



RESIDENTIAL AND SUBDIVISION DEVELOPMENT

205-209 GRANGE AVENUE, MARSDEN PARK

CIVIL WORKS CONCEPT DESIGN



LOCALITY PLAN
NOT TO SCALE
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DRAWINGS LIST			
SHEET No.	DWG No.	TITLE	REV
1	C100	COVER SHEET	E
2	C110	SITE PLAN	E
3	C201	CIVIL WORKS - ROAD DESIGN - GENERAL ARRANGEMENT PLAN - SHEET 1 OF 4	E
4	C202	CIVIL WORKS - ROAD DESIGN - GENERAL ARRANGEMENT PLAN - SHEET 2 OF 4	E
5	C203	CIVIL WORKS - ROAD DESIGN - GENERAL ARRANGEMENT PLAN - SHEET 3 OF 4	E
6	C204	CIVIL WORKS - ROAD DESIGN - GENERAL ARRANGEMENT PLAN - SHEET 4 OF 4	E
7	C231	CIVIL WORKS - ROAD DESIGN - BULK EARTHWORKS PLAN	E
8	C301	CIVIL WORKS - ROAD DESIGN - LONGITUDINAL SECTIONS - SHEET 1 OF 2	E
9	C302	CIVIL WORKS - ROAD DESIGN - LONGITUDINAL SECTIONS - SHEET 2 OF 2	E
10	C351	CIVIL WORKS - ROAD DESIGN - TYPICAL ROAD CROSS SECTIONS	E
11	C501	CIVIL WORKS ROAD DESIGN - DETAILS SHEET - SHEET 1 OF 3	E
12	C502	CIVIL WORKS ROAD DESIGN - DETAILS SHEET - SHEET 2 OF 3	E
13	C503	CIVIL WORKS ROAD DESIGN - DETAILS SHEET - SHEET 3 OF 3	E
14	C601	CIVIL WORKS - ROAD DESIGN - DRAINAGE LONGSECTION - SHEET 1 OF 2	E
15	C602	CIVIL WORKS - ROAD DESIGN - DRAINAGE LONGSECTION - SHEET 2 OF 2	E
16	C603	CIVIL WORKS - ROAD DESIGN - DRAINAGE CATCHMENT PLAN - SHEET 1 OF 3	E
17	C604	CIVIL WORKS - ROAD DESIGN - DRAINAGE CATCHMENT PLAN - SHEET 2 OF 3	E
18	C605	CIVIL WORKS - ROAD DESIGN - DRAINAGE CATCHMENT PLAN - SHEET 3 OF 3	E
19	C701	EROSION AND SEDIMENT CONTROL - PLAN	E
20	C702	EROSION AND SEDIMENT CONTROL - DETAILS	E
21	C901	CIVIL WORKS - ROAD DESIGN - SWEEP PATH ANALYSIS	E



PREPARED BY:
SGC Consulting Engineers
Suite 5.03, Level 5
156 Pacific Highway
St. Leonards, NSW 2065
T: +61 2 8883 4239
Email: office@sgce.com.au
Web: www.sgce.com.au

ARCHITECT:

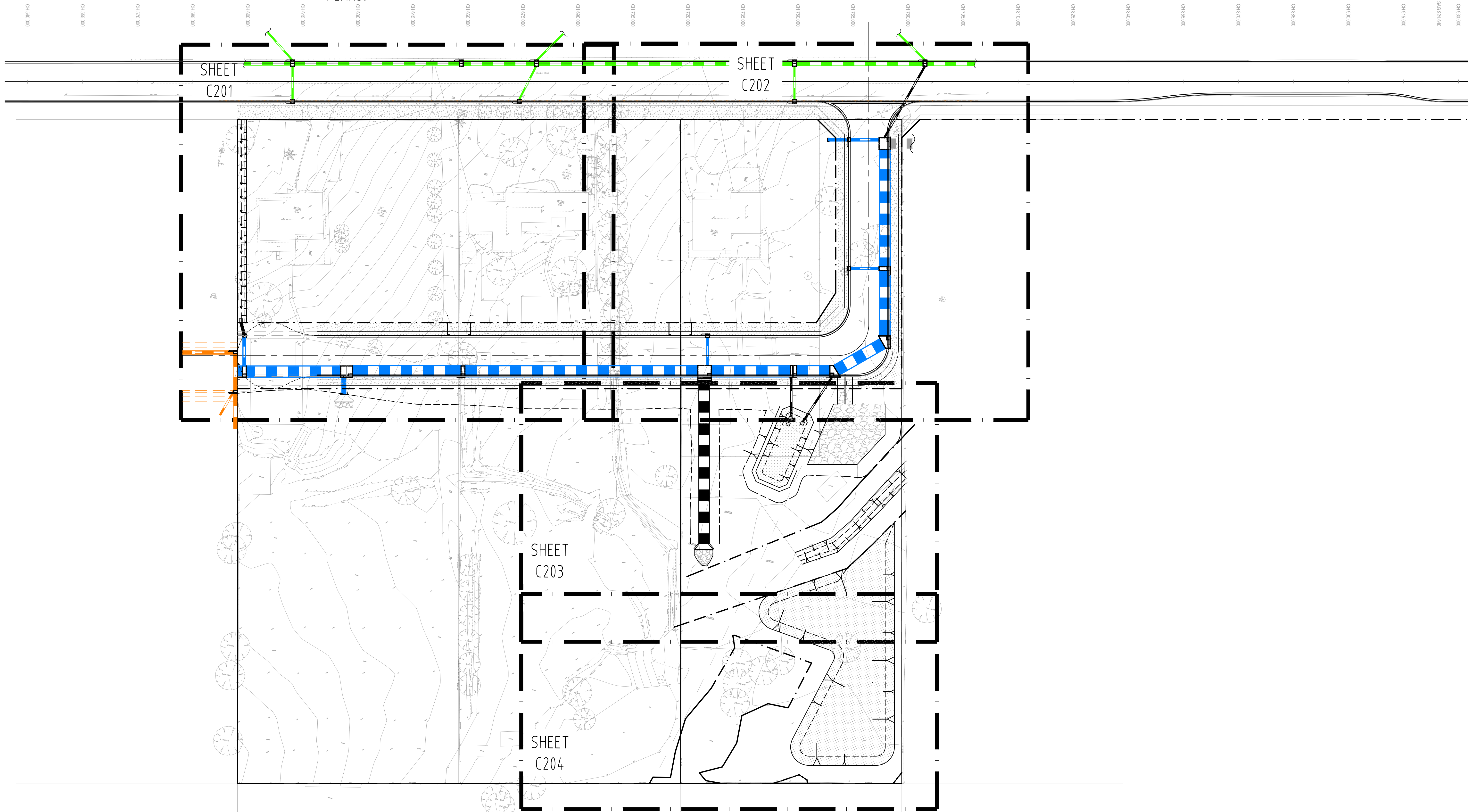


CLIENT :

**M DEVELOPMENT
GROUP PTY LTD**

LEGEND:

--- DENOTES SITE SHEET
BREAKUP & EXTENT OF
PLANS.



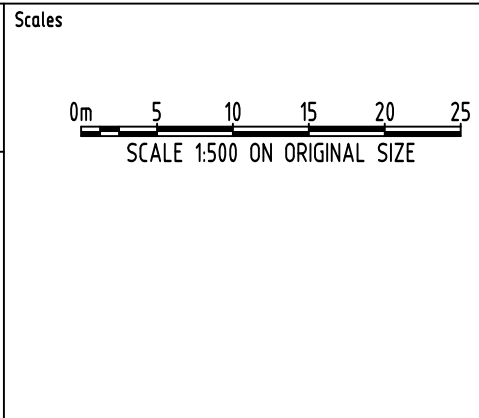
Reference Coordination Drawing				Discipline				Drawing Title and Number				Date				Rev.			
E	ISSUE FOR APPROVAL	CK	25.06.21	2	ARCH														
D	ISSUE FOR APPROVAL	CK	17.03.21	2	ARCH														
C	ISSUE FOR APPROVAL	CK	09.02.21	2	ARCH														
B	ISSUE FOR APPROVAL	CK	05.02.21	2	STRUCT														
A	ISSUE FOR APPROVAL	SH	18.02.20	2	MECH														
P2	PRELIMINARY ISSUE	JH	18.12.19	1	ELEC														
P1	PRELIMINARY ISSUE	JH	09.12.19	1	HYD														
Issue Last revision title				by	Date	Status	FIRE												
Issuer internal sequence and revision history				1- preliminary	2- development application	3- construction certificate	LANDS												
				4- tender	5- construction	6- other	SURVEY												

ENGINEERS
AUSTRALIA
Chartered Professional Engineer
MEMBER

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QUALITY CONTROL				DATE			
DRAWN	CK	DATE	25.06.21	CHECKED	SH	DATE	25.06.21
DESIGNED	CK	DATE	25.06.21	VERIFIED	SH	DATE	25.06.21
APPROVED	SH	DATE	25.06.21	CIVIL			

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ARCHITECT

design outbide
architects

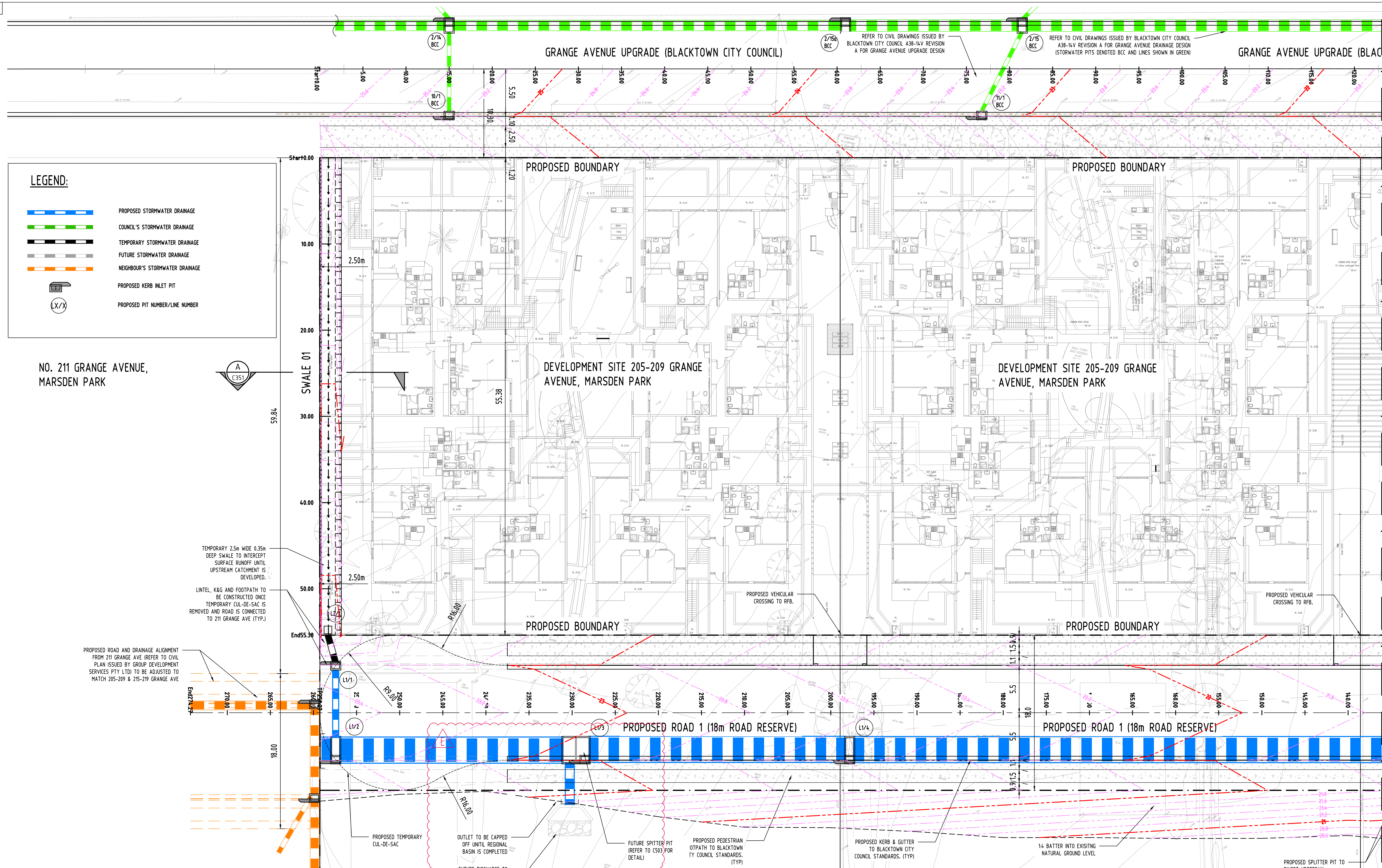
SGC
Engineering Value

Suite 5.03, Level 5,
156 PACIFIC HIGHWAY
ST. LEONARDS, NSW 2065
T: +61 2 8883 4239
Email: office@sgce.com.au
Web: www.sgce.com.au


A.B.N. 21 118 222 530

PROJECT
PROPOSED RESIDENTIAL
DEVELOPMENT
205-209 GRANGE AVENUE,
MARSDEN PARK

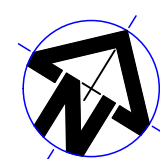
Drawing Status		FOR APPROVAL	
NOT TO BE USED FOR CONSTRUCTION PURPOSES			
Drawing Title		CIVIL WORKS - ROAD DESIGN SITE PLAN	
Project No	Drawing No	Revision No	
20190191	C110	E	




			Reference Coordination Drawing					
E	ISSUE FOR APPROVAL	CK	25.06.21	2	Discipline	Drawing Title and Number	Date	Rev.
D	ISSUE FOR APPROVAL	CK	17.03.21	2	ARCH			
C	ISSUE FOR APPROVAL	CK	09.02.21	2	ARCH			
B	ISSUE FOR APPROVAL	CK	05.02.21	2	STRUCT			
A	ISSUE FOR APPROVAL	SH	18.02.20	2	MECH			
P2	PRELIMINARY ISSUE	JH	18.12.19	1	ELEC			
P1	PRELIMINARY ISSUE	JH	09.12.19	1	HYD			
Issue	Last revision title	by	Date	Status	PRG			
Issue internal sequence and revision history						LANDS		
1-preliminary		2-development application		3-construction certificate		CIVIL		
4-tender		5-construction		6-other		SURVEY		

 ENGINEERS AUSTRALIA Chartered Professional Engineer MEMBER	QUALITY CONTROL			
	DRAWN	CK	DATE	25.06.21
	CHECKED	SH	DATE	25.06.21
	DESIGNED	CK	DATE	25.06.21
	VERIFIED	SH	DATE	25.06.21
	APPROVED	SH	DATE	25.06.21

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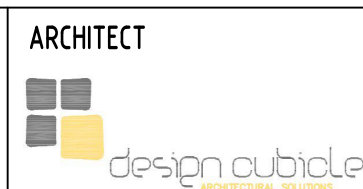
Scales



0m 2.5 5 7.5 10 12.5

SCALE 1:250 ON ORIGINAL SIZE

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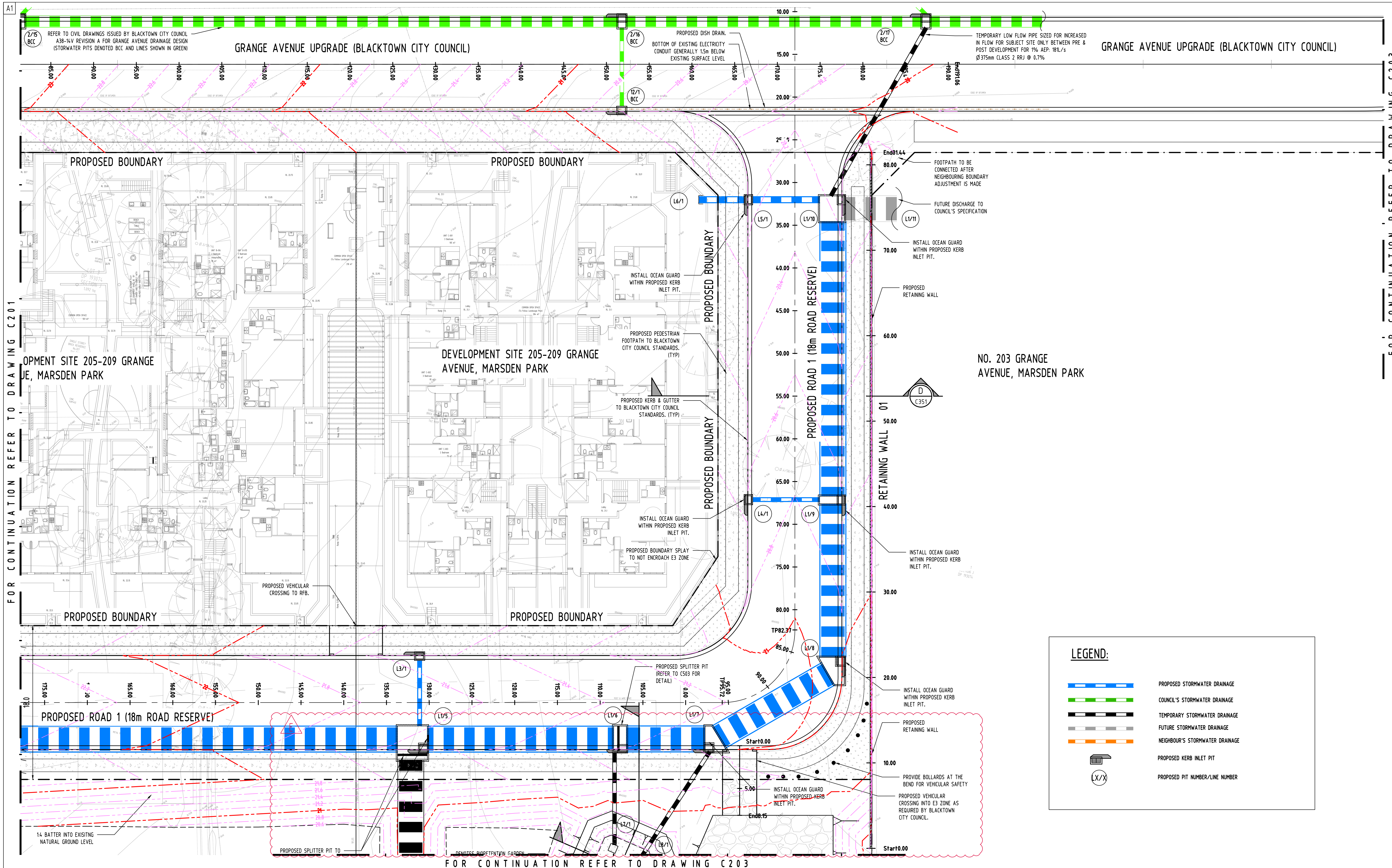






