

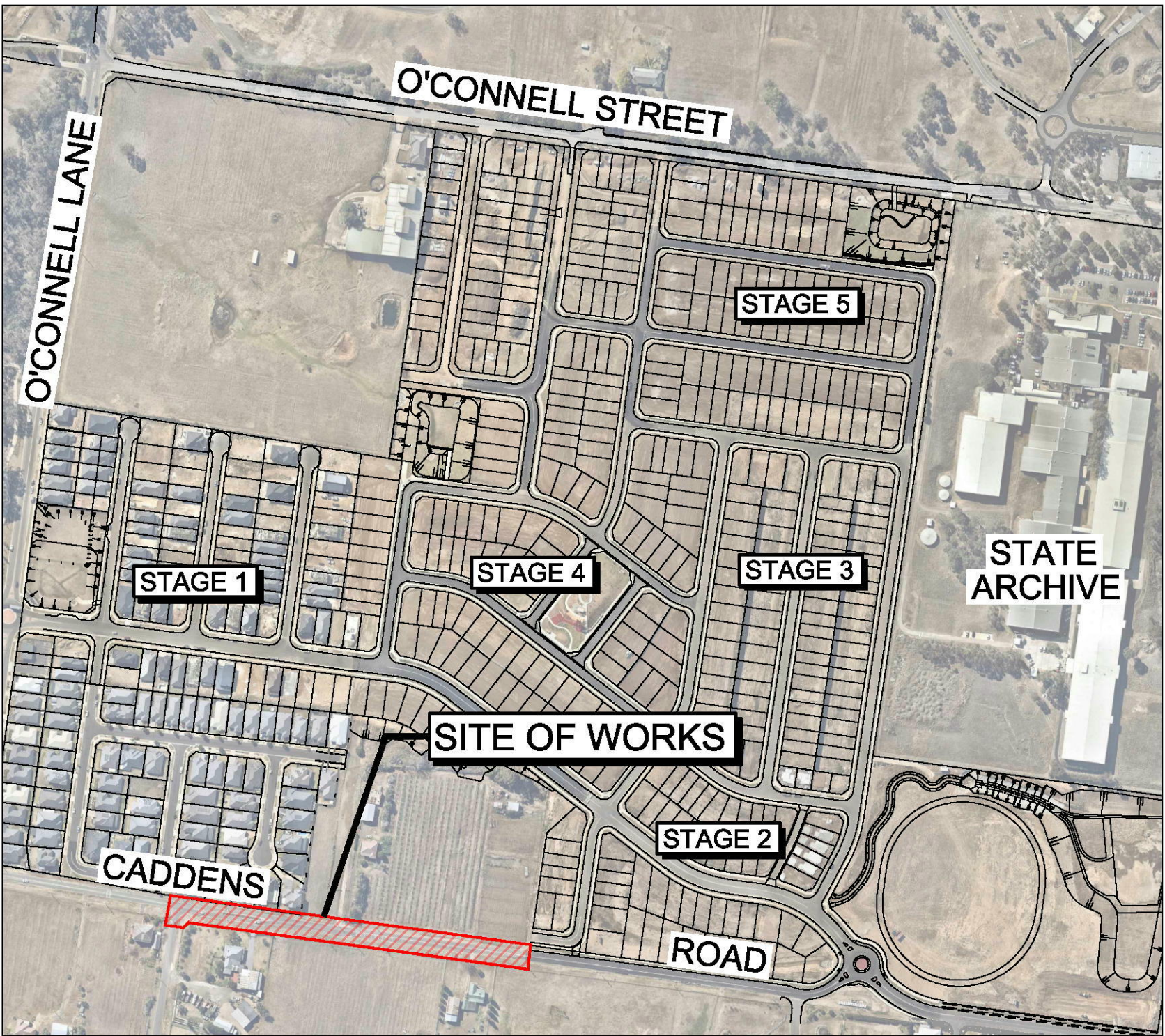


LEGACYPROPERTY

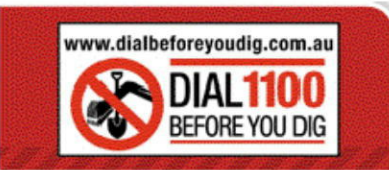
CADDENS HILL - STAGE 7 S138 ROADS ACT APPROVAL CLOSURE OF CADDENS ROAD EAST OF ULM ROAD PROPOSED ROAD CLOSURE WORKS

GENERAL NOTES:

- ALL WORKS ARE TO BE IN ACCORDANCE WITH PENRITH CITY COUNCILS "DESIGN GUIDELINES FOR ENGINEERING WORKS FOR SUBDIVISIONS AND DEVELOPMENTS" & "ENGINEERING CONSTRUCTION SPECIFICATION FOR CIVIL WORKS".
- SURVEY MARKS:-
 - STATE SURVEY MARKS LOCATIONS TO BE FIXED BY PROJECT SURVEYOR DURING WORK AS EXECUTED SURVEY OF SUBDIVISION.
 - SURVEY MARKS SHOWN THUS ▲ SHALL BE RETAINED AT ALL TIMES. WHERE RETENTION IS NOT POSSIBLE THE SUPERINTENDENT MUST BE NOTIFIED AND CONSENT RECEIVED PRIOR TO THEIR REMOVAL.
- THE CONTRACTOR SHALL LOCATE AND LEVEL ALL EXISTING SERVICES PRIOR TO COMMENCING CONSTRUCTION AND MAKE ARRANGEMENTS WITH THE RELEVANT AUTHORITY TO RELOCATE OR ADJUST IF NECESSARY.
- THE CONTRACTOR SHALL NOT ENTER UPON NOR DO ANY WORK WITHIN ADJACENT LANDS WITHOUT THE WRITTEN PERMISSION OF THE OWNERS. TO BE PROVIDED PRIOR TO THE APPROVAL OF THE PLANS.
- THE CONTRACTOR SHALL MAINTAIN SERVICES AND ALL WEATHER ACCESS AT ALL TIMES TO ADJOINING PROPERTIES.
- NO TREE SHALL BE FELLED, LOPPED OR REMOVED WITHOUT THE PRIOR APPROVAL OF COUNCIL'S ENGINEER.
- TREES TO BE RETAINED ON SITE SHALL BE PROTECTED BY SUITABLE STURDY APPROVED PROTECTIVE FENCING PRIOR TO COMMENCEMENT OF SITE WORKS.
- THE CONTRACTOR SHALL CLEAR THE SITE BY REMOVING ALL RUBBISH, FENCES OUT-HOUSES, CAR BODIES AND DEBRIS ETC.
- FILLING IS TO BE FROM A NOMINATED SOURCE, OF SOUND CLEAN MATERIAL, FREE FROM LARGE ROCK, STUMPS, CONTAMINATED MATTER, INDUSTRIAL AND BUILDING WASTE, ORGANIC MATTER AND OTHER DEBRIS. PLACING OF FILLING ON THE PREPARED AREAS SHALL NOT COMMENCE UNTIL THE AUTHORITY TO DO SO HAS BEEN OBTAINED FROM THE COUNCIL.
- SITE FILL AREAS:- THE CONTRACTOR SHALL TAKE LEVELS OF EXISTING SURFACE AFTER STRIPPING TOPSOIL AND PRIOR TO COMMENCING FILL OPERATIONS.
- ALL SITE FILLING TO BE COMPACTED TO 95% STANDARD COMPACTION AND SHALL BE CONTROLLED BY A REGISTERED SOIL LABORATORY IN ACCORDANCE WITH COUNCIL'S "ENGINEERING CONSTRUCTION SPECIFICATION FOR CIVIL WORKS".
- ALL SITE REGRADING AREAS SHALL BE GRADED AT A MINIMUM 1% TO THE ENGINEERS. REQUIREMENTS.
- SURPLUS EXCAVATED MATERIAL SHALL BE PLACED WHERE DIRECTED BY THE SUPERINTENDENT.
- ALL NEW WORKS SHALL MAKE A SMOOTH JUNCTION WITH EXISTING CONDITIONS.
- DRAINAGE LINES ON PLANS ARE DIAGRAMMATIC ONLY AND PIPE CENTRELINES SHALL ENTER AND EXIT PITS AT THE CENTRE OF THE RESPECTIVE PIT WALLS.
- DIMENSIONS OF ANY DETAIL SHALL NOT BE SCALED - DIMENSIONS, IF IN DOUBT, SHALL BE VERIFIED BY THE SUPERINTENDENT.
- ALL CONSTRUCTION AND RESTORATION WORK ON COUNCIL'S ROAD AND FOOTPATH AREA ARE TO BE CARRIED OUT IN ACCORDANCE WITH THE APPROVED DRAWINGS AND COUNCIL'S STANDARD SPECIFICATIONS AND APPROVED BY PENRITH CITY COUNCIL THROUGH A S138 ROADS ACT APPROVAL.
- ALL LAND THAT HAS BEEN DISTURBED BY EARTHWORKS IS TO BE SPRAY GRASSED OR SIMILARLY TREATED TO ESTABLISH A GRASS COVER.
- ALL EARTHWORKS SHALL BE UNDERTAKEN IN ACCORDANCE WITH AS3798 AND PCC DESIGN GUIDELINES FOR ENGINEERING WORKS FOR SUBDIVISIONS AND DEVELOPMENTS AND ENGINEERING CONSTRUCTION SPECIFICATIONS FRO CIVIL WORKS.
- ALL VERGE AREAS EXTEND FROM BACK OF KERB TO PROPERTY BOUNDARY TO BE TURFED.
- KERB TYPES USED IN SITE ARE KERB AND GUTTER UNLESS OTHERWISE NOTED. FOR DETAILS REFER TO PENRITH CITY COUNCIL "ENGINEERING CONSTRUCTION SPECIFICATION FOR CIVIL WORKS" STANDARD SD1003/1 & SD1003/2.
- ALL WASTE MATERIAL STORED ON-SITE ARE TO BE CONTAINED WITHIN A DESIGNATED AREA SUCH AS A WASTE BAY OR BIN. CONTRACTOR TO ENSURE THAT NO WASTE MATERIALS ARE ALLOWED TO ENTER THE STORMWATER SYSTEM OR NEIGHBOURING PROPERTIES. THE DESIGNATED WASTE STORAGE AREAS SHALL PROVIDE AT LEAST TWO WASTE BAY/BINS SO AS TO ALLOW FOR THE SEPARATION OF WASTES, AND ARE TO BE FULLY ENCLOSED WHEN SITE IS UNATTENDED.



CIVIL PLAN INDEX		
PLAN NO.	PLAN NAME	REV
110358/CC750	COVER SHEET, NOTES & INDEX	C
110358/CC751	ENGINEERING PLAN & SECTIONS	C
110358/CC752	KERB RETURN PLAN	B
110358/CC753	LINEMARKING AND SWEEP PATH PLANS	C
110358/CC754	SIGNAGE & LINEMARKING PLAN	C
110358/CC755	SOIL & WATER MANAGEMENT PLAN	C



UTILITIES SHOWN ARE DIAGRAMMATIC ONLY, CONTRACTORS ARE RESPONSIBLE TO LOCATE AND AVOID DAMAGE TO THEM.
NOTE: UTILITIES SHOWN MAY NOT INCLUDE ALL SERVICES WITHIN THE LIMIT OF WORKS

SURVEY SET OUT INFORMATION NOTES:

- ALL SITE SET OUT AND CONTROL POINTS ARE TO BE CERTIFIED BY A REGISTERED SURVEYOR.
- THE INFORMATION DETAILED ON THE CERTIFIED CONSTRUCTION CERTIFICATE PLANS TAKES PRECEDENCE OVER ALL ELECTRONIC INFORMATION PROVIDED. THE ORDER OF PRIORITY FOR USE OF ALL INFORMATION PROVIDED IS AS FOLLOWS:
 - CERTIFIED CONSTRUCTION CERTIFICATE DRAWINGS
 - 2D DRAFTING BASE (ELECTRONIC FILE)
 - 3D DTM (ELECTRONIC FILE)
- ANY DISCREPANCY BETWEEN ANY OF THE INFORMATION CONTAINED WITHIN THESE FILES IS TO BE BROUGHT TO THE ATTENTION OF THE SUPERINTENDENT PRIOR TO CONSTRUCTION WHO WILL SEEK CLARIFICATION AND ISSUE INSTRUCTIONS ON THE APPROPRIATE COURSE OF ACTION.

Survey By:

VINCE MORGAN (SURVEYORS) PTY. LTD.
CONSULTING SURVEYORS
P.O. Box 227, Penrith. 2751
Ph. (02) 4721 5293

Date: 26/06/17 File Name: 21132T.dwg

Plotdate: 19 March, 2019 4:37:59 PM File Name: J:\110358 - O'Connell Lane Caddens\08 - Stage 7\CDCC\CCADDENS ROAD CLOSURE\110358CC750.dwg

C	ISSUE FOR APPROVAL	JT	JT	MP	RO	19/03/19
B	ISSUE FOR APPROVAL	JT	JT	MP	MS	15/03/19
A	FIRST ISSUE	JT	JT	AM	MS	26/02/19
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

AZIMUTH:

DATUM:

A.H.D

ORIGIN:

M.G.A.

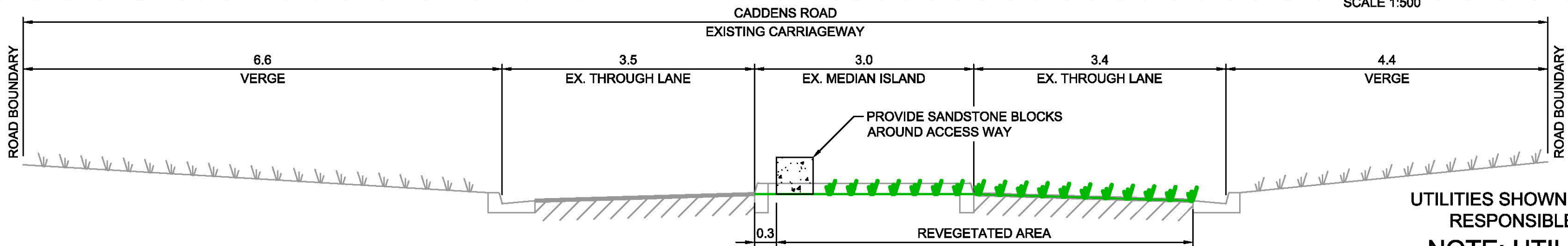
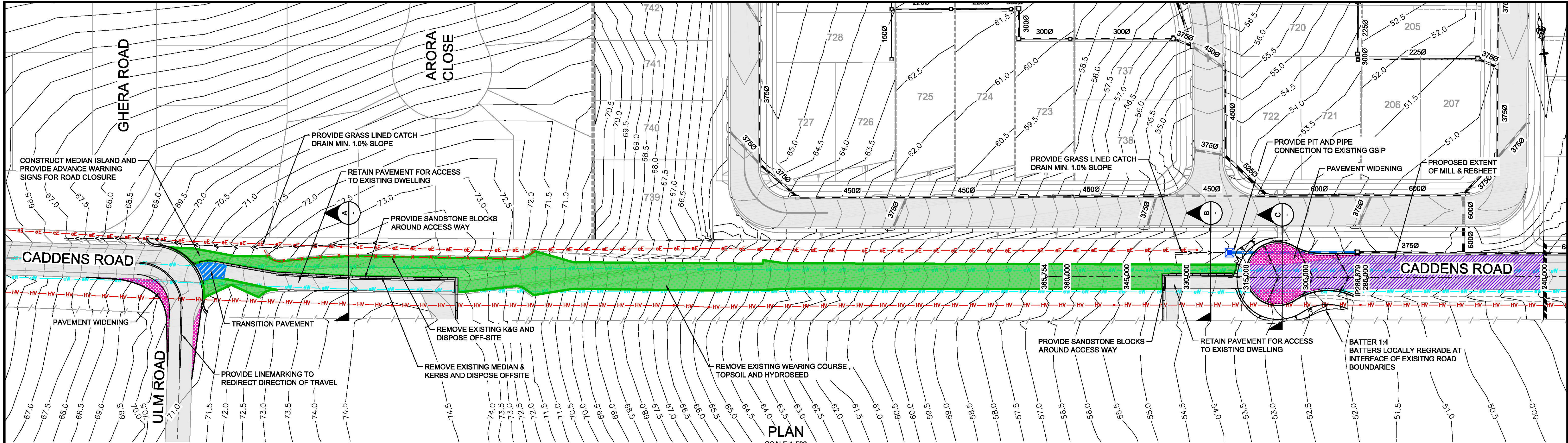


THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.

