

22 December 2022

Our Ref: 41/080/1

The Minister for Planning and Public Places
Department of Planning, Industry and Environment
Locked Bag 5022
Parramatta NSW 2124

Notification of Certificate Issue

Lot 13 DP 1271599, Lot 200 DP 1274184, Lot 62 DP 570271

Site Address: Ivanhoe Estate comprising Ivanhoe Place, Wilcannia Way, Nyngan Way, Narromine Way and Cobar Way, part of 2-4 Lyonpark Road, 6-8 Lyonpark Road and portions of Shrimptons Creek, Macquarie Park

Subdivision Works
Certificate: 17150

In accordance with the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021, please accept notice of our certificate issued under Part 6 Environmental Planning and Assessment Act, 1979.

The Subdivision Works Certificate and associated documentation has been uploaded to the NSW Planning Portal as required by legislation.

Please do not hesitate to contact our office should you require any further information relating to the certification work undertaken or the documentation accompanying this notification.

Yours faithfully



Colette Murray
Office Coordinator

22 December 2022

Our Ref: 41/080/1
Portal Ref: CFT-257466

Frasers Property Ivanhoe Pty Ltd
Suite 11, Lumiere Commercial Level 12
101 Bathurst Street
Sydney NSW 2000

Attention: Mr Peter Statham

Determination of Subdivision Works Certificate

The application for a Subdivision Works Certificate for retaining walls has been determined for approval on 22/12/2022.

Subdivision Works Certificate 17150 and related plans and specifications have been provided under separate cover.

If you require further information regarding this determination please contact the undersigned.

Yours faithfully



Eric Hausfeld

Registered Certifier

Registration No. BDC2416

Subdivision Works Certificate

Certificate Date:	22/12/2022
Applicant:	Fraser's Property Ivanhoe Pty Ltd
Development Consent:	SSD-8903-Mod-4 as approved on 5 August 2022
Subject Land:	Lot 13 DP 1271599, Lot 200 DP 1274184, Lot 62 DP 570271
Site Address:	Ivanhoe Estate comprising Ivanhoe Place, Wilcannia Way, Nyngan Way, Narromine Way and Cobar Way, part of 2-4 Lyonpark Road, 6-8 Lyonpark Road and portions of Shrimptons Creek, Macquarie Park
Description of Subdivision Work:	Retaining Walls
Plans & Specifications in relation to which the Subdivision Works Certificate is issued:	Refer to Schedule 1 for a list of the plans and specifications to which this certificate relates.
Other Documents:	Refer to Schedule 2 for a list of other documents supporting the application.
Notes:	Refer to Schedule 3 for notes applying to this certificate.
Certification Statement:	I certify that work completed in accordance with the plans and specifications listed in Schedule 1 will comply with the relevant requirements of s 6.12 of the Environmental Planning and Assessment Act 1979.

**Eric Hausfeld****Registered Certifier****Registration No. BDC2416**

Schedule 1

Plans & Specifications prepared by: Cardno

Reference: 304100943-RW-DRG

Drawing	Revision	Date	Description
001	2	15/12/2022	Site Plan
002	2	15/12/2022	Retaining Wall Plan
003	2	15/12/2022	Retaining Wall Elevation
004	2	15/12/2022	Retaining Wall Details – Sheet 1
005	2	15/12/2022	Retaining Wall Details – Sheet 2

Plans & Specifications prepared by: ADW Johnson

Reference: 300001(2)

Drawing	Revision	Date	Description
461	6	20/12/2022	Existing Stormwater Pit Reconstruction
564	6	20/12/2022	Retaining Wall Longitudinal Section RW101
571	6	20/12/2022	Typical Retaining Wall Details & Notes
575	6	20/12/2022	Retaining Wall RW101 Details

Schedule 2

Other Documents

1. Subdivision Works Certificate Application Ref CFT-257466.
2. License Agreement dated 16/11/2022.
3. Long Service Levy Receipt No. 441550.
4. Design report (Retaining Wall – Shrimptons Creek Bridge, Macquarie Park), dated 15/12/2022 as issued by Liam Hutton for Cardno now Stantec.
5. Design Compliance Certificate, dated 22/12/2022 as issued by Craig Bennett and Melissa Paige Cooper of ADW Johnson.
6. Fraser Property Australia correspondence dated 26/09/2022: Compliance with conditions B29d) and B30a).
7. Contiguous piling details, SKA & SKB, dated 29/11/2022 as issued by GCA Consultants
8. Christie Civil design responses, dated 21/12/2022 and 20/12/2022.
9. City of Ryde requirements for work to existing stormwater pit, dated 20/10/2022.

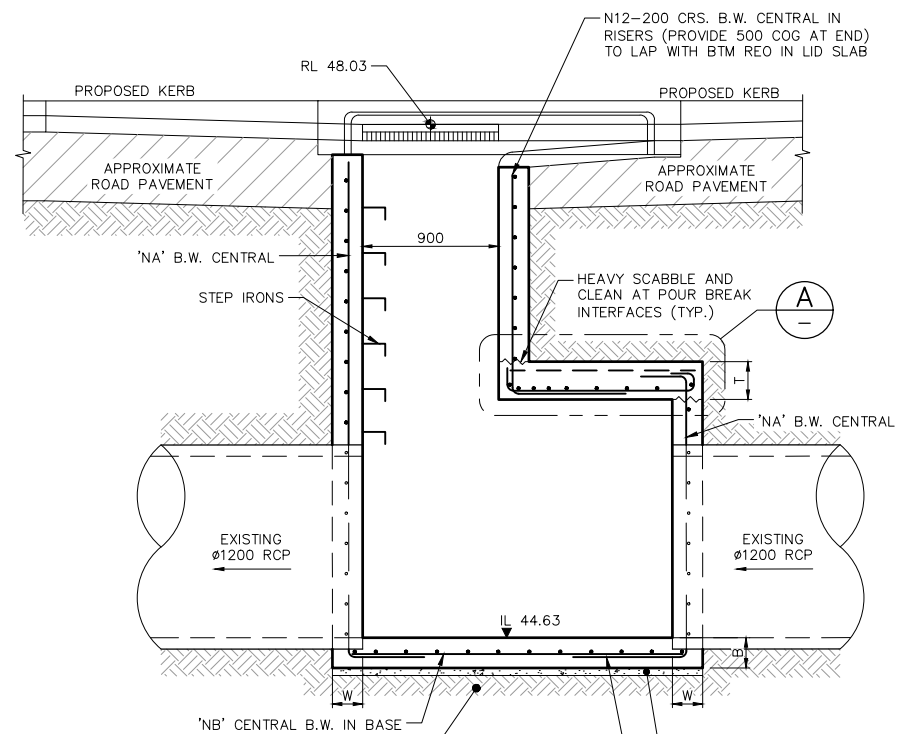
Schedule 3

Notes

1. This certificate relates to the replacement retaining wall on Lot 62 DP570271 under SSD-8903 MOD 4, replacement of existing pit and amendment to retaining wall 101 design under Subdivision Works Certificate 16746 as modified by Subdivision Works Certificate 16897.
2. This certificate follows and shall be read in conjunction with Subdivision Works Certificate's 16897 and 17083.
3. This certificate does not authorise commencement of works. The requirements of s 6.12 of the Act are to be met prior to commencement of works.

NOTE:

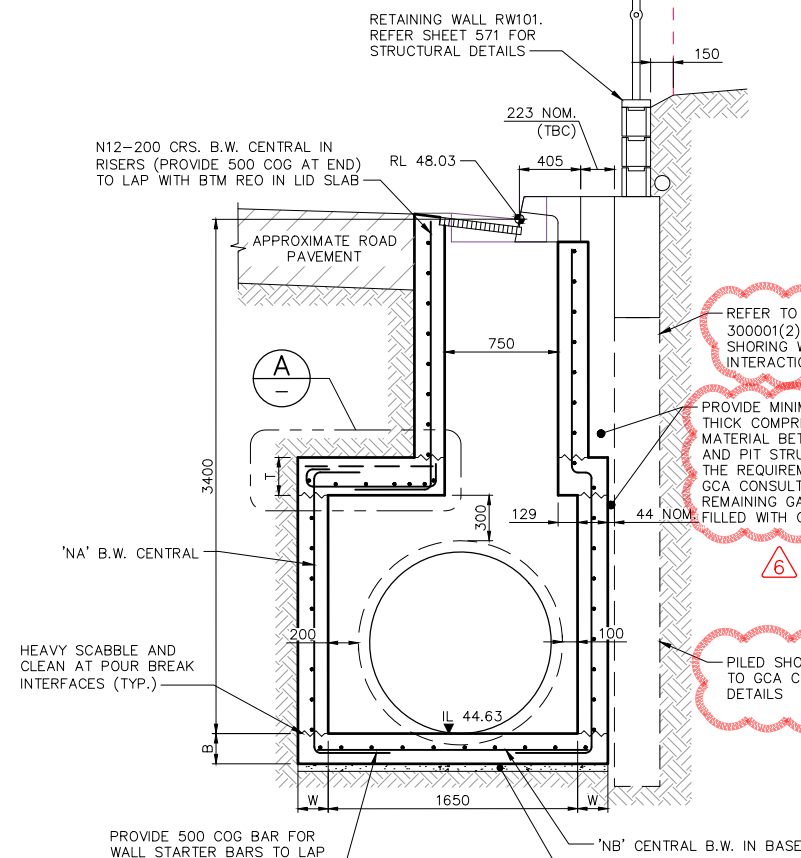
REFER TO DRAWING 300001(2)-006 FOR STRUCTURAL NOTES.