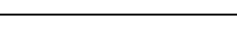
Suite 5.03, Level 5,
156 PACIFIC HIGHWAY
ST. LEONARDS, NSW 2065
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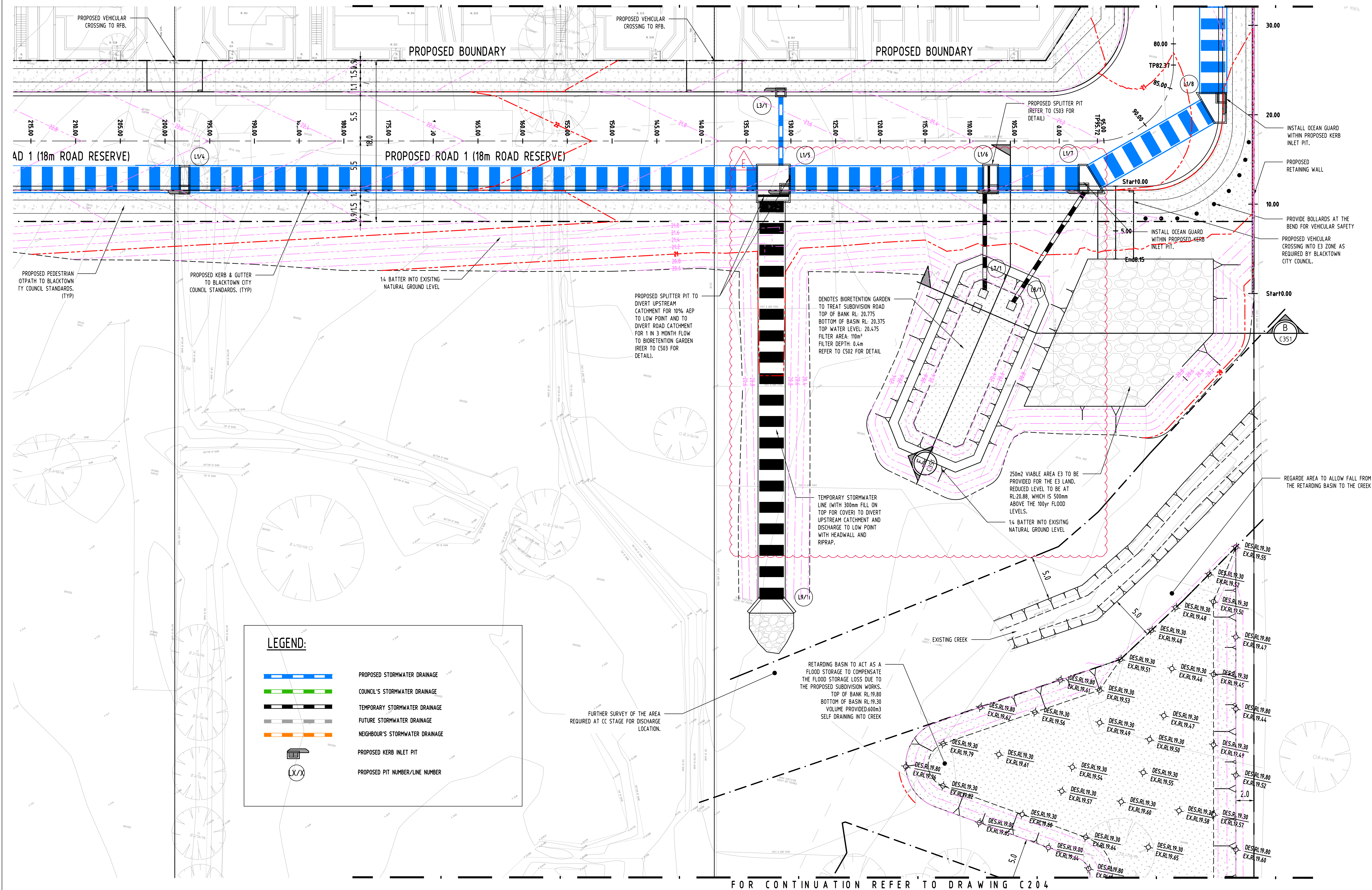
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PROJECT
PROPOSED RESIDENTIAL
DEVELOPMENT
205-209 GRANGE AVENUE,
MARSDEN PARK

Drawing Status	FOR APPROVAL		
	NOT TO BE USED FOR CONSTRUCTION PURPOSES		
Drawing Title	CIVIL WORKS - ROAD DESIGN GENERAL ARRANGEMENT PLAN SHEET 1 OF 4		
Project No	Drawing No	Revision	
20190191	C201	E	




Reference Coordination Drawing											ENGINEERS AUSTRALIA Australian Professional Engineers' Association	QUALITY CONTROL				WARNING: THE DESIGN, DRAWINGS, SPECIFICATIONS AND THE COPYRIGHT HEREIN REMAIN THE SOLE INTELLECTUAL PROPERTY OF S&G CONSULTANTS PTY LTD AND MUST NOT BE USED, COPIED, ALTERED OR REPRODUCED WHOLLY OR IN PART IN ANY FORM WITHOUT THE WRITTEN CONSENT OF S&G CONSULTANTS PTY LTD	Scales  SCALE 1:200 ON ORIGINAL SIZE	CLIENT M DEVELOPMENT GROUP PTY LTD	ARCHITECT  design cubicle ARCHITECTS	 Suite 5.03, Level 5, 156 PACIFIC HIGHWAY ST. LEONARDS, NSW 2065 T: +61 2 8883 4239 Email: office@sgce.com.au Web: www.sgce.com.au A.B.N. 21 118 222 530	PROJECT PROPOSED RESIDENTIAL DEVELOPMENT 205-209 GRANGE AVENUE, MARSDEN PARK	Drawing Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES			Drawing Title CIVIL WORKS - ROAD DESIGN GENERAL ARRANGEMENT PLAN SHEET 2 OF 4	Project No 20190191	Drawing No C202	Revision No E																																																																																																																																																																																																																																																																		
E	ISSUE FOR APPROVAL	CK	25.06.21	2	Discipline	Drawing Title and Number	Date	Rev.	DRAWN			CK	DATE	25.06.21	CHECKED							SH	DATE	25.06.21					DESIGNED	CK	DATE	25.06.21	VERIFIED	SH	DATE	25.06.21	APPROVED	SH	DATE	25.06.21																																																																																																																																																																																																																																																						
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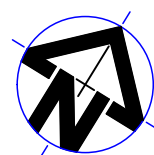


FOR CONTINUATION REFER TO DRAWING C204

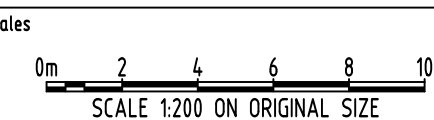
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E	ISSUE FOR APPROVAL	CK	25.06.21	2	Discipline	Drawing Title and Number	Date	Rev.
D	ISSUE FOR APPROVAL	CK	17.03.21	2	ARCH			
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P1	PRELIMINARY ISSUE	JH	09.12.19	1	HYD			
Issue	Last revision title	By	Date	Status	FRG			
Issuer internal sequence and revision history					LANDS			
1-preliminary					CIVIL			
4-tender					SURVEY			
2-development application								
5-construction								
3-construction certificate								
6-other								

 ENGINEERS AUSTRALIA <small>Chartered Professional Engineer</small> MEMBER	QUALITY CONTROL			
	DRAWN	CK	DATE	TIME
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	DESIGNED	CK	DATE	25.06.21
	VERIFIED	SH	DATE	25.06.21
	APPROVED	SH	DATE	25.06.21

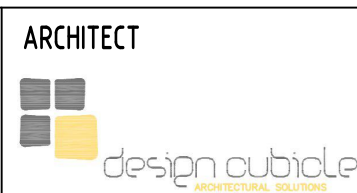
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0m 2 4 6 8 10
SCALE 1:200 ON ORIGINAL SIZE



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ST. LEONARDS, NSW 2065
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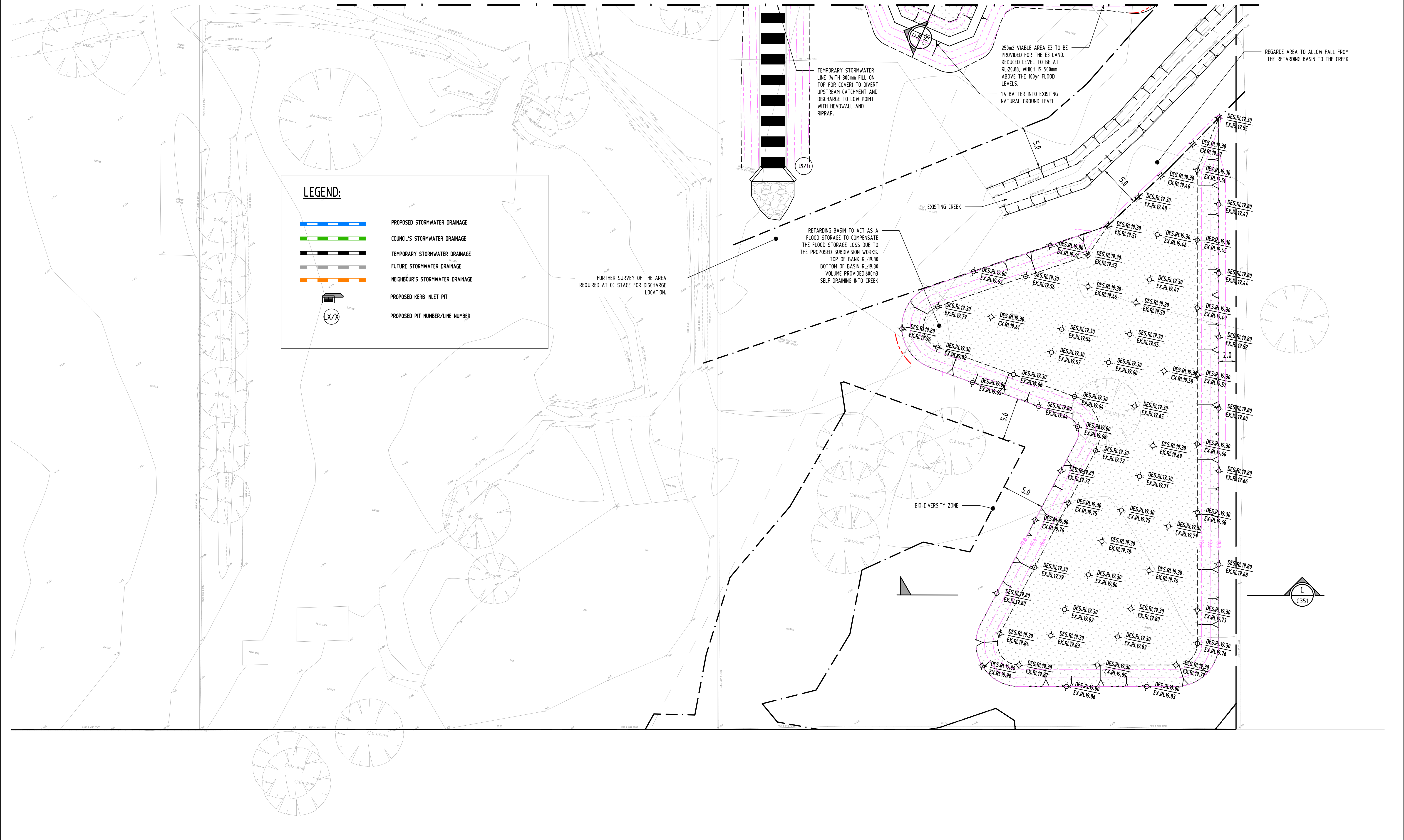
ABN 21 118 222 530

PROJECT
PROPOSED RESIDENTIAL
DEVELOPMENT
205-209 GRANGE AVENUE,
MARSDEN PARK

Grid	Datum	Sheet	Scale (at original size)
-	A.H.D.	5 of 21	1:200 @ A1

Drawing Status	FOR APPROVAL
	NOT TO BE USED FOR CONSTRUCTION PURPOSES
Drawing Title	CIVIL WORKS - ROAD DESIGN GENERAL ARRANGEMENT PLAN SHEET 3 OF 4

Project No	Drawing No	Revision
20190191	C203	E



Reference Coordination Drawing				Reference Coordination Drawing			
Issue	Last revision title	by	Date	Status	Discipline	Drawing Title and Number	Date
E	ISSUE FOR APPROVAL	CK	25.06.21	2	ARCH		
D	ISSUE FOR APPROVAL	CK	17.03.21	2	ARCH		
C	ISSUE FOR APPROVAL	CK	05.02.21	2	ARCH		
B	ISSUE FOR APPROVAL	CK	05.02.21	2	STRUCT		
A	ISSUE FOR APPROVAL	SH	18.02.20	2	MECH		
P2	PRELIMINARY ISSUE	JH	18.12.19	1	ELEC		
P1	PRELIMINARY ISSUE	JH	09.12.19	1	HYD		
Issue internal sequence and revision history				LANDS			
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ENGINEERS AUSTRALIA			
Chartered Professional Engineer			
MEMBER			

QUALITY CONTROL			
DRAWN	CK	DATE	25.06.21
CHECKED	SH	DATE	25.06.21
DESIGNED	CK	DATE	25.06.21
VERIFIED	SH	DATE	25.06.21
APPROVED	SH	DATE	25.06.21

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Scales			
0m 2 4 6 8 10			
SCALE 1:200 ON ORIGINAL SIZE			

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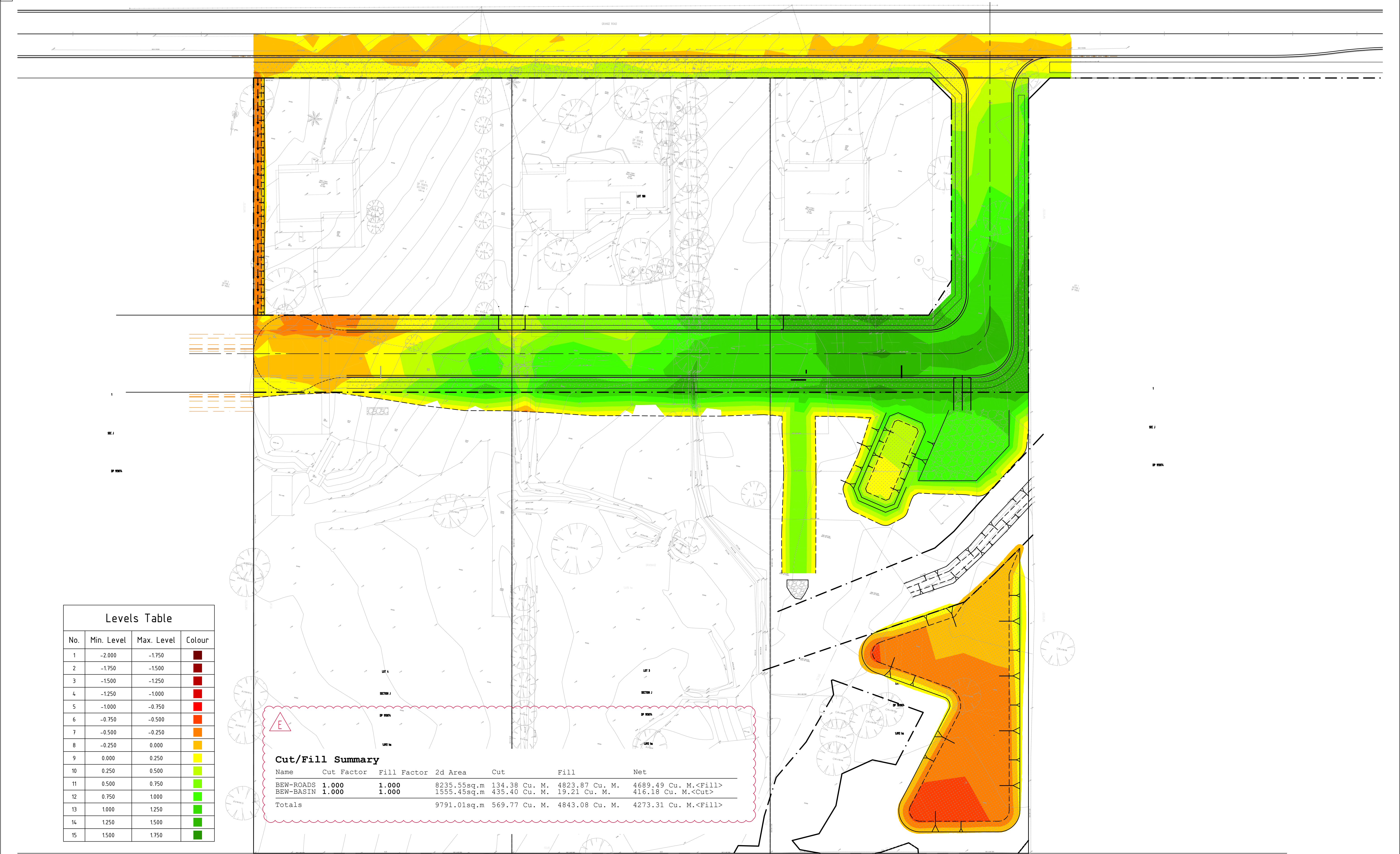
ARCHITECT
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architects

SGC
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Suite 5.03, Level 5,
156 PACIFIC HIGHWAY
ST. LEONARDS, NSW 2055
T: +61 2 8883 4239
Email: office@sgce.com.au
Web: www.sgce.com.au

PROJECT
PROPOSED RESIDENTIAL
DEVELOPMENT
205-209 GRANGE AVENUE,
MARSDEN PARK

Drawing Status			FOR APPROVAL
Drawing Title			NOT TO BE USED FOR CONSTRUCTION PURPOSES
			CIVIL WORKS - ROAD DESIGN
			GENERAL ARRANGEMENT PLAN
			SHEET 4 OF 4
Project No	Drawing No	Revision No	
20190191	C204	E	



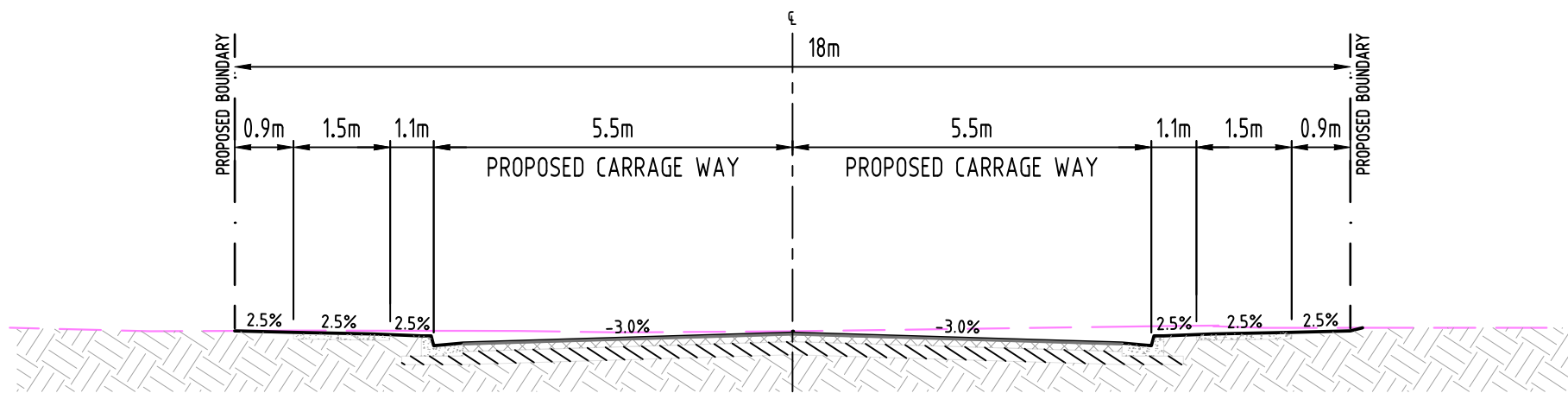
Levels Table

No.	Min. Level	Max. Level	Colour
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3	-1.500	-1.250	
4	-1.250	-1.000	
5	-1.000	-0.750	
6	-0.750	-0.500	
7	-0.500	-0.250	
8	-0.250	0.000	
9	0.000	0.250	
10	0.250	0.500	
11	0.500	0.750	
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14	1.250	1.500	
15	1.500	1.750	

