

LEGEND

- ULTIMATE SURFACE CONTOURS
- TOP OF BATTER
- TOE OF BATTER / CHANGE IN GRADE
- ROAD CONTROL LINE
- UPRIGHT KERB AND GUTTER
- LAYBACK KERB AND GUTTER
- 1.8m HIGH COLOURBOND FENCE
- 1.8m HIGH COLOURBOND FENCE WITH 1.5m INFILL
- EARTHWORKS - CUT
- EARTHWORKS - FILL
- + = AMOUNT OF FILL
- = AMOUNT OF CUT
FSL = FINISHED SURFACE LEVEL
- EXISTING SURFACE LEVEL.
NO WORKS REQUIRED

PERMISSION TO USE FOR CONSTRUCTION PURPOSES ROADWORKS AND STORMWATER DRAINAGE

SIGNED _____ DATE _____
DIRECTOR OF CITY GROWTH AND OPERATIONS
CITY OF PALMERSTON

THIS PERMISSION TO USE IS GIVEN ON THE BASIS THAT THE DEVELOPER AND/OR CONSULTANT IS NOT ABSOLVED FROM FULL RESPONSIBILITY FOR THE CORRECTNESS AND ACCURACY OF THE DESIGN AND/OR DOCUMENTS ASSOCIATED. THIS PERMISSION IS VALID FOR A PERIOD OF TWO YEARS FROM THE DATE OF SIGNED APPROVAL.

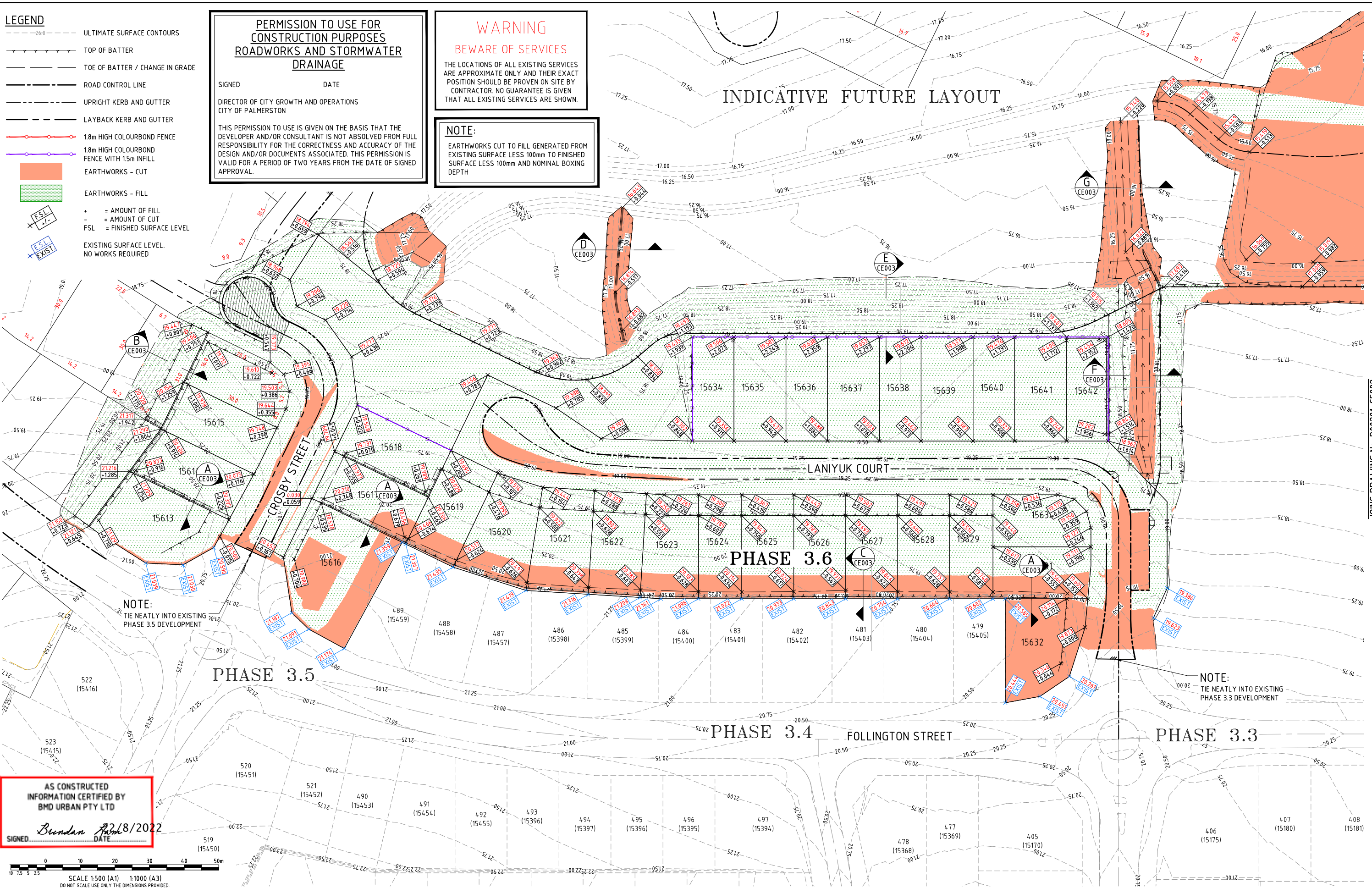
WARNING BEWARE OF SERVICES

THE LOCATIONS OF ALL EXISTING SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE BY CONTRACTOR. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

NOTE:

EARTHWORKS CUT TO FILL GENERATED FROM EXISTING SURFACE LESS 100mm TO FINISHED SURFACE LESS 100mm AND NOMINAL BOXING DEPTH

INDICATIVE FUTURE LAYOUT



NOTE:
TIE NEATLY INTO EXISTING
PHASE 3.5 DEVELOPMENT

NOTE:
TIE NEATLY INTO EXISTING
PHASE 3.3 DEVELOPMENT

AS CONSTRUCTED
INFORMATION CERTIFIED BY
BMD URBAN PTY LTD

SIGNED *Brundan* 18/08/2022
DATE

SCALE 1:500 (A1) 1:1000 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

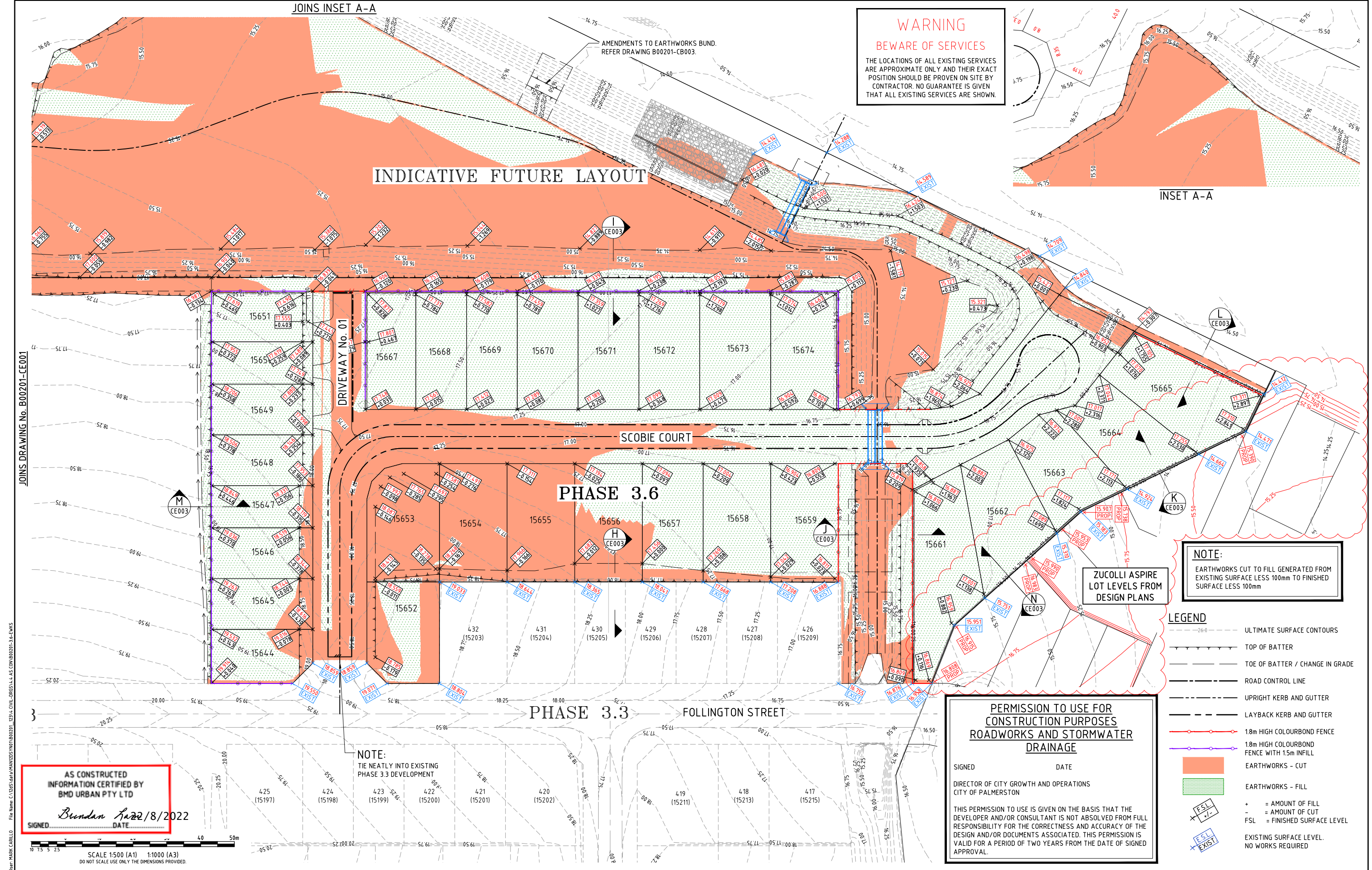
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No.	Amendments	Drawn	Design	Design Chk	Appd	Date	Registered Engineer
2	AMENDED AS CONSTRUCTED	MC	JT	WR	WR	19/08/22	Date Register
1	AS CONSTRUCTED	MC	JT	WR	WR	21/02/22	
0	ISSUED FOR CONSTRUCTION	ESS	LW	WR	MKB	16/08/21	ENGINEERING CERTIFICATION



Client	URBEX AND LAND DEVELOPMENT CORP. (JV)	Datum	AHD
Project	ZUCCOLI PHASE 3.6	PSM	RL
Title	EARTHWORKS MANAGEMENT PLAN SHEET 1 OF 2	COORD	(MGA)
Project No.	B00201-CE001	Drawing No.	2

JOINS DRAWING No. B00201-CE002



JOINS DRAWING No. B00201-CE001

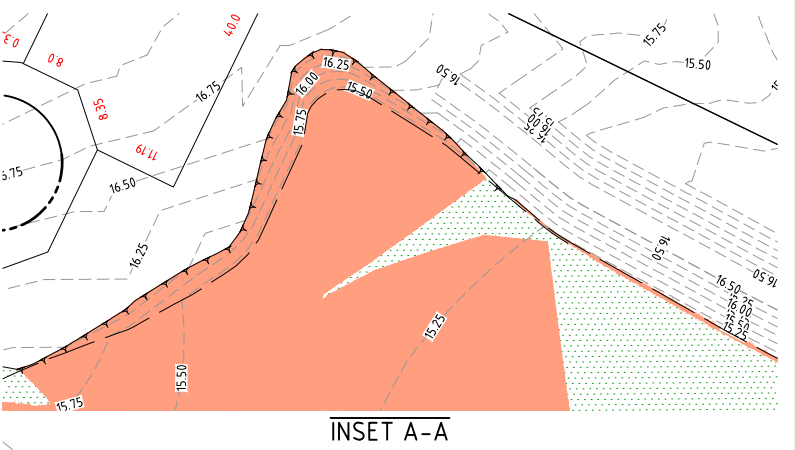
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AS CONSTRUCTED
INFORMATION CERTIFIED BY
BMD URBAN PTY LTD
SIGNED *Bruden* 12/8/2022
DATE

SCALE 1:500 (A1) 1:1000 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

NOTE:
TIE NEATLY INTO EXISTING
PHASE 3.3 DEVELOPMENT

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



NOTE:
EARTHWORKS CUT TO FILL GENERATED FROM
EXISTING SURFACE LESS 100mm TO FINISHED
SURFACE LESS 100mm

- LEGEND**
- 26.0 --- ULTIMATE SURFACE CONTOURS
 - TOP OF BATTER
 - TOE OF BATTER / CHANGE IN GRADE
 - ROAD CONTROL LINE
 - UPRIGHT KERB AND GUTTER
 - LAYBACK KERB AND GUTTER
 - 1.8m HIGH COLOURBOND FENCE
 - 1.8m HIGH COLOURBOND FENCE WITH 15m INFILL
 - EARTHWORKS - CUT
 - EARTHWORKS - FILL
 - + = AMOUNT OF FILL
 - = AMOUNT OF CUT
 - FSL = FINISHED SURFACE LEVEL
 - EXISTING SURFACE LEVEL. NO WORKS REQUIRED

**PERMISSION TO USE FOR
CONSTRUCTION PURPOSES
ROADWORKS AND STORMWATER
DRAINAGE**

SIGNED _____ DATE _____

DIRECTOR OF CITY GROWTH AND OPERATIONS
CITY OF PALMERSTON

THIS PERMISSION TO USE IS GIVEN ON THE BASIS THAT THE
DEVELOPER AND/OR CONSULTANT IS NOT ABSOLVED FROM FULL
RESPONSIBILITY FOR THE CORRECTNESS AND ACCURACY OF THE
DESIGN AND/OR DOCUMENTS ASSOCIATED. THIS PERMISSION IS
VALID FOR A PERIOD OF TWO YEARS FROM THE DATE OF SIGNED
APPROVAL.

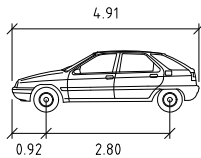
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2	AS CONSTRUCTED	MC	JT	WR	WR	21/02/22	
1	ADJOINING DEVELOPMENT EARTHWORKS LEVELS ADDED	LW	LW	WR	MKB	08/09/21	
0	ISSUED FOR CONSTRUCTION	ESS	LW	WR	MKB	16/08/21	
No.	Amendments	Drawn	Design	Design	Chk	Appd	Date

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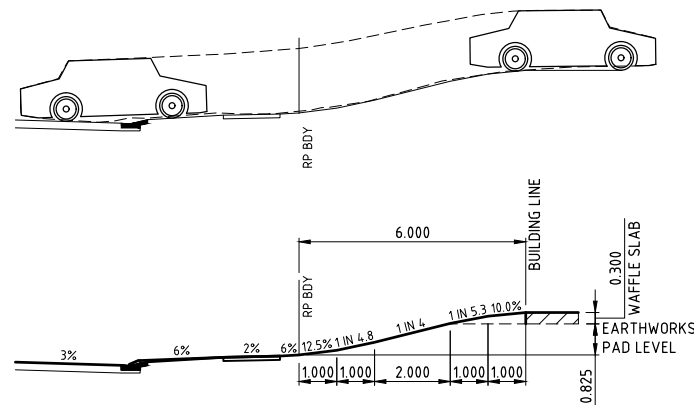
LAND DEVELOPMENT CORPORATION
urbex

Empower
ENGINEERS & PROJECT MANAGERS
ABN 23 010 743 692

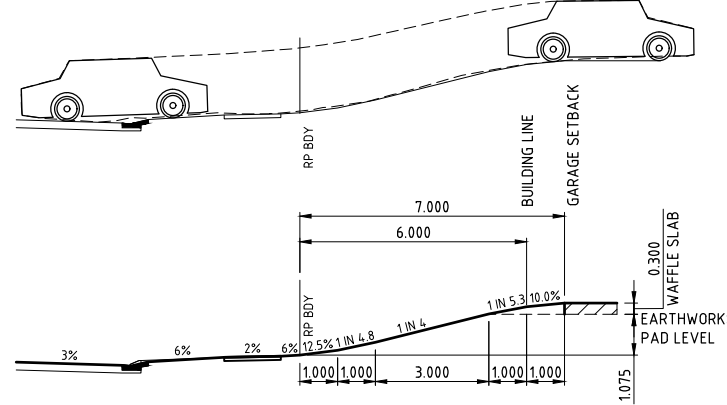
Client	URBEX AND LAND DEVELOPMENT CORP. (JV)	Datum	AHD
Project	ZUCCOLI PHASE 3.6	PSM	RL
Title	EARTHWORKS MANAGEMENT PLAN SHEET 2 OF 2	COORD	(MGA)
Project No.	B00201-CE002	Drawing No.	3



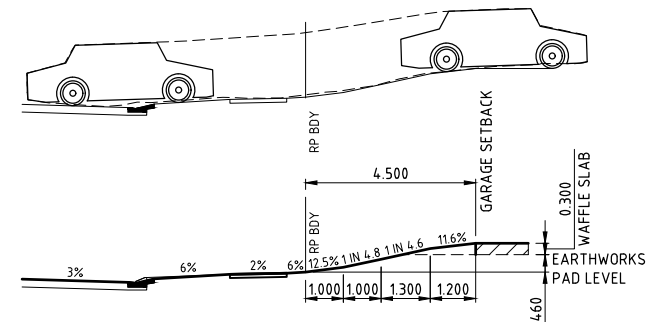
B85 VEHICLE METERS
WIDTH : 1.94
TRACK : 1.84
LOCK TO LOCK TIME : 6.0
STEERING ANGLE : 33.6
FRONT CLEARANCE : 0.12
WHEELBASE CLEARANCE : 0.12
REAR CLEARANCE : 0.12



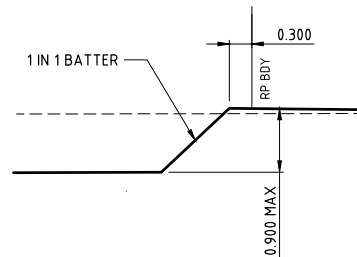
PRIMARY FRONTAGE - BUILDING LINE
MAXIMUM PAD LEVEL SCALE 1:100



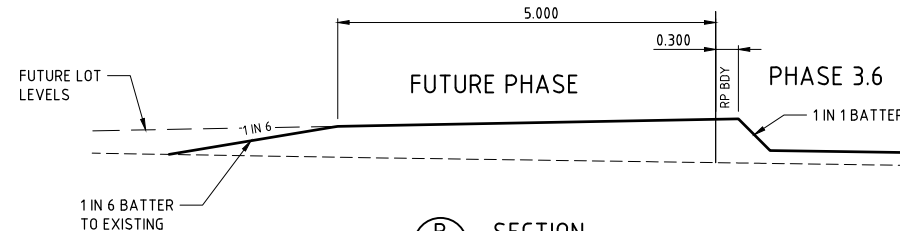
PRIMARY FRONTAGE - GARAGE LINE
MAXIMUM PAD LEVEL SCALE 1:100



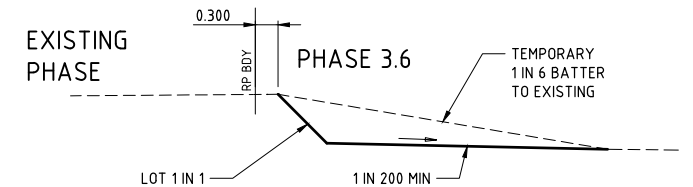
SECONDARY FRONTAGE - GARAGE LINE
MAXIMUM PAD LEVEL SCALE 1:100



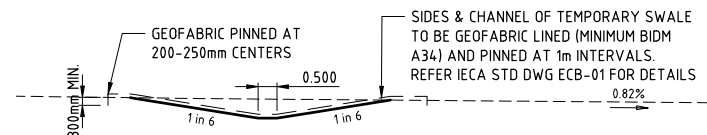
A TYPICAL INTER-ALLOTMENT BATTER DETAIL
CE001 SCALE 1:50 (A1)



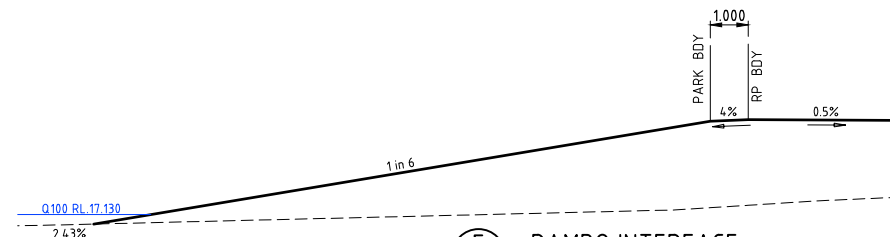
B SECTION
CE001 SCALE 1:50 (A1)



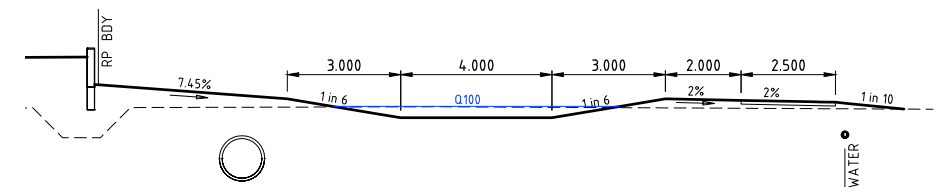
C SECTION
CE001 SCALE 1:50 (A1)



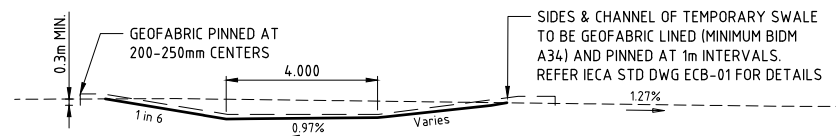
D OUTLET DRAIN
CE001 SCALE 1:100



E DAMBO INTERFACE
CE001 SCALE 1:100



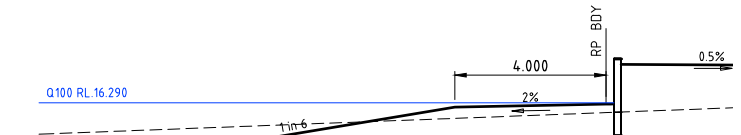
F OVERLAND FLOW PATH
CE001 SCALE 1:100



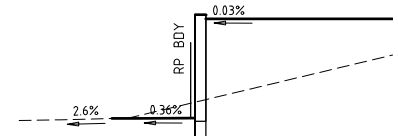
G OUTLET DRAIN
CE001 SCALE 1:100



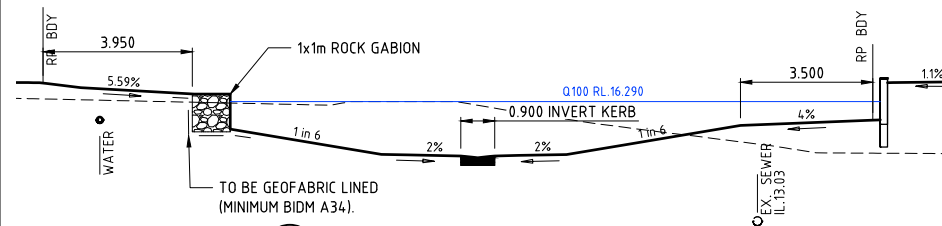
H INTERALLOTMENT BATTER
CE002 SCALE 1:100



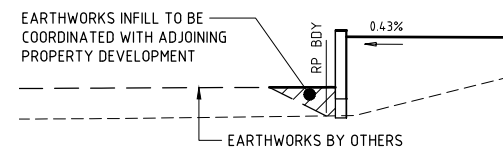
I DAMBO INTERFACE
CE002 SCALE 1:100



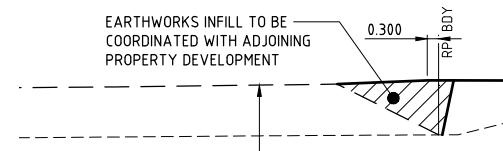
L RETAINING WALL
CE002 SCALE 1:100



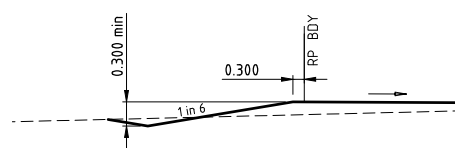
J OVERLAND FLOW PATH
CE002 SCALE 1:100



K RETAINING WALL
CE002 SCALE 1:100



N ADJOINING DEVELOPMENT
CE002 SCALE 1:100



M TYPICAL PARK-ALLOTMENT BATTER DETAIL
CE002 SCALE 1:100

AS CONSTRUCTED

PERMISSION TO USE FOR CONSTRUCTION PURPOSES ROADWORKS AND STORMWATER DRAINAGE

SIGNED DATE
DIRECTOR OF CITY GROWTH AND OPERATIONS
CITY OF PALMERSTON

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SCALE 1:50 (A1) 1:100 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

SCALE 1:100 (A1) 1:200 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

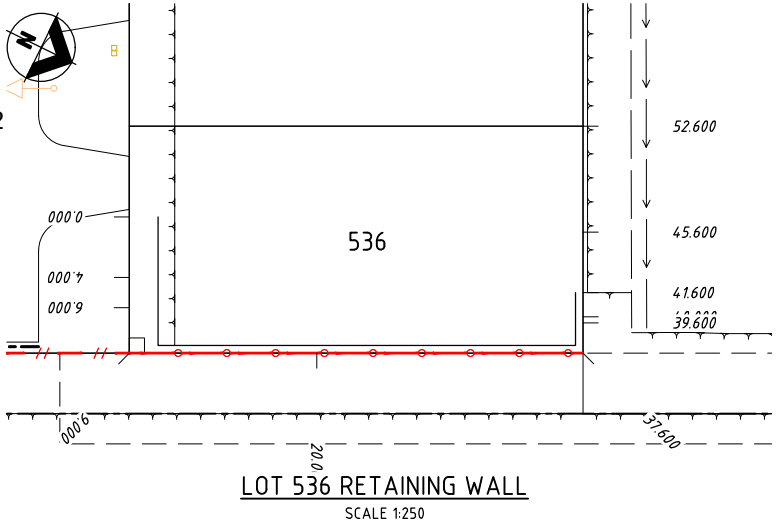
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No.	Amendments	Drawn	Design	Design Chk	Appd	Date	Registered Engineer
2	AS CONSTRUCTED	MC	JT	WR	WR	27/02/22	
1	TYPICAL SECTIONS AMENDED	LW	LW	WR	MKB	08/09/21	
0	ISSUED FOR CONSTRUCTION	ESS	LW	WR	MKB	16/08/21	
ENGINEERING CERTIFICATION							

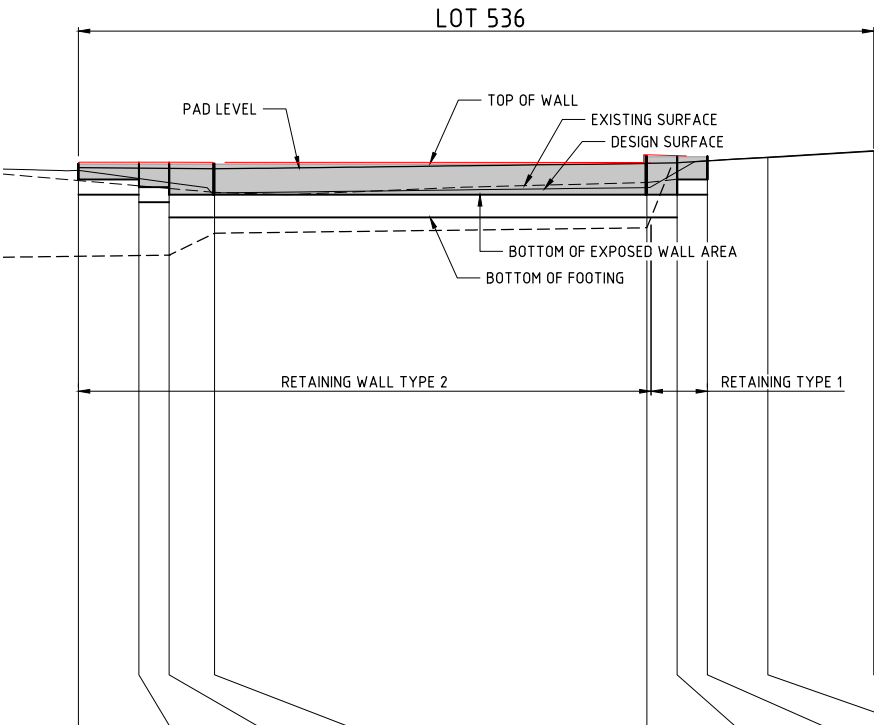
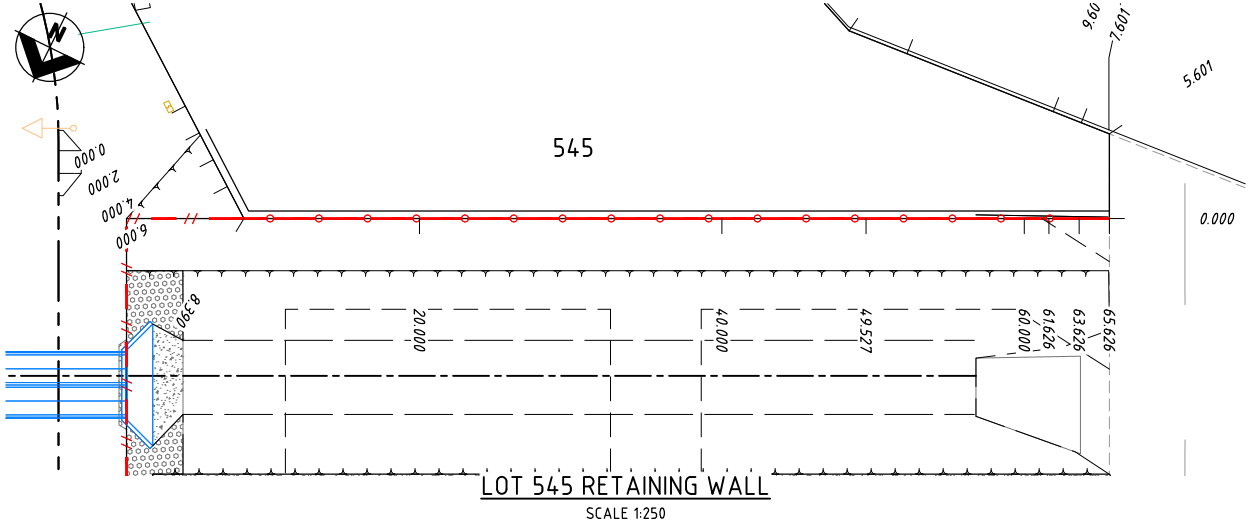


Client	URBEX AND LAND DEVELOPMENT CORP. (JV)	Datum	AHD
Project	ZUCCOLI PHASE 3.6	PSM	RL
Title	EARTHWORKS MANAGEMENT PLAN SECTION AND DETAILS	(MGA) COORD	
Project No.	B00201-CE003	Drawing No.	2

AS CONSTRUCTED
INFORMATION CERTIFIED BY
BMD URBAN PTY LTD
SIGNED: *Brendan* DATE: 17/07/2022

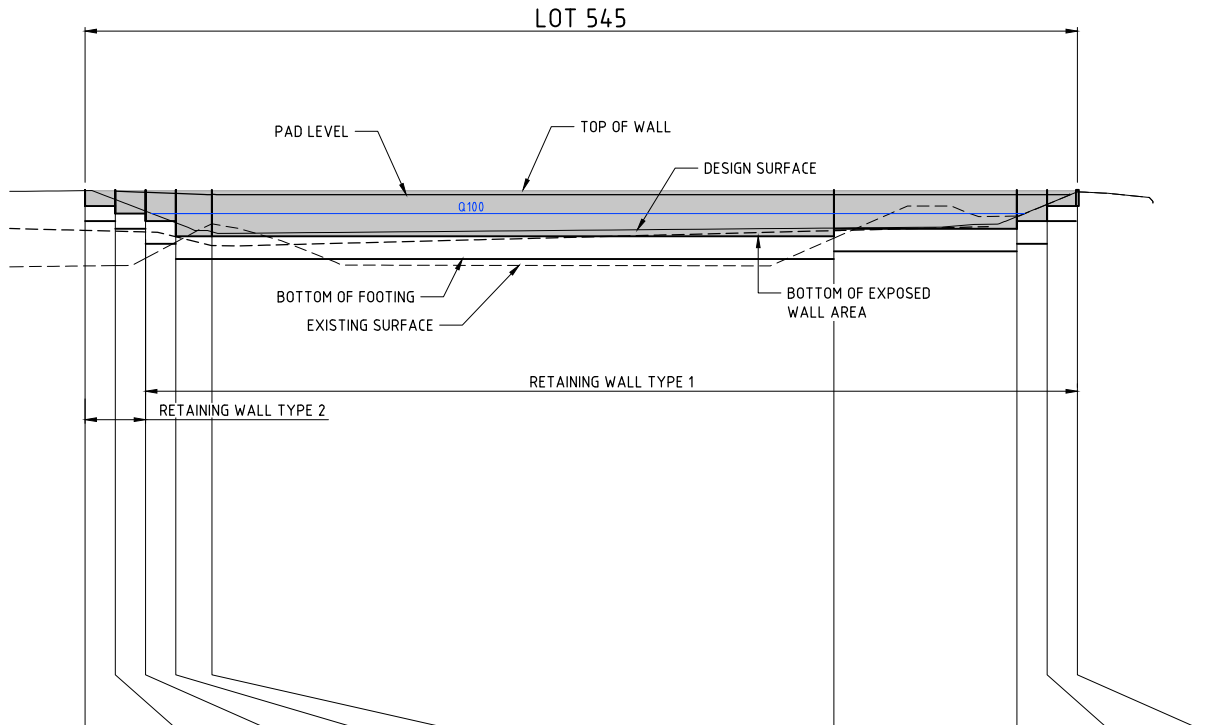


- LEGEND
- 26.0--- ULTIMATE SURFACE CONTOURS
 - TOP OF BATTER
 - TOE OF BATTER / CHANGE IN GRADE
 - ROAD CONTROL LINE
 - UPRIGHT KERB AND GUTTER
 - LAYBACK KERB AND GUTTER

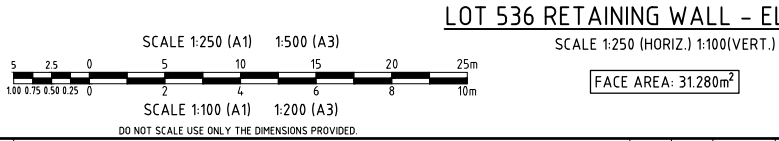


WARNING
BEWARE OF SERVICES
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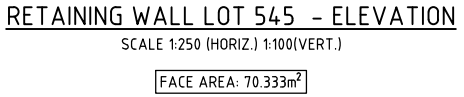
PERMISSION TO USE FOR CONSTRUCTION PURPOSES ROADWORKS AND STORMWATER DRAINAGE
SIGNED _____ DATE _____
DIRECTOR OF CITY GROWTH AND OPERATIONS
CITY OF PALMERSTON
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DATUM (m)	2.0									
JUNCTION BOTTOM LEVEL										
TOP OF WALL LEVEL	17.625	17.625	17.659	17.625	17.658	17.625	17.656	17.625	17.853	17.825
FACE HEIGHT HEIGHT TO TOP LEVEL	0.425	0.400	0.425	0.625	0.625	0.825	0.825	0.800	1.025	1.000
BOTTOM OF WALL LEVEL	17.200	17.200	17.100	17.000	17.000	16.800	16.800	16.800	16.800	16.800
CHAINAGE	0.000	4.000	4.000	2.000	6.000	3.000	9.000	28.600	37.600	2.000



DATUM (m)	2.0									
JUNCTION BOTTOM LEVEL										
TOP OF WALL LEVEL	16.925	16.925	16.925	16.925	16.925	16.925	16.925	16.925	16.925	16.925
FACE HEIGHT HEIGHT TO TOP LEVEL	0.425	0.400	0.425	0.625	0.625	0.825	0.825	1.200	1.225	1.200
BOTTOM OF WALL LEVEL	16.500	16.500	16.300	16.300	16.100	16.100	15.700	15.700	15.700	15.700
CHAINAGE	-2.000	2.000	0.000	2.000	2.000	2.000	4.000	2.390	6.390	41.137



RETAINING WALL DESIGN IS INDICATIVE ONLY.
DESIGN AND CONSTRUCTION BY CONTRACTOR.
RETAINING WALL DESIGNER MUST ALLOW FOR RAPID DRAW DOWN OF FLOOD. Q100 FLOOD LEVELS SHOWN ON RETAINING WALL ELEVATIONS.

AS CONSTRUCTED

Registered Engineer	MC	JT	WR	WR	21/02/22
Date	LW	LW	WR	MKB	08/09/21
Register	ESS	LW	WR	MKB	16/08/21
ENGINEERING CERTIFICATION	No.	Amendments			
	Drawn	Design	Design	Appd	Date



Client	URBEX AND LAND DEVELOPMENT CORP. (JV)			Datum	AHD
Project	ZUCCOLI PHASE 3.6			PSM	RL
Title	RETAINING WALL LAYOUT AND SECTIONS SHEET 1 OF 5			(MGA) COORD	AS CONSTRUCTED
	Project No.	Drawing No.	Rev		
	B00201-CE004		2		

-----26.0-----	ULTIMATE SURFACE CONTOURS
	TOP OF BATTER
-----	TOE OF BATTER / CHANGE IN GRADE
-----	ROAD CONTROL LINE
-----	UPRIGHT KERB AND GUTTER
-----	LAYBACK KERB AND GUTTER

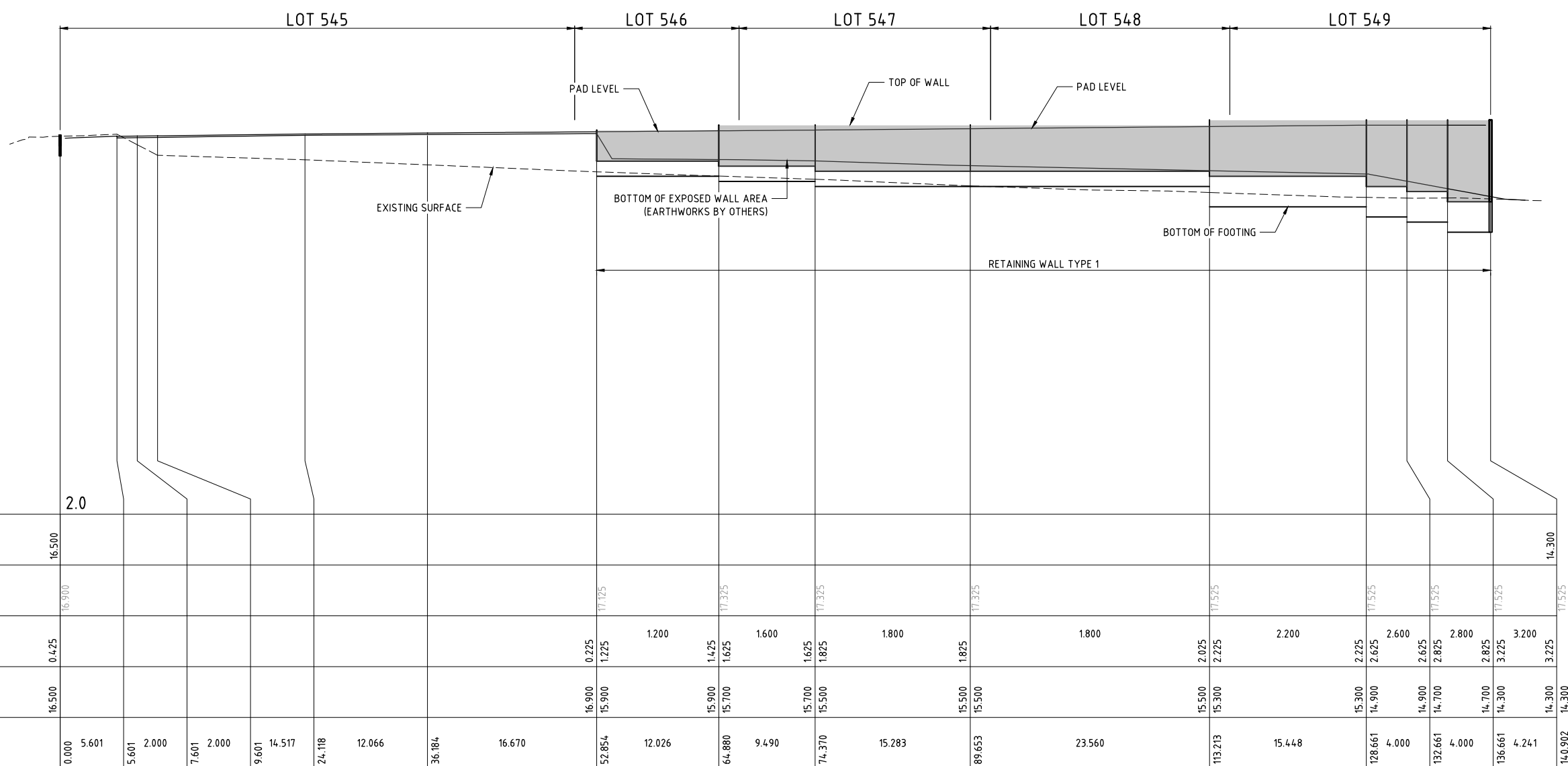
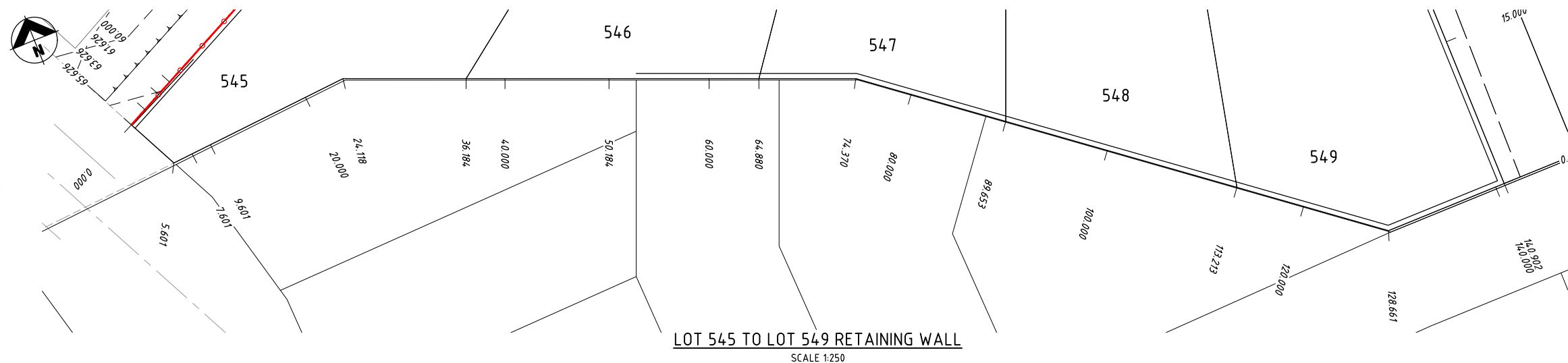
SIGNED _____ DATE _____
DIRECTOR OF CITY GROWTH AND OPERATIONS
CITY OF PALMERSTON

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AS CONSTRUCTED
INFORMATION CERTIFIED BY
BMD URBAN PTY LTD

SIGNED: Brendan Ram DATE: 9/7/2022



LOT 545 TO LOT 549 RETAINING WALL - ELEVATION

SCALE 1:250 (HORIZ.) 1:100(VERT.)

