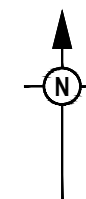


87 - 93 KOPLICK ROAD, PARK RIDGE
FOR 'KOPLICK DEVELOPMENTS PTY LTD'

18-0114-3000	SEWERAGE RETICULATION COVER PLAN
18-0114-3001	SEWERAGE RETICULATION LAYOUT PLAN
18-0114-3002	SEWERAGE RETICULATION LONGITUDINAL SECTIONS SHEET 1
18-0114-3003	SEWERAGE RETICULATION LONGITUDINAL SECTIONS SHEET 2
18-0114-3004	SEWERAGE RETICULATION LONGITUDINAL SECTIONS SHEET 3
18-0114-3005	SEWERAGE RETICULATION LONGITUDINAL SECTIONS SHEET 4
18-0114-3006	WATER RETICULATION LAYOUT PLAN



- LANDSCAPE ARCHITECT'S PLANS
- ELECTRICAL, COMMUNICATIONS AND GAS CONSULTANT'S PLANS
- SAFETY IN DESIGN REPORT

OW/134/2021

REV	DATE	DESIGN	DRAWN	REVISION DETAILS		DRAWN	STATUS		SCALE 1:2500 50 0 50 100 A1 1:5000 A3	CLIENT	PROJECT NAME	DRAWING TITLE		
1	07.05.21	RD	RD	ORIGINAL ISSUE		RD	NOT FOR CONSTRUCTION			DESIGN APPROVED TROY SCHULTZ RPEQ 20631  FOR AND ON BEHALF OF PEAKURBAN PTY LTD	KOPLICK DEVELOPMENTS PTY LTD ASSOCIATED CONSULTANT GOODROCK PROPERTY PH: 0423 557 882	PROPOSED RESIDENTIAL SUBDIVISION (STAGES 3 AND 4) 87 - 93 KOPLICK ROAD PARK RIDGE	PROJECT No. 18-0114	DRAWING No. 1000

LEGEND

- PROPOSED AREA OF WORKS/STAGE BOUNDARY
- PROPOSED SURFACE CONTOUR
- EXISTING SURFACE CONTOUR
- PROPOSED EARTHWORKS PAD SETBACK LINE
- PROPOSED CONCRETE SLEEPER RETAINING WALL
- PROPOSED DRAINAGE SWALE
- PROPOSED FINISHED SURFACE LEVEL (FSL) (INCLUDES TOPSOIL PLACEMENT)
- EXISTING SURFACE LEVEL (ESL)
- PROPOSED AREA OF CUT
- PROPOSED AREA OF FILL
- INDICATIVE DRIVEWAY LOCATIONS
- ZERO LOT BOUNDARY
- EXISTING STORMWATER DRAINAGE PIPE
- EXISTING ELECTRICAL CABLE O/H
- EXISTING DRAIN
- EXISTING WATER MAIN

VOLUMES:

CUT: 1330m³
FILL: 26690m³
(BALANCE = 25357m³ IMPORT)
*VOLUMES ACCOUNT FOR STAGE 1 AND 2 EXTERNAL WATER MAIN BUNDING AS BEING IN PLACE.

LOGAN CITY COUNCIL

APPROVED PLAN OF DEVELOPMENT

This is the approved plan of development for Development Application

OW/134/2021

GENERAL NOTES:

- THE CONTRACTOR SHALL SUPPLY ALL LABOR, MATERIALS, PLANT AND EQUIPMENT TO CONSTRUCT THE WORKS AS DOCUMENTED AND STRICTLY IN ACCORDANCE WITH THE RELEVANT AUTHORITY STANDARDS, SPECIFICATIONS AND REQUIREMENTS.
- THE EXISTING SERVICES THAT ARE SHOWN ON THE DRAWINGS ARE PROVIDED FOR INFORMATION PURPOSES ONLY. NO RESPONSIBILITY IS TAKEN BY THE SUPERINTENDENT OR THE PRINCIPAL FOR INFORMATION THAT HAS BEEN SUPPLIED BY OTHERS, OR ANY EXISTING SERVICES THAT MAY BE PRESENT NOT SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL VERIFY THE POSITION OF ANY UNDERGROUND SERVICES WITHIN THE AREAS OF WORKS AND SHALL BE RESPONSIBLE FOR MAKING GOOD ANY DAMAGE THERETO. ANY ALTERATION WORKS TO SERVICES WILL BE CARRIED OUT ONLY BY THE SERVICE OWNER AUTHORITY UNLESS APPROVED OTHERWISE.
- ALL CONSTRUCTION ACTIVITIES UNDERTAKEN SHALL COMPLY WITH CURRENT WORKPLACE HEALTH AND SAFETY REQUIREMENTS AND LEGISLATION.
- PRIOR TO COMMENCING WORK, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL RELEVANT LOCAL AUTHORITY PERMITS.
- THE CONTRACTOR SHALL NOT COMMENCE THE DEMOLITION OF ANY EXISTING BUILDINGS AND/OR STRUCTURES WITHOUT APPROVAL FROM THE SUPERINTENDENT.
- THE CONTRACTOR SHALL APPLY INDUSTRY BEST PRACTICE SO WORKS SHALL NOT DISTURB OR AFFECT NEARBY RESIDENTS EITHER BY DUST, NOISE, FLOODING OR DISCONNECTION OF SERVICES. CONTRACTOR TO ENSURE THAT ACCESS AND SERVICES TO EXISTING PROPERTIES ARE AVAILABLE AT ALL TIMES.
- THE CONTRACTOR SHALL VERIFY LEVELS OF EXISTING SERVICE CROSSINGS AND CONNECTION POINTS PRIOR TO COMMENCEMENT OF WORKS AND NOTIFY SUPERINTENDENT OF ANY DISCREPANCIES BETWEEN ACTUAL AND PROPOSED DESIGN LEVELS.
- THESE ENGINEERING DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE APPROVED VEGETATION MANAGEMENT PLAN, WHERE APPLICABLE. WHEN IN DOUBT, ALL EXISTING TREES ARE TO REMAIN UNLESS DIRECTED OTHERWISE.
- HOLD POINT: ONCE THE BASE OF MANHOLES, INSPECTION PITS, GULLIES AND FIELD INLETS FOR STORMWATER DRAINAGE AND SEWER RETICULATION HAVE BEEN POURED, CONSTRUCTION SHALL ONLY RE-COMMENCE ONCE THE SUPERINTENDENT AND/OR ENGINEER HAVE INSPECTED THE WORKS.
- THE CONTRACTOR SHALL NOTE DURING THE COURSE OF THE WORKS WHEN JOINT INSPECTIONS WITH THE AUTHORITY AND THE SUPERINTENDENT ARE REQUIRED. THESE INCLUDE PRE-STARTS, SUBGRADES, PRE-SEALS, CLEARING, AND OTHER SUCH INSPECTIONS AS NOMINATED IN THE APPROVAL AND THE SPECIFICATIONS. THE CONTRACTOR SHALL ENSURE NO WORKS PROCEED PAST THE INSPECTION POINT UNTIL THE JOINT INSPECTION HAS BEEN SUCCESSFULLY COMPLETED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A SAFE MOVEMENT OF TRAFFIC AND THE PROTECTION OF PERSON AND PROPERTY THROUGH AND AROUND THE SITE. THE CONTRACTOR IS RESPONSIBLE FOR ALL TRAFFIC MANAGEMENT INCLUDING THE DESIGN, CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY ROADWAYS, DETOURS, SIGNS, LIGHTS AND BARRIER AS REQUIRED STRICTLY IN ACCORDANCE WITH THE RELEVANT AUTHORITY REQUIREMENTS.

BULK EARTHWORKS NOTES

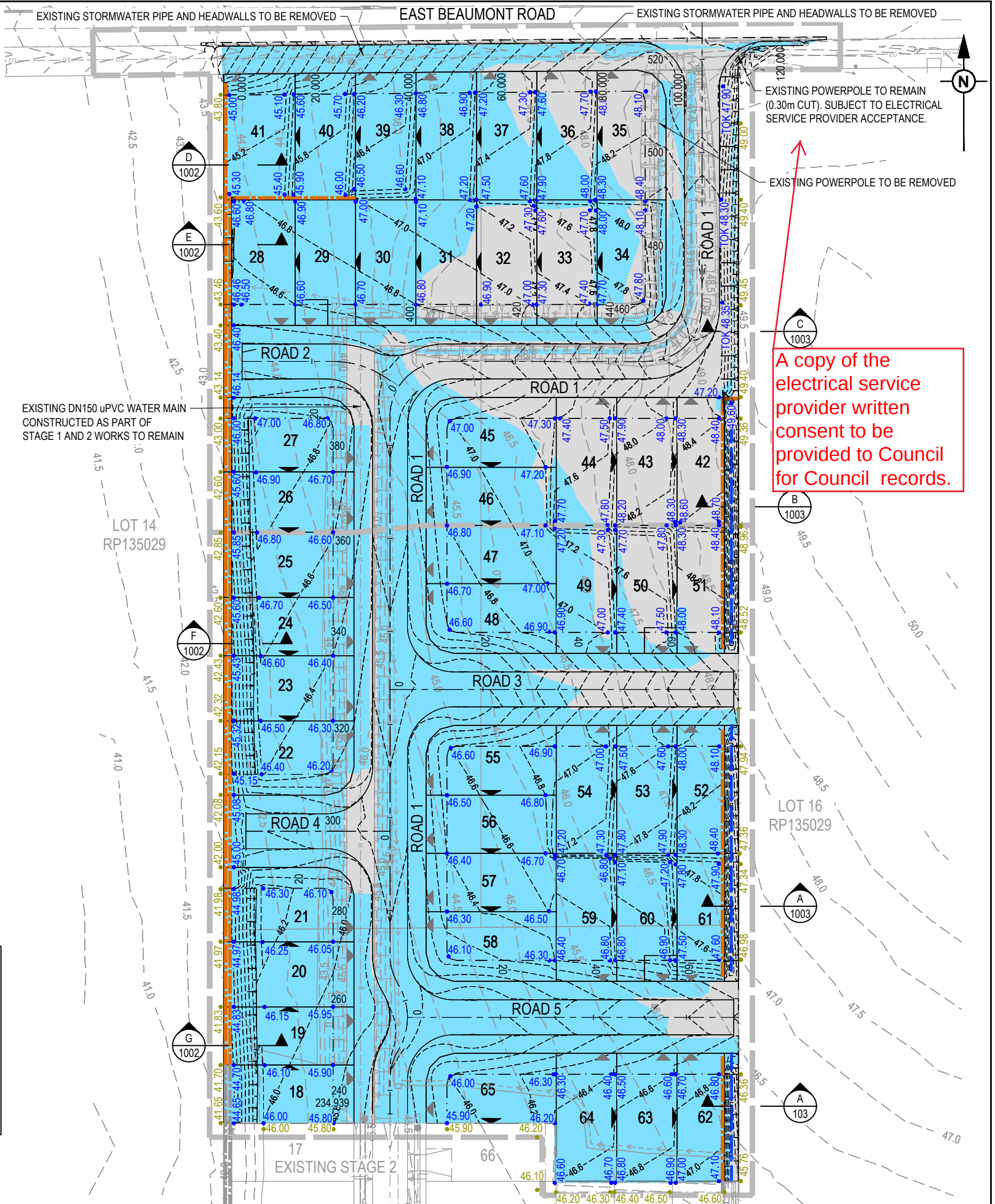
- NOTWITHSTANDING THE EXTENTS OF CUTTING AND FILLING SHOWN ON DRAWINGS, THE SUPERINTENDENT RESERVES THE RIGHT TO ADJUST THE FINISHED SURFACE LEVELS AND EARTHWORKS EXTENTS THROUGH WRITTEN DIRECTION.
- THE CONTRACTOR SHALL UNDERTAKE ALL CLEARING USING INDUSTRY BEST PRACTICE INCLUDING CONSIDERATION OF FAUNA RELOCATION.
- THE CONTRACTOR SHALL UNDERTAKE ALL EARTHWORKS IN ACCORDANCE WITH AS3798-2007 AND LOCAL AUTHORITY REQUIREMENTS. LEVEL 1 SUPERVISION IS REQUIRED.
- THE CONTRACTOR SHALL CONSIDER LOADS GENERATED BY THE EARTHWORKS OPERATIONS SO AS TO AVOID DAMAGE TO ALL PIPES, SERVICES AND STRUCTURES.
- THE EARTHWORKS DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE PROJECT'S SEDIMENT AND EROSION CONTROL PLAN, WHERE APPLICABLE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PLANNING, DESIGN, CERTIFICATION, IMPLEMENTATION AND MAINTENANCE OF AN EROSION AND SEDIMENT CONTROL PLAN THAT IS COMPLIANT WITH THE INTERNATIONAL EROSION CONTROL ASSOCIATION (IECA) GUIDELINE 'BEST PRACTICE EROSION AND SEDIMENT CONTROL' AND RELEVANT COUNCIL POLICIES.

WARNING! - EXISTING SERVICES

EXTREME CARE SHOULD BE TAKEN WHEN EXCAVATING IN THIS AREA. THE FOLLOWING EXISTING SERVICES ARE LIKELY TO BE PRESENT IN THE VICINITY OF THE SITE:

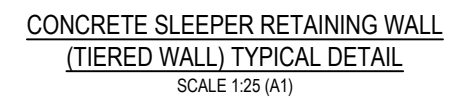
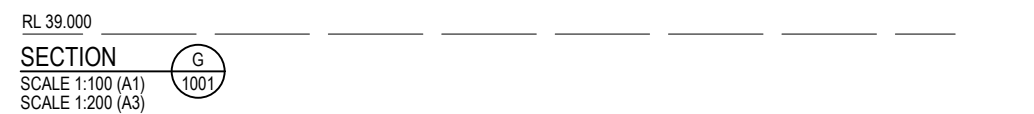
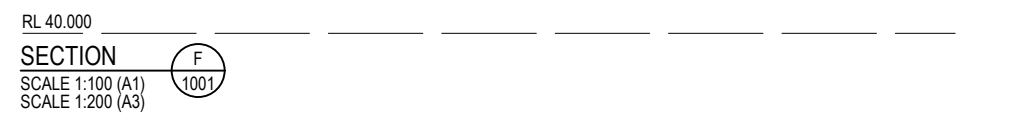
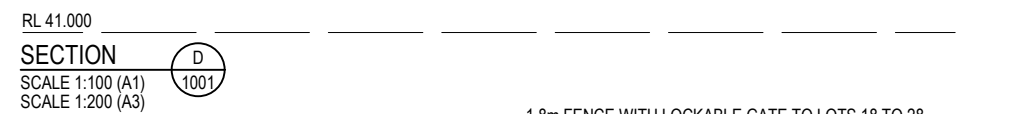
- ELECTRICAL CABLE
- TELECOMMUNICATIONS CABLES

THE CONTRACTOR SHOULD CONTACT THE SERVICE PROVIDER FOR FURTHER INFORMATION AND SATISFY THEMSELVES OF ANY SPECIFIC TREATMENT OR REQUIREMENTS.



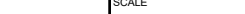
A copy of the electrical service provider written consent to be provided to Council for Council records.

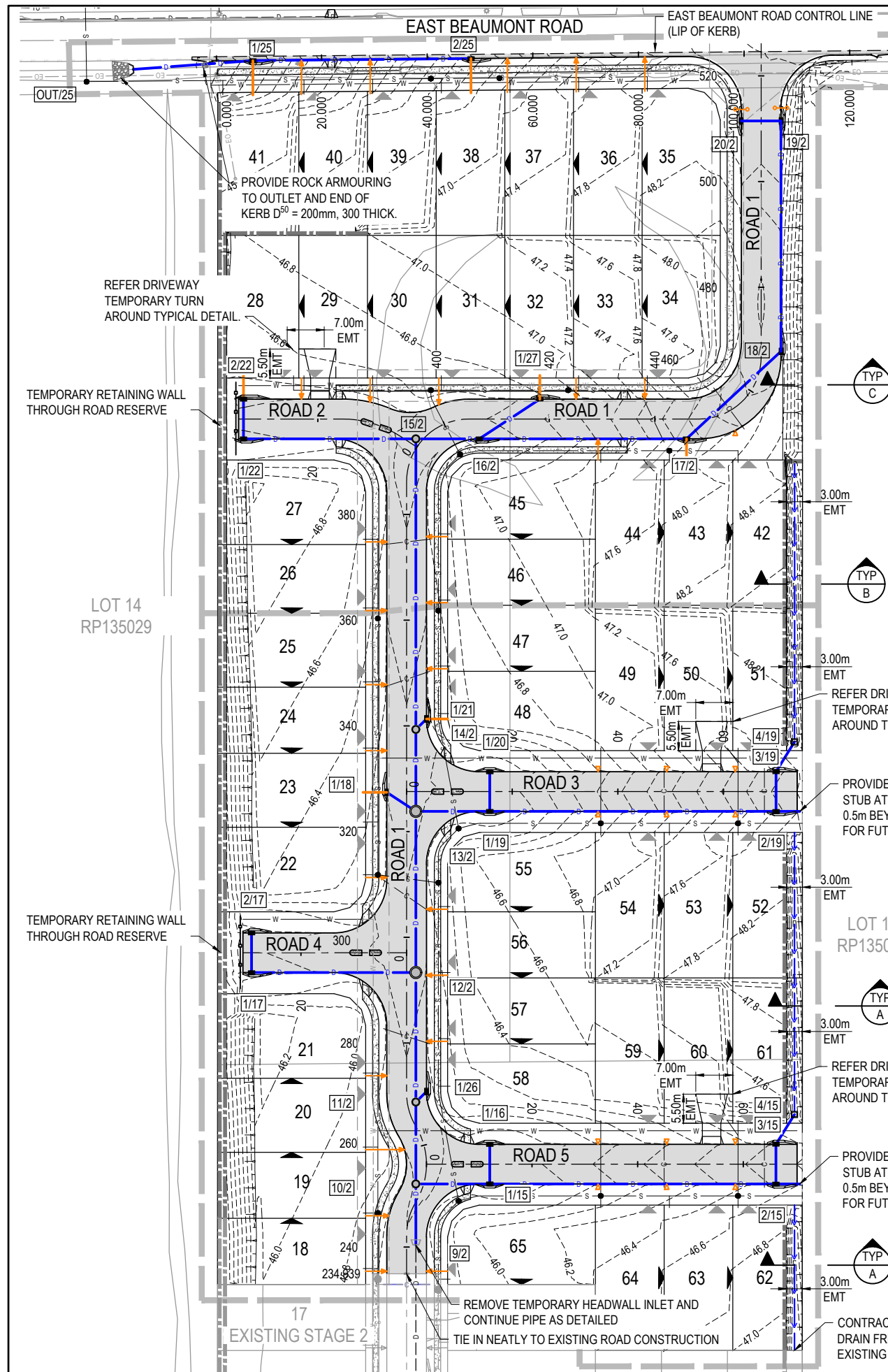
REV	DATE	DESIGN	DRAWN	REVISION DETAILS	DRAWN	STATUS	CLIENT	PROJECT NAME	DRAWING TITLE
1	07.05.21	RD	RD	ORIGINAL ISSUE	RD	NOT FOR CONSTRUCTION	KOPLICK DEVELOPMENTS PTY LTD	PROPOSED RESIDENTIAL SUBDIVISION (STAGES 3 AND 4)	BULK EARTHWORKS LAYOUT PLAN
2	10.08.21	RD	RD	ROAD 1 EASTERN INTERFACE AND CHAINAGES	RD	APPROVED	GOODROCK PROPERTY	87 - 93 KOPLICK ROAD PARK RIDGE	PROJECT No. 18-0114
3	29.10.21	RD	RD	LEVELS AMENDED	RD	TROY SCHULTZ	PH: 0423 557 882		DRAWING No. 1001
						RPEQ 20631			REVISION 3
						FOR AND ON BEHALF OF PEAKURBAN PTY LTD			
						ENQUIRIES@PEAKURBAN.COM.AU			



-
- The diagram illustrates a typical step between lots. It shows a cross-section with a horizontal line on the left labeled "- LOW LOT -". A vertical line on the right is labeled "BDY" (Boundary). A horizontal line on the right is labeled "- HIGH LOT -". A vertical line segment of 0.30m connects the horizontal line to the boundary line. A sloped line segment connects the horizontal line to the boundary line, labeled "1 IN 4".
- TYPICAL STEP BETWEEN LOTS DETAIL**
- SCALE 1:50 (A1)
SCALE 1:100 (A3)

This is the approved plan of development for Development Application
OW/134/2021

REV	DATE	DESIGN	DRAWN	REVISION DETAILS		DRAWN	STATUS		SCALE 1:500 10 5 0 10 20 A1 1:1000	CLIENT KOPLICK DEVELOPMENTS PTY LTD	PROJECT NAME PROPOSED RESIDENTIAL SUBDIVISION (STAGES 3 AND 4) 87 - 93 KOPLICK ROAD PARK RIDGE	DRAWING TITLE		
1	07.05.21	RD	RD	ORIGINAL ISSUE		RD	NOT FOR CONSTRUCTION					BULK EARTHWORKS SECTIONS AND DETAILS PLAN		
2	10.08.21		RD	MAX BATTER WIDTH ADDED								PROJECT No.	DRAWING No.	REVISION
						DESIGN	APPROVED TROY SCHULTZ RPEQ 20631					18-0114	1002	2
						RD	 FOR AND ON BEHALF OF PEAKURBAN PTY LTD ENQUIRIES@PEAKURBAN.COM.AU							



ROADWORKS AND DRAINAGE NOTES

- ALL WORKS SHALL BE IN ACCORDANCE WITH THE RELEVANT AUTHORITY'S STANDARD DRAWINGS, METHODS AND SPECIFICATIONS.
- NOTWITHSTANDING THE EXTENTS OF CUTTING AND FILLING SHOWN ON DRAWINGS, THE SUPERINTENDENT RESERVES THE RIGHT TO ADJUST THE FINISHED SURFACE LEVELS AND EARTHWORKS EXTENTS THROUGH WRITTEN DIRECTION.
- NEW CONSTRUCTION SHALL BE NEATLY JOINED TO EXISTING FORMATION. WHERE REQUIRED, THE EXISTING FORMATION SHALL BE SAW CUT IN ACCORDANCE WITH IPWEAQ STD DRG RS-170. LEVELS AND GRADIENTS AT CONNECTIONS WITH EXISTING WORKS MAY BE VARIED AS REQUIRED TO ACHIEVE A SMOOTH CONNECTION.
- THE CONTRACTOR SHALL UNDERTAKE ALL EARTHWORKS IN ACCORDANCE WITH AS3798-2007 AND LOCAL AUTHORITY REQUIREMENTS. LEVEL 1 SUPERVISION IS REQUIRED.
- THE CONTRACTOR SHALL SUPPLY THE SUPERINTENDENT WITH THE SUBGRADE TEST RESULTS NECESSARY FOR ALL PAVEMENT DESIGN.
- THE CONTRACTOR SHALL ENSURE A MINIMUM OF 75mm TOPSOIL TO ALL VERGE AND BATTER AREAS (AND STABILISATION AS ORDERED)
- THE CONTRACTOR SHALL INSTALL ALL FOOTPATH AND PRAM RAMP IN COMPLIANCE WITH THE AUTHORITY'S STANDARD DRAWINGS. PRAM RAMP ARE TO BE LOCATED CLEAR OF DRAINAGE GULLY PITS AND FUTURE DRIVEWAY POSITIONS INDICATED ON THE LAYOUT PLANS.
- THE CONTRACTOR SHALL INSTALL SUBSOIL DRAINS UNDER ALL KERBS AS REQUIRED BY THE LOCAL AUTHORITY'S STANDARDS.
- THE CONTRACTOR SHALL ENSURE THAT ALL RETAINING WALL SUBSOIL DRAINS ARE TO CONNECT TO EITHER KERB ADAPTORS, KERB SUBSOIL DRAINS OR STORMWATER DRAINAGE STRUCTURES. CONTRACTOR TO DEMONSTRATE TO SUPERINTENDENT THAT SUITABLE CONNECTIONS HAVE BEEN PROVIDED FOR ALL WALLS.
- ALL STORMWATER DRAINAGE MATERIALS, BEDDING, JOINTING AND STEP IRON REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE RELEVANT AUTHORITIES STANDARD DRAWINGS, METHODS AND SPECIFICATIONS.
- THE STORMWATER PIPE CLASSES HAVE BEEN DESIGNED FOR SERVICE LOADS ONLY. THE CONTRACTOR SHALL ASSESS THE SUITABILITY OF MACHINERY USED ON SITE AND THE ANTICIPATED CONSTRUCTION LOADS, AND UPGRADE THE PIPE CLASSES IF NECESSARY IN ACCORDANCE WITH AS3725-2007.
- THE TERM D₅₀ DOCUMENTED ON THE DRAWINGS, IN RELATION TO ROCK ARMORING, CORRESPONDS TO THE REQUIRED MEDIAN DIAMETER OF THE PLACED ROCKS. THE ROCKS USED SHALL NOT VARY IN SIZE BY +/- 30% OF THE PROPOSED D₅₀ SIZE.
- THE CONTRACTOR SHALL INSTALL A ROOFWATER CONNECTION TO EACH PROPERTY BY ONE OF THE FOLLOWING METHODS, AS SHOWN ON THE LAYOUT PLAN:
 - ONE ROOFWATER KERB ADAPTOR 500mm FROM THE DOWNSTREAM BOUNDARY (UNLESS SHOWN ON A DIFFERENT ALIGNMENT). WHERE THERE IS A CONCRETE FOOTPATH, A ROOFWATER PIPE SHALL BE INSTALLED FROM THE PROPERTY BOUNDARY CONNECTED TO THE KERB ADAPTOR AT 1.25% MINIMUM GRADE IN ACCORDANCE WITH COUNCIL'S STANDARDS.
 - ONE 150Ø ROOFWATER PIPE CONNECTED TO PROPOSED STORMWATER GULLY PIT OR MANHOLE AT MINIMUM 1.0% GRADE WITH 1.0m COVER.

