

Olivine Estate

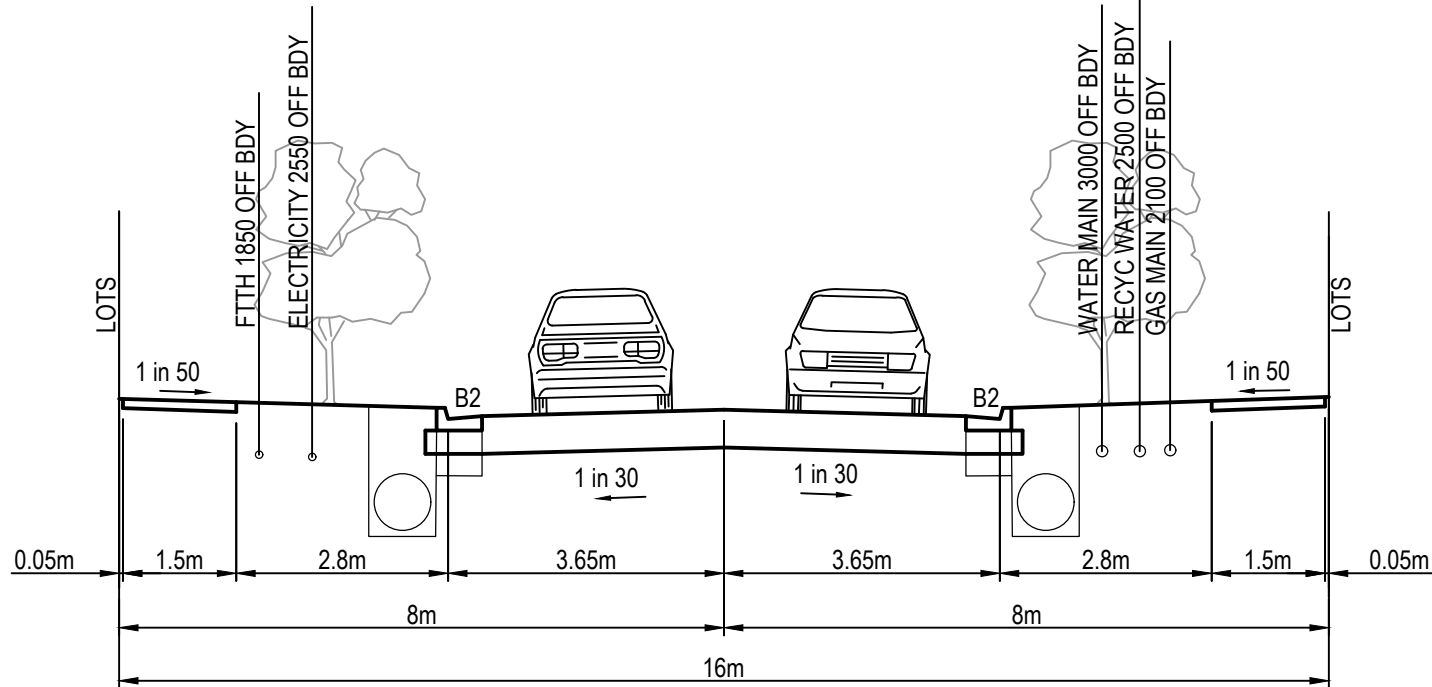
Stage 10



LOCALITY PLAN
MELWAYS REF: 8M2

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16m ACCESS STREET
VICINITY ROAD, METROPOLIS WAY,
MEDIAN GRANGE & DOWNTOWN AVENUE

GENERAL NOTES (WHITTLESEA CITY COUNCIL)

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

WARNING

SAFETY MEASURES REQUIRED

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








WARNING

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
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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)
VICINITY ROAD	EAST	2.10	EAST	2.50	EAST	3.00	WEST	2.55	WEST	1.85
METROPOLIS WAY	SOUTH	2.10	SOUTH	2.50	SOUTH	3.00	NORTH	2.55	NORTH	1.85
MEDIAN GRANGE	EAST	2.10	EAST	2.50	EAST	3.00	WEST	2.55	WEST	1.85
DOWNTOWN AVENUE	SOUTH	2.10	SOUTH	2.50	SOUTH	3.00	NORTH	2.55	NORTH	1.85

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
VICINITY ROAD	16.00	6.40	7.30	7.60	B2	B2	4.20	4.20
METROPOLIS WAY	16.00	6.40	7.30	7.60	B2	B2	4.20	4.20
MEDIAN GRANGE	16.00	6.40	7.30	7.60	B2	B2	4.20	4.20
DOWNTOWN AVENUE	16.00	6.40	7.30	7.60	B2	B2	4.20	4.20

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DES/DT	APPROVAL	All setting out should be carried out in accordance with MPA/Council's standard drawings or as nominated on hard copy plans provided by SMEC. Any digital information supplied by this office is for information only. Any discrepancies should be discussed with the superintendent.	TITLE	NAME		 Member of the Surbana Jurong Group © ABN 47 065 475 149 Collins Square, Tower 4, Level 20, 727 Collins Street Melbourne, VIC 3008 Ph 03 9514 1500		Olivine Estate - Stage 10 Whittlesea City Council Road and Drainage Cover Plan	MELWAYS REF 8M2	PROJECT / DRAWING No 1700E-10-01	SHEET No 01 of 20	REVISION A
A	28.05.19	ISSUED TO COUNCIL FOR APPROVAL	SM/RB	AB		DRAFTER	R.Barua								
<div>SUBJECT TO APPROVAL</div>					 Global-Mark.com.au®	 Global-Mark.com.au®	 Global-Mark.com.au®	 Scale 1:500 SCALE AS SHOWN AT A1							



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Locate all underground services before commencement of works
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REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL	TITLE	NAME
A	28.05.19	ISSUED TO COUNCIL FOR APPROVAL	SM/RB	AB	DRAFTER	R.Barua
					DESIGNER	P.McKay
					CHECKED	Z.Gosev
					AUTHORISED	A.Burrows
					COUNCIL DRAWING REF.	
					REFERENCE No. 2	

Quality Management - ISO 9001

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Oris Management - AS/NZS 1801

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Environmental Management - ISO 14001

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Scale 1:500

SCALE AS SHOWN AT 1

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SMEC

Member of the Surlana Jurong Group

ABN 47 065 475 149

Collins Square, Tower 4, Level 20, 727 Collins Street
Melbourne, VIC 3008
Ph 03 9514 1500

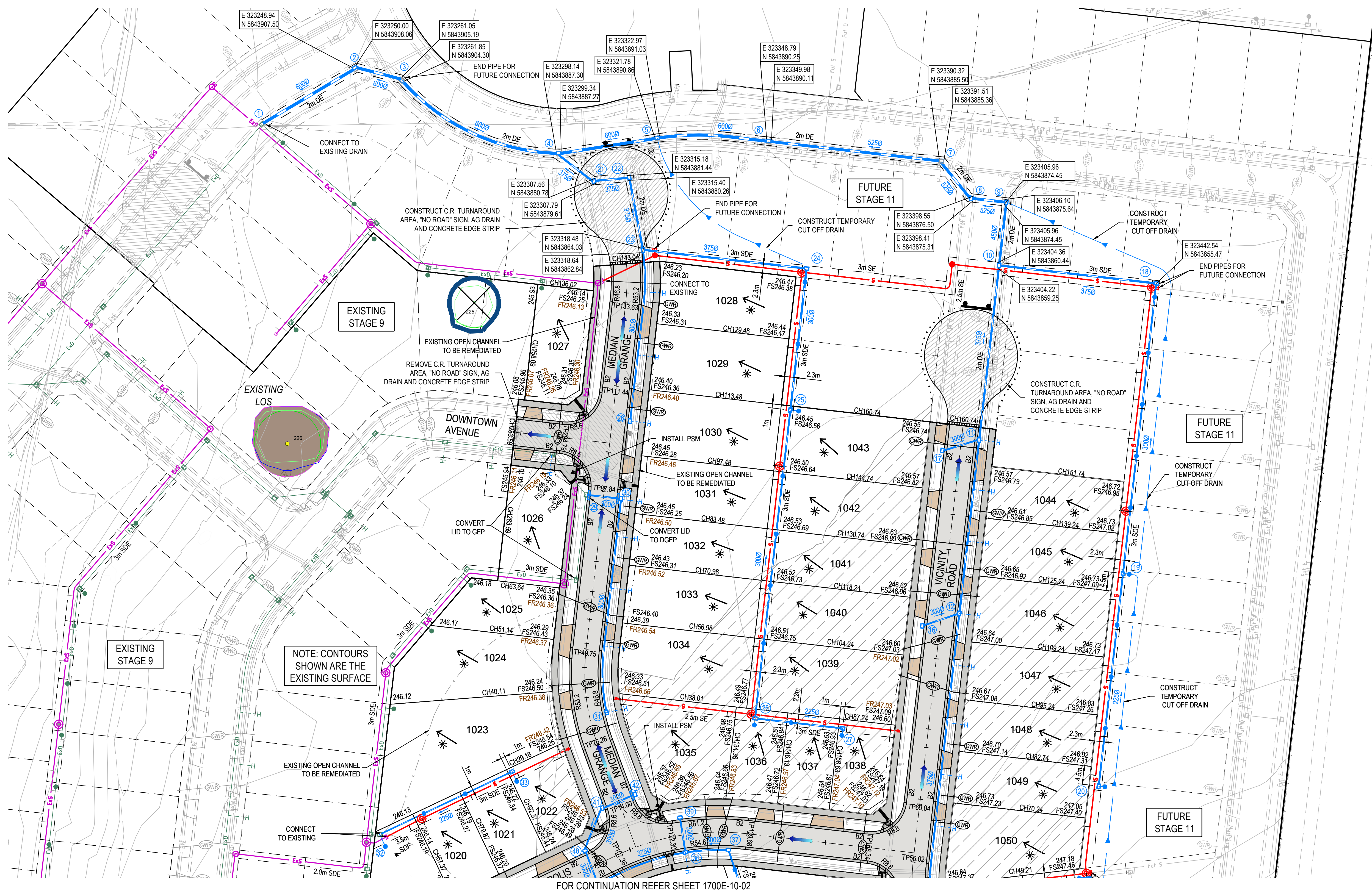
Olive Estate - Stage 10
Whittlesea City Council
Road and Drainage
Layout Plan - 1

MELWAYS REF
8M2

PROJECT / DRAWING No.
1700E-10-02

SHEET No.
02 of 20

REVISION
A



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

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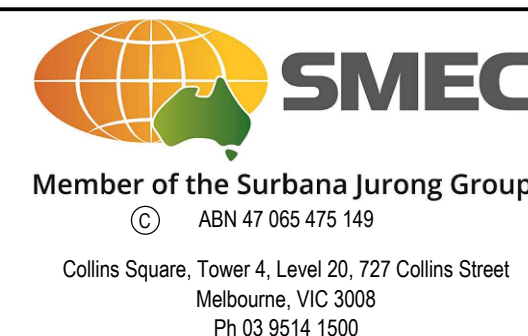
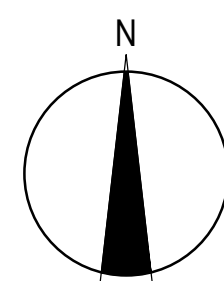
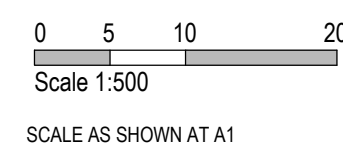
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SUBJECT TO APPROVAL

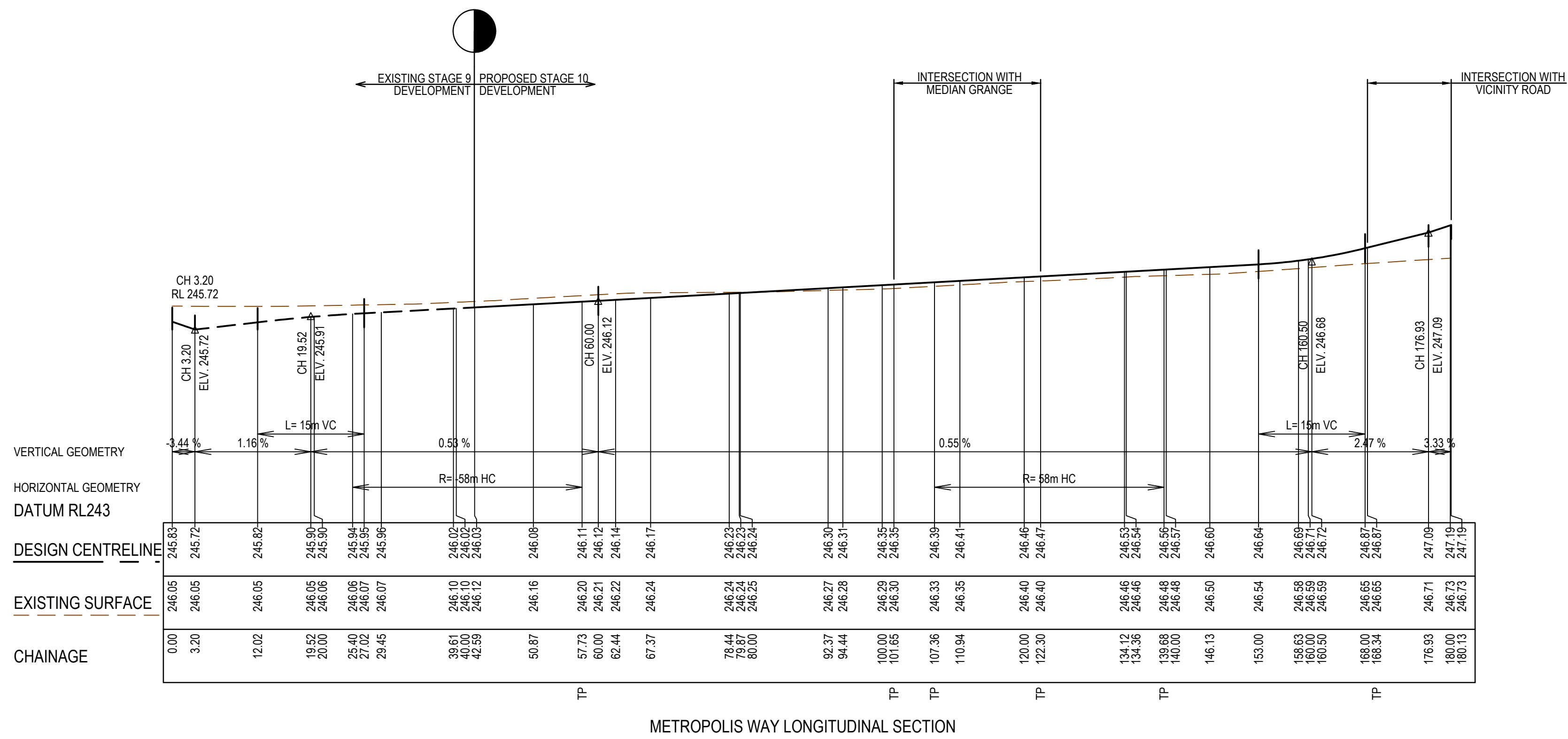
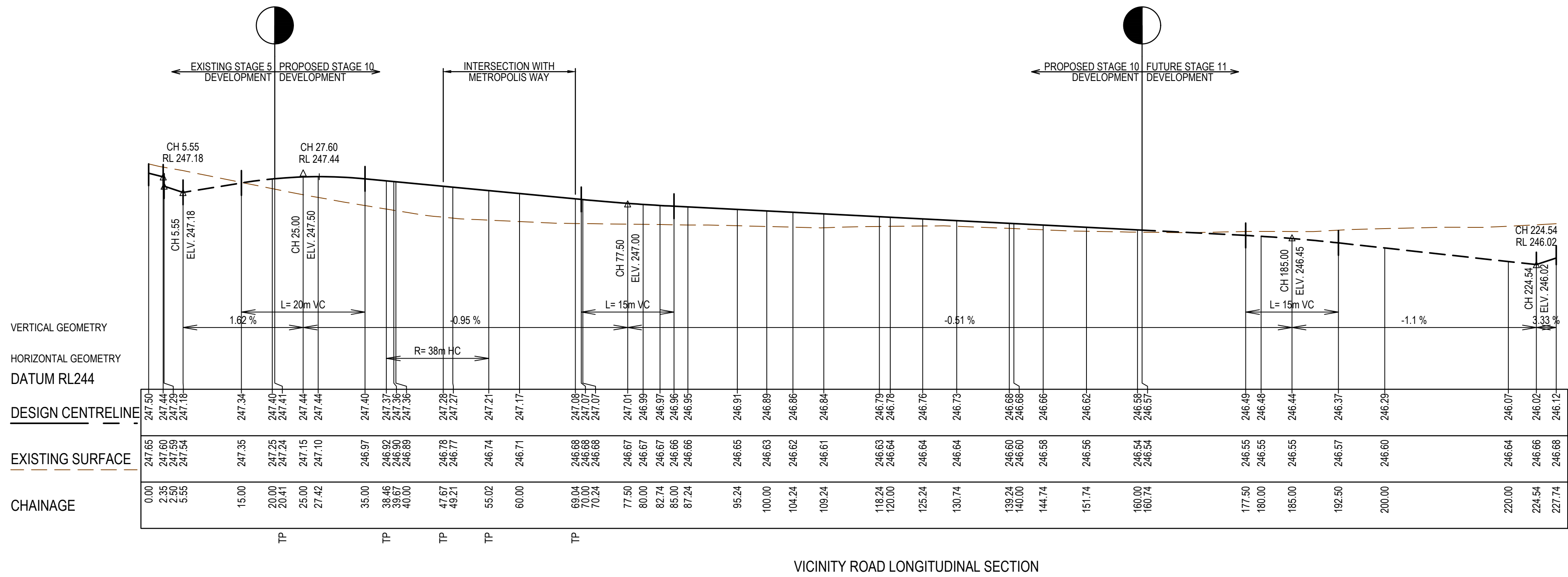


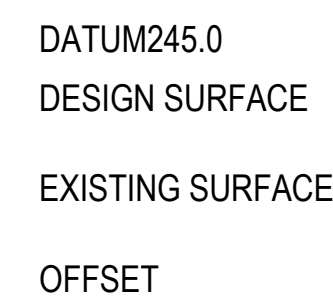
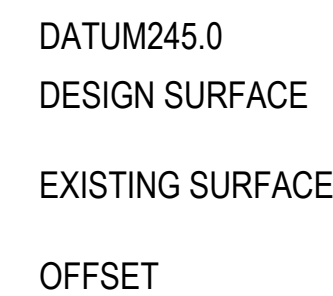
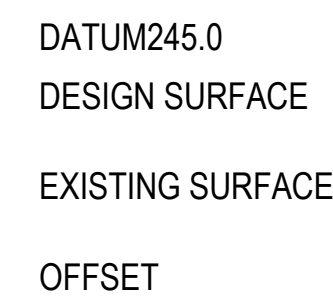
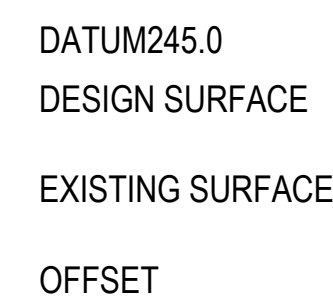
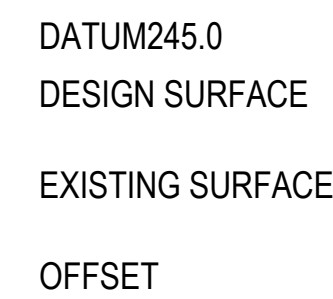
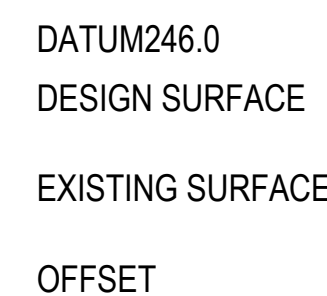
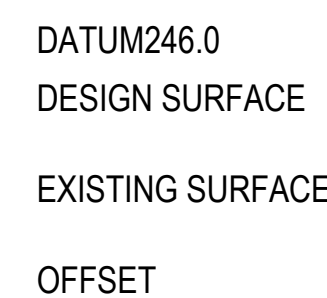
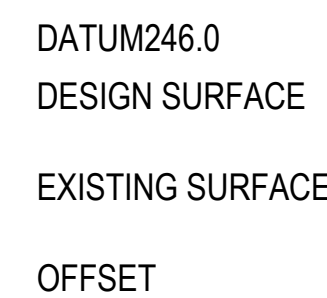
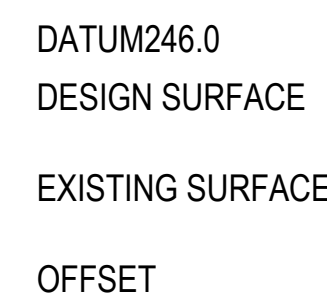
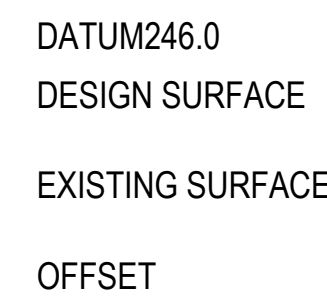
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DRAFTER	R.Barua
DESIGNER	P.McKay
CHECKED	Z.Gosev
AUTHORISED	A.Burrows
COUNCIL DRAWING REF.	
REFERENCE No. 2	



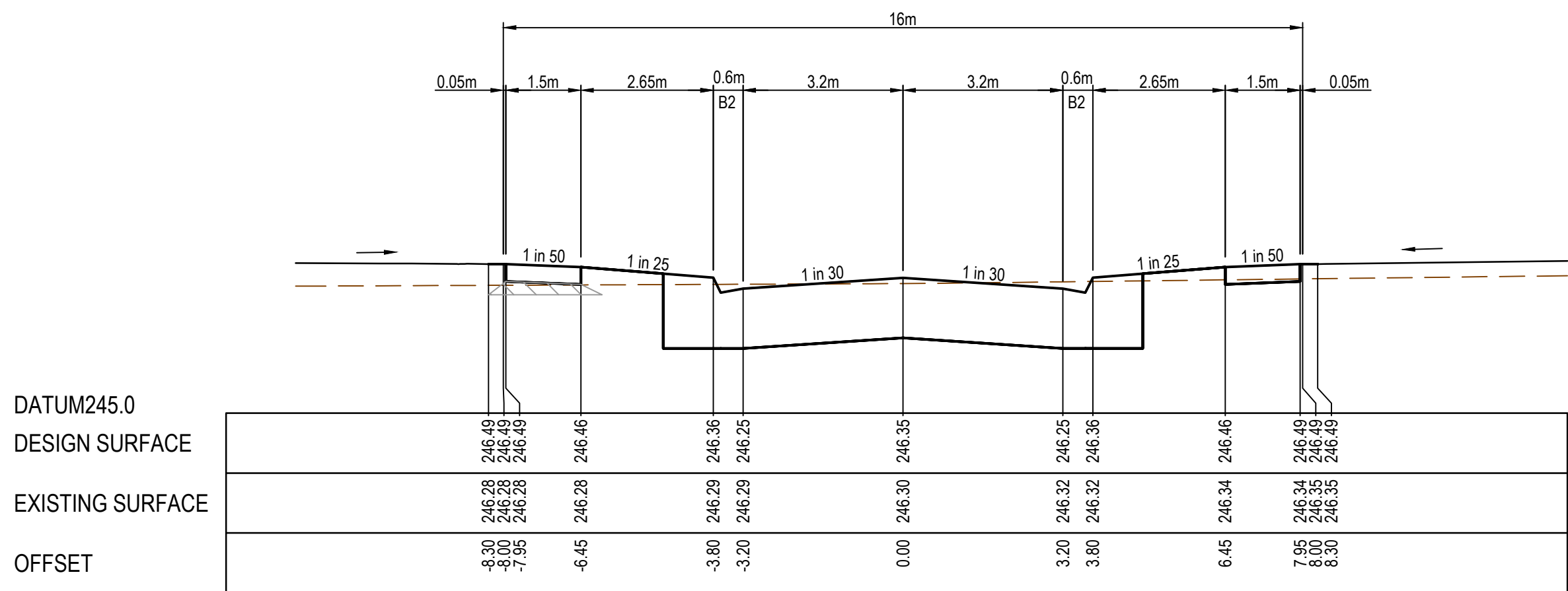
Olivine Estate - Stage 10
Whittlesea City Council
Road and Drainage
Layout Plan - 2