FACE AREA: 168.686m²

RETAINING WALL DESIGN IS INDICATIVE ONLY.
DESIGN AND CONSTRUCTION BY CONTRACTOR.

DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED											
2	AS CONSTRUCTED	MC	JT	WR	WR	27/02/22	Registered Engineer				
1	RETAINWALL LEVELS AMENDED	LW	LW	WR	MKB	08/09/21	Date Register				
0	ISSUED FOR CONSTRUCTION	ESS	LW	WR	MKB	16/08/21	ENGINEERING CERTIFICATION				
No.	Amendments	Drawn	Design	Design Chk	Appd	Date					

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<i>Client</i>	URBEX AND LAND DEVELOPMENT CORP. (JV)	<i>Date</i>	AHD	
<i>Project</i>	ZUCCOLI PHASE 3.6	<i>PSM</i>	RL	
<i>Title</i>	RETAINING WALL LAYOUT AND SECTIONS SHEET 2 OF 5	<i>(MGA)</i>	COORD	
		AS CONSTRUCTED		
		<i>Project No.</i>	<i>Drawing No.</i>	<i>Rev</i>
		B00201-CE005		2

LEGEND

- 26.0--- ULTIMATE SURFACE CONTOURS
- TOP OF BATTER
- TOE OF BATTER / CHANGE IN GRADE
- ROAD CONTROL LINE
- UPRIGHT KERB AND GUTTER
- LAYBACK KERB AND GUTTER

PERMISSION TO USE FOR CONSTRUCTION PURPOSES ROADWORKS AND STORMWATER DRAINAGE

SIGNED _____ DATE _____

DIRECTOR OF CITY GROWTH AND OPERATIONS
CITY OF PALMERSTON

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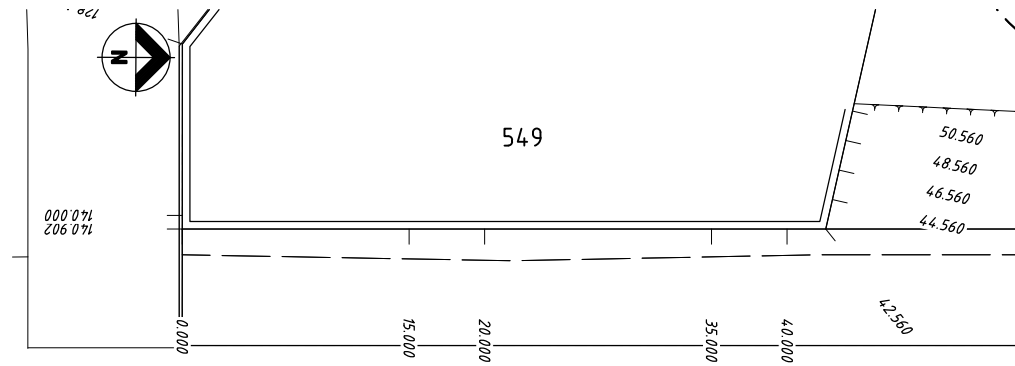
WARNING

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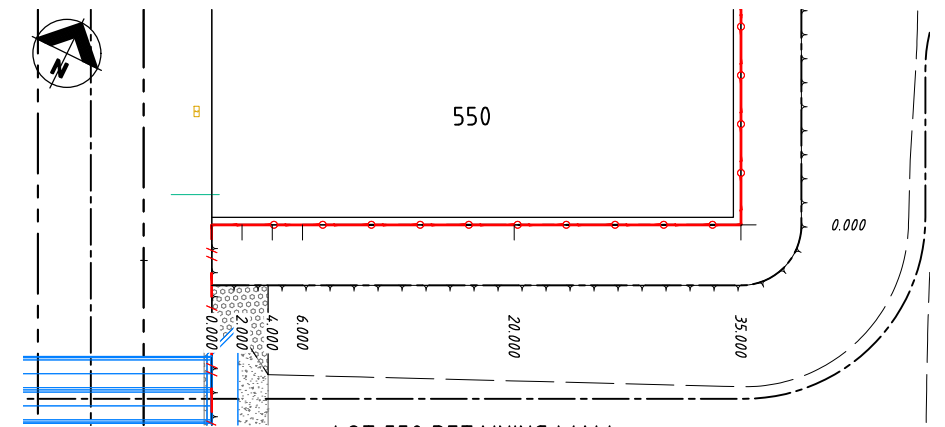
AS CONSTRUCTED
INFORMATION CERTIFIED BY
BMD URBAN PTY LTD

SIGNED Brendan Ash 19/7/2022
DATE



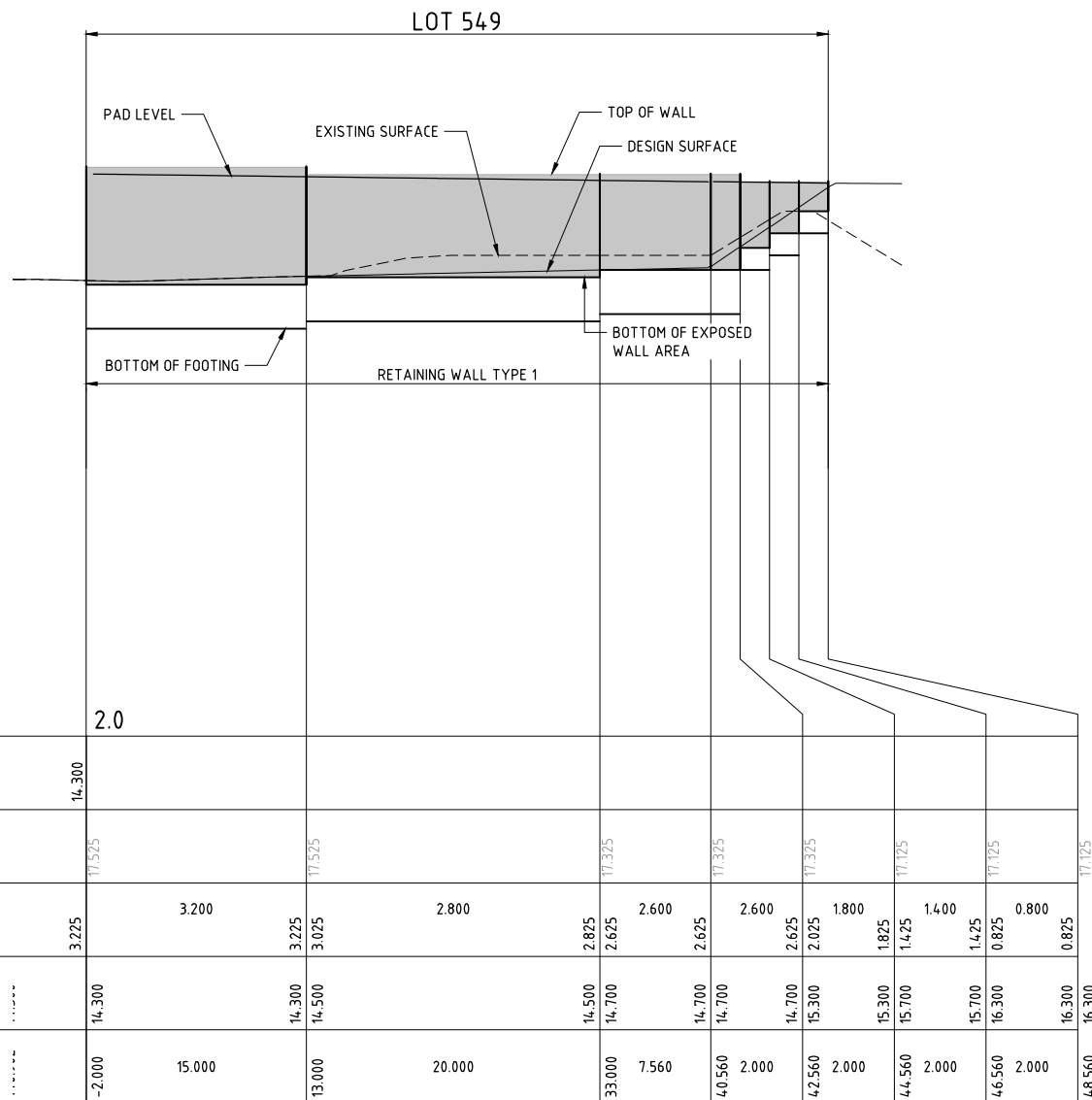
LOT 549 RETAINING WALL

SCALE 1:250



LOT 550 RETAINING WALL

SCALE 1:250

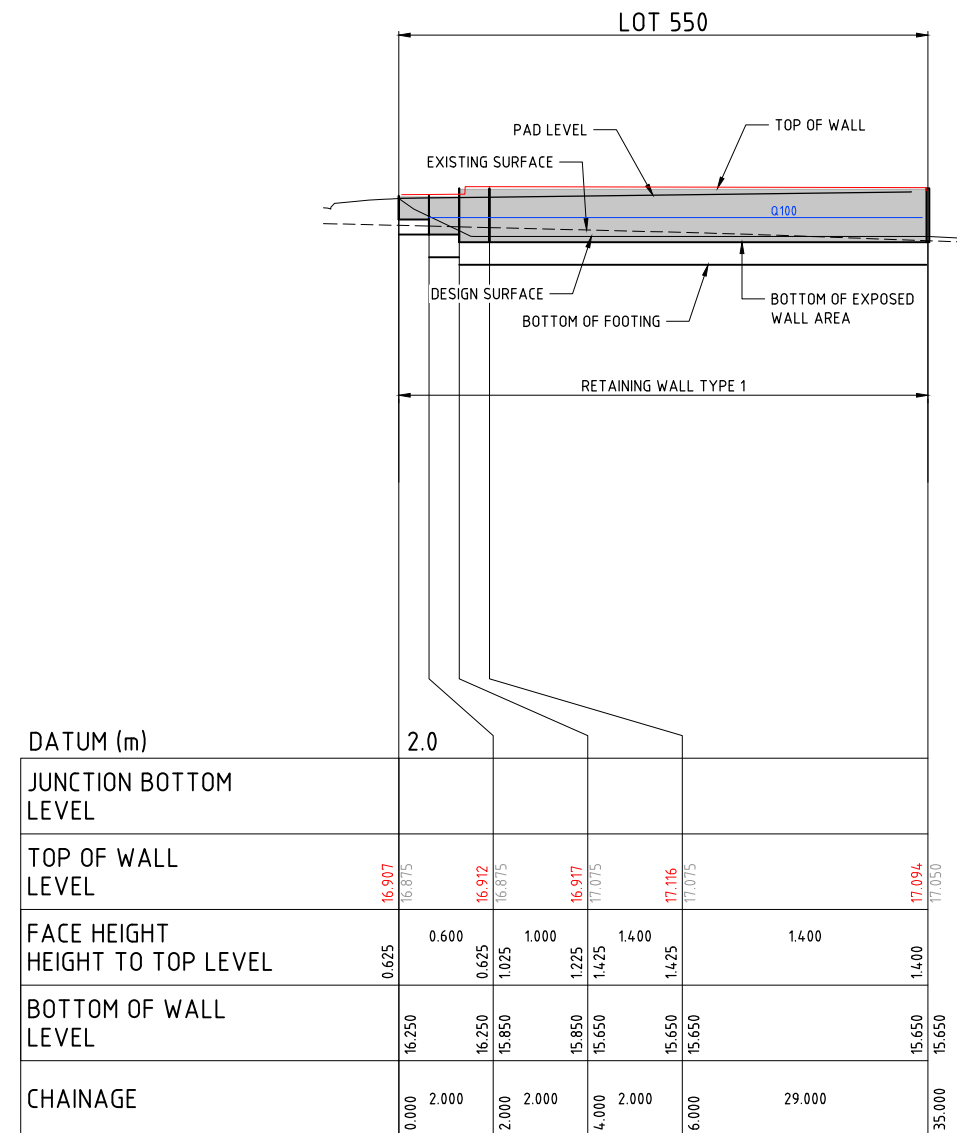


LOT 549 RETAINING WALL - ELEVATION

SCALE 1:250 (HORIZ.) 1:100 (VERT.)

FACE AREA: 136.857m²

AS CONSTRUCTED

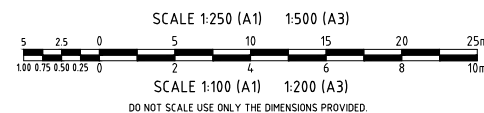


LOT 550 RETAINING WALL - ELEVATION

SCALE 1:250 (HORIZ.) 1:100 (VERT.)

FACE AREA: 46.600m²

RETAINING WALL DESIGN IS INDICATIVE ONLY.
DESIGN AND CONSTRUCTION BY CONTRACTOR.
RETAINING WALL DESIGNER MUST ALLOW FOR RAPID DRAW DOWN OF FLOOD. Q100 FLOOD LEVELS SHOWN ON RETAINING WALL ELEVATIONS.



DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

2	AS CONSTRUCTED	MC	JT	WR	WR	21/02/22	Registered Engineer
1	Q100 FLOOD LEVEL ADDED	LW	LW	WR	MKB	08/09/21	Date Register
0	ISSUED FOR CONSTRUCTION	ESS	LW	WR	MKB	16/08/21	ENGINEERING CERTIFICATION
No.	Amendments	Drawn	Design	Design Chk	Appd	Date	



Client	URBEX AND LAND DEVELOPMENT CORP. (JV)	Datum	AHD
Project	ZUCCOLI PHASE 3.6	PSM	RL
Title	RETAINING WALL LAYOUT AND SECTIONS SHEET 3 OF 5	(MGA)	COORD
Project No.	B00201-CE006	Drawing No.	2

AS CONSTRUCTED

- LEGEND**
- 26.0--- ULTIMATE SURFACE CONTOURS
 - TOP OF BATTER
 - TOE OF BATTER / CHANGE IN GRADE
 - ROAD CONTROL LINE
 - UPRIGHT KERB AND GUTTER
 - LAYBACK KERB AND GUTTER

**PERMISSION TO USE FOR
CONSTRUCTION PURPOSES
ROADWORKS AND STORMWATER
DRAINAGE**

SIGNED _____ DATE _____

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CITY OF PALMERSTON

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DESIGN AND/OR DOCUMENTS ASSOCIATED. THIS PERMISSION IS
VALID FOR A PERIOD OF TWO YEARS FROM THE DATE OF SIGNED
APPROVAL.

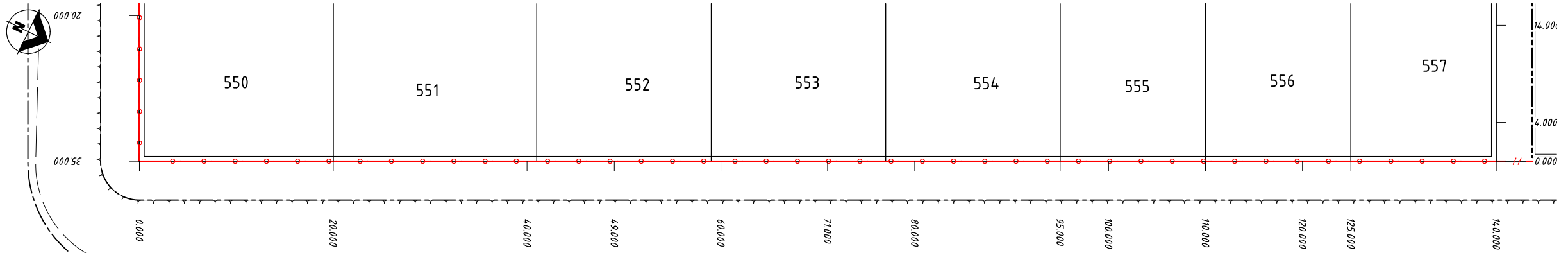
WARNING

BEWARE OF SERVICES

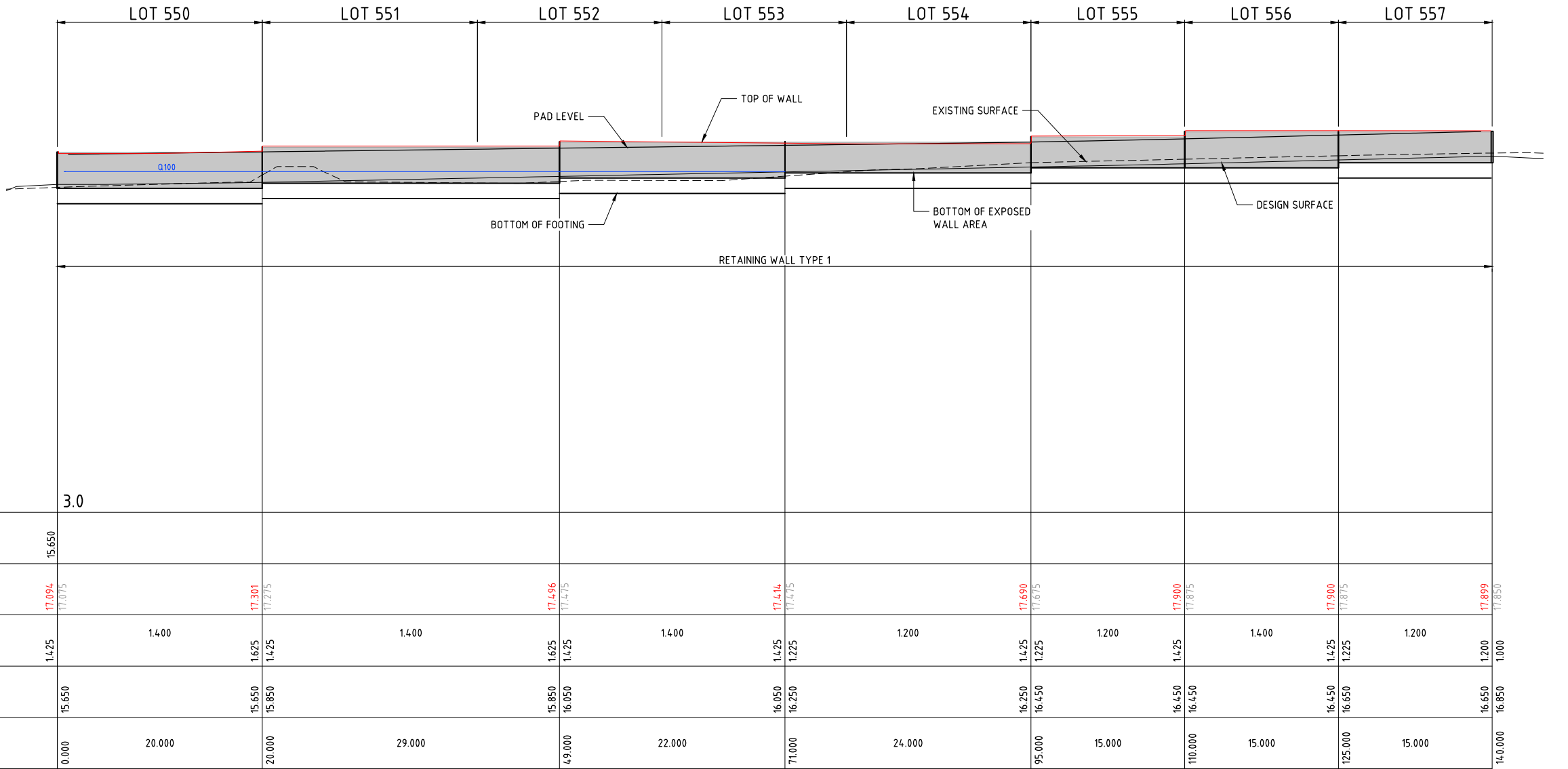
THE LOCATIONS OF ALL EXISTING SERVICES
ARE APPROXIMATE ONLY AND THEIR EXACT
POSITION SHOULD BE PROVEN ON SITE BY
CONTRACTOR. NO GUARANTEE IS GIVEN
THAT ALL EXISTING SERVICES ARE SHOWN.

AS CONSTRUCTED
INFORMATION CERTIFIED BY
BMD URBAN PTY LTD

SIGNED *Brendan* 29/7/2022
DATE



LOT 550 TO LOT 557 RETAINING WALL
SCALE 1:250



DATUM (m)

3.0

JUNCTION BOTTOM LEVEL	15.650																		
TOP OF WALL LEVEL	17.094 17.075			17.301 17.275			17.496 17.475			17.414 17.475			17.690 17.675			17.900 17.875			17.899 17.850
FACE HEIGHT HEIGHT TO TOP LEVEL	1.425	1.400	1.625 1.425	1.400	1.625 1.425	1.400	1.425 1.225	1.200	1.425 1.225	1.200	1.425 1.225	1.400	1.425 1.225	1.200	1.400	1.425 1.225	1.200	1.400	1.200
BOTTOM OF WALL LEVEL	15.650		15.650 15.850		15.850 16.050		16.050 16.250		16.250 16.450		16.450 16.650		16.650 16.850		16.850 17.050		17.050 17.250		17.250 17.450
CHAINAGE	0.000	20.000	20.000	29.000	49.000	22.000	71.000	24.000	95.000	15.000	110.000	15.000	125.000	15.000	140.000				

LOT 550 TO LOT 557 RETAINING WALL - ELEVATION

SCALE 1:250 (HORIZ.) 1:100 (VERT.)

FACE AREA: 185.200m²

RETAINING WALL DESIGN IS INDICATIVE ONLY.
DESIGN AND CONSTRUCTION BY CONTRACTOR.
RETAINING WALL DESIGNER MUST ALLOW FOR RAPID DRAW DOWN OF
FLOOD. Q100 FLOOD LEVELS SHOWN ON RETAINING WALL ELEVATIONS.

AS CONSTRUCTED

No.	Amendments	Drawn	Design	Design Chk	Appd	Date	Registered Engineer
2	AS CONSTRUCTED	MC	JT	WR	WR	27/02/22	
1	Q100 FLOOD LEVEL ADDED	LW	LW	WR	MKB	08/09/21	
0	ISSUED FOR CONSTRUCTION	ESS	LW	WR	MKB	16/08/21	
							ENGINEERING CERTIFICATION



Client	URBEX AND LAND DEVELOPMENT CORP. (JV)	Datum	AHD
Project	ZUCCOLI PHASE 3.6	PSM	RL
Title	RETAINING WALL LAYOUT AND SECTIONS SHEET 4 OF 5	(MGA)	COORD
		Project No.	B00201-CE007
		Drawing No.	2

-----26.0-----	ULTIMATE SURFACE CONTOURS
	TOP OF BATTER
-----	TOE OF BATTER / CHANGE IN GRADE
-----	ROAD CONTROL LINE
-----	UPRIGHT KERB AND GUTTER
-----	LAYBACK KERB AND GUTTER

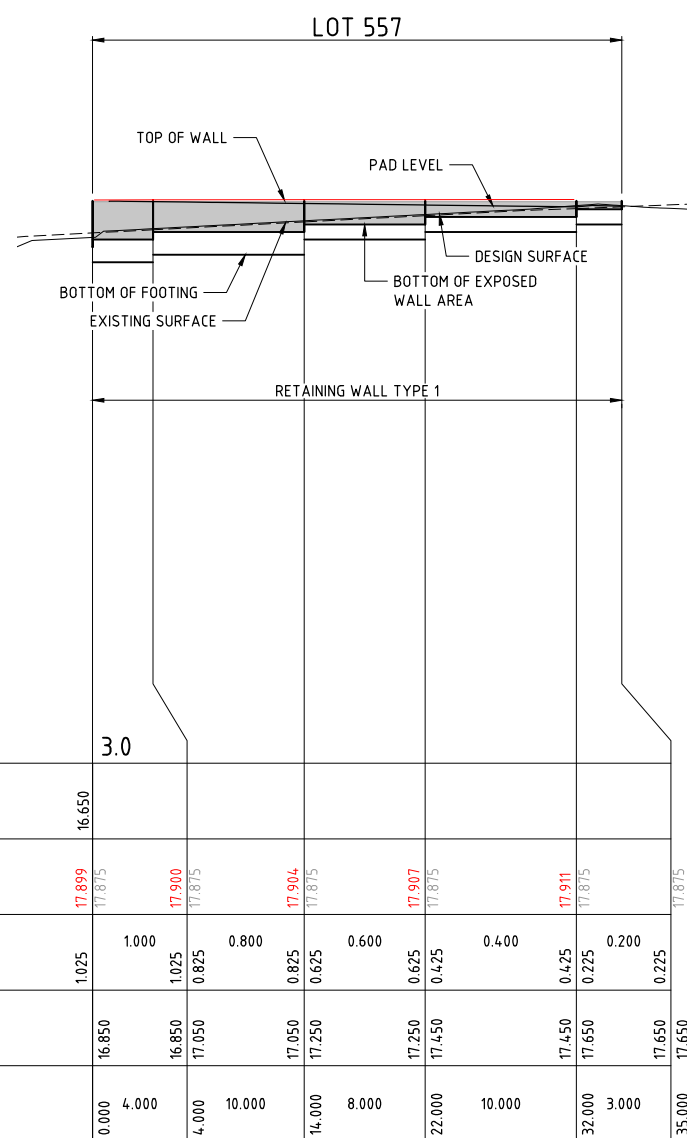
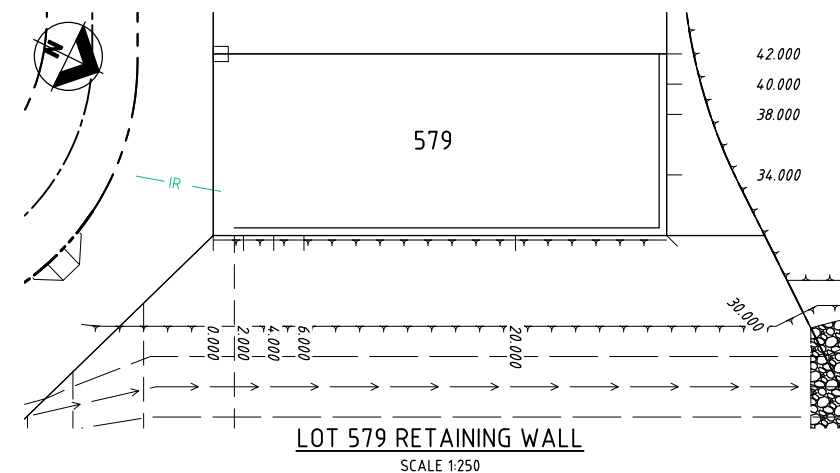
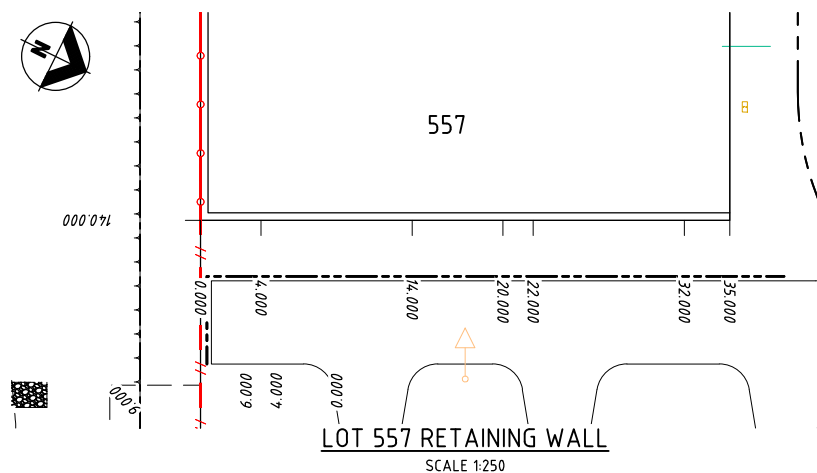
SIGNED _____ DATE _____
DIRECTOR OF CITY GROWTH AND OPERATIONS
CITY OF PALMERSTON

WARNING
BEWARE OF SERVICES

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AS CONSTRUCTED
INFORMATION CERTIFIED BY
BMD URBAN PTY LTD

SIGNED Brendan Park DATE 8/7/2022

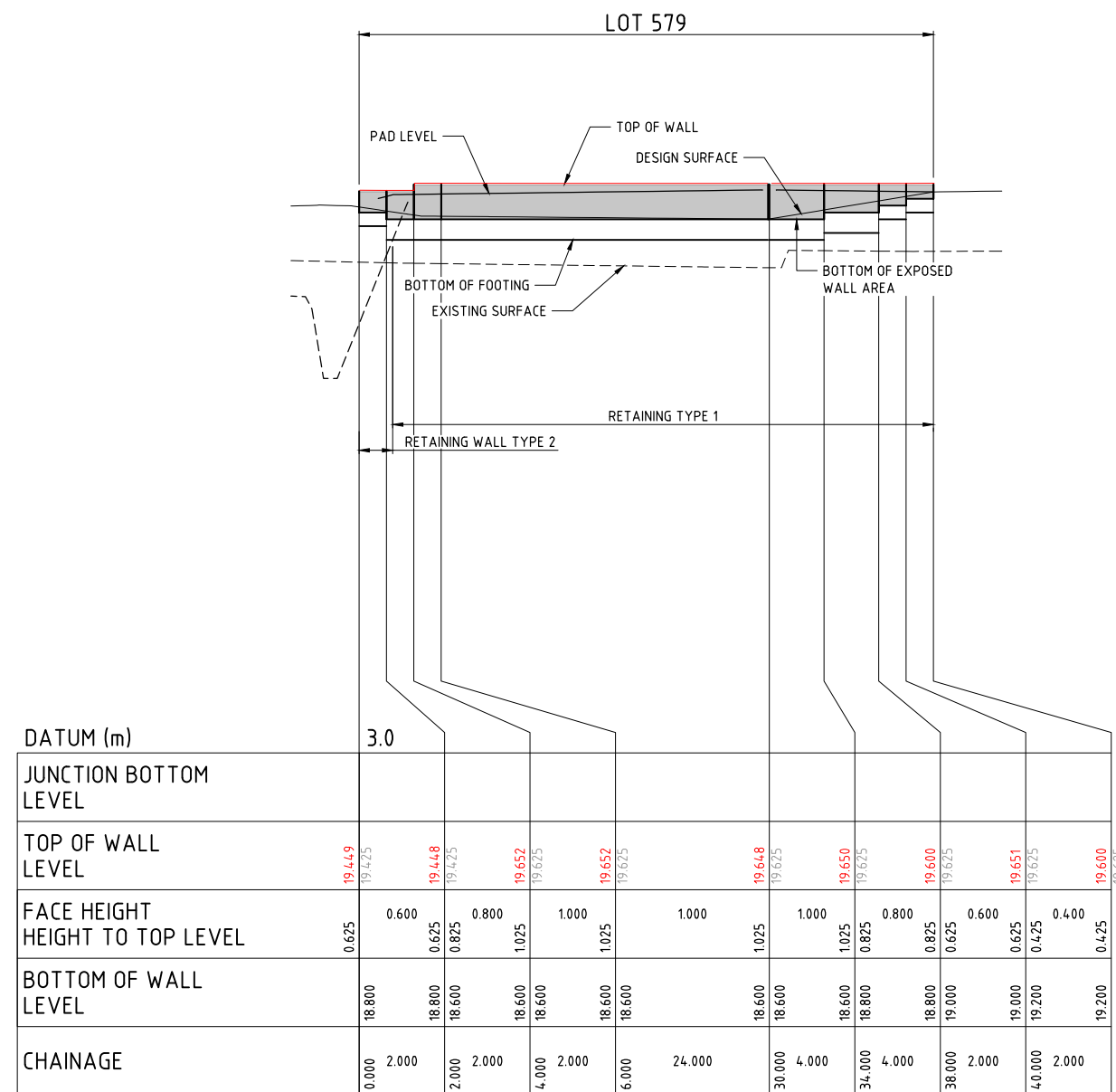


LOT 557 RETAINING WALL - ELEVATION

SCALE 1:250 (HORIZ.) 1:100(VERT.)

FACE AREA: 21.400m²

AS CONSTRUCTED



LOT 579 RETAINING WALL - ELEVATION

SCALE 1:250 (HORIZ.) 1:100(VERT.)

FACE AREA: 38.000m²

RETAINING WALL DESIGN IS INDICATIVE ONLY.
DESIGN AND CONSTRUCTION BY CONTRACTOR.

DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.						
2	AS CONSTRUCTED	MC	JT	WR	WR	21/02/22
1	SCLAE LABELS AMENDED	LW	LW	WR	MKB	08/09/21
0	ISSUED FOR CONSTRUCTION	ESS	LW	WR	MKB	16/08/21
No.	Amendments	Drawn	Design	Design Chk	Appd	Date

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<i>Client</i>	URBEX AND LAND DEVELOPMENT CORP. (JV)	<i>Datum</i> AHD	
<i>Project</i>	ZUCCOLI PHASE 3.6	PSM . RL . (MGA) COORD	
<i>Title</i>	RETAINING WALL LAYOUT AND SECTIONS SHEET 5 OF 5	AS CONSTRUCTED	
		<i>Project No.</i> B00201-CE008	<i>Drawing No.</i> 2

LEGEND

- FINISHED SURFACE CONTOURS
- TOP OF BATTER
- TOE OF BATTER / CHANGE IN GRADE
- ROAD CONTROL LINE
- UPRIGHT KERB AND GUTTER
- LAYBACK KERB AND GUTTER
- SWD --- STORMWATER DRAINAGE
- RWD --- ROOFWATER DRAINAGE
- E --- ELECTRICAL RETICULATION
- S --- SEWERAGE RETICULATION
- W --- WATER RETICULATION
- C --- C --- WATER CONDUIT CROSSINGS
- SWALE DRAIN
- CONCRETE FOOTPATH
- CONCRETE FOOTPATH DELIVERED AS PART OF LANDSCAPE PLANS. REFER LANDSCAPE PACKAGE FOR DETAILING.
- IR --- IRRIGATION CONDUITS REFER ABEP PLANS FOR SETOUT DETAILS

PERMISSION TO USE FOR CONSTRUCTION PURPOSES ROADWORKS AND STORMWATER DRAINAGE

SIGNED _____ DATE _____
DIRECTOR OF CITY GROWTH AND OPERATIONS
CITY OF PALMERSTON

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WARNING BEWARE OF SERVICES

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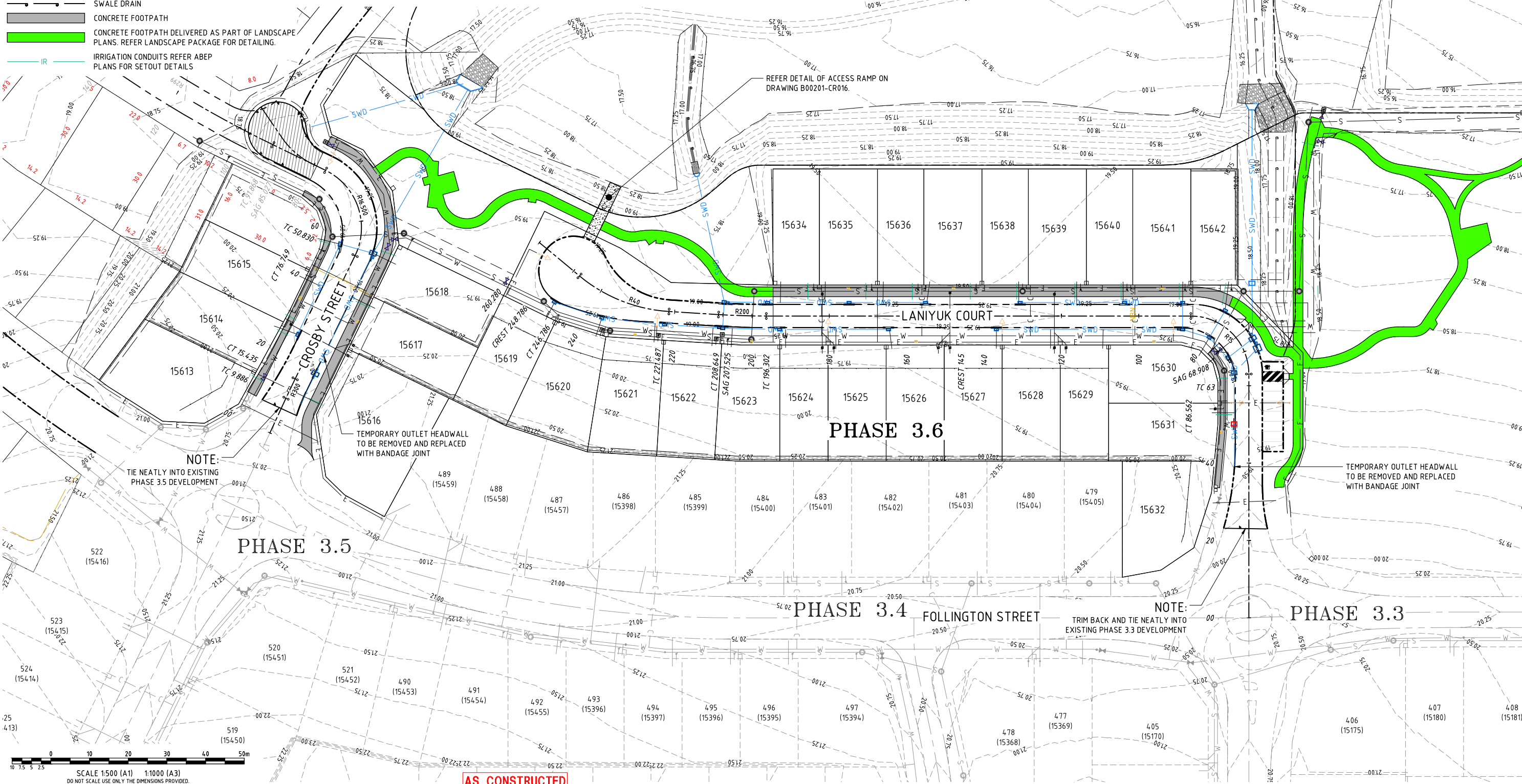
NOTE:

ROOFWATER CONNECTIONS INTO ALLOTMENTS AS PER DETAIL ON DRAWING B00201-CG007

AS CONSTRUCTED
INFORMATION CERTIFIED BY
BMD URBAN PTY LTD

SIGNED *Brundan* 12/8/7/2022
DATE _____

DAMBO OPEN SPACE AREA



AS CONSTRUCTED

Plot Date: 11/07/2022 3:20:29 PM User: MARK CARLLO File Name: C:\Users\markcarllo\Documents\12314 CIVIL-DRAWING\AS CONSTRUCTED\1-6-RDP

2	AS CONSTRUCTED	MC	JT	WR	WR	11/07/22	Registered Engineer
1	ADJOINING DEVELOPMENT CONTOURS ADDED	LW	LW	WR	MKB	08/09/21	Date Register
0	ISSUED FOR CONSTRUCTION	ESS	LW	WR	MKB	16/08/21	ENGINEERING CERTIFICATION
No.	Amendments	Drawn	Design	Design	Chk	Appd	Date

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Client	URBEX AND LAND DEVELOPMENT CORP. (JV)	Datum	ADP
Project	ZUCCOLI PHASE 3.6	PSM	RL
Title	ROADWORKS LAYOUT PLAN SHEET 1 OF 2	MG	COORD
Project No.	B00201-CR001	Drawing No.	2
Rev			

JOINS DRAWING No. B00201-CR002

INSET A-A

— REFER DETAIL OF ACCESS RAMP
ON DRAWING B00201-CR016.

