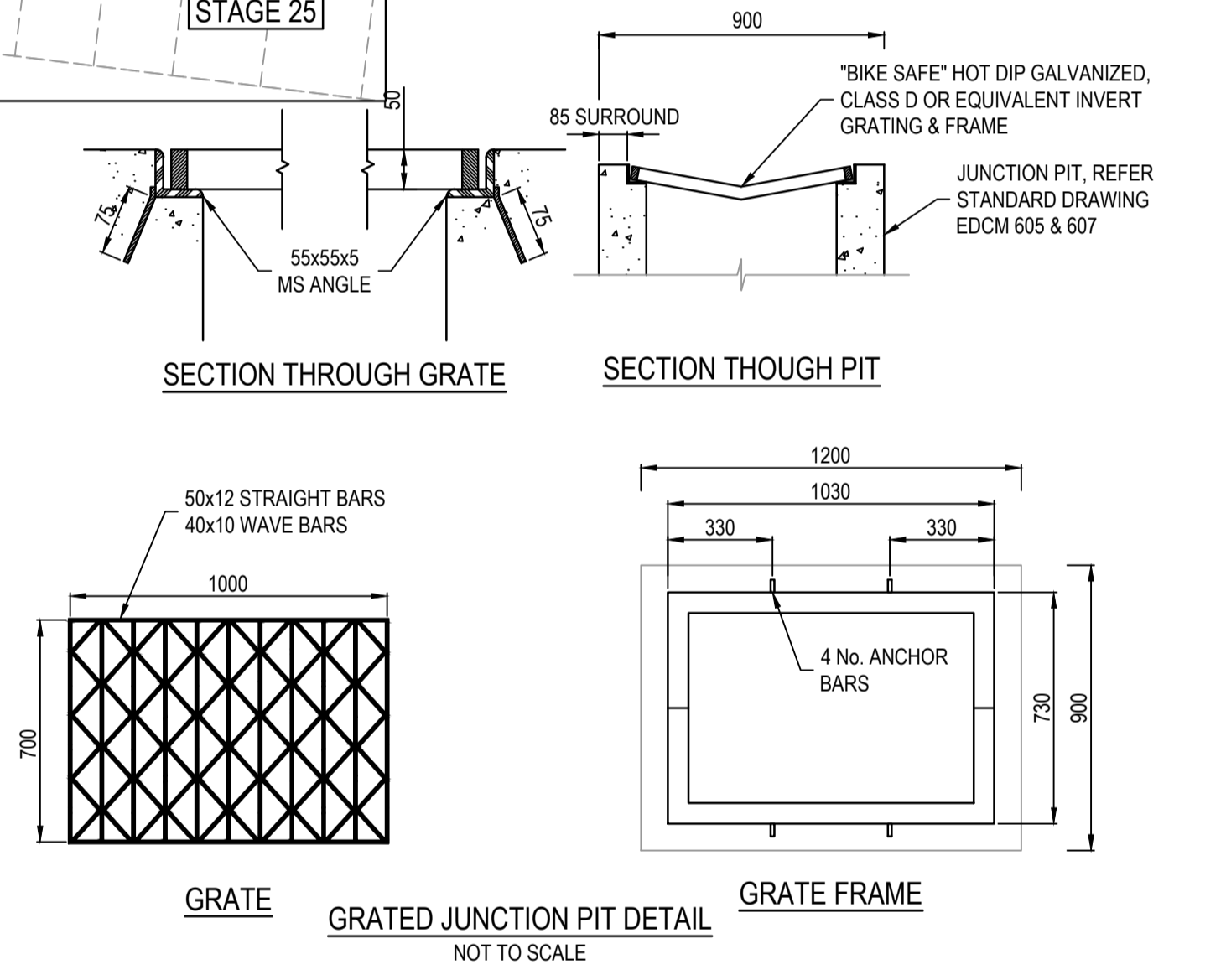
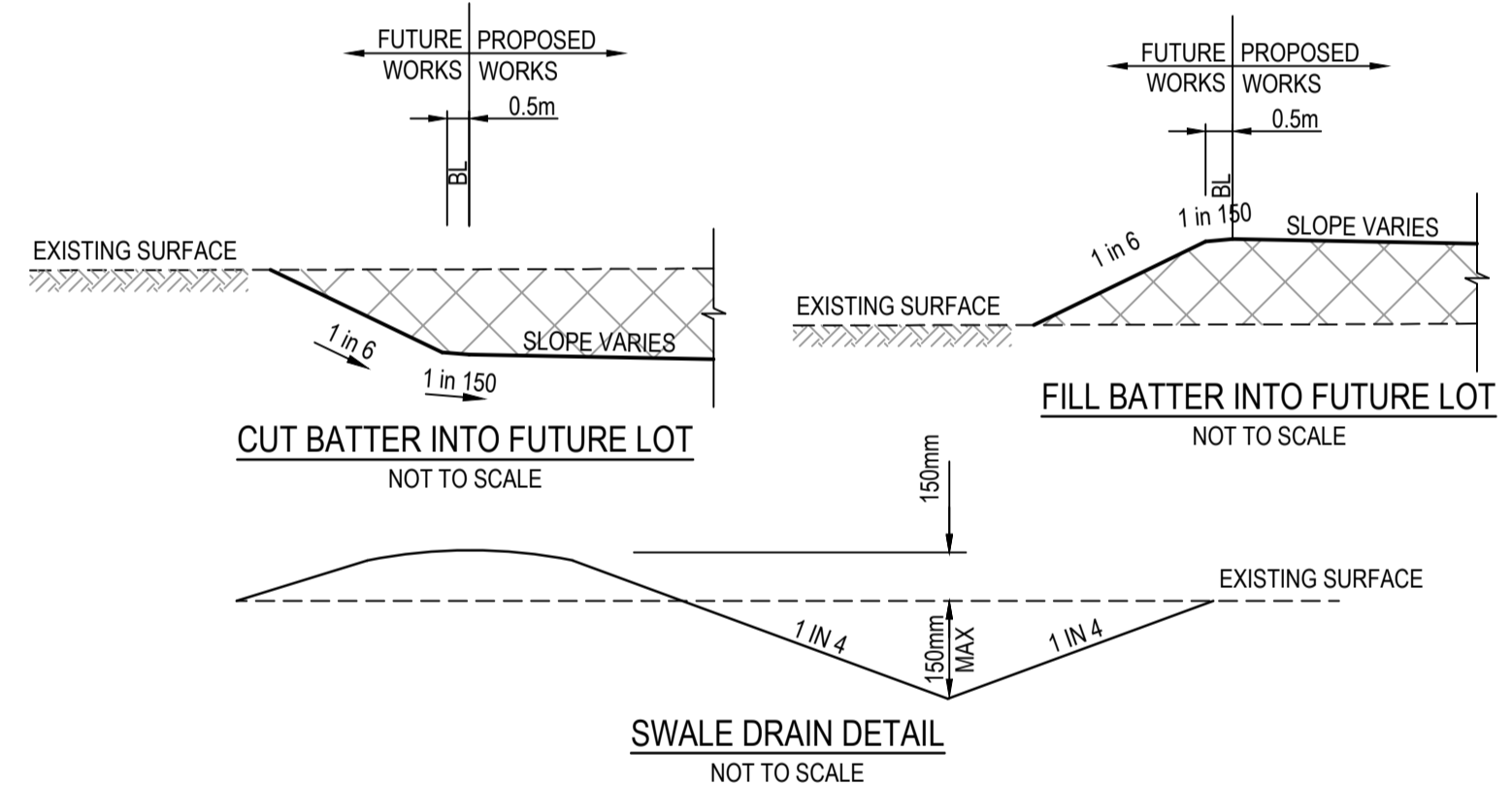
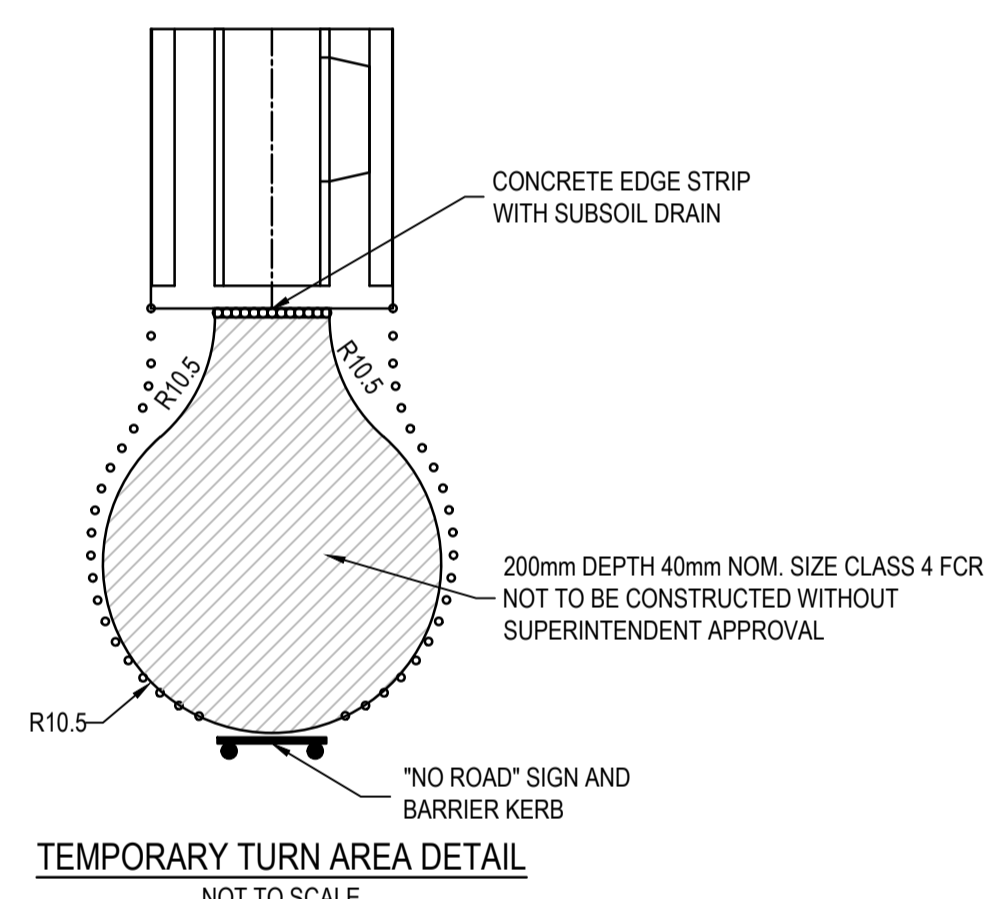
PAVEMENT LAYER	LAYER THICKNESS (mm)	MATERIAL
A ASPHALT WEARING COURSE	40	SIZE 14 TYPE N ASPHALT (CLASS 320 BINDER)
B ASPHALT BASE COURSE	40	SIZE 14 TYPE HP ASPHALT (CLASS A10E BINDER)
C SAMII SEAL	6.7	SIZE 10 S18RF
D PRIME	YES	
E BASE COURSE	110	SIZE 20 CLASS 2 CRUSHED ROCK COMPACTED TO A MINIMUM DENSITY OF 98% MDD (MODIFIED) AS1289.5.2.1
F UPPER SUBBASE	190	CLASS 3 CRUSHED ROCK (OR HIGHER QUALITY MATERIAL) COMPACTED TO A MINIMUM DENSITY OF 98% MDD (MODIFIED) AS1289.5.2.1
G LOWER SUBBASE	200	CLASS 4 CRUSHED ROCK (OR HIGHER QUALITY MATERIAL) COMPACTED TO A MINIMUM DENSITY OF 98% MDD (MODIFIED) AS1289.5.2.1
H CAPPING LAYER	150	IMPORTED TYPE A FILL WITH CBR≥8% SWELL≤1.5% PERMEABILITY k≤5x10 <sup>-10</sup> m/s COMPACTED TO 98% MDD (STANDARD)
I CONSTRUCTION LAYER	150	IMPORTED TYPE A FILL WITH CBR≥8% SWELL≤1.5% PERMEABILITY k≤5x10 <sup>-10</sup> m/s COMPACTED TO 98% MDD (STANDARD)
J SUBGRADE		SUBGRADE CLAY AS FOUND (DESIGN CBR = 2% EXPANSIVE)