WARNING! - EXISTING SERVICES

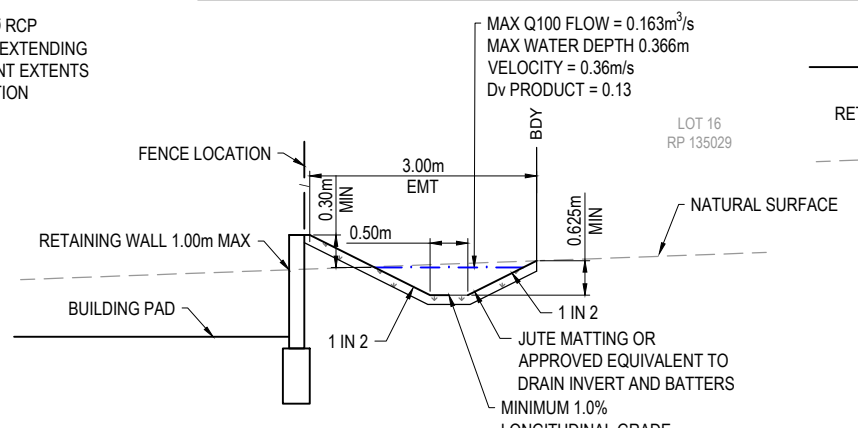
EXTREME CARE SHOULD BE TAKEN WHEN EXCAVATING IN THIS AREA. THE FOLLOWING EXISTING SERVICES ARE LIKELY TO BE PRESENT IN THE VICINITY OF THE SITE:

- ELECTRICAL CABLE
- TELECOMMUNICATIONS CABLES

THE CONTRACTOR SHOULD CONTACT THE SERVICE PROVIDER FOR FURTHER INFORMATION AND SATISFY THEMSELVES OF ANY SPECIFIC TREATMENT OR REQUIREMENTS.

LEGEND

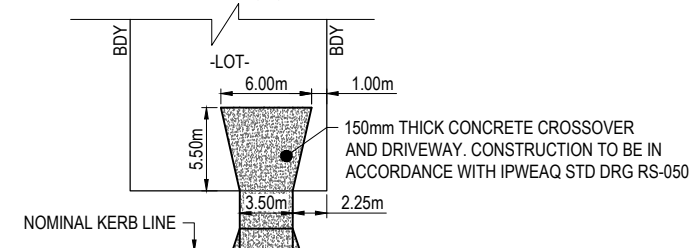
- PROPOSED AREA OF WORKS
- PROPOSED ROAD CONTROL LINE
- EXISTING ROAD CROWN
- PROPOSED KERB INVERT LINE
- PROPOSED EDGE OF BITUMEN
- PROPOSED KERB TRANSITION LOCATION
- PROPOSED GUARDRAIL
- PROPOSED CONCRETE PATH AND PRAM RAMP
- PROPOSED NEW ROAD PAVEMENT
- INDICATIVE DRIVEWAY LOCATION
- ZERO LOT BOUNDARY
- PROPOSED SURFACE CONTOUR
- EXISTING SURFACE CONTOUR
- PROPOSED STORMWATER DRAINAGE PIPE
- EXISTING STORMWATER DRAINAGE PIPE
- PROPOSED DRAINAGE SWALE
- PROPOSED ROOFWATER KERB ADAPTOR
- PROPOSED ROOFWATER KERB ADAPTOR WITH PIPE CONNECTION TO ALLOTMENT
- PROPOSED CONCRETE SLEEPER RETAINING WALL
- PROPOSED SEWERAGE MAIN
- PROPOSED WATER MAIN
- PROPOSED WATER CONDUIT
- EXISTING ELECTRICAL CABLE O/H
- EXISTING TELSTRA U/G



TEMPORARY DIVERSION DRAIN LOTS 42 AND 51

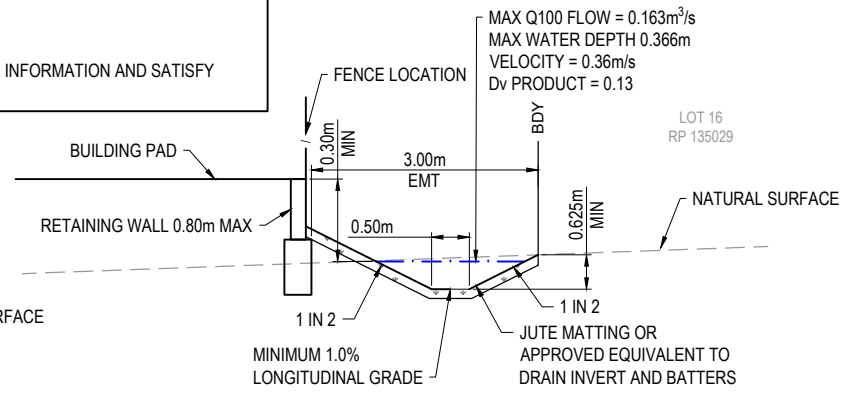
TYPICAL SECTION B

SCALE 1:50 (A1)



DRIVEWAY - TEMPORARY TURN AROUND TYPICAL DETAIL

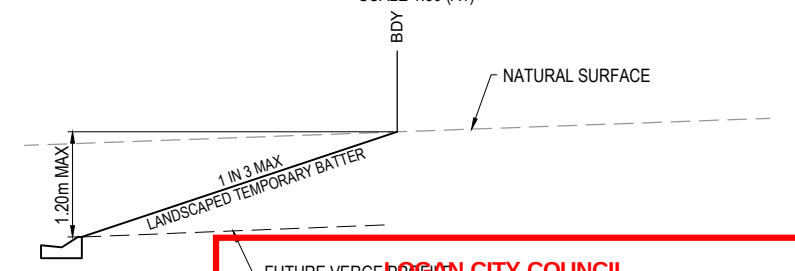
SCALE 1:250 (A1)



TEMPORARY DIVERSION DRAIN LOTS 52, 61 AND 62

TYPICAL SECTION A

SCALE 1:50 (A1)

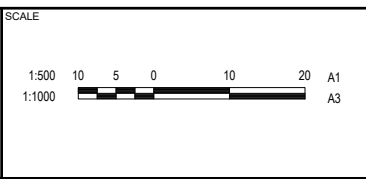


LOCAL CITY COUNCIL
APPROVED PLAN OF DEVELOPMENT
This is the approved plan of development for Development Application
OW/134/2021

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
1	07.05.21	RD	RD	ORIGINAL ISSUE
2	10.08.21	RD	RD	SECTION C AND CHAINAGES
3	28.10.21	RD	RD	STORMWATER LINE 2 AMENDED, LINE 24 REMOVED, SECTIONS B AND C AMENDED

DRAWN	STATUS
RD	NOT FOR CONSTRUCTION
DESIGN	APPROVED
RD	TROY SCHULTZ RPEQ 20631

PEAKURBAN
DEVELOPMENT ENGINEERS + ADVISORS
ENQUIRIES@PEAKURBAN.COM.AU



CLIENT
KOPLICK DEVELOPMENTS PTY LTD
ASSOCIATED CONSULTANT
GOODROCK PROPERTY
PH: 0423 557 882

PROJECT NAME
PROPOSED RESIDENTIAL SUBDIVISION (STAGES 3 AND 4)
87 - 93 KOPLICK ROAD
PARK RIDGE

DRAWING TITLE	PROJECT No.	DRAWING No.	REVISION
ROADWORKS AND DRAINAGE LAYOUT PLAN	18-0114	1003	3

LEGEND

	PROPOSED AREA OF WORKS/STAGE BOUNDARY
	PROPOSED NEW ROAD PAVEMENT
	PROPOSED ROAD CONTROL LINE
	PROPOSED MOUNTABLE KERB AND CHANNEL IPWEAQ TYPE M3'
	PROPOSED BARRIER KERB AND CHANNEL IPWEAQ TYPE B1' (450 CHANNEL)
	PROPOSED MOUNTABLE KERB ONLY IPWEAQ TYPE SM3'
	PROPOSED CONCRETE EDGE BEAM IPWEAQ TYPE SM3'
	PROPOSED KERB TRANSITION LOCATION
	PROPOSED CONCRETE PATH AND PRAM RAMP
	INDICATIVE DRIVEWAY LOCATION
	ZERO LOT BOUNDARY

ROAD 1 SETOUT DATA							
CT	128.085	2025.837	5116.945	0°00'00.00"			
TC	242.294	2025.837	5231.154	0°00'00.00"			
IP 5	245.583	2025.837	5234.527		R = 12.050	6.578	31°16'43.62"
CC	248.872	2027.589	5237.410	31°16'43.62"			
IP 6	256.378	2031.926	5244.549		R = -13.750	15.013	62°33'27.23"
CC	263.885	2027.589	5251.689	328°43'16.39"			
IP 7	267.174	2025.837	5254.572		R = 12.050	6.578	31°16'43.62"
CT	270.463	2025.837	5257.945	0°00'00.00"			
TC	386.268	2025.837	5373.749	0°00'00.00"			
IP 8	395.535	2025.837	5385.549		R = 11.800	18.535	90°00'00.00"
CT	404.803	2037.637	5385.549	90°00'00.00"			
TC	448.337	2081.171	5385.549	90°00'00.00"			
IP 9	457.605	2092.971	5385.549		R = -11.800	18.535	90°00'00.00"
CT	466.872	2092.971	5397.349	0°00'00.00"			
IP 10	528.007	2092.971	5458.485	0°00'00.00"			

ROAD 2 SETOUT DATA							
PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	2027.770	5380.221	303°15'34.82"			
TC	3.742	2024.641	5382.273	303°15'34.82"			
IP 2	9.547	2019.646	5385.549		R = -20.000	11.610	33°15'34.82"
CT	15.352	2013.672	5385.549	270°00'00.00"			
IP 3	35.000	1994.024	5385.549	270°00'00.00"			

ROAD 3 SETOUT DATA				
PT	CHAINAGE	EASTING	NORTHING	BEARING
IP 1	0.000	2025.837	5315.049	90°00'00.00"
IP 2	74.949	2100.786	5315.049	90°00'00.00"

ROAD 4 SETOUT DATA				
PT	CHAINAGE	EASTING	NORTHING	BEARING
IP 1	0.000	2025.837	5284.549	270°00'00.00"
IP 2	31.000	1994.838	5284.549	270°00'00.00"

ROAD 5 SETOUT DATA					
PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING
IP 1	0.000	2029.587	5244.549	45.674	90°00'00.00"
IP 2	71.180	2100.767	5244.549	46.624	90°00'00.00"

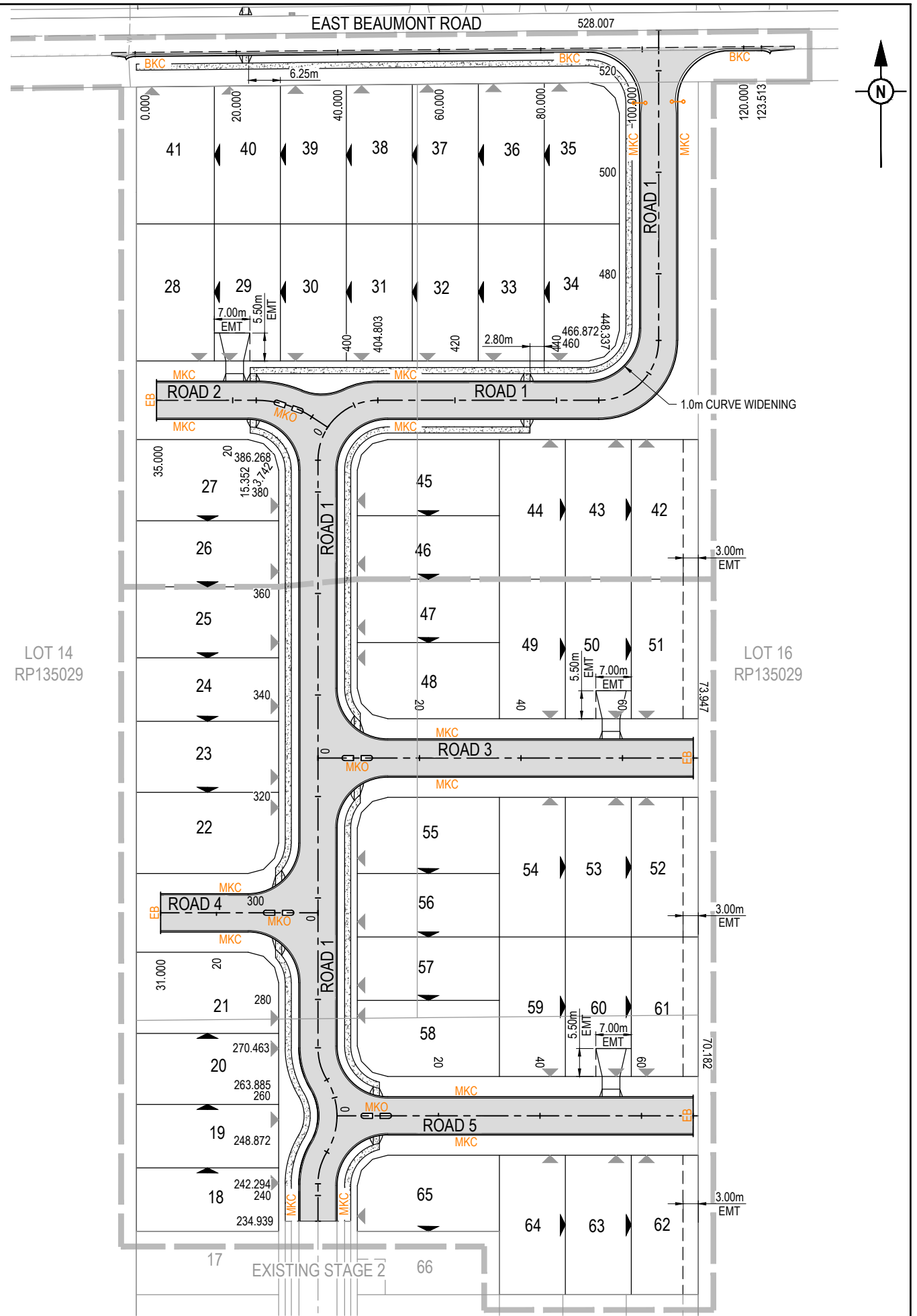
EAST BEAUMONT ROAD SETOUT DATA				
PT	CHAINAGE	EASTING	NORTHING	BEARING
IP 1	0.000	1989.735	5453.746	89°27'44.11"
IP 2	123.513	2113.243	5454.906	89°27'44.11"

LOGAN CITY COUNCIL

APPROVED PLAN OF DEVELOPMENT

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OW/134/2021



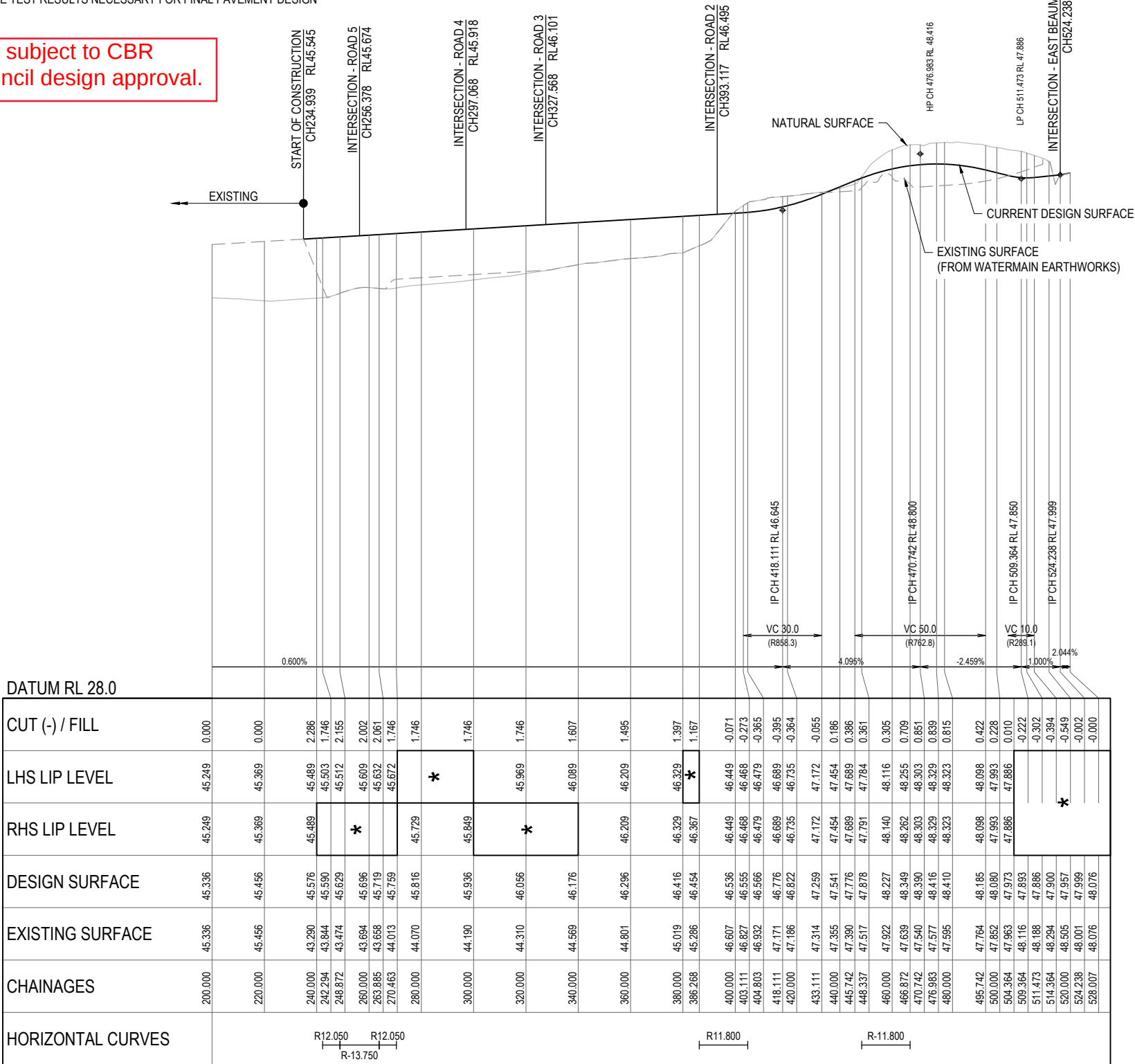
REV	DATE	DESIGN	DRAWN	REVISION DETAILS		DRAWN	STATUS	 PEAKURBAN DEVELOPMENT ENGINEERS • ADVISORS ENQUIRIES@PEAKURBAN.COM.AU	SCALE	CUSTOMER	PROJECT NAME	DRAWING TITLE					
1	07.05.21	RD	RD	ORIGINAL ISSUE		RD	NOT FOR CONSTRUCTION		1:500 10 5 0 10 20 A1 1:1000 A3 	KOPLICK DEVELOPMENTS PTY LTD	PROPOSED RESIDENTIAL SUBDIVISION (STAGES 3 AND 4) 87 - 93 KOPLICK ROAD PARK RIDGE	SURVEY SETOUT AND KERB TYPES LAYOUT PLAN					
2	10.08.21	RD	RD	EAST BEAUMONT ROAD SETOUT													
						RD	APPROVED TROY SCHULTZ RPEQ 20631					 FOR AND ON BEHALF OF PEAKURBAN PTY LTD			PROJECT No. 18-0114	DRAWING No. 1004	REVISION 2
						RD											
						RD											

ASSUMED PAVEMENT DETAILS (SUBJECT TO CBR TESTING)

ROAD	ROAD CLASSIFICATION	DESIGN ESAs	ASSUMED CBR	SURFACING	BASE	SUB BASE	LOWER SUB BASE	TOTAL DEPTH
ROAD 1	URBAN ACCESS ROAD	5.9 x 10 ⁵	3	35mm	150mm	100mm	230mm	515mm

NOTE: THIS PAVEMENT DESIGN IS PRELIMINARY ONLY BASED ON AN ASSUMED CBR. THE CONTRACTOR SHALL SUPPLY THE SUPERINTENDENT WITH SUBGRADE TEST RESULTS NECESSARY FOR FINAL PAVEMENT DESIGN

Final Pavement design subject to CBR testing results and Council design approval.



ROAD 1

LOGAN CITY COUNCIL
APPROVED PLAN OF DEVELOPMENT

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OW/134/2021

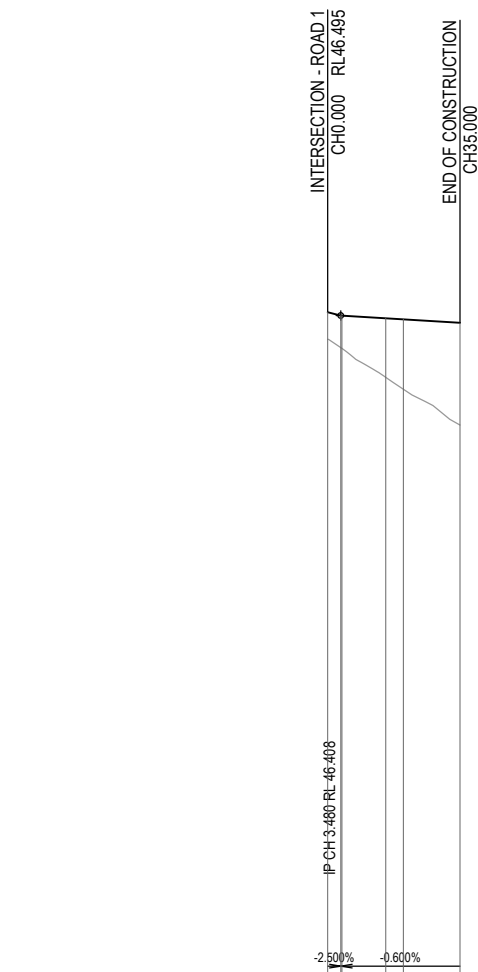
REV	DATE	DESIGN	DRAWN	REVISION DETAILS	DRAWN	STATUS	CLIENT	PROJECT NAME	DRAWING TITLE
1	07.05.21	RD	RD	ORIGINAL ISSUE	RD	NOT FOR CONSTRUCTION	KOPLICK DEVELOPMENTS PTY LTD	PROPOSED RESIDENTIAL SUBDIVISION (STAGES 3 AND 4)	ROAD 1 LONGITUDINAL SECTION
2	29.10.21	RD	RD	LONGSECTION AMENDED	RD	APPROVED TROY SCHULTZ RPEQ 20631	GOODROCK PROPERTY PH: 0423 557 882	87 - 93 KOPLICK ROAD PARK RIDGE	PROJECT No. 18-0114 DRAWING No. 1005 REVISION 2
						FOR AND ON BEHALF OF PEAKURBAN PTY LTD			
						ENQUIRIES@PEAKURBAN.COM.AU			



ROAD	ROAD CLASSIFICATION	DESIGN ESAS	ASSUMED CBR	SURFACING	BASE	SUB BASE	LOWER SUB BASE	TOTAL DEPTH
ROAD 6	URBAN ACCESS STREET	1.1 x 10 ⁵	3	35mm	150mm	100mm	150mm	435mm

NOTE: THIS PAVEMENT DESIGN IS PRELIMINARY ONLY BASED ON AN ASSUMED CBR. THE CONTRACTOR SHALL SUPPLY THE SUPERINTENDENT WITH SUBGRADE TEST RESULTS NECESSARY FOR FINAL PAVEMENT DESIGN

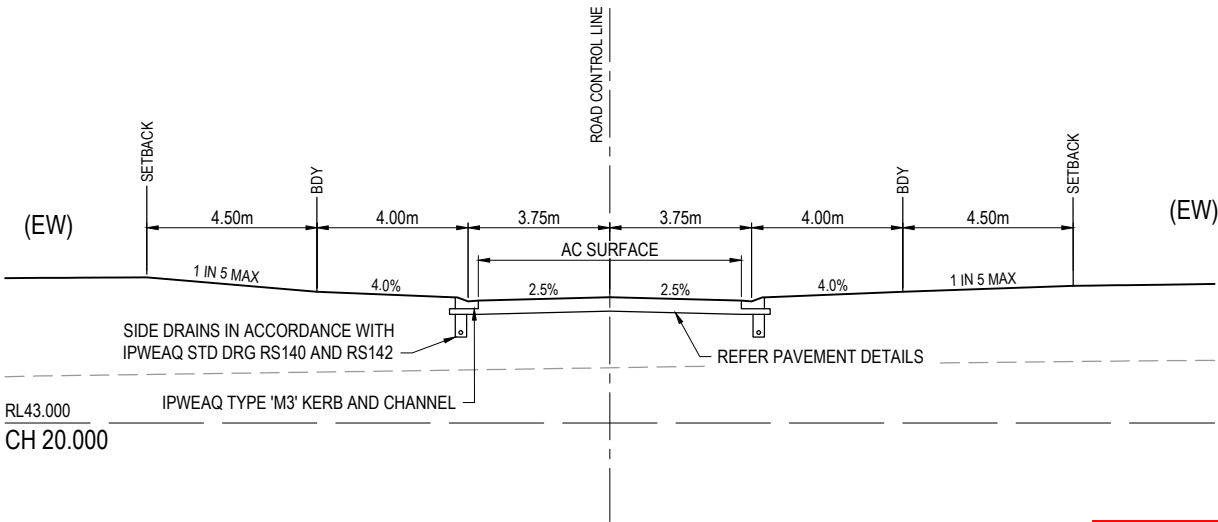
Final Pavement design subject to CBR testing results and Council design approval.