DRIVEWAY No. 01









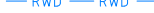


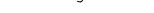
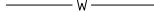



PHASE 3.6

WARNING

AWARE OF SERVICES

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LEGEND

- | | |
|---|--|
|  | FINISHED SURFACE CONTOURS |
|  | TOP OF BATTER |
|  | TOE OF BATTER / CHANGE IN GRADE |
|  | ROAD CONTROL LINE |
|  | UPRIGHT KERB AND GUTTER |
|  | LAYBACK KERB AND GUTTER |
|  | STORMWATER DRAINAGE |
|  | ROOFWATER DRAINAGE |
|  | ELECTRICAL RETICULATION |
|  | SEWERAGE RETICULATION |
|  | WATER RETICULATION |
|  | WATER CONDUIT CROSSINGS |
|  | SWALE DRAIN |
|  | CONCRETE FOOTPATH |
|  | CONCRETE FOOTPATH DELIVERED AS PART OF LANDSCAPE PLANS. REFER LANDSCAPE PACKAGE FOR DETAILING. |
|  | IRRIGATION CONDUITS REFER ABEP PLANS FOR SETOUT DETAILS |

PERMISSION TO USE FOR
CONSTRUCTION PURPOSES
ROADWORKS AND STORMWATER
DRAINAGE

SIGNED _____ DATE _____
DIRECTOR OF CITY GROWTH AND OPERATIONS
CITY OF PALMERSTON

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NOTE:
ROOFWATER CONNECTIONS INTO ALLOTMENTS
AS PER DETAIL ON DRAWING B00201-CG007

NOTE:
TIE NEATLY INTO EXISTING
PHASE 3.3 DEVELOPMENT

AS CONSTRUCTED




LAND DEVELOPMENT
CORPORATION

urbex

Empower 
**ENGINEERS &
PROJECT MANAGERS** **ABN 23 010 743 65**

<i>Client</i>	URBEX AND LAND DEVELOPMENT CORP. (JV)
<i>Project</i>	ZUCCOLI PHASE 3.6
<i>Title</i>	ROADWORKS LAYOUT PLAN SHEET 2 OF 2

Datum AHD PSM RL (MGA) COORD	
AS CONSTRUCTED	
Project No. B00201-CR002	Drawing No. 2

Print Date: 11/07/2022 3:20:33 PM User: MARK CARILLO File Name: C:\2dS\data\MAN12DSYN01\B00201_123\4 CIVIL-DRES\4.4 AS CON\B00201-3.6-RDP

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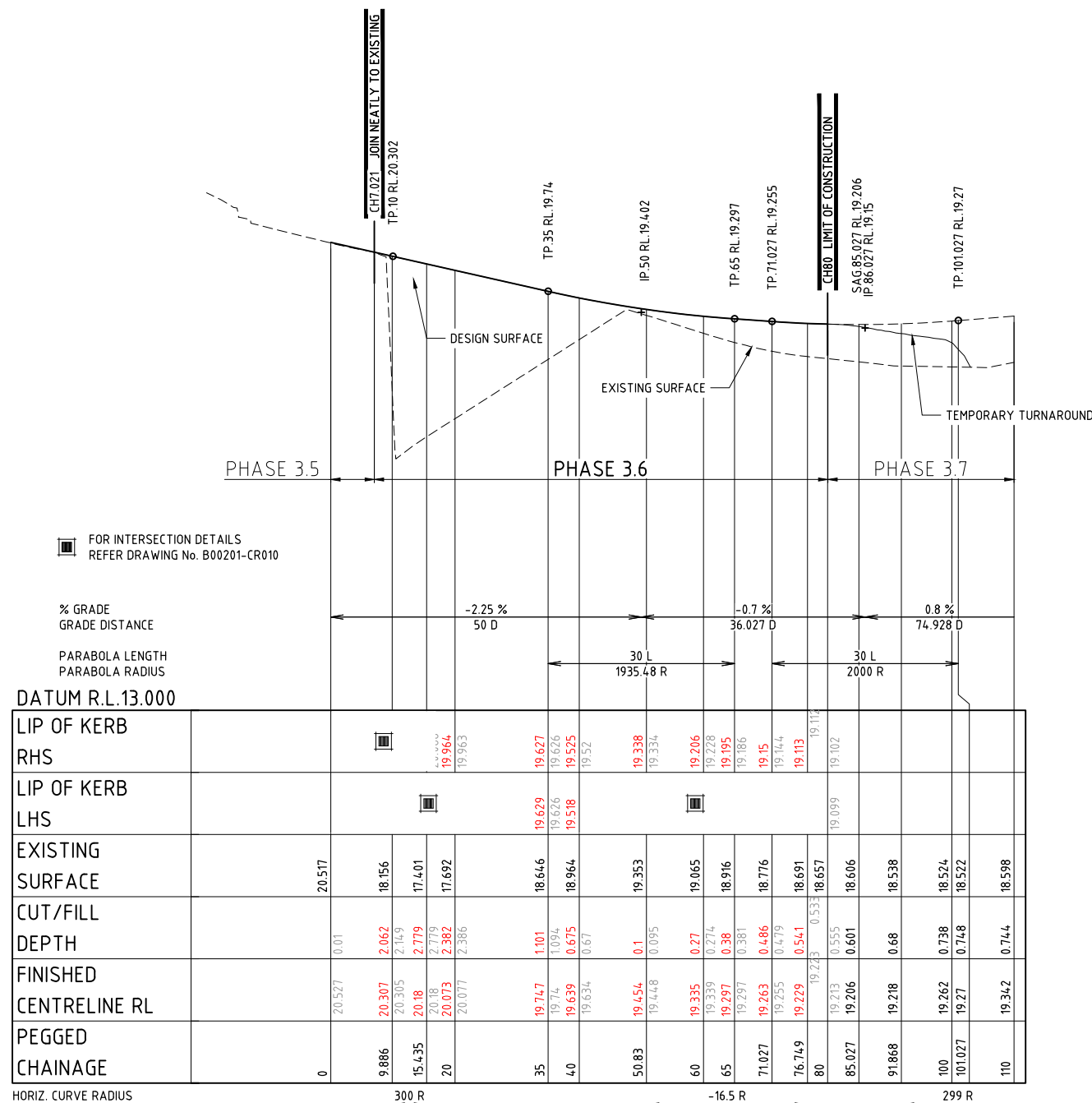
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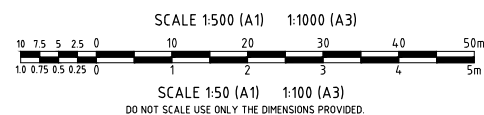
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AS CONSTRUCTED
INFORMATION CERTIFIED BY
BMD URBAN PTY LTD

SIGNED Brundan Lam 28/7/2022
DATE



CROSBY STREET LONGITUDINAL SECTION
SCALE 1:500(HORIZ.) 1:50(VERT.)



AS CONSTRUCTED

Registered Engineer

Date _____ Register _____

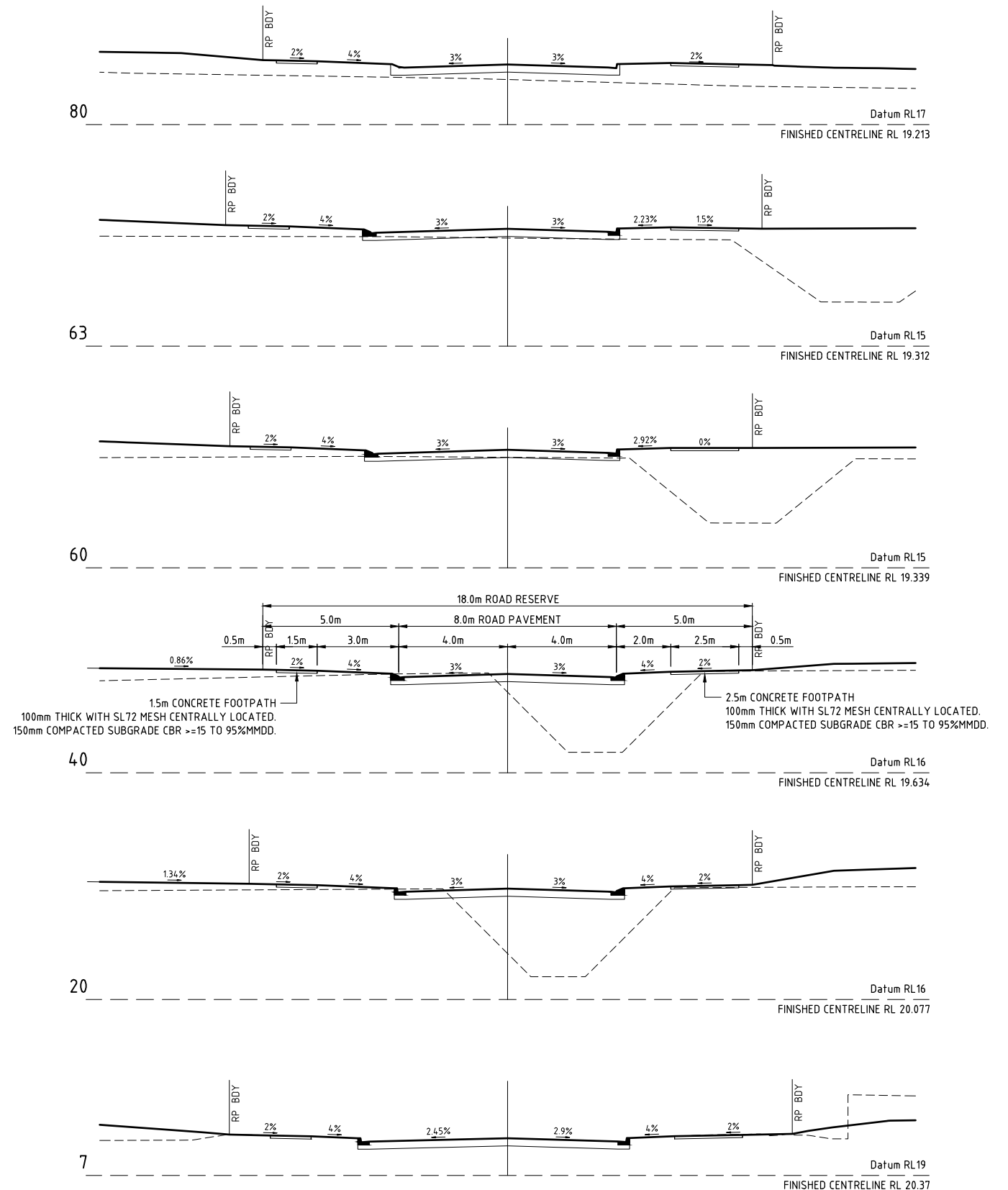
ENGINEERING CERTIFICATION

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CROSBY STREET CROSS SECTION
SCALE 1:100

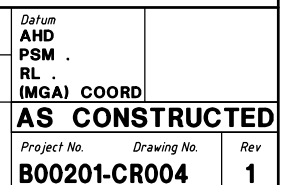
<i>Client</i>	URBEX AND LAND DEVELOPMENT CORP. (JV)	<i>Date</i> AHD PSM RL (MGA)	COORD
<i>Project</i>	ZUCCOLI PHASE 3.6		
<i>Title</i>	CROSBY STREET CROSS AND LONGITUDINAL SECTIONS	AS CONSTRUCTED	
		<i>Project No.</i> B00201-CR003	<i>Rev</i> 1

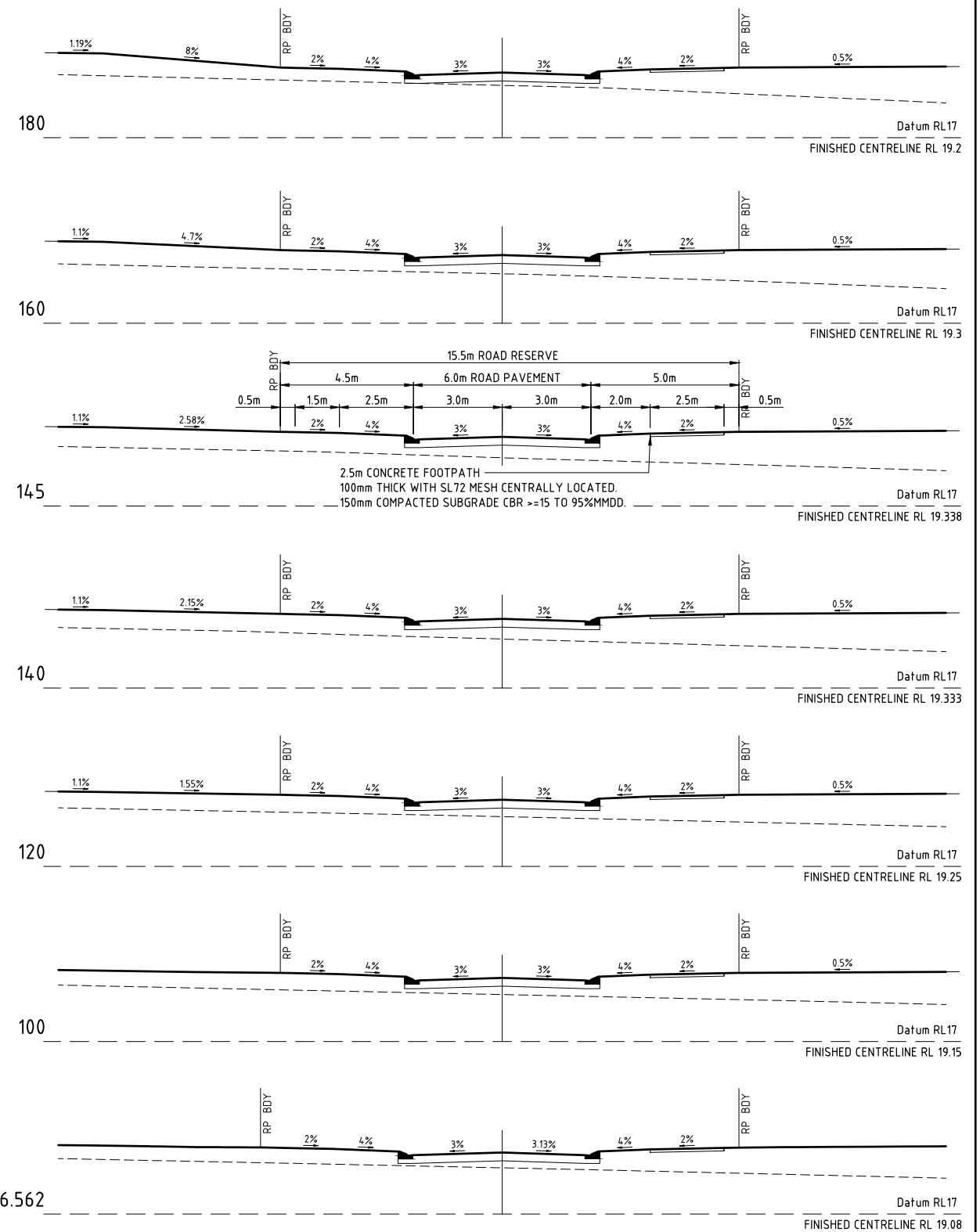


SIGNED: Brendan DATE: 4/7/2022

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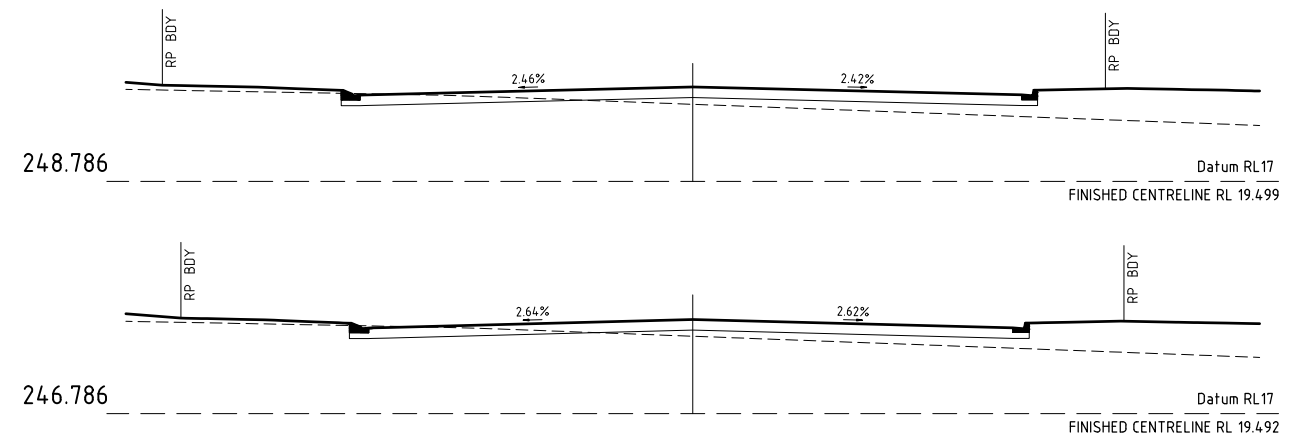


[illegible]

SIGNED: Brendan Gam DATE: 8/7/2022

2 THE LOCATIONS OF ALL EXISTING SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE BY CONTRACTOR. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

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0 2 4 6 8 10m
2.0 1.5 1.0 0.5
SCALE 1:100 (A1) 1:200 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

	<u>Registered Engineer</u>	
2	<u>Date</u>	<u>Register</u>
21	<u>ENGINEERING CERTIFICATION</u>	

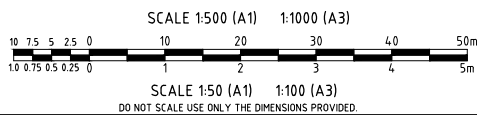


<i>Project No.</i>	<i>Drawing No.</i>	<i>Rev</i>
B00201-CR006		1

SIGNED Brendan Ram DATE 28/7/2022

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	Registered Engineer	
2	Date	Register
21	ENGINEERING CERTIFICATION	



Datum AHD PSM . RL . (MGA) COORD	
AS CONSTRUCTED	
Project No. B00201-CR007	Drawing No. Rev 1

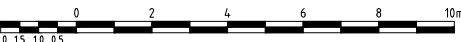
SIGNED _____ DATE _____
DIRECTOR OF CITY GROWTH AND OPERATIONS
CITY OF PALMERSTON

WARNING
BEWARE OF SERVICES

AS CONSTRUCTED
INFORMATION CERTIFIED BY
BMD URBAN PTY LTD

The diagrams illustrate the cross-section of a road and its drainage system at various elevations. The top diagram shows a road with a 0.5% slope on the left and 2% slopes on both sides of the centerline. The centerline is at a finished elevation of 17.383. The next diagram shows a similar cross-section with a finished centerline elevation of 17.474. The third diagram shows a cross-section with a finished centerline elevation of 17.605. The fourth diagram shows a cross-section with a finished centerline elevation of 17.8. The fifth diagram shows a cross-section with a finished centerline elevation of 17.89. The sixth diagram shows a cross-section with a finished centerline elevation of 18.19. The seventh diagram shows a cross-section with a finished centerline elevation of 18.577. The eighth diagram shows a cross-section with a finished centerline elevation of 18.678. The diagrams include labels for 'RP BODY' and 'RP BODY' on both sides of the centerline. The sixth diagram includes a detailed view of the road reserve and pavement structure, showing a 16.0m road reserve, 7.0m road pavement, and a 15m concrete footpath. The footpath is 100mm thick with SL72 mesh centrally located and 150mm compacted subgrade CBR >= 15 to 95% MMD.

SCALE 1:100



2	<i>Date</i>	<i>Register</i>
1	ENGINEERING CERTIFICATION	



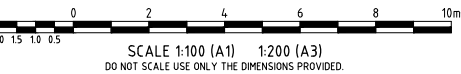
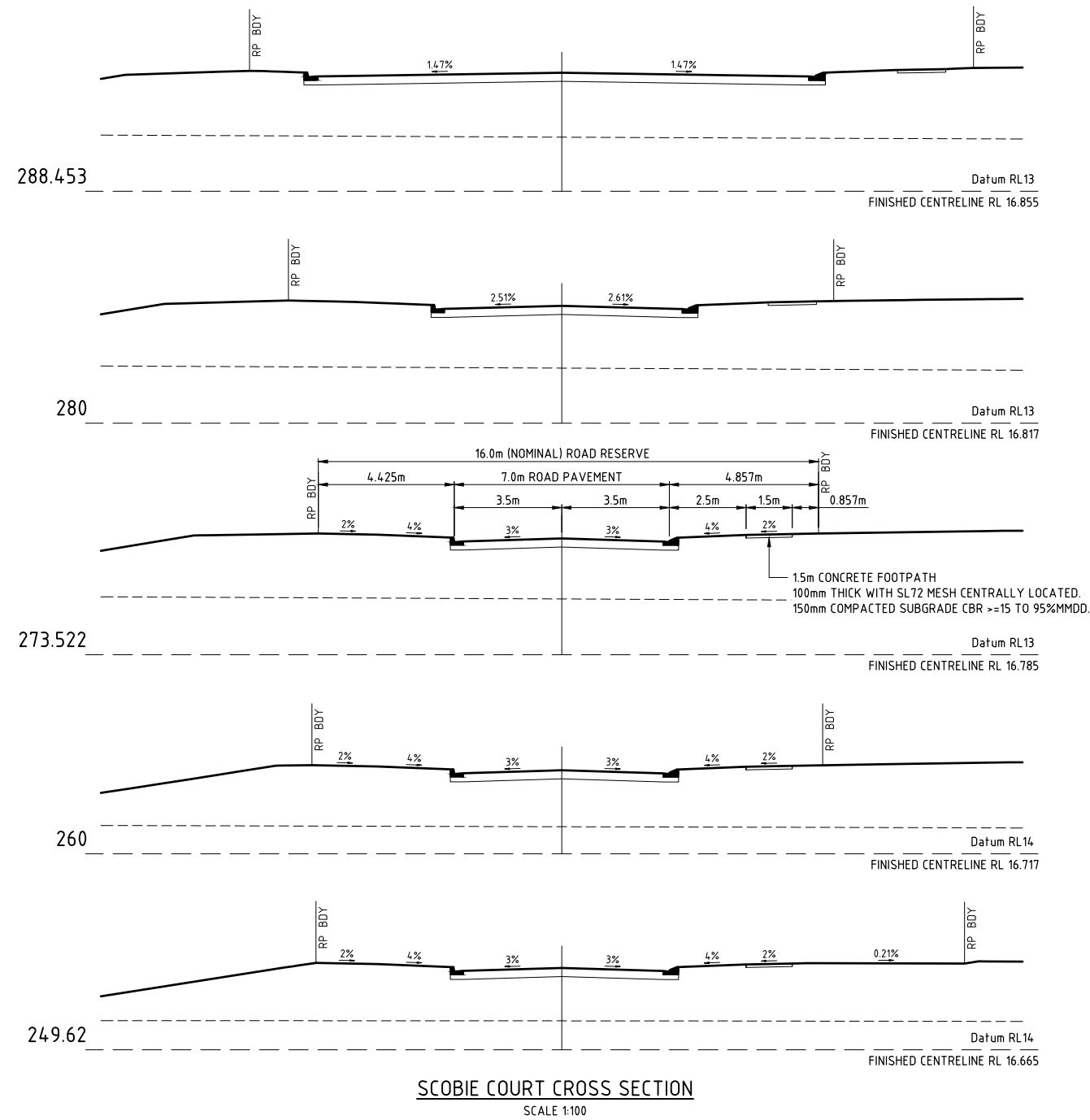
Datum AHD PSM . RL . (MGA) COORD	
--	--

Project No.	Drawing No.	Rev
B00201-CR008		1

AS CONSTRUCTED
INFORMATION CERTIFIED BY
BMD URBAN PTY LTD
SIGNED.....*Brendan*.....DATE.....*16/7/2022*.....

WARNING
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PERMISSION TO USE FOR CONSTRUCTION PURPOSES ROADWORKS AND STORMWATER DRAINAGE
SIGNED.....DATE.....
DIRECTOR OF CITY GROWTH AND OPERATIONS
CITY OF PALMERSTON
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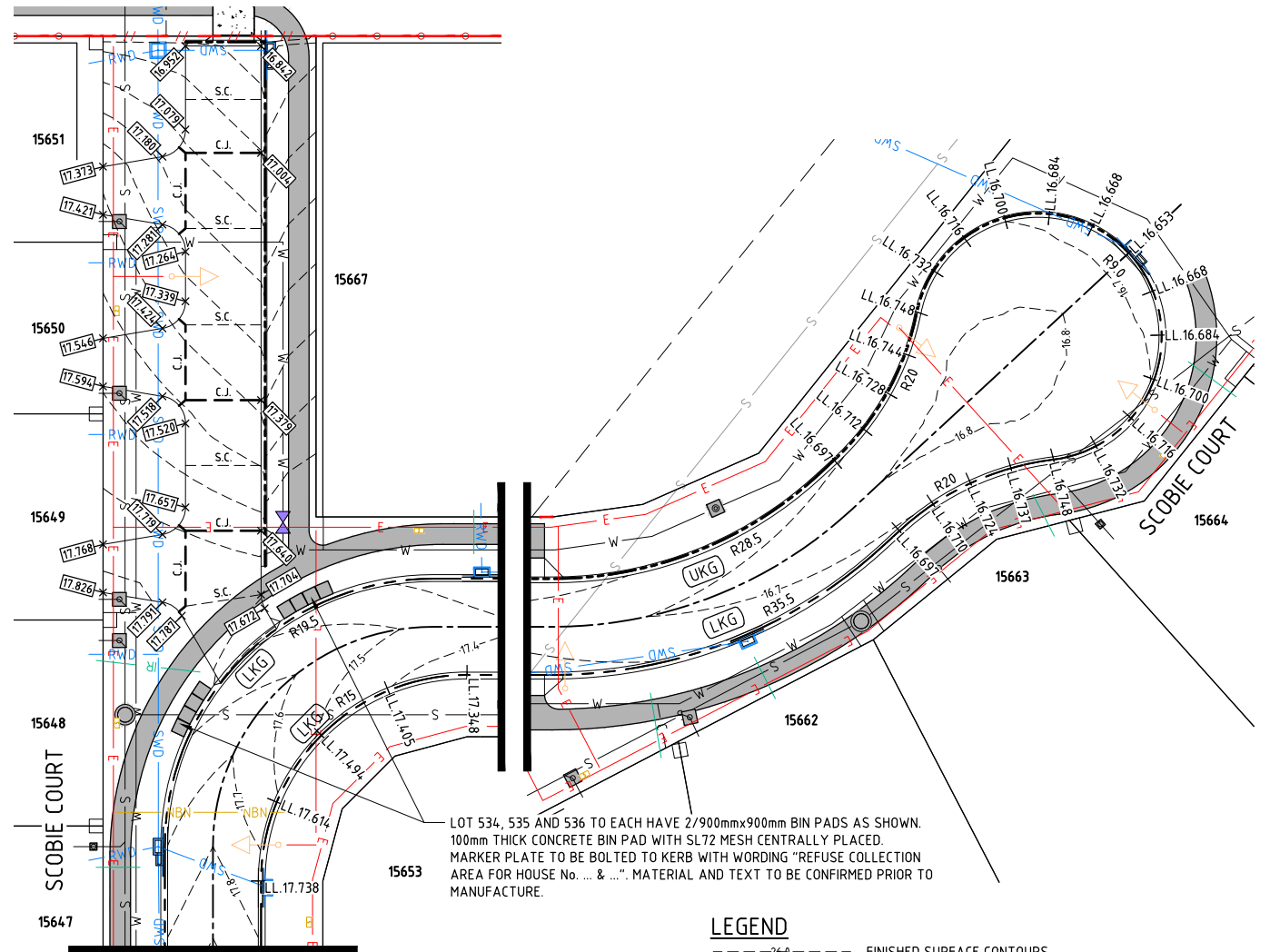
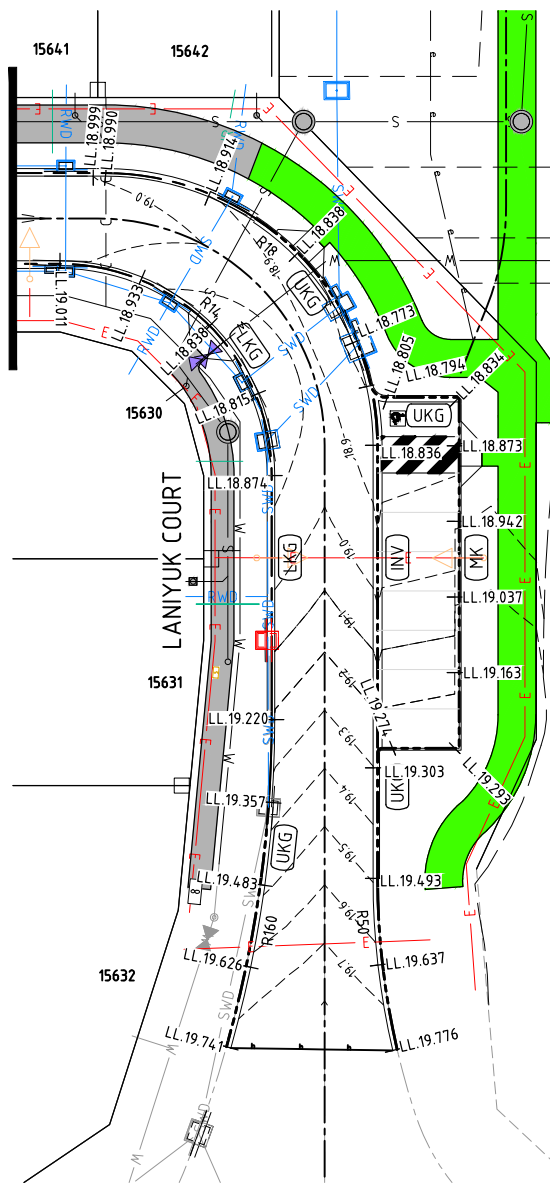
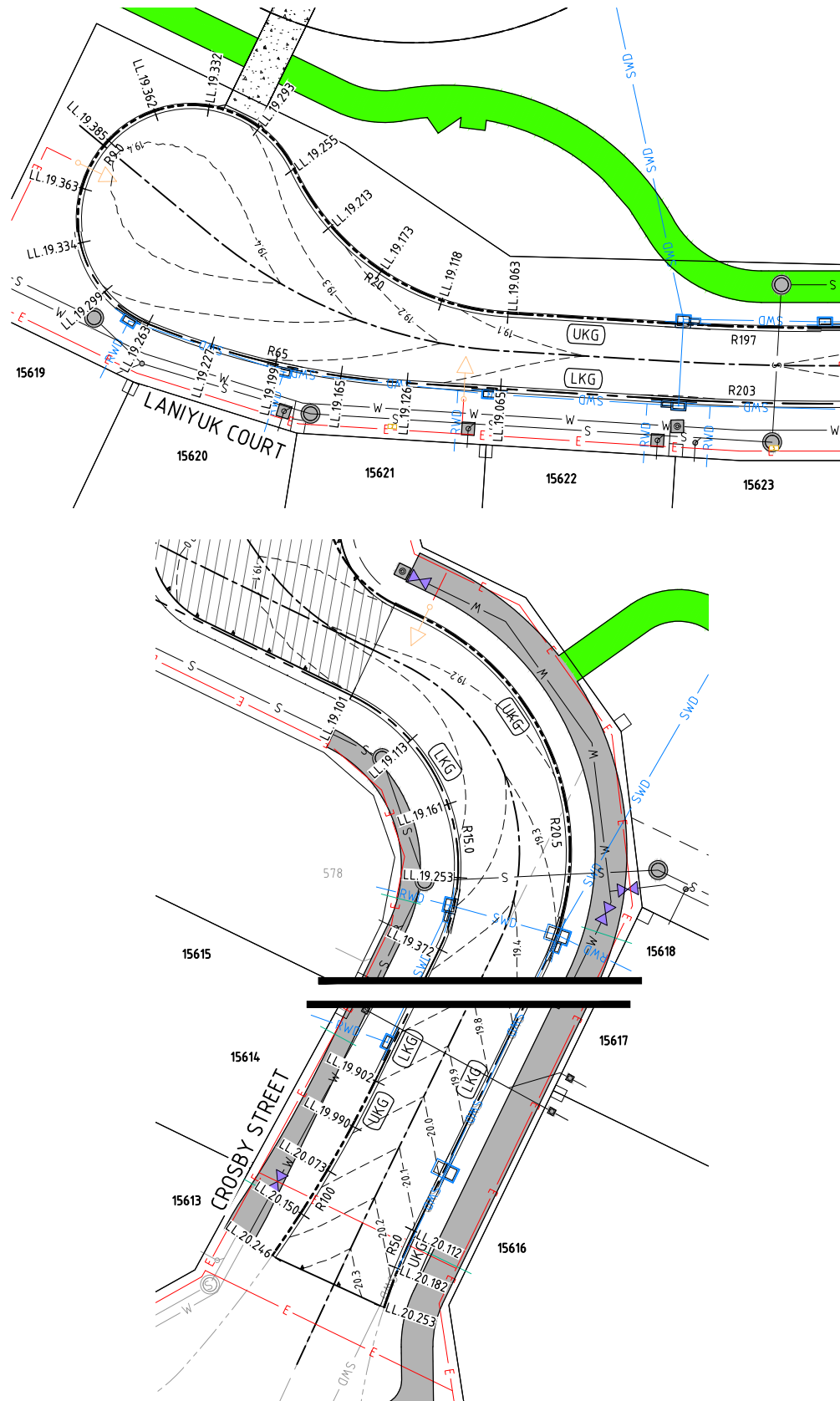


AS CONSTRUCTED



Client	URBEX AND LAND DEVELOPMENT CORP. (JV)			Datum	AHD	PSM	RL	COORD
Project	ZUCCOLI PHASE 3.6							
Title	SCOBIE COURT CROSS SECTIONS SHEET 2 OF 2							
Project No.	B00201-CR009		Drawing No.	1		Rev	1	

User: MARK CARILLO File Name: C:\Users\mark\Documents\B00201-36-INT Plot Date: 11/07/2022 3:21:06 PM



LEGEND

- 26.0 --- FINISHED SURFACE CONTOURS
- ROAD CONTROL LINE
- (MK) MOUNTABLE KERB
- (UKG) UPRIGHT KERB AND GUTTER
- (LKG) LAYBACK KERB AND GUTTER
- (INV) INVERT KERB
- SWD STORMWATER DRAINAGE
- E ELECTRICAL RETICULATION
- S SEWERAGE RETICULATION
- W WATER RETICULATION
- C C C WATER CONDUIT CROSSINGS
- SWALE DRAIN

JOINT TYPES

- S.C --- SAW CUT
- C.J --- CONTRACTION JOINT
- FOR DETAILS REFER DRAWING B00201-CG007

SURFACE TREATMENT

- EXPOSED AGGREGATE 150mm 32MPa CONCRETE SL82 MESH 50mm MIN TOP COVER SUBGRADE TO BE 150mm THICK CRB 15 AND COMPACTED TO 95% MMDD MINIMUM.
- FOOTPATH TO CoP STANDARD DETAILS. 100mm 25MPa CONCRETE SL72 MESH PLACED CENTRAL. SUBGRADE TO BE 150mm THICK CBR 15 AND COMPACTED TO 95% MMDD MINIMUM.
- CONCRETE FOOTPATH DELIVERED AS PART OF LANDSCAPE PLANS. REFER LANDSCAPE PACKAGE FOR DETAILING.

ALL STEEL WORK IS TO BE INSPECTED BY THE SUPERINTENDENT PRIOR TO ANY CONCRETE POURS.

PERMISSION TO USE FOR CONSTRUCTION PURPOSES ROADWORKS AND STORMWATER DRAINAGE

SIGNED _____ DATE _____
DIRECTOR OF CITY GROWTH AND OPERATIONS
CITY OF PALMERSTON

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WARNING BEWARE OF SERVICES

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AS CONSTRUCTED
INFORMATION CERTIFIED BY
BMD URBAN PTY LTD

SIGNED *Brendan* 12/8/2022 DATE _____

AS CONSTRUCTED



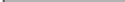
Client **URBEX AND LAND DEVELOPMENT CORP. (JV)**
Project **ZUCCOLI PHASE 3.6**
Title **INTERSECTION PLAN**

Datum **AHD**
PSM **RL**
(MGA) COORD
AS CONSTRUCTED
Project No. **B00201-CR010**
Drawing No. **1**

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
1	AS CONSTRUCTED	MC	JT	WR	WR	11/07/22
0	ISSUED FOR CONSTRUCTION	ESS	LW	WR	MKB	16/08/21

Registered Engineer	Date	Register
_____	_____	_____
ENGINEERING CERTIFICATION		

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	UPRIGHT KERB AND GUTTER
	LAYBACK KERB AND GUTTER
	CONCRETE FOOTPATH
	CONCRETE FOOTPATH DELIVERED AS PART OF LANDSCAPE PLANS. REFER LANDSCAPE PACKAGE FOR DETAILING.
 OL	OUTLINE
 SYL	SINGLE YELLOW LINE

SIGNED	DATE
DIRECTOR OF CITY GROWTH AND OPERATIONS CITY OF PALMERSTON	

THIS PERMISSION TO USE IS GIVEN ON THE BASIS THAT THE DEVELOPER AND/OR CONSULTANT IS NOT ABSOLVED FROM FULL RESPONSIBILITY FOR THE CORRECTNESS AND ACCURACY OF THE DESIGN AND/OR DOCUMENTS ASSOCIATED. THIS PERMISSION IS VALID FOR A PERIOD OF TWO YEARS FROM THE DATE OF SIGNED APPROVAL.