MELWAYS REF 8M2	PROJECT / DRAWING No. 1700E-10-03	SHEET No. 03 of 20	REVISION A
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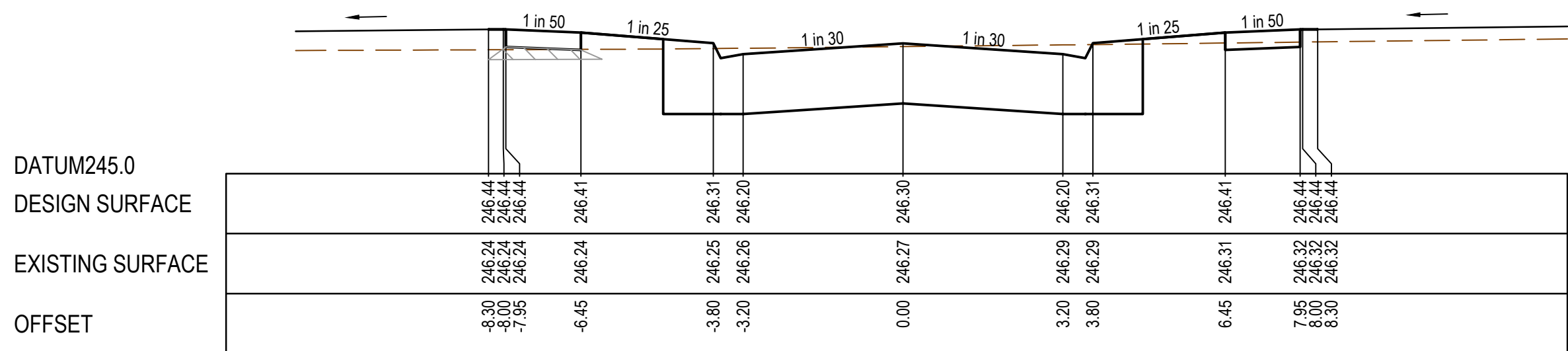




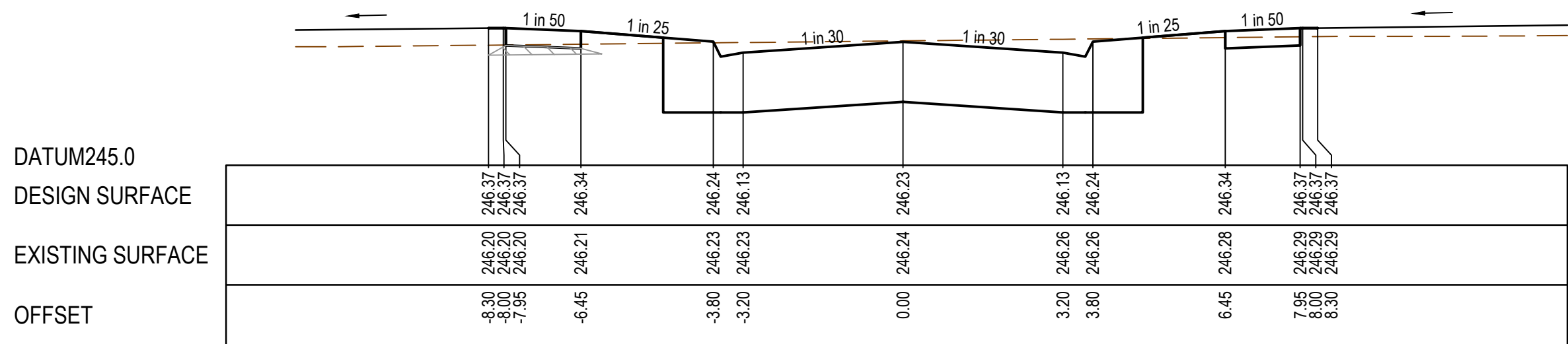
STRUCTURAL FILL REQUIRED UNDER
PAVEMENT AND FOOTPATHS WHERE
CONSTRUCTED ABOVE EXISTING SURFACE



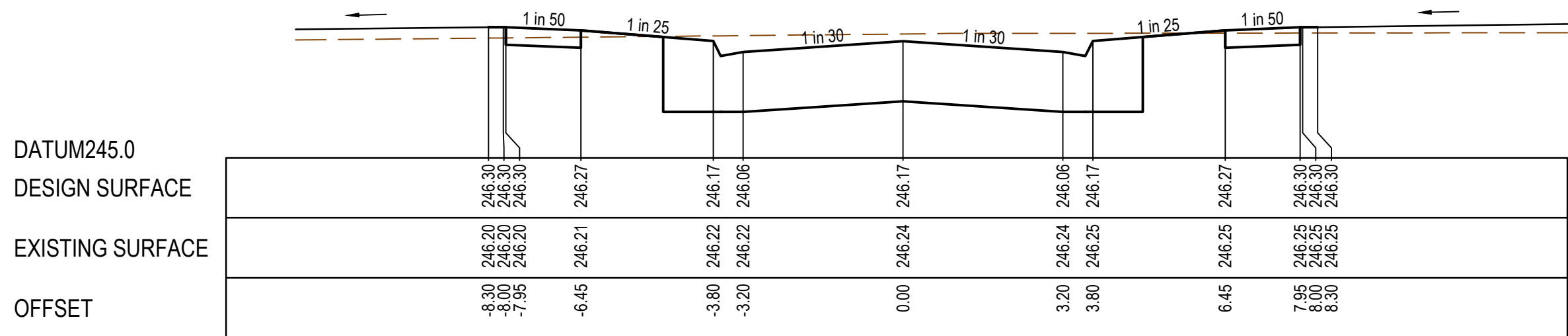
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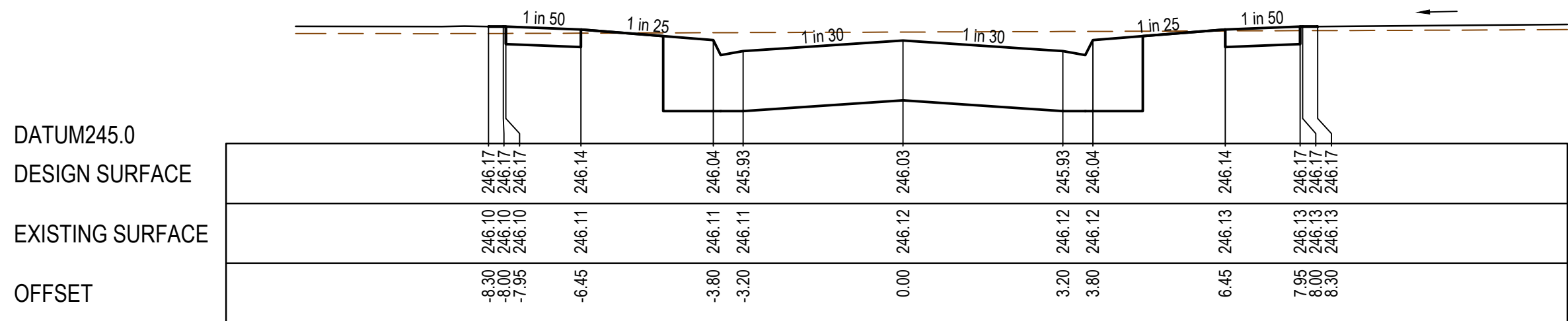
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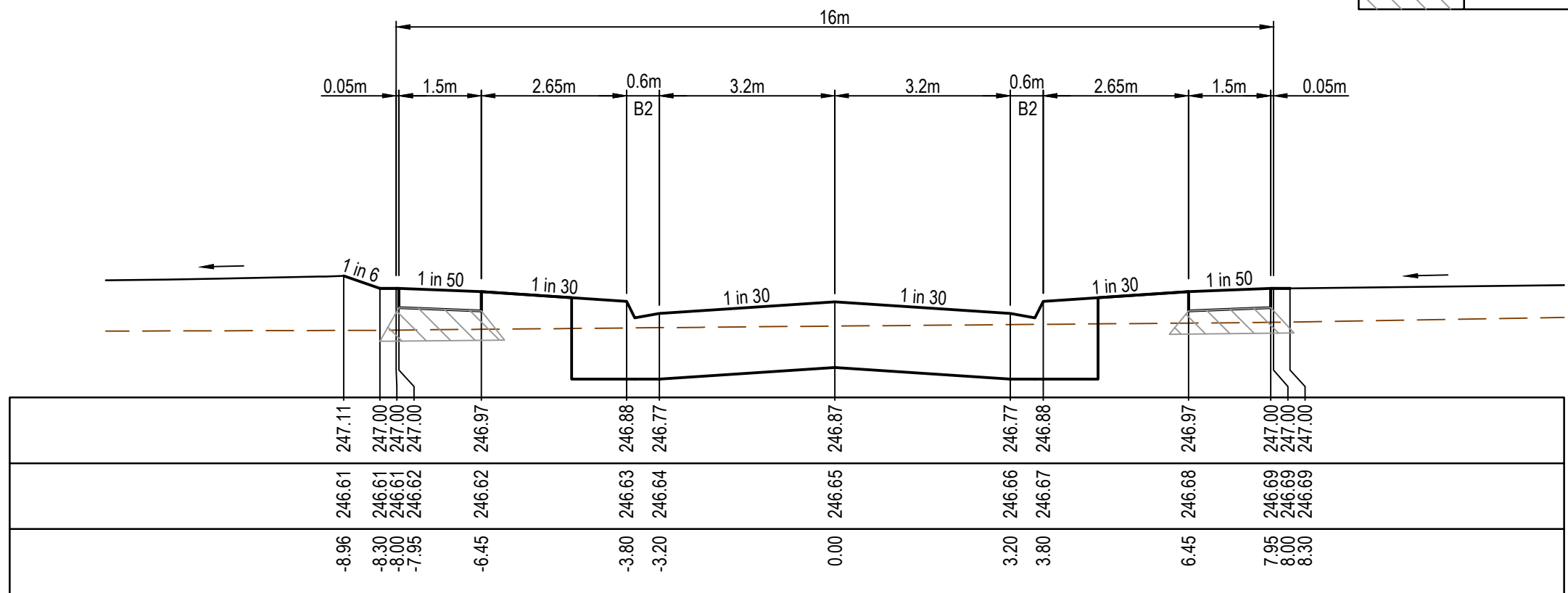
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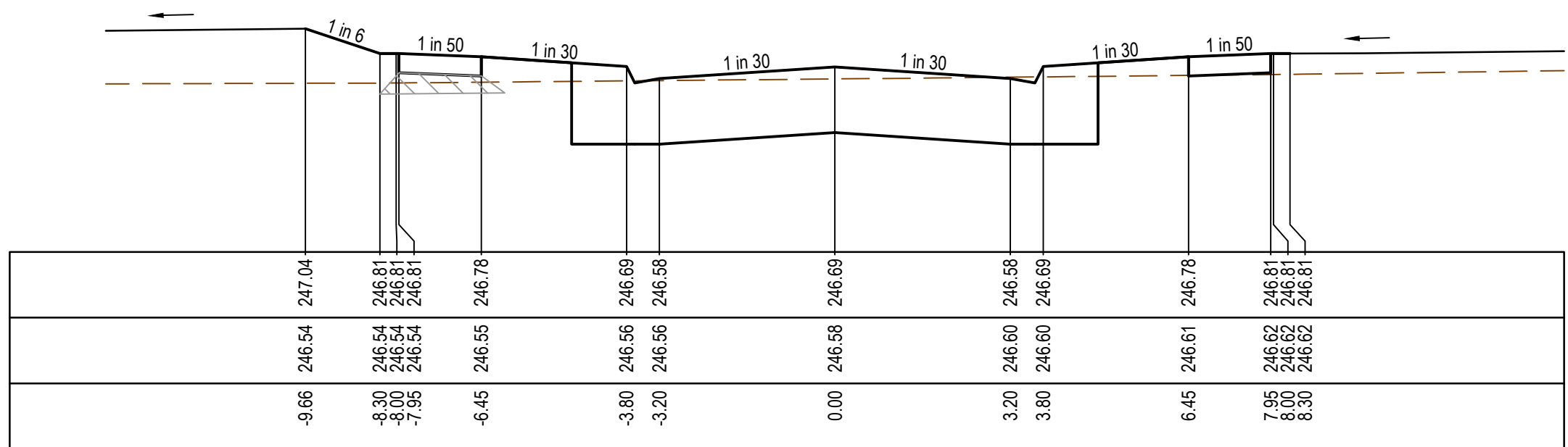
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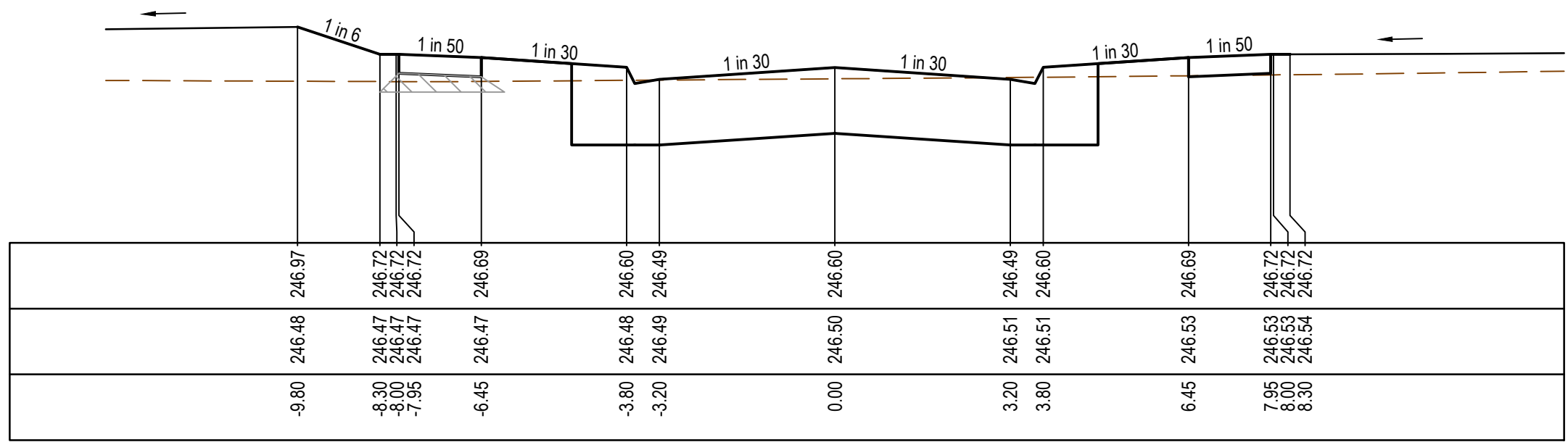
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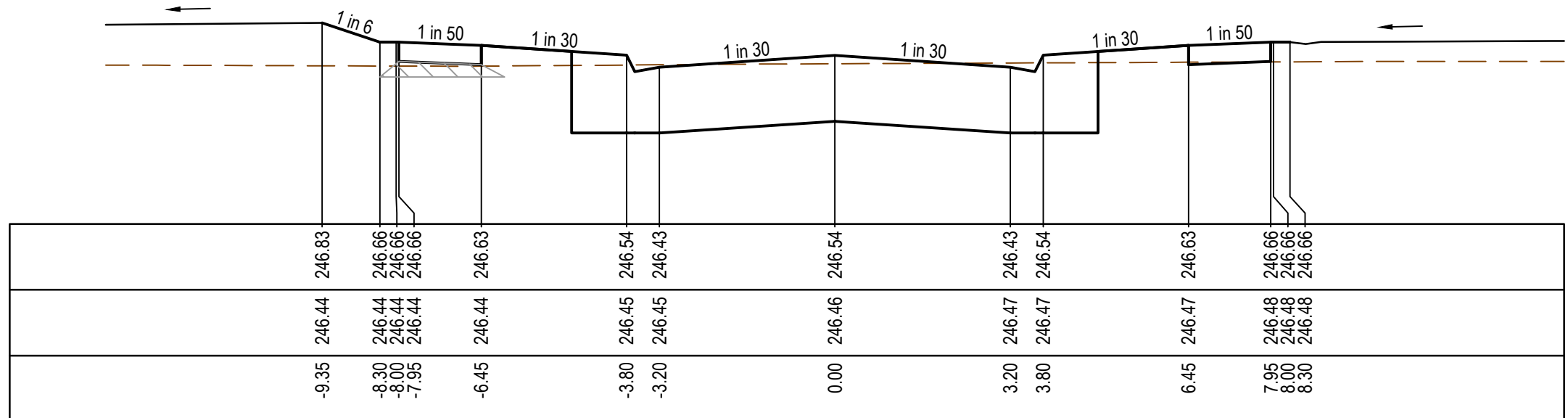
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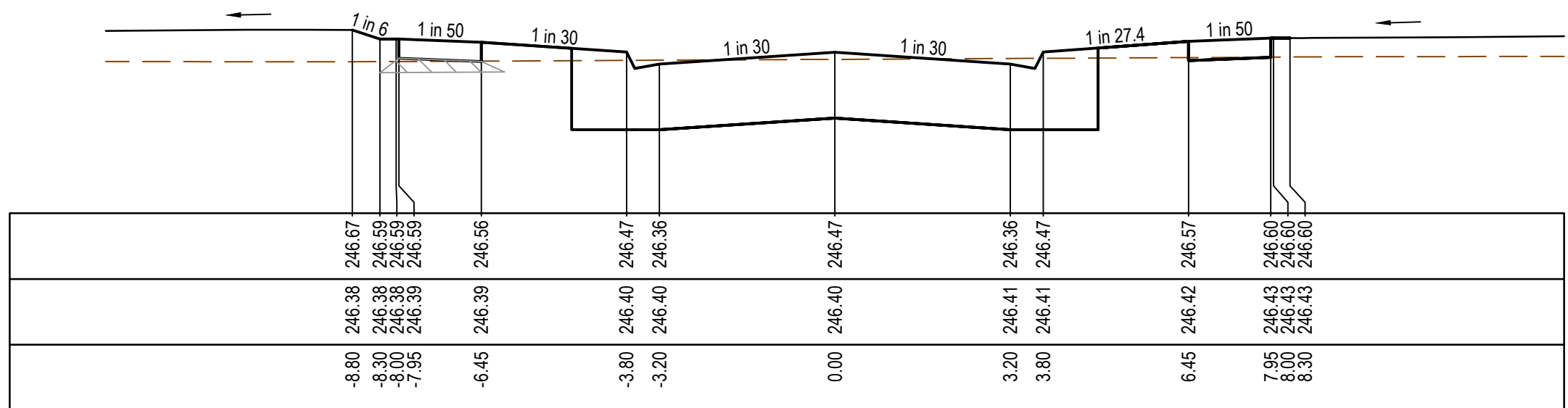
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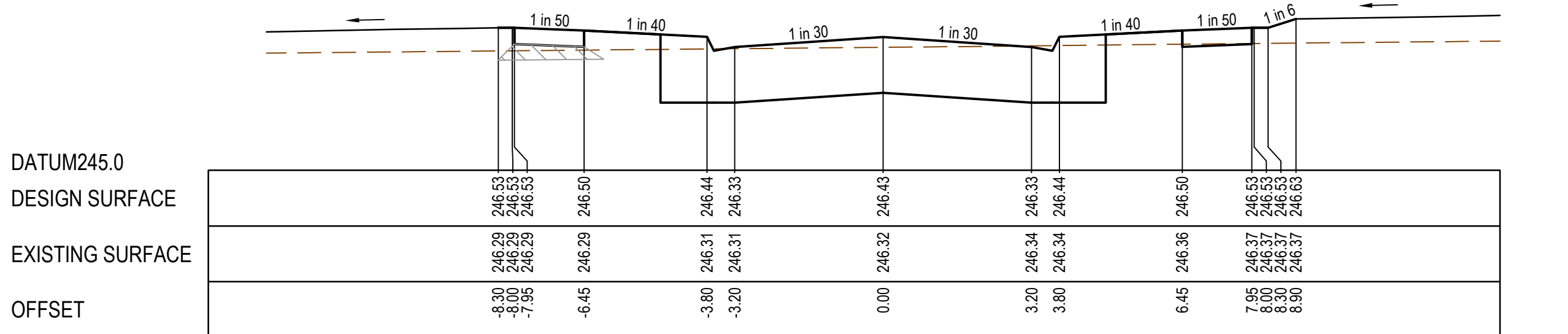
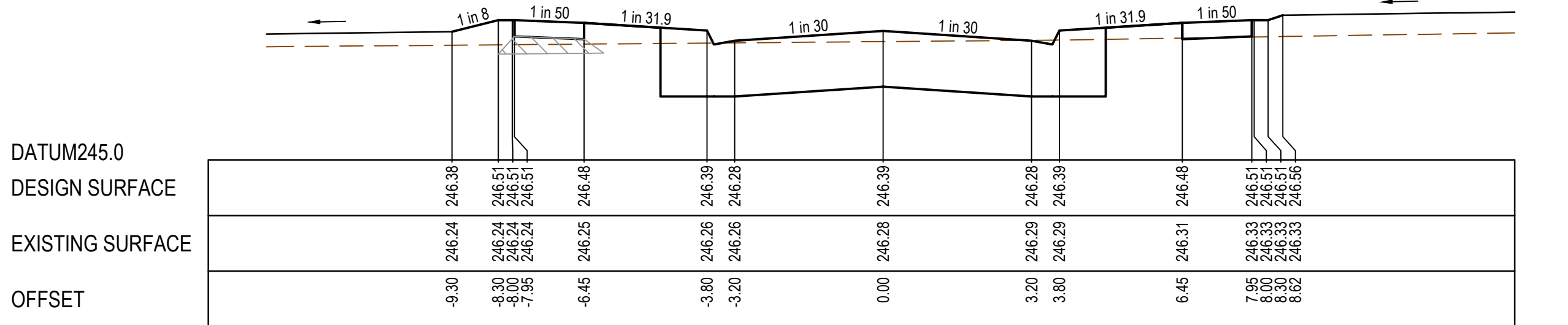
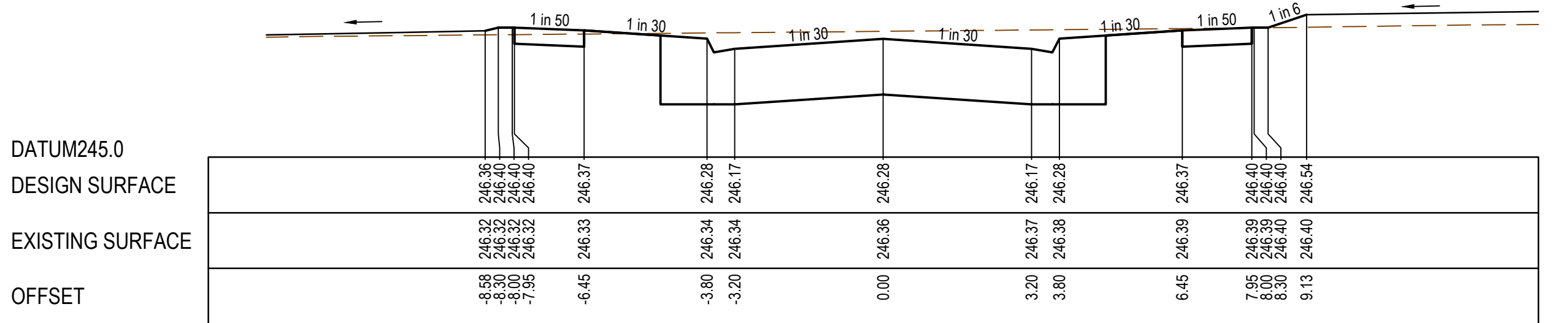
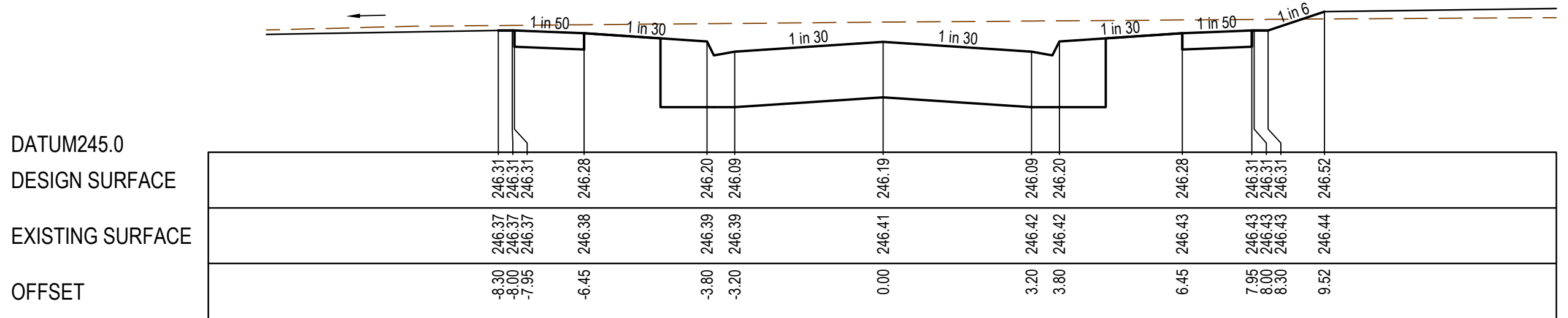
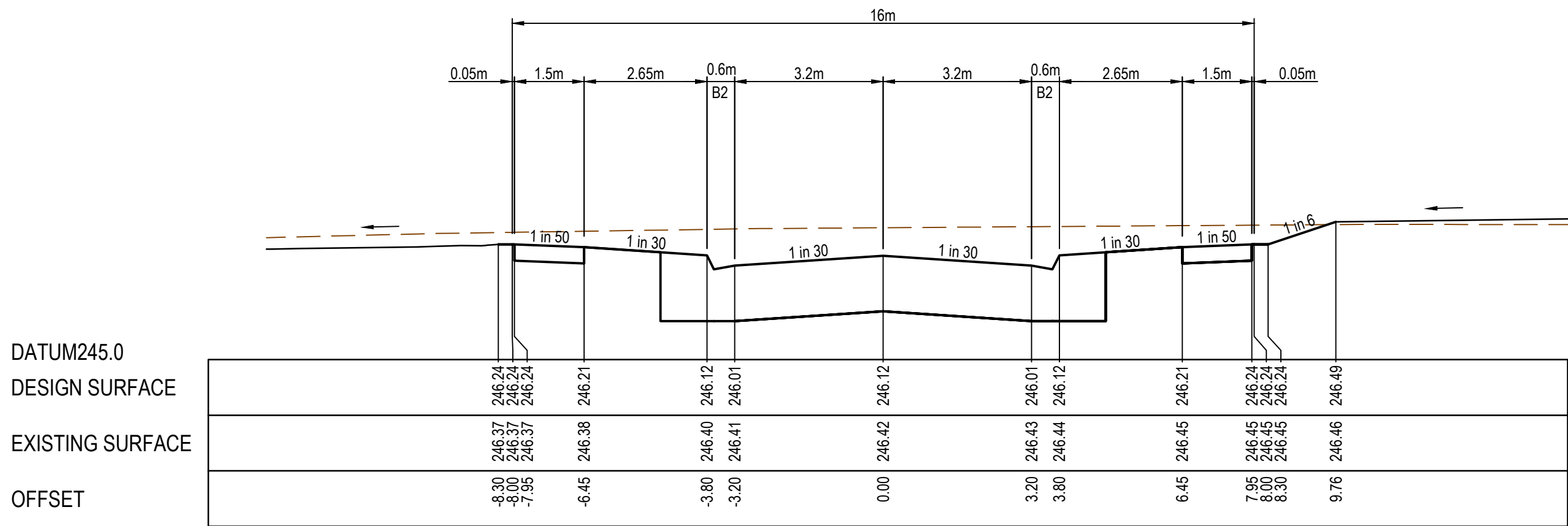


