

TILLERMAN
PARK RIDGE

PROPOSED RESIDENTIAL DEVELOPMENT

STAGE 1 AND EXTERNAL INTERSECTION OPERATIONAL WORKS
133-159 PARK RIDGE ROAD, PARK RIDGE FOR 'HB PARK RIDGE'

DRAWING LIST

EARTHWORKS, ROADWORKS AND DRAINAGE

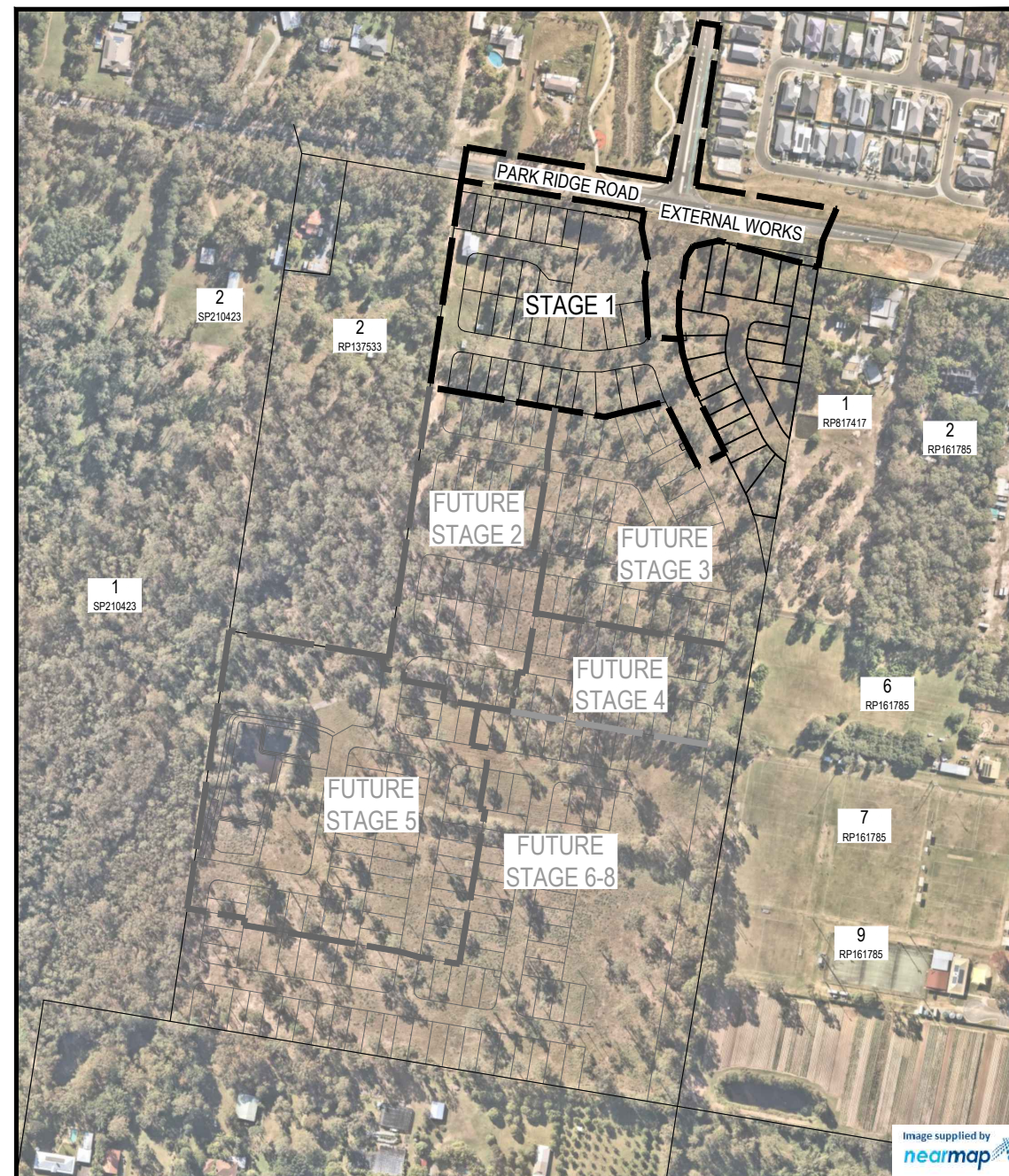
- 22-0141-200 COVER PLAN
- 22-0141-201 GENERAL NOTES
- 22-0141-202 BULK EARTHWORKS LAYOUT PLAN
- 22-0141-203 BULK EARTHWORKS TYPICAL SECTIONS
- 22-0141-203A BULK EARTHWORKS TYPICAL SECTIONS
- 22-0141-204 ROADWORKS AND DRAINAGE LAYOUT PLAN
- 22-0141-205 SURVEY SETOUT AND KERB TYPES LAYOUT PLAN
- 22-0141-206 TILLERMAN PARADE LONGITUDINAL SECTION AND CROSS SECTIONS
- 22-0141-207 WATERTOWER STREET LONGITUDINAL SECTION AND CROSS SECTIONS
- 22-0141-208 HEWING PLACE LONGITUDINAL SECTION AND CROSS SECTIONS
- 22-0141-209 INTERSECTION DETAILS LAYOUT PLAN SHEET 1 OF 2
- 22-0141-210 INTERSECTION DETAILS LAYOUT PLAN SHEET 2 OF 2
- 22-0141-211 SIGNS AND LINEMARKING LAYOUT PLAN
- 22-0141-212 STORMWATER DRAINAGE CATCHMENT LAYOUT PLAN
- 22-0141-213 STORMWATER DRAINAGE LONG SECTIONS SHEET 1 OF 3
- 22-0141-214 STORMWATER DRAINAGE LONG SECTIONS SHEET 2 OF 3
- 22-0141-215 STORMWATER DRAINAGE LONG SECTIONS SHEET 3 OF 3
- 22-0141-216 STORMWATER DRAINAGE DETAILS
- 22-0141-217 STORMWATER DRAINAGE CALCULATION TABLE SHEET 1 OF 2
- 22-0141-218 STORMWATER DRAINAGE CALCULATION TABLE SHEET 2 OF 2
- 22-0141-219 BIO RETENTION BASIN LAYOUT PLAN
- 22-0141-220 BIO RETENTION BASIN TYPICAL SECTIONS
- 22-0141-221 LAND DEDICATIONS

SEWERAGE AND WATER RETICULATION

- 22-0141-300 SEWERAGE RETICULATION COVER PLAN
- 22-0141-301 SEWERAGE RETICULATION LAYOUT PLAN
- 22-0141-302 SEWERAGE LONGITUDINAL SECTIONS SHEET 1 OF 4
- 22-0141-303 SEWERAGE LONGITUDINAL SECTIONS SHEET 2 OF 4
- 22-0141-304 SEWERAGE LONGITUDINAL SECTIONS SHEET 3 OF 4
- 22-0141-305 SEWERAGE LONGITUDINAL SECTIONS SHEET 4 OF 4
- 22-0141-306 WATER RETICULATION COVER PLAN
- 22-0141-307 WATER RETICULATION LAYOUT PLAN
- 22-0141-308 FIRE HYDRANT REACH LAYOUT PLAN
- 22-0141-309 TRUNK WATER DETAILS, LAYOUT AND LONGITUDINAL SECTION
- 22-0141-310 TRUNK WATER MAIN TUNNEL BORE AND LIVE CONNECTION DETAILS

EXTERNAL WORK (INTERSECTION WORK)

- 22-0141-500 SERVICES RELOCATION LAYOUT PLAN
- 22-0141-500A DN100 WATER MAINS LONGITUDINAL SECTION AND DETAILS
- 22-0141-501 EXT BULK EARTHWORKS LAYOUT PLAN
- 22-0141-502 EXT ROADWORKS AND DRAINAGE LAYOUT PLAN
- 22-0141-503 EXT INTERSECTION DETAILS LAYOUT PLAN
- 22-0141-504 EXT PARK RIDGE ROAD WIDEN LONG SECTION (LHS)
- 22-0141-505 EXT PARK RIDGE ROAD WIDEN LONG SECTION (RHS)
- 22-0141-506 EXT PARK RIDGE ROAD WIDEN CROSS SECTION (LHS) AND (RHS)
- 22-0141-507 EXT INTERSECTION ISLAND DETAILS
- 22-0141-508 EXT SIGNS AND LINEMARKING LAYOUT PLAN SHEET 1 OF 2
- 22-0141-509 EXT SIGNS AND LINEMARKING LAYOUT PLAN SHEET 2 OF 2
- 22-0141-510 EXT STORMWATER DRAINAGE CATCHMENT LAYOUT PLAN
- 22-0141-511 EXT STORMWATER DRAINAGE LONG SECTION
- 22-0141-512 EXT STORMWATER DRAINAGE DETAILS
- 22-0141-513 TILLERMAN PARADE DMA PRESSURE REDUCING VALVE DETAIL
- 22-0141-514 EXT WATER RETICULATION LONGITUDINAL SECTION
- 22-0141-515 EXT WATER RETICULATION SCOUR VALVE DETAILS

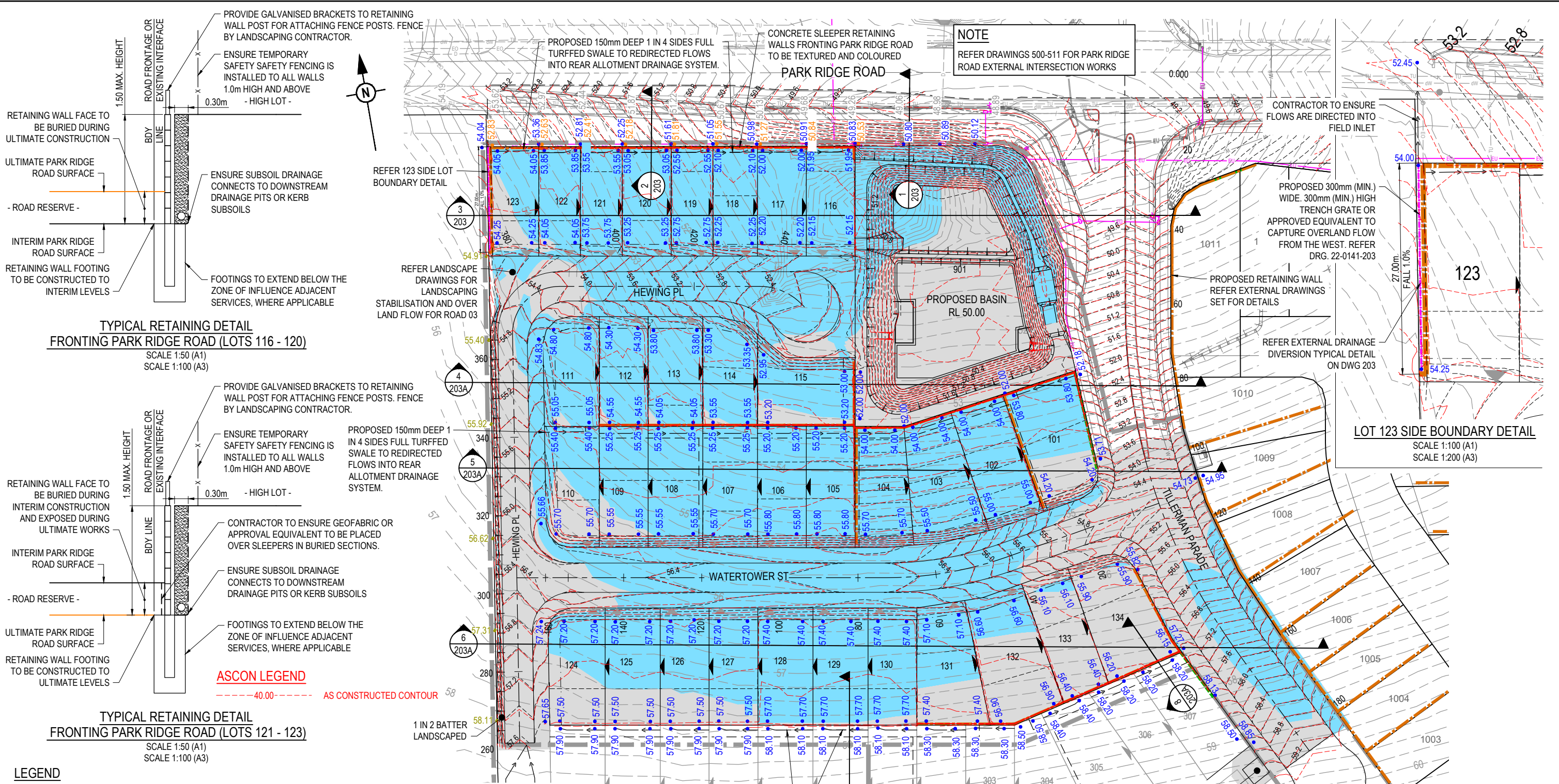


PROJECT INFORMATION SUMMARY:
STAGE 1 AND EXTERNAL WORKS
No. OF LOTS = 34
AREA OF STAGE 1 SITE = 2.485 ha
AREA OF EXTERNAL WORKS SITE = 1.480 ha
RP DESCRIPTION
LOT 3 ON RP137533
LOCAL AUTHORITY: LOGAN CITY COUNCIL
COUNCIL REFERENCE NUMBER: COM/36/2021

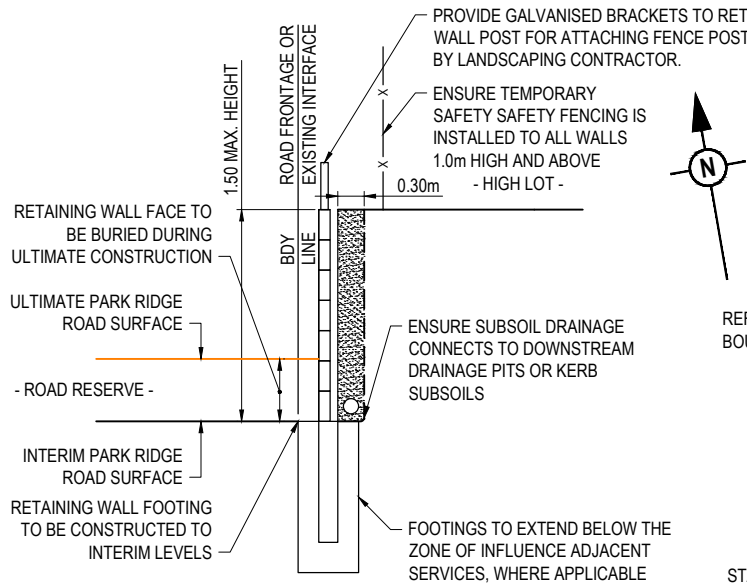
NOTE:
THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH:
- VEGETATION MANAGEMENT PLAN
- LANDSCAPE ARCHITECTS PLAN
- ELECTRICAL, COMMUNICATIONS AND GAS CONSULTANTS PLAN
- SEDIMENT AND EROSION HAZARD ASSESSMENT
- SAFETY IN DESIGN REPORT

AS-CONSTRUCTED CERTIFICATION
 Signature: _____ Date: 29/01/24
 DANIEL COLLINS RPEQ No. 18631
 For and on behalf of Colliers International engineering & design pty ltd

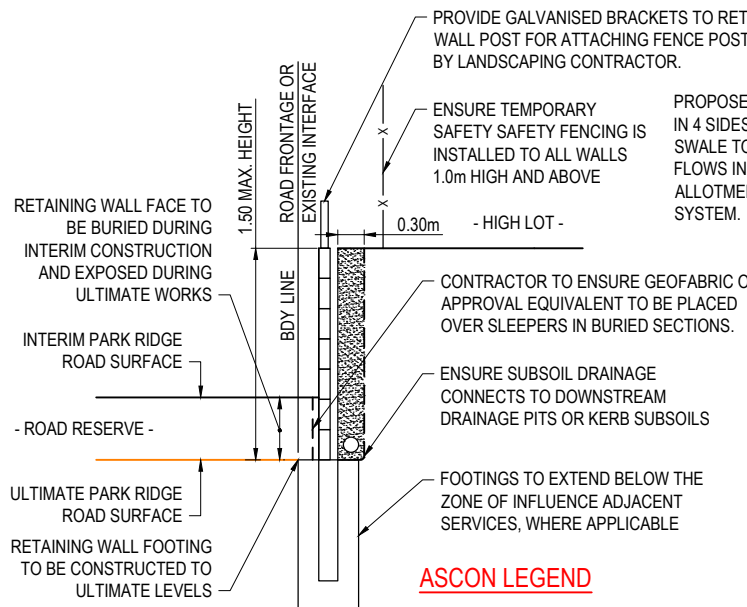
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A	25.01.23	CL	AK	ISSUE FOR CONSTRUCTION		AS CONSTRUCTED	1:2000 20 0 20 40 60 80 100 A1 1:4000 A3	HB PARK RIDGE		COVER PLAN	
B	17.04.23	CL	CL	DRAWING LIST AMENDED, BOUNDARY UPDATED							
C	17.04.23	CL	CL	DRAWING LIST AMENDED, BOUNDARY UPDATED							
D	02.05.23	CL	CL	DRAWING LIST AMENDED							
E	12.05.23	CL	CL	ISSUED FOR CONSTRUCTION							
F	29.01.24	CL	BP	AS CONSTRUCTED							
DESIGN APPROVED DANIEL COLLINS RPEQ 18631							ASSOCIATED CONSULTANT SAUNDERS HAVILL GROUP PH: 1300 123 744	PROJECT No. 133-159 PARK RIDGE ROAD PARK RIDGE (STAGE 1)	PROJECT No. 22-0141	DRAWING No. 200	REVISION F
FOR AND ON BEHALF OF PEAKURBAN PTY LTD											



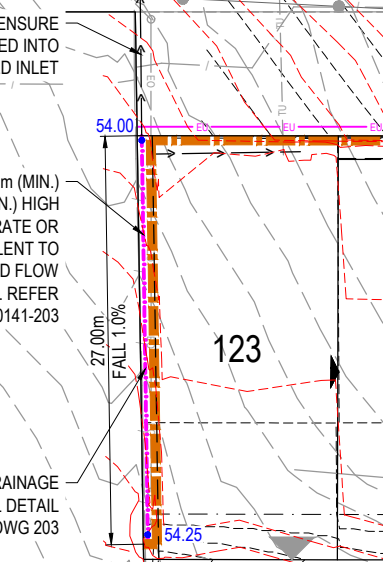
NOTE
REFER DRAWINGS 500-511 FOR PARK RIDGE ROAD EXTERNAL INTERSECTION WORKS



TYPICAL RETAINING DETAIL
FRONTING PARK RIDGE ROAD (LOTS 116 - 120)
SCALE 1:50 (A1)
SCALE 1:100 (A3)



TYPICAL RETAINING DETAIL
FRONTING PARK RIDGE ROAD (LOTS 121 - 123)
SCALE 1:50 (A1)
SCALE 1:100 (A3)



LOT 123 SIDE BOUNDARY DETAIL
SCALE 1:100 (A1)
SCALE 1:200 (A3)

ASCON LEGEND
- - - - - 40.00 - - - - - AS CONSTRUCTED CONTOUR

LEGEND

	PROPOSED AREA OF WORKS		PROPOSED AREA OF CUT
	PROPOSED SURFACE CONTOUR		PROPOSED AREA OF FILL
	EXISTING SURFACE CONTOUR		INDICATIVE DRIVEWAY LOCATIONS
	PROPOSED EARTHWORKS PAD SETBACK LINE		ZERO LOT BOUNDARY
	CONCRETE SLEEPER RETAINING WALL HEIGHT RANGE 0.60m-1.50m MAX		EXISTING STORMWATER DRAINAGE PIPE
	PROPOSED 'B GRADE' SANDSTONE BLOCK WALL		EXISTING SEWER MAIN
	PROPOSED ENTRY WALL REFER LANDSCAPER		EXISTING DBYD WATER MAIN
	PROPOSED TRENCH GRATE		EXISTING WATER CONDUIT
	PROPOSED FINISHED SURFACE LEVEL (FSL) (AFTER TOPSOIL PLACEMENT)		EXISTING ELECTRICAL CABLE U/G
	EXISTING SURFACE LEVEL (ESL)		EXISTING ELECTRICAL CABLE O/H
	ULTIMATE SURFACE LEVEL		EXISTING TELECOMMUNICATION CABLE U/G
			PROPOSED DRAINAGE SWALE

AS-CONSTRUCTED CERTIFICATION
Signature: _____ Date: 29/01/24
DANIEL COLLINS RPEQ No. 18631
For and on behalf of Colliers International engineering & design pty ltd

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 MAINS
- WATER MAINS
- SEWER MAINS

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

EARTHWORKS VOLUMES

CUT:	-6,890m³
FILL:	11,797m³
BAL:	4,906m³ (SPOIL)

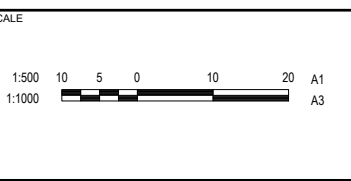
NOTE:
1. VOLUMES SHOWN ARE SOLID VALUES ONLY. NO ALLOWANCES FOR BULKING, COMPACTION, ROAD BOXING, UNSUITABLE MATERIALS.

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	25.01.23	CL	AK	ISSUE FOR CONSTRUCTION
B	12.05.23	CL	CL	AMENDED FOR TRUNK WATER MAIN APPROVAL
C	29.01.24	CL	BP	AS CONSTRUCTED

AS CONSTRUCTED

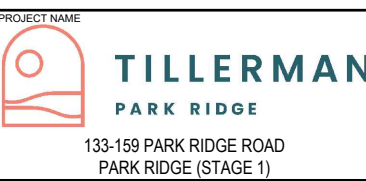
DESIGN APPROVED
DANIEL COLLINS RPEQ 18631

FOR AND ON BEHALF OF PEAKURBAN PTY LTD



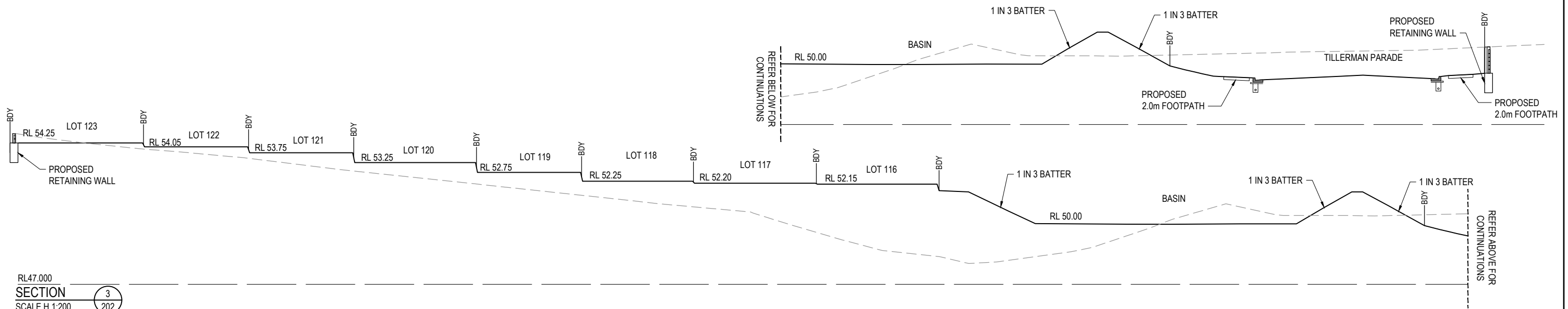
HB PARK RIDGE

ASSOCIATED CONSULTANT
SAUNDERS HAVILL GROUP
PH: 1300 123 744

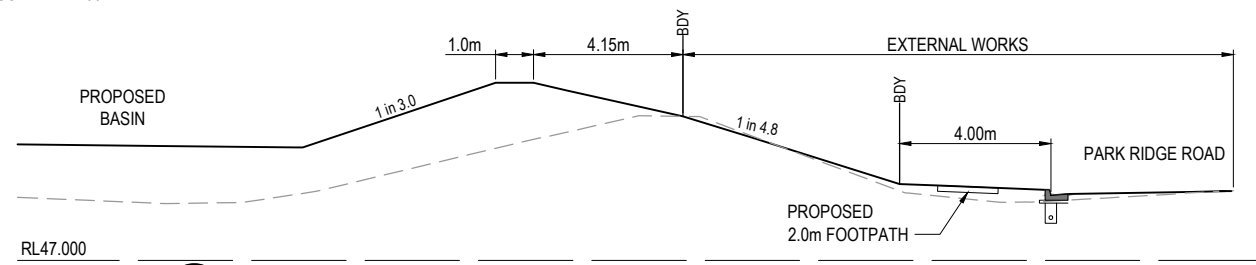


BULK EARTHWORKS LAYOUT PLAN

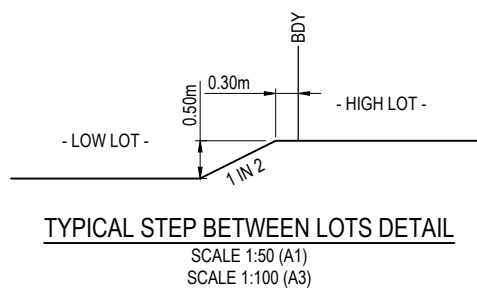
PROJECT No.	DRAWING No.	REVISION
22-0141	202	C



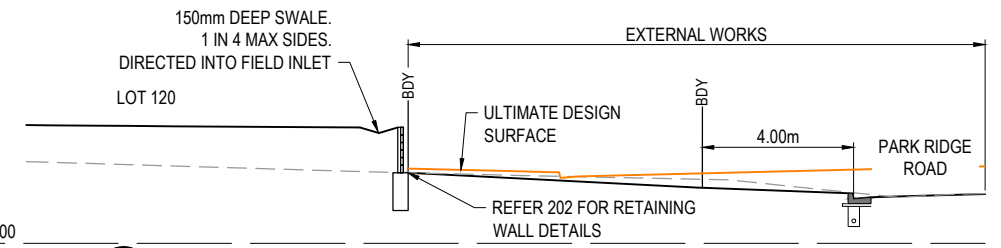
RL47.000
SECTION 3
SCALE H 1:200
SCALE V 1:100



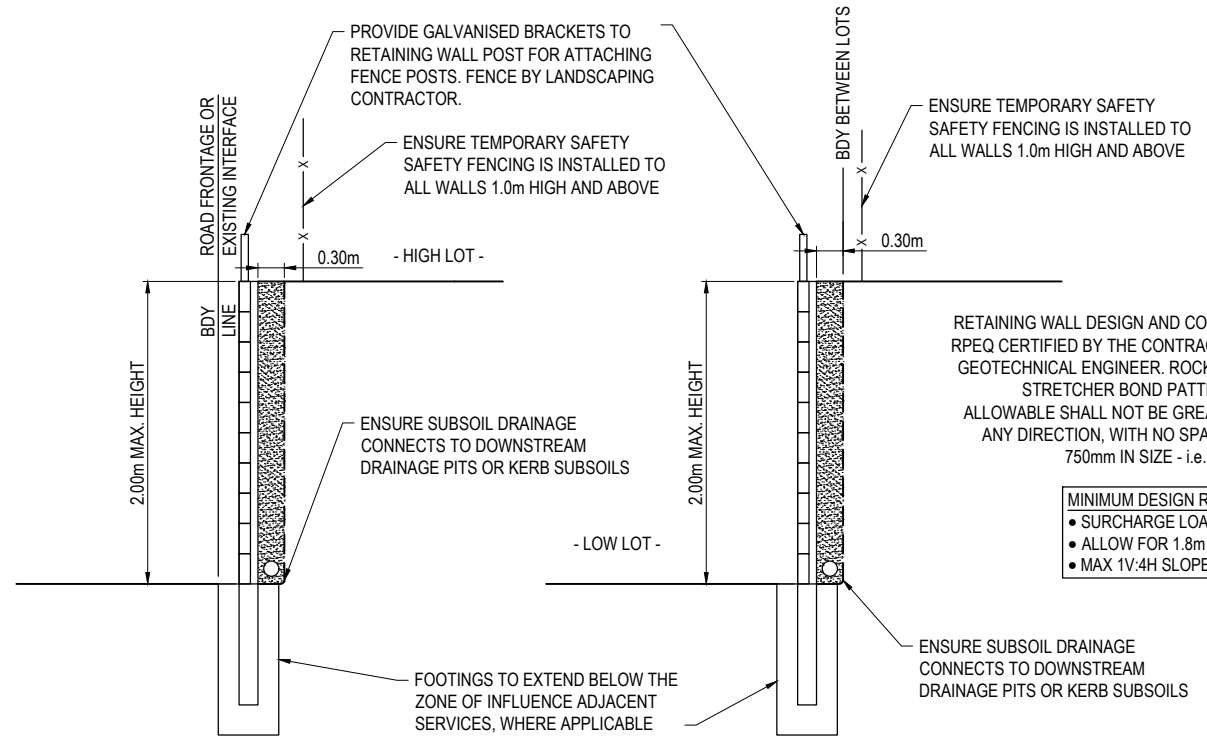
RL47.000
SECTION 1
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SCALE 1:200 (A3)



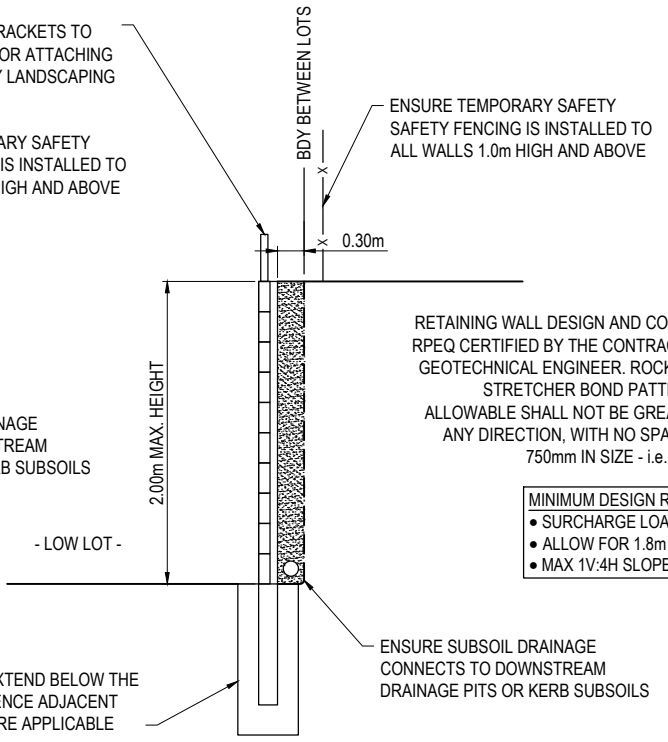
TYPICAL STEP BETWEEN LOTS DETAIL
SCALE 1:50 (A1)
SCALE 1:100 (A3)



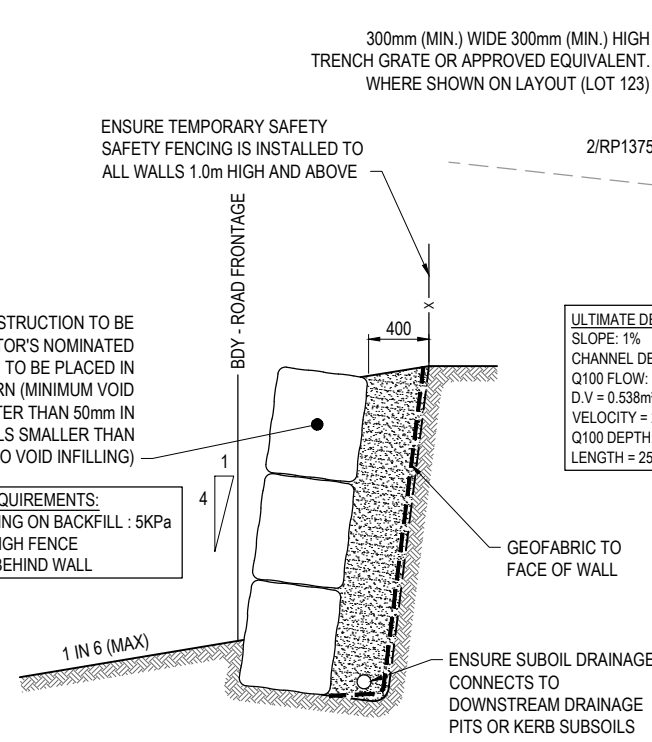
RL50.000
SECTION 2
SCALE 1:100 (A1)
SCALE 1:200 (A3)



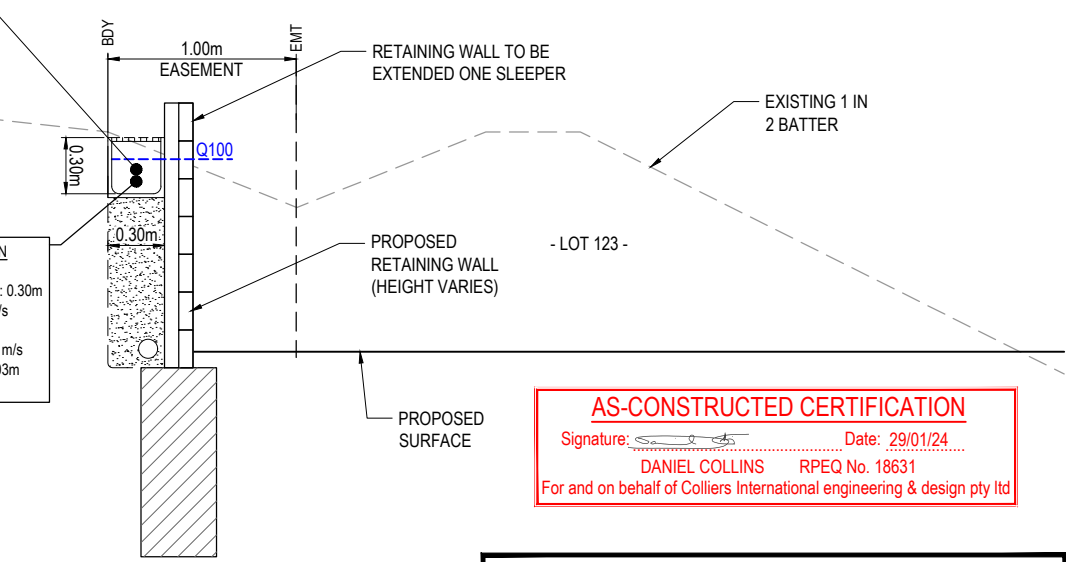
TYPICAL RETAINING DETAIL
(FRONTING ROAD RESERVE OR EXISTING)
SCALE 1:50 (A1)
SCALE 1:100 (A3)



TYPICAL RETAINING DETAIL
(BETWEEN LOTS)
SCALE 1:50 (A1)
SCALE 1:100 (A3)



TYPICAL 'B' GRADE SANDSTONE BLOCKWORK
RETAINING WALL DETAIL
SCALE 1:20 (A1)



PROPOSED EXTERNAL DRAINAGE
DIVERSION TYPICAL DETAIL
SCALE 1:20 (A1)
SCALE 1:40 (A3)

AS-CONSTRUCTED CERTIFICATION
Signature: _____ Date: 29/01/24
DANIEL COLLINS RPEQ No. 18631
For and on behalf of Colliers International engineering & design pty ltd

- RETAINING WALL NOTES:**
- ALL RETAINING WALLS ARE TO BE DELIVERED UNDER DESIGN AND CONSTRUCTION ARRANGEMENT - FORMS 15 AND 12 CERTIFICATIONS ARE TO BE PROVIDED BY THE CONTRACTOR.
 - DESIGN OF WALLS TO CONSIDER ALL LOADS (FENCES, DWELLINGS ETC) AS WELL AS ASSOCIATED IMPACTS FROM ANY ADJACENT SERVICES - FOOTING DEPTHS TO BE EXTENDED AS REQUIRED.
 - GEOTECHNICAL CONDITIONS ARE TO BE CONFIRMED AND APPROPRIATELY CONSIDERED FOR ALL WALLS.
 - REFER LANDSCAPE DRAWINGS FOR FURTHER INFORMATION ON RETAINING WALLS, PARTICULARLY RELATING TO FINISHES.
 - TEMPORARY SAFETY FENCING TO BE INSTALLED BEHIND ALL WALLS 1.0m HIGH AND GREATER.

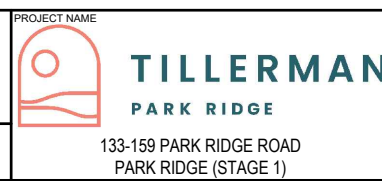
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B	29.01.24	CL	BP	AS CONSTRUCTED

DRAWN	STATUS
AS CONSTRUCTED	



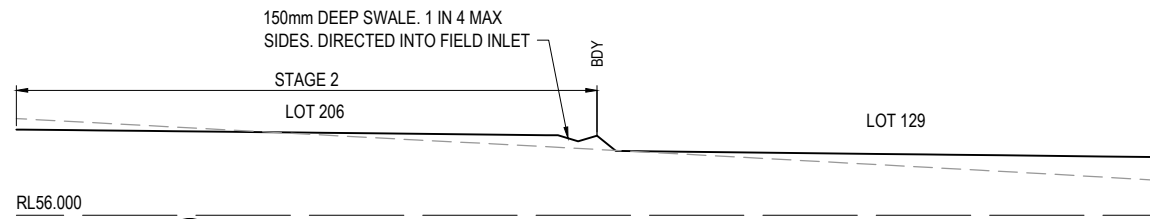
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1:100 0 1 2 3 4 5 A1
1:200 0 0.5 1 1.5 2 2.5 3 3.5 4 4.5 5 A3
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1:50 0 0.25 0.5 0.75 1.0 1.25 A3

CLIENT
HB PARK RIDGE

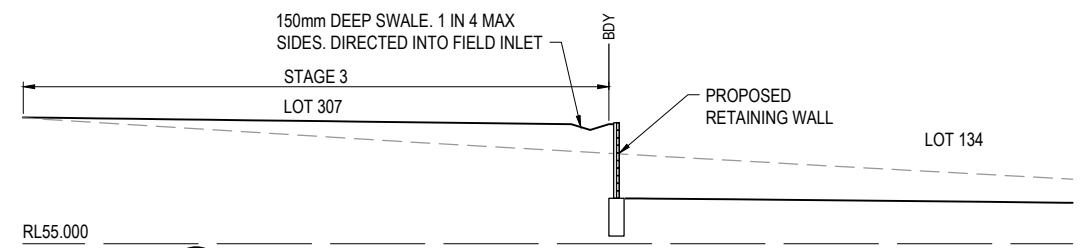


DRAWING TITLE
BULK EARTHWORKS TYPICAL SECTIONS

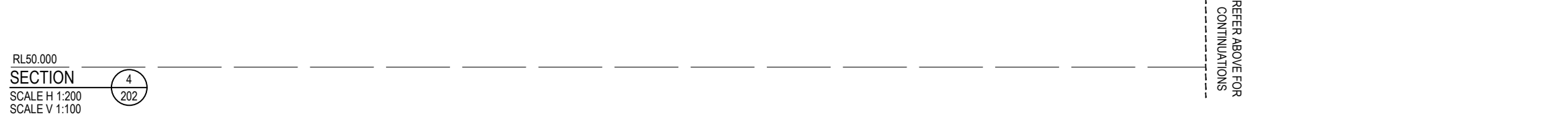
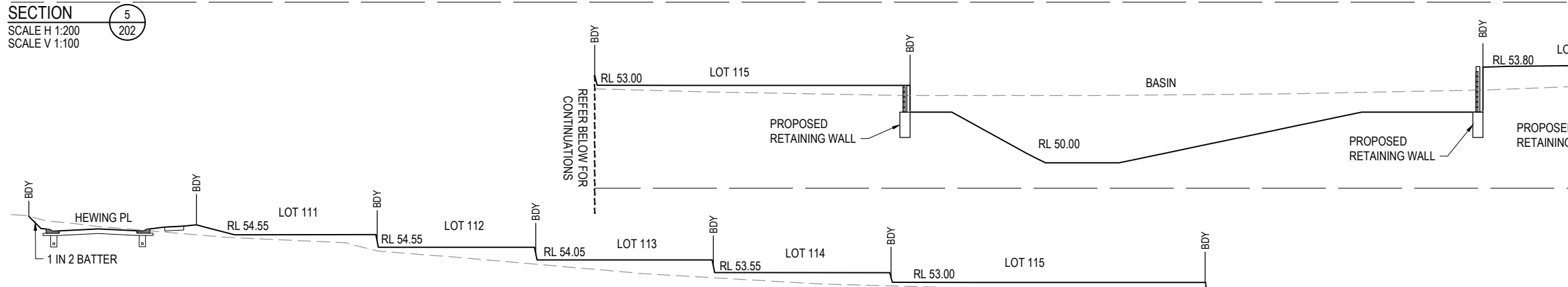
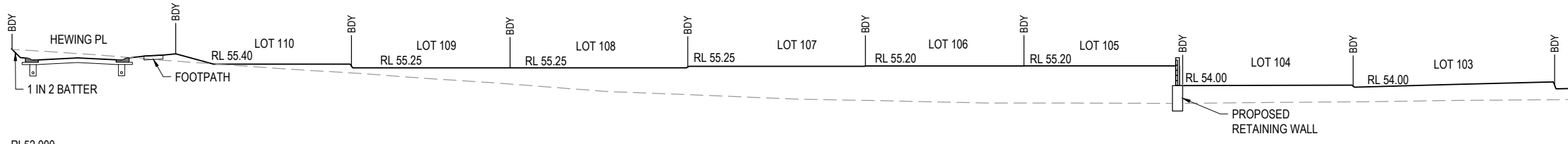
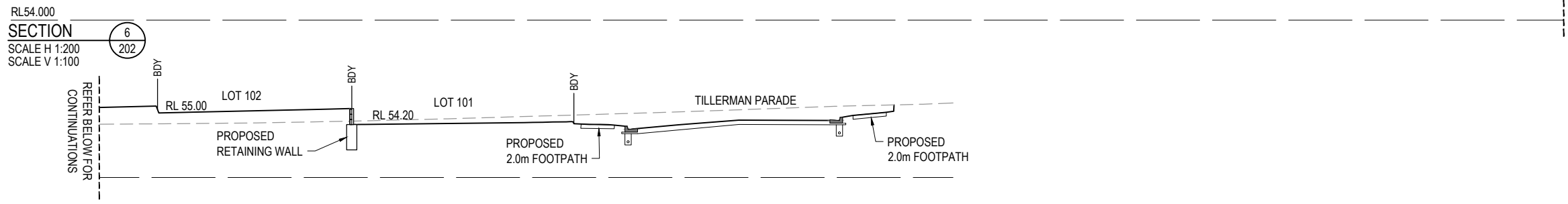
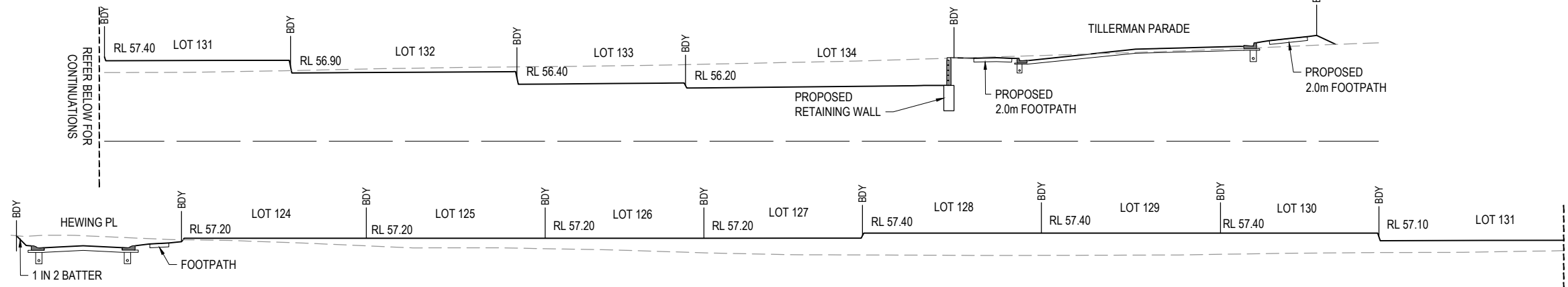
PROJECT No.	DRAWING No.	REVISION
22-0141	203	B



SECTION 7
SCALE 1:100 (A1)
SCALE 1:200 (A3)



SECTION 8
SCALE 1:100 (A1)
SCALE 1:200 (A3)



SECTION 4
SCALE H 1:200
SCALE V 1:100

AS-CONSTRUCTED CERTIFICATION
Signature: _____ Date: 29/01/24
DANIEL COLLINS RPEQ No. 18631
For and on behalf of Colliers International engineering & design pty ltd

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	25.01.23	CL	AK	ISSUE FOR CONSTRUCTION
B	29.01.24	CL	BP	AS CONSTRUCTED

DRAWN	STATUS
	AS CONSTRUCTED



SCALE
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1:200 0 1 2 3 4 5 A3
1:25 0 0.25 0.5 0.75 1.0 1.25 A1
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CLIENT
HB PARK RIDGE

PROJECT NAME
TILLERMAN PARK RIDGE
133-159 PARK RIDGE ROAD
PARK RIDGE (STAGE 1)

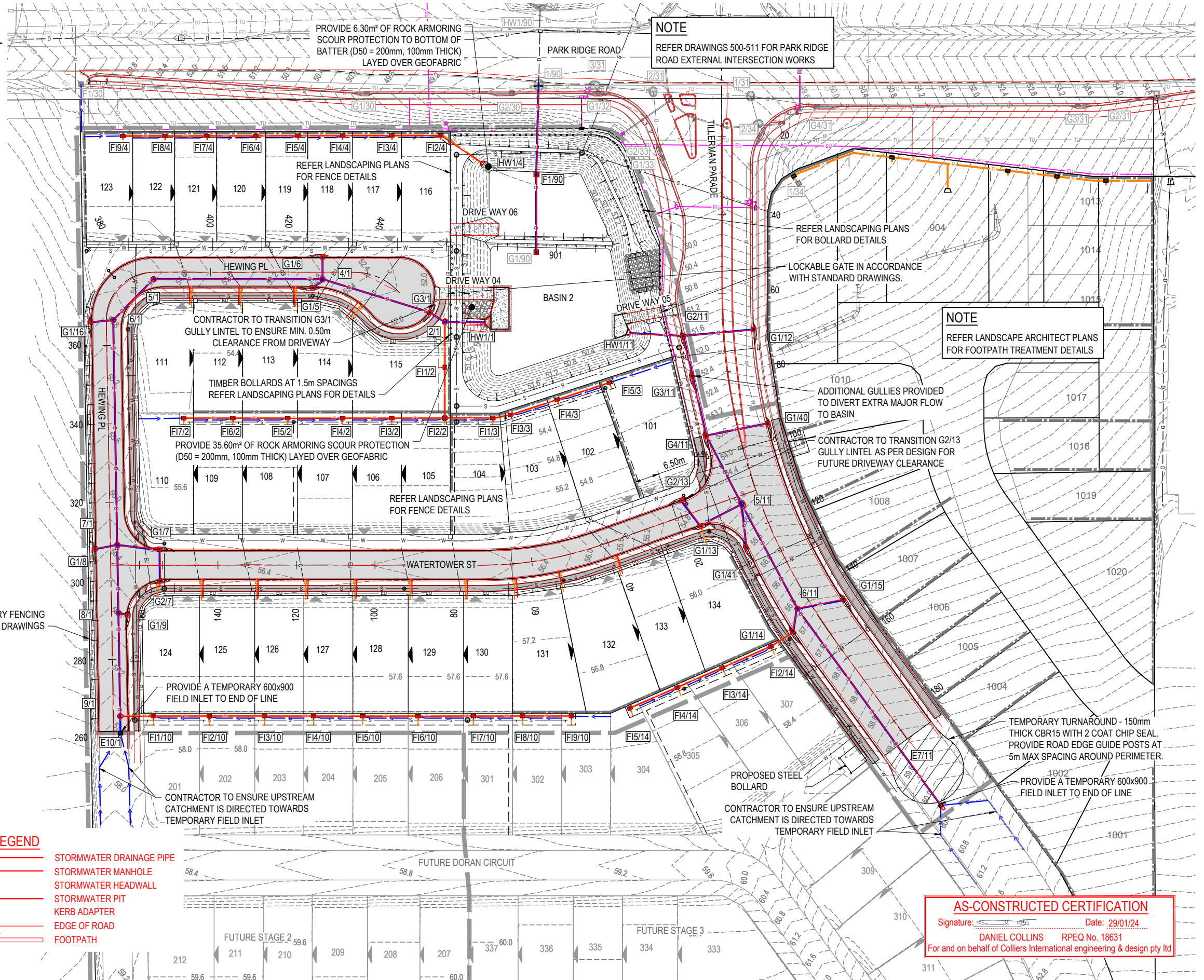
DRAWING TITLE
BULK EARTHWORKS TYPICAL SECTIONS

PROJECT No.	DRAWING No.	REVISION
22-0141	203A	B

FOR AND ON BEHALF OF PEAKURBAN PTY LTD

LEGEND

- PROPOSED AREA OF WORKS
- PROPOSED ROAD CONTROL LINE
- EXISTING ROAD CROWN
- PROPOSED KERB INVERT LINE
- PROPOSED KERB TRANSITION LOCATION
- PROPOSED CONCRETE PATH (FINISHED AS PER LANDSCAPE ARCHITECT PLANS)
- PROPOSED NEW ROAD PAVEMENT
- INDICATIVE DRIVEWAY LOCATION
- ZERO LOT BOUNDARY
- FINISHED SURFACE CONTOUR
- PROPOSED STORMWATER DRAINAGE PIPE
- EXISTING STORMWATER DRAINAGE PIPE
- EXTERNAL STORMWATER DRAINAGE PIPE
- PROPOSED ROOFWATER DRAINAGE PIPE
- PROPOSED DRAINAGE SWALE
- PROPOSED ROOFWATER KERB ADAPTOR WITH PIPE CONNECTION TO ALLOTMENT
- PROPOSED CONCRETE SLEEPER RETAINING WALL
- PROPOSED ENERGEX RETAINING WALL
- PROPOSED SEWERAGE MAIN
- EXISTING SEWERAGE MAIN
- PROPOSED WATER MAIN
- EXISTING WATER MAIN
- PROPOSED WATER CONDUIT
- EXISTING WATER CONDUIT
- PROPOSED AREA OF FILTER MEDIA
- PROPOSED FENCE
- PROPOSED BOLLARDS IN ACCORDANCE WITH IPWEAQ STD DRG GS-042



NOTE
REFER DRAWINGS 500-511 FOR PARK RIDGE ROAD EXTERNAL INTERSECTION WORKS

NOTE
REFER LANDSCAPE ARCHITECT PLANS FOR FOOTPATH TREATMENT DETAILS

ROOFWATER CONNECTION NOTE:
THE CONTRACTOR SHALL INSTALL A ROOFWATER CONNECTION TO EACH PROPERTY BY ONE OF THE FOLLOWING METHODS, AS SHOWN ON THE LAYOUT PLAN:

- TWO ROOFWATER KERB ADAPTOR 500mm FROM THE DOWNSTREAM BOUNDARY (UNLESS SHOWN ON A DIFFERENT ALIGNMENT). GALVANISED STEEL ROOFWATER CONNECTIONS ARE REQUIRED UNDER FOOTPATH. 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 THE LOCAL AUTHORITY STANDARDS.
- ONE 150Ø ROOFWATER PIPE CONNECTED TO PROPOSED STORMWATER GULLY PIT OR MANHOLE AT MINIMUM 1.0% GRADE WITH 1.0m COVER.