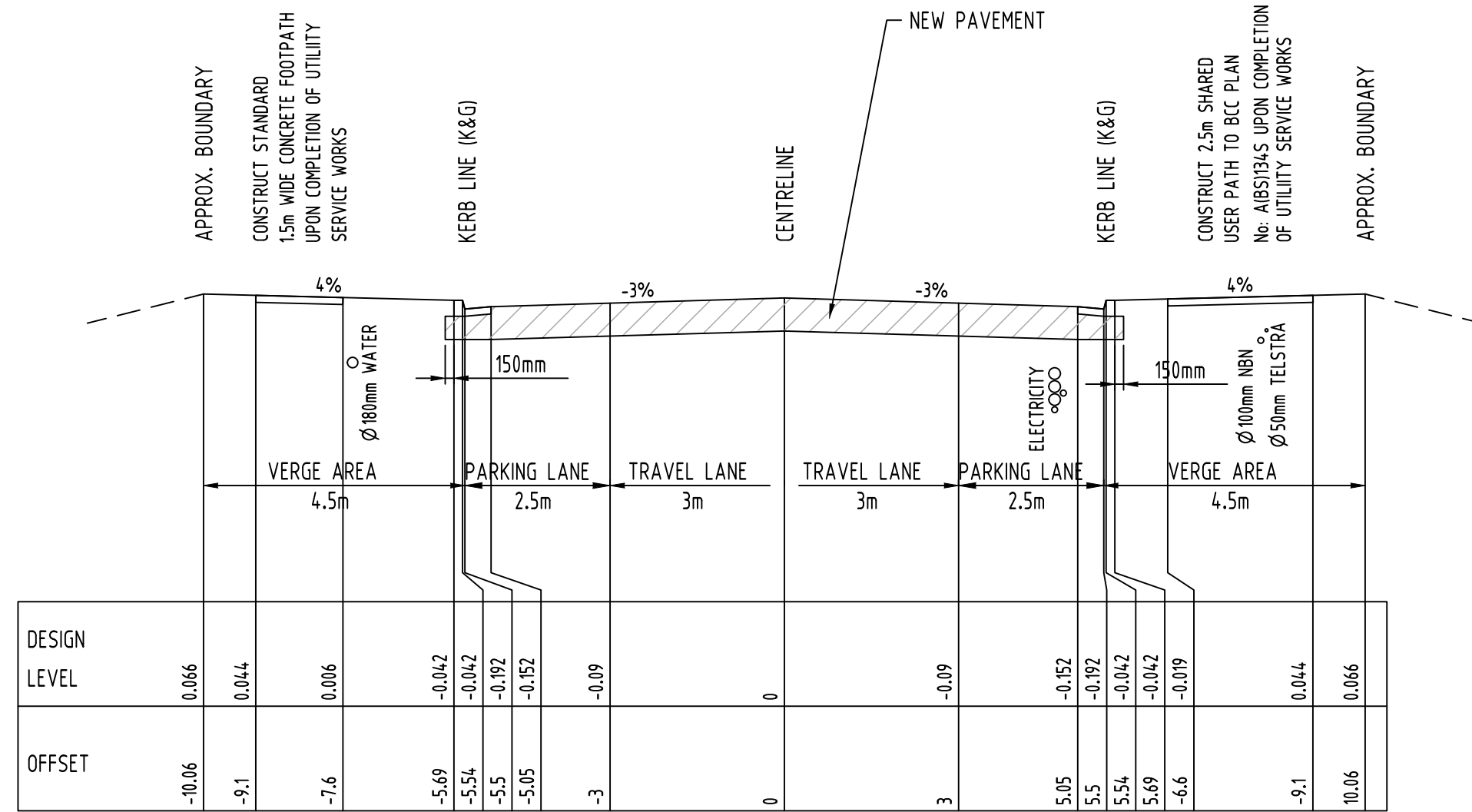
Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
BEW-ROADS	1.000	1.000	8235.55sq.m	134.38 Cu. M.	4823.87 Cu. M.	4689.49 Cu. M.<Fill>
BEW-BASIN	1.000	1.000	1555.45sq.m	435.40 Cu. M.	19.21 Cu. M.	416.18 Cu. M.<Cut>
Totals			9791.01sq.m	569.77 Cu. M.	4843.08 Cu. M.	4273.31 Cu. M.<Fill>

				Reference Coordination Drawing				
E	ISSUE FOR APPROVAL	CK	25.06.21	2	Discipline	Drawing Title and Number	Date	Rev.
D	ISSUE FOR APPROVAL	CK	17.03.21	2	ARCH			
C	ISSUE FOR APPROVAL	CK	09.02.21	2	ARCH			
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P1	PRELIMINARY ISSUE	JH	18.02.20	1	HYD			
Issue Last revision title		by	Date	Status	PRG			
Issuer internal sequence and revision history					LANDS			
1-preliminary		2-development application		3-construction certificate		CIVIL		
4-tender		5-construction		6-other		SURVEY		

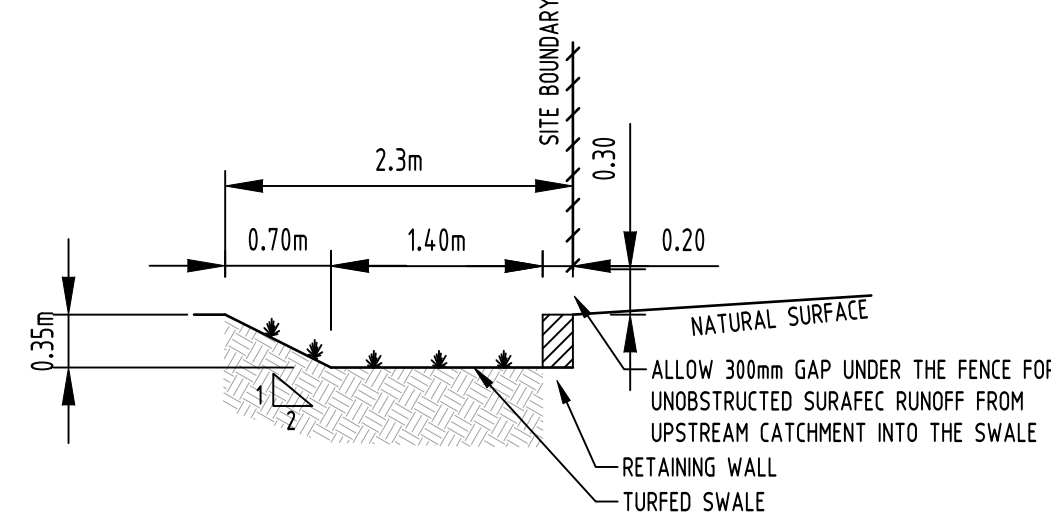


TYPICAL CROSS SECTION ROAD 1
SCALE H:1:100 V:1:100

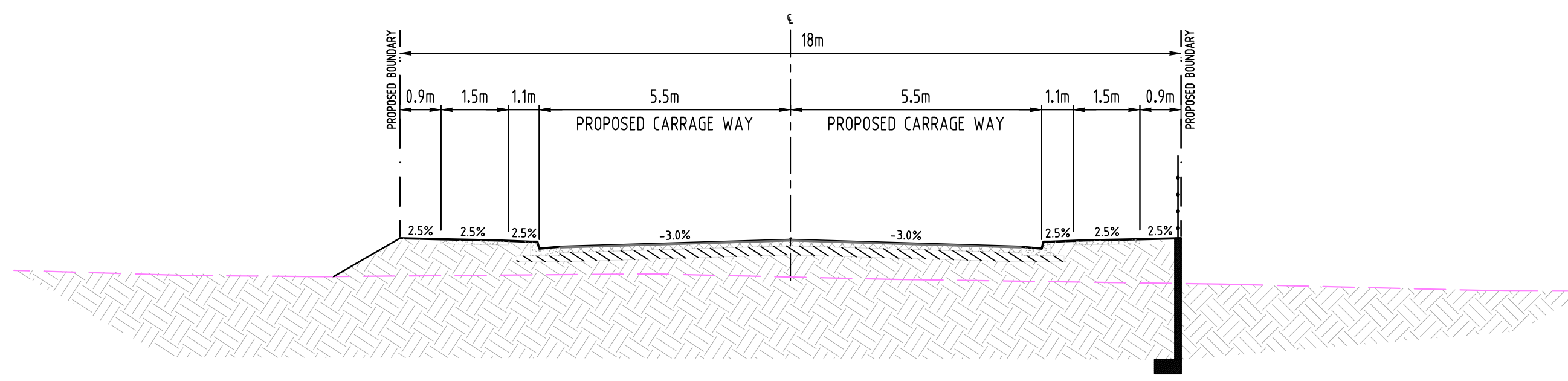


TYPICAL CROSS SECTION - GRANGE AVENUE
(RICHMOND ROAD TO BELLS CREEK)
SCALE 1:100 (NATURAL)

CATCHMENTS RUNOFF CALCULATIONS	MANNING'S OPEN CHANNEL CALCULATIONS
UNDEVELOPED UPSTREAM CATCHMENT AREA = 3192m ²	FORMULA: $Q = AR^{2/3}/n$
SLOPE = 0.02m/m n = 0.06 L = 600m (LONGEST DISTANCE OF TRAVEL) Tc = 20mins I ₁₀ = 89.1mm/hr I ₁₀₀ = 138mm/hr	S = 0.045m/m n = 0.035 (GRAVEL/STONE MULCH BASE) USE: BOTTOM WIDTH W = 1.40m TOP WIDTH = 2.10m DEPTH D = 0.35m
f = 0.10 C ₁₀ = 0.67 C ₁₀₀ = 0.80	AREA OF FLOW: A = 0.61m ² PERIMETER OF FLOW: P = 2.52m HYDRAULIC RADIUS: R = 0.24m
Q ₁₀ = 0.67x89.1x3192/3600 = 0.52m ³ /s Q ₁₀₀ = 0.80x138x3192/3600 = 0.96m ³ /s	TOTAL FLOW IN CHANNEL: Q = 1.43m ³ /s > 0.96m ³ /s THEREFORE OK.



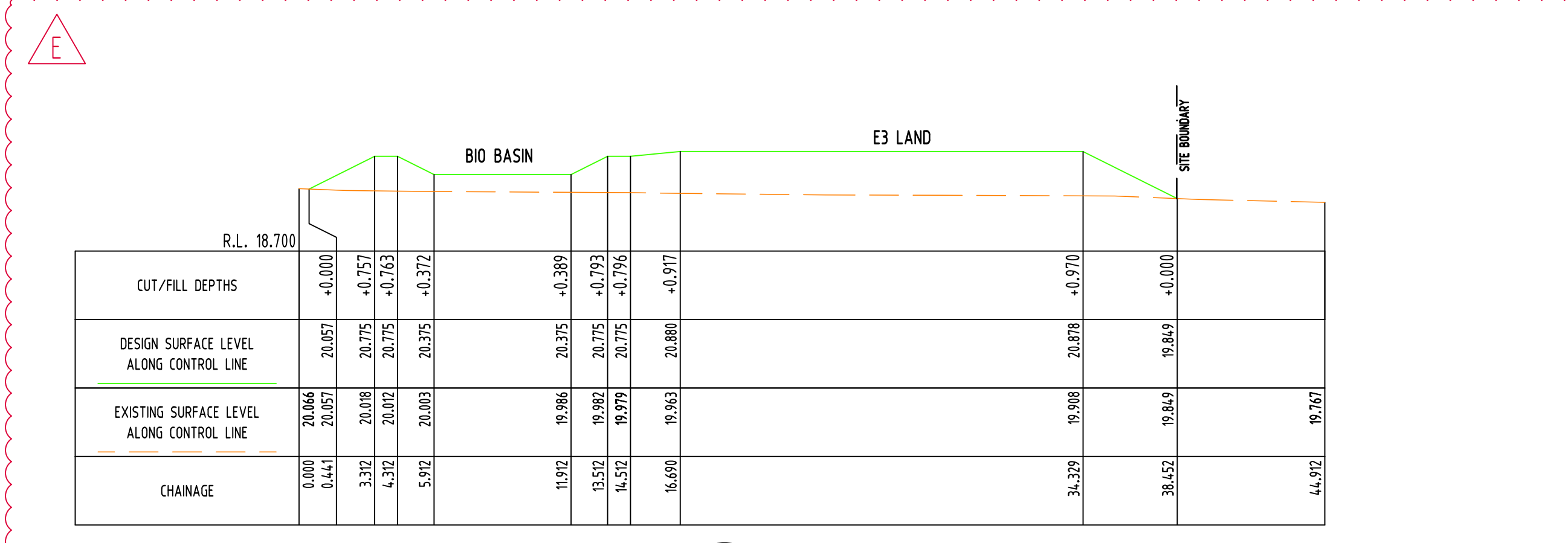
A
C201
SWALE SECTION
NOT TO SCALE



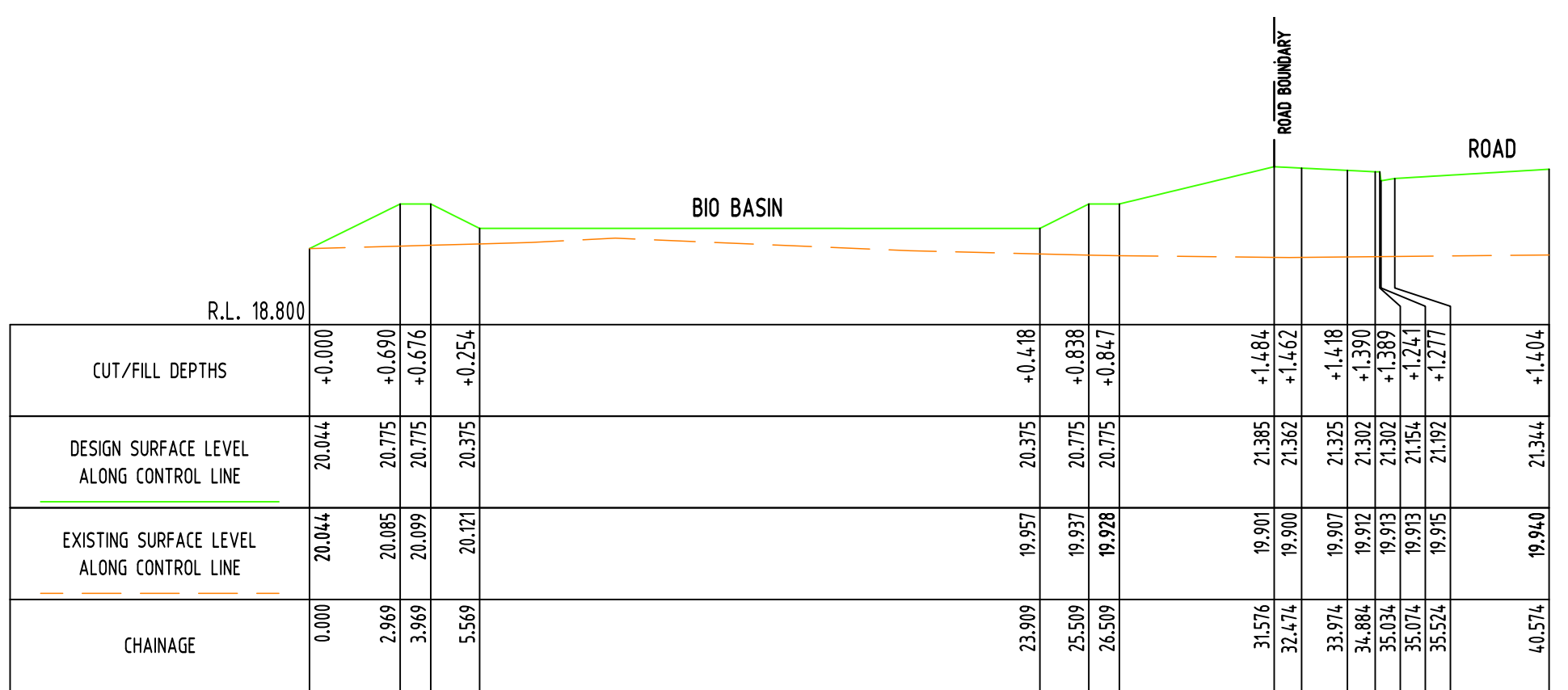
D
C202
SECTION
H:1m100 V:1m100

RETARDING BASIN									
R.L. 18.300									
CUT/FILL DEPTHS	0.000	19.794	19.794	19.794	19.794	19.794	19.794	19.794	19.794
DESIGN SURFACE LEVEL ALONG CONTROL LINE	0.000	19.794	19.794	19.794	19.794	19.794	19.794	19.794	19.794
EXISTING SURFACE LEVEL ALONG CONTROL LINE	0.000	19.794	19.794	19.794	19.794	19.794	19.794	19.794	19.794
CHAINAGE	0.000	1.000	2.000	3.000	4.000	5.000	6.000	7.000	8.000

C
C204
SECTION
RETARDING BASIN
H:1m200 V:1m100



B
C203
SECTION
E3 LAND & BIO BASIN
H:1m200 V:1m100



E
C203
SECTION
ROAD & BIO BASIN
H:1m200 V:1m100

Issue	Last revision title	by	Date	Status
E	ISSUE FOR APPROVAL	CK	25.06.21	2
D	ISSUE FOR APPROVAL	CK	17.03.21	2
C	ISSUE FOR APPROVAL	CK	09.02.21	2
B	ISSUE FOR APPROVAL	CK	05.02.21	2
A	ISSUE FOR APPROVAL	SH	18.02.20	2
P2	PRELIMINARY ISSUE	JH	18.12.19	1
P1	PRELIMINARY ISSUE	JH	09.12.19	1

Issuer internal sequence and revision history

1-preliminary	2-development application	3-construction certificate
4-tender	5-construction	6-other

Discipline	Drawing Title and Number	Date	Rev.
ARCH			
STRUCT			
MECH			
ELEC			
HYD			
FIRE			
LANDS			
CIVIL			
SURVEY			

