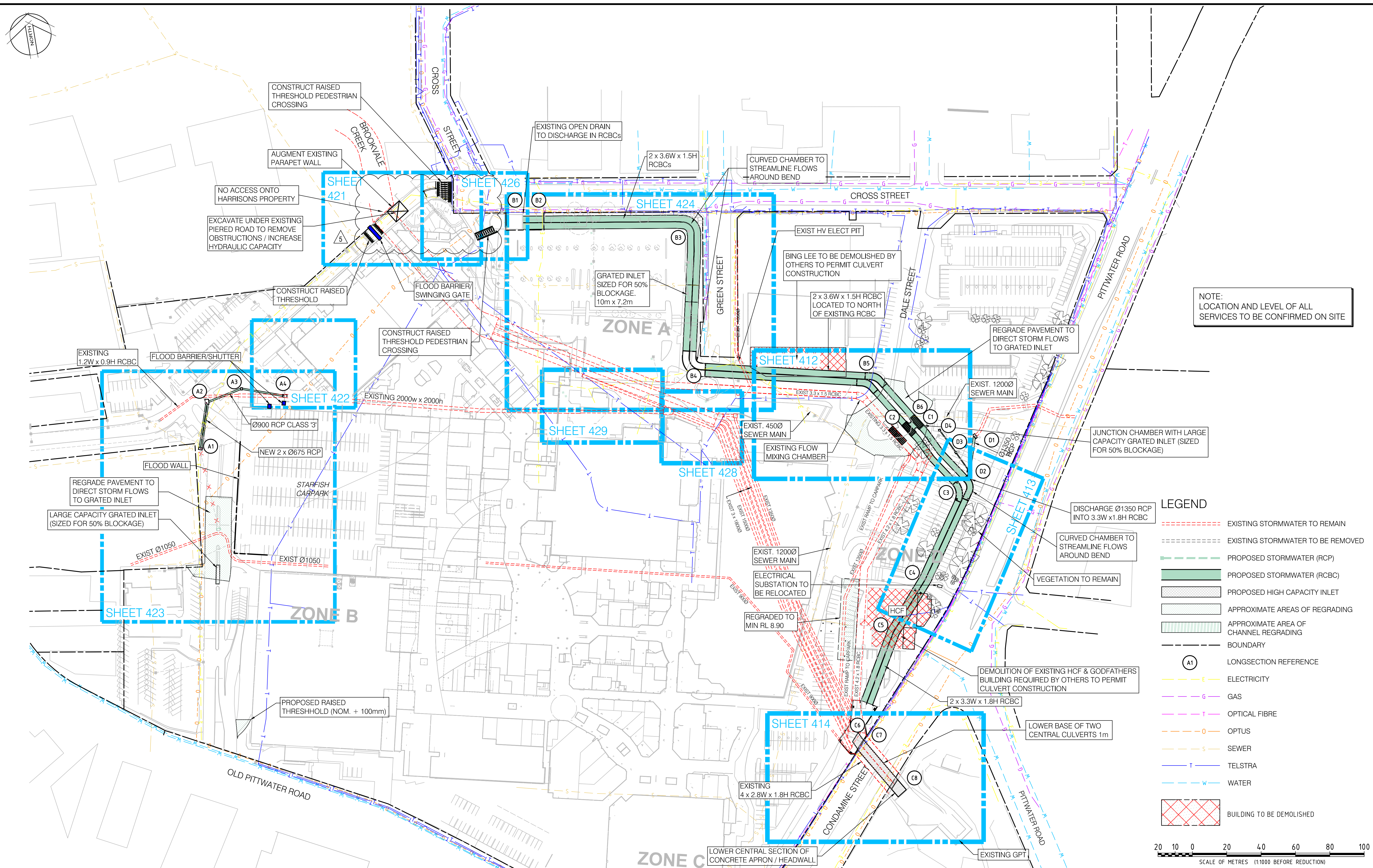


DATE PLOTTED: 1 April 2015 11:05 AM BY: JULIA PACHKOVA
XREF's: X-Drainage: X-Survey: X-Architect: X-GRP-A1-SHT: X-SYD-A1-Logo
CAD FILE: \\cardno.com\global\AUS\Warrindah\Warrindah\Structure\Projects\W4548-401\Package_1_Data\W4548-401(16).dwg



Rev	Date	Description	Drawn	Appr.
5	31/03/2015	COUNCIL COMMENTS ADDED	JP	DNA
4	7/11/2014	BING LEE, HCF & GODFATHERS NOTE ADDED	LLC	DNA
3	5/11/2014	FLOOD BARRIERS UPDATED	LLC	DNA
2	30/07/2014	CULVERT AMENDED THOUGH BING LEE	DH	DNA
1	20/11/2013	PRELIMINARY	DH	DNA

Westfield Design & Construction Pty Limited
100 William Street, Sydney NSW 2011
Phone (02) 9258 7000 Fax (02) 9258 7373
GPO Box 4004 Sydney NSW 2001
ABN 900 287 285

© Cardno Limited All Rights Reserved.
This document is produced by Cardno Limited solely for the benefit of and use by the client in accordance with the terms of the retainer. Cardno Limited does not and shall not assume any responsibility or liability whatsoever to any third party arising out of any use or reliance by third party on the content of this document.

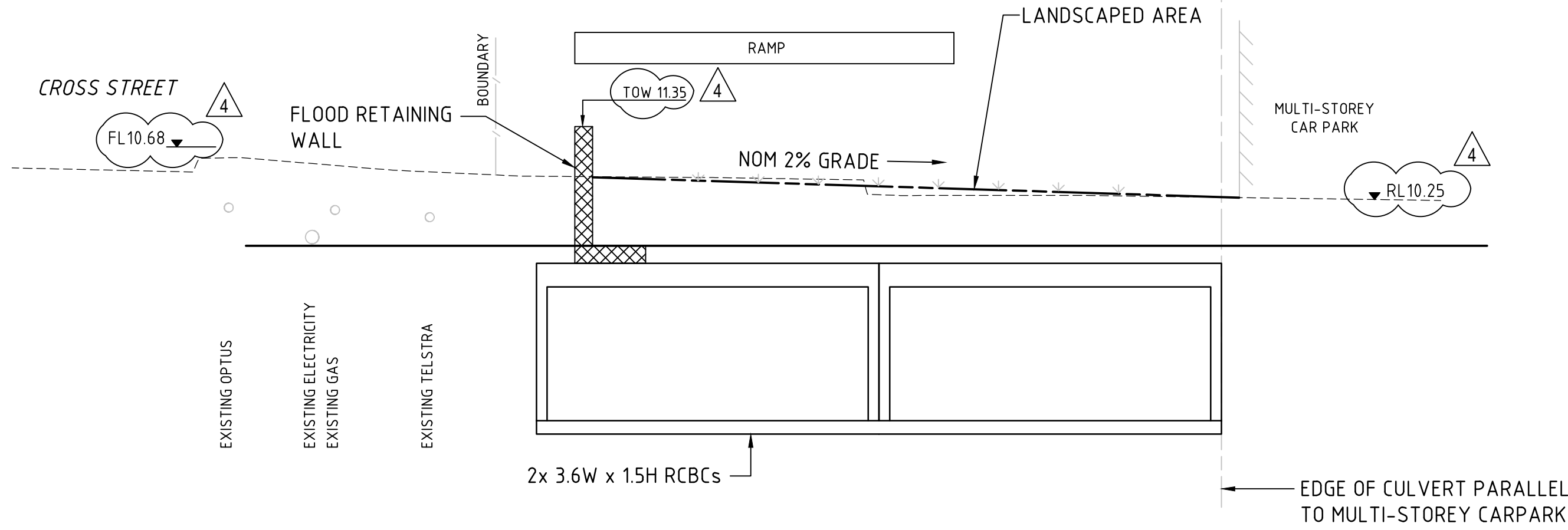
Cardno
Shaping the Future
ABN: 95 001 145 035
Level 9, The Forum, 203 Pacific Highway
St Leonards NSW Australia 2055
Phone (41) 21 94 50 7700 Fax (41) 21 94 59 5170
Email: Sydney@cardno.com.au Web: www.cardno.com.au

Drawn DH Date 18/11/2013
Checked DNA Date 18/11/2013
Designed DNA Date 18/11/2013
Verified Date
Approved Date

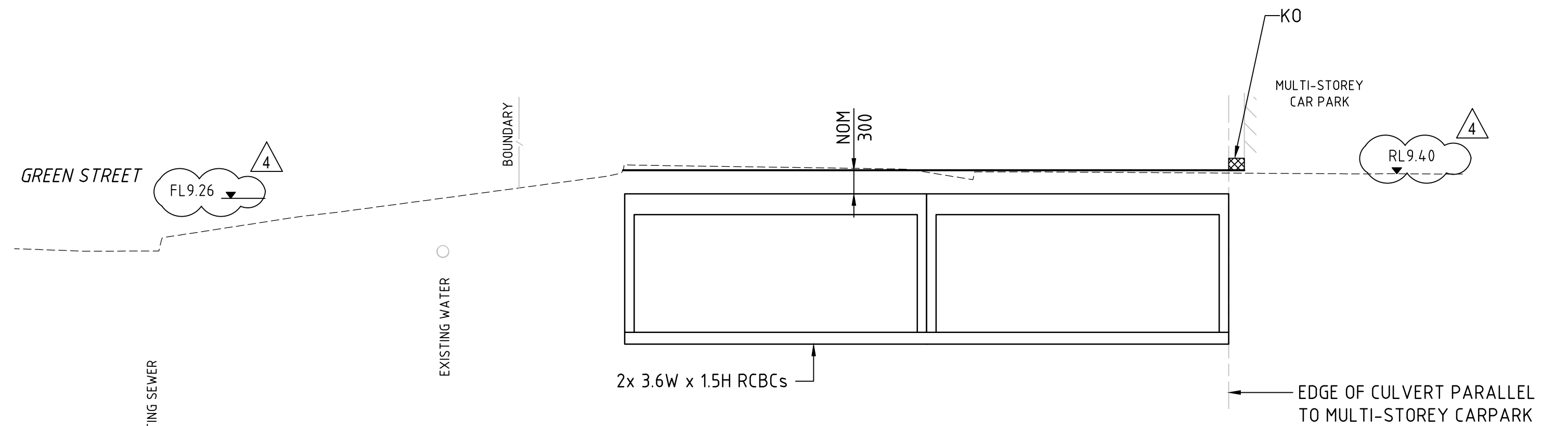
Client WESTFIELD DESIGN & CONSTRUCTION
WARRINGAH MALL
CONCEPT DRAINAGE AUGMENTATION WORKS
GENERAL ARRANGEMENT PLAN
MASTERPLAN

Status PRELIMINARY
Date 18/11/2013 Datum AHD Scale 1:1000 Size A1
Drawing Number W4548-401 Revision 5

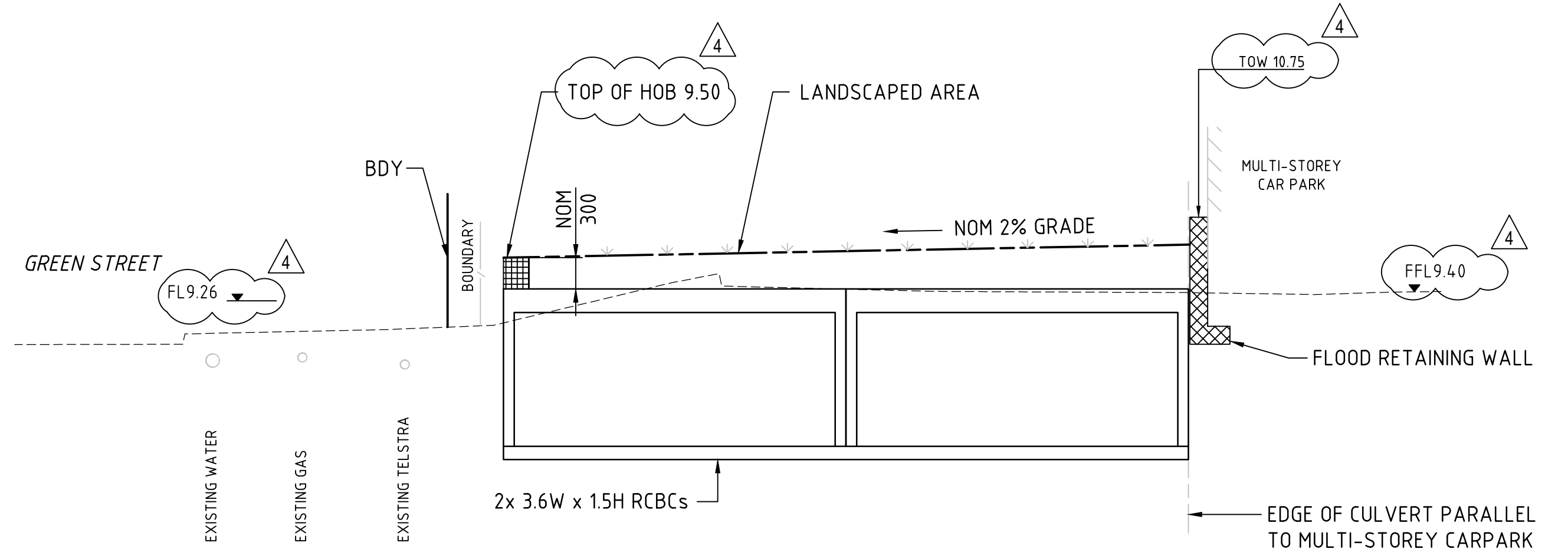
DATE PLOTTED: 1 April 2015 2:59 PM BY: JULIA PACHKOVA
XREF's: X:GRP-A1-SHT; X:SYD-A1-Logo
CAD FILE: \\cardno.com\gdata\au\NSW\Director\Structure\Projects\899\FY13\MA499\3132_WARRINGAH MALL FLOODING AND DRAINAGE\01_Package_1_1_Data\W4548-425(4).dwg