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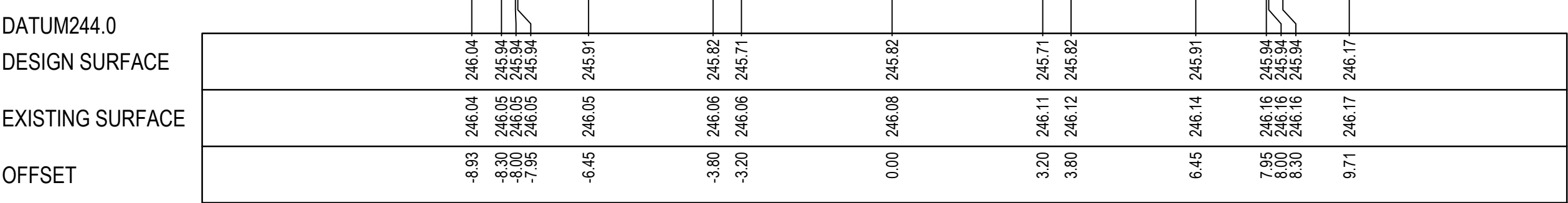
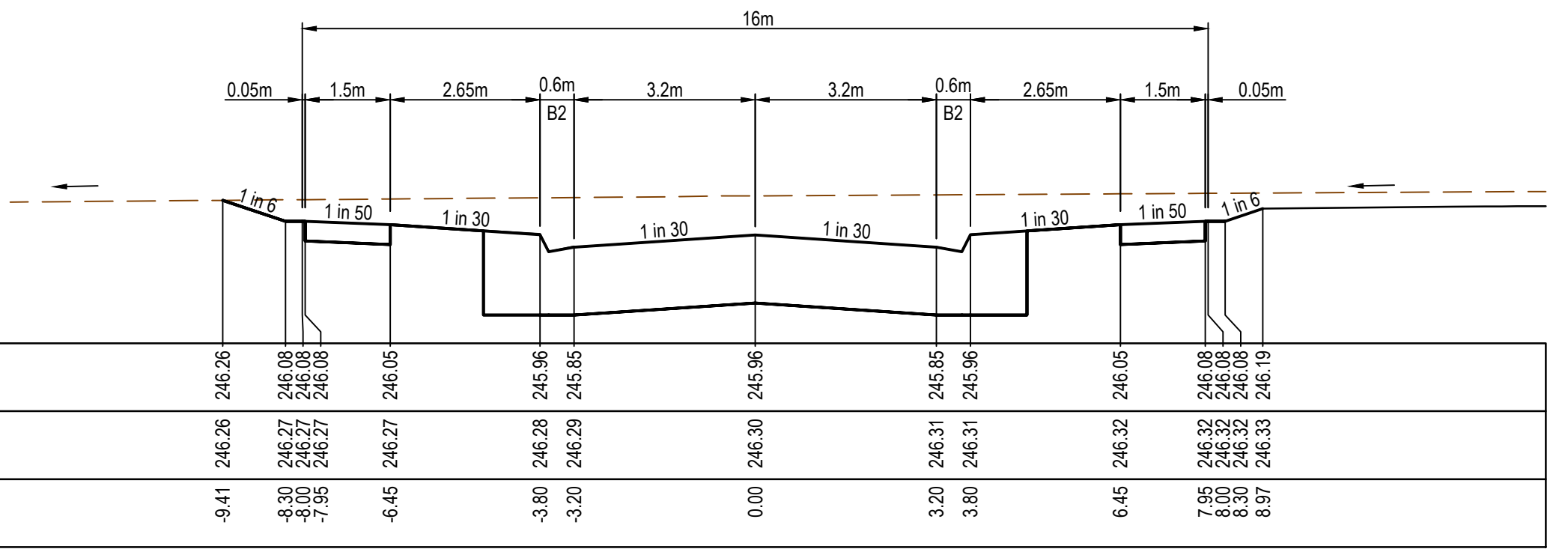


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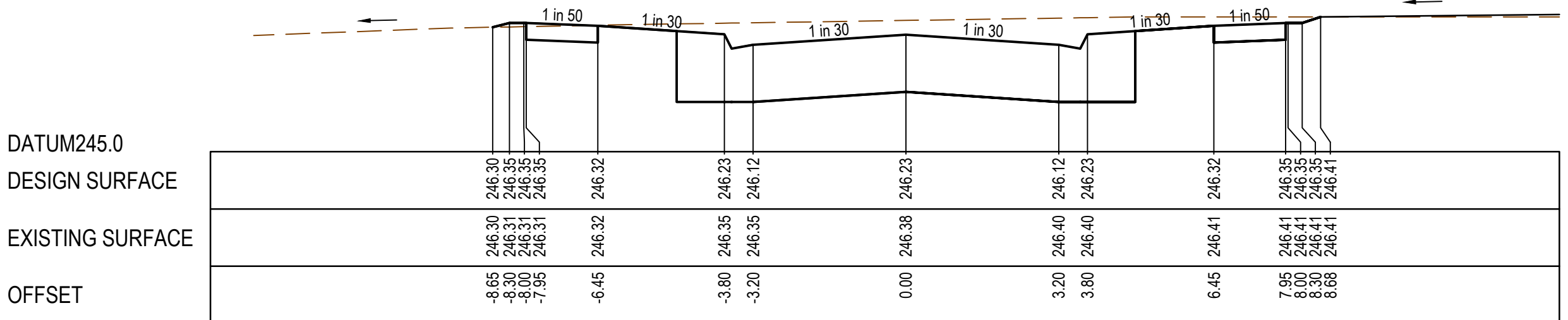
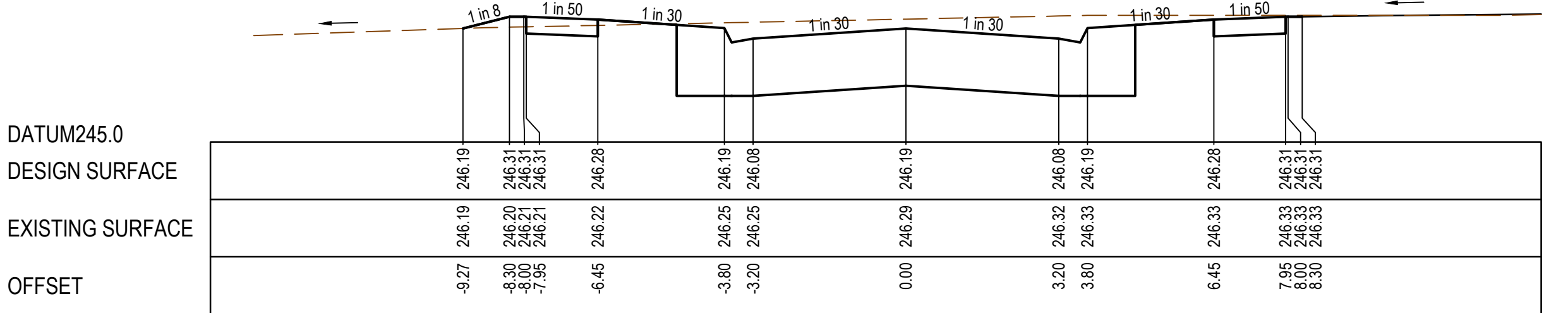
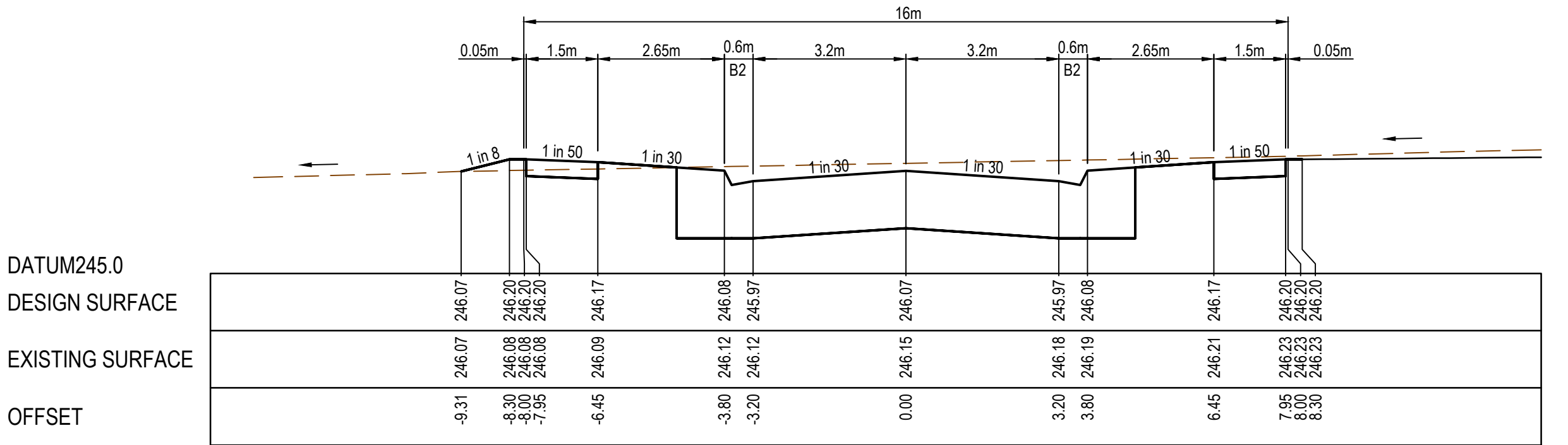
STRUCTURAL FILL REQUIRED UNDER
PAVEMENT AND FOOTPATHS WHERE
CONSTRUCTED ABOVE EXISTING SURFACE



MEDIAN GRANGE



DOWNTOWN AVENUE

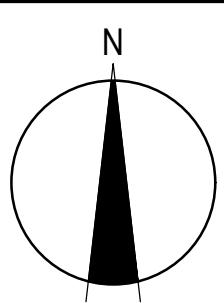
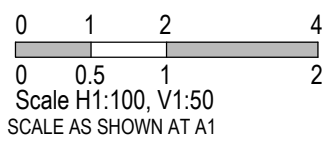


REV	DATE	AMENDMENT / REVISION DESCRIPTION	DES/DT	APPROVAL
A	28.05.19	ISSUED TO COUNCIL FOR APPROVAL	SM/RB	AB

SUBJECT TO APPROVAL

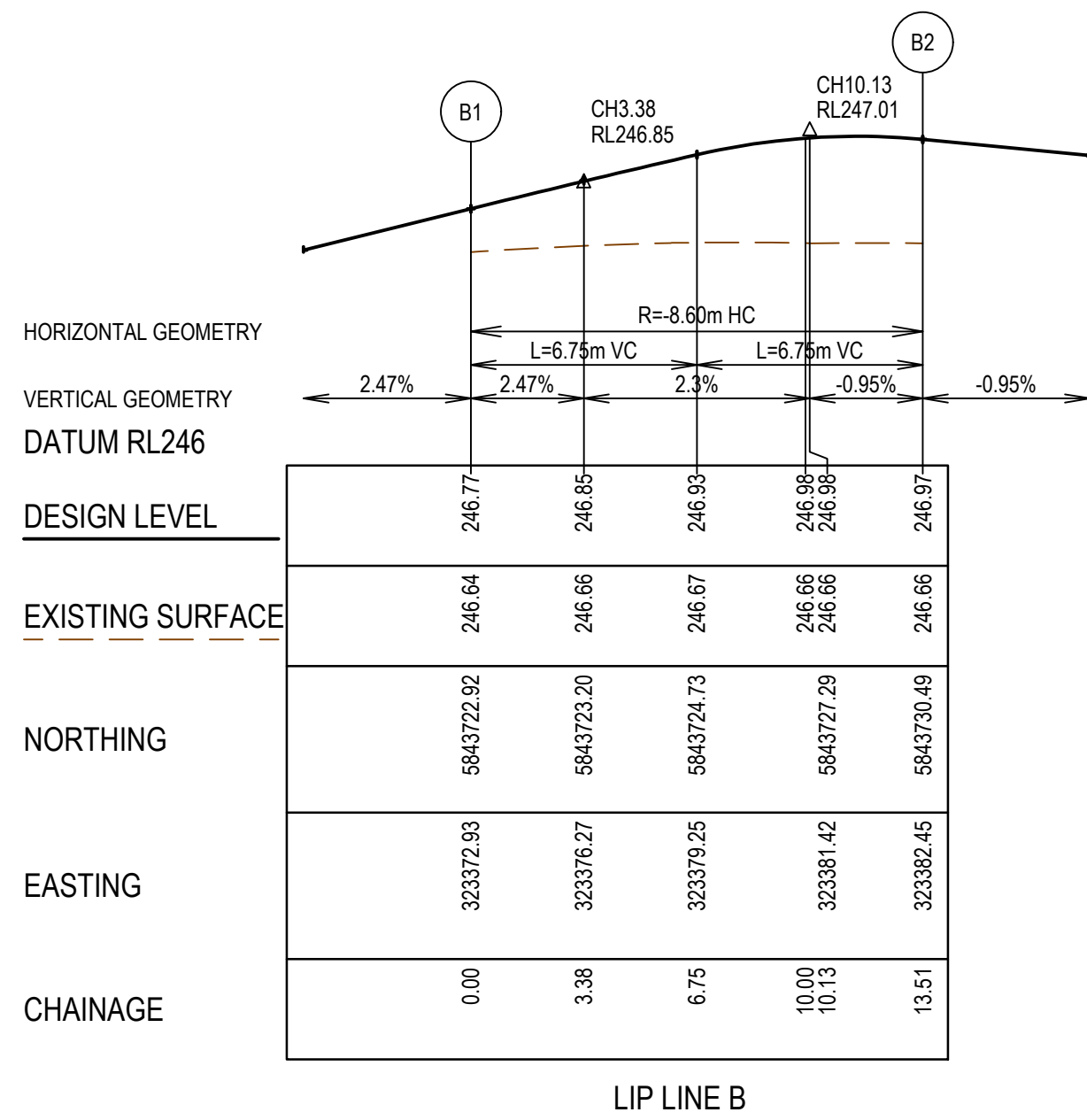
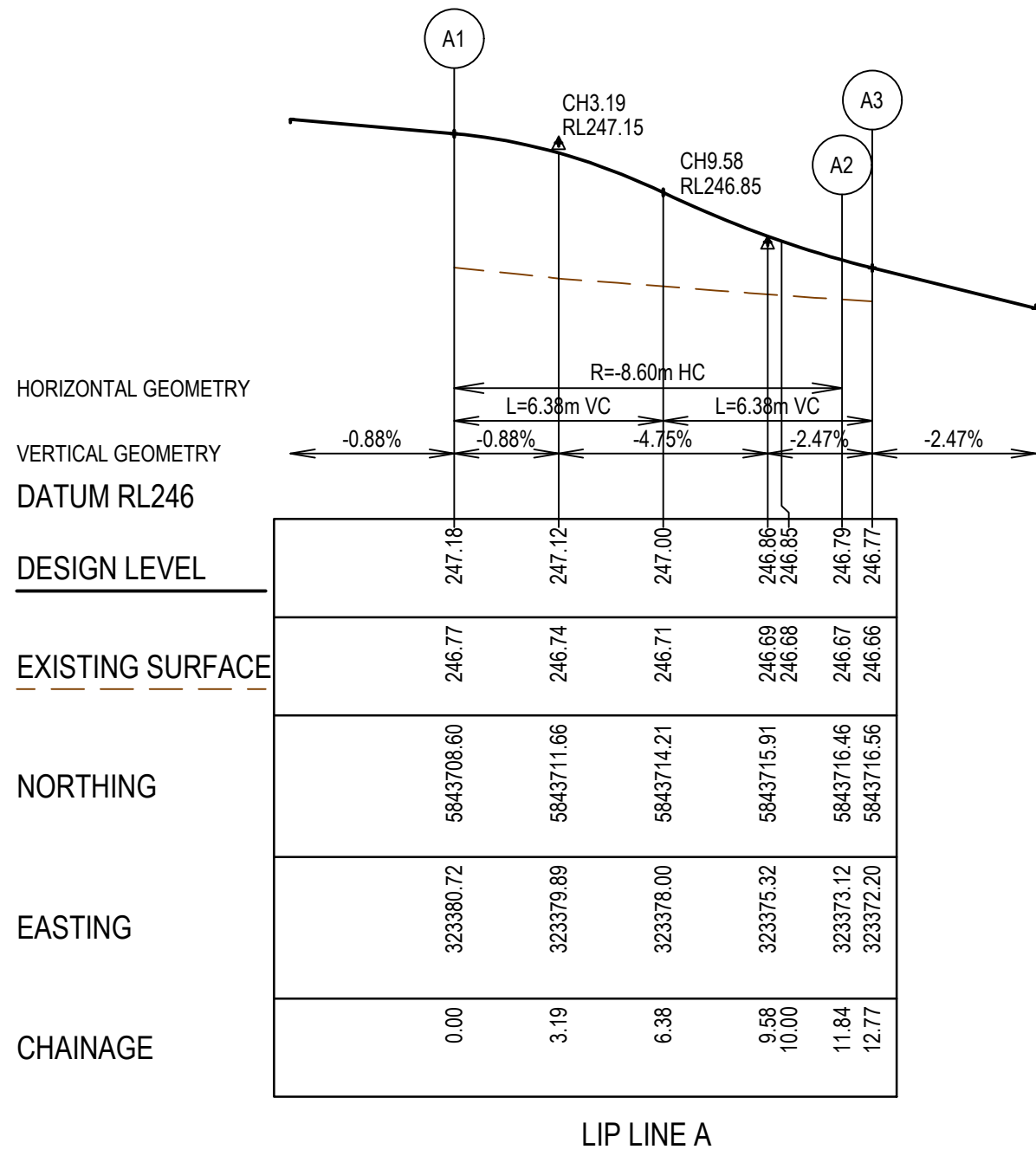
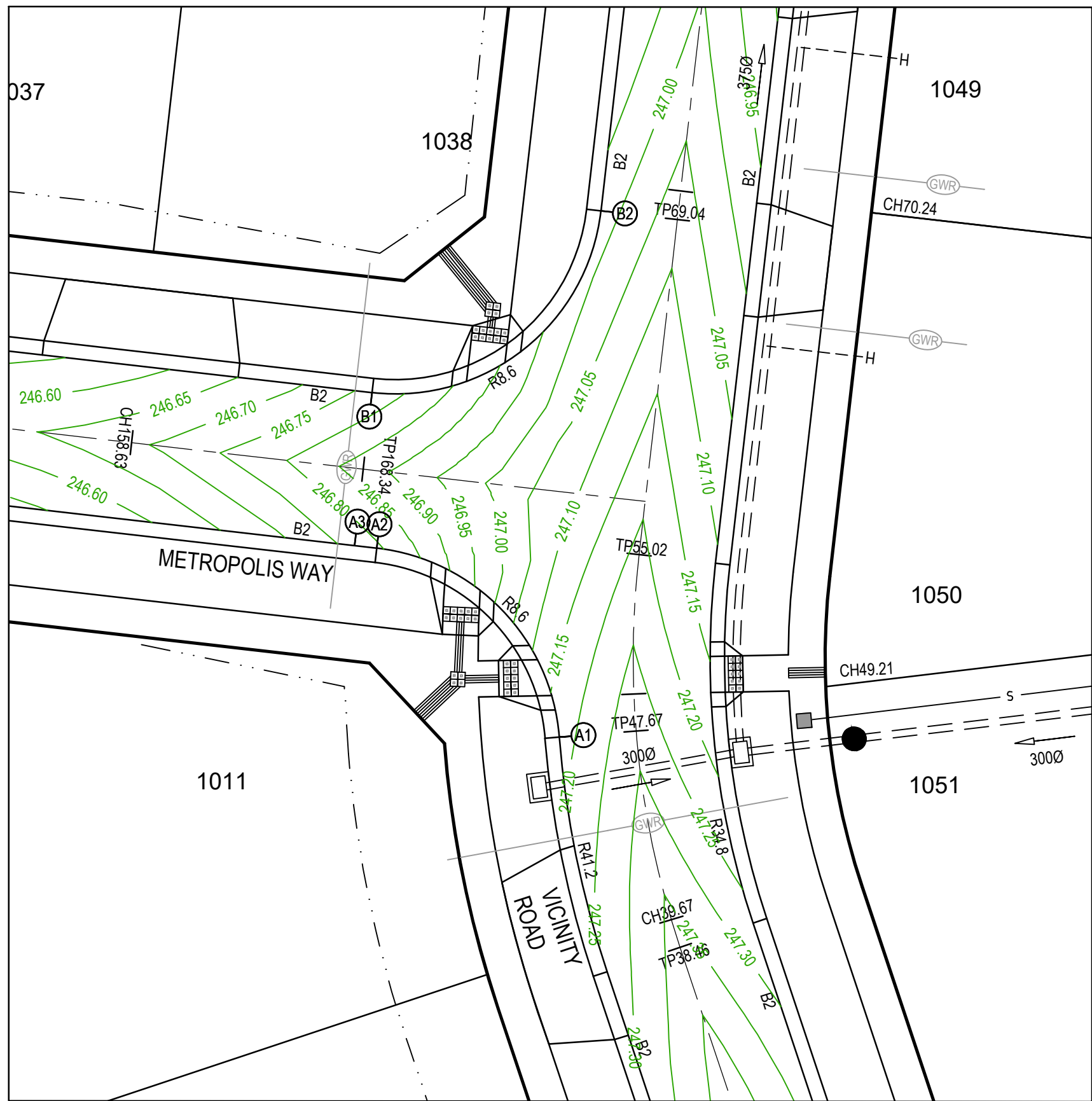
All setting out should be carried out in accordance with MPA/Council's standard drawings or as nominated on hard copy plans provided by SMEC. Any digital information supplied by this office is for information only. Any discrepancies should be discussed with the superintendent.		
Quality Management - ISO 9001	Site Management - AS/NZS 1880	Environmental Management - ISO 14001
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TITLE	NAME
DRAFTER	R.Barua
DESIGNER	P.McKay
CHECKED	Z.Gosev
AUTHORISED	A.Burrows
COUNCIL DRAWING REF.	
REFERENCE No. 2	



Olivine Estate - Stage 10
Whittlesea City Council
Road and Drainage
Cross Sections: Median Grange & Downtown Avenue