THE LOCATIONS OF ALL EXISTING SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE BY CONTRACTOR. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

AS CONSTRUCTED
INFORMATION CERTIFIED BY
BMD URBAN PTY LTD

SIGNED Brendan Lane DATE 28/7/2022

1. ALL LINE MARKING, AND RETRO REFLECTIVE PAVEMENT MARKERS (RRPMS) SHALL BE INSTALLED IN ACCORDANCE WITH AS1742 UNO. AND DPI STD DRG(S) 1520 & 1521.
2. ALL SIGNS SHALL BE SIZE 'A' UNO.
3. G5-1 SIGN AS PER PCC STD DRG DEV703-C-DWG-006 AS SHOWN
4. INSPECT EXISTING SIGNS REPLACE / REMOVE TO THE APPROVAL OF THE SUPERINTENDENT.
5. ON WIDENED CURVES, UL & SYL ARE TO BE TAKEN 10m PAST CURVE TPs EACH END U.N.O.
6. LATERAL DIMENSIONS ARE TO LIP OF LBK OR UK&G
7. UL OFFSET FROM LIP OF LBK OR UK&G BY THE DISTANCE SHOWN

LANIYUK COURT

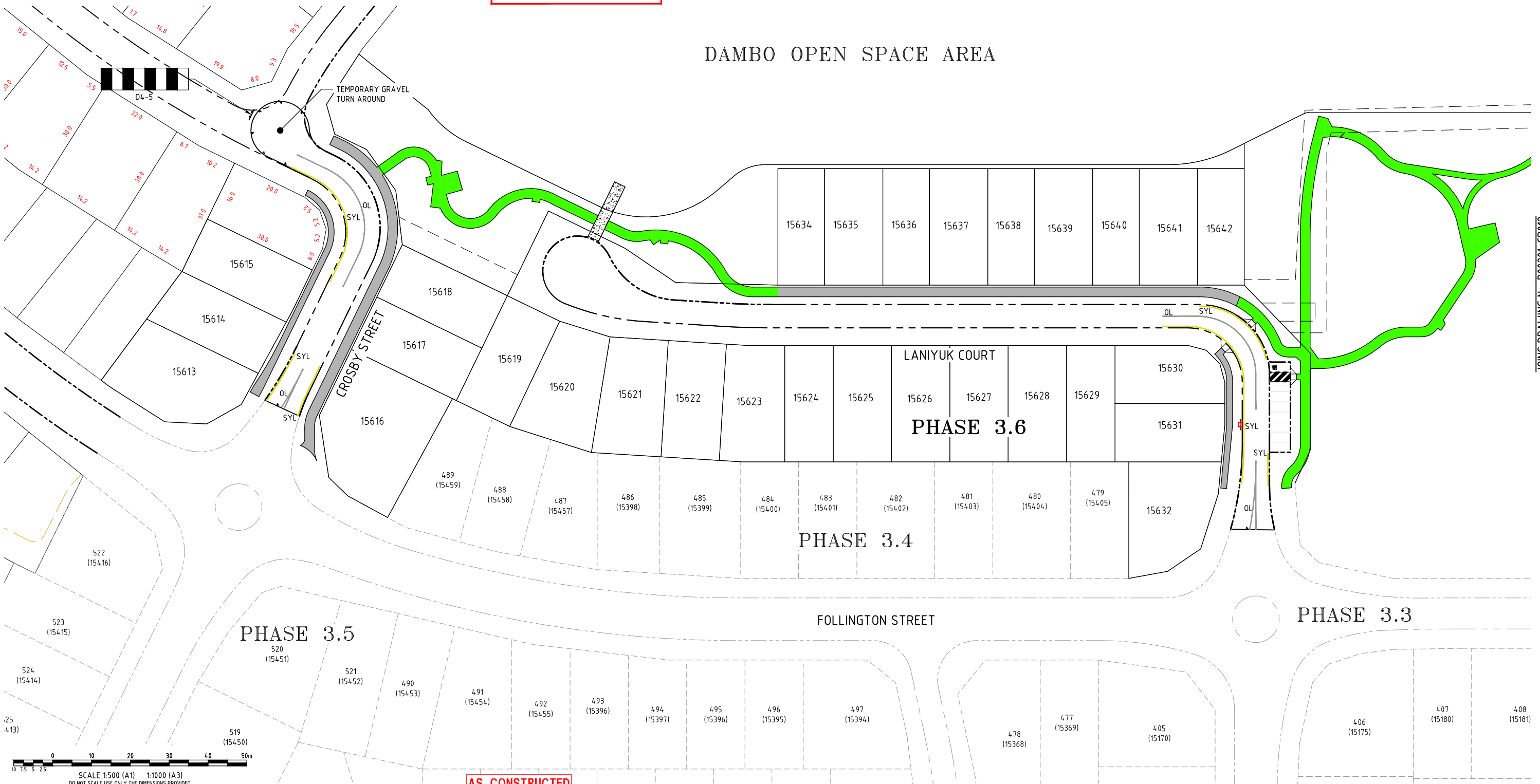
15626 15627 1

PHASE 3.6

PHASE 3.4

FOLLINGTON STREET

PHASE 3.3



AS CONSTRUCTED



Client	URBEX AND LAND DEVELOPMENT CORP. (JV)
--------	---------------------------------------

Project **ZUCCOLI PHASE 3.6**

Title	SIGNS AND LINEMARKING PLAN SHEET 1 OF 2
-------	--

Datum	
AHD	
PSM .	
RL .	
(MGA) COORD	

(MGA) COORD	
AS CONSTRUCTED	

<i>Project No.</i>	<i>Drawing No.</i>	<i>Rev</i>
B00201-CR011		1

Plot Date: 11/07/2022 3:21:13 PM User: MARK CARILLO File Name: C:\12dS\data\MAN12DSYN01\B00201_123\4 CIVIL-DRGS\4.4 AS CON\B00201-3.6-SIGN

NOTES:

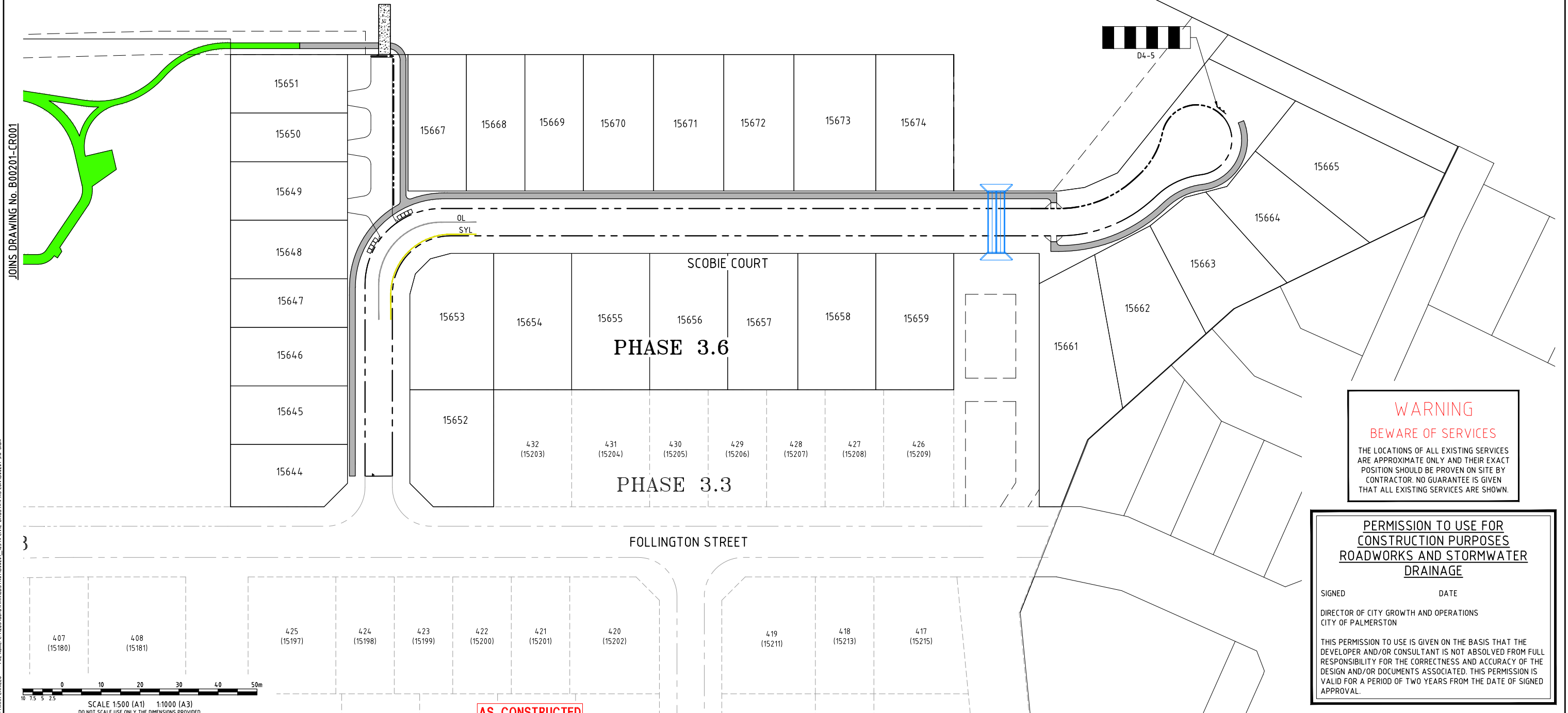
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2. ALL SIGNS SHALL BE SIZE 'A' UNO.
3. G5-1 SIGN AS PER PCC STD DRG DEV703-C-DWG-006 AS SHOWN
4. INSPECT EXISTING SIGNS REPLACE / REMOVE TO THE APPROVAL OF THE SUPERINTENDENT.
5. ON WIDENED CURVES, UL & SYL ARE TO BE TAKEN 10m PAST CURVE TPs EACH END U.N.O.
6. LATERAL DIMENSIONS ARE TO LIP OF LBK OR UK&G
7. UL OFFSET FROM LIP OF LBK OR UK&G BY THE DISTANCE SHOWN

AS CONSTRUCTED
INFORMATION CERTIFIED BY
BMD URBAN PTY LTD
SIGNED: *Brendan Reid* DATE: 28/7/2022

LEGEND

- UPRIGHT KERB AND GUTTER
- LAYBACK KERB AND GUTTER
- CONCRETE FOOTPATH
- OL OUTLINE
- SYL SINGLE YELLOW LINE
- CONCRETE FOOTPATH
- CONCRETE FOOTPATH DELIVERED AS PART OF LANDSCAPE PLANS. REFER LANDSCAPE PACKAGE FOR DETAILING.

DAMBO OPEN SPACE AREA



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

PERMISSION TO USE FOR CONSTRUCTION PURPOSES ROADWORKS AND STORMWATER DRAINAGE
SIGNED _____ DATE _____
DIRECTOR OF CITY GROWTH AND OPERATIONS
CITY OF PALMERSTON
THIS PERMISSION TO USE IS GIVEN ON THE BASIS THAT THE DEVELOPER AND/OR CONSULTANT IS NOT ABSOLVED FROM FULL RESPONSIBILITY FOR THE CORRECTNESS AND ACCURACY OF THE DESIGN AND/OR DOCUMENTS ASSOCIATED. THIS PERMISSION IS VALID FOR A PERIOD OF TWO YEARS FROM THE DATE OF SIGNED APPROVAL.

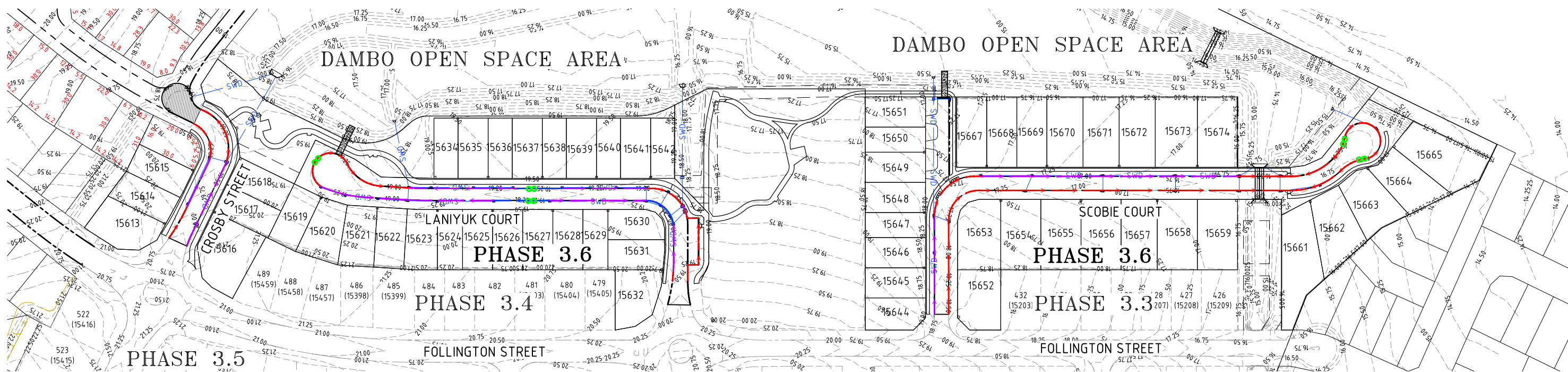
AS CONSTRUCTED

LAND DEVELOPMENT CORPORATION
urbex

Empower
ENGINEERS & PROJECT MANAGERS
ABN 23 010 743 692

Client	URBEX AND LAND DEVELOPMENT CORP. (JV)			Datum	AHD	PSM	RL	(MGA) COORD	
Project	ZUCCOLI PHASE 3.6								
Title	SIGNS AND LINEMARKING PLAN SHEET 2 OF 2			Project No.	Drawing No.		Rev		
				B00201-CR012	B00201-CR012		1		

User: MARK CARILLO File Name: C:\Users\markcarillo\Documents\B00201-123\4 CIVIL-DWG\4.4 AS CON-B00201-3.6-SIGN Plot Date: 11/07/2022 3:21:14 PM



- LEGEND**
- 26.0--- FINISHED SURFACE CONTOURS
 - ROAD CONTROL LINE
 - UPRIGHT KERB AND GUTTER
 - LAYBACK KERB AND GUTTER
 - SWD --- STORMWATER DRAINAGE
 - RWD --- ROOFWATER DRAINAGE
 - SUBSOIL DRAINAGE TYPE 1 WITH FLUSHING POINT - LOW FLOWS
 - SUBSOIL DRAINAGE TYPE 2 WITH FLUSHING POINT - HEAVY FLOWS
 - HIGH FLOW OVER STORMWATER - SUBSOIL DRAINAGE TYPE 1 WITH FLUSHING POINT
 - CONCRETE FOOTPATH

AS CONSTRUCTED
INFORMATION CERTIFIED BY
BMD URBAN PTY LTD
SIGNED: *Brendan Abbott* DATE: 16/07/2022

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

NOTE:-
SUBSOIL DRAIN CONNECTION TO STORMWATER PITS SHALL BE SIMILAR TO SUBSOIL CONNECTION DETAIL ON D.C.C. STD DRG DCC-106

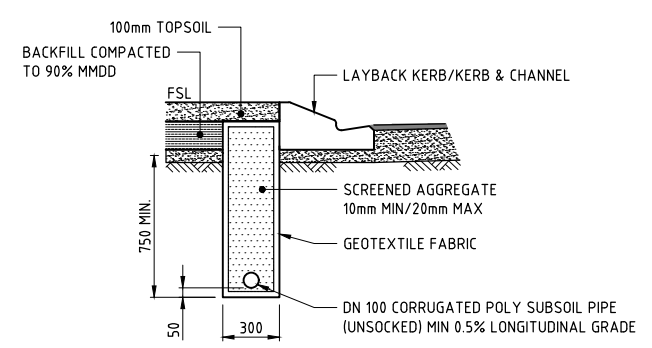
0 0.4 0.8 1.2 1.6 2.0m
SCALE 1:20 (A1) 1:40 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

0 20 40 60 80 100m
SCALE 1:1000 (A1) 1:2000 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

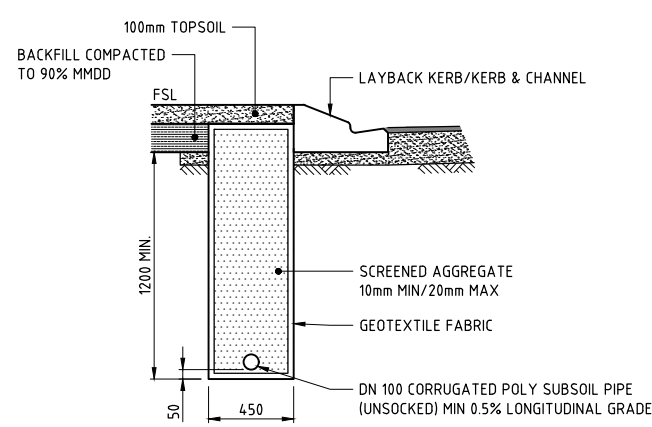
PERMISSION TO USE FOR CONSTRUCTION PURPOSES ROADWORKS AND STORMWATER DRAINAGE

SIGNED: _____ DATE: _____
DIRECTOR OF CITY GROWTH AND OPERATIONS
CITY OF PALMERSTON

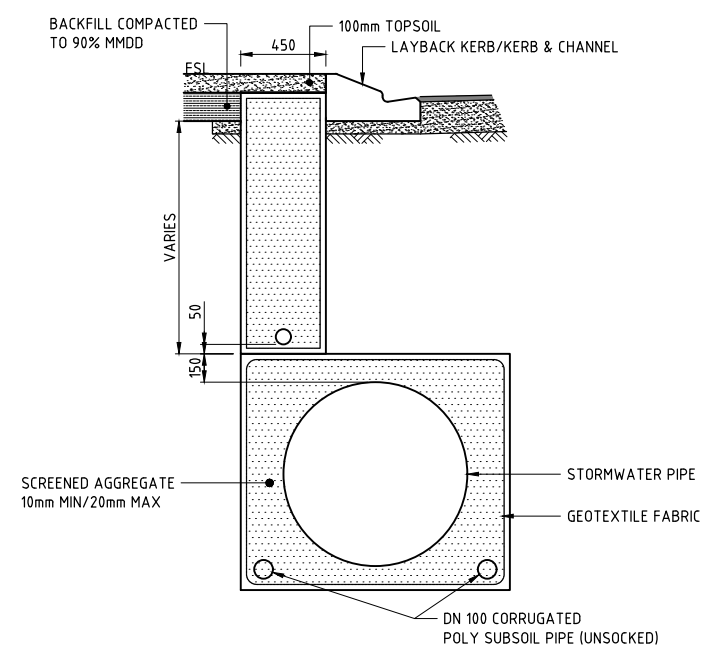
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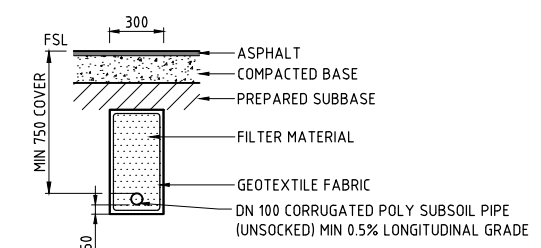
SUBSOIL DRAIN TYPE 1
SCALE 1:20
(SUITABLE FOR LOW FLOW)



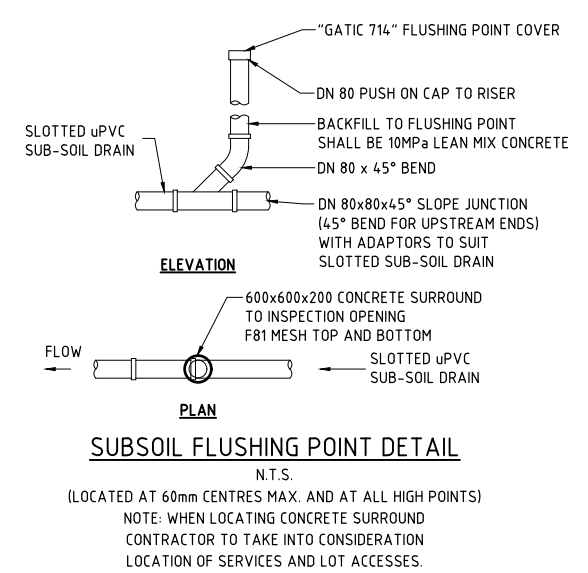
SUBSOIL DRAIN TYPE 2
SCALE 1:20
(SUITABLE FOR HIGH FLOW)



HIGH FLOW SUBSOIL DRAIN OVER STORMWATER
SCALE 1:20



SUBSOIL DRAIN TYPE 3
N.T.S.
(SUITABLE FOR UNDER ROAD IF REQUIRED)
NOTE: ENSURE SUBSOIL PIPE FALLS TO PIT OR SUBSOIL DRAIN BEHIND KERB



SUBSOIL FLUSHING POINT DETAIL
N.T.S.
(LOCATED AT 60mm CENTRES MAX. AND AT ALL HIGH POINTS)
NOTE: WHEN LOCATING CONCRETE SURROUND CONTRACTOR TO TAKE INTO CONSIDERATION LOCATION OF SERVICES AND LOT ACCESSSES.

User: MARK CARILLO File Name: C:\Users\markcarillo\Documents\12314 CIVIL-DWG\14 AS CON-00201-3.6-PAYE Plot Date: 6/07/2022 4:07:41 PM

1	AS CONSTRUCTED	MC	JT	WR	MKB	06/07/22	Registered Engineer
0	ISSUED FOR CONSTRUCTION	ESS	LW	WR	MKB	16/08/21	Date Register
No.	Amendments	Drawn	Design	Design Chk	Appd	Date	ENGINEERING CERTIFICATION
This drawing cannot be copied or reproduced in any form or used for any purpose other than that originally intended without the written permission of Empower Engineers and Project Managers ©COPYRIGHT 2022							



Client	URBEX AND LAND DEVELOPMENT CORP. (JV)	Datum	AHD
Project	ZUCCOLI PHASE 3.6	PSM	RL
Title	SUBSOIL COMPLICATION PLAN AND DETAILS	(MGA) COORD	AS CONSTRUCTED
Project No.	B00201-CR013	Drawing No.	1

PERMISSION TO USE FOR
CONSTRUCTION PURPOSES
ROADWORKS AND STORMWATER
DRAINAGE

SIGNED DATE
DIRECTOR OF CITY GROWTH AND OPERATIONS
CITY OF PALMERSTON

THIS PERMISSION TO USE IS GIVEN ON THE BASIS THAT THE
DEVELOPER AND/OR CONSULTANT IS NOT ABSOLVED FROM FULL
RESPONSIBILITY FOR THE CORRECTNESS AND ACCURACY OF THE
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APPROVAL.

WARNING
BEWARE OF SERVICES

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ARE APPROXIMATE ONLY AND THEIR EXACT
POSITION SHOULD BE PROVEN ON SITE BY
CONTRACTOR. NO GUARANTEE IS GIVEN
THAT ALL EXISTING SERVICES ARE SHOWN.

AS CONSTRUCTED
INFORMATION CERTIFIED BY
BMD URBAN PTY LTD

SIGNED DATE
5/9/2022

CBR TEST POINTS

CBR, ATTERBERG & SHRINK/SWLL TESTS REQUIRED AT ALL
LOCATIONS AND FOR ALL CHANGES IN MATERIAL UP TO 1.0m
BELOW THE PROPOSED SUBGRADE LEVEL.
RED NUMBERS INDICATE THE PROPOSED SUBGRADE LEVEL.
BLUE NUMBER INDICATE THE BOTTOM OF THE TEST PIT LEVEL.
PHOTOS AND SURVEY CO-ORDINATES AREA TO BE PROVIDED
FOR ALL TEST PITS

TYPE 2 PAVEMENT DETAILS

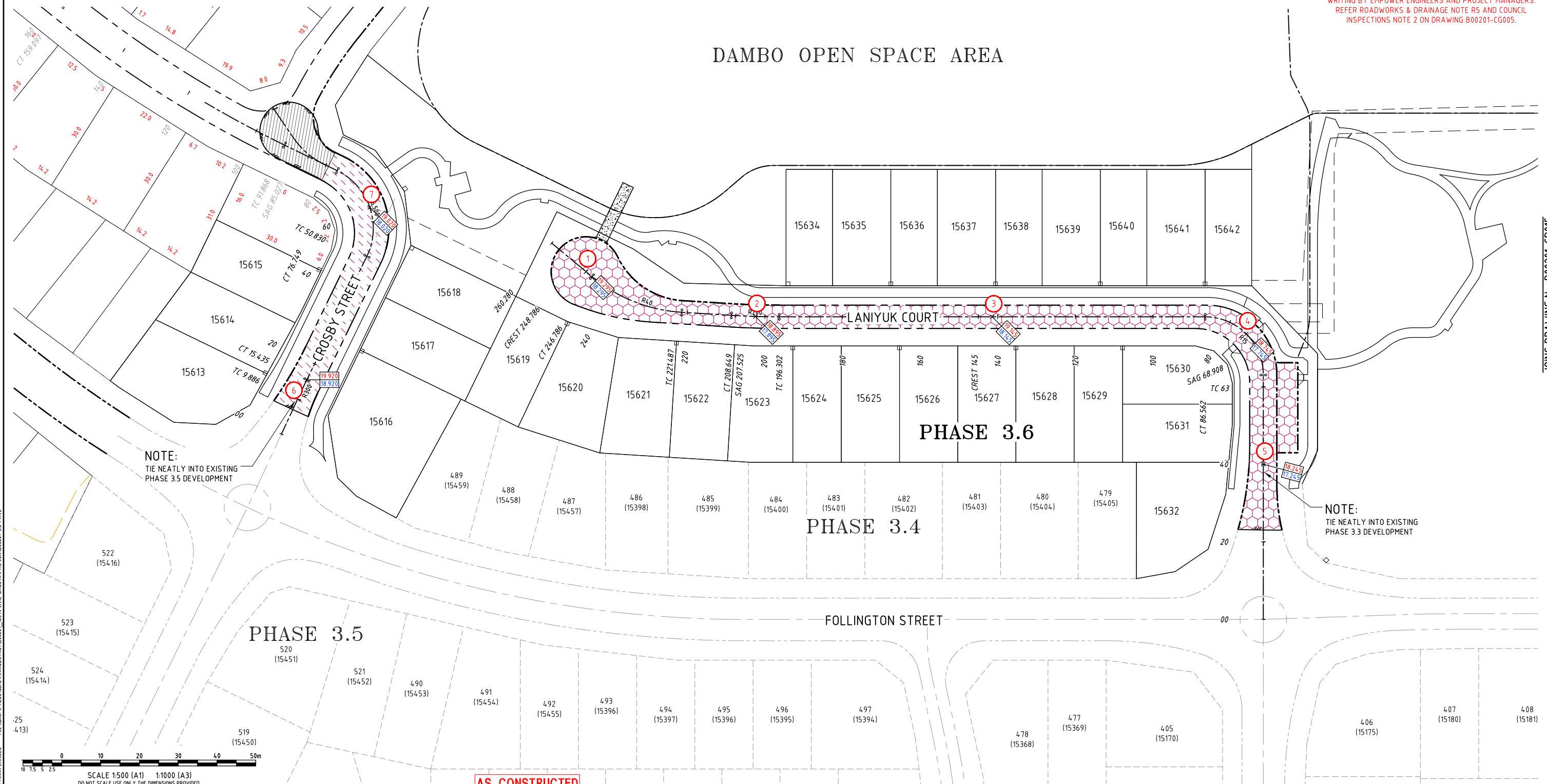
ROAD CLASSIFICATION	SECONDARY COLLECTOR
TRAFFIC ESA's	5 x10 ⁵
ADOPTED SUBGRADE CBR	10
PAVEMENT THICKNESS	250mm *
AC SURFACING	30mm *
BASE COURSE	150mm *
SUB-BASE COURSE	100mm *
ADDITIONAL PAVEMENT BLANKET COURSE	- *

TYPE 4 PROVISIONAL PAVEMENT DETAILS

ROAD CLASSIFICATION	MINOR ROAD
TRAFFIC ESA's	8 x10 ³
KERB & CHANNEL	10
PAVEMENT THICKNESS	175mm *
AC SURFACING	30mm *
BASE COURSE	175mm *
SUB-BASE COURSE	0mm *
ADDITIONAL PAVEMENT BLANKET COURSE	- *

* PAVEMENT DESIGN IS PROVISIONAL UNTIL APPROVED IN
WRITING BY EMPOWER ENGINEERS AND PROJECT MANAGERS.
REFER ROADWORKS & DRAINAGE NOTE R5 AND COUNCIL
INSPECTIONS NOTE 2 ON DRAWING B00201-CG005.

DAMBO OPEN SPACE AREA



NOTE:
TIE NEATLY INTO EXISTING
PHASE 3.5 DEVELOPMENT

NOTE:
TIE NEATLY INTO EXISTING
PHASE 3.3 DEVELOPMENT

AS CONSTRUCTED



Client URBEX AND LAND DEVELOPMENT CORP. (JV)
Project ZUCCOLI PHASE 3.6
Title ROAD PAVEMENT PLAN
SHEET 1 OF 2

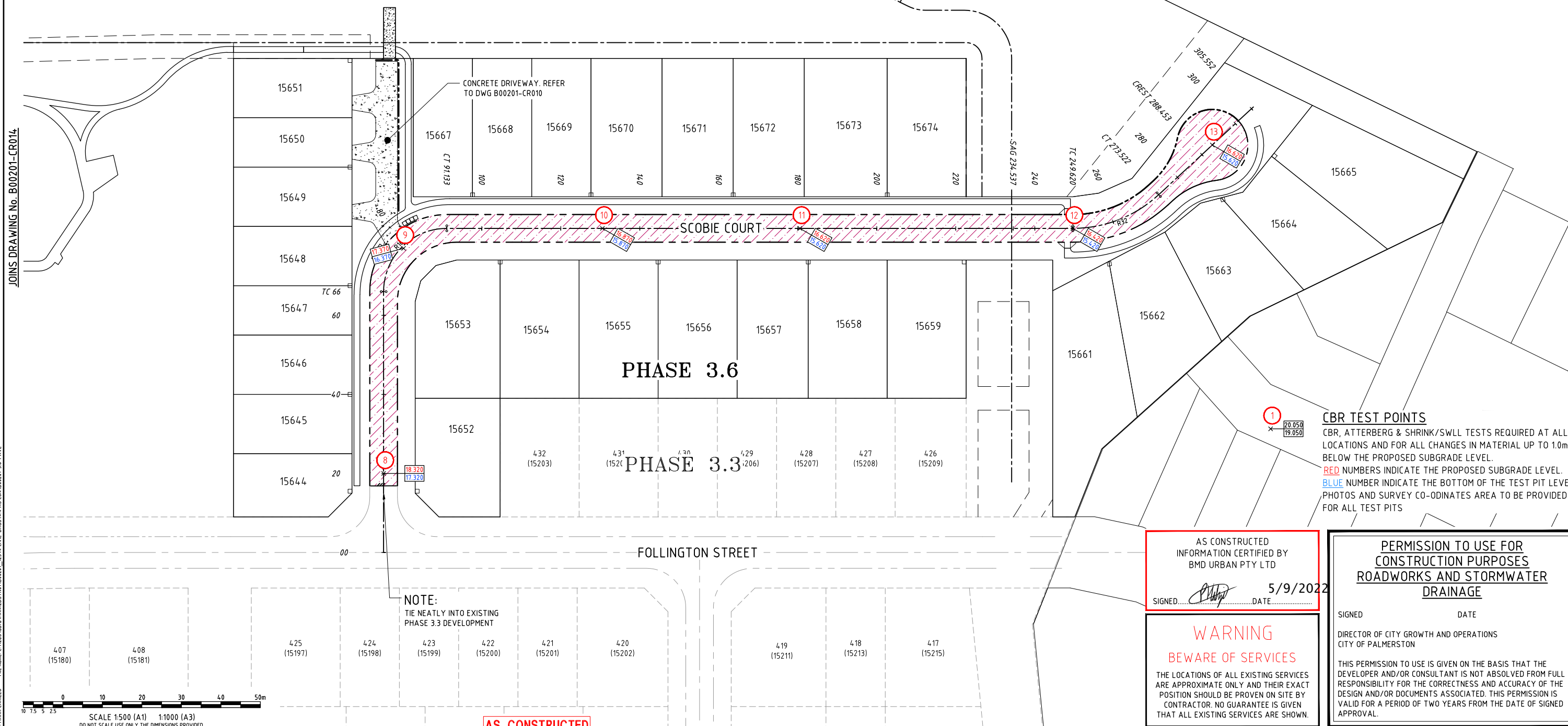
Datum
AHD
PSM
RL
(MGA) COORD
AS CONSTRUCTED
Project No. Drawing No. Rev
B00201-CR014 1

TYPE 3 PROVISIONAL PAVEMENT DETAILS

ROAD CLASSIFICATION	LOCAL ACCESS
TRAFFIC ESA's	5 x10 ⁴
ADOPTED SUBGRADE CBR	10
PAVEMENT THICKNESS	200mm *
AC SURFACING	30mm *
BASE COURSE	100mm *
SUB-BASE COURSE	100mm *
ADDITIONAL PAVEMENT BLANKET COURSE	- *

* PAVEMENT DESIGN IS PROVISIONAL UNTIL APPROVED IN WRITING BY EMPower ENGINEERS AND PROJECT MANAGERS. REFER ROADWORKS & DRAINAGE NOTE R5 AND COUNCIL INSPECTIONS NOTE 2 ON DRAWING B00201-CG005.

DAMBO OPEN SPACE AREA



CBR TEST POINTS
CBR, ATTERBERG & SHRINK/SWLL TESTS REQUIRED AT ALL LOCATIONS AND FOR ALL CHANGES IN MATERIAL UP TO 1.0m BELOW THE PROPOSED SUBGRADE LEVEL.
RED NUMBERS INDICATE THE PROPOSED SUBGRADE LEVEL.
BLUE NUMBERS INDICATE THE BOTTOM OF THE TEST PIT LEVEL.
PHOTOS AND SURVEY CO-ORDINATES AREA TO BE PROVIDED FOR ALL TEST PITS

AS CONSTRUCTED
INFORMATION CERTIFIED BY
BMD URBAN PTY LTD
SIGNED: [Signature] DATE: 5/9/2022

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

PERMISSION TO USE FOR CONSTRUCTION PURPOSES ROADWORKS AND STORMWATER DRAINAGE
SIGNED: _____ DATE: _____
DIRECTOR OF CITY GROWTH AND OPERATIONS
CITY OF PALMERSTON
THIS PERMISSION TO USE IS GIVEN ON THE BASIS THAT THE DEVELOPER AND/OR CONSULTANT IS NOT ABSOLVED FROM FULL RESPONSIBILITY FOR THE CORRECTNESS AND ACCURACY OF THE DESIGN AND/OR DOCUMENTS ASSOCIATED. THIS PERMISSION IS VALID FOR A PERIOD OF TWO YEARS FROM THE DATE OF SIGNED APPROVAL.

NOTE:
TIE NEATLY INTO EXISTING PHASE 3.3 DEVELOPMENT

AS CONSTRUCTED

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
1	AS CONSTRUCTED	MC	JT	WR	MKB	DD/MM/22
0	ISSUED FOR CONSTRUCTION	ESS	LW	WR	MKB	16/08/21

LAND DEVELOPMENT CORPORATION
urbex

Registered Engineer
Date: _____ Register: _____
ENGINEERING CERTIFICATION

Empower
ENGINEERS & PROJECT MANAGERS
ABN 23 010 743 692

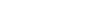
Client	URBEX AND LAND DEVELOPMENT CORP. (JV)
Project	ZUCCOLI PHASE 3.6
Title	ROAD PAVEMENT PLAN SHEET 2 OF 2
Datum	AHD
PSM	RL
MLA	COORD
Project No.	B00201-CR015
Drawing No.	
Rev	1

JOINS DRAWING No. B00201-CR014

User: MARK CARLLO File Name: C:\Users\markcarllo\Documents\B00201_123\4 CIVIL-DWG\4.4 AS CON B00201-3.6-PAYE

Plot Date: 5/9/2022 2:20:30 PM

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	FINISHED SURFACE CONTOURS
	TOP OF BATTER
	TOE OF BATTER / CHANGE IN GRADE
	UPRIGHT KERB AND GUTTER
	LAYBACK KERB AND GUTTER
	EDGE OF SURFACING
	OPEN CHANNEL
	STORMWATER DRAINAGE (375mm DIA RCP UNLESS NOTED OTHERWISE)
	REFER STORMWATER LOW SECTION B00201-CD005 TO B00201-CD007
	KERB ADAPTER (SINGLE OR DOUBLE) 100mm DIA ROOFWATER CONNECTION DIRECTLY INTO CATCHPIT
	100mm DIA ROOFWATER CONNECTION DIRECTLY INTO CATCHPIT
	IRRIGATION CONDUITS

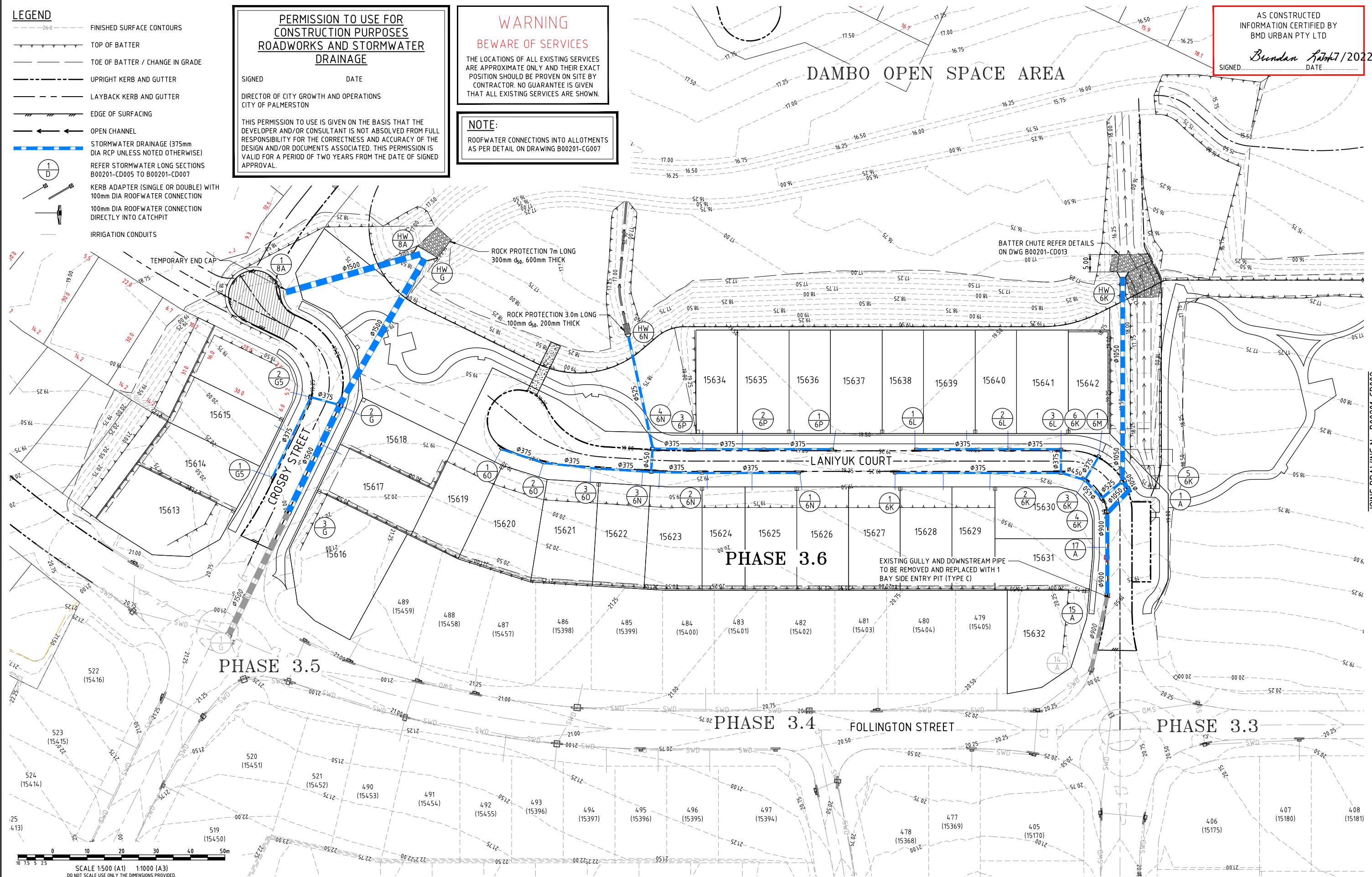
SIGNED _____ DATE _____
DIRECTOR OF CITY GROWTH AND OPERATIONS
CITY OF PALMERSTON

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ROOFWATER CONNECTIONS INTO ALLOTMENTS
AS PER DETAIL ON DRAWING B00201-CG007

SIGNED Brendan Lamb DATE 7/2022



JOINS DRAWING No. B00201 CD002

[illegible]

<i>Client</i>	URBEX AND LAND DEVELOPMENT CORP. (JV)	<i>Delun AND PSM . RL (MGA) COORD</i>	
<i>Project</i>	ZUCCOLI PHASE 3.6		
<i>Title</i>	STORMWATER DRAINAGE LAYOUT PLAN SHEET 1 OF 2	AS CONSTRUCTED	
		<i>Project No.</i> B00201-CD001	<i>Drawing No.</i> 1

PERMISSION TO USE FOR
CONSTRUCTION PURPOSES
ROADWORKS AND STORMWATER
DRAINAGE

SIGNED

DATE

DIRECTOR OF CITY GROWTH AND OPERATIONS
CITY OF PALMERSTON

THIS PERMISSION TO USE IS GIVEN ON THE BASIS THAT THE
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APPROVAL.

AS CONSTRUCTED
INFORMATION CERTIFIED BY
BMD URBAN PTY LTD

Brendan 17/7/2022
SIGNED DATE

JOINS INSET A-A

EXISTING 2x1800x600 RCBC TO BE DEMOLISHED.
REFER DETAIL ON SHEET B00201-CB003 FOR
BUND REINSTATEMENT DETAIL

EXISTING DETENTION BASIN WEIR TO
BE AUGMENTED. REFER DETAIL ON
SHEET B00201-CB001 FOR DETAIL

ROCK PROTECTION 4.0m LONG
200mm ϕ 400mm THICK

CULVERTS. FOR DETAILS REFER TO
B00201-CB001 TO B00201-CB003

DAMBO OPEN SPACE AREA

ROCK PROTECTION 3.0m LONG
100mm ϕ 200mm THICK

ROCK PROTECTION 3.0m LONG
100mm ϕ 200mm THICK

SCOBIE COURT

PHASE 3.6

CULVERTS. FOR DETAILS REFER TO
B00201-CD010 TO B00201-CD012

PHASE 3.3

FOLLINGTON STREET

WARNING

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CONTRACTOR. NO GUARANTEE IS GIVEN
THAT ALL EXISTING SERVICES ARE SHOWN.