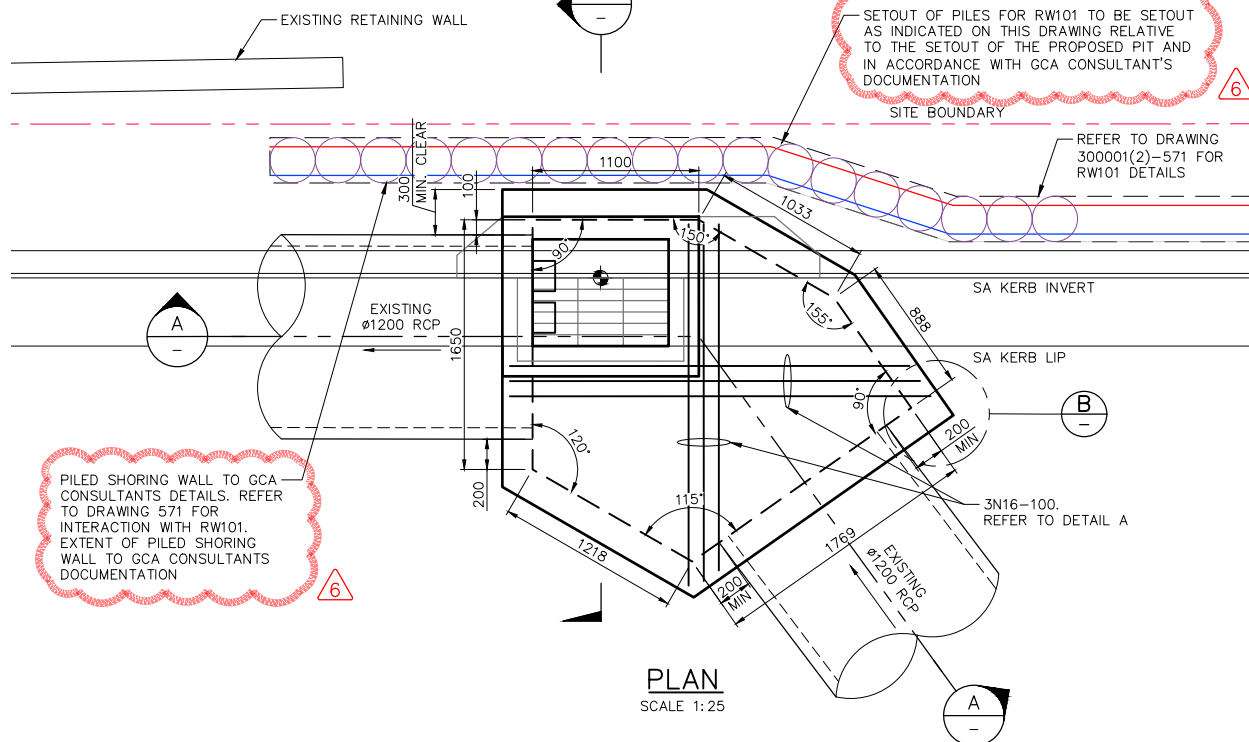
MINIMUM 150 kPa BEARING CAPACITY IN STIFF CLAY OR ENGINEERED FILL. FOUNDATION MATERIAL TO BE VERIFIED BY GEOTECHNICAL ENGINEER PRIOR TO POURING CONCRETE BINDING OR LAYING REINFORCEMENT

SECTION A
SCALE 1: 25

PROVIDE 500 COG BAR FOR WALL STARTER BARS TO LAP WITH BTM REO IN BASE TYP.

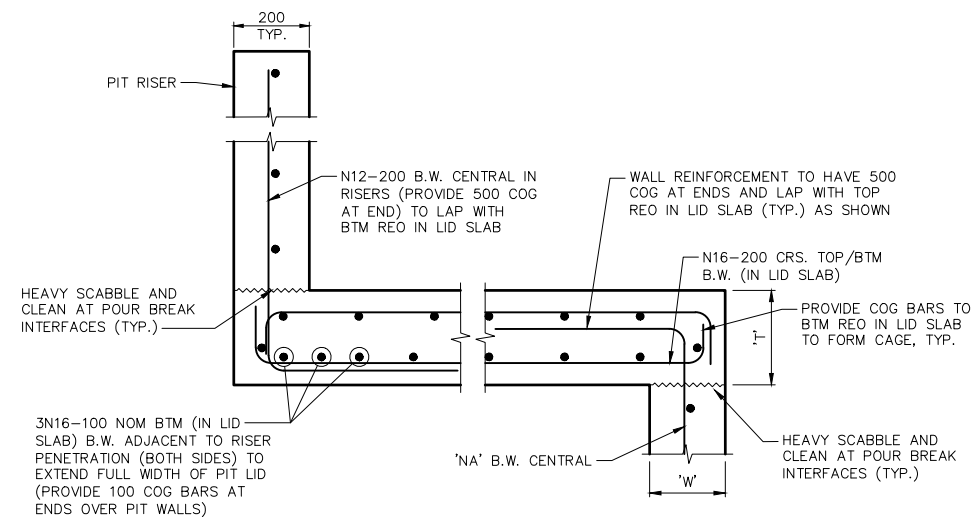
SECTION B
SCALE 1: 25

50mm CONCRETE BLINDING LAYER (N20 MPa) IF REQUIRED

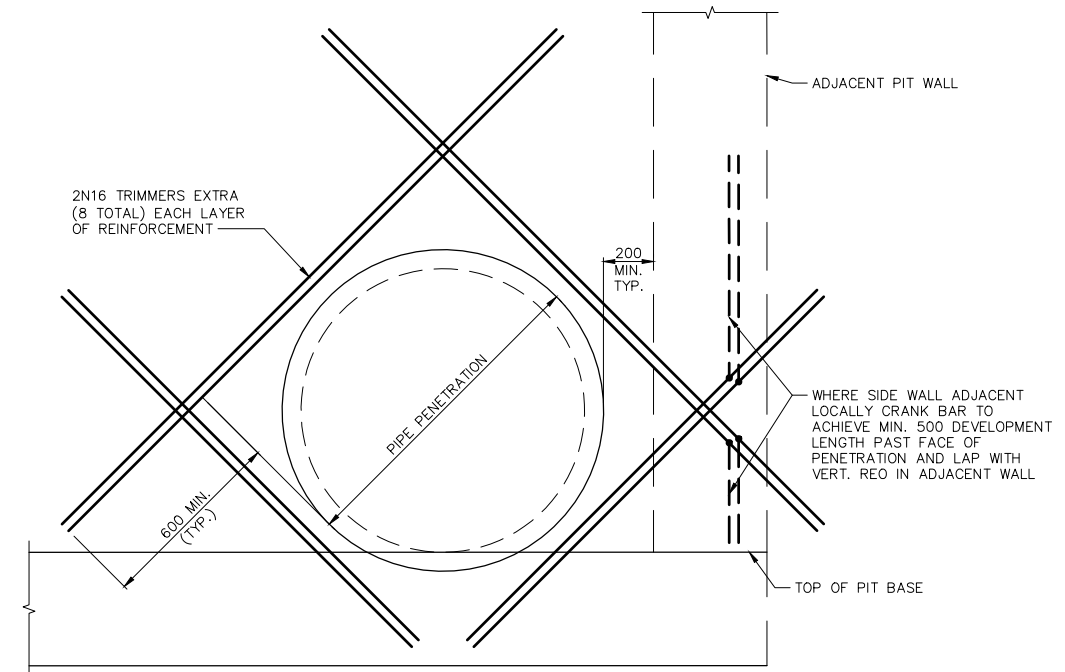
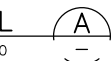
PLAN
SCALE 1: 25

CUSTOM PIT SCHEDULE

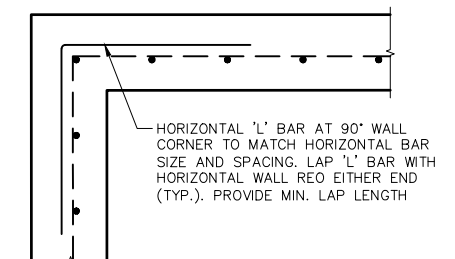
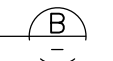
W (mm)	T (mm)	B (mm)	REINF. 'NA'	REINF. 'NB'
200	250	200	N16-200	N16-200