DATUM RL 28.0				
CUT (-) / FILL			0.712	
			0.851	
			0.867	
			1.562	
			1.847	
			2.707	
LHS LIP LEVEL				
RHS LIP LEVEL				
DESIGN SURFACE				
EXISTING SURFACE				
CHAINAGES				
HORIZONTAL CURVES				

* REFER INTERSECTION DETAILS

ROAD 2



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APPROVED PLAN OF DEVELOPMENT

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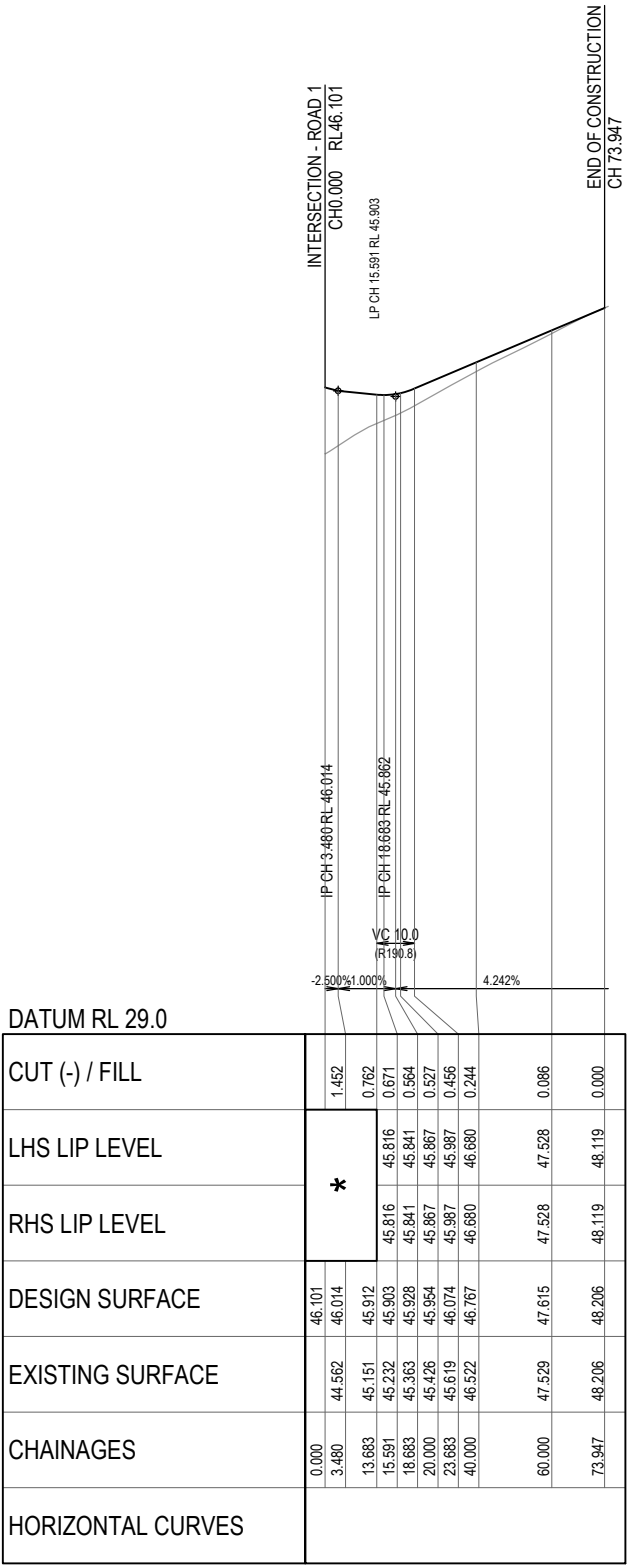
[illegible]

ASSUMED PAVEMENT DETAILS (SUBJECT TO CBR TESTING)

ROAD	ROAD CLASSIFICATION	DESIGN ESAs	ASSUMED CBR	SURFACING	BASE	SUB BASE	LOWER SUB BASE	TOTAL DEPTH
ROAD 6	URBAN ACCESS STREET	1.1 x 10 ⁵	3	35mm	150mm	100mm	150mm	435mm

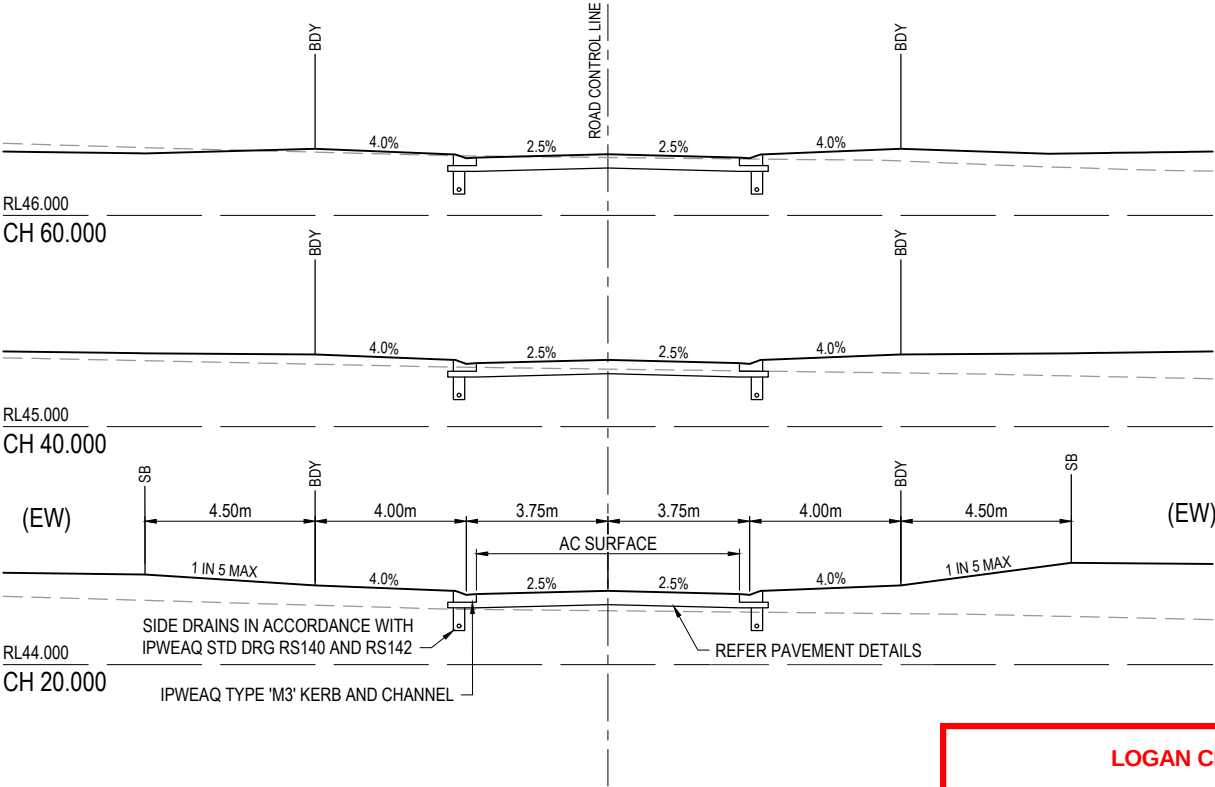
NOTE: THIS PAVEMENT DESIGN IS PRELIMINARY ONLY BASED ON AN ASSUMED CBR. THE CONTRACTOR SHALL
SUPPLY THE SUPERINTENDENT WITH SUBGRADE TEST RESULTS NECESSARY FOR FINAL PAVEMENT DESIGN

Final Pavement design subject to CBR
testing results and Council design approval.



* REFER INTERSECTION DETAILS

ROAD 3



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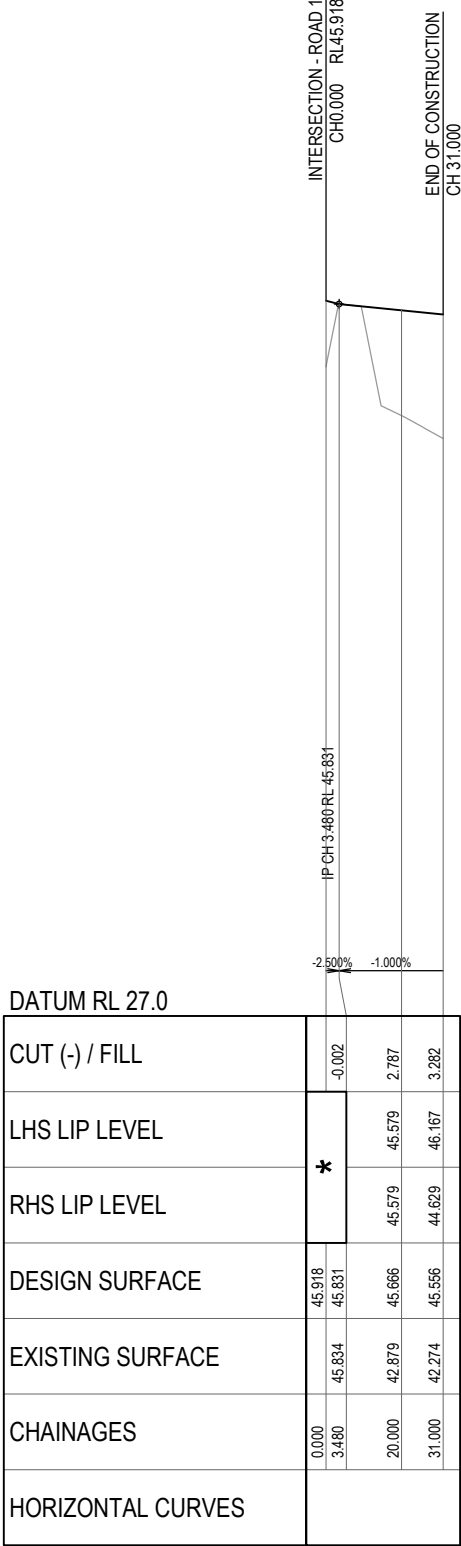
REV	DATE	DESIGN	DRAWN	REVISION DETAILS	DRAWN	STATUS	CLIENT	PROJECT NAME	DRAWING TITLE
1	07.05.21	RD	RD	ORIGINAL ISSUE	RD	NOT FOR CONSTRUCTION	KOPLICK DEVELOPMENTS PTY LTD	PROPOSED RESIDENTIAL SUBDIVISION (STAGES 3 AND 4)	ROAD 3 LONGITUDINAL SECTION AND CROSS SECTIONS
					DESIGN	APPROVED TROY SCHULTZ RPEQ 20631	ASSOCIATED CONSULTANT GOODROCK PROPERTY PH: 0423 557 882	87 - 93 KOPLICK ROAD PARK RIDGE	PROJECT No. 18-0114 DRAWING No. 1008 REVISION 1

ASSUMED PAVEMENT DETAILS (SUBJECT TO CBR TESTING)

ROAD	ROAD CLASSIFICATION	DESIGN ESAs	ASSUMED CBR	SURFACING	BASE	SUB BASE	LOWER SUB BASE	TOTAL DEPTH
ROAD 6	URBAN ACCESS STREET	1.1 x 10 ⁵	3	35mm	150mm	100mm	150mm	435mm

NOTE: THIS PAVEMENT DESIGN IS PRELIMINARY ONLY BASED ON AN ASSUMED CBR. THE CONTRACTOR SHALL
SUPPLY THE SUPERINTENDENT WITH SUBGRADE TEST RESULTS NECESSARY FOR FINAL PAVEMENT DESIGN

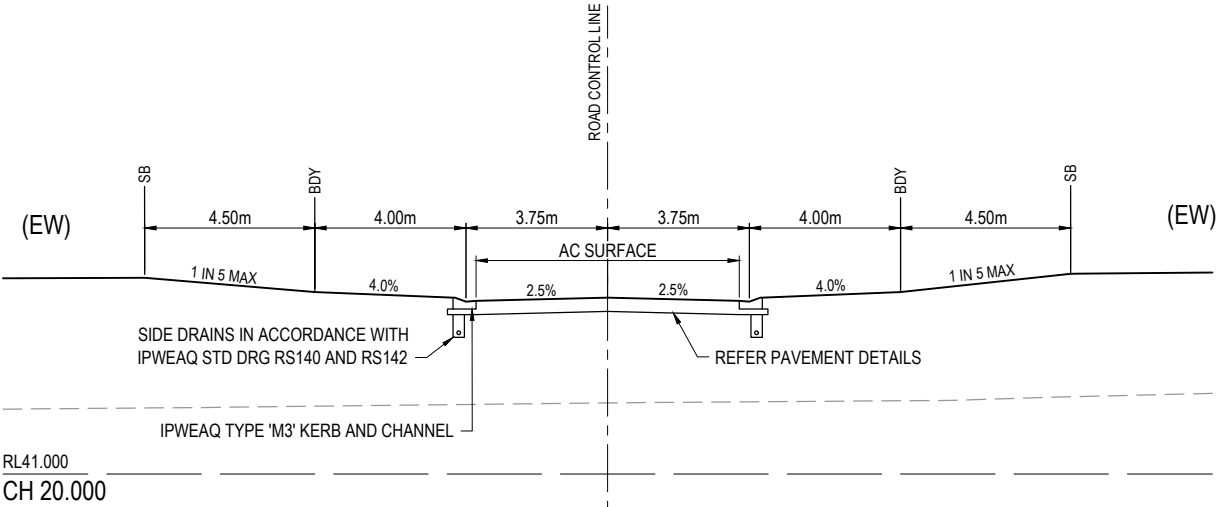
Final Pavement design subject to CBR
testing results and Council design approval.



CUT (-) / FILL	-0.002	2.787	3.282
LHS LIP LEVEL	*	45.579	46.167
RHS LIP LEVEL	*	45.579	44.629
DESIGN SURFACE	45.918	45.831	45.686
EXISTING SURFACE	45.834	42.879	42.274
CHAINAGES	0.000	20.000	31.000
HORIZONTAL CURVES			

* REFER INTERSECTION DETAILS

ROAD 4



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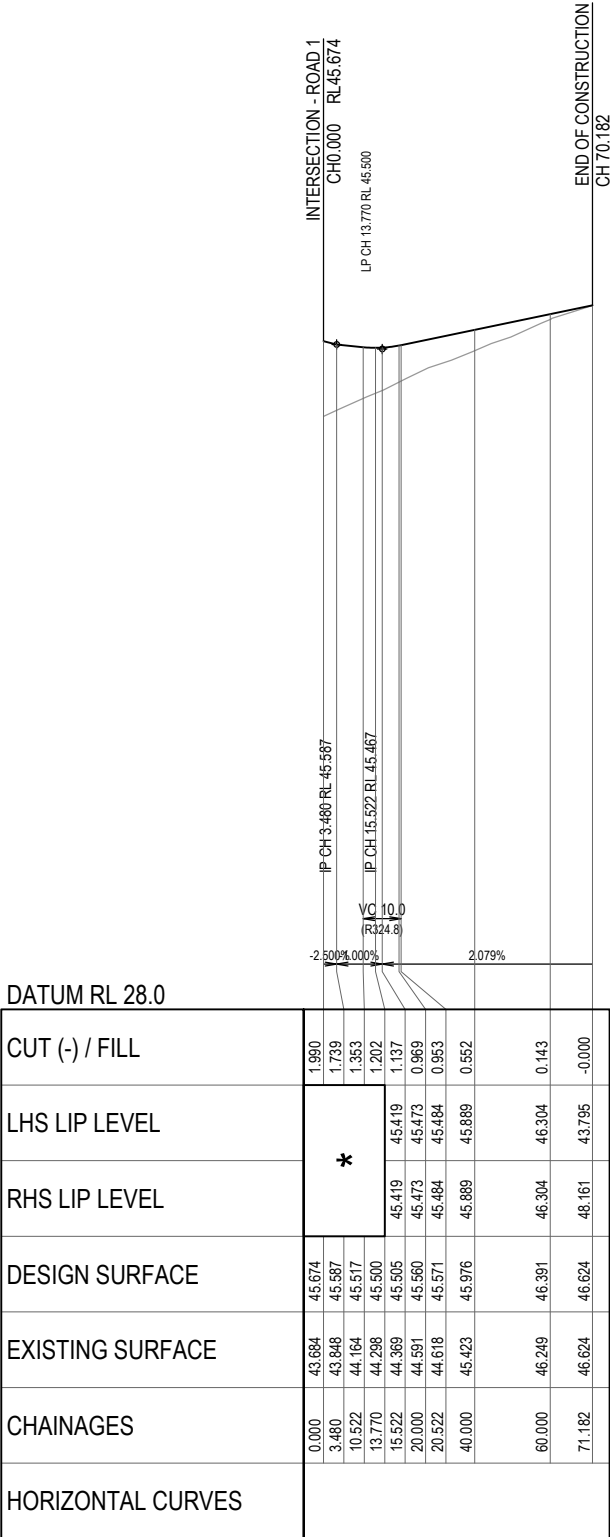
REV	DATE	DESIGN	DRAWN	REVISION DETAILS	DRAWN	STATUS	CLIENT	PROJECT NAME	DRAWING TITLE
1	07.05.21	RD	RD	ORIGINAL ISSUE	RD	NOT FOR CONSTRUCTION	KOPLICK DEVELOPMENTS PTY LTD	PROPOSED RESIDENTIAL SUBDIVISION (STAGES 3 AND 4)	ROAD 4 LONGITUDINAL SECTION AND CROSS SECTIONS
					RD	DESIGN APPROVED TROY SCHULTZ RPEQ 20631	ASSOCIATED CONSULTANT GOODROCK PROPERTY PH: 0423 557 882	87 - 93 KOPLICK ROAD PARK RIDGE	PROJECT No. 18-0114 DRAWING No. 1009 REVISION 1

ASSUMED PAVEMENT DETAILS (SUBJECT TO CBR TESTING)

ROAD	ROAD CLASSIFICATION	DESIGN ESAs	ASSUMED CBR	SURFACING	BASE	SUB BASE	LOWER SUB BASE	TOTAL DEPTH
ROAD 6	URBAN ACCESS STREET	1.1 x 10 ⁵	3	35mm	150mm	100mm	150mm	435mm

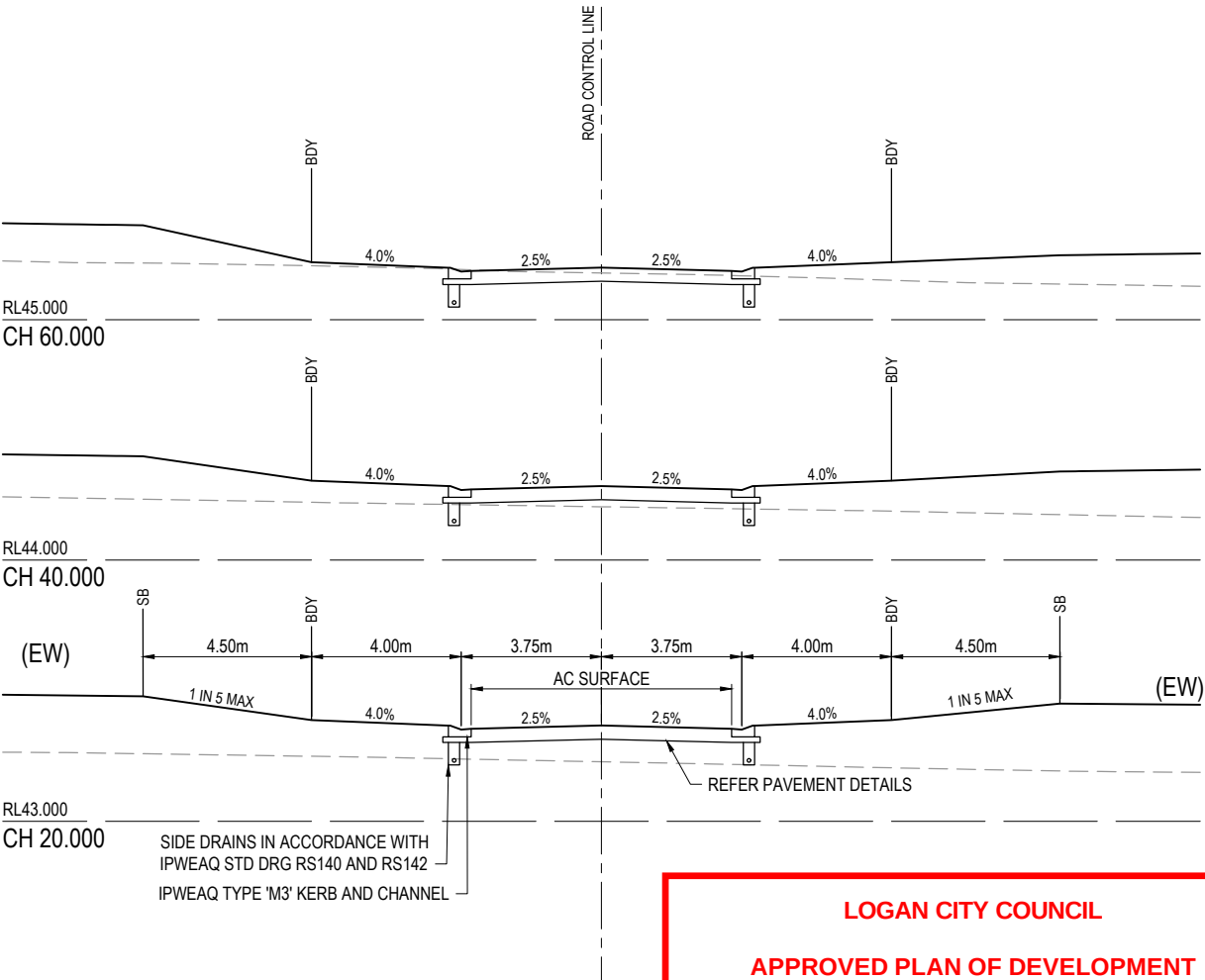
NOTE: THIS PAVEMENT DESIGN IS PRELIMINARY ONLY BASED ON AN ASSUMED CBR. THE CONTRACTOR SHALL SUPPLY THE SUPERINTENDENT WITH SUBGRADE TEST RESULTS NECESSARY FOR FINAL PAVEMENT DESIGN

Final pavement design subject to CBR testing results and Council design approval.



* REFER INTERSECTION DETAILS

ROAD 5



LOGAN CITY COUNCIL

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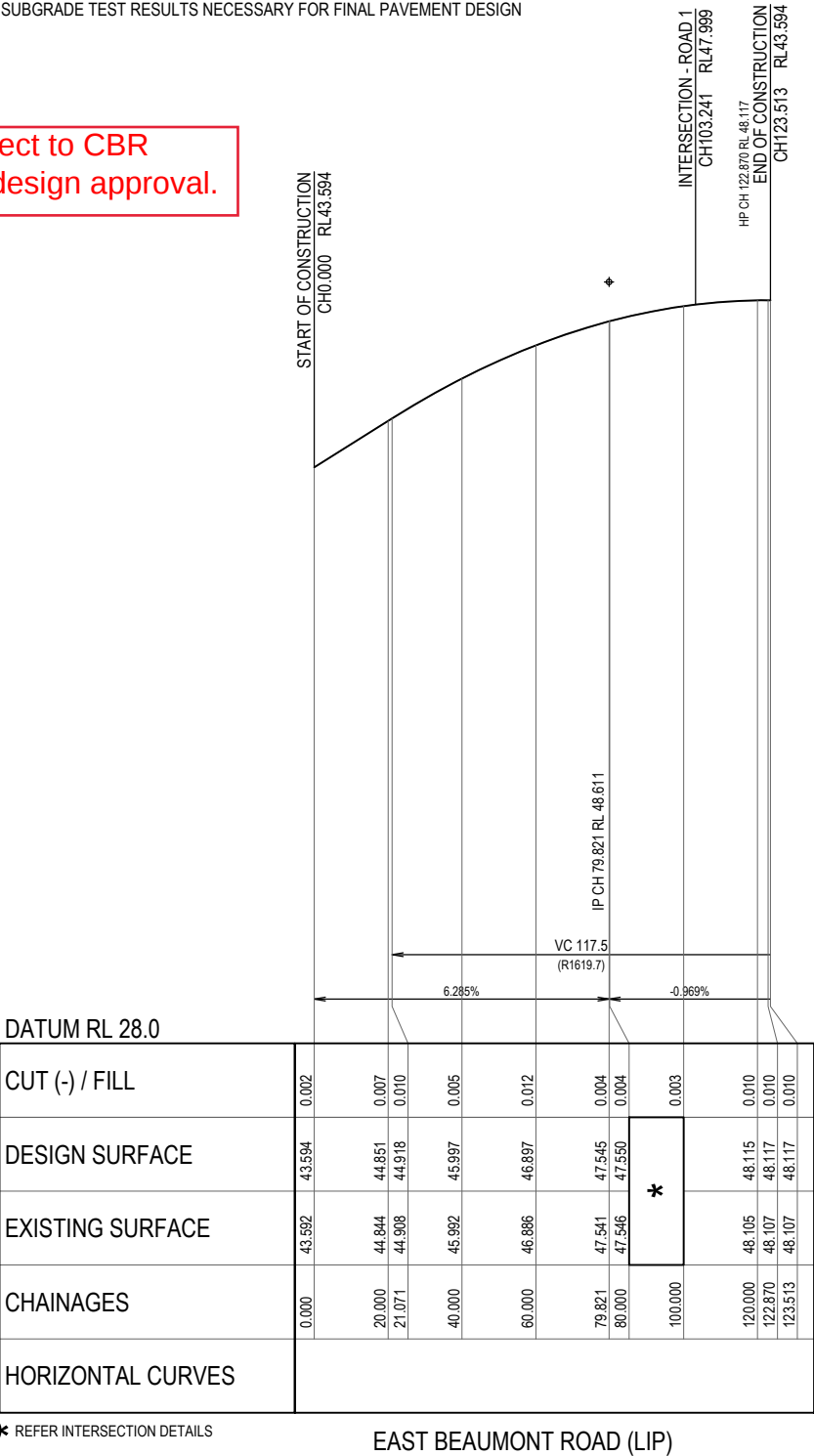
REV	DATE	DESIGN	DRAWN	REVISION DETAILS	DRAWN	STATUS	CLIENT	PROJECT NAME	DRAWING TITLE
1	07.05.21	RD	RD	ORIGINAL ISSUE	RD	NOT FOR CONSTRUCTION	KOPLICK DEVELOPMENTS PTY LTD	PROPOSED RESIDENTIAL SUBDIVISION (STAGES 3 AND 4)	ROAD 5 LONGITUDINAL SECTION AND CROSS SECTIONS
					DESIGN	APPROVED TROY SCHULTZ RPEQ 20631	ASSOCIATED CONSULTANT GOODROCK PROPERTY PH: 0423 557 882	87 - 93 KOPLICK ROAD PARK RIDGE	PROJECT No. 18-0114
						FOR AND ON BEHALF OF PEAKURBAN PTY LTD			DRAWING No. 1010
						ENQUIRIES@PEAKURBAN.COM.AU			REVISION 1