**ROAD PAVEMENT COMPOSITION - CONNECTOR STREET TYPE 4 (EUCALYPTUS PARADE)**

PAVEMENT LAYER	LAYER THICKNESS (mm)	MATERIAL
A WEARING COURSE	40	SIZE 14 TYPE H ASPHALT (CLASS 320 BINDER)
B INTERMEDIATE COURSE	75	SIZE 20 TYPE SI ASPHALT (CLASS 320 BINDER)
C BASE COURSE	75	SIZE 20 TYPE SI ASPHALT (CLASS 320 BINDER)
D PRIME	-	
E BASE COURSE	100	SIZE 20 NOMINAL SIZE CLASS 3 CEMENT TREATED CRUSHED ROCK, COMPACTED TO A AT LEAST 98% MDD (MODIFIED DRY DENSITY RATIO) AT A MOISTURE CONTENT WITHIN 2% OF THE OPTIMUM MOISTURE CONTENT WITH A MINIMUM YOUNG'S MODULUS OF 500 MPa. MINIMUM DESIGN CEMENTITIOUS BINDER CONTENT OF 3% BY MASS AS PER VICROADS SPECIFICATION 8015, TABLE 815.101.
F UPPER SUBBASE	100	CLASS 4 CRUSHED ROCK OR CLASS CC4 CRUSHED CONCRETE (OR HIGHER QUALITY MATERIAL) COMPACTED TO A MINIMUM DENSITY OF 95% (MODIFIED) AS1289.5.2.1
H CAPPING LAYER	150	IMPORTED TYPE A FILL WITH CBR≥8% SWELL≤1.5% PERMEABILITY k≤5x10 <sup>-10</sup> m/s COMPACTED TO 98% MDD (STANDARD)
I CONSTRUCTION LAYER	150	IMPORTED TYPE A FILL WITH CBR≥8% SWELL≤1.5% PERMEABILITY k≤5x10 <sup>-10</sup> m/s COMPACTED TO 98% MDD (STANDARD)
J SUBGRADE		SUBGRADE CLAY AS FOUND (DESIGN CBR = 2% EXPANSIVE)

**LANEWAY COMPOSITION - EDMC503 (ALCOVE LANE)**

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



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 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

NOTES:  
 CONDUITS FOR GAS, WATER, SEWER, ELECTRICITY AND TELECOM SERVICES TO BE LAID WITHIN THE SUBGRADE OR CONSTRUCTION LAYER, WITH A 100mm MIN CLEARANCE REQUIRED TO UNDERSIDE OF CAPPING LAYER. CONDUITS SHALL NOT BE PLACED WITHIN THE PAVEMENT NOR THE CAPPING LAYER.

**AS CONSTRUCTED PLANS**  
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Quality Management ISO 9001  
 OHS Management AS/NZS 4801  
 Environmental Management ISO 14001

PLAN OF SUB. NO.  
 PERMIT REF. NO.

**AS CONSTRUCTED**

Scale 1:1000  
 SCALE AS SHOWN AT 1

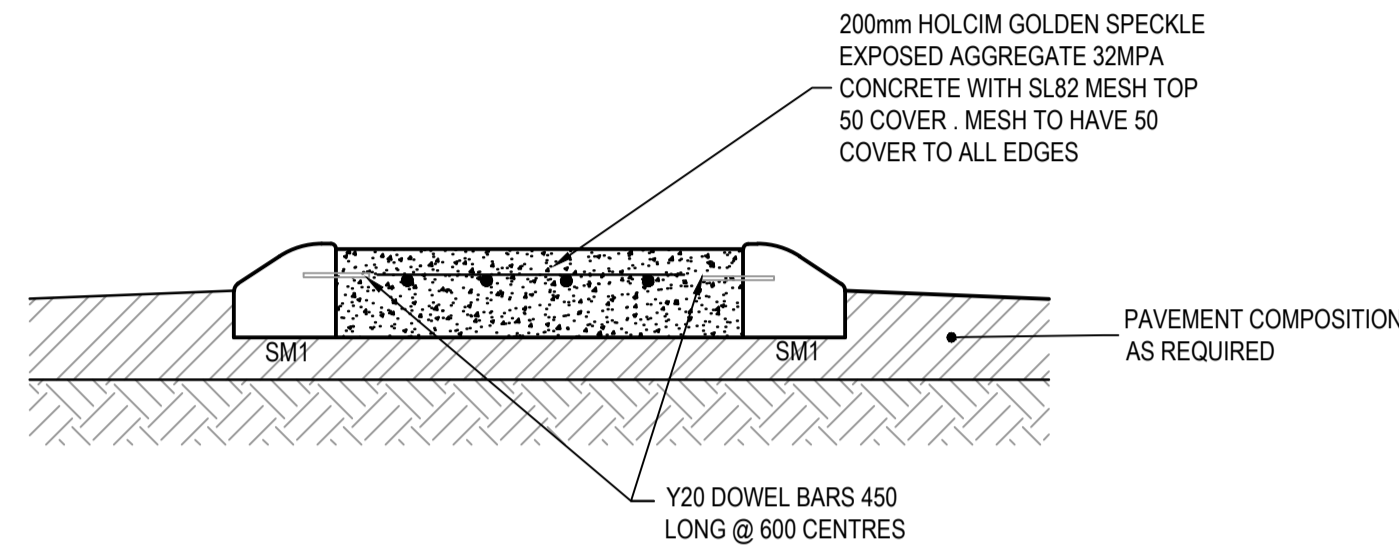
**SMEC**  
 Member of the Surlana Jurong Group  
 ABN 47 065 475 149  
 Collins Square, Tower 4, Level 20, 727 Collins St  
 Melbourne, VIC, 3008, Australia  
 03 9514 1500