LID SLAB DETAILS

DETAIL A
SCALE 1: 10TYPICAL TRIMMER BAR DETAIL
AROUND SINGLE PIPE PENETRATION

SCALE 1: 10

TYPICAL WALL CORNER DETAIL
90° CORNER REINFORCEMENT DETAILS (SINGLE LAYER REINFORCEMENT)DETAIL B
SCALE 1: 10

Plans and specifications referenced in certificate no. **17150** issued by:
Eric Hausfeld
Registered Certifier Registration No: BDC 2416
Categories: Certifier - Subdivision
Certifier - Strata
Certifier - Stormwater
Certifier - Road & Drainage
Certifier - Hydraulic (stormwater)
Land Development Certificates
www.LDC.com.au

DIAL 1100
BEFORE YOU DIG

CONSTRUCTION ISSUE

REV.	DATE	AMENDMENT	DESIGN	DRAWN	CHECKED	APPROVED	SCALES
1	21.01.22	ISSUED FOR CONSTRUCTION	B.M.	J.J.	B.M.	B.M.	
2	16.05.22	C3 STORMWATER CHANGE	B.M.	M.H.	B.M.	B.M.	
3		NOT ISSUED					
4	12.10.22	RETAINING WALL 101 AMENDMENT	B.M.	J.J.	B.M.	B.M.	
5	02.11.22	RETAINING WALL 101 AMENDMENT	B.M.	J.J.	B.M.	B.M.	
6	20.12.22	RETAINING WALL 101 AMENDMENT	B.M.	J.J.	B.M.	B.M.	

DESIGN	DRAWN	CHECKED	APPROVED	SCALES
B.M.	J.J.	B.M.	B.M.	
B.M.	M.H.	B.M.	B.M.	
B.M.	J.J.	B.M.	B.M.	
B.M.	J.J.	B.M.	B.M.	



Central Coast
5 Pioneer Avenue,
P.O. Box 3717,
Tuggerah N.S.W. 2259
Phone: (02) 4305 4300
Fax: (02) 4305 4399
email: coast@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT



PROPERTY DESCRIPTION

LOT 100 D.P.1262209 & LOT 1 D.P.859537
EPPING ROAD & LYONPARK ROAD,
MACQUARIE PARK
SSDA 8903

SURVEYED
ADW JohnsonDATUM
GDA94 M.G.A. ZONE 56

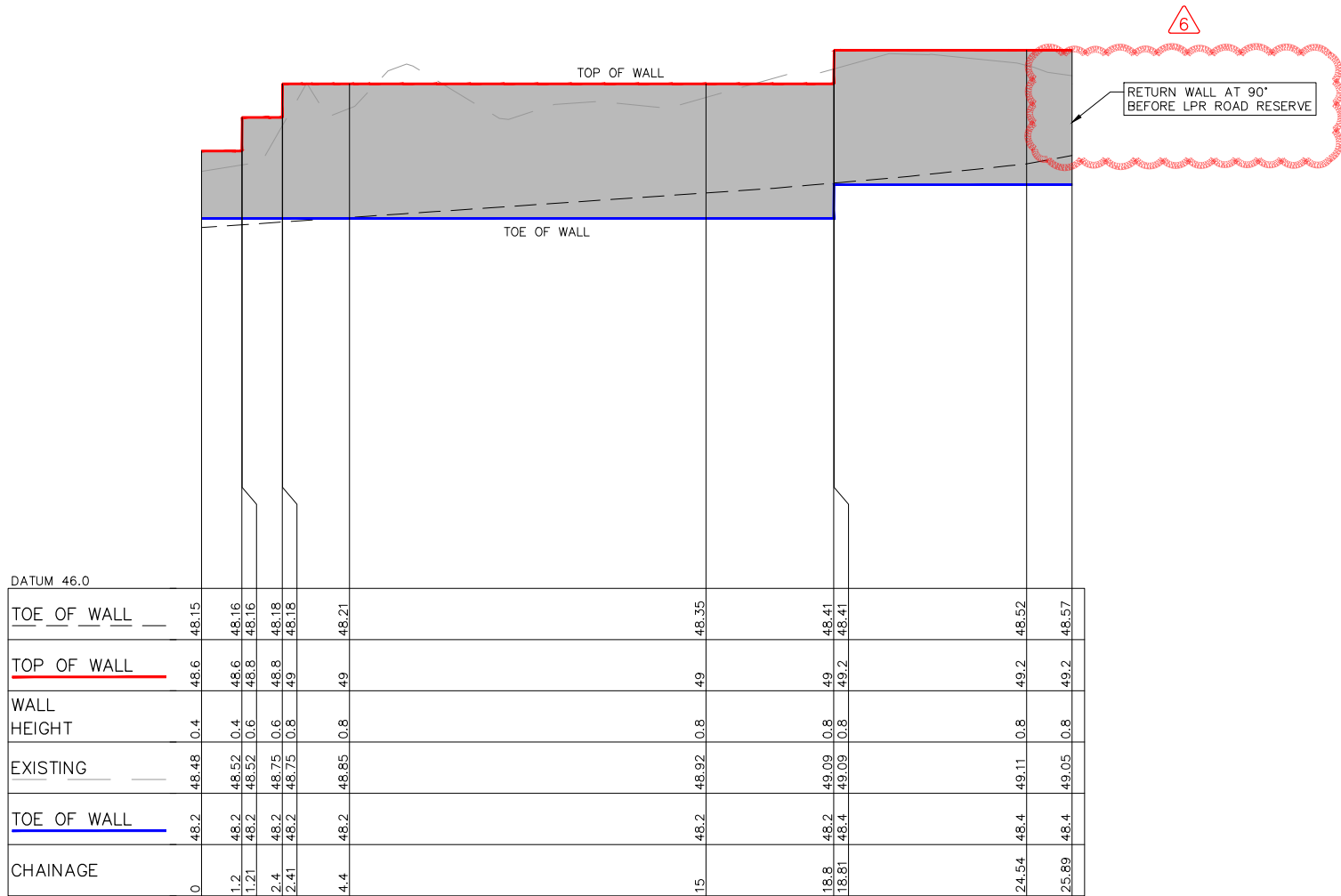
A.H.D.

PROJECT

PROPOSED SUBDIVISION

PLAN TITLE

EXISTING STORMWATER PIT
RECONSTRUCTIONPROJECT No.
300001(2) -DISCIPLINE
ENGNUMBER
461REV.
6



LONGITUDINAL SECTION RW101
HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:20

RW101 – SETOUT TABLE				
PT	CHAINAGE	EASTING	NORTHING	BEARING
IP 1	0.000	325876.869	6260259.112	130°44'09.38"
IP 2	3.293	325879.364	6260256.963	
IP 3	4.557	325880.022	6260255.884	
IP 4	24.537	325895.152	6260242.834	
IP 5	25.885	325896.268	6260242.077	124°09'15.91"



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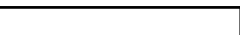
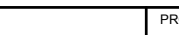