ISSUED FOR CONSTRUCTION APPROVAL

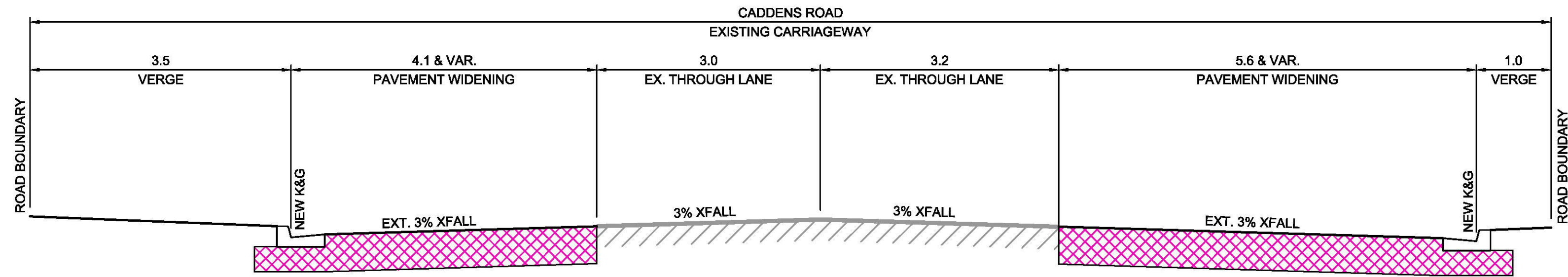
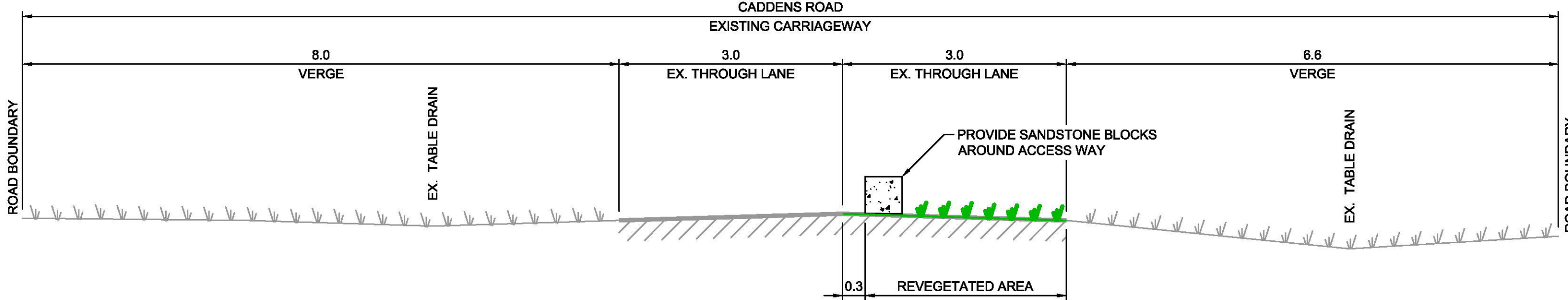
**CADDENS HILL - ROAD CLOSURE WORKS
CADDENS ROAD EAST OF ULM ROAD
COVER SHEET, NOTES & INDEX**

PLAN No:	110358/CC750	C
FILE No:	110358CC750	
SHEET SIZE:	A1 ORIGINAL	

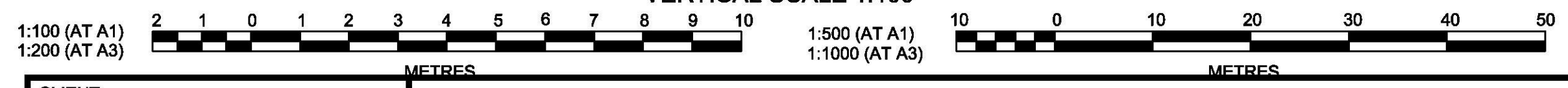


UTILITIES SHOWN ARE DIAGRAMMATIC ONLY, CONTRACTORS ARE RESPONSIBLE TO LOCATE AND AVOID DAMAGE TO THEM.
NOTE: UTILITIES SHOWN MAY NOT INCLUDE ALL SERVICES WITHIN THE LIMIT OF WORKS

CADDENS ROAD					
CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	LENGTH
0	290746.16	6260243.02	233°08'19.54"		
29.49	290722.57	6260225.33	233°08'19.54"		
45.13	290709.38	6260215.44		40	31.28
60.76	290693.05	6260217.72	277°56'31.08"		
204.93	290550.28	6260237.64			
225.69	290529.7	6260240.46			
286.88	290469.04	6260248.49			
365.75	290390.91	6260269.35	277°55'08.37"		



DATUM 42.0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													</
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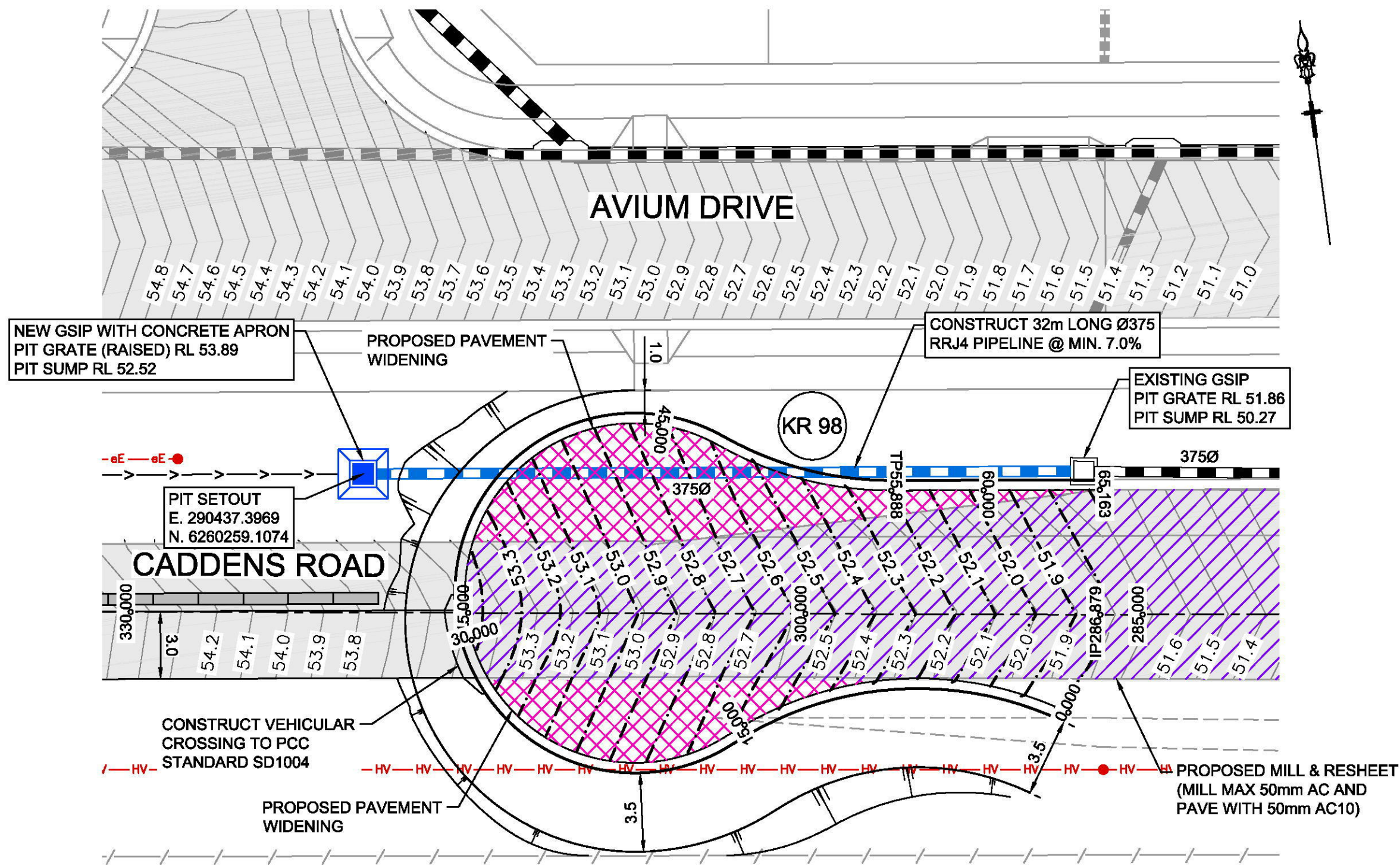
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AMENDMENT	DES	DRN	CKD	APR	DATE
C	JT	JT	MP	RO	19/03/19
B	JT	JT	MP	MS	15/03/19
A	JT	JT	AM	MS	26/02/19

J. WYNDHAM PRINCE CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

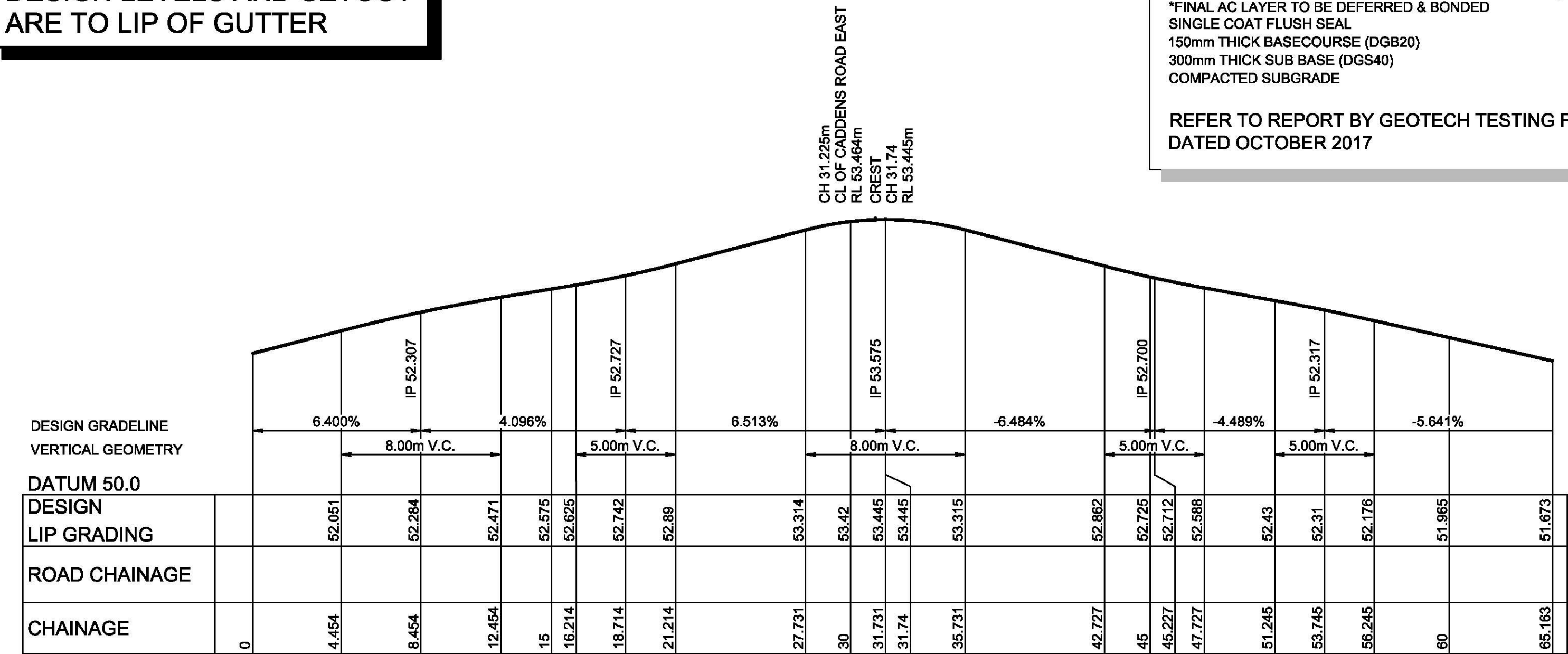
CLIENT: **LEGACYPROPERTY**
AZIMUTH: A.H.D
DATUM: M.G.A.
THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.

ISSUED FOR CONSTRUCTION APPROVAL
CADDENS HILL - ROAD CLOSURE WORKS
CADDENS ROAD EAST OF ULM ROAD
ENGINEERING PLAN & SECTIONS
PLAN No: 110358/CC751
FILE No: 110358CC751
SHEET SIZE: A1 ORIGINAL



PLAN
SCALE 1:200

DESIGN LEVELS AND SETOUT
ARE TO LIP OF GUTTER

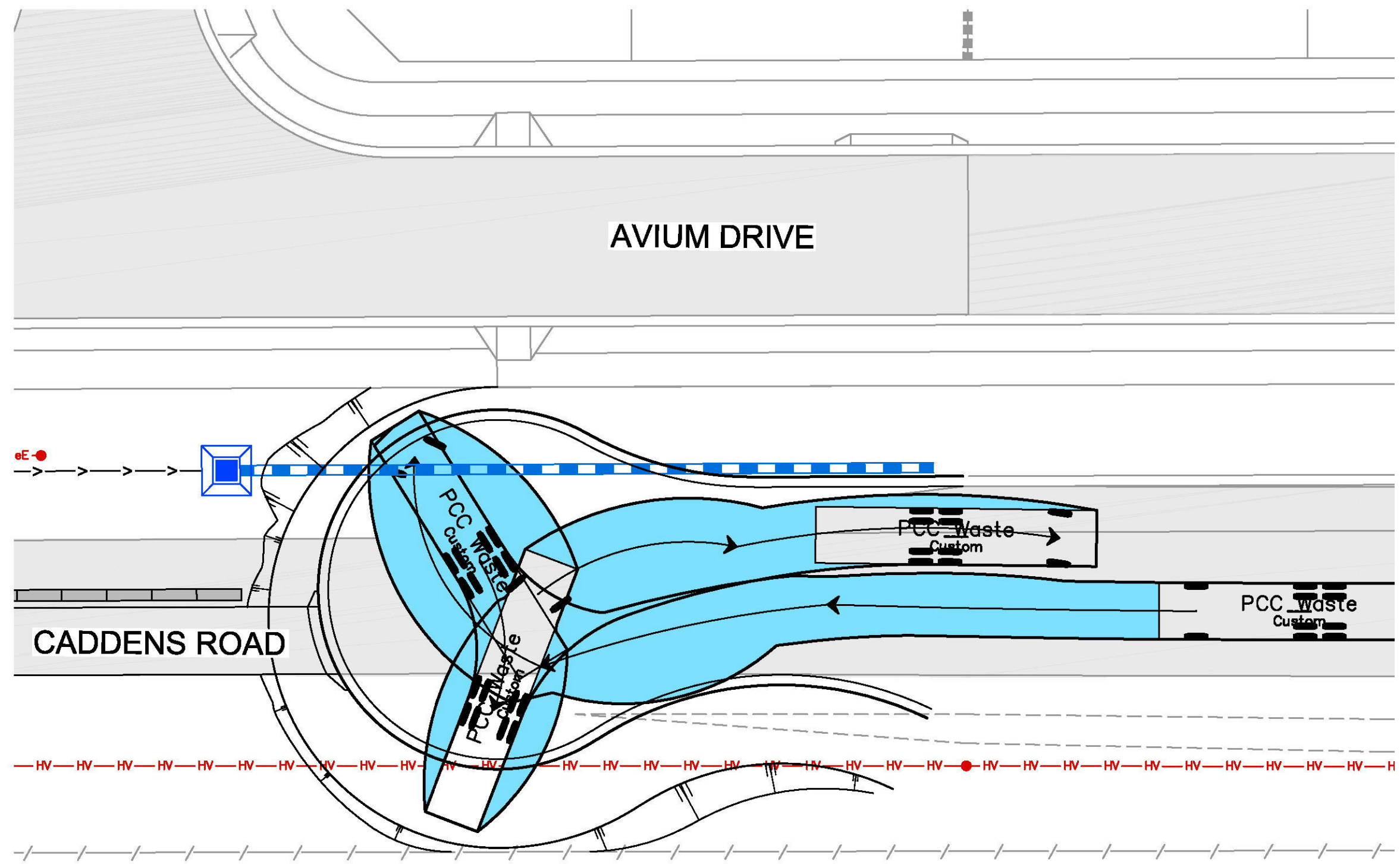


KR 98
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:50

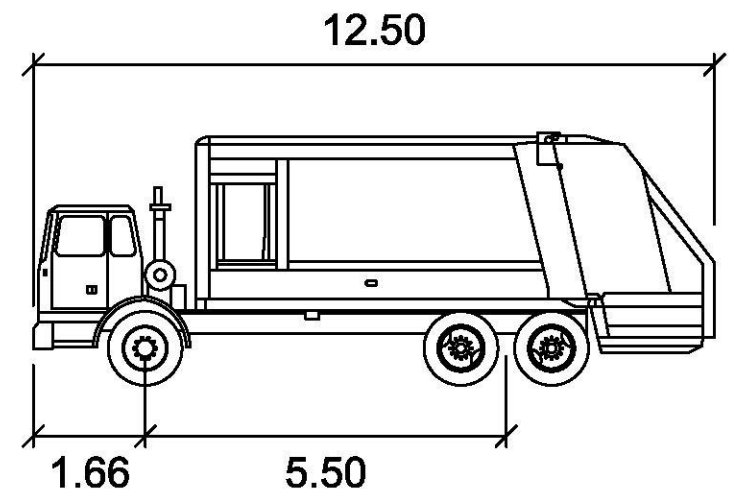
PAVEMENT NOTES

50mm MINIMUM THICKNESS (AC10) i.e. 2 x LAYERS 25mm (AC10)
*FINAL AC LAYER TO BE DEFERRED & BONDED
SINGLE COAT FLUSH SEAL
150mm THICK BASECOURSE (DGB20)
300mm THICK SUB BASE (DGS40)
COMPACTED SUBGRADE

REFER TO REPORT BY GEOTECH TESTING PTY LTD REF 8611/1-AA-R4
DATED OCTOBER 2017



PLAN
SCALE 1:200

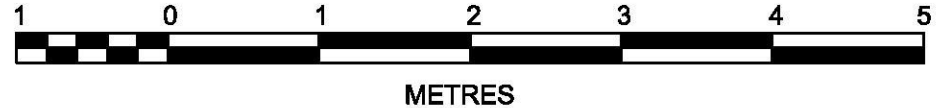


PCC Waste

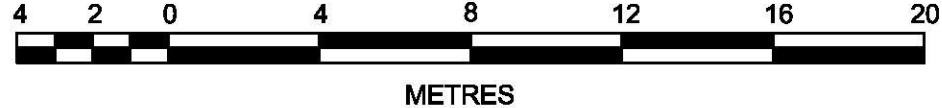
	Width	2.50
	Track	2.50
	Lock to Lock Time	6.0
	Steering Angle	36.6

KR 98					
CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPRAL	A.LENGTH
0	290467.04	6260244.37	303°22'06.55"		
7.93	290459.76	6260249.16		-15.45	15.87
15.87	290451.9	6260245.41	244°31'52.80"		
21.2	290446.08	6260242.64		7.55	10.66
26.53	290442.43	6260247.95	325°27'31.90"		
31.86	290438.78	6260253.25		7.55	10.66
37.19	290443.44	6260257.69	46°23'11.00"		
42.53	290448.11	6260262.14		7.55	10.66
47.86	290453.23	6260258.23	127°18'50.10"		
51.87	290456.5	6260255.74		-15.45	8.03
55.89	290460.57	6260255.2	97°31'57.99"		
65.16	290469.76	6260253.99	97°31'57.99"		

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



1:200 (AT A1)
1:400 (AT A3)



AMENDMENT	DES	DRN	CKD	APR	DATE
B	JT	JT	MP	MS	15/03/19
A	JT	JT	AM	MS	26/02/19

J. WYNDHAM PRINCE CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

AZIMUTH:
DATUM:
ORIGIN:

CLIENT:

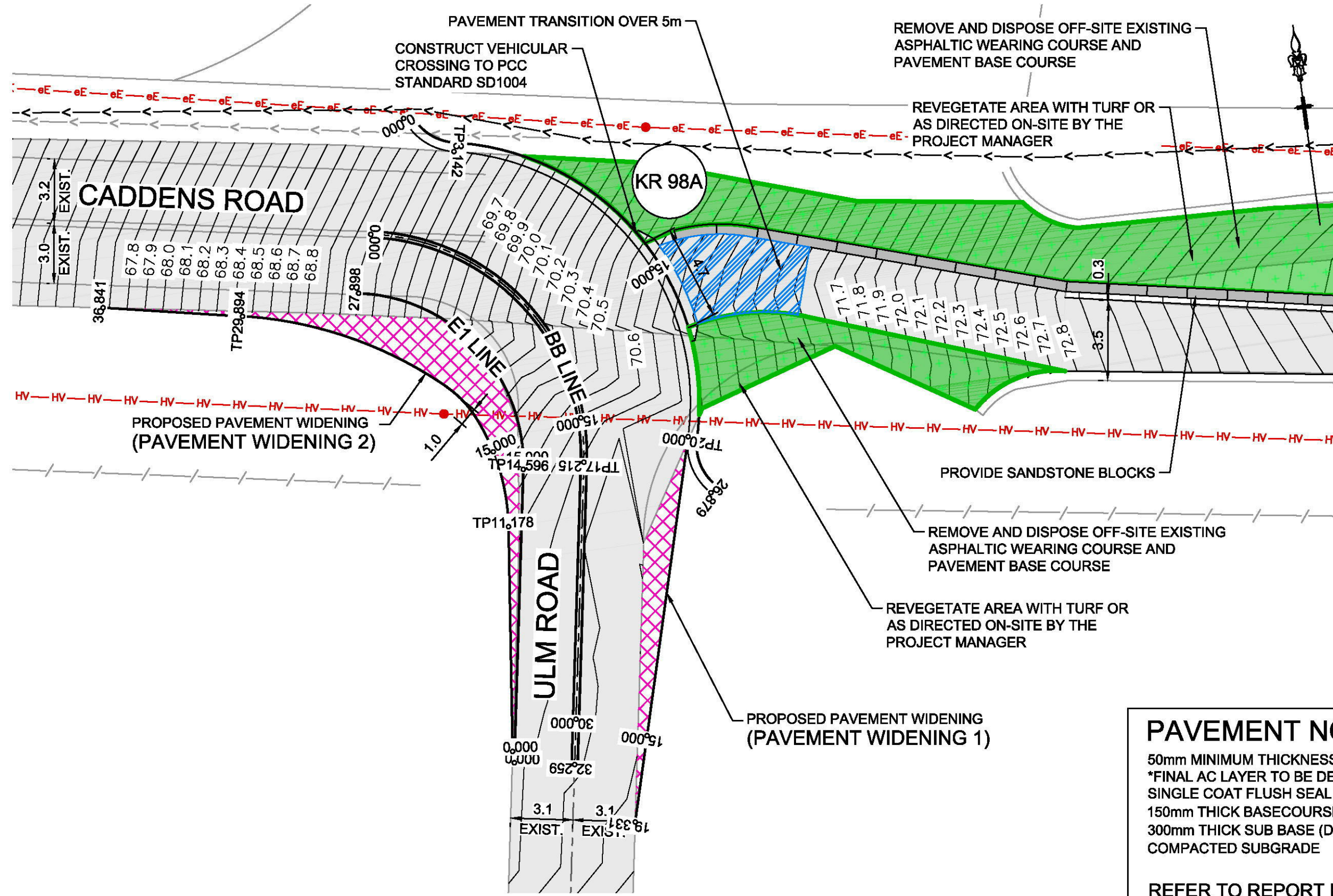


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ISSUED FOR CONSTRUCTION APPROVAL

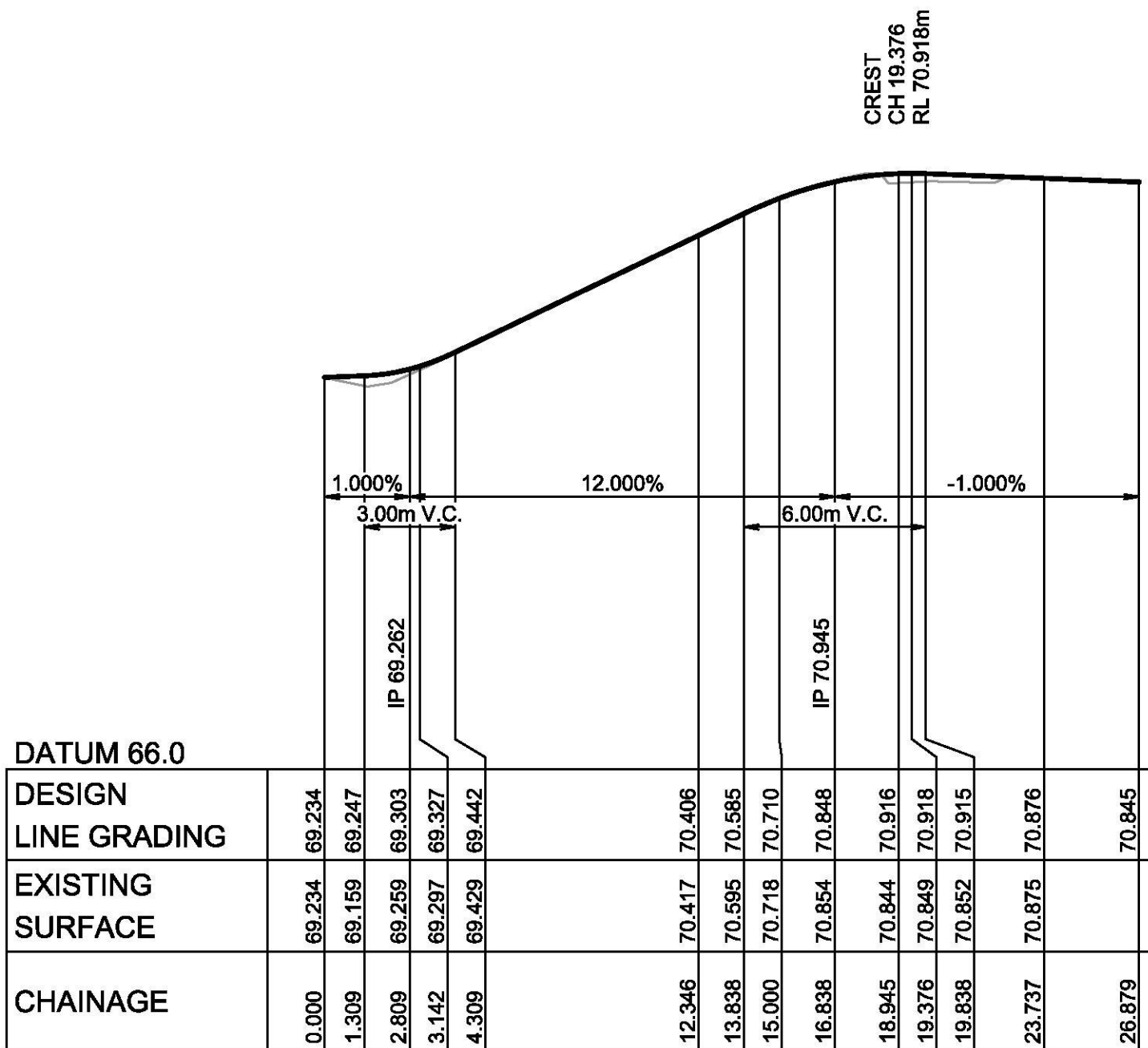
CADDENS HILL - ROAD CLOSURE WORKS
CADDENS ROAD EAST OF ULM ROAD
KERB RETURN PLAN

PLAN No:	110358/CC752	B
FILE No:	110358CC752	
SHEET SIZE:	A1 ORIGINAL	



PLAN
SCALE 1:200

DESIGN LEVELS AND SETOUT
ARE TO LIP OF GUTTER

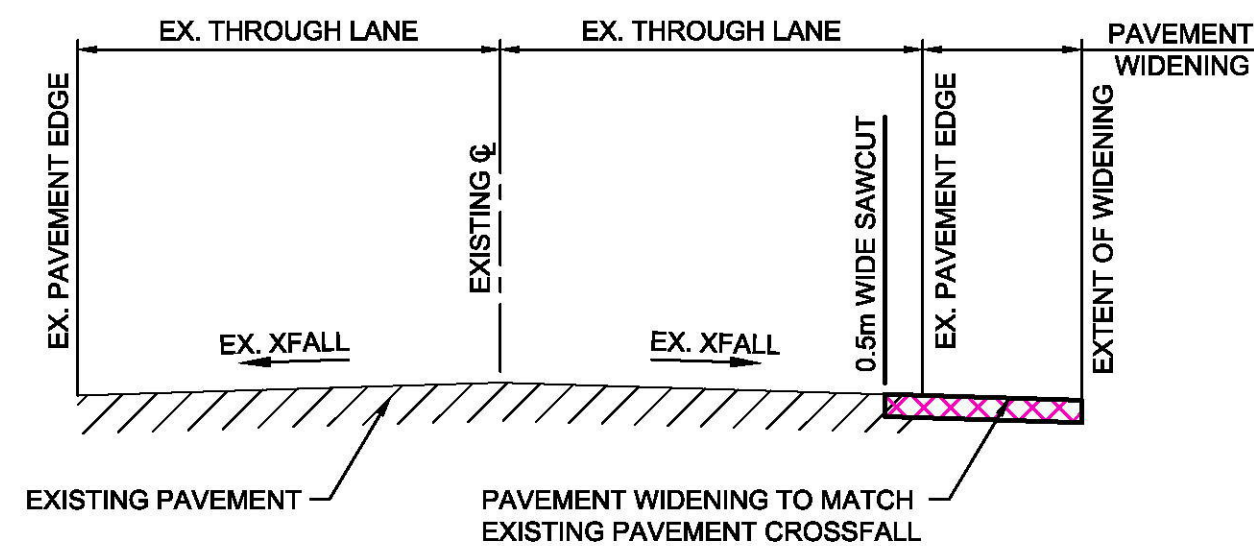


LONGITUDINAL SECTION KR 98A
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:50

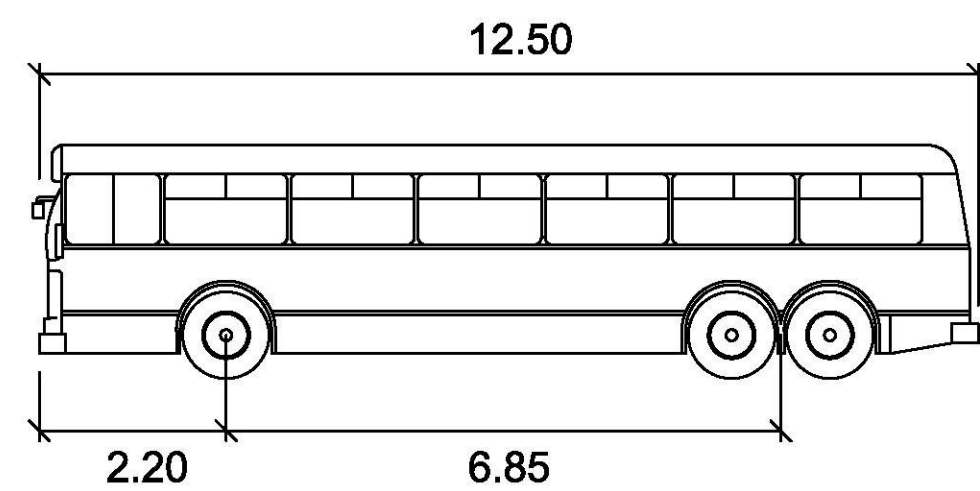
PAVEMENT NOTES

50mm MINIMUM THICKNESS (AC10) i.e. 2 x LAYERS 25mm (AC10)
*FINAL AC LAYER TO BE DEFERRED & BONDED
SINGLE COAT FLUSH SEAL
150mm THICK BASECOURSE (DGB20)
300mm THICK SUB BASE (DGS40)
COMPACTED SUBGRADE

REFER TO REPORT BY GEOTECH TESTING PTY LTD REF 8611/1-AA-R4
DATED OCTOBER 2017

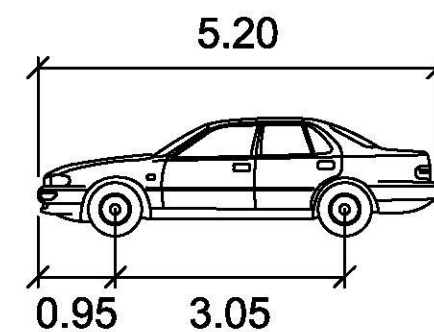


TYPICAL PAVEMENT WIDENING DETAIL
PAVEMENT WIDENING - EXTENSION OF CROSSFALL
NTS



BUS

Width : 2.50
Track : 2.50
Lock to Lock Time : 6.0
Steering Angle : 36.6



PASSENGER-CAR

Width : 1.94
Track : 1.84
Lock to Lock Time : 6.0
Steering Angle : 33.6

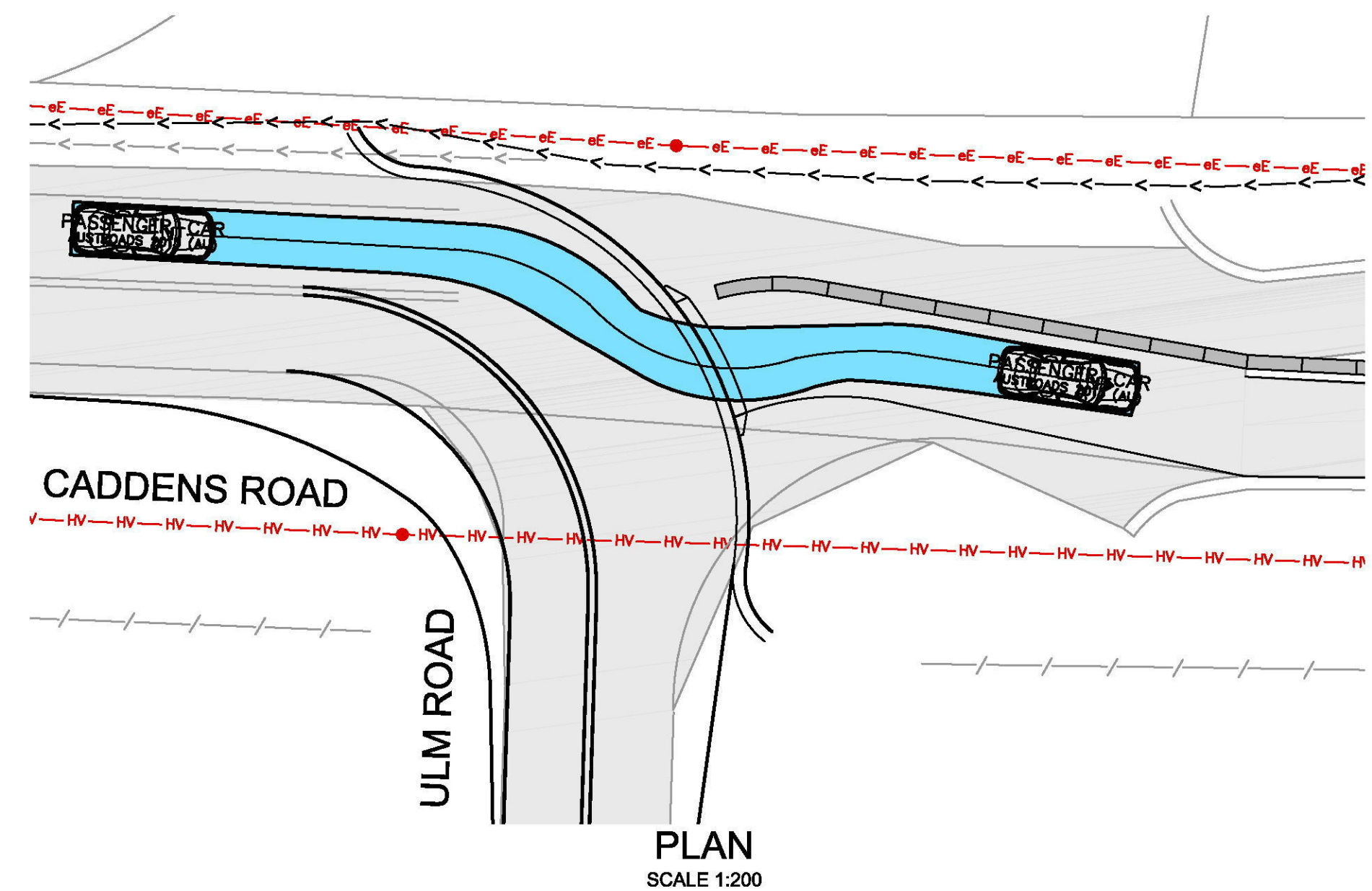
PAVEMENT WIDENING 1			
CHAINAGE	EASTING	NORTHING	BEARING
0	290179.76	6260281.46	195°33'45.18"
19.33	290174.58	6260282.84	195°33'45.18"

PAVEMENT WIDENING 2					
CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	290169.01	6260287.14	6°42'36.75"		
11.18	290170.32	6260278.24	6°42'36.75"		
14.11	290170.67	6260281.23		-10.5	5.87
17.05	290169.38	6260283.95	334°41'22.75"		
18.01	290168.96	6260284.84		-5	1.93
18.98	290168.24	6260285.5	312°33'13.06"		
24.44	290164.12	6260289.28		-20	10.92
29.89	290158.63	6260290.38	281°16'51.74"		
36.84	290151.81	6260291.74	281°16'51.74"		

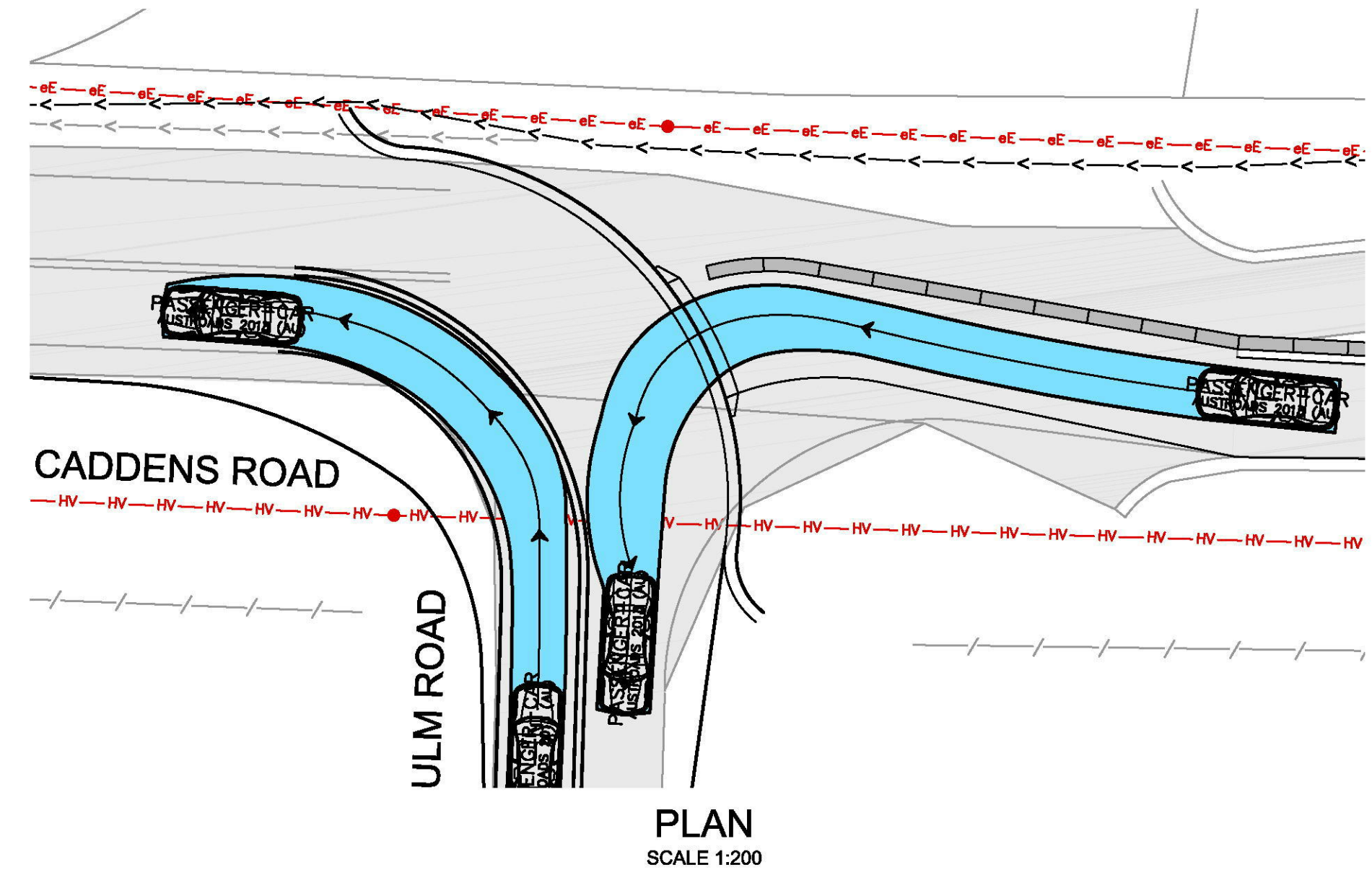
KR 98A					
CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	290167.88	6260299.05	161°09'41.37"		
1.57	290168.44	6260297.41		-3	3.14
3.14	290170.14	6260297.08	101°09'41.37"		
13.44	290183.38	6260294.47		12.5	20.6
23.74	290179.76	6260281.46			
25.31	290179.3	6260279.79		-3	3.14
26.88	290180.51	6260278.56	135°34'42.71"		