QUALITY CONTROL	DATE	25.06.21
DRAWN	CK	
CHECKED	SH	
DESIGNED	CK	
VERIFIED	SH	
APPROVED	SH	

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design outbide

SGC
Engineering Value

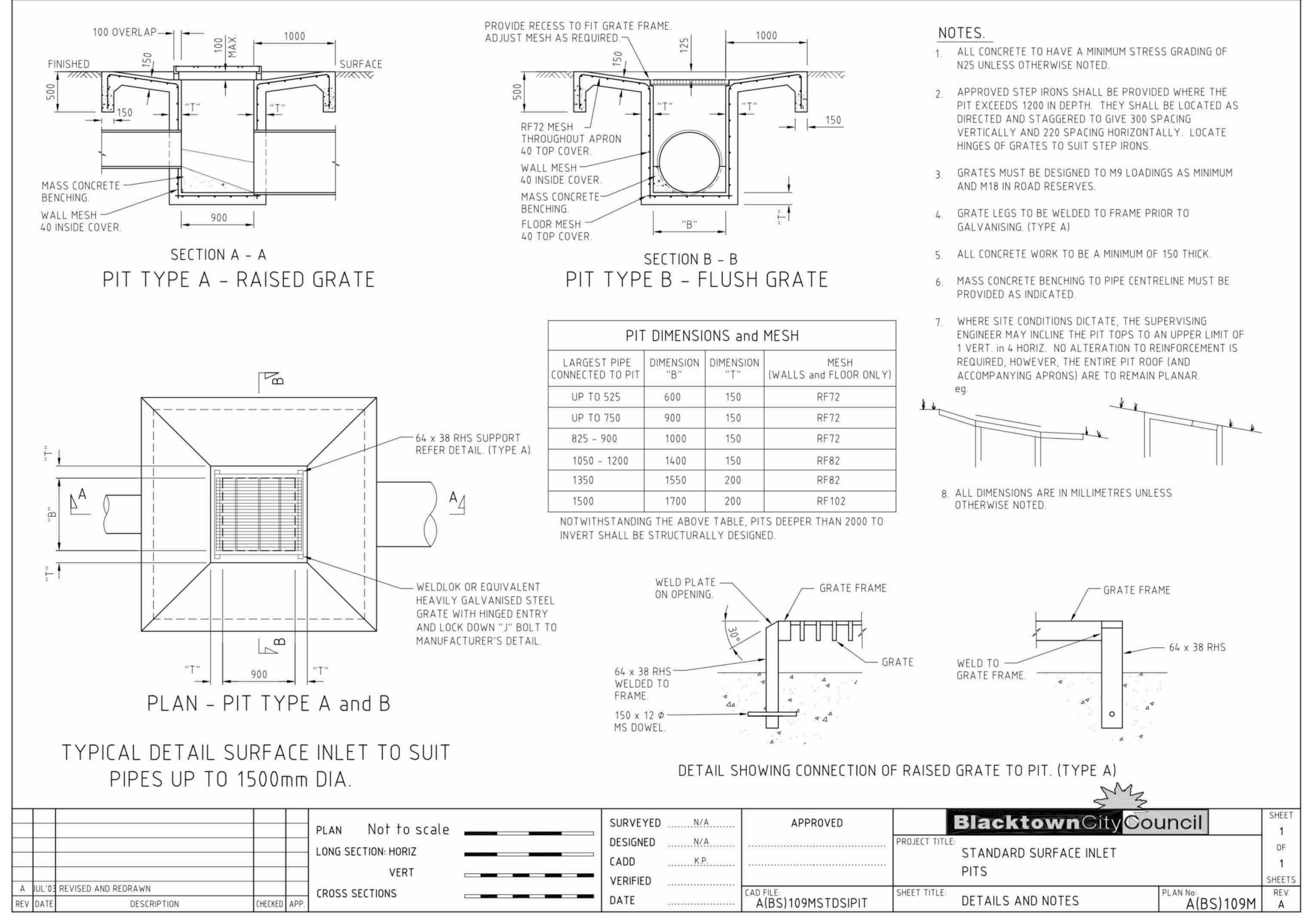
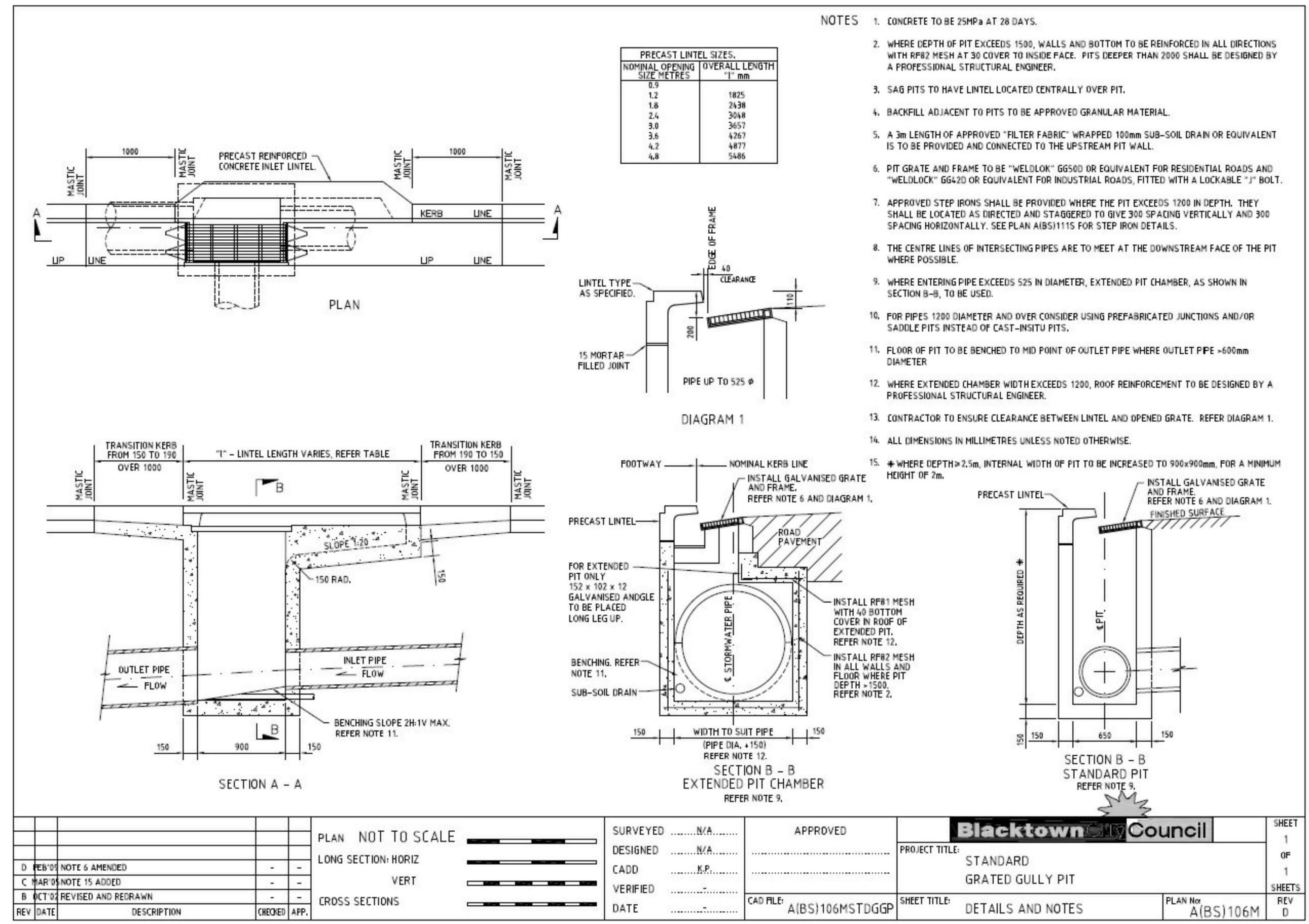
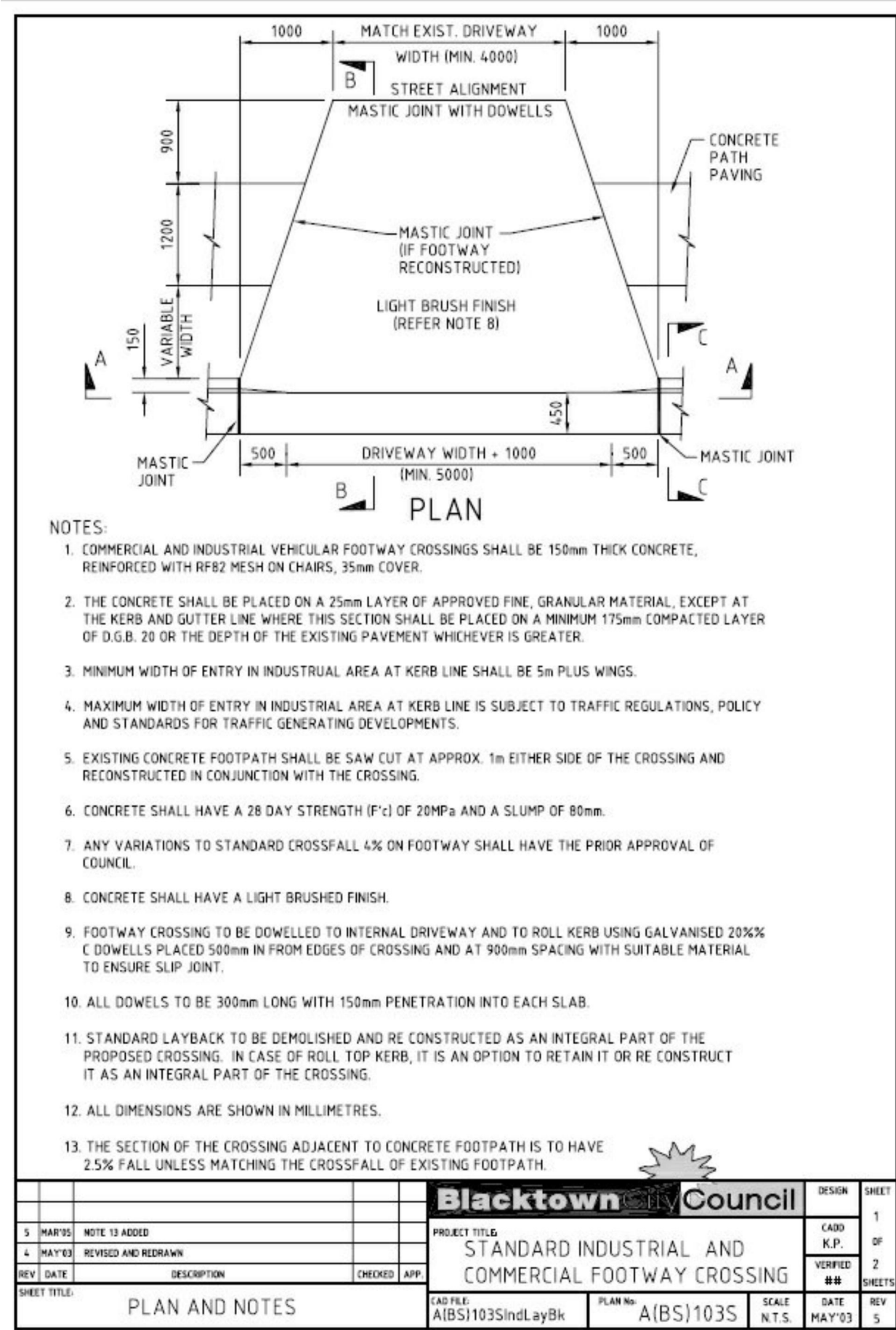
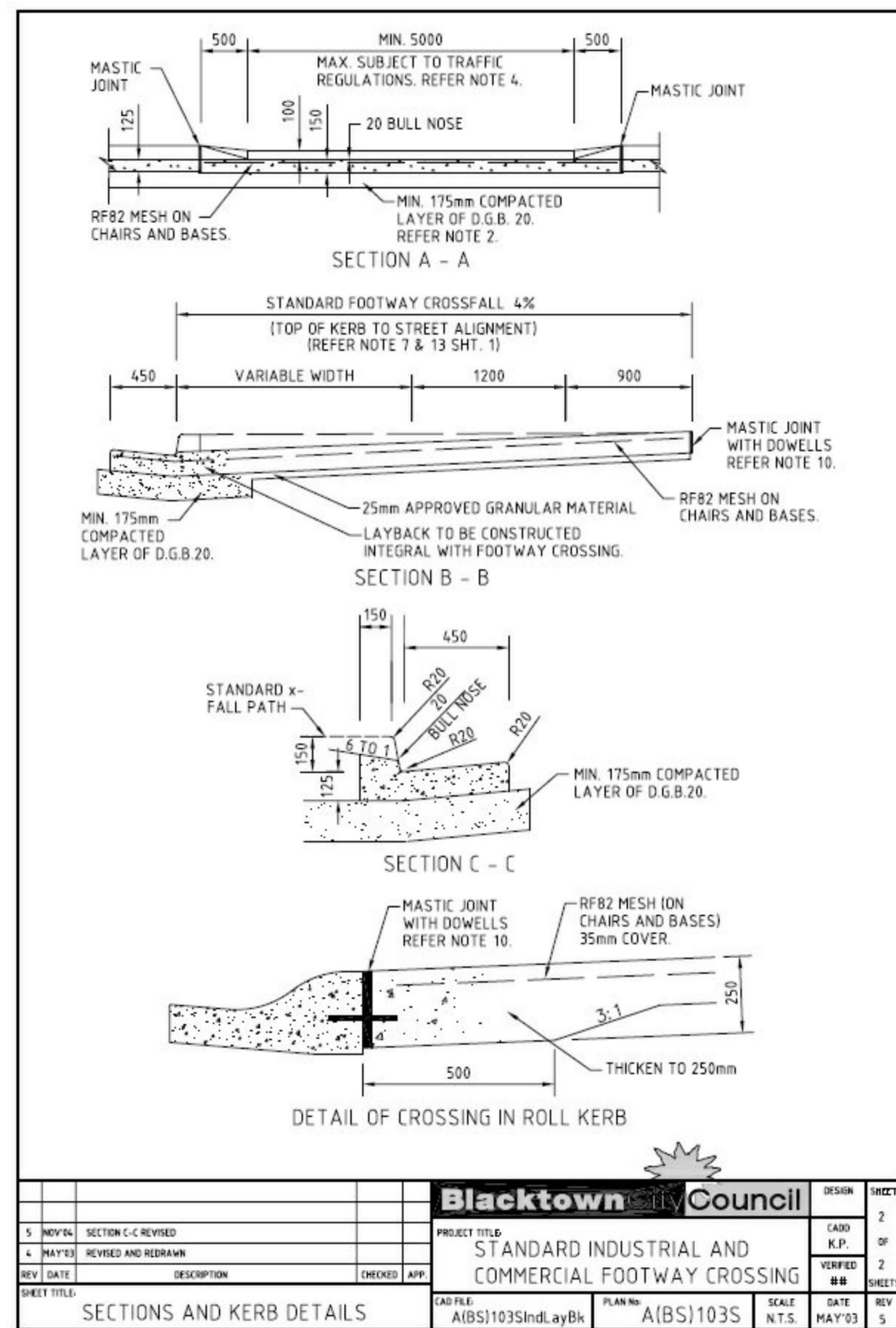
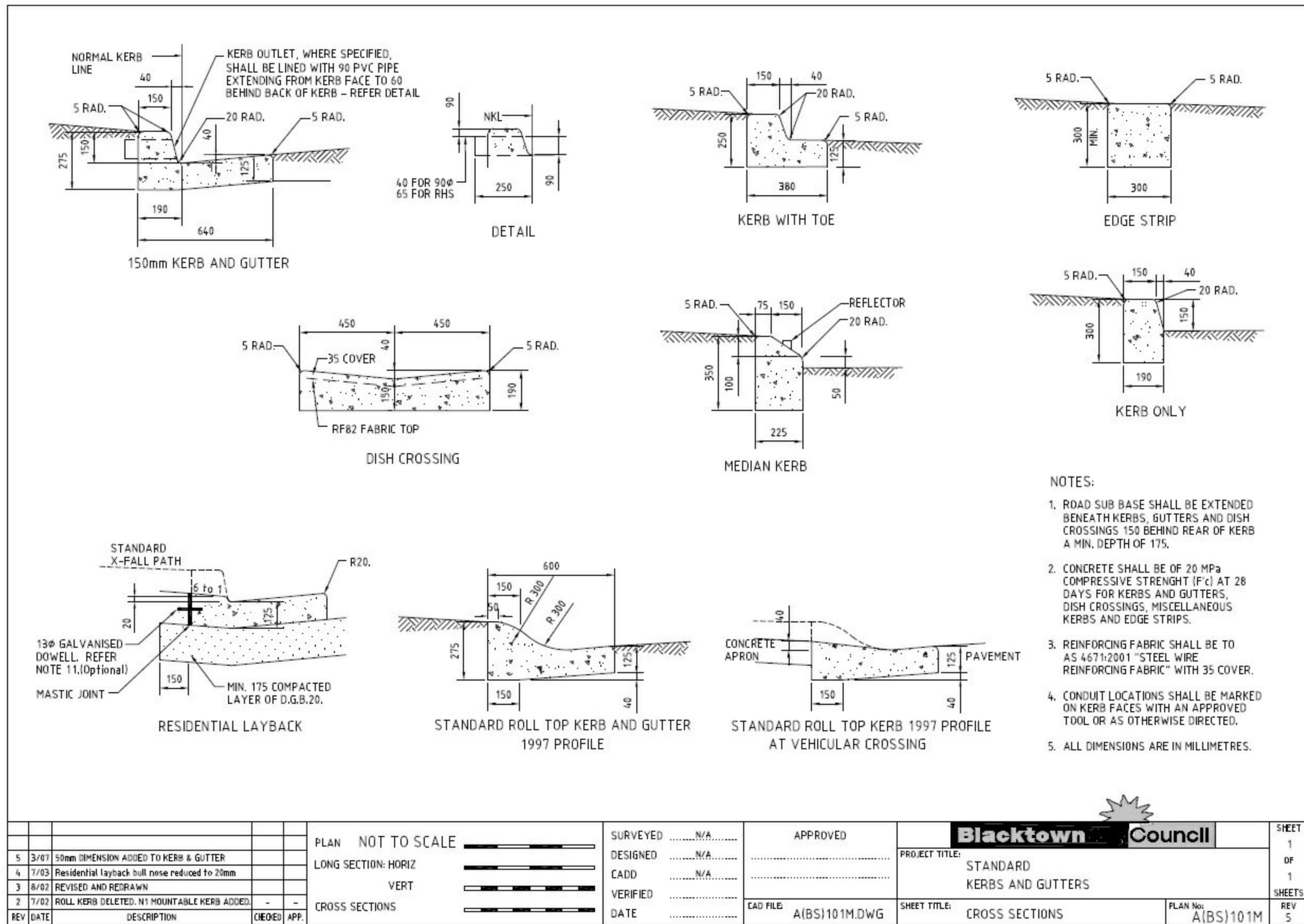
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PROJECT
PROPOSED RESIDENTIAL
DEVELOPMENT
205-209 GRANGE AVENUE,
MARSDEN PARK

Drawing Status
FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION PURPOSES
CIVIL WORKS - ROAD DESIGN
TYPICAL ROAD CROSS SECTIONS

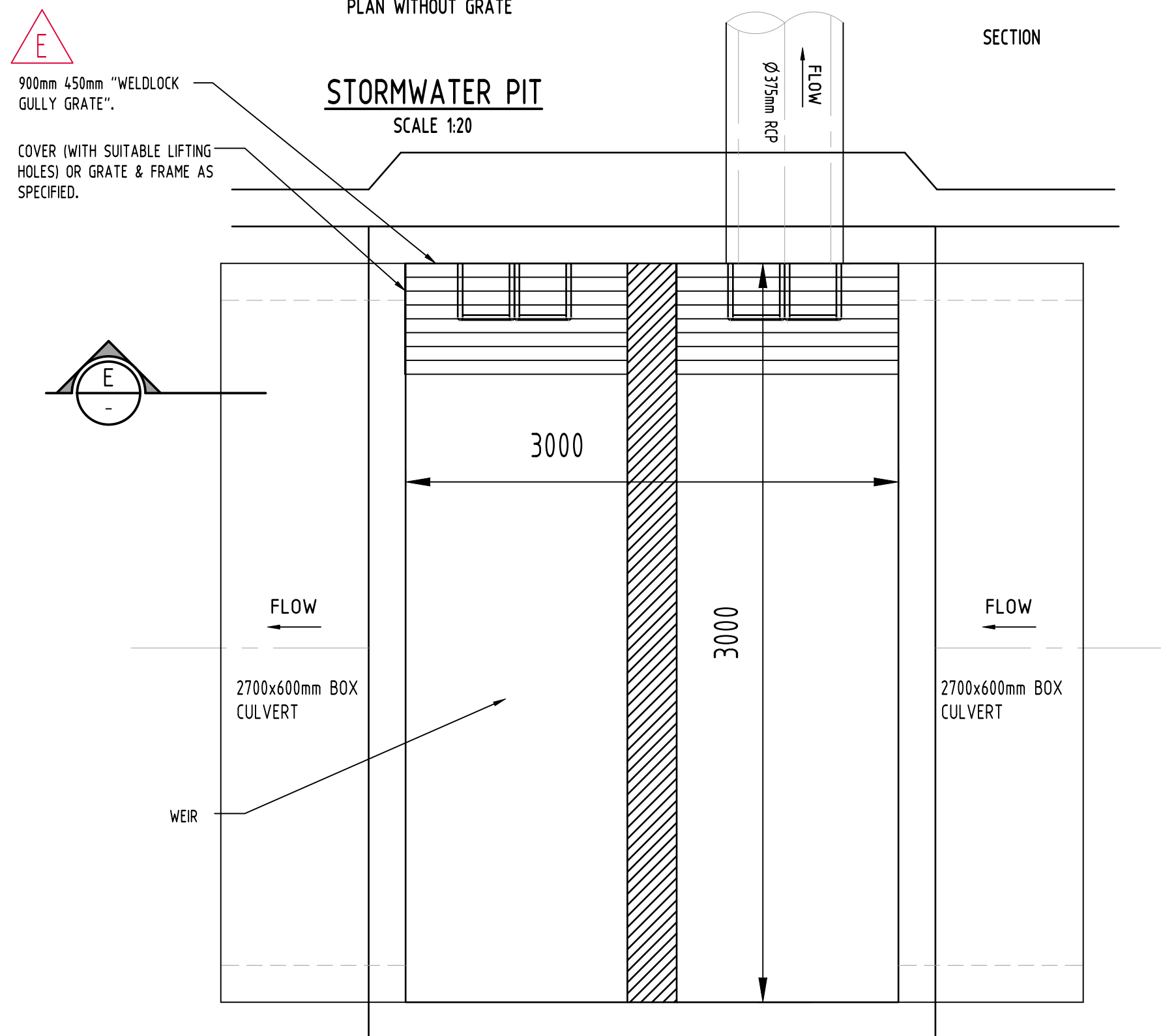
Project No
20190191
Drawing No
C351
Revision No
E