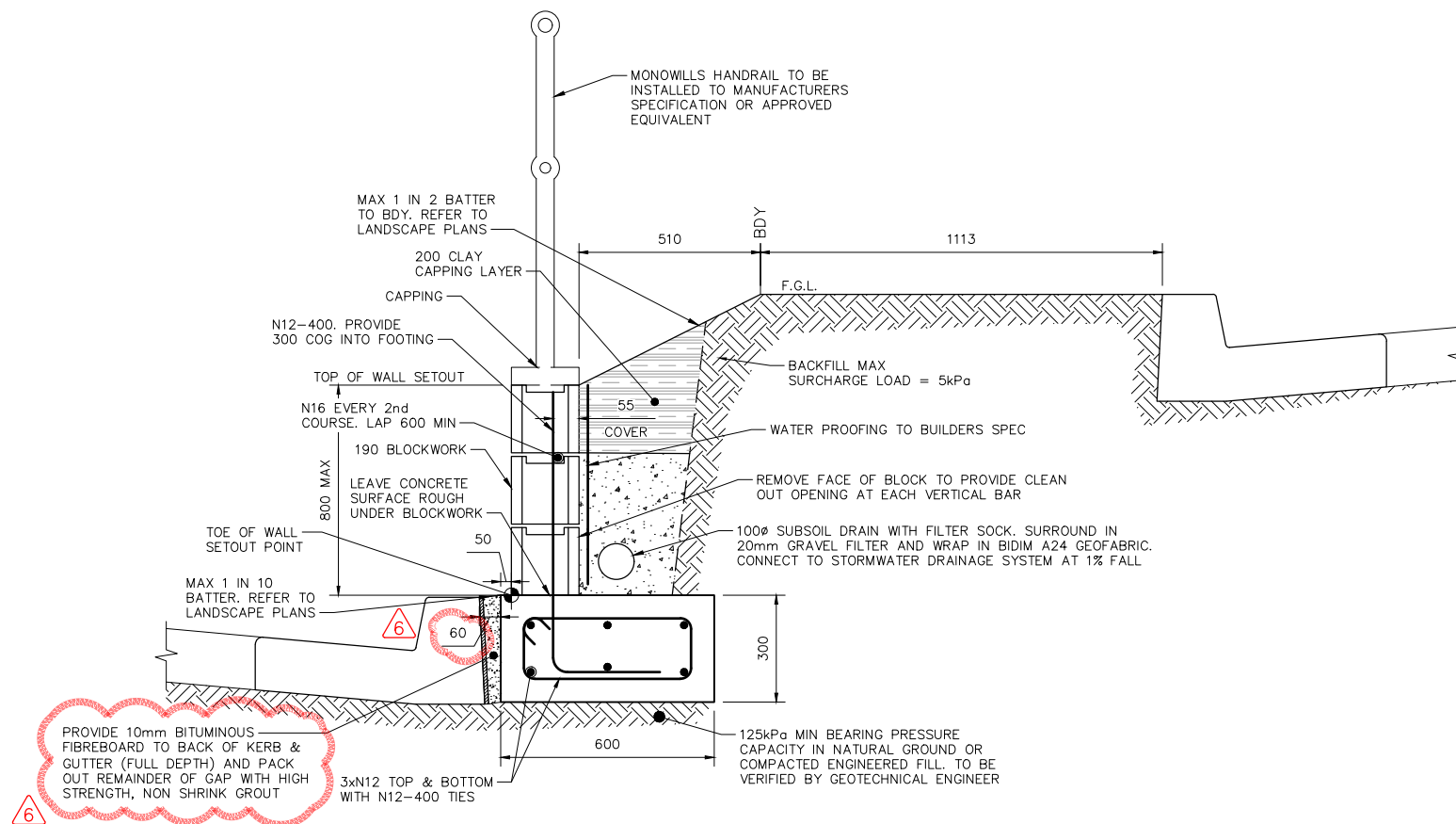
CONSTRUCTION ISSUE

REV.	DATE	AMENDMENT	DESIGN	DRAWN	CHECKED	APPROVED	SCALES		<p>Central Coast 5 Pioneer Avenue, P.O. Box 3717, Tuggerah N.S.W. 2259 Phone: (02) 4305 4300 Fax: (02) 4305 4399 email: coast@adwjohnson.com.au www.adwjohnson.com.au ABN 62 129 445 398</p>		CLIENT	PROPERTY DESCRIPTION	PROJECT					
PROPOSED SUBDIVISION																		
PLAN TITLE																		
RETAINING WALL LONGITUDINAL SECTION RW101																		
SURVEYED																		
DATUM																		
DISCIPLINE																		
NUMBER																		
REV.																		
1	21.01.22	ISSUED FOR CONSTRUCTION	B.M.	J.J.	B.M.	B.M.	A1 1:100					LOT 100 D.P.1262209 & LOT 1 D.P.859537 EPPING ROAD & LYONPARK ROAD, MACQUARIE PARK SSDA 8903	ADW Johnson	GDA94 M.G.A. ZONE 56 A.H.D.	PROJECT No. 300001(2) -	ENG	564	6
2	16.05.22	C3 STORMWATER CHANGE	B.M.	M.H.	B.M.	B.M.												
3	05.08.22	RETAINING WALL 101 AMENDMENT	B.M.	C.R.	B.M.	B.M.												
4	12.10.22	RETAINING WALL 101 AMENDMENT	B.M.	J.J.	B.M.	B.M.												
5	02.11.22	RETAINING WALL 101 AMENDMENT	B.M.	J.J.	B.M.	B.M.												
6	20.12.22	RETAINING WALL 101 AMENDMENT	B.M.	J.J.	B.M.	B.M.												
DESIGN FILE S:\300001\DESIGN\12D\STAGE 2 CC\DESIGN FILE.project								ALL DIMENSIONS ARE IN METRES. DO NOT SCALE										



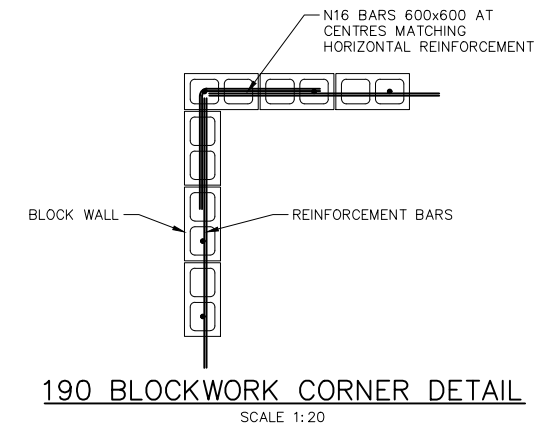
CONSTRUCTION ISSUE

REV.	DATE	AMENDMENT	DESIGN	DRAWN	CHECKED	APPROVED	SCALES		Central Coast 5 Pioneer Avenue, P.O. Box 3717, Tuggerah N.S.W. 2259 Phone: (02) 4305 4300 Fax: (02) 4305 4399 email: coast@adwjohnson.com.au www.adwjohnson.com.au ABN 62 129 445 398	CLIENT 	PROPERTY DESCRIPTION		PROJECT		PROPOSED SUBDIVISION							
1	21.01.22	ISSUED FOR CONSTRUCTION	B.M.	J.J.	B.M.	B.M.	A3 1:20				LOT 100 D.P.1262209 & LOT 1 D.P.859537		PLAN TITLE		TYPICAL RETAINING WALL DETAILS & NOTES							
2	16.05.22	C3 STORMWATER CHANGE	B.M.	M.H.	B.M.	B.M.	A3 1:20				EPPING ROAD & LYONPARK ROAD, MACQUARIE PARK SSDA 8903											
3	05.08.22	RW101 DETAILS ADDED	B.M.	D.P.T.	B.M.	B.M.																
4	12.10.22	RETAINING WALL 101 AMENDMENT	B.M.	J.J.	B.M.	B.M.																
5	02.11.22	RETAINING WALL 101 AMENDMENT	B.M.	J.J.	B.M.	B.M.																
6	20.12.22	RETAINING WALL 101 AMENDMENT	B.M.	J.J.	B.M.	B.M.																
DESIGN FILE S:\3000001\DESIGN\12D\STAGE 2 CC\DESIGN FILE.project							ALL DIMENSIONS ARE IN METRES. DO NOT SCALE				SURVEYED		DATUM		PROJECT No.		DISCIPLINE		NUMBER		REV.	
											ADW Johnson		GDA94 M.C.A. ZONE 56 A.H.D.		300001(2) -		ENG -		571		6	

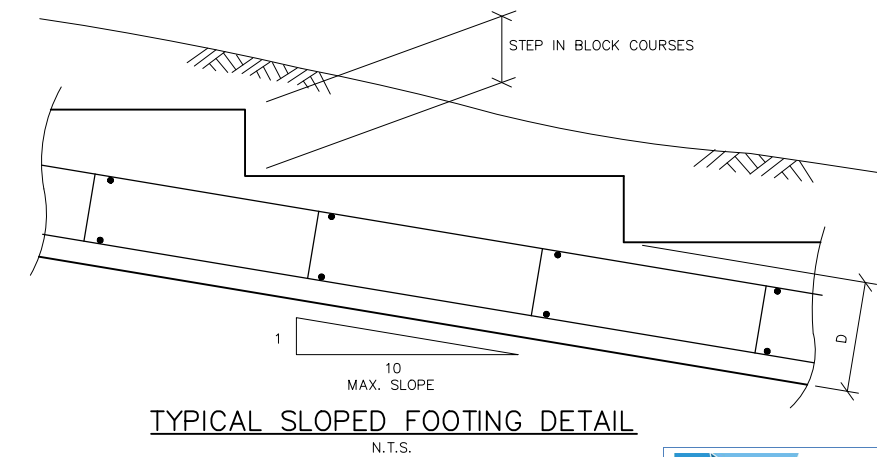


RW101 TYPICAL DETAILS (CH 5m TO 25.90m)
SCALE 1:10

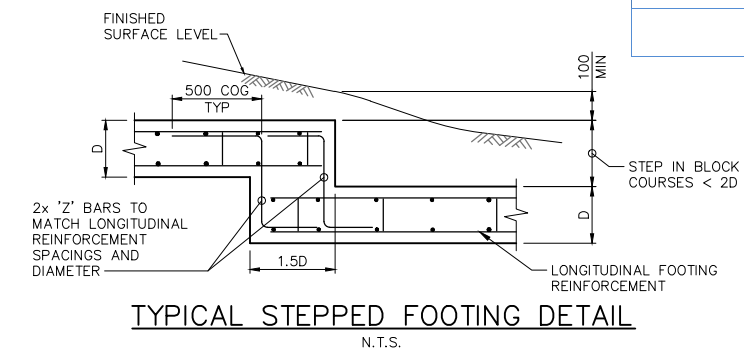
NOTE:
REFER SHEET 471 FOR RW101 (CH 0 TO 5m)



190 BLOCKWORK CORNER DETAIL
SCALE 1:20



TYPICAL SLOPED FOOTING DETAIL
N.T.S.



TYPICAL STEPPED FOOTING DETAIL
N.T.S.