**mirvac**

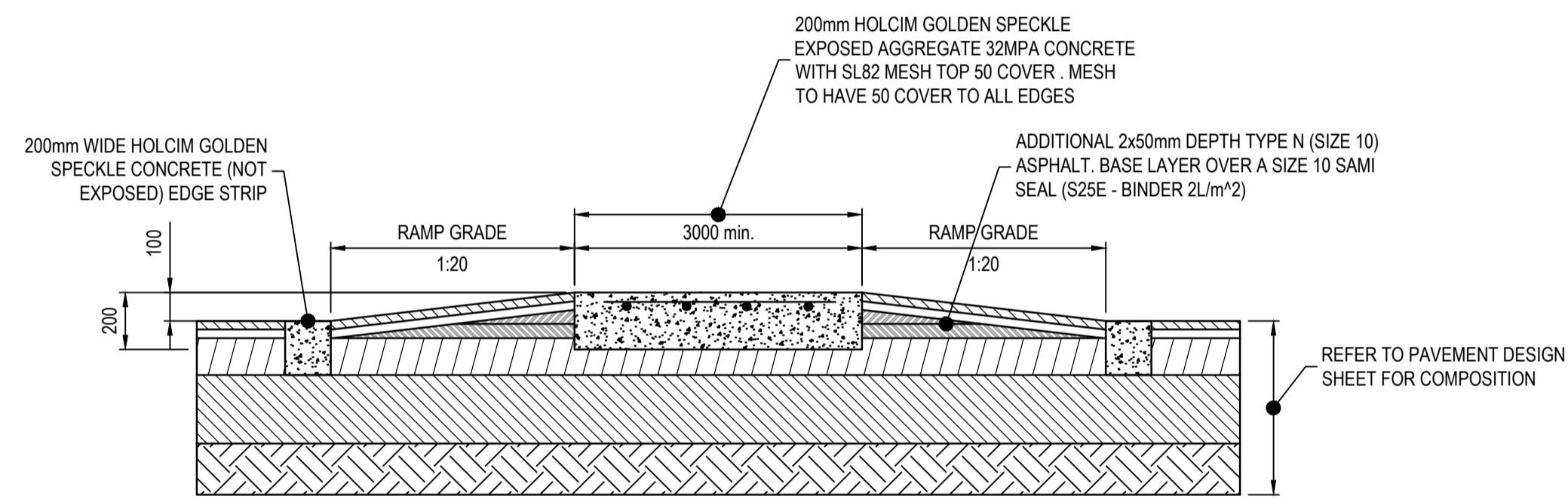
Olivine Estate - Stage 22  
 Whittlesea City Council  
 Road and Drainage  
 Pavement Details & General Details - 1

MELWAYS REF: 367 G11  
 PROJECT / DRAWING No: 1700E-022-411  
 SHEET No: 39 of 43  
 REVISION: 3

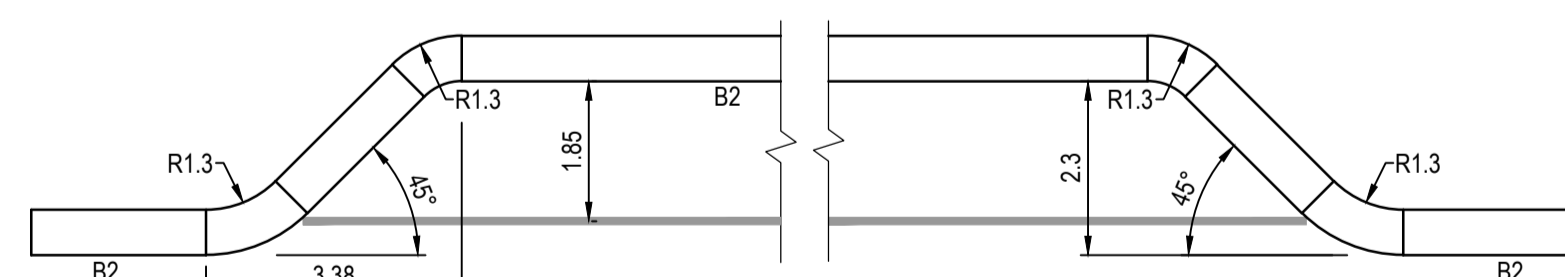
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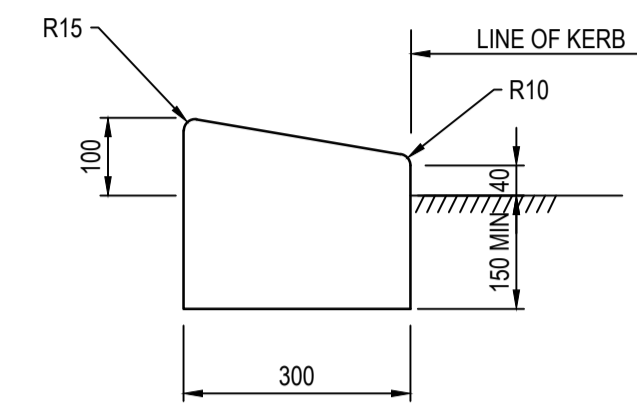
**SPLITTER ISLAND TYPICAL SECTION**  
NOT TO SCALE



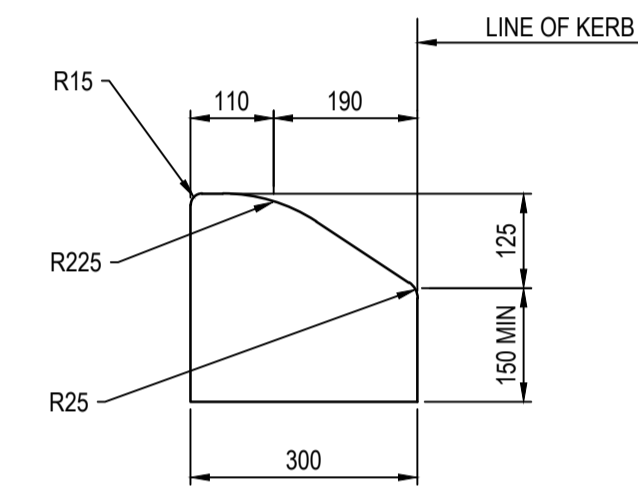
**FLAT TOP RAISED PAVEMENT**  
NOT TO SCALE



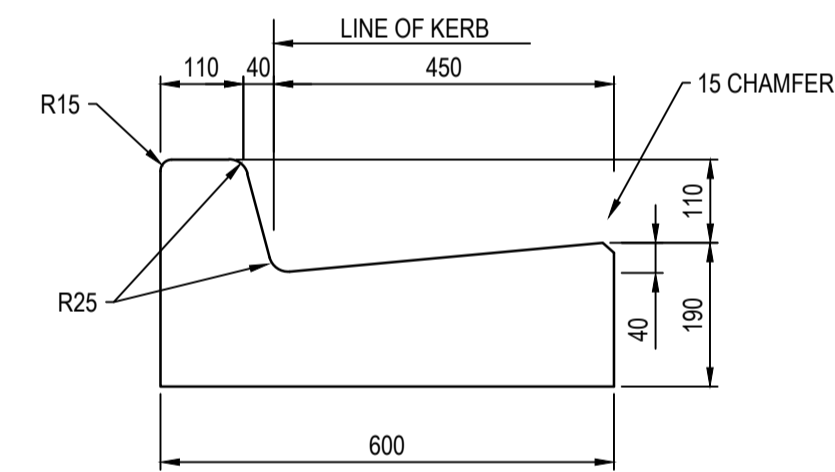
**TYPICAL PARKING BAY DETAIL**  
NOT TO SCALE



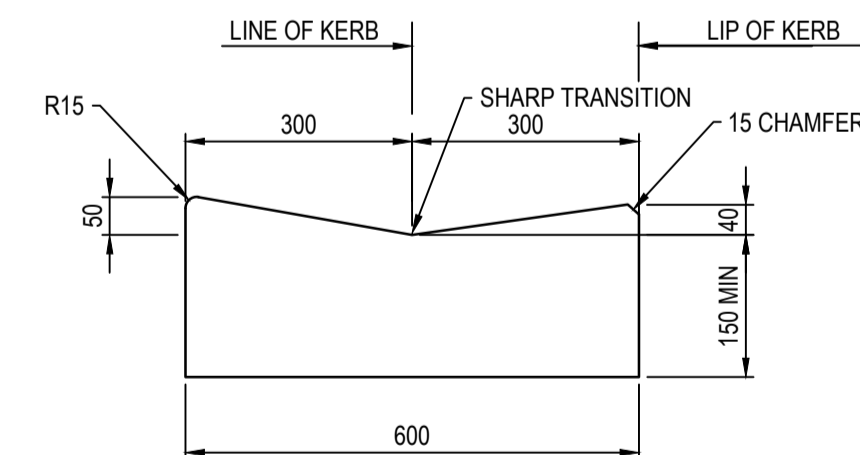
**M4 KERB DETAIL**  
SCALE 1:10  
EDCM



**SM1 KERB DETAIL**  
SCALE 1:10  
EDCM



**600 B2 KERB DETAIL**  
SCALE 1:10  
EDCM



**M2 KERB DETAIL**  
SCALE 1:10  
EDCM

**AS CONSTRUCTED PLANS**

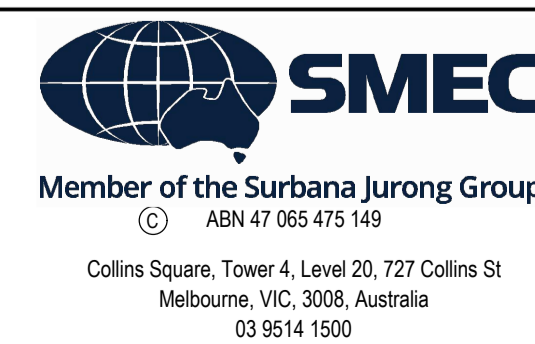
The purpose of these as-constructed plans is to update the design drawings to show significant changes which occurred during construction. Note that the levels shown on these plans are design levels, and have not been verified by survey. All information shown on these plans should be verified on site. SMEC Australia Pty Ltd accept no responsibility for loss or damages resulting from the inappropriate usage of these plans.