LEGEND

- 26.0--- FINISHED SURFACE CONTOURS
- TOP OF BATTER
- TOE OF BATTER / CHANGE IN GRADE
- UPRIGHT KERB AND GUTTER
- LAYBACK KERB AND GUTTER
- EDGE OF SURFACING
- OPEN CHANNEL
- STORMWATER DRAINAGE (375mm
DIA RCP UNLESS NOTED OTHERWISE)
- REFER STORMWATER LONG SECTIONS
B00201-CD005 TO B00201-CD007
- KERB ADAPTER (SINGLE OR DOUBLE) WITH
100mm DIA ROOFWATER CONNECTION
- 100mm DIA ROOFWATER CONNECTION
DIRECTLY INTO CATCHPIT
- IRRIGATION CONDUITS

NOTE:

ROOFWATER CONNECTIONS INTO ALLOTMENTS
AS PER DETAIL ON DRAWING B00201-CG007

0 10 20 30 40 50m
SCALE 1:500 (A1) 1:1000 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

Registered Engineer

Date Register

ENGINEERING CERTIFICATION



Client URBEX AND LAND DEVELOPMENT CORP. (JV)

Project ZUCCOLI PHASE 3.6

Title STORMWATER DRAINAGE
LAYOUT PLAN
SHEET 2 OF 2

Datum
AHD
PSM
RL
(MGA) COORD

AS CONSTRUCTED

Project No. Drawing No. Rev
B00201-CD002 1

LEGEND

- FINISHED SURFACE CONTOURS
- TOP OF BATTER
- TOE OF BATTER / CHANGE IN GRADE
- UPRIGHT KERB AND GUTTER
- LAYBACK KERB AND GUTTER
- EDGE OF SURFACING
- OPEN CHANNEL
- SWD STORMWATER DRAINAGE
- STORMWATER CATCHMENT BOUNDARY
- OVERLAND FLOW ROUTE
- LOT FLOW DIRECTION

PERMISSION TO USE FOR CONSTRUCTION PURPOSES ROADWORKS AND STORMWATER DRAINAGE

SIGNED DATE
DIRECTOR OF CITY GROWTH AND OPERATIONS
CITY OF PALMERSTON

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WARNING BEWARE OF SERVICES

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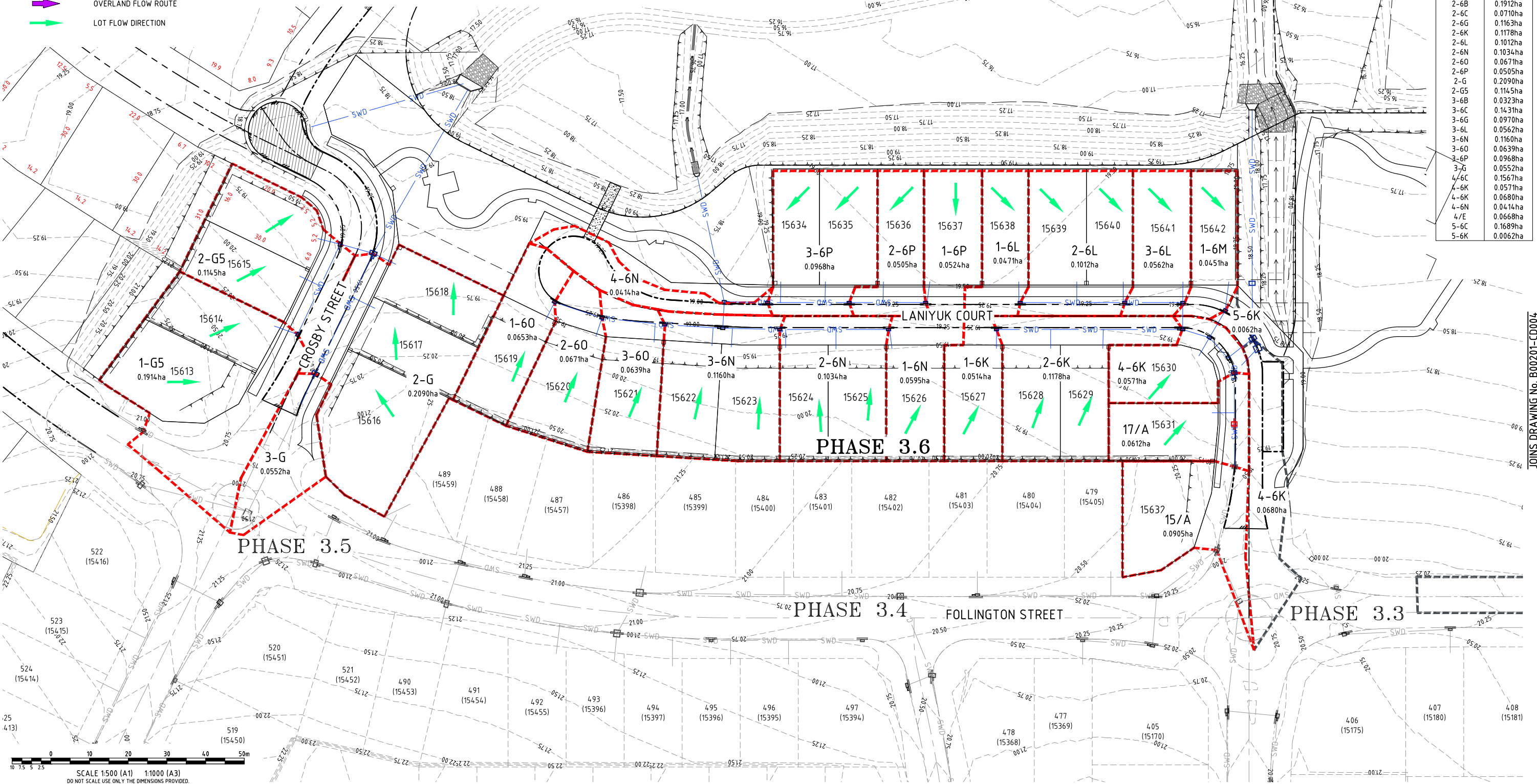
NOTE:

ROOFWATER CONNECTIONS INTO ALLOTMENTS AS PER DETAIL ON DRAWING B00201-CG007

AS CONSTRUCTED
INFORMATION CERTIFIED BY
BMD URBAN PTY LTD

SIGNED *Brundan* DATE 17/02/22

Catchment	Area (Ha)
1-6A	0.1973ha
1-6B	0.0854ha
1-6C	0.0862ha
1-6D	0.1109ha
1-6E	0.1707ha
1-6F	0.1655ha
1-6G	0.0186ha
1-6H	0.1102ha
1-6I	0.2369ha
1-6J	0.0514ha
1-6L	0.0471ha
1-6M	0.0451ha
1-6N	0.0595ha
1-6O	0.0653ha
1-6P	0.0524ha
1-6Q	0.1620ha
1-6R	0.1914ha
1-6S	0.0905ha
15/A	0.0612ha
17/A	0.0612ha
2-6B	0.1912ha
2-6C	0.0710ha
2-6D	0.1163ha
2-6E	0.1178ha
2-6F	0.1012ha
2-6G	0.1034ha
2-6H	0.0671ha
2-6I	0.0505ha
2-6J	0.2090ha
2-6K	0.1145ha
2-6L	0.0323ha
3-6C	0.1431ha
3-6D	0.0970ha
3-6E	0.0562ha
3-6F	0.1160ha
3-6G	0.0639ha
3-6H	0.0968ha
3-6I	0.0552ha
4-6C	0.1567ha
4-6D	0.0571ha
4-6E	0.0680ha
4-6F	0.0414ha
4-6G	0.0668ha
5-6C	0.1689ha
5-6K	0.0062ha



1	AS CONSTRUCTED	MC	JT	WR	MKB	06/07/22	Registered Engineer
0	ISSUED FOR CONSTRUCTION	ESS	LW	WR	MKB	16/08/21	Date Register
No.	Amendments	Drawn	Design	Design	Chk	Appd	ENGINEERING CERTIFICATION
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Client	URBEX AND LAND DEVELOPMENT CORP. (JV)	Datum	ADHD
Project	ZUCCOLI PHASE 3.6	PSM	RL
Title	STORMWATER DRAINAGE CATCHMENT PLAN SHEET 1 OF 2	(MGA) COORD	AS CONSTRUCTED
Project No.	B00201-CD003	Drawing No.	1

PERMISSION TO USE FOR
CONSTRUCTION PURPOSES
ROADWORKS AND STORMWATER
DRAINAGE

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DIRECTOR OF CITY GROWTH AND OPERATIONS
CITY OF PALMERSTON

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APPROVAL.

AS CONSTRUCTED
INFORMATION CERTIFIED BY
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SIGNED *Brendan* 17/2022
DATE

JOINS INSET A-A

DAMBO OPEN SPACE AREA

INSET A-A

JOINS DRAWING No. B00201-CD003

User: MARK CARILLO File Name: C:\Users\markcarillo\Documents\B00201-CD003-3-6-SW.dwg

NOTE:
ROOFWATER CONNECTIONS INTO ALLOTMENTS
AS PER DETAIL ON DRAWING B00201-CG007

0 10 20 30 40 50m
SCALE 1:500 (A1) 1:1000 (A3)
DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

PHASE 3.6

PHASE 3.3

FOLLINGTON STREET

SCOBIE COURT

ACCESS GATE

TRASH RACK DETAIL
TO BE CONFIRMED

LEGEND

- FINISHED SURFACE CONTOURS
- TOP OF BATTER
- TOE OF BATTER / CHANGE IN GRADE
- UPRIGHT KERB AND GUTTER
- LAYBACK KERB AND GUTTER
- EDGE OF SURFACING
- OPEN CHANNEL
- SWD STORMWATER DRAINAGE
- STORMWATER CATCHMENT BOUNDARY
- OVERLAND FLOW ROUTE
- LOT FLOW DIRECTION

WARNING

BWARE OF SERVICES

THE LOCATIONS OF ALL EXISTING SERVICES
ARE APPROXIMATE ONLY AND THEIR EXACT
POSITION SHOULD BE PROVEN ON SITE BY
CONTRACTOR. NO GUARANTEE IS GIVEN
THAT ALL EXISTING SERVICES ARE SHOWN.

Catchment	Area (Ha)
1-6A	0.1973ha
1-6B	0.0854ha
1-6C	0.0862ha
1-6D	0.1109ha
1-6E	0.1707ha
1-6F	0.1655ha
1-6G	0.1163ha
1-6H	0.1102ha
1-6J	0.2369ha
1-6K	0.0514ha
1-6L	0.0471ha
1-6M	0.0451ha
1-6N	0.0595ha
1-6O	0.0653ha
1-6P	0.0524ha
1-6Q	0.1620ha
1-6S	0.1914ha
15/A	0.0905ha
17/A	0.0612ha
2-6B	0.1912ha
2-6C	0.0710ha
2-6G	0.1163ha
2-6K	0.1178ha
2-6L	0.1012ha
2-6N	0.1034ha
2-6O	0.0671ha
2-6P	0.0505ha
2-G	0.2090ha
2-G5	0.1145ha
3-6B	0.0323ha
3-6C	0.1431ha
3-6G	0.0970ha
3-6L	0.0562ha
3-6N	0.1160ha
3-6O	0.0639ha
3-6P	0.0968ha
3-G	0.0552ha
4-6C	0.1567ha
4-6K	0.0571ha
4-6K	0.0680ha
4-6N	0.0414ha
4/E	0.0668ha
5-6C	0.1689ha
5-6K	0.0062ha



Client	URBEX AND LAND DEVELOPMENT CORP. (JV)	Datum	ADHD
Project	ZUCCOLI PHASE 3.6	PSM	RL
Title	STORMWATER DRAINAGE CATCHMENT PLAN SHEET 2 OF 2	(MGA) COORD	
Project No.	B00201-CD004	Drawing No.	1

1	AS CONSTRUCTED	MC	JT	WR	MKB	06/07/22	Registered Engineer
0	ISSUED FOR CONSTRUCTION	ESS	LW	WR	MKB	16/08/21	Date Register
No.	Amendments	Drawn	Design	Design	Chk	Appd	ENGINEERING CERTIFICATION
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SIGNED: *Brendan Sam* DATE: 17/7/2022

WARNING
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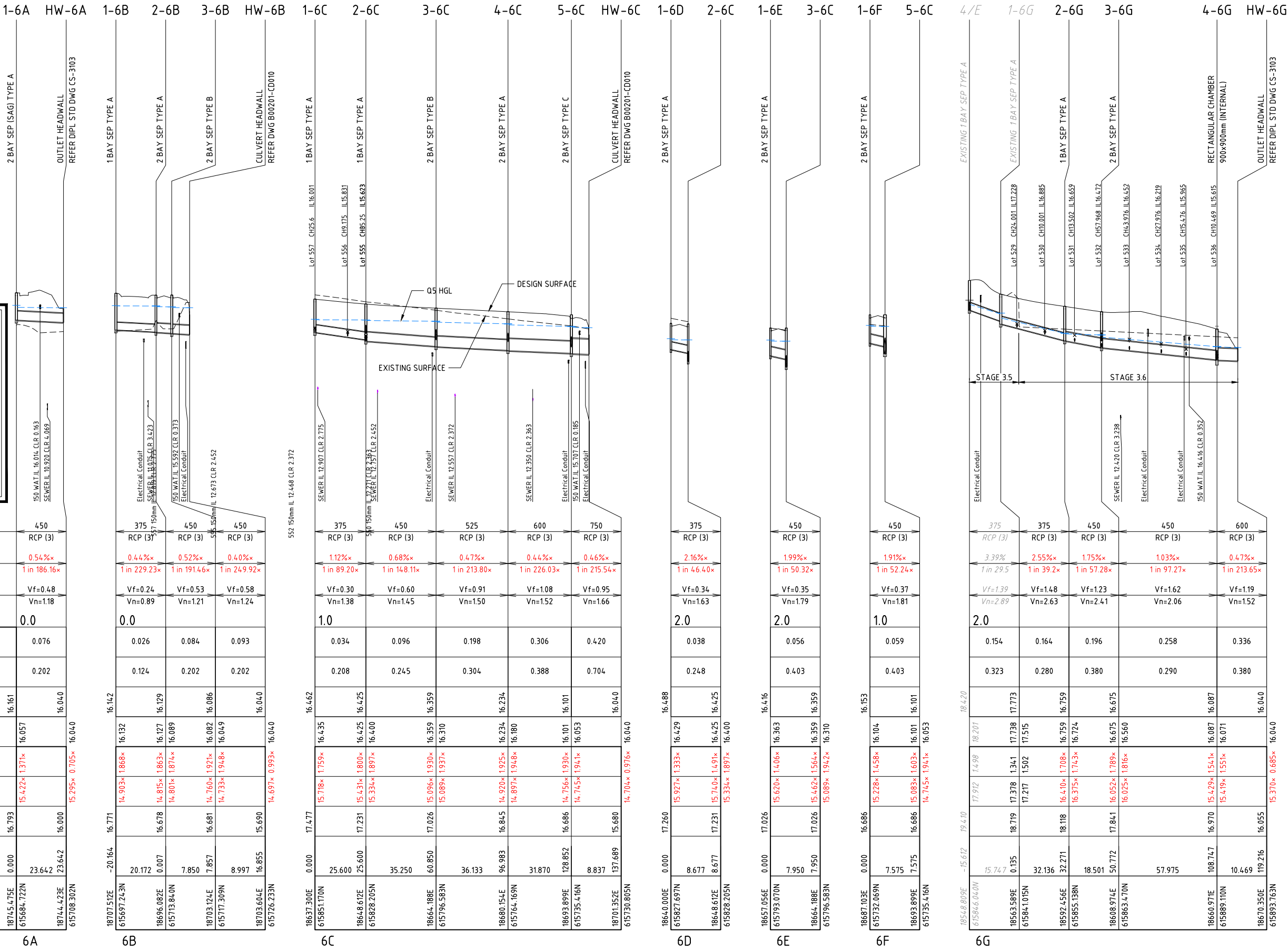
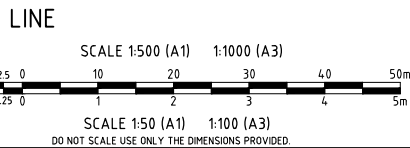
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DRAINAGE

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DIRECTOR OF CITY GROWTH AND OPERATIONS
CITY OF PALMERSTON

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PIPE SIZE (mm)	450
PIPE CLASS	RCP (3)
PIPE GRADE (%)	0.54%
PIPE GRADE (1 in)	1 in 186.16x
FULL PIPE VELOCITY (m/s)	Vf=0.48
NORMAL DEPTH VELOCITY (m/s)	Vn=1.18
DATUM (m)	0.0
PIPE FLOW (Cumecs)	0.076
PIPE CAPACITY AT GRADE (Cumecs)	0.202
WATER LEVEL IN STRUCTURE	16.161
HYDRAULIC GRADE LEVEL	16.057
DEPTH TO INVERT	15.422x 1.371x
INVERT LEVEL OF DRAIN	15.295x 0.705x
DESIGN SURFACE LEVEL	16.793
PIPE LENGTH RUNNING CHAINAGE	0.000
EASTING NORTHING	18745.475E 615684.722N



User: MARK CARILLO File Name: C:\Users\markcaril\OneDrive\Documents\BMD0201-CD005\1-6-5W.dwg Plot Date: 6/07/2022 4:05:58 PM

1	AS CONSTRUCTED	MC	JT	WR	MKB	06/07/22
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No.	Amendments	Drawn	Design	Design Chk	Appd	Date
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Client	URBEX AND LAND DEVELOPMENT CORP. (JV)	Datum	AHD
Project	ZUCCOLI PHASE 3.6	PSM	RL
Title	STORMWATER DRAINAGE LONGITUDINAL SECTION SHEET 1 OF 3	(MGA) COORD	AS CONSTRUCTED
Project No.	B00201-CD005	Drawing No.	1

- LEVEL AT OUTLET TO BE CONFIRMED PRIOR TO COMMENCEMENT CONSTRUCTION .
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SIGNED Brendan Am DATE 7/7/2022

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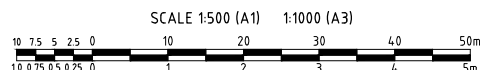
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CONSTRUCTION PURPOSES
ROADWORKS AND STORMWATER
DRAINAGE

SIGNED _____ DATE _____
DIRECTOR OF CITY GROWTH AND OPERATIONS
CITY OF PALMERSTON

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PIPE SIZE (mm)		375
PIPE CLASS		RCP (3)
PIPE GRADE (%)		1.89% ^x
PIPE GRADE (1 in)		1 in 53.01 ^x
FULL PIPE VELOCITY (m/s)		Vf=0.29
NORMAL DEPTH VELOCITY (m/s)		Vn=154
DATUM (m)		3.0
PIPE FLOW (Cumecs)		0.032
PIPE CAPACITY AT GRADE (Cumecs)		0.248
WATER LEVEL IN STRUCTURE	16.731	16.675
HYDRAULIC GRADE LEVEL		16.691
DEPTH TO INVERT		1.327 ^x
INVERT LEVEL OF DRAIN		16.558 ^x
DESIGN SURFACE LEVEL	17.885	17.841
PIPE LENGTH RUNNING CHAINAGE	0.000	8.534
EASTING NORTHING	18609.806E 615855.018N	18609.974E 615855.018N

LINE



SCALE 1:50 (A1) 1:100 (A3)

DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED

[illegible]

<i>Client</i>	URBEX AND LAND DEVELOPMENT CORP. (JV)	<i>Datum</i> AHD	
<i>Project</i>	ZUCCOLI PHASE 3.6	<i>PSM</i> RL	
<i>Title</i>	STORMWATER DRAINAGE LONGITUDINAL SECTION SHEET 2 OF 3	(MGA) COORD	
		AS CONSTRUCTED	
		<i>Project No.</i> B00201-CD006	<i>Drawing No.</i> 1

NOTE:-

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SIGNED: *Brundan Abbott* / 2022
DATE

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CONSTRUCTION PURPOSES
ROADWORKS AND STORMWATER
DRAINAGE

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CITY OF PALMERSTON

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PIPE SIZE (mm)

PIPE CLASS

PIPE GRADE (%)

PIPE GRADE (1 in)

FULL PIPE VELOCITY (m/s)

NORMAL DEPTH VELOCITY (m/s)

DATUM (m)

PIPE FLOW

(Cumecs)

PIPE CAPACITY

AT GRADE (Cumecs)

WATER LEVEL

IN STRUCTURE

HYDRAULIC GRADE

LEVEL

DEPTH TO

INVERT

INVERT LEVEL

OF DRAIN

DESIGN SURFACE

LEVEL

PIPE LENGTH

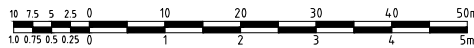
RUNNING CHAINAGE

EASTING

NORTHING

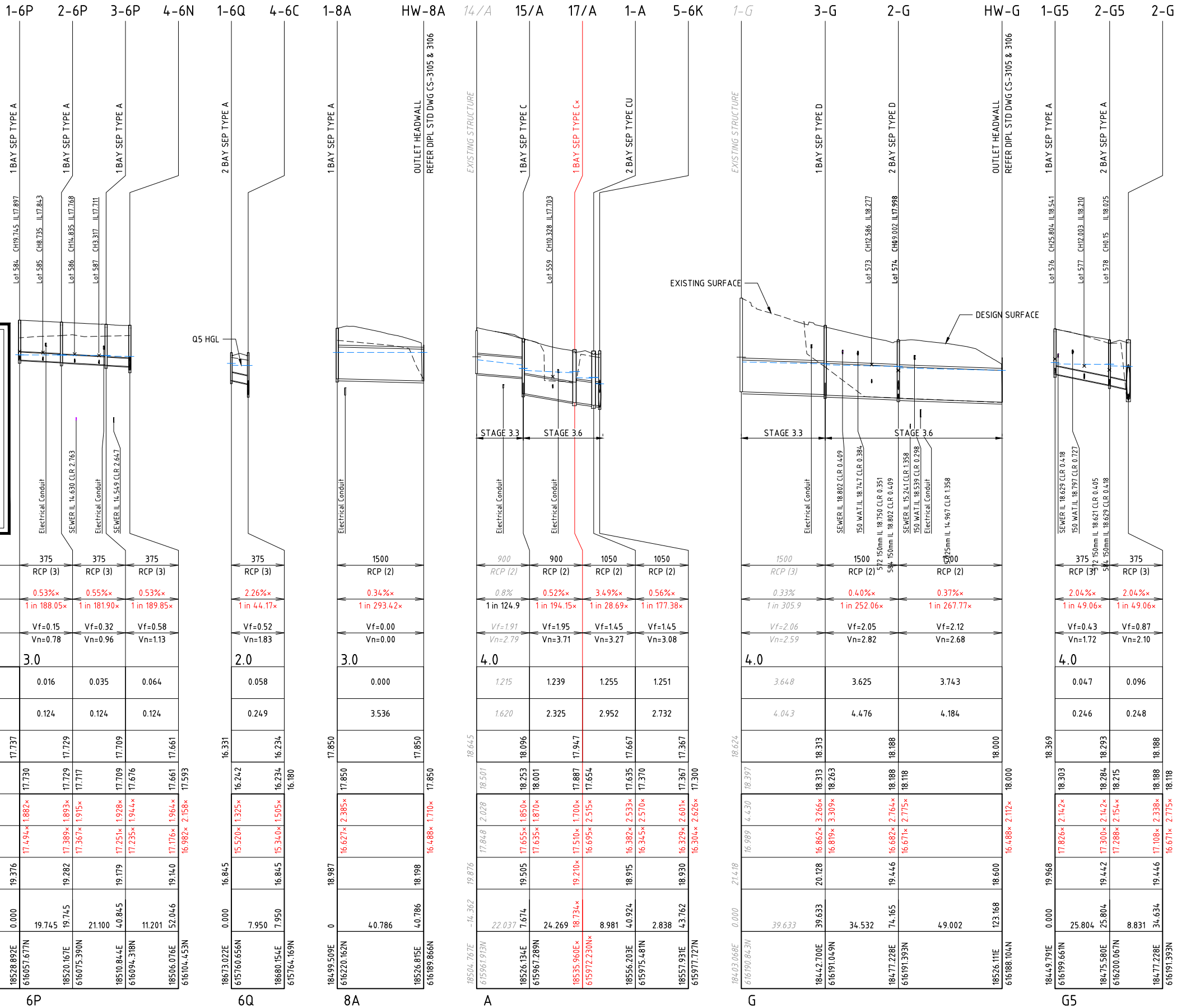
LINE

SCALE 1:500 (A1) 1:1000 (A3)



SCALE 1:50 (A1) 1:100 (A3)

DO NOT SCALE USE ONLY THE DIMENSIONS PROVIDED.

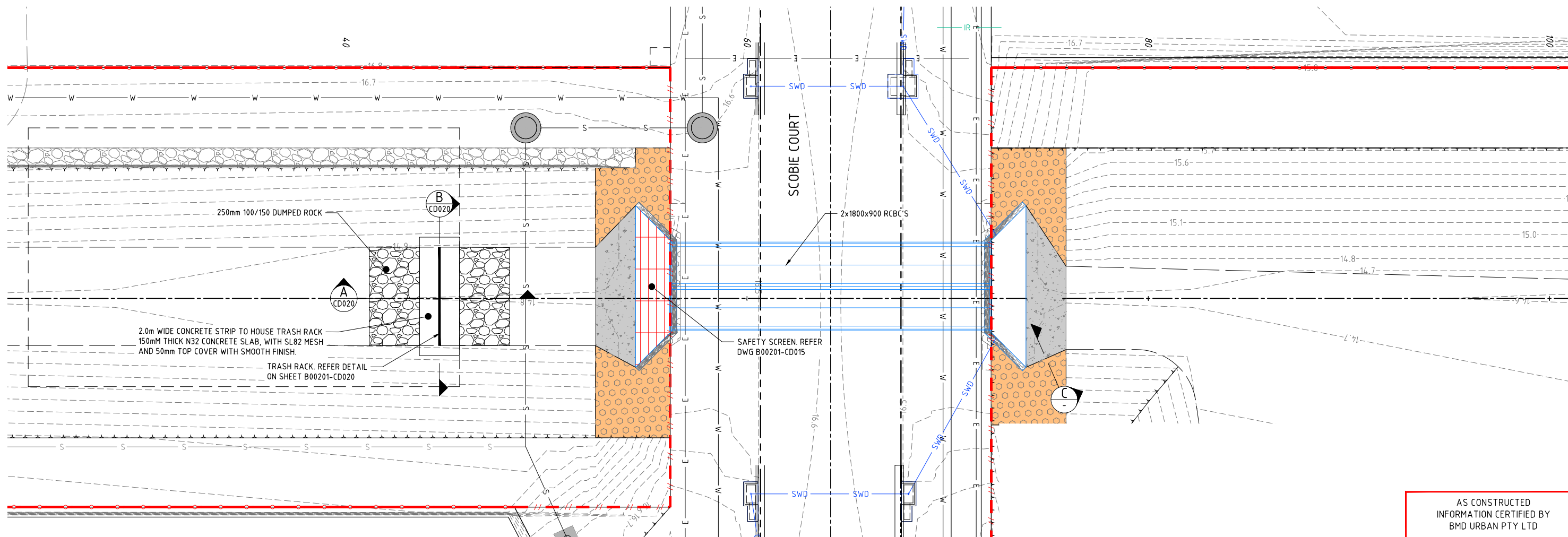


Registered Engineer
Date Register
ENGINEERING CERTIFICATION
No. Amendments
Drawn Design Design Chk Appd Date

LAND DEVELOPMENT
CORPORATION
urbex

Empower
ENGINEERS &
PROJECT MANAGERS
ABN 23 010 743 692

Client URBEX AND LAND DEVELOPMENT CORP. (JV)
Project ZUCCOLI PHASE 3.6
Title STORMWATER DRAINAGE
LONGITUDINAL SECTION
SHEET 3 OF 3
Datum AHD
PSM .
RL .
(MGA) COORD
AS CONSTRUCTED
Project No. Drawing No. Rev
B00201-CD007 1



TRASH RACK LAYOUT
SCALE 1:100

AS CONSTRUCTED
INFORMATION CERTIFIED BY
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SIGNED: *Brendan Ash* DATE: 16/07/2022

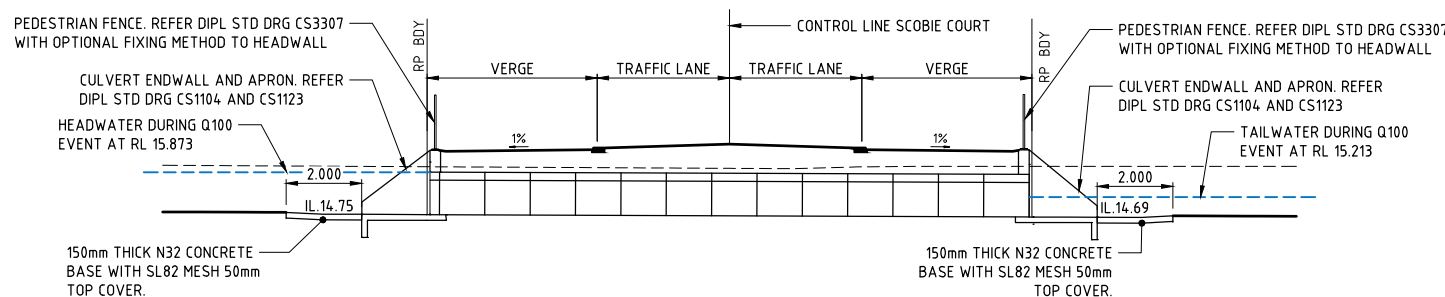
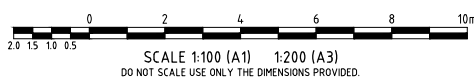
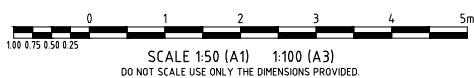
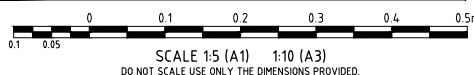
PERMISSION TO USE FOR
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ROADWORKS AND STORMWATER
DRAINAGE

SIGNED _____ DATE _____
DIRECTOR OF CITY GROWTH AND OPERATIONS
CITY OF PALMERSTON

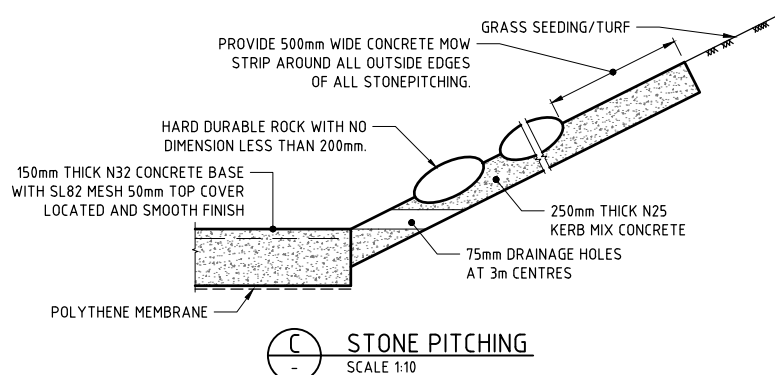
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NOTE:-

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2/1800X900 RCBC
SCALE 1:100



STONE PITCHING
SCALE 1:10

LEGEND

- ULTIMATE SURFACE CONTOURS
- TOP OF BATTER
- TOE OF BATTER / CHANGE IN GRADE
- ROAD CONTROL LINE
- UPRIGHT KERB AND GUTTER
- LAYBACK KERB AND GUTTER
- SWD - STORMWATER DRAINAGE
- E - ELECTRICAL RETICULATION
- S - SEWERAGE RETICULATION
- W - WATER RETICULATION
- PEDESTRIAN FENCE. REFER DIPL STANDARD DRAWING CS3307 FOR DETAILS.
- 1.8m HIGH COLOURBOND FENCE
- PROPOSED STONE PITCHING PROTECTION
- 150mm THICK N32 CONCRETE BASE WITH SL82 MESH 50mm TOP COVER

WARNING
BEWARE OF SERVICES

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Client: URBEX AND LAND DEVELOPMENT CORP. (JV)
Project: ZUCCOLI PHASE 3.6
Title: STORMWATER DRAINAGE CROSS SECTIONS AND CULVERT DETAILS

As Constructed
Project No. B00201-CD010
Drawing No. 1
Rev. 1

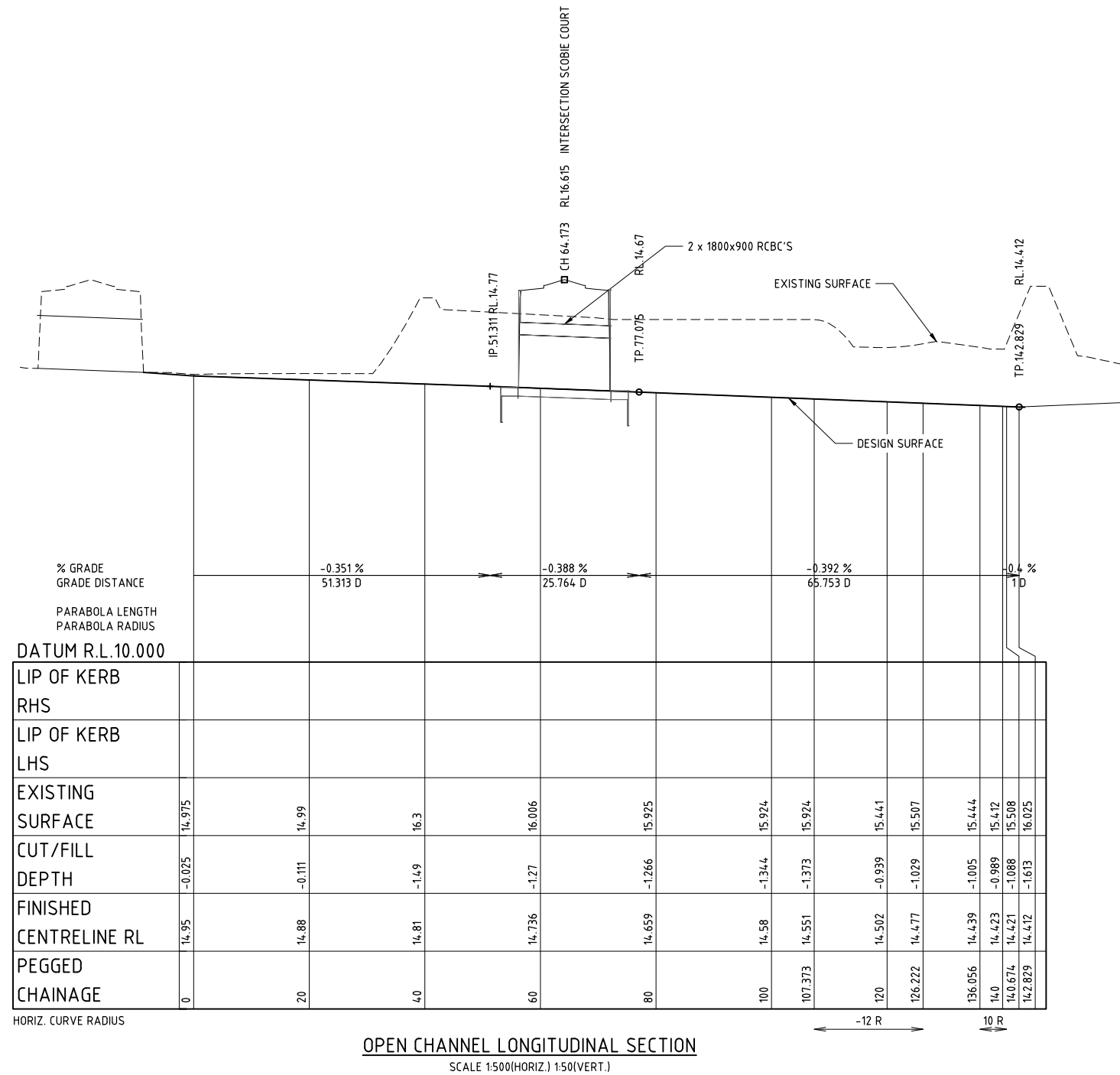
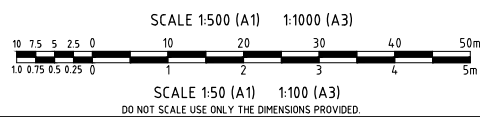
SIGNED Brendan Ham DATE 7/7/2022

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SIGNED	DATE
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[illegible]

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									Registered Engineer
1	AS CONSTRUCTED	MC	JT	WR	MKB	06/07/22			Date Register
0	ISSUED FOR CONSTRUCTION	ESS	LW	WR	MKB	16/08/21			
No.	Amendments	Drawn	Design	Design Chk	Appd	Date			ENGINEERING CERTIFICATION
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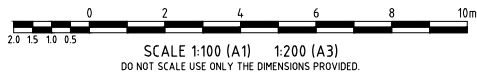
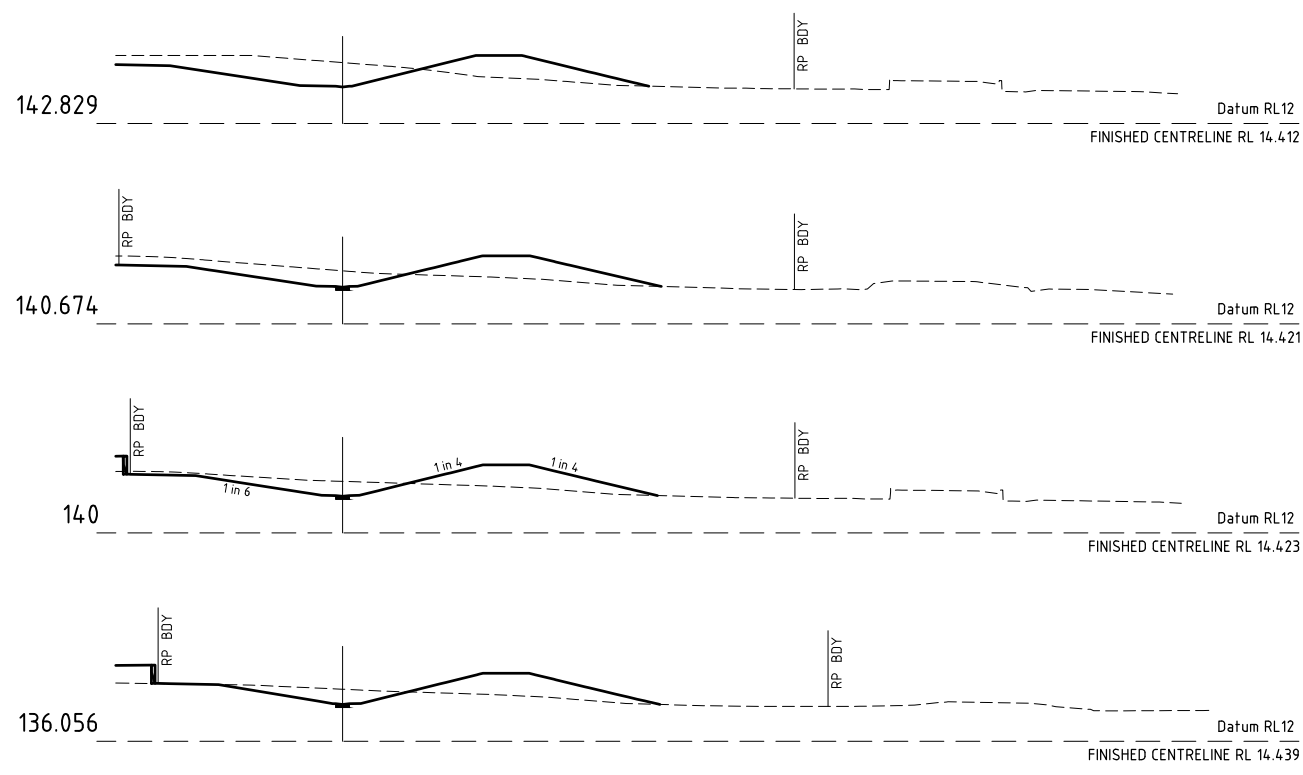
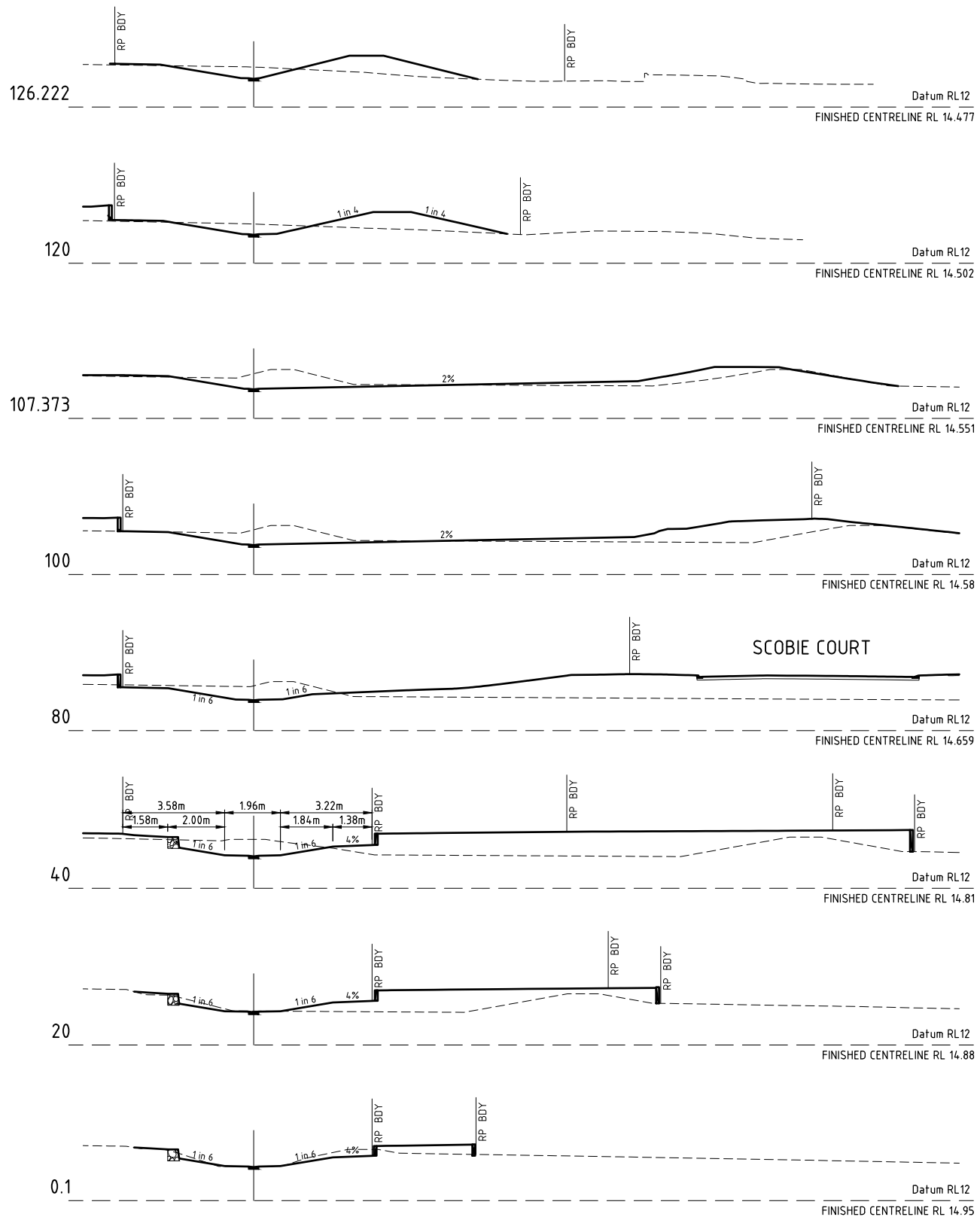