LDC Plans and specifications referenced in certificate no. **17150** issued by:

Eric Hausfeld
Registered Certifier Registration No: BDC 2416

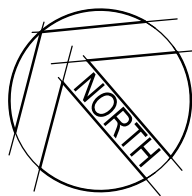
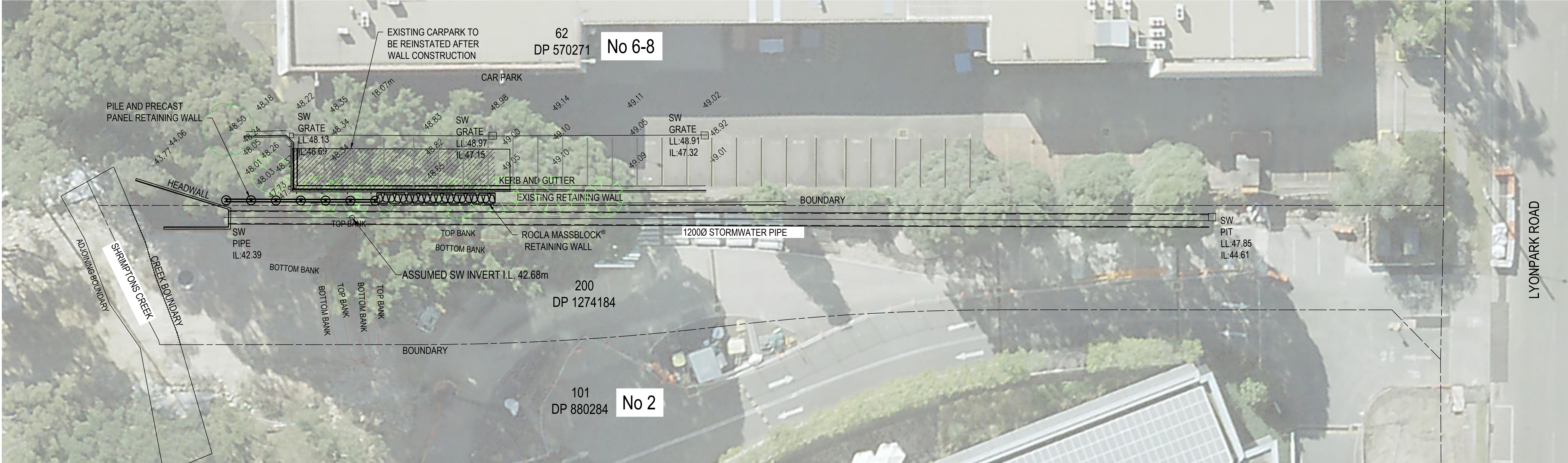
Categories: Certifier – Subdivision
Certifier – Strata
Certifier – Stormwater
Certifier – Road & Drainage
Certifier – Hydraulic (stormwater)

Land Development Certificates
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CONSTRUCTION ISSUE

REV.	DATE	AMENDMENT	DESIGN	DRAWN	CHECKED	APPROVED	SCALES	CLIENT	PROPERTY DESCRIPTION	PROJECT
1	21.01.22	ISSUED FOR CONSTRUCTION	B.M.	J.J.	B.M.	B.M.	A1 1:10	Central Coast 5 Pioneer Avenue, P.O. Box 3717, Tuggerah N.S.W. 2259 Phone: (02) 4305 4300 Fax: (02) 4305 4399 email: coast@adwjohnson.com.au www.adwjohnson.com.au ABN 62 129 445 398	LOT 100 D.P.1262209 & LOT 1 D.P.859537 EPPING ROAD & LYONPARK ROAD, MACQUARIE PARK SSDA 8903	PROPOSED SUBDIVISION
2	16.05.22	C3 STORMWATER CHANGE	B.M.	M.H.	B.M.	B.M.	A3 1:20			PLAN TITLE
3		NOT ISSUED								RETAINING WALL RW101 DETAILS
4	12.10.22	RETAINING WALL 101 AMENDMENT	B.M.	J.J.	B.M.	B.M.				PROJECT No.
5	02.11.22	RETAINING WALL 101 AMENDMENT	B.M.	J.J.	B.M.	B.M.				DISCIPLINE
6	20.12.22	RETAINING WALL 101 AMENDMENT	B.M.	J.J.	B.M.	B.M.				NUMBER
										REV.
										6



LOADING NOTES

- ALL LOADS TO AS1170.1 AND AS4678.
- DEAD LOADS ARE AS FOLLOWS:
 - SELF WEIGHT OF WALL
 - BACKFILL = 18kN/m³
- LIVE LOADS ARE AS FOLLOWS:
 - SURCHARGE = 5kPa
 - W₀ = 1.98kPa TO FENCING
 - WALL HAS BEEN DESIGNED AS A FREE DRAINING STRUCTURE. NO POREWATER PRESSURE HAS BEEN ALLOWED FOR.
- ONLY LIGHTWEIGHT / HAND-OPERATED MACHINERY IS PERMITTED FOR COMPACTION WITHIN 2m OF THE BACK OF THE WALL.

CONSTRUCTION METHODOLOGY

- AUGER PILES, INCLUDING INSTALLATION OF TEMPORARY LINER TO PREVENT SPILL OUT SURROUNDING PIPE BACKFILL.
- INSTALLATION OF PREFABRICATED REINFORCEMENT INCLUDING UC'S INTO FOOTINGS (I.E. REO AND UC TO BE DROPPED INTO FOUNDATION).
- POUR CONCRETE AND REMOVE LINER.
- INSTALLATION OF PRECAST CONCRETE SLEEPERS
- INSTALLATION OF GEOFABRIC, SUBSOIL DRAINS AND DRAINAGE GRAVEL (20mm DRAINAGE SCREENINGS).
- INSTALLATION OF BACKFILL AND COMPACTION OF IMPERVIOUS CLAY LAYER (WITH LIGHT / HAND OPERATED MACHINERY ONLY).

SITE PLAN

SCALE 1:200

REFER TO DRG No 0002 FOR DETAILED PLAN

PILING NOTES

- CONCRETE EXPOSURE CLASSIFICATION: B1
- MINIMUM 28 DAY COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 40MPa.
- REINFORCEMENT SHALL BE GRADE D500N UNLESS SPECIFIED OTHERWISE.
- LIGATURES SHALL BE GRADE D500N.
- NOMINAL COVER TO REINFORCEMENT NEAREST TO THE CONCRETE SURFACE SHALL BE 70mm UNLESS SPECIFIED OTHERWISE.
- UNLESS SHOWN OTHERWISE ON THE DRAWINGS, THE MINIMUM LAPS LENGTHS SHALL BE 1400mm FOR N32 BARS.
- MINIMUM LAP LENGTH OF HELIX SHALL BE 1.5 TURNS.
- END OF HELIX AT PILE HEAD AND TOE SHALL BE ANCHORED BY A HOOK AROUND MAIN BAR 300mm MIN EXTENSION INTO CORE CONCRETE.

STEELWORK NOTES

- ALL STEEL COMPONENTS SHALL BE HOT DIP GALVANISED IN ACCORDANCE WITH AS/NZS 4680 AFTER FABRICATION.
- STEEL UC SECTION SHALL BE GRADE 300 TO AS/NZS 3679.2.

CONCRETE INFILL PANEL NOTES

- CONCRETE EXPOSURE CLASSIFICATION: B1
- MINIMUM 28 DAY COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 40MPa.
- CONCRETE EDGES SHALL BE CHAMFERED 15 x 15 AND RE-ENTRANT ANGLES FILLETED UNLESS SPECIFIED OTHERWISE.
- REINFORCEMENT SHALL BE GRADE D500N UNLESS SPECIFIED OTHERWISE.
- NOMINAL COVER TO REINFORCEMENT NEAREST TO THE CONCRETE SURFACE SHALL BE 45mm UNLESS SPECIFIED OTHERWISE.
- MINIMUM DEVELOPMENTS LENGTHS AND LAPS TO BE 400mm FOR N12 BARS AND 550mm FOR N16 BARS UNO.
- UNLESS NOTED OTHERWISE, NO BACKFILL SHALL BE PLACED AGAINST STRUCTURES WITHIN 21 DAYS OF PLACING CONCRETE, UNLESS THE CONCRETE STRENGTH IS VERIFIED TO REACHED 28 DAY STRENGTH, IN ACCORDANCE WITH SPECIFICATION R44.
- NF DENOTES NEAR FACE
FF DENOTES FAR FACE
EF DENOTES EACH FACE
EE DENOTES EACH END
- MASS OF PRECAST CONCRETE INFILL IS BASED ON A DENSITY OF 2500kg/m³ DURING STORAGE, TRANSPORT AND HANDLING: STORE PANELS FLAT WITH SUPPORTS AT 600 FROM THE ENDS AND AT MID LENGTH. PRECAST PANELS SHALL BE LIFTED IN COMPLIANCE WITH THE RELEVANT NSW REGULATORY REQUIREMENTS AND THE MANUFACTURER'S RECOMMENDATIONS.
- SURFACE FINISH OF FORMED CONCRETE SURFACES SHALL BE CLASS 2 IN ACCORDANCE WITH AS 3610.1:2018.