**AS CONSTRUCTED**

PLAN OF SUB. NO.  
PERMIT REF. NO.

SCALE AS SHOWN AT A1



Olivine Estate - Stage 22  
Whittlesea City Council  
Road and Drainage  
General Details - 2

MELWAYS REF <b>367 G11</b>	PROJECT / DRAWING No. <b>1700E-022-412</b>	SHEET No. <b>40 of 43</b>	REVISION <b>1</b>
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THE FOLLOWING HAVE BEEN IDENTIFIED AS SIGNIFICANT ENVIRONMENTAL ASPECTS FOR THE SITE:

- CHMP, REF. 12653\_12112014
- KANGAROO MANAGEMENT PLAN, REF. 6408\_FINAL\_24062016
- RIVER RED GUM TREE MANAGEMENT PLAN, REF. 008833\_22032018
- CEMP, REF. 9630\_FINAL(V1)\_26102017

THESE ASPECTS SHALL BE MANAGED WITH THE ENVIRONMENTAL PROTECTION MEASURES OUTLINED ON THIS PLAN.

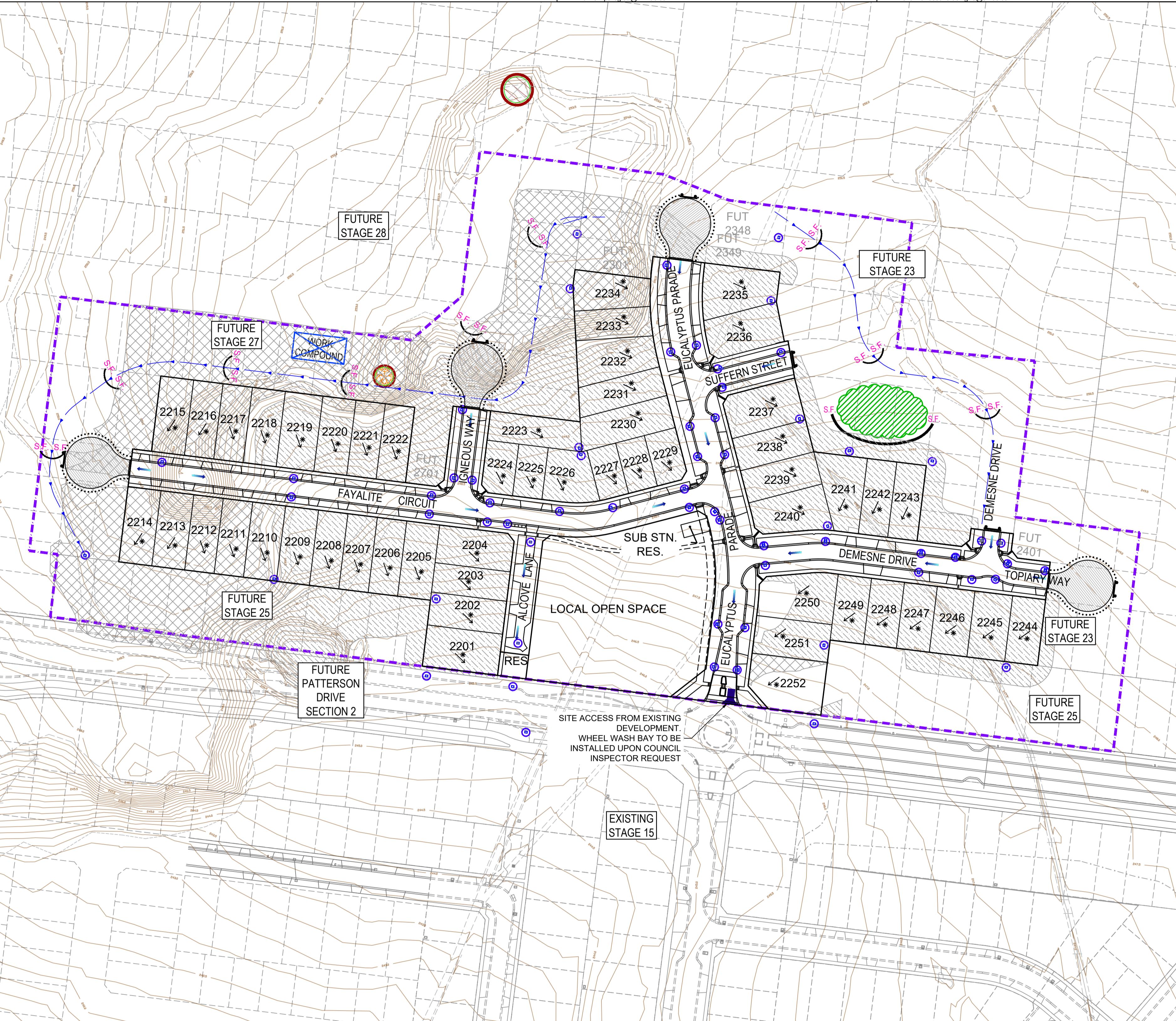
I HAVE PREPARED THIS ENVIRONMENTAL MANAGEMENT PLAN AND AGREE TO UNDERTAKE WORKS AND ENSURE SUB-CONTRACTORS UNDERTAKE WORKS IN ACCORDANCE WITH THIS PLAN.

DEVELOPER Mirvac  
Level 5, Building Q3, 6 Riverside Quay  
Southbank VIC 3006  
NAME: Chris Kiparoglou  
0466 941 870  
chris.kiparoglou@mirvac.com

CONSULTANT SMEC - URBAN DEVELOPMENT  
Collins Square, Tower 4, Level 20  
727 Collins St, Melbourne, VIC 3008  
NAME: Shankar Tisseverasinghe  
0434 581 518  
shankar.tisseverasinghe@smec.com

CONTRACTOR Winslow Constructors Pty Ltd  
50 Barry Road  
Campbellfield VIC 3061  
NAME: Adam Stojanovski  
0427 446 501  
adams@winslow.com.au