<i>Client</i>	URBEX AND LAND DEVELOPMENT CORP. (JV)	<i>Datum</i> AHD	
<i>Project</i>	ZUCCOLI PHASE 3.6	PSM RL (MGA) COORD	
<i>Title</i>	STORMWATER DRAINAGE CHANNEL LONGITUDINAL SECTION	AS CONSTRUCTED	
		<i>Project No.</i> B00201-CD011	<i>Drawing No.</i> <i>Rev</i> 1

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SIGNED: *Bundan* DATE: *14/4/2022*

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OPEN CHANNEL CROSS SECTION
SCALE 1:100

User: MARK CARLLO File Name: C:\Users\markcarllo\Documents\12314 CIVIL-DWG\14.4 AS CONSTRUCTED-16-SWDET Plot Date: 6/07/2022 4:21:16 PM

1	AS CONSTRUCTED	MC	JT	WR	MKB	06/01/22	Registered Engineer
0	ISSUED FOR CONSTRUCTION	ESS	LW	WR	MKB	16/08/21	Date Register
No.	Amendments	Drawn	Design	Design Chk	Appd	Date	ENGINEERING CERTIFICATION
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Client	URBEX AND LAND DEVELOPMENT CORP. (JV)	Datum	AHD
Project	ZUCCOLI PHASE 3.6	PSM	RL
Title	STORMWATER DRAINAGE CHANNEL CROSS SECTION	(MGA) COORD	AS CONSTRUCTED
Project No.	B00201-CD012	Drawing No.	1
Rev			

User: MARK CARLLO File Name: C:\Users\markcarllo\Documents\12314 CIVIL-DRAWING\AS CONSTRUCTION\3-6-SWDET

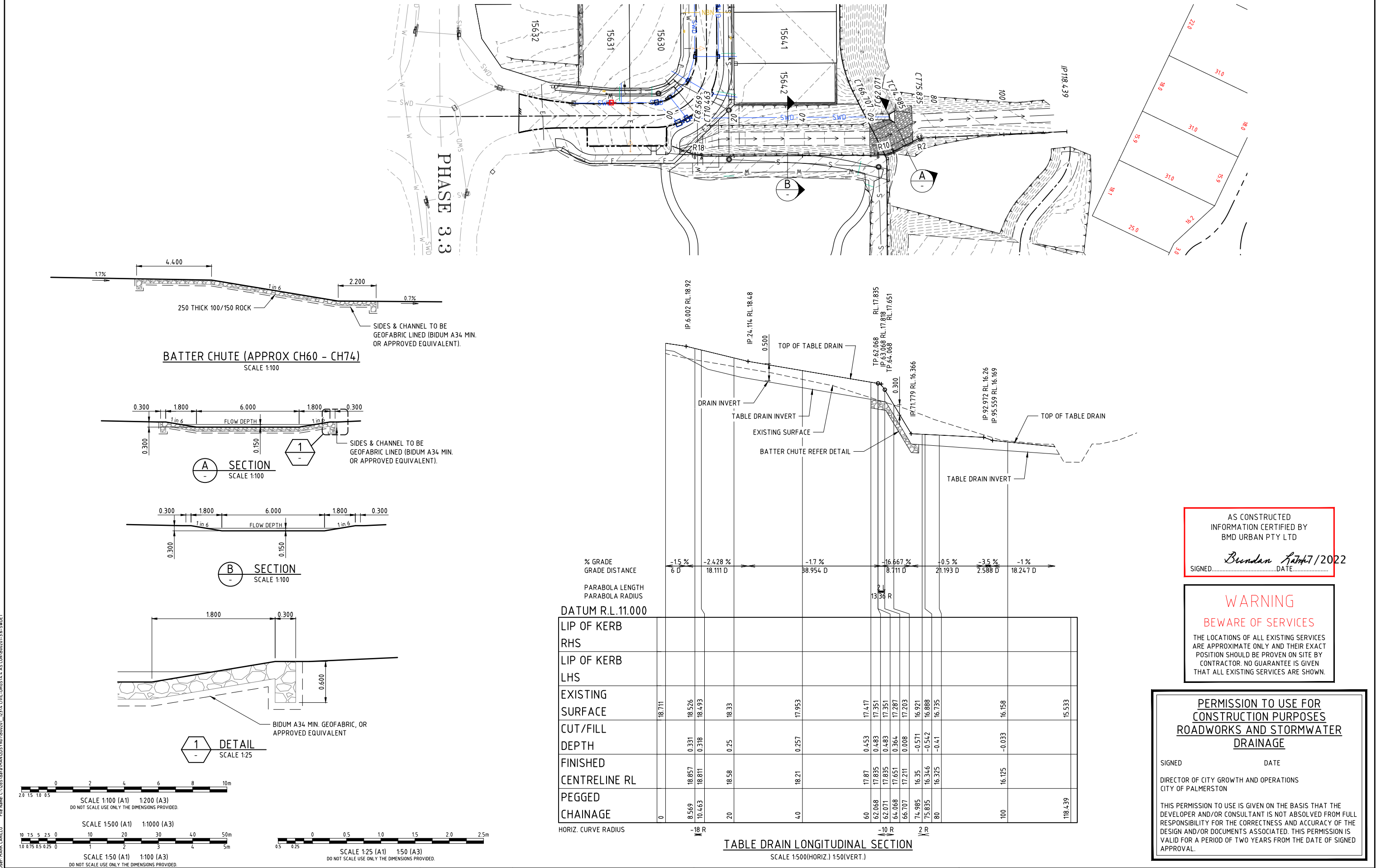
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1	AS CONSTRUCTED	MC	JT	WR	MKB	06/01/22	Registered Engineer
0	ISSUED FOR CONSTRUCTION	ESS	LW	WR	MKB	16/08/21	Date Register
No.	Amendments	Drawn	Design	Design Chk	Appd	Date	ENGINEERING CERTIFICATION



Client	URBEX AND LAND DEVELOPMENT CORP. (JV)	Datum	AHD
Project	ZUCCOLI PHASE 3.6	PSM	RL
Title	STORMWATER DRAINAGE TABLE DRAIN LAYOUT AND LONGITUDINAL SECTION	COORD	(MGA)
Project No.	B00201-CD013	Drawing No.	1



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DRAINAGE**
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APPROVAL.

BILL OF MATERIALS		
NO.	ITEM	QTY.
1	75x75x10 FLAT BAR - 1280.3mm	2
2	75x75x10 FLAT BAR - 236.1mm	2
3	75x75x10 FLAT BAR - 175.9mm	2
4	75x75x10 FLAT BAR - 1980mm	6
5	75x75x10 FLAT BAR - 397.5mm	3
6	75x75x10 FLAT BAR - 1980mm	2
7	75x75x10 FLAT BAR - 1388.6mm	8
8	75x75x10 FLAT BAR - 376mm	4
9	75x75x10 FLAT BAR - 468.3mm	4
10	75x75x10 FLAT BAR -	2
11	Ø20 BAR - 1980mm	20
12	Ø20 BAR - 397.5mm	10
13	Ø20 BAR - 678.1mm	2
14	Ø20 BAR - 631.7mm	2
15	Ø20 BAR - 585.4mm	2
16	Ø20 BAR - 538.8mm	2
17	Ø20 BAR - 492.4mm	2
18	Ø20 BAR - 446.1mm	2
19	Ø20 BAR - 399.7mm	2
20	Ø20 BAR - 353.3mm	2
21	Ø20 BAR - 306.9mm	2
22	Ø20 BAR - 222.8mm	2
23	75x75x10 FLAT BAR - 170mm	4
24	8mm PLATE 180x205mm	12
25	Ø20 BAR - 165mm	4
26	8mm PLATE 100x120mm	4
27	Ø12 BAR - 162mm	4

STEELWORK

ALL STRUCTURAL STEELWORK SHALL BE NOT DIPPED GALVANISED IN ACCORDANCE WITH ASA680AT 75 MICRONS MIN.

ALL MILD STEEL SHALL COMPLY WITH THE FOLLOWING U.N.O :-
WELDED SECTION - GRADE 300 TO AS/NZS 3679.2
ROLLED SECTION - GRADE 300 TO AS/NZS 3679.1
SHS AND RHS - GRADE 350/GRADE 450 TO AS 1163
CHS - GRADE 250/GRADE 350 TO AS 1163
FLATE PLATE - GRADE 300 TO AS/NZS 3679.1
STANDARD PLATE - GRADE 250 TO AS/NZS 3678

THE CONTRACTOR SHALL UNLESS SPECIFIED ELSEWHERE :-

- PROVIDE AND EMPLOY ANY ADDITIONAL TEMPORARY BRACING ETC. NECESSARY TO ADEQUATELY HOLD STEELWORKS IN POSITION DURING CONSTRUCTION.
- PROVIDE ALL PACKS , CLEATS, BOLTS (INCL. H.D. BOLTS) ETC. REQUIRED FOR TEMPORARY AND PERMANENT ERECTION OF STEELWORK AND FOR ATTACHMENT OF MISCELLANEOUS FRAMING.
- SUBMIT TWO (2) COPIES OF WORKSHOP DRAWINGS TO THE SUPERINTENDANT FOR PERUSAL. FABRICATION SHALL NOT COMMENCE WITHOUT A WRITTEN RESPONSE.

ALL WELDING SHALL BE IN ACCORDANCE WITH AS/NZS 1554.1 WITH THE FOLLOWING:-

- ALL WELDING ELECTRODES SHALL BE GRADE E48XX FOR MILD STEEL AS/NZS 1553.
- ALL WELDS SHALL BE CATEGORY 'SP' INSPECTION WITH ALL WELDS 100% VISUALLY SCANNED TO AS/NZS 1554.1 U.N.O.
- ALL WELDING SHALL BE PERFORMED BY A QUALIFIED WELDER TO AS/NZS 1554.1.
- ALL WELDING SYMBOLS TO AS/NZS 1101.3.
- UNLESS NOTED OTHERWISE, ALL WELDING SHALL BE CONTINUOUS 6mm FILLET WELD.
- SITE WELDING IS NOT PERMITTED UNLESS NOTED OTHERWISE.
- CDST MAY ORDER NON-DESTRUCTIVE TESTING OF SELECTED WELDS. WELDS PROVED TO BE BELOW THE SPECIFIED QUALITY SHALL BE CUT OUT, RE-WELDED AND RE-TESTED AT CONTRACTORS EXPENSE.

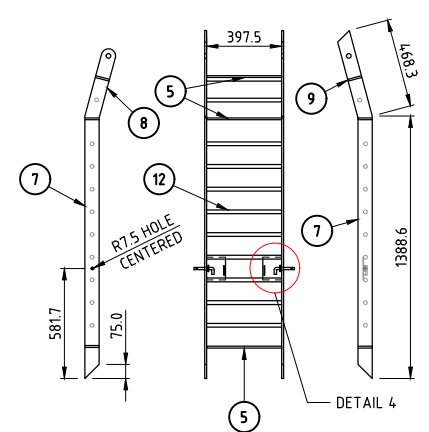
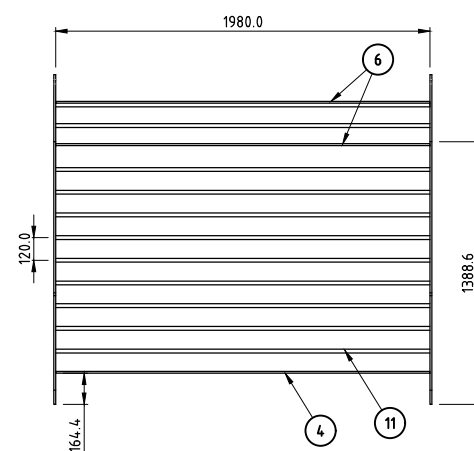
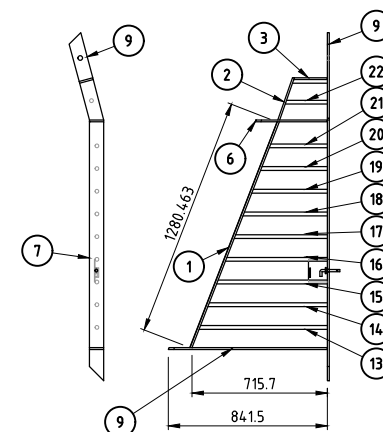
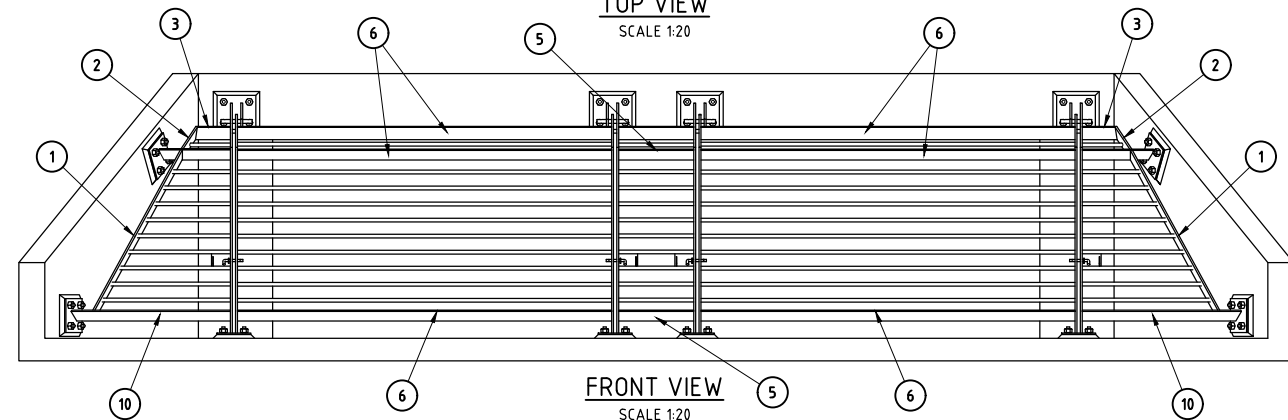
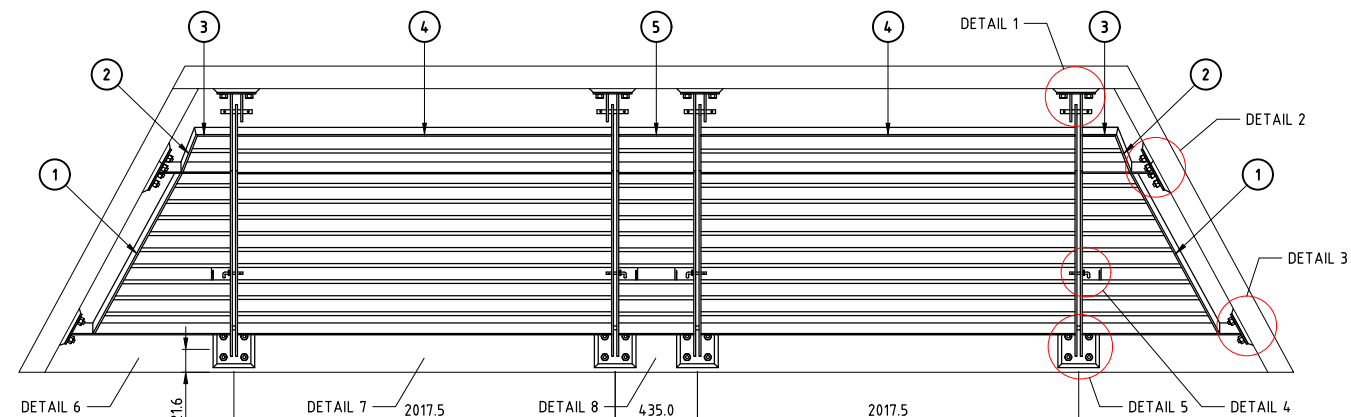
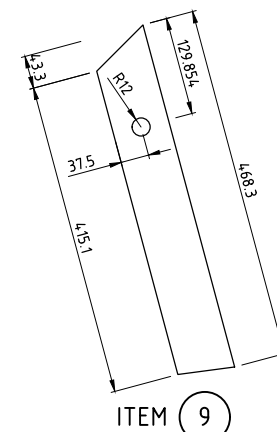
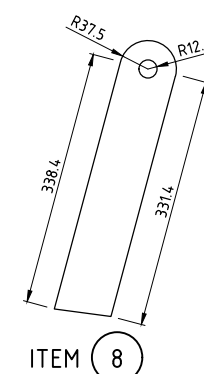
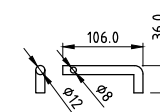
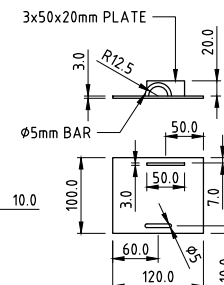
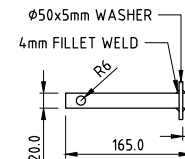
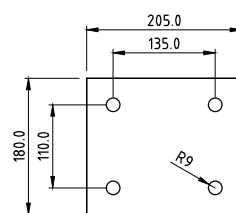
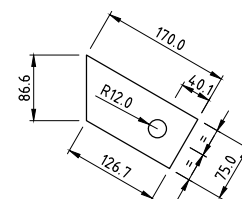
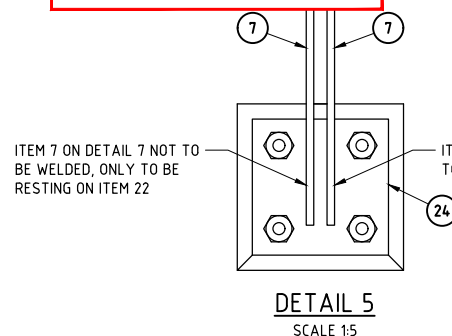
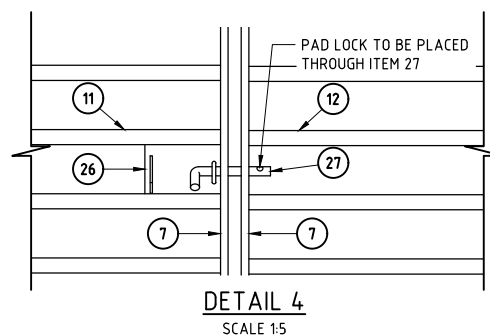
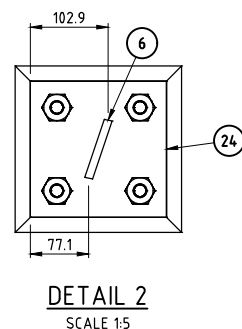
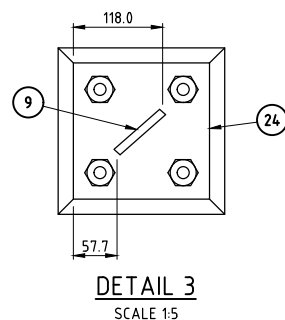
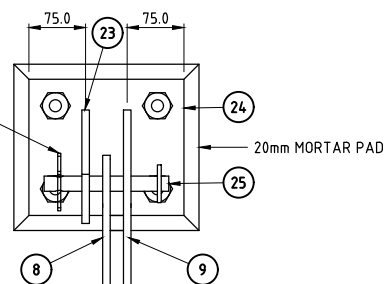
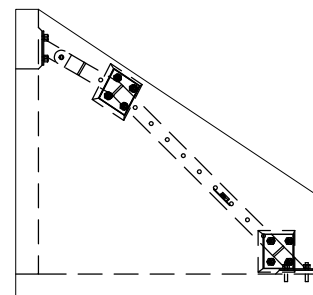
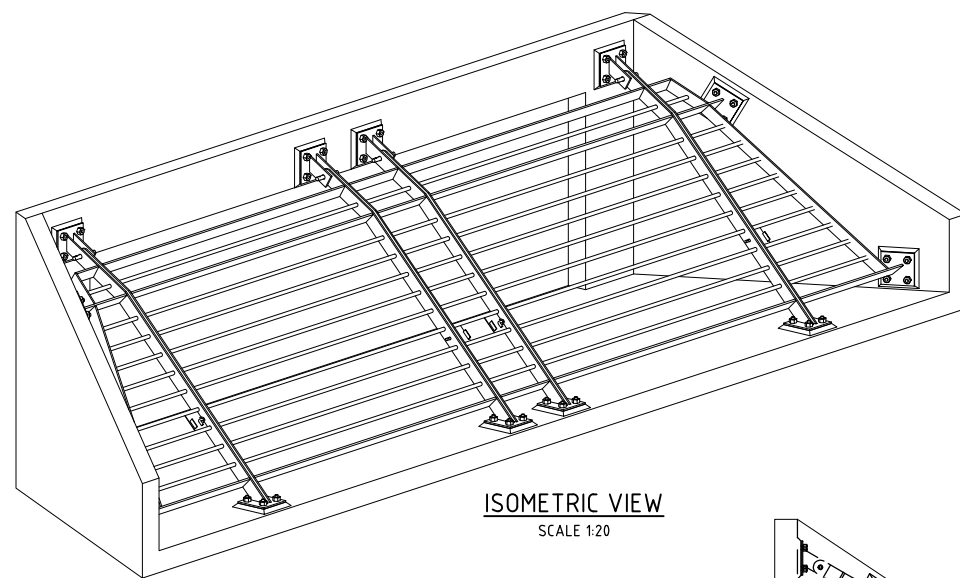
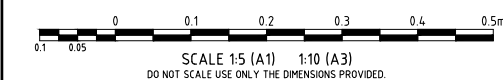
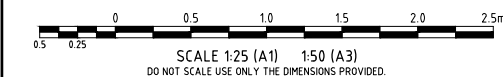
ALL MILD STEEL BOLTS TYPES SHALL BE AS FOLLOWS :-

- SNUG TIGHTENED BOLTS
x4.6/S - COMMERCIAL BOLTS TO AS 1111 ANS AS 1112

ALL BOLTS, NUTS AND WASHERS ARE TO BE HOT DIPPED GALVANISED U.N.O. ALL HOLD DOWN BOLTS, CAST-IN FERRULES, CAST-IN PLATES AND MASONRY ANCHORS ARE TO BE STAINLESS STEEL U.N.O. ALL STAINLESS STEEL AND MILD STEEL COMPONENTS TO BE CAST INTO CONCRETE MUST BE PASSIVATED.

ALL STRUCTURAL STEEL FIXING DETAILS ARE TO BE BASED ON AISC STANDARDISED STRUCTURAL CONNECTIONS U.N.O.

ALL PLATES TO BE FROM STANDARD SQUARE EDGE FLATS U.N.O.



1	AS CONSTRUCTED	MC	JT	WR	MKB	06/07/22	Registered Engineer
0	ISSUED FOR CONSTRUCTION	ESS	LW	WR	MKB	16/08/21	Date Register
No.	Amendments	Drawn	Design	Design	Chk	Appd	ENGINEERING CERTIFICATION
This drawing cannot be copied or reproduced in any form or used for any purpose other than that originally intended without the written permission of Empower Engineers and Project Managers ©COPYRIGHT 2022							



Client	URBEX AND LAND DEVELOPMENT CORP. (JV)			Datum	
Project	ZUCCOLI PHASE 3.6			AHD	
Title	STORMWATER DRAINAGE INLET GRATE DETAILS			PSM	
				RL	
				(MGA) COORD	
				AS CONSTRUCTED	
	Project No.	Drawing No.	Rev		
	B00201-CD015		1		

User: WILLIAM GRIFFITH File Name: C:\Users\william\Documents\WILLIAM00201_12314_CIVIL-DWG514_4_AS CON00201-3-6_SEW Plot Date: 30/06/2022 12:28:55 PM

LEGEND

PROPOSED LOT BOUNDARY
SEWERAGE RETICULATION

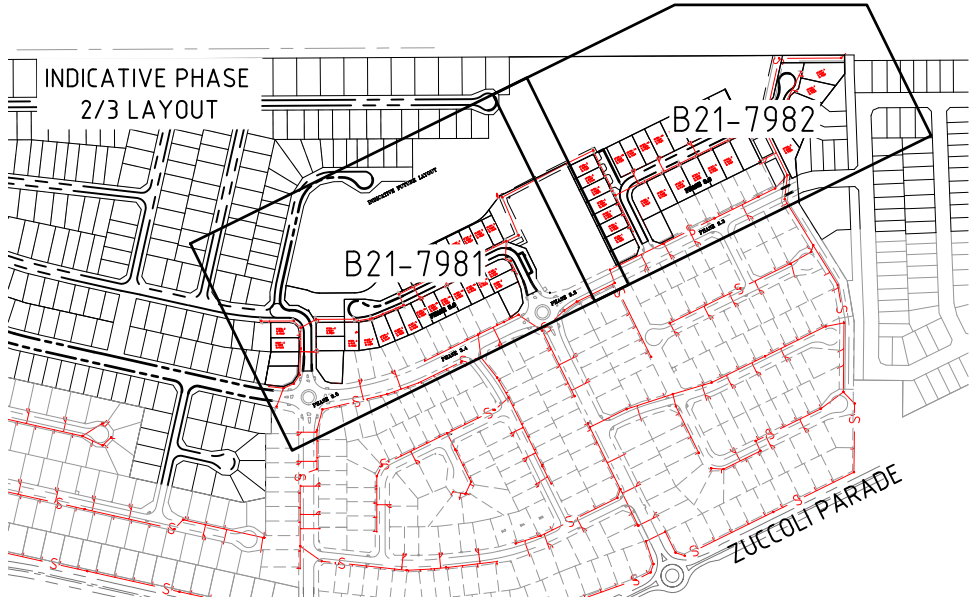
WARNING

BEWARE OF SERVICES

THE LOCATIONS OF ALL EXISTING SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE BY CONTRACTOR. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

AS CONSTRUCTED
INFORMATION CERTIFIED BY
BMD URBAN PTY LTD

SIGNED *Brundan* DATE 30/6/2022



SEWER RETICULATION LOCALITY PLAN

SCALE 1:4000

MINIMUM REQUIRED INSPECTIONS BY HYDRAULIC CERTIFIER - SEWER

PRE-START MEETING

THE CERTIFYING ENGINEER TO ARRANGE PRE-START MEETING WITH POWER WATER REPRESENTATIVE AND PLUMBING CONTRACTOR.

INSPECTION 1

INSPECT EXCAVATED TRENCH AND VERIFY EMBEDMENT TYPE REQUIRED FOR THE SUBSOIL CONDITION. OTHER EMBEDMENT TYPES MUST BE ENDORSED WITH SUPPORTING GEOTECHNICAL REPORT AND APPROVED BY POWER AND WATER.

INSPECTION 2

VERIFY ALL CONNECTIONS ARE COMPLETED AND ISOLATED FROM EXISTING.

INSPECTION 3

VERIFY ALL PIPE WORK AND CONCRETE STRUCTURES ARE CONSTRUCTED TO DRAWINGS AND SPECIFICATIONS.

INSPECTION 4

WITNESS PRESSURE TEST AND VERIFY PRESSURE TESTS HAVE PASSED.

INSPECTION 5

VERIFY ALL AS CONSTRUCTED INFORMATION. CONDUCT HANDOVER WITH POWER AND WATER.

INSPECTION 6

VERIFY ALL OUTSTANDING DEFECTS ARE COMPLETED.

HOUSE CONNECTION LEGEND

REFER LAYOUT PLANS

LOT NUMBER
HC TYPE
HC 250 - 2
IL 15.233
SL 16.182
DIST 2.097
'HC' HOUSE CONNECTION
HC INVERT LEVEL
SURFACE LEVEL AT HC
DISTANCE FROM DOWNSTREAM MANHOLE

MANHOLE DETAILS U.N.O.

REFER LONGITUDINAL SECTIONS

C: CIRCULAR MANHOLE
R: RECTANGULAR LID
D: CLASS D TRAFFICABLE LID

1. POWER AND WATER STANDARD NOTES

GENERAL

- WS.1. CONSTRUCTION OF THE WATER AND SEWERAGE WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE LATEST AMENDMENT OF THE APPROVED PROJECT DRAWINGS AND SPECIFICATION AND THE POWER AND WATER CONNECTION CODE.
- WS.2. DRAWINGS MUST BE SIGNED AS 'APPROVED FOR CONSTRUCTION' BY POWER AND WATER PRIOR TO COMMENCING WORKS.
- WS.3. THE DEVELOPER MUST SUBMIT THE "DEVELOPMENT WORK PERMIT" WITH ALL RELEVANT DOCUMENTATION AT LEAST SEVEN (7) DAYS PRIOR TO COMMENCEMENT OF WORKS. THE DEVELOPER MUST CONFIRM WITH POWER AND WATER IF A MEETING IS REQUIRED PRIOR TO COMMENCEMENT OR SITE WORKS.
- WS.4. PRIOR TO COMMENCEMENT OF WORKS, THE CONSTRUCTOR MUST CHECK THE LOCATION OF ALL UNDERGROUND SERVICES, CONFIRM FINISHED SURFACE LEVELS, CHECK THE MATERIAL, DIAMETER ALIGNMENT, LEVEL AND LOCATION OF EXISTING PIPEWORK AT THE CONNECTION POINTS. IT IS NOT GUARANTEED THAT ALL SERVICES HAVE BEEN SHOWN ON THE DRAWINGS.
- WS.5. CHANGES REQUESTED BY ANY PARTY TO THE DESIGN OF THE WORKS DURING ANY STAGE OF THE DEVELOPMENT MUST BE ENDORSED BY THE DESIGNER/CERTIFIER WITH AMENDED DRAWINGS SUBMITTED TO POWER AND WATER FOR APPROVAL PRIOR TO THE CHANGE BEING CARRIED OUT.
- WS.6. ALL EXISTING PROPERTY SERVICES ARE TO REMAIN IN SERVICE UNTIL THE CONSTRUCTION OF THE NEW SERVICE IS COMPLETED TO THE SATISFACTION OF POWER AND WATER.
- WS.7. ALL LEVELS GIVEN ARE TO AUSTRALIAN HEIGHT DATUM (AHD) IN METRES TO THREE DECIMAL PLACES. PROJECTION SHALL BE BASED ON MGA94 MAP GRID OF AUSTRALIA ZONE 52 OR 53 COORDINATE SYSTEM.
- WS.8. ALL DIMENSIONS ARE IN MILLIMETRES AND ALL CHAINAGES AND LEVELS IN METRES UNLESS SHOWN OTHERWISE.
- EXCAVATION AND FILLING
- WS.9. OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE RELEVANT AUTHORITY PRIOR TO ANY EXCAVATION. WHERE APPLICABLE, THE CONTRACTOR MUST SEEK A WRITTEN APPROVAL FROM THE LAND OWNER TO ACCESS AND CONSTRUCT WITHIN THEIR PROPERTY. ALL APPROVALS AND PERMITS MUST BE SUBMITTED TO POWER AND WATER AT LEAST SEVEN (7) DAYS PRIOR TO EXCAVATION WORKS.
- WS.10. MINIMUM COVER TO PIPE IS 750MM IN TRAFFICABLE AREAS, 600MM IN OTHER AREAS. 1500mm COVER REQUIRED FOR THRUST BORING UNDER ROAD.
- WS.11. EMBEDMENT TYPE FOR ALL PIPES MUST BE TYPE 2A OR 2B WRAPPED IN GEOTEXTILE UNLESS NOTED OTHERWISE. ALL OTHER EMBEDMENT TYPES MUST BE ENDORSED BY THE CERTIFIER WITH SUPPORTING GEOTECHNICAL INVESTIGATION, AND APPROVED BY POWER AND WATER.
- WS.12. WHEN EMBEDMENT TYPE CHANGES, A VERTICAL GEOTEXTILE BARRIER SHALL BE INSERTED BETWEEN THE EMBEDMENT TYPES.
- WS.13. UNLESS NOTED OTHERWISE IN THE DRAWINGS:

- A. USE GENERAL OR SELECTED BACKFILL FOR ROAD RESERVES AND GENERAL AREAS
B. USE 3% CEMENT STABILISED SAND FOR ROADWAYS, DRIVEWAYS AND TRAFFICABLE AREAS
C. USE 5% CEMENT STABILISED GRAVEL FOR OPEN UNLINED DRAIN CROSSINGS.
- WS.14. REINSTATE ALL SURFACES UPON COMPLETION OF THE WORKS AS SPECIFIED OR TO MATCH EXISTING TO SATISFACTION OF THE RELEVANT AUTHORITY OR PERSONNEL.

LIVE CONNECTIONS

WS.15. ONLY AUTHORISED POWER AND WATER PERSONNEL ARE PERMITTED TO UNDERTAKE ANY WORKS; OPERATE AND PHYSICALLY ACCESS LIVE ASSETS. AT NO STAGE SHALL ANY OTHER PERSONS CARRY OUT WORK ON POWER AND WATER INFRASTRUCTURE.

WS.16. THE DEVELOPER IS RESPONSIBLE FOR ALL CONNECTION FEES AND CHARGES. THE DEVELOPER MUST SUBMIT THE "REQUEST FOR CONNECTIONS" FORM AND ALLOW FOR A MINIMUM OF TWENTY-ONE (21) DAYS FOR SCHEDULING CONNECTIONS. POWER AND WATER HAVE NO OBLIGATIONS IN AVAILABILITY FOR REQUESTED CONNECTION DATE AND THE DEVELOPER IS TO NEGOTIATE ALTERNATIVE DATES WITH POWER AND WATER.

HANDOVER AND COMMISSIONING

WS.17. THE CERTIFIER MUST SUBMIT THE "HANDOVER REQUEST FORM" WITH ALL RELEVANT DOCUMENTATION AT LEAST SEVEN (7) DAYS PRIOR TO REQUESTED INITIAL HANDOVER INSPECTION DATE.

WS.18. ALL IDENTIFIED DEFECTS MUST BE RECTIFIED BY THE DEVELOPER WITHIN FOURTEEN DAYS (14) OF INITIAL HANDOVER DATE. A FINAL HANDOVER INSPECTION WITH POWER AND WATER MUST BE ARRANGED TO CONFIRM RECTIFICATION OF OUTSTANDING DEFECTS.

WS.19. COMMISSIONING OF GIFTED ASSET WORKS IS UNDERTAKEN BY POWER AND WATER AFTER SUCCESSFUL HANDOVER OF ASSET, RECTIFICATION OF ALL OUTSTANDING DEFECTS AND COMPLETION OF ALL LIVE CONNECTIONS TO EXISTING MAINS.

CLEARANCE, DEFECTS AND LIABILITY PERIOD

WS.20. THE DEVELOPER MUST SUBMIT THE "CLEARANCE REQUEST FORM" WITH ALL RELEVANT DOCUMENTATION AND ALLOW A MINIMUM OF FOURTEEN (14) DAYS TO OBTAIN DEVELOPMENT PERMIT CLEARANCE. ALLOW FOR AN ADDITIONAL FOURTEEN (14) DAYS TO RECTIFY ALL OUTSTANDING DEFECTS AND ISSUES.

WS.21. THE DEFECTS AND LIABILITY PERIOD OF THE ASSET WILL COMMENCE ON THE DATE WHEN DEVELOPMENT CLEARANCE WAS ISSUED BY POWER AND WATER OR DATE OF FINAL ACCEPTANCE OF ASSET.

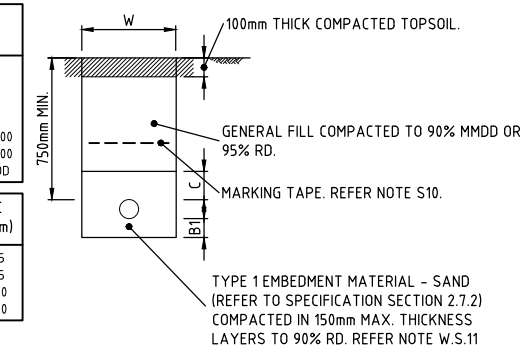
WS.22. ALL EXTENSIONS AND SUBDIVISIONS ARE SUBJECT TO TWENTY FOUR (24) MONTH DEFECT AND LIABILITY PERIOD. ALL BUILDING DEVELOPMENTS ARE SUBJECT TO TWELVE (12) MONTH DEFECT AND LIABILITY PERIOD.

WS.23. THE DEVELOPER IS FULLY RESPONSIBLE FOR ALL COSTS TO RECTIFY DEFECTS, REPAIR AND EMERGENCY WORKS WITHIN THIS PERIOD. SUCH WORKS WILL RESULT IN AN EXTENDED DEFECTS AND LIABILITY PERIOD OF FIVE (5) YEARS.

WS.24. THE DEVELOPER MUST SCHEDULE AN OFF-MAINTENANCE INSPECTION AT LEAST SEVEN (7) DAYS PRIOR TO REQUESTED INSPECTION DATE. POWER AND WATER WILL TAKE FULL RESPONSIBILITY OF ASSET AFTER ALL DEFECTS HAVE BEEN RECTIFIED AND ALL ASSOCIATED PAYMENT TO REPAIR AND EMERGENCY WORKS HAVE BEEN PAID BY THE DEVELOPER.

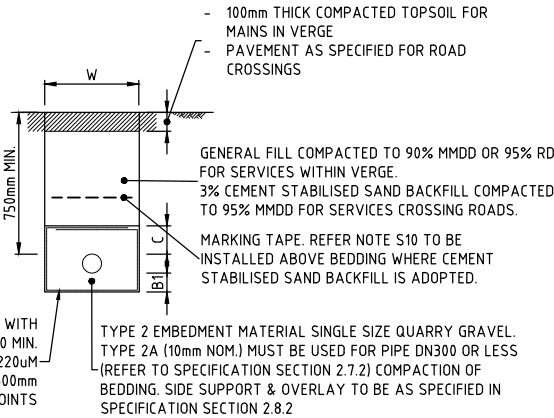
NOMINAL PIPE DIAMETER (DN)	W (mm)
100 & 150	450
200-300	600
375	750
450	900
450-900	PIPE OD + 600
1050-1500	PIPE OD + 700
1650-4000	1.5 x PIPE OD

NOMINAL PIPE SIZE (mm)	B1 (mm)	C (mm)
20-50	50	75
80-100	75	75
150-600	100	100
750 & LARGER	100	100



TYPE 1 EMBEDMENT & TRENCH DETAIL

SCALE N.T.S



TYPE 2A TRENCH DETAIL

SCALE 1:20

POWER AND WATER (SEWER NOTES)

- S.1. ALL GRAVITY SEWER PIPES SHALL BE UPVC DWV CLASS SN8 WITH STYRENE-BUTADIENE RUBBER RING JOINTS (SBR), UNLESS NOTED OTHERWISE.
- S.2. SEWER SHALL BE OFFSET FROM PROPERTY BOUNDARIES A DISTANCE OF 16m IN ROAD RESERVES AND 15m IN PRIVATE PROPERTY, EXCEPT WHERE SHOWN OTHERWISE ON THE DRAWINGS.
- S.3. ALL GRAVITY SEWER ARE TO BE A MINIMUM OF DN150, UNLESS NOTED OTHERWISE.
- S.4. THE CONTRACTOR SHALL EITHER INSCRIBE OR ATTACH A PLATE TO THE MAINTENANCE HOLES OR MAINTENANCE SHAFT WITH THE IDENTIFYING NUMBER AS SHOWN ON THE DRAWINGS.
- S.5. FLEXIBLE JOINTS WITH CONCRETE SURROUND MUST BE CONSTRUCTED ON BOTH UPSTREAM AND DOWNSTREAM SIDES OF THE MAINTENANCE HOLES. CONCRETE SURROUND MUST BE MINIMUM N32, 300mm THICK WITH 4 x N12 BAR AT EACH CORNER. EACH N12 BAR TO BE COGGED AND EPOXYED MIN 50mm INTO MAINTENANCE HOLE WALL WITH A MIN 50mm COVER.
- S.6. DEPTH TO INVERT AT MAINTENANCE HOLES/SHAFT ARE MEASURED FROM THE TOP OF MAINTENANCE HOLES/SHAFT.
- S.7. UNLESS NOTED OTHERWISE IN THE DRAWINGS, THE MINIMUM CONCRETE STRNTH FOR ALL SEWERAGE STRUCTURES INCLUDING MAINTENANCE HOLES MUST BE N50. REFER TO POWER AND WATER STANDARD DRAWING W2-2-01D FOR ADDITIONAL NOTES FOR SEWERAGE STRUCTURES.
- S.8. ALIGN MAINTENANCE HOLE COVER SUCH THAT THE LONG SIDE OF THE LID IS PARALLEL WITH THE SEWER MAIN.
- S.9. ALL SEWER RISING MAINS MUST BE PVC-O CLASS 16 RRJ, UNLESS NOTED OTHERWISE. NO DEFLECTIONS AT PVC JOINT ARE PERMITTED. SO-SO DI CONNECTORS (MAXIMUM OF TWO (2) DEGREES) OR DI BENDS MUST BE USED TO ACHIEVE DEFLECTIONS ON PVC PIPES.
- S.10. MARKING TAPE COLOURED ORANGE AND MARKED 'SEWER MAIN' MUST BE LAID CONTINUOUSLY AND LOCATED 300mm ABOVE THE SEWER PIPEWORK
- S.11. THE MINIMUM HORIZONTAL CLEARANCE BETWEEN EXISTING SERVICES MUST BE 600mm FOR NEW MAINS UP TO AND EQUAL TO DN200 AND 1000mm FOR NEW MAINS LARGER THAN DN200.
- S.12. THE MINIMUM VERTICAL CLEARANCE BETWEEN EXISTING SERVICES MUST BE 300mm FOR NEW MAINS UP TO AND EQUAL TO DN200 AND 500mm FOR NEW MAINS LARGER THAN DN200.
- S.13. THE TESTING OF SEWER MAINS AND STRUCTURES MUST BE ACCORDING TO POWER AND WATER'S TEST PROCEDURES GUIDELINE.