E1 LINE					
CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	290169.02	6260286.57	9°30'16.75"		
14.6	290171.43	6260280.96	9°30'16.75"		
21.25	290172.82	6260289.3		-8.5	13.3
27.9	290164.49	6260290.74	279°50'05.12"		

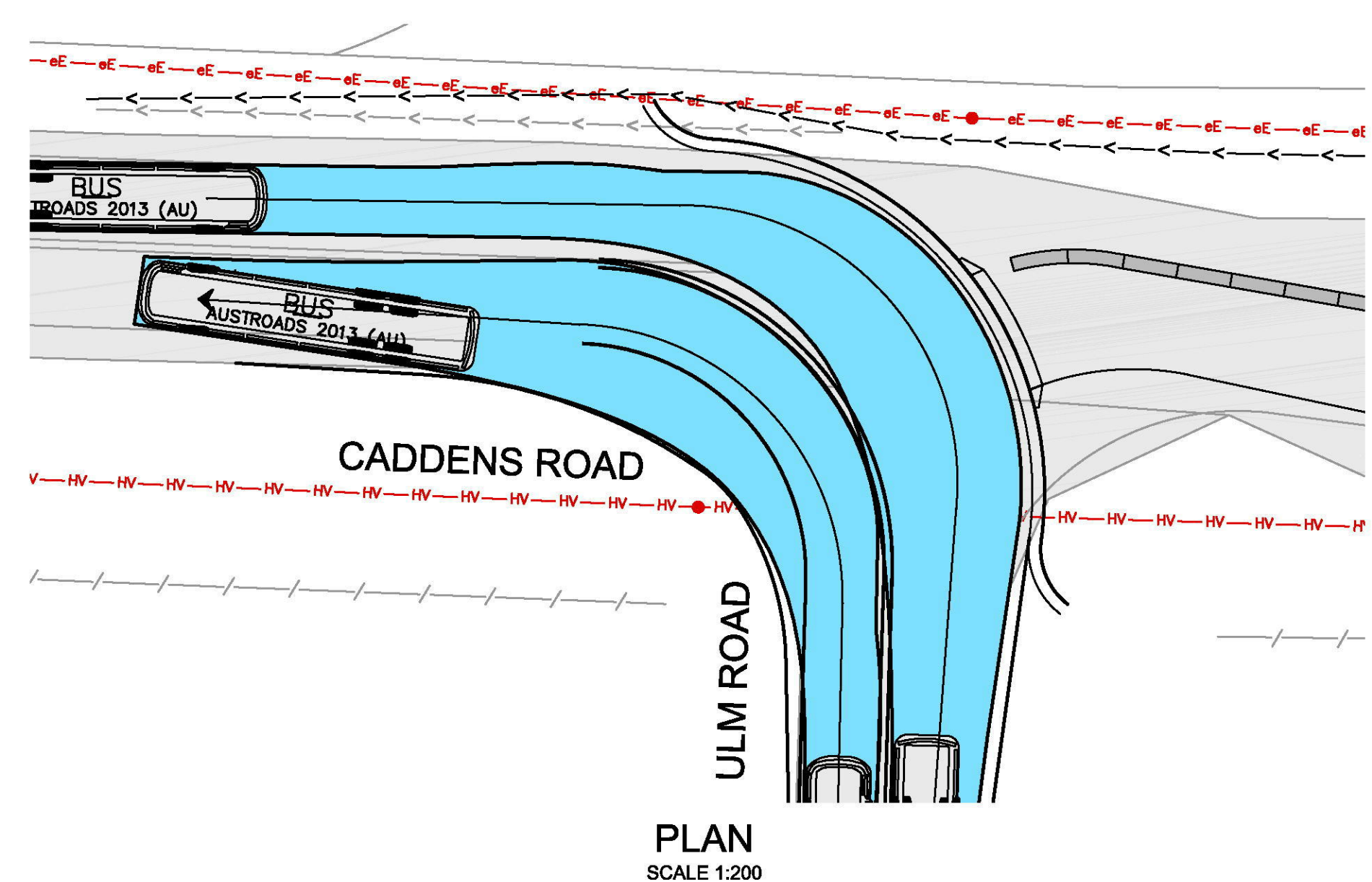
BB LINE					
CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	290165.49	6260293.56	99°50'05.12"		
8.81	290176.26	6260291.7		11	17.22
17.22	290174.46	6260280.91	189°30'16.75"		
32.26	290171.97	6260286.07	189°30'16.75"		



PLAN
SCALE 1:200

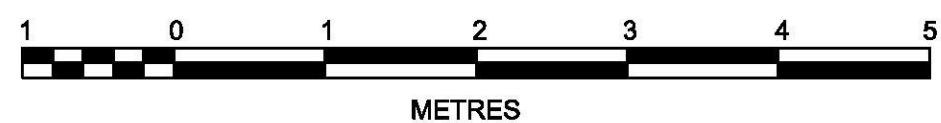


PLAN
SCALE 1:200

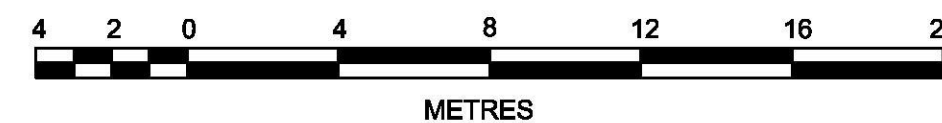


PLAN
SCALE 1:200

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



1:200 (AT A1)
1:400 (AT A3)



AMENDMENT	DES	DRN	CKD	APR	DATE
C	JT	JT	MP	RO	19/03/19
B	JT	JT	MP	MS	15/03/19
A	JT	JT	AM	MS	26/02/19

J. WYNDHAM PRINCE CONSULTING CIVIL INFRASTRUCTURE ENGINEERS
& PROJECT MANAGERS

PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwprince@jwprince.com.au

AZIMUTH:

DATUM:

ORIGIN:

CLIENT:



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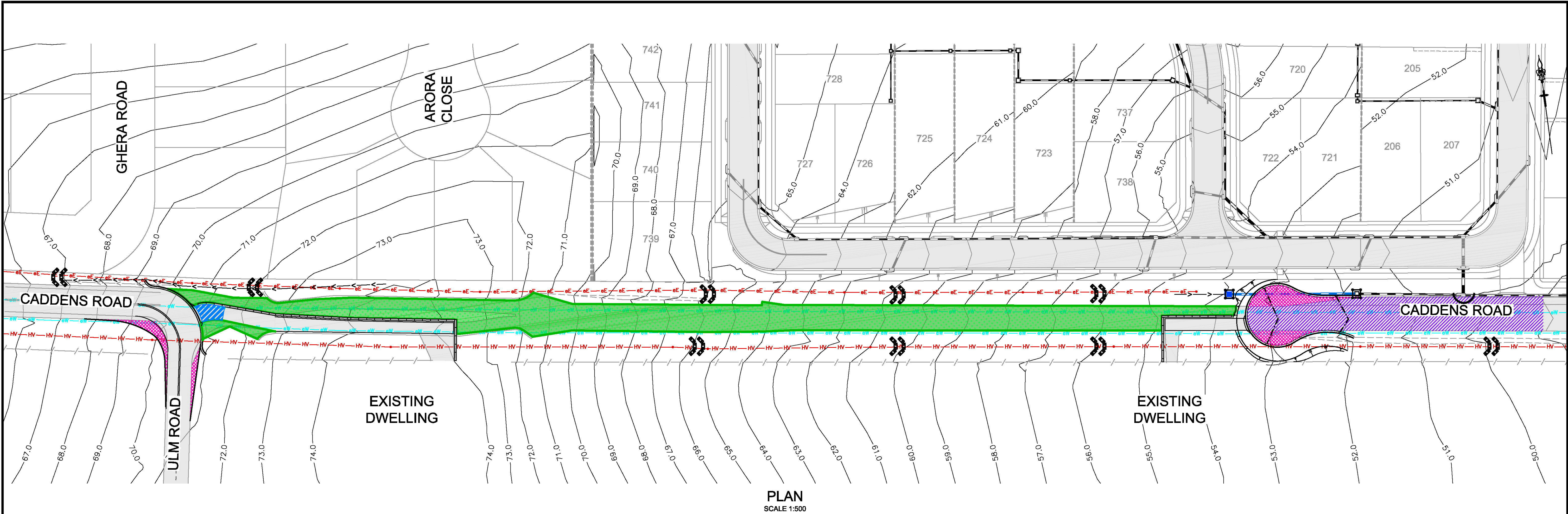
ISSUED FOR CONSTRUCTION APPROVAL

CADDENS HILL - ROAD CLOSURE WORKS
CADDENS ROAD EAST OF ULM ROAD
LINEMARKING AND SWEEP PATH PLANS

PLAN No:
110358/CC753

FILE No: 110358CC753

SHEET SIZE: A1 ORIGINAL



GENERAL NOTES:

- TO BE READ IN CONJUNCTION WITH PENRITH CITY COUNCILS 'WORKS SPECIFICATION CIVIL 2005'
- ALL EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING REVEGETATION AND STORAGE OF SOIL AND TOPSOIL, SHALL BE IMPLEMENTED TO THE REQUIREMENTS OF THE 'ENVIRONMENT PROTECTION AUTHORITY'.
 - TOPSOIL FROM ALL DISTURBED AREAS SHALL BE STOCKPILED AND LATER RESPREAD TO AID REVEGETATION IN THOSE AREAS.
 - ALL DRAINAGE WORKS SHALL BE CONSTRUCTED AND STABILIZED AS EARLY AS POSSIBLE DURING DEVELOPMENT.
 - ALL TAIL-OUT DRAINS SHALL BE GRASSED AND TRAPEZOIDAL IN SECTION. STRAW BALES SHALL BE PLACED AS A SEDIMENT CONTROL DEVICE WHERE REQUIRED.
 - VEHICULAR TRAFFIC SHALL BE CONTROLLED DURING DEVELOPMENT CONFINING ACCESS WHERE POSSIBLE TO PROPOSED OR EXISTING ROAD ALIGNMENTS. AREAS TO BE LEFT UNDISTURBED SHALL BE MARKED OFF.
 - DISTURBANCE OF VEGETATION SHALL BE LIMITED TO FILL AREAS, ROADWAYS AND DRAINAGE LINES. NO GRADING SHALL BE CARRIED OUT IN UNDISTURBED AREAS WITHOUT CONSULTATION WITH COUNCIL'S ENGINEER.
 - ALL DISTURBED AREAS SHALL BE REVEGETATED AS SOON AS THE RELEVANT WORKS ARE COMPLETED.

SEDIMENTATION CONTROL DEVICES:

- ALL STRAW BALES SHALL BE BOUND WITH WIRE. STRAW BALES SHALL BE PLACED END TO END IN A SINGLE ROW AND EMBEDDED INTO THE SOIL TO A DEPTH OF 100mm. EACH BALE SHALL BE SECURELY ANCHORED WITH TWO STEEL STAKES DRIVEN 450mm INTO THE GROUND AND LOCATED ON THE BALE CENTRE LINE.
- SILT FENCES SHALL BE CONSTRUCTED BY STRETCHING A FILTER FABRIC (PROPEX OR SIMILAR) BETWEEN POSTS AT 2m CENTRES. FABRIC SHALL BE BURIED 150mm ALONG ITS LOWER EDGE.

SPECIAL NOTES:

- LOCATION AND EXTENT OF SOIL AND WATER MANAGEMENT DEVICES IS DIAGRAMMATIC ONLY AND THE ACTUAL REQUIREMENTS SHALL BE CONFIRMED ON SITE.
- THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE GUIDELINES PREPARED BY LANDCOM 'MANAGING URBAN STORMWATER, SOILS AND CONSTRUCTION'-4th EDITION, MARCH 2004 AND THE ACCOMPANYING ROAD AND DRAINAGE PLANS.
- CONFORMITY WITH THIS PLAN SHALL IN NO WAY REDUCE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT AGAINST WATER DAMAGE DURING THE COURSE OF THE CONTRACT.
- MANAGEMENT DEVICES SHALL BE MAINTAINED ON A REGULAR BASIS. WHERE CLEANING IS REQUIRED, THE SEDIMENT SHALL BE REMOVED TO A POINT NOMINATED BY THE ENGINEER.

LEGEND	
STABILISED SITE ACCESS AS DIRECTED ON-SITE	
SEDIMENT FENCE	
MESH AND GRAVEL INLET FILTER	
STRAW BALE FILTER	
CATCH DRAIN	
REVEGETATED AREA	
GEOTEXTILE INLET FILTER	

Plotfile: 19 March - 2019 4:39:33 PM File Name: J110358 - OConnell Lane Caddens08 - Stage 7/CDDCC/CADDENS ROAD CLOSURE/J110358CC755.dwg

C	ISSUE FOR APPROVAL	JT	JT	MP	RO
B	ISSUE FOR APPROVAL	JT	JT	MP	MS
A	FIRST ISSUE	JT	JT	AM	MS
	AMENDMENT	DES	DRN	CKD	APR
					DATE

J. WYNDHAM PRINCE CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

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AZIMUTH:
DATUM:
ORIGIN:

CLIENT:



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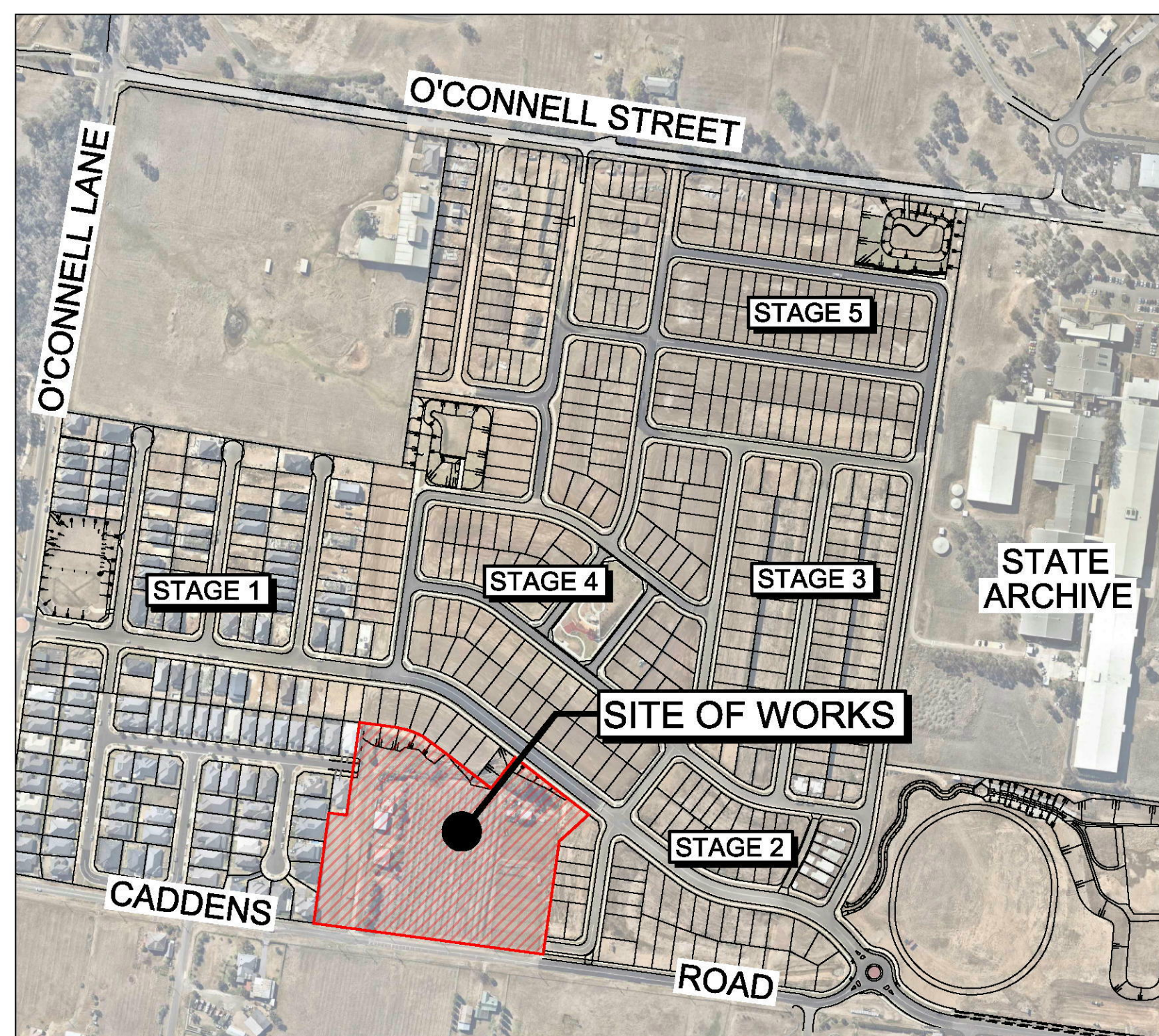
CADDENS HILL - ROAD CLOSURE WORKS
CADDENS ROAD EAST OF ULM ROAD
SOIL & WATER MANAGEMENT PLAN

PLAN No:	110358/CC755	C
FILE No:	110358CC755	
SHEET SIZE:	A1 ORIGINAL	



LEGACYPROPERTY

CADDENS HILL - STAGE 7 CONSTRUCTION CERTIFICATE PROPOSED SUBDIVISION & BULK EARTHWORKS DA17/1157



LOCALITY SKETCH

Prepared By:

J. WYNDHAM PRINCE

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ISSUED FOR CONSTRUCTION APPROVAL