KERB TYPES NOTE:
REFER TO THE SURVEY SETOUT ENGINEERING DRAWING FOR KERB TYPES AND TRANSITION LOCATIONS

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 MAINS
- WATER MAINS
- SEWER MAINS



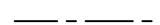

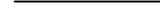
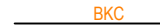




THE CONTRACTOR SHOULD CONTACT THE SERVICE PROVIDER FOR FURTHER INFORMATION AND SATISFY THEMSELVES OF ANY SPECIFIC TREATMENT OR REQUIREMENTS.

- ASCON LEGEND**
- STORMWATER DRAINAGE PIPE
 - STORMWATER MANHOLE
 - STORMWATER HEADWALL
 - STORMWATER PIT
 - KERB ADAPTER
 - EDGE OF ROAD
 - FOOTPATH








AS-CONSTRUCTED CERTIFICATION
Signature: _____ Date: 29/01/24
DANIEL COLLINS RPEQ No. 18631
For and on behalf of Colliers International engineering & design pty ltd

REV	DATE	DESIGN	DRAWN	REVISION DETAILS	DRAWN	STATUS	SCALE	CLIENT	PROJECT NAME	DRAWING TITLE
A	25.01.23	CL	AK	ISSUE FOR CONSTRUCTION		AS CONSTRUCTED	1:500 1:1000	HB PARK RIDGE	TILLERMAN PARK RIDGE	ROADWORKS AND DRAINAGE LAYOUT PLAN
B	12.05.23	CL	CL	AMENDED FOR TRUNK WATER MAIN APPROVAL				SAUNDERS HAVILL GROUP PH: 1300 123 744	133-159 PARK RIDGE ROAD PARK RIDGE (STAGE 1)	
C	29.01.24	CL	BP	AS CONSTRUCTED						
					DESIGN APPROVED DANIEL COLLINS RPEQ 18631					
					FOR AND ON BEHALF OF PEAKURBAN PTY LTD					
									PROJECT No. 22-0141 DRAWING No. 204 REVISION C	

LEGEND

-  PROPOSED AREA OF WORKS
-  PROPOSED NEW ROAD PAVEMENT
-  PROPOSED ROAD CONTROL LINE
-  PROPOSED MOUNTABLE KERB AND CHANNEL 'TYPE M3'
-  PROPOSED BARRIER KERB AND CHANNEL 'TYPE B1'
-  PROPOSED CONCRETE PATH (FINISHED AS PER LANDSCAPE ARCHITECT PLANS)
-  INDICATIVE DRIVEWAY LOCATION
-  ZERO LOT BOUNDARY
-  PROPOSED EASEMENT
-  PROPOSED KERB TRANSITION LOCATION

ASCON LEGEND

-  STORMWATER DRAINAGE PIPE
-  STORMWATER MANHOLE
-  STORMWATER HEADWALL
-  STORMWATER PIT
-  KERB ADAPTER
-  EDGE OF ROAD
-  FOOTPATH

NOTE - KERB TYPES:
REFER TO IPWEA STD DRG RS-080 FOR DETAILS

CONTROL LINE SETOUT - DRIVEWAY 05

PT	CHAINAGE	EASTING	NORTHING	BEARING
IP 1	0.000	505326.463	935912.162	269°06'58.32"
IP 2	14.512	505311.952	935911.938	269°06'58.32"

CONTROL LINE SETOUT - DRIVEWAY 04

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	505321.169	935771.467	33°54'28.39"			
TC	6.758	505324.939	935777.076	33°54'28.39"			
IP 2	9.137	505326.292	935779.088		R = 10.000	4.758	27°15'31.26"
CT	11.516	505328.416	935780.257	61°09'59.66"			
IP 3	39.409	505352.851	935793.710	61°09'59.66"			

CONTROL LINE SETOUT - TILLERMAN PARADE

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	505347.825	935973.396	189°32'22.12"			
IP 2	10.315	505346.116	935963.224				
TC	60.268	505337.838	935913.961	189°32'18.37"			
IP 3	107.404	505329.759	935865.884		R = -150.000	94.272	36°00'33.98"
CT	154.541	505351.490	935822.243	153°31'44.39"			
TC	224.759	505382.789	935759.387	153°31'44.39"			
IP 4	271.869	505404.507	935715.772		R = 150.000	94.221	35°59'22.56"
CT	318.979	505396.450	935667.720	189°31'06.96"			
IP 5	691.197	505334.897	935300.627	189°31'06.96"			

CONTROL LINE SETOUT - WATERTOWER ST

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	505337.999	935863.308	260°09'44.84"			
TC	41.346	505297.261	935856.244	260°09'44.84"			
IP 2	57.021	505281.666	935853.540		R = 92.250	31.350	19°28'15.39"
CT	72.696	505266.062	935856.189	279°38'00.23"			
IP 3	167.337	505172.755	935872.026	279°38'00.23"			

CONTROL LINE SETOUT - HEWING PL

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	505125.820	935571.645	9°38'00.23"			
IP 2	76.209	505138.573	935646.779				
TC	366.434	505182.117	935933.719	8°37'44.23"			
IP 3	375.964	505183.949	935945.793		R = 12.000	19.060	91°00'16.00"
CT	385.494	505195.989	935943.749	99°38'00.23"			
TC	436.739	505246.511	935935.174	99°38'00.23"			
IP 4	442.629	505252.637	935934.134		R = 15.000	11.781	45°00'00.00"
CT	448.520	505256.233	935929.068	144°38'00.23"			
IP 5	449.731	505256.934	935928.080	144°38'00.23"			

NOTE - DRIVEWAY CROSSOVERS:
ALL DRIVEWAY CROSSOVERS IN ACCORDANCE WITH IPWEAQ STD. DRG. RS-049

NOTE - KERB RAMPS:
KERB RAMPS TO BE DISABLE COMPLIANT TO LCC STD DRGS 8-00411 TO 8-00413

NOTE
REFER LANDSCAPE ARCHITECT PLANS FOR FOOTPATH TREATMENT DETAILS

NOTE

REFER DRAWINGS 500-511 FOR PARK RIDGE ROAD EXTERNAL INTERSECTION WORKS

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	25.01.23	CL	AK	ISSUE FOR CONSTRUCTION
B	29.01.24	CL	BP	AS CONSTRUCTED

DRAWN	STATUS
AS CONSTRUCTED	



SCALE
1:500 10 5 0 10 20 A1 1:1000

CLIENT
HB PARK RIDGE

PROJECT NAME
TILLERMAN PARK RIDGE

DRAWING TITLE
SURVEY SETOUT AND KERB TYPES LAYOUT PLAN

AS-CONSTRUCTED CERTIFICATION
Signature:  Date: 29/01/24
DANIEL COLLINS RPEQ No. 18631
For and on behalf of Colliers International engineering & design pty ltd

ASSOCIATED CONSULTANT	PROJECT No.	DRAWING No.	REVISION
SAUNDERS HAVILL GROUP PH: 1300 123 744	22-0141	205	B

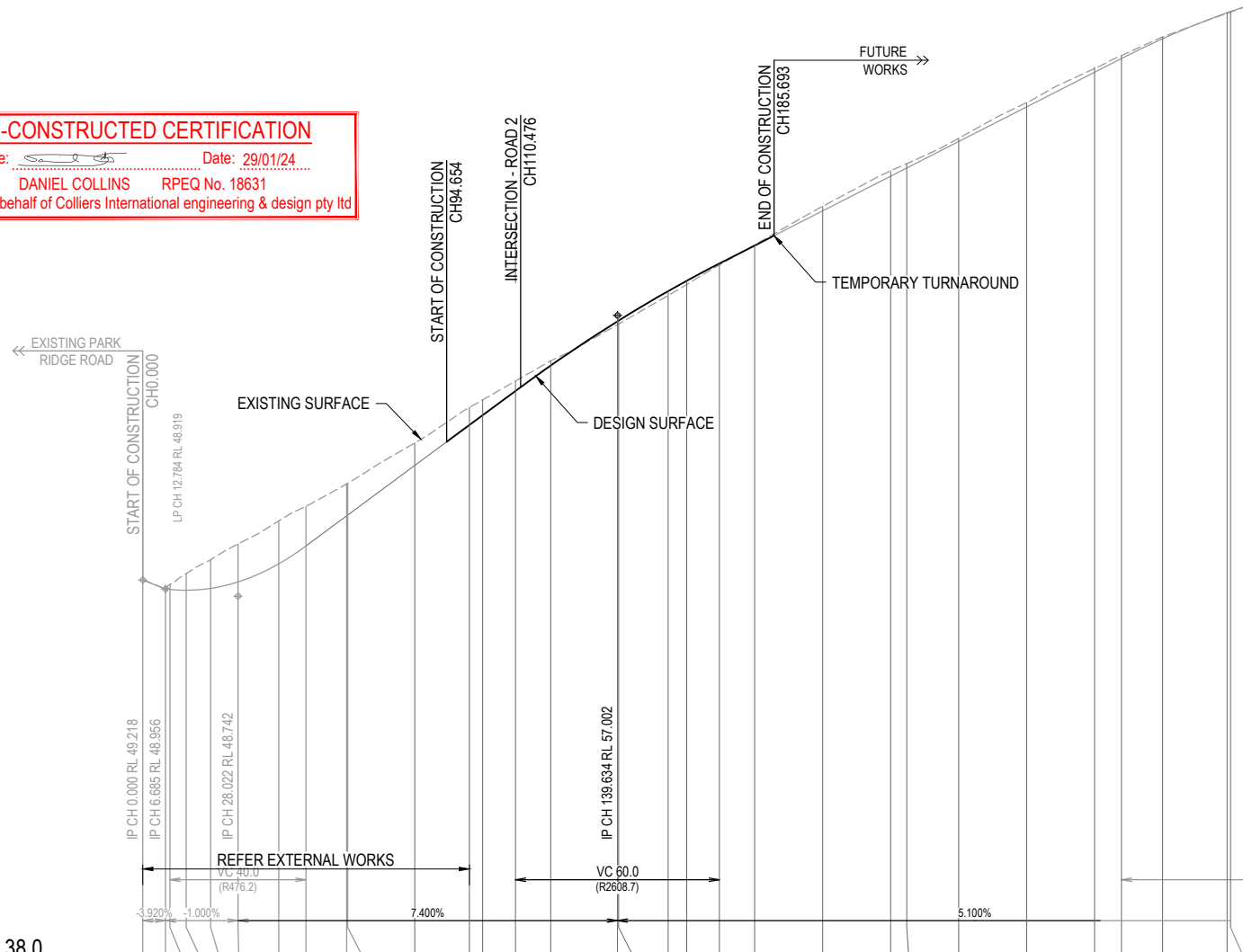
ASSUMED PAVEMENT DETAILS (SUBJECT TO CBR TESTING)

ROAD	ROAD CLASSIFICATION	DESIGN ESAS	ASSUMED CBR	SURFACING	BASE	SUB BASE	LOWER SUB BASE	TOTAL DEPTH
TILLERMAN PARADE	URBAN COLLECTOR	6.4 x 10 ⁶	3	50mm	300mm	100mm	170mm	620mm

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. THE PAVEMENT DESIGN IS SUBJECT TO A SEPARATE PAVEMENT DESIGN APPROVAL BY COUNCIL.

AS-CONSTRUCTED CERTIFICATION

Signature:  Date: 29/01/24
DANIEL COLLINS RPEQ No. 18631
 For and on behalf of Colliers International engineering & design pty ltd



DATUM RL 38.0

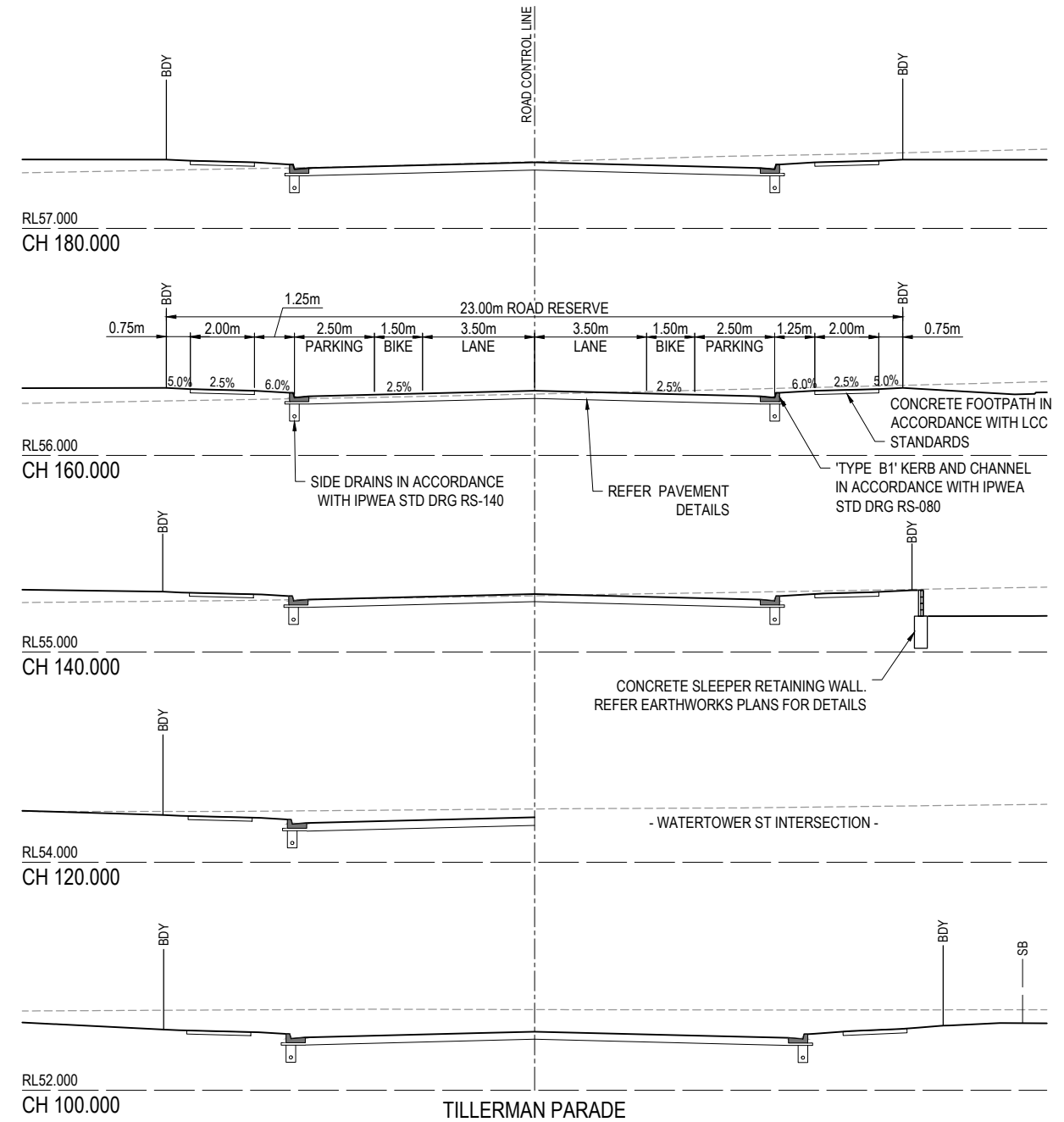
	0+000	0+100	0+200	0+300	0+400	0+500	0+600	0+700	0+800	0+900	0+1000	0+1100	0+1200	0+1300	0+1400	0+1500	0+1600	0+1700	0+1800	0+1900	0+2000	0+2100	0+2200	0+2300	0+2400	0+2500	0+2600	0+2700	0+2800	0+2900	0+3000		
CUT (-) / FILL	-0.000	-0.000	-0.143	-0.489	-0.647	-1.116	-1.260	-1.168	-0.941	-0.937	-0.662	-0.451	-0.292	-0.136	0.099	0.101	0.126	0.109	0.044	-0.022	-0.133	-0.156	-0.127	-0.093	-0.124	-0.110	-0.085	-0.052	0.017	0.017	0.017		
LHS LIP LEVEL	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#		
RHS LIP LEVEL	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	
DESIGN SURFACE	49.218	48.956	48.942	48.919	48.913	49.162	49.696	50.222	51.109	51.129	52.589	54.069	54.782	55.528	56.829	56.852	57.718	58.023	58.532	59.060	60.080	61.100	61.343	62.120	63.140	64.160	64.563	65.144	65.911	65.947	65.947	65.947	
EXISTING SURFACE	49.218	48.956	48.942	48.919	48.913	49.162	49.696	50.222	51.109	51.129	52.589	54.069	54.782	55.528	56.829	56.852	57.718	58.023	58.532	59.060	60.080	61.100	61.343	62.120	63.140	64.160	64.563	65.144	65.911	65.947	65.947	65.947	65.947
CHAINAGES	0+000	6+685	8+022	12+784	20+000	28+022	40+000	48+022	60+000	60+268	80+000	100+000	105+634	120+000	139+634	140+000	154+541	160+000	169+634	180+000	200+000	220+000	224+759	240+000	260+000	280+000	287+902	300+000	318+979	320+000	320+000	320+000	
HORIZONTAL CURVES	R-150.000															R150.000																	

REFER INTERSECTION DETAIL DRAWINGS FOR LIP LEVELS

TILLERMAN PARADE


AS-CONSTRUCTED PAVEMENT DETAILS

LOCATION	SECTION	ESA	DESIGN CBR	TOTAL PAVEMENT DEPTH	A C	BASE COURSE TYPE (1)	UPPER SUB-BASE TYPE (2)	LOWER SUB-BASE TYPE (3)	SUBGRADE TREATMENT
TILLERMAN PARADE	CH0 - CH120	6.4 x 10 ⁶ UC	4.5%	555mm	50mm	300mm	100mm	105mm	-
TILLERMAN PARADE	CH120 - CH185.693	6.4 x 10 ⁶ UC	10.0%	450mm	50mm	300mm	100mm	-	-



REV	DATE	DESIGN	DRAWN	ISSUE FOR CONSTRUCTION
A	25.01.23	CL	AK	ISSUE FOR CONSTRUCTION
B	29.01.24	CL	BP	AS CONSTRUCTED

DRAWN	STATUS	DESIGN
	AS CONSTRUCTED	APPROVED
		DANIEL COLLINS
		RPEQ 18631



SCALE	CLIENT	PROJECT NAME	DRAWING TITLE
1:100 1:200 1:1000 1:2000	HB PARK RIDGE	TILLERMAN PARK RIDGE	TILLERMAN PARADE LONGITUDINAL SECTION AND CROSS SECTIONS
	ASSOCIATED CONSULTANT SAUNDERS HAVILL GROUP PH: 1300 123 744	133-159 PARK RIDGE ROAD PARK RIDGE (STAGE 1)	PROJECT No. 22-0141 DRAWING No. 206 REVISION B

ASSUMED PAVEMENT DETAILS (SUBJECT TO CBR TESTING)

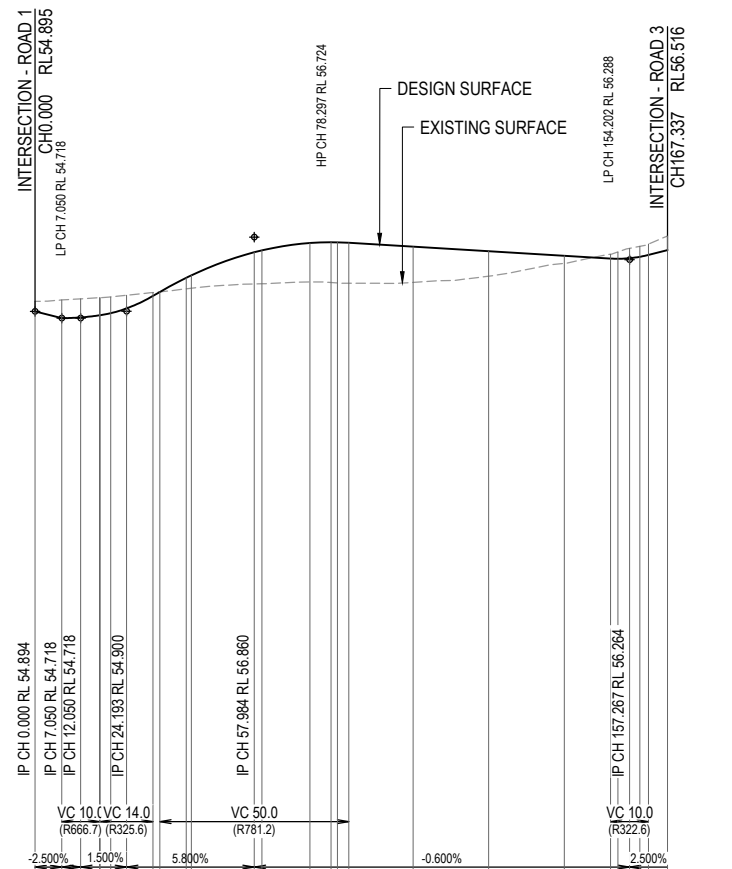
ROAD	ROAD CLASSIFICATION	DESIGN ESAS	ASSUMED CBR	SURFACING	BASE	SUB BASE	LOWER SUB BASE	TOTAL DEPTH
WATERTOWER ST	URBAN ACCESS ROAD	5.9 x 10 ⁵	3	35mm	150mm	150mm	200mm	535mm

AS-CONSTRUCTED PAVEMENT DETAILS

LOCATION	SECTION	ESA	DESIGN CBR	TOTAL PAVEMENT DEPTH	A C	BASE COURSE TYPE (1)	UPPER SUB-BASE TYPE (2)	LOWER SUB-BASE TYPE (3)	SUBGRADE TREATMENT
WATERTOWER STREET	CH0 - CH20	5.9 x 10 ⁵ UAR	2.5%	695mm	35mm	150mm	100mm	410mm	-
WATERTOWER STREET	CH20 - CH140	5.9 x 10 ⁵ UAR	10.0%	335mm	35mm	150mm	150mm	-	-
WATERTOWER STREET	CH140 - CH167.337	5.9 x 10 ⁵ UAR	2.5%	695mm	35mm	150mm	100mm	410mm	-

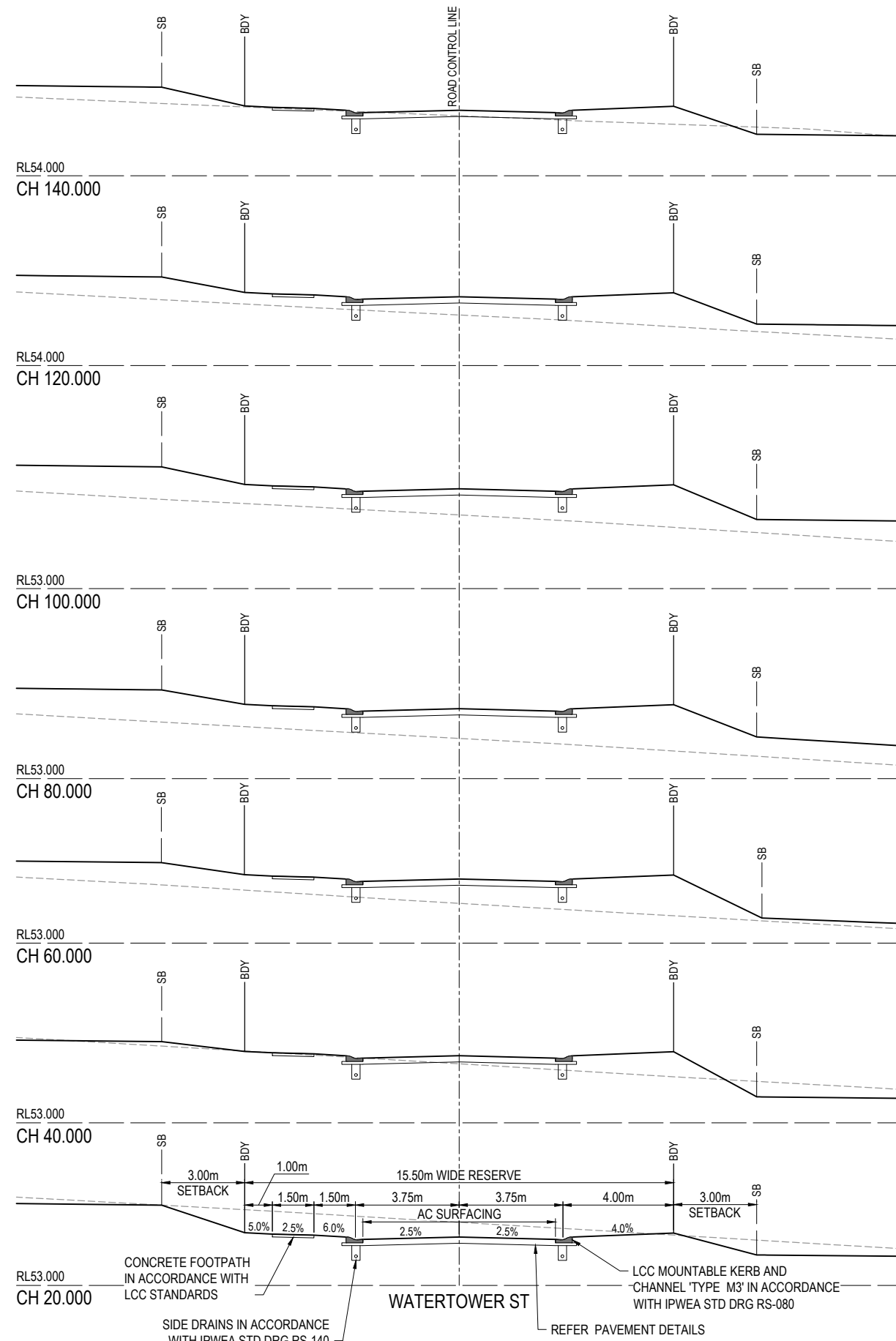
NOTE: THIS PAVEMENT DESIGN IS PRELIMINARY ONLY BASED ON AN ASSUMED CBR. THE CONTRACTOR SHALL SUPPLY THE SUPERINTENDENT WITH SUBGRADE TEST RESULTS NECESSARY FOR FINAL PAVEMENT DESIGN. THE PAVEMENT DESIGN IS SUBJECT TO A SEPARATE PAVEMENT DESIGN APPROVAL BY COUNCIL.

AS-CONSTRUCTED CERTIFICATION
 Signature: _____ Date: 29/01/24
 DANIEL COLLINS RPEQ No. 18631
 For and on behalf of Colliers International engineering & design pty ltd



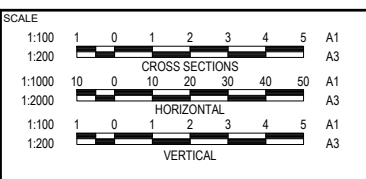
DATUM RL 39.0		CUT (-) / FILL	
		-0.268	-0.481
		-0.492	-0.465
		-0.464	-0.429
		-0.348	-0.090
		-0.003	0.340
		0.835	0.880
		0.944	0.660
		0.201	0.114
		-0.180	-0.261
		-0.276	-0.287
		-0.375	
LHS LIP LEVEL	#	54.709	54.712
RHS LIP LEVEL	#	54.762	54.888
DESIGN SURFACE		54.894	54.718
EXISTING SURFACE		55.162	55.198
CHAINAGES		0.000	7.050
HORIZONTAL CURVES			R92.250

REFER INTERSECTION DETAIL DRAWINGS FOR LIP LEVELS WATERTOWER ST



REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	25.01.23	CL	AK	ISSUE FOR CONSTRUCTION
B	29.01.24	CL	BP	AS CONSTRUCTED

DRAWN	STATUS
	AS CONSTRUCTED
DESIGN	APPROVED
DANIEL COLLINS	RPEQ 18631



CLIENT
HB PARK RIDGE

ASSOCIATED CONSULTANT
 SAUNDERS HAVILL GROUP
 PH: 1300 123 744

PROJECT NAME
TILLERMAN PARK RIDGE

133-159 PARK RIDGE ROAD
 PARK RIDGE (STAGE 1)

DRAWING TITLE
WATERTOWER STREET LONGITUDINAL SECTION AND CROSS SECTIONS

PROJECT No. **22-0141**
 DRAWING No. **207**
 REVISION **B**

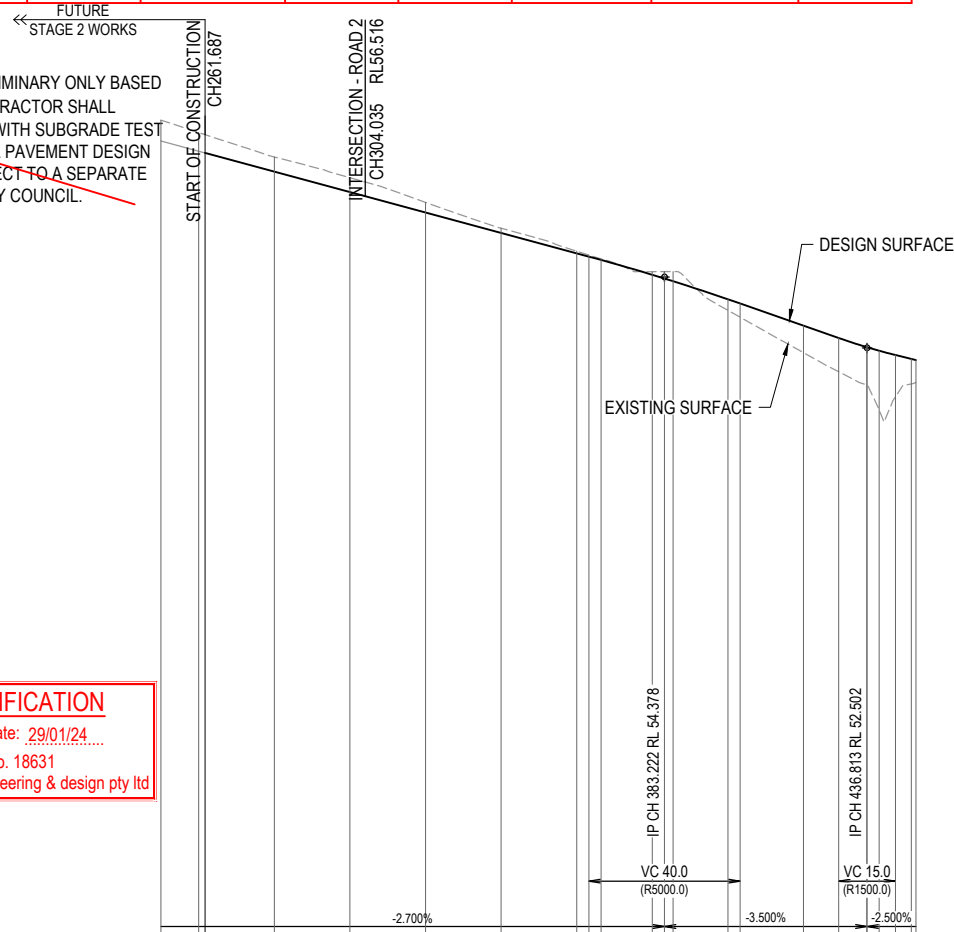
ASSUMED PAVEMENT DETAILS (SUBJECT TO CBR TESTING)

ROAD	ROAD CLASSIFICATION	DESIGN ESAS	ASSUMED CBR	SURFACING	BASE	SUB BASE	LOWER SUB BASE	TOTAL DEPTH
HEWING PL	URBAN ACCESS ROAD	5.9 x 10 ⁵	3	35mm	150mm	150mm	200mm	535mm

AS-CONSTRUCTED PAVEMENT DETAILS

LOCATION	SECTION	ESA	DESIGN CBR	TOTAL PAVEMENT DEPTH	A C	BASE COURSE TYPE (1)	UPPER SUB-BASE TYPE (2)	LOWER SUB-BASE TYPE (3)	SUBGRADE TREATMENT
HEWING PLACE	CH261.688 - CH400	5.9 x 10 ⁵ UAR	3.5%	485mm	35mm	150mm	100mm	200mm	-
HEWING PLACE	CH400 - CH449.731	5.9 x 10 ⁵ UAR	5.0%	405mm	35mm	150mm	100mm	120mm	-

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. THE PAVEMENT DESIGN IS SUBJECT TO A SEPARATE PAVEMENT DESIGN APPROVAL BY COUNCIL.



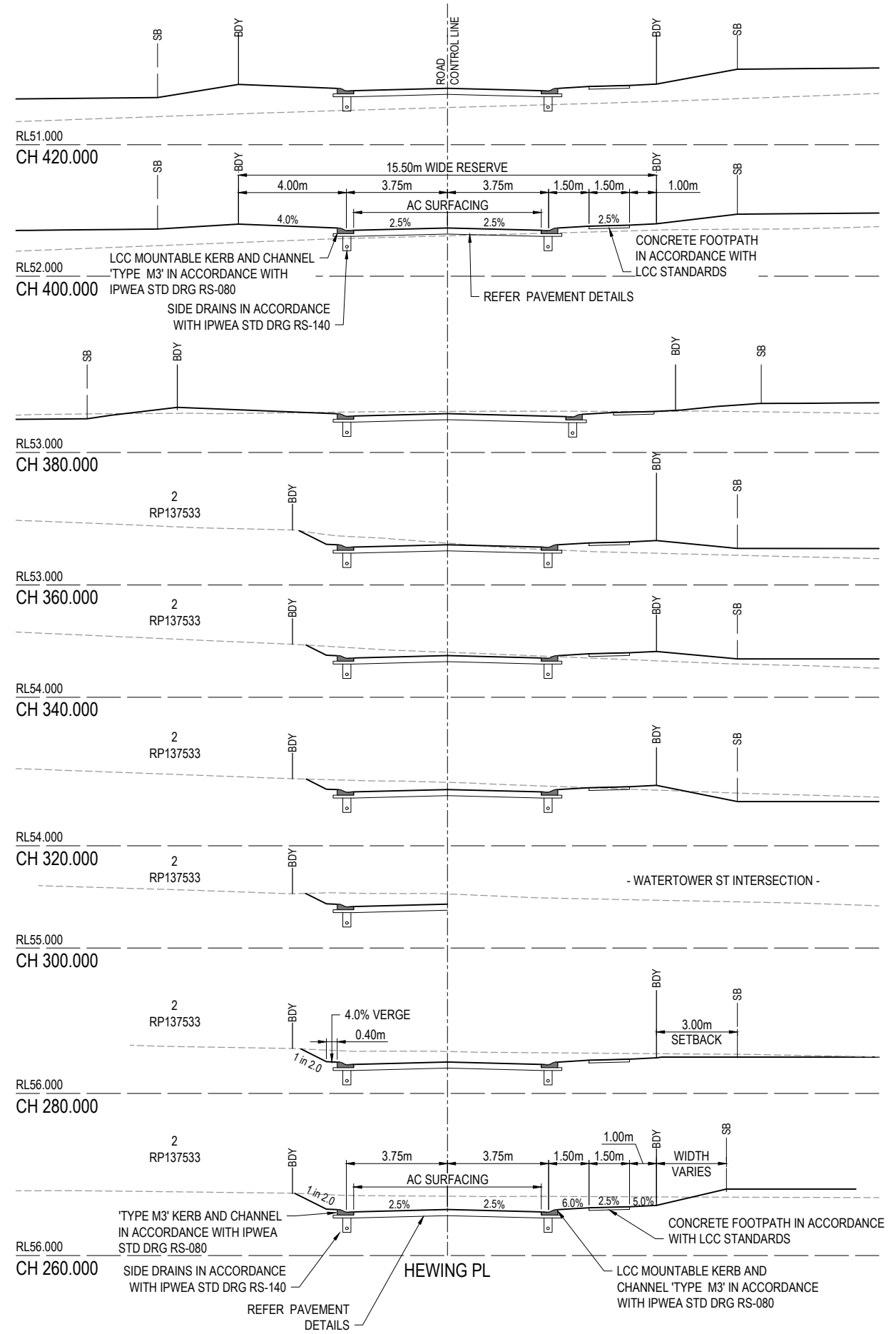
AS-CONSTRUCTED CERTIFICATION
 Signature: _____ Date: 29/01/24
 DANIEL COLLINS RPEQ No. 18631
 For and on behalf of Colliers International engineering & design pty ltd

DATUM RL 36.0

CUT (-) / FILL	LHS LIP LEVEL	RHS LIP LEVEL	DESIGN SURFACE	EXISTING SURFACE	CHAINAGES	HORIZONTAL CURVES
-0.515	57.812	57.815	57.975	58.529	250.000	
-0.494	57.616	57.618	57.705	58.199	260.000	
-0.390	57.082	57.078	57.165	57.555	280.000	
-0.380	#	#	56.625	57.005	300.000	
-0.266	56.002	55.998	56.085	56.351	320.000	
-0.124	55.462	55.458	55.545	55.669	340.000	
-0.057	54.922	54.918	55.005	55.062	360.000	R12.000
-0.042	54.835	54.831	54.918	54.959	363.222	
-0.027	54.748	54.736	54.830	54.857	366.434	
-0.083	54.350	54.327	54.437	54.519	380.000	
-0.184	54.251	54.236	54.338	54.522	383.222	
-0.255	54.180	54.173	54.267	54.522	385.494	
0.292	53.703	53.703	53.790	53.498	400.000	
0.362	53.591	53.591	53.678	53.315	403.222	
0.713	53.004	53.004	53.091	52.378	420.000	
0.890	52.678	52.678	52.765	51.875	429.313	
0.996	56.689	56.689	52.523	51.528	436.739	
1.117	52.315	52.315	52.521	51.525	436.813	
0.659	52.210	52.210	52.429	50.868	440.000	
0.591	52.179	52.179	52.315	51.198	444.313	
			52.210	51.550	448.520	
			52.179	51.588	449.731	

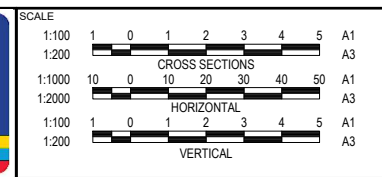
REFER INTERSECTION DETAIL DRAWINGS FOR LIP LEVELS

HEWING PL



REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	25.01.23	CL	AK	ISSUE FOR CONSTRUCTION
B	29.01.24	CL	BP	AS CONSTRUCTED

DRAWN	STATUS
DANIEL COLLINS	AS CONSTRUCTED



CLIENT: HB PARK RIDGE
 ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP
 PH: 1300 123 744

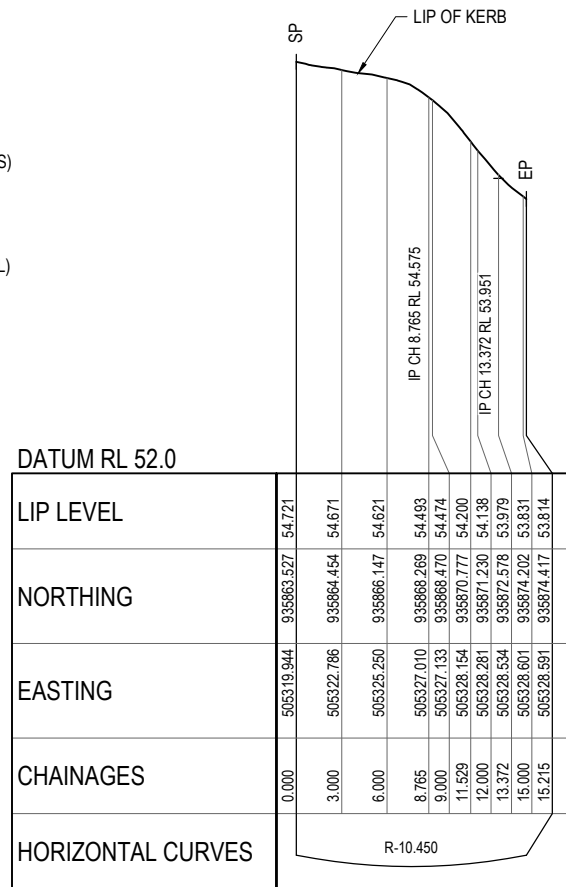
PROJECT NAME: TILLERMAN PARK RIDGE
 133-159 PARK RIDGE ROAD
 PARK RIDGE (STAGE 1)

DRAWING TITLE	PROJECT No.	DRAWING No.	REVISION
HEWING PLACE LONGITUDINAL SECTION AND CROSS SECTIONS	22-0141	208	B

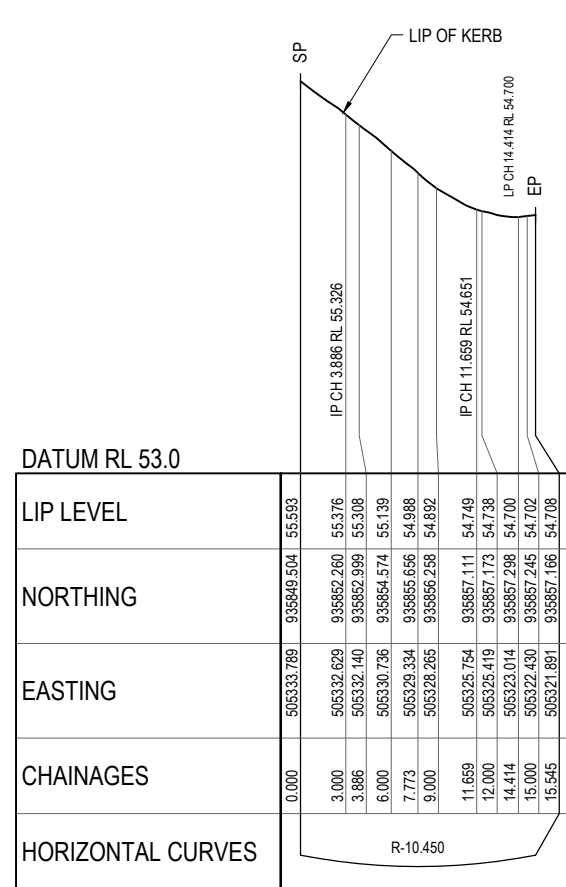
LEGEND

- PROPOSED ROAD CONTROL LINE
- PROPOSED KERB INVERT LINE
- PROPOSED KERB TRANSITION LOCATION
- PROPOSED KERB SETOUT NODE
- PROPOSED CONCRETE PATH (FINISHED AS PER LANDSCAPE ARCHITECT PLANS)
- PROPOSED NEW ROAD PAVEMENT
- INDICATIVE DRIVEWAY LOCATION
- PROPOSED PAVEMENT CONTOUR (0.2m INTERVAL)
- PROPOSED KERB SETOUT LINE
- PROPOSED KERB SETOUT START POINT
- PROPOSED KERB SETOUT END POINT
- PROPOSED SLEEPER RETAINING WALL
- PROPOSED STORMWATER DRAINAGE PIPE
- EXISTING STORMWATER DRAINAGE PIPE
- PROPOSED SEWERAGE MAIN
- PROPOSED WATER MAIN
- PROPOSED WATER CONDUIT
- PROPOSED EXPANSION/CONSTRUCTION JOINT
- PROPOSED SAWN CONTRACTION JOINT