<b>MANAGEMENT</b>	
1. RESPONSIBILITIES: Civil Contractor: WINSLOW CONSTRUCTORS PTY LTD Superintendent: SMEC	4. STAGING OF WORKS: - AS PER CONSTRUCTION PROGRAM
EMERGENCY CONTACTS: 1. SHANKAR TISSEVERASINGHE - (03) 9869947 2. RILEY GIACOMINI - (03) 95141822	5. INFORMING RESIDENTS: AS REQUIRED
2. COMMUNICATION OF EMP REQUIREMENTS: - INDUCTION OF ALL PERSONS WORKING ON SITE REGARDING REQUIREMENTS AS SET OUT ON THE EMP - EMP TO BE DISPLAYED IN VISIBLE LOCATION WITHIN SITE COMPOUND EG. ON WALLS OF SITE SHEDS / OFFICE.	6. ASSOCIATED DOCUMENTS:
3. INSPECTIONS AND MAINTENANCE: - TWO INSPECTIONS PER WEEK - PRIOR TO AND AFTER STORM EVENT AND/OR HEAVY RAIN - MAINTAINS SO REQUIRED WITH ALL RECTIFICATION TO BE ADDRESSED WITH 12 HOURS OF INCIDENT / REPORT.	
<b>NOISE</b> RISK: SIGNIFICANT	
REQUIREMENT: EPA VICTORIA AND COUNCIL REQUIREMENTS MUST BE ADHERED TO IN RELATION TO THE LEVEL OF NOISE AND WORKING HOURS, TO ENSURE THAT RESIDENTS AND OTHER APPLICABLE NEIGHBOURS TO THE SITE ARE NOT DISTURBED UNREASONABLY. THE GENERATION OF NOISE MUST BE MINIMISED.	
7. WORKING HOURS: 08.00 TO 18.30 MON - FRI 09.00 TO 13.00 SATURDAY	
8. NOISE MINIMISATION METHODS: - MAINTAIN WORKING HOUR - RESTRICT USE OF NOISY EQUIPMENT AND PROCESSES TO AVOID DISTURBANCES TO ADJACENT RESIDENTS - FOLLOW EPA NOISE CONTROL GUIDELINES - TG30292	9. OTHER:
<b>DUST</b> RISK: SIGNIFICANT	
REQUIREMENT: DUST GENERATION MUST BE MINIMISED TO ENSURE THERE IS NO HEALTH RISK OR LOSS OF AMENITY.	12. CONTINGENCIES: - IF HIGH WIND IS EXPECTED WHILE LARGE AREAS OF THE SITE ARE STRIPPED, SPRAY WATER IN ORDER TO ESTABLISH A THICK CRUST OVER UNVEGETATED LAND. ALSO MONITOR DRYNESS OF EXPOSED EARTH. SHOULD GROUND DRY OUT SIGNIFICANTLY, CONSIDER WATER SPRAYING OR COVER AREA WITH SOIL OR GRASS. NOTE: IF A HOSE IS USED FOR WATER SPRAYING, THE HOSE IS TO BE FILLED WITH A LARGE TRIGGER NOZZLE. CHECK WATER RESTRICTIONS WITH LOCAL AUTHORITY FOR GUIDELINES.
10. MINIMISING DUST GENERATION: - AVOID STRIPPING LARGE AREAS OF THE SITE WHEN NOT REQUIRED. - WATER SPRAYING AS REQUIRED. - MINIMISE STRIPPED AREAS - MINIMISE ACTIVITIES ON HIGH WIND DAYS.	11. DUST SUPPRESSION: - WATER SPRAYING - REDUCE ACTIVITY ON WINDY DAYS.
13. OTHER: REFER TO DUST MANAGEMENT PLAN FOR FURTHER INFORMATION	
<b>EROSION AND SEDIMENT</b> RISK: SIGNIFICANT	
REQUIREMENT: EROSION AND SEDIMENT MUST BE MANAGED IN ACCORDANCE WITH CURRENT BEST PRACTICE ENVIRONMENTAL MANAGEMENT PRACTICES, TO PREVENT SEDIMENT-LOADED WATER FROM ENTERING ANY DRAINAGE SYSTEM OR NATURAL WATERWAY.	14. DRAINAGE MANAGEMENT: - STORMWATER FLOWING ONTO SITE WILL BE CONTROLLED BY CUT SWALES, DRAINS, STRAW BALES AND SILT FENCE OR OTHER CONTROLS TO FILTER FLOW WHERE APPLICABLE. - ENSURE STORMWATER PITS AND DRAINS ARE PROTECTED FROM SILTATION BY USING APPROPRIATE METHODS.
15. SOIL STABILISATION DURING CONSTRUCTION: - TOPSOIL AND SEED, SOIL AS REQUIRED, RE-INSTATE DISTURBED AREAS AS SOON AS PRACTICAL.	17. SEDIMENT TRAPS: - SEDIMENT BASIN / SILT FENCE AS REQUIRED. - PITS MUST BE FITTED AS SOON AS POSSIBLE - USE TEMPORARY PIT LIDS UNTIL INSTALLED. USE SILT FENCES, SILT SAUSAGES, CUT OFF DRAINS AND OTHER SILT PROTECTION METHODS WHERE NECESSARY AS DETAILED IN THIS EMP PLAN AND AS REQUIRED BY THE SITUATION.
16. STOCKPILE PROTECTION: - SILT FENCES TO BE ERRECTED AROUND THE DOWNSTREAM SIDE OF STOCKPILES WHERE APPLICABLE. STOCKPILES TO BE PLACED AWAY FROM DRAINAGE INLETS, OPEN DRAINS, WATER COURSES & PAVED AREAS. A CUT-OFF DRAIN WITH EARTH BAND TO BE INSTALLED ON THE UPSIDE OF THE STOCKPILE TO DIVERT RUN-OFF AWAY FROM THE STOCKPILE. MINIMISE THE NUMBER OF STOCKPILES WHERE POSSIBLE.	18. DEWATERING: - WHERE POSSIBLE WATER SHALL BE DIRECTED OVER EXISTING GRASS & PLANTED AREAS FOR FURTHER SEDIMENT CONTROL. PRIOR TO DISCHARGE INTO STORMWATER SYSTEM. - IF THIS IS NOT POSSIBLE, WATER TO BE COLLECTED INTO A TEMPORARY SUMP AND THEN SENT THROUGH SILT TRAPS BEFORE ENTERING INTO THE DRAINAGE SYSTEM.
19. VEHICLE AND ROAD MANAGEMENT, SITE ACCESS: - ACCESS THROUGH COMO PARADE CLEANING VEHICLES: ALL VEHICLES LEAVING THE SITE MUST REMOVE ANY EXCESS SEDIMENTS / CLAY COLLECTED ON THE VEHICLES WHEELS ON SITE. EACH OPERATOR MUST MANUALLY REMOVE EXCESS CLAY SUCH THAT IT MINIMISES DEPOSITS ON THE ROAD.	20. OTHER: ROADS ARE TO BE CLEANED PRIOR TO RAINSTORMWATER EVENTS. STORMWATER PITS ALONG THE ESTABLISHED ROADWAY WHICH ARE SUBJECT TO SEDIMENT DEPOSITS, WILL BE EITHER FITTED WITH KERB INLET PROTECTORS OR SHALL BE FITTED WITH (GEO-FABRIC) FILTER MATERIAL TO CAPTURE SEDIMENTS. ROADS ARE TO BE INSPECTED AND ANY SEDIMENT DEPOSITED ON THESE ROADS REMOVED.
<b>WASTE</b> RISK: SIGNIFICANT	
REQUIREMENT: LITTER AND WASTE MUST BE CONTAINED ON SITE, BEFORE DISPOSAL IN A RESPONSIBLE MANNER. WASTE GENERATION MUST BE MINIMISED.	21. MOVEMENT OF SOIL: CONTAMINANT STATUS: CLEAN
22. WASTE MINIMISATION METHODS: - THE COLLECTION OF SURVEY PILES AND OTHER MATERIALS ARE TO BE COLLECTED AND RE-USED ON SITE AND RECYCLED FOR FUTURE PROJECTS. - MATERIALS TO BE STORED IN COMPOUND OR SITE CONTAINER.	23. WASTE STORAGE AND DISPOSAL: - WASTE BINS TO BE AGED IN COMPOUND FOR DAILY RUBBISH AND REMOVED OFFSITE AS REQUIRED.
24. OTHER: N/A	
<b>CHEMICALS</b> RISK: SIGNIFICANT	
REQUIREMENT: STORAGE AND SPILL MANAGEMENT PRACTICES MUST BE IMPLEMENTED TO ENSURE THAT NO ENVIRONMENTAL DAMAGE CAN RESULT FROM THE ESCAPE OR SPILLAGE OF CHEMICALS OR FUELS.	25. SIGNIFICANT FLORA AND FAUNA ON AND ADJACENT TO THE SITE MUST BE PROTECTED. 26. YES/NO - DETAILS: REFER TO ENDORSED LANDSCAPE MASTER PLAN
26. STORAGE: - MINIMAL QUANTITIES STORED IN SITE CONTAINER.	27. REFUELLING PROCEDURE: - ALL REFUELLING TO BE CARRIED OUT BY EXTERNAL CONTRACTOR WITH PROCEDURES AND SPILL KITS AVAILABLE DURING REFUELLING.
28. SPILL MANAGEMENT: - SEE ITEM 27: REFUELLING UNDERTAKEN BY EXTENDED FUEL CONTRACTOR WHO CARRIES ALL THE REQUIRED SPILL KITS ETC.	28. OTHER: N/A



31. REQUIREMENT: PLACES, SITES AND OBJECTS OF ARCHAEOLOGICAL OR HERITAGE SIGNIFICANCE MUST BE PROTECTED.	32. REQUIREMENT:
33. YES/NO - DETAILS: THE RECOMMENDATIONS WITHIN APPROVED CULTURAL HERITAGE MANAGEMENT PLAN No 12015 PREPARED BY HERITAGE INSIGHT Pty Ltd DATED 18TH JANUARY 2011, AS APPROVED BY THE SECRETARY, DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT ON 15TH APRIL 2012, OR ANY SUBSEQUENT APPROVED PLAN, MUST BE UNDERTAKEN, PRIOR TO AND DURING, THE CONSTRUCTION OF THE DEVELOPMENT HEREBY APPROVED.	

<b>SIGNIFICANT FLORA / FAUNA</b> RISK: SIGNIFICANT	<b>ARCHAEOLOGICAL / HERITAGE</b> RISK: SIGNIFICANT
--	--

<b>CHEMICALS</b> RISK: SIGNIFICANT	<b>EROSION AND SEDIMENT</b> RISK: SIGNIFICANT
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<b>WASTE</b> RISK: SIGNIFICANT	<b>NOISE</b> RISK: SIGNIFICANT
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<b>STORMWATER DRAINAGE</b> RISK: SIGNIFICANT	<b>DUST</b> RISK: SIGNIFICANT
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**AS CONSTRUCTED PLANS**  
The purpose of these as-constructed plans is to update the design drawings to show significant changes which occurred during construction. Note that the levels shown on these plans are design levels, and have not been verified by survey. All information shown on these plans should be verified on site. SMEC Australia Pty Ltd accept no responsibility for loss or damages resulting from the inappropriate usage of these plans.

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

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**AS CONSTRUCTED**

PLAN OF SUB. NO.  
PERMIT REF. NO.