PLAN No.
110358/CC700 **B**

FILE No. 110358CC700

LEGEND			
DESCRIPTION	PROPOSED	EXISTING	FUTURE
EXTENT OF WORKS			
KERB & GUTTER			
PRAM RAMP			
DRAINAGE LINE, PIT & EASEMENT			
DRAINAGE LINE & PIT			
HEADWALL			
GUIDE POSTS			
CONTOURS			
CATCH DRAIN			
KERB RETURN No			
ELECTRICITY, POWER POLE			
TELECOM, BOX			
WATER, STOP VALVE, HYDRANT			
SEWER, MANHOLE			
GAS			
TREES TO BE RETAINED			
TREES TO BE REMOVED			
STREET NAME SIGNS			
SURVEY MARKS - BENCH MARKS			
STATE SURVEY MARKS			
RECOVERY PEGS			
STAGE BOUNDARY			
STABILISED SITE ACCESS			
SEDIMENT FENCE			
STRAW BALE BARRIER			
STOCKPILE			
PROTECTIVE FENCING			
MESH AND GRAVEL INLET FILTER			
GEOTEXTILE INLET FILTER			
RETAINING WALL			

GENERAL NOTES:

- ALL WORKS ARE TO BE IN ACCORDANCE WITH PENRITH CITY COUNCILS "DESIGN GUIDELINES FOR ENGINEERING WORKS FOR SUBDIVISIONS AND DEVELOPMENTS" & "ENGINEERING CONSTRUCTION SPECIFICATION FOR CIVIL WORKS".
- SURVEY MARKS:-
 - STATE SURVEY MARKS LOCATIONS TO BE FIXED BY PROJECT SURVEYOR DURING WORK AS EXECUTED SURVEY OF SUBDIVISION.
 - SURVEY MARKS SHOWN THUS ▲ SHALL BE RETAINED AT ALL TIMES. WHERE RETENTION IS NOT POSSIBLE THE SUPERINTENDENT MUST BE NOTIFIED AND CONSENT RECEIVED PRIOR TO THEIR REMOVAL.
- THE CONTRACTOR SHALL LOCATE AND LEVEL ALL EXISTING SERVICES PRIOR TO COMMENCING CONSTRUCTION AND MAKE ARRANGEMENTS WITH THE RELEVANT AUTHORITY TO RELOCATE OR ADJUST IF NECESSARY.
- THE CONTRACTOR SHALL NOT ENTER UPON NOR DO ANY WORK WITHIN ADJACENT LANDS WITHOUT THE WRITTEN PERMISSION OF THE OWNERS.
- THE CONTRACTOR SHALL MAINTAIN SERVICES AND ALL WEATHER ACCESS AT ALL TIMES TO ADJOINING PROPERTIES.
- NO TREE SHALL BE FELLED, LOPPED OR REMOVED WITHOUT THE PRIOR APPROVAL OF COUNCIL'S ENGINEER.
- TREES TO BE RETAINED ON SITE SHALL BE PROTECTED BY SUITABLE STURDY APPROVED PROTECTIVE FENCING PRIOR TO COMMENCEMENT OF SITE WORKS.
- THE CONTRACTOR SHALL CLEAR THE SITE BY REMOVING ALL RUBBISH, FENCES OUT-HOUSES, CAR BODIES AND DEBRIS ETC.
- EXISTING SEDIMENT BASINS SHALL BE DEWATERED AND DESILTED. LEVELS SHALL BE OBTAINED ON SOUND MATERIAL PRIOR TO FILLING.
- FILLING IS TO BE FROM A NOMINATED SOURCE, OF SOUND CLEAN MATERIAL, FREE FROM LARGE ROCK, STUMPS, CONTAMINATED MATTER, INDUSTRIAL AND BUILDING WASTE, ORGANIC MATTER AND OTHER DEBRIS. PLACING OF FILLING ON THE PREPARED AREAS SHALL NOT COMMENCE UNTIL THE AUTHORITY TO DO SO HAS BEEN OBTAINED FROM THE COUNCIL.
- SITE FILL AREAS:- THE CONTRACTOR SHALL TAKE LEVELS OF EXISTING SURFACE AFTER STRIPPING TOPSOIL AND PRIOR TO COMMENCING FILL OPERATIONS.
- ALL SITE FILLING TO BE COMPACTED TO 95% STANDARD COMPACTION AND SHALL BE CONTROLLED BY A REGISTERED SOIL LABORATORY IN ACCORDANCE WITH COUNCIL'S "ENGINEERING CONSTRUCTION SPECIFICATION FOR CIVIL WORKS".
- ALL SITE REGRADING AREAS SHALL BE GRADED AT A MINIMUM 1% TO THE ENGINEERS. REQUIREMENTS.
- SURPLUS EXCAVATED MATERIAL SHALL BE PLACED WHERE DIRECTED BY THE SUPERINTENDENT.
- EASEMENT WIDTHS SHALL BE IN ACCORDANCE WITH 3.11 DRAINAGE EASEMENTS OF PENRITH CITY COUNCIL'S DESIGN GUIDELINES FOR ENGINEERING WORKS FOR SUBDIVISION AND DEVELOPMENTS.

PIPE DIA.	EASEMENT WIDTH
150Ø	1.5m
225Ø	2.0m
300Ø	2.0m
375Ø	2.5m
450Ø	2.5m
540Ø	2.5m
600Ø	2.5m
675Ø	3.0m
- DRAINAGE LINES UNDER ROADS SHALL BE BACKFILLED WITH NON-COHESIVE SAND AND HAVE 3m OF SUBSOIL DRAIN WRAPPED IN APPROVED FILTER SOCK, DISCHARGING INTO DOWN STREAM PITS. PIPE CLASS INDICATED ARE FOR REINFORCED CONCRETE PIPES (RCP) IF FIBRE REINFORCED CONCRETE PIPES (FRC) REFER TO PENRITH CITY COUNCIL "ENGINEERING CONSTRUCTION SPECIFICATION FOR CIVIL WORKS"
- ALL CONDUITS AND MAINS SHALL BE LAID PRIOR TO LAYING FINAL ASPHALTIC CONCRETE SEAL.
- VEHICULAR CROSSINGS SHALL BE CONSTRUCTED IN KERB AND GUTTER WHERE SHOWN IN ACCORDANCE WITH PCC STANDARD DRAWING SD1004.
- PRAM CROSSINGS SHALL BE CONSTRUCTED IN KERB AND GUTTER IN ACCORDANCE WITH COUNCIL'S STANDARD DRAWING SD1002.
- STREET NAME SIGNS SHALL BE ERECTED, WHERE SHOWN, IN ACCORDANCE WITH COUNCIL'S STANDARD SD1006/1 AND SD1006/2.
- ALL NEW WORKS SHALL MAKE A SMOOTH JUNCTION WITH EXISTING CONDITIONS.
- ALL INTERALLOTMENT DRAINAGE LINES SHALL BE LAID AT A MINIMUM GRADE OF 1% UNLESS OTHERWISE INDICATED.
- DRAINAGE LINES ON PLANS ARE DIAGRAMMATIC ONLY AND PIPE CENTRELINES SHALL ENTER AND EXIT PITS AT THE CENTRE OF THE RESPECTIVE PIT WALLS.
- DIMENSIONS OF ANY DETAIL SHALL NOT BE SCALED - DIMENSIONS, IF IN DOUBT, SHALL BE VERIFIED BY THE SUPERINTENDENT.
- ALL CONSTRUCTION AND RESTORATION WORK ON COUNCIL'S ROAD AND FOOTPATH AREA ARE TO BE CARRIED OUT IN ACCORDANCE WITH THE APPROVED DRAWINGS AND COUNCIL'S STANDARD SPECIFICATIONS AND APPROVED BY PENRITH CITY COUNCIL THROUGH A S138 ROADS ACT APPROVAL.
- ALL LAND THAT HAS BEEN DISTURBED BY EARTHWORKS IS TO BE SPRAY GRASSED OR SIMILARLY TREATED TO ESTABLISH A GRASS COVER.
- NO FILL MATERIAL IS TO BE IMPORTED TO THE SITE WITHOUT THE PRIOR APPROVAL OF PCC IN ACCORDANCE WIT H SYDNEY REGIONAL ENVIRONMENTAL PLAN No.20 (HAWKESBURY-NEPEAN RIVER) (No.2-1997). NO RECYCLING OF MATERIAL FOR USE OF FILL MATERIAL SHALL BE CARRIED OUT ON THE SITE WITHOUT THE PRIOR APPROVAL OF COUNCIL.
- ALL EARTHWORKS SHALL BE UNDERTAKEN IN ACCORDANCE WITH AS3798 AND PCC DESIGN GUIDELINES FOR ENGINEERING WORKS FOR SUBDIVISIONS AND DEVELOPMENTS AND ENGINEERING CONSTRUCTION SPECIFICATIONS FRO CIVIL WORKS.
- VEHICLE CROSSINGS TO BE LOCATED 1.0m CLEAR OF ANY LINTELS.
- ALL VERGE AREAS EXTEND FROM BACK OF KERB TO PROPERTY BOUNDARY TO BE TURFED.
- ALL STORMWATER PITS WITH DEPTHS GREATER THAN 1.0m TO HAVE GALVANISED OR OTHERWISE APPROVED STEP IRONS AT 300mm SPACING INSTALLED.
- KERB TYPES USED IN SITE ARE KERB AND GUTTER UNLESS OTHERWISE NOTED. FOR DETAILS REFER TO PENRITH CITY COUNCIL "ENGINEERING CONSTRUCTION SPECIFICATION FOR CIVIL WORKS" STANDARD SD1003/1 & SD1003/2.
- KERB ADAPTORS SHALL BE PROVIDED FOR ALL LOTS DRAINING TO THE STREET. FOR DETAIL REFER TO PENRITH CITY COUNCIL "ENGINEERING CONSTRUCTION SPECIFICATION FOR CIVIL WORKS"
- ALL WASTE MATERIAL STORED ON-SITE ARE TO BE CONTAINED WITHIN A DESIGNATED AREA SUCH AS A WASTE BAY OR BIN. CONTRACTOR TO ENSURE THAT NO WASTE MATERIALS ARE ALLOWED TO ENTER THE STORMWATER SYSTEM OR NEIGHBOURING PROPERTIES. THE DESIGNATED WASTE STORAGE AREAS SHALL PROVIDE AT LEAST TWO WASTE BAY/BINS SO AS TO ALLOW FOR THE SEPARATION OF WASTES, AND ARE TO BE FULLY ENCLOSED WHEN SITE IS UNATTENDED.
- AN APPROPRIATE QUALIFIED PERSON/S SHALL SUPERVISE ALL FILLING WORKS.

SURVEY SET OUT INFORMATION NOTES:

- ALL SITE SET OUT AND CONTROL POINTS ARE TO BE CERTIFIED BY A REGISTERED SURVEYOR.
- THE INFORMATION DETAILED ON THE CERTIFIED CONSTRUCTION CERTIFICATE PLANS TAKES PRECEDENCE OVER ALL ELECTRONIC INFORMATION PROVIDED. THE ORDER OF PRIORITY FOR USE OF ALL INFORMATION PROVIDED IS AS FOLLOWS:
 - CERTIFIED CONSTRUCTION CERTIFICATE DRAWINGS
 - 2D DRAFTING BASE (ELECTRONIC FILE)
 - 3D DTM (ELECTRONIC FILE)
- ANY DISCREPANCY BETWEEN ANY OF THE INFORMATION CONTAINED WITHIN THESE FILES IS TO BE BROUGHT TO THE ATTENTION OF THE SUPERINTENDENT PRIOR TO CONSTRUCTION WHO WILL SEEK CLARIFICATION AND ISSUE INSTRUCTIONS ON THE APPROPRIATE COURSE OF ACTION.

LOT CALCULATIONS BY:

VINCE MORGAN (SURVEYORS) PTY. LTD.
CONSULTING SURVEYORS
P.O. Box 227, Penrith. 2751
Ph. (02) 4721 5293
FILE: 20467 - 7C DATE: 08/11/18

SURVEY BY:

SDG LAND DEVELOPMENT SOLUTIONS
UNIT 7 1B KLEINS ROAD
NORTHMEND 2152
Ph. (02) 9630 7955
FILE: 6072 CONTOUR ISSUE D.DWG DATE: 22/4/16

Survey By:

VINCE MORGAN (SURVEYORS) PTY. LTD.
CONSULTING SURVEYORS
P.O. Box 227, Penrith. 2751
Ph. (02) 4721 5293

Date: 21/09/16 File Name: 20467-L2.dwg
Date: 21/09/16 File Name: 210916topo.dxf
Date: 16/01/18 File Name: 20467-7b-160118.dxf

CUSTOM MADE PRECAST PIT NOTES:

- DESIGN DOCUMENTATION REFLECTS PRECAST DRAINAGE PITS BEING USED FOR THE SITE. UNLESS NOTED OTHERWISE.
- AUSPITS CUSTOM MADE PRECAST PITS TO BE USED.
- PITS TO COMPLY WITH THE FOLLOWING PARAMETERS:
 - ARE SPECIFICALLY MANUFACTURED FOR THE PROJECT.
 - EACH PIT IS ACCOMPANIED BY A CERTIFICATE OF STRUCTURAL ADEQUACY SIGNED BY A NPER ENGINEER (STRUCTURAL)
 - THE STRUCTURAL CERTIFICATION OF THE PITS SHOULD INCLUDE ANY ADDITIONAL PRECAST ELEMENTS REQUIRED TO BRING THE PIT UP TO FINAL LEVELS ON SITE.
 - PITS MUST BE FIRMLY BEDDED ON SOUND MATERIAL.
 - CONCRETE IS TO BE POURED AROUND THE BASE TO AID IN STABILISATION OF THE PIT.
 - PIT FLOORS ARE TO HAVE A 1% FALL TOWARDS THE OUTLET PIPE.
 - ANY PIT REQUIRING MODIFICATION AFTER IT HAS BEEN POURED IN THE FACTORY OR DAMAGED IN TRANSPORT CANNOT BE USED.
 - ALL WORK TO BE TO THE SATISFACTION OF COUNCIL'S DEVELOPMENT INSPECTORS.

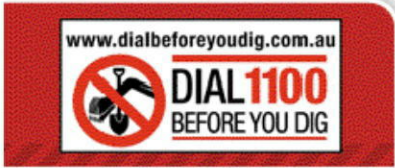
ALL CAST INSITU PITS TO BE IN ACCORDANCE WITH PCC STANDARD DRAWINGS SD2001/1, SD2001/2 AND SD2001/3. ANY PIT GREATER THAN 2m DEEP WILL REQUIRE SEPARATE APPROVAL.

STORMWATER DESIGN CRITERIA:

ANNUAL EXCEEDANCE PROBABILITY (AEP):
1% AEP MAJOR SYSTEM
20% AEP MINOR SYSTEM

CIVIL PLAN INDEX

PLAN NO.	PLAN NAME	REV
110358/CC700	COVER SHEET	B
110358/CC701	LEGEND, NOTES AND INDEX	C
110358/CC702	SITE LAYOUT	B
110358/CC703	ROAD SETOUT PLAN	B
110358/CC704	ENGINEERING PLAN	B
110358/CC705	CUT/FILL PLAN	B
110358/CC706	SITE SECTIONS	B
110358/CC707	ROAD LONGITUDINAL AND TYPICAL SECTION SHEET 1	B
110358/CC708	ROAD LONGITUDINAL AND TYPICAL SECTION SHEET 2	B
110358/CC709	ROAD CROSS SECTIONS SHEET 1	B
110358/CC710	ROAD CROSS SECTIONS SHEET 2	B
110358/CC711	KERB RETURNS	B
110358/CC712	CATCHMENT PLAN	B
110358/CC713	PIT SCHEDULE AND DETAILS	B
110358/CC714	DRAINAGE LONGITUDINAL SECTIONS SHEET 1	B
110358/CC715	DRAINAGE LONGITUDINAL SECTIONS SHEET 2	B
110358/CC716	DRAINAGE LONGITUDINAL SECTIONS SHEET 3	B
110358/CC717	DRAINAGE LONGITUDINAL SECTIONS SHEET 4	B
110358/CC718	DRAINAGE CALCULATIONS SHEET 1	B
110358/CC719	DRAINAGE CALCULATIONS SHEET 2	B
110358/CC720	DRAINAGE CALCULATIONS SHEET 3	B
110358/CC721	RETAINING WALL PLAN & DETAILS	B
110358/CC722	RETAINING WALL SECTIONS SHEET 1	B
110358/CC723	RETAINING WALL SECTIONS SHEET 2	B
110358/CC724	RETAINING WALL SECTIONS SHEET 3	B
110358/CC725	SOIL & WATER MANAGEMENT PLAN	B
110358/CC726	SOIL & WATER MANAGEMENT NOTES	B
110358/CC727	SIGNAGE & LINEMARKING PLAN	C



UTILITIES SHOWN ARE DIAGRAMMATIC ONLY, CONTRACTORS ARE RESPONSIBLE TO LOCATE AND AVOID DAMAGE TO THEM.

NOTE: UTILITIES SHOWN MAY NOT INCLUDE ALL SERVICES WITHIN THE LIMIT OF WORKS

CLIENT:



DAZIMUTH:

DATUM:

A.H.D

ORIGIN:

M.G.A.