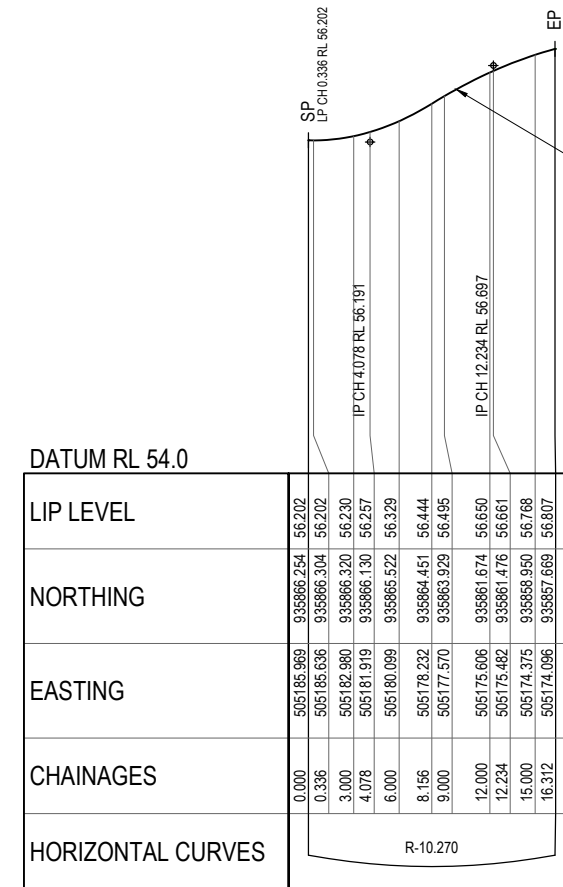
ASCON LEGEND
 AS CONSTRUCTED CONTOUR



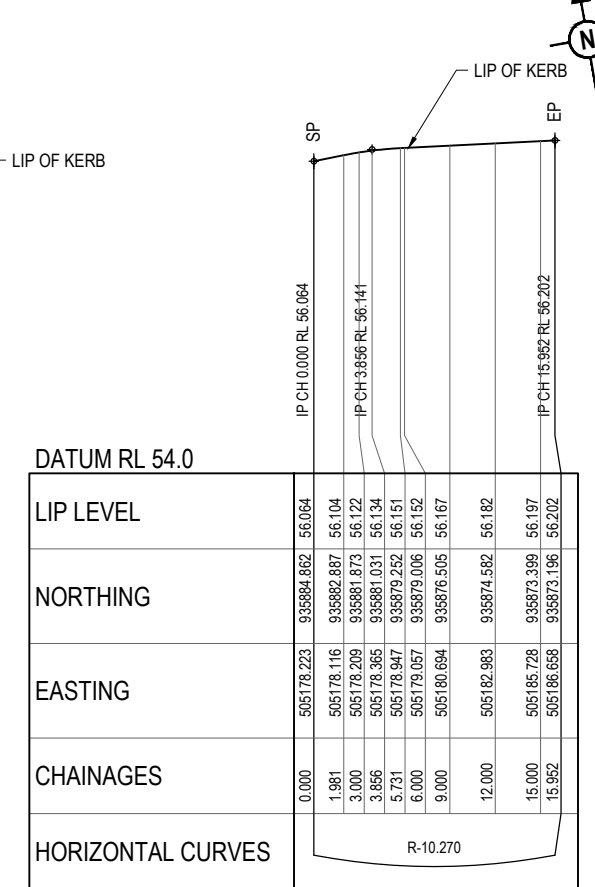
KR 03



KR 04



KR 09



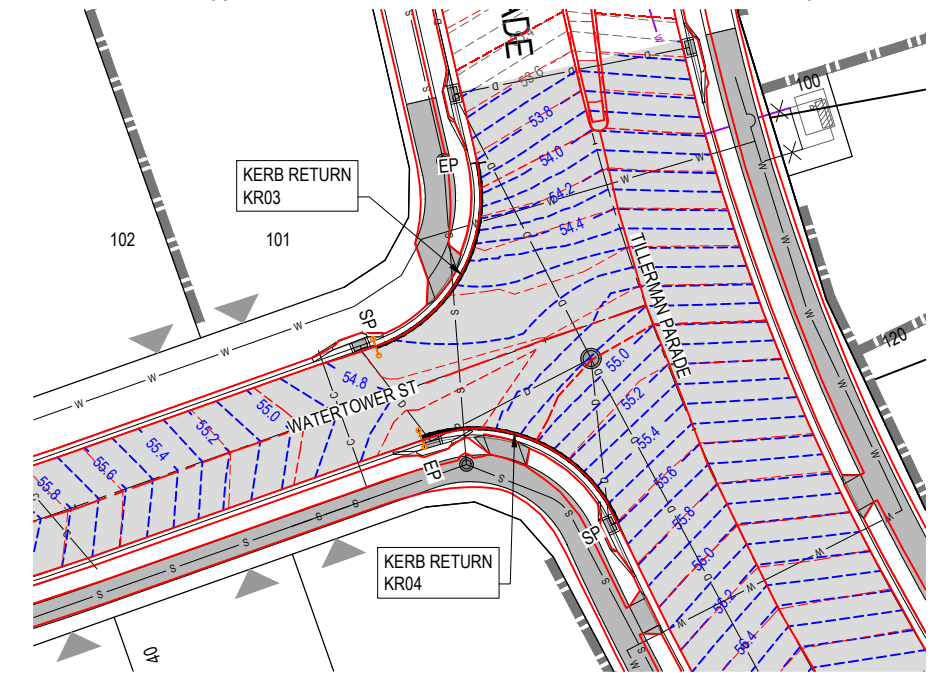
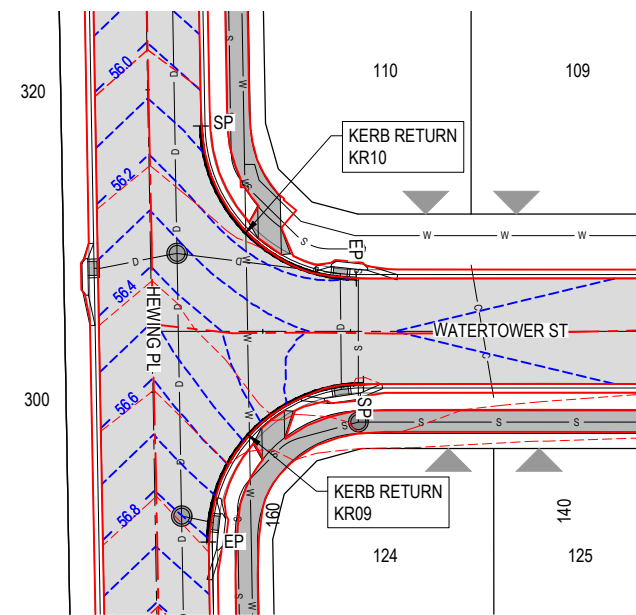
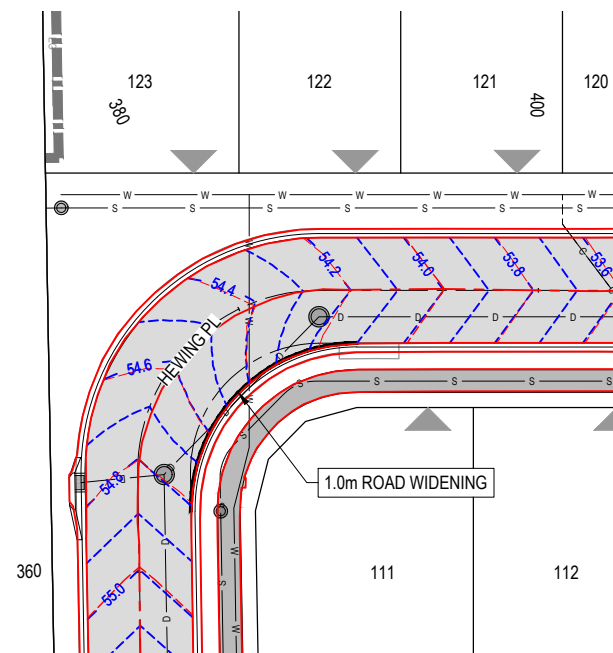
KR 10

NOTE
 REFER LANDSCAPE ARCHITECTS PLANS FOR FOOTPATH TREATMENT DETAILS

KERB TYPES NOTE:
 REFER TO THE SURVEY SETOUT ENGINEERING DRAWING FOR KERB TYPES AND TRANSITION LOCATIONS

DRIVEWAY CONCRETE NOTES:
 • DRIVEWAY CONCRETE TO BE 175mm THICK (N32), COLOUR 'SANDSTONE', SL82 MESH WITH 50 TOP COVER, ON 150mm THICK BASE COURSE TYPE 2.1

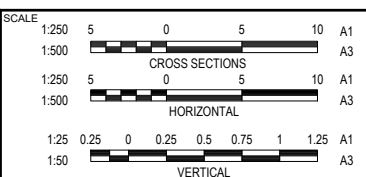
WARNING! - EXISTING SERVICES
 EXTREME CARE SHOULD BE TAKEN WHEN EXCAVATING IN THIS AREA. THE FOLLOWING EXISTING SERVICES ARE LIKELY TO BE PRESENT IN THE VICINITY OF THE SITE:
 - ELECTRICAL CABLES
 - TELECOMMUNICATIONS CABLES
 - GAS MAINS
 - WATER MAINS
 - SEWER MAINS
 THE CONTRACTOR SHOULD CONTACT THE SERVICE PROVIDER FOR FURTHER INFORMATION AND SATISFY THEMSELVES OF ANY SPECIFIC TREATMENT OR REQUIREMENTS.



AS-CONSTRUCTED CERTIFICATION
 Signature: _____ Date: 29/01/24
 DANIEL COLLINS RPEQ No. 18631
 For and on behalf of Colliers International engineering & design pty ltd

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	25.01.23	CL	AK	ISSUE FOR CONSTRUCTION
B	29.01.24	CL	BP	AS CONSTRUCTED

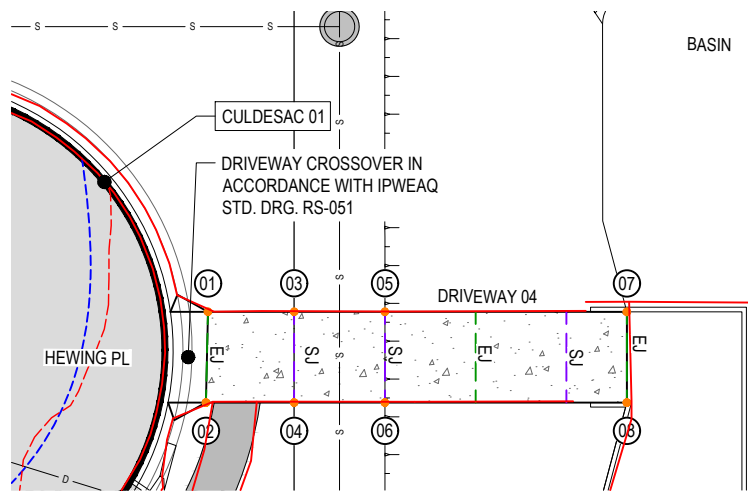
DRAWN	STATUS
AS CONSTRUCTED	



CLIENT
HB PARK RIDGE
 ASSOCIATED CONSULTANT
 SAUNDERS HAVILL GROUP
 PH: 1300 123 744

PROJECT NAME
TILLERMAN PARK RIDGE
 133-159 PARK RIDGE ROAD
 PARK RIDGE (STAGE 1)

DRAWING TITLE		
INTERSECTION DETAILS LAYOUT PLAN SHEET 1 OF 2		
PROJECT No.	DRAWING No.	REVISION
22-0141	209	B



STEP 1:
INITIAL CUT TO DEPTH T/4 (T/3 FOR STEEL FIBRE REINFORCED CONCRETE AS SOON AS POSSIBLE AND WITHIN 18 HOURS OF POURING CONCRETE. INSERT POLYURETHANE BACKING ROD TO PREVENT INGRESS OF DIRT UNTIL SEALANT APPLIED (MIN 28 DAYS LATER). ROD DIAMETER TO BE MIN. 1.25 x CUT WIDTH.

STEP 2:
REMOVE ALL DIRT FROM SAW CUT, USING HIGH PRESSURED COMPRESSED AIR. REPLACE BACKING ROD WITH LARGER DIAMETER IF LOOSE. PUSH BACKING ROD INTO SAW CUT 1mm BELOW DEPTH 'D'. IF NECESSARY, REMOVE AND REPLACE BACKING ROD. WIDEN SAW CUT TO WIDTH 'W' AND DEPTH 'D' WITH ADDITIONAL SAW CUTS. REMOVE ALL FOREIGN MATERIAL USING HIGH PRESSURE WATER WASH. DRY USING HIGH PRESSURE COMPRESSED AIR AND ALLOW ADDITIONAL 16 HRS TO DRY THOROUGHLY. INSTALL POLYETHYLENE BOND BREAKER TAPE. PRIME FACES OF CUT CONCRETE (REFER TABLE) INSTALL SEALANT AS SPECIFIED (REFER TABLE) IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

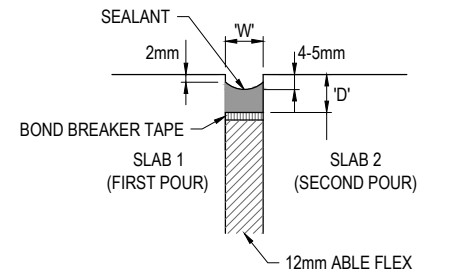
POINT	EASTING	NORTHING	HEIGHT
01	505267.155	935927.639	52.064
02	505266.587	935924.692	52.042
03	505269.964	935927.162	52.000
04	505269.462	935924.204	52.000
05	505272.922	935926.660	51.479
06	505272.420	935923.702	51.479
07	505280.809	935925.319	50.000
08	505280.307	935922.364	50.000

POINT	EASTING	NORTHING	HEIGHT
10	505324.743	935913.386	51.216
11	505324.811	935910.887	51.394
12	505321.917	935913.342	51.488
13	505322.059	935910.844	51.478
14	505320.135	935913.314	51.700
15	505320.828	935910.824	51.700
16	505317.036	935913.265	51.700
17	505317.728	935910.776	51.700
18	505311.952	935913.185	50.000
19	505312.426	935910.692	50.000

LOCATION	SEALANT	PRIMER
AREAS SUBJECT TO FUEL SPILLAGE	THIOFLEX 600	FOSROC PRIMER 14
OTHER EXTERNAL PAVEMENTS	EMER-ROAD SEAL SL	FOSROC PRIMER 10

ALTERNATIVE SEALANTS MUST HAVE

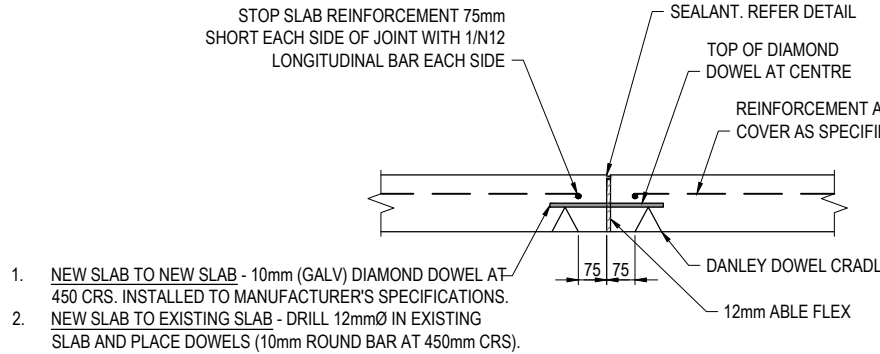
- MOVEMENT ACCOMMODATION FACTOR +/- 50%
- PRIMER TO MANUFACTURER'S SPECIFICATION
- INSTALLATION TO MANUFACTURER'S RECOMMENDATIONS
- PRIOR APPROVAL BY SUPERINTENDENT.



EXPANSION/ CONSTRUCTION JOINT SEALANT DETAILS
1:1 (A1)
1:2 (A3)

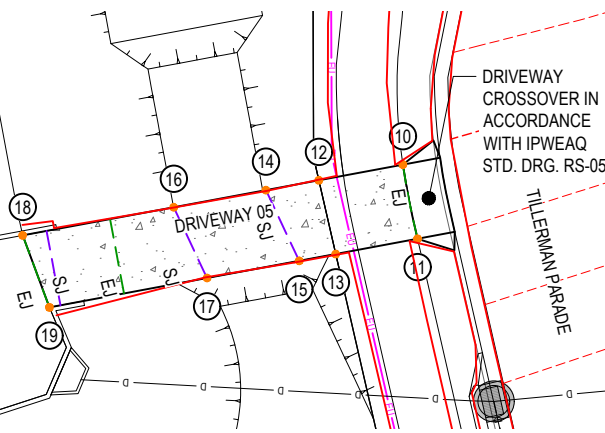
DRIVEWAY CONCRETE NOTES:

- DRIVEWAY CONCRETE TO BE 175mm THICK (N32), SL72 MESH WITH 50 TOP COVER, ON 150mm THICK BASE COURSE TYPE 2.1. FINISHED TO LANDSCAPE ARCHITECT PLANS

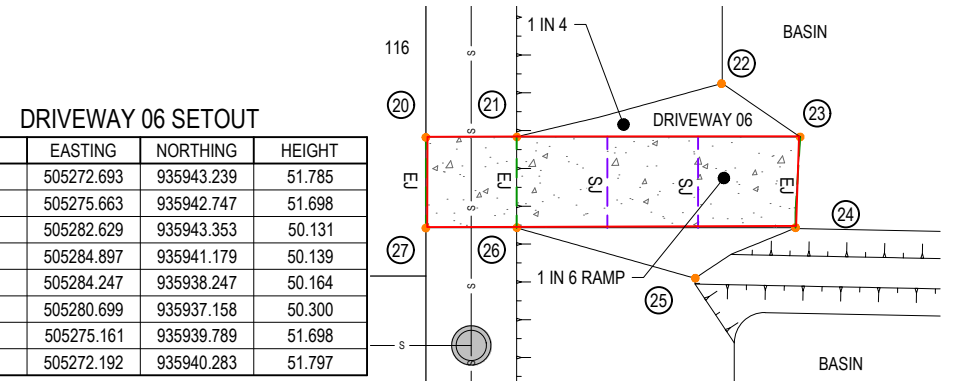


- NEW SLAB TO NEW SLAB - 10mm (GALV) DIAMOND DOWEL AT 450 CRS. INSTALLED TO MANUFACTURER'S SPECIFICATIONS. NEW SLAB TO EXISTING SLAB - DRILL 12mmØ IN EXISTING SLAB AND PLACE DOWELS (10mm ROUND BAR AT 450mm CRS).

EXPANSION/ CONSTRUCTION JOINT DETAIL (EJ)
1:10 (A1)
1:20 (A3)



POINT	EASTING	NORTHING	HEIGHT
20	505272.693	935943.239	51.785
21	505275.663	935942.747	51.698
22	505282.629	935943.353	50.131
23	505284.897	935941.179	50.139
24	505284.247	935938.247	50.164
25	505280.699	935937.158	50.300
26	505275.161	935939.789	51.698
27	505272.192	935940.283	51.797

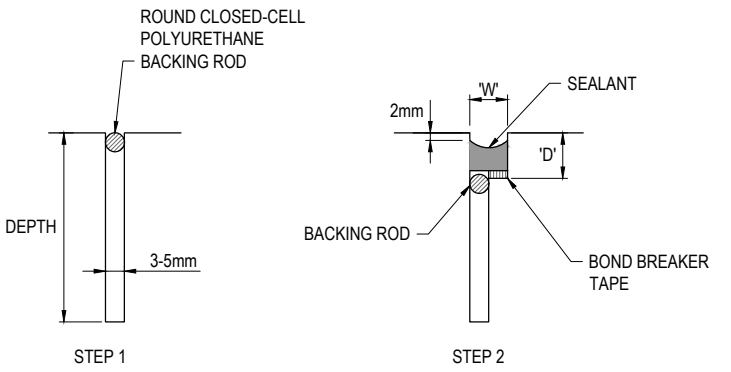
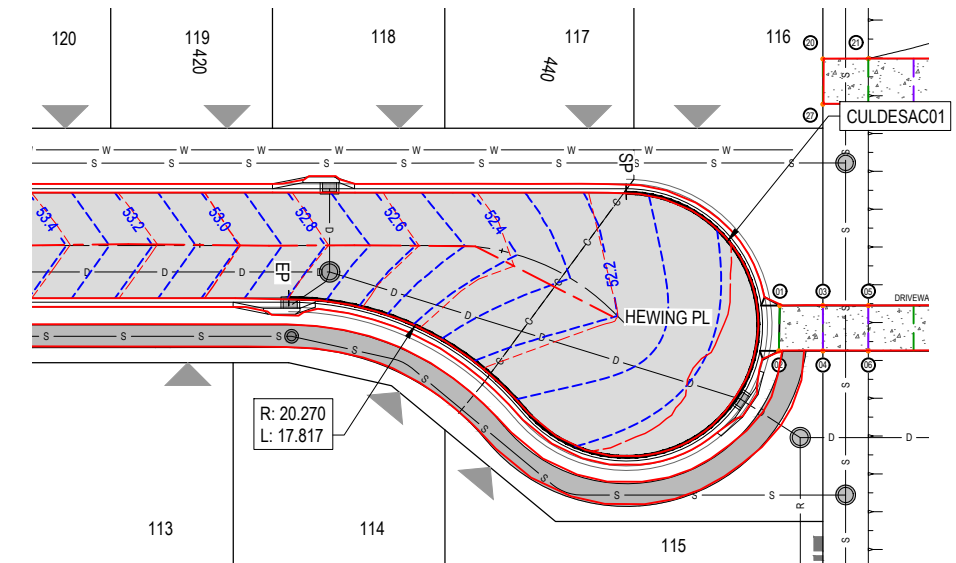


STEPS:

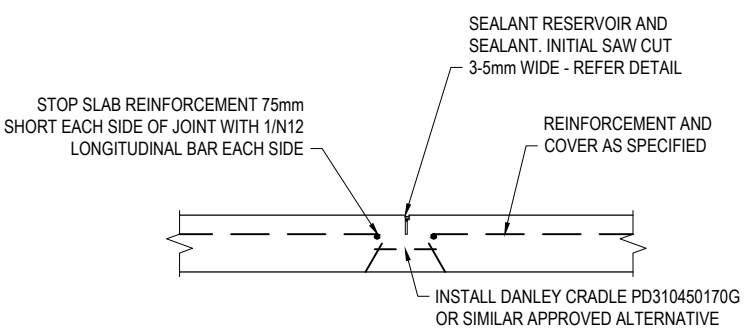
- AFTER SLAB CURING PERIOD (MIN 28 DAYS), REMOVE TEARAWAY PORTION OF ABLE FLEX AND WASH OUT REBATE USING HIGH PRESSURE WATER. DRY USING HIGH PRESSURE COMPRESSED AIR AND ALLOW ADDITIONAL 16 HRS TO DRY THOROUGHLY.
- INSTALL POLYETHYLENE BOND BREAKER TAPE FOR FULL WIDTH 'W'.
- PRIME FACES OF SIDES OF REBATE (REFER TABLE).
- INSTALL SEALANT AS SPECIFIED (REFER TABLE) IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

CONCRETE NOTES:

- MATERIALS AND WORKMANSHIP SHALL COMPLY WITH AS3600.
- PREPARATION OF SUB-BASE LEVEL WITH UTS SYSTEM.
- CONCRETE STRENGTH N32 CONCRETE.
- MAXIMUM DRYING SHRINKAGE STRAIN - 600 MICROSTRAIN AT 56 DAYS.
- CONCRETE TO BE PLACED ON A LAYER OF FORTECON.
- CONCRETE TO HAVE SOFT BRISTLE BROOMED FINISH.
- CONCRETE TO BE CURED UNDER LAYER OF FORTECON/BUILDERS PLASTIC TO REDUCE MOISTURE LOSS.
- REINFORCING TO BE WETTED DOWN IMMEDIATELY PRIOR TO CONCRETE POUR AS REQUIRED DUE TO HIGH TEMPERATURE WEATHER CONDITIONS.



SAW CUT AND JOINT SEALANT DETAILS
1:1 (A1)
1:2 (A3)



SAW CONTRACTION JOINT (SJ)
1:10 (A1)
1:20 (A3)

AS-CONSTRUCTED CERTIFICATION

Signature: _____ Date: 29/01/24

DANIEL COLLINS RPEQ No. 18631

For and on behalf of Colliers International engineering & design pty ltd

DATUM RL 50.0			
LIP LEVEL	52.436	52.349	52.267
NORTHING	935938.605	935938.103	935937.601
EASTING	505247.094	505250.051	505253.009
CHAINAGES	0.000	3.000	6.000
HORIZONTAL CURVES	R8.730		

SP	LP CH 30.219 RL 51.900	IP CH 7.434 RL 52.213	IP CH 32.216 RL 51.700	IP CH 53.267 RL 52.249	IP CH 60.676 RL 52.667
52.436	52.349	52.267	52.185	52.103	52.021
935938.103	935937.601	935937.109	935936.617	935936.125	935935.633
505247.094	505250.051	505253.009	505255.967	505258.925	505261.883
52.436	52.349	52.267	52.185	52.103	52.021
935938.605	935938.103	935937.601	935937.109	935936.617	935936.125
505247.094	505250.051	505253.009	505255.967	505258.925	505261.883
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935938.605	935938.103	935937.601	935937.109	935936.617	935936.125
505247.094	505250.051	505253.009	505255.967		

LEGEND

- PROPOSED AREA OF WORKS
- PROPOSED STREET NAME SIGN
- PROPOSED ROAD SIGN
- PROPOSED END OF ROAD SIGN
- EXISTING STREET NAME SIGN
- EXISTING ROAD SIGN
- EXISTING END OF ROAD SIGN
- PROPOSED RRPM - YELLOW - UNIDIRECTIONAL
- PROPOSED GIVE WAY LINE
- PROPOSED LANE LINE - BROKEN
- PROPOSED LANE LINE - CONTINUOUS
- PROPOSED CONTINUITY LINE
- PROPOSED TURN LINE
- PROPOSED BIKE LINE
- PROPOSED EDGE LINE
- PROPOSED BICYCLE LANE
- EXISTING LINEMARKING (LINETYPES AS PER PROPOSED)

EXTERNAL INTERSECTION LEGEND

- PROPOSED STREET NAME SIGN
- PROPOSED ROAD SIGN
- EXISTING ROAD SIGN
- PROPOSED GIVE WAY LINE
- PROPOSED STOP LINE
- PROPOSED LANE LINE - CONTINUOUS
- PROPOSED EDGE LINE
- PROPOSED BIKE LINE
- PROPOSED CONTINUITY LINE
- PROPOSED TURN LINE
- PROPOSED CROSS WALK LINE

ASCON LEGEND

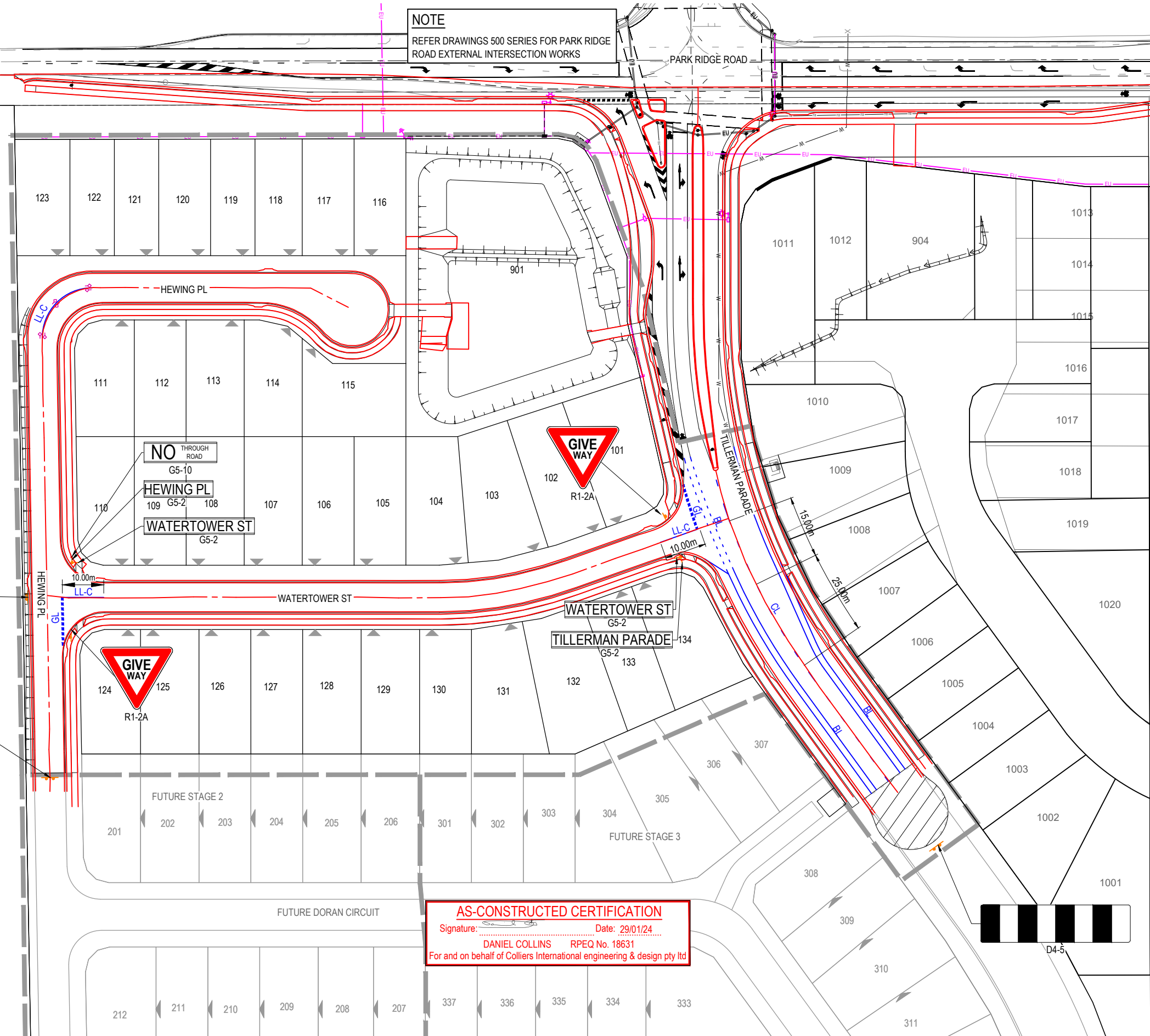
- STORMWATER DRAINAGE PIPE
- STORMWATER MANHOLE
- STORMWATER HEADWALL
- STORMWATER PIT
- KERB ADAPTER
- EDGE OF ROAD
- FOOTPATH

NOTES:

1. ALL SIGNS AND LINEMARKING SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND (L.C.C) STANDARDS.
2. TRAFFIC SIGN POSTS SHALL BE IN ACCORDANCE WITH (IPWEA RS-131) STANDARD DRAWINGS.
3. STREET NAME SIGN SHALL BE IN ACCORDANCE WITH (IPWEA RS-130) STANDARD DRAWINGS.
4. CONTRACTOR TO ENSURE SIGN LOCATIONS ARE CLEAR OF FUTURE DRIVEWAY LOCATIONS - LOCATE ON PB OR MID BLOCK. RRPM'S TO BE INSTALLED / REMOVED AND REINSTATED TO SUIT NEW CHEVRON, MEDIAN AND EDGE LINE IN ACCORDANCE WITH M.U.T.C.D. REQUIREMENTS

NOTE

REFER DRAWINGS 500 SERIES FOR PARK RIDGE ROAD EXTERNAL INTERSECTION WORKS



AS-CONSTRUCTED CERTIFICATION
 Signature: _____ Date: 29/01/24
DANIEL COLLINS RPEQ No. 18631
 For and on behalf of Colliers International engineering & design pty ltd

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	25.01.23	CL	AK	ISSUE FOR CONSTRUCTION
B	29.01.24	CL	BP	AS CONSTRUCTED

DRAWN	STATUS
AS CONSTRUCTED	
DESIGN APPROVED DANIEL COLLINS	RPEQ 18631



SCALE

1:500 10 5 0 10 20 A1
 1:1000

CLIENT

HB PARK RIDGE

ASSOCIATED CONSULTANT
 SAUNDERS HAVILL GROUP
 PH: 1300 123 744

PROJECT NAME

TILLERMAN PARK RIDGE

133-159 PARK RIDGE ROAD
 PARK RIDGE (STAGE 1)

DRAWING TITLE

SIGNS AND LINEMARKING LAYOUT PLAN

PROJECT No. **22-0141** DRAWING No. **211** REVISION **B**

FOR AND ON BEHALF OF PEAKURBAN PTY LTD



NOTE
EXTERNAL CATCHMENT REFER
DWG 22-0141-510 FOR DETAILS

NOTE
REFER DRAWINGS 500-511 FOR PARK RIDGE
ROAD EXTERNAL INTERSECTION WORKS

CATCHMENT EXT 1
A=0.289ha
MAJOR Q100 - 0.162m³/s

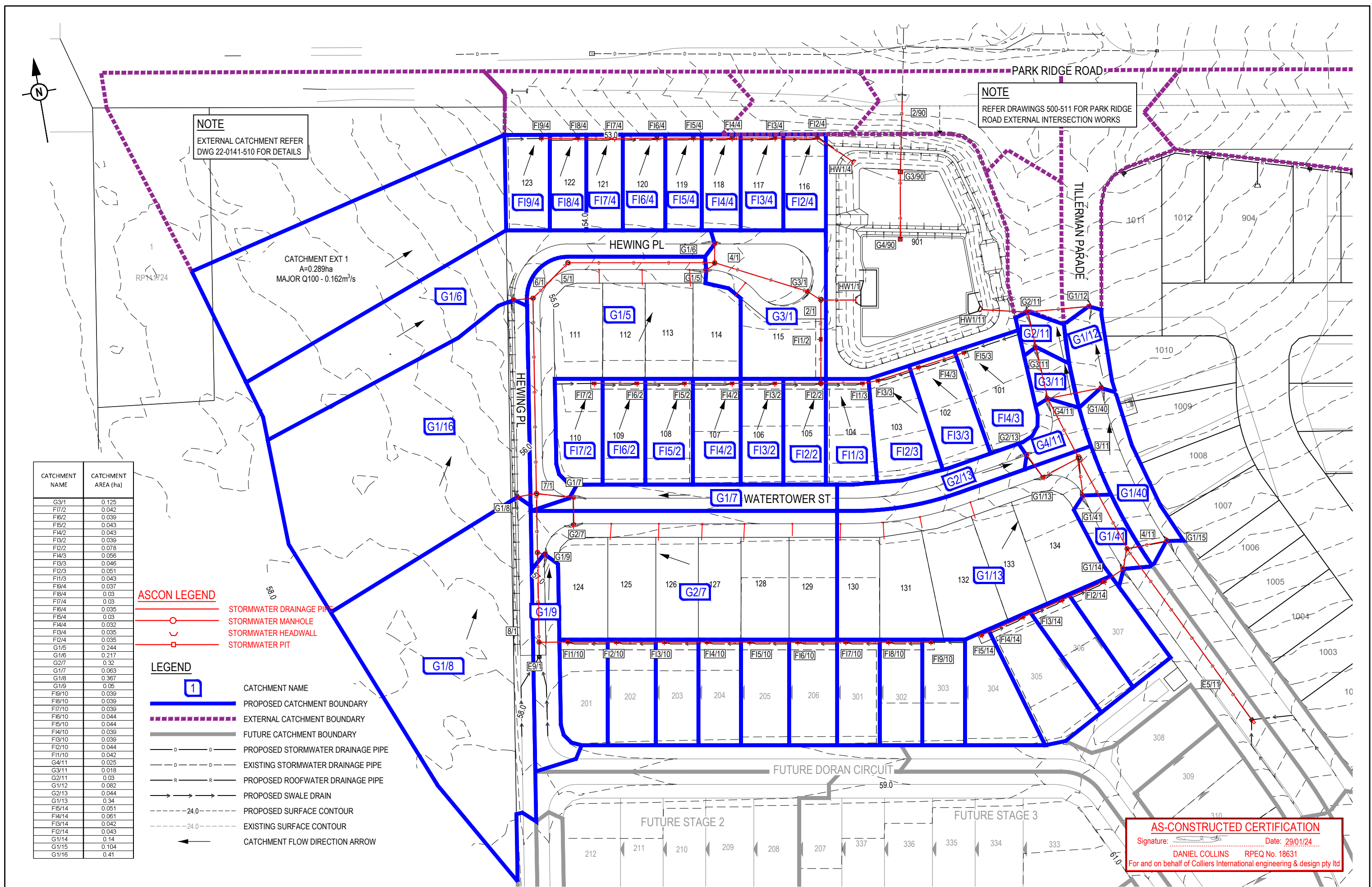
CATCHMENT NAME	CATCHMENT AREA (ha)
G3/1	0.125
F17/2	0.042
F16/2	0.039
F15/2	0.043
F14/2	0.043
F12/2	0.039
F12/2	0.078
F14/3	0.056
F13/3	0.046
F12/3	0.051
F11/3	0.043
F14/4	0.037
F14/4	0.03
F17/4	0.03
F16/4	0.035
F15/4	0.03
F12/4	0.035
G1/5	0.244
G1/6	0.217
G2/7	0.32
G1/7	0.063
G1/8	0.367
G1/9	0.05
F13/10	0.039
F12/10	0.039
F11/10	0.039
F11/10	0.044
F10/10	0.044
F9/10	0.039
F8/10	0.044
F7/10	0.044
F6/10	0.044
F5/10	0.039
F4/10	0.044
F3/10	0.039
F2/10	0.044
F1/10	0.042
G4/11	0.025
G3/11	0.018
G2/11	0.03
G1/12	0.082
G2/13	0.044
G1/13	0.34
F6/14	0.051
F4/14	0.051
F3/14	0.042
F2/14	0.043
G1/14	0.14
G1/15	0.104
G1/16	0.41

ASCON LEGEND

- STORMWATER DRAINAGE PIPE
- STORMWATER MANHOLE
- STORMWATER HEADWALL
- STORMWATER PIT

LEGEND

- CATCHMENT NAME
- PROPOSED CATCHMENT BOUNDARY
- EXTERNAL CATCHMENT BOUNDARY
- FUTURE CATCHMENT BOUNDARY
- PROPOSED STORMWATER DRAINAGE PIPE
- EXISTING STORMWATER DRAINAGE PIPE
- PROPOSED ROOFWATER DRAINAGE PIPE
- PROPOSED SWALE DRAIN
- PROPOSED SURFACE CONTOUR
- EXISTING SURFACE CONTOUR
- CATCHMENT FLOW DIRECTION ARROW



AS-CONSTRUCTED CERTIFICATION
Signature: Date: 29/01/24.....
DANIEL COLLINS RPEQ No. 18631
For and on behalf of Colliers International engineering & design pty ltd

REV	DATE	DESIGN	DRAWN	ISSUE FOR CONSTRUCTION	REVISION DETAILS
A	25.01.23	CL	AK	ISSUE FOR CONSTRUCTION	
B	29.01.24	CL	BP	AS CONSTRUCTED	

AS CONSTRUCTED

DESIGN APPROVED
DANIEL COLLINS RPEQ 18631



SCALE
1:500 10 5 0 10 20 A1
1:1000

CLIENT
HB PARK RIDGE

ASSOCIATED CONSULTANT
SAUNDERS HAVILL GROUP
PH: 1300 123 744

PROJECT NAME
**TILLERMAN
PARK RIDGE**

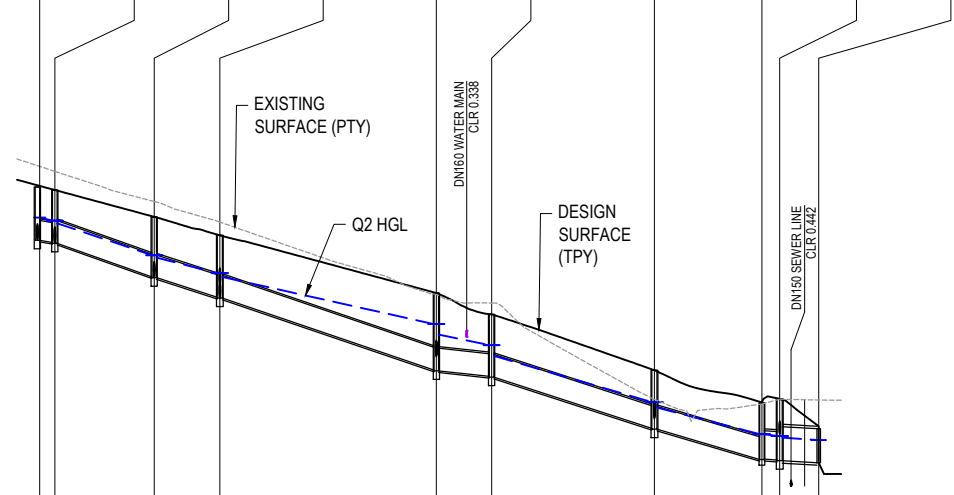
133-159 PARK RIDGE ROAD
PARK RIDGE (STAGE 1)

DRAWING TITLE
**STORMWATER DRAINAGE
CATCHMENT LAYOUT PLAN**

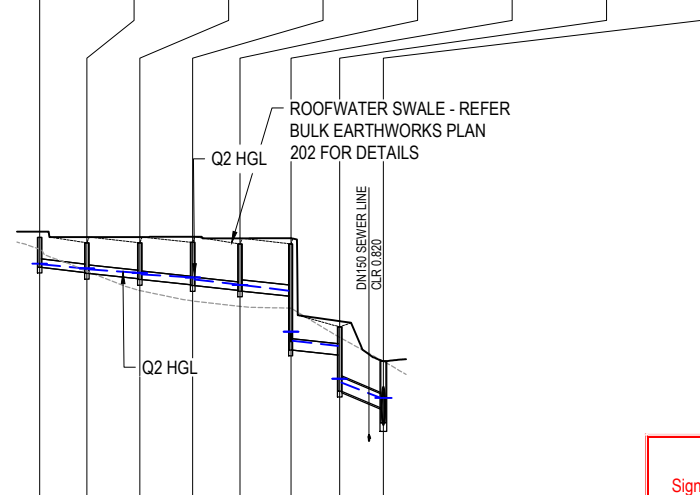
PROJECT No. 22-0141
DRAWING No. 212
REVISION B

STRUCTURE NAME	E10/1	9/1	8/1	7/1	6/1	5/1	4/1	G3/1	2/1	HW1/1
STRUCTURE DESCRIPTION	TEMPORARY FIELD INLET 900x600	STD MANHOLE 1200mm DIA	STD MANHOLE 1200mm DIA	STD MANHOLE 1350mm DIA	STD MANHOLE 1200mm DIA	STD MANHOLE 1200mm DIA	STD MANHOLE 1350mm DIA	STD TYPE A GULLY (SAG) LIL: 2.4m LINTEL; TYPE S	STD MANHOLE 1350mm DIA	HEADWALL

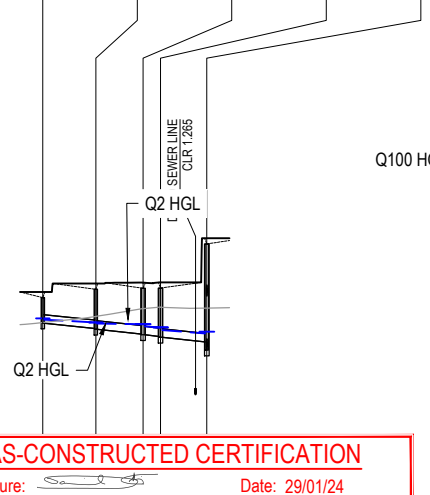
STORMWATER STRUCTURE NOTE:
STANDARD ROUND MANHOLES LESS THAN 3.0m DEEP:
CONSTRUCT IN ACCORDANCE WITH THE LOCAL AUTHORITY STANDARDS.
STANDARD ROUND MANHOLES 3.0m > 5.3m DEEP:
CONSTRUCT IN ACCORDANCE WITH TMR STD DRAWINGS 1307 AND 1308.
STANDARD ROUND MANHOLES GREATER THAN 5.3m DEEP:
SHALL BE STRUCTURALLY DESIGNED (CERTIFIED) AND CONSTRUCTED BY CONTRACTOR ON A CASE BY CASE BASIS.
ROUND EXTENDED (900mm MAX) MANHOLES:
CONSTRUCT IN ACCORDANCE WITH PEAK URBAN STD DRAWINGS S-101 & S-102.
RECTANGULAR STRUCTURE (SPECIAL):
SHALL BE STRUCTURALLY DESIGNED (CERTIFIED) AND CONSTRUCTED BY CONTRACTOR ON A CASE BY CASE BASIS.