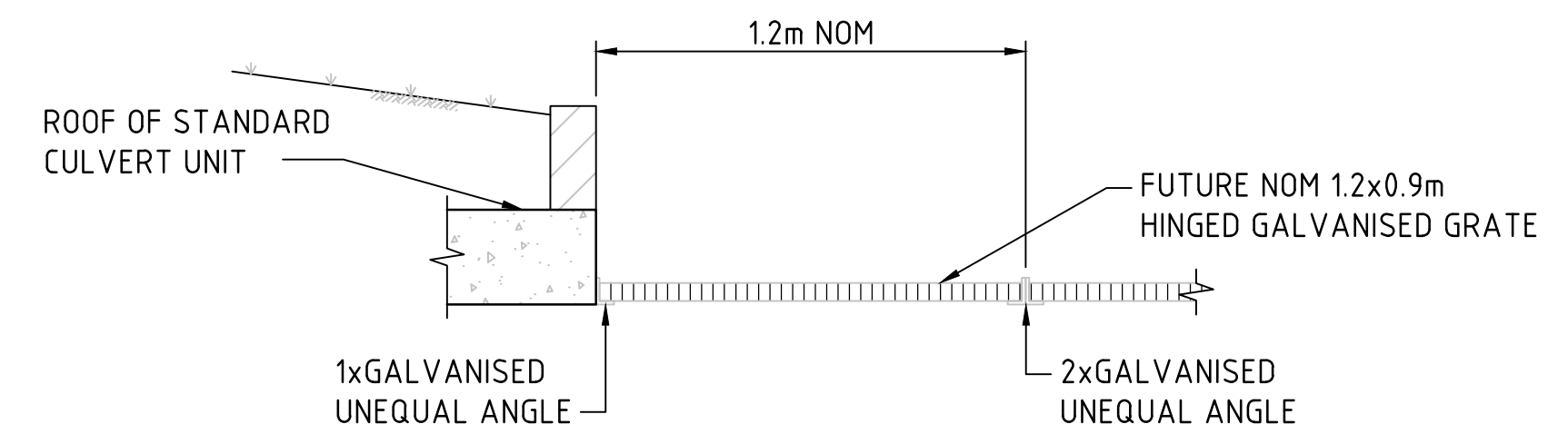
SECTION 1
SCALE 1:50
424



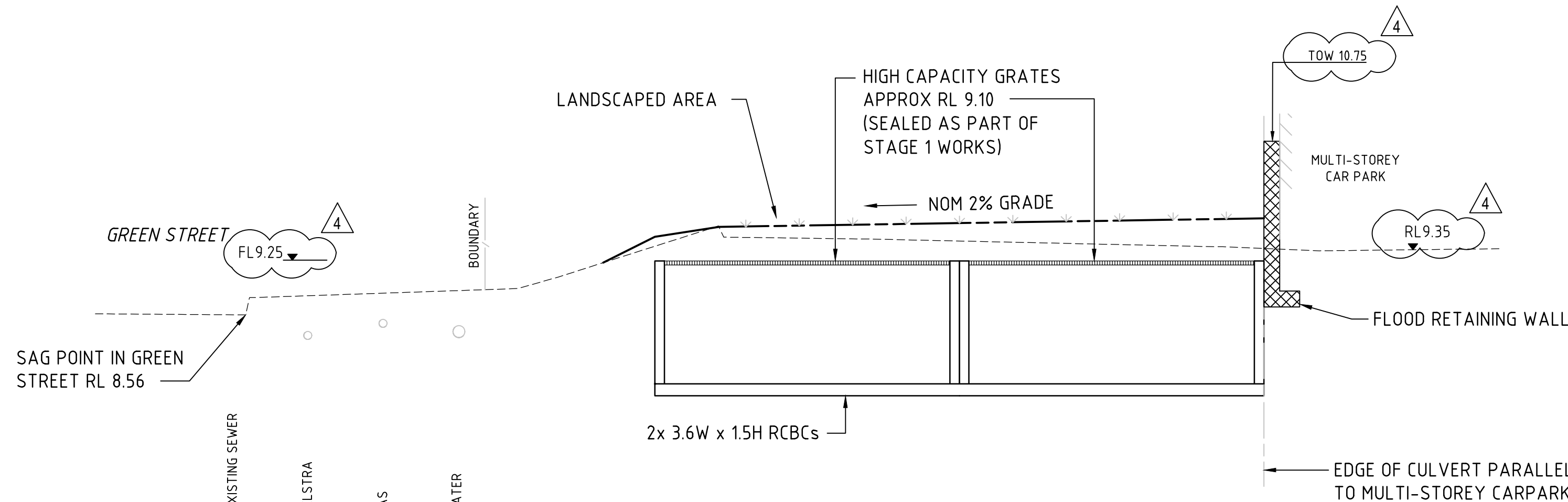
SECTION 4
SCALE 1:50
424



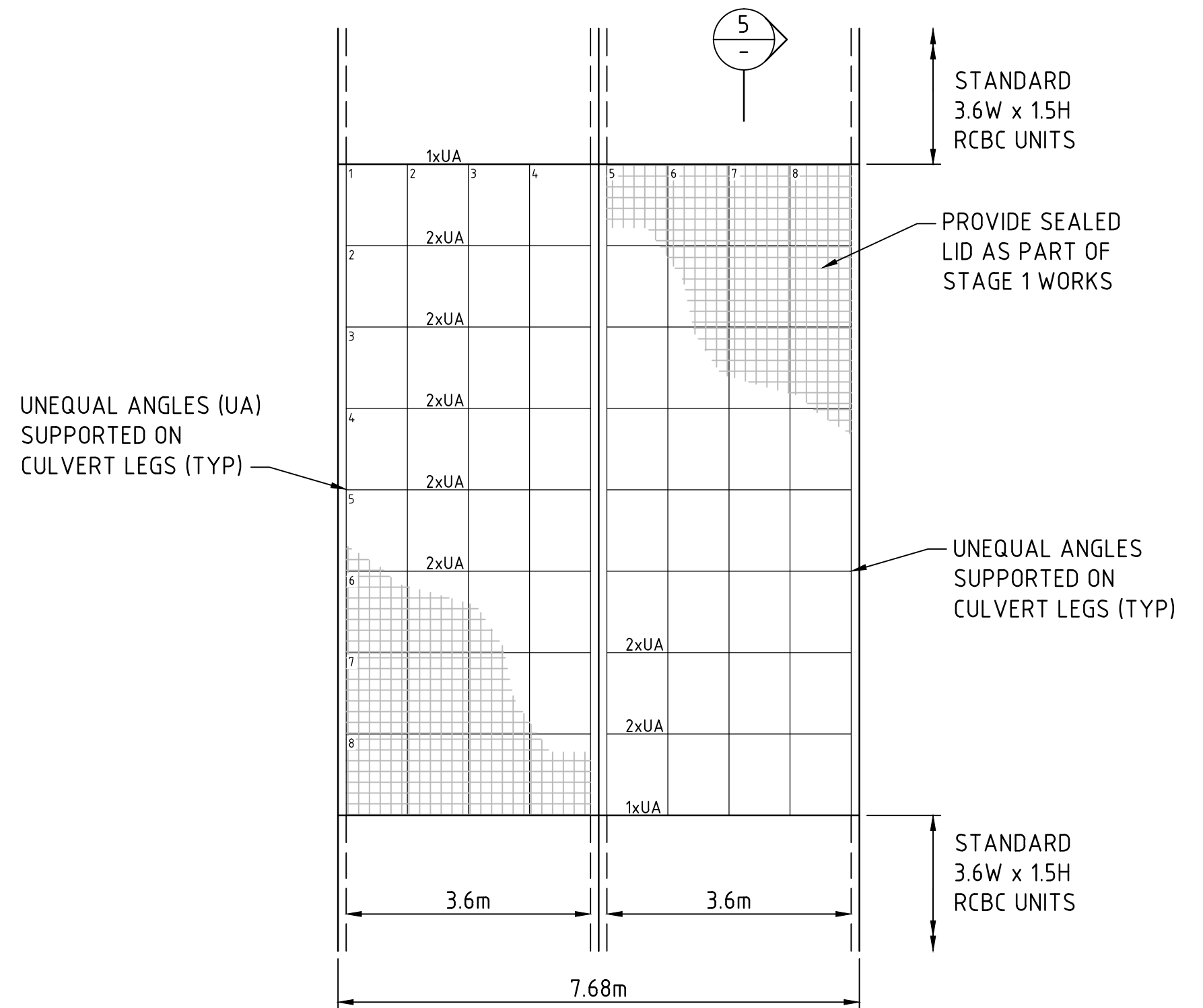
SECTION 2
SCALE 1:50
424



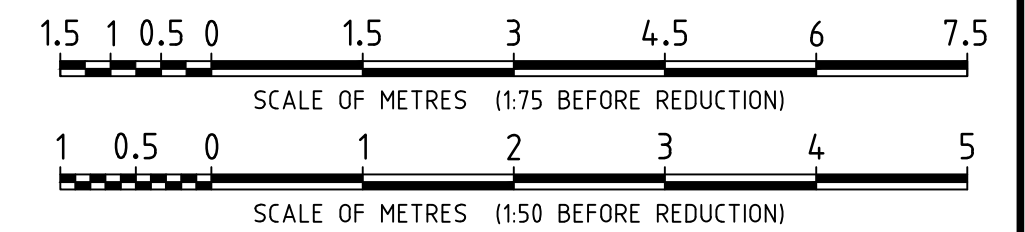
SECTION 5
NOT TO SCALE
-



SECTION 3
SCALE 1:50
424



DETAIL A
SCALE 1:75
424



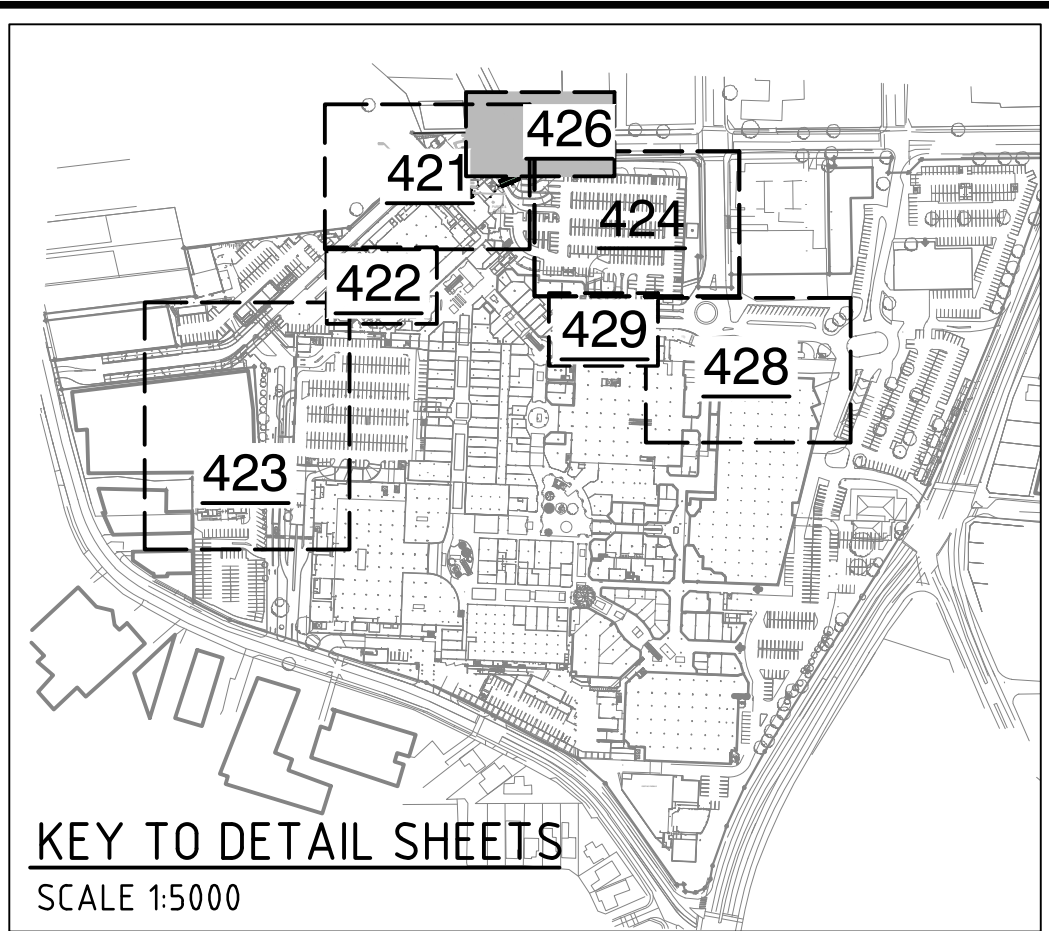
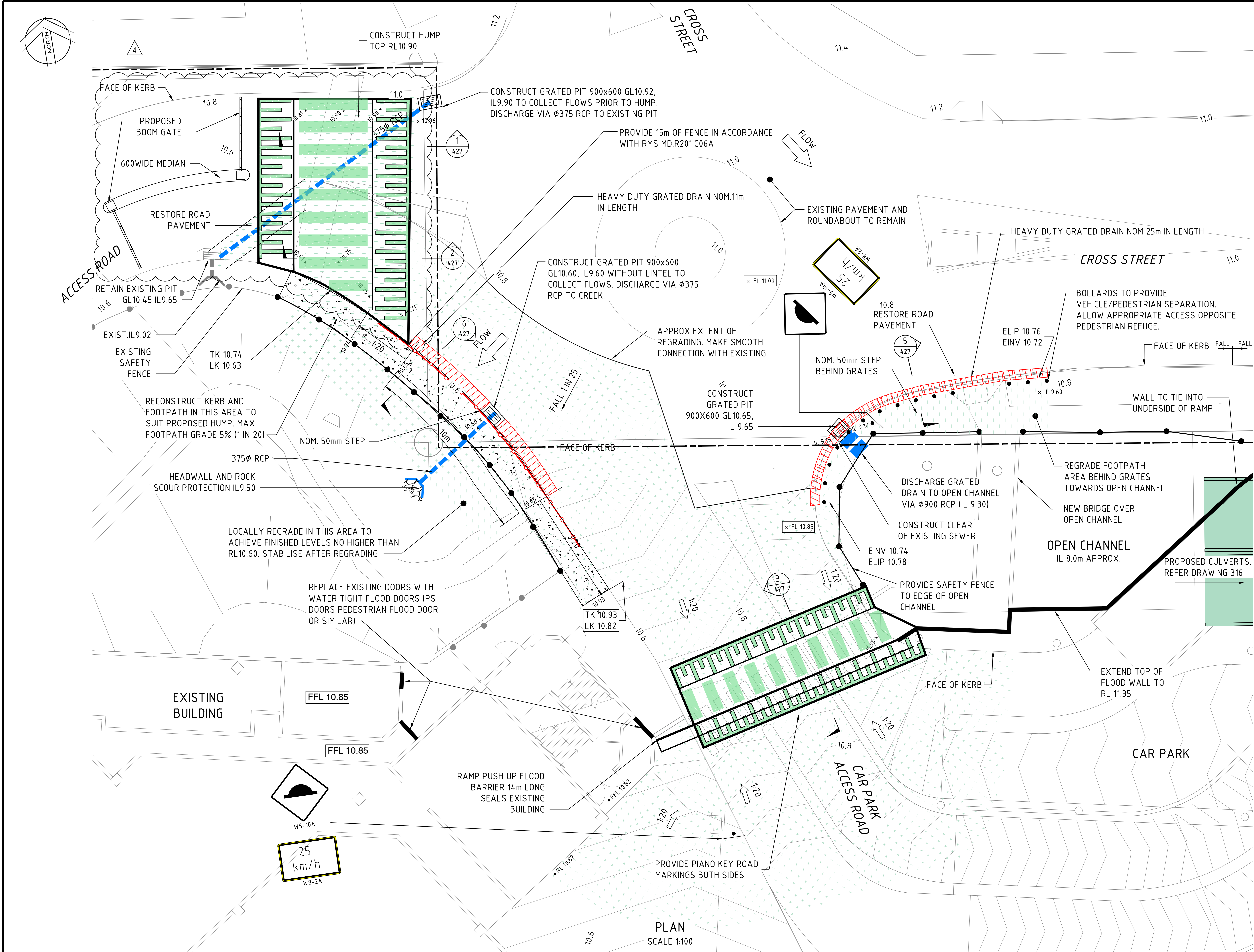
NOTE:
T.O.W. - TOP OF WALL



© Cardno Limited All Rights Reserved.
This document is produced by Cardno Limited solely for the benefit of and use by the client in accordance with the terms of the retainer. Cardno Limited does not and shall not assume any responsibility or liability whatsoever to any third party arising out of any use or reliance by third party on the content of this document.



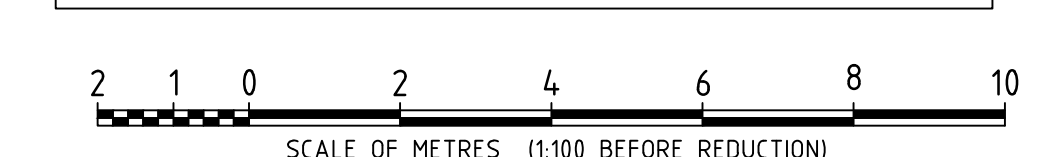
Drawn DH 18/11/2013	Date 18/11/2013	Client WESTFIELD DESIGN & CONSTRUCTION
Checked DNA 18/11/2013	Date 18/11/2013	WARRINGAH MALL CONCEPT DRAINAGE AUGMENTATION WORKS
Designed DNA 18/11/2013	Date 18/11/2013	DETAIL ARRANGEMENT PLAN CROSS AND GREEN STREETS SECTIONS
Verified	Date	
Approved	Date	
		Status PRELIMINARY
		Date 18/11/2013
		Datum AHD
		Scale AS SHOWN
		Size A1
		Drawing Number W4548-425
		Revision 4



LEGEND	
EXISTING	
---	BOUNDARY
x E10.87	EXISTING LEVEL
ELIP 10.76	EXISTING KERB LIP LEVEL
ELIP 10.76	EXISTING KERB INVERT LEVEL
[Symbol]	EXISTING STORMWATER PIT
[Symbol]	EXISTING LOCAL DRAINAGE
PROPOSED	
x 11.00	PROPOSED LEVEL
x FL 11.09	100 YEAR ARI FLOOD LEVEL (m AHD)
[Symbol]	PROPOSED GRATED INLET
[Symbol]	PROPOSED STORMWATER PIT AND PIPE
[Symbol]	PROPOSED SAFETY FENCE
[Symbol]	PROPOSED PEDESTRIAN FENCE
[Symbol]	PROPOSED CONCRETE FOOTPATH
TK 10.61 LK 10.55	PROPOSED TOP OF KERB LEVEL PROPOSED LIP OF KERB LEVEL

SERVICES	
---	E ELECTRICITY
---	G GAS
---	T OPTICAL FIBRE
---	O OPTUS
---	S SEWER
---	T TELSTRA
---	W WATER
NOTE: ALL SERVICE LOCATIONS ARE INDICATIVE ONLY	

NOTE:
WITH THE EXCEPTION OF THE WORKS SHOWN ON THIS PLAN, THE EXISTING ROAD PAVEMENT AND ROUNDABOUT IS TO BE RETAINED. PAVEMENT REINSTATEMENT, UNO IS TO MATCH EXISTING LEVELS



Rev	Date	Description	Drawn	Appr.
4	31/03/2015	COUNCIL COMMENTS ADDED	JP	DNA
3	5/11/2014	FLOOD BARRIERS UPDATED	LLC	DNA
2	30/07/2014	CULVERT AMENDED THOUGH BING LEE	DH	DNA
1	20/11/2013	PRELIMINARY	DH	DNA