0 10 20 40  
Scale 1:1000  
SCALE AS SHOWN AT 1

N

**SMEC**  
Member of the Surlana Jurong Group  
ABN 47 065 475 149  
Collins Square, Tower 4, Level 20, 727 Collins St  
Melbourne, VIC, 3008, Australia  
03 9514 1500

**mirvac**

Olivine Estate - Stage 22  
Whittlesea City Council  
Road and Drainage  
Environmental Management Plan  
Layout Plan

MELWAYS REF 367 G11 PROJECT / DRAWING No 1700E-022-451 SHEET No 41 of 43 REVISION 4

RISK ASSESSMENT CHECKLIST	
<b>NOISE</b> <b>ISSUES:</b> - NATURE OF NOISE GENERATING WORKS: VEHICLES, FIXED MACHINERY, CONSTRUCTION ACTIVITIES. - POTENTIAL NOISE RECEPTORS: SURROUNDING RESIDENTS / CONTRACTORS: - PROXIMITY OF WORKS TO NOISE RECEPTORS: ADJACENT RESIDENTS - THE RESIDENTS OF CRESSY WAY & EMINENCE DRIVE LIVE, 100m FROM THE SITE	LIKELIHOOD LIKELY  CONSEQUENCE MAJOR  OVERALL RISK LOW
<b>DUST</b> <b>ISSUES:</b> - DUST SOURCES: MOVEMENTS OF VEHICLES - POTENTIAL DUST RECEPTORS: SURROUNDING RESIDENTS / CONTRACTORS - PROXIMITY OF WORKS TO DUST RECEPTORS: ADJACENT RESIDENTS - EXTENT OF EXPOSED EARTH AND DURATION OF TIME EXPOSED: DURATION OF STAGED WORKS - WIND CONDITIONS:	LIKELIHOOD LIKELY  CONSEQUENCE MAJOR  OVERALL RISK LOW
<b>EROSION AND SEDIMENT</b> <b>ISSUES:</b> - EROSION AND SEDIMENT SOURCES: EXPOSED TOPSOIL - POTENTIAL EROSION AND SEDIMENT RECEPTORS: STORMWATER SYSTEM, CREEK SYSTEM. - PROXIMITY OF WORKS TO EROSION AND SEDIMENT RECEPTORS: ADJACENT RESIDENTS - EXTENT OF EXPOSED EARTH AND DURATION OF TIME EXPOSED: AREA APPROXIMATELY 5 HA EXPOSED FOR 8 MONTHS. - SLOPE: MINIMAL - 3 METRES OVER 250M - SITE DRAINAGE REGIME: SURFACE SWALES AND UNDERGROUND DRAINAGE - RAINFALL: 400 - 600MM / YEAR - VEHICLE MOVEMENTS ON AND OFF SITE: TO BE KEPT TO A MINIMUM AND VIA A SINGLE ENTRY / EXIT.	LIKELIHOOD LIKELY  CONSEQUENCE MAJOR  OVERALL RISK LOW
<b>WASTE</b> <b>ISSUES:</b> - NATURE OF WASTE TO BE GENERATED: BUILDING AND CONSTRUCTION PRODUCTS, LITTER. - PRESENCE OF WASTE ON SITE PRIOR TO WORK COMMENCEMENT: EXISTING SHEDS. - POTENTIAL WASTE RECEPTORS: SURROUNDING RESIDENTS. - PROXIMITY TO POTENTIAL WASTE RECEPTORS: ADJACENT RESIDENTS - THE RESIDENTS AT CRESSY WAY & EMINENCE DRIVE LIVE < 100M FROM THE SITE	LIKELIHOOD LIKELY  CONSEQUENCE MAJOR  OVERALL RISK LOW
<b>CHEMICALS</b> <b>ISSUES:</b> - TYPES OF CHEMICALS AND FUELS USED AND/OR STORED ON SITE: REFER TO MATERIAL SAFETY DATA SHEET (MSDS) - QUANTITIES OF CHEMICALS AND FUELS USED AND/OR STORED ON SITE: REFER TO MATERIAL SAFETY DATA SHEET (MSDS) - POTENTIAL CHEMICAL RECEPTORS: SURROUNDING RESIDENTS / CONTRACTORS / WATERWAYS - PROXIMITY TO POTENTIAL CHEMICAL RECEPTORS: 200 METRES	LIKELIHOOD LIKELY  CONSEQUENCE MAJOR  OVERALL RISK LOW
<b>SIGNIFICANT FLORA/FAUNA</b> <b>ISSUES:</b> - TYPES OF FLORA/FAUNA: NIL - VULNERABILITY OF FLORA/FAUNA: N/A - PROXIMITY OF FLORA/FAUNA TO WORKS: N/A - WORK ACTIVITIES WHICH MAY THREATEN FLORA/FAUNA: N/A - POTENTIAL IMPACTS ON FLORA/FAUNA: N/A - REFER TO 0697-06-81, ITEM No.29 FOR DETAILS.	LIKELIHOOD LIKELY  CONSEQUENCE MAJOR  OVERALL RISK LOW
<b>ARCHAEOLOGICAL/HERITAGE</b> <b>ISSUES:</b> - TRADITIONAL LAND OWNERS CONSULTED? YES - SURVEY OR ASSESSMENT CONDUCTED? YES - PROBABILITY OF ENCOUNTERING ARCHAEOLOGICAL/HERITAGE ITEMS DURING WORKS: LOW - TYPES OF ARCHAEOLOGICAL/HERITAGE ITEMS ON SITE: NIL - PROXIMITY OF ARCHAEOLOGICAL/HERITAGE ITEMS TO WORKS ON SITE: N/A - WORK ACTIVITIES WHICH MAY THREATEN ARCHAEOLOGICAL/HERITAGE ITEMS: NIL - REFER TO 0697-06-81, ITEM No.30 FOR DETAILS.	LIKELIHOOD LIKELY  CONSEQUENCE MAJOR  OVERALL RISK LOW

I HAVE PREPARED THIS ENVIRONMENTAL MANAGEMENT PLAN AND AGREE TO UNDERTAKE WORKS AND ENSURE SUB-CONTRACTORS UNDERTAKE WORKS IN ACCORDANCE WITH THIS PLAN.

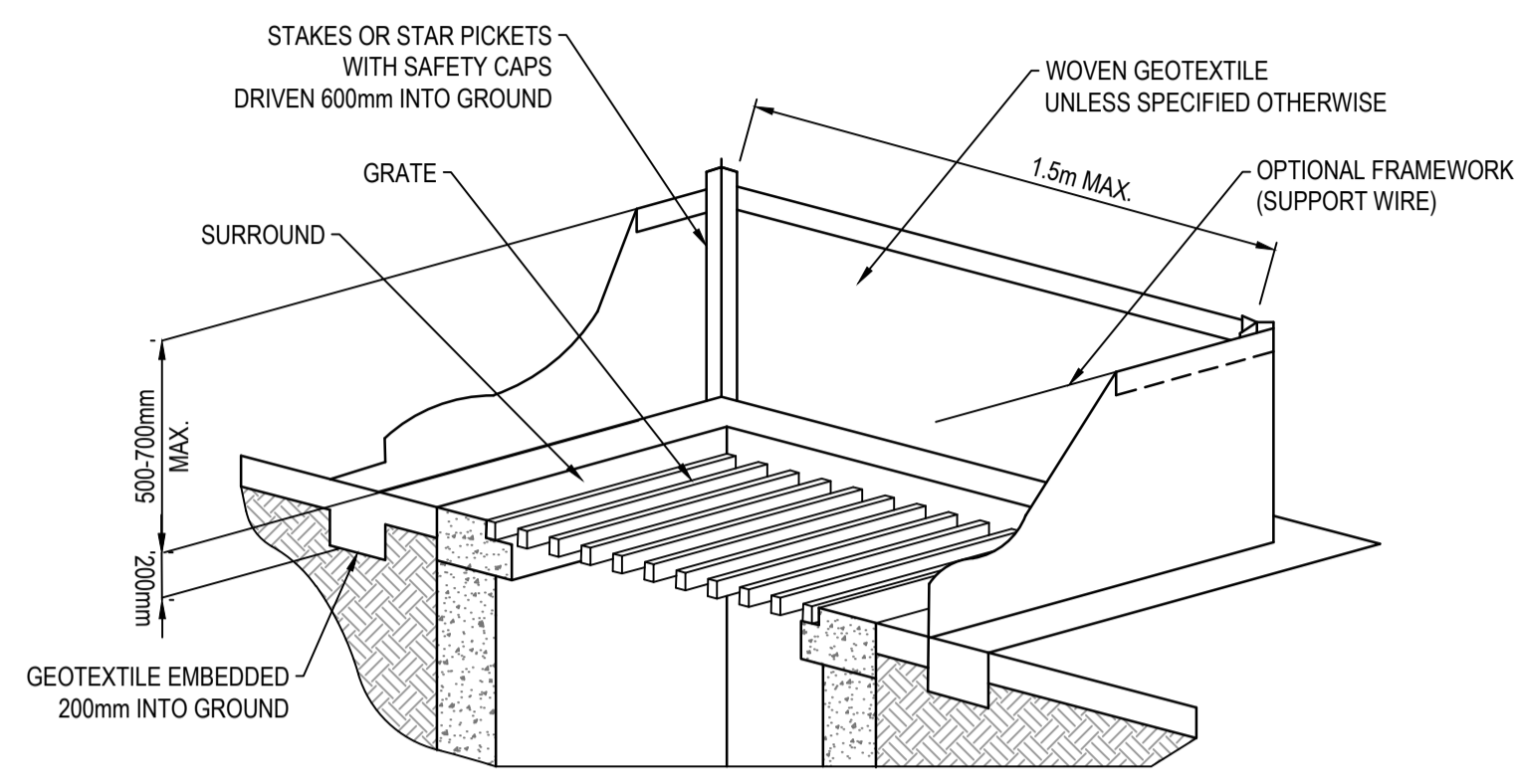
DEVELOPER Mirvac  
 Level 5, Building Q3, 6 Riverside Quay  
 Southbank VIC 3006  
 NAME: Chris Kiparoglou  
 0466 941 870  
 chris.kiparoglou@mirvac.com