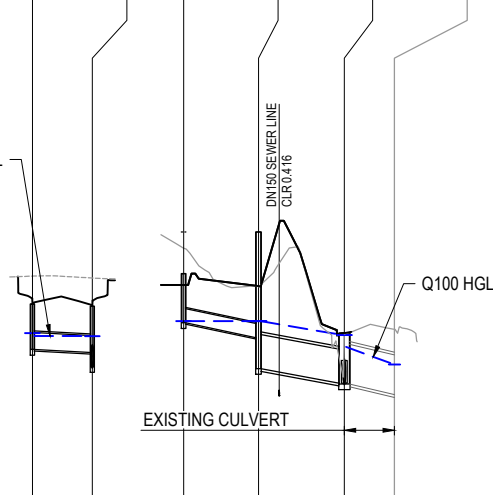
STRUCTURE NAME	F17/2	F16/2	F15/2	F14/2	F13/2	F12/2	F11/2	2/1
STRUCTURE DESCRIPTION	STD FIELD INLET TYPE B2 900x600	STD FIELD INLET TYPE B2 900x600	STD FIELD INLET TYPE B2 900x600	STD FIELD INLET TYPE B2 900x600	STD FIELD INLET TYPE B2 900x600	STD FIELD INLET TYPE B2 900x600	STD FIELD INLET TYPE B2 900x600	STD MANHOLE 1350mm DIA



STRUCTURE NAME	F14/3	F13/3	F12/3	F11/3	F12/2
STRUCTURE DESCRIPTION	STD FIELD INLET TYPE 2 600x600	STD FIELD INLET TYPE 2 600x600	STD FIELD INLET TYPE 2 900x600	STD FIELD INLET TYPE 2 900x600	STD FIELD INLET TYPE 2 900x600



STRUCTURE NAME	1/40	G4/11	G1/90	F1/90	1/90	EXISTING OUT/190
STRUCTURE DESCRIPTION	STD TYPE A GULLY LIL: 3.6m LINTEL; TYPE M	STD TYPE A GULLY LIL: 2.4m LINTEL; TYPE S	STD FIELD INLET TYPE 1 900x900	FIELD INLET 1200x1200 RAISED GRATE	STD MANHOLE 1800mm DIA EXTENDED 900mm ON 1350mm DIA MANHOLE	HEADWALL



AS-CONSTRUCTED CERTIFICATION
Signature: _____ Date: 29/01/24
DANIEL COLLINS RPEQ No. 18631
For and on behalf of Colliers International engineering & design pty ltd

PIPE SIZE (mm)	525	600	600	600	600	600	750	900	225	225	225	225	300	300	375	225	225	225	225	450	375	900	1050		
PIPE CLASS	3	3	3	3	3	3	3	3	PVC	PVC	PVC	PVC	PVC	PVC	3	PVC	PVC	PVC	PVC	3	3	4	3		
PIPE GRADE (%)	1.86%	3.03%	2.73%	3.22%	0.96%	3.03%	2.78%	0.44%	1.11%	0.93%	1.00%	0.96%	1.03%	0.78%	3.39%	1.00%	1.04%	0.66%	0.98%	0.56%	2.01%	1.64%	2.43%		
PIPE SLOPE (1 in X)	55.56	32.26	32.99	33.33	30.67	31.77	35.42	200.00	87.41	99.29	100.00	100.00	96.79	100.00	26.18	99.53	100.02	98.32	99.54	178.22	49.73	61.16	46.93		
FULL PIPE VELOCITY (m/s)	2.80	2.40	2.43	2.86	2.99	2.98	3.22	2.12	0.23	0.45	0.69	0.93	0.64	1.36	0.87	0.31	0.57	0.85	1.08	0.39	0.00	3.62	4.25		
PART FULL VELOCITY (m/s)	3.02	4.04	4.00	4.31	2.99	4.25	4.12	2.12	0.93	1.07	1.18	1.26	1.34	1.56	2.66	0.97	1.13	1.25	1.29	1.12	0.00	4.23	5.22		
DATUM RL	41.0																								
H.G.L IN PIPE & W.S.E IN STRUCTURE	57.506	56.626	56.557	55.786	55.724	55.311	55.210	53.950	53.679	53.402	53.403	53.125	51.899	51.899	51.756	51.056	51.056	51.011	51.011	50.960	50.889	50.889	50.899	50.889	
PIPE FLOW (Cumecs)	0.607	0.680	0.686	0.808	0.846	0.843	0.912	0.935	1.024	0.009	0.018	0.027	0.037	0.045	0.096	0.096	0.012	0.023	0.034	0.043	0.062	0.000	2.300	3.677	
PIPE CAPACITY AT GRADE (Cumecs)	0.577	1.082	1.064	1.120	0.614	1.090	1.032	0.788	1.298	0.048	0.045	0.045	0.045	0.097	0.097	0.343	0.045	0.045	0.045	0.045	0.203	0.248	2.361	3.985	
DEPTH TO INVERT	4.455	4.463	4.463	1.46	1.57	1.62	1.67	2.00	2.068	2.04	1.62	1.57	1.49	1.57	1.42	1.14	1.42	1.23	1.22	1.33	1.27	1.30	1.33	1.38	
INVERT LEVEL OF DRAIN	56.182	56.049	56.020	55.22	55.104	54.70	54.653	52.77	52.748	52.73	52.59	52.562	52.562	52.562	52.27	52.27	52.17	52.17	52.17	52.19	52.21	49.800	48.99	47.800	
DESIGN SURFACE LEVEL	57.637	57.48	57.512	56.901	56.801	56.31	56.308	54.77	54.766	54.21	54.223	51.99	51.998	51.998	51.50	51.50	52.89	52.892	52.892	52.892	53.50	49.97	48.76	47.38	
SETOUT COORDINATES	E 505168.045 N 935929.378	E 505168.703 N 935933.663	E 505172.648 N 935959.656	E 505175.254 N 935976.829	E 505183.847 N 935933.456	E 505195.697 N 935942.024	E 505238.172 N 935934.814	E 505263.551 N 935921.978	E 505267.025 N 935918.805	E 505277.175 N 935917.082	E 505197.372 N 935905.833	E 505209.695 N 935903.742	E 505223.498 N 935901.399	E 505237.300 N 935959.056	E 505249.624 N 935936.964	E 505262.934 N 935934.705	E 505265.093 N 935907.423	E 505279.617 N 935994.540	E 505279.617 N 935992.722	E 505275.004 N 935992.656	E 505262.934 N 935994.705	E 505343.703 N 935979.603	E 505327.870 N 935979.163	E 505300.706 N 935952.014	E 505303.264 N 935987.298
RUNNING CHAINAGE	332.052	336.387	26.290	362.677	380.047	57.41	437.323	451.945	42.95	26.63	4.53	10.20	0.000	12.56	13.93	13.98	12.48	13.55	12.79	11.80	0.000	16.04	19.89	22.63	55.763

REV	DATE	DESIGN	DRAWN	ISSUE FOR CONSTRUCTION
A	25.01.23	CL	AK	ISSUE FOR CONSTRUCTION
B	20.04.23	CL	CL	AMENDMENTS TO LINE 1
C	29.01.24	CL	BP	AS CONSTRUCTED

REVISION DETAILS	DRAWN	STATUS
		AS CONSTRUCTED
		APPROVED
	DANIEL COLLINS	RPEQ 18631

SCALE

1:1000 10 0 10 20 30 40 50 A1

1:2000 HORIZONTAL A3

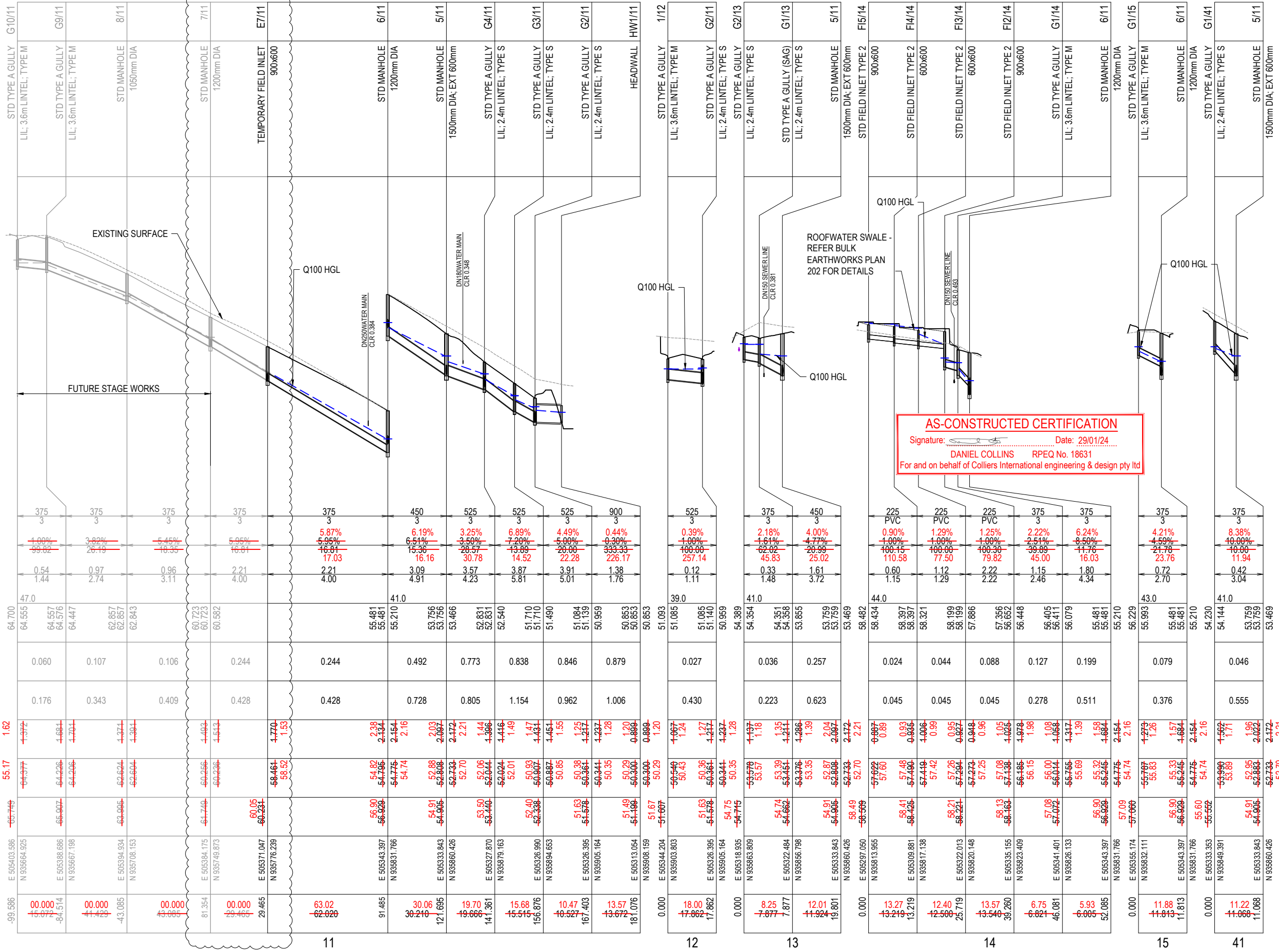
1:100 2 1 0 2 4 A1

1:200 VERTICAL A3

CLIENT	PROJECT NAME	DRAWING TITLE
HB PARK RIDGE	TILLERMAN PARK RIDGE	STORMWATER DRAINAGE LONG SECTIONS SHEET 1 OF 3
ASSOCIATED CONSULTANT	PROJECT No.	DRAWING No.
SAUNDERS HAVILL GROUP PH: 1300 123 744	22-0141	213
REVISION		C

STRUCTURE NAME	G1/9	8/1
STRUCTURE DESCRIPTION	STD TYPE A GULLY LIL: 2.4m LINTEL; TYPE S	STD MANHOLE 1200mm DIA

STORMWATER STRUCTURE NOTE:
 STANDARD ROUND MANHOLES LESS THAN 3.0m DEEP:
 CONSTRUCT IN ACCORDANCE WITH THE LOCAL AUTHORITY STANDARDS.
 STANDARD ROUND MANHOLES 3.0m > 5.3m DEEP:
 CONSTRUCT IN ACCORDANCE WITH TMR STD DRAWINGS 1307 AND 1308.
 STANDARD ROUND MANHOLES GREATER THAN 5.3m DEEP:
 SHALL BE STRUCTURALLY DESIGNED (CERTIFIED) AND CONSTRUCTED BY CONTRACTOR ON A CASE BY CASE BASIS.
 ROUND EXTENDED (900mm MAX) MANHOLES:
 CONSTRUCT IN ACCORDANCE WITH PEAK URBAN STD DRAWINGS S-101 & S-102.
 RECTANGULAR STRUCTURE (SPECIAL):
 SHALL BE STRUCTURALLY DESIGNED (CERTIFIED) AND CONSTRUCTED BY CONTRACTOR ON A CASE BY CASE BASIS.






AS-CONSTRUCTED CERTIFICATION
 Signature: _____ Date: 29/01/24
 DANIEL COLLINS RPEQ No. 18631
 For and on behalf of Colliers International engineering & design pty ltd

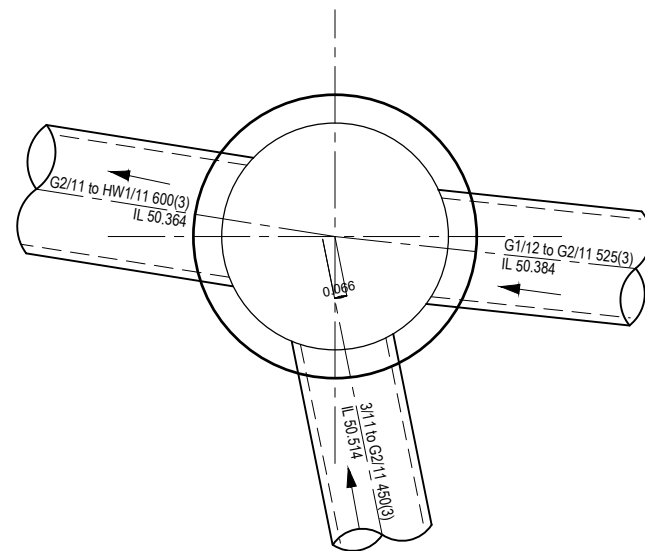
PIPE SIZE (mm)	PIPE CLASS	PIPE GRADE (%)	PIPE SLOPE (1 in X)	FULL PIPE VELOCITY (m/s)	PART FULL VELOCITY (m/s)	DATUM RL	H.G.L IN PIPE & W.S.E IN STRUCTURE	PIPE FLOW (Cumecs)	PIPE CAPACITY AT GRADE (Cumecs)	DEPTH TO INVERT	INVERT LEVEL OF DRAIN	DESIGN SURFACE LEVEL	SETOUT COORDINATES	RUNNING CHAINAGE
375	3	2.34%	26.16	0.12	1.51	43.0	55.794	0.014	0.343	1.451	56.74	E 505174.635	0.000	
375	3	1.00%	39.62	0.54	1.44	47.0	55.786	0.060	0.176	1.44	56.747	N 935858.876	0.000	
375	3	3.82%	26.18	0.97	2.74	64.565	55.786	0.107	0.343	1.65	56.79	E 505172.648	0.000	
375	3	5.46%	18.55	0.96	3.11	64.700	55.786	0.106	0.409	1.607	56.801	N 935859.656	0.000	
375	3	5.95%	16.81	2.21	4.00	64.555	55.725	0.244	0.428	1.62	56.749	E 505403.586	0.000	
375	3	5.87%	17.03	2.21	4.00	64.557	55.725	0.244	0.428	1.62	56.749	N 935664.925	0.000	
375	3	6.19%	15.36	2.21	4.00	64.576	55.725	0.244	0.428	1.62	56.749	E 505388.686	0.000	
450	3	3.25%	28.57	3.09	4.91	64.447	55.725	0.492	0.728	1.62	56.749	N 935667.198	0.000	
525	3	6.89%	13.99	3.87	5.81	62.857	55.725	0.773	0.805	1.62	56.749	E 505394.934	0.000	
525	3	4.49%	22.28	4.23	6.16	62.843	55.725	0.838	1.154	1.62	56.749	N 935708.153	0.000	
900	3	0.44%	333.33	5.01	1.76	60.723	55.725	0.846	1.006	1.62	56.749	E 505384.175	0.000	
525	3	0.39%	100.00	5.01	1.11	60.582	55.725	0.027	0.430	1.62	56.749	N 935749.873	0.000	
375	3	2.18%	62.02	3.91	1.48	55.481	55.725	0.036	0.223	1.62	56.749	E 505343.397	0.000	
450	3	4.00%	20.99	3.91	3.72	55.481	55.725	0.257	0.623	1.62	56.749	N 935831.766	0.000	
225	PVC	0.90%	110.58	0.60	1.15	55.481	55.725	0.024	0.045	1.62	56.749	E 505326.395	0.000	
225	PVC	1.29%	77.50	1.12	1.29	55.481	55.725	0.044	0.045	1.62	56.749	N 935805.164	0.000	
225	PVC	1.25%	79.82	2.22	2.22	55.481	55.725	0.088	0.045	1.62	56.749	E 505318.935	0.000	
375	3	2.22%	39.89	1.15	2.46	55.481	55.725	0.127	0.278	1.62	56.749	N 935813.955	0.000	
375	3	6.24%	11.76	1.80	4.34	55.481	55.725	0.199	0.511	1.62	56.749	E 505309.881	0.000	
375	3	4.21%	24.76	0.72	2.70	55.481	55.725	0.079	0.376	1.62	56.749	N 935817.138	0.000	
375	3	8.38%	10.00	0.42	3.04	55.481	55.725	0.046	0.555	1.62	56.749	E 505322.013	0.000	
375	3	8.38%	11.94	0.42	3.04	55.481	55.725	0.046	0.555	1.62	56.749	N 935820.148	0.000	

REV A 25.01.23 B 20.04.23 C 29.01.24	DATE CL CL CL	DESIGN AK CL BP	DRAWN AK CL BP	ISSUE FOR CONSTRUCTION AMENDMENTS TO LINE 11 AS CONSTRUCTED	REVISION DETAILS	DRAWN STATUS AS CONSTRUCTED	APPROVED DANIEL COLLINS RPEQ 18631	FOR AND ON BEHALF OF PEAKURBAN PTY LTD	SCALE 1:1000 10 0 10 20 30 40 50 A1 1:2000 HORIZONTAL 1:100 2 1 0 2 4 A1 1:200 VERTICAL	CLIENT HB PARK RIDGE	ASSOCIATED CONSULTANT SAUNDERS HAVILL GROUP PH: 1300 123 744	PROJECT NAME 133-159 PARK RIDGE ROAD PARK RIDGE (STAGE 1)	DRAWING TITLE STORMWATER DRAINAGE LONG SECTIONS SHEET 3 OF 3	PROJECT No. 22-0141	DRAWING No. 215	REVISION C
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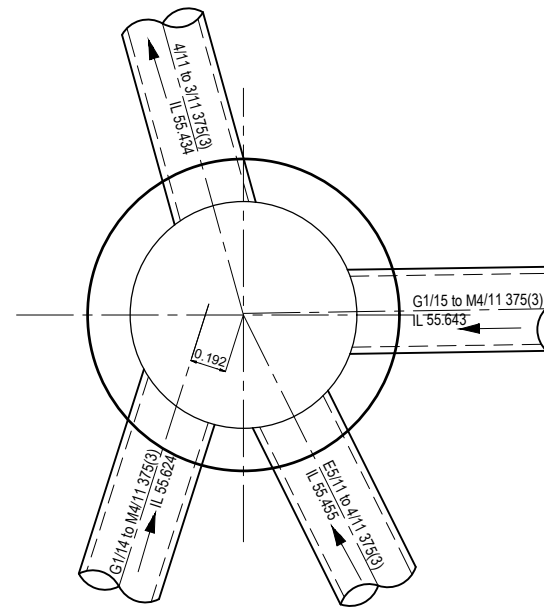
STRUCTURE SETOUT REFERENCE POINT

STRUCTURE TYPE	HORIZONTAL	VERTICAL
MANHOLE	 MAIN SHAFT	FINISHED SURFACE LEVEL
GULLY PIT	 INTERSECTION OF PIT AND KERB INVERT LNE # (INCLUDING MANHOLES UNDER GULLIES)	KERB INVERT LEVEL
HEADWALL	 INTERSECTION OF HEADWALL FACE & PIPE CENTRE LINE	TOP OF HEADWALL

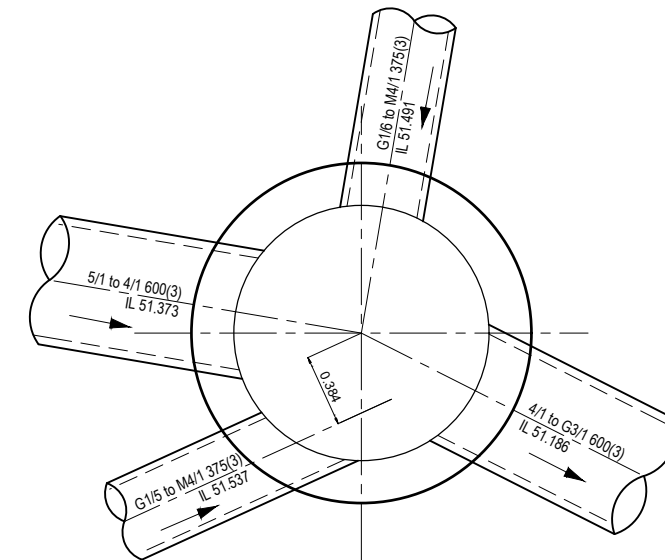
NOTE:
WITHIN GULLY PIT CHAMBER, CONTRACTOR TO ENSURE STORMWATER PIPES ARE OFFSET AS REQUIRED SO THAT PIPES ENTER WHOLLY WITHIN A SIDE WALL




G2/11 - 1200mm MANHOLE
1:20 (A1)
1:40 (A3)





6/11 - 1200mm MANHOLE
1:20 (A1)
1:40 (A3)



4/1 - 1350mm MANHOLE
1:20 (A1)
1:40 (A3)

AS-CONSTRUCTED CERTIFICATION
Signature:  Date: 29/01/24
DANIEL COLLINS RPEQ No. 18631
For and on behalf of Colliers International engineering & design pty ltd

REV	DATE	DESIGN	DRAWN	REVISION DETAILS	DRAWN	STATUS	SCALE	CLIENT	PROJECT NAME	DRAWING TITLE
A	25.01.23	CL	AK	ISSUE FOR CONSTRUCTION		AS CONSTRUCTED		HB PARK RIDGE ASSOCIATED CONSULTANT SAUNDERS HAVILL GROUP PH: 1300 123 744		STORMWATER DRAINAGE DETAILS PROJECT No. 22-0141 DRAWING No. 216 REVISION C
C	29.01.24	CL	BP	AS CONSTRUCTED	DESIGN					

Q2 CALCULATION

LOCATION				TIME			SUBCATCHMENT RUNOFF								INLET DESIGN										DRAIN DESIGN										HEADLOSSES								PART FULL		DESIGN LEVELS																																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58																							
DESIGN ARI	STRUCTURE NO.	DRAIN SECTION	SUB-CATCHMENTS CONTRIBUTING	SURFACE CONDITIONS (LAND USE)	SLOPE OF CATCHMENT	SUB-CATCHMENT TIME OF CONCENTRATION	RAINFALL INTENSITY	COEFFICIENT OF RUNOFF	SUB-CATCHMENT AREA	EQUIVALENT AREA	SUM OF CONTRIBUTING EQUIVALENT AREAS	SUB-CATCHMENT DISCHARGE	FLOW PAST PREVIOUS GULLIES	FLOW IN K&C (INCLUDING BYPASS)	ROAD GRADE AT INLET	K - K WIDTH	FLOW WIDTH	FLOW DEPTH AT INVERT	GUTTER FLOW VELOCITY	d _g x V _g	INLET NUMBER	INLET TYPE	FLOW INTO INLET	CRITICAL TIME OF CONC.	RAINFALL INTENSITY	TOTAL CONTRIBUTING EQUIVALENT AREA	MAJOR TOTAL FLOW	MAJOR SURFACE FLOW CAPACITY	MAJOR SURFACE FLOW	FLOW IN PIPE	REACH LENGTH	PIPE GRADE	PIPE/BOX DIMENSIONS	FLOW VELOCITY	TIME OF FLOW IN REACH	Ku METHOD	Ku CHART	VELOCITY HEAD	U/S HEADLOSS COEFF.	U/S PIPE STRUCTURE HEADLOSS	LAT. HEADLOSS COEFFICIENT	LAT. PIPE STRUCTURE HEADLOSS	W.S.E. COEFFICIENT	CHANGE IN W.S.E.	FRICTION SLOPE	PIPE FRICTION HEADLOSS	DEPTH	VELOCITY	OBVERT LEVELS	DESIGN LEVEL	OBVERT LEVELS	DRAIN SECTION HGL	U/S HGL	LATERAL HGL	WSE	SURFACE OF K&C INVERT LEVEL	FREEBOARD	STRUCTURE No.																						
MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR								
Yrs	Yrs	Yrs	Yrs	%	min.	mm/hr	mm/hr	mm/hr	mm/hr	mm/hr	mm/hr	mm/hr	m³/s	m³/s	m³/s	m³/s	m	m	m	m/s	m³/s	m³/s	min	min	mm/hr	Ha	m³/s	m³/s	m³/s	m³/s	m	m	m	%	mm	m/s	min	mm/hr	Ha	m³/s	m³/s	m³/s	m³/s	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
2	100	F7/10	F7/10 to F6/10	3	0	2.5	10	108	0.74	0.74	0.039	0.029	0.029	0.029	0.029	0.009	0.019	0	0.009	1				F7/10	SF2 600x600	0.009	10.21	107.41	232.73	0.086	0.086	0.056					0.026	0.001	14.1	0.99	225	0.65	0.36154		T1	0.02	1.56	0.03					0.033	0.58	0.112	0.122	1.164	57.388	57.248	57.297	57.215	57.33	57.33	57.33	57.33	57.33	57.961	0.631	F7/10											
2	100	F6/10	F6/10 to F5/10	4	0	2.5	10	108	0.74	0.74	0.044	0.032	0.032	0.032	0.032	0.01	0.021	0	0.01	1				F6/10	SF2 600x600	0.01	10.22	107.37	232.65	0.118	0.118	0.076					0.035	0.001	14.1	1.01	225	0.89	0.26404		T1	0.04	1.36	0.05					0.054	0.44	0.095	0.15	1.254	57.228	57.086	57.16	57.098	57.215	57.215	57.215	57.215	57.215	57.961	0.746	F6/10											
2	100	F4/10	F4/10 to F3/10	6	0	2.5	10	108	0.74	0.74	0.039	0.029	0.029	0.029	0.029	0.009	0.019	0	0.009	1				F4/10	SF2 600x900	0.009	10.44	106.74	231.3	0.179	0.179	0.115					0.053	0.004	12.5	0.5	375	0.48	0.43403		T1	0.01							0.43	0.061	0.171	1.082	57.07	57.007	56.866	56.812	56.866	56.866	56.866	56.866	56.866	57.961	0.895	F4/10												
2	100	F3/10	F3/10 to F2/10	7	0	2.5	10	108	0.74	0.74	0.039	0.029	0.029	0.029	0.029	0.009	0.019	0	0.009	1				F3/10	SF2 600x900	0.009	10.55	106.44	230.66	0.208	0.208	0.133					0.061	0.002	14.1	0.5	375	0.56	0.41964		T1	0.02	0.84	0.01					0.013	0.2	0.053	0.187	1.117	56.966	56.916	56.799	56.771	56.812	56.812	56.812	56.812	56.812	57.961	0.949	F3/10											
2	100	F2/10	F2/10 to F1/10	8	0	2.5	10	108	0.74	0.74	0.044	0.032	0.032	0.032	0.032	0.01	0.021	0	0.01	1				F2/10	SF2 600x900	0.01	10.56	106.4	230.58	0.24	0.24	0.153					0.071	0.081	14.196	0.49	375	0.64	0.36969		T1	0.02	0.82	0.02					0.017	0.12	0.035	0.204	1.153	56.895	56.825	56.754	56.736	56.771	56.771	56.771	56.771	56.771	57.961	0.99	F2/10											
2	100	F1/10	F1/10 to 7/1	9	0	2.5	10	108	0.74	0.74	0.042	0.031	0.031	0.031	0.031	0.009	0.02	0	0.009	1				F1/10	SF2 600x900	0.009	10.68	106.06	229.86	0.271	0.271	0.173					0.08	0.159	8.488	0.49	375	0.72	0.19648		T1	0.03	0.74	0.02					0.02	0.21	0.018	0.22	1.188	56.549	56.507	56.717	56.699	56.736	56.736	56.736	56.736	56.736	57.961	0.995	F1/10											
2	100	F4/14	F4/14 to F3/14	1	0	2.5	10	108	0.74	0.74	0.051	0.037	0.037	0.037	0.037	0.011	0.024	0	0.011	1				F4/14	SF2 600x900	0.011	10	108	234	0.037	0.037	0.024					0.011	0.024	13.219	1	225	0.28	0.78685		G1		7	0.03				0.029	0.82	0.124	0.077	0.938	57.847	57.715	57.709	57.6	57.737	57.737	57.737	57.737	57.737	58.359	0.622	F4/14												
2	100	F3/14	F3/14 to F2/14	2	0	2.5	10	108	0.74	0.74	0.061	0.045	0.045	0.045	0.045	0.014	0.03	0	0.014	1				F3/14	SF2 600x900	0.014	10.11	107.69	233.33	0.083	0.083	0.054					0.025	0.054	12.5	1	225	0.62	0.33602		G1/T1	0.02	2.52	0.05					0.05	0.58	0.1	0.119	1.157	57.644	57.519	57.55	57.478	57.6	57.6	57.6	57.6	57.6	58.275	0.675	F3/14											
2	100	F2/14	F2/14 to F1/14	3	0	2.5	10	108	0.74	0.74	0.042	0.031	0.031	0.031	0.031	0.009	0.02	0	0.009	1				F2/14	SF2 600x600	0.009	10.21	107.39	232.69	0.114	0.114	0.074					0.034	0.074	13.54	1	225	0.85	0.26549		T1	0.04	1.36	0.05					0.051	1.06	0.134	0.146	1.24	57.498	57.363	57.427	57.284	57.478	57.478	57.478	57.478	57.478	58.071	0.593	F2/14											
2	100	F1/14	F1/14 to G1/14	4	0	2.5	10	108	0.74	0.74	0.043	0.032	0.032	0.032	0.032	0.01	0.021	0	0.01	1				F1/14	SF2 600x900	0.01	10.22	107.38	232.68	0.145	0.145	0.094					0.043	0.094	6.821	2.49	375	0.39	0.2915		T10	0.01	2.19	0.02				3.11	0.024	3.22	0.106	0.1	1.825	56.56	56.39	56.335	56.155	56.359	56.359	56.359	56.359	56.359	58.013	1.654	F1/14											
2	100	G1/16	G1/16 to 4/1	2	0	2.5	15	93.75	203.5	0.74	0.74	0.41	0.213	0.213	0.213	0.213	0.056	0.12	0.001	0.057	2.74	7.5	2.2	G1/16	AL2D	0.053	0.004	15	93.75	203.5	0.213	0.213	0.12	3.03	0.108	0.053	0.009	5.519	1.99	375	0.48	0.19163		G2	0.01	6.6	0.08				0.077	0.09	0.005	0.118	1.783	53.623	53.513	53.956	53.951	54.033	54.033	54.033	54.033	54.033	54.735	0.702	G1/16													

Q100 CALCULATION

LOCATION				TIME			SUBCATCHMENT RUNOFF								INLET DESIGN										DRAIN DESIGN										HEADLOSSES								PART FULL		DESIGN LEVELS																															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58																			
DESIGN ARI	STRUCTURE NO.	DRAIN SECTION	SUB-CATCHMENTS CONTRIBUTING	SURFACE CONDITIONS (LAND USE)	SLOPE OF CATCHMENT	SUB-CATCHMENT TIME OF CONCENTRATION	RAINFALL INTENSITY	COEFFICIENT OF RUNOFF	SUB-CATCHMENT AREA	EQUIVALENT AREA	SUM OF CONTRIBUTING EQUIVALENT AREAS	SUB-CATCHMENT DISCHARGE	FLOW PAST PREVIOUS GULLIES	FLOW IN K&C (INCLUDING BYPASS)	ROAD GRADE AT INLET	K - K WIDTH	FLOW WIDTH	FLOW DEPTH AT INVERT	GUTTER FLOW VELOCITY	d _g x V _g	INLET NUMBER	INLET TYPE	FLOW INTO INLET	CRITICAL TIME OF CONC.	RAINFALL INTENSITY	TOTAL CONTRIBUTING EQUIVALENT AREA	MAJOR TOTAL FLOW	MAJOR SURFACE FLOW CAPACITY	MAJOR SURFACE FLOW	FLOW IN PIPE	REACH LENGTH	PIPE GRADE	PIPE/BOX DIMENSIONS	FLOW VELOCITY	TIME OF FLOW IN REACH	Ku METHOD	Ku CHART	VELOCITY HEAD	U/S HEADLOSS COEFF.	U/S PIPE STRUCTURE HEADLOSS	LAT. HEADLOSS COEFFICIENT	LAT. PIPE STRUCTURE HEADLOSS	W.S.E. COEFFICIENT	CHANGE IN W.S.E.	FRICTION SLOPE	PIPE FRICTION HEADLOSS	DEPTH	VELOCITY	OBVERT LEVELS	DESIGN LEVEL	OBVERT LEVELS	DRAIN SECTION HGL	U/S HGL	LATERAL HGL	WSE	SURFACE OF K&C INVERT LEVEL	FREEBOARD	STRUCTURE No.																		
MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR	MINOR MAJOR														
Yrs	Yrs	Yrs	Yrs	%	min.	mm/hr	mm/hr	mm/hr	mm/hr	mm/hr	mm/hr	mm/hr	m³/s	m³/s	m³/s	m³/s	m	m	m	m/s	m³/s	m³/s	min	min	mm/hr	Ha	m³/s	m³/s	m³/s	m³/s	m	m	m	%	mm	m/s	min	mm/hr	Ha	m³/s	m³/s	m³/s	m³/s	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
100	100	2/11	2/11 to 1/11	10	0	2.5								1						2/11	MH1200			6.59	274.21	274.21	0.674	0.674	0.514					0.467	0.467	30.21	8	450	2.94	0.17126		T2/T4	0.44	0.35	0.15					0.153	6.51	1.978	0.246	5.256	55.675	53.258	55.657	53.69	55.81	55.81	56.929	1.119	2/11													
100	100	1/11	1/11 to G3/11	13	0	2.5								1						1/11	MH1500E 600			8.1	256.43	256.43	1.074	1.074	0.765					0.745	0.745	19.666	3.5	525	3.44	0.09528		T2/T5	0.6	0.47	0.28					0.282	3	0.59	0.399	4.22	53.258	52.569	53.408	52.818	53.69	53.69	54.905	1.215	1/11													
100	100	G3/11	G3/11 to G2/11	15	0	2.5																																																																						

LEGEND

- PROPOSED BATTER LINE
- PROPOSED CONCRETE SLEEPER RETAINING WALL
- PROPOSED SETOUT POINT
- PROPOSED FINISHED SURFACE LEVEL
- PROPOSED STORMWATER DRAINAGE PIPE
- PROPOSED 1500 SLOTTED SUB SOIL DRAINAGE PIPE WITH CLEAN-OUT POINT
- PROPOSED 3000 UN-SLOTTED COLLECTOR PIPE
- PROPOSED SEWERAGE MAIN
- PROPOSED WATER MAIN
- PROPOSED BIO RETENTION FILTER AREA
- PROPOSED PLANTED BATTER - BY LANDSCAPERS
- PROPOSED 3.0m WIDE MAINTENANCE BENCH/BUND
- PROPOSED ROCK SCOUR PROTECTION
- PROPOSED FENCING TO LANDSCAPE ARCHITECT'S DETAILS

ASCON LEGEND

- STORMWATER DRAINAGE PIPE
- STORMWATER MANHOLE
- STORMWATER HEADWALL
- STORMWATER PIT
- KERB ADAPTER
- AS CONSTRUCTED CONTOUR

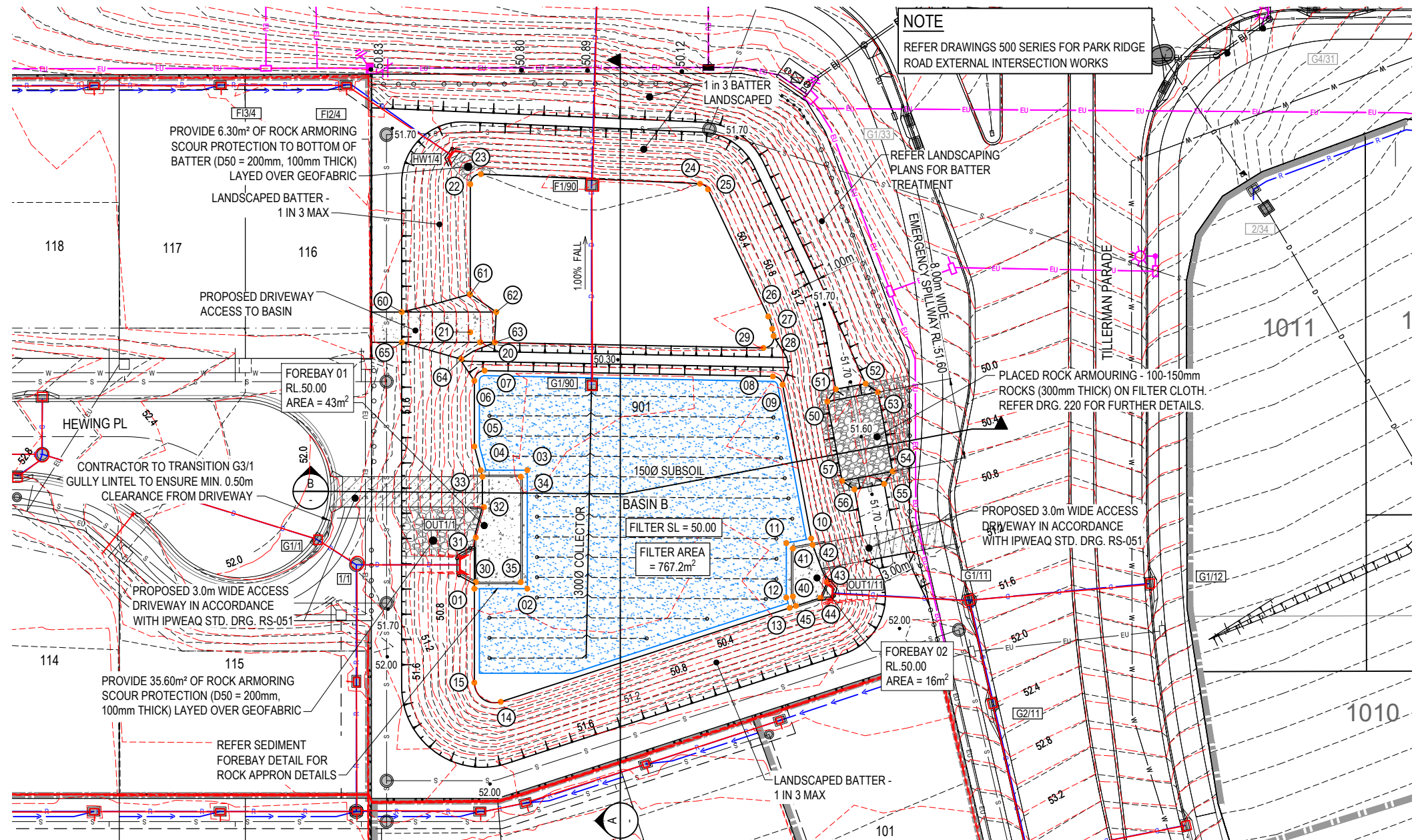
RAMP SETOUT

POINT	EASTING	NORTHING
60	505275.665	935942.758
61	505282.630	935943.362
62	505284.898	935941.182
63	505284.247	935938.249
64	505280.699	935937.161
65	505275.161	935939.791

NOTE:
THE BASIN DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT'S DRAWINGS AND DOCUMENTATION, SPECIFICALLY RELATING TO RETAINING WALLS, BARRIERS, PLANTING AND VEGETATION

BASIN ACCESS DRIVEWAY CONCRETE NOTES:

- DRIVEWAY CONCRETE TO BE 175mm THICK (N32) PLAIN FINISHED CONCRETE, SL72 MESH WITH 50 TOP COVER
- FINISH TO LANDSCAPE ARCHITECT'S DETAILS

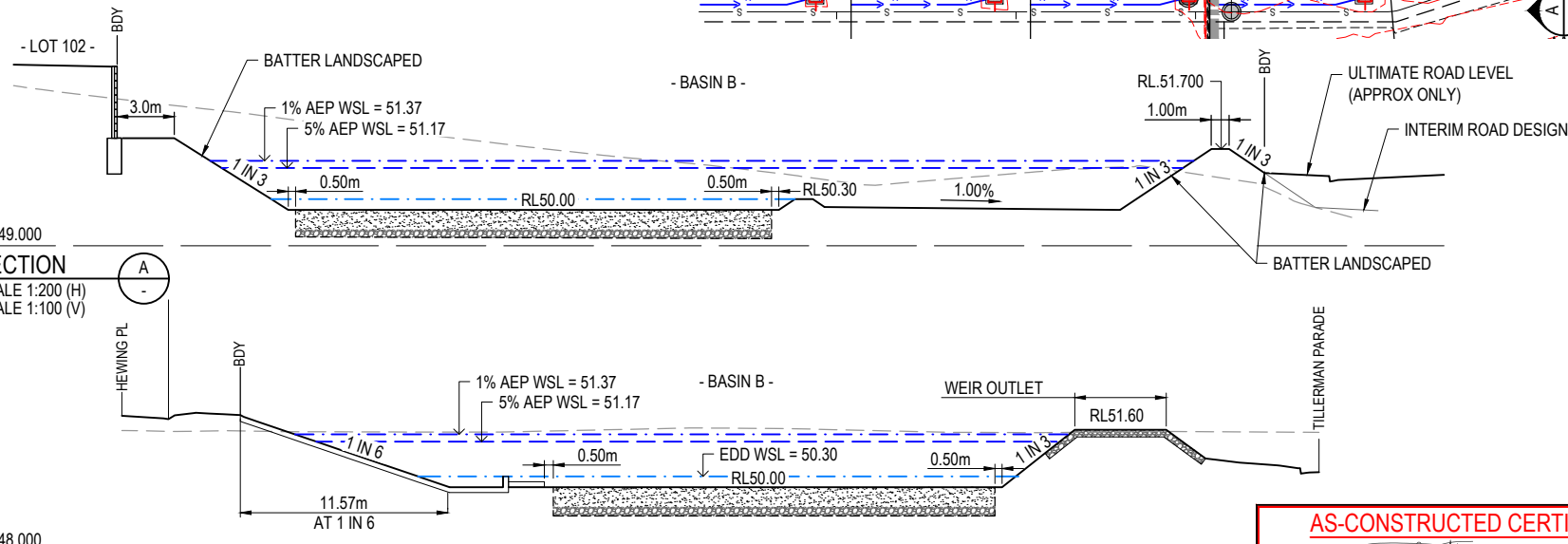


NOTE
REFER DRAWINGS 500 SERIES FOR PARK RIDGE ROAD EXTERNAL INTERSECTION WORKS

REFER LANDSCAPING PLANS FOR BATTER TREATMENT

PLACED ROCK ARMOURING - 100-150mm ROCKS (300mm THICK) ON FILTER CLOTH. REFER DRG. 220 FOR FURTHER DETAILS.

PROPOSED 3.0m WIDE ACCESS DRIVEWAY IN ACCORDANCE WITH IPWEAQ STD. DRG. RS-051



BIO BASIN SETOUT

NUMBER	EASTING	NORTHING
01	505278.163	935914.514
02	505283.343	935913.635
03	505285.309	935925.217
04	505280.747	935925.991
05	505280.523	935928.413
06	505281.612	935934.833
07	505282.785	935935.648
08	505310.863	935930.308
09	505311.676	935929.341
10	505311.921	935913.835
11	505309.412	935913.795
12	505308.509	935908.472
13	505308.666	935907.405
14	505278.868	935903.022
15	505276.606	935905.336

DETENTION BASIN SETOUT

POINT	EASTING	NORTHING
20	505282.822	935938.491
21	505282.023	935939.641
22	505284.477	935954.102
23	505285.674	935954.914
24	505306.936	935950.347
25	505307.627	935949.656
26	505311.402	935936.235
27	505311.588	935934.960
28	505311.599	935934.242
29	505310.412	935933.244

OVERFLOW WIER SETOUT

POINT	EASTING	NORTHING
50	505315.765	935926.944
51	505316.798	935928.010
52	505319.798	935928.057
53	505320.864	935927.024
54	505320.990	935919.025
55	505319.957	935917.959
56	505316.957	935917.911
57	505315.891	935918.945

FOREBAY 01 SETOUT

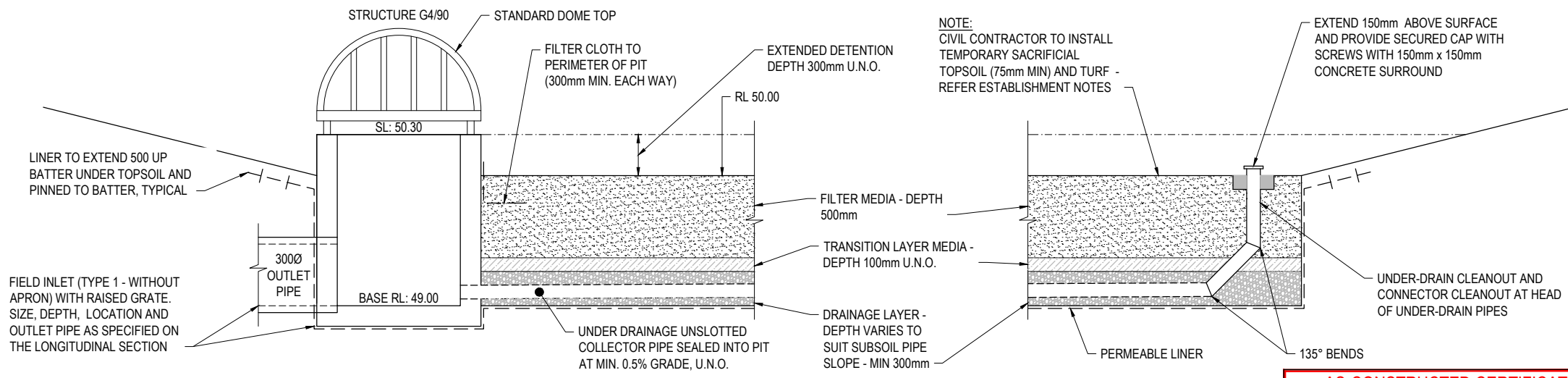
POINT	EASTING	NORTHING
30	505278.420	935915.130
31	505279.161	935919.495
32	505280.460	935922.338
33	505280.809	935925.321
34	505284.560	935924.685
35	505282.811	935914.384

FOREBAY 02 SETOUT

POINT	EASTING	NORTHING
40	505309.167	935908.465
41	505309.963	935913.154
42	505311.952	935913.185
43	505312.760	935909.295
44	505311.841	935907.872
45	505309.309	935907.499

AS-CONSTRUCTED CERTIFICATION
Signature: _____ Date: 29/01/24
DANIEL COLLINS RPEQ No. 18631
For and on behalf of Colliers International engineering & design pty ltd

<table border="1"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>DESIGN</th> <th>DRAWN</th> <th>REVISION DETAILS</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>25.01.23</td> <td>CL</td> <td>AK</td> <td>ISSUE FOR CONSTRUCTION</td> </tr> <tr> <td>B</td> <td>12.05.23</td> <td>CL</td> <td>CL</td> <td>AMENDED FOR TRUNK WATER MAIN APPROVAL</td> </tr> <tr> <td>C</td> <td>29.01.24</td> <td>CL</td> <td>BP</td> <td>AS CONSTRUCTED</td> </tr> </tbody> </table>	REV	DATE	DESIGN	DRAWN	REVISION DETAILS	A	25.01.23	CL	AK	ISSUE FOR CONSTRUCTION	B	12.05.23	CL	CL	AMENDED FOR TRUNK WATER MAIN APPROVAL	C	29.01.24	CL	BP	AS CONSTRUCTED	<p>AS CONSTRUCTED</p>		<table border="1"> <thead> <tr> <th>DRAWN</th> <th>STATUS</th> </tr> </thead> <tbody> <tr> <td>DANIEL COLLINS</td> <td>RPEQ 18631</td> </tr> </tbody> </table>	DRAWN	STATUS	DANIEL COLLINS	RPEQ 18631	<table border="1"> <thead> <tr> <th>SCALE</th> <th>CLIENT</th> </tr> </thead> <tbody> <tr> <td>1:250 5 0 5 10 A1 1:500 2 0 2 4 6 8 10 A3 1:200 1 0 1 2 3 4 5 A1 1:100 1 0 1 2 3 4 5 A1 1:200 1 0 1 2 3 4 5 A3</td> <td>HB PARK RIDGE</td> </tr> </tbody> </table>	SCALE	CLIENT	1:250 5 0 5 10 A1 1:500 2 0 2 4 6 8 10 A3 1:200 1 0 1 2 3 4 5 A1 1:100 1 0 1 2 3 4 5 A1 1:200 1 0 1 2 3 4 5 A3	HB PARK RIDGE		<table border="1"> <thead> <tr> <th>PROJECT NAME</th> <th>DRAWING TITLE</th> </tr> </thead> <tbody> <tr> <td>133-159 PARK RIDGE ROAD PARK RIDGE (STAGE 1)</td> <td>BIO RETENTION BASIN LAYOUT PLAN</td> </tr> </tbody> </table>	PROJECT NAME	DRAWING TITLE	133-159 PARK RIDGE ROAD PARK RIDGE (STAGE 1)	BIO RETENTION BASIN LAYOUT PLAN
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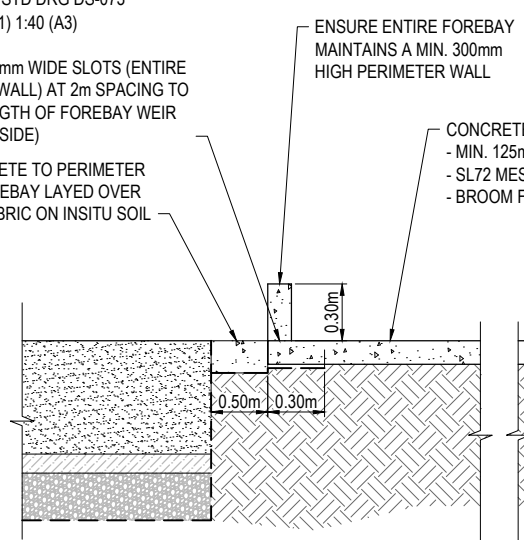


BIO RETENTION FILTER MEDIA AND SUBSOIL DRAINAGE DETAIL
CONVENTIONAL

REFERENCE: IPWEA STD DRG DS-073
SCALE 1:20 (A1) 1:40 (A3)

PROVIDE 50mm WIDE SLOTS (ENTIRE HEIGHT OF WALL) AT 2m SPACING TO ENTIRE LENGTH OF FOREBAY WEIR (MIN. 2 PER SIDE)