ASSUMED PAVEMENT DETAILS (SUBJECT TO CBR TESTING)

ROAD	ROAD CLASSIFICATION	DESIGN ESAs	ASSUMED CBR	SURFACING	BASE	SUB BASE	LOWER SUB BASE	TOTAL DEPTH
EAST BEAUMONT ROAD	URBAN ACCESS ROAD	5.9 x 10 ⁵	3	35mm	150mm	100mm	230mm	515mm

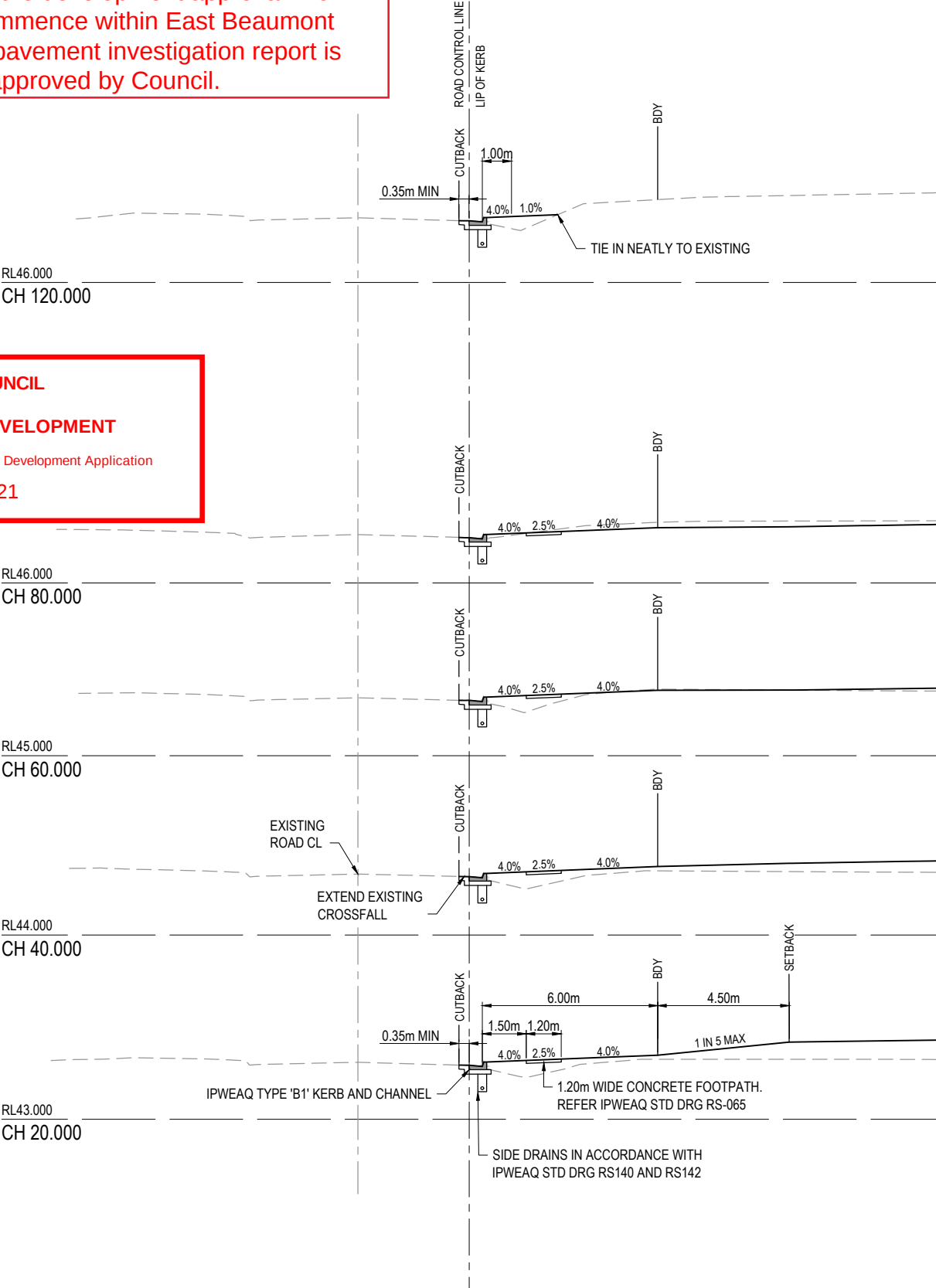
NOTE: THIS PAVEMENT DESIGN IS PRELIMINARY ONLY BASED ON AN ASSUMED CBR. THE CONTRACTOR SHALL
SUPPLY THE SUPERINTENDENT WITH SUBGRADE TEST RESULTS NECESSARY FOR FINAL PAVEMENT DESIGN

Final Pavement design subject to CBR
testing results and Council design approval.

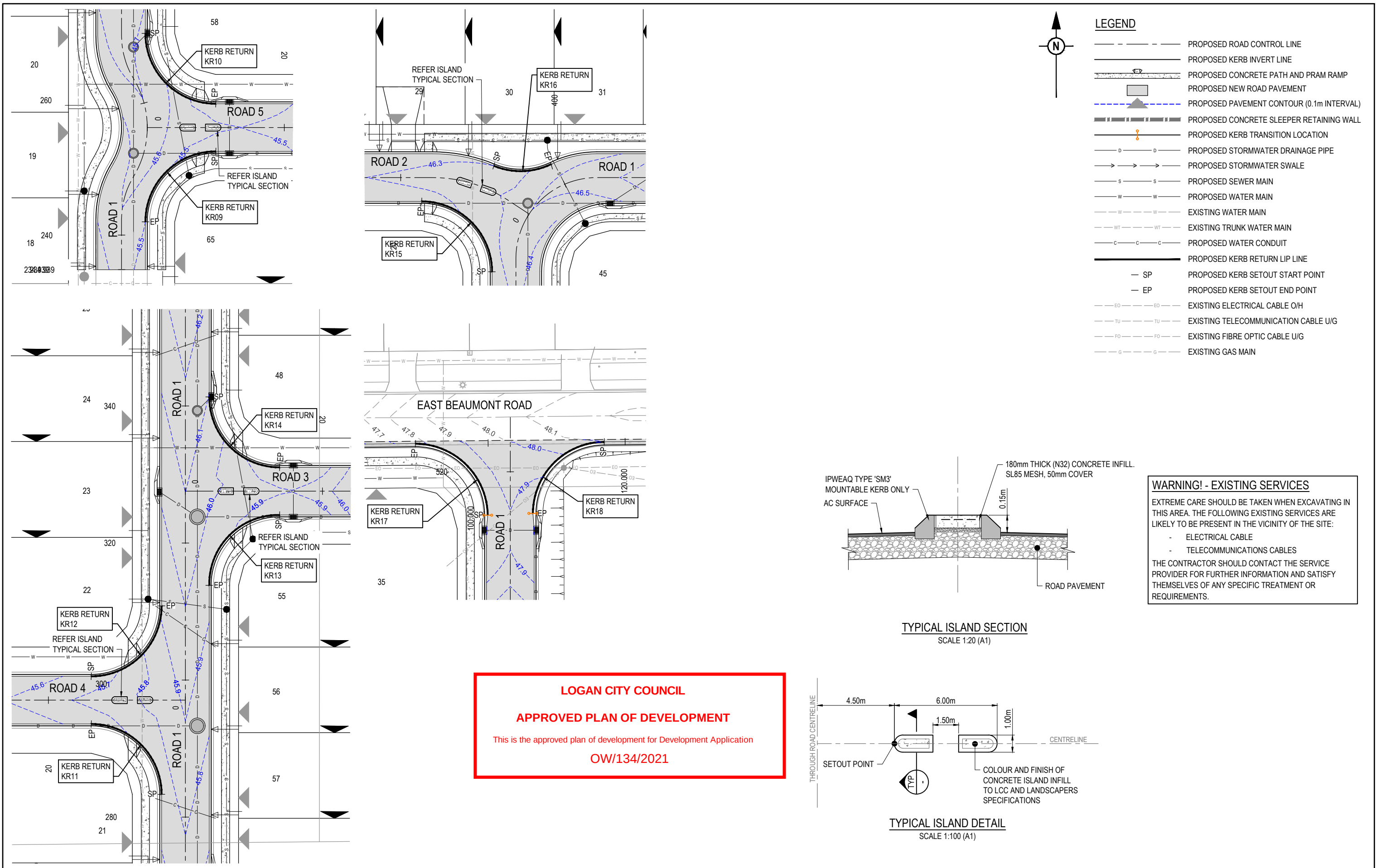


The extent of works along East Beaumont Road
are subject to a pavement investigation report. See
condition 1.2 of the development approval. No
works are to commence within East Beaumont
Road, until the pavement investigation report is
submitted and approved by Council.

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REV	DATE	DESIGN	DRAWN	REVISION DETAILS	DRAWN	STATUS	CLIENT	PROJECT NAME	DRAWING TITLE
1	07.05.21	RD	RD	ORIGINAL ISSUE	RD	NOT FOR CONSTRUCTION	KOPLICK DEVELOPMENTS PTY LTD	PROPOSED RESIDENTIAL SUBDIVISION (STAGES 3 AND 4)	EAST BEAUMONT ROAD WIDENING CROSS SECTIONS
2	10.08.21	RD	RD	LONGSECTION ADDED	RD	APPROVED TROY SCHULTZ RPEQ 20631	ASSOCIATED CONSULTANT GOODROCK PROPERTY PH: 0423 557 882	87 - 93 KOPLICK ROAD PARK RIDGE	PROJECT No. 18-0114 DRAWING No. 1011 REVISION 2



REV	DATE	DESIGN	DRAWN	REVISION DETAILS	DRAWN	STATUS	SCALE	CLIENT	PROJECT NAME	DRAWING TITLE
1	07.05.21	RD	RD	ORIGINAL ISSUE	RD	NOT FOR CONSTRUCTION	1:250 1:500	KOPLICK DEVELOPMENTS PTY LTD	PROPOSED RESIDENTIAL SUBDIVISION (STAGES 3 AND 4)	INTERSECTION DETAILS LAYOUT PLAN
2	10.08.21	RD	RD	ROAD CHAINAGES	RD	APPROVED		GOODROCK PROPERTY	87 - 93 KOPLICK ROAD PARK RIDGE	PROJECT No. 18-0114
3	29.10.21	RD	RD	ROAD 1 AMENDED	RD	TROY SCHULTZ RPEQ 20631		PH: 0423 557 882		DRAWING No. 1012
						FOR AND ON BEHALF OF PEAKURBAN PTY LTD				REVISION 3

LOGAN CITY COUNCIL

APPROVED PLAN OF DEVELOPMENT

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DATUM RL 44.0

LIP LEVEL	45.435
NORTHING	5241.069
EASTING	2039.587
CHAINAGES	0.000
HORIZONTAL CURVES	R-10.270

HORIZ SCALE: 250
VERTICAL SCALE: 25

KR09

DATUM RL 44.0

LIP LEVEL	45.630
NORTHING	5253.164
EASTING	2030.759
CHAINAGES	0.000
HORIZONTAL CURVES	R-10.270

HORIZ SCALE: 250
VERTICAL SCALE: 25

KR10

DATUM RL 44.0

LIP LEVEL	45.749
NORTHING	5270.799
EASTING	2022.357
CHAINAGES	0.000
HORIZONTAL CURVES	R-10.270

HORIZ SCALE: 250
VERTICAL SCALE: 25

KR11

DATUM RL 44.0

LIP LEVEL	45.642
NORTHING	5288.029
EASTING	2012.087
CHAINAGES	0.000
HORIZONTAL CURVES	R-10.270

HORIZ SCALE: 250
VERTICAL SCALE: 25

KR12

DATUM RL 44.0

LIP LEVEL	45.825
NORTHING	5311.569
EASTING	2039.587
CHAINAGES	0.000
HORIZONTAL CURVES	R-10.270

HORIZ SCALE: 250
VERTICAL SCALE: 25

KR13

DATUM RL 44.0

LIP LEVEL	46.097
NORTHING	5328.799
EASTING	2029.317
CHAINAGES	0.000
HORIZONTAL CURVES	R-10.270

HORIZ SCALE: 250
VERTICAL SCALE: 25

KR14

DATUM RL 44.0

LIP LEVEL	46.355
NORTHING	5371.799
EASTING	2022.357
CHAINAGES	0.000
HORIZONTAL CURVES	R-10.270

HORIZ SCALE: 250
VERTICAL SCALE: 25

KR15

DATUM RL 45.0

LIP LEVEL	46.296
NORTHING	5387.260
EASTING	2022.614
CHAINAGES	0.000
HORIZONTAL CURVES	R-10.270

HORIZ SCALE: 250
VERTICAL SCALE: 25

KR16

DATUM RL 46.0

LIP LEVEL	47.813
NORTHING	5444.317
EASTING	2089.671
CHAINAGES	0.000
HORIZONTAL CURVES	R-10.270

HORIZ SCALE: 250
VERTICAL SCALE: 25

KR17

DATUM RL 46.0

LIP LEVEL	48.106
NORTHING	5454.842
EASTING	2106.445
CHAINAGES	0.000
HORIZONTAL CURVES	R-10.270

HORIZ SCALE: 250
VERTICAL SCALE: 25

KR18

REV	DATE	DESIGN	DRAWN	REVISION DETAILS	DRAWN	STATUS	SCALE	CLIENT	PROJECT NAME	DRAWING TITLE
1	07.05.21	RD	RD	ORIGINAL ISSUE	RD	NOT FOR CONSTRUCTION	1:250 5 0 5 10 HORIZONTAL	KOPLICK DEVELOPMENTS PTY LTD	PROPOSED RESIDENTIAL SUBDIVISION (STAGES 3 AND 4)	KERB RETURN LONGITUDINAL SECTIONS
2	10.08.21	RD	RD	KERB RETURNS 15 AND 16 AMENDED	RD	APPROVED TROY SCHULTZ RPEQ 20631	1:25 0.25 0 0.25 0.5 0.75 1 1.25 VERTICAL	ASSOCIATED CONSULTANT GOODROCK PROPERTY PH: 0423 557 882	87 - 93 KOPLICK ROAD PARK RIDGE	PROJECT No. 18-0114
3	29.10.21	RD	RD	KR17 AND KR18	RD	FOR AND ON BEHALF OF PEAKURBAN PTY LTD				DRAWING No. 1013
						ENQUIRIES@PEAKURBAN.COM.AU				REVISION 3

LEGEND

- PROPOSED STREET NAME SIGN
- PROPOSED ROAD SIGN
- EXISTING ROAD SIGN
- PROPOSED CONTINUITY LINE
- EXISTING DIVIDING LINE
- EXISTING EDGE LINE

NOTES:

- ALL SIGNS AND LINEMARKING SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND L.C.C. STANDARDS.
- RETRO-REFLECTIVE PAVEMENT MARKERS (RRPM's) TO BE INSTALLED AS REQUIRED TO MUTCD AND COUNCIL STANDARDS.
- CONTRACTOR TO ENSURE SIGN LOCATIONS ARE CLEAR OF ALL FUTURE DRIVEWAY LOCATIONS.

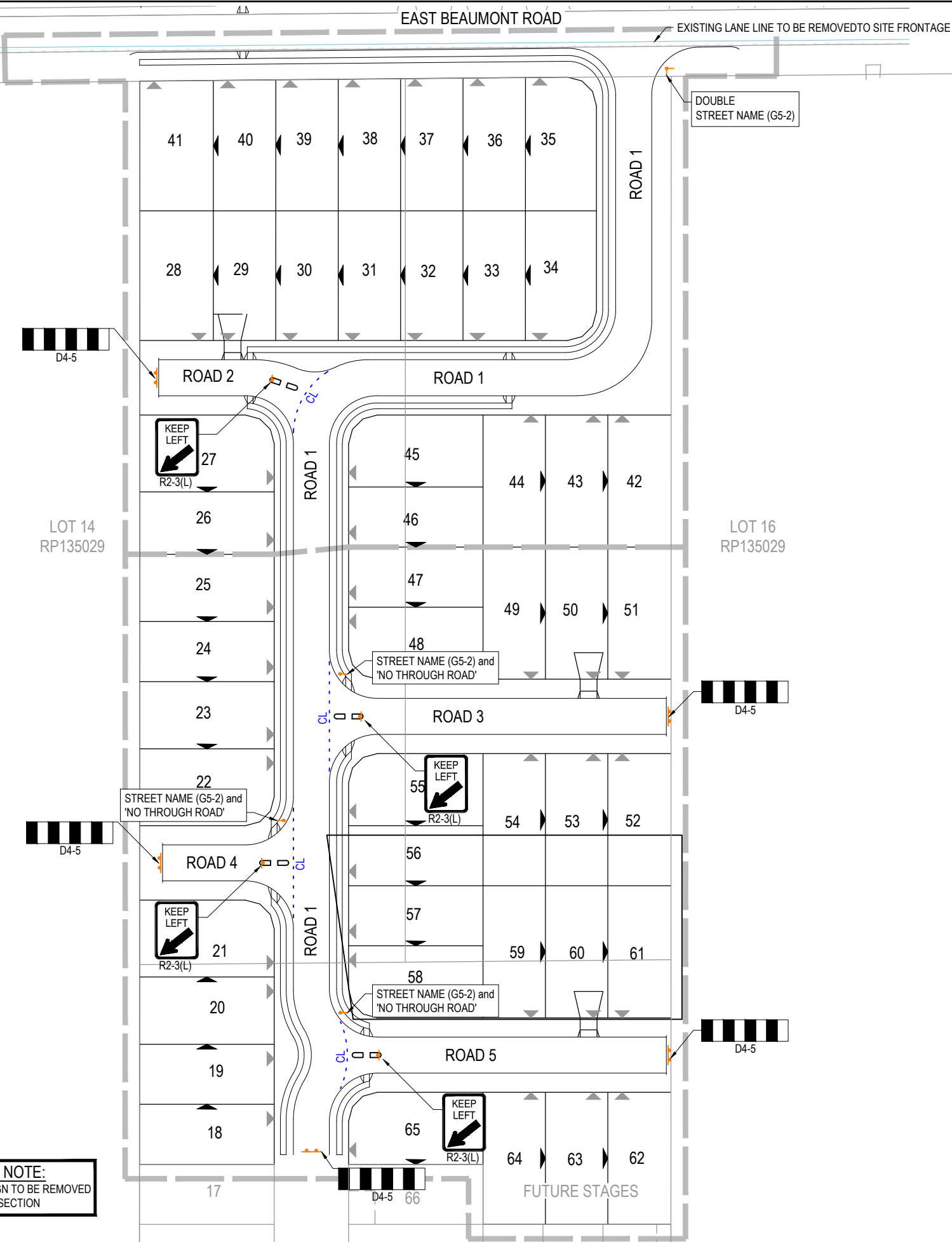
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APPROVED PLAN OF DEVELOPMENT

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KOPLICK ROAD / ROAD 1 NOTE:
EXISTING 'NO-THROUGH ROAD' SIGN TO BE REMOVED
AT KOPLICK ROAD / ROAD 1 INTERSECTION

REV	DATE	DESIGN	DRAWN	REVISION DETAILS	DRAWN	STATUS	CLIENT	PROJECT NAME	DRAWING TITLE
1	07.05.21	RD	RD	ORIGINAL ISSUE	RD	NOT FOR CONSTRUCTION	KOPLICK DEVELOPMENTS PTY LTD	PROPOSED RESIDENTIAL SUBDIVISION (STAGES 3 AND 4)	SIGNS AND LINEMARKING LAYOUT PLAN
					DESIGN	APPROVED TROY SCHULTZ RPEQ 20631	ASSOCIATED CONSULTANT GOODROCK PROPERTY PH: 0423 557 882	87 - 93 KOPLICK ROAD PARK RIDGE	PROJECT No. 18-0114
					RD	FOR AND ON BEHALF OF PEAKURBAN PTY LTD			DRAWING No. 1014
									REVISION 1



LEGEND

- 1

CATCHMENT NAME
- CATCHMENT BOUNDARY
- PROPOSED STORMWATER DRAINAGE PIPE
- EXISTING STORMWATER DRAINAGE PIPE
- PROPOSED SWALE DRAIN
- EXISTING SWALE DRAIN
- PROPOSED SURFACE CONTOUR
- EXISTING SURFACE CONTOUR

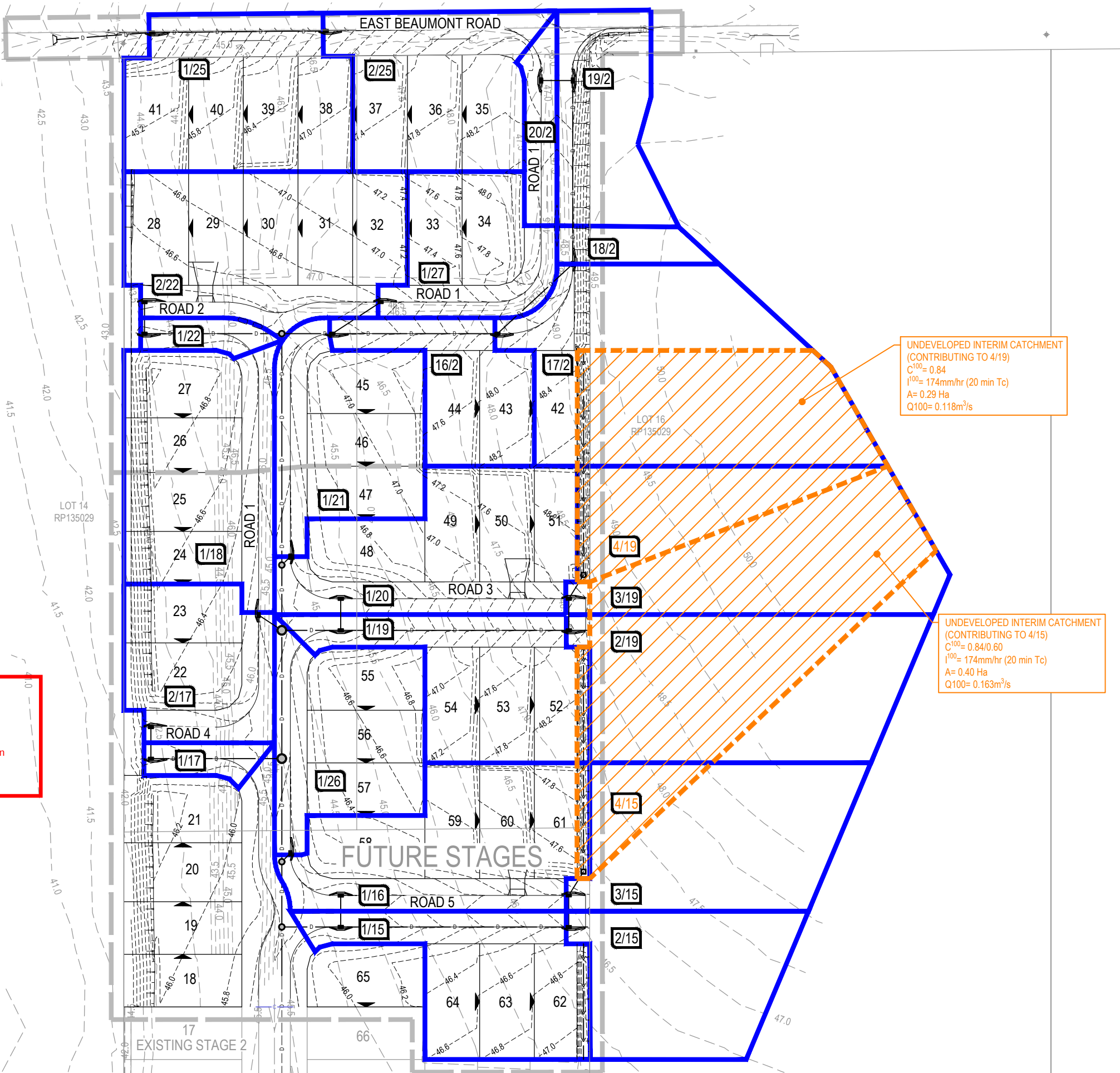
CATCHMENT AREAS	
CATCH NAME	CATCHMENT AREA
3/19	0.293
3/15	0.214
2/25	0.165
2/22	0.230
2/19	0.266
2/17	0.126
2/15	0.161
20/2	0.036
19/2	0.116
18/2	0.030
17/2	0.325
16/2	0.102
1/27	0.115
1/26	0.153
1/25	0.190
1/22	0.024
1/21	0.157
1/20	0.200
1/19	0.159
1/18	0.204
1/17	0.023
1/16	0.205
1/15	0.157

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UNDEVELOPED INTERIM CATCHMENT
(CONTRIBUTING TO 4/19)
 $C^{100} = 0.84$
 $I^{100} = 174\text{mm/hr (20 min } T_c)$
 $A = 0.29\text{ Ha}$
 $Q_{100} = 0.118\text{m}^3/\text{s}$

UNDEVELOPED INTERIM CATCHMENT
(CONTRIBUTING TO 4/15)
 $C^{100} = 0.84/0.60$
 $I^{100} = 174\text{mm/hr (20 min } T_c)$
 $A = 0.40\text{ Ha}$
 $Q_{100} = 0.163\text{m}^3/\text{s}$