CONSULTANT SMEC - URBAN DEVELOPMENT  
 COLLINS SQUARE, TOWER 4, LEVEL 20  
 727 COLLINS ST, MELBOURNE, VIC, 3008  
 NAME: Shankar Tisseverasinghe  
 0434 581 518  
 shankar.tisseverasinghe@smec.com

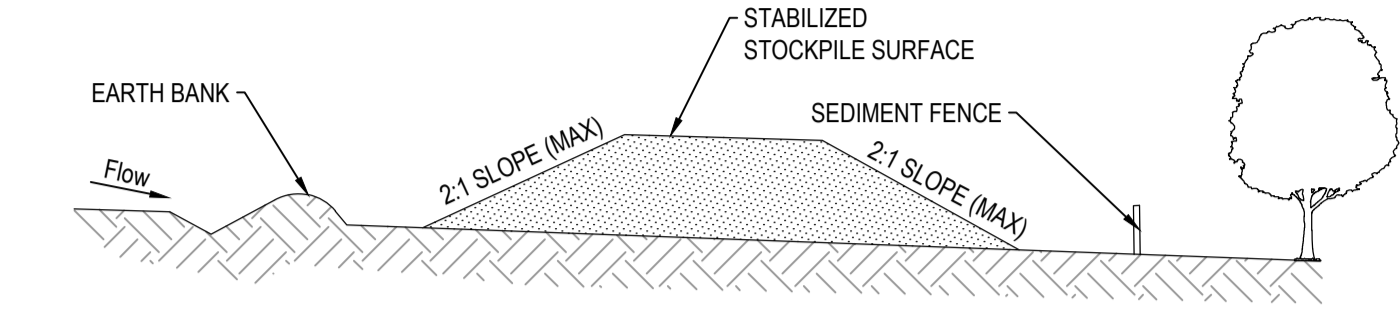
CONTRACTOR Winslow Constructors Pty Ltd  
 50 Barry Road  
 Campbellfield VIC 3061  
 NAME: Adam Stojanovski  
 0427 446 501  
 adams@winslow.com.au

ENVIRONMENTAL PROTECTION MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE FOLLOWING DESIGNS.

**GEOTEXTILE INLET GUARD - PHASE B\*\***



**STOCKPILES**

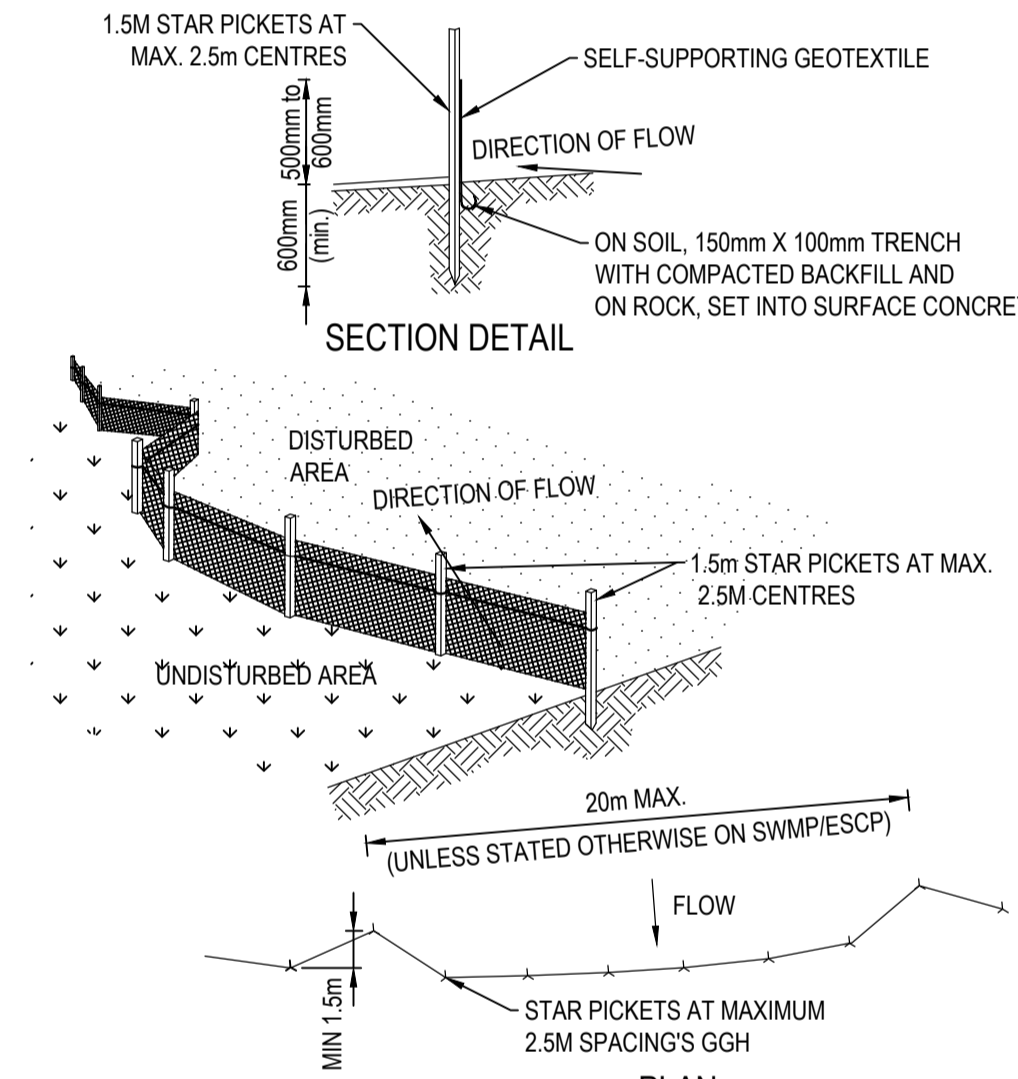


- CONSTRUCTION NOTES:**
- WHERE POSSIBLE LOCATE STOCKPILE AT LEAST 5 METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOWS, ROADS AND HAZARD AREAS.
  - CONSTRUCT ON THE CONTOUR AS A LOW, FLAT, ELONGATED MOUND.
  - WHERE THERE IS SUFFICIENT AREA TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METRES IN HEIGHT.
  - REHABILITATE IN ACCORDANCE WITH THE SWMP/ESCP.
  - CONSTRUCT EARTH BANK (STANDARD DRAWING 5-5) ON THE UPSLOPE SIDE TO DIVERT RUN OFF AROUND THE STOCKPILE AND A SEDIMENT FENCE (STANDARD DRAWING 6-8) 1 TO 2 METRES DOWNSLOPE OF STOCKPILE.
  - THE PLACEMENT OF FILL MUST BE DESIGNED TO ENSURE THAT IT DOES NOT COMPROMISE NATIVE VEGETATION TO BE PROTECTED.
  - SOIL MUST NOT BE STOCKPILED ON NATIVE VEGETATION

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

**PRELIMINARY**  
 NOT APPROVED FOR CONSTRUCTION  
 THIS PLAN HAS BEEN PREPARED FOR INFORMATION ONLY IN ACCORDANCE WITH CLAUSE XX  
 THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRODUCING THE FINAL EMP AS PART OF THE LUMP SUM PRICE FOR THE WORKS