MELWAYS REF 8M2	PROJECT / DRAWING No. 1700E-10-08	SHEET No. 08 of 20	REVISION A
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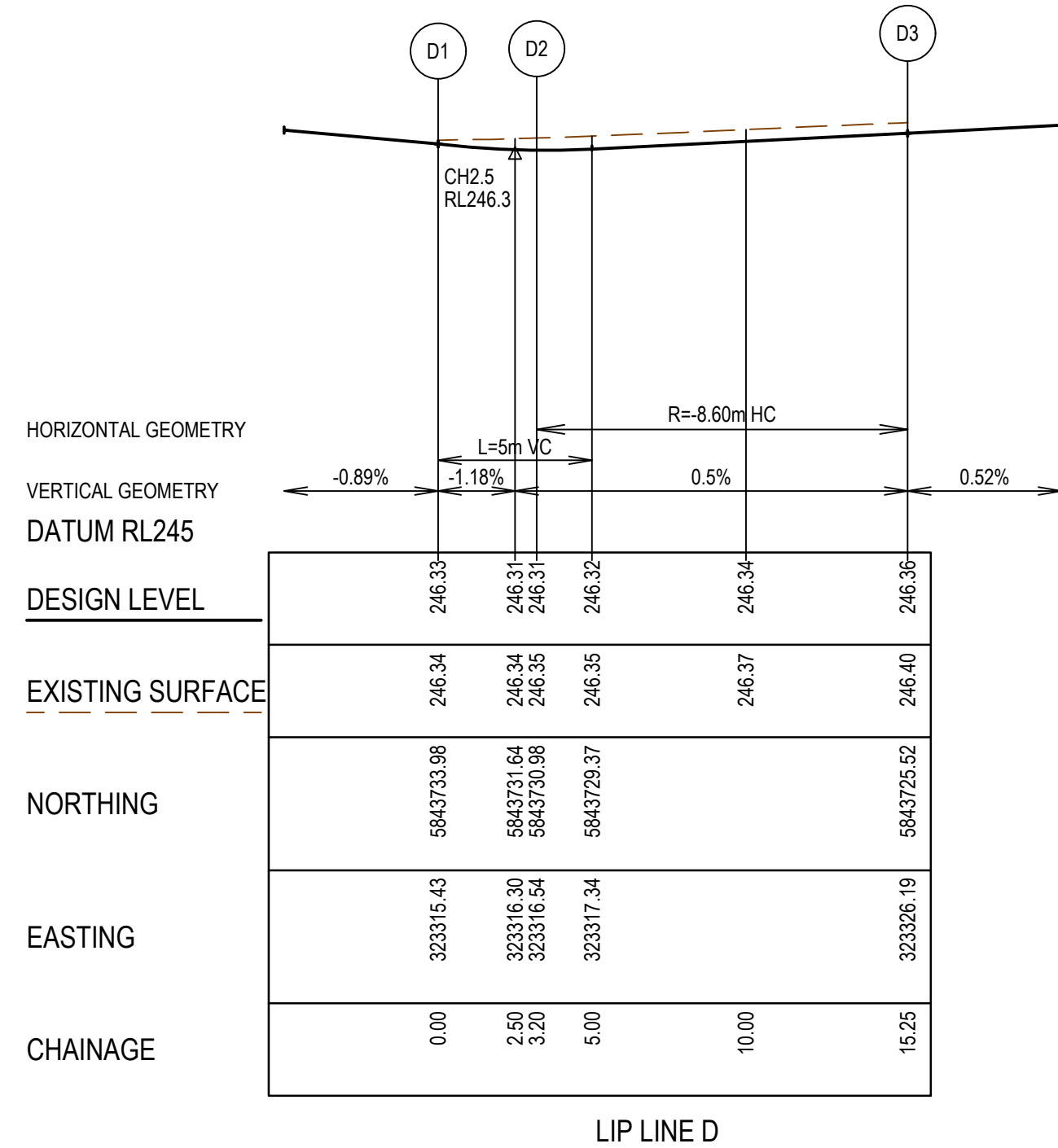
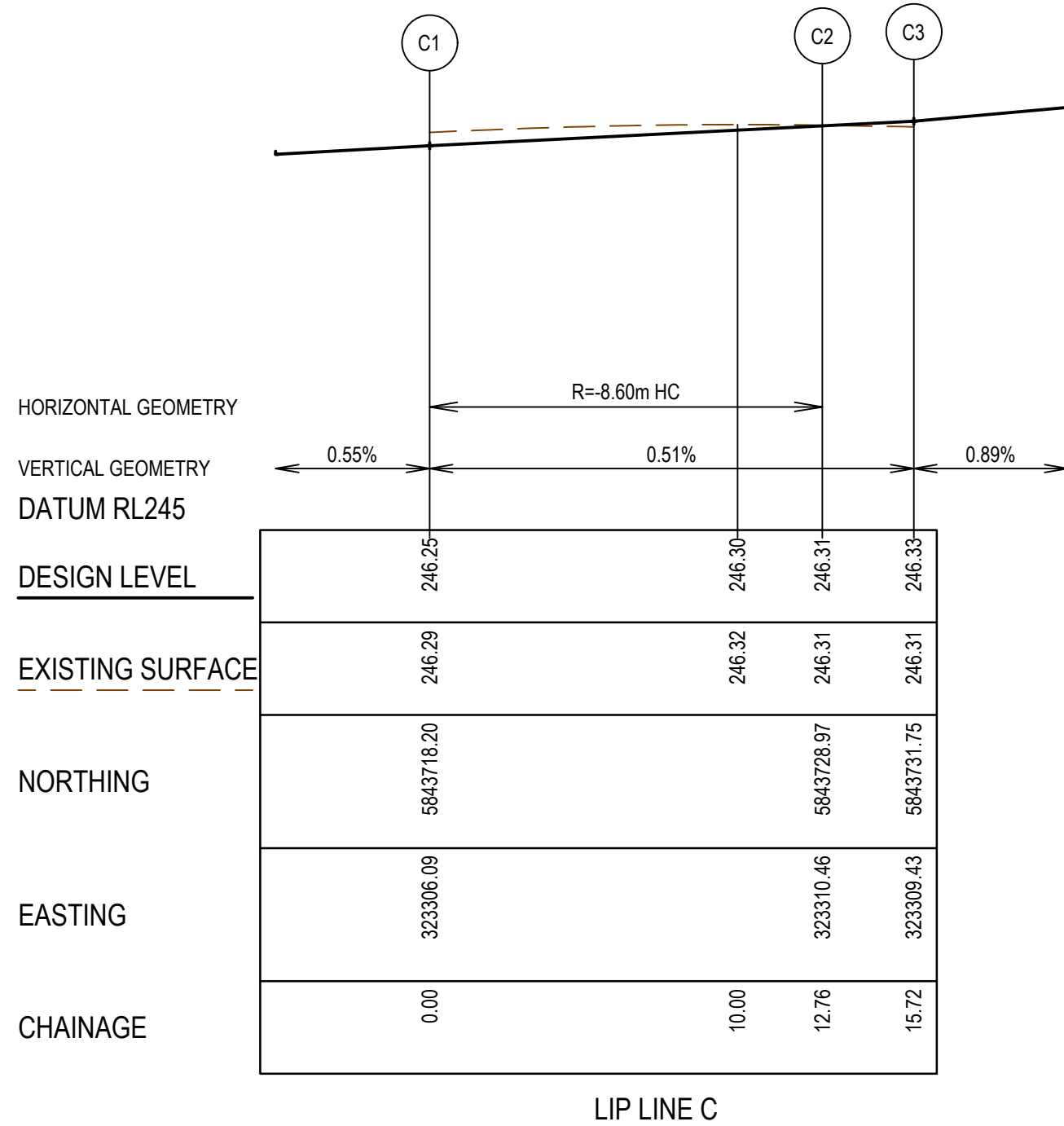
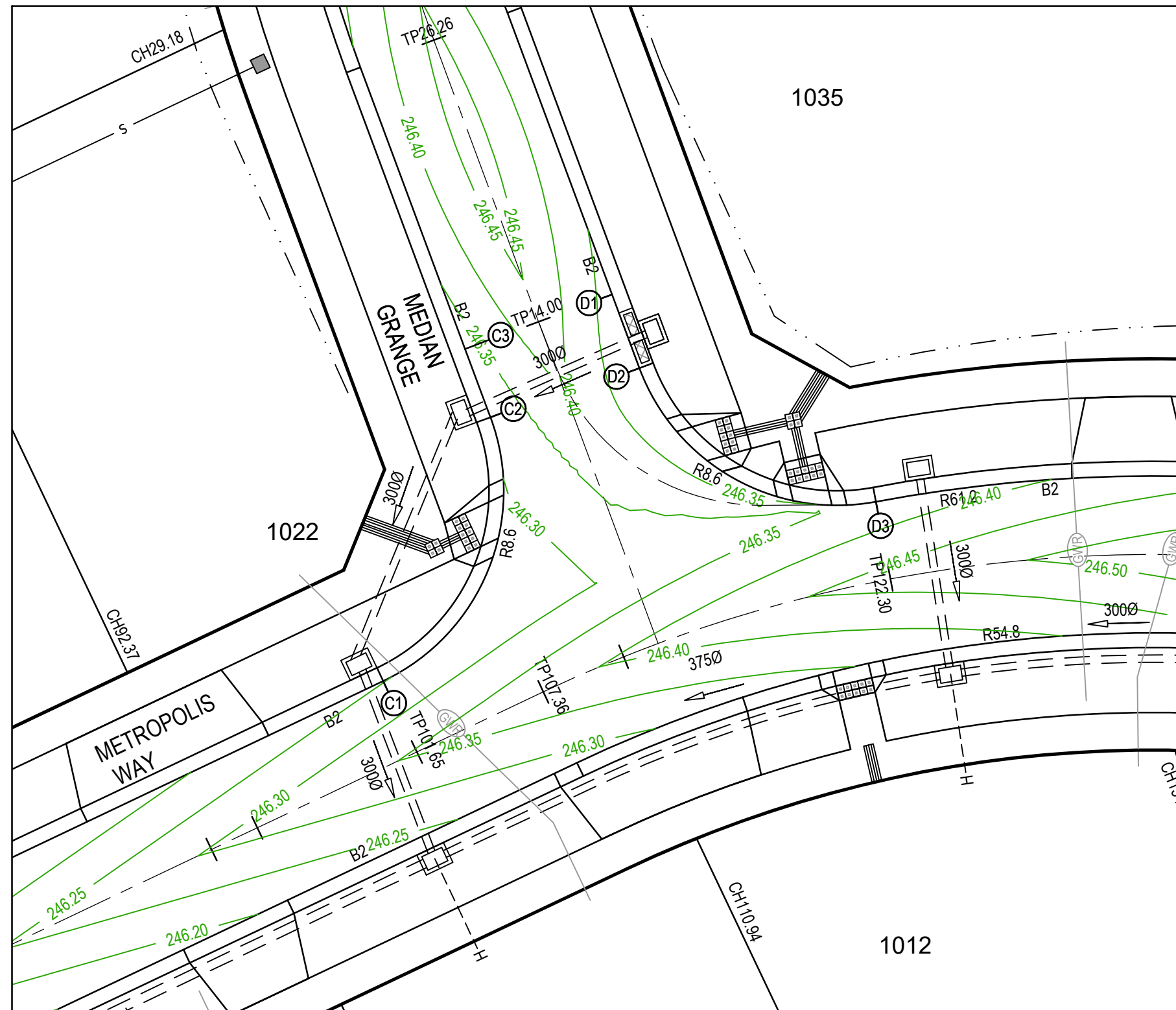


LEGEND - INTERSECTION DETAIL PLAN

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

- 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.
 4. INDUSTRIAL DRIVEWAYS TO COUNCIL RESERVES TO BE PROVIDED AS PART OF LANDSCAPE WORKS.
 5. SHARE PATH THROUGH CREEK CORRIDOR TO FORM PART OF LANDSCAPE WORKS.

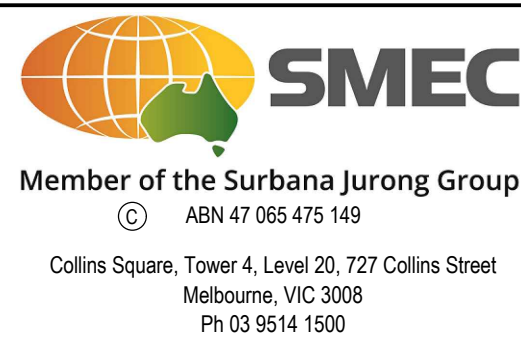
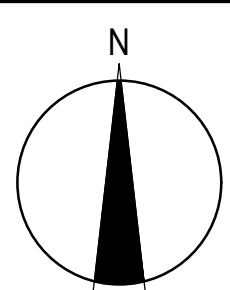
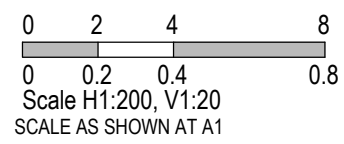


REV	DATE	AMENDMENT / REVISION DESCRIPTION	DES/DT	APPROVAL
A	28.05.19	ISSUED TO COUNCIL FOR APPROVAL	SM/RB	AB

SUBJECT TO APPROVAL

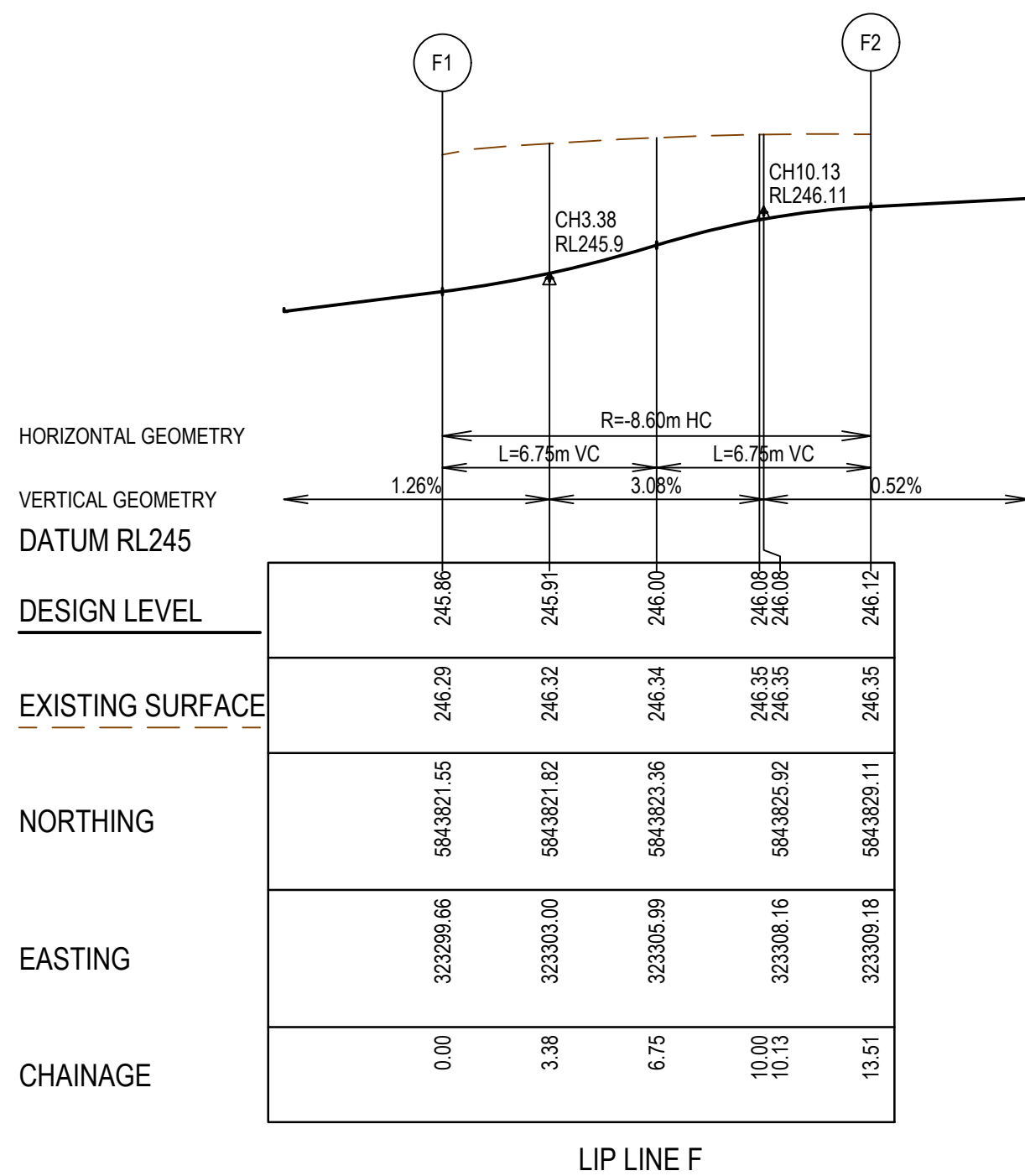
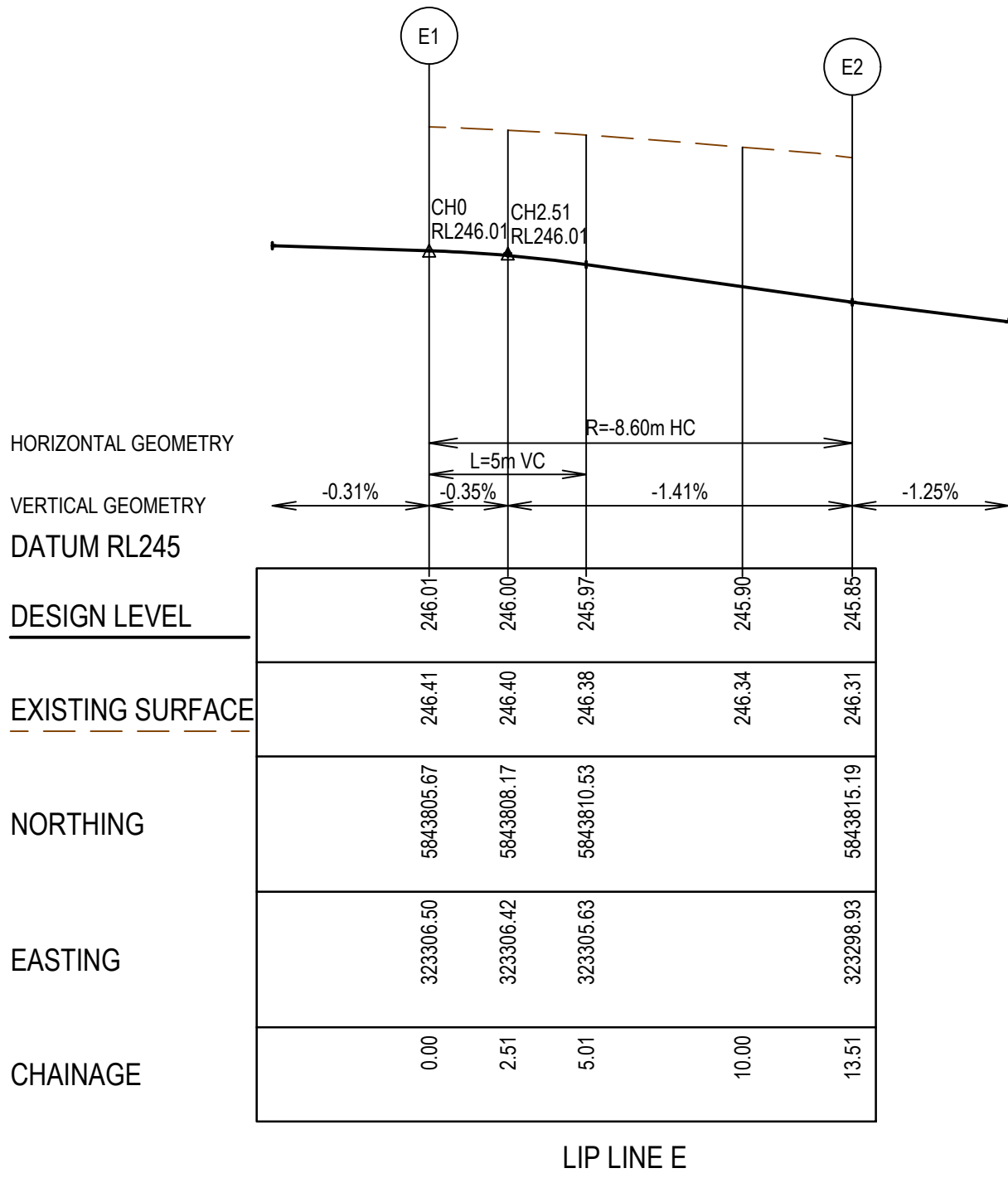
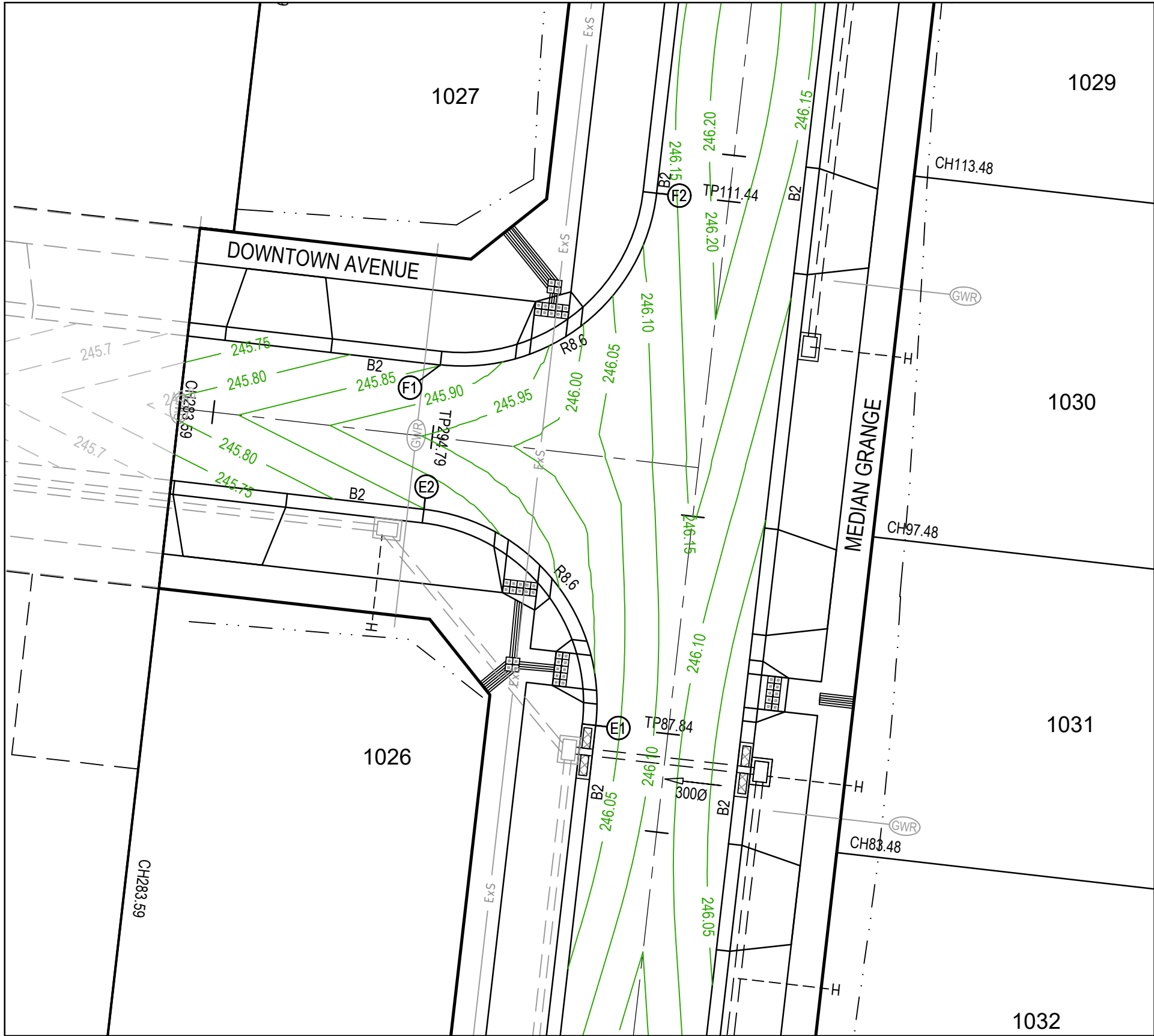


TITLE	NAME
DRAFTER	R.Barua
DESIGNER	P.McKay
CHECKED	Z.Gosev
AUTHORISED	A.Burrows
COUNCIL DRAWING REF.	
REFERENCE No. 2	



Olivine Estate - Stage 10
Whittlesea City Council
Road and Drainage
Intersection Detail Plan & Lip Profiles - 1

MELWAYS REF	PROJECT / DRAWING No	SHEET No	REVISION
8M2	1700E-10-09	09 of 20	A



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

- NOTES
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 5. SHARE PATH THROUGH CREEK CORRIDOR TO FORM PART OF LANDSCAPE WORKS.