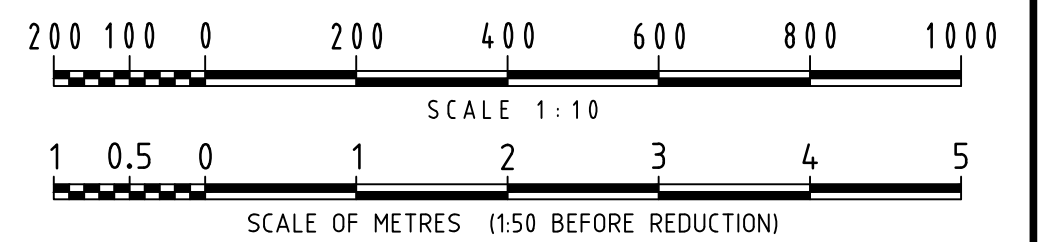
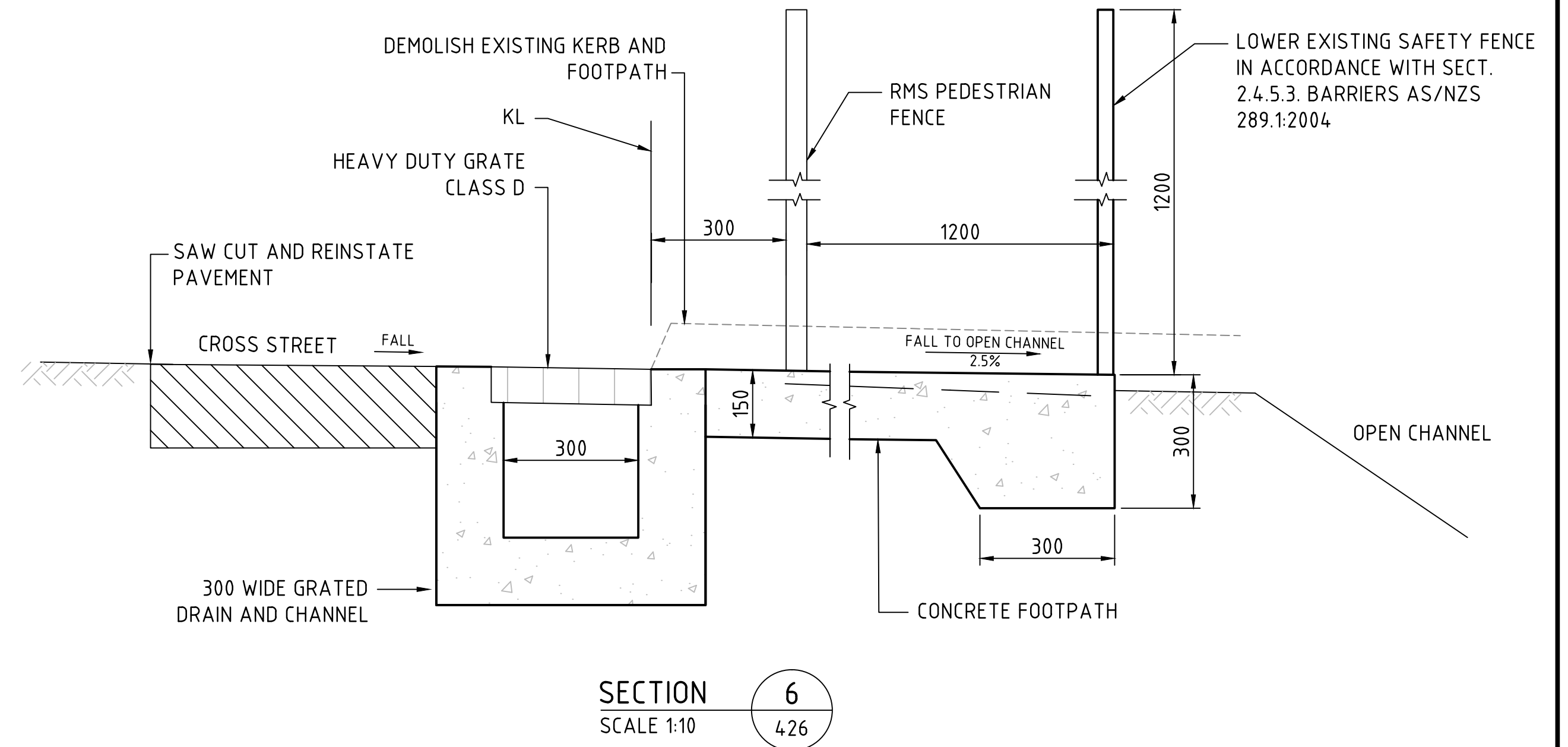
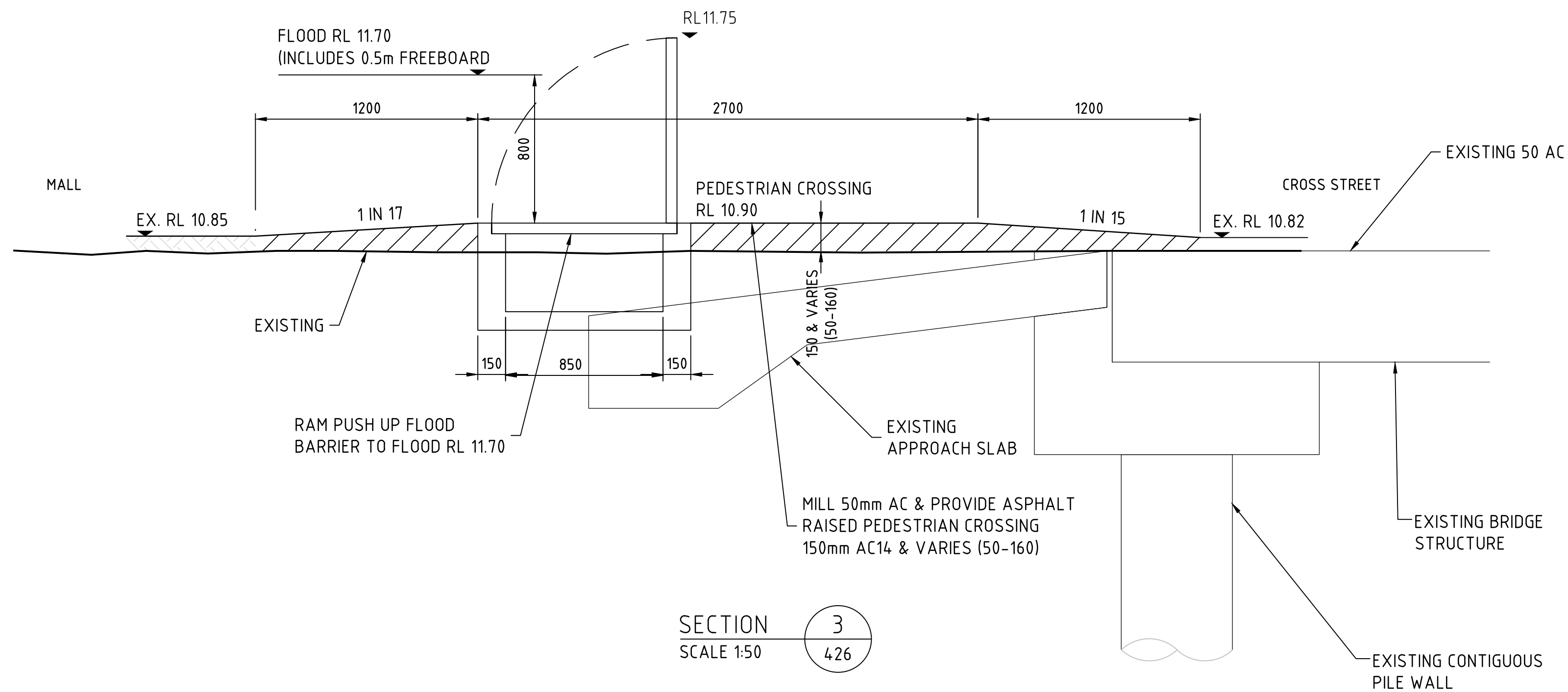
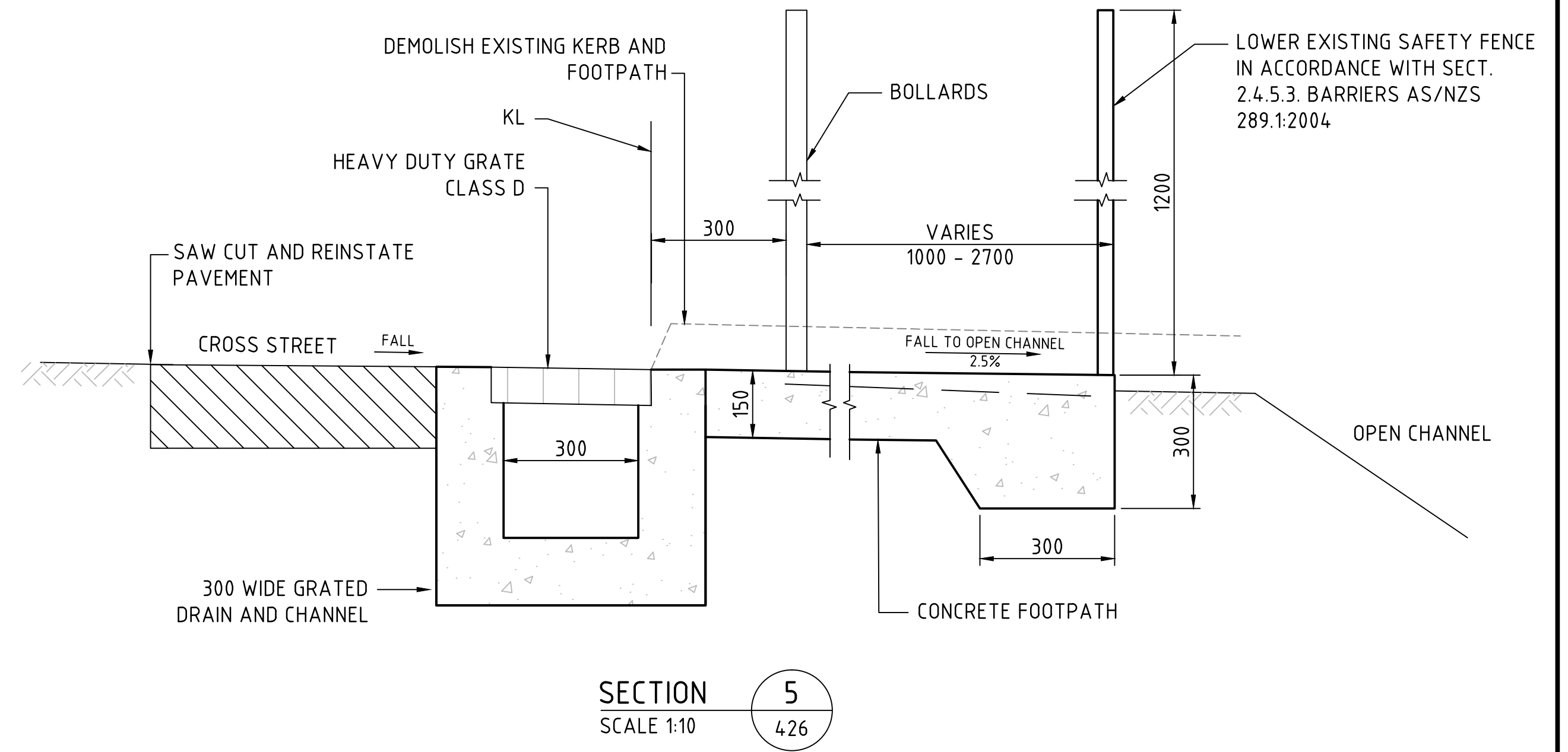
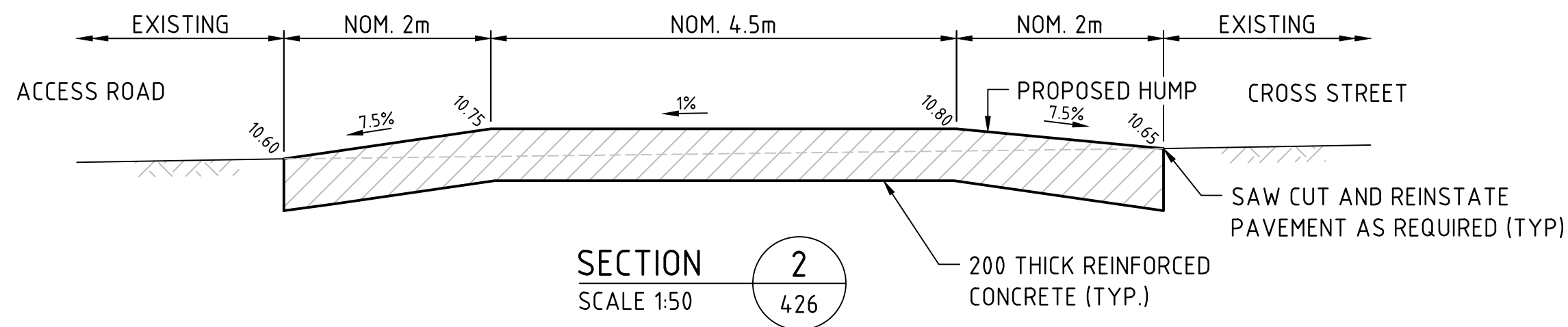
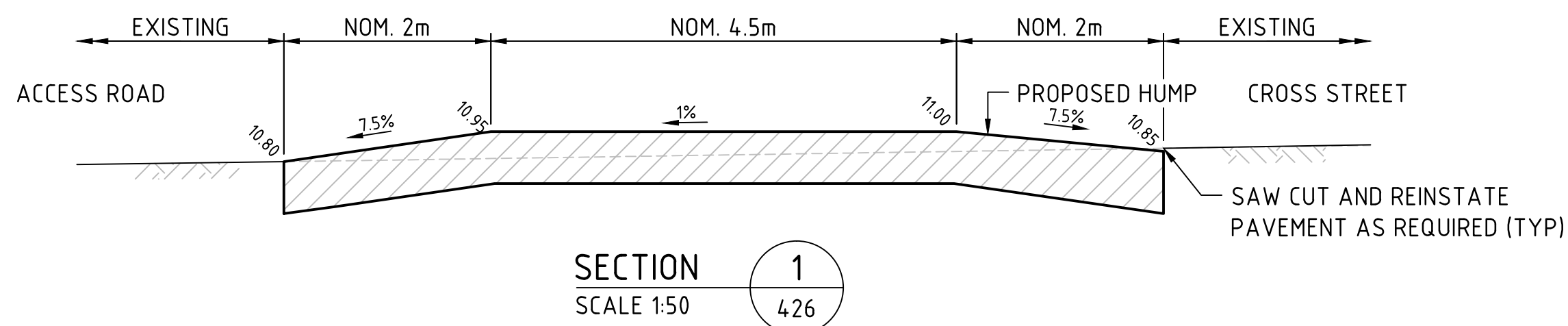
Westfield Design & Construction Pty Limited
100 William Street, Sydney NSW 2011
Phone (02) 9358 7000 Fax (02) 9358 7373
GPO Box 4004 Sydney NSW 2001
ABN 000 287 285

© Cardno Limited All Rights Reserved.
This document is produced by Cardno Limited solely for the benefit of and use by the client in accordance with the terms of the retainer. Cardno Limited does not and shall not assume any responsibility or liability whatsoever to any third party arising out of any use or reliance by third party on the content of this document.

Cardno
Shaping the Future
ABN: 95 001 145 035
Level 9, The Forum, 203 Pacific Highway
St Leonards NSW Australia 2065
Phone (412) 94 96 7700 Fax (412) 94 96 5170
Email: Sydney@cardno.com.au Web: www.cardno.com.au

Drawn DH 18/11/2013	Date 18/11/2013	Client WESTFIELD DESIGN & CONSTRUCTION
Checked DNA 18/11/2013	Date 18/11/2013	WARRINGAH MALL CONCEPT DRAINAGE AUGMENTATION WORKS
Designed DNA 18/11/2013	Date 18/11/2013	DETAIL ARRANGEMENT PLAN CROSS STREET ROUNDABOUT PLAN
Verified	Date	
Approved	Date	
Status PRELIMINARY		Revision 4
Drawing Number W4548-426		

DATE PLOTTED: 1 April 2015 3:08 PM BY: JULIA PACHKOVA



Rev	Date	Description	Drawn	Appr.
4	31/3/2015	COUNCIL COMMENTS ADDED	JP	DNA
3	5/11/2014	FLOOD BARRIERS UPDATED	LLC	DNA
2	30/07/2014	CULVERT AMENDED THOUGH BING LEE	DH	DNA
1	20/11/2013	PRELIMINARY	DH	DNA



© Cardno Limited All Rights Reserved.
This document is produced by Cardno Limited solely for the benefit of and use by the client in accordance with the terms of the retainer. Cardno Limited does not and shall not assume any responsibility or liability whatsoever to any third party arising out of any use or reliance by third party on the content of this document.



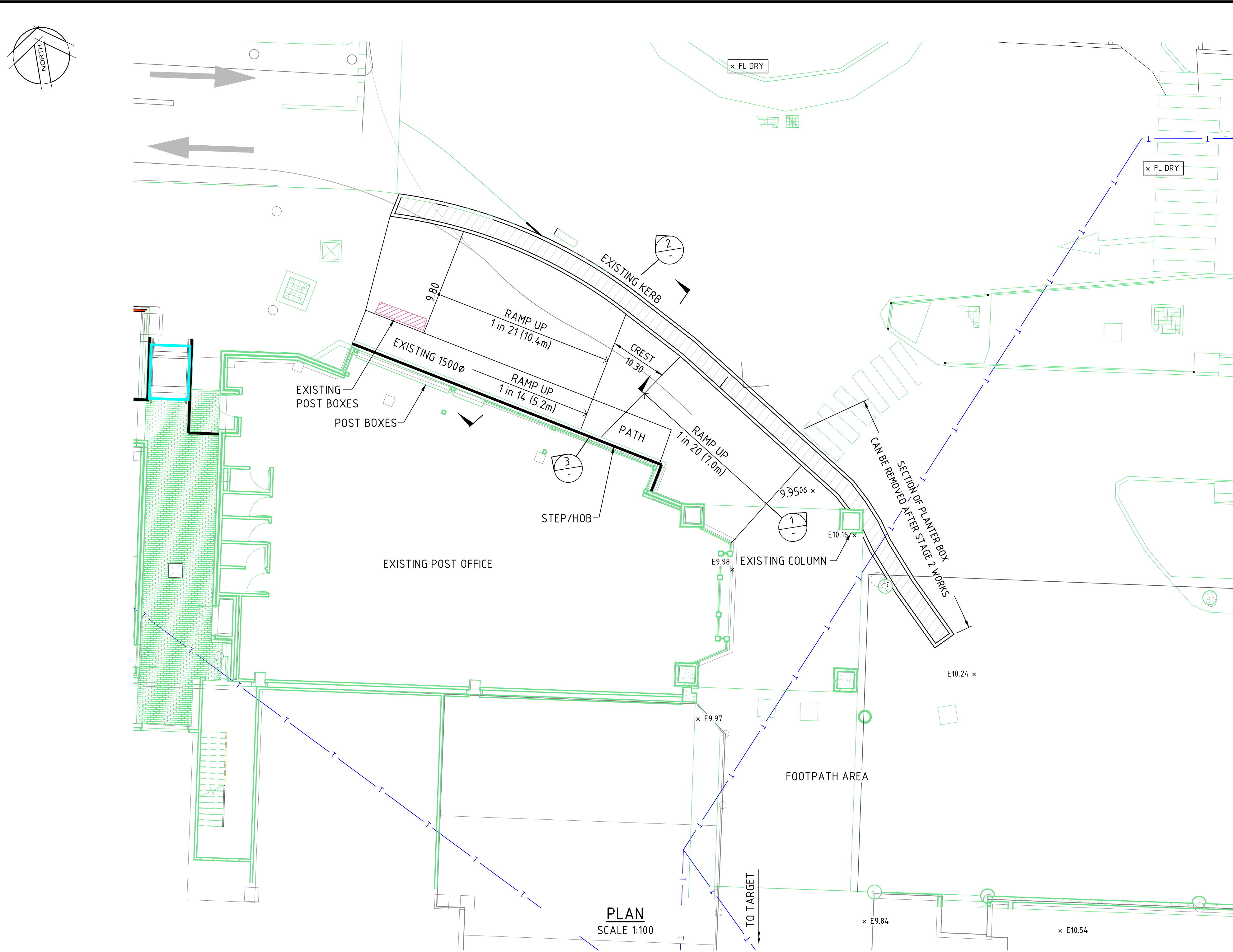
Drawn	DH	Date	18/11/2013
Checked	DNA	Date	18/11/2013
Designed	DNA	Date	18/11/2013
Verified		Date	
Approved		Date	

Client	WESTFIELD DESIGN & CONSTRUCTION
	WARRINGAH MALL CONCEPT DRAINAGE AUGMENTATION WORKS
	DETAIL ARRANGEMENT PLAN CROSS STREET ROUNDABOUT DETAILS

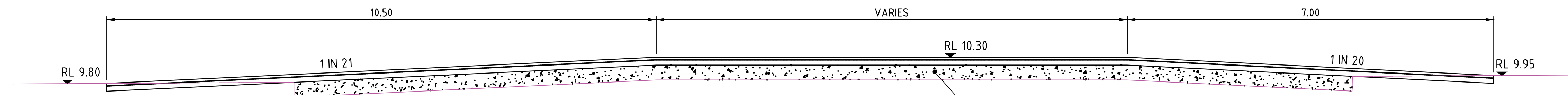
Status			
PRELIMINARY			
Date	Datum	Scale	Size
18/11/2013	AHD	AS SHOWN	A1
Drawing Number			Revision
W4548-427			4

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150mm ON A1 ORIGINAL

DATE PLOTTED: 1 April 2015 1:08 PM BY: JULIA PACHKOVA
XREF's: X:Drainage; X:Survey; X:Architect; X:GP; X:SYDA; X:Log; X:WR-Floor Plan; X:Z02-GR Aerial Post Loading Proposed; X:JH
CAD FILE: \\cardno.com\projects\Warringah Mall\Warringah Mall_FLOODING AND DRAINAGE\01_Package_1\Drawings\4548-428(4).dwg