Grid
Datum
Sheet
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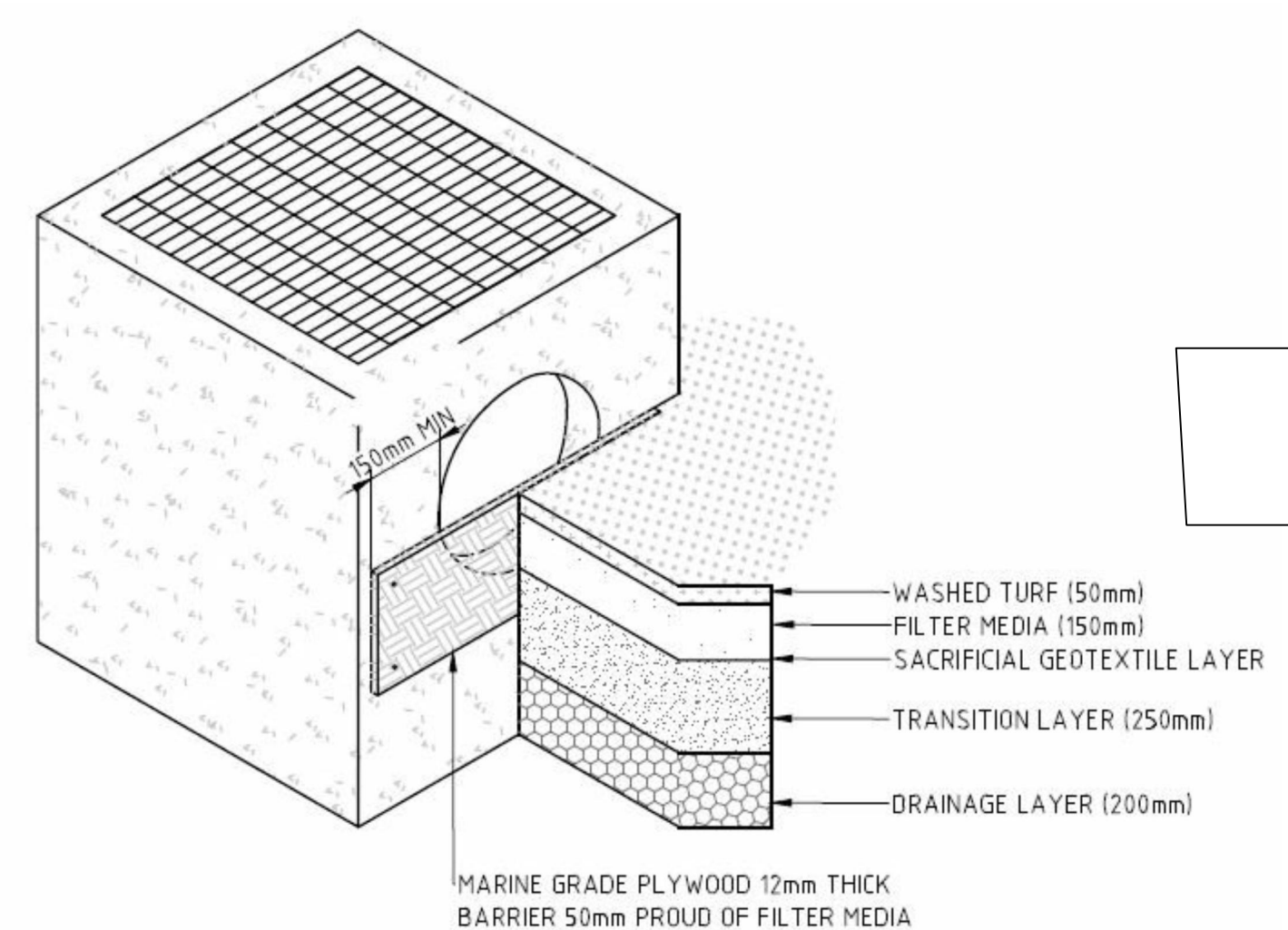
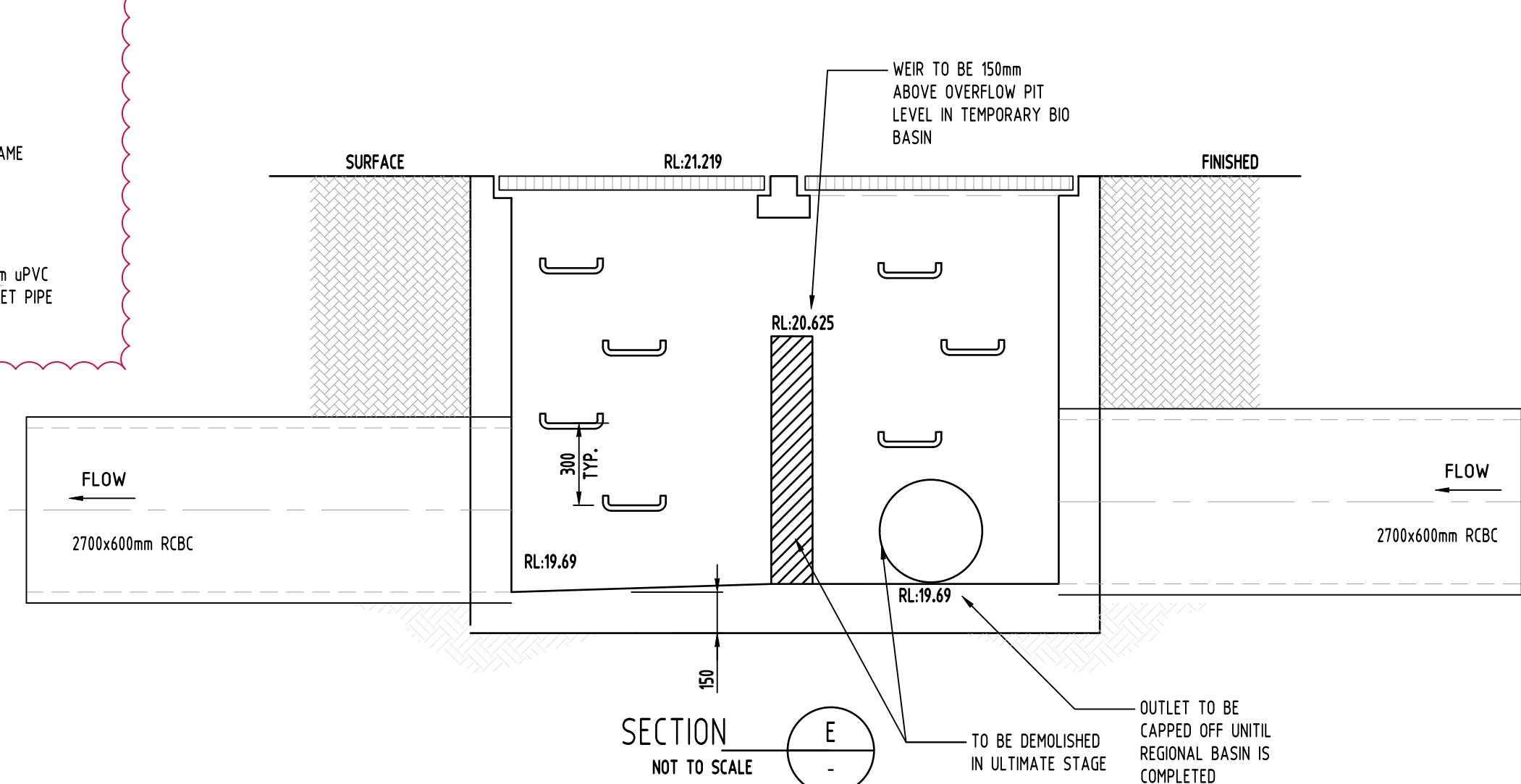


Reference Coordination Drawing					ENGINEERS AUSTRALIA Chartered Professional Engineer MEMBER	QUALITY CONTROL		WARNING: THE DESIGNS, DRAWINGS, SPECIFICATIONS AND THE COPYRIGHT HEREIN REMAIN THE SOLE INTELLECTUAL PROPERTY OF SAG CONSULTANTS PTY LTD AND MUST NOT BE USED, COPIED, ALTERED OR REPRODUCED WHOLLY OR IN PART IN ANY FORM WITHOUT THE WRITTEN CONSENT OF SAG CONSULTANTS PTY LTD	Scale
Issue	Last revision title	by	Date	Status		DRAWN	CK	DATE	
E	ISSUE FOR APPROVAL	CK	25.06.21	2	Discipline	DATE	25.06.21		
D	ISSUE FOR APPROVAL	CK	17.03.21	2	ARCH	DATE	25.06.21		
C	ISSUE FOR APPROVAL	CK	09.02.21	2	ARCH	DATE	25.06.21		
B	ISSUE FOR APPROVAL	CK	05.02.21	2	STRUCT	DATE	25.06.21		
A	ISSUE FOR APPROVAL	SH	18.02.20	2	MECH	DATE	25.06.21		
P2	PRELIMINARY ISSUE	JH	18.12.19	1	ELEC	DATE	25.06.21		
P1	PRELIMINARY ISSUE	JH	09.12.19	1	HYD	DATE	25.06.21		
Issue internal sequence and revision history					LANDS	DATE	25.06.21		
1-preliminary					CIVIL	DATE	25.06.21		
4-tender					SURVEY	DATE	25.06.21		
2-development application									
3-construction certificate									
6-other									

CLIENT M DEVELOPMENT GROUP PTY LTD		ARCHITECT design outable		PROJECT PROPOSED RESIDENTIAL DEVELOPMENT 205-209 GRANGE AVENUE, MARSDEN PARK		Drawing Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES	
Suite 5.03, Level 5, 156 PACIFIC HIGHWAY ST. LEONARDS, NSW 2055 T: +61 2 8883 4239 Email: office@sge.com.au Web: www.sge.com.au		A.B.N. 21 118 222 530		Drawing Title CIVIL WORKS - ROAD DESIGN DETAILS SHEET SHEET 1 OF 3		Project No 20190191	
Grid		Datum		Sheet		Scale (at original size)	
-		A.H.D.		11 of 21		NTS	
C501		E		Revision No		20190191	




KERB INLET PIT L1/6
SCALE 1:20

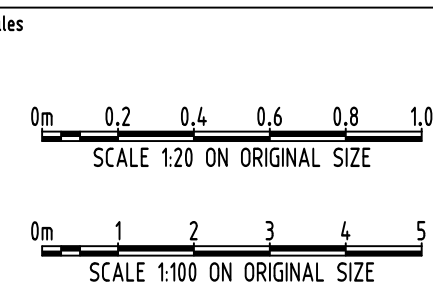


STAGE 2 TEMPORARY SOIL BARRIER ON UPFLOW PIT
NOT TO SCALE

				Reference Coordination Drawing				
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D	ISSUE FOR APPROVAL	CK	17.03.21	2	AREH			
C	ISSUE FOR APPROVAL	CK	09.02.21	2	AREH			
B	ISSUE FOR APPROVAL	CK	15.02.21	2	STRUCT			
A	ISSUE FOR APPROVAL	SH	18.02.20	2	MECH			
P2	PRELIMINARY ISSUE	JH	18.12.19	1	ELEC			
P1	PRELIMINARY ISSUE	JH	09.12.19	1	HYD			
Issue	Last revision title	by	Date	Status	FILE			
Issue internal sequence and revision history					LANDS			
1-preliminary					CIVIL			
4-tender					SURVEY			
2-development application								
5-construction								
3-construction certificate								
6-other								


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	DRAWN	CK	DATE	25.06.21
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	DESIGNED	CK	DATE	25.06.21
	VERIFIED	SH	DATE	25.06.21
	APPROVED	SH	DATE	25.06.21

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ARCHITECT



design cubicle
ARCHITECTURAL SOLUTIONS

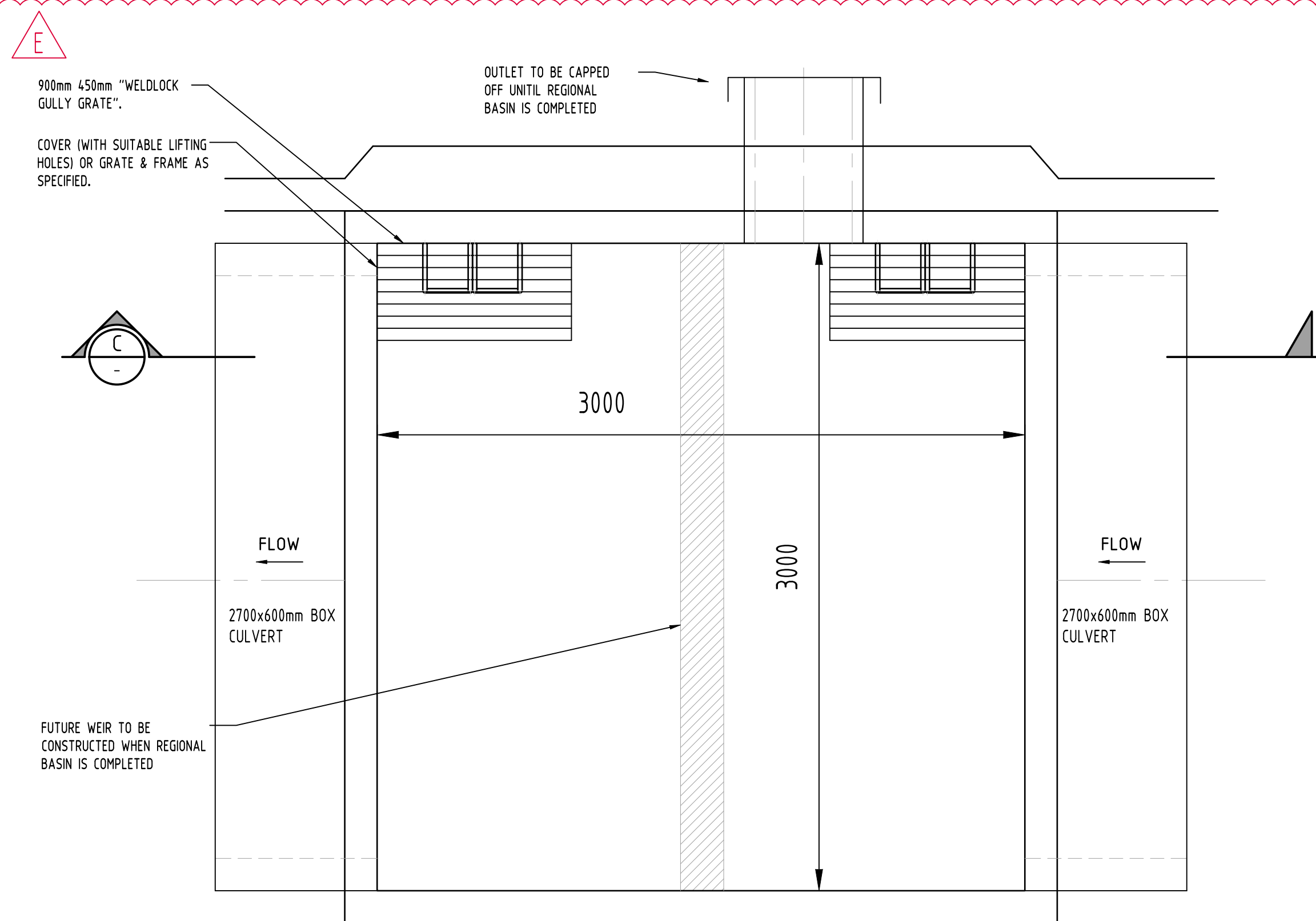


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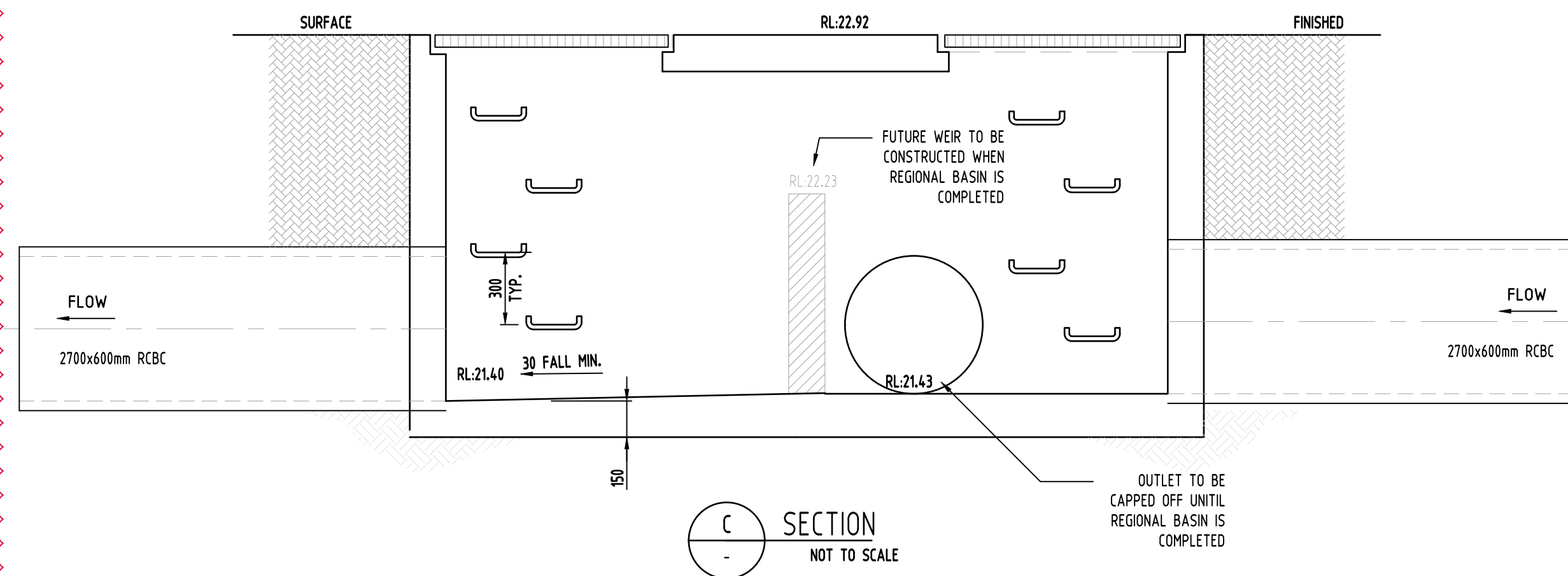
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PROJECT
PROPOSED RESIDENTIAL
DEVELOPMENT
205-209 GRANGE AVENUE,
MARSDEN PARK

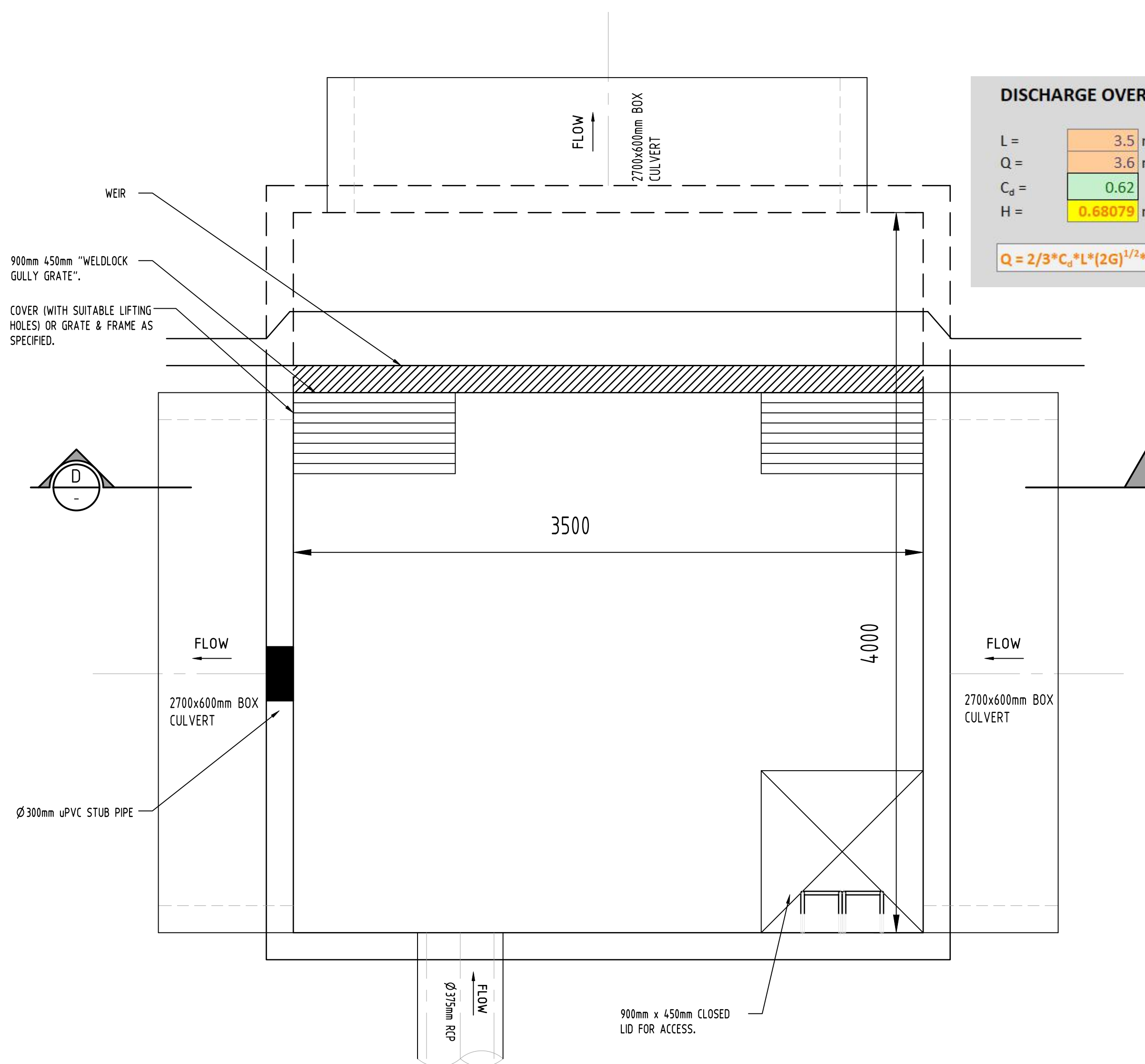
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NOT TO BE USED FOR CONSTRUCTION PURPOSES			
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	SHEET 2 OF 3		
Project No	Drawing No	Revision No	
20190191	C502	E	