ADDITIONAL SEWER NOTES

- S.101. THE SUPERINTENDENT IN CONSULTATION WITH GEOTECHNICAL PERSONNEL AND PWC SHALL DETERMINE WATER PIPE BEDDING TYPE AFTER INSPECTION OF THE EXCAVATED TRENCH. TYPE 2A BEDDING AND GEOTEXTILE FABRIC SHALL BE USED UNDER ROADS AND AT OTHER LOCATIONS AS SHOWN ON THE DRAWINGS. ALL ROAD CROSSINGS SHALL BE BACKFILLED TO A STRINGENT COMPACTION STANDARD, USING A NATURAL GRAVEL FOR THE FULL WIDTH OF THE TRENCH TO SUBGRADE LEVEL.
- S.102. ALL SEWER MAINS SHALL BE SUBJECT TO CCTV INSPECTION IN ACCORDANCE WITH PWC CONNECTION CODE.
- S.103. UNDERTAKE 2 DISTORTION TESTS OF MAINS. ONE 3 MONTHS AFTER COMPLETION AND THE SECOND AFTER THE FIRST WET SEASON.
- S.104. PROVIDE CEMENT STABILISED BACKFILL UNDER DRAINAGE PATHS OR OPEN DRAINS.
- S.105. THE DISTANCE TO DOWNSTREAM MANHOLE IS THE PERPENDICULAR DISTANCE TO THE MAIN FROM THE LOT CONNECTION.
- S.106. THE DISTANCE TO DOWNSTREAM MANHOLE IS THE PERPENDICULAR DISTANCE TO THE MAIN FROM THE LOT CONNECTION.
- S.107. TRENCHSTOPS OR BULKHEADS TO BE CONSTRUCTED IN ACCORDANCE WITH WSA4 STANDARD DRAWING WA1-1209 WHERE WATERMAIN GRADE EXCEEDS 5%.

POWER WATER CORPORATION - SEWER

W2-1-01/8	TYPE 1 SEWER CONNECTION DN 100 AND DN 150
W2-1-02/7	TYPE 2 SEWER CONNECTION DN 100 AND DN 150
W2-1-04/7	SEWER CONNECTION LAYOUTS DN 100 AND DN 150
W2-1-05/6	INTERMEDIATE AND TERMINAL INSPECTION OPENINGS LIGHT AND HEAVY DUTY ARRANGEMENTS
W2-1-06/2	TERMINAL MAINTENANCE SHAFT AND PROPERTY CONNECTION DETAIL
W2-1-07/1	INTERMEDIATE AND TERMINAL INSPECTION OPENING ARRANGEMENTS
W2-1-08/6	TYPE 4 AND 5 SEWER CONNECTIONS DN100 AND DN 150
W2-1-10/2	TYPE 5 SEWER CONNECTION
W2-1-11/1	ACCESS CHAMBER CONNECTION DN150-DN225
W2-2-01A/3	ACCESS CHAMBERS CAST INSITU CIRCULAR CHAMBERS (UP TO 6.0m DEEP) SHEET 1 OF 4
W2-2-01D/3	ACCESS CHAMBERS CAST INSITU AND PRECAST NOTES FOR CONSTRUCTION SHEET 4 OF 4
W2-2-02/6	ACCESS CHAMBERS PRECAST CHAMBERS (UP TO 6.0m DEEP)
W2-2-03/5	ACCESS CHAMBERS EXTERNAL AND INTERNAL DROPS TYPES 1-4
W2-2-07/4	MAINTENANCE SHAFT TYPICAL ARRANGEMENT
W2-2-08/2	MAINTENANCE SHAFT PIPELINE CONNECTION DETAILS

CONTRACTOR TO CONFIRM THAT THE LATEST REVISIONS ARE USED FOR CONSTRUCTION

POWER WATER CORP. DRG No. B21-7980

ENGINEER'S CERTIFICATION

I, MATTHEW BEGGS, being duly authorised by Power and Water Corporation hereby certify that the works included herein are designed in accordance with sound engineering judgement and published PWC standards

PWC Accreditation Number - DESCERT4
For and on behalf of Empower Engineers and Project Managers Pty Ltd

PowerWater

Empower
ENGINEERS & PROJECT MANAGERS



LAND DEVELOPMENT CORPORATION

urbex

Empower
ENGINEERS & PROJECT MANAGERS
ABN 23 010 743 692

Client URBEX AND LAND DEVELOPMENT CORP. (JV)

Project ZUCCOLI PHASE 3.6

Title SEWER RETICULATION LOCALITY PLAN AND NOTES

Project No. B00201-CS001
Drawing No.
Rev 1

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LEGEND

- UPRIGHT KERB AND GUTTER
- LAYBACK KERB AND GUTTER
- SEWERAGE RETICULATION
- ACCESS CHAMBER
- MAINTENANCE SHAFT
- TERMINAL MAINTENANCE SHAFT
- REFER SEWER RETICULATION LONG SECTIONS B00201-CS004 TO B00201-CS007
- ALLOWABLE DRIVEWAY ACCESS

PERMISSION TO USE FOR CONSTRUCTION PURPOSES WATER AND SEWER RETICULATION

SIGNED DATE

ON BEHALF OF WATER SERVICES FOR THE INCORPORATION INTO POWER AND WATER CORPORATION'S NETWORK.

THIS PERMISSION TO USE IS GIVEN ON THE BASIS THAT THE DEVELOPER AND/OR CONSULTANT IS NOT ABSOLVED FROM FULL RESPONSIBILITY FOR THE CORRECTNESS AND ACCURACY OF THE DESIGN AND/OR DOCUMENTS ASSOCIATED.

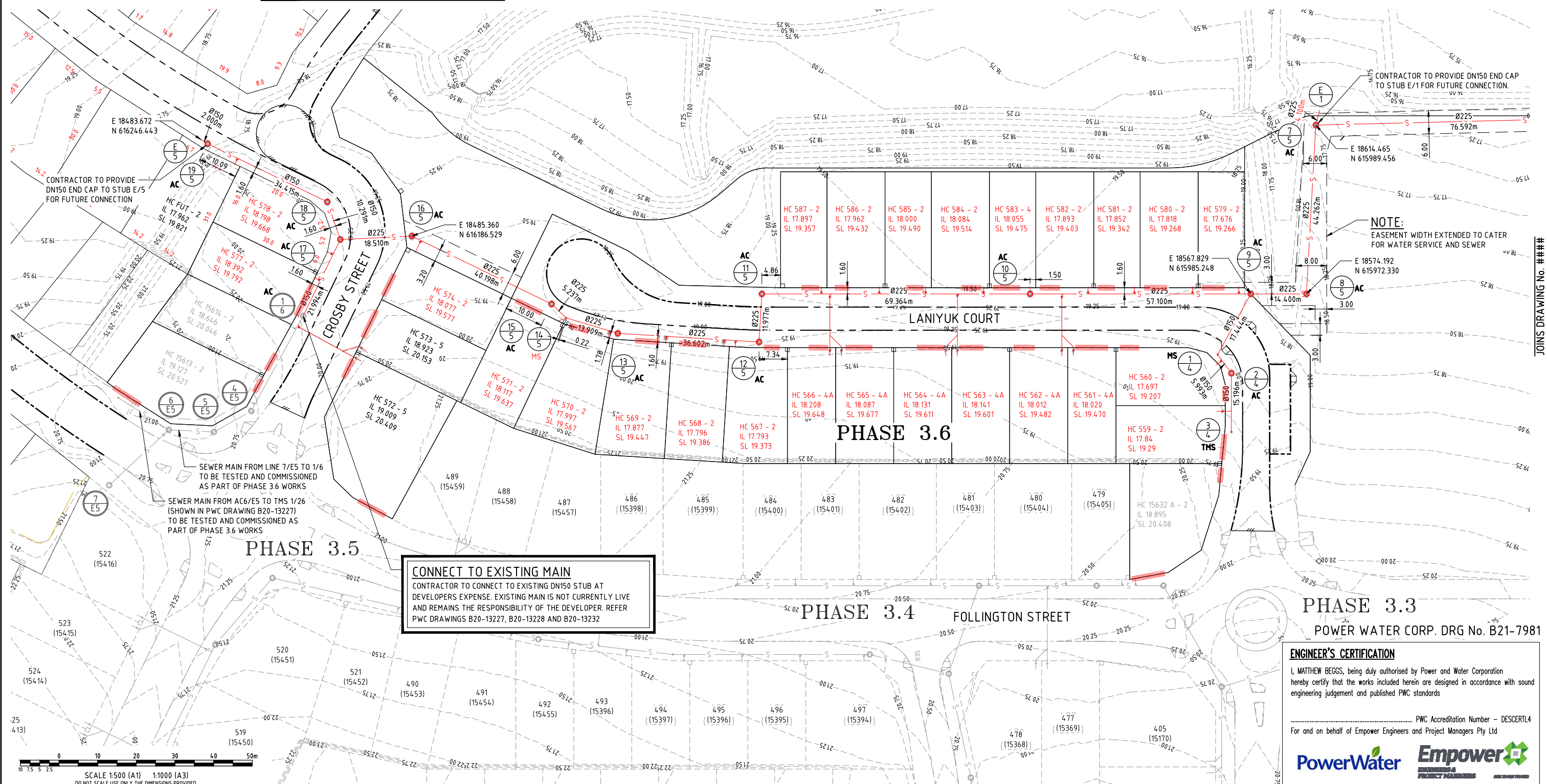
THIS PERMISSION IS VALID FOR A PERIOD OF TWO YEARS FROM THE DATE OF SIGNED APPROVAL.

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THE LOCATIONS OF ALL EXISTING SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE BY CONTRACTOR. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

AS CONSTRUCTED
INFORMATION CERTIFIED BY
BMD URBAN PTY LTD

SIGNED *Brundan* DATE 30/6/2022



ENGINEER'S CERTIFICATION

I, MATTHEW BEGGS, being duly authorised by Power and Water Corporation hereby certify that the works included herein are designed in accordance with sound engineering judgement and published PWC standards

PWC Accreditation Number - DESCERT4
For and on behalf of Empower Engineers and Project Managers Pty Ltd

PowerWater Empower
ENGINEERS & PROJECT MANAGERS

3	AS CONSTRUCTED	MC	LW	WPR	MKB	30/06/22	Registered Engineer
2	PIPE DIAMETER CHANGES	LW	LW	WR	MKB	02/09/21	
1	MINOR LEVEL CHANGES	LW	LW	WR	MKB	11/08/21	Date Register
0	ISSUED FOR CONSTRUCTION	ESS	LW	WR	MKB	05/08/21	ENGINEERING CERTIFICATION
No.	Amendments	Drawn	Design	Design Chk	Appd	Date	

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LAND DEVELOPMENT CORPORATION

urbex

Empower
ENGINEERS & PROJECT MANAGERS
ABN 23 010 743 692

Client	URBEX AND LAND DEVELOPMENT CORP. (JV)
Project	ZUCCOLI PHASE 3.6
Title	SEWER RETICULATION PLAN SHEET 1 OF 2
Datum	AHD
PSM	RL
(MGA) COORD	AS CONSTRUCTED
Project No.	B00201-CS002
Drawing No.	3

 UPRIGHT KERB AND GUTTER
 LAYBACK KERB AND GUTTER
 SEWERAGE RETICULATION
 ACCESS CHAMBER
 MAINTENANCE SHAFT
 TERMINAL MAINTENANCE SHAFT
 REFER SEWER RETICULATION LONG
SECTIONS B00201-CS004 TO B00201-CS007
 ALLOWABLE DRIVEWAY ACCESS

SIGNED _____ DATE _____

ON BEHALF OF WATER SERVICES FOR THE INCORPORATION INTO
POWER AND WATER CORPORATION'S NETWORK.

THIS PERMISSION TO USE IS GIVEN ON THE BASIS THAT THE DEVELOPER AND/OR CONSULTANT IS NOT ABSOLVED FROM FULL RESPONSIBILITY FOR THE CORRECTNESS AND ACCURACY OF THE DESIGN AND/OR DOCUMENTS ASSOCIATED.

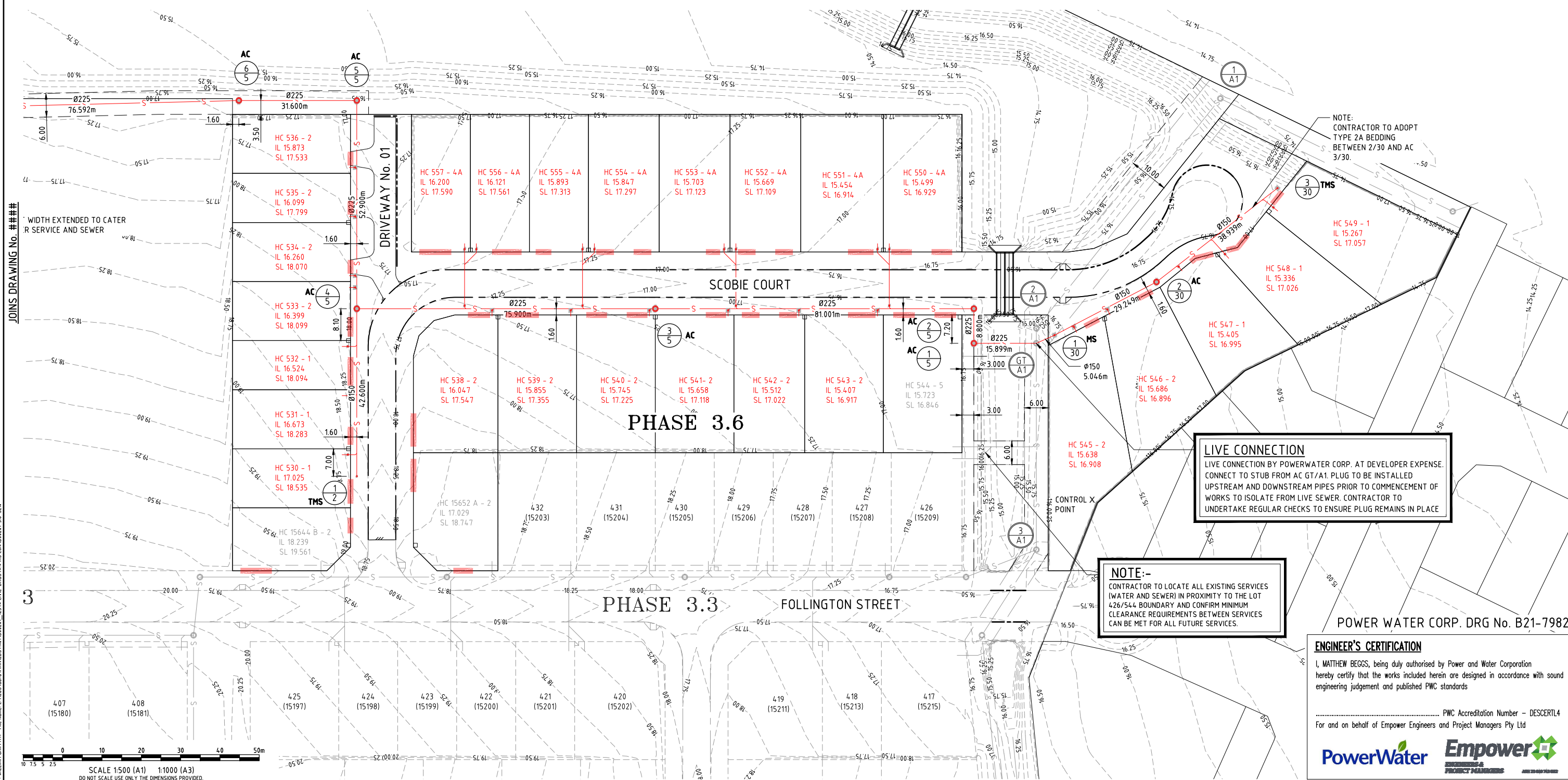
THIS PERMISSION IS VALID FOR A PERIOD OF TWO YEARS FROM THE DATE OF SIGNED APPROVAL.

BEWARE OF SERVICES

THE LOCATIONS OF ALL EXISTING SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE BY CONTRACTOR. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

AS CONSTRUCTED
INFORMATION CERTIFIED BY
BMD URBAN PTY LTD

SIGNED: Brendan Lane DATE: 30/6/2022



POWER WATER CORP. DRG No. B21-7982

ENGINEER'S CERTIFICATION

I, MATTHEW BEGGS, being duly authorised by Power and Water Corporation hereby certify that the works included herein are designed in accordance with sound engineering judgement and published PWC standards


..... PWC Accreditation Number - DESCERT4
For and on behalf of Empower Engineers and Project Managers Pty Ltd

[illegible]

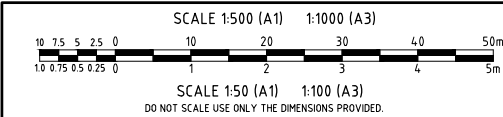
Client	URBEX AND LAND DEVELOPMENT CORP. (JV)
--------	---------------------------------------

Project **ZUCCOLI PHASE 3.6**

Title	SEWER RETICULATION PLAN SHEET 2 OF 2
-------	---

Datum AHD PSM RL (MGA) COORD		
AS CONSTRUCTED		
Project No.	Drawing No.	Rev
B00201-CS003		1

User: WILLIAM GRIFFITH File Name: C:\Users\william\Documents\B00201_CS004_CIVIL-DWG.dwg AS CONSTRUCTED-36-SEW.LX
Plot Date: 30/06/2022 02:02 PM



ENGINEER'S CERTIFICATION

I, MATTHEW BEGGS, being duly authorised by Power and Water Corporation hereby certify that the works included herein are designed in accordance with sound engineering judgement and published PWC standards

..... PWC Accreditation Number - DESCERTL4
For and on behalf of Empower Engineers and Project Managers Pty Ltd



LEGEND

- × ALLOTMENT CONTROL LEVEL
- ▽ HOUSE CONNECTION
- Conc CONCRETE COVER
- C.I. CAST IRON COVER
- Bolt BOLT DOWN COVER

BEDDING/BACKFILL

PROP. DESCRIPTION

DIAMETER/TYPE $\phi 225$ PVC-U SN8

GRADE (1 in) (mm/m) (4.8) 0.48%

LENGTH (1 in X) (1 in 208) 2.480

DATUM (m) 1.0

JUNCTION INVERT LEVEL

DEPTH BELOW F.S.L.

INVERT LEVEL

FINISHED SURFACE LEVEL

CHAINAGE

LINE

7/5	E/1
MANHOLE TYPE/DROP	Class D1 S100 Bolt Drop 0.038 TYPE 1
MANHOLE COVER	Class D1 S100 Bolt
JUNCTION LINE No.	
JUNCTION DROP	
HC DEPTH	
HC TYPE	
HC IL	
HC LOT No.	

4/5	1/2
MANHOLE TYPE/DROP	Class D1 S100 Drop 3.430 TYPE 3A
MANHOLE COVER	Class D1 S100
JUNCTION LINE No.	
JUNCTION DROP	
HC DEPTH	
HC TYPE	
HC IL	
HC LOT No.	

9/5	1/4	2/4	3/4
MANHOLE TYPE/DROP	Class D1 S100 Drop 2.474 TYPE 3A	Class D1 S100 Drop 0.000 TYPE 1	Class D1 S100 Drop 0.000 TYPE 1
MANHOLE COVER	Class D1 S100	Class D1 S100	Class D1 S100
JUNCTION LINE No.			
JUNCTION DROP			
HC DEPTH			
HC TYPE			
HC IL			
HC LOT No.			

38.633	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342	4.309	15.651	11.342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PERMISSION TO USE FOR CONSTRUCTION PURPOSES WATER AND SEWER RETICULATION

SIGNED _____ DATE _____

ON BEHALF OF WATER SERVICES FOR THE INCORPORATION INTO POWER AND WATER CORPORATION'S NETWORK.

THIS PERMISSION TO USE IS GIVEN ON THE BASIS THAT THE DEVELOPER AND/OR CONSULTANT IS NOT ABSOLVED FROM FULL RESPONSIBILITY FOR THE CORRECTNESS AND ACCURACY OF THE DESIGN AND/OR DOCUMENTS ASSOCIATED.

THIS PERMISSION IS VALID FOR A PERIOD OF TWO YEARS FROM THE DATE OF SIGNED APPROVAL.

3/5	4/5	
MANHOLE TYPE/DROP	Class D1 S100 Drop 0.020 TYPE 1	Class D1 S100 Drop 0.040 TYPE 1
MANHOLE COVER	Class D1 S100	Class D1 S100
JUNCTION LINE No.		
JUNCTION DROP		
HC DEPTH		
HC TYPE		
HC IL		
HC LOT No.		

AS CONSTRUCTED
INFORMATION CERTIFIED BY
BMD URBAN PTY LTD

SIGNED *Brendan* DATE *30/6/2022*

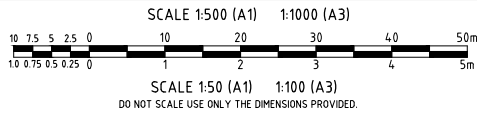
AS CONSTRUCTED



Client	URBEX AND LAND DEVELOPMENT CORP. (JV)	Datum	AHD
Project	ZUCCOLI PHASE 3.6	PSM	RL
Title	SEWER RETICULATION LONGITUDINAL SECTION SHEET 1 OF 4	(MGA) COORD	AS CONSTRUCTED
Project No.	B00201-CS004	Drawing No.	2

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User: WILLIAM GRIFFITH File Name: C:\Users\william\Documents\B00201_CS0001_12314_CIVIL-DWG\B00201-36-SEW.LX Plot Date: 30/06/2022 02:27:03 PM



PERMISSION TO USE FOR
CONSTRUCTION PURPOSES
WATER AND SEWER RETICULATION

SIGNED _____ DATE _____

ON BEHALF OF WATER SERVICES FOR THE INCORPORATION INTO
POWER AND WATER CORPORATION'S NETWORK.

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THE DATE OF SIGNED APPROVAL.

AS CONSTRUCTED
INFORMATION CERTIFIED BY
BMD URBAN PTY LTD

SIGNED Brendan 30/6/2022
DATE

MANHOLE TYPE/DROP	4/5	5/5	6/5	7/5	8/5	9/5	10/5
MANHOLE COVER	Class D1 S1000 Drop 0.040 TYPE 1	Class D1 S1000 Bolt Drop 0.040 TYPE 1	Class D1 S1000 Bolt Drop 0.030 TYPE 1	Class D1 S1000 Bolt Drop 0.040 TYPE 1	Class D1 S1000 Bolt Drop 0.040 TYPE 1	Class D1 S1000 Bolt Drop 0.030 TYPE 1	Class D1 S1000 Drop 0.030 TYPE 1
JUNCTION LINE No.	Line 2			Line 1		Line 4	
JUNCTION DROP	Drop 3.369 TYPE 3A			Drop 0.080 TYPE 1		Drop 2.400 TYPE 3A	
HC DEPTH	1.395					1.4	1.39
HC TYPE	Type 2	Type 2	Type 2			Type 2	Type 2
HC IL	IL 16.458	IL 16.429	IL 16.715			IL 17.665	IL 17.900
HC LOT No.	Lot 533	Lot 534	Lot 535			Lot 579	Lot 580

ENGINEER'S CERTIFICATION

I, MATTHEW BEGGS, being duly authorised by Power and Water Corporation hereby certify that the works included herein are designed in accordance with sound engineering judgement and published PWC standards

..... PWC Accreditation Number - DESCERTL4
For and on behalf of Empower Engineers and Project Managers Pty Ltd



LEGEND

- × ALLOTMENT CONTROL LEVEL
- ▽ HOUSE CONNECTION
- Conc CONCRETE COVER
- C.I. CAST IRON COVER
- Bolt BOLT DOWN COVER
- BEDDING/BACKFILL

PROP. DESCRIPTION	LOT	LOT	LOT	LOT	LOT	LOT
DIAMETER/TYPE	Ø225PVC-U SN8	Ø225PVC-U SN8	Ø225PVC-U SN8	Ø225PVC-U SN8	Ø225PVC-U SN8	Ø225PVC-U SN8
GRADE (1 in) (mm/m)	(4.8)	(4.8)	(4.8)	(4.8)	(4.8)	(4.8)
LENGTH (1 in X)	(1 in208)	(1 in208)	(1 in208)	(1 in208)	(1 in208)	(1 in208)
DATUM (m)						
JUNCTION INVERT LEVEL	15.799x			13.305x		16.207x
DEPTH BELOW F.S.L.	5.554x	4.126x	4.082x	4.465x	5.132x	5.305x
INVERT LEVEL	12.326x	12.640x	12.835x	13.229x	13.475x	13.590x
FINISHED SURFACE LEVEL	17.880	16.766	16.917	17.694	18.607	18.895
CHAINAGE	181.600	234.500	266.100	342.692	386.954	401.354

LINE

5

AS CONSTRUCTED

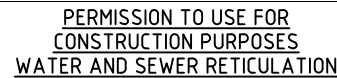
POWER WATER CORP. DRG No. B21-7984

No.	Amendments	Drawn	Design	Design Chk	Appd	Date
2	AS CONSTRUCTED	MC	LW	WPR	MKB	30/06/22
1	MINOR GRADING CHANGES	LW	LW	WR	MKB	11/08/21
0	ISSUED FOR CONSTRUCTION	ESS	LW	WR	MKB	05/08/21

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Client	URBEX AND LAND DEVELOPMENT CORP. (JV)	Datum	AHD
Project	ZUCCOLI PHASE 3.6	PSM	RL
Title	SEWER RETICULATION LONGITUDINAL SECTION SHEET 2 OF 4	(MGA) COORD	AS CONSTRUCTED
Project No.	B00201-CS005	Drawing No.	2



SIGNED	DATE
ON BEHALF OF WATER SERVICES FOR THE INCORPORATION INTO POWER AND WATER CORPORATION'S NETWORK.	
THIS PERMISSION TO USE IS GIVEN ON THE BASIS THAT THE DEVELOPER AND/OR CONSULTANT IS NOT ABSOLVED FROM FULL RESPONSIBILITY FOR THE CORRECTNESS AND ACCURACY OF THIS DESIGN AND/OR DOCUMENTS ASSOCIATED.	
THIS PERMISSION IS VALID FOR A PERIOD OF TWO YEARS FROM THE DATE OF SIGNED APPROVAL.	

MANHOLE TYPE/DROP	S100 Drop 0.030 TYPE 1	<div>ON BEHALF OF WATER SERVICES FOR THE INCORPORATION INTO POWER AND WATER CORPORATION'S NETWORK.</div> <div>THIS PERMISSION TO USE IS GIVEN ON THE BASIS THAT THE DEVELOPER AND/OR CONSULTANT IS NOT ABSOLVED FROM FULL RESPONSIBILITY FOR THE CORRECTNESS AND ACCURACY OF THE DESIGN AND/OR DOCUMENTS ASSOCIATED.</div> <div>THIS PERMISSION IS VALID FOR A PERIOD OF TWO YEARS FROM THE DATE OF SIGNED APPROVAL.</div>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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I, MATTHEW BEGGS, being duly authorised by Power and Water Corporation hereby certify that the works included herein are designed in accordance with sound engineering judgement and published PWC standards

..... PWC Accreditation Number – DESCRTL4
For and on behalf of Empower Engineers and Project Managers Pty Ltd



✕ ALLOTMENT CONTROL LEVEL
 ◁ HOUSE CONNECTION
 Conc CONCRETE COVER
 C.I. CAST IRON COVER
 Bolt BOLT DOWN COVER
BEDDING/BACKFILL

[illegible]

- CONSTRUCT $\phi 150$ STUB
FOR FUTURE CONNECTION

CONNECT TO EXISTING
CONTRACTOR TO CONNECT TO
EXISTING STUB FROM 1/6

AS CONSTRUCTED
INFORMATION CERTIFIED BY
BMD URBAN PTY LTD

SIGNED: Brendan Ram DATE: 20/6/2022

Diagram illustrating the cross-section of a road structure, showing layers and dimensions:

- TYPE 2/GEO-WRAP BED
- GENERAL FILL.
- VERGE
- $\phi 150\text{PVC-U SN8}$
- (26.7)
- 2.67%
- (1 in 37)
- 21.994
- 3.0

POWER WATER CORP. DRG No. B21-7985

AS CONSTRUCTED

4	AS CONSTRUCTED	MC	LW	WPR	MKB	30/06/22	<div> <div>Registered Engineer</div> <div> <div>Date</div> <div>Register</div> </div> </div>
3	MINOR AMENDMENTS	MC	LW	WR	MKB	15/09/21	
2	MINOR GRADING CHANGES	LW	LW	WR	MKB	02/09/21	
1	MINOR GRADING CHANGES	LW	LW	WR	MKB	11/08/21	
0	ISSUED FOR CONSTRUCTION	ESS	LW	WR	MKB	05/08/21	
No.	Amendments	Drawn	Design	Design Chk	Appd	Date	ENGINEERING CERTIFICATION



Client	URBEX AND LAND DEVELOPMENT CORP. (JV)
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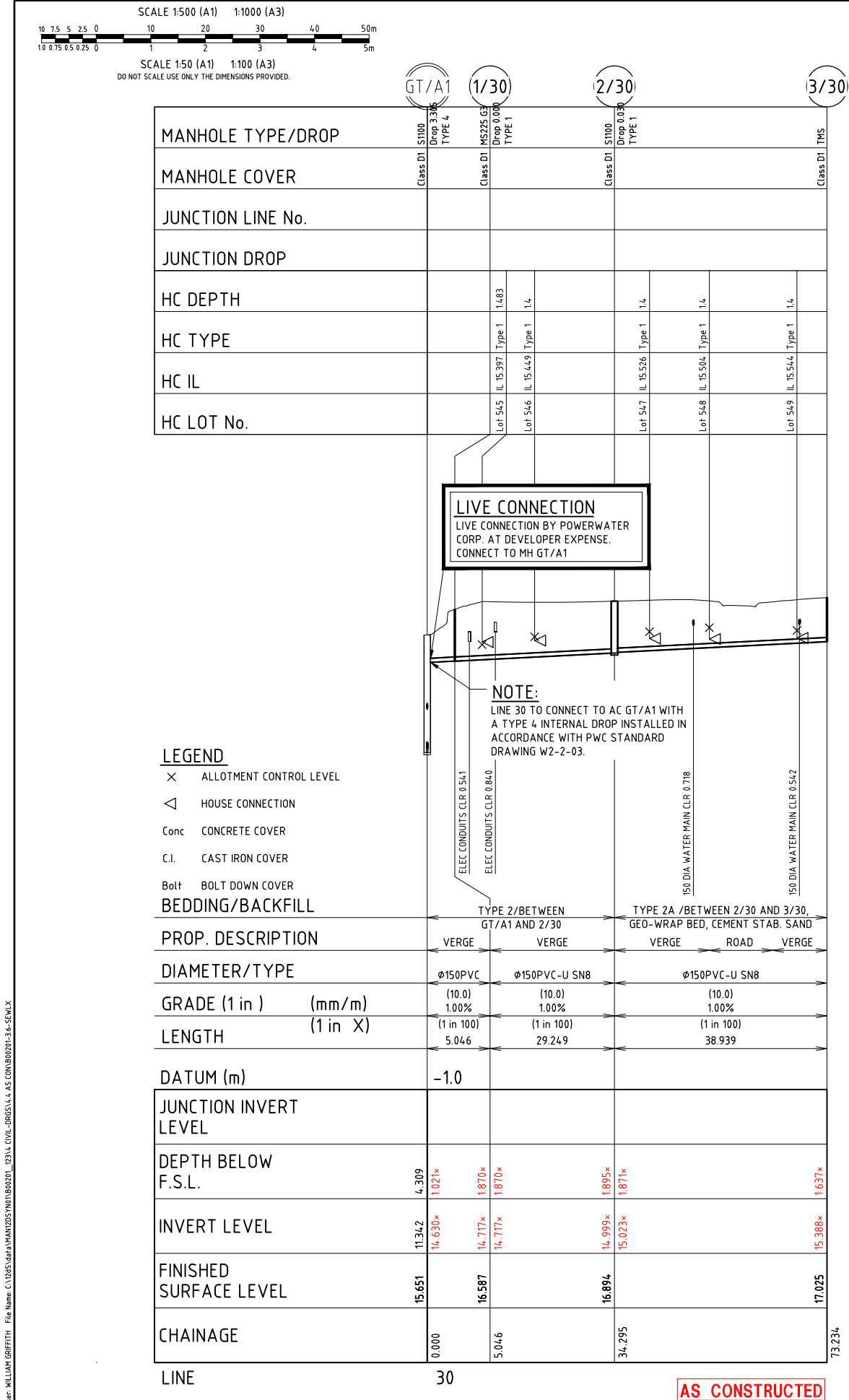
Project **ZUCCOLI PHASE 3.6**

Title **SEWER RETICULATION
LONGITUDINAL SECTION
SHEET 3 OF 4**

Datum	
AHD	
PSM .	
RL .	
(MGA) COORD	

AS CONSTRUCTED	
----------------	--

Project No.	Drawing No.	Rev
B00201-CS006		4



AS CONSTRUCTED
INFORMATION CERTIFIED BY
BMD URBAN PTY LTD

SIGNED.....DATE.....

30/6/2022

PERMISSION TO USE FOR
CONSTRUCTION PURPOSES
WATER AND SEWER RETICULATION

SIGNED.....DATE.....

ON BEHALF OF WATER SERVICES FOR THE INCORPORATION INTO
POWER AND WATER CORPORATION'S NETWORK.

THIS PERMISSION TO USE IS GIVEN ON THE BASIS THAT THE
DEVELOPER AND/OR CONSULTANT IS NOT ABSOLVED FROM FULL
RESPONSIBILITY FOR THE CORRECTNESS AND ACCURACY OF THE
DESIGN AND/OR DOCUMENTS ASSOCIATED.

THIS PERMISSION IS VALID FOR A PERIOD OF TWO YEARS FROM
THE DATE OF SIGNED APPROVAL.

POWER WATER CORP. DRG No. B21-7986

ENGINEER'S CERTIFICATION

I, MATTHEW BEGGS, being duly authorised by Power and Water Corporation
hereby certify that the works included herein are designed in accordance with sound
engineering judgement and published PWC standards

..... PWC Accreditation Number -- DESCERTL4

For and on behalf of Empower Engineers and Project Managers Pty Ltd

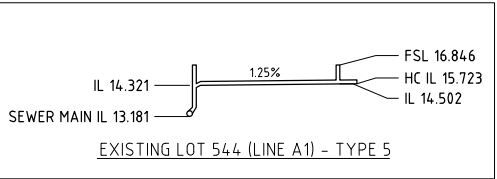
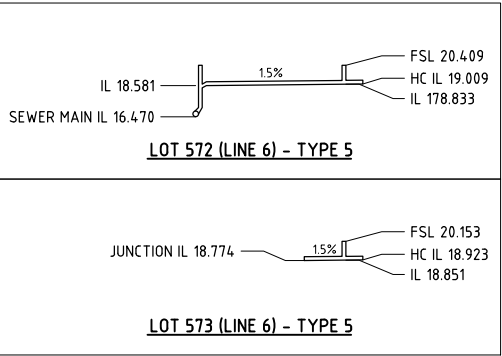
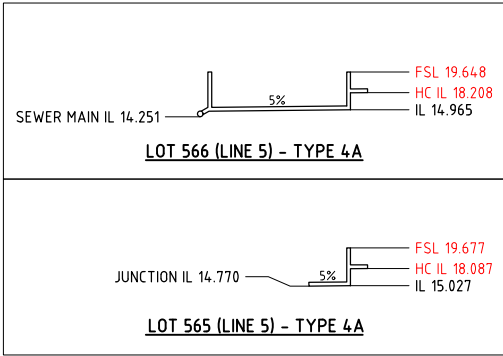
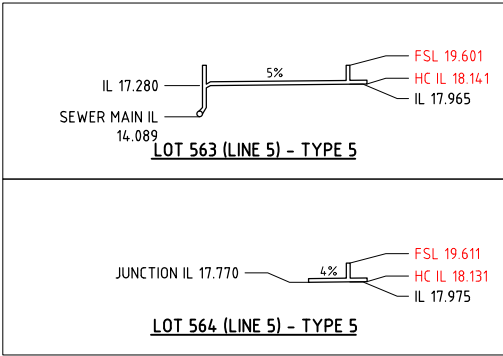
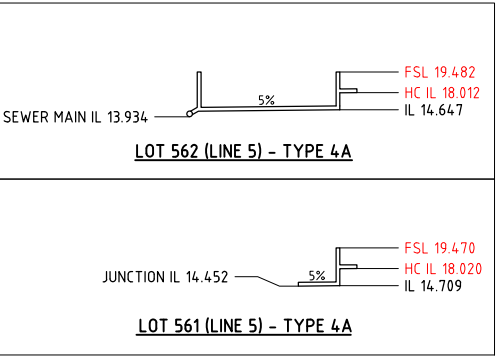
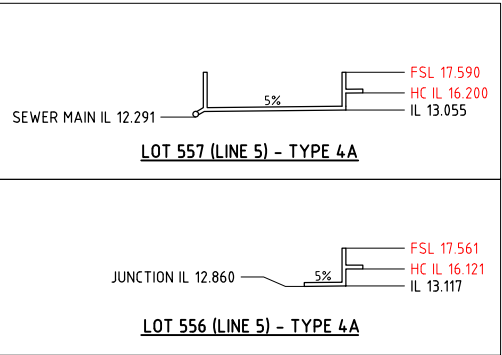
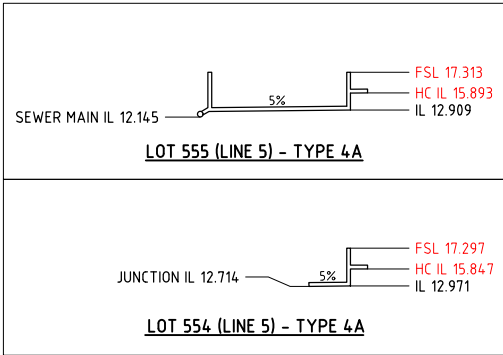
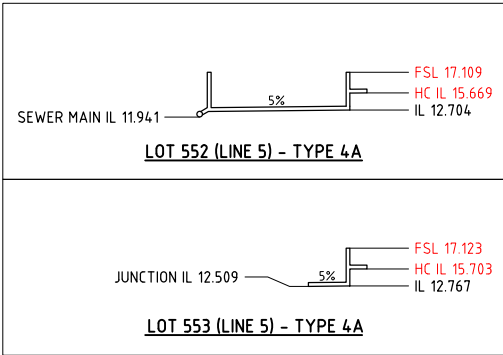
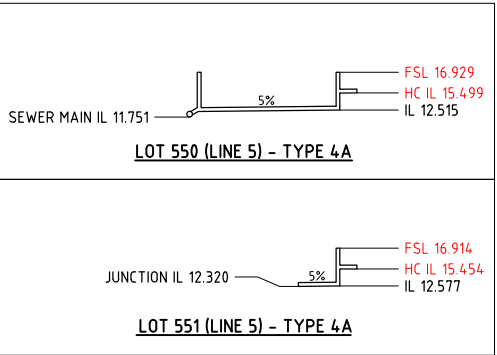
PowerWater Empower

1	AS CONSTRUCTED	MC	LW	WPR	MKB	30/06/22
0	ISSUED FOR CONSTRUCTION	ESS	LW	WR	MKB	05/08/21
No.	Amendments	Drawn	Design	Design Chk	Appd	Date
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Client	URBEX AND LAND DEVELOPMENT CORP. (JV)	Datum	AHD
Project	ZUCCOLI PHASE 3.6	PSM	RL
Title	SEWER RETICULATION LONGITUDINAL SECTION SHEET 4 OF 4	(MGA) COORD	AS CONSTRUCTED
Project No.	B00201-CS007	Drawing No.	1

User: WILLIAM GRIFFITH File Name: C:\Users\william\Documents\B00201_CS000\B00201_CS000.dwg Plot Date: 30/06/2022 12:27:05 PM



NOTES FOR LINES 4, 5, 6 AND 30:

- × HC IL DENOTES THE INVERT LEVEL OF THE HOUSE CONNECTION AT THE STUB.
- × ALL OTHER IL'S NOMINATED ARE TO ASSIST WITH CONSTRUCTION.
- × REFERENCE IS MADE TO THE PWC STANDARD DRAWINGS NOMINATED IN DRAWING B21-7980

AS CONSTRUCTED

Registered Engineer
Date Register
ENGINEERING CERTIFICATION



**PERMISSION TO USE FOR
CONSTRUCTION PURPOSES
WATER AND SEWER RETICULATION**

SIGNED _____ DATE _____

ON BEHALF OF WATER SERVICES FOR THE INCORPORATION INTO POWER AND WATER CORPORATION'S NETWORK.