DOWNTOWN AVENUE DESIGN LINE

IP	CHAINAGE	X COORD	Y COORD	Z COORD	TYPE	BEARING	LENGTH	RADIUS
1	283.585	323288.169	5843819.640	245.818	IP	96°31'31.28"		
2	306.585	323311.020	5843817.026	246.168	IP	96°31'31.28"		

MEDIAN GRANGE DESIGN LINE

IP	CHAINAGE	X COORD	Y COORD	Z COORD	TYPE	BEARING	LENGTH	RADIUS
1	0.000	323317.304	5843719.741	246.415	IP	339°36'59.72"		
	26.263	323308.157	5843744.360	246.461	TC	339°36'59.72"		
2	38.005	323303.991	5843755.573	246.391	IP		23.482	50.000
	49.746	323305.350	5843767.457	246.321	CT	6°31'31.48"		
	133.625	323314.882	5843850.793	246.154	TC	6°31'31.48"		
3	138.331	323315.419	5843855.482	246.114	IP		9.411	-50.000
4	143.036	323315.068	5843860.188	246.073	IP	355°44'30.47"		

METROPOLIS WAY DESIGN LINE

IP	CHAINAGE	X COORD	Y COORD	Z COORD	TYPE	BEARING	LENGTH	RADIUS
1	42.585	323253.423	5843691.825	246.032	IP	79°33'12.93"		
2	50.156	323260.910	5843693.206	246.072	IP		15.141	-58.000
	57.726	323267.787	5843696.472	246.113	CT	64°35'49.04"		
	107.363	323312.625	5843717.765	246.386	TC	64°35'49.04"		
3	123.523	323327.613	5843724.883	246.476	IP		32.321	58.000
	139.684	323344.097	5843722.997	246.565	CT	96°31'31.48"		
4	180.135	323384.286	5843718.400	247.193	IP	96°31'31.48"		

VICINITY ROAD DESIGN LINE

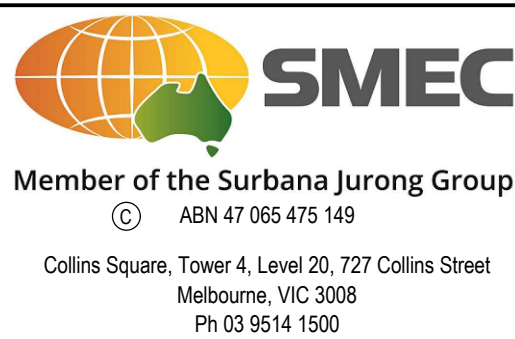
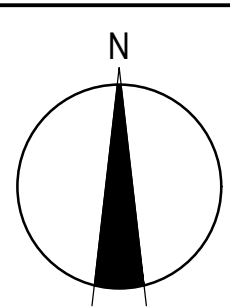
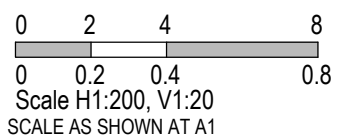
IP	CHAINAGE	X COORD	Y COORD	Z COORD	TYPE	BEARING	LENGTH	RADIUS
1	20.410	323391.449	5843682.728	247.407	IP	341°33'27.33"		
	38.460	323385.739	5843699.851	247.372	TC	341°33'27.33"		
2	46.740	323383.077	5843707.832	247.293	IP		16.559	38.000
	55.019	323384.034	5843716.191	247.214	CT	6°31'31.49"		
3	160.743	323396.048	5843821.230	246.575	IP	6°31'31.49"		

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DES/DT	APPROVAL
A	28.05.19	ISSUED TO COUNCIL FOR APPROVAL	SM/RB	AB

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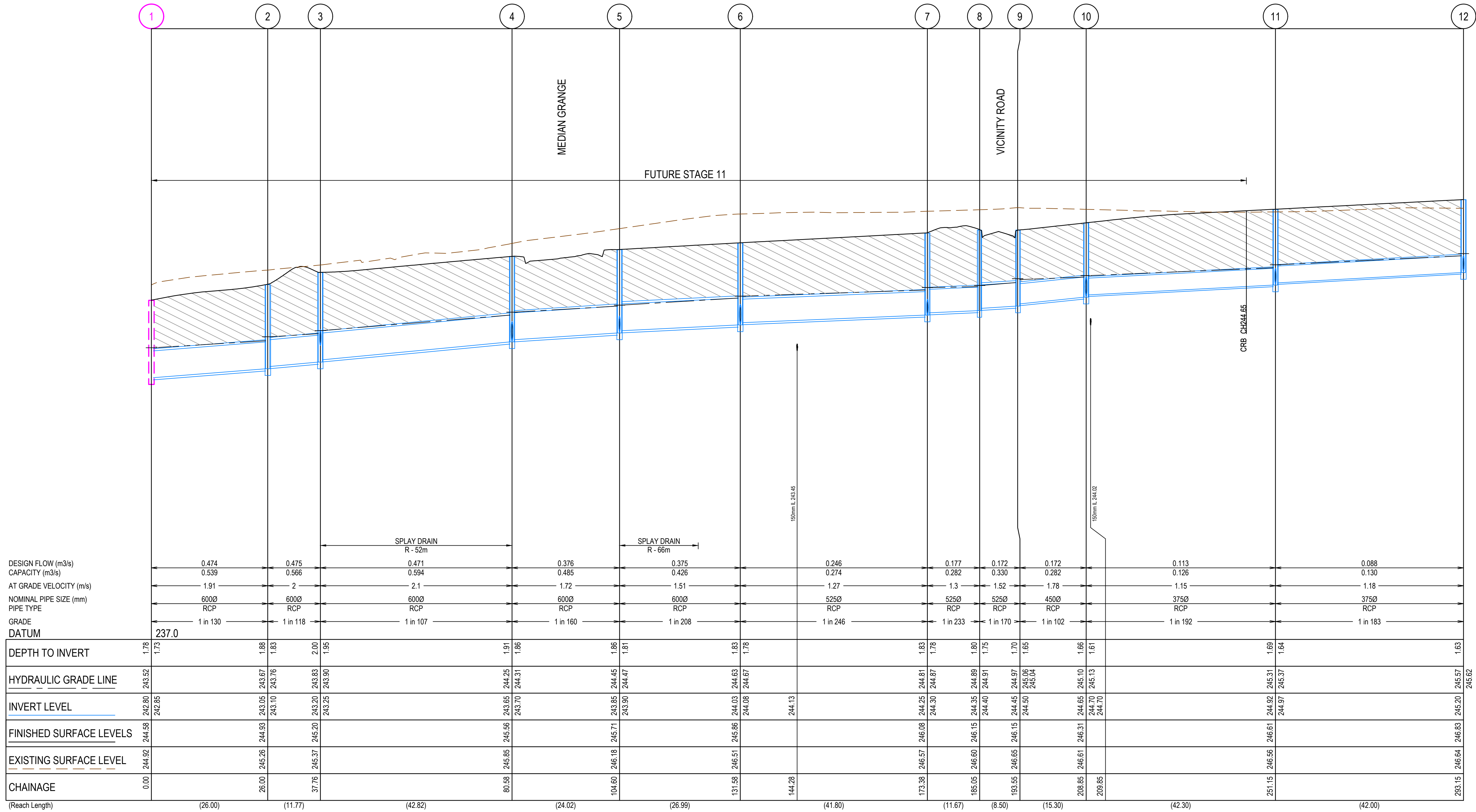
TITLE	NAME
DRAFTER	R.Barua
DESIGNER	P.McKay
CHECKED	Z.Gosev
AUTHORISED	A.Burrows
COUNCIL DRAWING REF.	
REFERENCE No. 2	

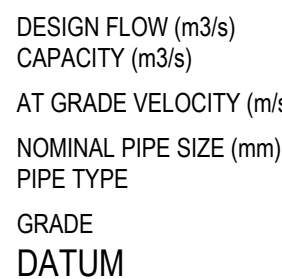


Olivine Estate - Stage 10
Whittlesea City Council
Road and Drainage
Intersection Detail Plan & Lip Profiles - 2

MELWAYS REF	PROJECT / DRAWING No.	SHEET No.	REVISION
8M2	1700E-10-10	10 of 20	A

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




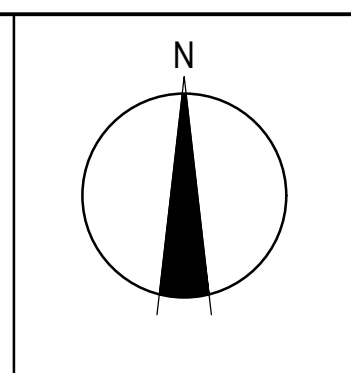
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SUBJECT TO APPROVAL

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

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DESIGNER	F. Muckay
CHECKED	Z. Gosev
AUTHORISED	A. Burrows
COUNCIL DRAWING REF.	
REFERENCE No. 2	



SMEC

Member of the Surbana Jurong Group

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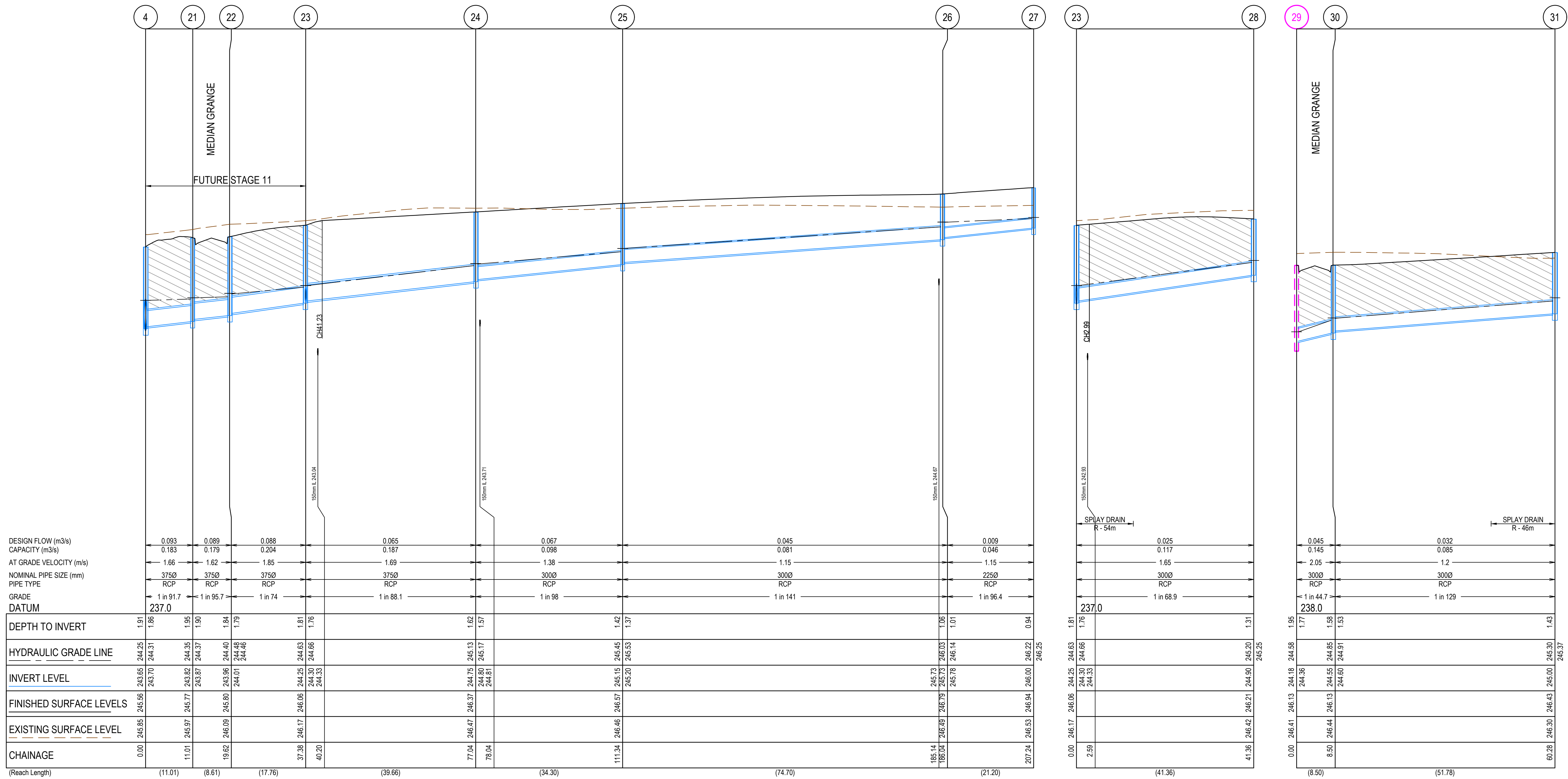
Collins Square, Tower 4, Level 20, 727 Collins Street
Melbourne, VIC 3008
Ph 03 9514 1500

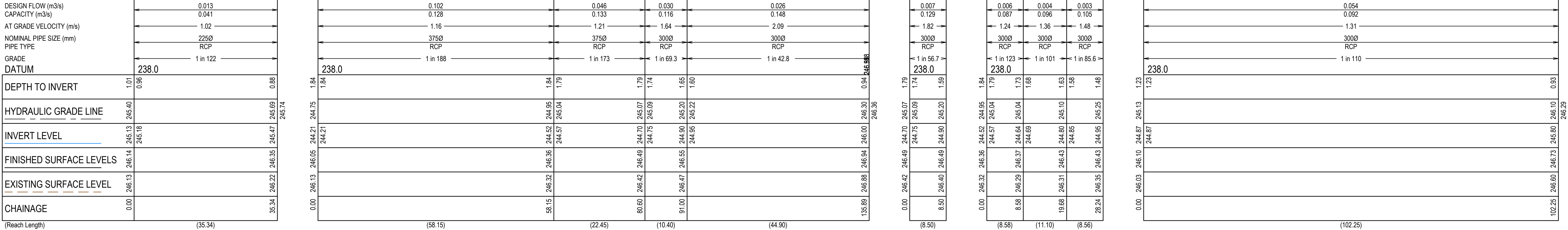


PROJECT / DRAWING No. 1700E-10-12	SHEET No. 12 of
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MELWAYS REF 8M2	PROJECT / DRAWING No. 1700E-10-12	SHEET No. 12 of 20	REVISION A
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CRUSHED ROCK BACKFILL
CRB INDICATES CRUSHED ROCK BACKFILL COMPACTED IN ACCORDANCE WITH COUNCIL STANDARDS & SPECIFICATIONS, CLASS 3 UNLESS SPECIFIED OTHERWISE

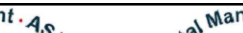
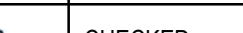
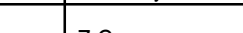





REV	DATE	AMENDMENT / REVISION DESCRIPTION	DES/DFT	APPROVAL
A	26.05.19	ISSUED TO COUNCIL FOR APPROVAL	SM/RB	AB


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TITLE	NAME
DRAFTER	R.Barua
DESIGNER	P.McKay
CHECKED	Z.Gosev
AUTHORISED	A.Burrows
COUNCIL DRAWING REF.	
REFERENCE No. 2	






Scale 1H:500, V1:50
SCALE AS SHOWN AT A1



Member of the Surbana Jurong Group

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Collins Square, Tower 4, Level 20, 727 Collins Street
Melbourne, VIC 3008
Ph 03 9514 1500



Olive Estate - Stage 10
Whittlesea City Council
Road and Drainage
Drainage Longitudinal Sections - 4

MELWAYS REF 8M2	PROJECT / DRAWING No. 1700E-10-14	SHEET No. 14 of 20	REVISION A
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PIT NUMBER	TYPE	INTERNAL		INLET		OUTLET		PIT SETOUT R.L.	DEPTH	STANDARD DRAWING	REMARKS
		WIDTH (mm)	LENGTH (mm)	DIAMETER (mm)	INV R.L. (m)	DIAMETER (mm)	INV R.L. (m)				
1	Ex PIT	900	900	600	242.85			244.58			CONNECT TO EXISTING PIT
2	JUNCTION PIT	1050	900	600	243.1	600	243.05	244.93	1.88	EDCM 607	HAUNCH PIT. COVER 600 x 900
3	JUNCTION PIT	900	900	600	243.25	600	243.2	245.2	2	EDCM 607	HAUNCHED PIT UNDER KERB. COVER 600 X 900
				300	243.6						
4	JUNCTION PIT	750	900	600	243.7	600	243.65	245.56	1.91	EDCM 607	HAUNCH PIT. COVER 600 x 900
				375	243.7						
5	JUNCTION PIT	750	900	600	243.9	600	243.85	245.71	1.86	EDCM 607	HAUNCH PIT. COVER 600 x 900. PROVIDE GRATED JUNCTION PIT LID. REFER DETAIL
				300	243.9						
6	JUNCTION PIT	750	900	525	244.08	600	244.03	245.86	1.83	EDCM 607	HAUNCH PIT. COVER 600 x 900
				375	244.08						
7	JUNCTION PIT	750	900	525	244.3	525	244.25	246.08	1.83	EDCM 607	HAUNCH PIT. COVER 600 x 900
				300	244.27						
8	JUNCTION PIT	600	900	525	244.4	525	244.35	246.15	1.8	EDCM 605	
9	JUNCTION PIT	600	900	450	244.5	525	244.45	246.15	1.7	EDCM 605	PROVIDE GRATED JUNCTION PIT LID. REFER DETAIL
10	JUNCTION PIT	600	900	375	244.7	450	244.65	246.31	1.66	EDCM 605	
				375	244.7						
11	GRATED ENTRY PIT	600	900	375	244.97	375	244.92	246.61	1.69	EDCM 605 & 601	
				300	244.97						
12	GRATED ENTRY PIT	600	900	300	245.25	375	245.2	246.83	1.63	EDCM 605 & 601	
				300	245.25						
13	GRATED ENTRY PIT	600	900	300	245.7	300	245.65	247.31	1.66	EDCM 605 & 601	
				300	245.7						
14	ENDPIPE			300	246.35	300	246.35	247.49	1.14		BLANK OFF END PIPE
15	GRATED ENTRY PIT	600	900			300	245.8	247.31	1.51	EDCM 605 & 601	
16	GRATED ENTRY PIT	600	900			300	245.35	246.85	1.5	EDCM 605 & 601	
17	GRATED ENTRY PIT	600	900			300	245.07	246.63	1.56	EDCM 605 & 601	
18	JUNCTION PIT	600	900	300	245.4	375	245.35	246.69	1.34	EDCM 605	
19	JUNCTION PIT	600	900	225	246.05	300	246	247.11	1.11	EDCM 605	PROVIDE GRATED JUNCTION PIT LID. REFER DETAIL
20	JUNCTION PIT	600	900			225	246.49	247.34	0.85	EDCM 605	
21	JUNCTION PIT	600	900	375	243.87	375	243.82	245.77	1.95	EDCM 605	
22	JUNCTION PIT	600	900	375	244.01	375	243.96	245.8	1.84	EDCM 605	
23	JUNCTION PIT	600	900	375	244.3	375	244.25	246.06	1.81	EDCM 605	
				300	244.3						
24	JUNCTION PIT	600	900	300	244.8	375	244.75	246.37	1.62	EDCM 605	
25	JUNCTION PIT	600	900	300	245.2	300	245.14	246.57	1.42	EDCM 605	
26	JUNCTION PIT	600	900	225	245.78	300	245.73	246.79	1.06	EDCM 605	
27	JUNCTION PIT	600	900			225	246	246.94	0.94	EDCM 605	
28	GRATED ENTRY PIT	600	900			300	244.9	246.21	1.31	EDCM 605 & 601	
29	Ex PIT	600	900	300	244.36			246.13			CONNECT TO EXISTING PIT. CONVERT LID TO DGEP
30	DOUBLE GRATED ENTRY PIT	600	900	300	244.6	300	244.55	246.13	1.58	EDCM 605 & 602	
31	GRATED ENTRY PIT	600	900			300	245	246.43	1.43	EDCM 605 & 601	
32	Ex PIT	600	900	225	245.18			246.14			CONNECT TO EXISTING PIT.
33	GRATED ENTRY PIT	600	900			225	245.47	246.35	0.88	EDCM 605 & 601	
34	Ex ENDPIPE			375	244.21			246.05			CONNECT TO EXISTING PIPE.
35	GRATED ENTRY PIT	600	900	375	244.57	375	244.52	246.36	1.84	EDCM 605 & 601	
				300	244.57						
36	GRATED ENTRY PIT	600	900	300	244.75	375	244.7	246.49	1.79	EDCM 605 & 601	
				300	244.75						
37	GRATED ENTRY PIT	600	900	300	244.95	300	244.9	246.55	1.65	EDCM 605 & 601	
38	JUNCTION PIT	600	900			300	246	246.94	0.94	EDCM 605	
39	GRATED ENTRY PIT	600	900			300	244.9	246.49	1.59	EDCM 605 & 601	
40	GRATED ENTRY PIT	600	900	300	244.69	300	244.64	246.37	1.73	EDCM 605 & 601	
41	GRATED ENTRY PIT	600	900	300	244.85	300	244.8	246.43	1.63	EDCM 605 & 601	
42	DOUBLE GRATED ENTRY PIT	600	900			300	244.95	246.43	1.48	EDCM 605 & 602	
43	Ex PIT	600	900	300	244.87			246.1			CONNECT TO EXISTING PIT.
44	JUNCTION PIT	600	900			300	245.8	246.73	0.93	EDCM 605	



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

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DES/DT	APPROVAL
A	28.05.19	ISSUED TO COUNCIL FOR APPROVAL	SM/RB	AB

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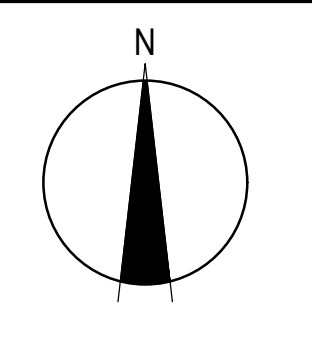
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TITLE	NAME
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COUNCIL DRAWING REF.	
REFERENCE No. 2	