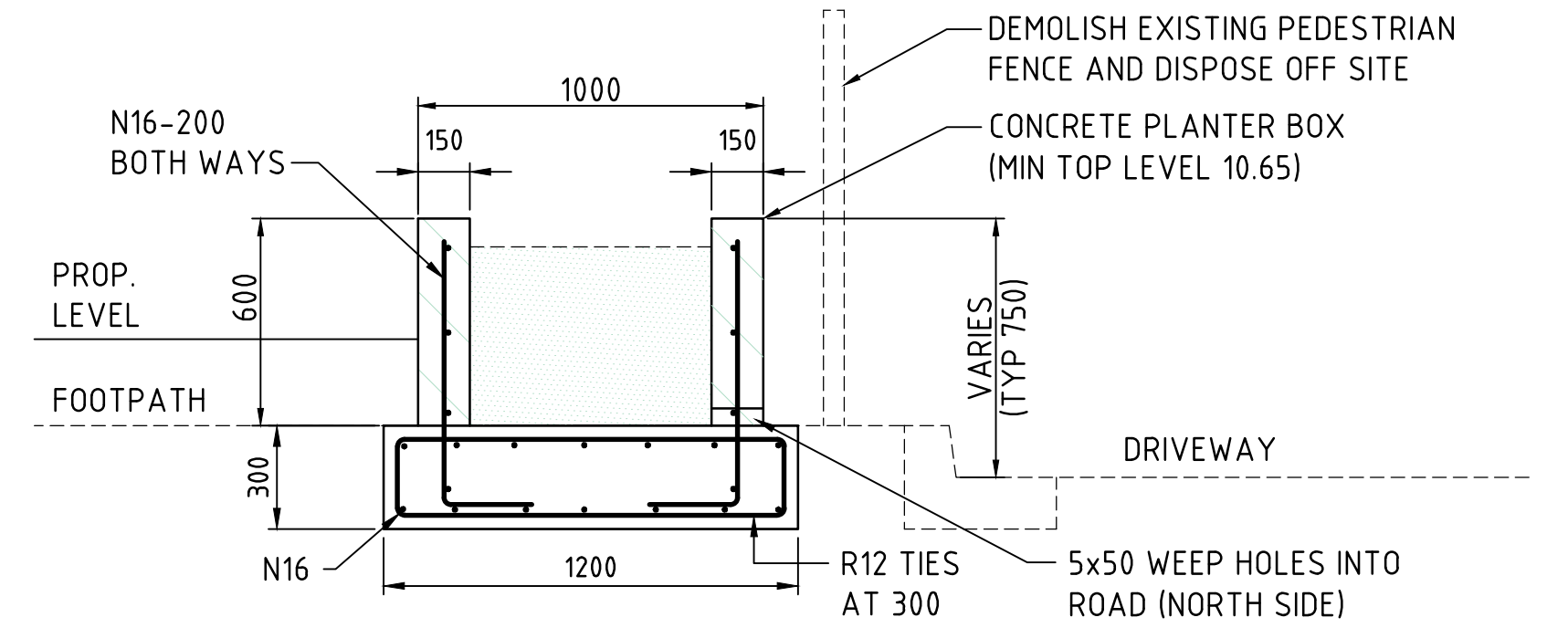


PLAN
SCALE 1:100

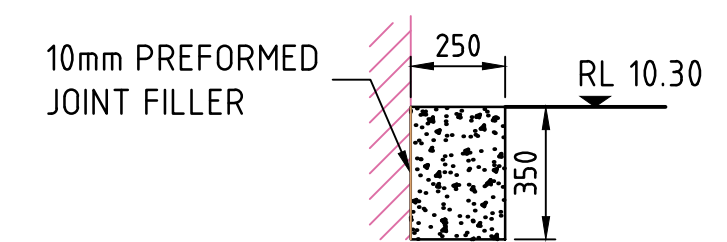


SECTION 1
SCALE 1:50

150mm THICK CONCRETE REINFORCED
WITH SL92 FABRIC (50 TOP COVER)
ON ROAD BASE (THICKNESS VARIES)



SECTION 2
SCALE 1:20



SECTION 3
SCALE 1:20

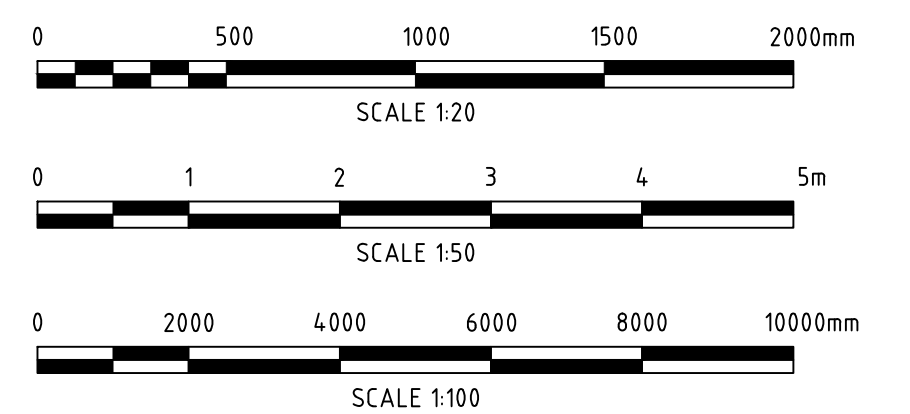
LEGEND

EXISTING

- × E10.24 EXISTING LEVEL
× FL 11.09 100 YEAR ARI FLOOD LEVEL (m AHD)

4

NOTE:
FL DRY - EXISTING SURFACE LEVEL IS ABOVE THE 100 YEAR FLOOD LEVEL



Rev	Date	Description	Drawn	Appr.
4	31/3/2015	COUNCIL COMMENTS ADDED	JP	DNA
3	5/11/2014	FLOOD BARRIERS UPDATED	LLC	DNA
2	30/07/2014	CULVERT AMENDED THOUGH BING LEE	DH	DNA
1	20/11/2013	PRELIMINARY	DH	DNA

Westfield
Westfield Design & Construction Pty Limited
100 William Street, Sydney NSW 2011
Phone (02) 9358 7000 Fax (02) 9358 7373
GPO Box 4004 Sydney NSW 2001
ABN 900 287 285

© Cardno Limited All Rights Reserved.
This document is produced by Cardno Limited solely for the benefit of and use by the client in accordance with the terms of the retainer. Cardno Limited does not and shall not assume any responsibility or liability whatsoever to any third party arising out of any use or reliance by third party on the content of this document.

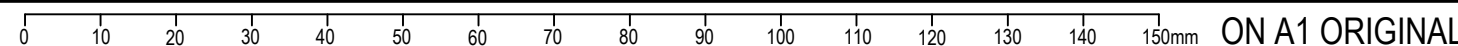
Cardno
Shaping the Future
ABN: 95 001 145 035
Level 9, The Forum, 203 Pacific Highway
St Leonards NSW Australia 2065
Phone (61) 21 94 96 7700 Fax (61) 21 94 96 5170
Email: Sydney@cardno.com.au Web: www.cardno.com.au

Drawn	DH	Date	18/11/2013
Checked	DNA	Date	18/11/2013
Designed	DNA	Date	18/11/2013
Verified		Date	
Approved		Date	

Client **WESTFIELD DESIGN & CONSTRUCTION**
WARRINGAH MALL
CONCEPT DRAINAGE AUGMENTATION WORKS
DETAIL ARRANGEMENT PLAN
TARGET ENTRY - CONCRETE PLANTER BOX

Status	PRELIMINARY		
Date	18/11/2013	Datum	AHD
Scale	AS SHOWN	Size	A1
Drawing Number	W4548-428		
Revision	4		

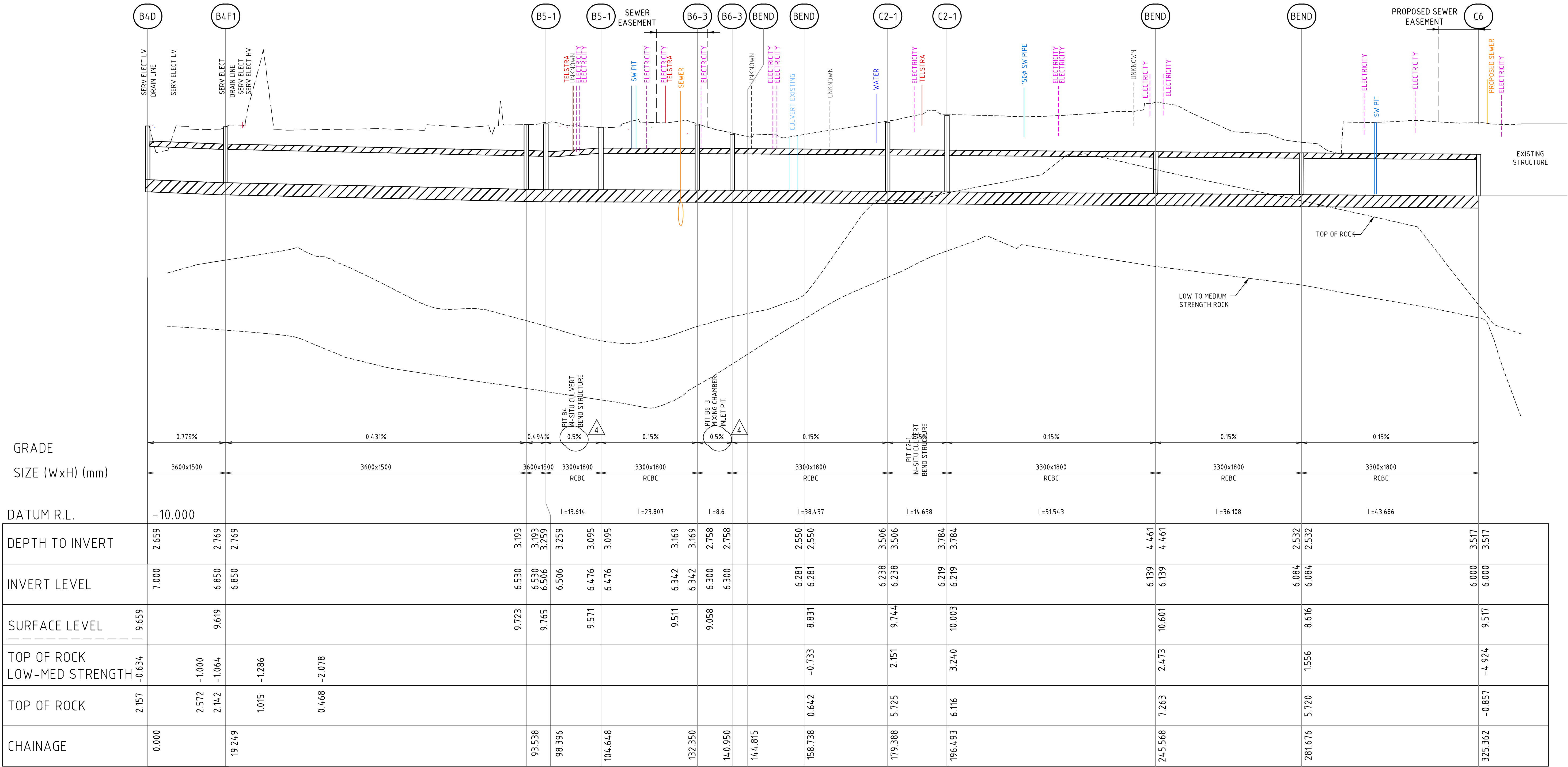
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150mm ON A1 ORIGINAL



DATE PLOTTED: 31 March 2015 5:46 PM BY: JULIA PACHKOVA

XREFs: X:GRP-A1:SHT: X:SYD-A1:Logo

CAD FILE: \\cardno.com\global\AUNSW\Director\Structure\Projects\499\FY13\NA99\13132_WARRINGAH MALL_FLOODING AND DRAINAGE\01-Package_1_Data\W4548-43\14.dwg

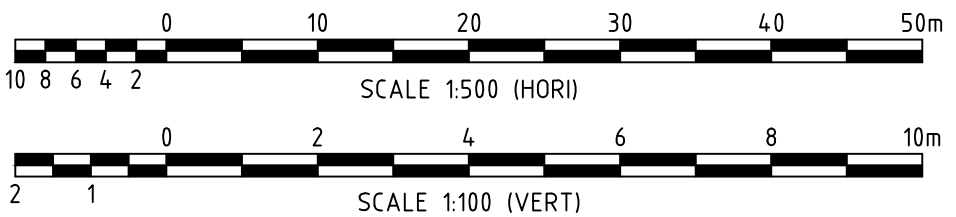


NOTE:

1. LOCATION AND LEVELS OF ALL SERVICES IS INDICATIVE ONLY. SERVICES TO BE LOCATED AND POTHOLED PRIOR TO CONSTRUCTION.

2. ALL REQUIREMENTS ASSOCIATED WITH THE ADJUSTMENT TO ANY UNDERGROUND UTILITY SERVICES THAT CONFLICT WITH THE DRAINAGE WORKS ARE TO BE BORNE BY THE CONTRACTOR.

LONGITUDINAL SECTION PIT B4-C6
CULVERT 1
SCALE 1:500(H) 1:100(V)



Rev	Date	Description	Drawn	Appr.
4	31/03/2015	COUNCIL COMMENTS ADDED	JP	DNA
3	5/11/2014	FLOOD BARRIERS UPDATED	LLC	DNA
2	30/07/2014	CULVERT AMENDED THOUGH BING LEE	DH	DNA
1	20/11/2013	PRELIMINARY	DH	DNA



© Cardno Limited All Rights Reserved.
This document is produced by Cardno Limited solely for the benefit of and use by the client in accordance with the terms of the retainer. Cardno Limited does not and shall not assume any responsibility or liability whatsoever to any third party arising out of any use or reliance by third party on the content of this document.



Drawn	DH	Date	18/11/2013	Client	WESTFIELD DESIGN & CONSTRUCTION			
Checked	DNA	Date	18/11/2013		WARRINGAH MALL CONCEPT DRAINAGE AUGMENTATION WORKS			
Designed	DNA	Date	18/11/2013					
Verified		Date						
Approved		Date						
					STORMWATER LONGSECTIONS - SHEET 2 of 2			
					Status	PRELIMINARY		
					Date	18/11/2013	Datum	AHD
					Scale	AS SHOWN	Size	A1
					Drawing Number	W4548-431		
					Revision	4		

DATE PLOTTED: 1 April 2015 11:07 AM BY: JULIA PACHKOVA

XREF's: X-Drainage: X-Survey: X-Architect: X-GRP-A1-SHT: X-SYD-A1-Logo

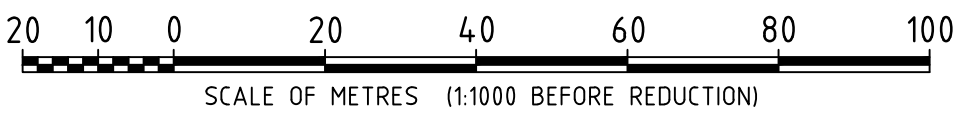
CAD FILE: \\cardno.com\gis\GIS\Warrindah\Warrindah\Structure\Projects\W4548-402\4.dwg



NOTE:
LOCATION AND LEVEL OF ALL
SERVICES TO BE CONFIRMED ON SITE

LEGEND

- EXISTING STORMWATER TO REMAIN
- EXISTING STORMWATER TO BE REMOVED
- PROPOSED STORMWATER (RCP)
- PROPOSED STORMWATER (RCBC)
- PROPOSED HIGH CAPACITY INLET
- APPROXIMATE AREAS OF REGRADING
- BOUNDARY
- ELECTRICITY
- GAS
- OPTICAL FIBRE
- OPTUS
- SEWER
- TELSTRA
- WATER



Rev	Date	Description	Drawn	Appr.
4	31/3/2015	COUNCIL COMMENTS ADDED	JP	DNA
3	5/11/2014	FLOOD BARRIERS UPDATED	LLC	DNA
2	30/07/2014	CULVERT AMENDED THOUGH BING LEE	DH	DNA
1	20/11/2013	PRELIMINARY	DH	DNA

Westfield
Westfield Design & Construction Pty limited
100 William Street, Sydney NSW 2011
Phone (02) 9258 7000 Fax (02) 9258 7373
GPO Box 4024 Sydney NSW 2001
ABN 900 287 285