THIS PERMISSION TO USE IS GIVEN ON THE BASIS THAT THE DEVELOPER AND/OR CONSULTANT IS NOT ABSOLVED FROM FULL RESPONSIBILITY FOR THE CORRECTNESS AND ACCURACY OF THE DESIGN AND/OR DOCUMENTS ASSOCIATED.

THIS PERMISSION IS VALID FOR A PERIOD OF TWO YEARS FROM THE DATE OF SIGNED APPROVAL.

AS CONSTRUCTED
INFORMATION CERTIFIED BY
BMD URBAN PTY LTD

SIGNED: *Brendan* 30/06/2022
DATE

POWER WATER CORP. DRG No. B21-7987

ENGINEER'S CERTIFICATION

I, MATTHEW BEGGS, being duly authorised by Power and Water Corporation hereby certify that the works included herein are designed in accordance with sound engineering judgement and published PWC standards

PWC Accreditation Number - DESCERT4
For and on behalf of Empower Engineers and Project Managers Pty Ltd



Client **URBEX AND LAND DEVELOPMENT CORP. (JV)**

Project **ZUCCOLI PHASE 3.6**

Title **SEWER RETICULATION
HOUSE CONNECTION DETAILS**

Datum
AHD
PSM
RL
(MGA) COORD

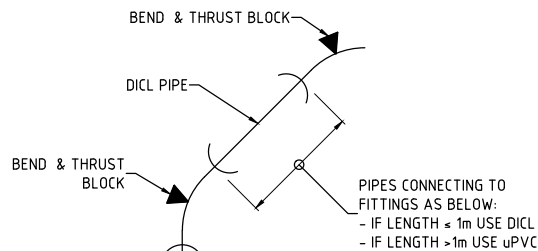
AS CONSTRUCTED
Project No. Drawing No. Rev
B00201-CS008 2

- LEGEND**
- 300 PROPOSED Ø300 WATER MAIN
 - 225 PROPOSED Ø225 WATER MAIN
 - 150 PROPOSED Ø150 WATER MAIN
 - W AS CONSTRUCTED WATER MAIN

**ON BEHALF OF WATER SERVICES, FOR
INCORPORATION INTO POWER WATER
CORP'S NETWORK.**

THIS DRAWING IS APPROVED FOR THE CONSTRUCTION OF ALL WATER & SEWER COMPONENTS AS SHOWN ON THE DRAWINGS. THIS APPROVAL DOES NOT RELIEVE THE DEVELOPER AND CONSULTANT FROM FULL RESPONSIBILITY FOR THE CORRECTNESS OF THE DESIGN AND ASSOCIATED DOCUMENTS. THIS DRAWING IS VALID ONLY FOR 2 YEARS FROM DATE OF SIGNING

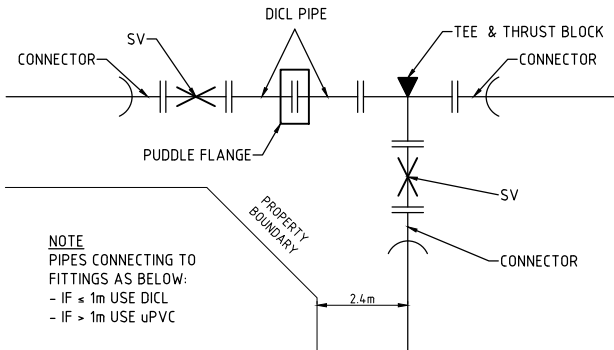
SIGNED _____ DATE _____



TYPICAL MULTI-BEND DETAIL

N.T.S.

NOTE: FOR MAIN & FITTINGS REFER PLAN DRG'S



TYPICAL BRANCH DETAIL

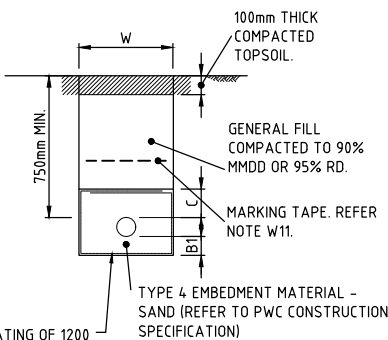
N.T.S.

ALL BENDS ARE DICT (SOC-SOC) UNLESS SHOWN OTHERWISE IN A SCHEMATIC DETAIL.

NOMINAL PIPE DIAMETER	W
100 & 150	450
200-300	600
375	750
450	900
450-900	PIPE OD + 600
1050-1500	PIPE OD + 700
1650-4000	15 x PIPE OD

NOMINAL PIPE SIZE	B1	C
20-50	100	150
80-100	100	150
150-600	150	150
750 & LARGER	200	200

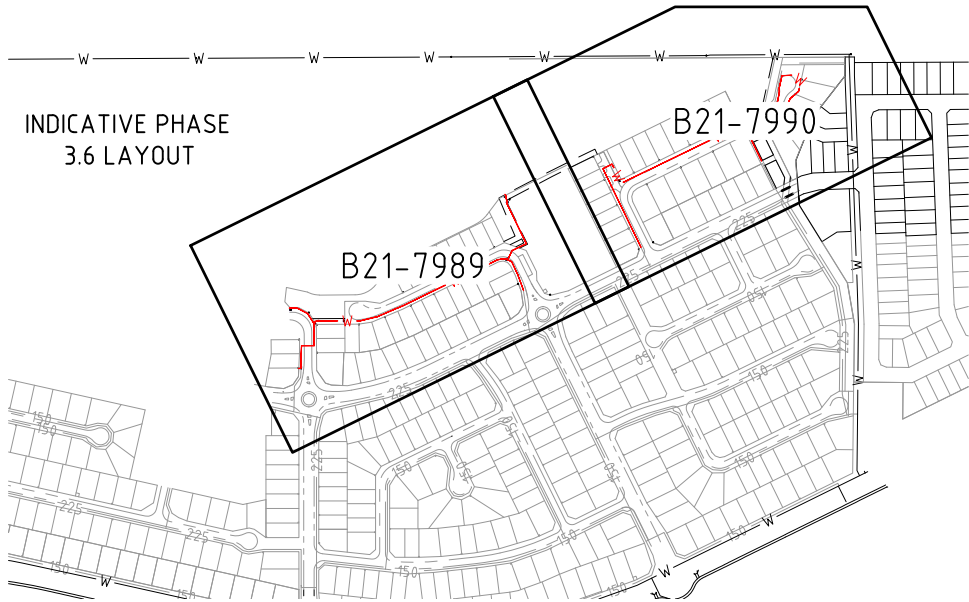
GEOTEXTILE FABRIC WITH AUSTRROADS G RATING OF 1200 MIN. & NOMINAL OPENING SIZE 220µm MAX. MINIMUM OVERLAP OF 500mm AT ALL JOINTS



TYPICAL TYPE 4 EMBEDMENT & TRENCH DETAIL

SCALE N.T.S.

**INDICATIVE PHASE
3.6 LAYOUT**



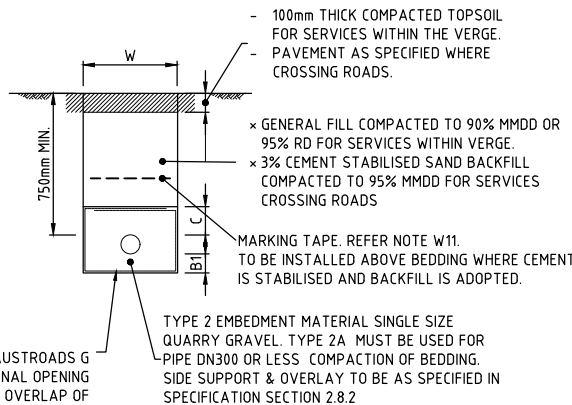
**WATER RETICULATION
LOCALITY PLAN**

SCALE 1:4000

NOMINAL PIPE DIAMETER	W
100 & 150	450
200-300	600
375	750
450	900
450-900	PIPE OD + 600
1050-1500	PIPE OD + 700
1650-4000	15 x PIPE OD

NOMINAL PIPE SIZE	B1	C
20-50	100	150
80-100	100	150
150-600	150	150
750 & LARGER	200	200

GEOTEXTILE FABRIC WITH AUSTRROADS G RATING OF 1200 MIN. & NOMINAL OPENING SIZE 220µm MAX. MINIMUM OVERLAP OF 500mm AT ALL JOINTS



TYPICAL TYPE 2A TRENCH DETAIL

SCALE N.T.S.

MINIMUM REQUIRED INSPECTIONS BY HYDRAULIC CERTIFIER - WATER

PRE-START MEETING

THE CERTIFYING ENGINEER TO ARRANGE PRE-START MEETING WITH POWER WATER REPRESENTATIVE AND PLUMBING CONTRACTOR.

INSPECTION 1

INSPECT EXCAVATED TRENCH AND VERIFY EMBEDMENT TYPE REQUIRED FOR THE SUBSOIL CONDITION. OTHER EMBEDMENT TYPES MUST BE ENDORSED WITH SUPPORTING GEOTECHNICAL REPORT AND APPROVED BY POWER AND WATER.

INSPECTION 2

VERIFY ALL CONNECTIONS ARE COMPLETED AND ISOLATED FROM EXISTING.

INSPECTION 3

VERIFY ALL PIPEWORK AND THRUST RESTRAINING PRODUCTS ARE CONSTRUCTED TO DRAWINGS AND SPECIFICATIONS.

INSPECTION 4

WITNESS OF DISINFECTION, FLUSHING AND WATER SAMPLING. VERIFY PRESSURE, DISINFECTION AND BACTERIOLOGICAL TESTS HAVE PASSED.

INSPECTION 5

VERIFY ALL AS CONSTRUCTED INFORMATION. CONDUCT HANDOVER WITH POWER AND WATER.

INSPECTION 6

VERIFY ALL OUTSTANDING DEFECTS ARE COMPLETED.

AS CONSTRUCTED



POWER AND WATER STANDARD NOTES

GENERAL

- WS.1. CONSTRUCTION OF THE WATER AND SEWERAGE WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE LATEST AMENDMENT OF THE APPROVED PROJECT DRAWINGS AND SPECIFICATION AND THE POWER AND WATER CONNECTION CODE.
- WS.2. DRAWINGS MUST BE SIGNED AS 'APPROVED FOR CONSTRUCTION' BY POWER AND WATER PRIOR TO COMMENCING WORKS.
- WS.3. THE DEVELOPER MUST SUBMIT THE "DEVELOPMENT WORK PERMIT" WITH ALL RELEVANT DOCUMENTATION AT LEAST SEVEN (7) DAYS PRIOR TO COMMENCEMENT OF WORKS. THE DEVELOPER MUST CONFIRM WITH POWER AND WATER IF A MEETING IS REQUIRED PRIOR TO COMMENCEMENT OR SITE WORKS.
- WS.4. PRIOR TO COMMENCEMENT OF WORKS, THE CONSTRUCTOR MUST CHECK THE LOCATION OF ALL UNDERGROUND SERVICES, CONFIRM FINISHED SURFACE LEVELS, CHECK THE MATERIAL, DIAMETER ALIGNMENT, LEVEL AND LOCATION OF EXISTING PIPEWORK AT THE CONNECTION POINTS. IT IS NOT GUARANTEED THAT ALL SERVICES HAVE BEEN SHOWN ON THE DRAWINGS.
- WS.5. CHANGES REQUESTED BY ANY PARTY TO THE DESIGN OF THE WORKS DURING ANY STAGE OF THE DEVELOPMENT MUST BE ENDORSED BY THE DESIGNER/CERTIFIER WITH AMENDED DRAWINGS SUBMITTED TO POWER AND WATER FOR APPROVAL PRIOR TO THE CHANGE BEING CARRIED OUT.
- WS.6. ALL EXISTING PROPERTY SERVICES ARE TO REMAIN IN SERVICE UNTIL THE CONSTRUCTION OF THE NEW SERVICE IS COMPLETED TO THE SATISFACTION OF POWER AND WATER.
- WS.7. ALL LEVELS GIVEN ARE TO AUSTRALIAN HEIGHT DATUM (AHD) IN METRES TO THREE DECIMAL PLACES. PROJECTION SHALL BE BASED ON MGA94 MAP GRID OF AUSTRALIA ZONE 52 OR 53 COORDINATE SYSTEM.
- WS.8. ALL DIMENSIONS ARE IN MILLIMETRES AND ALL CHAINAGES AND LEVELS IN METRES UNLESS SHOWN OTHERWISE.

EXCAVATION AND BACKFILLING

- WS.9. OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE RELEVANT AUTHORITY PRIOR TO ANY EXCAVATION. WHERE APPLICABLE, THE CONTRACTOR MUST SEEK A WRITTEN APPROVAL FROM THE LAND OWNER TO ACCESS AND CONSTRUCT WITHIN THEIR PROPERTY. ALL APPROVALS AND PERMITS MUST BE SUBMITTED TO POWER AND WATER AT LEAST SEVEN (7) DAYS PRIOR TO EXCAVATION WORKS.
- WS.10. MINIMUM COVER TO PIPE IS 750mm IN TRAFFICABLE AREAS, 600mm IN OTHER AREAS. 1500mm COVER REQUIRED FOR THRUST BORING UNDER ROAD.
- WS.11. EMBEDMENT TYPE FOR ALL PIPES MUST BE TYPE 2A OR 2B WRAPPED IN GEOTEXTILE UNLESS NOTED OTHERWISE. ALL OTHER EMBEDMENT TYPES MUST BE ENDORSED BY THE CERTIFIER WITH SUPPORTING GEOTECHNICAL INVESTIGATION, AND APPROVED BY POWER AND WATER.
- WS.12. WHEN EMBEDMENT TYPE CHANGES, A VERTICAL GEOTEXTILE BARRIER SHALL BE INSERTED BETWEEN THE EMBEDMENT TYPES.
- WS.13. UNLESS NOTED OTHERWISE IN THE DRAWINGS:
 - A. USE GENERAL OR SELECTED BACKFILL FOR ROAD RESERVES AND GENERAL AREAS
 - B. USE 3% CEMENT STABILISED SAND FOR ROADWAYS, DRIVEWAYS AND TRAFFICABLE AREAS
 - C. USE 5% CEMENT STABILISED GRAVEL FOR OPEN UNLINED DRAIN CROSSINGS.
- WS.14. REINSTATE ALL SURFACES UPON COMPLETION OF THE WORKS AS SPECIFIED OR TO MATCH EXISTING TO SATISFACTION OF THE RELEVANT AUTHORITY OR PERSONNEL.

LIVE CONNECTIONS

- WS.15. ONLY AUTHORISED POWER AND WATER PERSONNEL ARE PERMITTED TO UNDERTAKE ANY WORKS; OPERATE AND PHYSICALLY ACCESS LIVE ASSETS. AT NO STAGE SHALL ANY OTHER PERSONS CARRY OUT WORK ON POWER AND WATER INFRASTRUCTURE.
- WS.16. THE DEVELOPER IS RESPONSIBLE FOR ALL CONNECTION FEES AND CHARGES. THE DEVELOPER MUST SUBMIT THE "REQUEST FOR CONNECTIONS" FORM AND ALLOW FOR A MINIMUM OF TWENTY-ONE (21) DAYS FOR SCHEDULING CONNECTIONS. POWER AND WATER HAVE NO OBLIGATIONS IN AVAILABILITY FOR REQUESTED CONNECTION DATE AND THE DEVELOPER IS TO NEGOTIATE ALTERNATIVE DATES WITH POWER AND WATER.

HANDOVER AND COMMISSIONING

- WS.17. THE CERTIFIER MUST SUBMIT THE "HANDOVER REQUEST FORM" WITH ALL RELEVANT DOCUMENTATION AT LEAST SEVEN (7) DAYS PRIOR TO REQUESTED INITIAL HANDOVER INSPECTION DATE.
- WS.18. ALL IDENTIFIED DEFECTS MUST BE RECTIFIED BY THE DEVELOPER WITHIN FOURTEEN DAYS (14) OF INITIAL HANDOVER DATE. A FINAL HANDOVER INSPECTION WITH POWER AND WATER MUST BE ARRANGED TO CONFIRM RECTIFICATION OF OUTSTANDING DEFECTS.
- WS.19. COMMISSIONING OF GIFTED ASSET WORKS IS UNDERTAKEN BY POWER AND WATER AFTER SUCCESSFUL HANDOVER OF ASSET, RECTIFICATION OF ALL OUTSTANDING DEFECTS AND COMPLETION OF ALL LIVE CONNECTIONS TO EXISTING MAINS.

CLEARANCE, DEFECTS AND LIABILITY PERIOD

- WS.20. THE DEVELOPER MUST SUBMIT THE "CLEARANCE REQUEST FORM" WITH ALL RELEVANT DOCUMENTATION AND ALLOW A MINIMUM OF FOURTEEN (14) DAYS TO OBTAIN DEVELOPMENT PERMIT CLEARANCE. ALLOW FOR AN ADDITIONAL FOURTEEN (14) DAYS TO RECTIFY ALL OUTSTANDING DEFECTS AND ISSUES.
- WS.21. THE DEFECTS AND LIABILITY PERIOD OF THE ASSET WILL COMMENCE ON THE DATE WHEN DEVELOPMENT CLEARANCE WAS ISSUED BY POWER AND WATER OR DATE OF FINAL ACCEPTANCE OF ASSET.
- WS.22. ALL EXTENSIONS AND SUBDIVISIONS ARE SUBJECT TO TWENTY FOUR (24) MONTH DEFECT AND LIABILITY PERIOD. ALL BUILDING DEVELOPMENTS ARE SUBJECT TO TWELVE (12) MONTH DEFECT AND LIABILITY PERIOD.
- WS.23. THE DEVELOPER IS FULLY RESPONSIBLE FOR ALL COSTS TO RECTIFY DEFECTS, REPAIR AND EMERGENCY WORKS WITHIN THIS PERIOD. SUCH WORKS WILL RESULT IN AN EXTENDED DEFECTS AND LIABILITY PERIOD OF FIVE (5) YEARS.

AS CONSTRUCTED
INFORMATION CERTIFIED BY
BMD URBAN PTY LTD

SIGNED *Brendan* 30/06/2022
DATE

**WARNING
BEWARE OF SERVICES**

THE LOCATIONS OF ALL EXISTING SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE BY CONTRACTOR. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

WS.24. THE DEVELOPER MUST SCHEDULE AN OFF-MAINTENANCE INSPECTION AT LEAST SEVEN (7) DAYS PRIOR TO REQUESTED INSPECTION DATE. POWER AND WATER WILL TAKE FULL RESPONSIBILITY OF ASSET AFTER ALL DEFECTS HAVE BEEN RECTIFIED AND ALL ASSOCIATED PAYMENT TO REPAIR AND EMERGENCY WORKS HAVE BEEN PAID BY THE DEVELOPER.

POWER AND WATER (WATER NOTES)

- W.1. WATER PIPES MUST BE BURIED PVC-M SERIES 2 CLASS 16, WITH DUCTILE IRON (DI) FITTINGS, UNLESS NOTED OTHERWISE.
- W.2. ALL DUCTILE IRON CEMENT LINED (DICT) PIPES SHALL BE CLASS PN16 FLANGED OR CLASS 35 RUBBER RING JOINTED (RRJ). ALL BURIED DICT PIPES AND FITTINGS SHALL BE WRAPPED IN POLYETHYLENE SLEEVING. MARKING ON PIPES SHALL FACE UPWARDS.
- W.3. PIPES UNDER ROAD PAVEMENT, OPEN DRAIN AND DRAINAGE STRUCTURES MUST BE DICT CLASS 16 FLANGED.
- W.4. PROVIDE ANCHORAGE FOR ALL VALVES, REDUCERS, AND VERTICAL BENDS. PROVIDE THRUST BLOCKS FOR ALL HORIZONTAL BENDS, TEES AND END CAPS.
- W.5. ALL SLUICE VALVES MUST BE RESILIENT SEATED FLANGED CLASS 16 WITH RAISED FLANGES, UNLESS NOTED OTHERWISE.
- W.6. ALL FLANGES MUST BE CLASS 16 RAISED TYPE COMPLYING WITH AS 4087 FIGURE B5 FOR DICT AND FIGURE B7 FOR MILD STEEL CEMENT LINED (MSCL), UNLESS NOTED OTHERWISE.
- W.7. WATER MAINS MUST BE OFFSET FROM PROPERTY BOUNDARIES A DISTANCE OF 2.4m IN ROAD RESERVES AND 1.5m IN PRIVATE PROPERTY, EXCEPT WHERE SHOWN OTHERWISE ON THE DRAWINGS.
- W.8. THE COATING ON THE FITTINGS MUST BE FULLY PROTECTED BY A FELT OR GEOTEXTILE BARRIER WHEN THE THRUST BLOCK IS POURED AND THRUST BLOCKS MUST NOT OVERLAP THE JOINT.
- W.9. WATERMAINS MUST BE LAID OVER STORM WATER, SEWER, NON-POTABLE AND RECYCLED WATER PIPES, EXCEPT WHERE SHOWN OTHERWISE ON THE DRAWINGS.
- W.10. NO DEFLECTION AT PVC SOCKET JOINTS ARE PERMITTED. SO-SO DI CONNECTORS (MAXIMUM OF TWO (2) DEGREES) OR DI BENDS MUST BE USED TO ACHIEVE DEFLECTIONS ON PVC PIPES.
- W.11. MARKING TAPE COLOURED GREEN AND MARKED 'WATER MAIN' SHALL BE LAID CONTINUOUSLY AND LOCATED 300mm ABOVE THE WATER MAIN.
- W.12. THE MINIMUM HORIZONTAL CLEARANCE BETWEEN EXISTING SERVICES MUST BE 600mm FOR NEW MAINS UP TO AND EQUAL TO DN200 AND 1000mm FOR NEW MAINS LARGER THAN DN200.
- W.13. THE MINIMUM VERTICAL CLEARANCE BETWEEN EXISTING SERVICES MUST BE 300mm FOR NEW MAINS UP TO AND EQUAL TO DN200 AND 500mm FOR NEW MAINS LARGER THAN DN200.
- W.14. THE TESTING OF WATER MAINS MUST BE ACCORDING TO POWER AND WATER'S TEST PROCEDURES GUIDELINES.

ADDITIONAL WATER NOTES

- W.101. THE SUPERINTENDENT IN CONSULTATION WITH GEOTECHNICAL PERSONNEL SHALL DETERMINE WATER PIPE BEDDING TYPE AFTER INSPECTION OF THE EXCAVATED TRENCH. TYPE 2A BEDDING AND GEOTEXTILE FABRIC SHALL BE USED UNDER ROADS AND AT OTHER LOCATIONS AS SHOWN ON THE DRAWINGS. ALL ROAD CROSSINGS SHALL BE BACKFILLED TO A STRINGENT COMPACTION STANDARD, USING A NATURAL GRAVEL FOR THE FULL WIDTH OF THE TRENCH TO SUBGRADE LEVEL.
- W.102. HYDRANTS SHALL BE BS750 SCREW-DOWN TYPE - BS750 - 1977 THREAD IN ACCORDANCE WITH PWC STD DRG W1-2-03A.
- W.103. ALL SERVICE CONNECTIONS SHALL BE DN20 U.N.O. REFER PWC STD DRG W1-1-01.
- W.104. DUPLEX SERVICE CONNECTION SHALL BE DN 25, FOR DETAILS REFER PWC STD DRG W1-1-29. WHERE DUPLEX SITE IS GREATER THAN 800m² IN AREA, THE CONNECTION SHALL BE DN50. REFER PWC STD DRG W1-1-27.
- W.105. TRIPLEX SERVICE CONNECTION SHALL BE DN 50, FOR DETAILS REFER PWC STD DRG W1-1-27.
- W.106. TRENCHTOPS OR BULKHEADS TO BE CONSTRUCTED IN ACCORDANCE WITH WSAA STANDARD DRAWING WAT-1209 WHERE WATERMAIN GRADE EXCEEDS 5%.

PWC - STANDARD DRAWING INDEX (WATER)

W1-1-01A/2	WATER 20mm WATER SERVICE COPPER
W1-1-02A/2	WATER 25mm WATER SERVICE COPPER
W1-1-04A/2	WATER 50mm WATER SERVICE COPPER
W1-1-16/3	DN100 - 300 WATER MAINS TYPICAL DETAILS BRANCH OFF MAINS
W1-1-23A/4	CONNECTIONS TO MAINS DN20 AND DN25
W1-1-23B/4	PROPERTY CONNECTIONS TO MAINS DN50
W1-1-24/6	PROPERTY CONNECTIONS DN100 AND DN150
W1-2-03A/5	BS750 SCREW DOWN HYDRANT INSTALLATION IN NATURE STRIP OFF DN100 - DN 300 MAINS
W1-2-03C/3	BS750 SCREW DOWN HYDRANT AND SLUICE VALVE INSTALLATION IN ROADWAY
W1-2-03D/1	STOP (ISOLATING) VALVES LOCATION MARKING
W1-2-03F/3	BS750 SCREW DOWN HYDRANT KERB MARKING AND MARKER POST DETAILS
W1-2-03H/2	WATER MAINS LOCATION MARKING
W1-2-03J/2	SLUICE VALVE INSTALLATION IN NATURE STRIP
W1-2-05/1	THRUST BLOCK AND TRENCH DETAILS FOR DN100 - 225 PRESSURE MAIN
W1-2-07/3	HYDROSTATIC TESTING PROCEDURE FOR WATER MAINS
W1-2-17A/1	APPLICATION OF POLYETHYLENE SLEEVING FOR CORROSION PROTECTION OF DICT PIPE
W1-2-17B/2	APPLICATION OF POLYETHYLENE SLEEVING FOR CORROSION PROTECTION OF DICT FITTINGS
W1-2-18/1	WATER MAINS AND SERVICES KERB MARKERS FOR ROAD CROSSINGS
W1-2-19/5	TEMPORARY DEAD ENDS DN100 - DN450

ENGINEER'S CERTIFICATION

I, MATTHEW BEGGS, being duly authorised by Power and Water Corporation hereby certify that the works included herein are designed in accordance with sound engineering judgement and published PWC standards

..... PWC Accreditation Number - DESCERT4
For and on behalf of Empower Engineers and Project Managers Pty Ltd



Client **URBEX AND LAND DEVELOPMENT CORP. (JV)**

Project **ZUCCOLI PHASE 3.6**

Title **WATER RETICULATION
LOCALITY PLAN AND NOTES**

Datum **AHD**
PSM
RL
(MGA) COORD

AS CONSTRUCTED

Project No. **B00201-CW001**
Drawing No. **1**
Rev

ON BEHALF OF WATER SERVICES, FOR
INCORPORATION INTO POWER WATER
CORP'S NETWORK.

THIS DRAWING IS APPROVED FOR THE CONSTRUCTION OF ALL
WATER & SEWER COMPONENTS AS SHOWN ON THE DRAWINGS.
THIS APPROVAL DOES NOT RELIEVE THE DEVELOPER AND
CONSULTANT FROM FULL RESPONSIBILITY FOR THE
CORRECTNESS OF THE DESIGN AND ASSOCIATED DOCUMENTS.
THIS DRAWING IS VALID ONLY FOR 2 YEARS FROM DATE OF
SIGNING

SIGNED

DATE

WARNING

BWARE OF SERVICES

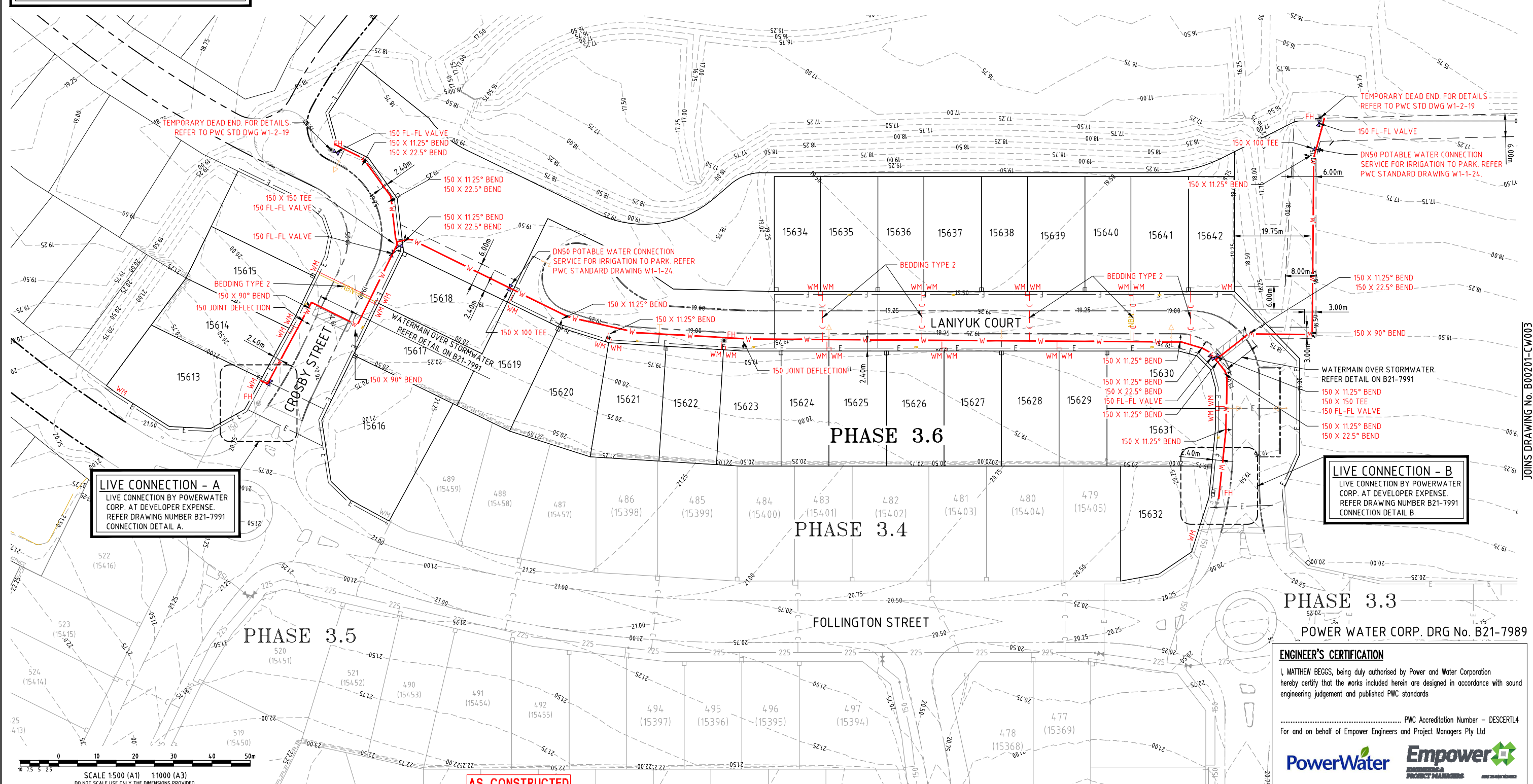
THE LOCATIONS OF ALL EXISTING SERVICES
ARE APPROXIMATE ONLY AND THEIR EXACT
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CONTRACTOR. NO GUARANTEE IS GIVEN
THAT ALL EXISTING SERVICES ARE SHOWN.

AS CONSTRUCTED
INFORMATION CERTIFIED BY
BMD URBAN PTY LTD

SIGNED *Brendan Lee* 30/6/2022
DATE

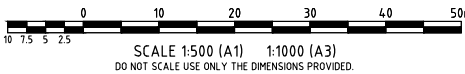
LEGEND

- W AS CONSTRUCTED WATER MAIN
- 225 EXISTING Ø225 WATER MAIN
- 150 EXISTING Ø150 WATER MAIN
- C C C WATER CONDUIT CROSSINGS
- LAYBACK KERB AND CHANNEL FACE
- UPRIGHT KERB FACE
- WM WATER SERVICE POINT OF ENTRY (INDICATIVE ONLY)
- PHASE BOUNDARIES



LIVE CONNECTION - A
LIVE CONNECTION BY POWERWATER
CORP. AT DEVELOPER EXPENSE.
REFER DRAWING NUMBER B21-7991
CONNECTION DETAIL A.

LIVE CONNECTION - B
LIVE CONNECTION BY POWERWATER
CORP. AT DEVELOPER EXPENSE.
REFER DRAWING NUMBER B21-7991
CONNECTION DETAIL B.



AS CONSTRUCTED

PHASE 3.3
POWER WATER CORP. DRG No. B21-7989

ENGINEER'S CERTIFICATION
I, MATTHEW BEGGS, being duly authorised by Power and Water Corporation
hereby certify that the works included herein are designed in accordance with sound
engineering judgement and published PWC standards

PWC Accreditation Number - DESCERT4
For and on behalf of Empower Engineers and Project Managers Pty Ltd

PowerWater **Empower**
ENGINEERS & PROJECT MANAGERS



Client	URBEX AND LAND DEVELOPMENT CORP. (JV)	Datum AHD PSM RL (MGA) COORD		
Project	ZUCCOLI PHASE 3.6			
Title	WATER RETICULATION PLAN SHEET 1 OF 2	AS CONSTRUCTED		
		Project No.	Drawing No.	Rev
		B00201-CW002		1

ON BEHALF OF WATER SERVICES, FOR
INCORPORATION INTO POWER WATER
CORP'S NETWORK.

THIS DRAWING IS APPROVED FOR THE CONSTRUCTION OF ALL
WATER & SEWER COMPONENTS AS SHOWN ON THE DRAWINGS.
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THIS DRAWING IS VALID ONLY FOR 2 YEARS FROM DATE OF
SIGNING

SIGNED

DATE

WARNING

BWARE OF SERVICES

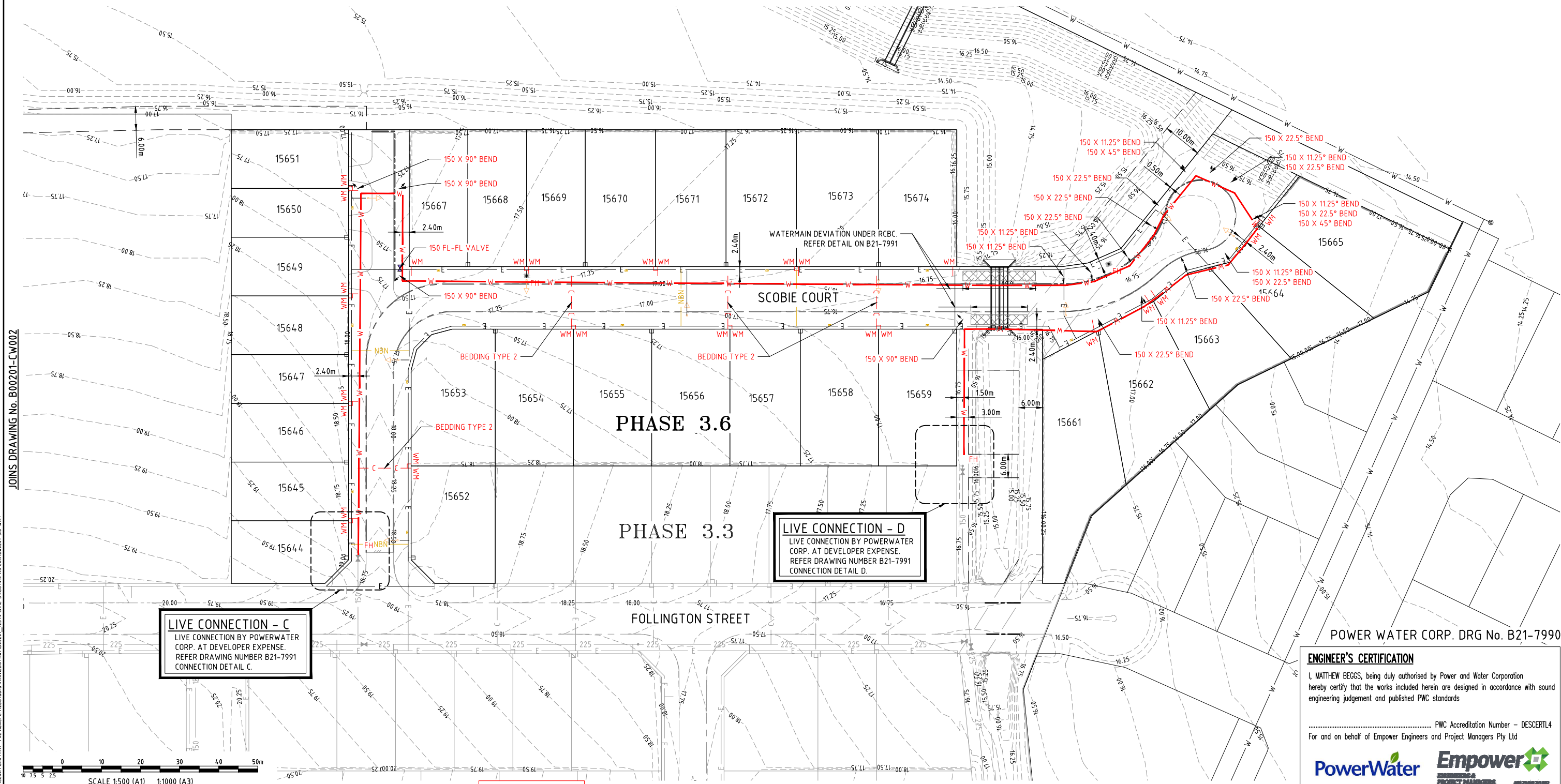
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THAT ALL EXISTING SERVICES ARE SHOWN.

AS CONSTRUCTED
INFORMATION CERTIFIED BY
BMD URBAN PTY LTD

SIGNED *Brundan Lazo* 30/06/2022
DATE

LEGEND

- W AS CONSTRUCTED WATER MAIN
- 225 EXISTING Ø225 WATER MAIN
- 150 EXISTING Ø150 WATER MAIN
- C C C WATER CONDUIT CROSSINGS
- LAYBACK KERB AND CHANNEL FACE
- UPRIGHT KERB FACE
- WM WATER SERVICE POINT OF ENTRY (INDICATIVE ONLY)
- PHASE BOUNDARIES



LIVE CONNECTION - C
LIVE CONNECTION BY POWERWATER
CORP. AT DEVELOPER EXPENSE.
REFER DRAWING NUMBER B21-7991
CONNECTION DETAIL C.

LIVE CONNECTION - D
LIVE CONNECTION BY POWERWATER
CORP. AT DEVELOPER EXPENSE.
REFER DRAWING NUMBER B21-7991
CONNECTION DETAIL D.

POWER WATER CORP. DRG No. B21-7990

ENGINEER'S CERTIFICATION
I, MATTHEW BEGGS, being duly authorised by Power and Water Corporation
hereby certify that the works included herein are designed in accordance with sound
engineering judgement and published PWC standards

PWC Accreditation Number - DESCERT4
For and on behalf of Empower Engineers and Project Managers Pty Ltd

PowerWater **Empower**
ENGINEERS & PROJECT MANAGERS

AS CONSTRUCTED

LAND DEVELOPMENT CORPORATION
urbex

Empower
ENGINEERS & PROJECT MANAGERS
ABN 23 010 743 692

Client	URBEX AND LAND DEVELOPMENT CORP. (JV)	Datum AHD PSM RL (MGA) COORD		
Project	ZUCCOLI PHASE 3.6			
Title	WATER RETICULATION PLAN SHEET 2 OF 2	AS CONSTRUCTED		
		Project No.	Drawing No.	Rev
		B00201-CW003		1

JOINS DRAWING No. B00201-CW002
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Plot Date: 30/06/2022 12:28:11 PM
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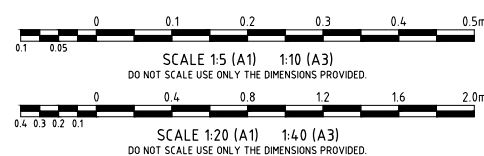
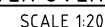
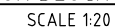
1. REFER PWC STD. DWG. W1-2-05 FOR DN150 AND DN225 THRUST BLOCK DETAILS.
2. UNLESS NOTED OTHERWISE, REFER TO THIS DETAILS ON THIS DRAWING AND PWC STANDARD DRAWING W1-2-05 FOR DN150 AND DN225 THRUST BLOCK DETAILS.
3. CONTRACTOR TO CONFIRM THE SOIL BEARING CAPACITY PRIOR TO THE CONSTRUCTION OF THE THRUST BLOCK. CERTIFIER TO WITNESS AND REPORT.

SIGNED Brendan Lam DATE 30/6/2022

VERTICAL BENDS FOR TEST PRESSURE OF 1000 kPa			
PIPE DN	CONCRETE VOLUME m ³		
	11.25° BENDS	22.5° BENDS	45° BENDS
ø150	0.2	0.4	0.75
ø225	0.45	0.85	1.60

THIS DRAWING IS APPROVED FOR THE CONSTRUCTION OF ALL WATER & SEWER COMPONENTS AS SHOWN ON THE DRAWINGS. THIS APPROVAL DOES NOT RELIEVE THE DEVELOPER AND CONSULTANT FROM FULL RESPONSIBILITY FOR THE CORRECTNESS OF THE DESIGN AND ASSOCIATED DOCUMENTS. THIS DRAWING IS VALID ONLY FOR 2 YEARS FROM DATE OF SIGNING

DATE _____

[illegible]

Title **WATER RETICULATION
DETAILS PLAN**

(MGA) COORD	
AS CONSTRUCTED	

Project No.	Drawing No.	Rev
B00201-CW004		1