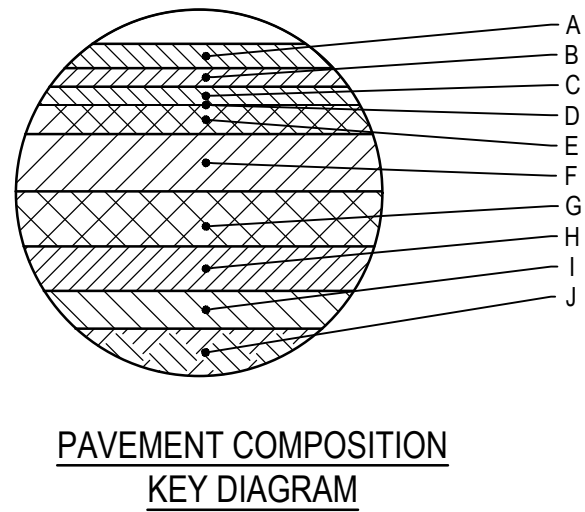
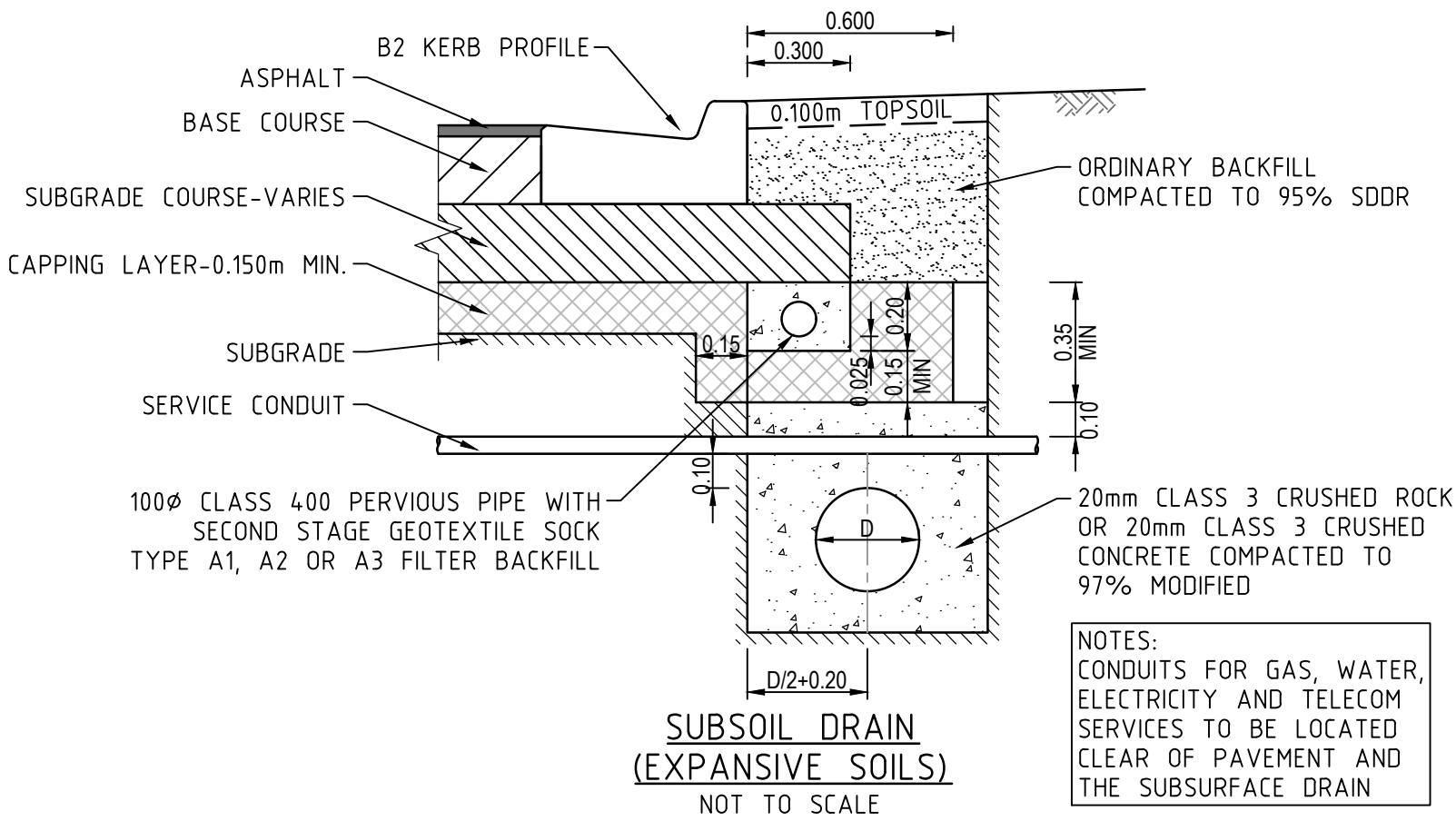
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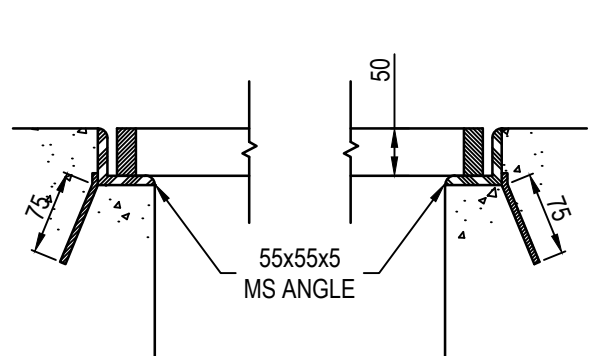
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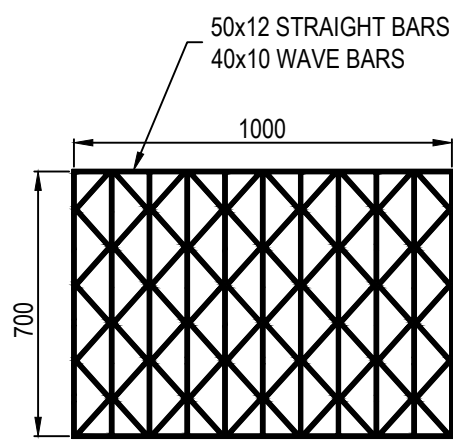
Olivine Estate - Stage 10 Whittlesea City Council Road and Drainage Signage & Linemarking Plan		MELWAYS REF 8M2	PROJECT / DRAWING No. 1700E-10-16	SHEET No. 16 of 20	REVISION A
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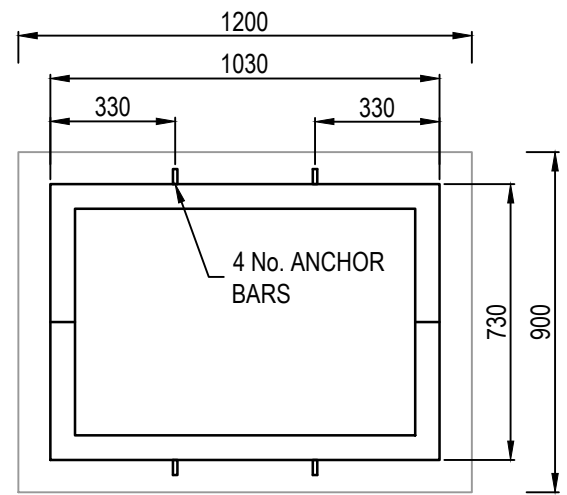
DOWNTOWN AVENUE, MEDIAN GRANGE, METROPOLIS WAY & VICINITY ROAD PAVEMENT COMPOSITION		
595mm DEPTH PAVEMENT COMPOSITION		
PAVEMENT LAYER	LAYER THICKNESS (mm)	MATERIAL
A WEARING COURSE	30	SIZE 10 TYPE N ASPHALT (CLASS 170 BINDER)
B INTERMEDIATE COURSE 1	30	SIZE 10 TYPE N ASPHALT (CLASS 170 BINDER)
C INTERMEDIATE COURSE 2	-	-
D SAMII SEAL	10	SIZE 10 S18RF
E PRIME	-	-
F BASE COURSE	130	SIZE 20 CLASS 2 CRUSHED ROCK COMPACTED TO A MINIMUM DRY DENSITY RATIO OF 98% (MODIFIED) AS1289.5.2.1
G UPPER BASE COURSE	-	-
H LOWER BASE	110	CLASS 3 CRUSHED ROCK COMPACTED TO A MINIMUM DRY DENSITY RATIO OF 98% (MODIFIED) AS1289.5.2.1
I CAPPING LAYER	285	IMPORTED TYPE A FILL WITH CBR≥8% SWELL≤1.5% PERMEABILITY k≤5x10 ⁻⁹ m/s. OR LIME STABILISED SITE WON CLAY WHICH CONFORMS TO THE PARAMETERS ABOVE.
J SUBGRADE		SUBGRADE CLAY AS FOUND (C.B.R = 2%) (IF REQUIRED, SUBGRADE IMPROVEMENT WORKS TO BE UNDERTAKEN TO COUNCIL'S SATISFACTION)



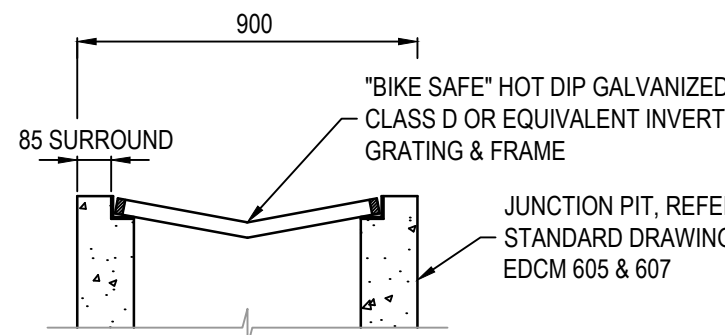
SECTION THROUGH GRATE



GRATE



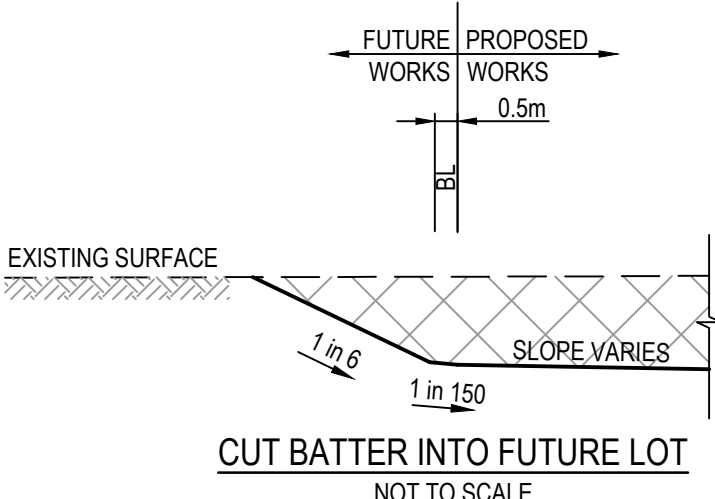
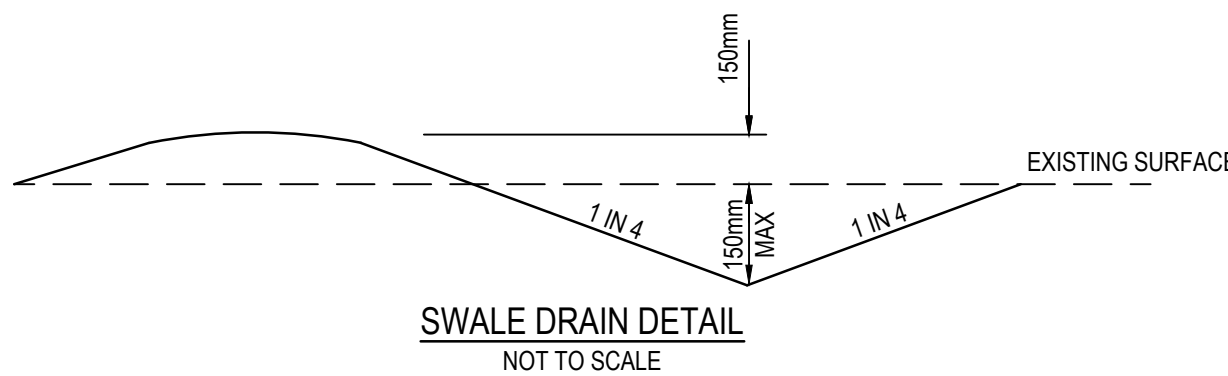
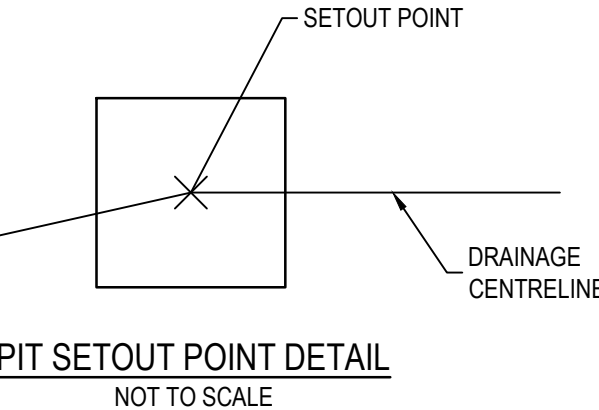
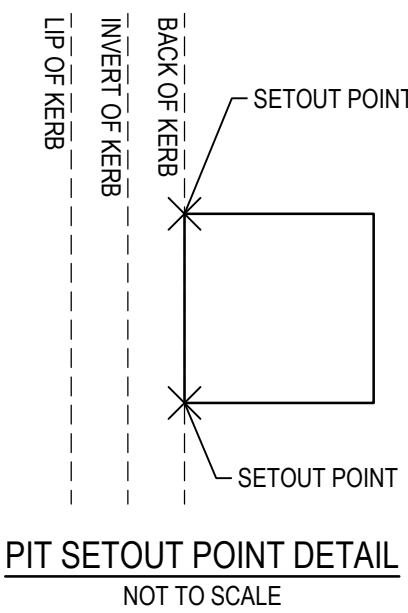
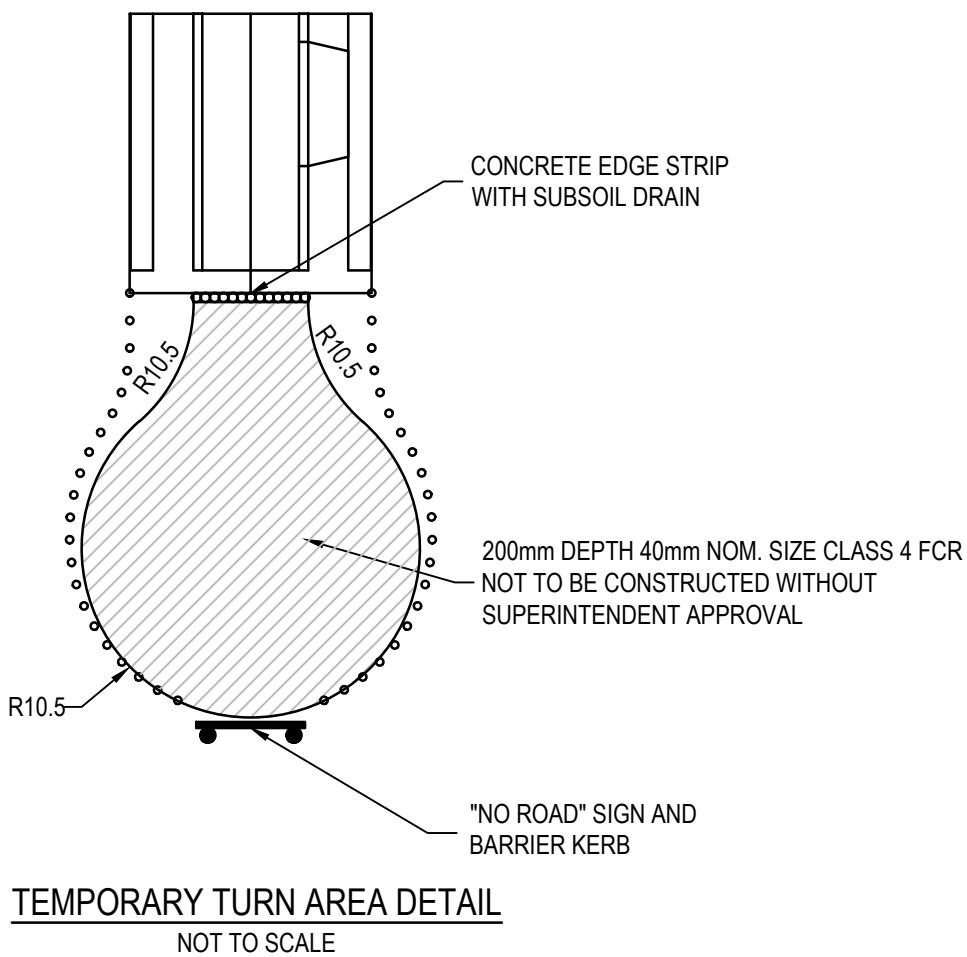
GRATE FRAME

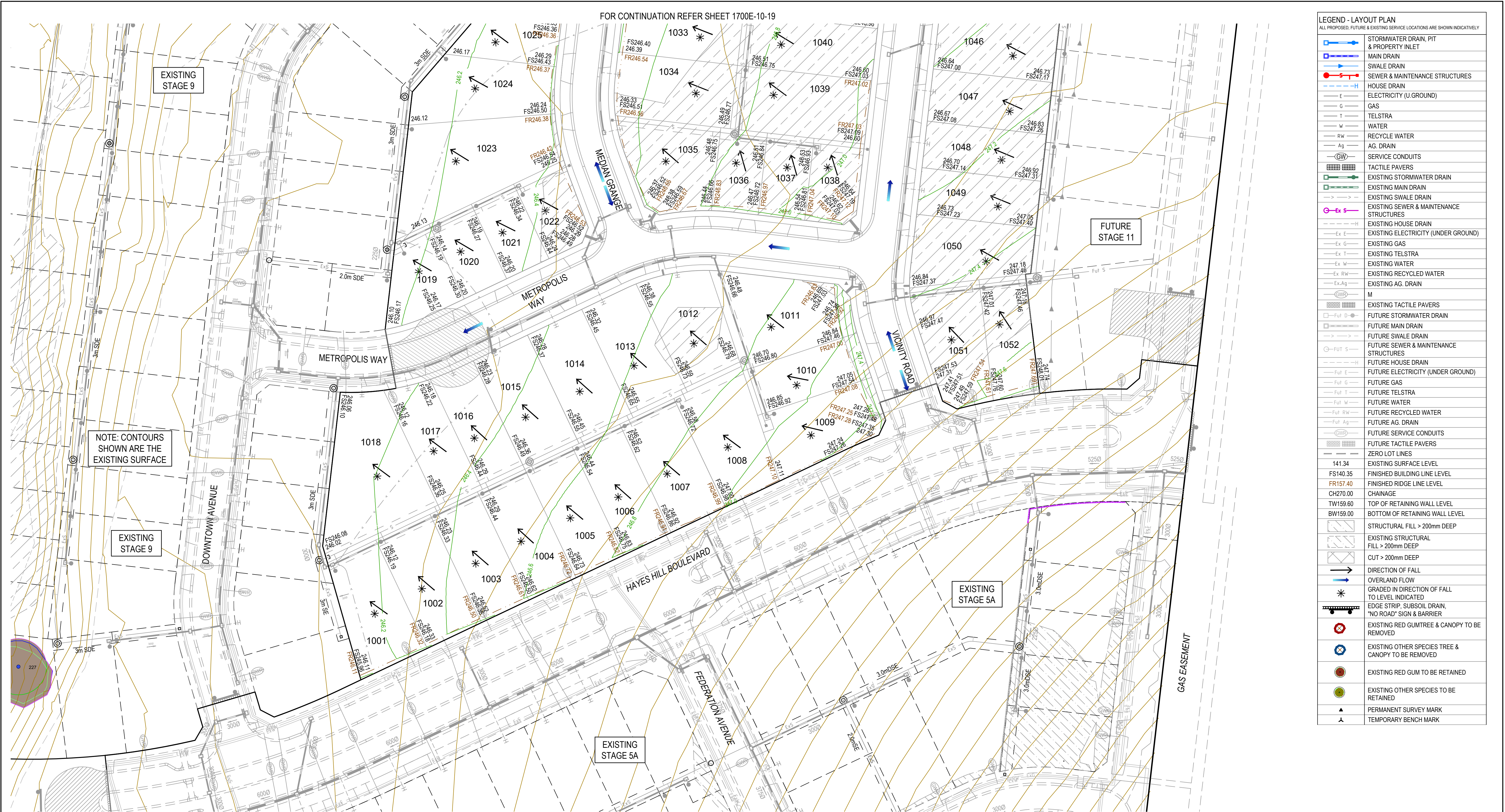


SECTION THOUGH PIT

- NOTES
- REFER TO EDCM STANDARD DRAWINGS 605, 606 & 607 FOR JUNCTION PIT DETAILS
 - GRATE FRAME TO BE "BIKE SAFE" TO AS3996-1992

GRADED JUNCTION PIT DETAIL
NOT TO SCALE





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

REV	DATE	AMENDMENT / REVISION DESCRIPTION	DES/DT	APPROVAL	All setting out should be carried out in accordance with MPA/Council's standard drawings or as nominated on hard copy plans provided by SMEC. Any digital information supplied by this office is for information only. Any discrepancies should be discussed with the superintendent.	TITLE	NAME					Olivine Estate - Stage 10 Whittlesea City Council Road and Drainage Earthworks Plan - 1
A	28.05.19	ISSUED TO COUNCIL FOR APPROVAL	SM/RB	AB		DRAFTER	R.Barua					
<div>Quality Management - ISO 9001 Global-Mark.com.au®</div> <div>Site Management - AS/NZS 4801 Global-Mark.com.au®</div> <div>Environmental Management - ISO 14001 Global-Mark.com.au®</div>						CHECKED	Z.Gosev					
						AUTHORISED	A.Burrows					
<div>SUBJECT TO APPROVAL</div>						COUNCIL DRAWING REF.						
						REFERENCE No. 2						
						SCALE AS SHOWN AT A1						



LEGEND - LAYOUT PLAN	
ALL PROPOSED, FUTURE & EXISTING SERVICE LOCATIONS ARE SHOWN INDICATIVELY	
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	GAS
	TELSTRA
	WATER
	RECYCLE WATER
	AG. DRAIN
	SERVICE CONDUITS
	TACTILE PAVERS
	EXISTING STORMWATER DRAIN
	EXISTING MAIN DRAIN
	EXISTING SWALE DRAIN
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	EXISTING GAS
	EXISTING TELSTRA
	EXISTING WATER
	EXISTING RECYCLED WATER
	EXISTING AG. DRAIN
	M
	EXISTING TACTILE PAVERS
	FUTURE STORMWATER DRAIN
	FUTURE MAIN DRAIN
	FUTURE SWALE DRAIN
	FUTURE SEWER & MAINTENANCE STRUCTURES
	FUTURE HOUSE DRAIN
	FUTURE ELECTRICITY (UNDER GROUND)
	FUTURE GAS
	FUTURE TELSTRA
	FUTURE WATER
	FUTURE RECYCLED WATER
	FUTURE AG. DRAIN
	FUTURE SERVICE CONDUITS
	FUTURE TACTILE PAVERS
	ZERO LOT LINES
	EXISTING SURFACE LEVEL
	FINISHED BUILDING LINE LEVEL
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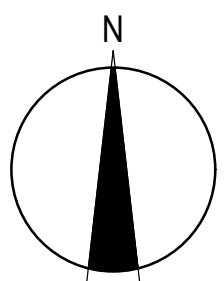
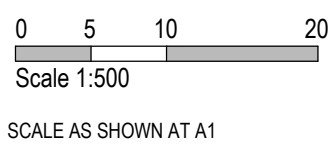
WARNING
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REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
A	28.05.19	ISSUED TO COUNCIL FOR APPROVAL	SM/RB	AB

SUBJECT TO APPROVAL

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



Olivine Estate - Stage 10
Whittlesea City Council
Road and Drainage
Earthworks Plan - 2

MELWAYS REF	PROJECT / DRAWING No.	SHEET No.	REVISION
8M2	1700E-10-19	19 of 20	A

GENERAL NOTES

1. ONLY CONTRACTORS ACCREDITED BY YARRA VALLEY WATER TO WC1 SHALL BE ELIGIBLE TO CONSTRUCT THESE WORKS.
2. ONLY PRODUCTS APPROVED AND CATALOGUED BY THE WATER AGENCY SHALL BE USED.
3. WORKS MUST BE CONSTRUCTED ACCORDING TO WSA 03-2011 MRWA EDITION.
- THE CONTRACTOR SHALL ENSURE THAT THEY ARE CONVERSANT WITH ALL CURRENT REVISIONS, AMENDMENTS AND UPDATES THAT THE RELEVANT WATER AGENCY HAS MADE TO THEIR STANDARDS.
4. DW AND NDW ASSETS SHALL ONLY BE CONSTRUCTED AFTER DEEPER ASSETS AFFECTING THE WATER MAINS HAVE BEEN CONSTRUCTED (EG: SEWERAGE & DRAINAGE ASSETS).
5. THIS DESIGN IS TO BE READ IN CONJUNCTION WITH ROAD AND DRAINAGE PLANS.
6. THE CONTRACTOR SHALL OBTAIN A ROAD OPENING PERMIT FOR ANY WORKS WITHIN THE ROAD RESERVE AND COMPLY WITH ALL REQUIREMENTS OF THE ROAD OWNER.

SURVEY, SET OUT AND ASSET RECORDING

7. TEMPORARY BENCH MARKS (TBM) FOR THE SET OUT OF WORKS TO THE AUSTRALIAN HEIGHT DATUM (AHD) ARE PROVIDED IN THE DESIGN DRAWINGS (SHOWN IN TABLE 6).
8. ALL LEVELS ARE IN METRES TO AHD.
9. ALL CO-ORDINATES ARE IN METRES TO THE MAP GRID OF AUSTRALIA (MGA 55- 94).
10. THE CONTRACTOR IS DIRECTLY RESPONSIBLE FOR ENSURING THE PROJECT SET OUT IS CONSISTENT WITH THE DESIGN. SHOULD ACTUAL SITE CONDITIONS CONFLICT IN ANY WAY WITH THAT DOCUMENTED, THE CONTRACTOR SHALL CONTACT THE SUPERINTENDENT FOR CLARIFICATION BEFORE PROCEEDING.
11. THE CONTRACTOR IS TO ENGAGE A SUITABLY QUALIFIED AND EXPERIENCED SURVEYOR TO UNDERTAKE ASSET RECORDING OF THE WORK. ALL SURVEYOR WORKS AND DATA RECORDING SHALL BE UNDERTAKEN IN ACCORDANCE WITH THE MRWA SURVEY MANUAL.
12. ALL SPECIFIC PIPE MATERIALS (EG. PVC-O) SHALL BE INDICATED IN THE AS CONSTRUCTED INFORMATION

PRODUCTS AND MATERIALS (REFER TABLE 1)

13. DW AND NDW SYSTEM COMPONENTS SHALL BE DIFFERENTIATED AS PER SECTION 4.2 OF WSA03-2011, MRWA EDITION.

APPURTENANCES (FITTINGS- REFER TABLE 2)

14. ALL VALVES AND HYDRANTS SHALL BE MARKED ACCORDING TO DRAWINGS MRWA-W-300 AND MRWA-W-301.
15. VALVE SURROUNDS, COVERS AND SPINDLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH DRAWING MRWA-W-302.
16. HYDRANT SURFACE ARRANGEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DRAWINGS MRWA-W-303.
17. FLANGE AND FLANGE BOLTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DRAWINGS MRWA-W-306A AND MRWA-W-306B.
18. FOR THE HYDRANT AND WASHOUT DETAILS REFER TO HYDRANT AND WASHOUT SCHEDULE.
19. ALL VALVES SHALL BE LOCATED DIRECTLY OUT FROM THE APEX OF THE SPLAY CORNER (UNLESS OTHERWISE INDICATED).