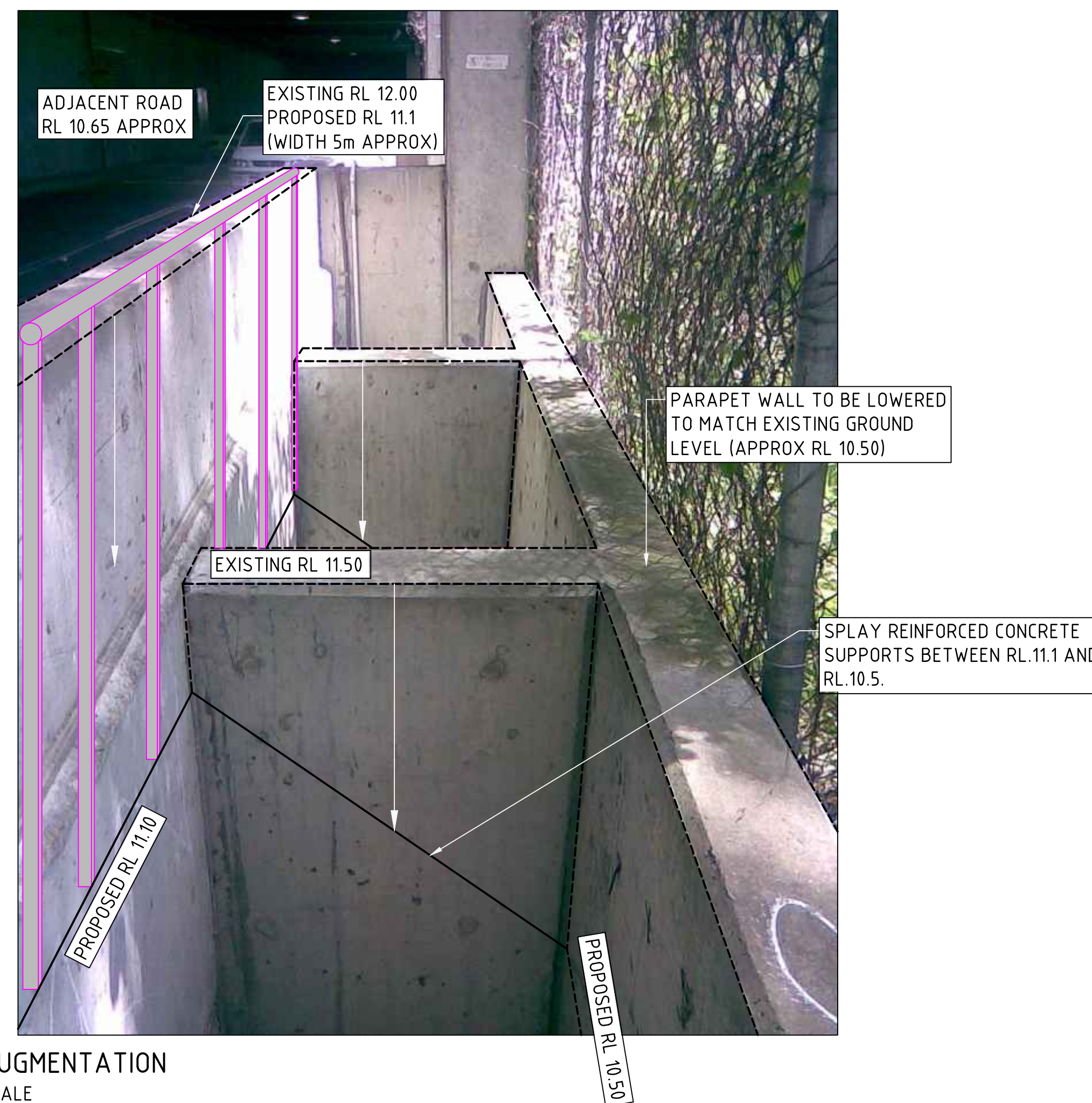
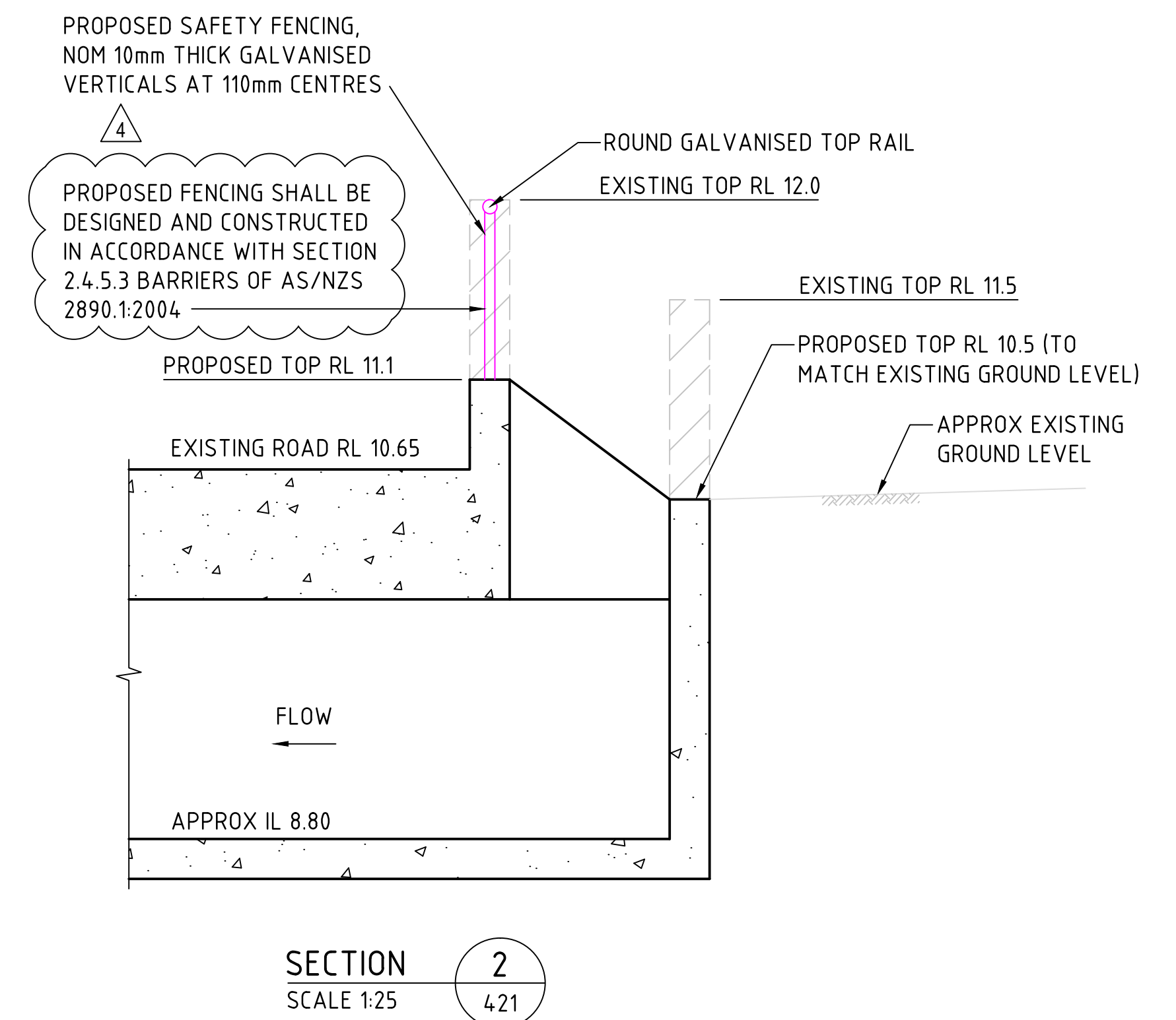
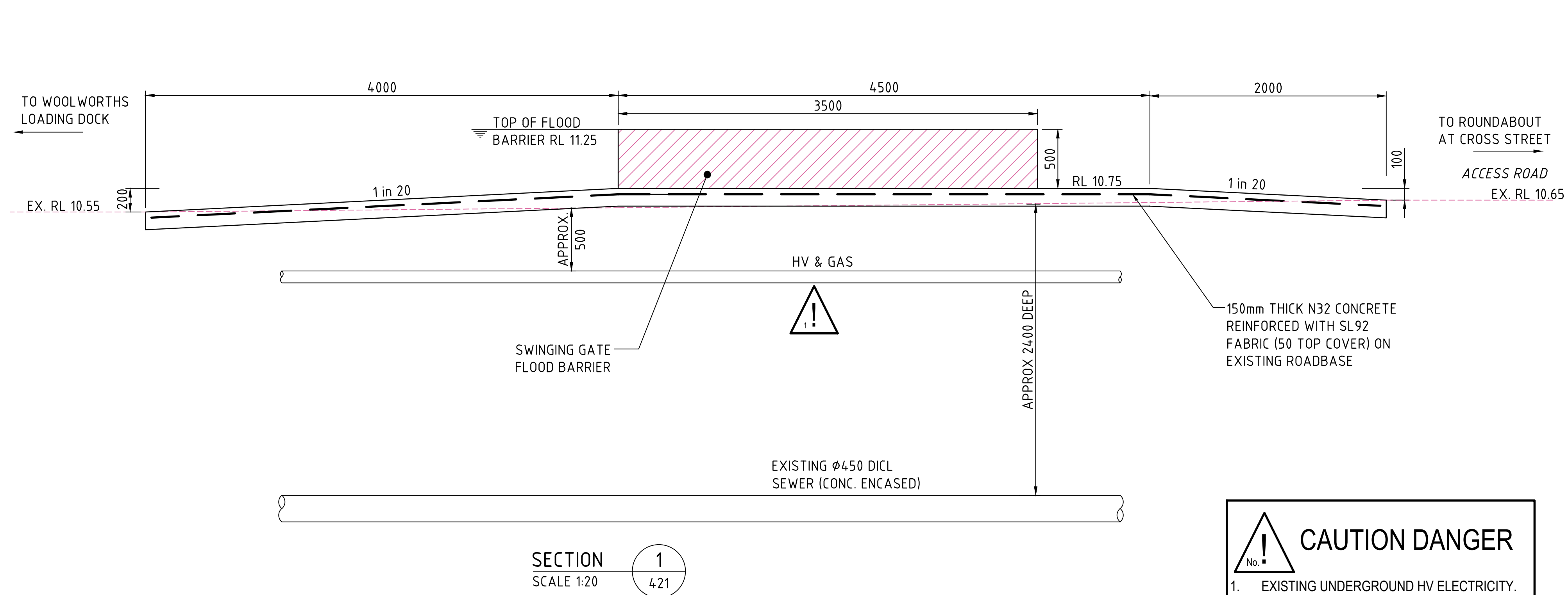
© Cardno Limited All Rights Reserved.
This document is produced by Cardno Limited solely for the benefit of and use by the client in accordance with the terms of the retainer. Cardno Limited does not and shall not assume any responsibility or liability whatsoever to any third party arising out of any use or reliance by third party on the content of this document.

Cardno
Shaping the Future
ABN: 95 001 145 035
Level 9, The Forum, 203 Pacific Highway
St Leonards NSW Australia 2065
Phone +61 21 94 96 7700 Fax +61 21 94 96 5170
Email: Sydney@cardno.com.au Web: www.cardno.com.au

Drawn	DH	Date	18/11/2013
Checked	DNA	Date	18/11/2013
Designed	DNA	Date	18/11/2013
Verified		Date	
Approved		Date	

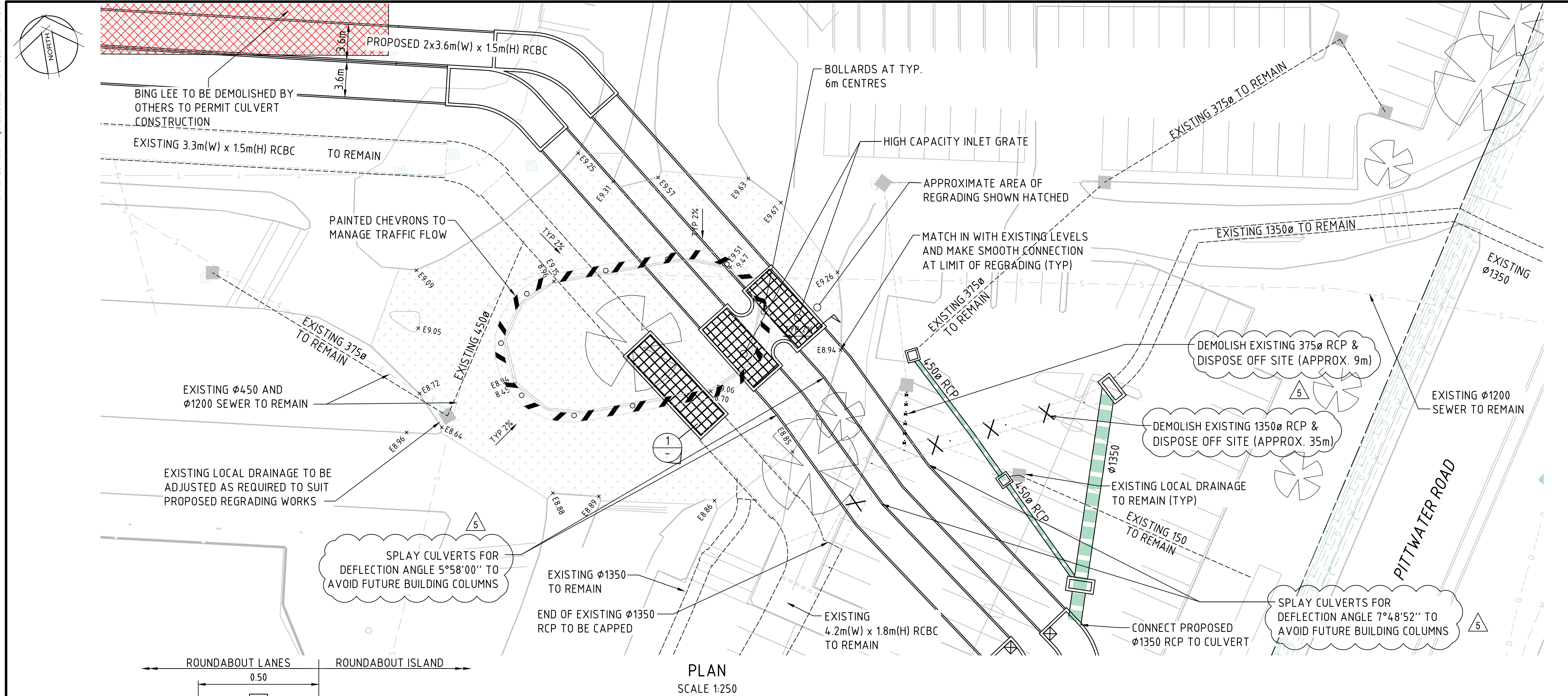
Client: **WESTFIELD DESIGN & CONSTRUCTION**
WARRINGAH MALL
CONCEPT DRAINAGE AUGMENTATION WORKS
GENERAL ARRANGEMENT PLAN
MASTERPLAN WITH AERIAL OVERLAY

Status	PRELIMINARY		
Date	18/11/2013	Datum	AHD
Scale	1:1000	Size	A1
Drawing Number	W4548-402		Revision
			4

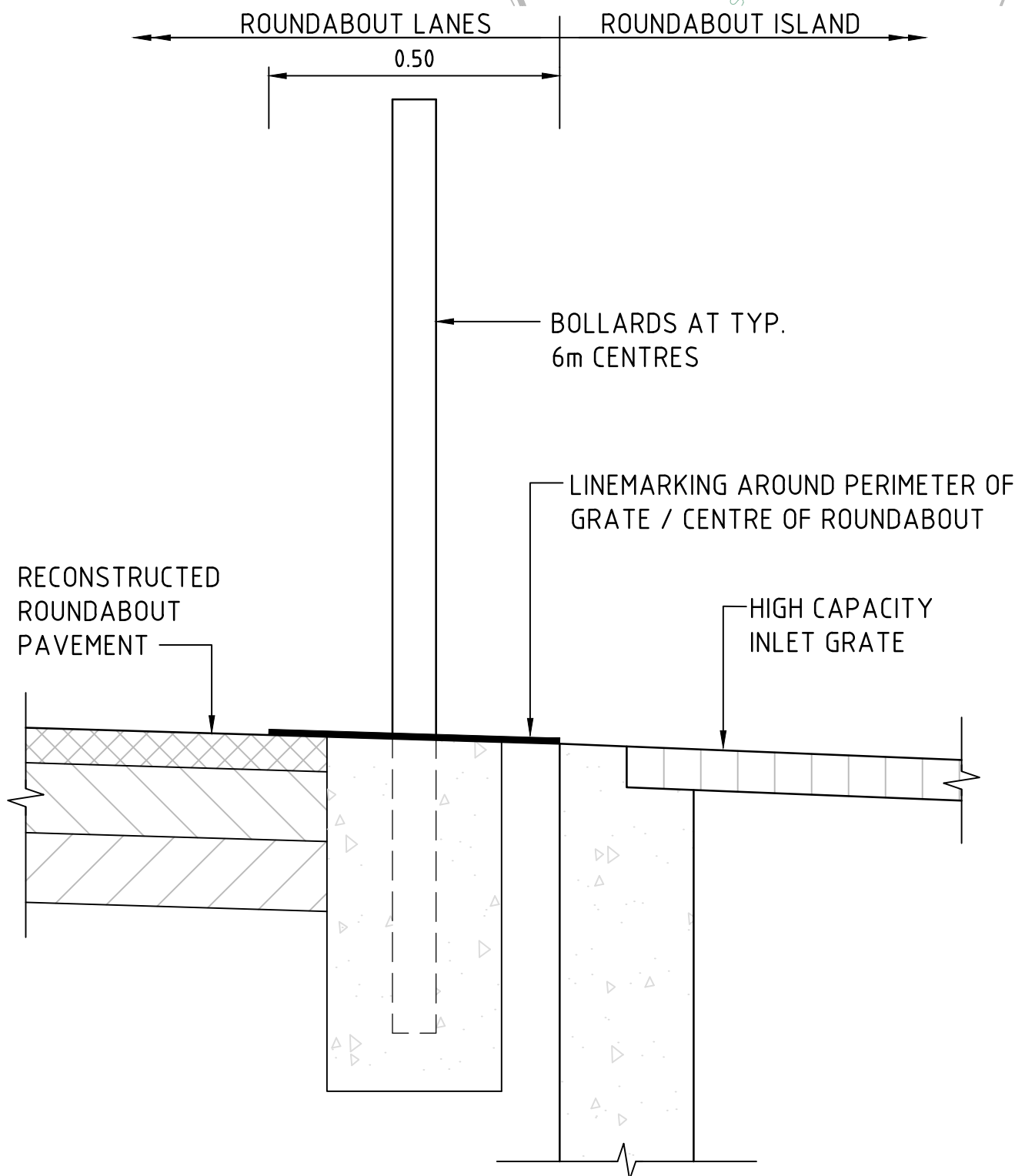


PARAPET WALL AUGMENTATION
NOT TO SCALE

[illegible]