CONCRETE TO PERIMETER OF FOREBAY LAYED OVER GEOFABRIC ON INSITU SOIL



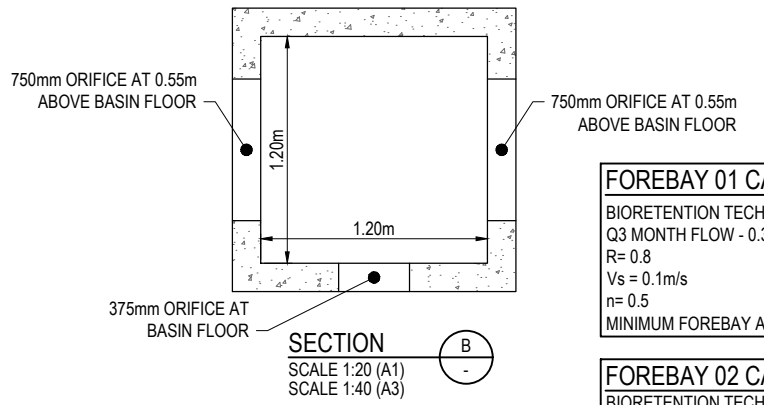
SEDIMENT FOREBAY DETAIL
REFERENCE: IPWEA STD DRG DS-075
SCALE 1:20 (A1) 1:40 (A3)

NOTE:
1. FOR DESIGN AND CONSTRUCTION NOTES REFER TO IPWEA STANDARD DRAWING DS-078.
2. DRAWINGS TO BE READ IN CONJUNCTION WITH SITE BASED STORMWATER MANAGEMENT PLAN AND LANDSCAPE ARCHITECT'S PLANS

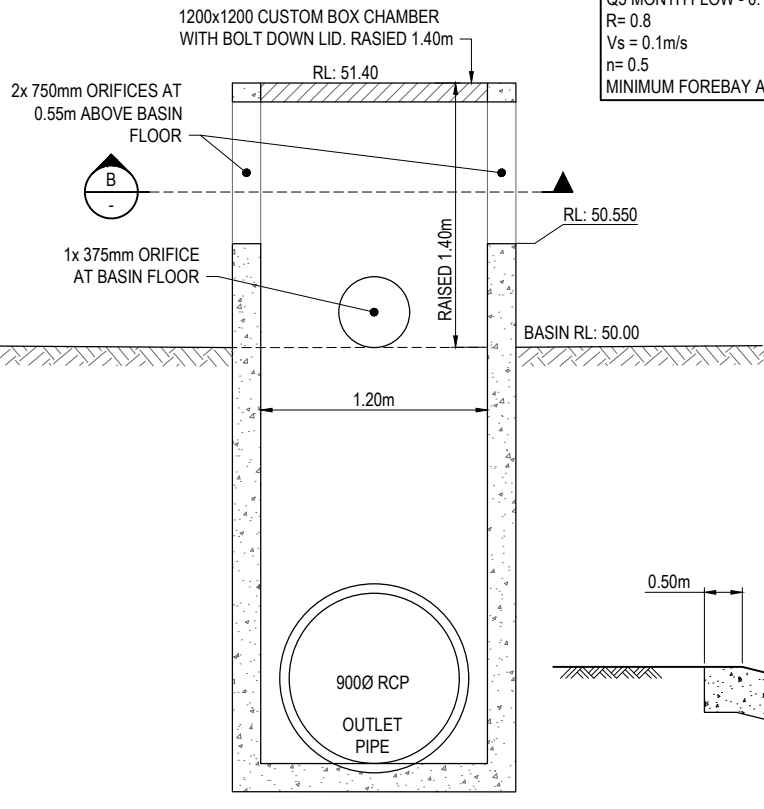
NOTES:

- BIORETENTION SYSTEM SURFACE. SURFACE LEVEL IS TOP OF FILTER MEDIA. SURFACE TO BE MULCHED AND PLANTED AS PER PROJECT DRAWINGS AND THE 'BIORETENTION TECHNICAL DESIGN GUIDELINES' (WATER BY DESIGN).
- FILTER MEDIA SPECIFICATION SHALL BE IN ACCORDANCE WITH THE 'ADOPTION GUIDELINES FOR STORMWATER BIOFILTRATION SYSTEMS (CRC FOR WATER SENSITIVE CITIES) AND THE BIORETENTION TECHNICAL DESIGN GUIDELINES (WATER BY DESIGN). BIORETENTION HYDRAULIC CONDUCTIVITY SHALL BE IN ACCORDANCE WITH PRACTICE NOTE 1: IN SITU MEASUREMENT OF HYDRAULIC CONDUCTIVITY' (FAWB). THE NUMBER OF SAMPLES TO BE TESTED SHALL BE IN ACCORDANCE WITH THE 'CONSTRUCTION AND ESTABLISHMENT GUIDELINES - SWALES, BIORETENTION SYSTEMS AND WETLANDS' (WATER BY DESIGN).
- CONSTRUCTION TOLERANCES SHALL BE IN ACCORDANCE WITH THE 'CONSTRUCTION AND ESTABLISHMENT GUIDELINES - SWALES, BIORETENTION SYSTEMS AND WETLANDS' (WATER BY DESIGN)
- TRANSITION LAYER AND DRAINAGE LAYER DEPTHS VARY WITH DESIGN. DEPTHS AND SPECIFICATION TO BE IN ACCORDANCE WITH PROJECT DRAWINGS AND THE 'BIORETENTION TECHNICAL DESIGN GUIDELINES' (WATER BY DESIGN)
- UNDERDRAIN TO BE SLOTTED RIGID PIPE LAID AT 0.5% GRADE. REFER TO PROJECT DRAWINGS FOR DIAMETER AND PIPE INVERT. PIPE SHOULD NOT BE INSTALLED WITH A FILTER SOCK SURROUNDING PIPE. UNDERDRAIN PIPES SHALL BE SEALED INTO PITS USING GROUT OR OTHER APPROVED WATERTIGHT SEAL.
- LINER (AS SPECIFIED ON THE PROJECT DRAWINGS):
 - PERMEABLE LINER: NON-WOVEN GEOTEXTILE FILTER CLOTH TO BASE AND SIDES OF BIORETENTION SYSTEM. FILTER CLOTH NOT TO BE PLACED BETWEEN ANY FILTER LAYERS. REFER 'BIORETENTION TECHNICAL DESIGN GUIDELINES' (WATER BY DESIGN)
 - IMPERMEABLE LINER: COMPACTED CLAY OR SYNTHETIC LINER WITH PERMEABILITY OF NO GREATER THAN 1×10^{-9} m/s. IMPERMEABLE LINER TO BE SEALED AROUND ALL PROTRUSIONS. SYNTHETIC LINERS TO BE INSTALLED AND SEALED IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS. REFER 'BIORETENTION TECHNICAL DESIGN GUIDELINES' (WATER BY DESIGN).
- UNDERDRAIN OUTLET RISER ESTABLISHES MAX SATURATED ZONE WATER LEVEL. UNDERDRAIN OUTLET RISER AS PER PROJECT DRAWINGS AND 'BIORETENTION TECHNICAL DESIGN GUIDELINES' (WATER BY DESIGN)
- VEGETATED BATTER. SLOPE AND PLANTING TO BE IN ACCORDANCE WITH PROJECT DRAWINGS AND 'BIORETENTION TECHNICAL DESIGN GUIDELINES' (WATER BY DESIGN).
- INSPECTION/CLEANOUT POINT. VERTICAL SOLID PIPE SECTION ATTACHED TO THE END OF EACH UNDERDRAIN IN ACCORDANCE WITH PROJECT DRAWINGS AND THE 'BIORETENTION TECHNICAL DESIGN GUIDELINES' (WATER BY DESIGN)
- FILTER CLOTH TO BE FIXED TO PERIMETER OF PIT TO AVOID RUNNELLING OF WATER BETWEEN PIT AND SOIL INTERFACE. BEGIN FILTER CLOTH 100 ABOVE SURFACE. EXTEND TO 100 BELOW SURFACE. CONTINUE 300 HORIZONTALLY INTO FILTER MEDIA.

AS-CONSTRUCTED CERTIFICATION
Signature: *[Signature]* Date: 29/01/24
DANIEL COLLINS RPEQ No. 18631
For and on behalf of Colliers International engineering & design pty ltd



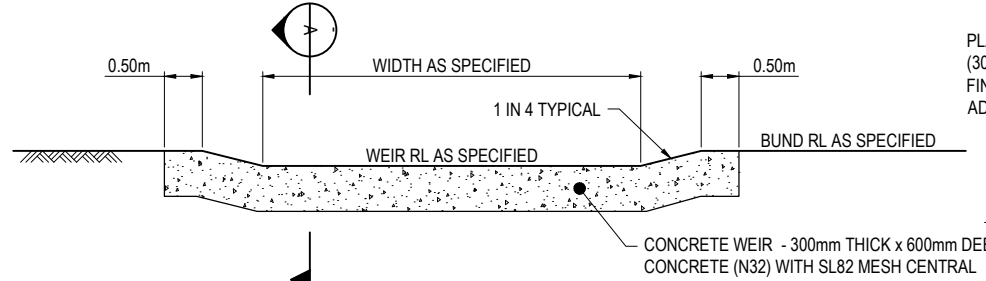
FOREBAY 01 CALCULATION
BIORETENTION TECHNICAL DESIGN GUIDELINES v1.1
Q3 MONTH FLOW - 0.355m³/s
R= 0.8
Vs = 0.1m/s
n= 0.5
MINIMUM FOREBAY AREA = 42.60m²



STRUCTURE 3/90 DETAIL
SCALE 1:20 (A1)
SCALE 1:40 (A3)

ESTABLISHMENT NOTES:

- BASIN DRAINAGE LAYERS AND FILTER TO BE CONSTRUCTED AND TEMPORARILY PROTECTED USING GEOTEXTILE PLACED OVER FILTER WITH 75mm TOPSOIL AND TURFED PRIOR TO CIVIL ON-MAINTENANCE. BASIN TO BE KEPT IN THIS PROTECTED STATE FOR A 24 MONTH MAINTENANCE PERIOD TO ALLOW FOR SUBSTANTIAL CONSTRUCTION WORK.
- PRIOR TO OFF MAINTENANCE INSPECTION, 3 IN-SITU FILTRATION TESTS ARE TO BE PROVED DEMONSTRATING THAT THE HYDRAULIC CONDUCTIVITY IS MET AT 200mm/hr.
- PLANTING OF FILTER TO OCCUR ONLY AFTER SUCCESSFUL INFILTRATION TESTS AND COUNCIL ACCEPTANCE OF CIVIL WORKS 'OFF MAINTENANCE'. PLANTING ON FILTER SUBJECT TO FURTHER 12 MONTHS MAINTENANCE PERIOD.



TYPICAL WEIR DETAIL
REFERENCE: IPWEA STD DRG DS-076
SCALE 1:50 (A1) 1:100 (A3)

BIO-FILTRATION NOTES:

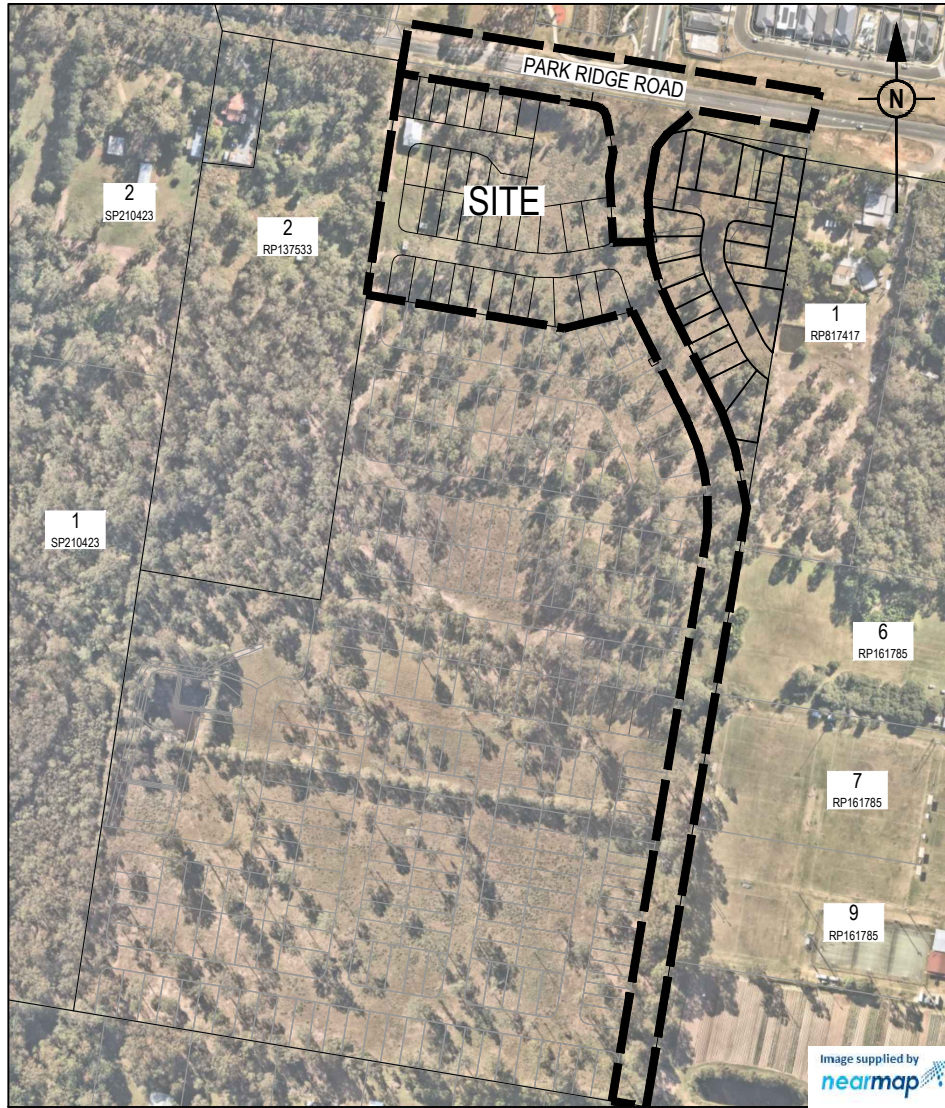
- UNLESS NOTED OTHERWISE IN THE STORMWATER MANAGEMENT PLAN THE FILTER MEDIA SHALL BE TESTED BY A NATA CERTIFIED LAB AND MEET THE FOLLOWING CRITERIA:

PARAMETER	ACCEPTANCE CRITERIA:
ORGANIC MATTER	5.0% MINIMUM; 10% MAXIMUM BY WEIGHT
PH	5.5-7.5
ELECTRICAL CONDUCTIVITY	<1.2 ds/m
PHOSPHORUS	<50mg/kg
HYDRAULIC CONDUCTIVITY	145mm/hr MINIMUM; 220mm/hr MAXIMUM
PARTICLE SIZE DISTRIBUTION	AS PER TABLE BELOW

COMPONENT	COMPOSITION RANGE (% BY WEIGHT)	PARTICLE SIZE (mm)
CLAY & SLIT	< 3	<0.05
VERY FINE SAND	5 - 30	0.05 - 0.15
FINE SAND	10 - 30	0.15 - 0.25
MEDIUM TO COARSE SAND	40 - 60	0.25 - 1.0
COARSE SAND	7 - 10	1.0 - 2.0
FINE GRAVEL	< 3	2.0 - 3.4

- THE HYDRAULIC CONDUCTIVITY OF A POTENTIAL FILTER MEDIA SHALL BE DETERMINED USING ASTM F1815-06 PRIOR TO ACCEPTANCE BY THE SUPERINTENDENT.
- THE TRANSITION LAYER SHALL BE WELL-GRADED SAND / COARSE SAND, CONTAINING LITTLE TO NO FINES PARTICLE SIZE 0.5mm MINIMUM TO 1.4mm MAXIMUM.
- THE DRAINAGE LAYER SHALL BE CLEAN FINE GRAVEL, WASHED SCREENING PARTICLE SIZE 2.0mm MINIMUM TO 5.0mm MAXIMUM.

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		<p>DESIGN APPROVED</p> <p>DANIEL COLLINS RPEQ 18631</p>		<p>ASSOCIATED CONSULTANT</p> <p>SAUNDERS HAVILL GROUP PH: 1300 123 744</p>	<p>PROJECT NAME</p> <p>133-159 PARK RIDGE ROAD PARK RIDGE (STAGE 1)</p>	<p>PROJECT No.</p> <p>22-0141</p>	<p>DRAWING No.</p> <p>220</p>	<p>REVISION</p> <p>B</p>																			



LOCALITY PLAN

1:2500 (A1)
1:5000 (A3)

NAME OF ESTATE		PARK RIDGE ROAD STAGE 1
SUBDIVIDER		TILLER MAN PARK RIDGE
SP APPLICATION No.		COM/36/2021
SP APPROVAL DATE		-
DRAWING/PLAN No.		22-0141-300 - 305
No. OF ALLOTMENTS		34
AREA		2.485 ha
LENGTH OF SEWERS	100Ø uPVC SN8	- 115.765m
	150Ø uPVC SN8	996.450m 1021.721m

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.
- EXISTING SERVICES RELEVANT TO THE PROJECT HAVE BEEN CONSIDERED THROUGHOUT DESIGN AND IS BASED ON SURVEY INFORMATION PROVIDED BY THE SURVEYOR AND THE CONTRACTOR. THE SUPERINTENDENT AND THE PRINCIPAL HAVE RELIED UPON THIS INFORMATION TO INFORM THE DESIGN. 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. THE CERTIFICATION OF THIS DESIGN IS BASED ON SURVEY AND POT HOLE INFORMATION PROVIDED BY THE SURVEYOR AND CONTRACTOR AT THE TIME OF DESIGN.
- 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 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.

SEWER RETICULATION NOTES

- ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT WSAA GRAVITY SEWERAGE CODE OF AUSTRALIA SPECIFICATIONS AND STANDARD - SOUTH EAST QUEENSLAND SERVICE PROVIDERS EDITION.
- UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
- 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.
- ALL WORK ASSOCIATED WITH LIVE SEWERS OR MAINTENANCE HOLES SHALL BE CARRIED OUT BY THE SEQ SERVICE PROVIDER AT THE DEVELOPER'S COST.
- ALL PIPES AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE "ACCEPTED PRODUCTS AND MATERIALS" LIST.
- EACH ALLOTMENT SHALL BE SERVED BY A 100Ø PVC PROPERTY CONNECTION.
- PROPERTY CONNECTIONS SHALL BE LOCATED WITHIN THE PROPERTY AS SHOWN IN THE DRAWINGS.
- PROPERTY CONNECTION BRANCHES SHALL EXTEND INTO THE PROPERTY A MINIMUM OF 300mm (500mm FOR UNITY WATER) AND A MAXIMUM OF 750mm.
- 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.
- 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.
- 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. THE CERTIFICATION OF THIS DESIGN IS BASED ON SURVEY AND POT HOLE INFORMATION PROVIDED BY THE SURVEYOR AND CONTRACTOR AT THE TIME OF DESIGN.
- SEWERS SHALL BE DISUSED/ABANDONED IN ACCORDANCE WITH PROCEDURE SET OUT IN THE GRAVITY SEWER CODE.
- BENCH MARK AND LEVELS TO AHD.
- EXISTING ALLOTMENTS REQUIRING A PROPERTY CONNECTIONS FROM EXISTING SEWERS SHALL BE PROVIDED BY THE SEQ SERVICE PROVIDER AT THE DEVELOPERS COST.

ENVIRONMENTAL CONDITIONS

VEGETATION PROTECTION

- TREES LOCATED ALONG THE FOOTPATH SHALL BE, TRANSPLANTED PRIOR TO CONSTRUCTION, OR REPLACED IF DESTROYED.
- 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.
- 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.
- ANY TREE LOPPING REQUIRED SHOULD BE UNDERTAKEN BY AN APPROVED ARBORIST.

SOIL

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

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)	AGENCY TO CONSTRUCT A 0.50m STUB (TEMPORARY END CAPPED) IN MH1/1.	150Ø	1/1	-	B	P301	49.300 49.36	49.300	45.749 45.75	3.551 3.61	Y
1 (B)	0.50m FROM EXISTING STUB, CONSTRUCTOR TO LAY NEW SEWERS. AFTER CLEANSING, TESTING AND INSPECTION, NOTIFY AGENCY.										
1 (C)	AGENCY TO REMOVE TEMPORARY END CAP ON EXISTING STUB AND MAKE LIVE CONNECTION AFTER SUCCESSFUL 'ON MAINTENANCE' INSPECTION.										

ENGINEER'S CERTIFICATION

I, Dan Collins, hereby certify that:




- The information contained in this drawing / document is in compliance with approved drawings and design.
- The new water and sewerage works defined by this drawing have been designed and constructed in accordance with the SEQ code.
- This generally represents an accurate record of as-constructed works
- I accept responsibility for the information contained in this drawing / document.


 RPEQ (signature) RPEQ No. 18631 Date: 29/01/24

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

PROPERTY CONNECTIONS HAVE BEEN DESIGNED TO CONTROL THE REQUIRED SERVICE AREA OF EACH LOT AT A GRADE OF 1:60 AND A MAXIMUM DEPTH OF PROPERTY CONNECTION AT 1.5m UNLESS OTHERWISE STATED. FOR JUNCTION DETAILS REFER SEQ-SEW-1104-1 AND SEQ-SEW-1105-1.

ALL WATER AND SEWERAGE CONSTRUCTION SHALL COMPLY WITH ALL QUEENSLAND LEGISLATION

REV	DATE	DESIGN	DRAWN	REVISION DETAILS	DRAWN	STATUS	SCALE	CLIENT	PROJECT NAME	DRAWING TITLE	
A	25.01.23	CL	AK	ISSUE FOR CONSTRUCTION		AS CONSTRUCTED	1:2500 50 0 50 100 A1 1:5000	HB PARK RIDGE	 133-159 PARK RIDGE ROAD PARK RIDGE (STAGE 1)	SEWERAGE RETICULATION COVER PLAN	
B	19.07.23	NK	AK	SEWER LIVE WORKS TABLE AMENDED							
C	23.09.23	NK	BP	AS CONSTRUCTED							
D	29.01.24	NK	BP	AS CONSTRUCTED							
						DESIGN APPROVED					
						DANIEL COLLINS	RPEQ 18631				
						FOR AND ON BEHALF OF PEAKURBAN PTY LTD				ASSOCIATED CONSULTANT SAUNDERS HAVILL GROUP PH: 1300 123 744	
										PROJECT No. 22-0141 DRAWING No. 300 REVISION D	

LEGEND

- PROPOSED AREA OF WORKS
- PROPOSED SEWER MAIN
- EXISTING SEWER MAIN
- ^{24.60} SEWER LOT CONTROL SURFACE LEVEL
- INDICATIVE DRIVEWAY LOCATION
- ZERO LOT BOUNDARY
- 24.6— FINISHED SURFACE CONTOUR
- PROPOSED STORMWATER DRAINAGE PIPE
- EXISTING STORMWATER DRAINAGE PIPE
- PROPOSED ROOFWATER DRAINAGE PIPE
- EXISTING ROOFWATER DRAINAGE PIPE
- PROPOSED WATER MAIN
- EXISTING WATER MAIN
- EXISTING DBYD WATER MAIN
- x PROPOSED WATER SERVICE POINT
- PROPOSED RETAINING WALL

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 MAINS
- WATER MAINS
- SEWER MAINS

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

NOTE - SETOUT:
REFER TO THE LONGITUDINAL SECTIONS FOR EASTING AND NORTHING SETOUT OF SEWER STRUCTURES, ENDS AND BENDS.

AS CONSTRUCTED LEGEND

- SEWERAGE MAIN
- SEWERAGE MANHOLE
- ↷ BEND
- END OF LINE

ENGINEER'S CERTIFICATION

- I, Dan Collins, hereby certify that:
1. The information contained in this drawing / document is in compliance with approved drawings and design.
 2. The new water and sewerage works defined by this drawing have been designed and constructed in accordance with the SEQ code.
 3. This generally represents an accurate record of as-constructed works
 4. I accept responsibility for the information contained in this drawing / document.

RPEQ (signature) RPEQ No. 18631 Date: 29/01/24

RP DESCRIPTION

LOT 3 ON SP137533

DATUM LEVEL AND LOCATION

PM70079 RL 57.043 AHD
LOCATED: 133-159 PARK RIDGE ROAD, PARK RIDGE

PROVIDE DN150 STUB FOR FUTURE CONNECTION

PROVIDE DN150 STUB FOR FUTURE CONNECTION

NOTE
REFER DRAWINGS 500-511 FOR PARK RIDGE ROAD EXTERNAL INTERSECTION WORKS

CONTRACTOR TO CONSTRUCT NEW MANHOLE OVER EXISTING SEWER MAIN UNDER LOCAL AUTHORITY REQUIREMENTS.

LIVE CONNECTION 1 REFER LIVE WORKS TABLE FOR DETAILS


EXISTING STRUCTURE TO BE DECOMMISSIONED ONCE CONNECTION MADE.

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STRUC/ BEND/ END NAME	1/1	2/1	HB1A/1	HB2A/1	3/1	4/1	5/1	6/1	HTP1/1	HTP2/1	7/1	8/1	9/1	HTP3/1	HTP4/1	HTP5/1	HTP6/1	10/1	HTP7/1	HTP8/1	11/1	E/1
STRUCTURE TYPE	P2 1,2000	PE LINE P2 1,2000	HTP	HTP	PK 1,2000	P2 1,2000	P2 1,2000	P2 1,2000	HTP	HTP	P2 1,2000	MS	P2 1,2000	HTP	HTP	HTP	HTP	H1	HTP	HTP	MS	END
STRUCTURE LID TYPE	B	B			B	D	D	D			D	B	B					B			B	
STRUCTURE DROP TYPE	V	X			X	V	V	X			V	V	V					V			V	
JUNCTION LINE		LINE 1A				LINE 2	LINE 3	LINE 4					LINE 6									
DEPTH TO LOT CONTROL LEVEL																						
DEPTH TO HOUSE CONNECTION																						
HC INVERT LEVEL																						
HC TYPE																						
HC LOT No																						
CH. FROM D/S STRUC/ BEND																						
STRUCTURE TYPES C2 = CAST-IN-SITU 1,500Ø P2 = PRE-CAST CONCRETE 1,050Ø / 1,200Ø MS = uPVC TYPE 'U' MAINTENANCE SHAFT MH DROP TYPES: AS PER SEQ STD DRG SEQ-SEW-1303-1 MS DROP TYPES: MS-V = 30mm DROP THROUGH BULB MS-Z = >750mm DROP INTO RISER LID TYPES: B = NON-TRAFFICABLE D = TRAFFICABLE D(BD) = TRAFFICABLE WITH BOLT DOWN																						
NOTE: PE LINING OF MANHOLES: MAINTENANCE HOLES ≥ 1500Ø IN DIA OR ≥ 4.0m IN DEPTH, REQUIRE PE LINED PROTECTIVE COATING																						
# EMBEDMENT NOTE: PIPE EMBEDMENT & TRENCHFILL SHALL BE IN ACCORDANCE WITH SEQ-SEW-1200-2, 1201-1 TO 1201-5. TYPE 3 SUPPORT IS PROPOSED UNTIL FINAL GEOTECHNICAL INVESTIGATIONS ARE COMPLETED PRIOR TO CONSTRUCTION.																						
* STORMWATER BRIDGING NOTE: WHERE A STORMWATER PIPE ≥ 600mm DIA CROSSES OVER A SEWER, THE PIPE SHALL BE SUPPORTED BY A BRIDGE STRUCTURE THAT SPANS THE SEWER TRENCH. REFER COLLIER'S STD DRG S-100.																						
LIVE CONNECTION 1 REFER LIVE WORKS TABLE FOR DETAILS																						
CONTRACTOR TO CONFIRM EXISTING SEWER LEVELS BEFORE START OF CONSTRUCTION.																						
DATUM R.L.	44.0																					
LAND USE	ROAD RESERVE BASIN BASIN ROAD RESERVE ROAD ROAD RESERVE ROAD RESERVE ALLOTMENT																					
DIAMETER	1500 uPVC S18																					
GRADE	147.93 1 IN 170																					
EMBEDMENT TYPE	TYPE 3 #																					
DEPTH TO INVERT	3.78 3.68 5.67 4.97 4.99 4.99 4.97 4.97 3.95 2.35 2.61 2.60 2.64 2.19 2.11 2.18 1.63 1.68 1.68 1.64 1.64 1.64 1.20 1.14 2.63 2.61 2.61 2.09 1.83 1.83 2.03 2.03 2.16 2.16 2.01 2.01 1.99 1.99 1.87 1.82 2.54 2.54 1.79 1.79 1.79 1.59 1.59																					
JUNCTION INVERT LEVEL																						
SEWER INVERT LEVEL	45.58 46.54 46.68 46.10 46.69 46.64 46.70 46.76 46.76 46.73 46.73 47.76 47.62 49.36 49.36 48.49 48.69 49.74 49.74 49.83 50.54 50.54 50.69 50.69 50.67 50.67 50.84 50.99 50.90 51.32 51.37 51.34 52.83 52.99 53.09 53.06 53.96 53.96 53.94 53.94 55.69 55.69 55.69 55.69 56.07 56.07 55.42 55.42 55.49 55.49 55.47 56.62 56.62 56.62 56.62 56.65 56.65 56.67 56.67 56.82 56.82																					
DESIGN SURFACE LEVEL	46.49 46.36 51.79 51.67 51.79 51.79 51.70 51.76 51.71 51.99 51.99 52.07 52.07 52.09 52.07 52.09 52.09 52.04 52.04 51.97 51.97 51.97 53.04 53.04 53.95 53.95 54.44 54.44 56.69 56.69 57.99 57.99 57.99 57.99 58.47 58.47 58.47 58.47 58.47 58.47 58.44 58.44 58.44 58.44																					
SETOUT	505340.753 938009.955 505308.753 938995.494 505307.507 938995.877 505307.057 938995.978 505271.116 938980.332 505271.020 938979.202 505269.347 938914.562 505266.402 938971.210 505276.505 938995.495 505277.444 938995.485 505324.841 938902.455 505326.408 938974.946 505324.651 938964.887 505329.530 93881.898 505330.836 93860.263 505337.730 938829.306 505337.895 938928.906 505340.124 938924.429 505337.146 938827.946 505338.531 938827.720 505311.577 93818.529 505298.337 93813.244																					
RUNNING CHAINAGE	0.000 62.130 62.307 1.304 63.811 12.030 64.073 30.256 94.132 24.290 24.476 118.807 22.050 140.357 17.590 188.157 10.240 189.405 58.660 189.347 47.907 217.254 27.510 244.808 20.020 264.983 270.760 272.897 34.280 274.960 285.382 300.1 300.383 303.720 303.720 304.376 305.711 330.087 343.729																					

ENGINEER'S CERTIFICATION
 I, Dan Collins, hereby certify that:
 1. The information contained in this drawing / document is in compliance with approved drawings and design.
 2. The new water and sewerage works defined by this drawing have been designed and constructed in accordance with the SEQ code.
 3. This generally represents an accurate record of as-constructed works
 4. I accept responsibility for the information contained in this drawing / document.

RPEQ (signature) RPEQ No. 18631 Date: 29/01/24

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REV	DATE	DESIGN	DRAWN	REVISION DETAILS																																																																		
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REVISION H																																																																						

STRUC/ BEND/ END NAME

STRUCTURE TYPE	MS	2/1	1/1A
STRUCTURE LID TYPE	B		
STRUCTURE DROP TYPE	X		
JUNCTION LINE	LINE 1A		
DEPTH TO LOT CONTROL LEVEL			
DEPTH TO HOUSE CONNECTION		49.98	1.33
HC INVERT LEVEL		49.98	1.33
HC TYPE			
HC LOT No		7001	X
CH. FROM D/S STRUC/ BEND		52.307	

STRUCTURE TYPES
 C2 = CAST-IN-SITU 1.5000
 P2 = PRE-CAST CONCRETE 1.0500
 MS = uPVC TYPE '1' MAINTENANCE SHAFT
MH DROP TYPES:
 AS PER SEQ STD DRG SEQ-SEW-1303-1
MS DROP TYPES:
 MS-V = 30mm DROP THROUGH BULB
 MS-Z = >750mm DROP INTO RISER
LID TYPES
 B = NON-TRAFFICABLE
 D = TRAFFICABLE
 D(BD) = TRAFFICABLE WITH BOLT DOWN

NOTE: PE LINING OF MANHOLES:
 MAINTENANCE HOLES ≥ 15000 IN DIA OR ≥ 4.0m IN DEPTH, REQUIRE PE LINED PROTECTIVE COATING

EMBEDMENT NOTE:
 PIPE EMBEDMENT & TRENCHFILL SHALL BE IN ACCORDANCE WITH SEQ-SEW-1200-2, 1201-1 TO 1201-5. TYPE 3 SUPPORT IS PROPOSED UNTIL FINAL GEOTECHNICAL INVESTIGATIONS ARE COMPLETED PRIOR TO CONSTRUCTION.

*** 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 PEAK URBAN STD DRG S-100.

DATUM R.L.	44.0
LAND USE	ROAD RESERVE
DIAMETER	DN150 PE100 SDR21
GRADE	101.29 -1 IN 400
EMBEDMENT TYPE	
DEPTH TO INVERT	5.67 4.90 3.97 3.17
JUNCTION INVERT LEVEL	
SEWER INVERT LEVEL	46.10 46.65 47.70 48.21
DESIGN SURFACE LEVEL	51.67 51.67 51.38
SETOUT	505308.108 935955.825 505354.633 935931.820
RUNNING CHAINAGE	0.000 51.660 52.307

LINE 1A

STRUCTURE TYPE	P2	1,2000	1/2	E/2
STRUCTURE LID TYPE	B			
STRUCTURE DROP TYPE	V			
JUNCTION LINE	LINE 2			
DEPTH TO LOT CONTROL LEVEL				
DEPTH TO HOUSE CONNECTION				
HC INVERT LEVEL				
HC TYPE				
HC LOT No				
CH. FROM D/S STRUC/ BEND				

DATUM R.L.	47.0
LAND USE	ROAD RESERVE
DIAMETER	1500 uPVC SN8
GRADE	29.48 -1 IN 20.00
EMBEDMENT TYPE	
DEPTH TO INVERT	2.50 2.43 2.05 2.02
JUNCTION INVERT LEVEL	
SEWER INVERT LEVEL	49.49 49.56 52.75 52.78
DESIGN SURFACE LEVEL	51.99 51.99 54.80
SETOUT	505273.020 935936.202 505180.083 935951.977 505179.095 935952.127
RUNNING CHAINAGE	0.000 94.350 94.366

LINE 2

STRUCTURE TYPE	MS	5/3	1/8	E/8
STRUCTURE LID TYPE	B			
STRUCTURE DROP TYPE	V			
JUNCTION LINE	LINE 8			
DEPTH TO LOT CONTROL LEVEL				
DEPTH TO HOUSE CONNECTION				
HC INVERT LEVEL				
HC TYPE				
HC LOT No				
CH. FROM D/S STRUC/ BEND				

DATUM R.L.	52.0
LAND USE	ALLOTMENT
DIAMETER	1500 uPVC SN8
GRADE	85.72 -1 IN 38.61
EMBEDMENT TYPE	TYPE 3 #
DEPTH TO INVERT	2.01 2.00 1.55 1.54
JUNCTION INVERT LEVEL	
SEWER INVERT LEVEL	55.44 55.43 55.45 55.44 55.48 56.71
DESIGN SURFACE LEVEL	57.46 57.46 58.03 58.25
SETOUT	505172.202 935932.855 505280.912 935917.870 505280.912 935913.803
RUNNING CHAINAGE	0.000 84.860 84.765 25.130 25.600

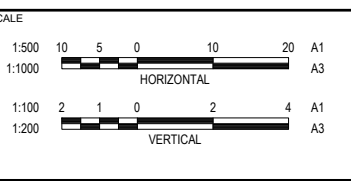
LINE 8

ENGINEER'S CERTIFICATION
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RPEQ (signature) RPEQ No. 18631 Date: 29/01/24

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	25.01.23	CL	AK	ISSUE FOR CONSTRUCTION
B	29.09.23	CL	BP	AS CONSTRUCTED
C	29.01.24	CL	BP	AS CONSTRUCTED

DRAWN	STATUS
DESIGN	APPROVED
DANIEL COLLINS	RPEQ 18631
FOR AND ON BEHALF OF PEAKURBAN PTY LTD	



CLIENT
HB PARK RIDGE

ASSOCIATED CONSULTANT
 SAUNDERS HAVILL GROUP
 PH: 1300 123 744

PROJECT NAME
TILLERMAN PARK RIDGE

133-159 PARK RIDGE ROAD
 PARK RIDGE (STAGE 1)

DRAWING TITLE SEWERAGE LONGITUDINAL SECTIONS SHEET 2 OF 4		
PROJECT No. 22-0141	DRAWING No. 303	REVISION C

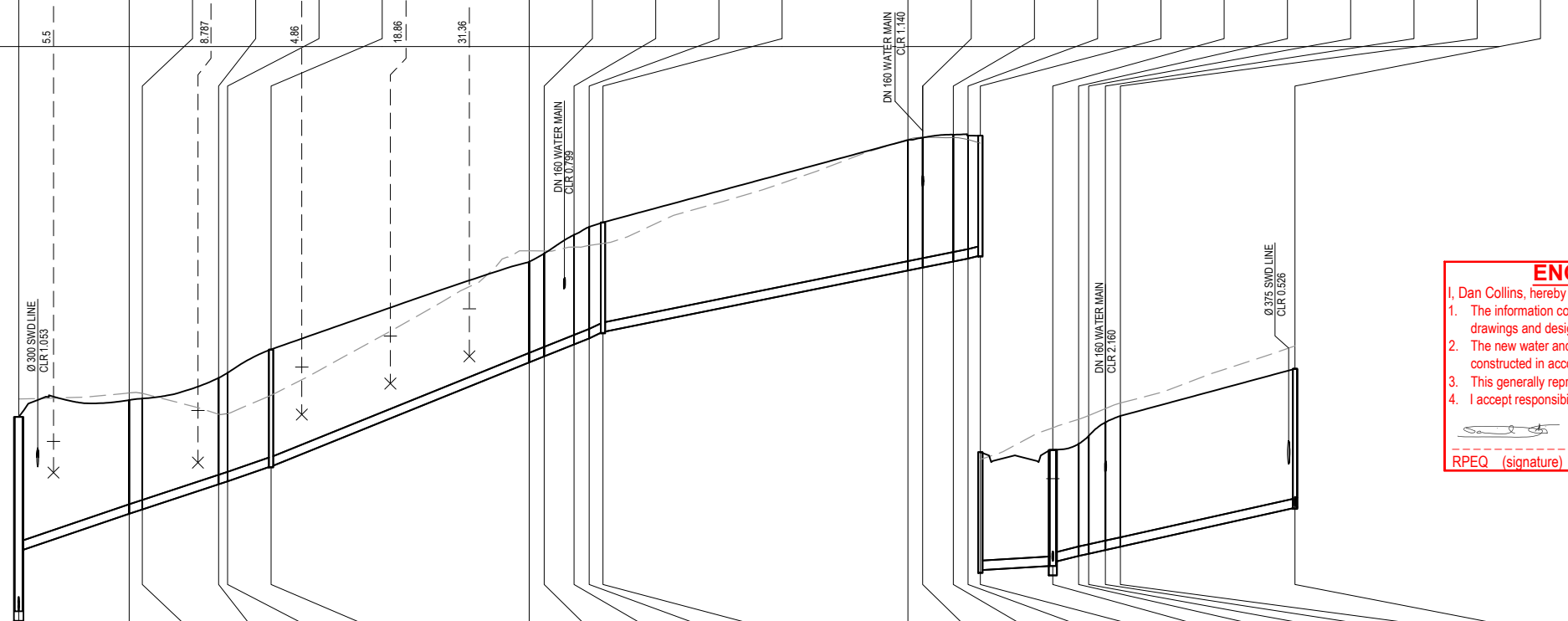
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STRUCTURE TYPE	P2 1,200Ø	HTP	HTP	HTP	HTP	MS	HTP	HTP	HTP	HTP	MS	HTP	HTP	HTP	HTP	MS	P2 1,200Ø	HTP	HTP	HTP	HTP	P2 1,200Ø
STRUCTURE LID TYPE	B					B					B					B	B					B
STRUCTURE DROP TYPE	V					V					V					V	V					V
JUNCTION LINE	LINE 3																LINE 7					
DEPTH TO LOT CONTROL LEVEL	0.908					0.550								0.554								
DEPTH TO HOUSE CONNECTION	1.34					1.35																
HC INVERT LEVEL	51.06		51.19		51.94	52.44					52.85											
HC TYPE	B		B		B	B					B											
HC LOT No	115		114		113	112					111											
CH. FROM D/S STRUC/ BEND	5.5		8.787		4.86	18.86					31.36											

STRUCTURE TYPES
 C2 = CAST-IN-SITU 1.500Ø
 P2 = PRE-CAST CONCRETE 1.050Ø
 MS = uPVC TYPE 'J' MAINTENANCE SHAFT
MH DROP TYPES:
 AS PER SEQ STD DRG SEQ-SEW-1303-1
MS DROP TYPES:
 MS-V = 30mm DROP THROUGH BULB
 MS-Z = >750mm DROP INTO RISER
LID TYPES
 B = NON-TRAFFICABLE
 D = TRAFFICABLE
 D(BD) = TRAFFICABLE WITH BOLT DOWN

NOTE: PE LINING OF MANHOLES:
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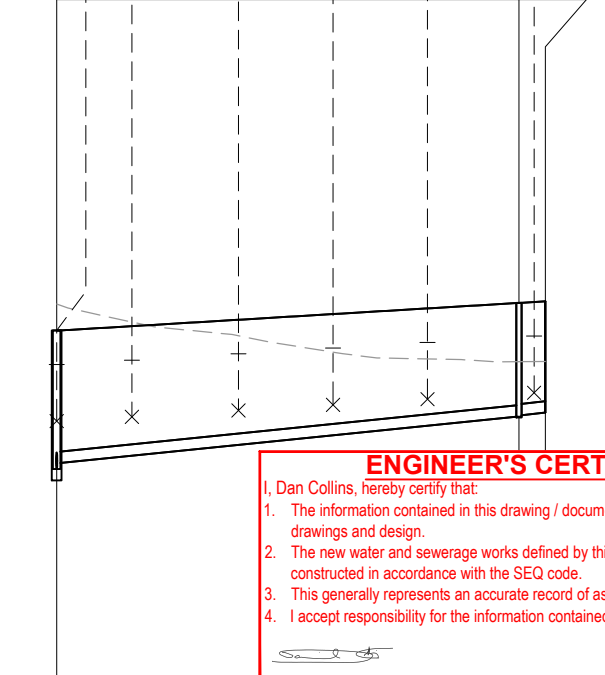
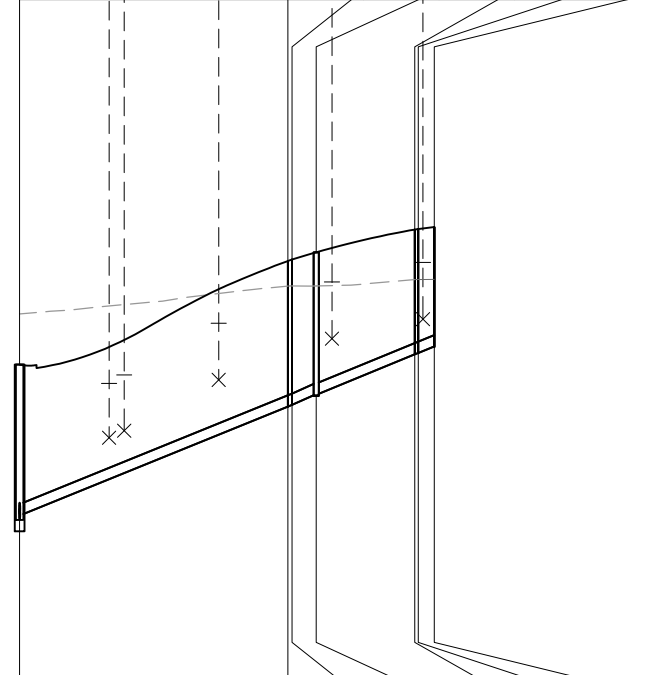
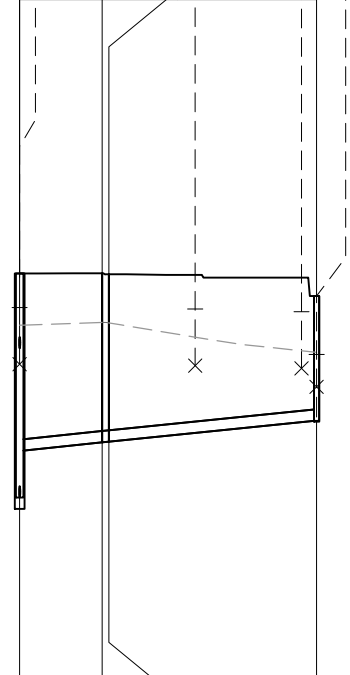
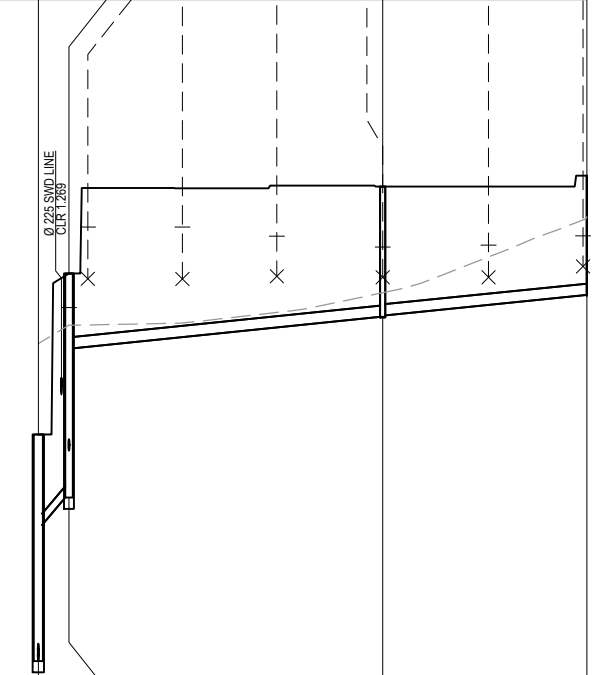
(Signature)
 RPEQ (signature) RPEQ No. 18631 Date: 29/01/24

DATUM R.L.	48.0																							
LAND USE							ROAD RESERVE																	
DIAMETER												1500 uPVC SN8												
GRADE																								
EMBEDMENT TYPE							TYPE 3 #																	
DEPTH TO INVERT	2.196	2.197	2.09	4.798	4.798	4.795	4.793	4.698	4.698	4.774	4.774	4.695	4.695	4.695	4.695	4.695	4.695	4.695	4.695	4.695	4.695	4.695	4.695	
JUNCTION INVERT LEVEL	49.704	49.796	49.81	50.967	50.967	50.965	50.963	50.963	50.963	50.963	50.963	50.963	50.963	50.963	50.963	50.963	50.963	50.963	50.963	50.963	50.963	50.963	50.963	
SEWER INVERT LEVEL	49.704	49.796	49.81	50.967	50.967	50.965	50.963	50.963	50.963	50.963	50.963	50.963	50.963	50.963	50.963	50.963	50.963	50.963	50.963	50.963	50.963	50.963	50.963	
DESIGN SURFACE LEVEL	54.987	51.90	54.984	56.166	56.244	56.294	56.362	56.362	56.362	56.362	56.362	56.362	56.362	56.362	56.362	56.362	56.362	56.362	56.362	56.362	56.362	56.362	56.362	
SETOUT	505269.347	935914.562	505252.120	935917.496	505250.349	935918.496	505242.478	935927.628	505241.339	935928.448	505234.981	935931.045	505194.754	935937.873	505192.494	935937.347	505188.668	935934.590	505187.460	935932.599	505187.131	935930.435	505179.898	935882.770
RUNNING CHAINAGE	0.000	17.473	2.075	4.049	12.090	31.612	1.416	40.028	39.896	46.993	80.699	2.382	80.082	17.800	4.937	55.300	147.153	1.330	150.082	150.082	150.082	150.082	150.082	150.082