WATER MAIN ALIGNMENT, TRENCHING & COVER (REFER TABLE 4 & 8)

20. OFFSETS OF MAINS FROM PROPERTY BOUNDARIES SHALL BE: MIN 600MM (MAINS < DN100) AND MIN 1M (MAINS >DN100).
21. ALL WATER MAINS SHALL PASS OVER DRAINS AND SEWERS UNLESS SHOWN OTHERWISE IN THE DESIGN DRAWINGS.

EMBEDMENT

22. EMBEDMENT SHALL BE PLACED AS PER DRAWINGS MRWA-W-201 AND MRWA-W-202.
23. PIPE EMBEDMENT MATERIALS SHALL BE IN ACCORDANCE WITH PRODUCT SPECIFICATIONS WSA-PS-351, 360 AND 361 AS APPROVED FOR THE MATERIAL AND OR ANY SPECIAL EMBEDMENT.
24. SPECIAL EMBEDMENT SHALL BE PLACED AS PER MRWA-W-203.

BACKFILL

25. COMPACTION TRIALS AND COMPACTION TESTING SHALL BE UNDERTAKEN IN ACCORDANCE WITH THE MRWA 04-03.1 BACKFILL SPECIFICATIONS.
26. TRENCH BACKFILL WITHIN TRAFFICABLE AREAS SHALL BE TO THE ROAD OWNER SPECIFICATION (REFER MRWA-W-201).
27. NON TRAFFICABLE BACKFILL SHALL BE COMPLETED AS PER MRWA-W-201 AND THE 04-03.1 MRWA BACKFILL SPECIFICATION.

THRUST RESTRAINT (REFER TABLE 5)

28. THRUST RESTRAINTS HAVE BEEN DESIGNED ON THE BASIS OF THE AHPB (GROUND STRENGTH) NOMINATED IN TABLE 5. THE CONTRACTOR SHALL CONFIRM THE ACTUAL GROUND CONDITIONS AND DISCUSS WITH THE SUPERINTENDENT ANY GROUND CONDITIONS WHICH ARE FOUND TO BE DIFFERENT TO THAT NOMINATED.

PROPERTY SERVICES

29. NDW PROPERTY SERVICES SHALL ALWAYS BE LOCATED ON THE LEFT OF THE DW PROPERTY SERVICE AS YOU LOOK FROM THE ROAD TO THE FRONT OF THE PROPERTY.

CONNECTIONS (ALL TYPES)

30. ALL PROPERTY SERVICE CONNECTIONS TO NEW RESIDENTIAL RRJ RETICULATION MAINS ARE TO BE COMPLETED USING PRETAPPED CONNECTORS.

OTHER SERVICES (REF- TABLE 4 & 7)

31. TO RECEIVE THE MOST UP TO DATE INFORMATION PRIOR TO CONSTRUCTION, "DIAL BEFORE YOU DIG" SHALL BE UNDERTAKEN TO AID IN THE LOCATION OF OTHER SERVICES.
- OTHER SERVICES SHALL BE CAREFULLY LOCATED PRIOR TO FULL EXCAVATION AT THE CONTRACTOR'S COST. ANY CLASHES OF PROPOSED NEW WORKS WITH OTHER ASSETS SHALL BE REPORTED TO THE SUPERINTENDENT IMMEDIATELY FOR CLARIFICATION.
32. CLEARANCES TO OTHER SERVICES SHALL BE AS PER TABLE 7 AND TABLE 5.5 OF WSA03- 2011 MRWA EDITION. THESE CLEARANCES SHALL APPLY TO SURFACE COVERS AS WELL AS UNDERGROUND ASSETS.

EARTHWORKS AND RETAINING WALLS

33. IN AREAS SUBJECT TO EARTHWORKS, CONSTRUCTION OF WATER ASSETS SHALL NOT COMMENCE UNTIL EARTHWORKS AND RETAINING WALLS HAS BEEN COMPLETED UNLESS WRITTEN APPROVAL HAS BEEN GIVEN BY THE WATER AUTHORITY.

TESTING, ASSET ACCEPTANCE AND LIVE CONNECTIONS

34. POST CONSTRUCTION ACTIVITIES (OF BOTH DW & NDW) SUCH AS SWABBING, WATER QUALITY TESTING, PRESSURE TESTING AND CHLORINATION SHALL BE CARRIED OUT IN ACCORDANCE WITH WSA03-2011 MRWA EDITION AND THE MRWA WATER QUALITY COMPLIANCE SPECIFICATION.
- ALL TEST RESULTS SHALL BE DOCUMENTED AND REPORTED TO THE SUPERINTENDENT.
35. THE WATER AGENCY SHALL BE NOTIFIED IN WRITING 2 FULL WORKING DAYS IN ADVANCE OF TESTING BEING UNDERTAKEN.

36. BOTH ENDS OF DW AND NDW MAIN TO METER PROPERTY SERVICES SHALL BE INSPECTED BY THE WATER AGENCY.
- THE WATER AGENCY SHALL BE NOTIFIED IN WRITING 2 FULL WORKING DAYS IN ADVANCE OF THIS INSPECTION BEING CARRIED OUT.
- BOTH ENDS OF DW-NDW MAIN TO METER PROPERTY SERVICES ARE TO REMAIN EXPOSED UNTIL INSPECTED BY THE WATER AGENCY COMPLIANCE OFFICER.
- EACH PROPERTY SERVICE SHALL BE "SQUIRT TESTED". THIS TEST INVOLVES PLACING EACH NETWORK UNDER PRESSURE SEPARATELY AND ENSURING THAT ONLY THE END OF THE CORRECT PROPERTY SERVICE DISCHARGES WATER.
37. THE CONTRACTOR'S ITP SHALL INCLUDE PROVISION FOR EACH NDW CONNECTION TO BE SIGNED OFF AS CORRECTLY INSTALLED.
38. THE WATER AGENCY SHALL BE NOTIFIED IN WRITING 9 FULL WORKING DAYS IN ADVANCE OF CONNECTION TO THE LIVE NETWORK BEING UNDERTAKEN.
- SHUT DOWN WORK SHALL BE AS SHORT AS PRACTICAL AND SCHEDULED TO COMMENCE AT 9AM ON WORKING DAYS WITH COMPLETION TO OCCUR NO LATER THAN 4PM.
- IN INDUSTRIAL AND COMMERCIAL AREAS, THE IMPACT ON BUSINESS SHALL BE CONSIDERED AND IT MAY BE NECESSARY TO CARRY OUT THE WORK OUTSIDE NORMAL WORKING HOURS..
- SHUT DOWNS SHALL BE LIMITED TO 4 HOURS IN DURATION. ARRANGE FOR ALTERNATE SUPPLIES SHOULD THE SHUT DOWN DURATION EXCEED 4 HOURS.
39. VALVES CONNECTING NEW ASSETS TO THE WATER AGENCY'S LIVE SYSTEM SHALL NOT BE OPERATED BY THE CONTRACTOR.

WARNING
BEWARE OF ASBESTOS

SOME UNDERGROUND SERVICES MAYBE CONSTRUCTED FROM ASBESTOS CONTAINING MATERIAL. CONTACT THE SUPERINTENDENT FOR INSTRUCTIONS ON HOW TO MANAGE ANY POTENTIAL ASBESTOS HAZARD

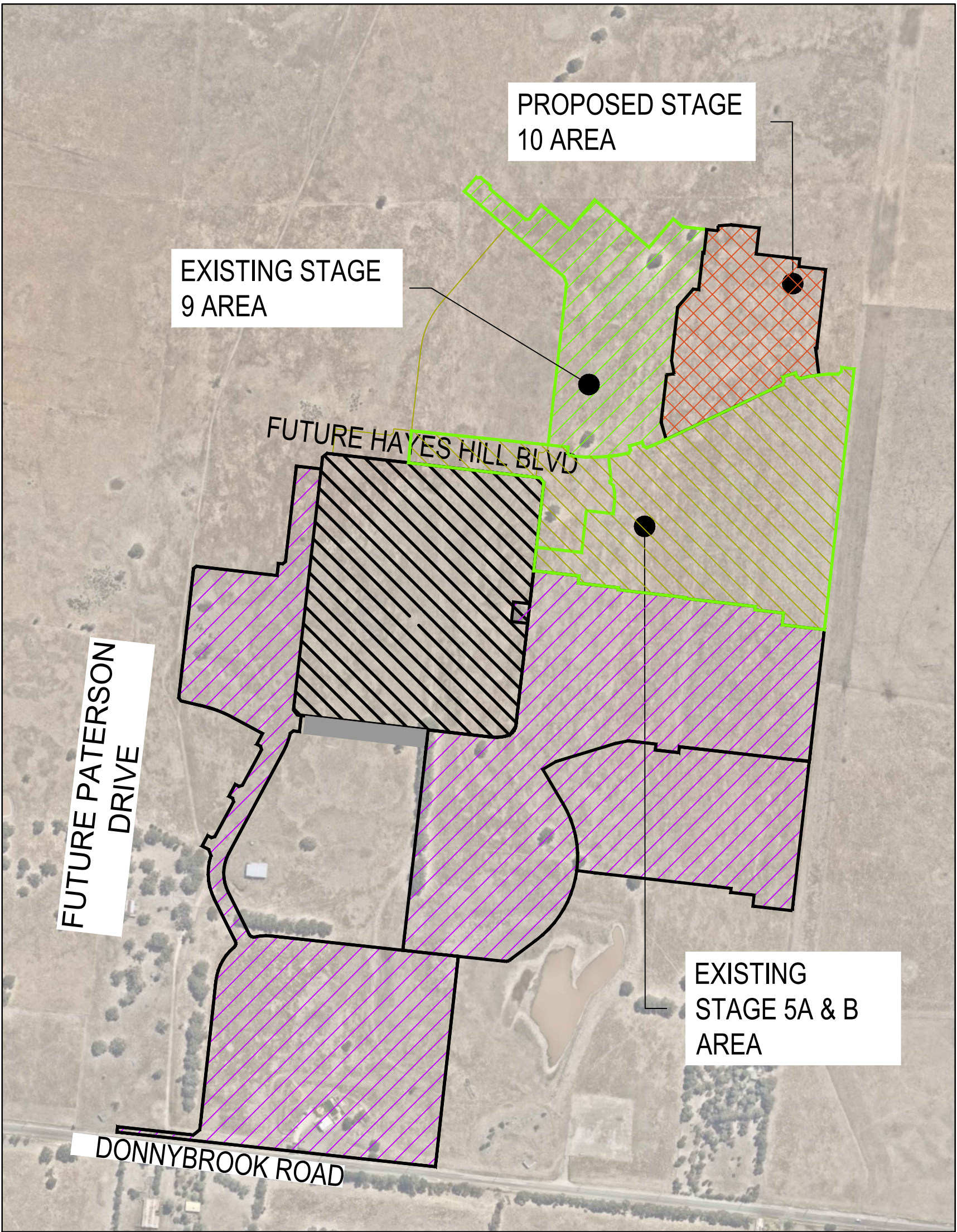
FOR THE DURATION OF PROCLAIMED WATER RESTRICTIONS, THE CONTRACTOR SHALL CONFORM WITH THE RESTRICTIONS AND ANY OTHER WATER CONSERVATION REQUIREMENTS IMPOSED BY THE WATER AGENCY.

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Drawing Index

388/3384/61 Locality Plan
388/3384/62 Layout Plan - 1
388/3384/63 YVW STD DWG WQP000-C-0001



DESIGN HEAD = 65m (DW & NDW)
TEST PRESSURE = 1000 kPa
ZONE = RESIDENTIAL

TABLE 1 TOTAL WORK SCHEDULE				
NEW WORK			POTABLE MAIN	RECYCLE MAIN
SIZE (DN)	TYPE/REFERENCE	CLASS	LENGTH (m)	LENGTH (m)
100	"PVC-M WSA-PS-209 PVC-O WSA-PS-210"	16	189	189
125	PE100 WSA-PS-207	16	260	260
25	"PE100 (PROPERTY SERVICES) WSA-PS-215"	16	-	-

TABLE 2 HYDRANT & WASHOUT SCHEDULE					
MAIN SIZE	FITTING TYPE	OWNERSHIP	LOCATION	STREET	LOCATION
100	HYDRANT	NDW-COUNCIL	INLINE	VICINITY ROAD	2.0m N OF SBL OF LOT 1046
100	HYDRANT	NDW-COUNCIL	INLINE	METROPOLIS WAY	2.0m W OF SPLAY LOT 1011
100	HYDRANT	DW	INLINE	METROPOLIS WAY	2.7m W OF SPLAY LOT 1011
100	HYDRANT	NDW-COUNCIL	INLINE	MEDIAN GRANGE	7.0m N OF SPLAY LOT 1035
100	HYDRANT	DW	INLINE	MEDIAN GRANGE	7.7m N OF SPLAY LOT 1035
100	WASHOUT	NDW	PLAIN	VICINITY ROAD	1.0m N OF STG BOUNDARY
100	WASHOUT	DW	PLAIN	VICINITY ROAD	1.0m N OF STG BOUNDARY
100	WASHOUT	NDW	PLAIN	METROPOLIS WAY	1.0m N OF STG BOUNDARY
100	WASHOUT	DW	PLAIN	METROPOLIS WAY	1.0m N OF STG BOUNDARY

× ALL DW AND NDW HYDRANTS & WASHOUTS ARE WATER AGENCY OWNED UNLESS STATED OTHERWISE.

TABLE 5: THRUST RESTRAINT SCHEDULE					
LOCATION	TYPE	THRUST	AHPB (kPa) USED	AREA (m2), OR W(m) X Y(m)	NO. LOCATIONS
B	INLINE	2 x 150x100 TEES & 125 PE SHRINKAGES	50	1.32 (TOT)	1
C	INLINE	2 x125x125 TEES & 125 PE SHRINKAGES	50	1.32 (TOT)	1
D	INLINE	2 x 125 PE SHRINKAGES	51	0.86 (TOT)	1
E	PLAIN	2 x 100 WASHOUTS	50	0.46 (TOT)	2

TABLE 4: 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)
VICINITY ROAD	EAST	2.10	EAST	2.50	EAST	3.00	WEST	2.55	WEST	1.85
METROPOLIS WAY	SOUTH	2.10	SOUTH	2.50	SOUTH	3.00	NORTH	2.55	NORTH	1.85
MEDIAN GRANGE	EAST	2.10	EAST	2.50	EAST	3.00	WEST	2.55	WEST	1.85
DOWNTOWN AVENUE	SOUTH	2.10	SOUTH	2.50	SOUTH	3.00	NORTH	2.35	SOUTH	1.80

TABLE 6: TBM SETOUT TABLE				
POINT	EAST	NORTHING	ELEVATION	DESCRIPTION
C34SSPL	323383.546	5842934.15	238.735	STEEL STAR PICKET
C68PM77L	323210.099	5842698.35	237.616	PERMANENT MARK PM77
C75PM50L	322900.181	5842750.808	240.178	PERMANENT MARK PM50
C76SSPL	323252.295	5842715.378	236.886	STEEL STAR PICKET
C77RVTRG	323038.436	5842738.371	243.696	RIVET IN ROCK
C78SSPG	322835.256	5842759.893	239.488	STEEL STAR PICKET
C79SSPL	322666.202	5842778.237	238.207	STEEL STAR PICKET
C80SPKBG	322654.654	5842776.01	238.428	SPIKE IN BITUMEN
C81SSPL	322549.258	5842791.748	235.563	STEEL STAR PICKET
C82SSPL	322570.163	5842989.303	236.275	STEEL STAR PICKET
C83SSPL	322595.579	5843198.908	239.115	STEEL STAR PICKET
C84RVTRL	322617.683	5843412.157	242.457	RIVET IN ROCK
C85SSPL	322640.995	5843611.461	239.572	STEEL STAR PICKET
C93SSPL	323276.817	5842944.336	237.989	STEEL STAR PICKET
C104RVTRL	322946.48	5843298.043	243.686	RIVET IN ROCK
C106SSPL	322762.605	5842991.952	238.464	STEEL STAR PICKET
C107SSPL	322900.731	5843023.612	240.323	STEEL STAR PICKET
C108SSPL	323208.79	5843072.045	241.058	STEEL STAR PICKET
C109SSPL	322932.732	5843474.686	243.559	STEEL STAR PICKET

TABLE 7 : VERTICAL CLEARANCE TABLE	
EXISTING OR PROPOSED SERVICE	MINIMUM VERTICAL CLEARANCE (mm)
WATER MAINS <DN375	150
WATER MAINS >DN375	300
GAS MAINS	150
TELCO CONDUITS & CABLES	150
ELECTRICITY CONDUITS & CABLES	225
STORMWATER DRAINS & PITS	150
SEWERS - GRAVITY	500
SEWERS - PRESSURE & VACUUM	300

- VERTICAL CLEARANCE BETWEEN WATER MAINS SHALL DEPEND ON THE LARGER MAIN DIAMETER.
- MAINTAIN ADDITIONAL CLEARANCE FROM HIGH VOLTAGE ELECTRICAL CABLES TO ALLOW FOR A PROTECTIVE BARRIER AND MARKING.

TABLE 8 : PIPE COVER	
LOCATION	MINIMUM COVER
WITHIN FOOTWAY	450mm
MINOR/SECONDARY ROADS	600mm

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 S10 P4.E6, 1700E-10-35

ASSESS THE RISK - STAY SAFE

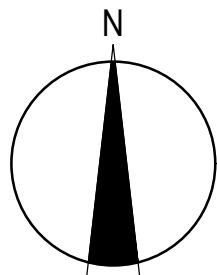
REV	DATE	AMENDMENT / REVISION DESCRIPTION	DESIGN	APPROVAL
0	23.08.19	ISSUED FOR CONSTRUCTION	ME/SM	AB

ISSUED FOR CONSTRUCTION

All setting out should be carried out in accordance with MPA/Council's standard drawings or as nominated on hard copy plans provided by SMEC. Any digital information supplied by this office is for information only. Any discrepancies should be discussed with the superintendent.		
Quality Management - ISO 9001	Site Management - AS/NZS 4801	Environmental Management - ISO 14001
Global-Mark.com.au®	Global-Mark.com.au®	Global-Mark.com.au®

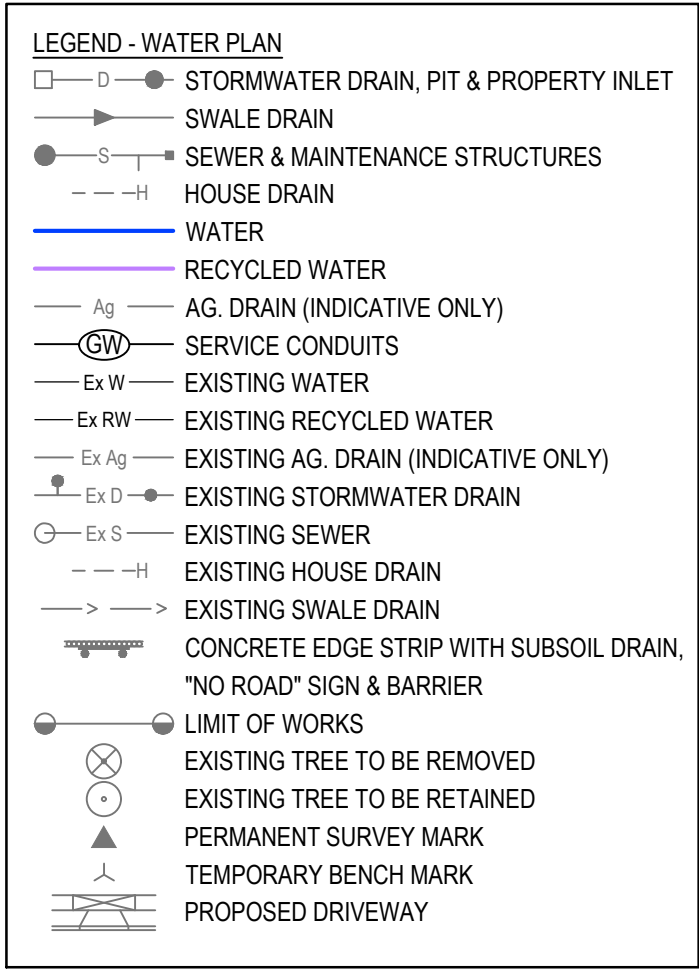
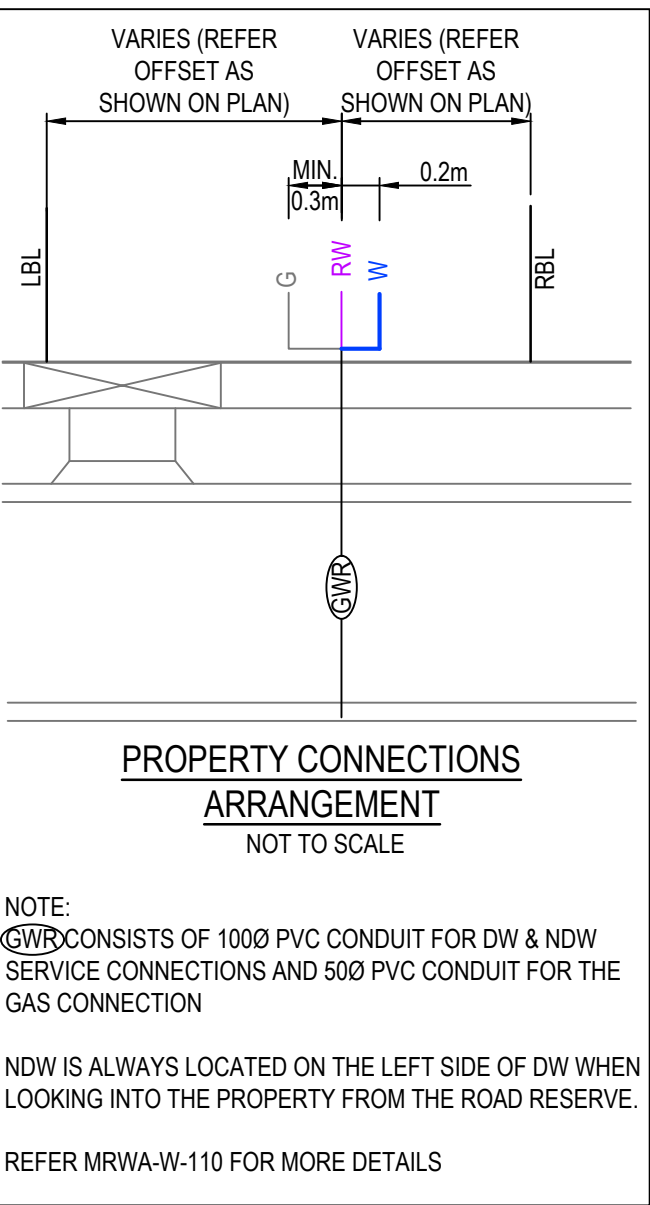
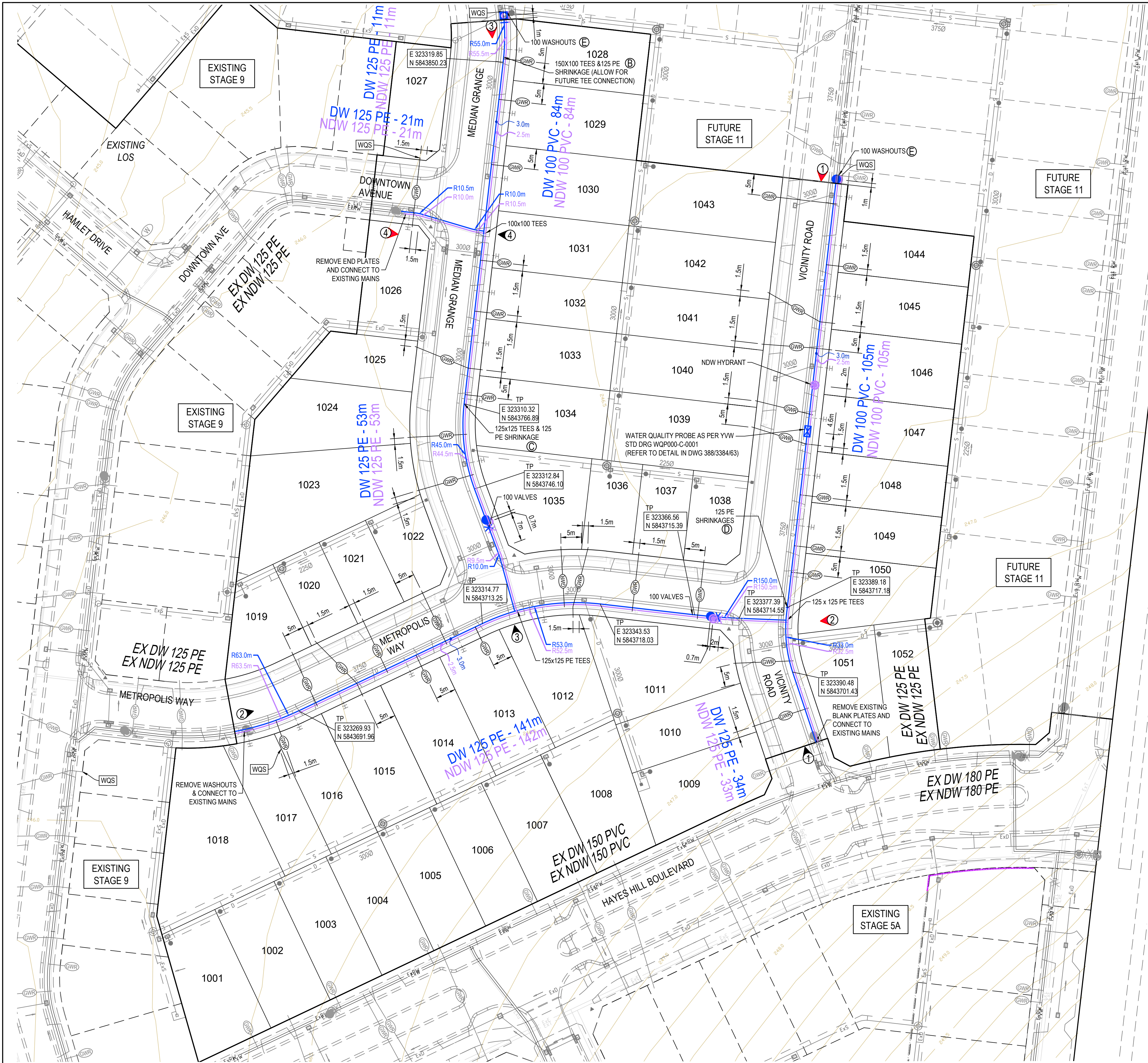
TITLE	NAME
DRAFTER	S.MacLaren
DESIGNER	M.Esho
CHECKED	E.Lam
AUTHORISED	A.Burrows
WATER AUTHORITY REF.	388/3384
SMEC DRAWING REF.	1700E.10