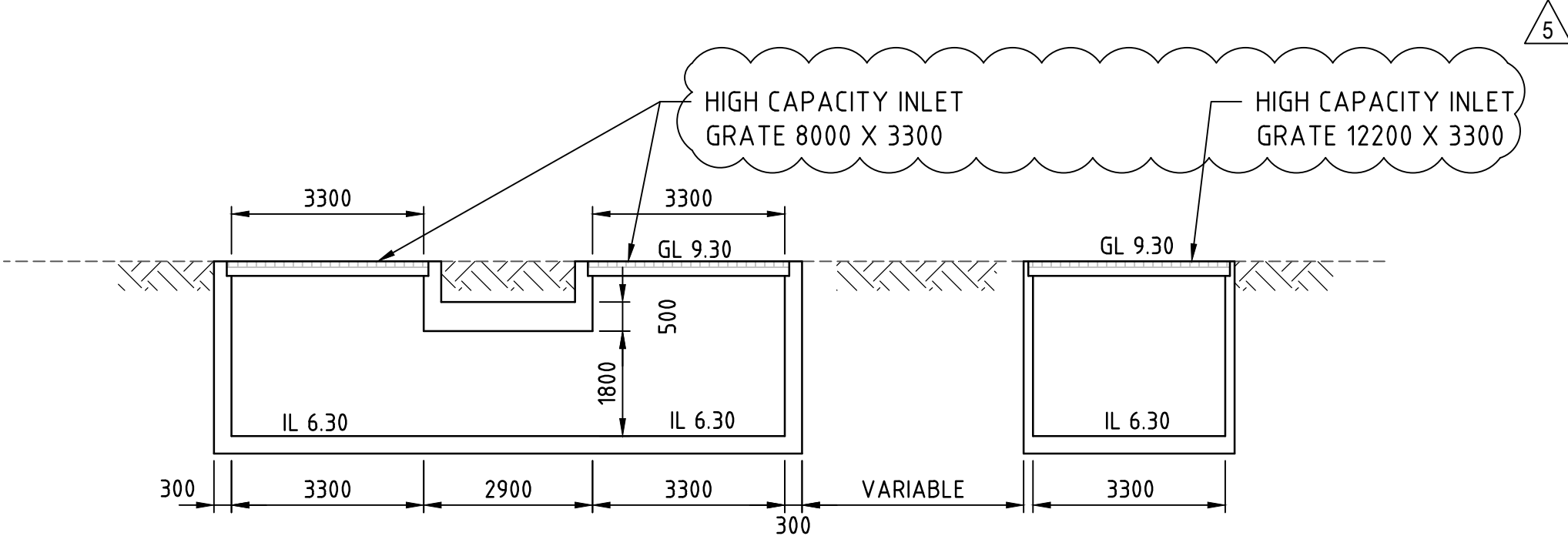


PLAN
SCALE 1:250

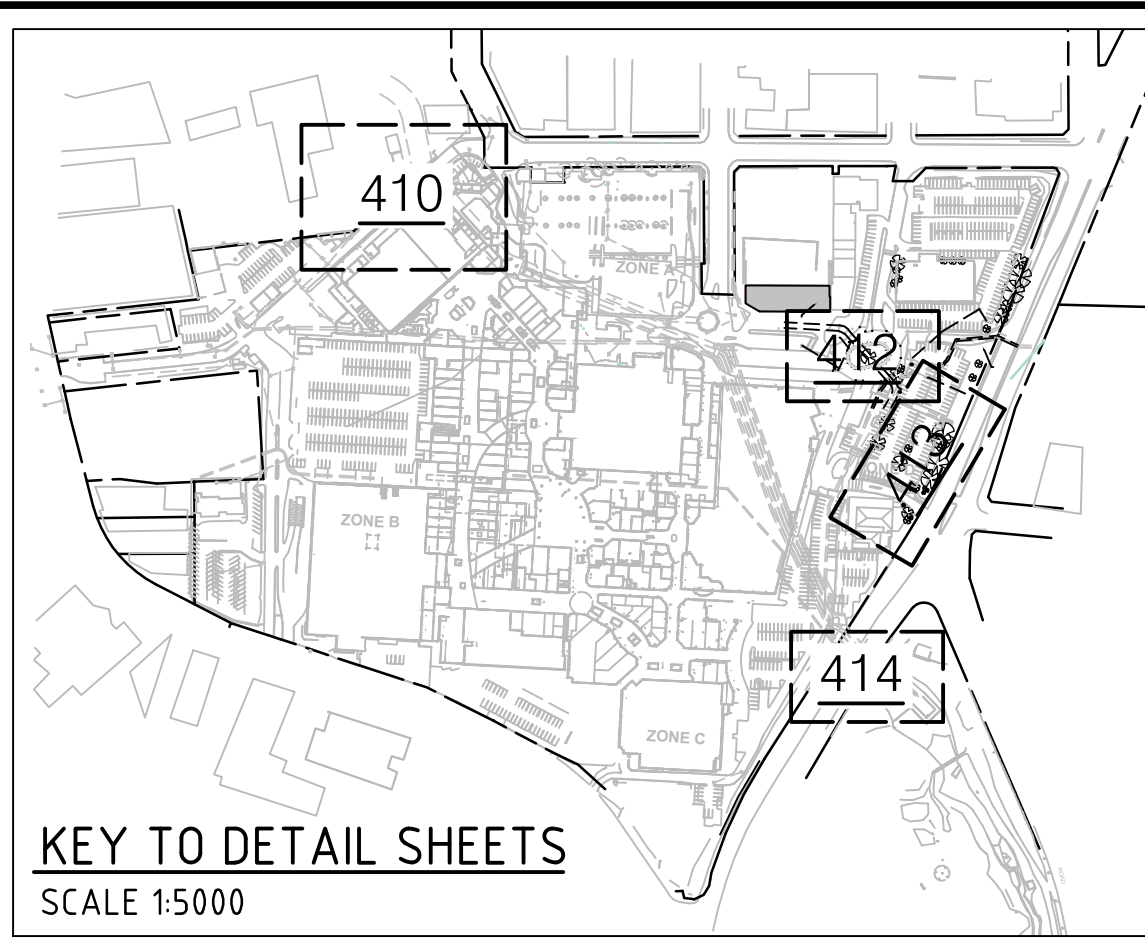


TYPICAL ROUNDABOUT EDGE TREATMENT

DETAIL
SCALE 1:10



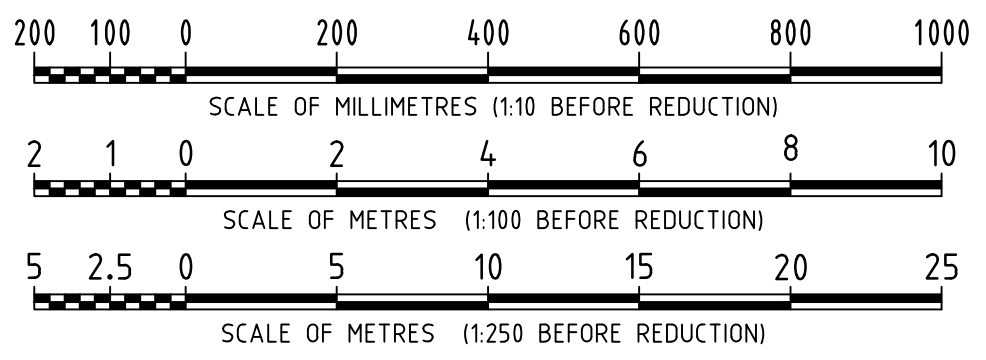
SECTION
SCALE 1:100



- LEGEND**
- EXISTING**
- EXISTING CULVERTS
 - EXISTING SPOT LEVEL
 - EXISTING LOCAL DRAINAGE
- PROPOSED**
- STORMWATER PIPE
 - CULVERTS
 - PROPOSED SPOT LEVEL
 - PROPOSED BOLLARD
 - APPROXIMATE AREA OF REGRADE
 - HIGH CAPACITY GRATE
 - BUILDING TO BE DEMOLISHED
- SERVICES**
- ELECTRICITY
 - GAS
 - OPTICAL FIBRE
 - OPTUS
 - SEWER
 - TELSTRA
 - WATER
- NOTE: ALL SERVICE LOCATIONS ARE INDICATIVE ONLY

NOTE:

- HIGH CAPACITY INLET GRATES ARE 100THICK WELDLK DIAMOND GRATING CD-1006 (150 kg/m³) ON 310UB46 STEEL BEAMS @1m CTRS.
- DESIGN LOAD AS1600 IN ACCORDANCE WITH AS5100 BRIDGE CODE.



Rev	Date	Description	Drawn	Appr.
5	31/03/2015	COUNCIL COMMENTS ADDED	JP	DNA
4	7/11/2014	BING LEE, HCF & GODFATHERS NOTE ADDED	LLC	DNA
3	5/11/2014	FLOOD BARRIERS UPDATED	LLC	DNA
2	30/07/2014	CULVERT AMENDED THOUGH BING LEE	DH	DNA
1	20/11/2013	PRELIMINARY	DH	DNA



© Cardno Limited All Rights Reserved.
This document is produced by Cardno Limited solely for the benefit of and use by the client in accordance with the terms of the retainer. Cardno Limited does not and shall not assume any responsibility or liability whatsoever to any third party arising out of any use or reliance by third party on the content of this document.



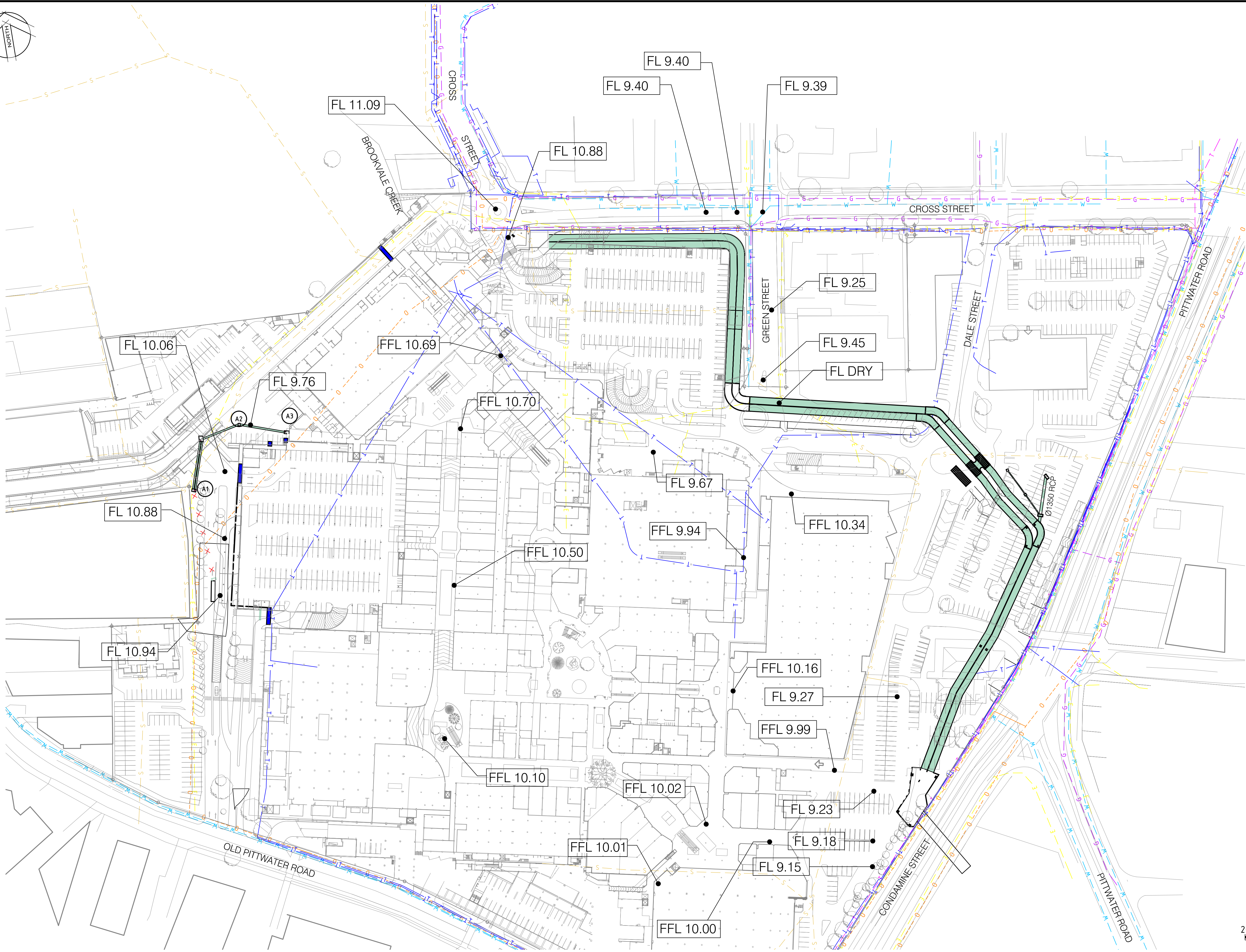
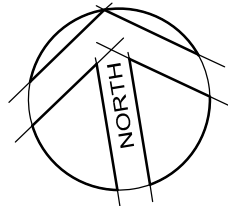
Drawn	DH	Date	18/11/2013
Checked	DNA	Date	18/11/2013
Designed	DNA	Date	18/11/2013
Verified		Date	
Approved		Date	

WESTFIELD DESIGN & CONSTRUCTION

WARRINGAH MALL
CONCEPT DRAINAGE AUGMENTATION WORKS

DETAIL ARRANGEMENT PLAN
DALE STREET ROUNDABOUT

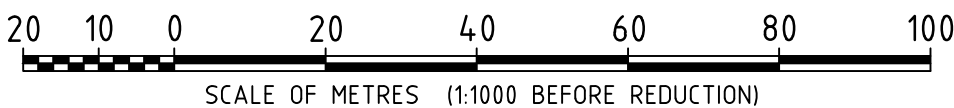
Status	PRELIMINARY		
Date	18/11/2013	Datum	AHD
Scale	AS SHOWN	Size	A1
Drawing Number	W4548-412		Revision
			5



LEGEND

- EXISTING STORMWATER TO REMAIN
- EXISTING STORMWATER TO BE REMOVED
- PROPOSED STORMWATER (RCP)
- PROPOSED STORMWATER (RCBC)
- PROPOSED HIGH CAPACITY INLET
- APPROXIMATE AREAS OF REGRADING
- APPROXIMATE AREA OF CHANNEL REGRADING
- FFL 10.50 FINISHED FLOOR LEVEL (m AHD)
- FL 10.17 100 YEAR ARI FLOOD LEVEL (m AHD)
- BOUNDARY
- ELECTRICITY
- GAS
- OPTICAL FIBRE
- OPTUS
- SEWER
- TELSTRA
- WATER

NOTE:
1. LOCATION AND LEVEL OF ALL SERVICES TO BE CONFIRMED ON SITE
2. FL DRY - EXISTING SURFACE LEVEL IS ABOVE THE 100 YEAR ARI FLOOD LEVEL.



6	31/03/2015	COUNCIL COMMENTS ADDED	JP	DNA
5	5/11/2014	FLOOD BARRIERS UPDATED	LLC	DNA
4	15/10/2014	FLOOD LEVELS AMENDED	JT	DNA
3	13/08/2014	FLOOD LEVELS REVISED	GV	DNA
2	30/07/2014	CULVERT AMENDED THOUGH BING LEE	DH	DNA
1	20/11/2013	PRELIMINARY	DH	DNA
Rev	Date	Description	Drawn	Appr.



© Cardno Limited All Rights Reserved.
This document is produced by Cardno Limited solely for the benefit of and use by the client in accordance with the terms of the retainer. Cardno Limited does not and shall not assume any responsibility or liability whatsoever to any third party arising out of any use or reliance by third party on the content of this document.

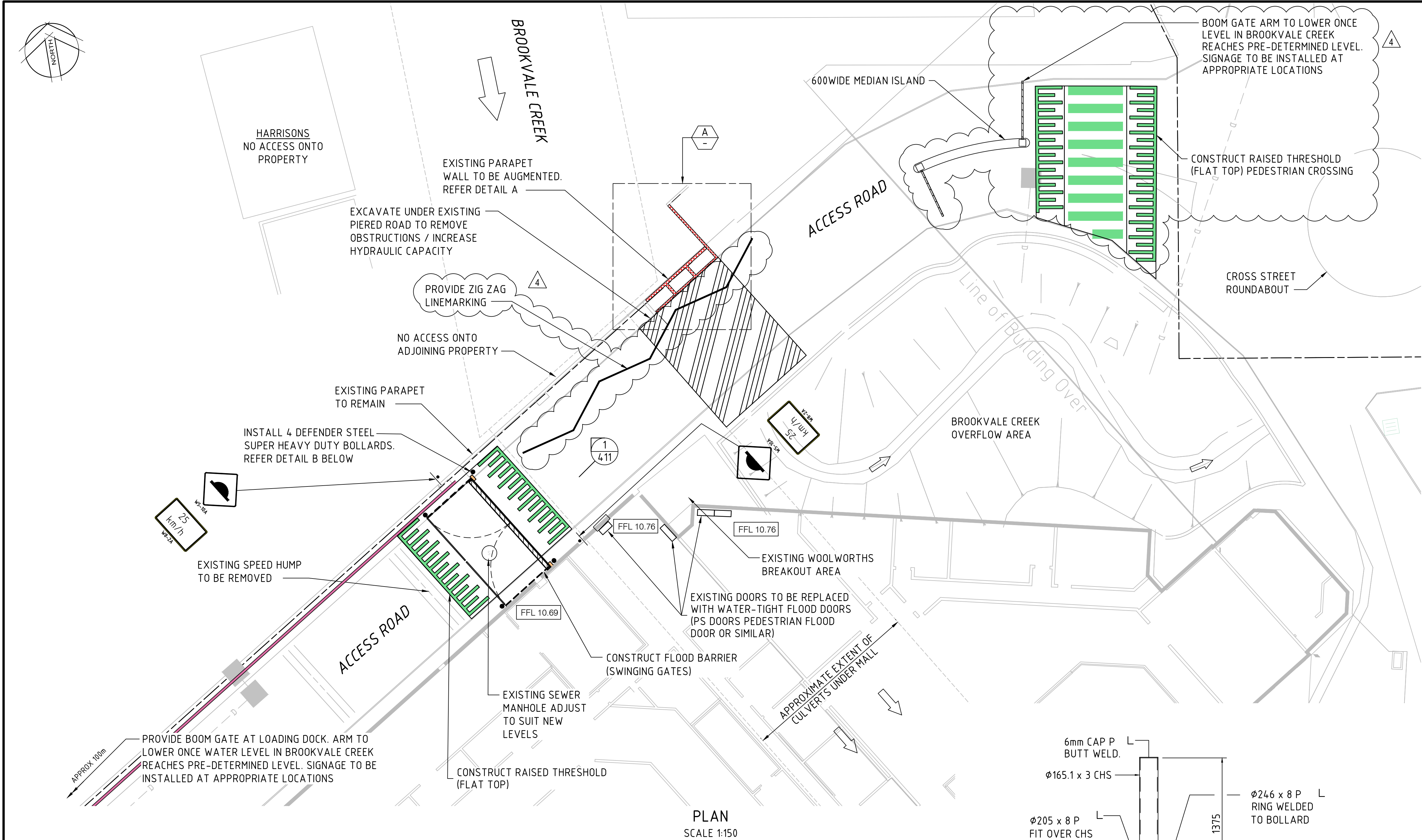


Drawn	GV	Date	13/08/2014
Checked	DNA	Date	13/08/2014
Designed	DNA	Date	18/11/2013
Verified		Date	
Approved		Date	

WESTFIELD DESIGN & CONSTRUCTION			
WARRINGAH MALL CONCEPT DRAINAGE AUGMENTATION WORKS			
DETAIL ARRANGEMENT PLAN GENERAL ARRANGEMENT PLAN			

Status	PRELIMINARY		
Date	12/08/2014	Datum	AHD
Scale	1:1000	Size	A1
Drawing Number	W4548-420		Revision
			6

DATE PLOTTED: 1 April 2015 11:22 AM BY: JULIA PACHKOVA
XREF's: X-Architect; X-Survey; X-Drainage; X-GP-A1-SHT; X-SYD-A1-Logo
CAD FILE: \\cardno.corp\global\AUNSW\Director\Structure\Projects\899\FY13\W4548-421.dwg
WARRINGAH MALL FLOODING AND DRAINAGE01-Package_1_Data\W4548-421.dwg