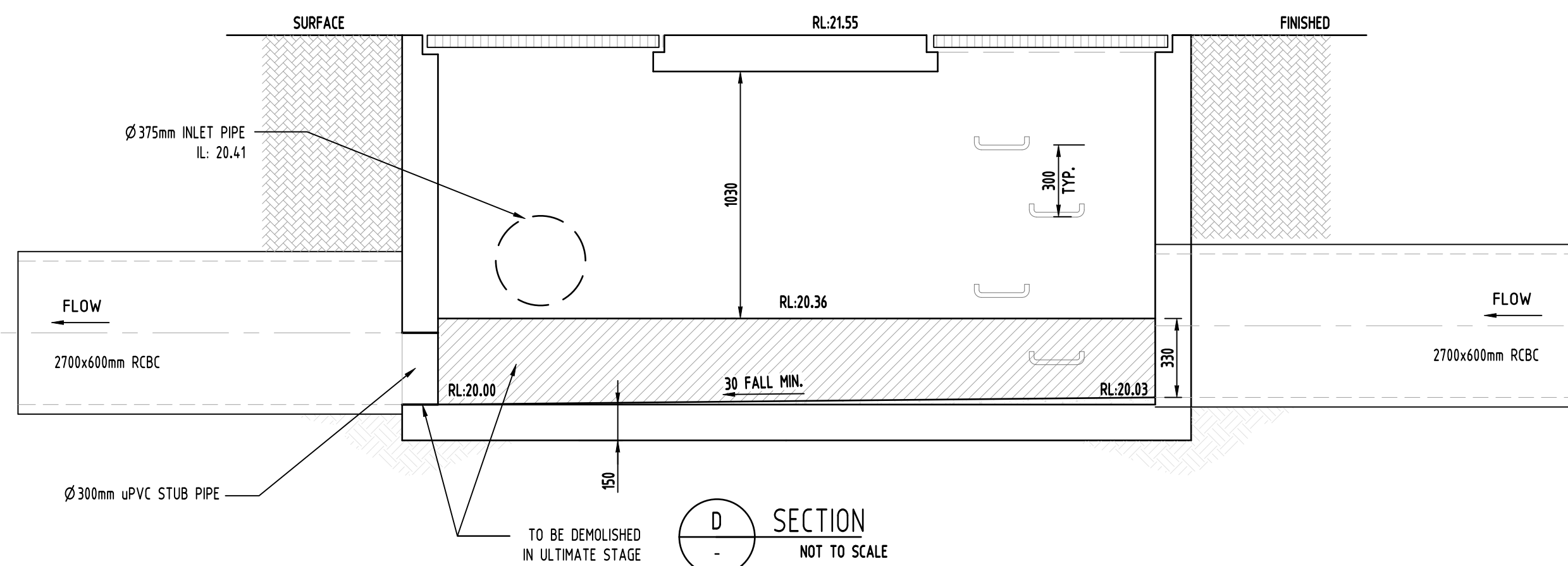
KERB INLET PIT L1/3
SCALE 1:20



SECTION C
NOT TO SCALE



KERB INLET PIT L1/5
SCALE 1:20



SECTION D
NOT TO SCALE

DISCHARGE OVER A RECTANGULAR WEIR

L = 3.5 m
Q = 3.6 m³/s
C_d = 0.62
H = 0.68079 m

$$Q = \frac{2}{3} \cdot C_d \cdot L \cdot (2G)^{\frac{1}{2}} \cdot (H)^{\frac{3}{2}}$$

$$Q = \frac{2}{3} \cdot C_d \cdot L \cdot (2G)^{\frac{1}{2}} \cdot (H)^{\frac{3}{2}} = 3.5995$$

Goal Seek

PIT L1/5 WEIR CALCULATION

Reference Coordination Drawing				Discipline			
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D	ISSUE FOR APPROVAL	CK	17.03.21	2	ARCH		
C	ISSUE FOR APPROVAL	CK	05.02.21	2	ARCH		
B	ISSUE FOR APPROVAL	CK	05.02.21	2	STRUCT		
A	ISSUE FOR APPROVAL	SH	18.02.20	2	MECH		
P2	PRELIMINARY ISSUE	JH	18.12.19	1	ELEC		
P1	PRELIMINARY ISSUE	JH	09.12.19	1	HYD		
Issue Last revision title				by	Date	Status	
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				4- tender	5- construction		
						LANDS	
						SURVEY	

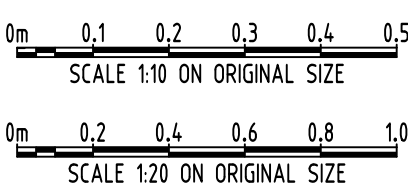


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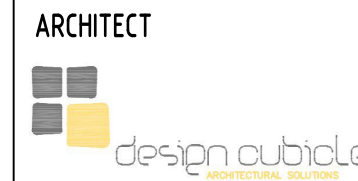
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CHECKED	SH	DATE	25.06.21
DESIGNED	CK	DATE	25.06.21
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Scales



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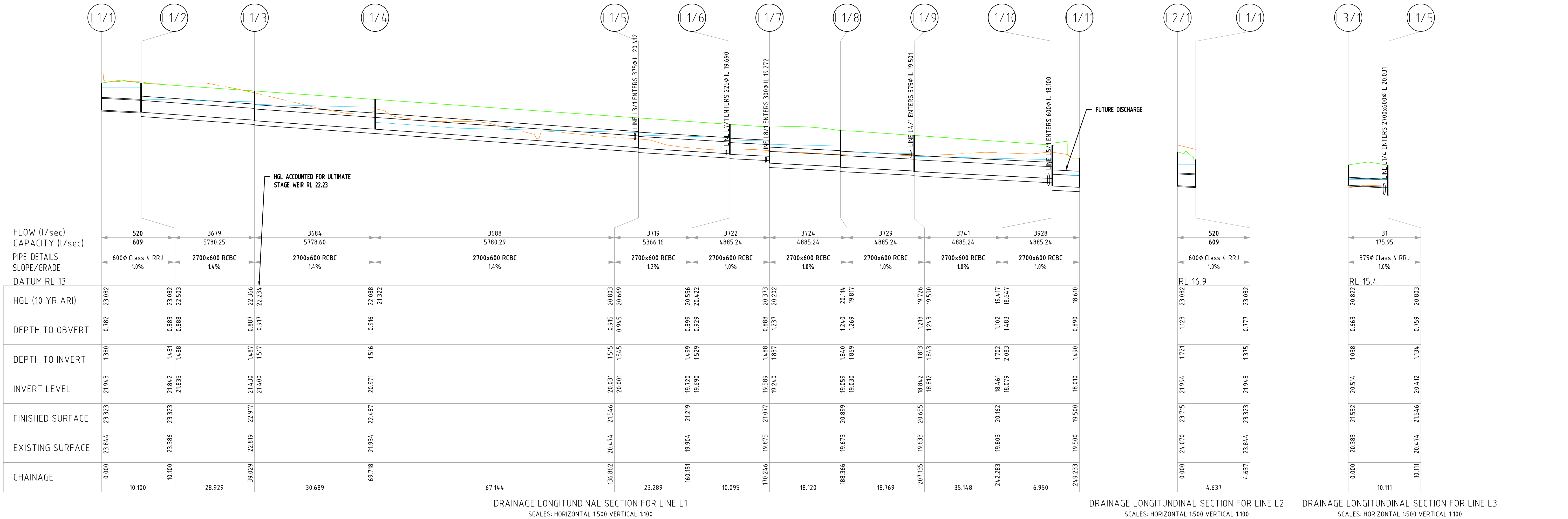
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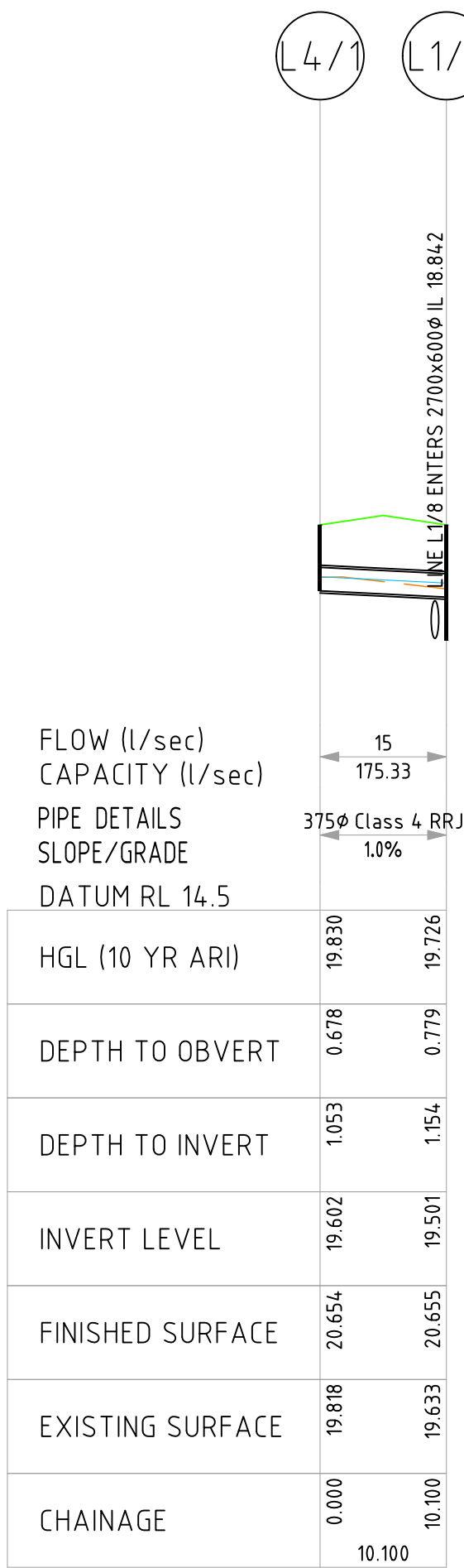
A.B.N. 21 118 222 530

PROJECT
PROPOSED RESIDENTIAL
DEVELOPMENT
205-209 GRANGE AVENUE,
MARSDEN PARK

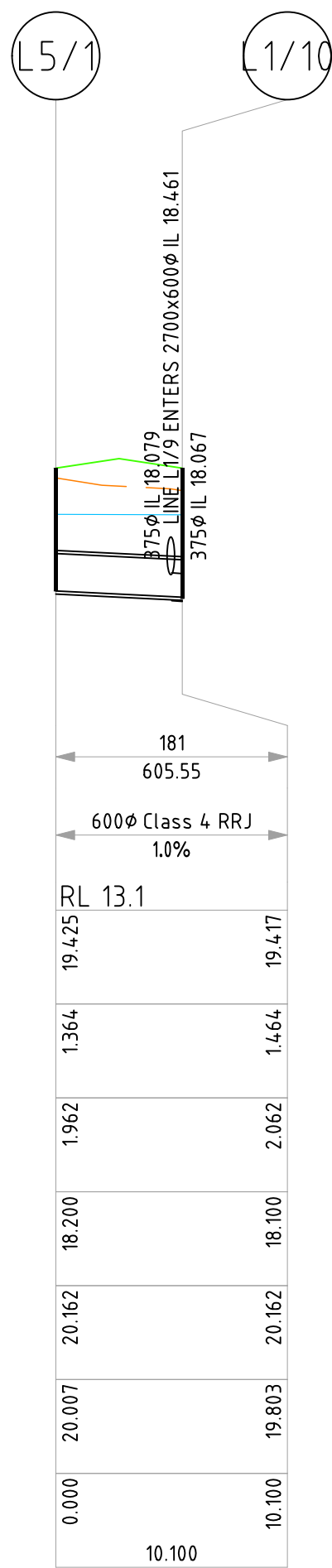
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-	A.H.D.	13 of 21	AS SHOWN

Drawing Status	FOR APPROVAL
Drawing Title	NOT TO BE USED FOR CONSTRUCTION PURPOSES
Project No	20190191
Drawing No	C503
Revision No	E

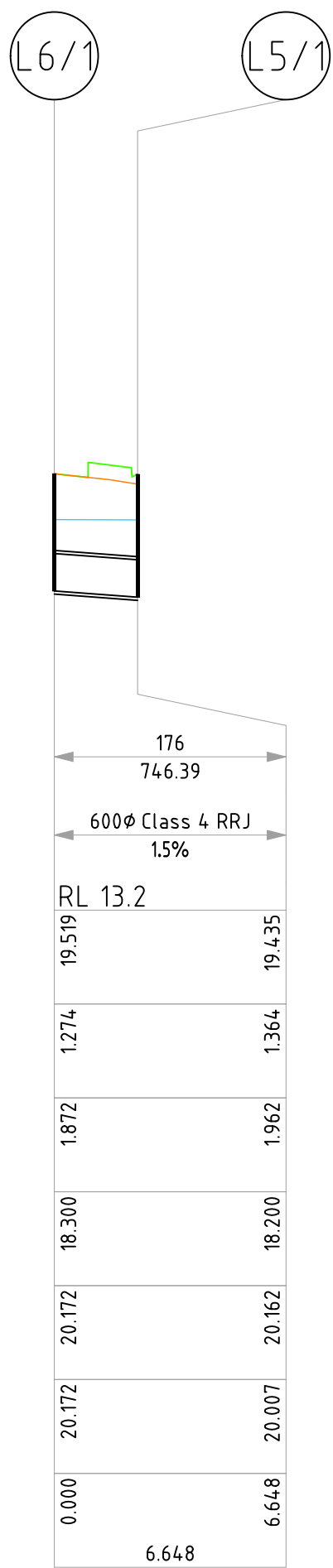




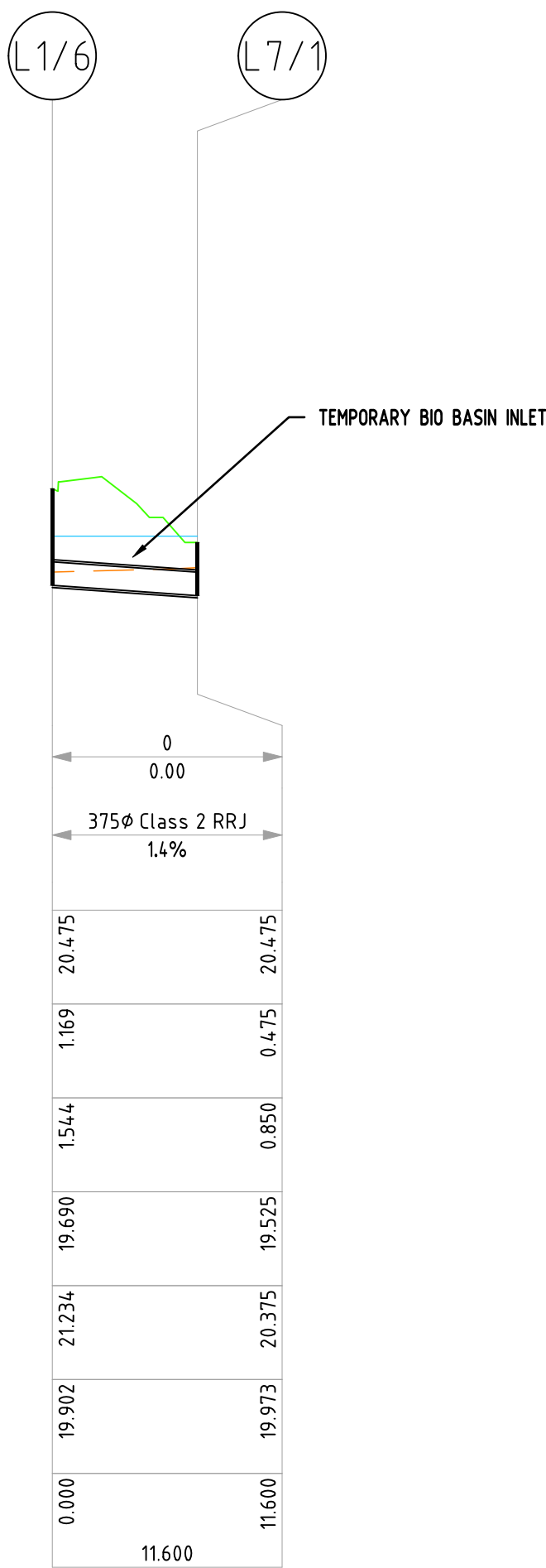
DRAINAGE LONGITUDINAL SECTION FOR LINE L4
SCALES: HORIZONTAL 1:500 VERTICAL 1:100



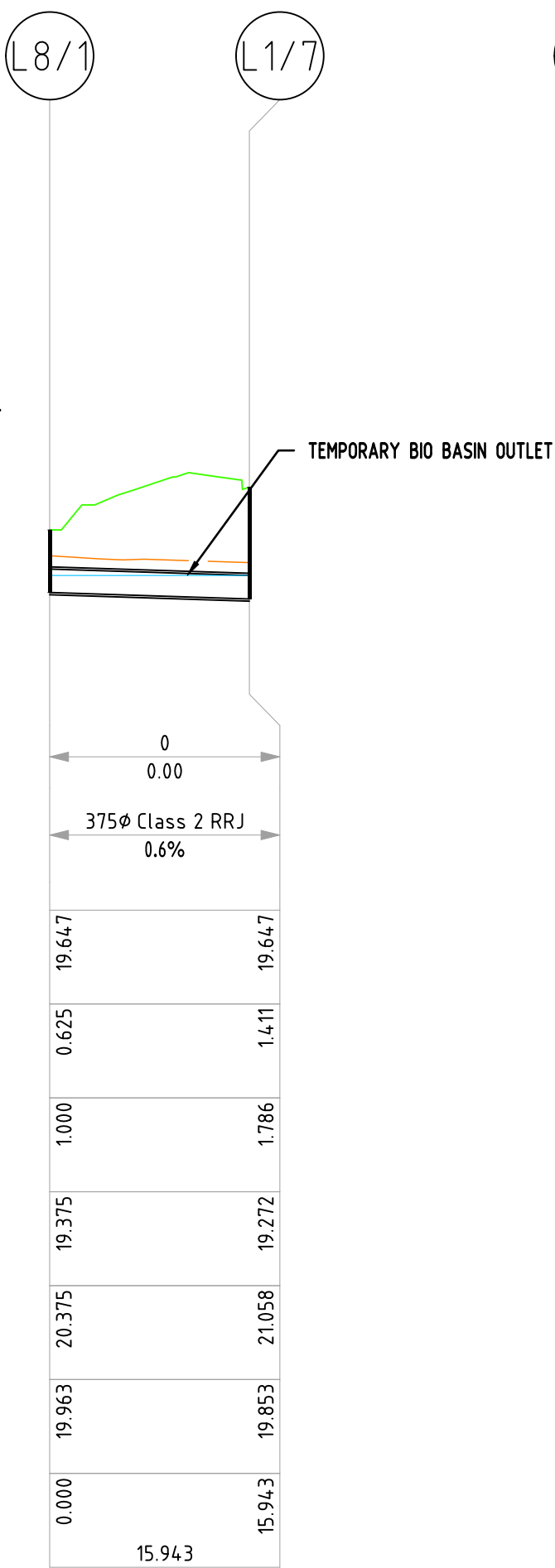
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SCALES: HORIZONTAL 1:500 VERTICAL 1:100