REV	DATE	DESIGN	DRAWN	REVISION DETAILS	DRAWN	STATUS	SCALE	CLIENT	PROJECT NAME	DRAWING TITLE
1	07.05.21	RD	RD	ORIGINAL ISSUE	RD	NOT FOR CONSTRUCTION	1:500 1:1000	KOPLICK DEVELOPMENTS PTY LTD	PROPOSED RESIDENTIAL SUBDIVISION (STAGES 3 AND 4)	STORMWATER DRAINAGE CATCHMENT LAYOUT PLAN
2	10.08.21	RD	RD	CATCHMENTS 17/2, 18/2 AND 19/2	RD	APPROVED		GOODROCK PROPERTY	87 - 93 KOPLICK ROAD PARK RIDGE	
3	29.10.21	RD	RD	CATCHMENTS AMENDED	RD	TROY SCHULTZ RPEQ 20631		PH: 0423 557 882		
					FOR AND ON BEHALF OF PEAKURBAN PTY LTD		ENQUIRIES@PEAKURBAN.COM.AU			
							1:500 10 5 0 10 20 A1 1:1000			
							ASSOCIATED CONSULTANT			
							PROJECT No.			
							DRAWING No.			
							REVISION			
							18-0114		1015	3

APPROVED PLAN OF DEVELOPMENT

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LOCATION						TIME		SUB-CATCHMENT RUNOFF					INLET DESIGN							DRAIN DESIGN										HEADLOSSES																		PART FULL					DESIGN LEVELS				
DESIGN ARI	STRUCTURE No.	DRAIN SECTION	SUB-CATCHMENTS CONTRIBUTING	LAND USE	SLOPE OF CATCHMENT	SUB-CATCHMENT TIME OF CONC.	RAINFALL INTENSITY	10yr-RUNOFF CO-EFFICIENT	CO-EFFICIENT OF RUNOFF	SUB-CATCHMENT AREA	EQUIVALENT AREA	SUM OF (C x A)	SUB-CATCHMENT DISCHARGE FLOW IN Q/C (INC. BYPASS)	ROAD GRADE AT INLET	MINOR FLOW ROAD CAPACITY	INLET TYPE	FLOW INTO INLET	BYPASS FLOW	BYPASS STRUCTURE No.	CRITICAL TIME OF CONC.	RAINFALL INTENSITY	TOTAL (C x A)	MAJOR TOTAL FLOW	MAJOR SURFACE FLOW CAPACITY	MAJOR SURFACE FLOW	PIPE FLOW	REACH LENGTH	PIPE GRADE	PIPE / BOX DIMENSIONS (CLASS)	FLOW VELOCITY FULL (PIPE GRADE VELOCITY)	TIME OF FLOW IN REACH	STRUCTURE CHART No.	STRUCTURE RATIOS FOR 'K' VALUE CALCULATIONS	VELOCITY HEAD	U/S HEADLOSS COEFFICIENT	U/S PIPE STRUCT. HEADLOSS	LAT. HEADLOSS CO-EFFICIENT	LAT. PIPE STRUCT. HEADLOSS	W.S.E CO-EFFICIENT	CHANGE IN W.S.E	PIPE FRICTION SLOPE	PIPE FRICTION HEADLOSS (L x Sf)	DEPTH	VELOCITY	OVERT LEVELS	DRAIN SECTION H.G.L	UPSTREAM H.G.L	LAT. H.G.L	W.S.E.	SURFACE OR K&C INVERT LEVEL	STRUCTURE No.						
yrs				%	min	mm/h				ha	ha	ha	L/s	L/s	%	L/s	L/s	L/s			min	mm/h	ha	L/s	L/s	L/s	L/s	m	%	mm	m/s	min			m			m	m	%	m	m	m/s	m	m	m	m	m	m	m	m	m					
2 100	20/2	20/2 to 19/2	20/2		5.00 5.00	151 305	0.83 0.83	0.71 1.00	0.036 0.036	0.026 0.036	0.026 0.036	11 31	11 0.00	274 0.000m 3 month)	1350.107 (UNLOCKED 0)	11 0					5.00 5.00	151 305	0.026 0.036	31 600	20 (Pipe flow= Grate flow)	7500 flow)	0.50	375(3)	0.10 (1.12)	0.13		Qg 0.011 Qo 0.011 Do 375 CHRT 32- Vo2/2gDo 0.00 H/Do 0.00 Kg side flow 10.84 end flow 7.56	0.001	10.84	0.006			10.84	0.006	0.00	0.000	0.076	0.70	46.994 46.957	46.994 46.957	47.000	47.000	47.000	47.779	20/2							
2 100	19/2	19/2 to 18/2	20/2,19/2		13.00 13.00	104 213	0.83 0.83	0.71 1.00	0.116 0.116	0.082 0.116	0.082 0.116	24 69	24 0.00	274 0.000m 3 month)	1350.107 (UNLOCKED 0)	24 0					13.00 13.00	104 213	0.108 0.152	90 600	59 (Pipe flow= Sum upstr atten flows)	31 43,601	7500 after flows)	0.50	375(3)	0.28 (1.12)	0.73		Qg 0.024 Qo 0.031 Do 375 Angle 90 Chart 47 S/Do 2.5 charldag Du/Do 100 K0 192 K0.5 2.12 Qu/Do 0.24 Cg 125 K 2.17 S/Do 2.0 K0 2.44 K0.5 2.40 K 2.39 S/Do 15 K0 2.67 K0.5 2.58 K 2.56 Interp val for S/Do 1.03 Kw 2.79 CHART 46 S/Do 2.0 K0 2.04 K0.5 1.92 K 1.99 S/Do 15 K0 2.09 K0.5 2.31 K 2.36 Interp val for S/Do 1.03 Ku 2.81	0.004	2.81	0.012			2.81	0.012	0.03	0.014	0.129	0.94	46.937 46.718	46.937 46.718	46.948	46.948	47.779	19/2							
2 100	18/2	18/2 to 17/2	20/2,19/2,18/2		5.00 5.00	151 305	0.83 0.83	0.71 1.00	0.030 0.030	0.021 0.030	0.021 0.030	9 25	9 0.60	148 0.000m 3 month)	1 (UNLOCKED 0)	8 1	17/2	13.73 13.73	101 208	0.129 0.182	105 2907	70 (Pipe flow= Sum upstr atten flows)	36 24,370	7500 after flows)	0.50	375(4)	0.32 (1.12)	0.41		Qg 0.005 Qo 0.036 Do 375 CHART 37 Angle 47 Case2 S/Do 2.5 Du/Do 100 Qg/Do 0.15 K 1.01 S/Do 1.02 cor 0.27 Ku 1.28 Kw 1.28	0.005	1.28	0.007			1.28	0.007	0.04	0.010	0.138	0.97	46.698 46.577	46.698 46.577	46.705	46.705	48.254	18/2										
2 100	17/2	17/2 to 16/2	20/2,19/2,18/2,17/2		13.00 13.00	104 213	0.83 0.83	0.71 1.00	0.325 0.325	0.231 0.325	0.231 0.325	67 192	68 0.60	148 0.000m 3 month)	1 (UNLOCKED 0)	49 19	16/2	14.14 14.14	100 205	0.360 0.409	233 2907	207 (Additional flow= -0.056 cumecs Pipe flow= Sum upstr atten flows)	26 39,245	7500 after flows)	1.17	375(4)	0.23 (1.71)	0.65		Qg 0.047 Qo 0.026 Do 375 Flow 18/2 made eqv grate flow CHRT 32- Vo2/2gDo 0.01 H/Do 0.00 Kg side flow 10.66 end flow 7.46 K vals above for stepped pipes as grate flow	0.003	10.66	0.029			10.66	0.029	0.02	0.009	0.094	1.20	46.101 45.643	46.101 45.654	46.130	46.130	47.680	17/2										
2 100	1/27	1/27 to 16/2	1/27		13.00 13.00	104 213	0.83 0.83	0.71 1.00	0.115 0.115	0.082 0.115	0.082 0.115	24 68	24 0.60	148 0.000m 3 month)	1 (UNLOCKED 0)	24 0	2/22	13.00 13.00	104 213	0.082 0.115	68 290																																				

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REV	DATE	DESIGN	DRAWN	REVISION DETAILS		DRAWN	STATUS	 PEAKURBAN DEVELOPMENT ENGINEERS • ADVISORS ENQUIRIES@PEAKURBAN.COM.AU	SCALE	CLIENT	PROJECT NAME	DRAWING TITLE		
1	07.05.21	RD	RD	ORIGINAL ISSUE		RD	NOT FOR CONSTRUCTION		AS SHOWN	KOPLICK DEVELOPMENTS PTY LTD	PROPOSED RESIDENTIAL SUBDIVISION (STAGES 3 AND 4)	STORMWATER DRAINAGE CALCULATION TABLES SHEET 1		
2	10.08.21	RD	RD	TABLE AMENDED										
3	29.10.21	RD	RD	TABLE AMENDED										
						DESIGN	APPROVED TROY SCHULTZ RPEQ 20631				ASSOCIATED CONSULTANT GOODROCK PROPERTY PARK RIDGE PH: 0423 557 882	87 - 93 KOPLICK ROAD PARK RIDGE	PROJECT No. 18-0114	DRAWING No. 1018
						RD	 FOR AND ON BEHALF OF PEAKURBAN PTY LTD							

LOGAN CITY COUNCIL

APPROVED PLAN OF DEVELOPMENT

This is the approved plan of development for Development Application

OW/134/2021

LOCATION					TIME		SUB-CATCHMENT RUNOFF					INLET DESIGN					DRAIN DESIGN															HEADLOSSES					PART FULL					DESIGN LEVELS													
DESIGN ARI	STRUCTURE No.	DRAIN SECTION	SUB-CATCHMENTS CONTRIBUTING	LAND USE	TIME OF CATCHMENT	TIME OF CONC.	RAINFALL INTENSITY	10YR RUNOFF CO-EFFICIENT	CO-EFFICIENT OF RUNOFF	SUB-CATCHMENT AREA	EQUIVALENT AREA	SUM OF (C x A)	SUB-CATCHMENT DISCHARGE	FLOW IN K&C (INC. BYPASS)	ROAD GRADE AT INLET	MINOR FLOW ROAD CAPACITY	INLET TYPE	FLOW INTO INLET	BYPASS FLOW	BYPASS STRUCTURE No.	CRITICAL TIME OF CONC.	RAINFALL INTENSITY	TOTAL (C x A)	MAJOR TOTAL FLOW	MAJOR SURFACE FLOW CAPACITY	MAJOR SURFACE FLOW	PIPE FLOW	REACH LENGTH	PIPE GRADE	PIPE / BOX DIMENSIONS (CLASS)	FLOW VELOCITY FULL (PIPE GRADE VELOCITY)	TIME OF FLOW IN REACH	STRUCTURE CHART No.	STRUCTURE RATIOS FOR 'K' VALUE CALCULATIONS	VELOCITY HEAD	U/S HEADLOSS COEFFICIENT	U/S PIPE STRUCT. HEADLOSS	LAT. HEADLOSS CO-EFFICIENT	LAT. PIPE STRUCT. HEADLOSS	W.S.E CO-EFFICIENT	CHANGE IN W.S.E	PIPE FRICTION SLOPE	PIPE FRICTION HEADLOSS (L x Sf)	DEPTH	VELOCITY	OBVERT LEVELS	DRAIN SECTION H.G.L.	UPSTREAM H.G.L.	LAT. H.G.L.	W.S.E.	SURFACE OR K&C INVERT LEVEL	STRUCTURE No.			
YRS					%	min	mm/h			ha	ha	ha	l/s	l/s	%	l/s		l/s	l/s		min	mm/h	ha	l/s	l/s	l/s	l/s	m	%	mm	m/s	min			m		m		m	%	m	m	m/s	m	m	m	m	m							
2 100	14/2	14/2 to 13/2	20/2;19/2;18/2;17/2 ;17/2;16/2;2/2;2/2;2/21										42 121	42	0.60	148	1	42 (UNLOCKED 0)	0			15.91 15.91	95 195	0.542 0.871	472	3369 (Pipe flow= Sum upstr atten flows)	329 142	15500 15500	0.25	525(3) x 2	0.34 (0.98)	0.26	Qo 0.142 Do 742 Flow 1/21 made eqv grate flow CHART 33 Angle 0 S/Do 2.5 Du/Do 0.81 Qg/Do 0.21 K 0.31 S/Do 2.61 cor -0.01 Ku 0.30 Kw 0.30 K vals above for stepped pipes as grate flow grate flow decreased by 0.029 from 1/21 Routine 2.1 CHART 53 Du/Do 0.8 Du/Do 0.79 Kw=Ku= 0.08 Combined pipes in line case	0.006	0.15	0.000	Join Pipes: 15/2 and 1/21 Vel1 0.40 Vel2 0.205 Eq Dia 699 Angle 184 Flow 0.142 CHART 58 Du/Do 0.94 alpha 0 K w 0.05 Ku 0.37 WSE 0.00 Ku 0.01 Kw 0.07 Interpolated Ku= 0.04 Kw= 0.08 K vals step pipes as pipe flow Ku 0.04 Kw 0.08 Averaged Ku 0.15 Kw 0.17	0.17	0.001	0.03	0.005				44.467 44.428	45.302 45.297	45.302		45.303	46.128	14/2				
2 100	1/18	1/18 to 13/2	1/18		13.00 13.00	104 213	0.83 0.83	0.71 1.00	0.204 0.204	0.145 0.204	0.145 0.204	42 121	42	0.60	148	1	42 (UNLOCKED 0)	0			13.00 13.00	104 213	0.145 0.204	121	2907 (Pipe flow= Sum upstr atten flows)	79 42	6560 6560	0.50	375(3) x 2	0.38 (1.12)	0.11	Qg 0.042 Do 0.042 Do 375 CHRT 32: Vo2/2gbo 0.02 H/Do 1.05 Kg side flow 6.08 and flow 4.46	0.007	6.08	0.044							6.08	0.044	0.06	0.004			44.908 44.875	45.301 45.297	45.345		45.345	45.994	1/18	
2 100	13/2	13/2 to 12/2	4/19;3/19;2/19;1/20; 1/19;20/2;19/2;18/2; 17/2;17/2;16/2;2/2;2/2 ;1/22;1/21;1/18										26 75	26	1.00	191	2	26 (UNLOCKED 0)	0			2136 2136	83 171	1340 1594	947	2907 (Pipe flow= Sum upstr atten flows)	639 308	30500 30500	0.25	525(3) x 2	0.73 (0.98)	0.51	Qo 0.308 Do 742 Flow 1/19 made eqv grate flow Flow 1/18 made eqv grate flow CHART 33 Angle 0 S/Do 2.5 Du/Do 1.00 Qg/Do 0.80 K 1.69 S/Do 2.71 cor -0.08 Ku 1.61 Kw 1.61 K vals above for stepped pipes as grate flow grate flow decreased by 0.150 from 1/19 grate flow decreased by 0.033 from 1/18 Routine 3.1 Join Pipes: 1/18 and 14/2 Vel1 0.383 Vel2 0.288 Eq Dia 831 Angle 188 Flow 0.158 Routine 2.12 CHART 49 High vel lat 1/19 Dhv 450 Dhv 0.150 Dhv/Dhv 0.5 Dhv/Do 0.61	0.027	1.72	0.047	Ohv/Do 0.49 H 3.37 Low vel lat 1/18 & 14/2 Dv 831 Qv 0.158 Dh/Do 1.12 Qlv/Do 0.51 L 0.20 H-L 3.17 No grate flow H-L -0.2 = 2.97 Kw=Kw= 2.97 CHART 52 B 900 In line Latrl Determine KI D/Do 0.61 B/Do 1.21 Du/Do 0.51 Do/Do 0.89 Do/DI 1.65 KI 1.27 M 0.92 KI-KI=MI= 1.17 Determine Ku K'u 2.13 M'u 0.79 Ku=K'u=Mu= 1.68 Kw=Kw= 1.68 Interpolated Ku= 1.85 Kw= 1.85 K vals step pipes as pipe flow Ku 1.85 Kw 1.85 Averaged Ku 1.72 Kw 1.72	1.72	0.047	0.14	0.042				44.408 44.332	45.250 45.208	45.297		45.297	46.035	13/2				
2 100	2/17	2/17 to 1/17	2/17		13.00 13.00	104 213	0.83 0.83	0.71 1.00	0.126 0.126	0.089 0.126	0.089 0.126	26 75	26	1.00	191	2	26 (UNLOCKED 0)	0			13.00 13.00	104 213	0.089 0.126	75	3752 (Pipe flow= Sum upstr atten flows)	49 26	7.499 7.499	0.30	600(3) (1.19)	0.09 (0.12)	0.12	Qg 0.026 Do 0.026 Do 600 CHRT 32: Vo2/2gbo 0.00 H/Do 1.10 Kg side flow 6.22 and flow 4.49	0.000	6.22	0.003							6.22	0.003	0.00	0.000			44.550 44.527	45.209 45.209	45.212		45.212	45.465	2/17	
2 100	1/17	1/17 to 12/2	2/17;1/17		5.00 5.00	151 305	0.88 0.88	0.75 1.00	0.023 0.023	0.017 0.023	0.017 0.023	7 19	7	1.00	191	1	7 (UNLOCKED 0)	0			13.12 13.12	193 212	0.106 0.051	30	3752 (Pipe flow= Sum upstr atten flows)	0 30	31.112 31.112	0.30	675(3) x 2	0.08 (1.29)	0.52	Qg 0.005 Do 0.030 Do 675 Angle 91 Chart 47 S/Do 2.5 chartdeg Du/Do 0.89 K0 1.99 K0.5 2.26 Qu/Do 0.84 Cg 0.39 K 2.10 S/Do 2.0 K0 2.47 K0.5 2.40 K 2.44 S/Do 15 K0 2.69 K0.5 2.66 K 2.68	0.000	2.03	0.001	Interp val for S/Do 1.92 Kw 2.48 CHART 46 S/Do 2.0 K0 2.00 K0.5 2.00 K 2.00 S/Do 15 K0 2.09 K0.5 2.31 K 2.18 Interp val for S/Do 1.92 Ku 2.03	2.48	0.001	0.00	0.000				44.586 44.493	45.208 45.208	45.209		45.209	45.466	1/17					
2 100	12/2	12/2 to 11/2	4/19;3/19;2/19;1/20; 1/19;20/2;19/2;18/2; 17/2;17/2;16/2;2/2;2/2 ;1/22;1/21;1/18;2/17; 1/17										26 169	26	1.00	191	24	26 (UNLOCKED 0)	0			2187 2187	82 169	1348 2.045	960	2907 (Pipe flow= Sum upstr atten flows)	631 329	24.499 24.499	0.20	825(3) (1.21)	0.60 (1.12)	0.41	Qo 0.329 Do 825 Routine 2.1 CHART 53 Du/Do 0.9 Du/Do 0.93 Kw=Ku= -0.08 Combined pipes in line case Join Pipes: 13/2 and 1/17	0.018	0.20	0.004	Vel1 0.70 Vel2 0.067 Eq Dia 799 Angle 173 Flow 0.329 CHART 58 Du/Do 0.97 alpha 0 K w 0.05 Ku 0.66 WSE 0.00 Ku 0.14 Kw 0.20 Interpolated Ku= -0.08 Kw= -0.08	0.20	0.004	0.05	0.012				44.626 44.577	45.204 45.192	45.208		45.208	45.852	12/2				
2 100	4/15	4/15 to 3/15	4/15		20.00 20.00	85 176	0.83 0.83	0.71 1.00	0.001 0.001	0.001 0.001	0.001 0.001	0 0	0	0.00	0	1350.107	0 (UNLOCKED 0)	0			20.00 20.00	85 176	0.001 0.334	163	Additional flow 0.163 cumecs (Pipe flow= Sum upstr atten flows)	163 6.652	6.652	0.50	375(3) x 2	1.48 (1.12)	0.07	Qg 0.163 Do 0.163 Do 375 CHRT 32: Vo2/2gbo 0.00 H/Do 0.08 Kg side flow 4.82 and flow 4.06	0.112	4.82	0.538							4.82	0.538	0.87	0.058			45.543 45.510	45.573 45.515	46.111		46.111	46.555	4/15	
2 100	3/15	3/15 to 2/15	4/15;3/15		13.00 13.00	104 213	0.83 0.83	0.71 1.00	0.214 0.214	0.152 0.214	0.152 0.214	44 127	44	2.08	275	1	44 (UNLOCKED 0)	0			20.07 20.07	85 176	0.486 0.215	105	3651 (Pipe flow= Sum upstr atten flows)	69 36	7.500 7.500	0.50	375(3) x 2	0.33 (1.12)	0.13	Qg 0.036 Do 0.036 Do 375 CHART 34 Angle 32 Case3 S/Do 2.5 Du/Do 1.00 Qg/Do 0.99 K 2.78 S/Do 1.07 cor 1.70 Ku 4.48 Kw 4.48	0.006	4.48	0.025							4.48	0.025	0.04	0.003	0.138	0.97		45.490 45.452	45.490 45.475	45.515		45.515	46.413	3/15
2 100	1N/100	1N/100 to 2/15															24				0.00 0.00	151 305	0.000 0.000	0	(Pipe flow= Grate flow)	0 4.500	4.500	0.50	375(3) (1.12)	0.00 (1.12)	0.08							0.20	0.000	0.00	0.000			45.475 45.452	45.475	45.475		45.475	46.507	1N/100					
2 100	2/15	2/15 to 1/15	4/15;3/15;2/15		13.00 13.00	104 213	0.83 0.83	0.71 1.00	0.161 0.161	0.114 0.161	0.114 0.161	33 95	33	2.08	275	1	33 (UNLOCKED 0)	0			20.20 20.20	85 176	0.267 0.376	184	3651 (Pipe flow= Sum upstr atten flows)	121 63	54.184 54.184	1.25	375(4) x 2	0.57 (1.77)	0.90	Qg 0.027 Do 0.063 Do 375 Flow 14/10 made eqv grate flow Angle 90 Chart 47 S/Do 2.5 chartdeg Du/Do 1.00 K0 1.92 K0.5 2.12 Qu/Do 0.57 Cg 0.89 K 2.10 S/Do 2.0 K0 2.44 K0.5 2.40 K 2.40 S/Do 15 K0 2.67 K0.5 2.58 K 2.59	0.017	2.55	0.043	Interp val for S/Do 1.12 Kw 2.74 CHART 46 S/Do 2.0 K0 2.04 K0.5 1.92 K 1.93 S/Do 15 K0 2.09 K0.5 2.31 K 2.28 Interp val for S/Do 1.12 Ku 2.55 K vals above for stepped pipes as grate flow	2.74	0.046	0.13	0.070	0.146	158		45.432 44.755	45.432 45.209	45.475		45.478	46.413	2/15					
2 100	1/16	1/16 to 1/15	1/16		13.00 13.00	104 213	0.83 0.83	0.71 1.00	0.205 0.205	0.146 0.205	0.146 0.205	42 121	61	0.00	42	1350.107	42 (UNLOCKED 0)	19			13.00 13.00	104 213	0.146 0.205	121	300 (Pipe flow= Grate flow)	79 42	7.500 7.500	0.50	375(3) x 2	0.19 (1.12)	0.13	Qg 0.042 Do 0.042 Do 530 CHRT 32: Vo2/2gbo 0.00 H/Do 1.31 Kg side flow 5.37 and flow 4.01	0.002	5.37	0.010							5.37	0.010	0.01	0.001			44.719 44.682	45.210 45.209	45.220		45.220	45.398	1/16	
2 100	1/15	1/15 to 10/2	4/15;3/15;2/15;1/16; 1/15		13.00 13.00	104 213	0.83 0.83	0.71 1.00	0.157 0.157	0.111 0.157	0.111 0.157	32 93	51	0.00	32	1350.107	32 (UNLOCKED 0)	19			21.10 21.10	83 172	0.524 0.738	353	300 (Pipe flow= Sum upstr atten flows)	232 121	13.995 13.995	0.30	525(4) (1.66)	0.61 (1.66)	0.23	Qg 0.026 Do 0.121 Do 525 Routine 2.1 CHART 48 Du/Do 0.71 Du/Do 0.51 K 0.97 d/Do 2.0 chrt Qg/Do 0.21 Kg 0.21 d/Do 1.5 chrt Qg/Do 0.21 Kg 0.25 d/Do 1.79 Interp value Kg 0.23 Ku=Kw= 1.19 Combined pipes in line case Join Pipes:	0.019	1.19	0.023	2/15 and 1/16 Vel1 0.558 Vel2 0.153 Eq Dia 541 Angle 148 Flow 0.095 CHART 33 Angle 0 S/Do 2.5 Du/Do 1.03 Qg/Do 0.21 K 0.85 S/Do 1.83 cor 0.14 Ku 0.99 Kw 0.99 Interpolated Ku= 1.19 Kw= 1.19	1.19	0.023	0.10	0.014				44.789 44.747	45.186 45.172	45.209		45.209	45.398	1/15					
2 100	1/26	1/26 to 1/12	1/26		13.00 13.00	104 213	0.83 0.83	0.71 1.00	0.153 0.153	0.109 0.153	0.109 0.153	31 91	51	0.60	148	1	32 (UNLOCKED 0)	19			13.00 13.00	104 213	0.109 0.153	91	2907 (Pipe flow= Sum upstr atten flows)	59 32	2.803 2.803	1.00	375(3) (1.59)	0.29 (1.59)	0.05	Qg 0.032 Do 0.032 Do 375 CHRT 32: Vo2/2gbo 0.01 H/Do 1.66 Kg side flow 4.36 and flow 3.42	0.004	4.36	0.019							4.36	0.019	0.03	0.001			44.569 44.541	45.193 45.192	45.212		45.212	45.654	1/26	

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CALCULATIONS TABLE

REV	DATE	DESIGN	DRAWN	REVISION DETAILS		DRAWN	STATUS	 PEAKURBAN DEVELOPMENT ENGINEERS • ADVISORS	SCALE	CLIENT	PROJECT NAME	DRAWING TITLE				
1	07.05.21	RD	RD	ORIGINAL ISSUE		RD	NOT FOR CONSTRUCTION		AS SHOWN	KOPLICK DEVELOPMENTS PTY LTD	PROPOSED RESIDENTIAL SUBDIVISION (STAGES 3 AND 4)	STORMWATER DRAINAGE CALCULATION TABLES SHEET 2				
2	10.08.21	RD	RD	TABLE AMENDED												
3	29.10.21	RD	RD	TABLE AMENDED												
						DESIGN	APPROVED					 TROY SCHULTZ RPEQ 20631	GOODROCK PROPERTY PH: 0423 557 882	87 - 93 KOPLICK ROAD PARK RIDGE	PROJECT No.	DRAWING No.
						RD		18-0114							1019	3