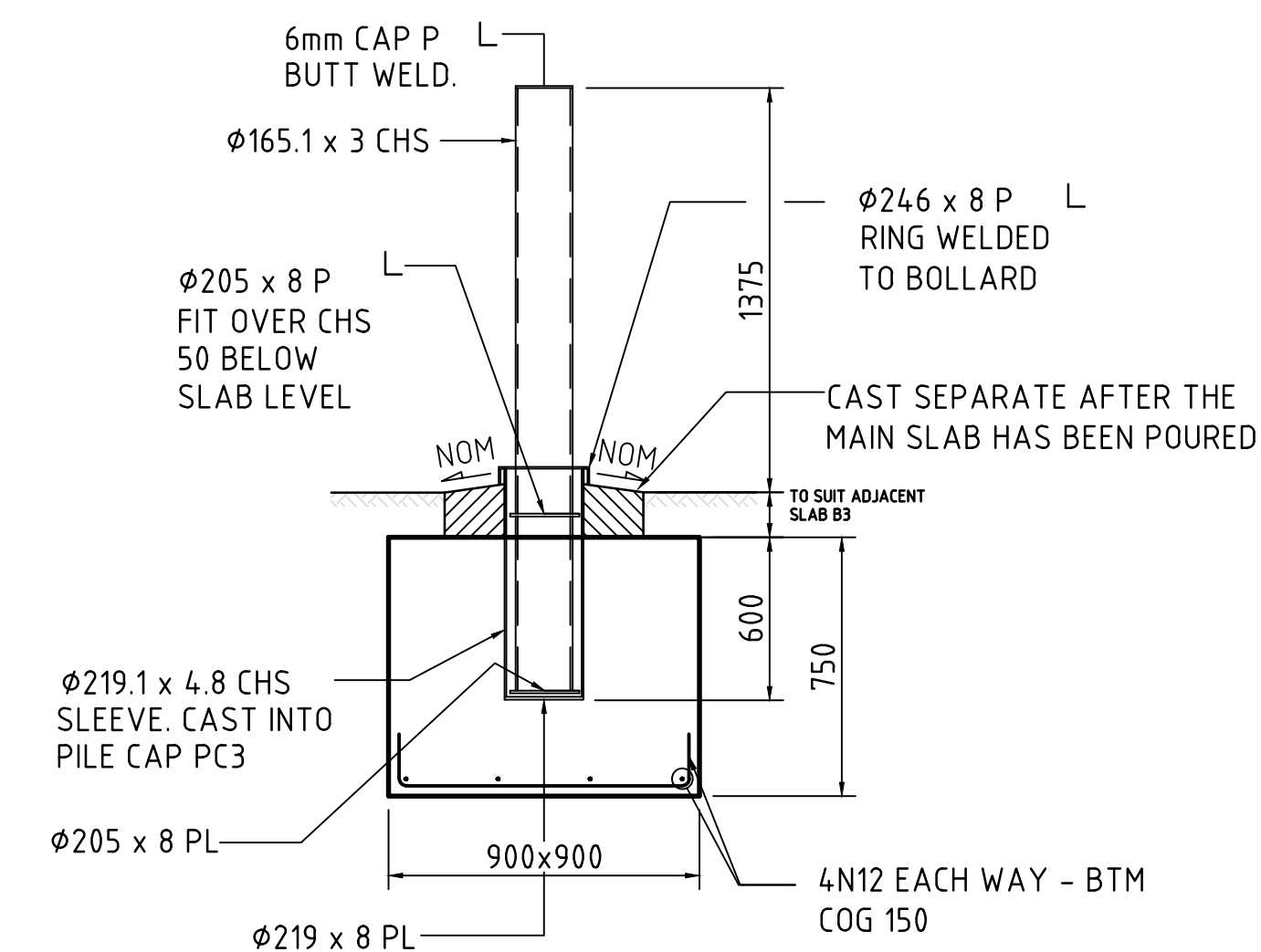
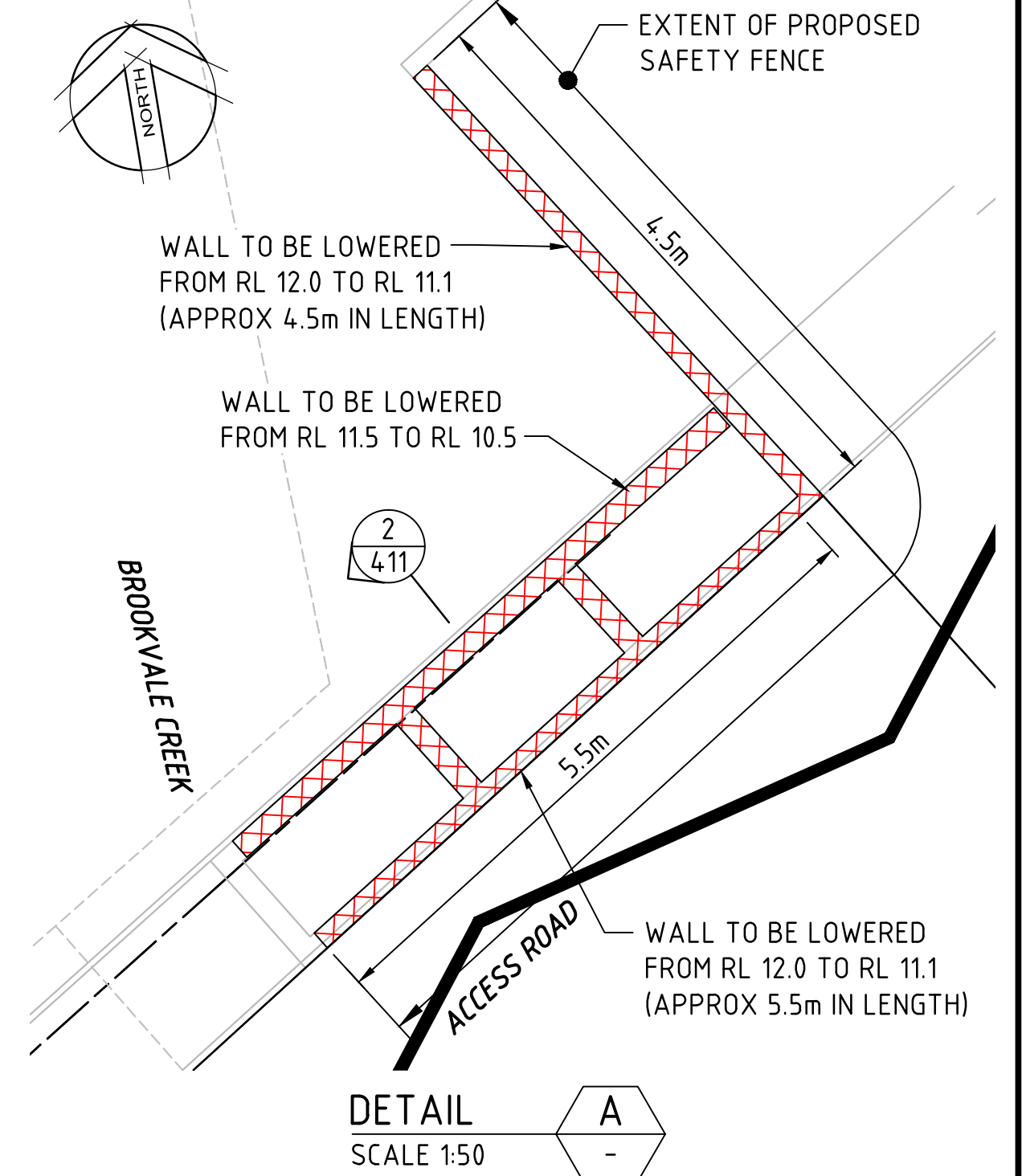
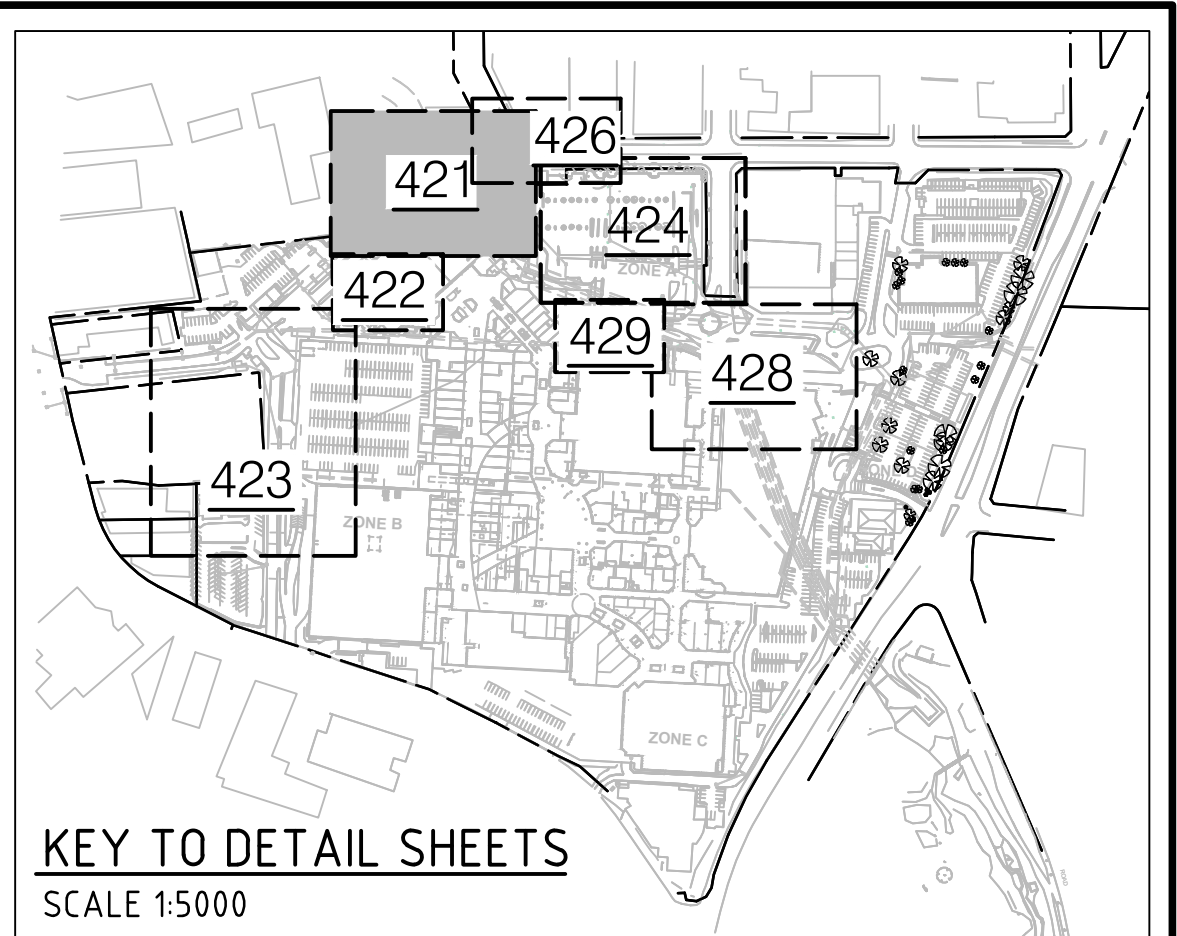
LEGEND

- WALL TO BE LOWERED
- FLOOD BARRIER
- BOOM GATE ARM
- DIRECTION OF FLOW
- EXTENT OF CHANNEL REGRADING

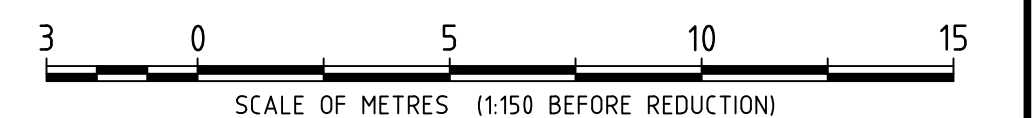
SERVICES

- ELECTRICITY
- GAS
- OPTICAL FIBRE
- OPTUS
- SEWER
- TELSTRA
- WATER

NOTE: ALL SERVICE LOCATIONS ARE INDICATIVE ONLY



NOTE: ALL ELEMENTS TO BE GALVANIZED



Rev	Date	Description	Drawn	Appr.
4	31/03/2015	COUNCIL COMMENTS ADDED	JP	DNA
3	5/11/2014	FLOOD BARRIERS UPDATED	LLC	DNA
2	30/07/2014	CULVERT AMENDED THOUGH BING LEE	DH	DNA
1	20/11/2013	PRELIMINARY	DH	DNA



© Cardno Limited All Rights Reserved.
This document is produced by Cardno Limited solely for the benefit of and use by the client in accordance with the terms of the retainer. Cardno Limited does not and shall not assume any responsibility or liability whatsoever to any third party arising out of any use or reliance by third party on the content of this document.



Drawn	DH	Date	18/11/2013
Checked	DNA	Date	18/11/2013
Designed	DNA	Date	18/11/2013
Verified		Date	
Approved		Date	

Client	WESTFIELD DESIGN & CONSTRUCTION
	WARRINGAH MALL CONCEPT DRAINAGE AUGMENTATION WORKS
DETAIL ARRANGEMENT PLAN CROSS STREET & BROOKVALE CREEK	

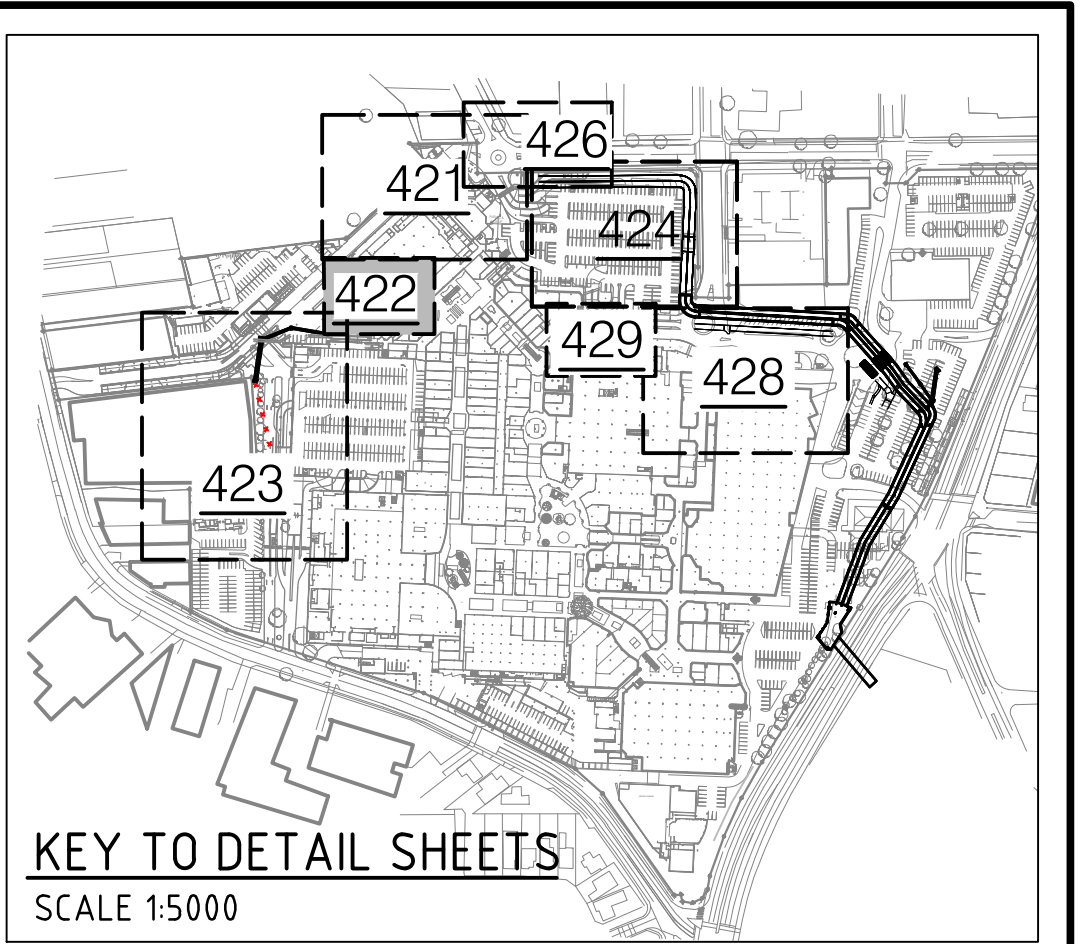
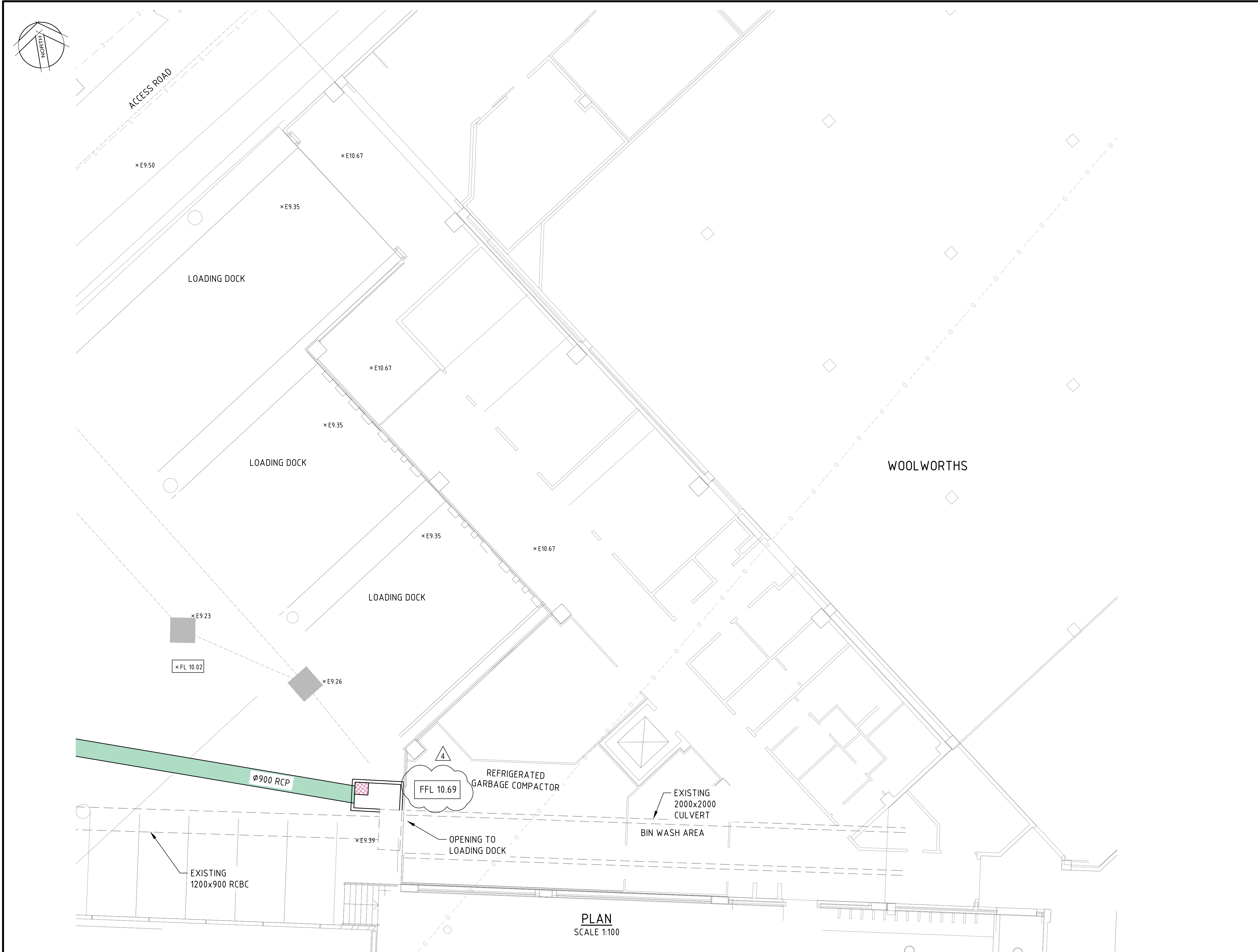
Status	PRELIMINARY
Date	18/11/2013
Datum	AHD
Scale	AS SHOWN
Size	A1
Drawing Number	W4548-421
Revision	4

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150mm ON A1 ORIGINAL

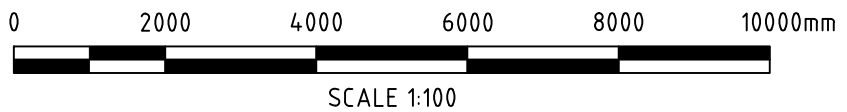
DATE PLOTTED: 1 April 2015 11:27 AM BY: JULIA PACHKOVA

XREF's: X:Services; X:Drainage; X:Survey; X:Architect; X:GRP-A1-SHT; X:SYDA-A1-Logo

CAD FILE: \\cardno.corp\global\AUNSW\Director\Structure\Projects\899\FY13\MA499\3132_WARRINGAH MALL FLOODING AND DRAINAGE\01_Package_1\Drawn\4548-422\4.dwg



- LEGEND**
- EXISTING**
- × E10.87 EXISTING LEVEL
 - EXISTING LOCAL DRAINAGE
- PROPOSED**
- × 11.00 PROPOSED LEVEL
 - × FL 10.03 100 YEAR ARI FLOOD LEVEL (m AHD)
 - FFL 10.69 FINISHED FLOOR LEVEL
- PROPOSED WATER-TIGHT FLOOD DOOR
- SERVICES**
- E — ELECTRICITY
 - G — GAS
 - T — OPTICAL FIBRE
 - O — OPTUS
 - S — SEWER
 - T — TELSTRA
 - W — WATER
- NOTE: ALL SERVICE LOCATIONS ARE INDICATIVE ONLY



Rev	Date	Description	Drawn	Appr.
4	31/03/2015	COUNCIL COMMENTS ADDED	JP	DNA
3	5/11/2014	FLOOD BARRIERS UPDATED	LLC	DNA
2	30/07/2014	CULVERT AMENDED THOUGH BING LEE	DH	DNA
1	20/11/2013	PRELIMINARY	DH	DNA

Westfield Design & Construction Pty limited
100 William Street, Sydney NSW 2011
Phone (02) 9358 7000 Fax (02) 9358 7373
GPO Box 4004 Sydney NSW 2001
ABN 900 287 285

© Cardno Limited All Rights Reserved.
This document is produced by Cardno Limited solely for the benefit of and use by the client in accordance with the terms of the retainer. Cardno Limited does not and shall not assume any responsibility or liability whatsoever to any third party arising out of any use or reliance by third party on the content of this document.