PAVEMENT NOTES

- ALL DIMENSIONS SHOWN IN MILLIMETRES UNLESS NOTED OTHERWISE.
- THE CONTRACTOR IS TO ENSURE A SMOOTH TRANSITION IS ACHIEVED BETWEEN EXISTING AND PROPOSED PAVEMENTS.

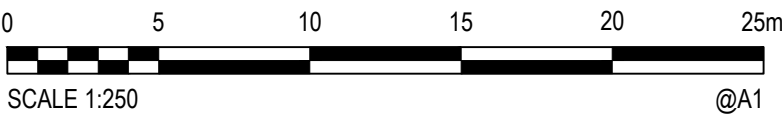
TRAFFIC BARRIER NOTES

- TRAFFIC BARRIER TO BE W BEAM TYPE TO BE IN ACCORDANCE WITH THE TNSW STANDARDS. REFER TO TNSW STANDARD DRAWING SERIES R0710 FOR DETAILS.



Plans and specifications referenced in certificate no. **17150** issued by:
Eric Hausfeld
Registered Certifier Registration No: BDC 2416
Categories: Certifier – Subdivision
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Certifier – Road & Drainage
Certifier – Hydraulic (stormwater)
Land Development Certificates
www.LDC.com.au

Rev.	Date	Description	Des.	Verif.	Appd.
2	15/12/2022	FOR APPROVAL	AM	LB	LH
1	30/11/2022	FOR INFORMATION	AM	LB	LH



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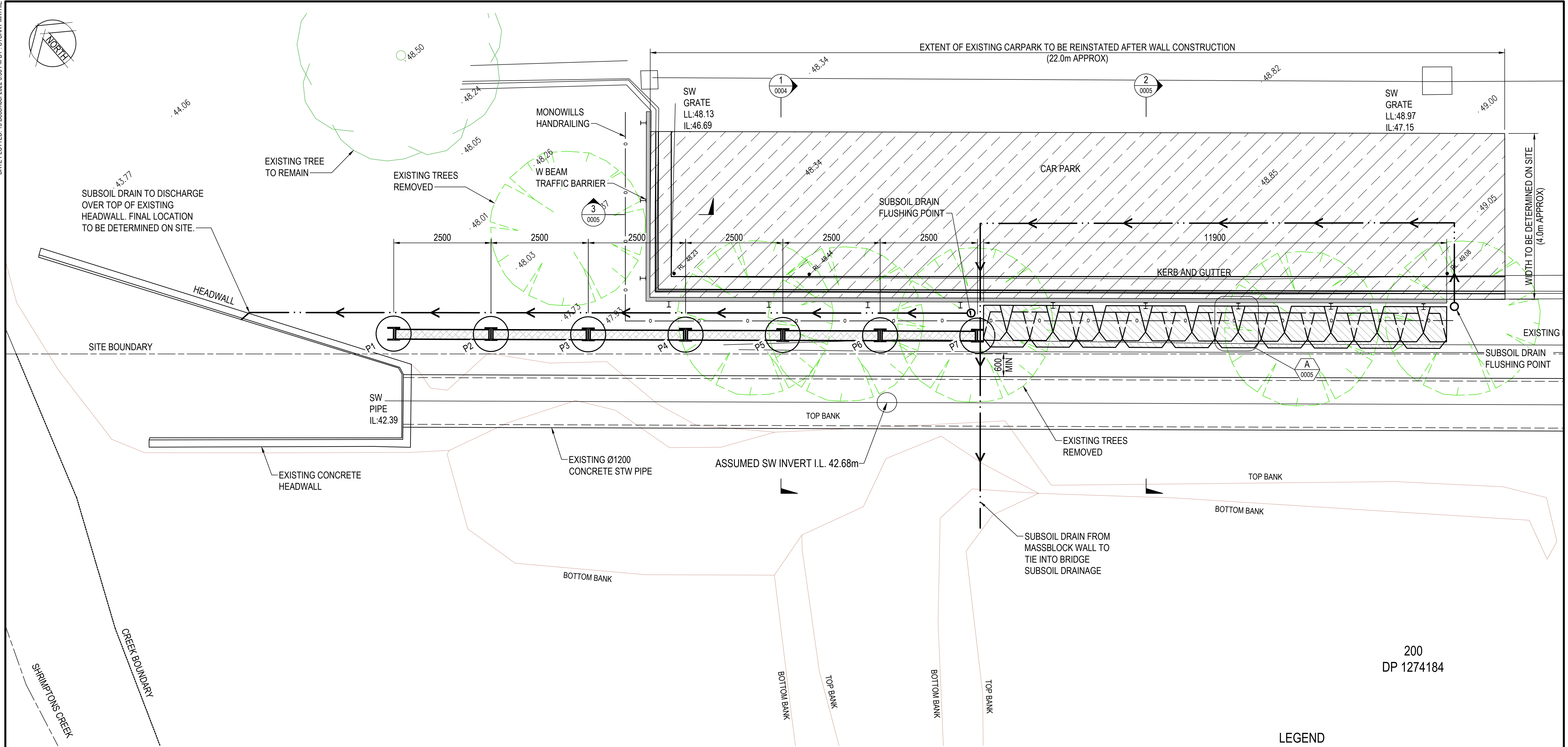


Cardno (NSW/ACT) Pty Ltd | ABN 95 001 145 035
Level 9, The Forum, 203 Pacific Highway
St Leonards, NSW 2055
Tel: 02 9496 7700 Fax: 02 9439 5170
Web: www.cardno.com.au

Drawn A. DUNN Checked S. MATHIE Designed A. RAE Verified L. BAI Approved	Date NOV. 2022 Date NOV. 2022 Date NOV. 2022 Date NOV. 2022	Client FRAZERS PROPERTY	Project IVANHOE ESTATE 4 LYONPARK ROAD MACQUARIE PARK	Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES
Title SITE PLAN			Datum AHD	Scale 1:200
			Drawing Number 304100943-RW-DRG-0001	Size A1
			Revision 2	

DATE PLOTTED: 15 December 2022 3:50 PM BY: STUART MATHIE

XREF's: X-Shrimpton_Survey, X-Shrimpton_Vall plan
CAD File: N:\Projects\8001723\304100943 - Shrimpton's Creek\Drawings\01_Dwg\304100943-RW-0002.dwg






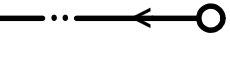
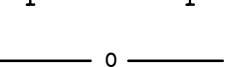



RETAINING WALL PLAN
SCALE 1:50

MARK	COORDINATES	
	EASTING	NORTHING
P1	325804.150	6260322.859
P2	325806.039	6260321.221
P3	325807.927	6260319.583
P4	325809.816	6260317.945
P5	325811.704	6260316.307
P6	325813.593	6260314.669
P7	325815.481	6260313.031



Plans and specifications referenced in certificate no. **17150** issued by:
Eric Hausfeld
Registered Certifier Registration No: BDC 2416
Categories: Certifier – Subdivision
Certifier – Strata
Certifier – Stormwater
Certifier – Road & Drainage
Certifier – Hydraulic (stormwater)
Land Development Certificates
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- LEGEND**
-  EXISTING TREE TO REMAIN
 -  EXISTING TREE REMOVED
 -  STEEL POST AND PRECAST PANEL INFILL WALL
 -  ROCLA MASSBLOC® WALL
 -  CARPARK WORKS TO BE REINSTATED
 -  SUBSOIL DRAIN WITH FLUSHING POINT AT END
 -  W BEAM TRAFFIC BARRIER
 -  MONOWILLS STANDARD BALUSTRADE IN-GROUND (OR APPROVED EQUIVALENT)

Rev.	Date	Description	Des.	Verif.	Appd.
2	15/12/2022	FOR APPROVAL		AM	LB LH
1	30/11/2022	FOR INFORMATION		AM	LB LH



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Tel: 02 9496 7700 Fax: 02 9439 5170
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Drawn A. DUNN Checked S. MATHIE Designed A. RAE Verified L. BAI Approved	Date NOV. 2022 Date NOV. 2022 Date NOV. 2022 Date NOV. 2022	Client FRAZERS PROPERTY Project IVANHOE ESTATE 4 LYONPARK ROAD MACQUARIE PARK Title RETAINING WALL PLAN	Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES Datum AHD Scale 1:50 Size A1 Drawing Number 304100943-RW-DRG-0002 Revision 2
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RETAINING WALL ELEVATION