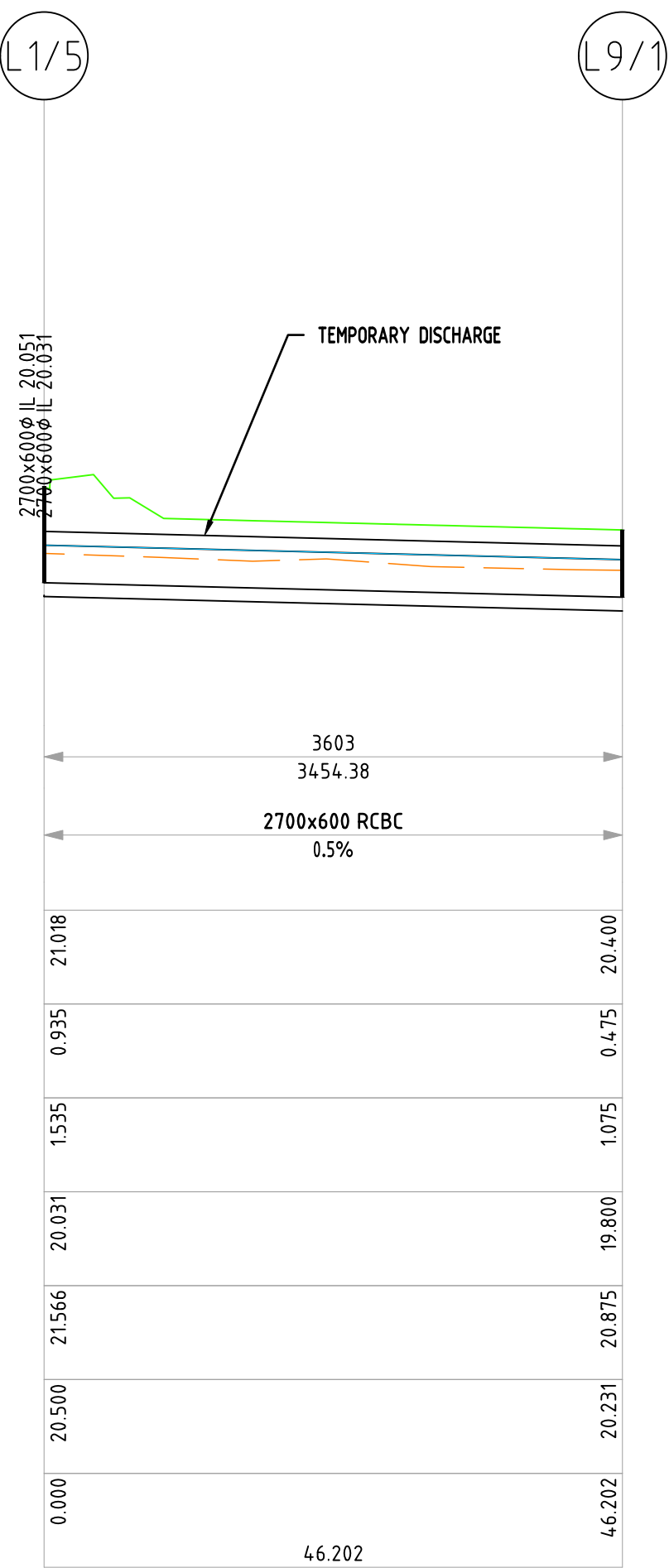
DRAINAGE LONGITUDINAL SECTION FOR LINE L6
SCALES: HORIZONTAL 1:500 VERTICAL 1:100



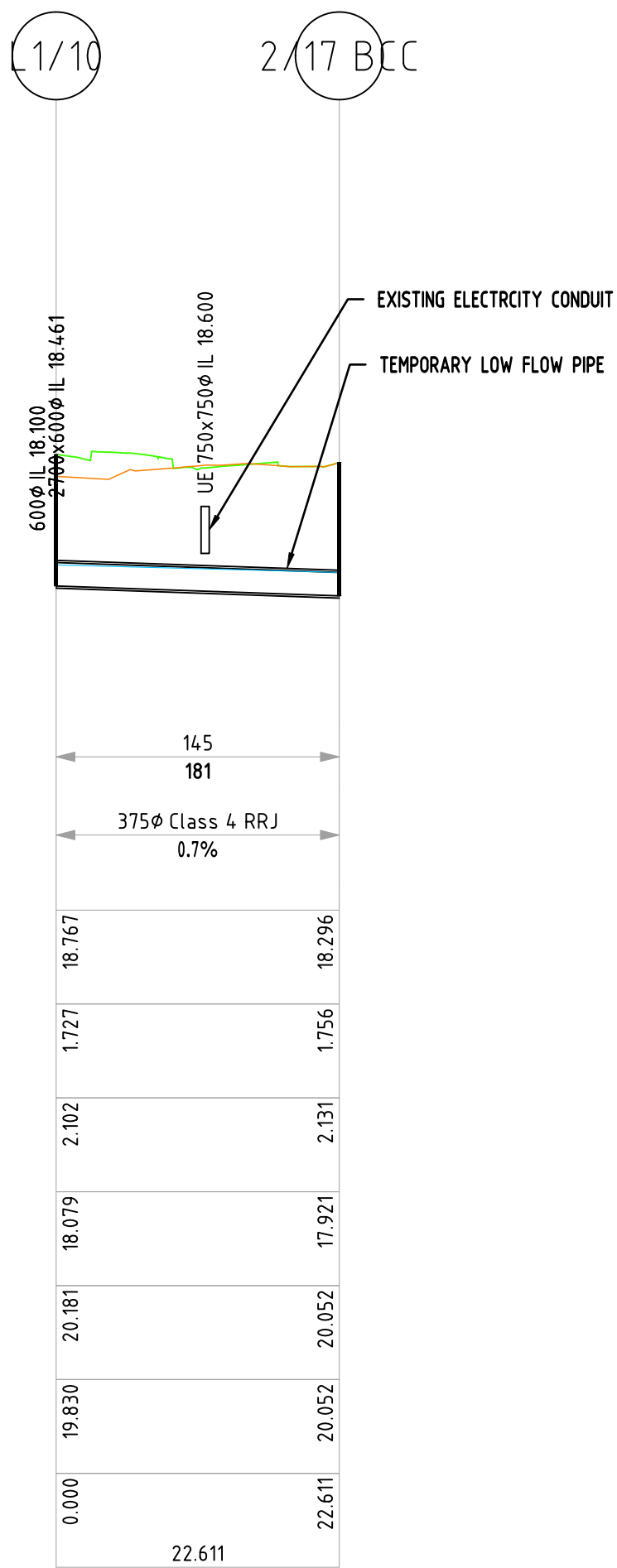
DRAINAGE LONGITUDINAL SECTION FOR LINE TEMP L3
SCALES: HORIZONTAL 1:500 VERTICAL 1:100



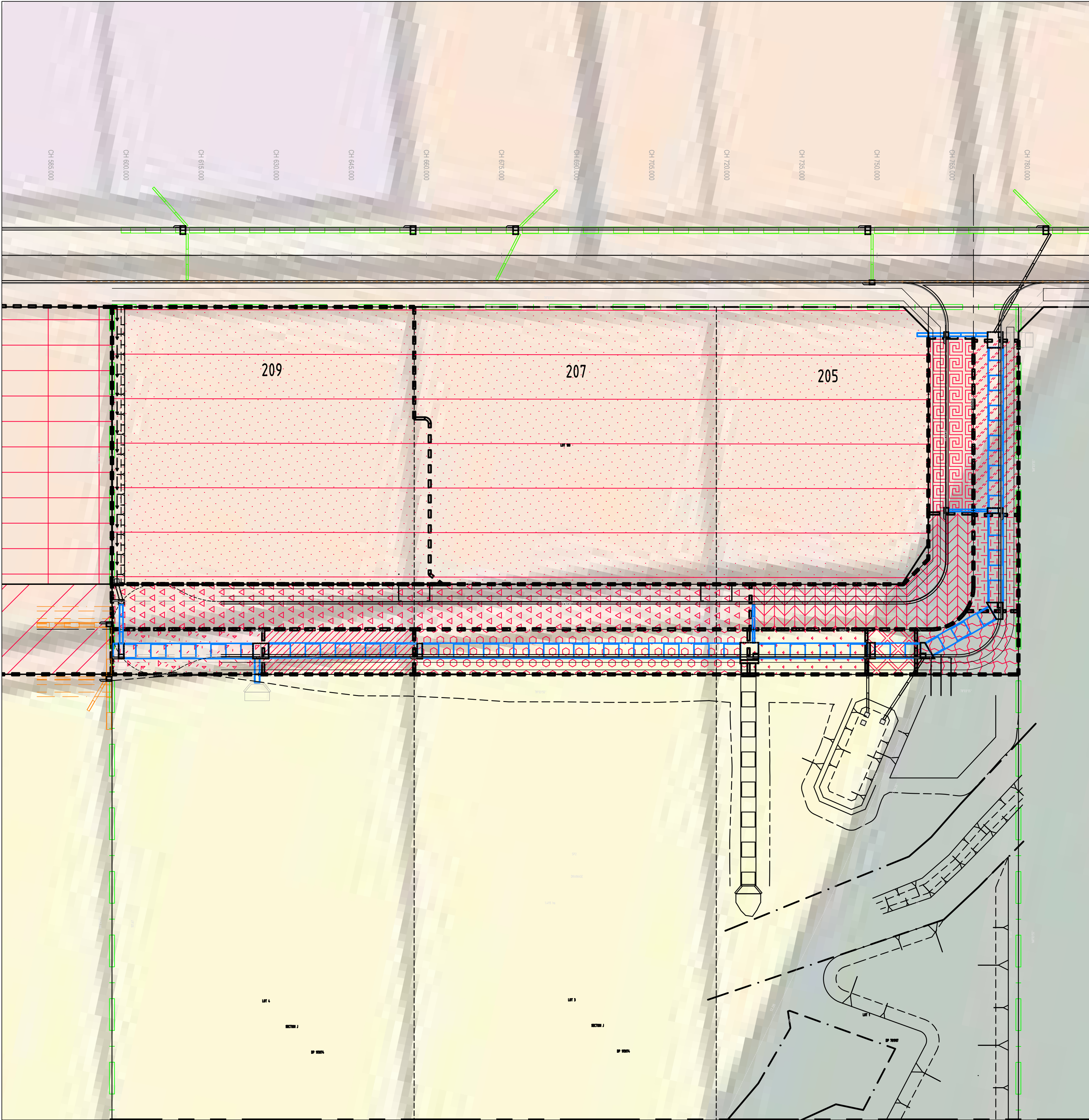
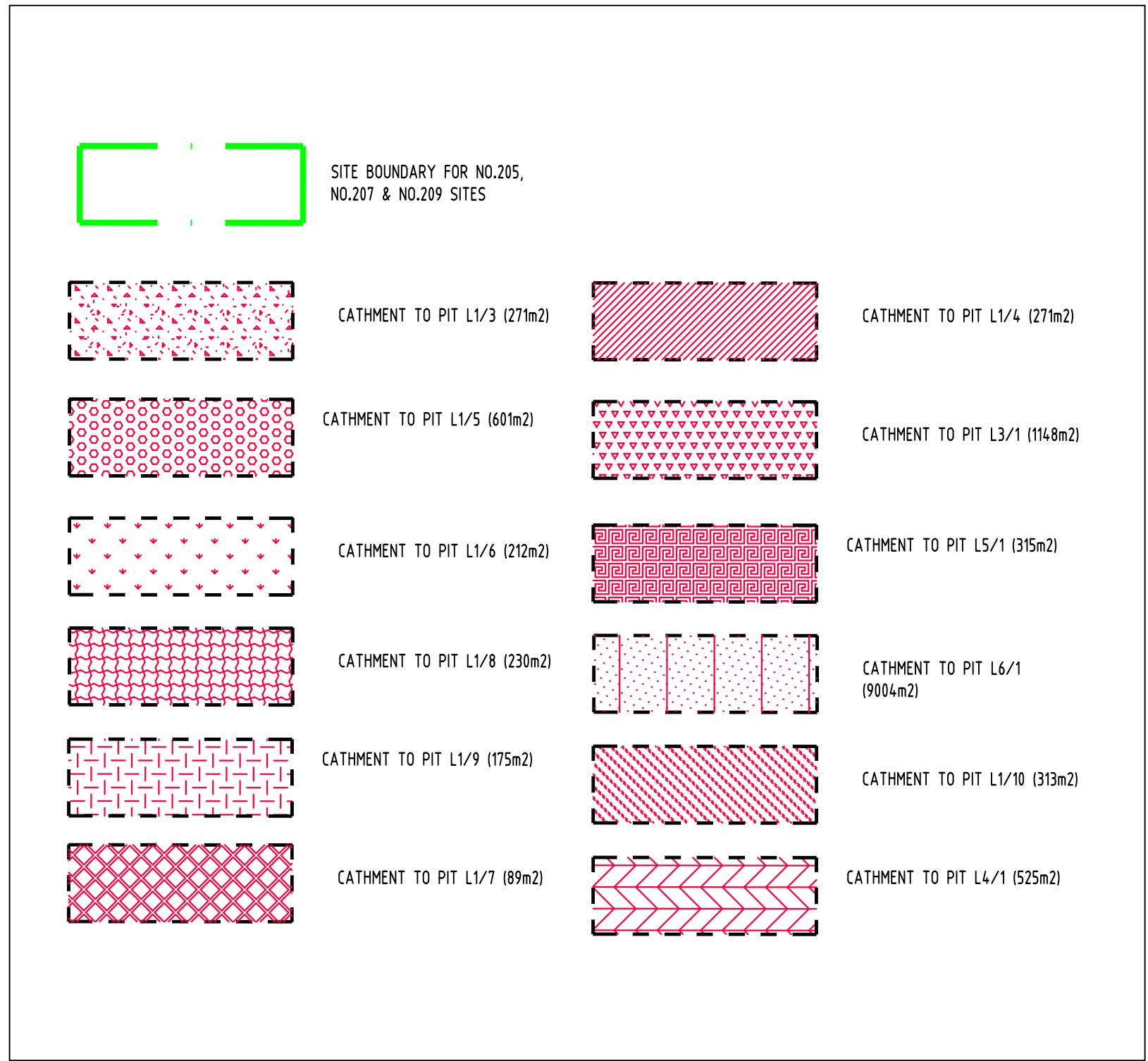
DRAINAGE LONGITUDINAL SECTION FOR LINE TEMP L4
SCALES: HORIZONTAL 1:500 VERTICAL 1:100



DRAINAGE LONGITUDINAL SECTION FOR LINE TEMP L1
SCALES: HORIZONTAL 1:500 VERTICAL 1:100



DRAINAGE LONGITUDINAL SECTION FOR LINE TEMP L2
SCALES: HORIZONTAL 1:500 VERTICAL 1:100



FOR CONTINUATION REFERRING TO SW 604

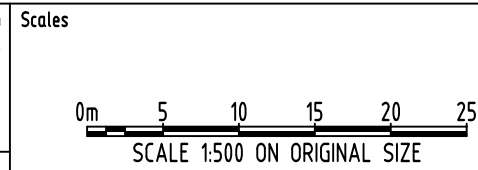
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D	ISSUE FOR APPROVAL	CK	17.03.21	2	ARCH		
C	ISSUE FOR APPROVAL	CK	09.02.21	2	ARCH		
B	ISSUE FOR APPROVAL	CK	05.02.21	2	STRUCT		
A	ISSUE FOR APPROVAL	SH	18.02.20	2	MECH		
P2	PRELIMINARY ISSUE	JH	18.12.19	1	ELEC		
P1	PRELIMINARY ISSUE	JH	09.12.19	1	HYD		
Issue Last revision title				by	Date	Status	
1-preliminary				2-development application			
4-tender				5-construction			
				3-construction certificate			
				6-other			
LANDS							
SURVEY							



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Austliani Professional Engineer
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QUALITY CONTROL							
DRAWN	CK	DATE	25.06.21	CHECKED	SH	DATE	25.06.21
DESIGNED	CK	DATE	25.06.21	VERIFIED	SH	DATE	25.06.21
APPROVED	SH	DATE	25.06.21				

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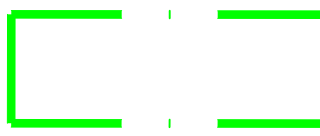
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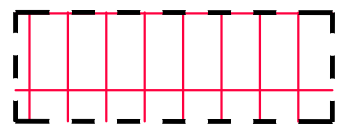
PROJECT
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DEVELOPMENT
205-209 GRANGE AVENUE,
MARSDEN PARK

Grid	Datum	Sheet	Scale (at original size)
-	A.H.D.	16 of 21	AS SHOWN

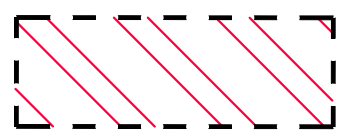
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Project No	Drawing No	Revision No	
20190191	C603	E	



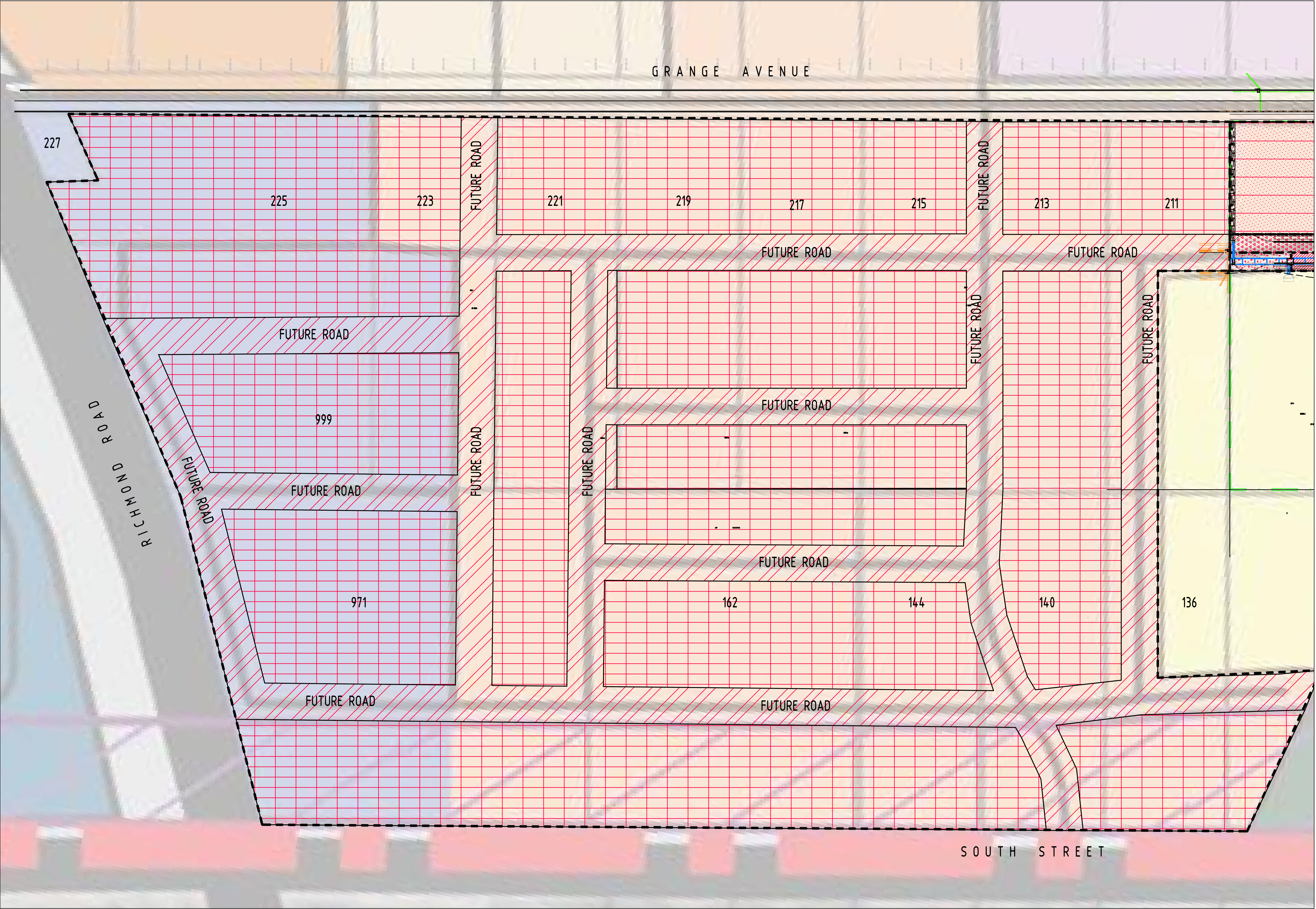
SITE BOUNDARY FOR NO.205,
NO.207 & NO.209 SITES