ABN: 95 001 145 035
Level 9, The Forum, 203 Pacific Highway
St Leonards NSW Australia 2065
Phone: (41) 21 94 96 7700 Fax: (41) 21 94 99 5170
Email: Sydney@cardno.com.au Web: www.cardno.com.au

Drawn DH Date 18/11/2013

Checked DNA Date 18/11/2013

Designed DNA Date 18/11/2013

Verified Date

Approved Date

Client: WESTFIELD DESIGN & CONSTRUCTION

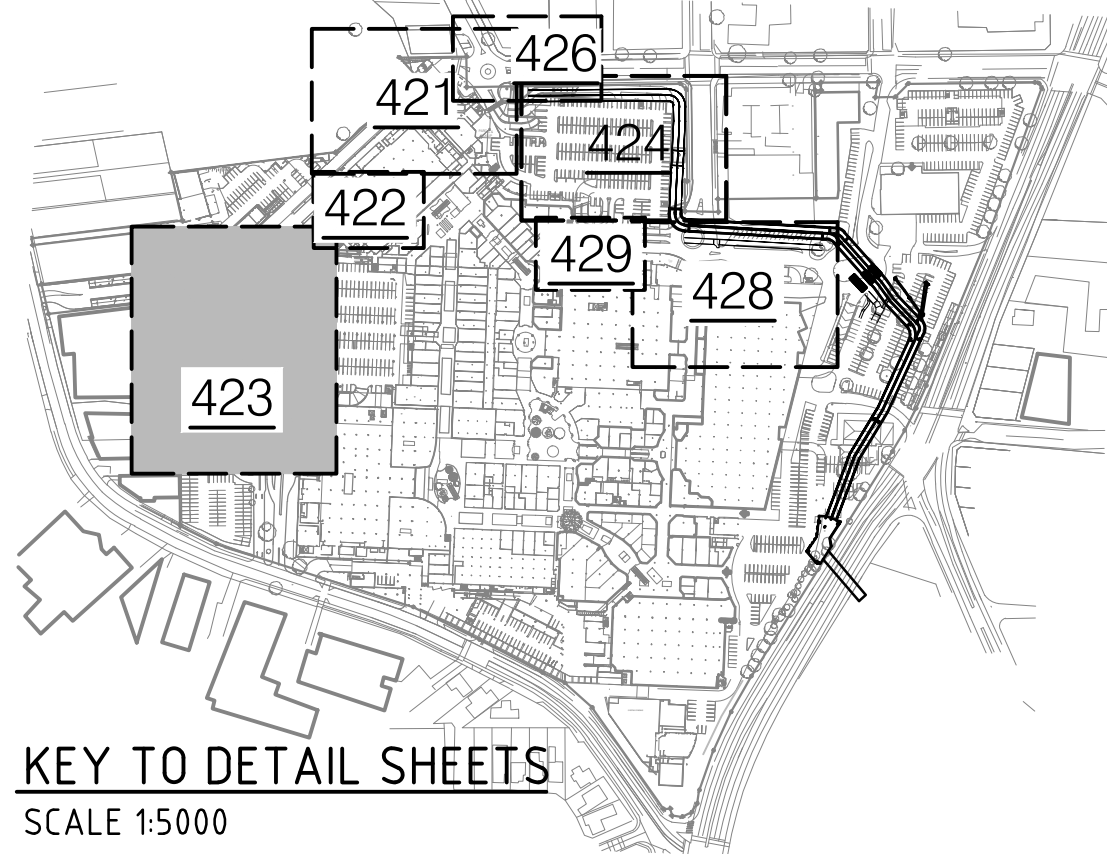
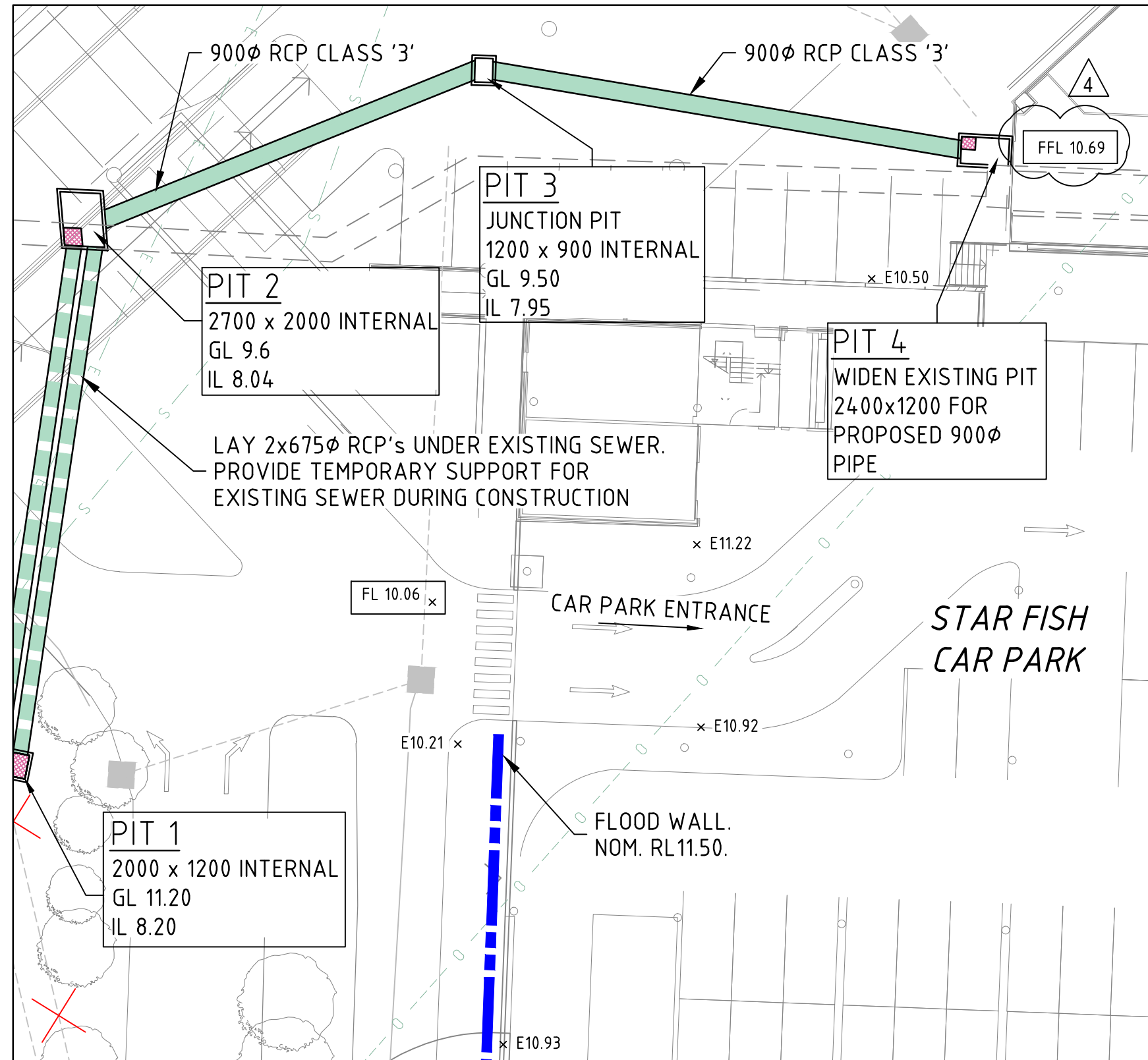
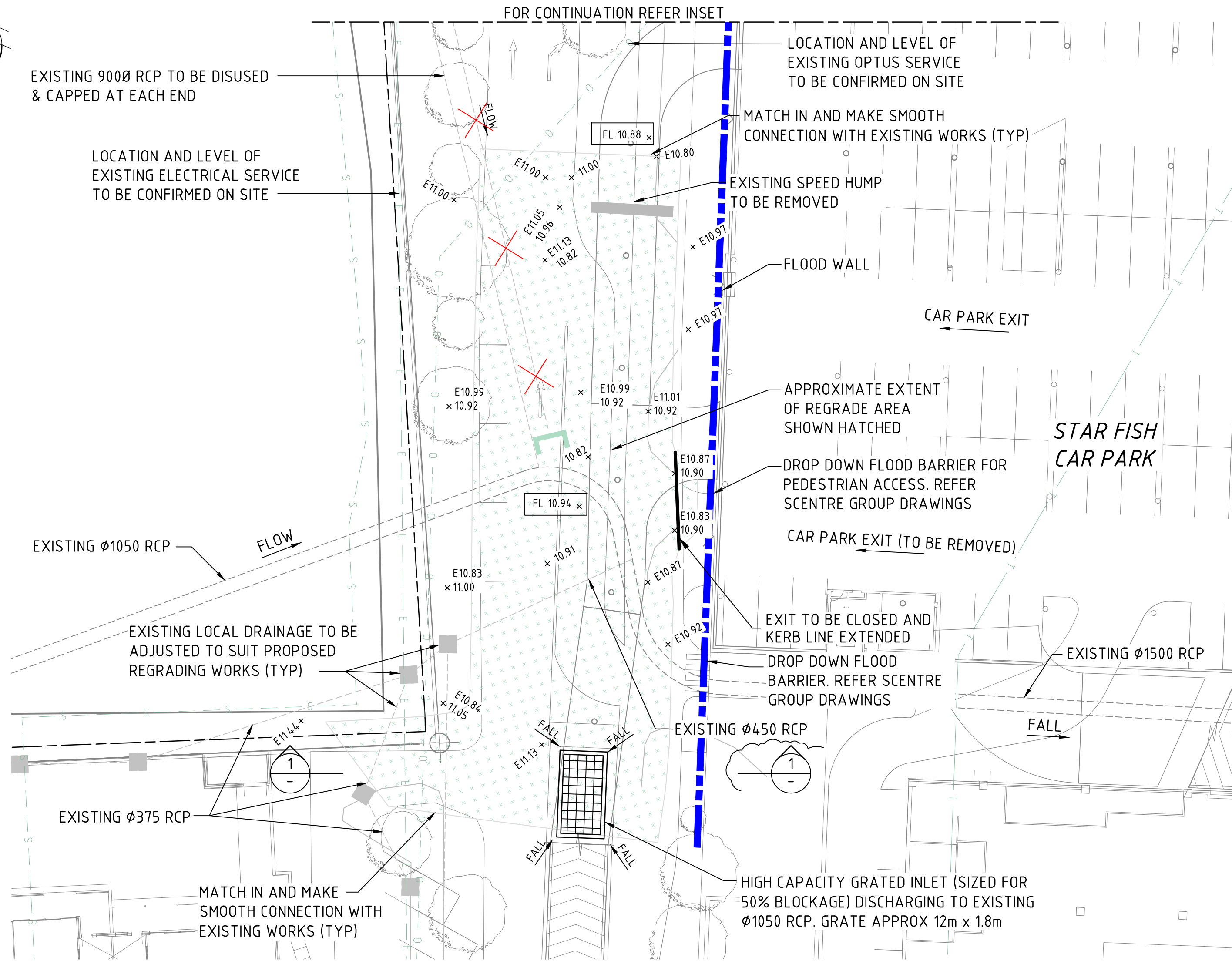
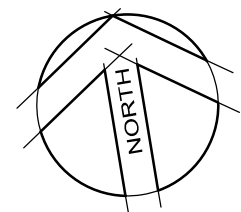
WARRINGAH MALL
CONCEPT DRAINAGE AUGMENTATION WORKS

DETAIL ARRANGEMENT PLAN
WOOLWORTHS LOADING DOCKS WORKS

Status			
PRELIMINARY			
Date	Datum	Scale	Size
18/11/2013	AHD	1:100	A1
Drawing Number			Revision
W4548-422			4

DATE PLOTTED: 31 March 2015 2:39 PM BY: JULIA PACHKOVA

XREF's: X:Survey, X:Capark, X:Archited, New, X:GRP-A1-SHT, X:SYD-A1-Logo
CAD FILE: \\warrimoo.corp\digital\AUNSW\Directory\Structural\Projects\W4548\W4548-423\4.dwg



LEGEND

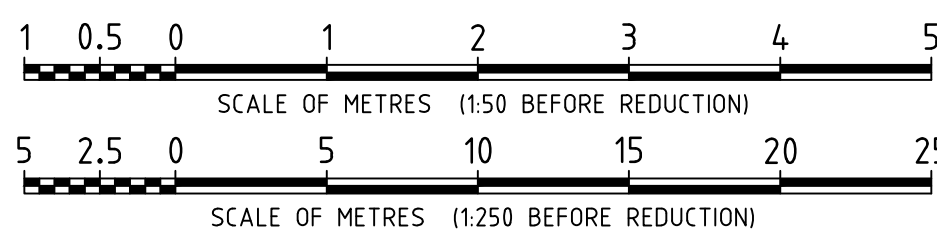
- EXISTING
- × E10.87 EXISTING LEVEL
 - EXISTING LOCAL DRAINAGE
- PROPOSED
- × 11.00 PROPOSED LEVEL
 - PROPOSED BOLLARD
 - × FL 10.03 100 YEAR ARI FLOOD LEVEL (m AHD)
 - FFL 10.69 FINISHED FLOOR LEVEL
 - APPROXIMATE AREA OF REGRADE
 - PROPOSED HIGH CAPACITY GRATE
 - PROPOSED STORMWATER PIPE
 - PROPOSED FLOOD WALL
 - PROPOSED FLOOD BARRIER/SHUTTER

SERVICES

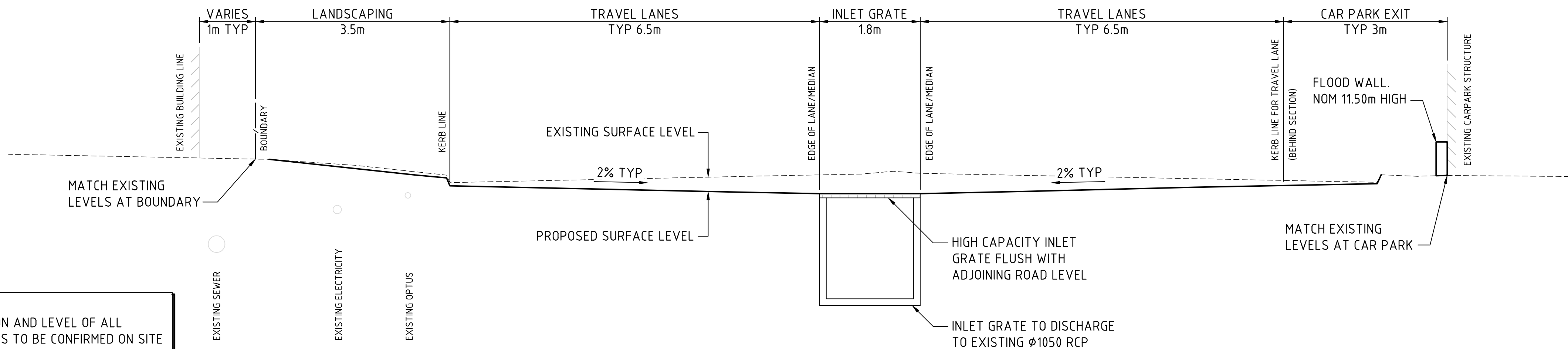
- E ELECTRICITY
- G GAS
- T OPTICAL FIBRE
- O OPTUS
- S SEWER
- T TELSTRA
- W WATER

NOTE: ALL SERVICE LOCATIONS ARE INDICATIVE ONLY

NOTE:
ALL PEDESTRIAN ACCESS POINTS AND OPENINGS TO THE CARPARK ADJACENT TO OVERLAND FLOW PATHS AND DRAINAGE PITS LOCATED IN THE CARPARK ARE TO BE PROTECTED FROM FLOOD WATER INUNDATION AND MUST BE WATER TIGHT TO ACHIEVE MINIMUM 300mm FREEBOARD TO THE PROPOSED FLOOD LEVELS. DRAINAGE PITS IN THE CARPARK MAY REQUIRE ONE-WAY VALVES TO PREVENT CARPARK FLOOD INUNDATION DUE TO BACKWATER AFFECTS TO THE INTER-CONNECTED STORMWATER DRAINAGE SYSTEM UNDERNEATH WARRINGAH MALL.



NOTE:
LOCATION AND LEVEL OF ALL SERVICES TO BE CONFIRMED ON SITE



Westfield

Westfield Design & Construction Pty Limited
100 William Street, Sydney NSW 2011
Phone (02) 9358 7000 Fax (02) 9358 7373
GPO Box 490 Sydney NSW 2001
A/NZ 000 207 236

© Cardno Limited All Rights Reserved.
This document is produced by Cardno Limited solely for the benefit of and use by the client in accordance with the terms of the retainer. Cardno Limited does not and shall not assume any responsibility or liability whatsoever to any third party arising out of any use or reliance by third party on the content of this document.

Cardno
Shaping the Future

ABN: 95 001 145 035
Level 9, The Forum, 203 Pacific Highway
St Leonards NSW Australia 2065
Phone (41) 21 9456 7700 Fax (41) 21 9439 5170
Email: Sydney@cardno.com.au Web: www.cardno.com.au

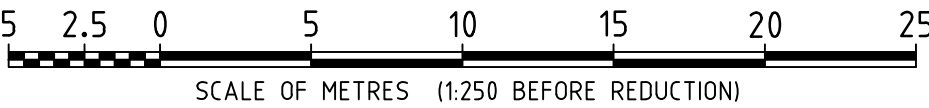
Drawn DH Date 18/11/2013
Checked DNA Date 18/11/2013
Designed DNA Date 18/11/2013
Verified
Approved

Client **WESTFIELD DESIGN & CONSTRUCTION**
WARRINGAH MALL
CONCEPT DRAINAGE AUGMENTATION WORKS
DETAIL ARRANGEMENT PLAN
STARFISH CARPARK

Status **PRELIMINARY**

Date 18/11/2013 Datum AHD Scale AS SHOWN Size A1
Drawing Number **W4548-423** Revision **4**

Rev	Date	Description	Drawn	Appr.
4	31/03/2015	COUNCIL COMMENTS ADDED	JP	DNA
3	5/11/2014	FLOOD BARRIERS UPDATED	LLC	DNA
2	30/07/2014	CULVERT AMENDED THOUGH BING LEE	DH	DNA
1	20/11/2013	PRELIMINARY	DH	DNA



5	31/3/2015	COUNCIL COMMENTS ADDED		JP	DNA
4	7/11/2014	BING LEE, HCF & GODFATHERS NOTE ADDED		LLC	DNA
3	5/11/2014	FLOOD BARRIERS UPDATED		LLC	DNA
2	30/07/2014	CULVERT AMENDED THOUGH BING LEE		DH	DNA
1	20/11/2013	PRELIMINARY		DH	DNA
Rev	Date	Description		Drawn	Appr.



© Cardno Limited All Rights Reserved.
This document is produced by Cardno Limited solely for the benefit of and use by the client in accordance with the terms of the retainer. Cardno Limited does not and shall not assume any responsibility or liability whatsoever to any third party arising out of any use or reliance by third party on the content of this document.



ABN: 95 001 145 035
Level 9, The Forum, 203 Pacific Highway
St Leonards NSW Australia 2065
Phone (+61 2) 9496 7700 Fax (+61 2) 9439 5170
Email: Sydney@cardno.com.au Web: www.cardno.com.au

Drawn	Date
DH	18/11/2013
Checked	Date
DNA	18/11/2013
Designed	Date
DNA	18/11/2013
Verified	Date
Approved	Date

Client	WESTFIELD DESIGN & CONSTRUCTION
	WARRINGAH MALL CONCEPT DRAINAGE AUGMENTATION WORKS DETAIL ARRANGEMENT PLAN CROSS AND GREEN STREETS

Status			
PRELIMINARY			
Date	Datum	Scale	Size
18/11/2013	AHD	1:250	A1
Drawing Number			Revision
W4548-424			5