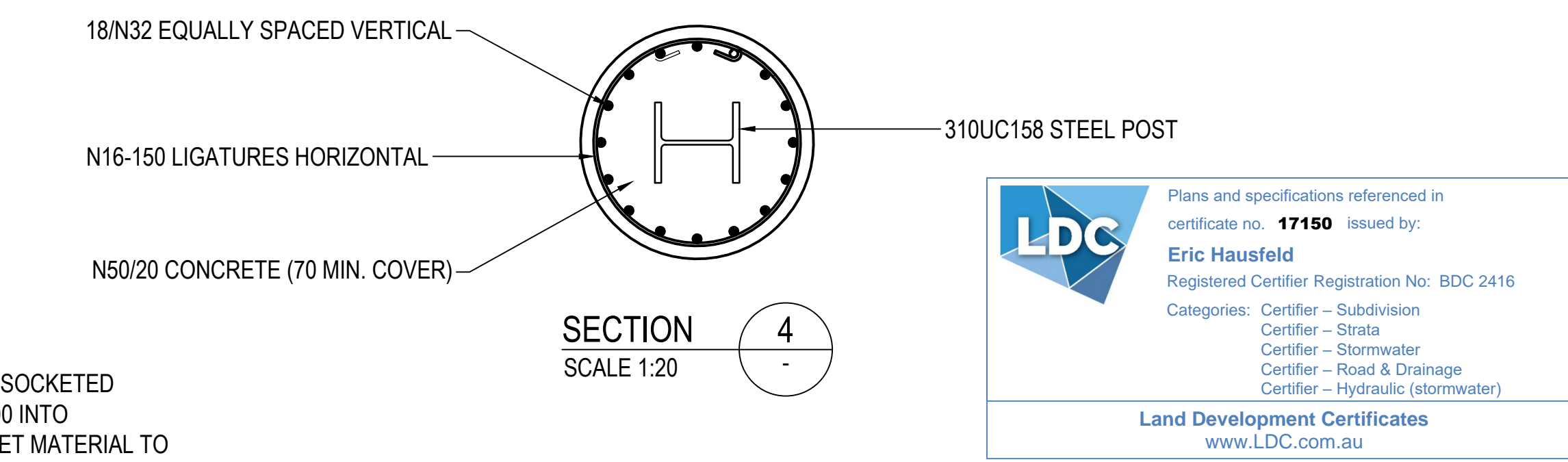
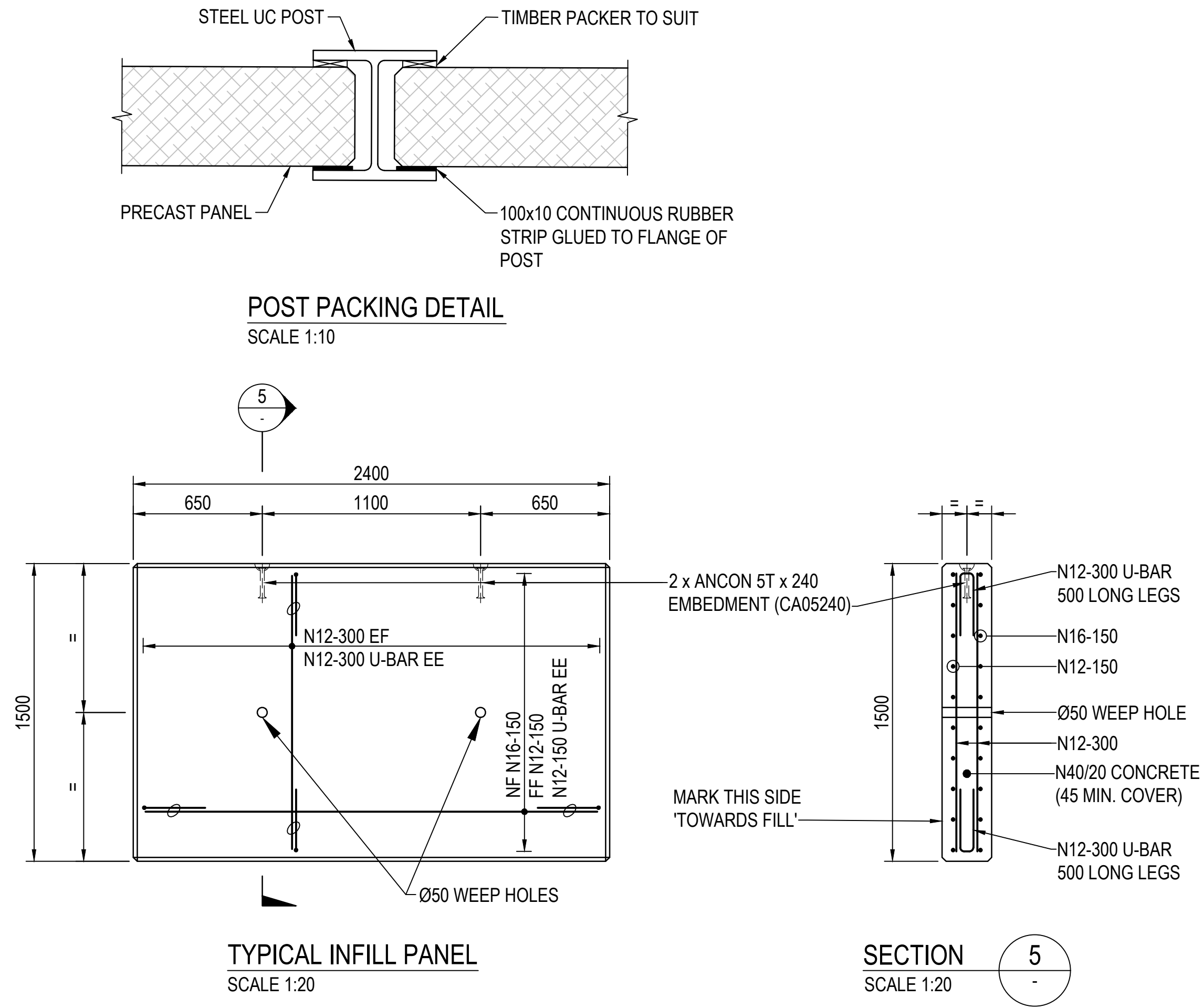
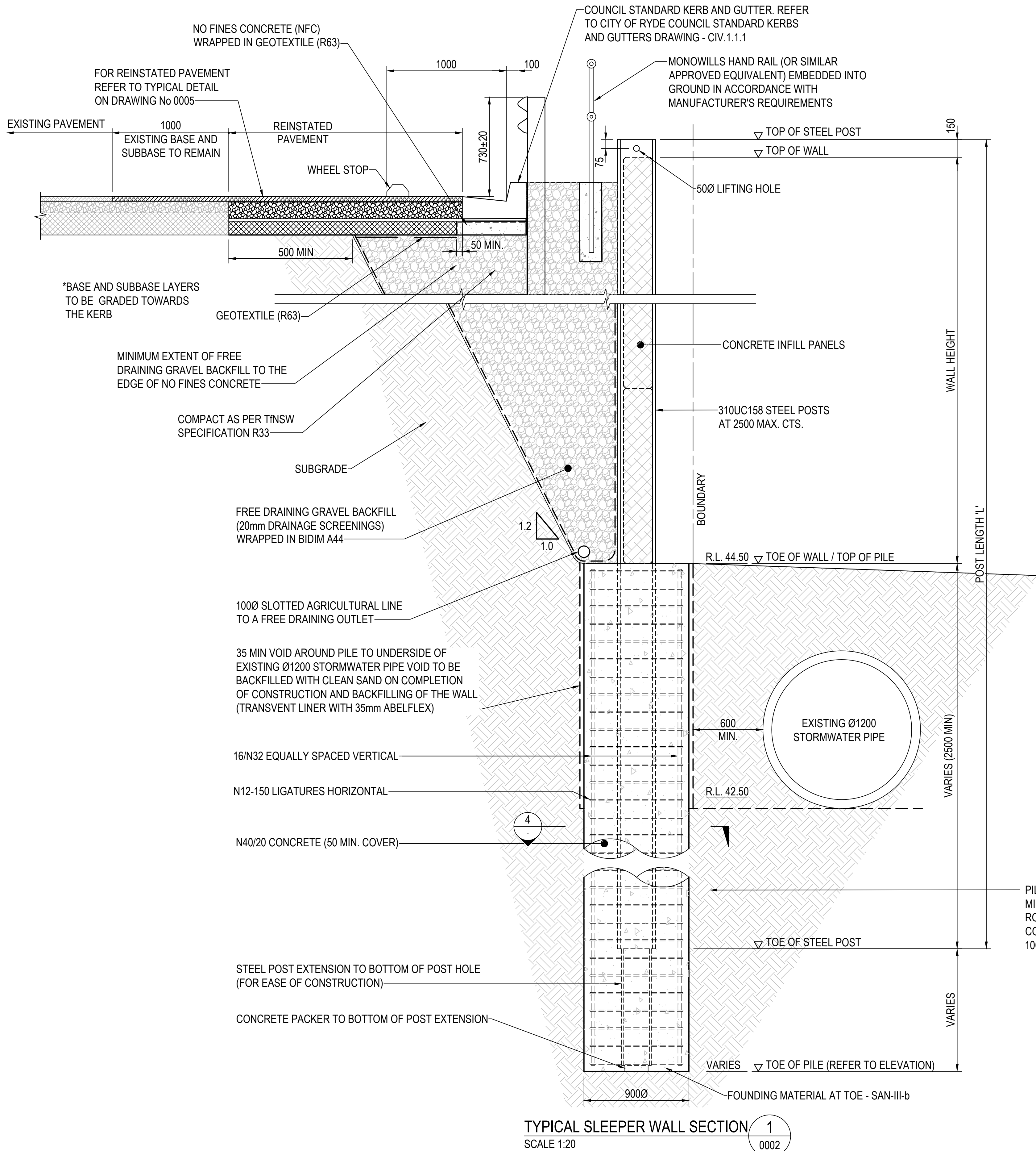
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Drawn A. DUNN	Date NOV. 2022	Client FRAZERS PROPERTY			
Checked S. MATHIE	Date NOV. 2022	Project IVANHOE ESTATE 4 LYONPARK ROAD MACQUARIE PARK	Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES		
Designed A. RAE	Date NOV. 2022		Datum AHD		
Verified L. BAI	Date NOV. 2022		Scale 1:50	Size A1	
Approved		Title RETAINING WALL ELEVATION	Drawing Number 304100943-RW-DRG-0003		Revision 2