FUTURE LOT CATCHMENT TO PIT
L1/2 (12.95ha)



FUTURE ROAD CATCHMENT TO
PIT L1/2 (4.93ha)



Reference Coordination Drawing				Discipline				Drawing Title and Number				Date				Rev.			
E	ISSUE FOR APPROVAL	CK	25.06.21	2	ARCH														
D	ISSUE FOR APPROVAL	CK	17.03.21	2	ARCH														
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P2	PRELIMINARY ISSUE	JH	18.12.19	1	ELEC														
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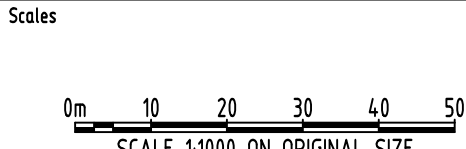


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CHECKED	SH	DATE	25.06.21	DESIGNED	CK	DATE	25.06.21	VERIFIED	SH	DATE	25.06.21	APPROVED	SH	DATE	25.06.21

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Suite 5.03, Level 5,
156 PACIFIC HIGHWAY
ST. LEONARDS, NSW 2065
T: +61 2 8883 4239
Email: office@sgce.com.au
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MARSDEN PARK

Grid
-
Datum
A.H.D.
Sheet
17 of 21
Scale (at original size)
AS SHOWN

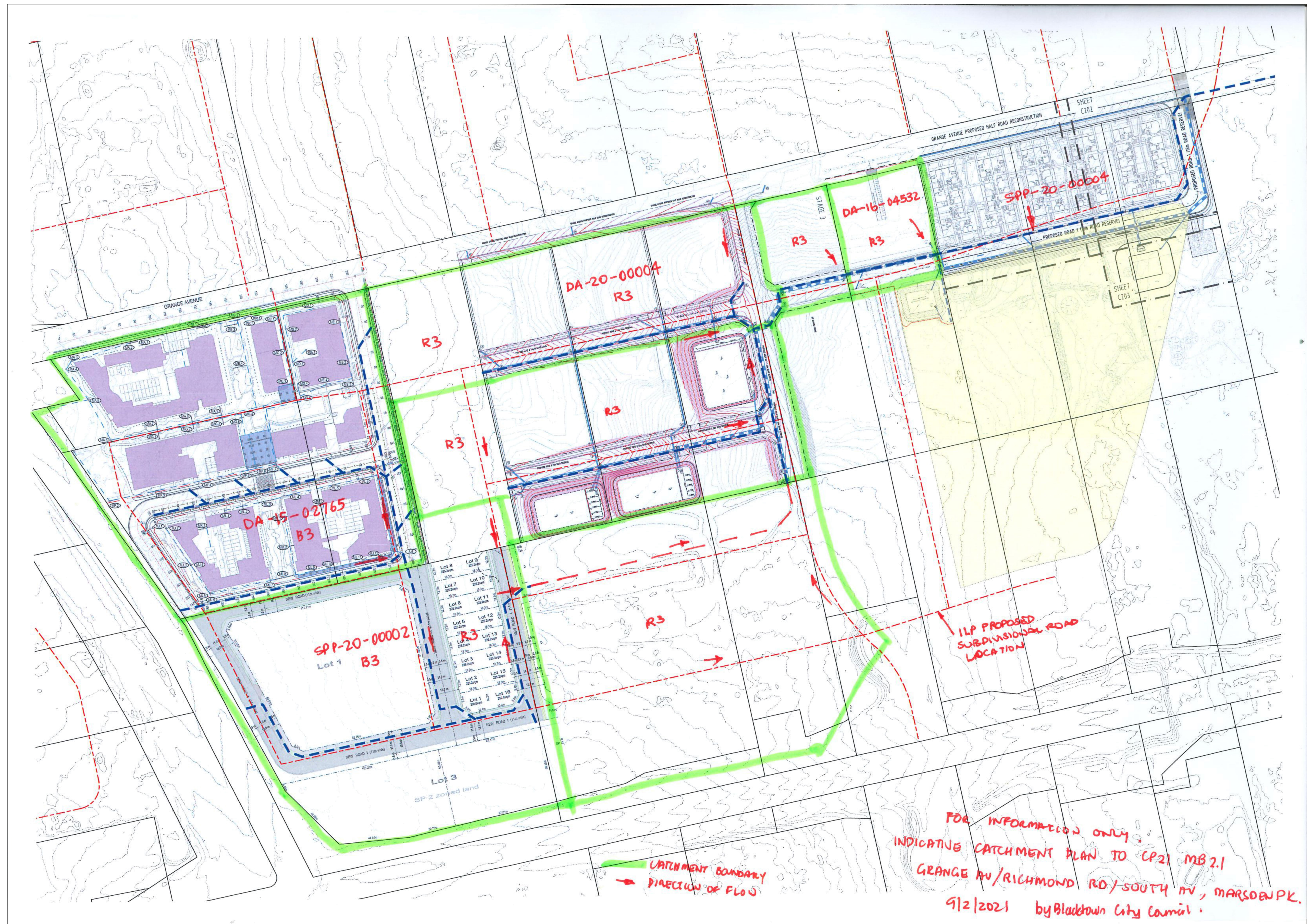
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FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION PURPOSES

Drawing Title
CIVIL WORKS - ROAD DESIGN
DRAINAGE CATCHMENT PLAN
SHEET 2 OF 3

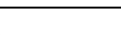

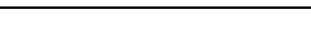

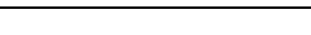

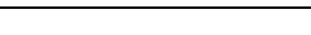

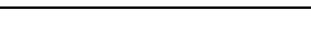

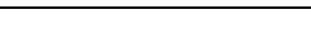

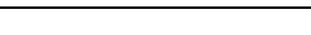

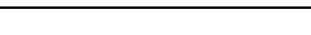

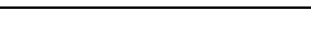

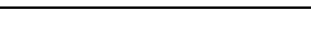

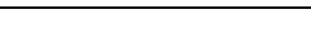

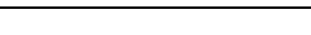

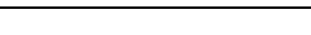

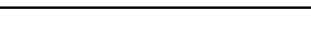

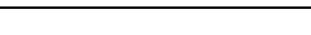

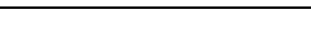

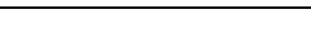

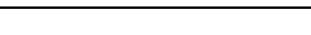

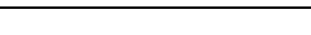

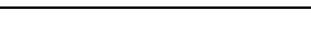

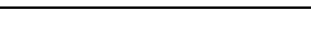

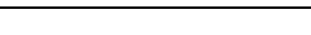

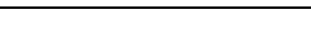

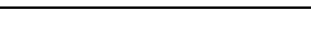

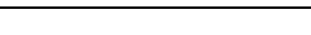

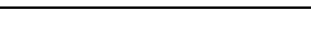
Project No
20190191

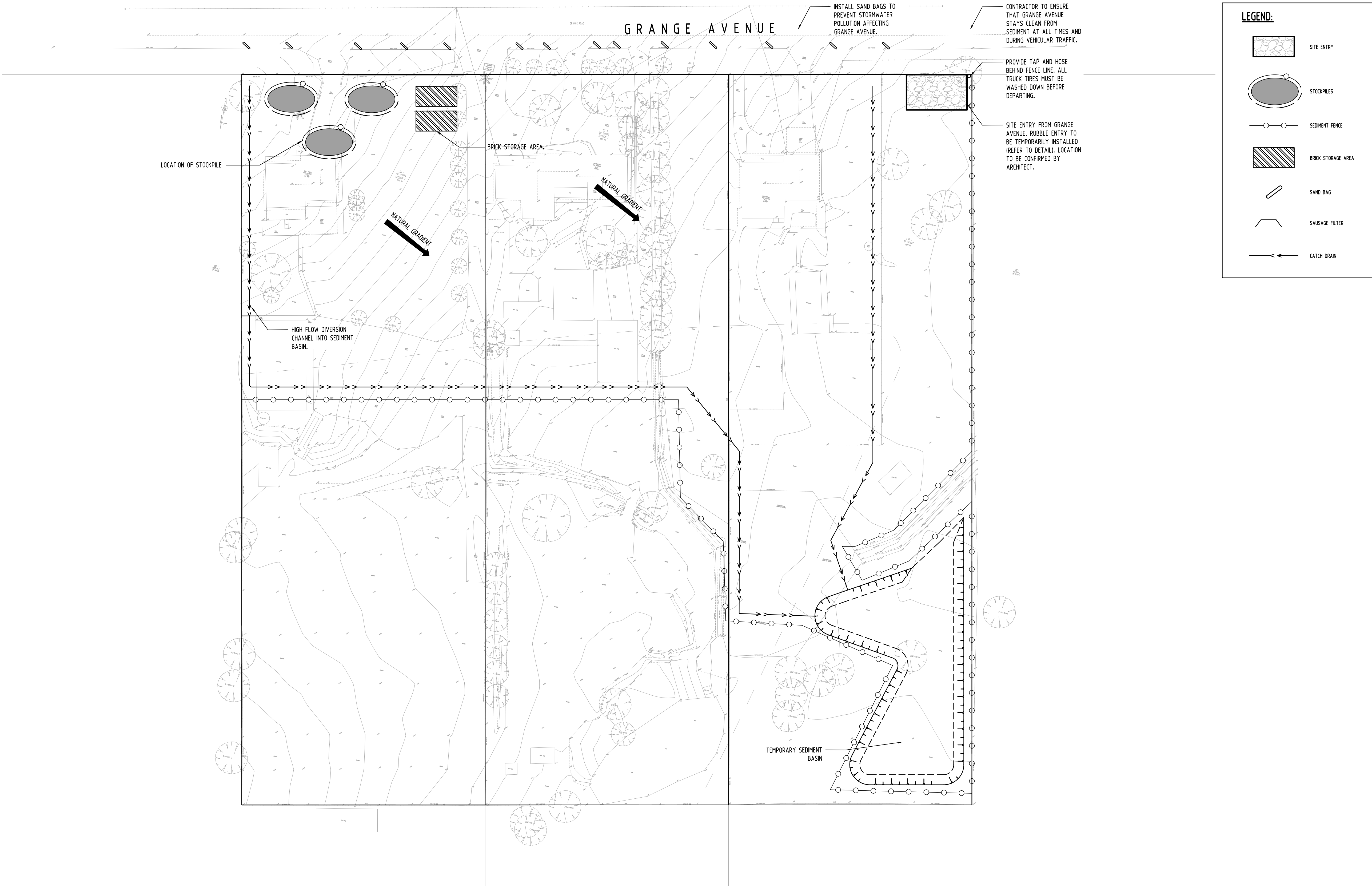
Drawing No
C604

Revision No
E




UPSTREAM CATCHMENT MARK-UP BY COUNCIL

Reference Coordination Drawing										 ENGINEERS AUSTRALIA Chartered Professional Engineer MEMBER	QUALITY CONTROL				WARNING: THE DESIGN, DRAWINGS, SPECIFICATIONS AND THE COPYRIGHT HEREIN REMAIN THE SOLE INTELLECTUAL PROPERTY OF S&G CONSULTANTS PTY LTD AND MUST NOT BE USED, COPIED, ALTERED OR REPRODUCED WHOLLY OR IN PART IN ANY FORM WITHOUT THE WRITTEN CONSENT OF S&G CONSULTANTS PTY LTD	Scales	CLIENT M DEVELOPMENT GROUP PTY LTD	 design outside ARCHITECT	 Suite 5.03, Level 5, 156 PACIFIC HIGHWAY ST. LEONARDS, NSW 2065 T: +61 2 8883 4239 Email: office@sgce.com.au Web: www.sgce.com.au	PROJECT PROPOSED RESIDENTIAL DEVELOPMENT 205-209 GRANGE AVENUE, MARSDEN PARK	Drawing Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES CIVIL WORKS - ROAD DESIGN DRAINAGE CATCHMENT PLAN SHEET 3 OF 3	Project No 20190191	Drawing No C604	Revision No E																				
E	ISSUE FOR APPROVAL	CK	25.06.21	2	Discipline	Drawing Title and Number	Date	Rev.	DRAWN		CK	DATE	25.06.21																															
D	ISSUE FOR APPROVAL	CK	17.03.21	2	ARCH				CHECKED		SH	DATE	25.06.21																															
C	ISSUE FOR APPROVAL	CK	09.02.21	2	ARCH				DESIGNED		CK	DATE	25.06.21																															
B	ISSUE FOR APPROVAL	CK	05.02.21	2	STRUCT				VERIFIED		SH	DATE	25.06.21																															
A	ISSUE FOR APPROVAL	SH	18.02.20	2	MECH				APPROVED	SH	DATE	25.06.21	DIMENSIONS NOT SHOWN TO BE CHECKED ON SITE. DO NOT SCALE OF THIS DRAWING. POSITIONS OF AUTHORITIES MARKS AND/OR EXISTING SERVICES ARE TO BE CHECKED PRIOR TO COMMENCEMENT OF WORK. REPORT ANY DISCREPANCIES TO THE CONSULTING ENGINEER FOR DECISION/CLARIFICATION BEFORE PROCEEDING WITH THE WORK. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND OTHER CONSULTANTS' DRAWINGS.																															
P2	PRELIMINARY ISSUE	JH	18.12.19	1	ELEC				Scales														CLIENT M DEVELOPMENT GROUP PTY LTD	 design outside ARCHITECT	 Suite 5.03, Level 5, 156 PACIFIC HIGHWAY ST. LEONARDS, NSW 2065 T: +61 2 8883 4239 Email: office@sgce.com.au Web: www.sgce.com.au	PROJECT PROPOSED RESIDENTIAL DEVELOPMENT 205-209 GRANGE AVENUE, MARSDEN PARK	Drawing Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES CIVIL WORKS - ROAD DESIGN DRAINAGE CATCHMENT PLAN SHEET 3 OF 3	Project No 20190191	Drawing No C604	Revision No E														
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Issue Last revision title				by	Date	Status	Scales				CLIENT M DEVELOPMENT GROUP PTY LTD	 design outside ARCHITECT																											 Suite 5.03, Level 5, 156 PACIFIC HIGHWAY ST. LEONARDS, NSW 2065 T: +61 2 8883 4239 Email: office@sgce.com.au Web: www.sgce.com.au	PROJECT PROPOSED RESIDENTIAL DEVELOPMENT 205-209 GRANGE AVENUE, MARSDEN PARK	Drawing Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES CIVIL WORKS - ROAD DESIGN DRAINAGE CATCHMENT PLAN SHEET 3 OF 3	Project No 20190191	Drawing No C604	Revision No E
Issuer internal sequence and revision history				LANDS				Scales																																				
1-preliminary				2-development application				3-construction certificate					CLIENT M DEVELOPMENT GROUP PTY LTD	 design outside ARCHITECT	 Suite 5.03, Level 5, 156 PACIFIC HIGHWAY ST. LEONARDS, NSW 2065 T: +61 2 8883 4239 Email: office@sgce.com.au Web: www.sgce.com.au	PROJECT PROPOSED RESIDENTIAL DEVELOPMENT 205-209 GRANGE AVENUE, MARSDEN PARK	Drawing Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES CIVIL WORKS - ROAD DESIGN DRAINAGE CATCHMENT PLAN SHEET 3 OF 3	Project No 20190191	Drawing No C604	Revision No E																								
4-tender				5-construction				6-other													CLIENT M DEVELOPMENT GROUP PTY LTD	 design outside ARCHITECT	 Suite 5.03, Level 5, 156 PACIFIC HIGHWAY ST. LEONARDS, NSW 2065 T: +61 2 8883 4239 Email: office@sgce.com.au Web: www.sgce.com.au	PROJECT PROPOSED RESIDENTIAL DEVELOPMENT 205-209 GRANGE AVENUE, MARSDEN PARK	Drawing Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES CIVIL WORKS - ROAD DESIGN DRAINAGE CATCHMENT PLAN SHEET 3 OF 3	Project No 20190191	Drawing No C604	Revision No E																
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Reference Coordination Drawing				Discipline			
Issue	Last revision title	by	Date	Status	Discipline	Drawing Title and Number	Date
E	ISSUE FOR APPROVAL	CK	25.06.21	2	ARCH		
D	ISSUE FOR APPROVAL	CK	17.03.21	2	ARCH		
C	ISSUE FOR APPROVAL	CK	05.02.21	2	ARCH		
B	ISSUE FOR APPROVAL	CK	05.02.21	2	STRUCT		
A	ISSUE FOR APPROVAL	SH	18.02.20	2	MECH		
P2	PRELIMINARY ISSUE	JH	18.12.19	1	ELEC		
P1	PRELIMINARY ISSUE	JH	09.12.19	1	HYD		
Issue Last revision title				by	Date	Status	Discipline
1-preliminary				2-development application	3-construction certificate	6-other	LANDS
4-tender				5-construction			CIVIL
6-other							SURVEY




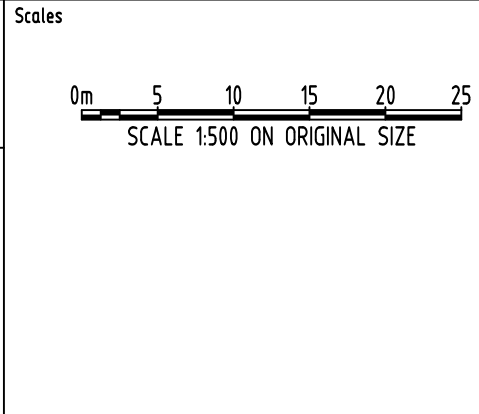
ENGINEERS AUSTRALIA
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QUALITY CONTROL			
DRAWN	CK	DATE	25.06.21
CHECKED	SH	DATE	25.06.21
DESIGNED	CK	DATE	25.06.21
VERIFIED	SH	DATE	25.06.21
APPROVED	SH	DATE	25.06.21


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GROUP PTY LTD

ARCHITECT





Suite 5.03, Level 5,
156 PACIFIC HIGHWAY
ST. LEONARDS, NSW 2065
T: +61 2 8883 4239
Email: office@sgce.com.au
Web: www.sgce.com.au

A.B.N. 21 118 222 530

PROJECT
PROPOSED RESIDENTIAL
DEVELOPMENT
205-209 GRANGE AVENUE,
MARSDEN PARK

Drawing Status	FOR APPROVAL		
NOT TO BE USED FOR CONSTRUCTION PURPOSES			
Drawing Title	EROSION AND SEDIMENT CONTROL PLAN		
Project No	Drawing No	Revision No	
20190191	C701	E	

Grid	Datum	Sheet	Scale (at original size)
-	A.H.D.	19 of 21	1:500 @ A1