LOCATION					TIME		SUB-CATCHMENT RUNOFF						INLET DESIGN						DRAIN DESIGN											HEADLOSSES											PART FULL				DESIGN LEVELS							
DESIGN ARI	STRUCTURE No.	DRAIN SECTION	SUB-CATCHMENTS CONTRIBUTING	LAND USE	SLOPE OF CATCHMENT	SUB-CATCHMENT TIME OF CONC.	RAINFALL INTENSITY	10yr RUNOFF CO-EFFICIENT	CO-EFFICIENT OF RUNOFF	SUB-CATCHMENT AREA	EQUIVALENT AREA	SUM OF (C x A)	SUB-CATCHMENT DISCHARGE	FLOW IN K&C (INC. BYPASS)	ROAD GRADE AT INLET	MINOR FLOW ROAD CAPACITY	INLET TYPE	FLOW INTO INLET	BYPASS FLOW	BYPASS STRUCTURE No.	CRITICAL TIME OF CONC.	RAINFALL INTENSITY	TOTAL (C x A)	MAJOR TOTAL FLOW	MAJOR SURFACE FLOW CAPACITY	MAJOR SURFACE FLOW	PIPE FLOW	REACH LENGTH	PIPE GRADE	PIPE / BOX DIMENSIONS (CLASS)	FLOW VELOCITY FULL (PIPE GRADE VELOCITY)	TIME OF FLOW IN REACH	STRUCTURE CHART No.	STRUCTURE RATIOS FOR 'K' VALUE CALCULATIONS	VELOCITY HEAD	U/S HEADLOSS COEFFICIENT	U/S PIPE STRUCT. HEADLOSS	LAT. HEADLOSS CO-EFFICIENT	LAT. PIPE STRUCT. HEADLOSS	W/S CO-EFFICIENT	CHANGE IN W/S	PIPE FRICTION SLOPE	PIPE FRICTION HEADLOSS (L x Sf)	DEPTH	VELOCITY	OBVERT LEVELS	DRAIN SECTION H.G.L	UPSTREAM H.G.L	LAT. H.G.L	W.S.E.	SURFACE OR K&C INVERT LEVEL	STRUCTURE No.
yrs					%	min	mm/h			ha	ha	ha	l/s	l/s	%	l/s		l/s	l/s		min	mm/h	ha	l/s	l/s	l/s	l/s	m	%	mm	m/s	min		m		m		m	%	m	m	m/s	m	m	m	m	m					
2 100	11/2	11/2 to 10/2	4/19,3/19,2/19,1/20, 1/19,20/2,19/2,18/2, 11/2,1/21,16/2,2/2,2/2, 1/22,1/21,1/18,2/11, 1/11,1/26														24					22.28 22.28	81 168	1457 2.198	1026	3502 (Pipe flow= Sum upstr atten flow)	677 349	15.502	0.20	825(3)	0.64 (1.21)	0.26	Do 0.3149 Do 825 Routine 2.15 Join Pipes: 12/2 and 1/26 Vel1 0.607 Vel2 0.222	0.021	0.54	0.011	Eq Dia 875 Angle 182 Flow 0.349 CHART 54 Du/Do104 alpha 2 K'w 0.13 Yu 0.58 WSE 0.01 Ku 0.54 Kw 0.65	0.65 Flow 0.349	0.013	0.06	0.009			44.557 44.526	45.181 45.172	45.192		45.194	45.707	11/2		
2 100	10/2	10/2 to 9/2	4/15,3/15,2/15,1/16, 1/15,4/19,3/19,2/19, 1/20,1/19,20/2,19/2, 18/2,11/2,1/21,16/2, 2/22,1/22,1/21,1/18, 2/11,1/11,1/26														24					22.54 22.54	80 167	1981 2.936	1362	3408 (Pipe flow= Sum upstr atten flow)	901 461	11.567	0.17	825(3)	0.85 (1.11)	0.19	Do 0.461 Do 825 Flow 1/15 made eqv grate flow CHART 33 Angle 0 S/Do 2.5 Du/Do 1.00 Qg/Do 0.25 K 0.95 S/Do 1.81 cor 0.17 Ku 1.12 Kw 1.12 K vals above for stepped pipes as grate flow grate flow decreased by 0.1% from 1/15 Routine 2.1 CHART 52 B 900 In line 11/2 LatH 1/15 Determine Kl Du/Do 0.64 B/Do 1.09 Du/Do 0.75 Do/Du 1.00 Do/Dl 1.57 K1 1.10 M1 0.60 Kl=K1+M1= 0.66	0.037	0.89	0.033	Determine Ku K'u 1.95 Mu 0.44 Ku+K'u+Mu= 0.86 Kw=Ku= 0.86 Combined pipes in line case Join Pipes: 11/2 and 1/15 Vel1 0.645 Vel2 0.537 Eq Dia 974 Angle 202 Flow 0.441 CHART 54 Du/Do118 alpha 0 K'w 0.05 Yu 0.62 WSE 0.03 Ku 0.78 Kw 0.81 Interpolated Ku= 0.86 Kw= 0.86 K vals step pipes as pipe flow Ku 0.86 Kw 0.86 Averaged Ku 0.89 K'u 0.89	0.89 Flow 0.441	0.033	0.10	0.011			44.506 44.486	45.139 45.128	45.172		45.172	45.613	10/2		
2 100	2/25	2/25 to 1/25	2/25			13.00 13.00	104 213	0.83 0.83	0.71 1.00	0.165 0.165	0.117 0.165	0.117 0.165	34 98 FLOW WIDTH 1.086 m (0.000m 3 month)	34 FLOW WIDTH 1.086 m (0.000m 3 month)	4.53	4.06	1 (UNLOCKED 0)	34 (UNLOCKED 0)	0	1/25	13.00 13.00	104 213	0.117 0.165	98	3307 (Pipe flow= Grate flow)	64 (Pipe flow= Grate flow)	34	4.1290 (Flow)	6.12	375(3)	0.31 (3.92)	0.69	Qg 0.834 Qo 0.034 Do 375 CHRT 32: Voz/2gDo 0.01 H/Do 0.00 Kg side flow 10.48 end flow 7.37	0.005	10.48	0.051			10.48	0.051	0.04	0.015	0.071	2.34	45.275 42.749	45.275 42.780	45.326		45.326	46.360	2/25	
2 100	1/25	1/25 to OUT/25	2/25,1/25			13.00 13.00	104 213	0.83 0.83	0.71 1.00	0.190 0.190	0.135 0.190	0.135 0.190	39 112 FLOW WIDTH 1.073 m (0.000m 3 month)	39 FLOW WIDTH 1.073 m (0.000m 3 month)	6.29	4.78	1 (UNLOCKED 0)	39 (UNLOCKED 0)	0		13.69 13.69	101 208	0.252 0.355	205	3147 (Pipe flow= Sum upstr atten flow)	134 (Pipe flow= Sum upstr atten flow)	71	22.748	0.54	375(3)	0.64 (1.17)	0.38	Qg 0.838 Qo 0.071 Do 375 CHART 33 Angle 3 S/Do 2.5 Du/Do 1.00 Qg/Do 0.54 K 1.58 S/Do 1.14 cor 0.86 Ku 2.44 Kw 2.44	0.021	2.44	0.051			2.44	0.051	0.16	0.037	0.198	1.20	42.729 42.605	42.729 42.605	42.780		42.780	43.994	1/25	

C:\Users\kneuben Dalton\OneDrive - peakURBAN Pty Ltd\PC Settings\Documents\PCD\table1.DXF

CALCULATIONS TABLE

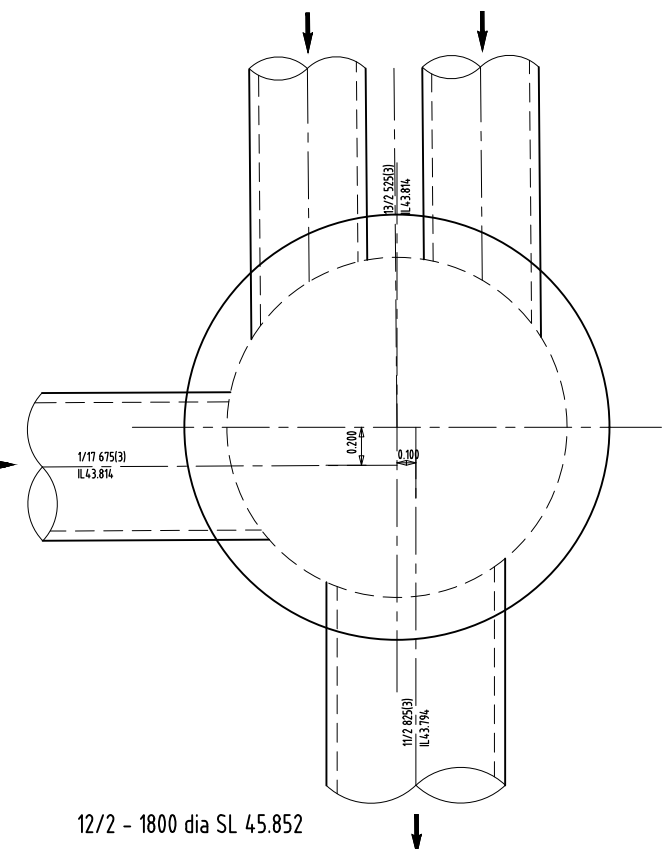
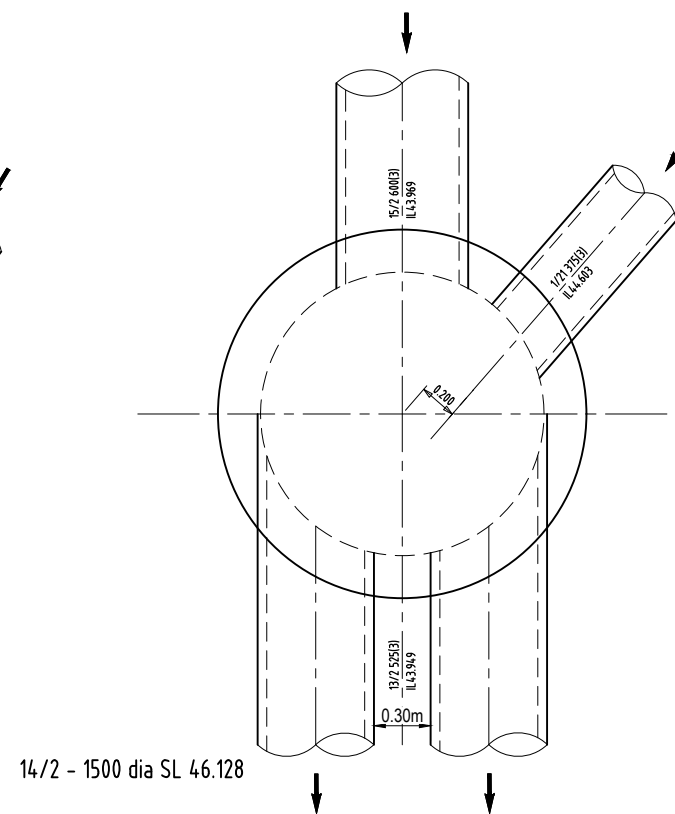
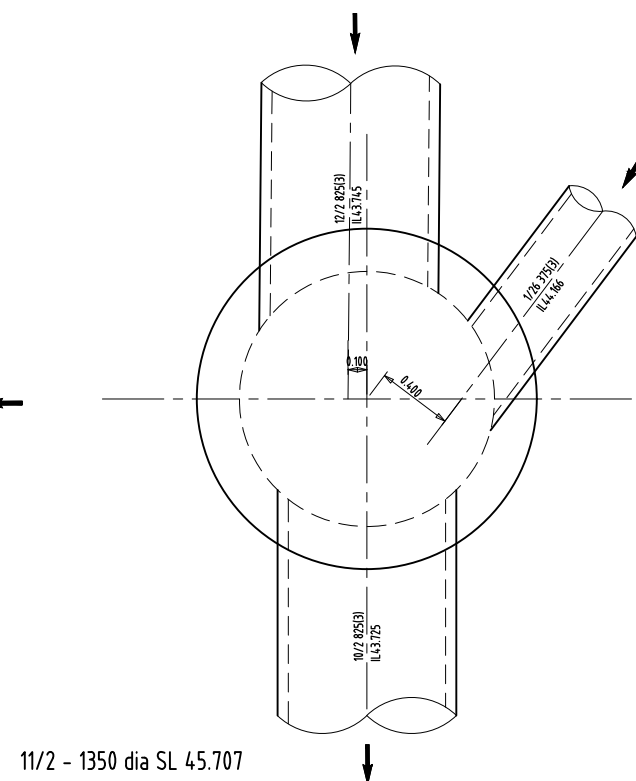
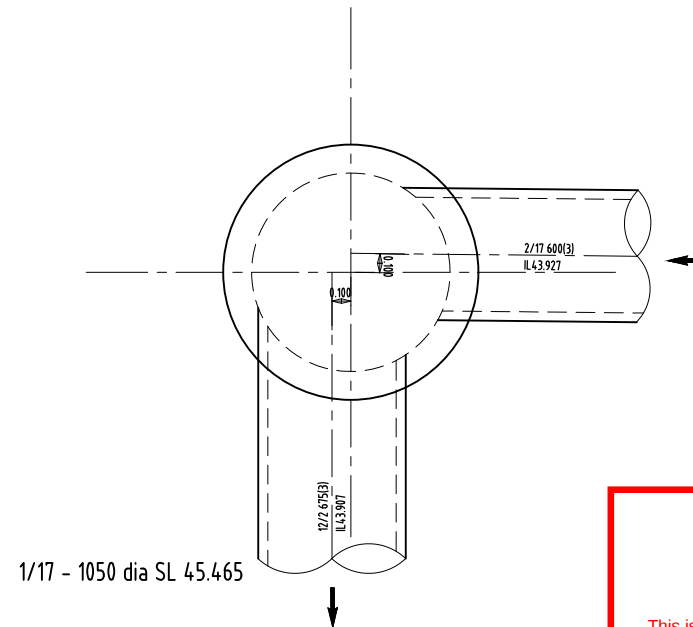
LOGAN CITY COUNCIL

APPROVED PLAN OF DEVELOPMENT

This is the approved plan of development for Development Application

OW/134/2021

REV	DATE	DESIGN	DRAWN	REVISION DETAILS		DRAWN	STATUS	SCALE	CLIENT	PROJECT NAME	DRAWING TITLE					
1	07.05.21	RD	RD	ORIGINAL ISSUE		RD	NOT FOR CONSTRUCTION				AS SHOWN	KOPLICK DEVELOPMENTS PTY LTD	PROPOSED RESIDENTIAL SUBDIVISION (STAGES 3 AND 4)	STORMWATER DRAINAGE CALCULATION TABLES SHEET 3		
2	10.08.21	RD	RD	TABLE AMENDED												
3	29.10.21	RD	RD	TABLE AMENDED												
						DESIGN	APPROVED TROY SCHULTZ RPEQ 20631							PROJECT No.	DRAWING No.	REVISION
						RD	FOR AND ON BEHALF OF PEAKURBAN PTY LTD	18-0114	1020	3						

[illegible]

GENERAL NOTES:

1. THE CONTRACTOR SHALL SUPPLY ALL LABOR, MATERIALS, PLANT AND EQUIPMENT TO CONSTRUCT THE WORKS AS DOCUMENTED AND STRICTLY IN ACCORDANCE WITH THE RELEVANT AUTHORITY STANDARDS, SPECIFICATIONS AND REQUIREMENTS.
2. THE EXISTING SERVICES THAT ARE SHOWN ON THE DRAWINGS ARE PROVIDED FOR INFORMATION PURPOSES ONLY. NO RESPONSIBILITY IS TAKEN BY THE SUPERINTENDENT OR THE PRINCIPAL FOR INFORMATION THAT HAS BEEN SUPPLIED BY OTHERS, OR ANY EXISTING SERVICES THAT MAY BE PRESENT NOT SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL VERIFY THE POSITION OF ANY UNDERGROUND SERVICES WITHIN THE AREAS OF WORKS AND SHALL BE RESPONSIBLE FOR MAKING GOOD ANY DAMAGE THERETO. ANY ALTERATION WORKS TO SERVICES WILL BE CARRIED OUT ONLY BY THE SERVICE OWNER AUTHORITY UNLESS APPROVED OTHERWISE.
3. ALL CONSTRUCTION ACTIVITIES UNDERTAKEN SHALL COMPLY WITH CURRENT WORKPLACE HEALTH AND SAFETY REQUIREMENTS AND LEGISLATION.
4. PRIOR TO COMMENCING WORK, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL RELEVANT LOCAL AUTHORITY PERMITS.
5. THE CONTRACTOR SHALL NOT COMMENCE THE DEMOLITION OF ANY EXISTING BUILDINGS AND/OR STRUCTURES WITHOUT APPROVAL FROM THE SUPERINTENDENT.
6. THE CONTRACTOR SHALL APPLY INDUSTRY BEST PRACTICE SO WORKS SHALL NOT DISTURB OR AFFECT NEARBY RESIDENTS EITHER BY DUST, NOISE, FLOODING OR DISCONNECTION OF SERVICES. CONTRACTOR TO ENSURE THAT ACCESS AND SERVICES TO EXISTING PROPERTIES ARE AVAILABLE AT ALL TIMES.
7. THE CONTRACTOR SHALL VERIFY LEVELS OF EXISTING SERVICE CROSSINGS AND CONNECTION POINTS PRIOR TO COMMENCEMENT OF WORKS AND NOTIFY SUPERINTENDENT OF ANY DISCREPANCIES BETWEEN ACTUAL AND PROPOSED DESIGN LEVELS.
8. THESE ENGINEERING DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE APPROVED VEGETATION MANAGEMENT PLAN, WHERE APPLICABLE. WHEN IN DOUBT, ALL EXISTING TREES ARE TO REMAIN UNLESS DIRECTED OTHERWISE.
9. HOLD POINT: ONCE THE BASE OF MANHOLES, INSPECTION PITS, GULLIES AND FIELD INLETS FOR STORMWATER DRAINAGE AND SEWER RETICULATION HAVE BEEN POURED, CONSTRUCTION SHALL ONLY RE-COMMENCE ONCE THE SUPERINTENDENT AND/OR ENGINEER HAVE INSPECTED THE WORKS.
10. THE CONTRACTOR SHALL NOTE DURING THE COURSE OF THE WORKS WHEN JOINT INSPECTIONS WITH THE AUTHORITY AND THE SUPERINTENDENT ARE REQUIRED. THESE INCLUDE PRE-STARTS, SUBGRADES, PRE-SEALS, CLEARING, AND OTHER SUCH INSPECTIONS AS NOMINATED IN THE APPROVAL AND THE SPECIFICATIONS. THE CONTRACTOR SHALL ENSURE NO WORKS PROCEED PAST THE INSPECTION POINT UNTIL THE JOINT INSPECTION HAS BEEN SUCCESSFULLY COMPLETED.

SEWERAGE RETICULATION NOTES

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT SOUTH EAST QUEENSLAND SEWERAGE CODE SPECIFICATIONS AND STANDARDS.
2. UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
3. THE CONSTRUCTION OF THE SEWERAGE WORK SHOWN ON THIS DRAWING SHALL BE SUPERVISED BY AN ENGINEER WHO HAS RPEQ REGISTRATION. SEWERAGE WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT INTO THE SEQ SERVICE PROVIDER SEWERAGE SYSTEM.
4. ALL WORK ASSOCIATED WITH LIVE SEWERS OR MAINTENANCE HOLES SHALL BE CARRIED OUT BY THE SEQ SERVICE PROVIDER AT THE DEVELOPER'S COST.
5. ALL PIPES AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE "ACCEPTED PRODUCTS AND MATERIALS" LIST.
6. EACH ALLOTMENT SHALL BE SERVED BY A 100Ø PVC PROPERTY CONNECTION. FOR ALLOTMENTS OTHER THAN SINGLE RESIDENTIAL, A 150Ø PVC PROPERTY CONNECTION SHALL BE PROVIDED.
7. PROPERTY CONNECTIONS SHALL BE LOCATED WITHIN THE PROPERTY AS SHOWN IN THE DRAWINGS.
8. PROPERTY CONNECTION BRANCHES SHALL EXTEND INTO THE PROPERTY A MINIMUM OF 500mm AND A MAXIMUM OF 750mm.
9. WHERE PIPES ARE LAID IN FILL, THE FILLING SHALL BE CARRIED OUT IN LAYERS NOT EXCEEDING 300mm (LOOSE) IN DEPTH AND SHALL BE COMPACTED UNTIL THE COMPACTION IS NOT LESS THAN 95% OF THE MATERIALS MAXIMUM COMPACTION WHEN TESTED IN ACCORDANCE WITH A.S.1289 (MODIFIED COMPACTION). TESTING SHALL BE CARRIED OUT AFTER EACH ALTERNATE LAYER. IN ALL SUCH CASES APPROVAL OF CONSTRUCTED SEWERS WILL NOT BE ISSUED BY THE SEQ SERVICE PROVIDER UNLESS CERTIFICATES ARE PRODUCED CERTIFYING THAT THE REQUIRED COMPACTION HAS BEEN ACHIEVED.
10. WHERE SEWERS HAVE A GRADE OF 1 IN 20 OR STEEPER, BULKHEADS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SEQ SEWER CODE DRG SEQ-SEW-1206-1 AND 1207-1.
11. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF EXISTING SERVICES WITH RELEVANT AUTHORITIES BEFORE COMMENCING WORKS.
12. SEWERS SHALL BE DISUSED/ABANDONED IN ACCORDANCE WITH PROCEDURE SET OUT IN THE SEQ SEWER CODE.
13. BENCH MARK AND LEVELS TO AHD.

ENVIRONMENTAL CONDITIONS

VEGETATION PROTECTION

- A. TREES LOCATED ALONG THE FOOTPATH SHALL BE, TRANSPLANTED PRIOR TO CONSTRUCTION, OR REPLACED IF DESTROYED.
- B. WHEN WORKING WITHIN 4m OF TREES, RUBBER OR HARDWOOD GIRDLES SHALL BE CONSTRUCTED WITH 1.8m BATTENS CLOSELY SPACED AND ARRANGED VERTICALLY FROM GROUND LEVEL. GIRDLES SHALL BE STRAPPED TO TREES PRIOR TO CONSTRUCTION AND REMAIN UNTIL COMPLETION.
- C. TREE ROOTS SHALL BE TUNNELED UNDER, RATHER THAN SEVERED. IF ROOTS ARE SEVERED THE DAMAGED AREA SHALL BE TREATED WITH A SUITABLE FUNGICIDE. CONTACT RELEVANT COUNCIL ARBORIST FOR FURTHER ADVICE.
- D. ANY TREE LOPPING REQUIRED SHOULD BE UNDERTAKEN BY AN APPROVED ARBORIST.

SOIL

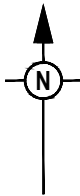
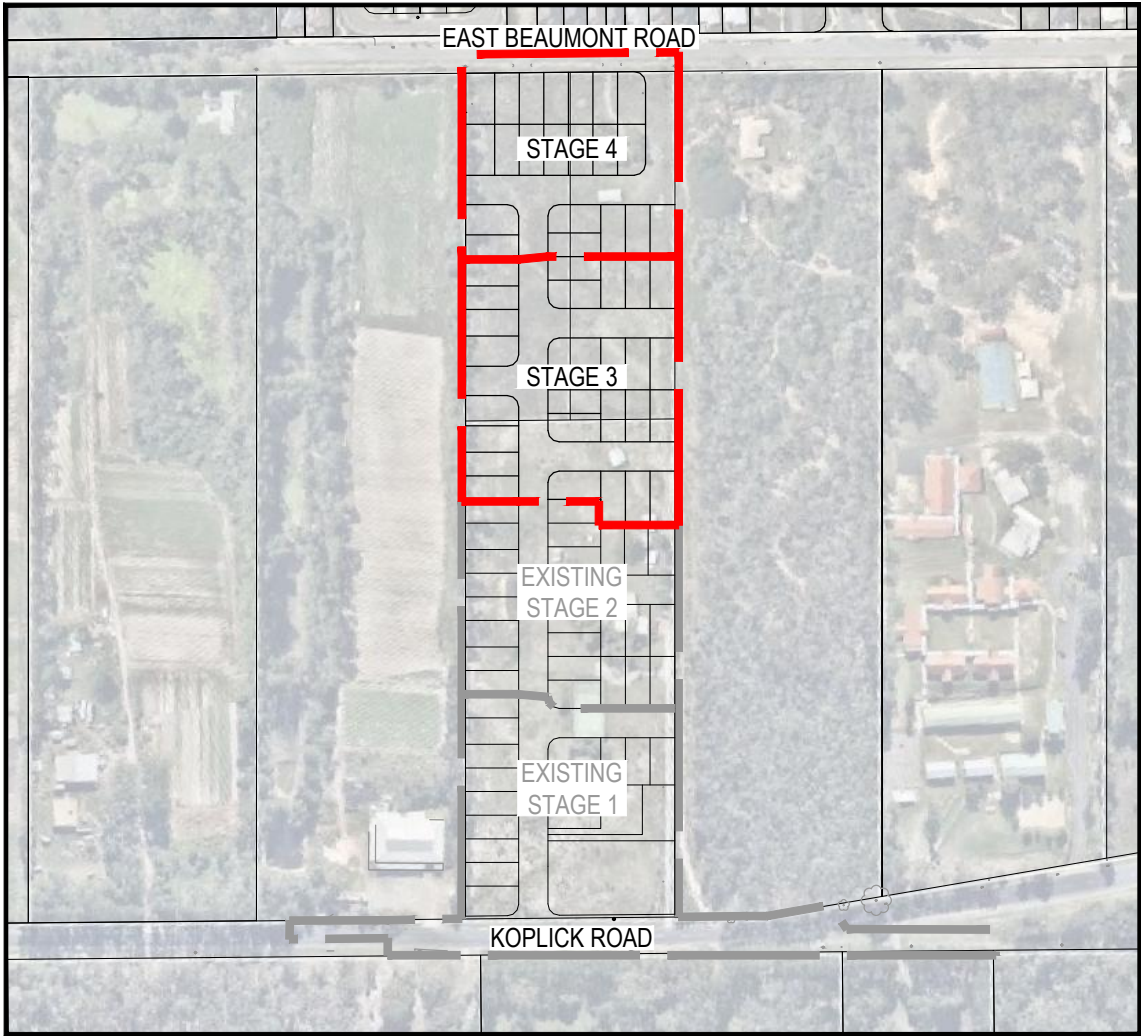
- A. TOPSOIL AND SUBSOIL SHALL BE STOCKPILED SEPARATELY.
- B. CARE SHALL BE TAKEN TO PREVENT SEDIMENT FROM ENTERING THE STORMWATER SYSTEM. THIS MAY INVOLVE PLACING APPROPRIATE SEDIMENT CONTROLS AROUND STOCKPILES.