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**CADDENS HILL
STAGE 7**
LEGEND, NOTES AND INDEX

PLAN No:

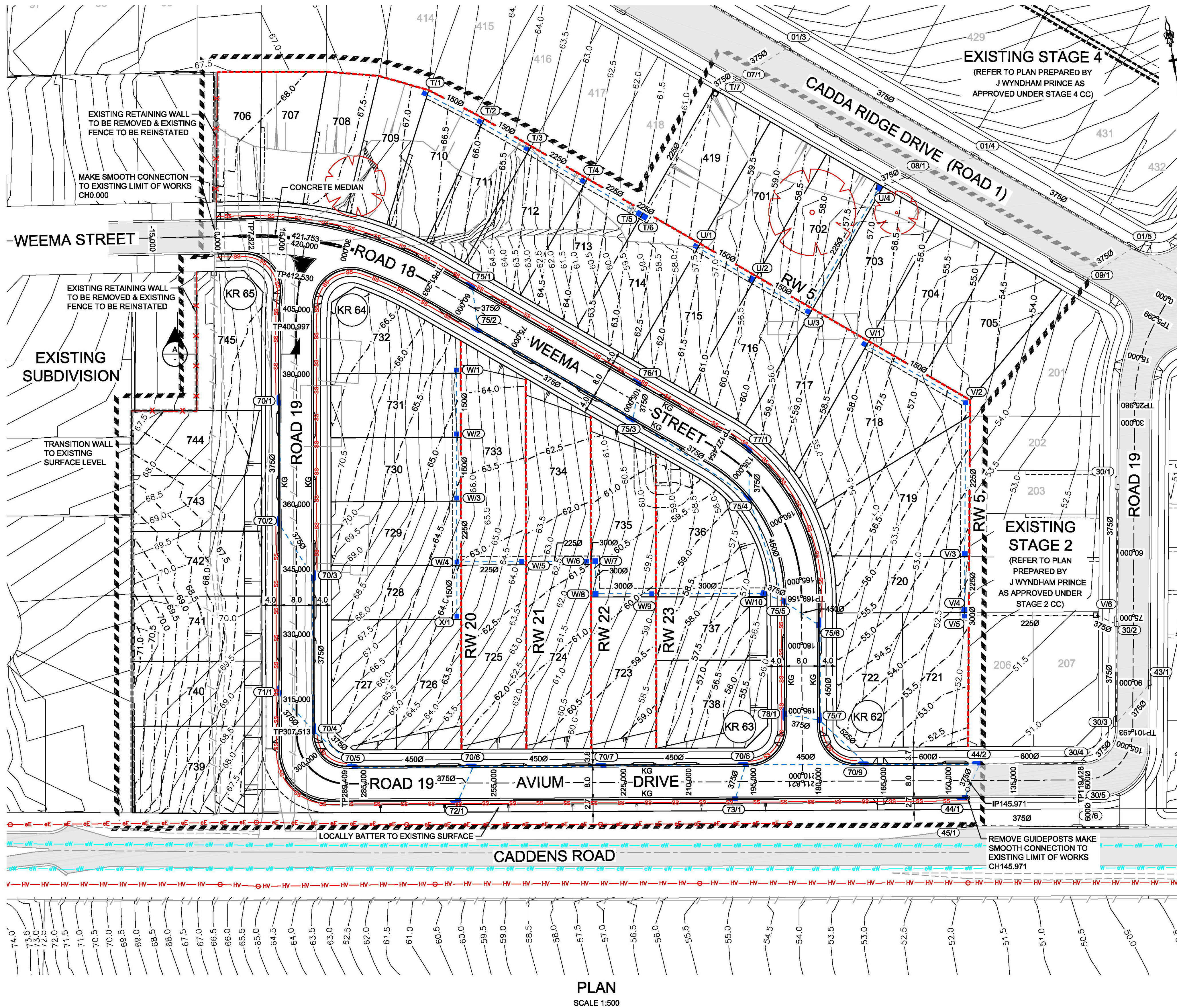
110358/CC701

C

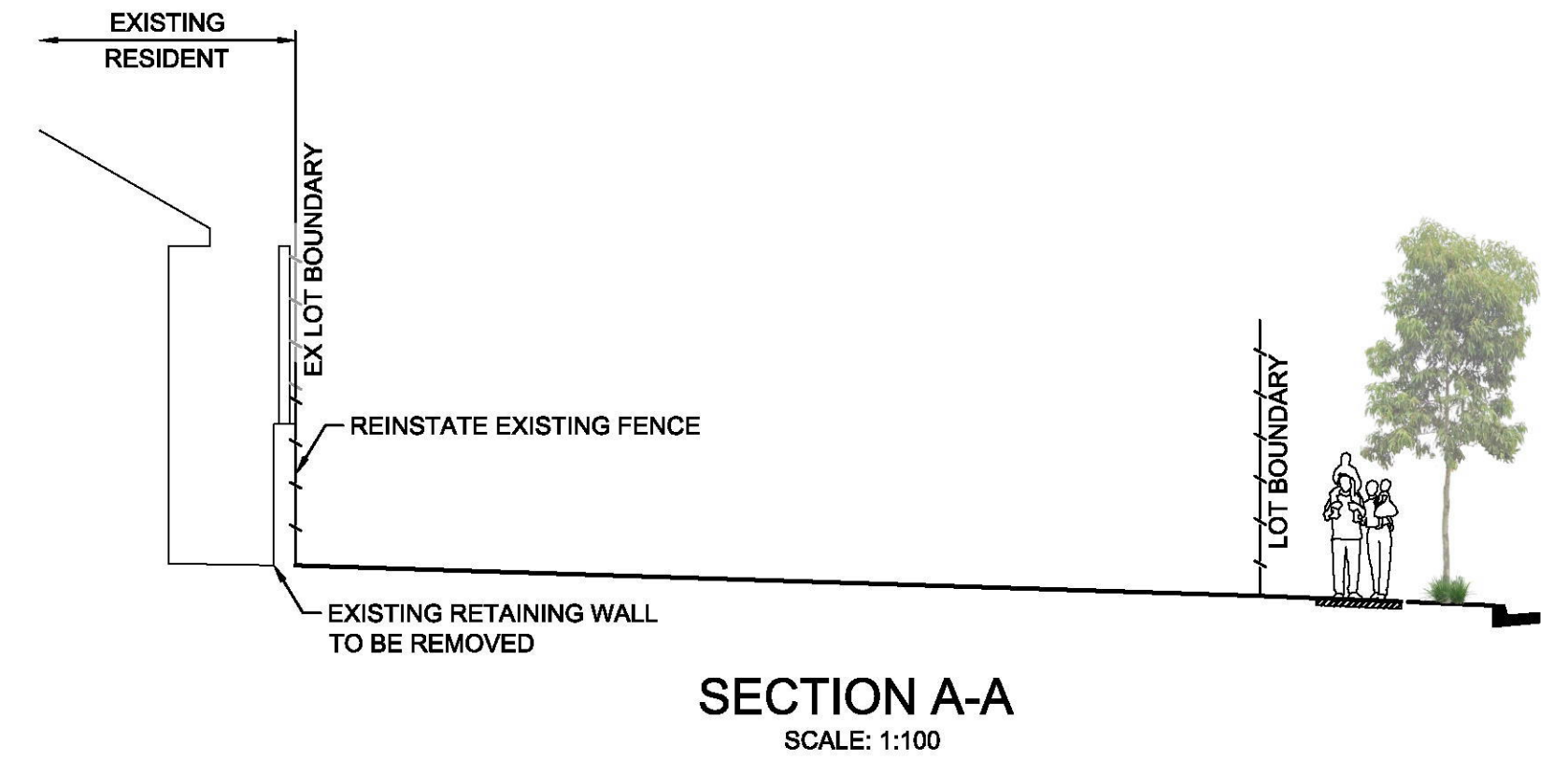
FILE No: 110358CC701

SHEET SIZE:

A1 ORIGINAL



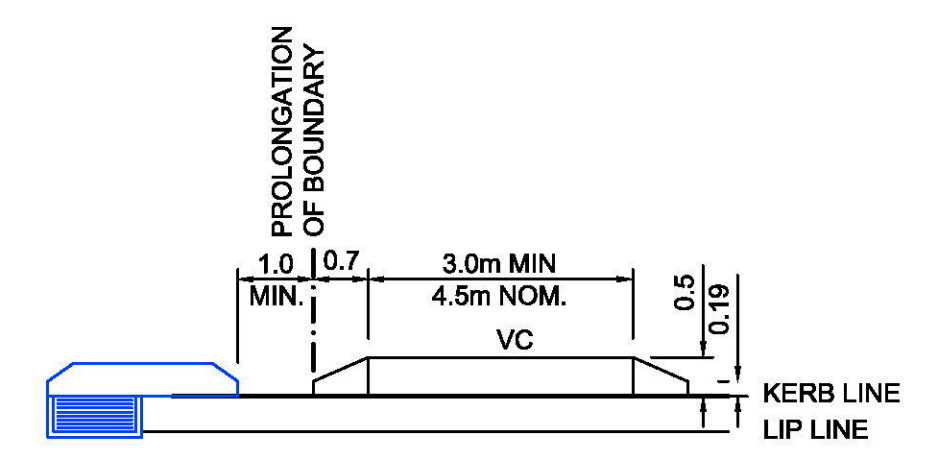
PLAN
SCALE 1:500



SECTION A-A
SCALE: 1:100

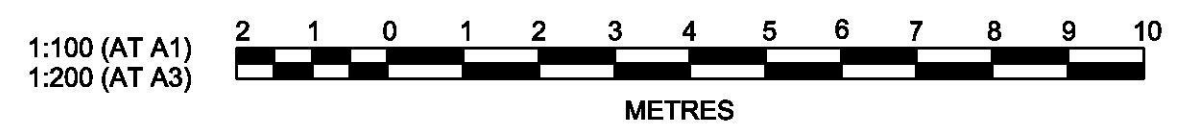
RETAINING WALL PLAN AND SECTIONS
REFER TO PLANS CC721 - CC724

NOTE:
ALL BATTERS SHOWN ARE 1:4 UNLESS NOTED OTHERWISE



VEHICULAR CROSSING (VC)
SETOUT DETAIL
SCALE: N.T.S.

- ALL VEHICULAR CROSSING (VC) WIDTHS ARE 4.5m WIDE UNLESS OTHER WISE NOTED ON PLAN
- VC MUST HAVE A MIN STRAIGHT OF 3m PER P.C.C. STANDARD DETAIL
- VC'S TO BE IN ACCORDANCE WITH SD1004 OF P.C.C ENGINEERING CONSTRUCTION SPECIFICATION FOR CIVIL WORKS



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AZIMUTH:
DATUM:
ORIGIN:

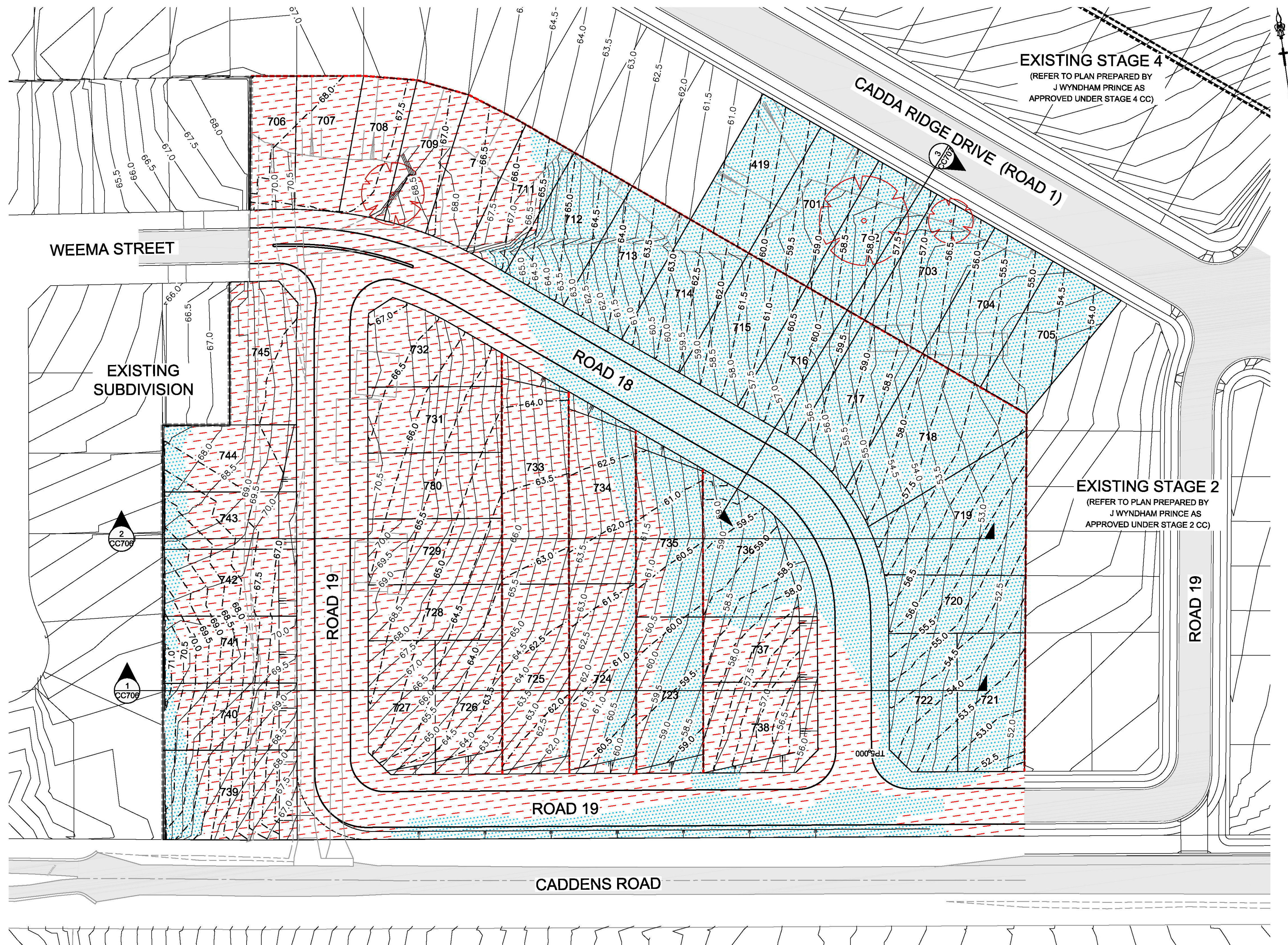
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LEGACYPROPERTY
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CADDENS HILL
STAGE 7
ENGINEERING PLAN

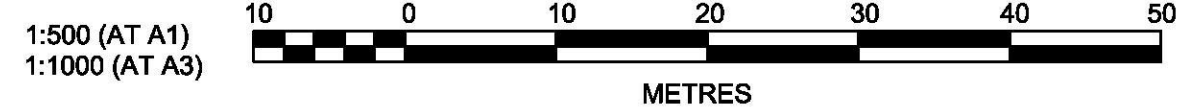
PLAN No:
110358/CC704 B
FILE No: 110358CC704
SHEET SIZE: A1 ORIGINAL

AMENDMENT	DES	DRN	CKD	APR	DATE
B	JT	JT	AM	MS	07/03/19
A	JT	NA/JA	AM	MS	11/12/18



PLAN
SCALE 1:500

LEGEND	
	CUT
	FILL



AMENDMENT	DES	DRN	CKD	APR	DATE
B	JT	JT	AM	MS	07/03/19
A	JT	NA/JA	AM	MS	11/12/18

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AZIMUTH:
DATUM:
ORIGIN:

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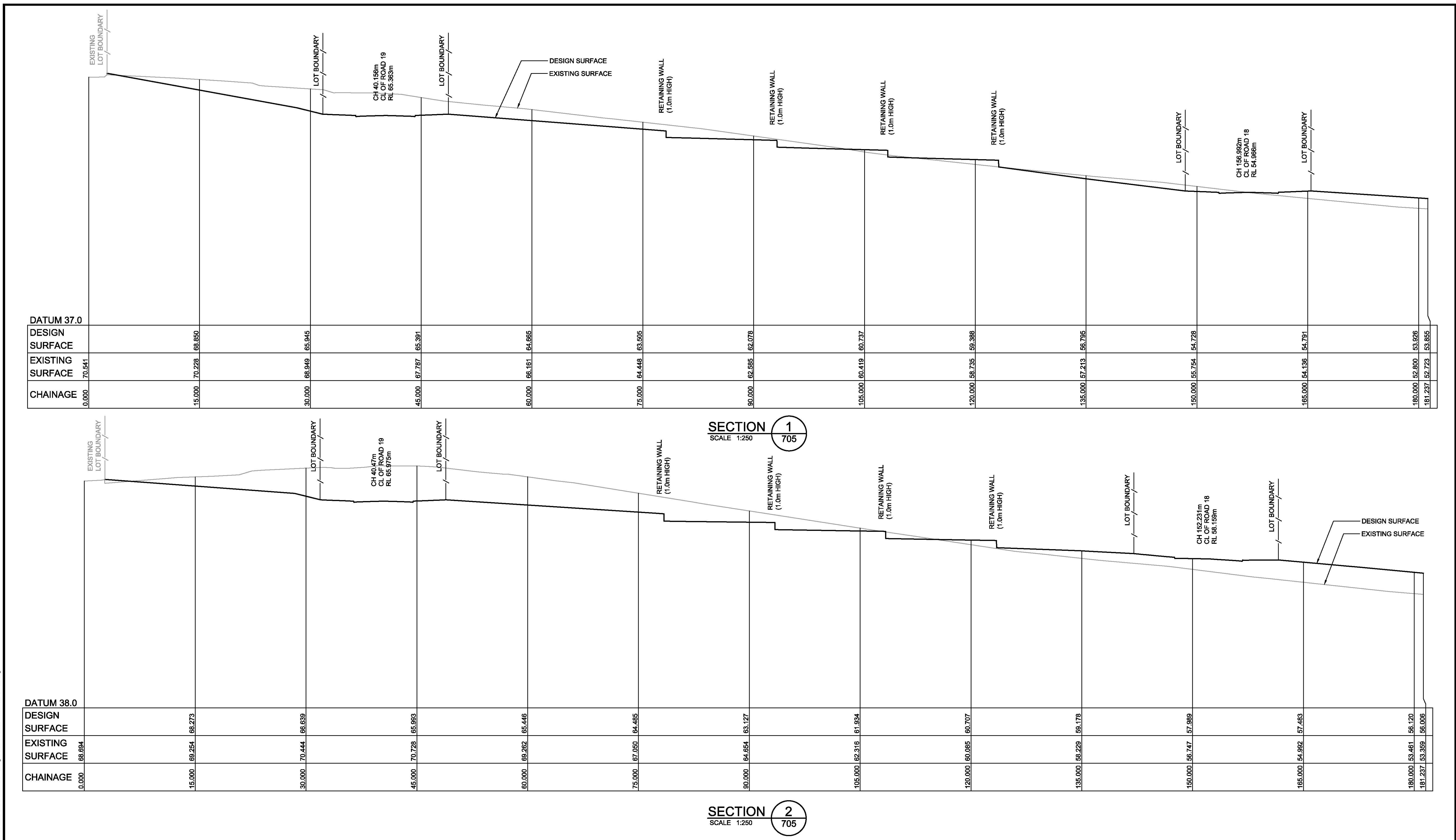
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**CADDENS HILL
STAGE 7
CUT/FILL PLAN**

PLAN No:	110358/CC705	B
FILE No:	110358CC705	
SHEET SIZE:	A1 ORIGINAL	

Plotted: 7 March, 2019 2:23:16 PM File Name: J:\110358 - OConnell Lane Caddens\08 - Stage 7\CD\CC110358CC706.dwg



B	ISSUE FOR APPROVAL	JT	JT	AM	MS	07/03/19	
A	FIRST ISSUE	JT	NA/JA	AM	MS	11/12/18	
	AMENDMENT	DES	DRN	CKD	APR	DATE	

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AZIMUTH:
A.H.D
ORIGIN:
M.G.A.