LINE 3

<table border="1"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>DESIGN</th> <th>DRAWN</th> <th>REVISION DETAILS</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>25.01.23</td> <td>CL</td> <td>AK</td> <td>ISSUE FOR CONSTRUCTION</td> </tr> <tr> <td>B</td> <td>29.09.23</td> <td>CL</td> <td>BP</td> <td>AS CONSTRUCTED</td> </tr> <tr> <td>C</td> <td>29.01.24</td> <td>CL</td> <td>BP</td> <td>AS CONSTRUCTED</td> </tr> </tbody> </table>	REV	DATE	DESIGN	DRAWN	REVISION DETAILS	A	25.01.23	CL	AK	ISSUE FOR CONSTRUCTION	B	29.09.23	CL	BP	AS CONSTRUCTED	C	29.01.24	CL	BP	AS CONSTRUCTED	<table border="1"> <thead> <tr> <th>DRAWN</th> <th>STATUS</th> </tr> </thead> <tbody> <tr> <td>DANIEL COLLINS</td> <td>AS CONSTRUCTED</td> </tr> </tbody> </table>	DRAWN	STATUS	DANIEL COLLINS	AS CONSTRUCTED		<p>SCALE</p> <p>1:500 10 5 0 10 20 A1</p> <p>1:1000 HORIZONTAL A3</p> <p>1:100 2 1 0 2 4 A1</p> <p>1:200 VERTICAL A3</p>	<p>CLIENT</p> <p>HB PARK RIDGE</p> <p>ASSOCIATED CONSULTANT</p> <p>SAUNDERS HAVILL GROUP PH: 1300 123 744</p>	<p>PROJECT NAME</p> <p>133-159 PARK RIDGE ROAD PARK RIDGE (STAGE 1)</p>	<p>DRAWING TITLE</p> <p>SEWERAGE LONGITUDINAL SECTIONS SHEET 3 OF 4</p> <p>PROJECT No. 22-0141</p> <p>DRAWING No. 304</p> <p>REVISION C</p>
REV	DATE	DESIGN	DRAWN	REVISION DETAILS																										
A	25.01.23	CL	AK	ISSUE FOR CONSTRUCTION																										
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DRAWN	STATUS																													
DANIEL COLLINS	AS CONSTRUCTED																													

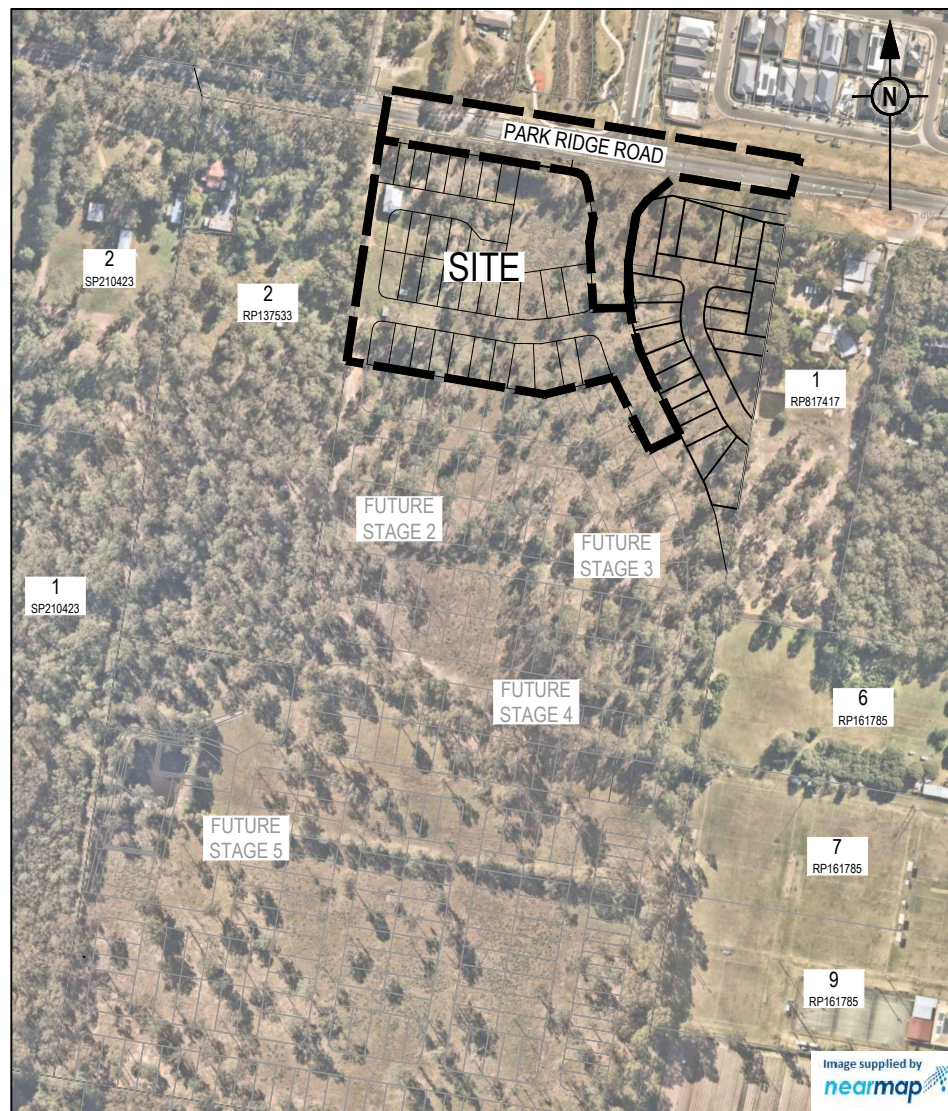
STRUC/ BEND/ END NAME	6/1	1/4	2/4	E/4	1/4	HTP1/5	HTP2/5	1/5	9/1	HTP1/6	HTP2/6	1/6	HTP3/6	HTP4/6	E/6	4/3	1/7	HTP1/7	
STRUCTURE TYPE	P2	P2	MS	END	P2 1,200Ø	HTP	HTP	MS	P2 1,200Ø	HTP	HTP	MS	HTP	HTP	END	P2 1,200Ø	MS	HTP	
STRUCTURE LID TYPE	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	
STRUCTURE DROP TYPE	X	X	V	V	X	X	X	V	V	V	V	V	V	V	V	V	V	V	
JUNCTION LINE	LINE 4	LINE 5			LINE 5				LINE 6							LINE 7			
DEPTH TO LOT CONTROL LEVEL	0.550	0.616			0.550			0.550								0.550			
DEPTH TO HOUSE CONNECTION		1.14			1.18			1.26	1.46	1.33	1.42	1.43				1.39		1.17	
HC INVERT LEVEL		53.97			53.96			53.90	53.55	54.72	55.26	55.54				55.21		55.57	
HC TYPE		B			X			B	B	B	B	B				X		B	
HC LOT No		105			104			102	134	132	131	130				124		129	
CH. FROM D/S STRUC/ BEND		2.5			0			25.485	11.834	26.334	2.084	0.631				0.002		27.001	
STRUCTURE TYPES C2 = CAST-IN-SITU 1.500Ø P2 = PRE-CAST CONCRETE 1.050Ø MS = uPVC TYPE 'J' MAINTENANCE SHAFT MH DROP TYPES: AS PER SEQ STD DRG SEQ-SEW-1303-1 MS DROP TYPES: MS-V = 30mm DROP THROUGH BULB MS-Z = >750mm DROP INTO RISER LID TYPES B = NON-TRAFFICABLE D = TRAFFICABLE D(BD) = TRAFFICABLE WITH BOLT DOWN																			
NOTE: PE LINING OF MANHOLES: MAINTENANCE HOLES ≥ 1500Ø IN DIA OR ≥ 4.0m IN DEPTH, REQUIRE PE LINED PROTECTIVE COATING																			
# EMBEDMENT NOTE: PIPE EMBEDMENT & TRENCHFILL SHALL BE IN ACCORDANCE WITH SEQ-SEW-1200-2, 1201-1 TO 1201-5. TYPE 3 SUPPORT IS PROPOSED UNTIL FINAL GEOTECHNICAL INVESTIGATIONS ARE COMPLETED PRIOR TO CONSTRUCTION.																			
* 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 PEAK URBAN STD DRG S-100.																			
DATUM R.L.	48.0																		
LAND USE	ROAD RESERVE																		
DIAMETER	1500 uPVC SN8																		
GRADE	1 IN 11.11																		
EMBEDMENT TYPE	TYPE 3 #																		
DEPTH TO INVERT	2.187	1.101	1.79	1.54	3.01	2.33	2.25	2.24	2.09	1.95	1.92	1.86	1.85	1.85	1.59	1.85	1.78	1.52	
JUNCTION INVERT LEVEL	49.883	50.87	53.54	53.85	51.12	51.80	51.65	52.17	52.84	53.21	54.07	54.59	55.09	55.16	55.16	54.53	54.62	55.22	
SEWER INVERT LEVEL	49.883	50.87	53.54	53.85	51.12	51.80	51.65	52.17	52.84	53.21	54.07	54.59	55.09	55.16	55.16	54.53	54.62	55.22	
DESIGN SURFACE LEVEL	50.909	52.07	54.13	55.33	54.13	54.13	54.13	54.13	54.32	54.32	54.32	54.42	54.42	54.42	54.42	54.38	54.38	54.74	
SETOUT	505266.402	505987.210	505987.210	50524.809	505266.402	505987.210	505987.210	50524.809	505324.551	505266.402	505987.210	505987.210	50524.809	505266.402	505987.210	505185.213	505987.210	50524.809	
RUNNING CHAINAGE	0.000	4.040	4.550	27.070	0.000	39.170	39.170	39.286	35.483	35.483	36.038	39.237	42.262	42.262	54.858	0.000	61.155	64.655	



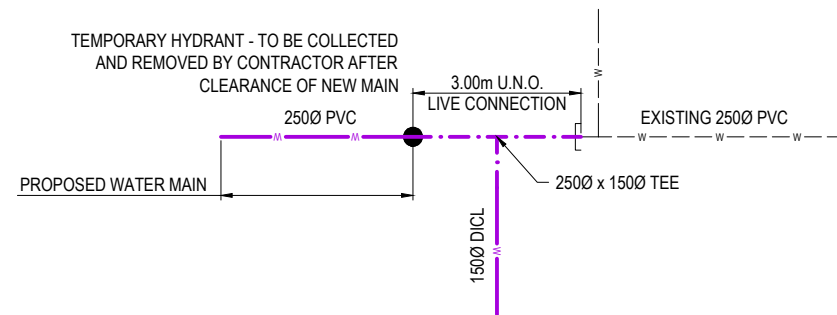
ENGINEER'S CERTIFICATION
 I, Dan Collins, hereby certify that:
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RPEQ (signature) RPEQ No. 18631 Date: 29/01/24

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LOCALITY PLAN
1:2500 (A1)
1:5000 (A3)



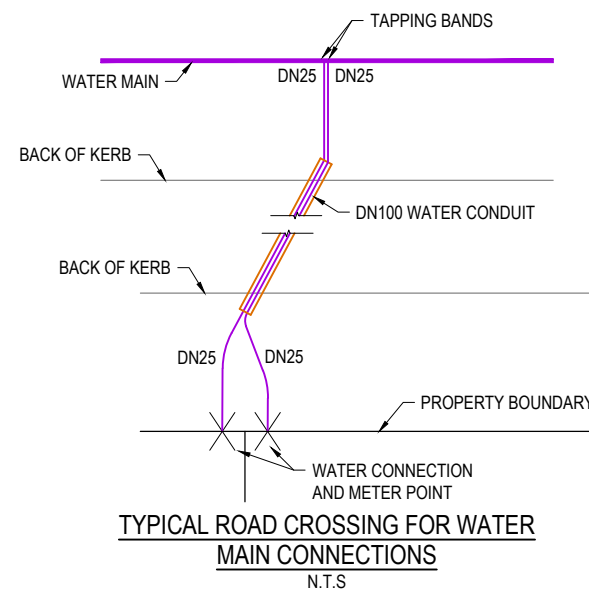
LIVE WATER CONNECTION 1 DETAIL
NOT TO SCALE

LIVE WATER WORKS

No.	DESCRIPTION	WATER MAIN DIA (mm)	WATER MAIN LENGTH	FITTING TYPE	NO. OF FITTINGS
1	3.0m LOGAN WATER CONNECTION LOGAN WATER TO EXCAVATE TO NEW WATER MAIN PREVIOUSLY CONSTRUCTED BY THE CONTRACTOR AND REMOVE DEAD END CAP AND CONNECTION TO EXISTING 2500Ø WATER MAIN. LOGAN WATER TO BACKFILL WATER MAIN INCLUDING TEMPORARY SURFACE RESTORATION.	1500 DI CL	3.000	2500 x 1500 TEE APPROVED CONNECTOR	2

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.
- EXISTING SERVICES RELEVANT TO THE PROJECT HAVE BEEN CONSIDERED THROUGHOUT DESIGN AND IS BASED ON SURVEY INFORMATION PROVIDED BY THE SURVEYOR AND THE CONTRACTOR. THE SUPERINTENDENT AND THE PRINCIPAL HAVE RELIED UPON THIS INFORMATION TO INFORM THE DESIGN. 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 DESIGN AND 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. THE CERTIFICATION OF THIS DESIGN IS BASED ON SURVEY AND POT HOLE INFORMATION PROVIDED BY THE SURVEYOR AND CONTRACTOR AT THE TIME OF DESIGN.
- 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.
- 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 DURING THE PRE-START, 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.



TYPICAL ROAD CROSSING FOR WATER MAIN CONNECTIONS
N.T.S

ENVIRONMENTAL CONDITIONS

VEGETATION PROTECTION

- TREES LOCATED ALONG THE FOOTPATH SHALL BE, TRANSPLANTED PRIOR TO CONSTRUCTION, OR REPLACED IF DESTROYED.
- 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.
- 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.
- ANY TREE LOPPING REQUIRED SHOULD BE UNDERTAKEN BY AN APPROVED ARBORIST.

SOIL

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

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

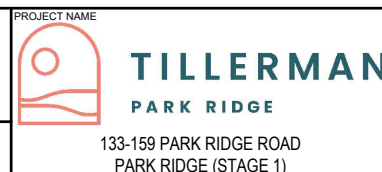
WATER RETICULATION NOTES

- ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT SOUTH EAST QUEENSLAND WATER SUPPLY CODE SPECIFICATIONS AND STANDARDS.
- UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
- ADOPT LIP OF KERB OR SHOULDER OF ROAD AS PERMANENT LEVEL.
- COVER ON MAINS FROM PERMANENT LEVEL TO BE AS SHOWN IN SEQ-WAT-1200-2.
- CONDUITS TO BE INSTALLED IN ACCORDANCE WITH THE STANDARD DRAWINGS.
- A WATER SERVICE 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.
- 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.
- 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 (WHERE APPLICABLE)
- 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.

ENGINEER'S CERTIFICATION

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RPEQ (signature) RPEQ No. 18631 Date: 29/01/24

REV	DATE	DESIGN	DRAWN	REVISION DETAILS	DRAWN	STATUS	SCALE	CLIENT	PROJECT NAME	DRAWING TITLE
A	25.01.23	CL	AK	ISSUE FOR CONSTRUCTION		AS CONSTRUCTED	1:2500 50 0 50 100 A1 1:5000	HB PARK RIDGE		WATER RETICULATION COVER PLAN
B	24.03.23	CL	AK	LIVE CONNECTION 4 AMENDED						
C	29.09.23	CL	BP	AS CONSTRUCTED						
D	29.01.24	CL	BP	AS CONSTRUCTED						
					DESIGN	APPROVED DANIEL COLLINS		ASSOCIATED CONSULTANT SAUNDERS HAVILL GROUP PH: 1300 123 744	133-159 PARK RIDGE ROAD PARK RIDGE (STAGE 1)	PROJECT No. 22-0141
						RPEQ 18631				DRAWING No. 306
						FOR AND ON BEHALF OF PEAKURBAN PTY LTD				REVISION D

LEGEND

- PROPOSED AREA OF WORKS
- PROPOSED WATER MAIN
- PROPOSED 2500 PVC-M PN32 TRUNK WATER MAIN
- PROPOSED EXTERNAL WORKS WATER MAIN
- PROPOSED DICL WATER MAIN
- EXISTING DBYD WATER MAIN
- EXISTING WATER MAIN
- EXISTING TRUNK WATER MAIN
- PROPOSED WATER CONDUIT
- HIGH POINT / LOW POINT
- PROPOSED STORMWATER DRAINAGE PIPE
- EXISTING STORMWATER DRAINAGE PIPE
- PROPOSED ROOFWATER DRAINAGE PIPE
- PROPOSED SEWER MAIN
- EXISTING SEWER MAIN
- PROPOSED TELSTRA CABLE
- INDICATIVE DRIVEWAY LOCATIONS
- ZERO LOT BOUNDARY

WATER FITTINGS LEGEND

- PROPOSED:**
- FIRE HYDRANT
 - ISOLATION VALVE
 - DEAD END
 - WATER SERVICE POINT
- EXISTING:**
- FIRE HYDRANT
 - ISOLATION VALVE
 - DEAD END

AS CONSTRUCTED LEGEND

- WATER PIPE
- WATER METER
- VALVE
- FIRE HYDRANT
- END CAP

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 MAINS
- WATER MAINS
- SEWER MAINS

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

NOTE:

- WATER MAINS MUST CROSS OVER SERVICES WITH MINIMUM COVER PER SEQ CI. 7.2.4. AND CLEARANCES PER SEQ CODE TABLE 5.5.
- ALL VALVES TO BE FULLY RESTRAINED IN ACCORDANCE WITH THE SEQ CODE.
- MARKERS FOR PROPERTY SERVICES SHALL BE IN ACCORDANCE WITH SEQ-WAT-1106-1108. MARKERS FOR WATER MAIN CROSSINGS, HYDRANTS AND VALVES SHALL BE IN ACCORDANCE WITH SEQ-WAT-1300-1.

RP DESCRIPTION

LOT 3 ON SP137533
DATUM LEVEL AND LOCATION
 PM70079 RL 57.043 AHD
 LOCATED: 133-159 PARK RIDGE ROAD, PARK RIDGE

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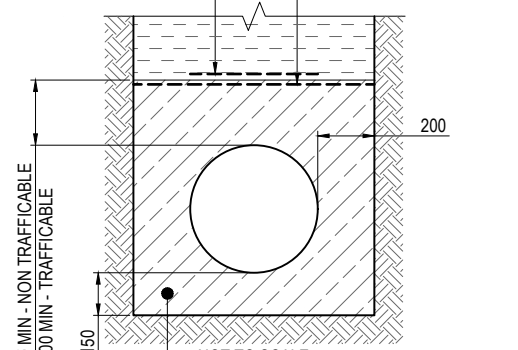
NOTE

FOR ALL EXTERNAL/PARK RIDGE ROAD WATER LAYOUT AND CONNECTION POINT. REFER DRAWING 22-0141-500 FOR DETAILS

REFER NOTE:

REFER 22-0141-309 FOR DETAILED DESIGN OF 2500 TRUNK WATER MAIN AND LONGITUDINAL SECTION

MARKING TAPE
 BIDIM A64 GEOTEXTILE



EMBEDMENT MATERIAL SHALL BE OF NOMINAL SIZED AGGREGATE OR 75mm AGGREGATE AS SPECIFIED. REFER SEQ CODE ACCEPTED PRODUCTS AND MATERIALS LIST. TRENCH FILL SHALL COMPLY WITH SEQ-WAT-1200-2

FUTURE PRV SITE LOCATION REFER DRG. 513 FOR DETAILS

LIVE WORKS CONNECTION 1 (AFTER CLEARANCE ON NEW MAIN): 3m CONNECTION TO EXISTING MAIN

REFER DRG. 309 FOR 2500 TRUNK WATER MAIN DETAILS AND LONGITUDINAL SECTION

NOTE: WATER MAINS MUST CROSS OVER SERVICES WITH MINIMUM COVER PER SEQ CI. 7.2.4. AND CLEARANCES PER SEQ CODE TABLE 5.5

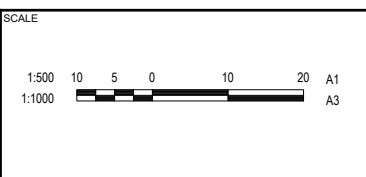
NOTE - FITTINGS FOR FITTING AND THRUST / ANCHOR BLOCK NOTES. ADDITIONAL DETAILS AND REINFORCEMENT DETAILS REFER STD. DWG. SEQ-WAT-1205-1, SEQ-WAT-1206-1, SEQ-WAR-1207-1.

NOTE - ROAD CROSSINGS: WATER MAINS UNDER CARRIAGEWAYS TO BE DICL, UNLESS OTHERWISE APPROVED BY COUNCIL

NOTE - WATER SERVICE CONDUITS: ALL WATER SERVICE CONDUITS TO BE DN100 uPVC AND COMPLY WITH THE RELEVANT SEQ. WS & S AND D & C CODE STANDARD DRAWINGS SEQ-WAT-1110-1 & 2

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	25.01.23	CL	AK	ISSUE FOR CONSTRUCTION
B	24.03.23	CL	AK	TILLERMAN PARADE WATER MAIN AMENDED
C	17.04.23	CL	CL	TRUNK WATER ALIGNMENT AMENDED TO COUNCIL RFI
D	21.04.23	CL	CL	TRUNK WATER ALIGNMENT AMENDED. PRV SITE ADDED. CROSS-ROAD LABELS AMENDED
E	02.05.23	CL	CL	TRUNK WATER VERTICAL ALIGNMENT AMENDED
F	12.05.23	CL	CL	ISSUED FOR CONSTRUCTION
G	29.09.23	CL	BP	AS CONSTRUCTED
H	29.01.24	CL	BP	AS CONSTRUCTED

DRAWN	STATUS
AS CONSTRUCTED	
DESIGN APPROVED	DANIEL COLLINS RPEQ 18631








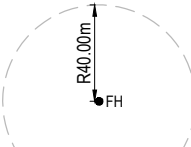
CLIENT
HB PARK RIDGE
 ASSOCIATED CONSULTANT
 SAUNDERS HAVILL GROUP
 PH: 1300 123 744

PROJECT NAME
TILLERMAN PARK RIDGE
 133-159 PARK RIDGE ROAD
 PARK RIDGE (STAGE 1)

DRAWING TITLE		
WATER RETICULATION LAYOUT PLAN		
PROJECT No.	DRAWING No.	REVISION
22-0141	307	H

LEGEND

-  PROPOSED AREA OF WORKS
-  PROPOSED WATER MAIN
-  EXISTING WATER MAIN
-  PROPOSED HYDRANT REACH (WORST CASE ALLOTMENT)
-  FIRE HYDRANT SPACING (RADIUS 40m)








FIRE HYDRANT COVERAGE
NOT TO SCALE

NOTE:

ALL FIRE HYDRANT LOCATIONS SHALL MEET CLASS 1 BUILDING COVERAGE REQUIREMENTS OF THE SEQ CODE. FIRE HYDRANT COVERAGE IS AS SHOWN AND DEMONSTRATES THE WORST POSSIBLE LOCATION OF ANY PROPOSED CLASS 1 BUILDING WITHIN 90m OF HYDRANT REACH.

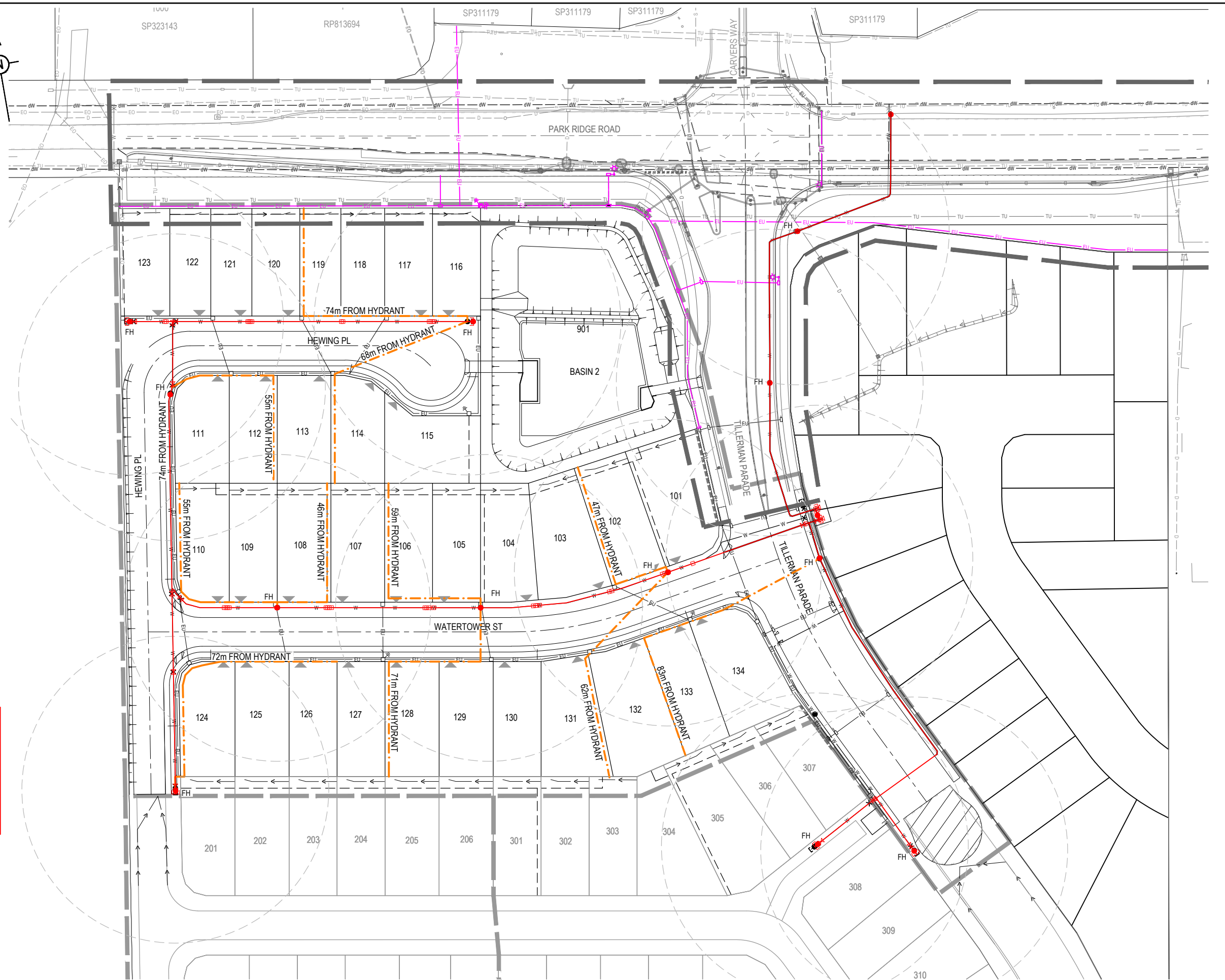
AS CONSTRUCTED LEGEND

-  WATER PIPE
-  WATER METER
-  VALVE
-  FIRE HYDRANT
-  END CAP

ENGINEER'S CERTIFICATION

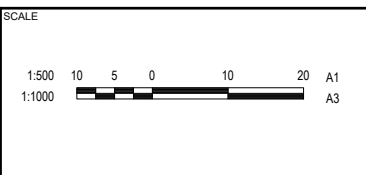
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B	17.04.23	CL	CL	TRUNK WATER ALIGNMENT AMENDED TO COUNCIL RFI. FIRE REACH AMENDED
C	21.04.23	CL	CL	TRUNK WATER ALIGNMENT AMENDED TO COUNCIL RFI. HYDRANT LOCATION UPDATED
D	02.05.23	CL	CL	TRUNK WATER ALIGNMENT AMENDED TO COUNCIL RFI. HYDRANT LOCATION UPDATED
E	12.05.23	CL	CL	ISSUED FOR CONSTRUCTION
F	29.09.23	CL	BP	AS CONSTRUCTED
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DRAWN	STATUS
	AS CONSTRUCTED
DESIGN	APPROVED
	DANIEL COLLINS
	RPEQ 18631



CLIENT
HB PARK RIDGE

ASSOCIATED CONSULTANT
SAUNDERS HAVILL GROUP
PH: 1300 123 744

PROJECT NAME
TILLERMAN PARK RIDGE

133-159 PARK RIDGE ROAD
PARK RIDGE (STAGE 1)

DRAWING TITLE		
FIRE HYDRANT REACH LAYOUT PLAN		
PROJECT No.	DRAWING No.	REVISION
22-0141	308	G

FOR AND ON BEHALF OF PEAKURBAN PTY LTD

LEGEND

	PROPOSED AREA OF WORKS		PROPOSED ROOFWATER DRAINAGE PIPE
	PROPOSED WATER MAIN		PROPOSED SEWER MAIN
	EXISTING DBYD WATER MAIN		EXISTING SEWER MAIN
	EXISTING WATER MAIN		PROPOSED TELSTRA CABLE
	PROPOSED STORMWATER DRAINAGE PIPE		ULTIMATE PARK RIDGE ROAD KERB
	ULTIMATE STORMWATER DRAINAGE PIPE (INDICATIVE)		INDICATIVE DRIVEWAY LOCATIONS
	EXISTING STORMWATER DRAINAGE PIPE		ZERO LOT BOUNDARY
	PROPOSED 2500 DICL TRUNK WATER MAIN		HIGH POINT / LOW POINT
	PROPOSED 2500 PVC-M PN32 TRUNK WATER MAIN		
	PROPOSED DICL WATER		

WATER FITTINGS LEGEND

	PROPOSED: FIRE HYDRANT		EXISTING: FIRE HYDRANT
	PROPOSED: ISOLATION VALVE		EXISTING: ISOLATION VALVE
	PROPOSED: DEAD END		EXISTING: DEAD END

AS CONSTRUCTED LEGEND

	WATER PIPE
	WATER METER
	VALVE
	FIRE HYDRANT
	END CAP

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 3. This generally represents an accurate record of as-constructed works
 4. I accept responsibility for the information contained in this drawing / document.

RPEQ (signature) RPEQ No. 18631 Date: 29/01/24

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 MAINS
- WATER MAINS
- SEWER MAINS

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

NOTE:
WATER MAINS MUST CROSS OVER SERVICES WITH MINIMUM COVER PER SEQ CI. 7.2.4. AND CLEARANCES PER SEQ CODE TABLE 5.5

NOTE - ROAD CROSSINGS:
WATER MAINS UNDER CARRIAGEWAYS TO BE DICL

NOTE
FOR ALL EXTERNAL/PARK RIDGE ROAD WATER LAYOUT AND CONNECTION POINT. REFER DRAWING 22-0141- 500 FOR DETAILS

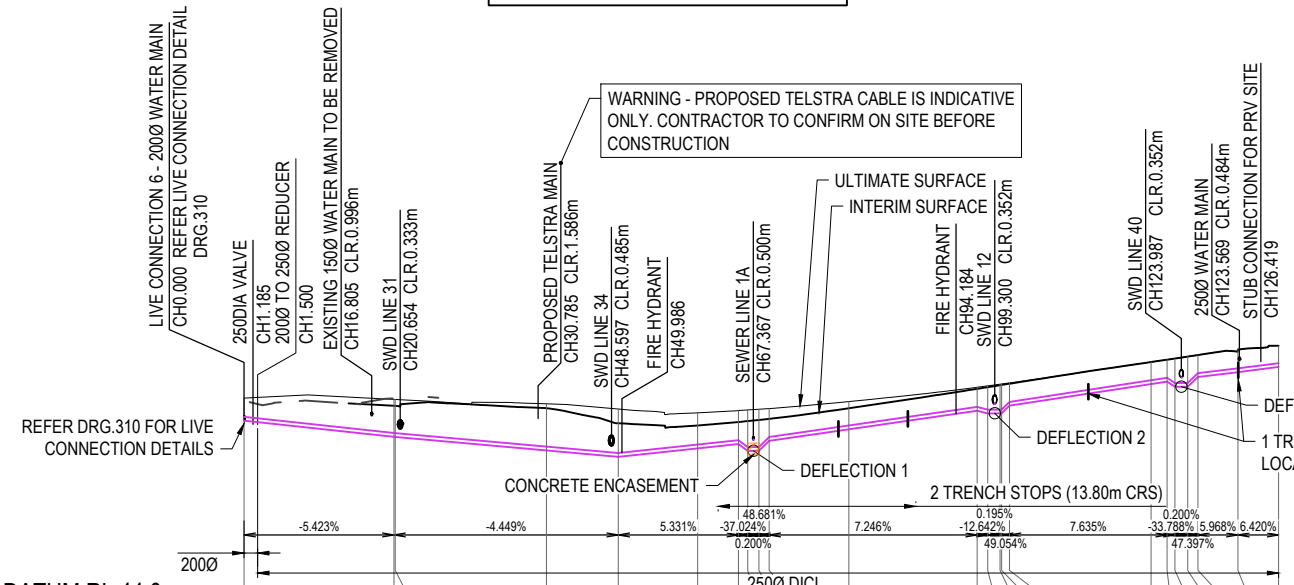
NOTE:
THRUST BLOCKS TO BE CONSTRUCTED IN ACCORDANCE WITH SEQ-WAT-1205-1

NOTE:
WATER MAINS MUST CROSS OVER SERVICES WITH MINIMUM COVER PER SEQ CI. 7.2.4. AND CLEARANCES PER SEQ CODE TABLE 5.5.
 ALL VALVES TO BE FULLY RESTRAINED IN ACCORDANCE WITH THE SEQ CODE.
 MARKERS FOR PROPERTY SERVICES SHALL BE IN ACCORDANCE WITH SEQ-WAT-1106-1108. MARKERS FOR WATER MAIN CROSSINGS, HYDRANTS AND VALVES SHALL BE IN ACCORDANCE WITH SEQ-WAT-1300-1.

NOTE - WATER SERVICE CONDUITS:
ALL WATER SERVICE CONDUITS TO BE DN100 UPVC AND COMPLY WITH THE RELEVANT SEQ, WS & S AND D & C CODE STANDARD DRAWINGS SEQ-WAT-1110-1 & 2

NOTE

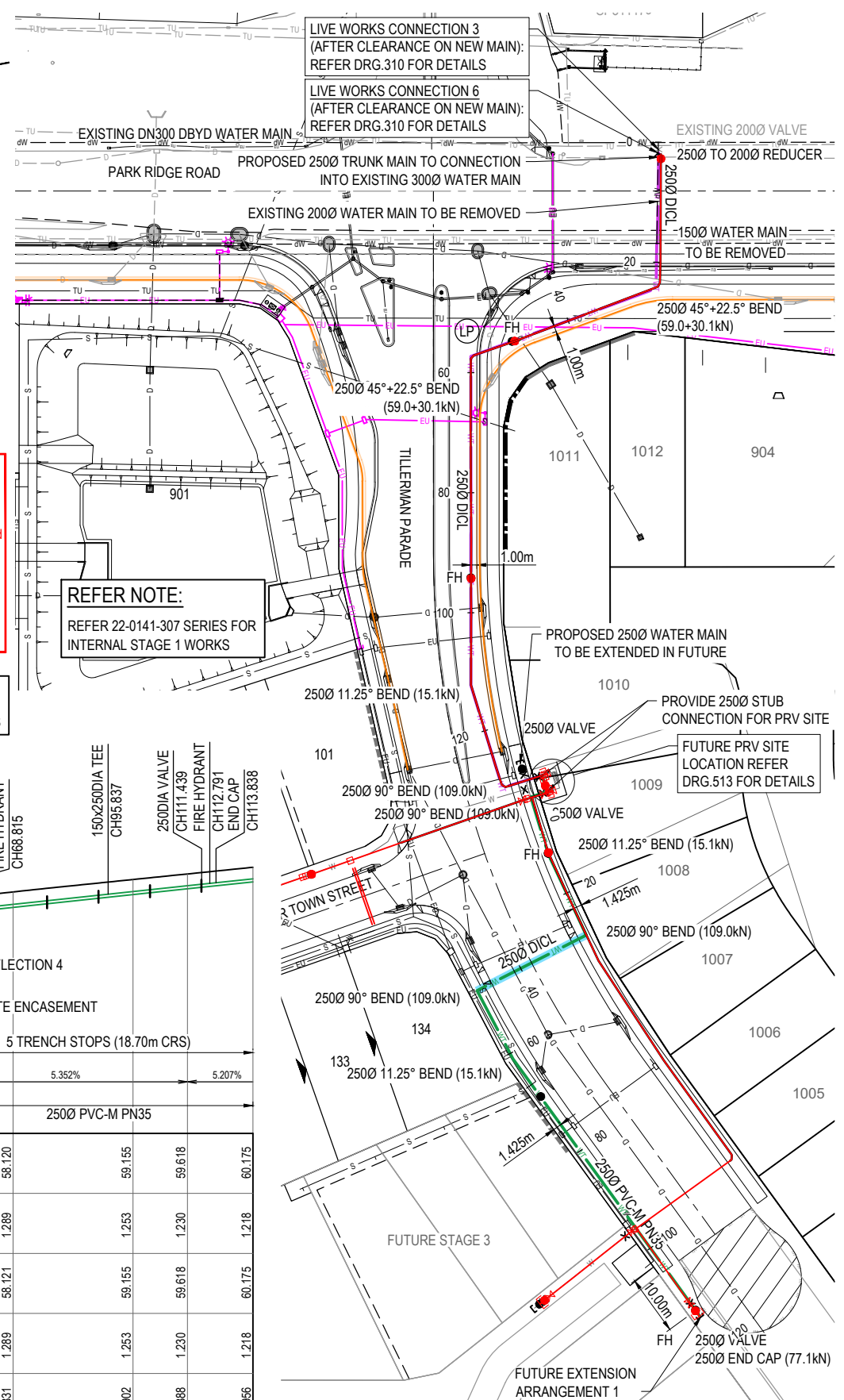
REFER DRG. 310 FOR VERTICAL DEFLECTION DETAILS



DATUM RL 44.0		2500 DICL		2500 PVC-M PN35		2500 PVC-M PN35		2500 PVC-M PN35	
ULTIMATE SURFACE	50.889	50.805	50.506	51.601	53.428	53.505	53.632	53.735	54.092
DEPTH TO ULTIMATE	1.491	2.482	3.080	1.549	1.819	1.871	1.994	1.818	1.492
INTERIM SURFACE		50.379	50.216	51.500	53.271	53.428	53.632	53.735	54.351
DEPTH TO INTERIM		2.056	2.791	1.448	1.453	1.449	1.449	1.449	1.405
PIPE INVERT LEVEL	49.398	48.323	47.426	47.563	51.817	51.979	51.638	51.638	52.600
CHAINAGES	0.000	19.829	40.000	60.000	96.972	122.116	123.136	124.836	131.476

DATUM RL 44.0		2500 PVC-M PN35		2500 PVC-M PN35		2500 PVC-M PN35		2500 PVC-M PN35	
ULTIMATE SURFACE	54.505	55.752	56.288	56.223	56.289	57.017	57.023	57.201	58.120
DEPTH TO ULTIMATE	1.436	1.474	1.357	1.270	1.321	1.287	1.287	1.249	1.289
INTERIM SURFACE	54.505	55.752	56.288	56.224	56.289	57.018	57.023	57.201	58.121
DEPTH TO INTERIM	1.436	1.474	1.357	1.270	1.321	1.288	1.287	1.249	1.289
PIPE INVERT LEVEL	53.069	54.278	54.931	54.954	54.968	55.730	55.737	55.952	56.831
CHAINAGES	3.883	20.000	28.703	40.000	47.286	59.903	60.000	63.159	80.000

TRUNK WATER MAIN (DOWNSTREAM OF PRV SITE)

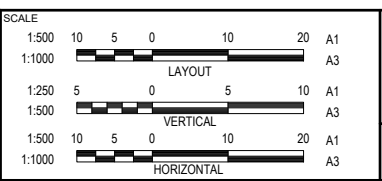


RP DESCRIPTION
 LOT 3 ON SP137533
DATUM LEVEL AND LOCATION
 PM70079 RL 57.043 AHD
 LOCATED: 133-159 PARK RIDGE ROAD, PARK RIDGE

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
B	24.03.23	CL	AK	WATER MAIN ALIGNMENT AND CLASS AMENDED
C	17.04.23	CL	CL	DRAWING NAME AMENDED, TRUNK WATER ALIGNMENT AMENDED TO COUNCIL RFI
D	02.05.23	CL	CL	TRUNK WATER ALIGNMENT AMENDED TO COUNCIL RFI, PRV SITE ADDED
E	02.05.23	CL	CL	TRUNK WATER VERTICAL ALIGNMENT AMENDED, TRENCH STOP ADDED, LIVE DETAIL REMOVED
F	08.05.23	CL	CL	AMENDED TO COUNCIL COMMENTS
G	12.05.23	CL	CL	ISSUED FOR CONSTRUCTION
H	06.06.23	CL	CL	WATER MAIN ALIGNMENT UPDATED, LIVE CONNECTION 3, 6 ADDED, TUNNEL BORE REMOVED
I	07.06.23	CL	CL	2500 DIA VALVE REMOVED
J	29.09.23	CL	BP	AS CONSTRUCTED
K	29.01.24	CL	BP	AS CONSTRUCTED

AS CONSTRUCTED

APPROVED
DANIEL COLLINS
 RPEQ 18631



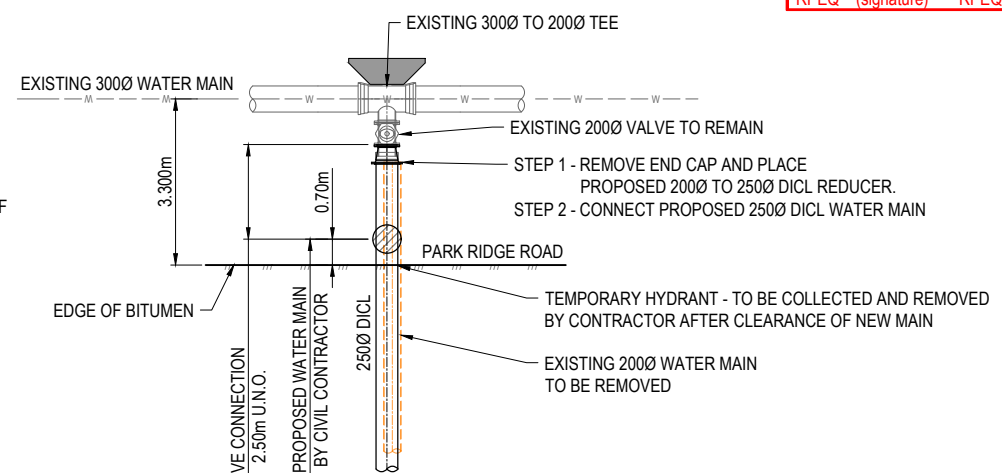
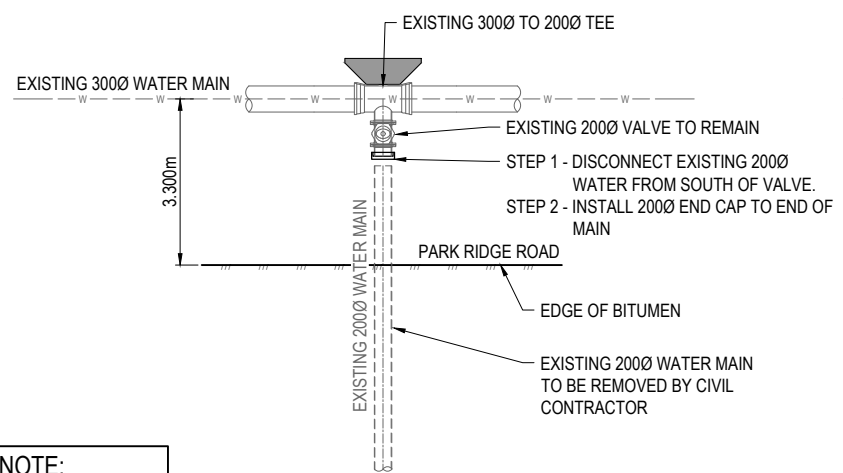
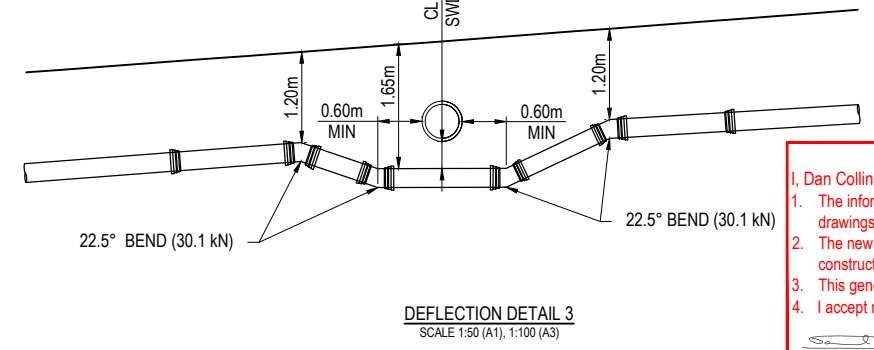
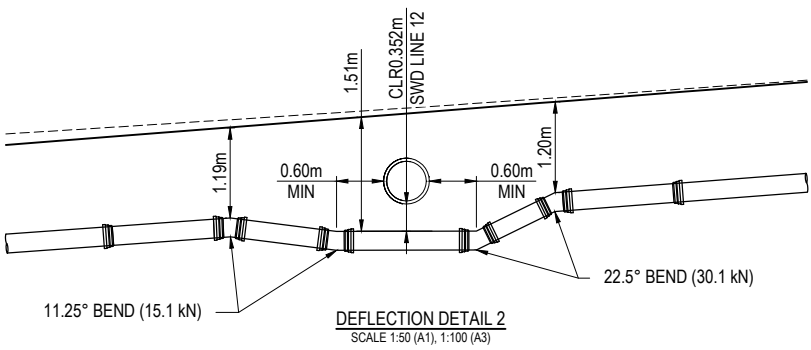
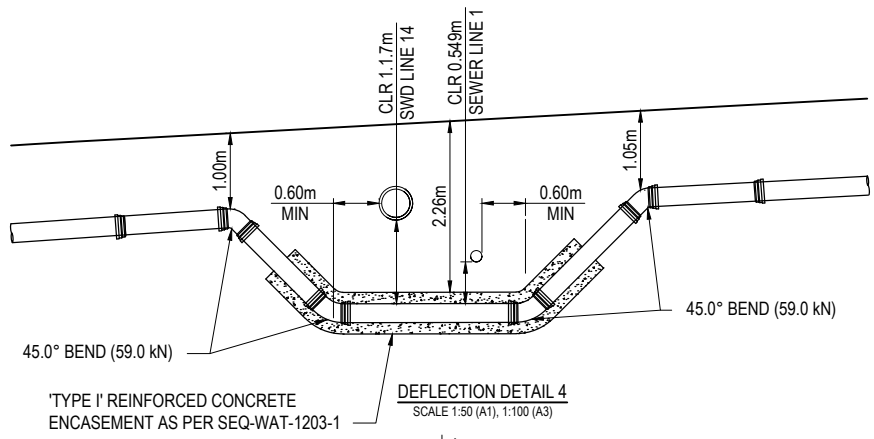
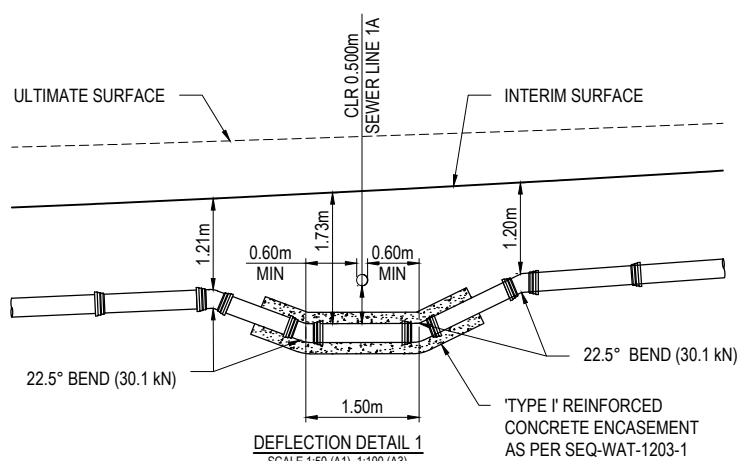
CLIENT
HB PARK RIDGE