**SILT/DRIFT FENCE - PHASE A\*\***

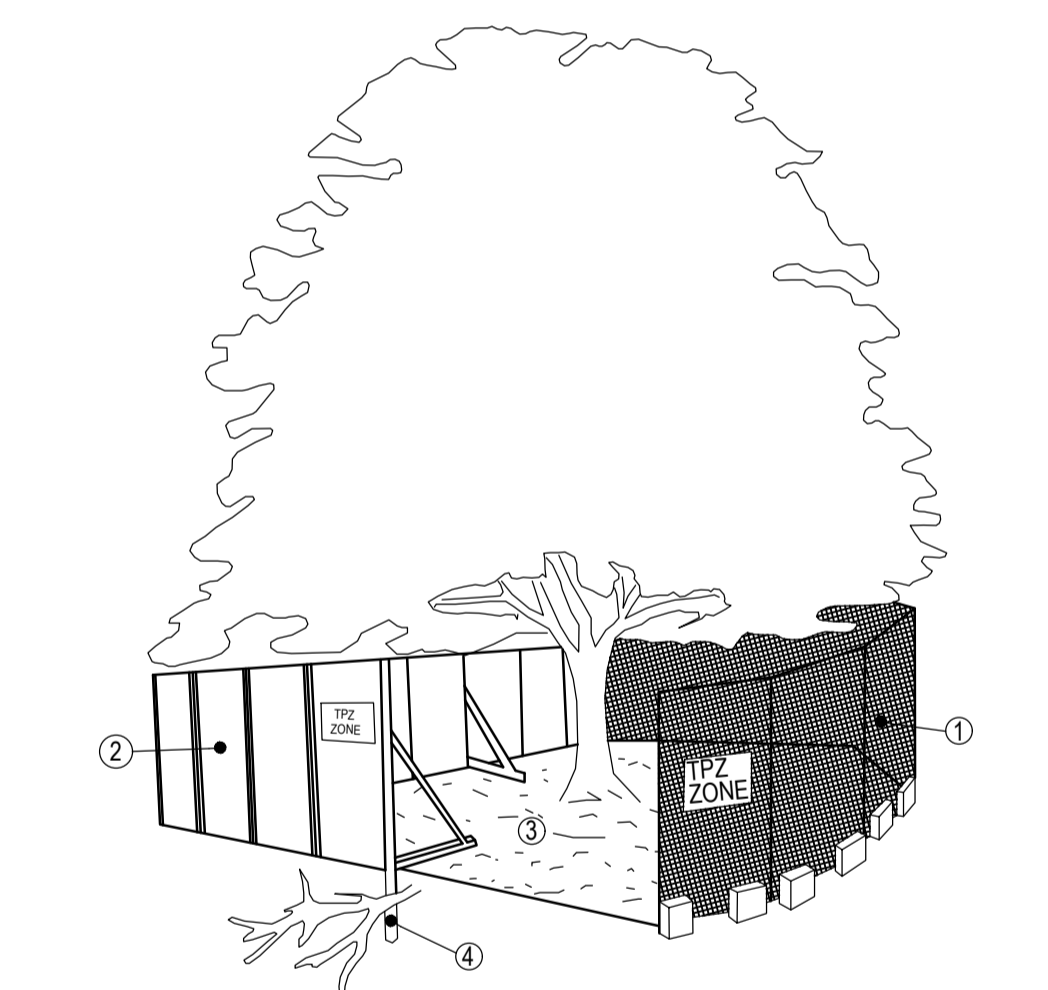


- CONSTRUCTION NOTES:**
- CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10-YEAR EVENT.
  - CUT A 150MM DEEP TRENCH ALONG THE UPSIDE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
  - DRIVE 1.5 METRE LONG STAR PICKETS INTO GROUND AT 2.5 METRE INTERVALS (MAX) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS
  - FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
  - JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150MM OVERLAP.
  - BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.

**TREE PROTECTIVE FENCING**

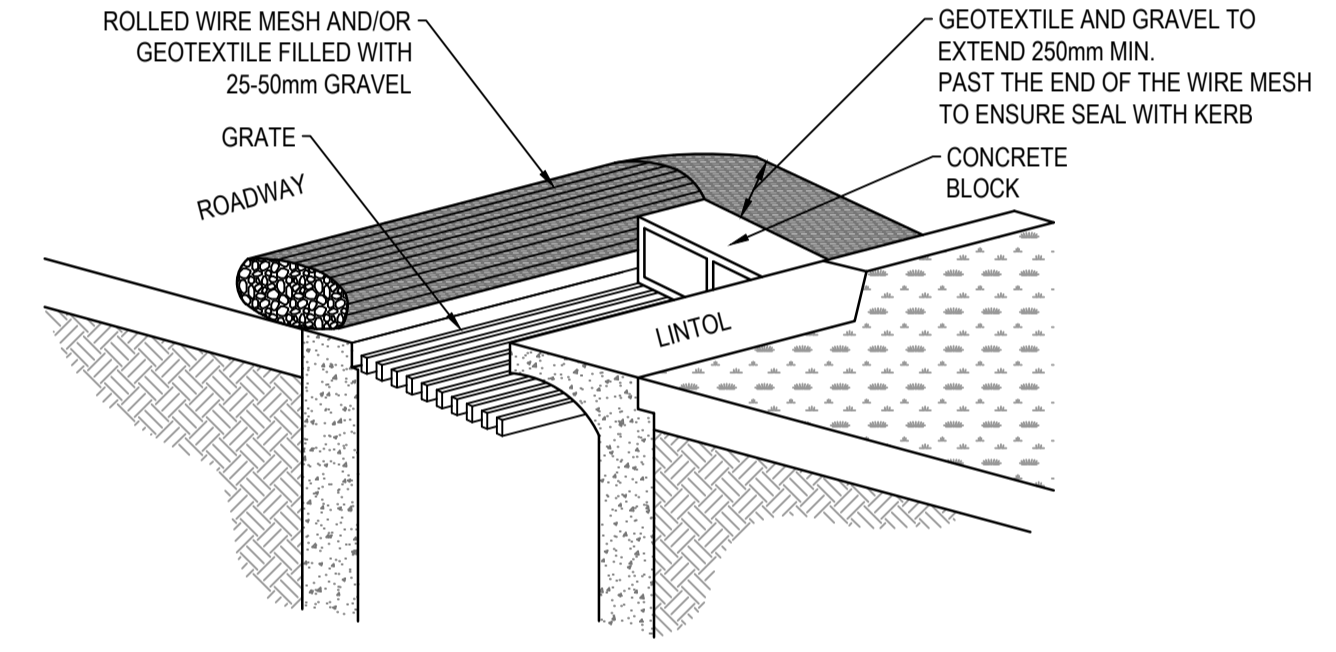
**TREE PROTECTION/NO-GO FENCING**

- ALL INDIGENOUS TREES TO TWICE THE CANOPY
- PROTECTIVE FENCING (HIGHLY VISIBLE) AROUND TWICE THE CANOPY
- DISTANCE OF EACH SCATTERED TREE AND MORE THAN 2 METRES FROM AREAS OF NATIVE VEGETATION IDENTIFIED TO BE PROTECTED.



- CONSTRUCTION NOTES:**
- CHAIN WIRE MESH PANELS WITH SHADE CLOTH (IF REQUIRED) ATTACHED, HELD IN PLACE WITH CONCRETE FEET.
  - ALTERNATIVE PLYWOOD OR WOODEN PALING FENCE PANELS. THIS FENCING MATERIAL ALSO PREVENTS BUILDING MATERIALS OR SOIL ENTERING THE TPZ.
  - MULCH INSTALLATION ACROSS SURFACE OF TPZ (AT THE DISCRETION OF THE PROJECT ARBORIST). NO EXCAVATION, CONSTRUCTION ACTIVITY, GRADE CHANGES, SURFACE TREATMENT OR STORAGE OF MATERIALS OF ANY KIND IS PERMITTED WITHIN THE TPZ.
  - BRACING IS PERMISSIBLE WITHIN THE TPZ. INSTALLATION OF SUPPORTS SHOULD AVOID DAMAGING ROOTS.

**INLET FILTER BAG - PHASE B\*\***



**OTHER ISSUES 1**

ISSUES:  
 ALL CONTRACTORS TO IMPLEMENT AND ADHERE TO THE GUIDELINES AS DESCRIBED WITHIN THIS EMP. PLEASE REFER TO ALL ASSOCIATED DOCUMENTS AND DETAILED DESIGN DRAWINGS FOR EXACT LOCATION OF ELEMENTS.  
 ALL CONTRACTORS TO IMPLEMENT, MONITOR AND REVIEW ENVIRONMENTAL PROTECTIVE MEASURES ON A STAGE BY STAGE BASIS.

**OTHER ISSUES 2**

ISSUES:  
 LIKELIHOOD  
 LIKELY  
  
 CONSEQUENCE  
 MAJOR  
  
 OVERALL RISK  
 LOW

LIKELIHOOD  
 LIKELY  
  
 CONSEQUENCE  
 MAJOR  
  
 OVERALL RISK  
 LOW

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

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**AS CONSTRUCTED**

PLAN OF SUB. NO.  
 PERMIT REF. NO.

SCALE AS SHOWN AT A1

Member of the **Surbana Jurong Group**  
 ABN 47 065 475 149  
 Collins Square, Tower 4, Level 20, 727 Collins St  
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**SMEC**  
 Member of the **Surbana Jurong Group**  
 ABN 47 065 475 149  
 Collins Square, Tower 4, Level 20, 727 Collins St  
 Melbourne, VIC, 3008, Australia  
 03 9514 1500

**mirvac**

Olivine Estate - Stage 22  
 Whittlesea City Council  
 Road and Drainage  
 Environmental Management Plan  
 Details

MELWAYS REF: 367 G11  
 PROJECT / DRAWING No: 1700E-022-456  
 SHEET No: 42 of 43  
 REVISION: 1

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

**AS CONSTRUCTED PLANS**

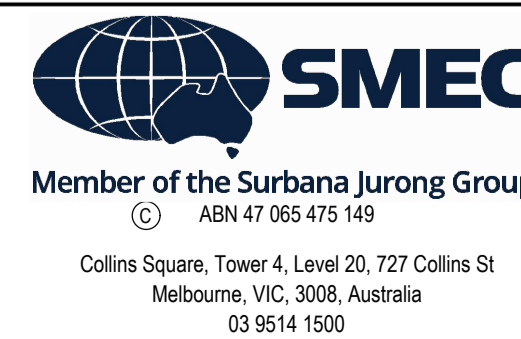
The purpose of these as-constructed plans is to update the design drawings to show significant changes which occurred during construction. Note that the levels shown on these plans are design levels, and have not been verified by survey. All information shown on these plans should be verified on site. SMEC Australia Pty Ltd accept no responsibility for loss or damages resulting from the inappropriate usage of these plans.



**AS CONSTRUCTED**

PLAN OF SUB. NO.  
PERMIT REF. NO.

SCALE AS SHOWN AT A1



Olivine Estate - Stage 22  
Whittlesea City Council  
Road and Drainage  
Safety In Design