CLIENT:

**LEGACYPROPERTY**

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CADDENS HILL
STAGE 7
SITE SECTIONS

PLAN No:
110358/CC706 **B**

FILE No: 110358CC706

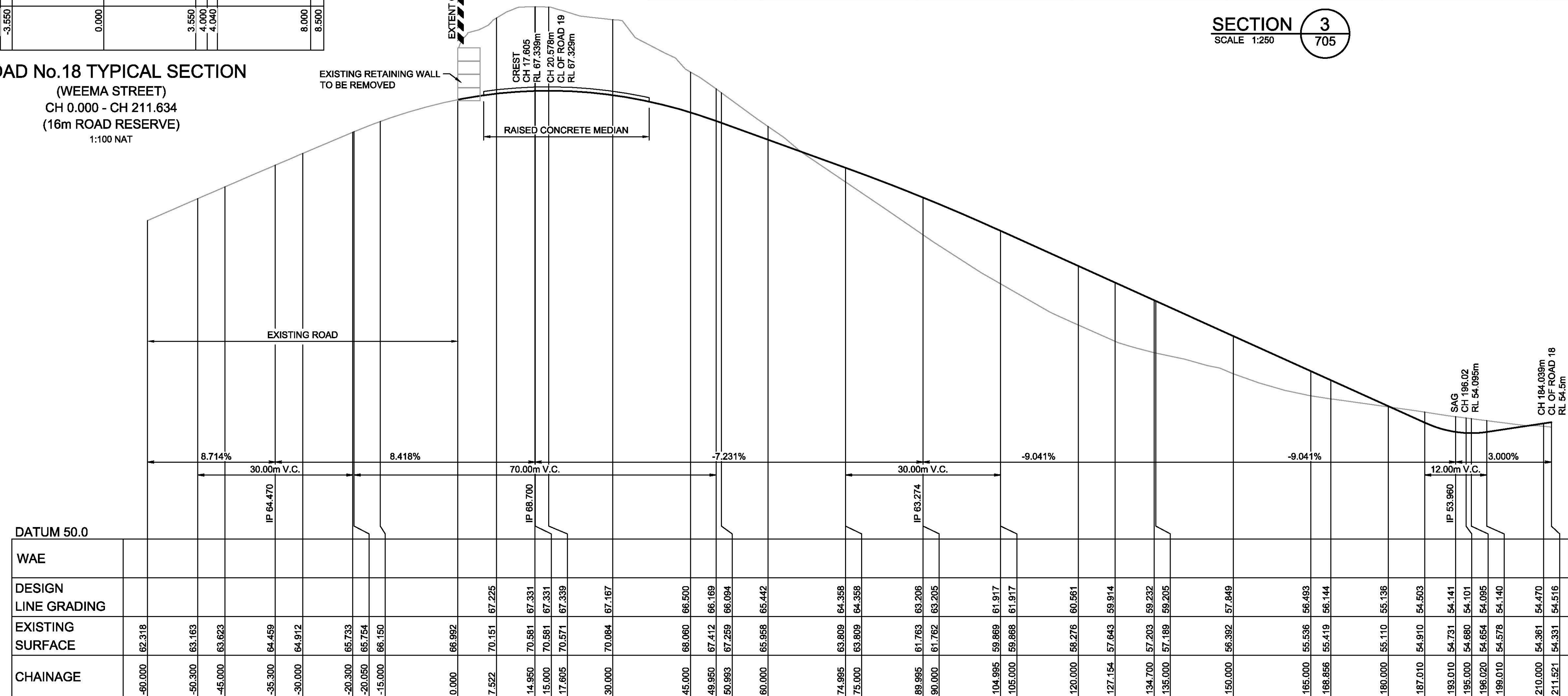
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NOTE
FOR SHARED PATH/CYCLEWAY DETAILS REFER TO PENRITH CITY COUNCIL CONSTRUCTION SPECIFICATION FOR CIVIL WORKS - SECTION 7.5 CONCRETE FOOTPATH PAVING AND PATHWAYS - SHARED WAYS/CYCLEWAYS

ACCESS STREET 5x10⁴
50mm MINIMUM THICKNESS (AC10) i.e. 2 x LAYERS 25mm (AC10)
***FINAL AC LAYER TO BE DEFERRED & BONDED**
SINGLE COAT FLUSH SEAL
150mm THICK BASECOURSE (DGB20)
175mm THICK SUB BASE (DGS40)
COMPACTED SUBGRADE

[illegible]

EXISTING RETAINMENT WALL
TO BE REMOVED



(WEEMA STEET)
HORIZONTAL SCALE 1:500
VERTICAL SCALE 1:100

[illegible]

SECTION 3
SCALE 1:250 705

[illegible]

B	ISSUE FOR APPROVAL	JT	JT	AM	MS	07/03/19
A	FIRST ISSUE	JT	NA/JA	AM	MS	11/12/18
	AMENDMENT	DES	DRN	CKD	APR	DATE

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ORIGIN:
M.G.A.



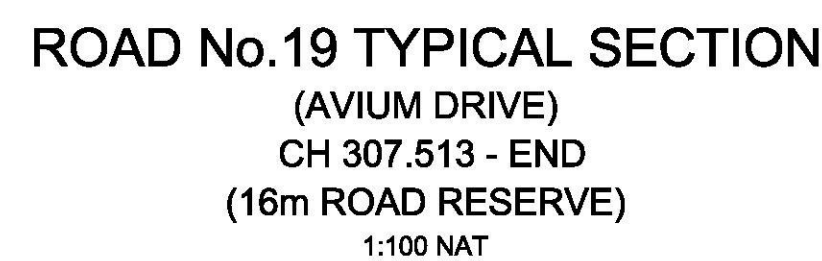
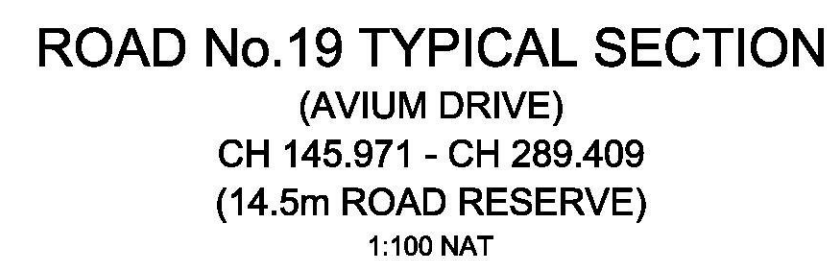
CLIENT:

CADDENS HILL STAGE 7

PLAN No:
110358/CC707

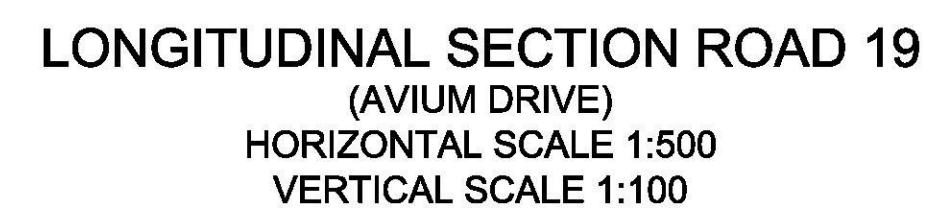
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SHEET SIZE: A1 ORIGINAL



REFER TO REPORT BY GEOTECH TESTING PTY LTD REF 8611/1-AB
DATED 7 JANUARY 2019

FOR SHARED PATH/CYCLEWAY DETAILS REFER TO PENRITH CITY
COUNCIL CONSTRUCTION SPECIFICATION FOR CIVIL WORKS -
SECTION 7.5 CONCRETE FOOTPATH PAVING AND PATHWAYS -
SHARED WAYS/CYCLEWAYS



B	ISSUE FOR APPROVAL	JT	JT	AM	MS	07/03/11	
A	FIRST ISSUE	JT	NA/JA	AM	MS	11/12/11	
	AMENDMENT	DES	DRN	CKD	APR	DATE	

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ORIGIN:
M.G.A.