ASSOCIATED CONSULTANT
SAUNDERS HAVILL GROUP
 PH: 1300 123 744

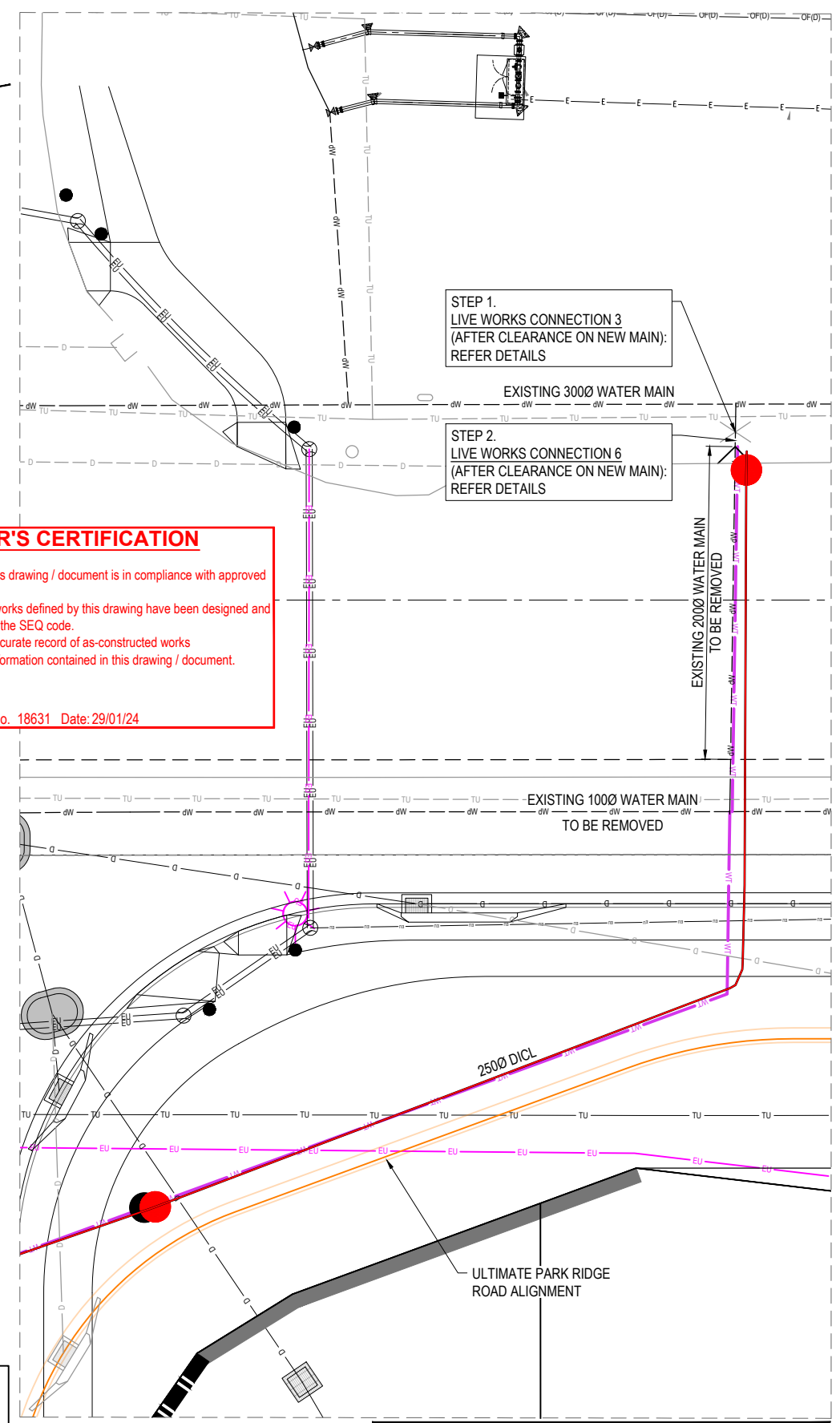
PROJECT NAME
TILLERMAN PARK RIDGE

133-159 PARK RIDGE ROAD
 PARK RIDGE (STAGE 1)

DRAWING TITLE		
TRUNK WATER DETAILS, LAYOUT AND LONGITUDINAL SECTION		
PROJECT No.	DRAWING No.	REVISION
22-0141	309	K



ENGINEER'S CERTIFICATION
 I, Dan Collins, hereby certify that:
 1. The information contained in this drawing / document is in compliance with approved drawings and design.
 2. The new water and sewerage works defined by this drawing have been designed and constructed in accordance with the SEQ code.
 3. This generally represents an accurate record of as-constructed works
 4. I accept responsibility for the information contained in this drawing / document.
 RPEQ (signature) RPEQ No. 18631 Date: 29/01/24



REFER NOTE:
 REFER 22-0141-307 SERIES FOR INTERNAL STAGE 1 WORKS

NOTE - ROAD CROSSINGS:
 WATER MAINS UNDER CARRIAGEWAYS TO BE DI-CL

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

LIVE WATER WORKS

No.	DESCRIPTION	WATER MAIN DIA (mm)	WATER MAIN LENGTH	FITTING TYPE	NO. OF FITTINGS
3	REMOVAL OF WATER MAIN BOTH CONTRACTOR AND LOGAN WATER TO DECOMMISSION AND EXCAVATE EXISTING 2000 PVC WATER MAIN FROM ACROSS PARK RIDGE ROAD AND ANY ASSOCIATED FITTINGS. WORKS TO BE UNDERTAKEN PRIOR TO INSTALLATION OF 250 ROAD CROSSING AND LIVE CONNECTION 6	2000	15.600m	APPROVED CONNECTOR	1
6	2.50m LOGAN WATER CONNECTION CONTRACTOR, UNDER LOGAN WATER SUPERVISION TO EXCAVATE WATER MAIN PREVIOUSLY CONSTRUCTED BY THE CONTRACTOR AND REMOVE DEAD END CAP AND CONNECTION TO EXISTING 2000 WATER MAIN. LOGAN WATER TO BACKFILL WATER MAIN INCLUDING TEMPORARY SURFACE RESTORATION.	2500	2.500m	APPROVED CONNECTOR	1

NOTE
 FOR ALL EXTERNAL/PARK RIDGE ROAD WATER LAYOUT AND CONNECTION POINT. REFER DRAWING 22-0141- 500 FOR DETAILS

NOTE:
 THRUST BLOCKS TO BE CONSTRUCTED IN ACCORDANCE WITH SEQ-WAT-1205-1

NOTE:
 WATER MAINS MUST CROSS OVER SERVICES WITH MINIMUM COVER PER SEQ CI. 7.2.4. AND CLEARANCES PER SEQ CODE TABLE 5.5

NOTE - WATER SERVICE CONDUITS:
 ALL WATER SERVICE CONDUITS TO BE DN100 uPVC AND COMPLY WITH THE RELEVANT SEQ. WS & S AND D & C CODE STANDARD DRAWINGS SEQ-WAT-1110-1 & 2

RP DESCRIPTION
 LOT 3 ON SP137533
DATUM LEVEL AND LOCATION
 PM70079 RL 57.043 AHD
 LOCATED: 133-159 PARK RIDGE ROAD, PARK RIDGE

<table border="1"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>DESIGN</th> <th>DRAWN</th> <th>REVISION DETAILS</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>02.05.23</td> <td>CL</td> <td>CL</td> <td>ISSUE FOR APPROVAL</td> </tr> <tr> <td>B</td> <td>08.05.23</td> <td>CL</td> <td>CL</td> <td>AMENDED TO COUNCIL COMMENTS</td> </tr> <tr> <td>C</td> <td>12.05.23</td> <td>CL</td> <td>CL</td> <td>ISSUED FOR CONSTRUCTION</td> </tr> <tr> <td>D</td> <td>06.08.23</td> <td>CL</td> <td>CL</td> <td>WATER MAIN ALIGNMENT UPDATED. LIVE CONNECTION 3, 6 ADDED. TUNNEL BORE REMOVED</td> </tr> <tr> <td>E</td> <td>07.08.23</td> <td>CL</td> <td>CL</td> <td>250DIA VALVE REMOVED</td> </tr> <tr> <td>F</td> <td>08.08.23</td> <td>CL</td> <td>CL</td> <td>LIVE CONNECTION 6 AMENDED</td> </tr> <tr> <td>G</td> <td>19.06.23</td> <td>CL</td> <td>CL</td> <td>LIVE CONNECTION TABLE 3 AND 6 ADDED</td> </tr> <tr> <td>H</td> <td>29.09.23</td> <td>CL</td> <td>BP</td> <td>AS CONSTRUCTED</td> </tr> <tr> <td>I</td> <td>29.01.24</td> <td>CL</td> <td>BP</td> <td>AS CONSTRUCTED</td> </tr> </tbody> </table>	REV	DATE	DESIGN	DRAWN	REVISION DETAILS	A	02.05.23	CL	CL	ISSUE FOR APPROVAL	B	08.05.23	CL	CL	AMENDED TO COUNCIL COMMENTS	C	12.05.23	CL	CL	ISSUED FOR CONSTRUCTION	D	06.08.23	CL	CL	WATER MAIN ALIGNMENT UPDATED. LIVE CONNECTION 3, 6 ADDED. TUNNEL BORE REMOVED	E	07.08.23	CL	CL	250DIA VALVE REMOVED	F	08.08.23	CL	CL	LIVE CONNECTION 6 AMENDED	G	19.06.23	CL	CL	LIVE CONNECTION TABLE 3 AND 6 ADDED	H	29.09.23	CL	BP	AS CONSTRUCTED	I	29.01.24	CL	BP	AS CONSTRUCTED	<table border="1"> <thead> <tr> <th>DRAWN</th> <th>STATUS</th> </tr> </thead> <tbody> <tr> <td>AS CONSTRUCTED</td> <td></td> </tr> </tbody> </table>	DRAWN	STATUS	AS CONSTRUCTED			<table border="1"> <thead> <tr> <th>SCALE</th> <th>SCALE</th> <th>CLIENT</th> </tr> </thead> <tbody> <tr> <td>1:500</td> <td>10 5 0 10 20 A1</td> <td>HB PARK RIDGE</td> </tr> <tr> <td>1:1000</td> <td>10 5 0 10 20 A1</td> <td></td> </tr> <tr> <td>1:250</td> <td>5 0 5 10 A1</td> <td></td> </tr> <tr> <td>1:500</td> <td>10 5 0 10 20 A1</td> <td></td> </tr> <tr> <td>1:1000</td> <td>10 5 0 10 20 A1</td> <td></td> </tr> </tbody> </table>	SCALE	SCALE	CLIENT	1:500	10 5 0 10 20 A1	HB PARK RIDGE	1:1000	10 5 0 10 20 A1		1:250	5 0 5 10 A1		1:500	10 5 0 10 20 A1		1:1000	10 5 0 10 20 A1		<table border="1"> <thead> <tr> <th>PROJECT NAME</th> <th>ASSOCIATED CONSULTANT</th> <th>PROJECT No.</th> <th>DRAWING No.</th> <th>REVISION</th> </tr> </thead> <tbody> <tr> <td>TILLERMAN PARK RIDGE</td> <td>SAUNDERS HAVILL GROUP PH: 1300 123 744</td> <td>22-0141</td> <td>310</td> <td>I</td> </tr> </tbody> </table>	PROJECT NAME	ASSOCIATED CONSULTANT	PROJECT No.	DRAWING No.	REVISION	TILLERMAN PARK RIDGE	SAUNDERS HAVILL GROUP PH: 1300 123 744	22-0141	310	I
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ASCON LEGEND

---40.00--- AS CONSTRUCTED CONTOUR

LEGEND

- PROPOSED AREA OF WORKS
- 24.0--- PROPOSED SURFACE CONTOUR
- 24.0--- EXISTING SURFACE CONTOUR
- PROPOSED 'B' GRADE SANDSTONE BLOCK WALL
- PROPOSED ENTRY WALL REFER LANDSCAPE DRAWINGS
- TEXTURED CONCRETE SLEEPER RETAINING WALL
- 24.60 PROPOSED FINISHED SURFACE LEVEL (FSL) (AFTER TOPSOIL PLACEMENT)
- 24.60 EXISTING SURFACE LEVEL (ESL)
- PROPOSED AREA OF CUT
- PROPOSED AREA OF FILL
- ▲ INDICATIVE DRIVEWAY LOCATIONS
- ZERO LOT BOUNDARY
- D --- D --- EXISTING STORMWATER DRAINAGE PIPE
- R --- R --- EXISTING ROOFWATER DRAINAGE PIPE
- S --- S --- EXISTING SEWER MAIN
- W --- W --- EXISTING WATER MAIN
- C --- C --- EXISTING WATER CONDUIT
- EU --- EU --- EXISTING ELECTRICAL CABLE U/G
- EO --- EO --- EXISTING ELECTRICAL CABLE O/H
- TU --- TU --- EXISTING TELECOMMUNICATION CABLE U/G
- FO --- FO --- EXISTING FIBRE OPTIC CABLE U/G
- G --- G --- EXISTING GAS MAIN
- >--->--- EXISTING DRAIN

NOTE
REFER DRAWINGS 200-308
INTERNAL WORKS

NOTE
REFER DRAWINGS 507 FOR PARK
RIDGE ROAD CROSS SECTIONS

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:

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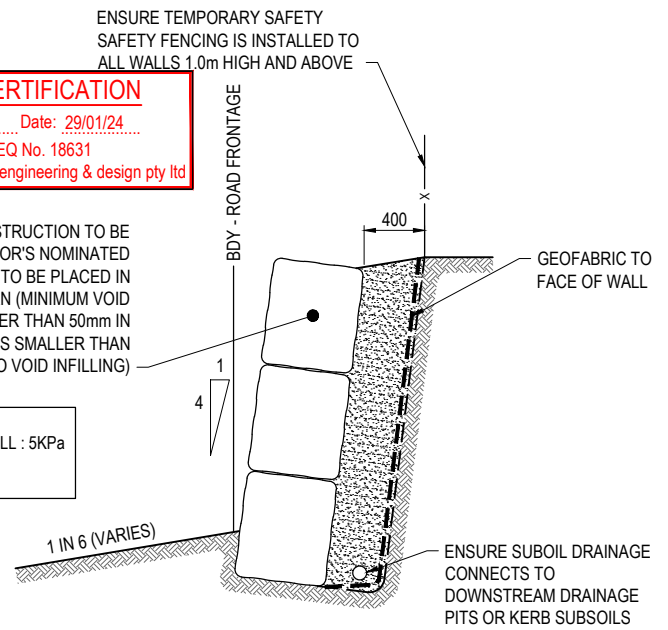
EARTHWORKS VOLUMES	
CUT:	-2,970m ³
FILL:	88m ³
BAL:	2,881m ³ (SPOIL)

NOTE:
1. VOLUMES SHOWN ARE SOLID VALUES ONLY. NO ALLOWANCES FOR BULKING, COMPACTION, ROAD BOXING, UNSUITABLE MATERIALS.

AS-CONSTRUCTED CERTIFICATION
Signature: _____ Date: 29/01/24
DANIEL COLLINS RPEQ No. 18631
For and on behalf of Colliers International engineering & design pty ltd

RETAINING WALL DESIGN AND CONSTRUCTION TO BE RPEQ CERTIFIED BY THE CONTRACTOR'S NOMINATED GEOTECHNICAL ENGINEER. ROCKS TO BE PLACED IN STRETCHER BOND PATTERN (MINIMUM VOID ALLOWABLE SHALL NOT BE GREATER THAN 50mm IN ANY DIRECTION, WITH NO SPALLS SMALLER THAN 750mm IN SIZE - i.e. NO VOID INFILLING)

- MINIMUM DESIGN REQUIREMENTS:**
- SURCHARGE LOADING ON BACKFILL : 5kPa
 - ALLOW FOR 1.8m HIGH FENCE
 - MAX 1V:4H SLOPE BEHIND WALL



TYPICAL 'B' GRADE SANDSTONE BLOCKWORK RETAINING WALL DETAIL
SCALE 1:20 (A1)

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	25.01.23	CL	AK	ISSUE FOR CONSTRUCTION
B	12.05.23	CL	CL	AMENDED FOR TRUNK WATER MAIN APPROVAL
C	29.01.24	CL	BP	AS CONSTRUCTED

DRAWN	STATUS
AS CONSTRUCTED	

DESIGN	APPROVED	RPEQ No.
	DANIEL COLLINS	18631



SCALE

1:500 10 5 0 10 20 A1
1:1000

CLIENT

HB PARK RIDGE

ASSOCIATED CONSULTANT
SAUNDERS HAVILL GROUP
PH: 1300 123 744

PROJECT NAME

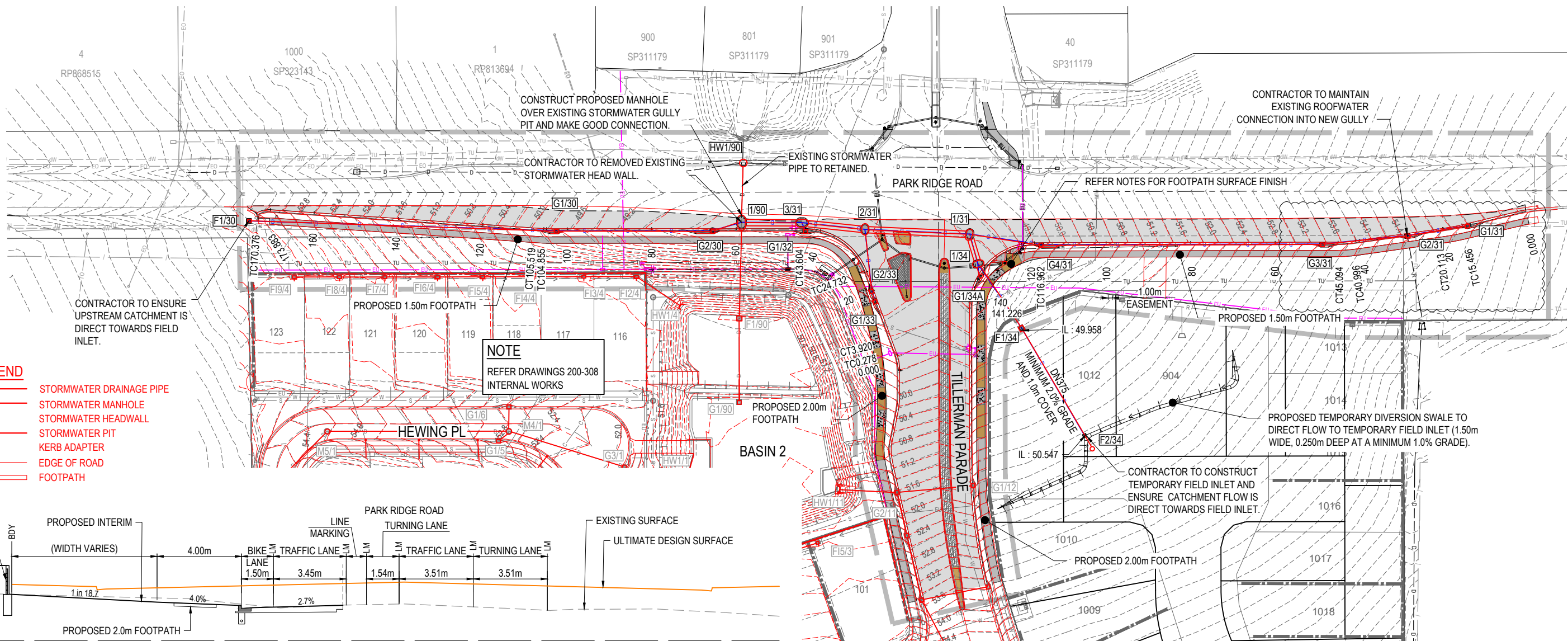
TILLERMAN PARK RIDGE

133-159 PARK RIDGE ROAD
PARK RIDGE (STAGE 1)

DRAWING TITLE

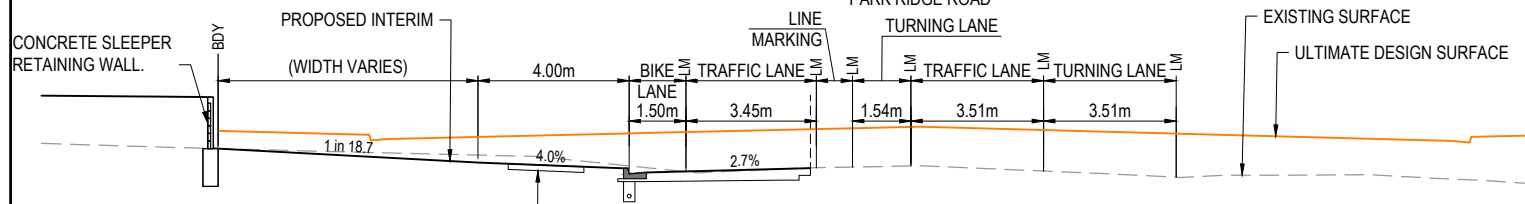
EXT BULK EARTHWORKS LAYOUT PLAN

PROJECT No. **22-0141**
DRAWING No. **501**
REVISION **C**

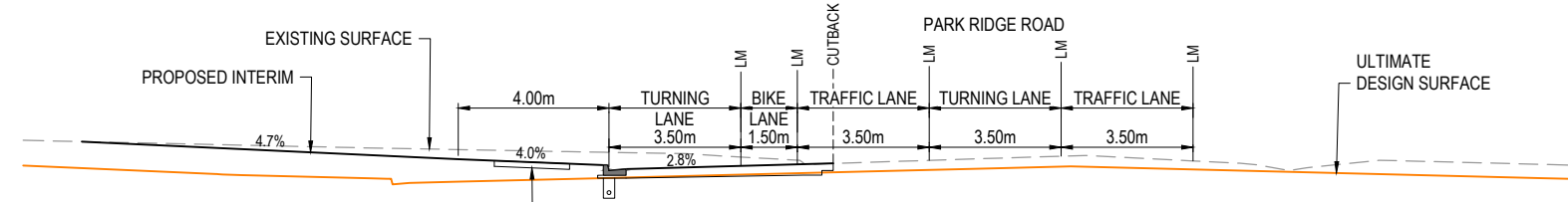


- ASCON LEGEND**
- STORMWATER DRAINAGE PIPE
 - STORMWATER MANHOLE
 - STORMWATER HEADWALL
 - STORMWATER PIT
 - KERB ADAPTER
 - EDGE OF ROAD
 - FOOTPATH

NOTE
REFER DRAWINGS 200-308
INTERNAL WORKS



RL49.000
ULTIMATE DESIGN ON LHS SECTION (AT CH 120.000)



RL50.000
ULTIMATE DESIGN ON RHS SECTION (AT CH 80.000)

- LEGEND**
- PROPOSED ROAD CONTROL LINE
 - EXISTING ROAD CROWN
 - PROPOSED KERB INVERT LINE
 - PROPOSED CONCRETE PATH (FINISHED AS PER LANDSCAPE ARCHITECT PLANS)
 - PROPOSED NEW ROAD PAVEMENT
 - PROPOSED MEDIAN INFILL PLATING
 - PROPOSED FEATURED FOOTPATH
 - FINISHED SURFACE CONTOUR
 - PROPOSED STORMWATER DRAINAGE PIPE
 - EXISTING STORMWATER DRAINAGE PIPE
 - STAGE 1 STORMWATER DRAINAGE PIPE
 - PROPOSED ROOFWATER DRAINAGE PIPE
 - PROPOSED CONCRETE SLEEPER RETAINING WALL
 - PROPOSED BLOCKWORK RETAINING WALL
 - PROPOSED SEWERAGE MAIN
 - EXISTING SEWERAGE MAIN
 - PROPOSED WATER MAIN
 - EXISTING WATER MAIN
 - EXISTING DBYD WATER MAIN

AS-CONSTRUCTED CERTIFICATION
Signature: _____ Date: 29/01/24
DANIEL COLLINS RPEQ No. 18631
For and on behalf of Colliers International engineering & design pty ltd

ROOFWATER CONNECTION NOTE:
THE CONTRACTOR SHALL INSTALL A ROOFWATER CONNECTION TO EACH PROPERTY BY ONE OF THE FOLLOWING METHODS, AS SHOWN ON THE LAYOUT PLAN:

- TWO 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 THE LOCAL AUTHORITY STANDARDS.
- ONE 150Ø ROOFWATER PIPE CONNECTED TO PROPOSED STORMWATER GULLY PIT OR MANHOLE AT MINIMUM 1.0% GRADE WITH 1.0m COVER.

- FOOTPATH NOTES**
- SUPPLY AND INSTALL (PT1) BROOM FINISH COLOURED CONCRETE PAVING PATHWAYS (CIVIL CONSTRUCTION AND SETOUT DETAILS)
 - BROOM FINISH "BORAL: MAIZE" PIGMENT COLOUR. INCORPORATE INTO GRAY CEMENT % OF VOLUME TO MANUFACTURE RECOMMENDATIONS IN THE MIX.
 - SUPPLY AND INSTALL (PT2) MEDIUM EXPOSED COLOURED CONCRETE PAVING PATHWAYS (REFER CIVIL CONSTRUCTIONS AND SETOUT DETAILS)
 - MEDIUM EXPOSED AGGREGATE FINISH "HANSON RAVEN - IMAGECRETE" PIGMENT COLOUR % OF VOLUME TO MANUFACTURE RECOMMENDATIONS IN MIX AGGREGATE - MOONSTONE

NOTE
REFER LANDSCAPE ARCHITECT PLANS FOR FOOTPATH TREATMENT DETAILS

KERB TYPES NOTE:
REFER TO THE SURVEY SETOUT ENGINEERING DRAWING FOR KERB TYPES AND TRANSITION LOCATIONS

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- SEWER MAINS

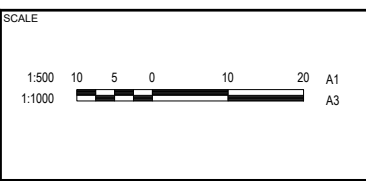
THE CONTRACTOR SHOULD CONTACT THE SERVICE PROVIDER FOR FURTHER INFORMATION AND SATISFY THEMSELVES OF ANY SPECIFIC TREATMENT OR REQUIREMENTS.

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	25.01.23	CL	AK	ISSUE FOR CONSTRUCTION
B	13.03.23	CL	AK	STORMWATER LINE 34 UPDATED, LINE 34A ADDED
C	12.05.23	CL	CL	AMENDED FOR TRUNK WATER MAIN APPROVAL
D	14.08.23	CL	CL	STRUCTURE G1/31, G2/31 AND G3/31 UPDATED
E	29.01.24	CL	BP	AS CONSTRUCTED

AS CONSTRUCTED

DESIGN APPROVED
DANIEL COLLINS RPEQ 18631

FOR AND ON BEHALF OF PEAKURBAN PTY LTD



CLIENT
HB PARK RIDGE

ASSOCIATED CONSULTANT
SAUNDERS HAVILL GROUP
PH: 1300 123 744

PROJECT NAME
TILLERMAN PARK RIDGE

133-159 PARK RIDGE ROAD
PARK RIDGE (STAGE 1)

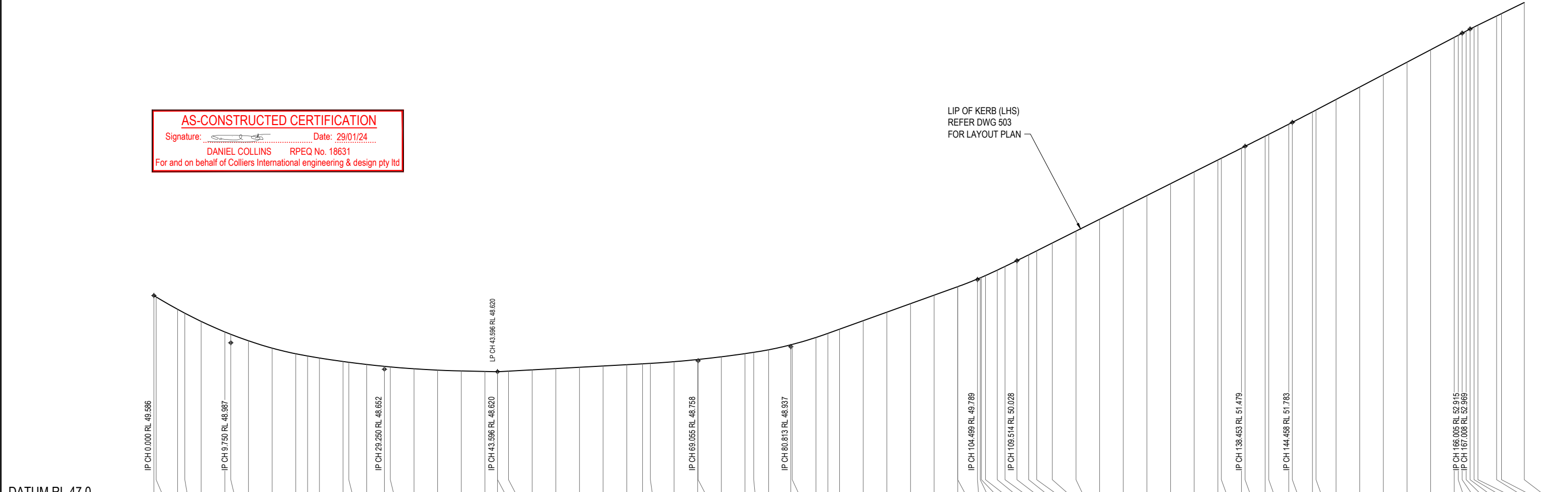
DRAWING TITLE
EXT ROADWORKS AND DRAINAGE LAYOUT PLAN

PROJECT No. **22-0141**
DRAWING No. **502**
REVISION **E**

AS-CONSTRUCTED PAVEMENT DETAILS									
LOCATION	SECTION	ESA	DESIGN CBR	TOTAL PAVEMENT DEPTH	A C	BASE COURSE TYPE (1)	UPPER SUB-BASE TYPE (2)	LOWER SUB-BASE TYPE (3)	SUBGRADE TREATMENT
PARK RIDGE ROAD	CH0 - CH173.901	6.4 x 10 ⁶ UC	4.5%	605mm	50mm	300mm	150mm	105mm	-

AS-CONSTRUCTED CERTIFICATION
 Signature: _____ Date: 29/01/24
DANIEL COLLINS RPEQ No. 18631
 For and on behalf of Colliers International engineering & design pty ltd

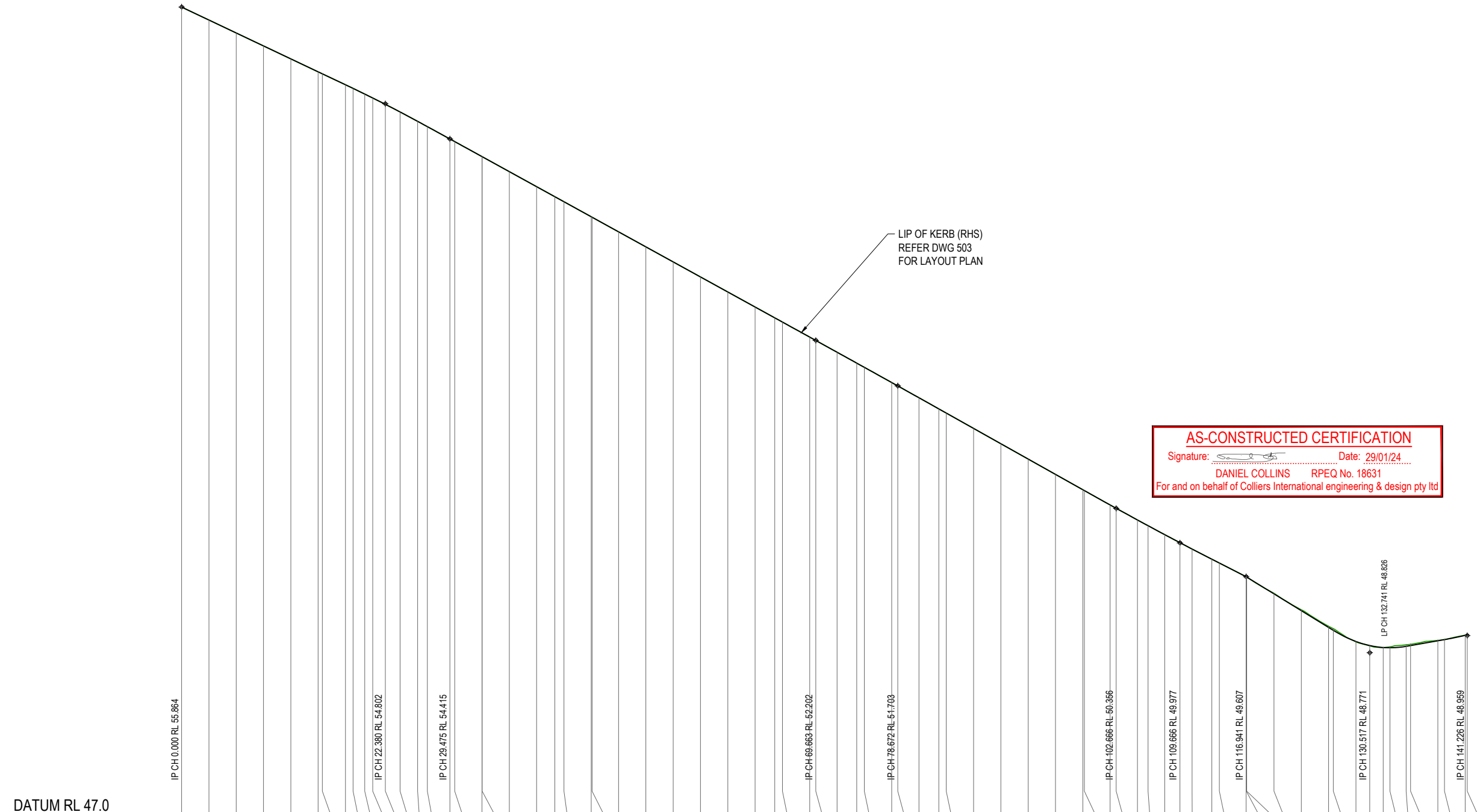
LIP OF KERB (LHS)
 REFER DWG 503
 FOR LAYOUT PLAN

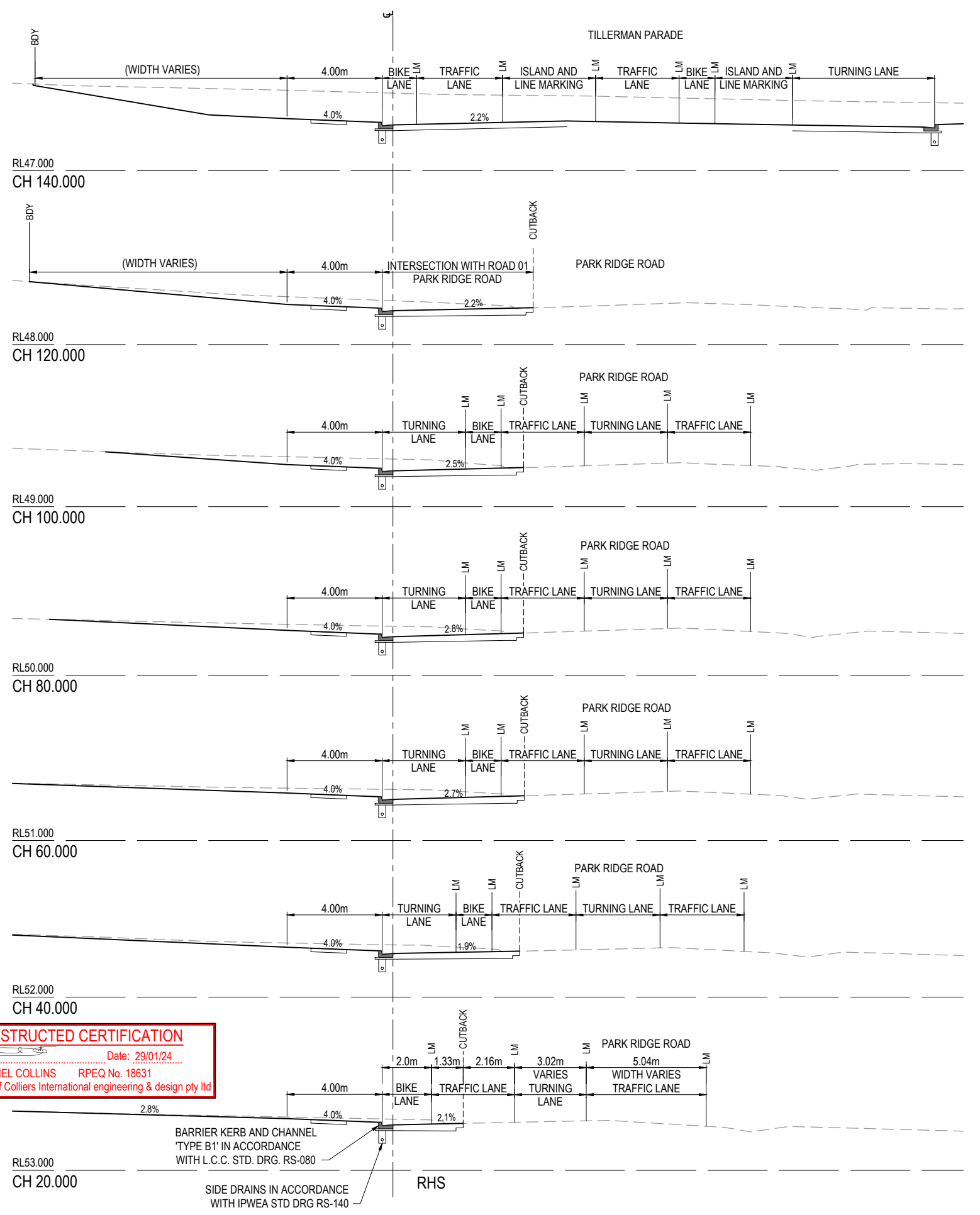
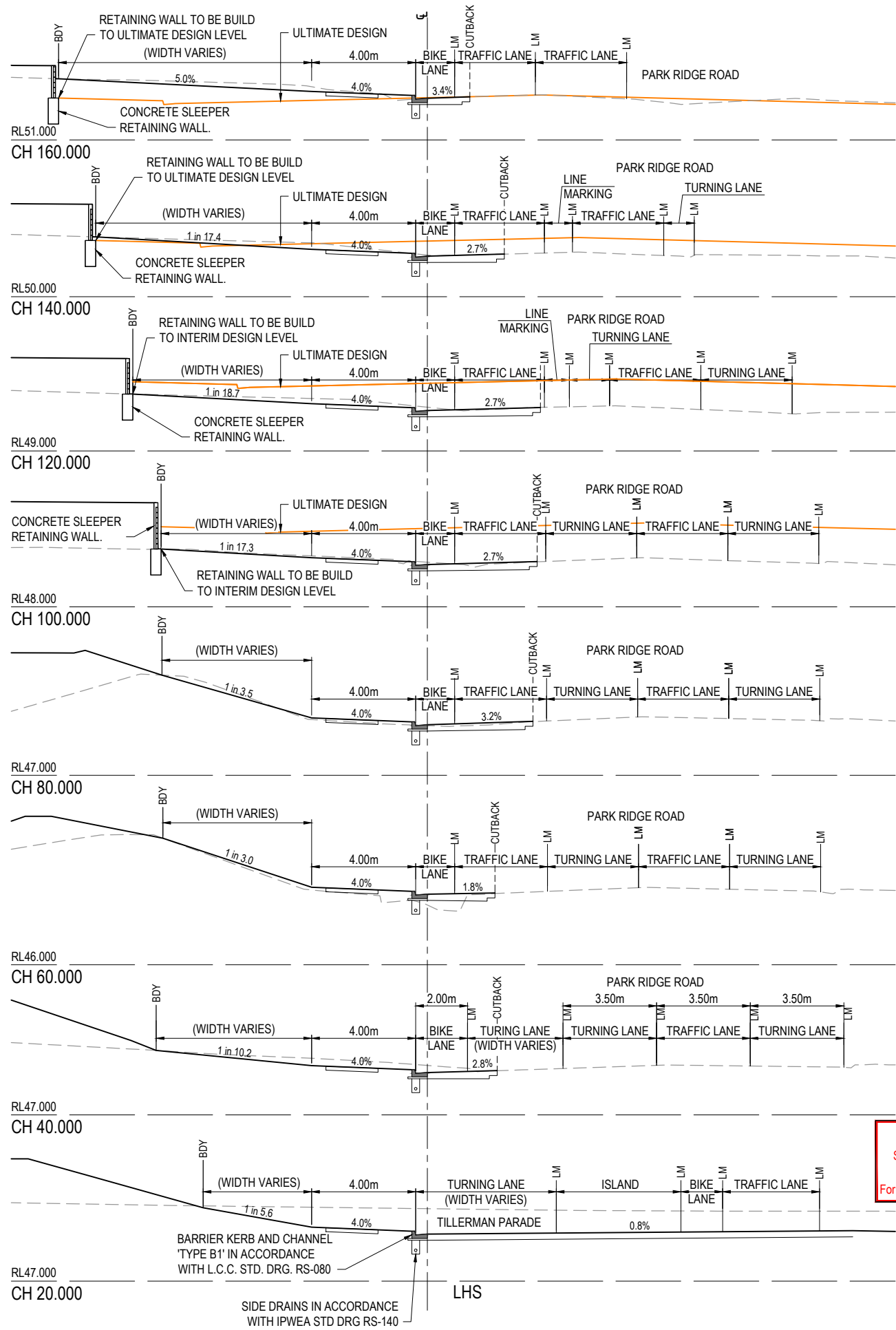


CHAINAGES	EASTING	NORTHING	LIP LEVEL
0.000	505331.737	935933.473	49.586
0.278	505331.783	935933.747	49.569
3.000	505331.881	935936.459	49.412
3.920	505331.755	935937.370	49.363
6.000	505331.378	935939.416	49.258
9.000	505330.835	935942.366	49.125
9.750	505330.699	935943.104	49.095
12.000	505330.292	935945.317	49.012
15.000	505329.749	935948.267	48.920
18.000	505329.206	935951.218	48.848
19.500	505328.935	935952.693	48.819
21.000	505328.663	935954.168	48.794
24.000	505328.120	935957.119	48.750
24.732	505327.988	935957.839	48.740
27.000	505327.416	935960.031	48.712
29.250	505326.537	935962.100	48.688
30.000	505326.178	935962.759	48.681
33.000	505324.439	935965.197	48.657
36.000	505322.261	935967.254	48.640
39.000	505319.728	935968.852	48.630
42.000	505316.934	935969.932	48.624
43.596	505315.377	935970.280	48.620
43.604	505315.369	935970.282	48.620
45.000	505313.993	935970.515	48.628
48.000	505311.035	935971.016	48.644
51.000	505308.077	935971.518	48.660
54.000	505305.120	935972.019	48.677
57.000	505302.162	935972.521	48.693
60.000	505299.204	935973.022	48.709
62.000	505297.232	935973.357	48.720
63.000	505296.246	935973.524	48.726
66.000	505293.288	935974.025	48.747
69.000	505290.331	935974.527	48.775
69.055	505290.277	935974.536	48.776
72.000	505287.373	935975.028	48.809
75.000	505284.415	935975.530	48.849
76.110	505283.321	935975.715	48.866
78.000	505281.457	935976.031	48.898
80.813	505278.684	935976.501	48.962
81.000	505278.499	935976.533	48.966
84.000	505275.542	935977.034	49.054
85.516	505274.047	935977.288	49.106
87.000	505272.584	935977.536	49.160
90.000	505269.626	935978.037	49.268
93.000	505266.668	935978.539	49.376
96.000	505263.711	935979.040	49.483
99.000	505260.753	935979.542	49.591
101.991	505257.804	935980.042	49.699
102.000	505257.795	935980.043	49.699
104.499	505255.331	935980.461	49.796
104.865	505254.980	935980.520	49.811
105.000	505254.837	935980.546	49.816
105.519	505254.330	935980.654	49.840
107.006	505252.884	935981.004	49.909
108.000	505251.918	935981.238	49.956
109.514	505250.447	935981.504	50.030
111.000	505249.003	935981.943	50.103
112.022	505248.010	935982.183	50.154
114.000	505246.087	935982.649	50.253
117.000	505243.171	935983.355	50.403
120.000	505240.255	935984.060	50.554
123.000	505237.339	935984.766	50.704
126.000	505234.423	935985.472	50.855
129.000	505231.508	935986.177	51.005
132.000	505228.592	935986.883	51.156
135.000	505225.676	935987.589	51.306
135.451	505225.238	935987.694	51.329
138.000	505222.760	935988.294	51.457
138.453	505222.320	935988.401	51.480
141.000	505219.844	935989.000	51.608
141.455	505219.402	935989.107	51.631
144.000	505216.929	935989.706	51.761
144.458	505216.484	935989.813	51.784
147.000	505214.013	935990.411	51.916
147.460	505213.565	935990.519	51.941
150.000	505211.097	935991.117	52.074
153.000	505208.181	935991.823	52.232
156.000	505205.265	935992.528	52.389
159.000	505202.349	935993.234	52.547
162.000	505199.434	935993.940	52.704
165.000	505196.518	935994.645	52.862
165.504	505196.028	935994.764	52.889
166.005	505195.541	935994.882	52.915
166.507	505195.053	935995.000	52.942
167.008	505194.566	935995.118	52.968
167.509	505194.079	935995.235	52.993
168.000	505193.602	935995.351	53.017
170.376	505191.293	935995.910	53.133
171.000	505190.679	935996.021	53.163
173.883	505187.858	935995.619	53.304

PARK RIDGE ROAD WIDEN LHS

<table border="1"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>DESIGN</th> <th>DRAWN</th> <th>REVISION DETAILS</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>25.01.23</td> <td>CL</td> <td>AK</td> <td>ISSUE FOR CONSTRUCTION</td> </tr> <tr> <td>B</td> <td>29.01.24</td> <td>CL</td> <td>BP</td> <td>AS CONSTRUCTED</td> </tr> </tbody> </table>	REV	DATE	DESIGN	DRAWN	REVISION DETAILS	A	25.01.23	CL	AK	ISSUE FOR CONSTRUCTION	B	29.01.24	CL	BP	AS CONSTRUCTED	<table border="1"> <thead> <tr> <th>DRAWN</th> <th>STATUS</th> </tr> </thead> <tbody> <tr> <td>DANIEL COLLINS</td> <td>AS CONSTRUCTED</td> </tr> </tbody> </table>	DRAWN	STATUS	DANIEL COLLINS	AS CONSTRUCTED		<table border="1"> <thead> <tr> <th>SCALE</th> </tr> </thead> <tbody> <tr> <td>1:250 5 0 5 10 A1</td> </tr> <tr> <td>1:500 A3</td> </tr> </tbody> </table>	SCALE	1:250 5 0 5 10 A1	1:500 A3	<table border="1"> <thead> <tr> <th>CLIENT</th> </tr> </thead> <tbody> <tr> <td>HB PARK RIDGE</td> </tr> </tbody> </table>	CLIENT	HB PARK RIDGE	<table border="1"> <thead> <tr> <th>PROJECT NAME</th> </tr> </thead> <tbody> <tr> <td>TILLERMAN PARK RIDGE</td> </tr> </tbody> </table>	PROJECT NAME	TILLERMAN PARK RIDGE	<table border="1"> <thead> <tr> <th>DRAWING TITLE</th> </tr> </thead> <tbody> <tr> <td>EXT PARK RIDGE ROAD WIDEN LONG SECTION (LHS)</td> </tr> </tbody> </table>	DRAWING TITLE	EXT PARK RIDGE ROAD WIDEN LONG SECTION (LHS)
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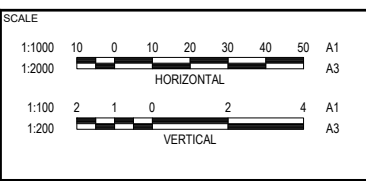