CREEK CROSSINGS

- A. SILTATION CONTROL MEASURES SHALL BE PLACED DOWNSTREAM OF ANY EXCAVATION WORK.
- B. APPROPRIATE SEDIMENT CONTROLS SHALL BE USED TO PREVENT SEDIMENT FROM ENTERING THE CREEK.
- C. NO SOIL SHALL BE STOCKPILED WITHIN 5m OF THE CREEK.

REHABILITATION

- A. PREDISTURBANCE SOIL PROFILES AND COMPACTION LEVELS SHALL BE REINSTATED.
- B. PREDISTURBANCE VEGETATION PATTERNS SHALL BE RESTORED.



WARNING! - EXISTING SERVICES

EXTREME CARE SHOULD BE TAKEN WHEN EXCAVATING IN THIS AREA. THE FOLLOWING EXISTING SERVICES ARE LIKELY TO BE PRESENT IN THE VICINITY OF THE SITE:

- ELECTRICAL CABLES
- TELECOMMUNICATIONS CABLES
- GAS CABLES
- WATER MAINS
- STORMWATER DRAINAGE PIPES

THE CONTRACTOR SHOULD CONTACT THE SERVICE PROVIDER FOR FURTHER INFORMATION AND SATISFY THEMSELVES OF ANY SPECIFIC TREATMENT OR REQUIREMENTS.

ALL ENVIRONMENTAL PROTECTION MEASURES SHALL BE IMPLEMENTED PRIOR TO ANY CONSTRUCTION WORK COMMENCING, INCLUDING CLEARING

ALL WATER AND SEWERAGE CONSTRUCTION SHALL COMPLY WITH THE REQUIREMENTS OF THE QUEENSLAND WORK HEALTH AND SAFETY ACT 2011. CONTACT THE DIVISION OF WORKPLACE HEALTH AND SAFETY FOR INFORMATION. PHONE 1300 362 128

ALL CLEARANCES TO EXISTING SERVICES TO COMPLY WITH TABLE 4.2, SECTION 4.4.5.2 SEQ WS&S D&C CODE AMENDMENT TO WSA

LOCALITY PLAN

SCALE 1:2000 (A1)
SCALE 1:4000 (A3)

LOGAN CITY COUNCIL

APPROVED PLAN OF DEVELOPMENT

This is the approved plan of development for Development Application

OW/134/2021

NAME OF ESTATE		87-93 KOPLICK ROAD STAGES 3 AND 4
SUBDIVIDER		KOPLICK DEVELOPMENTS PTY LTD
SP APPLICATION No.		OW/115/2019
SP APPROVAL DATE		16 NOVEMBER 2020
DRAWING/PLAN No.		18-0114-3000-3005
No. OF ALLOTMENTS		48
AREA		2.40ha
LENGTH OF SEWERS	100Ø uPVC	105.8m
	150Ø uPVC	720.3m

LIVE SEWER WORKS

No.	DESCRIPTION	DIA. SEWER	EXISTING ASSET ID AT CONNECTION	MH/MS TYPE	COVER TYPE	LOT & PLAN No.	F.S.L.	E.S.L.	CONNECTION I.L.	CONNECTION DEPTH TO INVERT	ALTERATION TO EXISTING MH BENCHING REQUIRED (Y/N)
1 (A)	0.50m FROM EXISTING STUB, CONSTRUCTOR, TO LAY NEW RETICULATION SEWERS. AFTER CLEANSING, TESTING AND INSPECTION, NOTIFY AGENCY.	DN150	8/1	P2	B	LOT 65	45.602	45.602	43.622	1.980	N
1 (B)	AGENCY TO REMOVE TEMPORARY END CAP ON EXISTING STUB AND MAKE LIVE CONNECTION AFTER SUCCESSFUL 'ON MAINTENANCE' INSPECTION.										
2 (A)	0.50m FROM EXISTING STUB, CONSTRUCTOR, TO LAY NEW RETICULATION SEWERS. AFTER CLEANSING, TESTING AND INSPECTION, NOTIFY AGENCY.	DN150	3/2	P2	B	LOT 18	45.344	45.344	44.059	1.295	N
2 (B)	AGENCY TO REMOVE TEMPORARY END CAP ON EXISTING STUB AND MAKE LIVE CONNECTION AFTER SUCCESSFUL 'ON MAINTENANCE' INSPECTION.										
3 (A)	AGENCY TO CONSTRUCT A 150mm STUB (TEMPORARY END CAPPED) IN MH X/15.	DN150	X/15	P2	B	MOUNT PATTERSON STREET	42.220	42.220	40.510	1.710	Y
3 (B)	0.50m FROM EXISTING STUB, CONSTRUCTOR TO LAY NEW RETICULATION SEWERS. AFTER CLEANSING, TESTING AND INSPECTION, NOTIFY AGENCY.					Edwards					

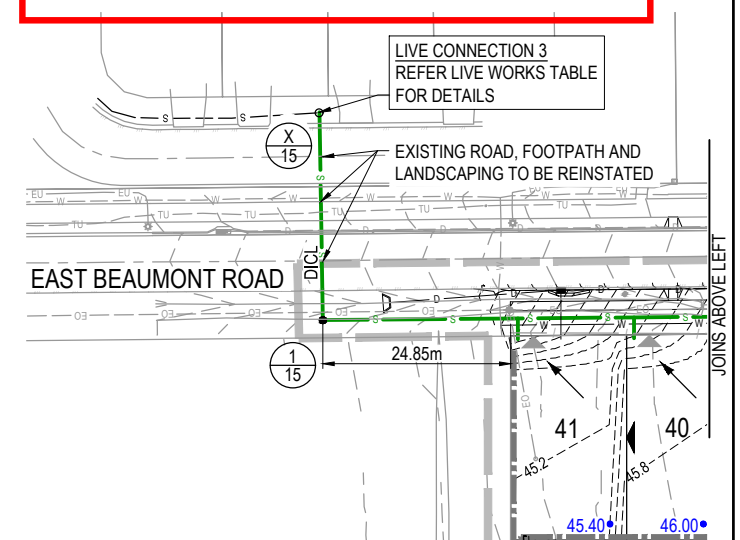
REV	DATE	DESIGN	DRAWN	REVISION DETAILS		DRAWN	STATUS	 PEAKURBAN DEVELOPMENT ENGINEERS + ADVISORS	 SCALE 1:500 10 5 0 10 20 A1 1:1000 A3	CLIENT KOPLICK DEVELOPMENTS PTY LTD	PROJECT NAME PROPOSED RESIDENTIAL SUBDIVISION (STAGES 3 AND 4) 87 - 93 KOPLICK ROAD PARK RIDGE	DRAWING TITLE SEWERAGE RETICULATION COVER PLAN			
1	07.05.21	RD	RD	ORIGINAL ISSUE		RD	NOT FOR CONSTRUCTION					PROJECT No.	DRAWING No.	REVISION	
						DESIGN				APPROVED TROY SCHULTZ 		RPEQ 20631			
						RD				FOR AND ON BEHALF OF PEAKURBAN PTY LTD 					

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2. UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
3. THE CONSTRUCTION OF THE SEWERAGE WORK SHOWN ON THIS DRAWING SHALL BE SUPERVISED BY AN ENGINEER WHO HAS RPEQ REGISTRATION. SEWERAGE WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT INTO THE SEQ SERVICE PROVIDER SEWERAGE SYSTEM.
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8. PROPERTY CONNECTION BRANCHES SHALL EXTEND INTO THE PROPERTY A MINIMUM OF 500mm AND A MAXIMUM OF 750mm.
9. WHERE PIPES ARE LAID IN FILL, THE FILLING SHALL BE CARRIED OUT IN LAYERS NOT EXCEEDING 300mm (LOOSE) IN DEPTH AND SHALL BE COMPACTED UNTIL THE COMPACTION IS NOT LESS THAN 95% OF THE MATERIALS MAXIMUM COMPACTION WHEN TESTED IN ACCORDANCE WITH A.S.1289 (MODIFIED COMPACTION). TESTING SHALL BE CARRIED OUT AFTER EACH ALTERNATE LAYER. IN ALL SUCH CASES APPROVAL OF CONSTRUCTED SEWERS WILL NOT BE ISSUED BY THE SEQ SERVICE PROVIDER UNLESS CERTIFICATES ARE PRODUCED CERTIFYING THAT THE REQUIRED COMPACTION HAS BEEN ACHIEVED.
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12. SEWERS SHALL BE DISUSED/ABANDONED IN ACCORDANCE WITH PROCEDURE SET OUT IN THE SEQ SEWER CODE.
13. BENCH MARK AND LEVELS TO AHD.

A. PREDISTURBANCE SOIL PROFILES AND COMPACTION LEVELS SHALL BE REINSTATED.

B. PREDISTURBANCE VEGETATION PATTERNS SHALL BE RESTORED.



REV	DATE	DESIGN	DRAWN	REVISION DETAILS		DRAWN	STATUS	SCALE		CLIENT	PROJECT NAME	DRAWING TITLE				
1	07.05.21	RD	RD	ORIGINAL ISSUE		RD	NOT FOR CONSTRUCTION	1:500 10 5 0 10 20 A1 1:1000		KOPLICK DEVELOPMENTS PTY LTD	PROPOSED RESIDENTIAL SUBDIVISION (STAGES 3 AND 4)	87 - 93 KOPLICK ROAD PARK RIDGE	PROJECT No. 18-0114	DRAWING No. 3001	REVISION 2	
2	29.10.21	RD	RD	CONTROL LEVELS AND CONTOURS												
						DESIGN	APPROVED TROY SCHULTZ RPEQ 20631			ASSOCIATED CONSULTANT GOODROCK PROPERTY PARK RIDGE PH: 0423 557 882						
						RD	FOR AND ON BEHALF OF PEAKURBAN PTY LTD			ENQUIRIES@PEAKURBAN.COM.AU						

STRUCTURE / BEND / END NAME
STRUCTURE TYPE
STRUCTURE LID TYPE
STRUCTURE DROP TYPE
JUNCTION LINE
DEPTH TO HC
HC INVERT LEVEL
HC TYPE
HC LOT No
CH. FROM D/S STRUC / BEND

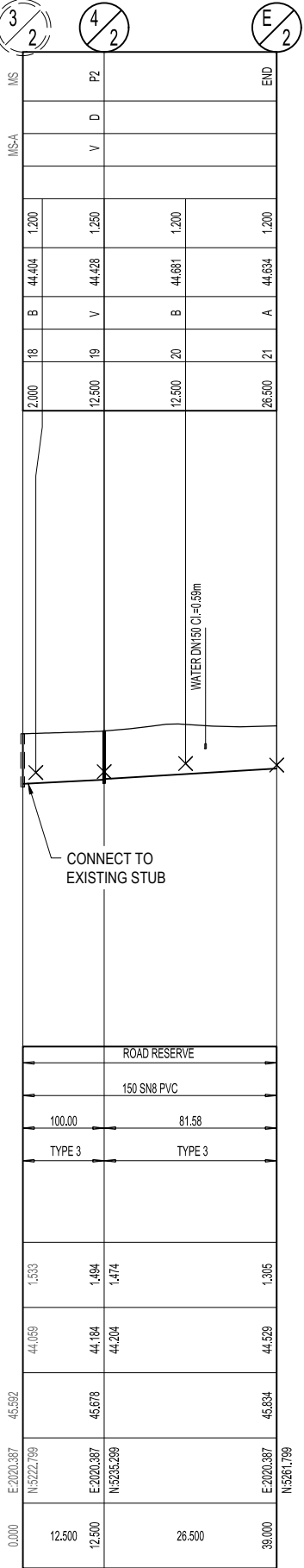
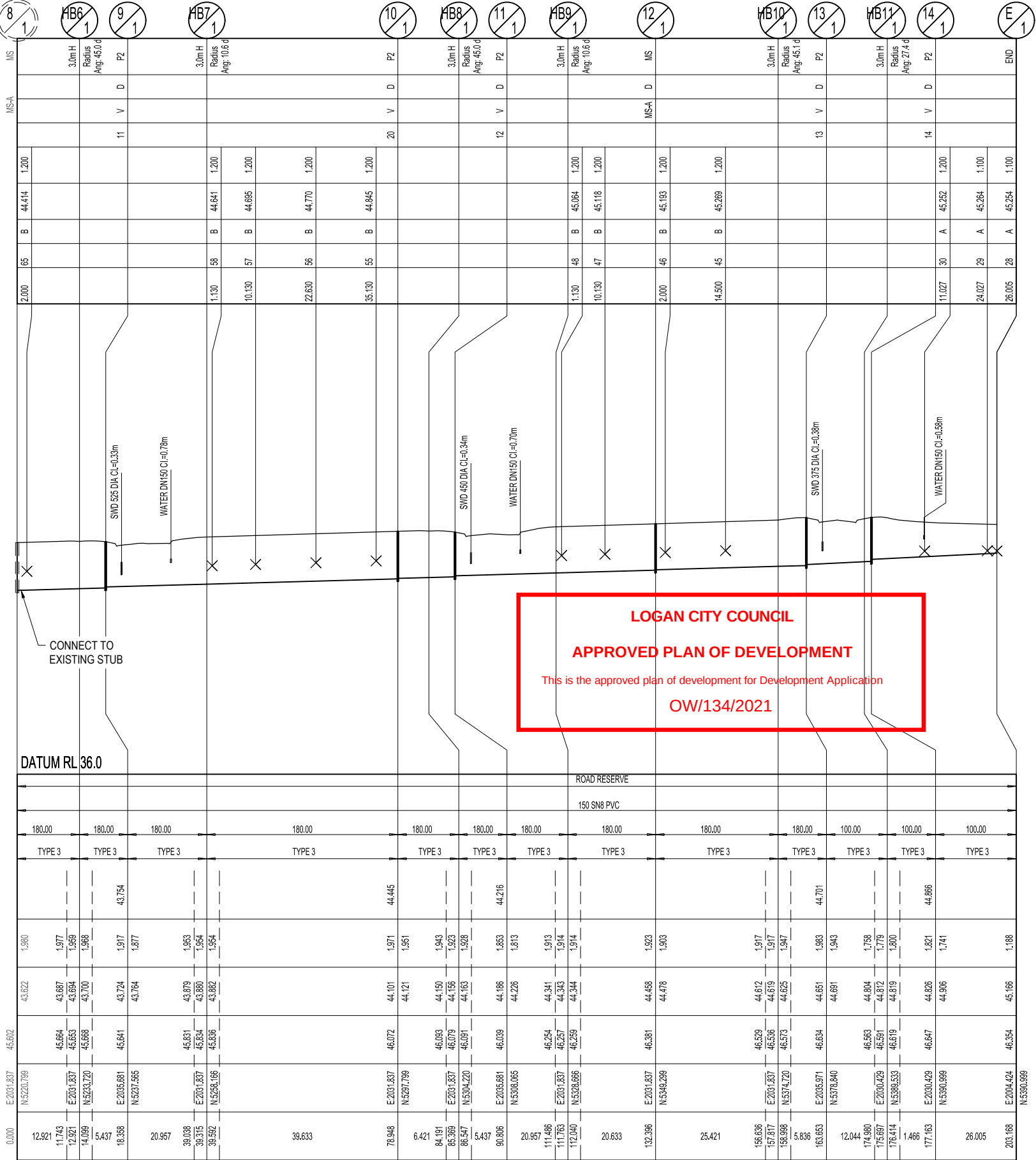
STRUCTURE TYPES
MS = TYPE 'J1' MAINTENANCE SHAFT
P2 = CONCRETE DN1050
MS DROP TYPES:
MS-A = 20mm DROP THROUGH BULB
MS-B = >750mm DROP INTO RISER
LID TYPES
B = NON-TRAFFICABLE
D = TRAFFICABLE
D(BD) = TRAFFICABLE WITH BOLT DOWN

EMBEDMENT NOTE:
EMBEDMENT TYPE IS PRELIMINARY ONLY AND IS TO BE CONFIRMED AFTER GEOTECHNICAL INVESTIGATION AND ADJUSTED IF NECESSARY IN ACCORDANCE WITH SEQ STD DRGS SEQ-SEW-1201-1 TO 1205-1

* STORMWATER BRIDGING NOTE:
WHERE A STORMWATER PIPE >= 600mm DIA CROSSES OVER A SEWER, THE STORMWATER PIPE SHALL BE SUPPORTED BY A BRIDGE STRUCTURE THAT SPANS THE SEWER TRENCH. REFER DETAIL ON PEAK URBAN STD DRG S-100.

LAND USE
DIAMETER
GRADE
EMBEDMENT
JUNCTION INVERT LEVEL
DEPTH TO INVERT
SEWER INVERT LEVEL
DESIGN SURFACE LEVEL
SETOUT
RUNNING CHAINAGE

LINE



REV	DATE	DESIGN	DRAWN	REVISION DETAILS
1	07.05.21	RD	RD	ORIGINAL ISSUE
2	10.08.21	RD	RD	EXISTING STRUCTURES 8/1 AND 3/2

DRAWN	STATUS
RD	NOT FOR CONSTRUCTION
DESIGN	APPROVED
RD	TROY SCHULTZ RPEQ 20631
	FOR AND ON BEHALF OF PEAKURBAN PTY LTD

DEVELOPMENT ENGINEERS + ADVISORS

ENQUIRIES@PEAKURBAN.COM.AU

SCALE

1:500 10 5 0 10 20 A1

1:1000 HORIZONTAL A3

1:100 2 1 0 2 4 A1

1:200 VERTICAL A3

CLIENT

KOPLICK DEVELOPMENTS PTY LTD

ASSOCIATED CONSULTANT

GOODROCK PROPERTY

PH: 0423 557 882

PROJECT NAME

PROPOSED RESIDENTIAL SUBDIVISION (STAGES 3 AND 4)

87 - 93 KOPLICK ROAD PARK RIDGE

DRAWING TITLE

SEWERAGE RETICULATION LONGITUDINAL SECTIONS SHEET 1

PROJECT No. 18-0114

DRAWING No. 3002

REVISION 2

STRUCTURE / BEND / END NAME
STRUCTURE TYPE
STRUCTURE LID TYPE
STRUCTURE DROP TYPE
JUNCTION LINE
DEPTH TO HC
HC INVERT LEVEL
HC TYPE
HC LOT No
CH. FROM D/S STRUC / BEND

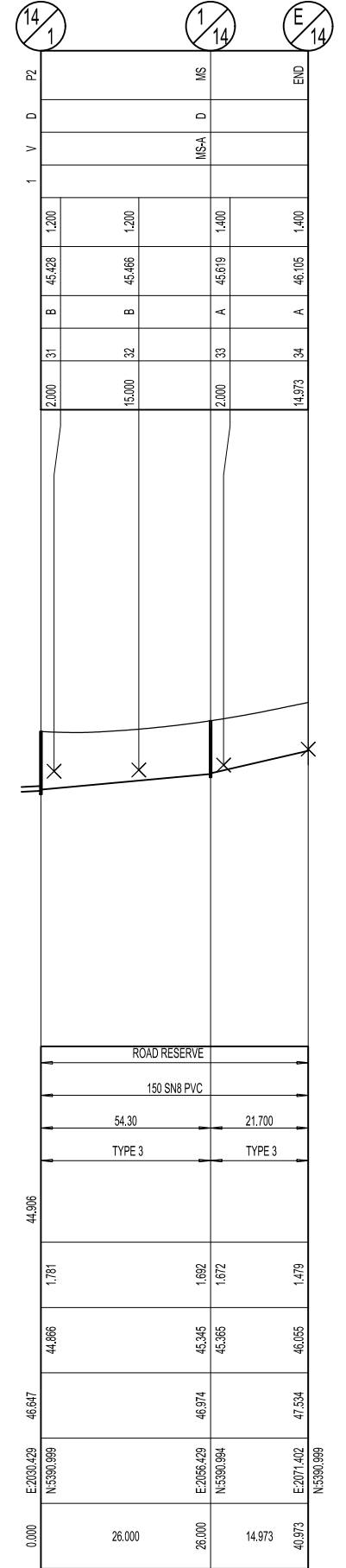
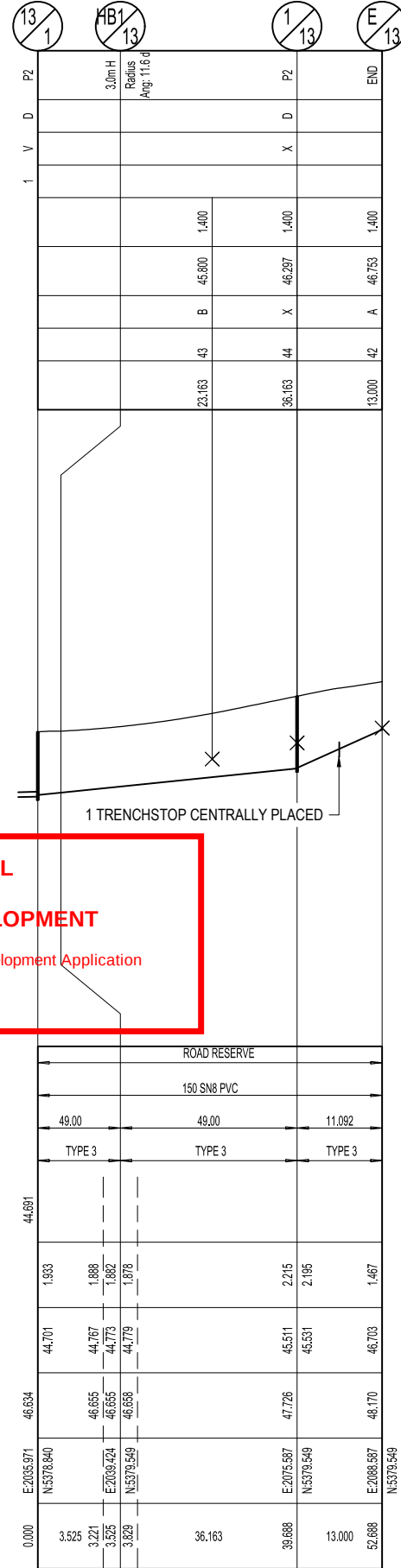
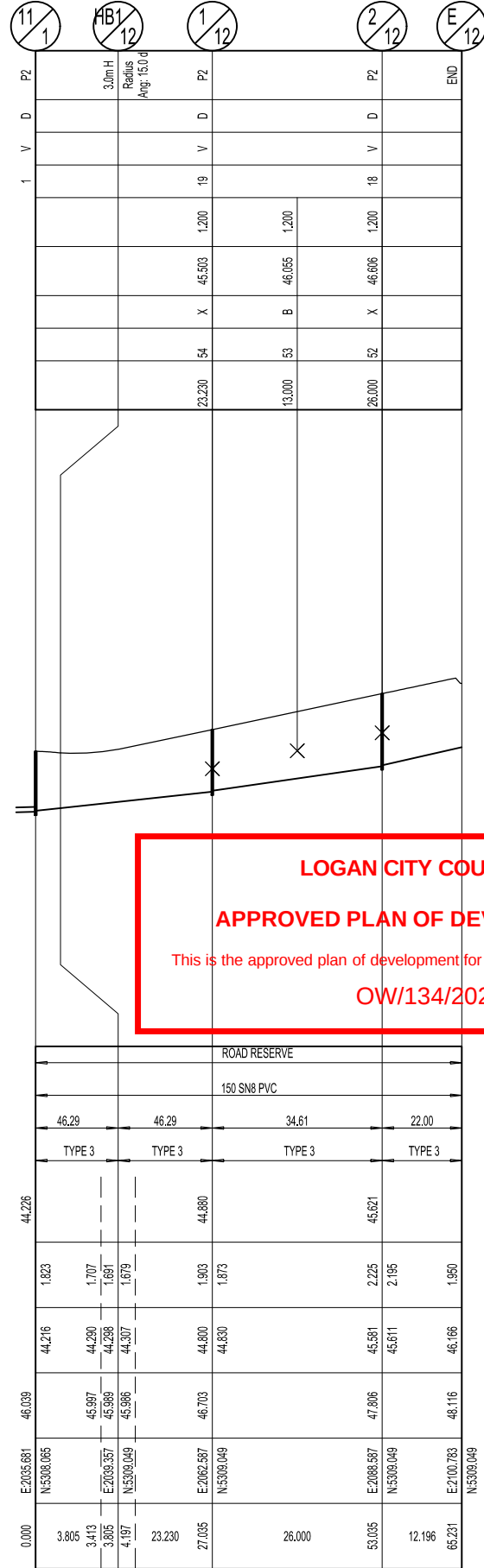
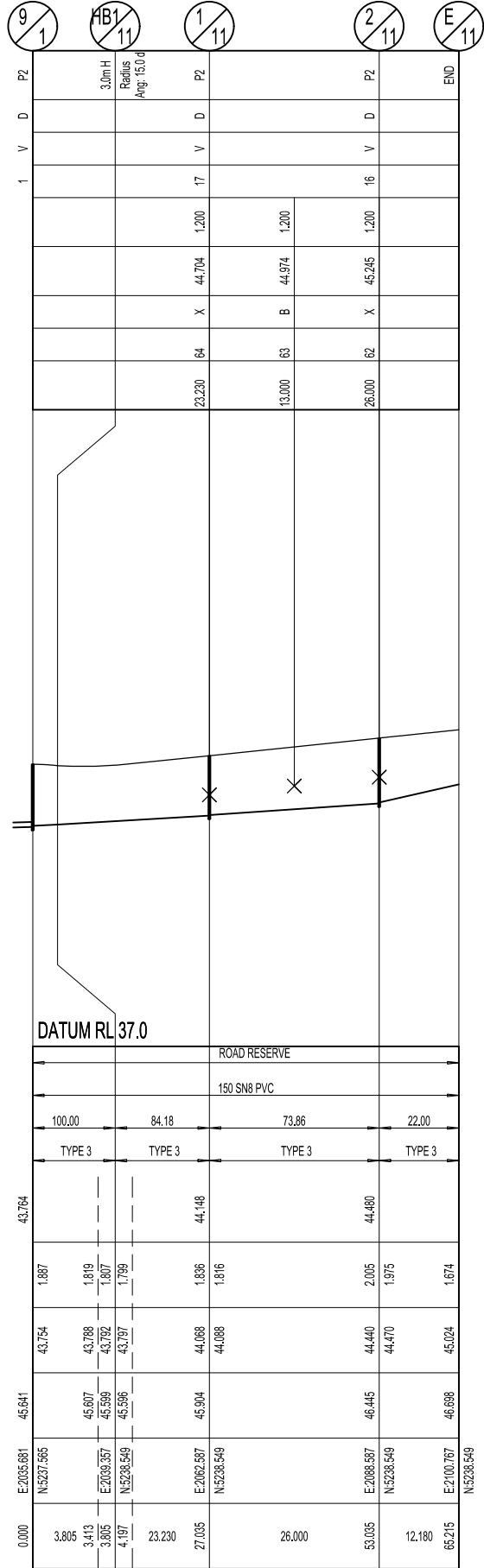
STRUCTURE TYPES
MS = TYPE 'U' MAINTENANCE SHAFT
P2 = CONCRETE DN1050
MS DROP TYPES:
MS-A = 20mm DROP THROUGH BULB
MS-B = >750mm DROP INTO RISER
LID TYPES
B = NON-TRAFFICABLE
D = TRAFFICABLE
D(BD) = TRAFFICABLE WITH BOLT DOWN

EMBEDMENT NOTE:
EMBEDMENT TYPE IS PRELIMINARY ONLY AND IS TO BE CONFIRMED AFTER GEOTECHNICAL INVESTIGATION AND ADJUSTED IF NECESSARY IN ACCORDANCE WITH SEQ STD DRGS SEQ-SEW-1201-1 TO 1205-1

* STORMWATER BRIDGING NOTE:
WHERE A STORMWATER PIPE >= 600mm DIA CROSSES OVER A SEWER, THE STORMWATER PIPE SHALL BE SUPPORTED BY A BRIDGE STRUCTURE THAT SPANS THE SEWER TRENCH. REFER DETAIL ON PEAK URBAN STD DRG S-100.