SCALE AS SHOWN AT A1



Yarra Valley Water
Whittlesea City Council
Olivine Estate - Stage 10
Water Reticulation Plan
Locality Plan

MELWAYS REF	PROJECT / DRAWING No.	SHEET No.	REVISION
8M2	388/3384/61	01 of 03	0



WARNING
BEWARE OF ASBESTOS
SOME UNDERGROUND SERVICES MAYBE CONSTRUCTED FROM ASBESTOS CONTAINING MATERIAL. CONTACT THE SUPERINTENDENT FOR INSTRUCTIONS ON HOW TO MANAGE ANY POTENTIAL ASBESTOS HAZARD

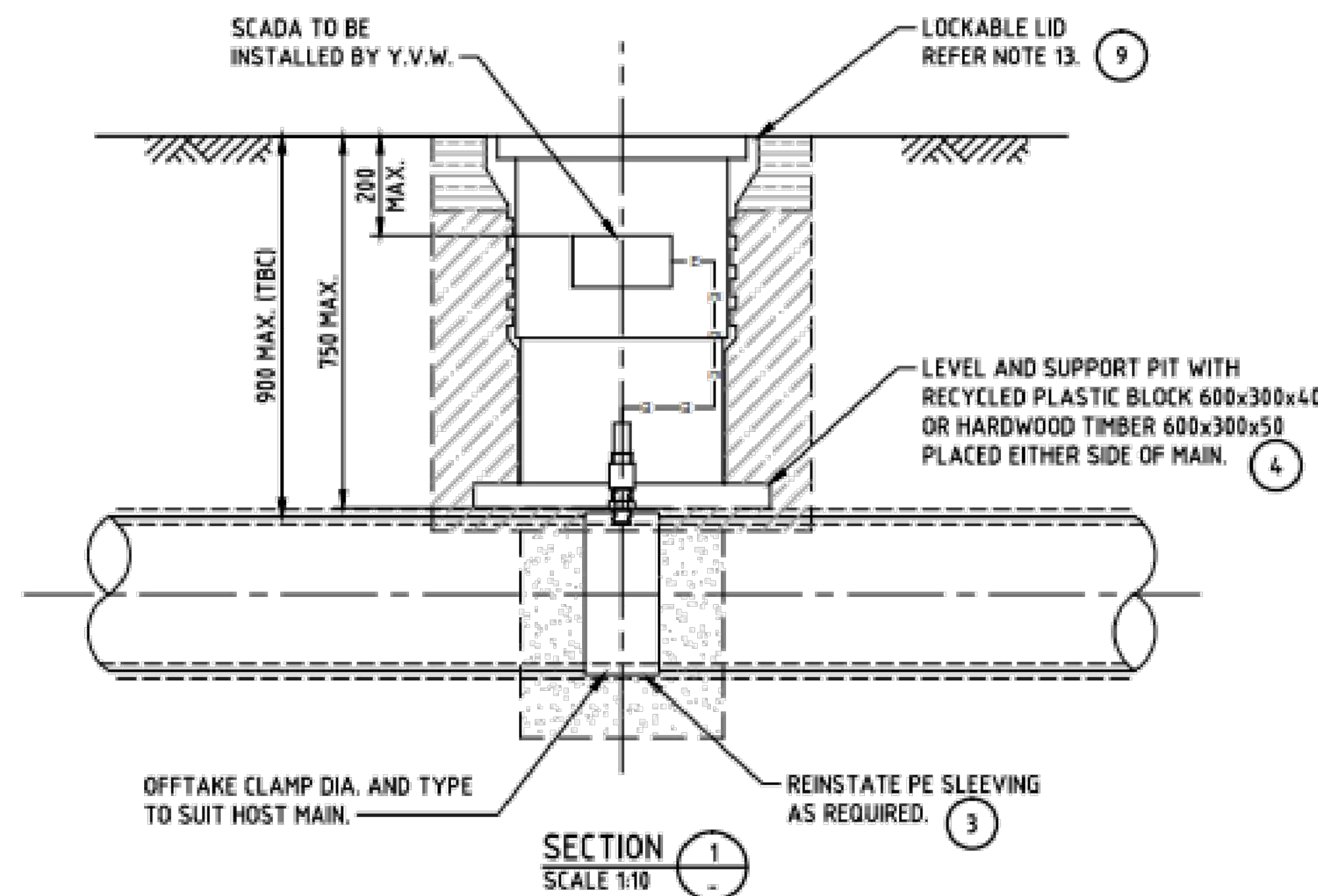
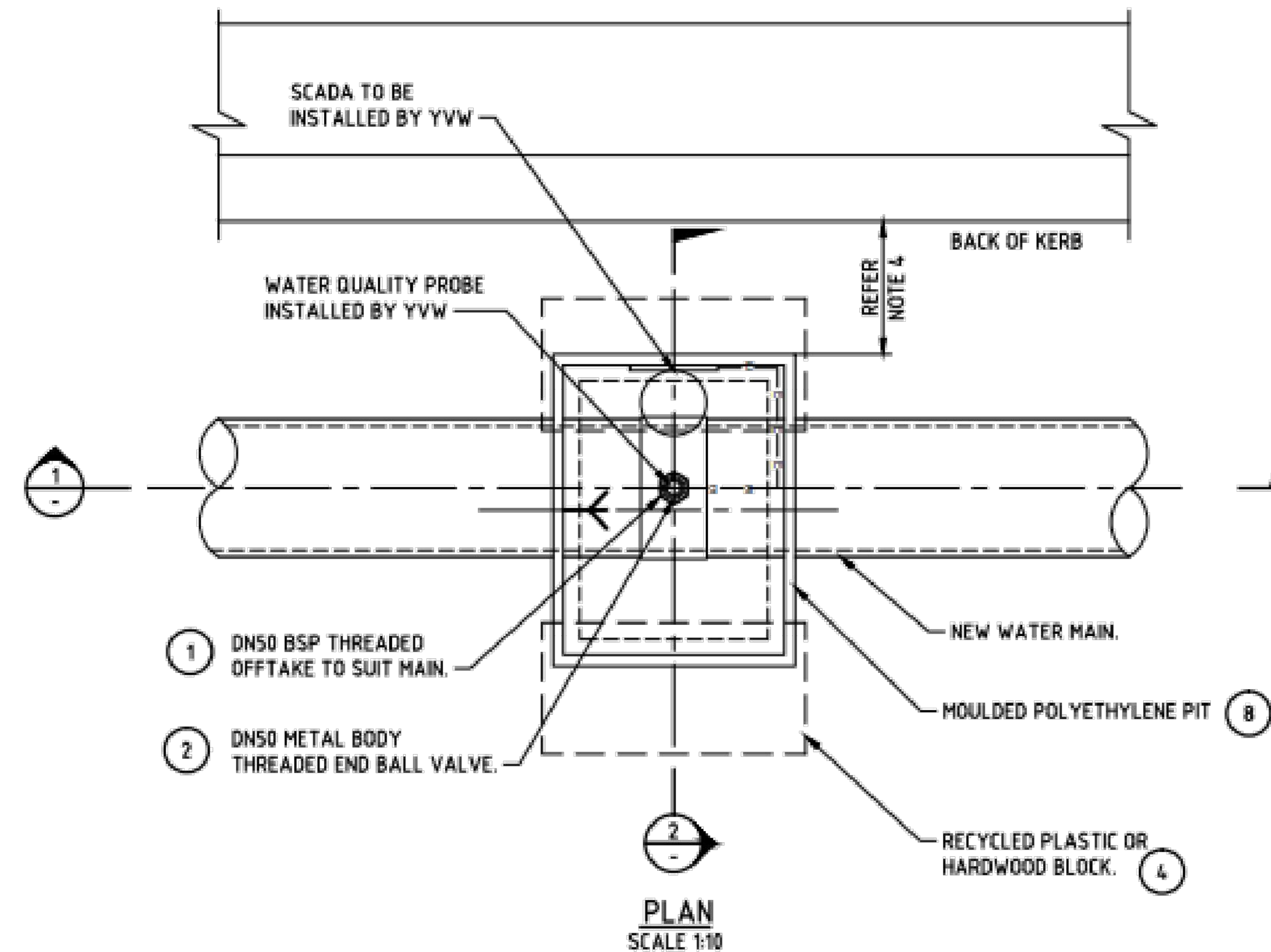
FOR THE DURATION OF PROCLAIMED WATER RESTRICTIONS, THE CONTRACTOR SHALL CONFORM WITH THE RESTRICTIONS AND ANY OTHER WATER CONSERVATION REQUIREMENTS IMPOSED BY THE WATER AGENCY.

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

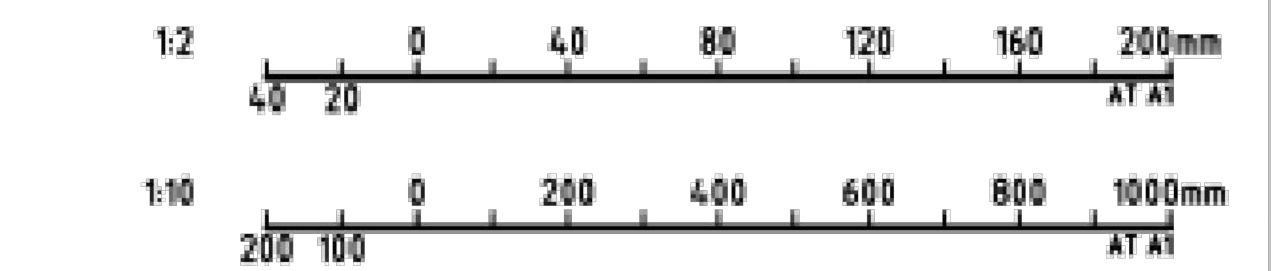
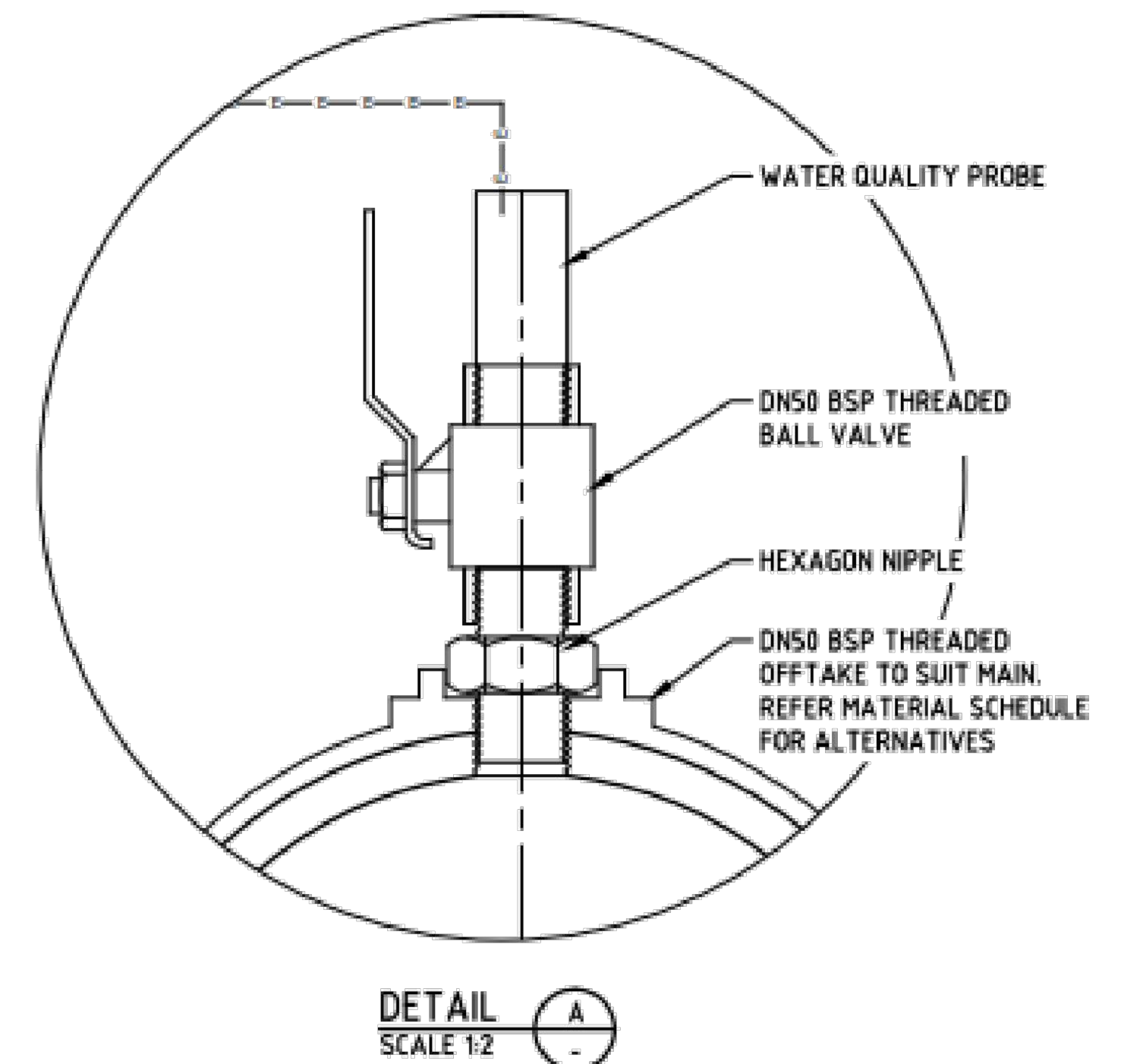
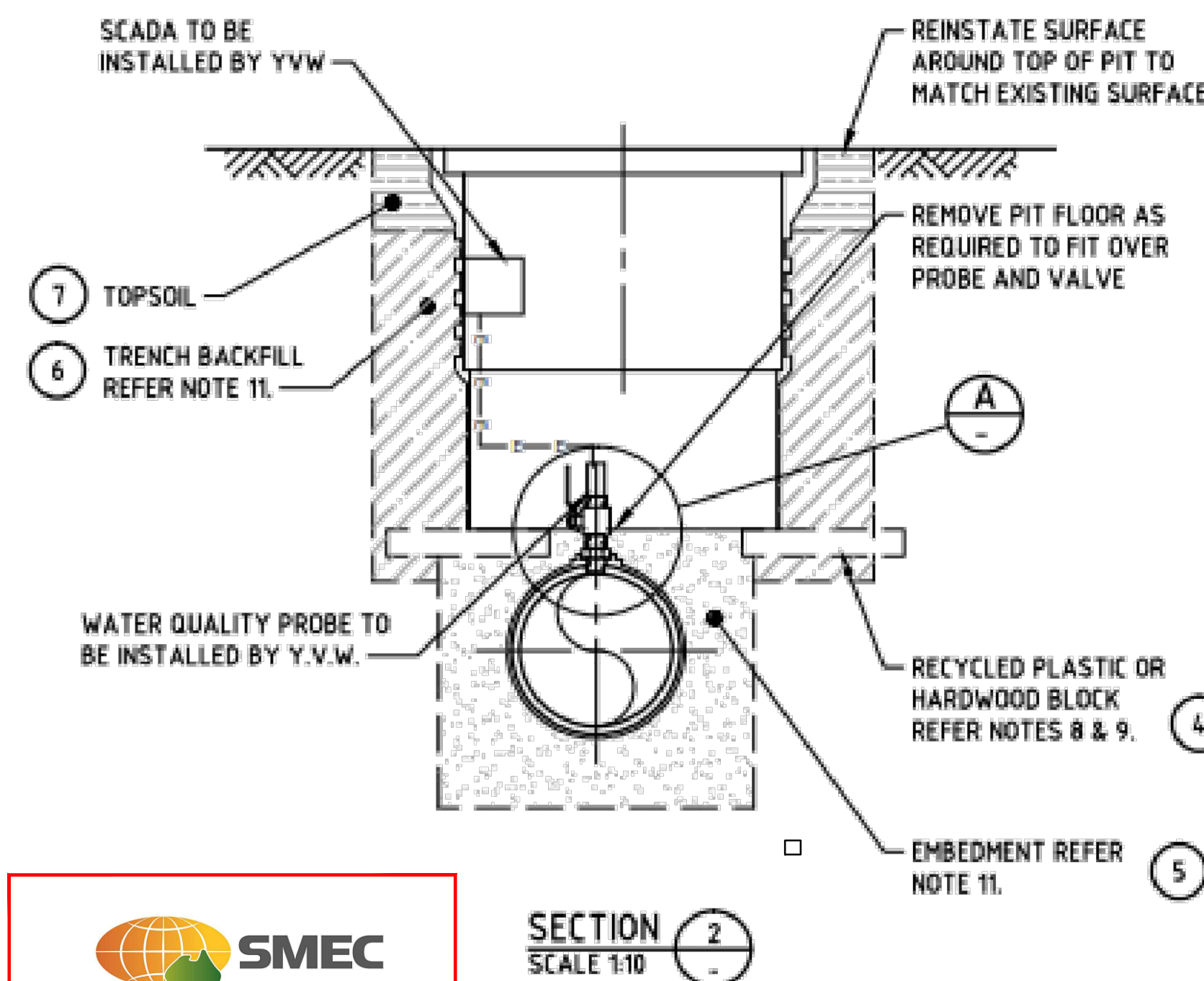
WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION TO BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

SYMBOLS AND WATER MAIN FITTINGS			
X	VALVE		FLANGE WITH BACKING RING
●	WATER AUTHORITY HYDRANT (BELOW GROUND)	—●—	SLIP IN TYPE WELD (MSCL), BUTT WELD (PE)
⊙	COUNCIL HYDRANT (BELOW GROUND))	ENDCAP
○	WATER AUTHORITY HYDRANT (ABOVE GROUND)	⌋	FLANGE SOCKET THRUST CONNECTOR
⊙	COUNCIL HYDRANT (ABOVE GROUND)	⌋	PLAIN THRUST BLOCK
⊙	COMBINED VALVE CONTROLLED HYDRANT	⌋	IN LINE THRUST BLOCK
⊙	FITTING REMOVED	⊙	FERRULE
⊙	DUCKFOOT BEND, HYDRANT RISER & HYDRANT ABOVE	⊙	ELECTROLYSIS
▶	TAPER	—	ABANDONED
⊙	WASHOUT BEND, RISER & HYDRANT ABOVE	⌋	DOUBLE PRE-TAPPED CONNECTOR
⊙	CHLORINATION POINT	▶	PRESSURE CONTROL VALVE
⌋	SOCKET	⊙	SWAB INSERTION POINT
⌋	DOUBLE SOCKET CONNECTOR	⊙	SWAB REMOVAL POINT
⌋	FLANGE	WQS	WATER QUALITY SAMPLE

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



MATERIALS SCHEDULE		
ITEM No.	DESCRIPTION	REFERENCE
1	DN50 THREADED MECHANICAL COUPLING FOR NON-PE MAINS	WSA PS-310, PS-313
1	DN50 THREADED MECHANICAL COUPLING FOR PE MAINS	WSA PS-327
1	DN50 ELECTROFUSION TAPPING SADDLES FOR PE MAINS	WSA PS-329
1	DN50 ELECTROFUSION OR BUTT WELDED OFFTAKE/TEE FOR PE MAINS	WSA PS-208
1	STEEL ROUND TAPPING PAD - SIZE TO SUIT MAIN x DN50 TAPPING	MRWA APPROVED PRODUCTS
1	DI/GRN PRETAPPED CONNECTOR - SIZE TO SUIT MAIN x DN50 TAPPING	WSA PS-201, PS-246
2	DN50 METAL BODY THREADED END BALL VALVE	WSA PS-274
3	POLYETHYLENE SLEEVING	WSA PS-320
4	RECYCLED PLASTIC OR HARDWOOD BLOCKS AND WEDGES	MRWA APPROVED PRODUCTS
5	EMBEDMENT SAND OR CRUSHED ROCK	WSA PS-360, PS-361, PS-362
6	TRENCH BACKFILL	MRWA BACKFILL SPECIFICATION
7	TOPSOIL	WSA 03_2011_MRWA2, SECTION 23.3
8	MOULDED POLYETHYLENE PIT, MIN INTERNAL DIMENSIONS 650 LONG x 500 WIDE x 600 DEEP (MAX. 700 DEEP)	
9	LOCKABLE LID, CLASS B OR C TO SUIT LOCATION, WITH LABEL	



NOTES:

GENERAL

- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.
- UNLESS SPECIFICALLY NOTED OTHERWISE, ALL INSTALLATION DETAILS ARE TO YARRA VALLEY WATER REQUIREMENTS.
- CONFIRM LOCATION OF EXISTING SERVICES IN THE VICINITY OF THE INSTALLATION PRIOR TO COMMENCEMENT OF CONSTRUCTION. DUE ATTENTION AND CARE SHALL BE MAINTAINED REGARDING THE CARRYING OUT OF CONSTRUCTION ACTIVITIES IN AREA CONTAINING EXISTING SERVICES.
- THE INSTALLATION IS TO BE LOCATED AS FAR FROM THE BACK OF KERB AS POSSIBLE TO ALLOW FOR TESTING AND SERVICING.

WATER QUALITY PROBE:

- YARRA VALLEY WATER WILL PROVIDE INSTALLATION LOCATION PRIOR TO MAIN CONSTRUCTION IN NEW DEVELOPMENT.
- WATER QUALITY PROBE, LOGGER AND/OR SCADA TO BE INSTALLED BY YARRA VALLEY WATER.

PIT:

- HARDWOOD SHALL BE RATING 1 TIMBER AS DEFINED BY AS 5604 TIMBER - NATURAL DURABILITY RATING AND THE AUSTRALIAN GOVERNMENT REPORT TITLED 'THE IN-GROUND NATURAL DURABILITY OF AUSTRALIAN TIMBERS'.
- PLACE TIMBER/RECYCLED PLASTIC BLOCKS ON EMBEDMENT COMPACTED TO MINIMUM 70% DENSITY INDEX.
- LOCKABLE LID SHALL BE CLASS B IN NON-TRAFFICABLE AREA OR CLASS C IN TRAFFICABLE AREA OTHER THAN ROAD. PIT NOT TO BE LOCATED IN ROAD.
- EMBEDMENT AND BACKFILL MATERIALS, PLACEMENT AND COMPACTION SHALL COMPLY WITH MRWA-W-201 AND MRWA-W-202.
- REINSTATE SURFACE AROUND BOX TO MATCH EXISTING LEVELS AND CONDITIONS.
- ALL MALE THREADS SHALL BE WRAPPED IN PTFE TAPE.

ASSET RECORDING:

- A SUITABLY QUALIFIED AND EXPERIENCED SURVEYOR IS TO UNDERTAKE ASSET RECORDING OF THE INSTALLATION IN ACCORDANCE WITH THE MRWA SURVEY MANUAL.



ISSUED FOR INFORMATION ONLY
SMEC REFERENCE No: 388/3384/63
DATE: 23.08.2019



TYPICAL DRAWINGS

WATER QUALITY PROBE
INSTALLATION IN NEW DEVELOPMENTS

SCALE: AS SHOWN DRAWING No: WQP000-C-0001 REV: B

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REV	DATE	REVISION	APPROVED
B	20/05/15	ISSUED FOR APPROVAL	
A	19/01/15	ISSUED FOR REVIEW	