DATE PLOTTED: 15 December 2022 3:51 PM BY: STUART MATHIE
XREF's: CAD File: N:\Projects\9001\23\304100943 - Shrimpsons Creek\Drawings\01_Dwg\304100943-RW-0004.dwg

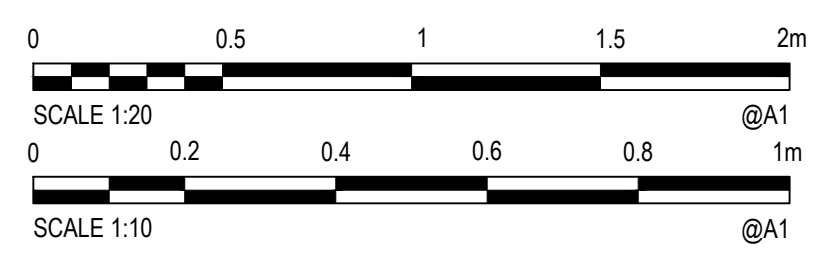


ROCK CLASSIFICATION		
ROCK CLASS (BASED ON PELLIS ET AL. (2019))	ROCK STRENGTH DESCRIPTION (TO AS1726)	UNIAXIAL COMPRESSIVE STRENGTH (UCS) (Mpa)
SAN-III-a	MEDIUM	7
SAN-III-b	MEDIUM TO HIGH	12 - 30

PILE DESIGN PARAMATERS		
ROCK CLASS (BASED ON PELLIS ET AL. (2019))	ULTIMATE END BEARING (Mpa)	ULTIMATE SHAFT ADHESION (Kpa)
SAN-III-a	20	800
SAN-III-b	40	1500

LDC Plans and specifications referenced in certificate no. **17150** issued by:
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Certifier - Road & Drainage
Certifier - Hydraulic (stormwater)
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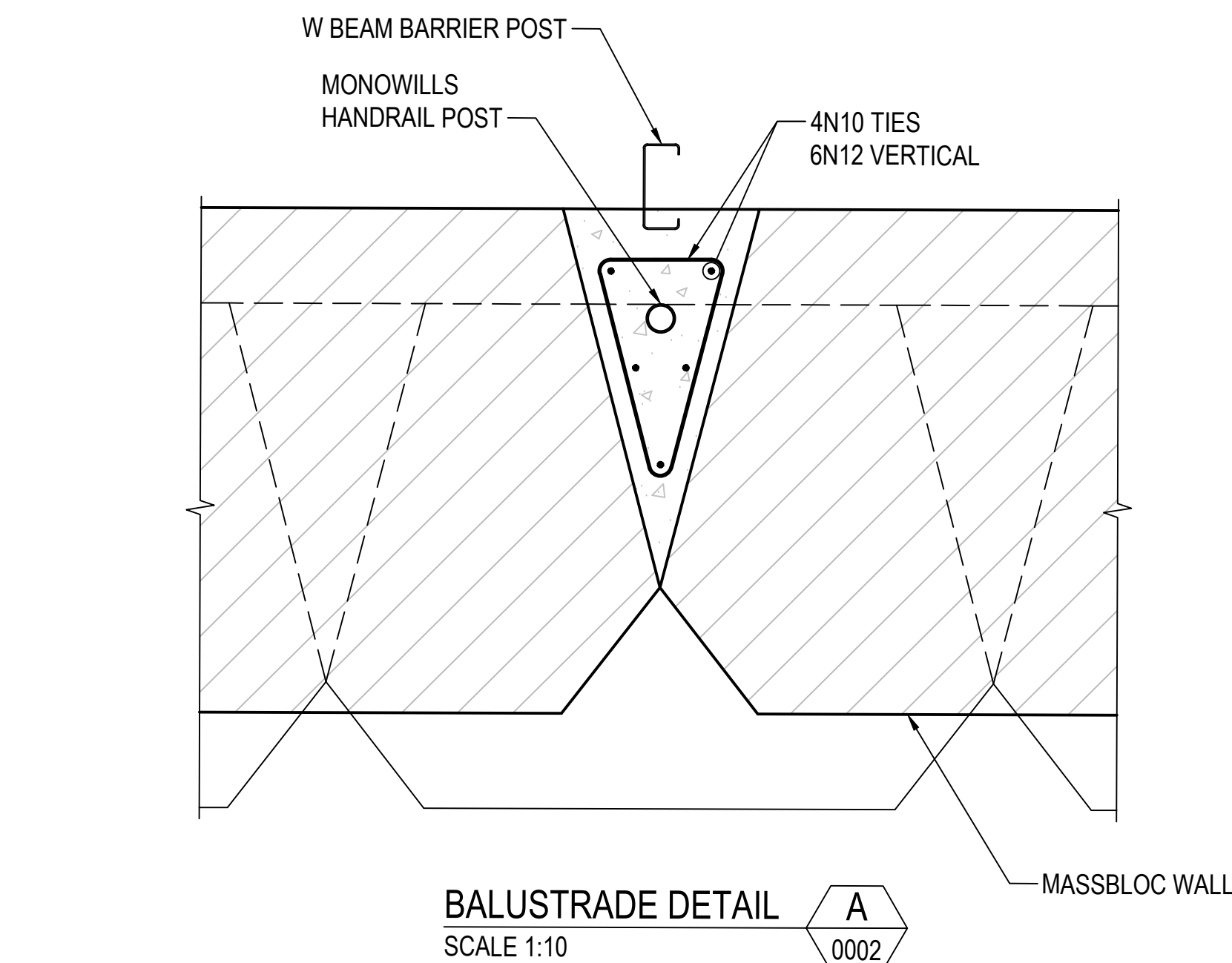
Rev.	Date	Description	Des.	Verif.	Appd.
2	15/12/2022	FOR APPROVAL	AM	LB	LH
1	30/11/2022	FOR INFORMATION	AM	LB	LH



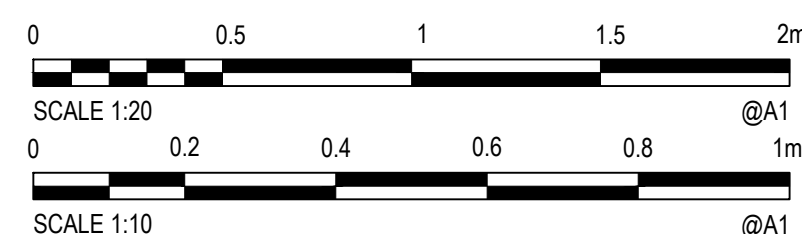
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Drawn A. DUNN Checked S. MATHIE Designed A. RAE Verified L. BAI Approved	Date NOV. 2022 Date NOV. 2022 Date NOV. 2022 Date NOV. 2022	Client FRAZERS PROPERTY Project IVANHOE ESTATE 4 LYONPARK ROAD MACQUARIE PARK Title RETAINING WALL DETAILS SHEET 1	Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES Datum AHD Scale 1:20 Size A1 Drawing Number 304100943-RW-DRG-0004 Revision 2
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2	15/12/2022	FOR APPROVAL		AM	LB
1	30/11/2022	FOR INFORMATION		AM	LB
Rev.	Date	Description		Des.	Verif.
					LH
					LH
					Appd.



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Drawn J. PARK	Date NOV. 2022	Client FRAZERS PROPERTY			
Checked S. MATHIE	Date NOV. 2022	Project IVANHOE ESTATE 4 LYONPARK ROAD MACQUARIE PARK		Status <div>FOR APPROVAL</div> <div>NOT TO BE USED FOR CONSTRUCTION PURPOSES</div>	
Designed A. RAE	Date NOV. 2022	Title RETAINING WALL DETAILS SHEET 2		Datum AHD	
Verified L. BAI	Date NOV. 2022			Scale 1:20, 1:10	
Approved				Size A1	
		Drawing Number 304100943-RW-DRG-0005		Revision 2	