LAND USE
DIAMETER
GRADE
EMBEDMENT
JUNCTION INVERT LEVEL
DEPTH TO INVERT
SEWER INVERT LEVEL
DESIGN SURFACE LEVEL
SETOUT
RUNNING CHAINAGE

LINE



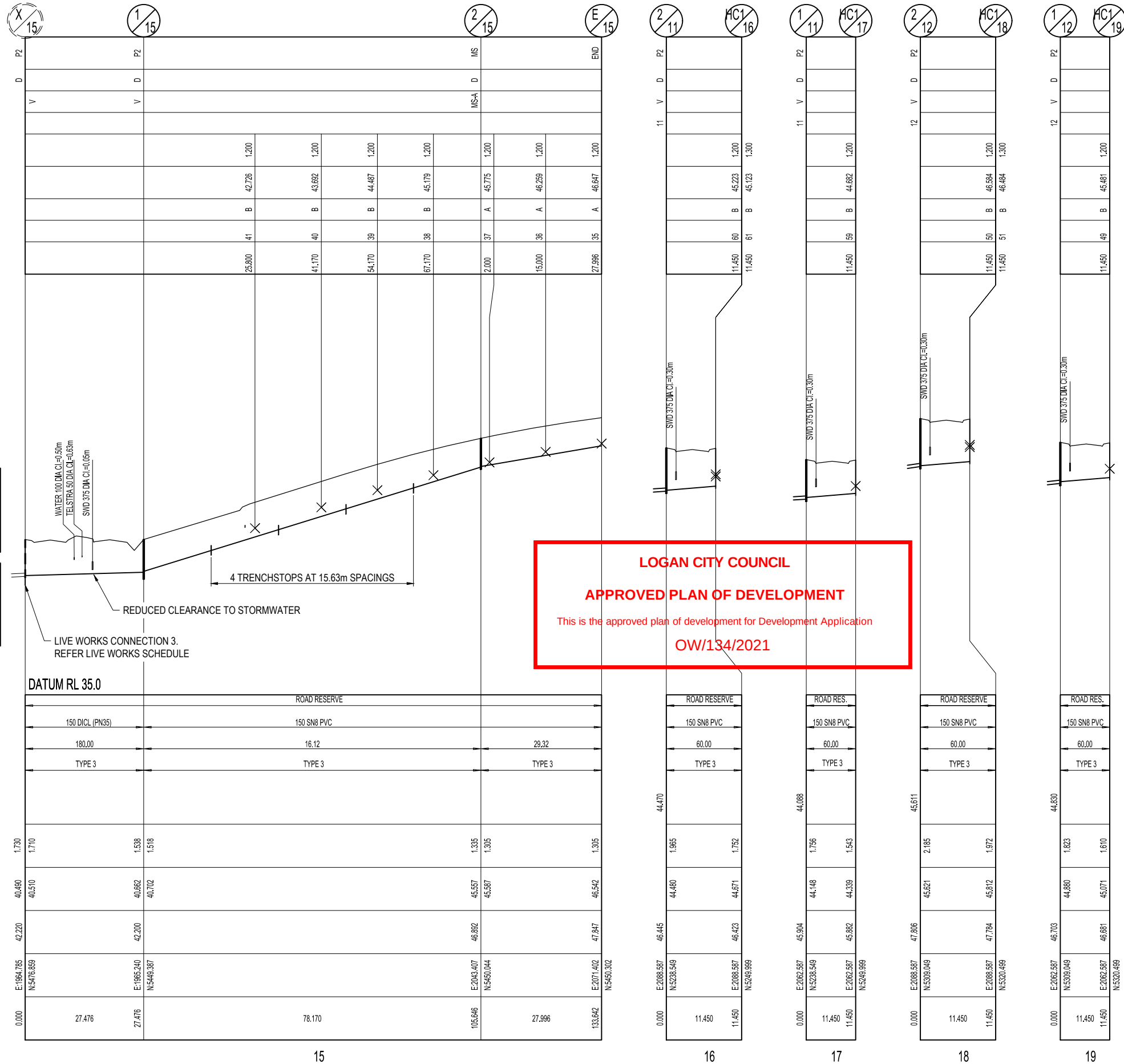
REV	DATE	DESIGN	DRAWN	REVISION DETAILS	DRAWN	STATUS	CLIENT	PROJECT NAME	DRAWING TITLE
1	07.05.21	RD	RD	ORIGINAL ISSUE	RD	NOT FOR CONSTRUCTION	KOPLICK DEVELOPMENTS PTY LTD	PROPOSED RESIDENTIAL SUBDIVISION (STAGES 3 AND 4)	SEWERAGE RETICULATION LONGITUDINAL SECTIONS SHEET 2
2	29.10.21	RD	RD	LINES 13 AND 14 AMENDED	RD	APPROVED TROY SCHULTZ RPEQ 20631	GOODROCK PROPERTY PH: 0423 557 882	87 - 93 KOPLICK ROAD PARK RIDGE	PROJECT No. 18-0114 DRAWING No. 3003 REVISION 2
						FOR AND ON BEHALF OF PEAKURBAN PTY LTD			

STRUCTURE TYPES
MS = TYPE 'J1' MAINTENANCE SHAFT
P2 = CONCRETE DN1050
MS DROP TYPES:
MS-A = 20mm DROP THROUGH BULB
MS-B = >750mm DROP INTO RISER
LID TYPES
B = NON-TRAFFICABLE
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D(BD) = TRAFFICABLE WITH BOLT DOWN

EMBEDMENT NOTE:
EMBEDMENT TYPE IS PRELIMINARY ONLY AND
IS TO BE CONFIRMED AFTER GEOTECHNICAL
INVESTIGATION AND ADJUSTED IF NECESSARY
IN ACCORDANCE WITH SEQ STD DRGS
SEQ-SEW-1201-1 TO 1205-1

*** STORMWATER BRIDGING NOTE:**
WHERE A STORMWATER PIPE $\geq$ 600mm DIA
CROSSES OVER A SEWER, THE STORMWATER
PIPE SHALL BE SUPPORTED BY A BRIDGE
STRUCTURE THAT SPANS THE SEWER TRENCH.
REFER DETAIL ON PEAK URBAN STD DRG S-100.

LAND USE
DIAMETER
GRADE
EMBEDMENT
JUNCTION INVERT LEVEL
DEPTH TO INVERT
SEWER INVERT LEVEL
DESIGN SURFACE LEVEL
SETOUT
RUNNING CHAINAGE

[illegible]

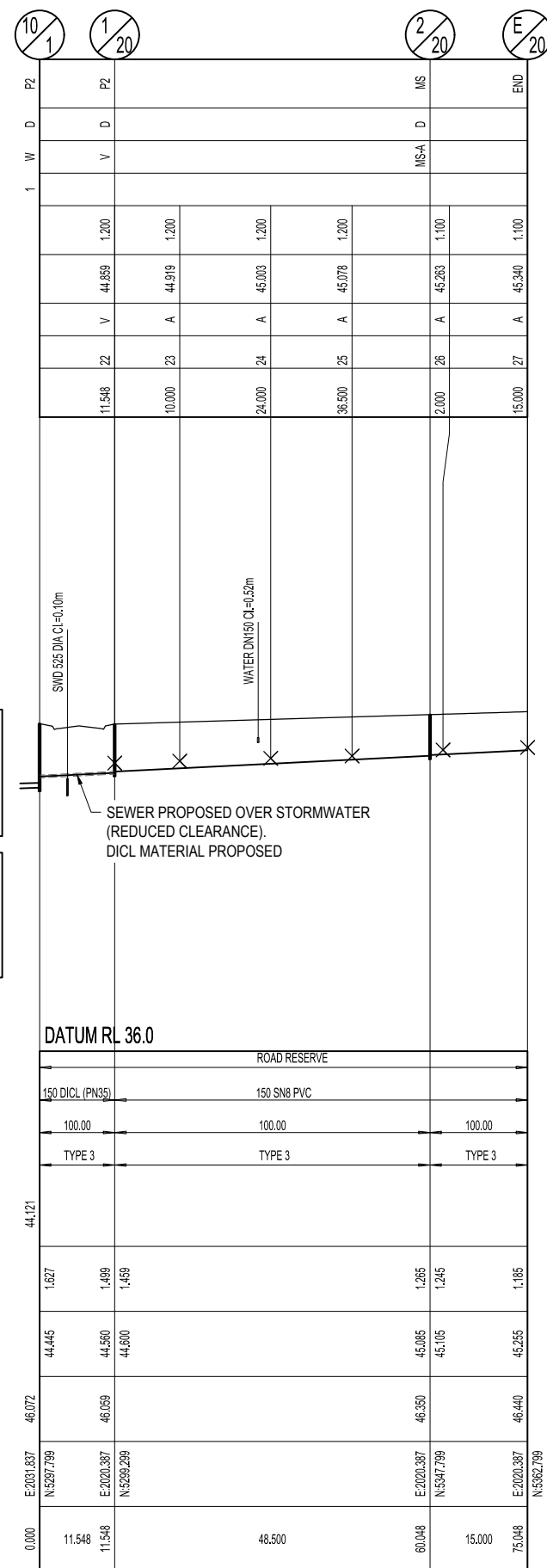
STRUCTURE TYPES MS = TYPE 'J1' MAINTENANCE SHAFT P2 = CONCRETE DN1050 MS DROP TYPES: MS-A = 20mm DROP THROUGH BULB MS-B = >750mm DROP INTO RISER LID TYPES B = NON-TRAFFICABLE D = TRAFFICABLE D(BD) = TRAFFICABLE WITH BOLT DOWN

EMBEDMENT NOTE:
EMBEDMENT TYPE IS PRELIMINARY ONLY AND
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LAND USE
DIAMETER
GRADE
EMBEDMENT
JUNCTION INVERT LEVEL
DEPTH TO INVERT
SEWER INVERT LEVEL
DESIGN SURFACE LEVEL
SETOUT
RUNNING CHAINAGE

LINE

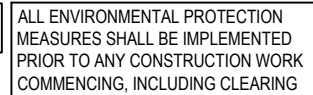


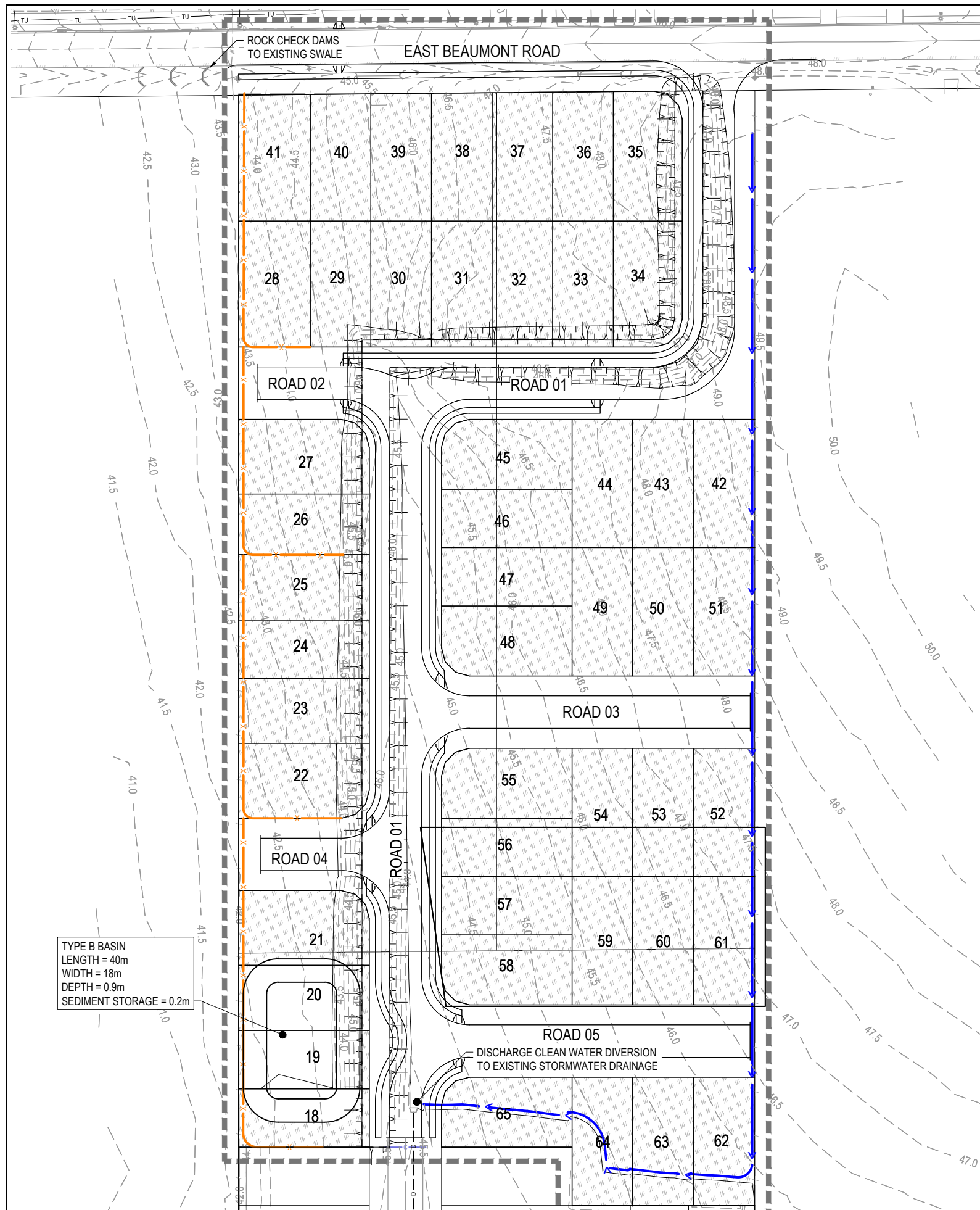
20

REV	DATE	DESIGN	DRAWN	REVISION DETAILS		DRAWN	STATUS	 PEAKURBAN DEVELOPMENT ENGINEERS • ADVISORS ENQUIRIES@PEAKURBAN.COM.AU	SCALE 1:500 10 5 0 10 20 A1 1:1000 A3 HORIZONTAL 1:100 2 1 0 2 4 A1 1:200 A3 VERTICAL	CLIENT	PROJECT NAME PROPOSED RESIDENTIAL SUBDIVISION (STAGES 3 AND 4) 87 - 93 KOPLICK ROAD PARK RIDGE	DRAWING TITLE		
1	07.05.21	RD	RD	ORIGINAL ISSUE		RD	NOT FOR CONSTRUCTION APPROVED TROY SCHULTZ RPEQ 20631  FOR AND ON BEHALF OF PEAKURBAN PTY LTD			KOPLICK DEVELOPMENTS PTY LTD ASSOCIATED CONSULTANT GOODROCK PROPERTY PH: 0423 557 882		PROJECT No. 18-0114	DRAWING No. 3005	REVISION 1
						RD								

1. THE CONTRACTOR SHALL SUPPLY ALL LABOR, MATERIALS, PLANT AND EQUIPMENT TO CONSTRUCT THE WORKS AS DOCUMENTED AND STRICTLY IN ACCORDANCE WITH THE RELEVANT AUTHORITY STANDARDS, SPECIFICATIONS AND REQUIREMENTS.
2. THE EXISTING SERVICES THAT ARE SHOWN ON THE DRAWINGS ARE PROVIDED FOR INFORMATION PURPOSES ONLY. NO RESPONSIBILITY IS TAKEN BY THE SUPERINTENDENT OR THE PRINCIPAL FOR INFORMATION THAT HAS BEEN SUPPLIED BY OTHERS, OR ANY EXISTING SERVICES THAT MAY BE PRESENT NOT SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL VERIFY THE POSITION OF ANY UNDERGROUND SERVICES WITHIN THE AREAS OF WORKS AND SHALL BE RESPONSIBLE FOR MAKING GOOD ANY DAMAGE THERETO. ANY ALTERATION WORKS TO SERVICES WILL BE CARRIED OUT ONLY BY THE SERVICE OWNER AUTHORITY UNLESS APPROVED OTHERWISE.
3. ALL CONSTRUCTION ACTIVITIES UNDERTAKEN SHALL COMPLY WITH CURRENT WORKPLACE HEALTH AND SAFETY REQUIREMENTS AND LEGISLATION.
4. PRIOR TO COMMENCING WORK, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL RELEVANT LOCAL AUTHORITY PERMITS.
5. THE CONTRACTOR SHALL NOT COMMENCE THE DEMOLITION OF ANY EXISTING BUILDINGS AND/OR STRUCTURES WITHOUT APPROVAL FROM THE SUPERINTENDENT.
6. THE CONTRACTOR SHALL APPLY INDUSTRY BEST PRACTICE SO WORKS SHALL NOT DISTURB OR AFFECT NEARBY RESIDENTS EITHER BY DUST, NOISE, FLOODING OR DISCONNECTION OF SERVICES. CONTRACTOR TO ENSURE THAT ACCESS AND SERVICES TO EXISTING PROPERTIES ARE AVAILABLE AT ALL TIMES.
7. THE CONTRACTOR SHALL VERIFY LEVELS OF EXISTING SERVICE CROSSINGS AND CONNECTION POINTS PRIOR TO COMMENCEMENT OF WORKS AND NOTIFY SUPERINTENDENT OF ANY DISCREPANCIES BETWEEN ACTUAL AND PROPOSED DESIGN LEVELS.
8. THESE ENGINEERING DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE APPROVED VEGETATION MANAGEMENT PLAN, WHERE APPLICABLE. WHEN IN DOUBT, ALL EXISTING TREES ARE TO REMAIN UNLESS DIRECTED OTHERWISE.
9. HOLD POINT: ONCE THE BASE OF MANHOLES, INSPECTION PITTS, GULLIES AND FIELD INLETS FOR STORMWATER DRAINAGE AND SEWER RETICULATION HAVE BEEN POURED, CONSTRUCTION SHALL ONLY RE-COMMENCE ONCE THE SUPERINTENDENT AND/OR ENGINEER HAVE INSPECTED THE WORKS.
10. THE CONTRACTOR SHALL NOTE DURING THE COURSE OF THE WORKS WHEN JOINT INSPECTIONS WITH THE AUTHORITY AND THE SUPERINTENDENT ARE REQUIRED. THESE INCLUDE PRE-STARTS, SUBGRADES, PRE-SEALS, CLEARING, AND OTHER SUCH INSPECTIONS AS NOMINATED IN THE APPROVAL AND THE SPECIFICATIONS. THE CONTRACTOR SHALL ENSURE NO WORKS PROCEED PAST THE INSPECTION POINT UNTIL THE JOINT INSPECTION HAS BEEN SUCCESSFULLY COMPLETED.

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT SOUTH EAST QUEENSLAND WATER SUPPLY CODE SPECIFICATIONS AND STANDARDS.
2. UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
3. ADOPT LIP OF KERB OR SHOULDER OF ROAD AS PERMANENT LEVEL.
4. COVER ON MAINS FROM PERMANENT LEVEL TO BE AS SHOWN IN SEQ-WAT-1200-2.
5. CONDUITS TO BE INSTALLED IN ACCORDANCE WITH THE STANDARD DRAWINGS.
6. A WATER METER SUPPLIED AT THE DEVELOPER'S COST, IS TO BE INSTALLED AT THE SERVICE POINT OF EACH LOT IN ACCORDANCE WITH THE STANDARD DRAWING FOR THE SEQ-SP.
7. ALL MATERIALS USED IN THE WORKS SHALL COMPLY WITH THE SEQ-SP'S ACCEPTED PRODUCTS AND MATERIALS LIST OR BE APPROPRIATELY SHOWN, LISTED AND DEFINED IN THE ENGINEERING SUBMISSION SO THAT THE ALTERNATIVE PRODUCT OR MATERIAL CAN BE ASSESSED AND IF APPROPRIATE, APPROVED BY THE SEQ-SP.
8. TEST/CHLORINATION POINTS TO BE INSTALLED IN ACCORDANCE WITH STANDARD DRAWING No. SEQ-WAT-1410-1, AT THE END OF ALL NEW MAINS BEFORE THE SCOUR VALVE AND WHERE REQUIRED FOR COMMISSIONING PURPOSES.
9. THE CONSTRUCTION OF THE WATER RETICULATION WORK SHOWN ON THIS DRAWING MUST BE SUPERVISED BY AN ENGINEER WHO HAS RPEQ REGISTRATION. WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT TO THE RETICULATION SYSTEM.

[illegible]



Sediment Basin Sizing - Basin A and B	
Q1 Flow	0.114 m3/s
Design Discharge (Q)	0.06 m3/s
Sediment Settlement Coefficient (Ks) *	12000.00
Settling Zone - Average Area (As)	684.00
Settling Zone Depth (Ds)	0.68 m
Critical Settling Zone Length (Ls)	81.00 m
Adopted Settling Zone Length	40.00
Settling Zone Width (Ws)	17.10 m
Flow Velocity of Clear Water Supernatant (vc)	0.004901961
Sediment Storage Depth (Dss)	0.2 m
Total Depth	0.88 m
* To be confirmed with Jar Test prior to construction commencement	

LOGAN CITY COUNCIL
ENDORSED PLAN
This is the endorsed plan for Development Application
OW/134/2021

NOTE:
ROADS ARE TO BE TEMPORARILY STABILISED WITH AN APPROVED PRODUCT AND TO THE SATISFACTION OF THE SUPERINTENDENT

NOTE:
THE DESIGN INFORMATION SHOWN ON THIS DRAWING IS A CONCEPTUAL GUIDE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR THE PLANNING, DESIGN (INCLUDING CPESC CERTIFICATION) , IMPLEMENTATION AND MAINTENANCE OF AN EROSION AND SEDIMENT CONTROL PLAN THAT IS COMPLIANT WITH THE INTERNATIONAL EROSION CONTROL ASSOCIATION (IECA) GUIDELINE 'BEST PRACTICE EROSION AND SEDIMENT CONTROL' AND RELEVANT COUNCIL POLICIES.

NOTE:
TYPE B BASINS HAVE BEEN ADOPTED FOR THIS CONCEPT DESIGN, HOWEVER THE PRINCIPAL CONTRACTOR CAN ADOPT A TYPE A BASIN DESIGN IN LIEU OF THIS IF DEEMED APPROPRIATE.

TYPE B BASIN
LENGTH = 40m
WIDTH = 18m
DEPTH = 0.9m
SEDIMENT STORAGE = 0.2m

- LEGEND
- 24.6----- PROPOSED CONTOUR (0.2m INTERVAL)
 - - - - -24.6- - - - - EXISTING CONTOUR (0.5m INTERVAL)
 - PROPOSED CLEAN WATER DRAIN
 - x-x- PROPOSED SEDIMENT FENCE
 - [Pattern] PROPOSED AREA OF SURFACE STABILISATION
 - - - - - INDICATIVE BASIN CATCHMENT