AS-CONSTRUCTED CERTIFICATION
 Signature: _____ Date: 29/01/24
 DANIEL COLLINS RPEQ No. 18631
 For and on behalf of Colliers International engineering & design pty ltd

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	25.01.23	CL	AK	ISSUE FOR CONSTRUCTION
B	29.01.24	CL	BP	AS CONSTRUCTED

DRAWN	STATUS
	AS CONSTRUCTED



CLIENT
HB PARK RIDGE

ASSOCIATED CONSULTANT
 SAUNDERS HAVILL GROUP
 PH: 1300 123 744

PROJECT NAME
TILLERMAN PARK RIDGE

133-159 PARK RIDGE ROAD
 PARK RIDGE (STAGE 1)

DRAWING TITLE
EXT PARK RIDGE ROAD WIDEN CROSS SECTION (LHS) AND (RHS)

PROJECT No. **22-0141**
 DRAWING No. **506**
 REVISION **B**

FOR AND ON BEHALF OF PEAKURBAN PTY LTD

ASSUMED PAVEMENT DETAILS (SUBJECT TO CBR TESTING)

ROAD	ROAD CLASSIFICATION	DESIGN ESAs	ASSUMED CBR	SURFACING	BASE	SUB BASE	LOWER SUB BASE	TOTAL DEPTH
TILLERMAN PARADE	URBAN COLLECTOR	6.4 x 10 ⁶	3	50mm	300mm	100mm	170mm	620mm

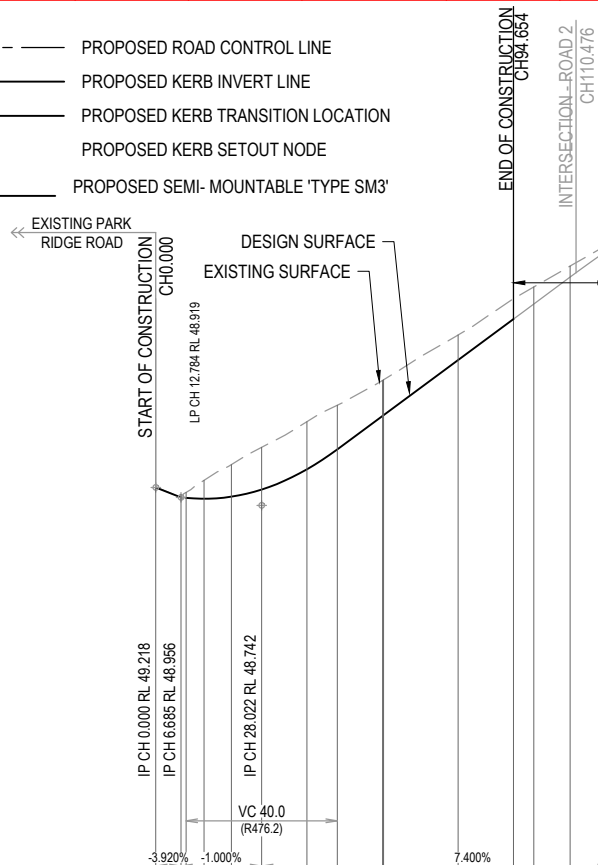
NOTE: THIS PAVEMENT DESIGN IS PRELIMINARY ONLY BASED ON AN ASSUMED CBR. THE CONTRACTOR SHALL SUPPLY THE SUPERINTENDENT WITH SUBGRADE TEST RESULTS NECESSARY FOR FINAL PAVEMENT DESIGN

AS-CONSTRUCTED PAVEMENT DETAILS

LOCATION	SECTION	ESA	DESIGN CBR	TOTAL PAVEMENT DEPTH	A C	BASE COURSE TYPE (1)	UPPER SUB-BASE TYPE (2)	LOWER SUB-BASE TYPE (3)	SUBGRADE TREATMENT
TILLERMAN PARADE	CH0 - CH30	6.4 x 10 ⁶ UC	4.5%	605mm	50mm	300mm	150mm	105mm	-
TILLERMAN PARADE	CH30 - CH120	6.4 x 10 ⁶ UC	4.5%	555mm	50mm	300mm	100mm	105	-

LEGEND

- PROPOSED ROAD CONTROL LINE
- PROPOSED KERB INVERT LINE
- PROPOSED KERB TRANSITION LOCATION
- PROPOSED KERB SETOUT NODE
- SM3 PROPOSED SEMI-MOUNTABLE 'TYPE SM3'



DATUM RL 38.0

CUT (-) / FILL	0.000	6.685	8.022	12.784	20.000	28.022	40.000	48.022	60.000	60.268	80.000	100.000	109.634	120.000
LHS LIP LEVEL	-0.000	-0.143	-0.489	-0.847	-1.116	-1.260	-1.168	-0.941	-0.937	-0.662	-0.451	-0.292	-0.136	
RHS LIP LEVEL														
DESIGN SURFACE	49.218	48.956	48.942	48.919	48.973	49.162	49.696	50.222	51.109	51.129	52.589	54.069	54.782	55.528
EXISTING SURFACE	49.218	48.956	49.085	48.919	49.820	50.279	50.957	51.391	52.049	52.065	53.251	54.519	55.074	55.664
CHAINAGES	0.000	6.685	8.022	12.784	20.000	28.022	40.000	48.022	60.000	60.268	80.000	100.000	109.634	120.000
HORIZONTAL CURVES	R-150.000													

REFER INTERSECTION DETAIL DRAWINGS FOR LIP LEVELS TILLERMAN PARADE

ISLAND 'B' SETOUT

POINT	EASTING	NORTHING
20	505336.358	935875.764
21	505335.947	935896.898
22	505337.838	935913.961
23	505342.891	935944.036
24	505344.739	935955.034
25	505345.526	935957.366
26	505347.421	935957.048
27	505347.402	935954.587
28	505345.554	935943.589
29	505340.501	935913.514
30	505338.663	935896.757
31	505337.555	935875.786

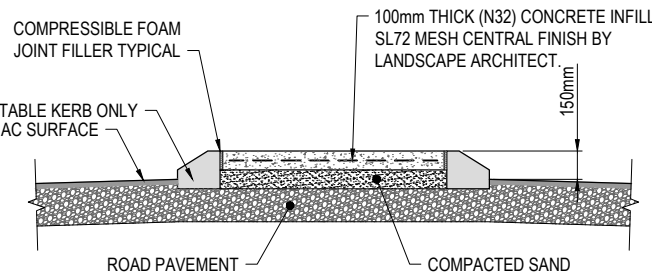
ISLAND 'A' SETOUT

POINT	EASTING	NORTHING
01	505337.302	935950.088
02	505338.912	935960.243
03	505336.855	935960.846
04	505333.266	935959.761
05	505335.340	935950.035
10	505339.252	935962.403
11	505339.681	935964.388
12	505338.862	935965.538
13	505335.721	935965.951
14	505335.919	935963.221
16	505333.886	935962.171
17	505333.490	935966.386
18	505331.800	935966.601
19	505332.805	935961.892

ISLAND 'C' SETOUT

POINT	EASTING	NORTHING
30	505350.741	935988.724
31	505348.933	935989.021
32	505349.769	935993.993
33	505351.584	935993.733
34	505352.083	935996.776
35	505350.281	935997.028

NOTE: COLOUR AND FINISH OF CONCRETE ISLAND INFILL TO LCC AND LANDSCAPER'S SPECIFICATIONS.

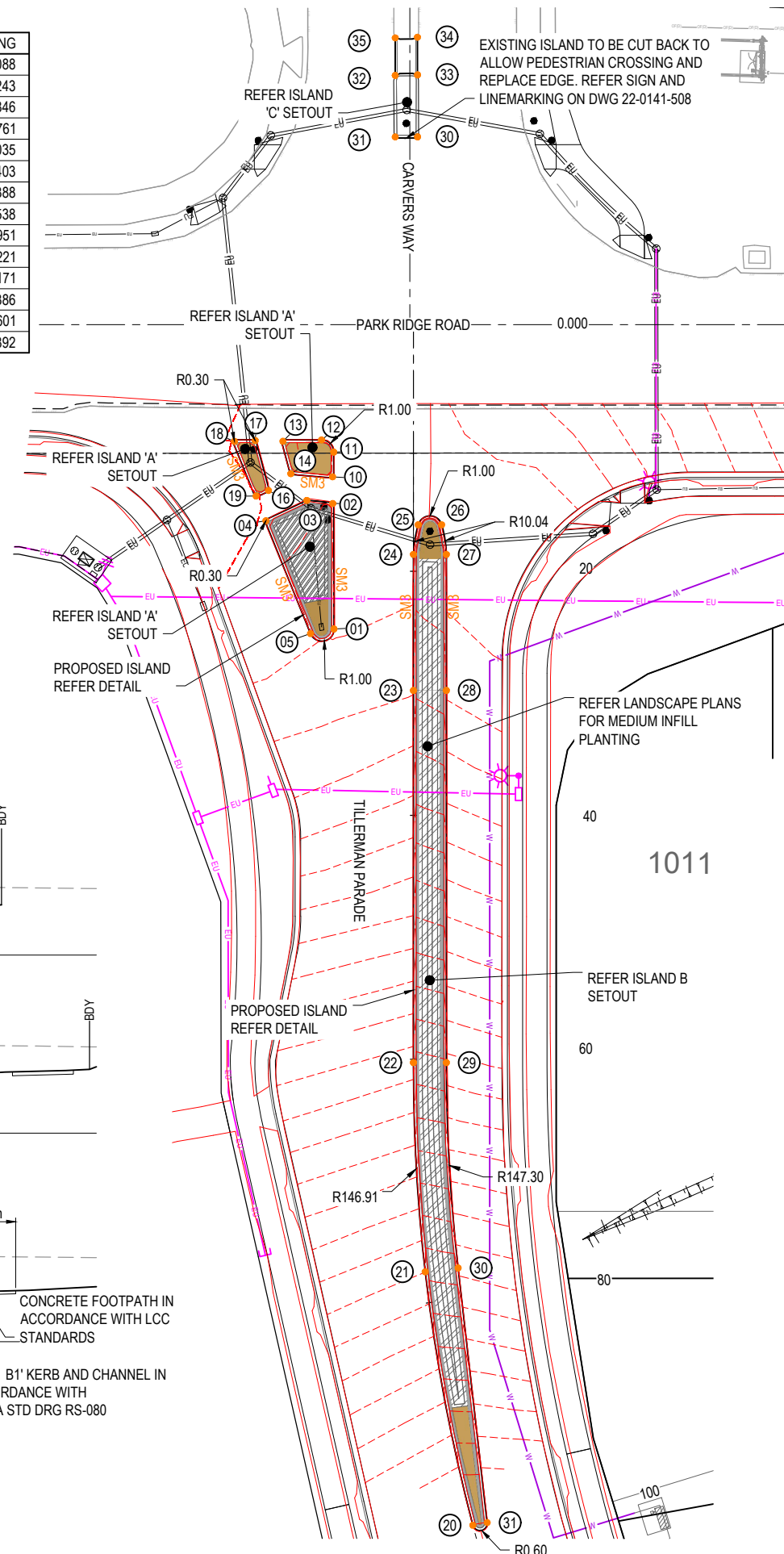
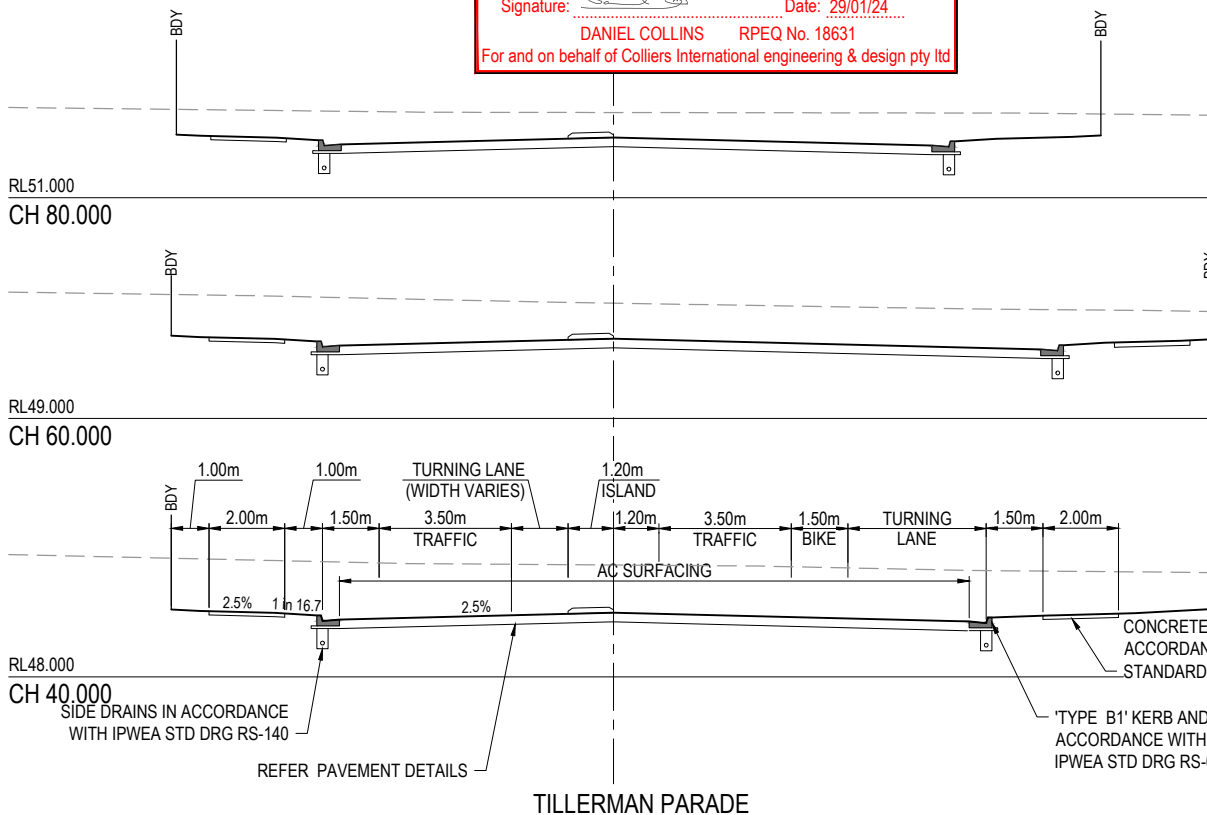


CONCRETE ISLAND INFILL TYPICAL SECTION (NON-MOUNTABLE)

1:20 (A1)
1:40 (A3)

AS-CONSTRUCTED CERTIFICATION

Signature: *[Signature]* Date: 29/01/24
DANIEL COLLINS RPEQ No. 18631
For and on behalf of Colliers International engineering & design pty ltd




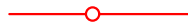





REV	DATE	DESIGN	DRAWN	ISSUE FOR CONSTRUCTION	REVISION DETAILS	DRAWN	STATUS	SCALE	CLIENT	PROJECT NAME	DRAWING TITLE
A	25.01.23	CL	AK	ISSUE FOR CONSTRUCTION			AS CONSTRUCTED	1:250 1:500	HB PARK RIDGE	TILLERMAN PARK RIDGE	EXT INTERSECTION ISLAND DETAILS
B	29.01.24	CL	BP	AS CONSTRUCTED					SAUNDERS HAVILL GROUP PH: 1300 123 744	133-159 PARK RIDGE ROAD PARK RIDGE (STAGE 1)	PROJECT No. 22-0141 DRAWING No. 507 REVISION B

NOTES:

1. ALL SIGNS AND LINEMARKING SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND L.C.C. STANDARDS.
2. TRAFFIC SIGN POSTS SHALL BE IN ACCORDANCE WITH IPWEA RS-131 STANDARD DRAWINGS.
3. STREET NAME SIGN SHALL BE IN ACCORDANCE WITH IPWEA RS-130 STANDARD DRAWINGS.
4. CONTRACTOR TO ENSURE SIGN LOCATIONS ARE CLEAR OF FUTURE DRIVEWAY LOCATIONS - LOCATE ON PB OR MID BLOCK.



















ASCON LEGEND

-  STORMWATER DRAINAGE PIPE
-  STORMWATER MANHOLE
-  STORMWATER HEADWALL
-  STORMWATER PIT
-  KERB ADAPTER
-  EDGE OF ROAD
-  FOOTPATH








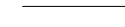
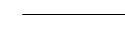
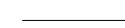

AS-CONSTRUCTED CERTIFICATION

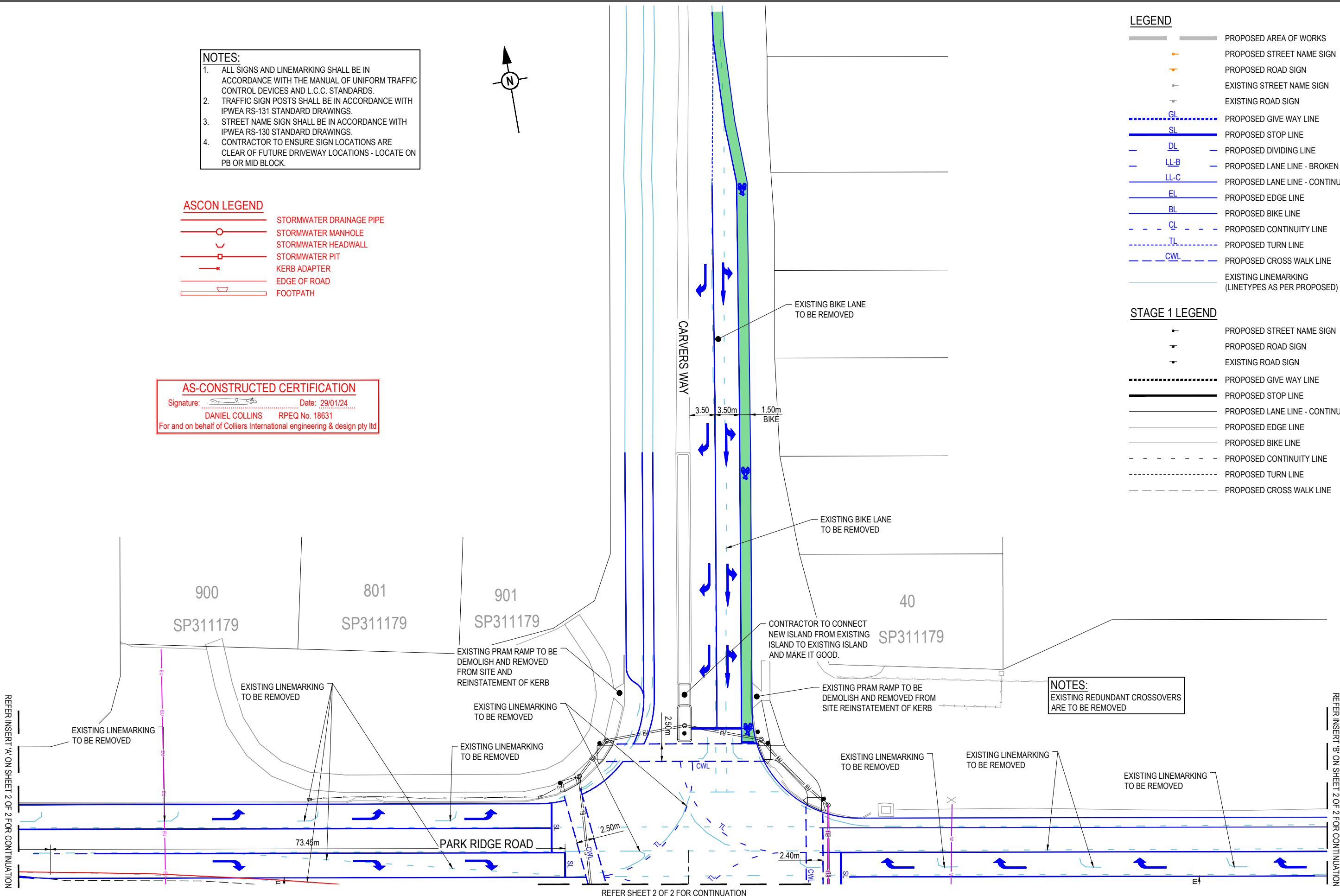
Signature:  Date: 29/01/24
 DANIEL COLLINS RPEQ No. 18631
 For and on behalf of Colliers International engineering & design pty ltd

LEGEND

-  PROPOSED AREA OF WORKS
-  PROPOSED STREET NAME SIGN
-  PROPOSED ROAD SIGN
-  EXISTING STREET NAME SIGN
-  EXISTING ROAD SIGN
-  PROPOSED GIVE WAY LINE
-  PROPOSED STOP LINE
-  PROPOSED DIVIDING LINE
-  PROPOSED LANE LINE - BROKEN
-  PROPOSED LANE LINE - CONTINUOUS
-  PROPOSED EDGE LINE
-  PROPOSED BIKE LINE
-  PROPOSED CONTINUITY LINE
-  PROPOSED TURN LINE
-  PROPOSED CROSS WALK LINE
-  EXISTING LINEMARKING (LINETYPES AS PER PROPOSED)

STAGE 1 LEGEND

-  PROPOSED STREET NAME SIGN
-  PROPOSED ROAD SIGN
-  EXISTING ROAD SIGN
-  PROPOSED GIVE WAY LINE
-  PROPOSED STOP LINE
-  PROPOSED LANE LINE - CONTINUOUS
-  PROPOSED EDGE LINE
-  PROPOSED BIKE LINE
-  PROPOSED CONTINUITY LINE
-  PROPOSED TURN LINE
-  PROPOSED CROSS WALK LINE




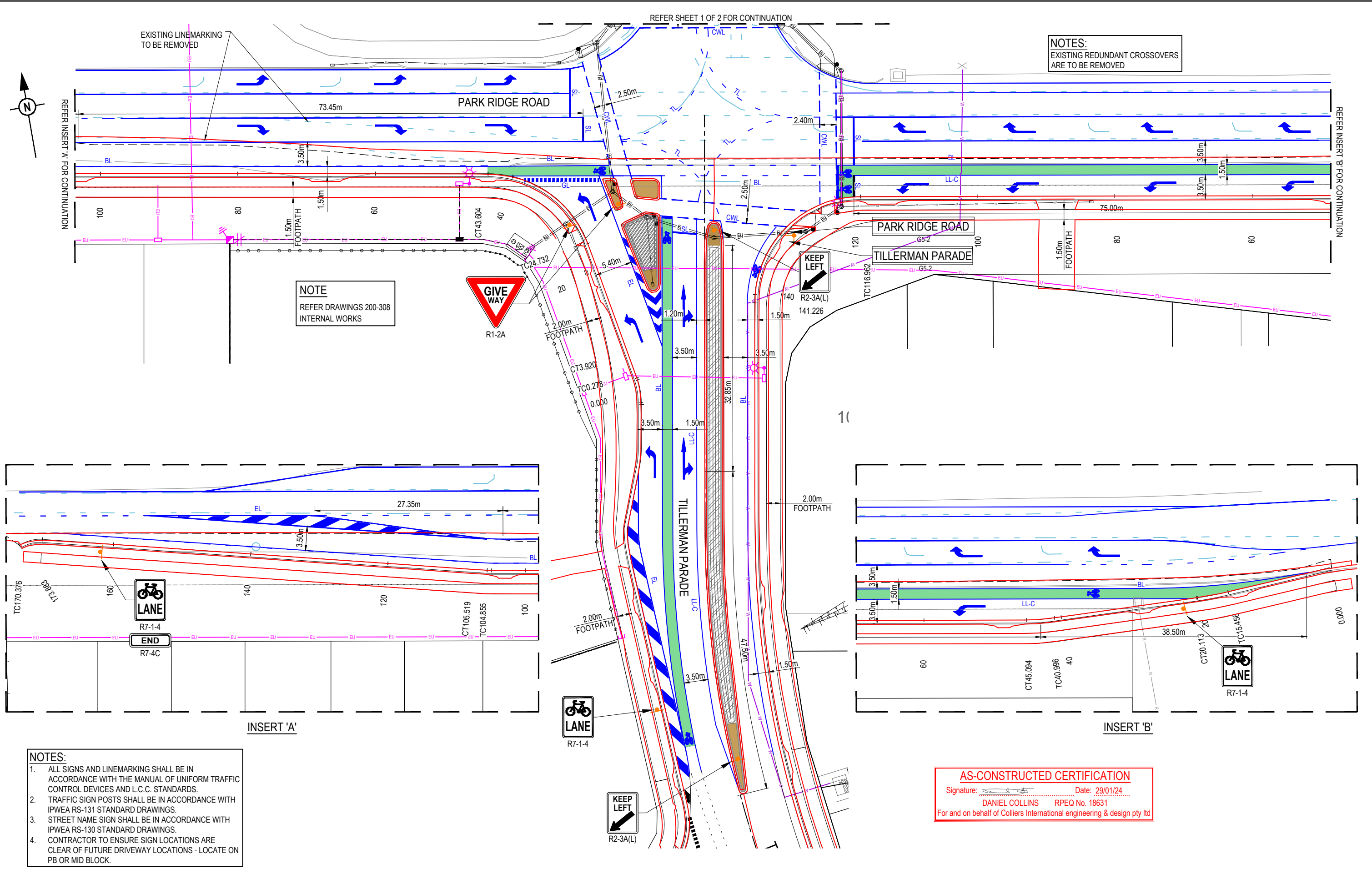
NOTES:
EXISTING REDUNDANT CROSSOVERS ARE TO BE REMOVED

REFER INSERT 'A' ON SHEET 2 OF 2 FOR CONTINUATION

REFER INSERT 'B' ON SHEET 2 OF 2 FOR CONTINUATION

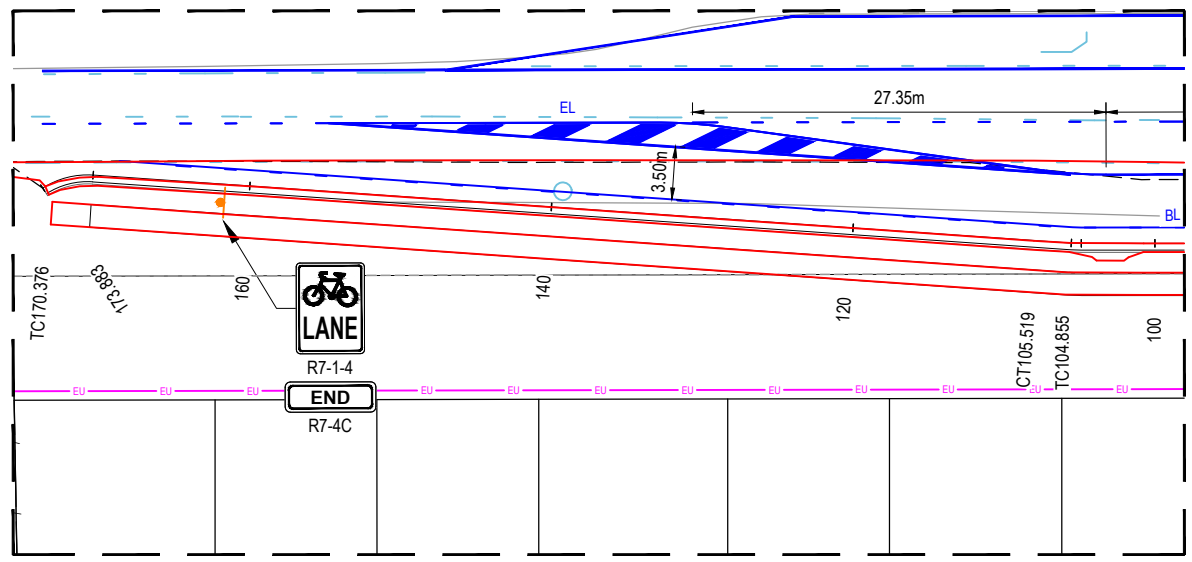
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B	29.01.24	CL	BP	AS CONSTRUCTED			

AS CONSTRUCTED			SCALE	CLIENT	PROJECT NAME	DRAWING TITLE
DESIGN	APPROVED		1:250 1:500	HB PARK RIDGE	TILLERMAN PARK RIDGE	EXT SIGNS AND LINEMARKING LAYOUT PLAN SHEET 1 OF 2
DANIEL COLLINS	DANIEL COLLINS			SAUNDERS HAVILL GROUP PH: 1300 123 744	133-159 PARK RIDGE ROAD PARK RIDGE (STAGE 1)	PROJECT No. 22-0141
FOR AND ON BEHALF OF PEAKURBAN PTY LTD					DRAWING No. 508	REVISION B

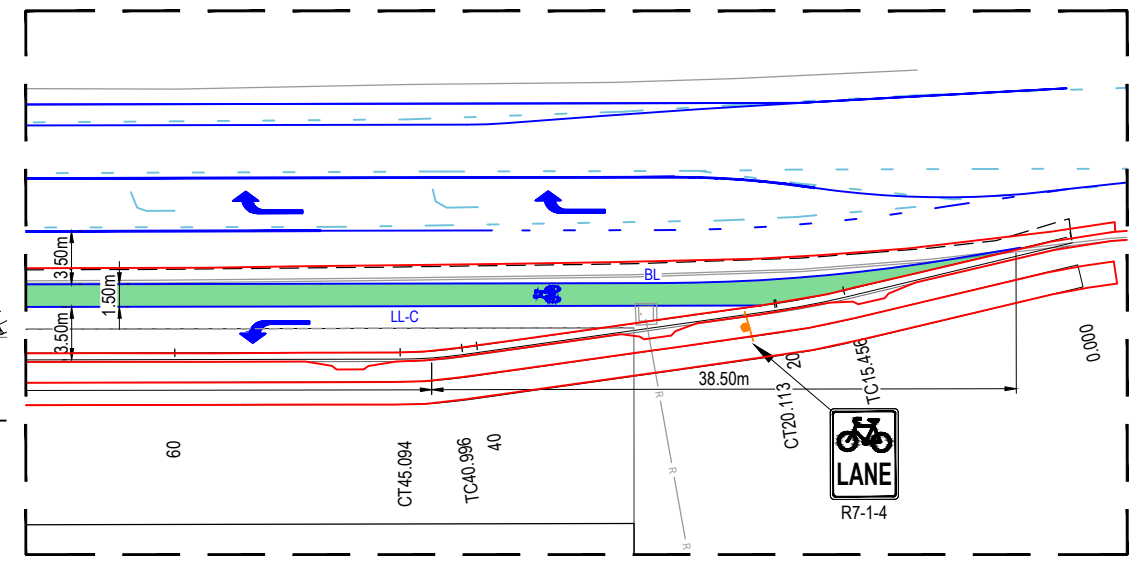


NOTES:
EXISTING REDUNDANT CROSSOVERS
ARE TO BE REMOVED

NOTE
REFER DRAWINGS 200-308
INTERNAL WORKS



INSERT 'A'



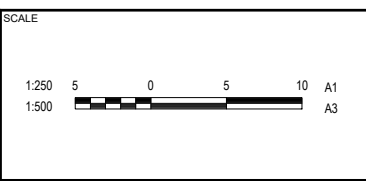
INSERT 'B'

NOTES:
1. ALL SIGNS AND LINEMARKING SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND L.C.C. STANDARDS.
2. TRAFFIC SIGN POSTS SHALL BE IN ACCORDANCE WITH IPWEA RS-131 STANDARD DRAWINGS.
3. STREET NAME SIGN SHALL BE IN ACCORDANCE WITH IPWEA RS-130 STANDARD DRAWINGS.
4. CONTRACTOR TO ENSURE SIGN LOCATIONS ARE CLEAR OF FUTURE DRIVEWAY LOCATIONS - LOCATE ON PB OR MID BLOCK.

AS-CONSTRUCTED CERTIFICATION
Signature: _____ Date: 29/01/24
DANIEL COLLINS RPEQ No. 18631
For and on behalf of Colliers International engineering & design pty ltd

REV	DATE	DESIGN	DRAWN	ISSUE FOR CONSTRUCTION	REVISION DETAILS
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B	29.01.24	CL	BP	AS CONSTRUCTED	

DESIGN	APPROVED	DANIEL COLLINS	RPEQ 18631
FOR AND ON BEHALF OF PEAKURBAN PTY LTD			



CLIENT
HB PARK RIDGE

ASSOCIATED CONSULTANT
SAUNDERS HAVILL GROUP
PH: 1300 123 744

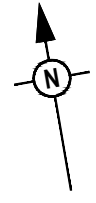
PROJECT NAME
TILLERMAN PARK RIDGE

133-159 PARK RIDGE ROAD
PARK RIDGE (STAGE 1)

DRAWING TITLE EXT SIGNS AND LINEMARKING LAYOUT PLAN SHEET 2 OF 2		
PROJECT No. 22-0141	DRAWING No. 509	REVISION B

LEGEND

- 1 CATCHMENT NAME
- PROPOSED CATCHMENT BOUNDARY
- EXTERNAL CATCHMENT BOUNDARY
- STAGE 1 CATCHMENT BOUNDARY
- FUTURE CATCHMENT BOUNDARY
- PROPOSED STORMWATER DRAINAGE PIPE
- EXISTING STORMWATER DRAINAGE PIPE
- PROPOSED ROOFWATER DRAINAGE PIPE
- PROPOSED SWALE DRAIN
- PROPOSED SURFACE CONTOUR
- EXISTING SURFACE CONTOUR
- CATCHMENT FLOW DIRECTION ARROW



STRUCTURE SETOUT REFERENCE POINT

STRUCTURE TYPE	HORIZONTAL	VERTICAL
MANHOLE	MAIN SHAFT	FINISHED SURFACE LEVEL
GULLY PIT	INTERSECTION OF PIT AND KERB INVERT LNE # (INCLUDING MANHOLES UNDER GULLIES)	KERB INVERT LEVEL
HEADWALL	INTERSECTION OF HEADWALL FACE & PIPE CENTRE LINE	TOP OF HEADWALL

NOTE:
WITHIN GULLY PIT CHAMBER, CONTRACTOR TO ENSURE STORMWATER PIPES ARE OFFSET AS REQUIRED SO THAT PIPES ENTER WHOLLY WITHIN A SIDE WALL

CATCHMENT TABLE

CATCHMENT NAME	CATCHMENT AREA (ha)	RUNOFF COEFF MINOR	RUNOFF COEFF MAJOR	IMPERVIOUS CATCHMENT AREA MINOR (ha)	IMPERVIOUS CATCHMENT AREA MAJOR (ha)
F1/30	0.728	1	1	0.546	0.546
G1/30	0.129	1	1	0.129	0.129
G2/30	0.069	1	1	0.069	0.069
G1/31	0.485	1	1	0.382	0.382
G2/31	1.008	1	1	0.724	0.724
G3/31	0.054	1	1	0.054	0.054
G4/31	0.186	1	1	0.186	0.186
G1/32	0.128	1	1	0.128	0.128
G1/33	0.072	1	1	0.072	0.072
G2/33	0.004	1	1	0.004	0.004
F1/34	1.434	0.7	0.7	1.004	1.004
G1/34A	0.134	1	1	0.134	0.134

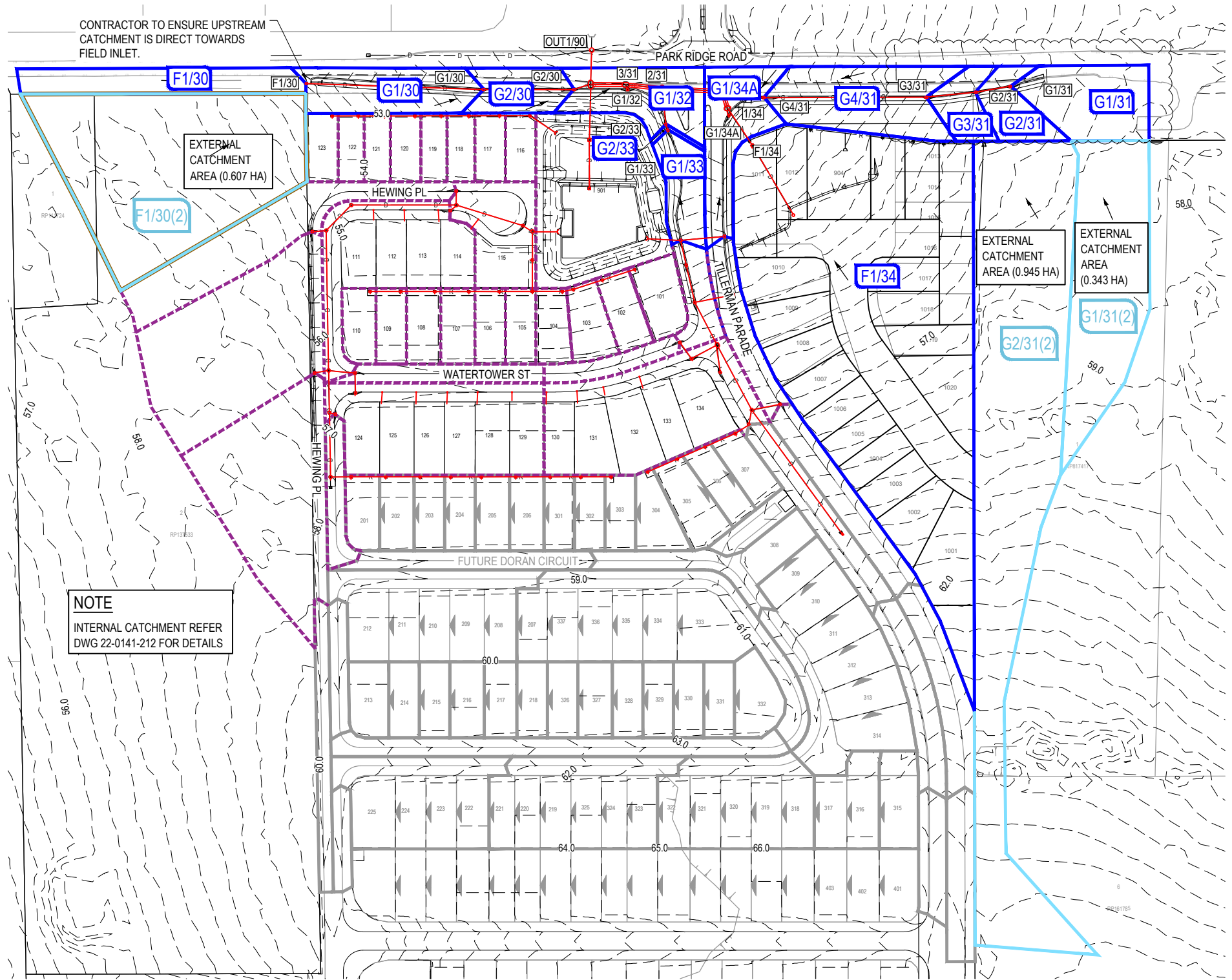
NOTE
INTERNAL CATCHMENT REFER DWG 22-0141-212 FOR DETAILS

ASCON LEGEND

- STORMWATER DRAINAGE PIPE
- STORMWATER MANHOLE
- STORMWATER HEADWALL
- STORMWATER PIT

AS-CONSTRUCTED CERTIFICATION

Signature: Date: 29/01/24
 DANIEL COLLINS RPEQ No. 18631
 For and on behalf of Colliers International engineering & design pty ltd




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<p>FOR AND ON BEHALF OF PEAKURBAN PTY LTD</p>		<p>DESIGN APPROVED DANIEL COLLINS RPEQ 18631</p>																													

STRUCTURE NAME	F1/30	G1/30	G2/30	1/90	G1/31	G2/31	G3/31	G4/31	1/31	2/31	3/31	1/90	G1/32	3/31	G1/33	G2/33	2/31	F2/34	F1/34	1/34	1/31	G1/34A	1/34	G1/90	F1/90	1/90	EXISTING OUT/1/90			
STRUCTURE DESCRIPTION	STD FIELD INLET TYPE 2 900x600 WITH DOME GRATE	STD TYPE A GULLY LIL: 2.4m LINTEL; TYPE S	STD TYPE A GULLY LIL: 4.8m LINTEL; TYPE L ON 1050mm DIA MANHOLE	STD MANHOLE 1800mm DIA EXTENDED 900mm	STD TYPE A GULLY LIL: 2.4m LINTEL; TYPE S	STD TYPE A GULLY LIL: 2.4m LINTEL; TYPE S	STD TYPE A GULLY LIL: 2.4m LINTEL; TYPE S	STD TYPE A GULLY LIL: 4.8m LINTEL; TYPE L	STD MANHOLE 1500mm DIA EXTENDED 600mm REFER DETAIL	STD MANHOLE 1500mm DIA EXTENDED 600mm	STD MANHOLE 1800mm DIA EXTENDED 600mm REFER DETAIL	STD MANHOLE 1800mm DIA EXTENDED 900mm	STD TYPE A GULLY (SAG) LIL: 2.4m LINTEL; TYPE S ON 1050mm DIA MANHOLE	STD MANHOLE 1800mm DIA EXTENDED 600mm REFER DETAIL	STD TYPE A GULLY LIL: 2.4m LINTEL; TYPE S	STD TYPE A GULLY LIL: 2.4m LINTEL; TYPE S	STD MANHOLE 1500mm DIA EXTENDED 600mm	STD TYPE A GULLY LIL: 2.4m LINTEL; TYPE S	STD TYPE A GULLY LIL: 2.4m LINTEL; TYPE S AND CONCRETE APRON	STD MANHOLE 1500mm DIA EXTENDED 600mm REFER DETAIL	STD MANHOLE 1500mm DIA EXTENDED 600mm	STD TYPE A GULLY (SAG) LIL: 2.4m LINTEL; TYPE S	STD MANHOLE 1500mm DIA EXTENDED 600mm	STD TYPE A GULLY LIL: 2.4m LINTEL; TYPE S	900x600	FIELD INLET 1200x1200 RAISED GRATE	STD MANHOLE 1800mm DIA EXTENDED 900mm ON 1350mm DIA MANHOLE	HEADWALL		
PIPE SIZE (mm)	450	450	600		375	375	450	525	1200x600	1200x600	1500x600		525	375	375	375	525	1200x600	375	525	1200x600	525	375	375	375	900	1050			
PIPE CLASS	3	3	3		3	3	3	3	PE	PE	PE		3	3	3	3	3	BC	3	3	3	3	3	3	3	3	3			
PIPE GRADE (%)		5.94%	1.40%	0.85%	4.92%	3.93%	5.36%	2.84%	0.28%	0.67%	0.21%		0.94%	6.04%	0.50%	0.50%	2.03%	1.90%	0.42%	2.36%					2.01%	1.64%	2.06%			
PIPE SLOPE (1 in X)		16.61	66.67	125.00	12.50	10.00	13.64	7.25	0.75	1.75	0.53		2.40	15.56	1.27	1.27	5.00	4.75	1.12	5.94					5.00	4.25	5.22			
FULL PIPE VELOCITY (m/s)		1.94	2.18	1.36	1.03	2.50	2.48	2.24	1.23	1.27	0.96		0.59	0.53	0.57	0.57	2.02	0.83	0.83	1.00					0.00	3.62	4.25			
PART FULL VELOCITY (m/s)		4.26	2.50	2.10	3.06	4.07	4.36	3.71	1.69	1.70	1.63		1.35	1.10	1.12	1.12	2.82	1.66	1.66	2.93					0.00	4.25	5.22			
DATUM RL	37.0				38.0									35.0												36.0				
H.G.L. IN PIPE & W.S.E IN STRUCTURE	53.217	52.824	49.415	48.685	54.079	54.059	53.442	52.609	52.257	48.977	48.779	48.675	48.615	48.580	48.580	48.580	48.717	49.660	49.038	48.850	48.846	48.845	48.850	48.778	48.959	48.858	48.850	48.850	48.846	47.896
PIPE FLOW (Cumecs)		0.308	0.347	0.385	0.114	0.276	0.395	0.485	0.886	0.915	0.865		0.129	0.058	0.062		0.436	0.600		0.216					0.000	2.300	3.677			
PIPE CAPACITY AT GRADE (Cumecs)		0.700	0.349	0.549	0.390	0.422	0.665	0.756	1.037	1.037	1.358		0.304	0.124	0.124		0.551	1.198		0.727					0.248	2.361	3.985			
DEPTH TO INVERT	1.62	1.12	1.67	1.28	1.39	1.71	1.40	1.40	1.33	1.33	1.41	1.41	1.05	1.14	1.21	1.21	1.08	1.18	1.18	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	
INVERT LEVEL OF DRAIN	52.436	52.39	48.07	47.49	53.350	52.80	52.75	51.95	51.88	48.209	48.17	48.17	47.540	47.42	47.42	47.42	47.540	49.91	49.04	48.850	48.846	48.845	48.850	48.778	48.959	48.858	48.850	48.850	48.846	47.896
DESIGN SURFACE LEVEL	53.51	49.74	48.77	48.70	54.49	54.49	53.36	50.308	49.01	48.70	48.70	48.76	48.70	48.70	48.70	48.76	52.52	51.20	48.89	49.01	48.89	48.89	48.89	48.89	48.89	48.89	48.89	48.84	48.84	47.896
SETOUT COORDINATES	E 505186.825 N 935994.121	E 505257.225 N 935979.678	E 505293.617 N 935973.513	E 505300.706 N 935974.297	E 505470.206 N 935944.812	E 505455.517 N 935944.859	E 505435.340 N 935946.222	E 505353.500 N 935962.522	E 505329.223 N 935967.770	E 505314.757 N 935971.846	E 505300.706 N 935974.297	E 505315.294 N 935969.838	E 505314.757 N 935971.846	E 505328.839 N 935950.725	E 505328.405 N 935953.085	E 505329.223 N 935967.770	E 505372.326 N 935970.971	E 505361.865 N 935938.545	E 505354.207 N 935955.239	E 505353.500 N 935962.522	E 505353.966 N 935952.049	E 505354.207 N 935955.239	E 505293.000 N 935932.492	E 505296.320 N 935952.014	E 505300.706 N 935974.297	E 505303.264 N 935987.298				
RUNNING CHAINAGE	0.000	72.846	109.757	116.889	14.23	14.689	20.36	36.902	66.64	101.379	17.23	24.68	14.97	2.65	2.400	14.75	0.000	29.492	18.42	7.21	0.000	2.96	19.89	19.802	22.63	14.11				

STORMWATER STRUCTURE NOTE:
 STANDARD ROUND MANHOLES LESS THAN 3.0m DEEP:
 CONSTRUCT IN ACCORDANCE WITH THE LOCAL AUTHORITY STANDARDS.
 STANDARD ROUND MANHOLES GREATER THAN 5.3m DEEP:
 CONSTRUCT IN ACCORDANCE WITH TMR STD DRAWINGS 1307 AND 1308.
 STANDARD ROUND MANHOLES GREATER THAN 5.3m DEEP:
 SHALL BE STRUCTURALLY DESIGNED (CERTIFIED) AND CONSTRUCTED BY CONTRACTOR ON A CASE BY CASE BASIS.
 ROUND EXTENDED (900mm MAX) MANHOLES:
 CONSTRUCT IN ACCORDANCE WITH PEAK URBAN STD DRAWINGS S-101 & S-102.
 RECTANGULAR STRUCTURE (SPECIAL):
 SHALL BE STRUCTURALLY DESIGNED (CERTIFIED) AND CONSTRUCTED BY CONTRACTOR ON A CASE BY CASE BASIS.

AS-CONSTRUCTED CERTIFICATION
 Signature: _____ Date: 29/01/24
DANIEL COLLINS RPEQ No. 18631
 For and on behalf of Colliers International engineering & design pty ltd

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