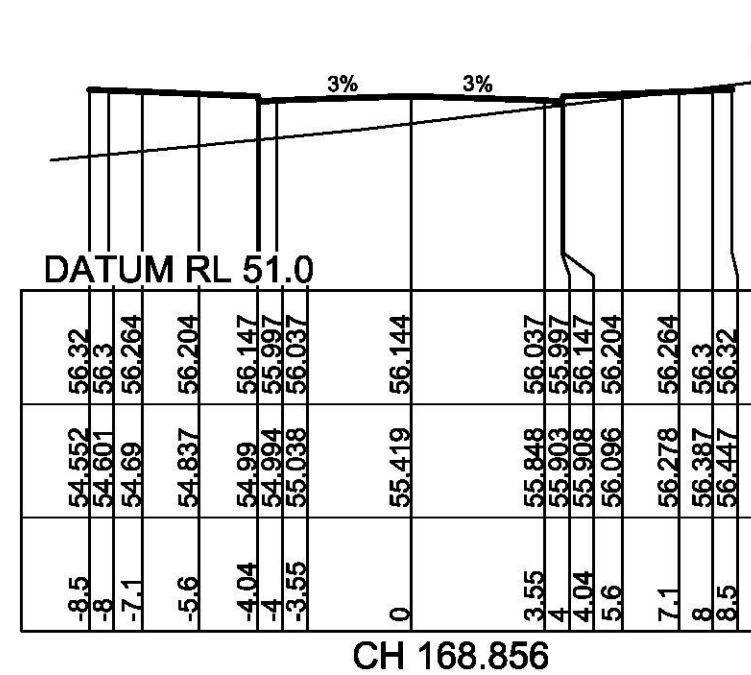
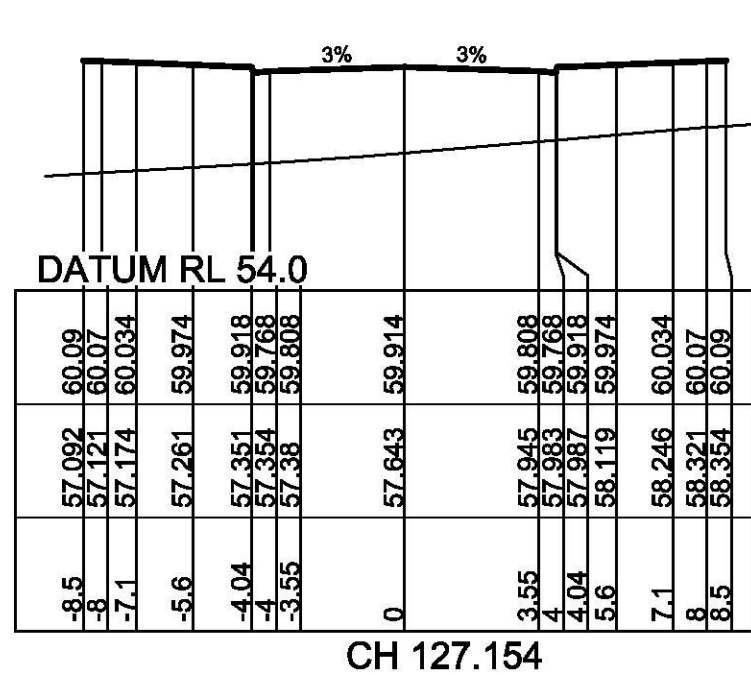
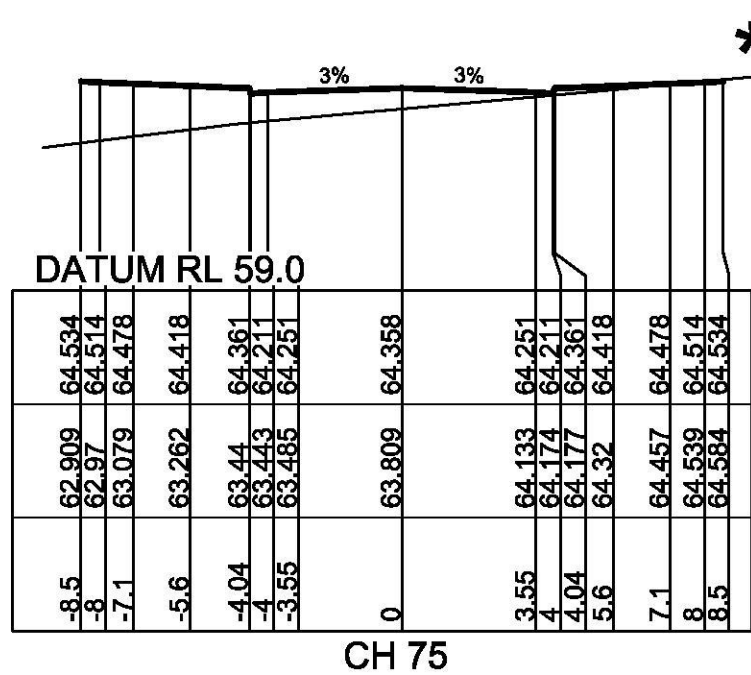
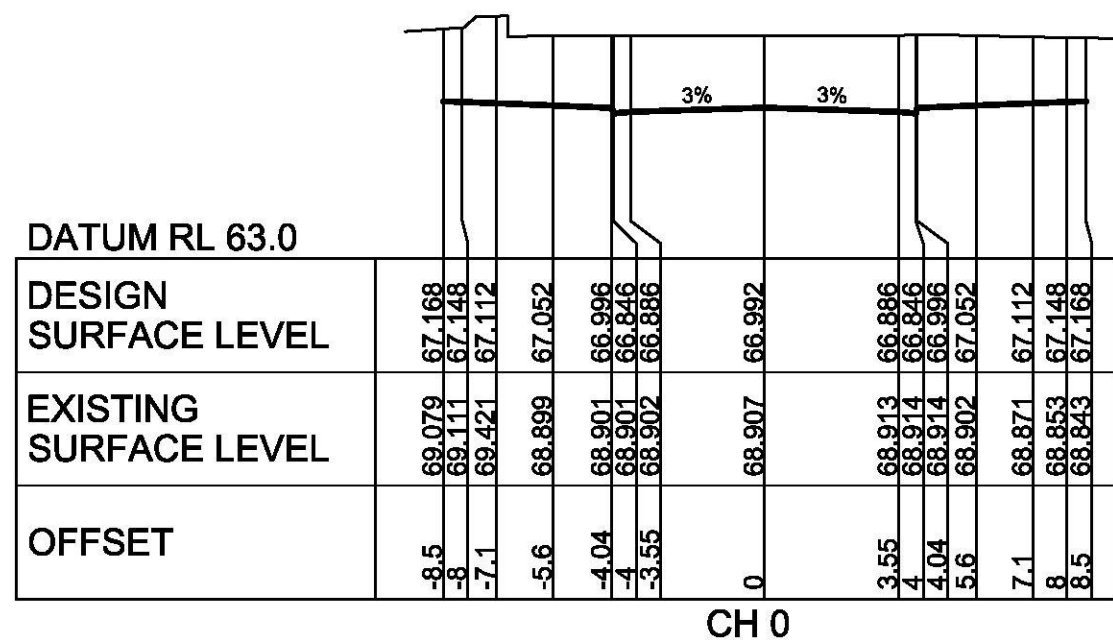
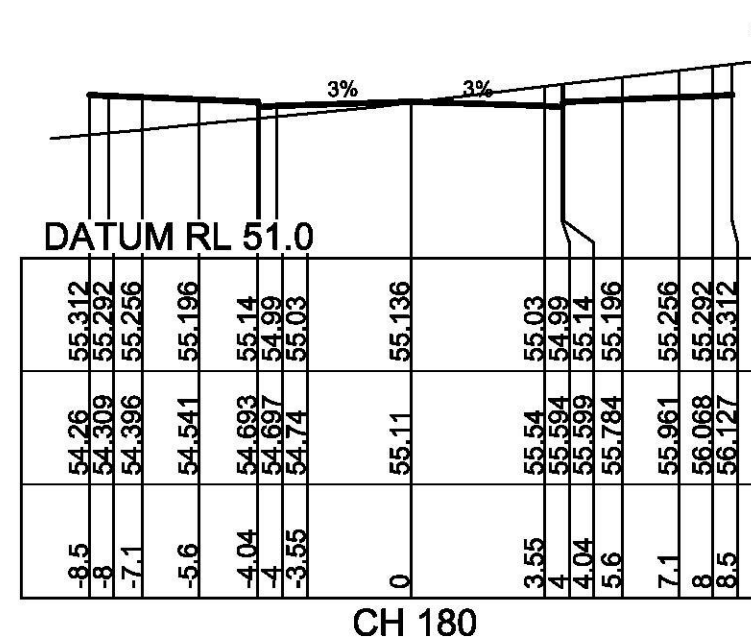
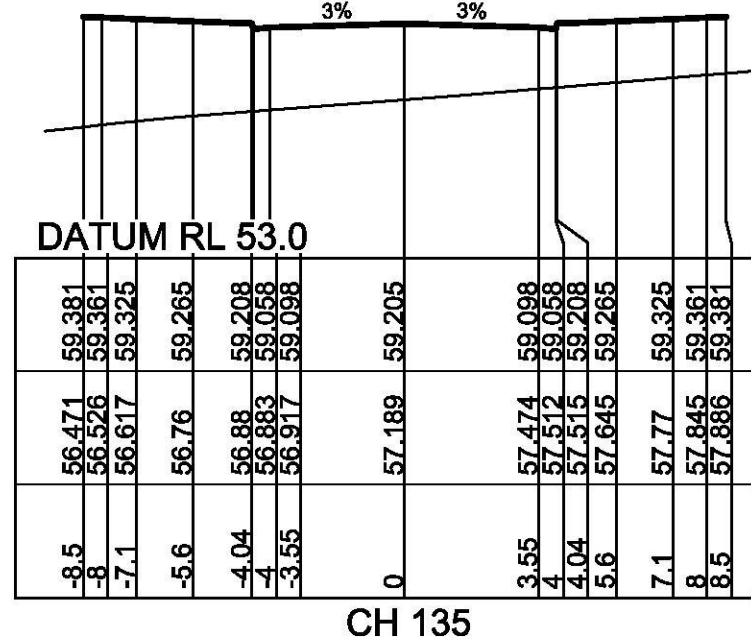
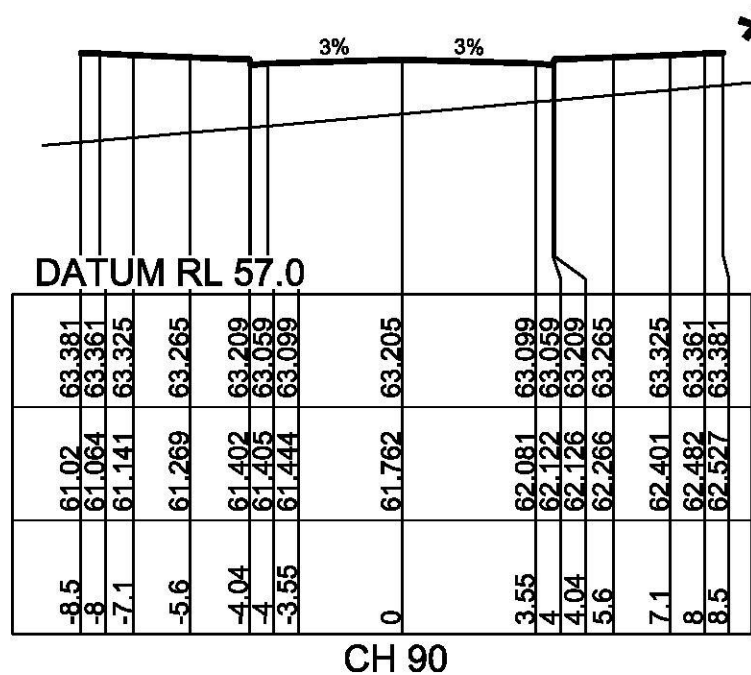
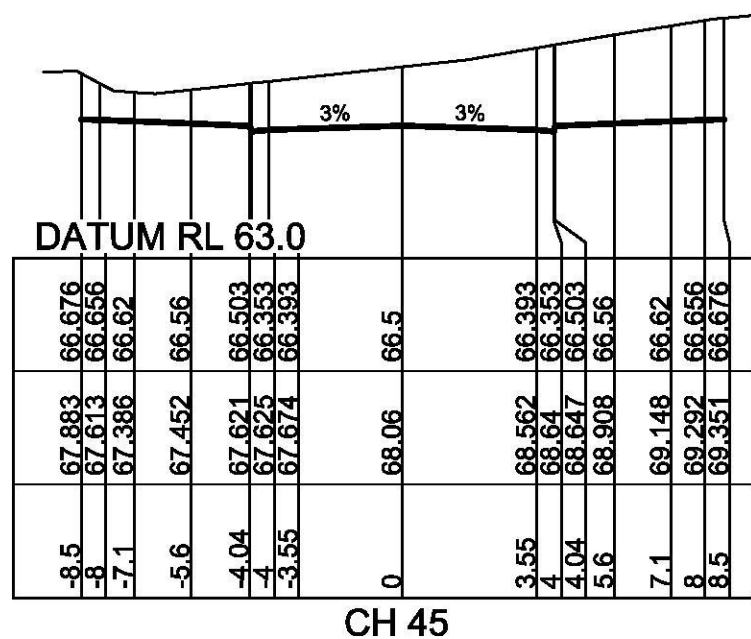
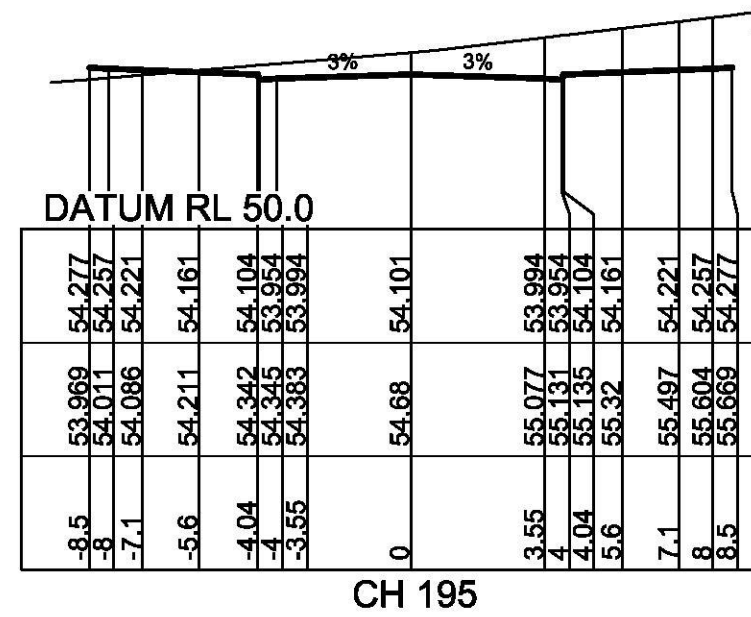
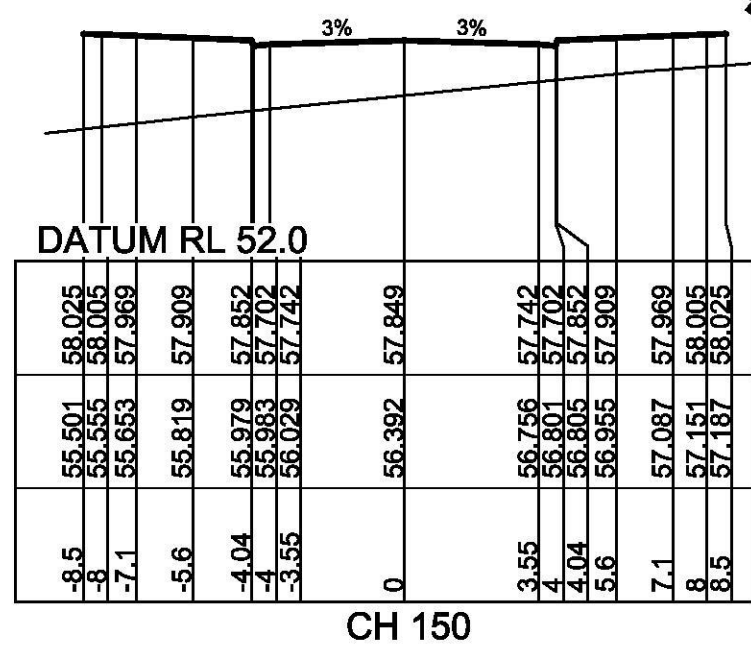
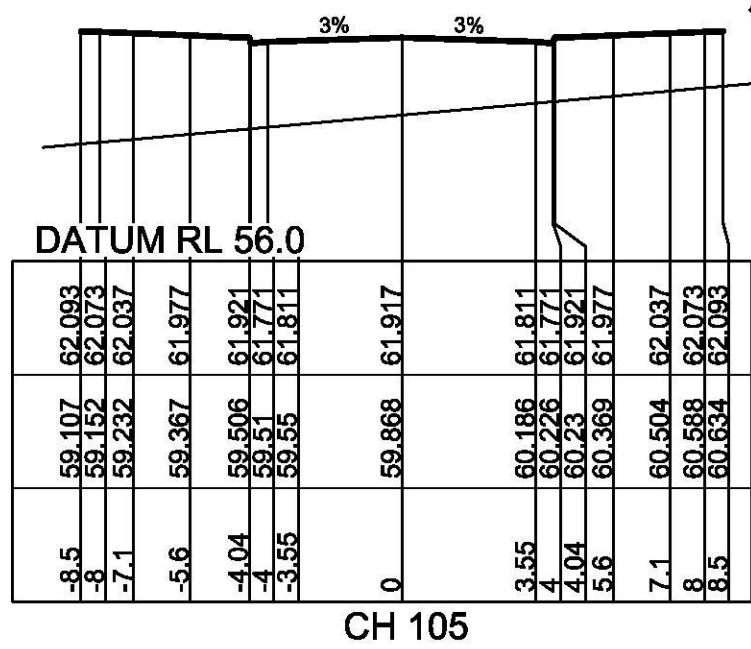
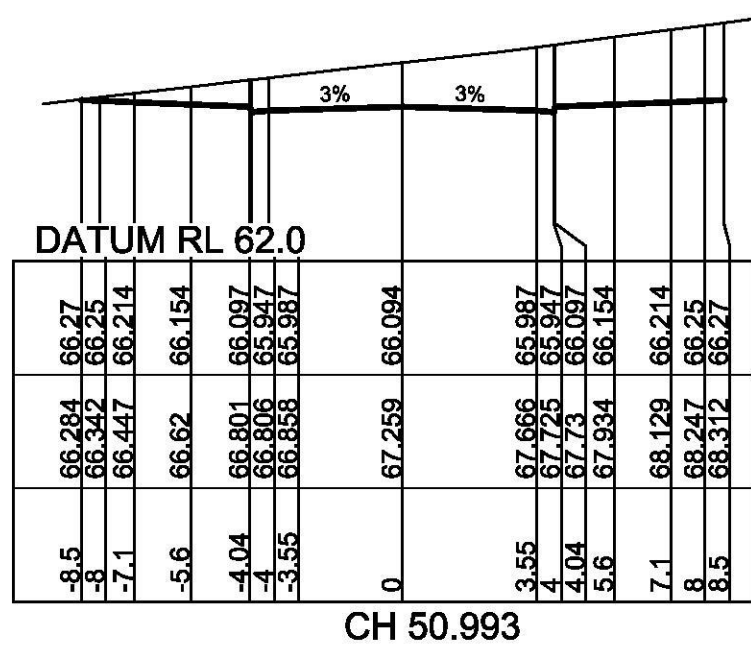
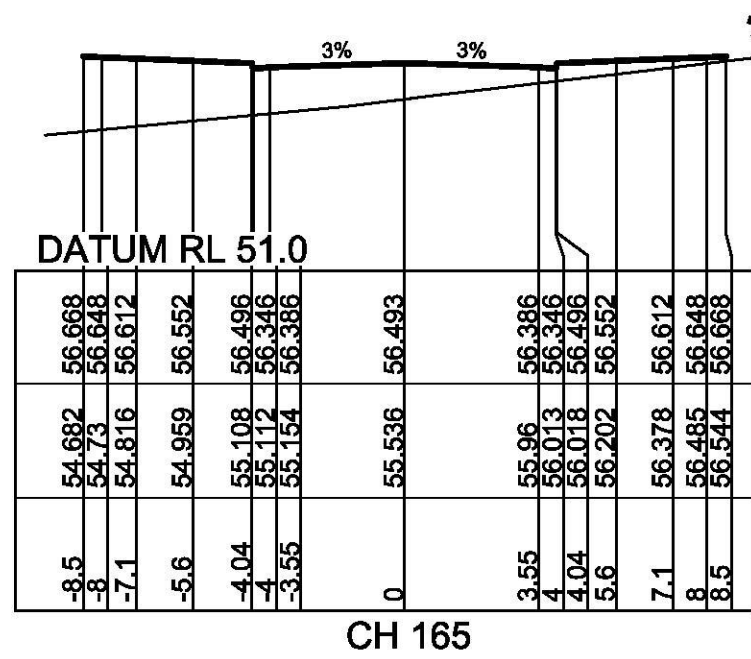
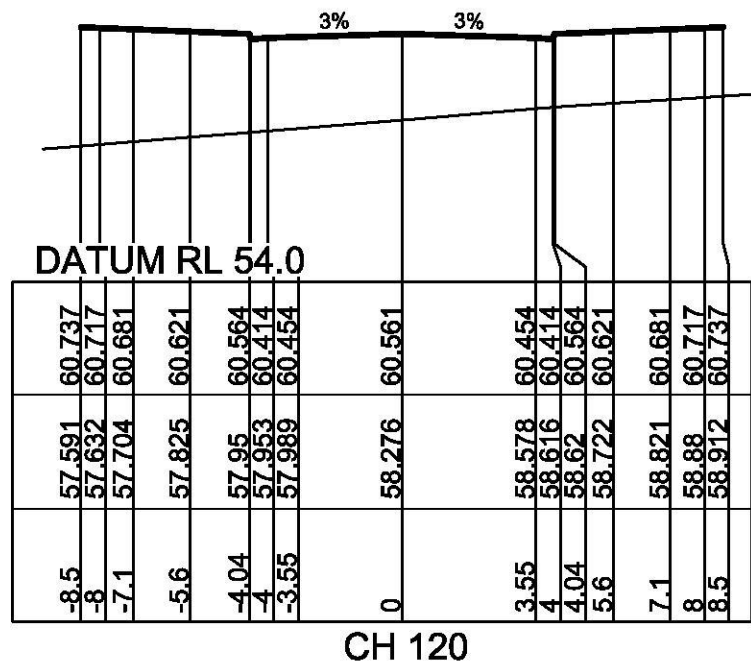
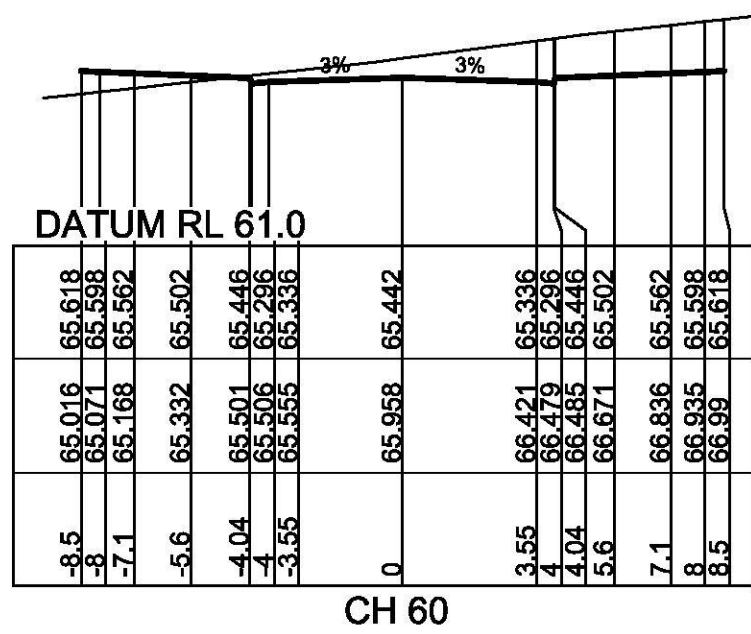
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ROAD LONGITUDINAL AND TYPICAL SECTION
SHEET 2

FILE No: 110358CC708

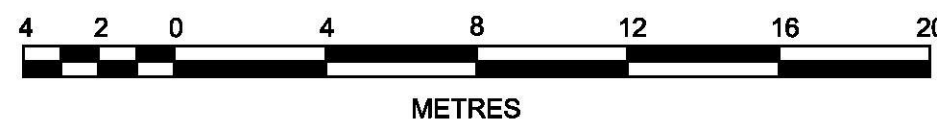
SHEET SIZE: A1 ORIGINAL

* NOTE
FOR LOT GRADING
REFER TO PLANS CC704



ROAD 18
(WEEMA STREET)

1:200 (AT A1)
1:400 (AT A3)



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DATUM:
A.H.D

ORIGIN:
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CLIENT:



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CADDENS HILL
STAGE 7
ROAD CROSS SECTIONS
SHEET 1

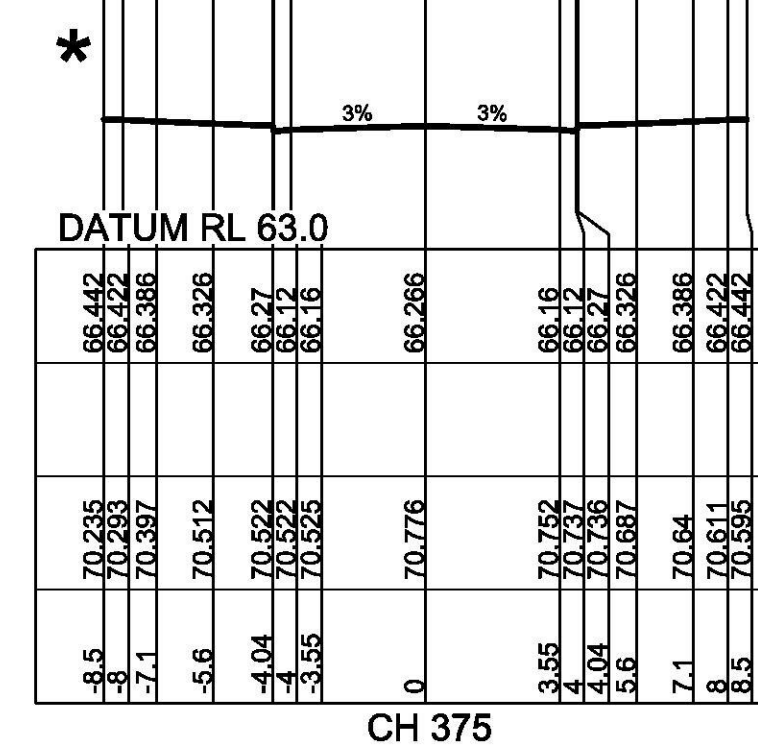
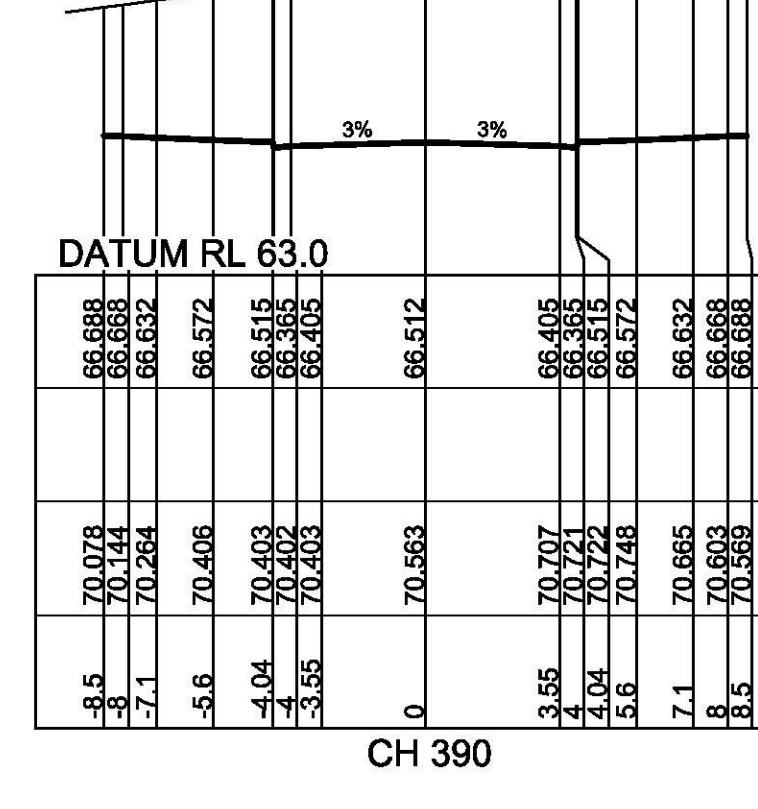
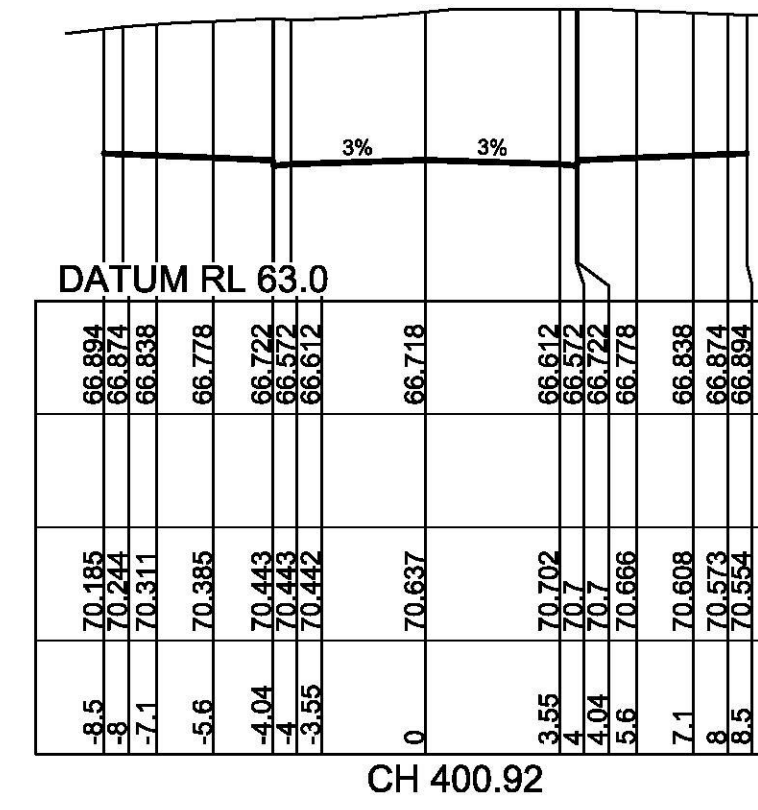
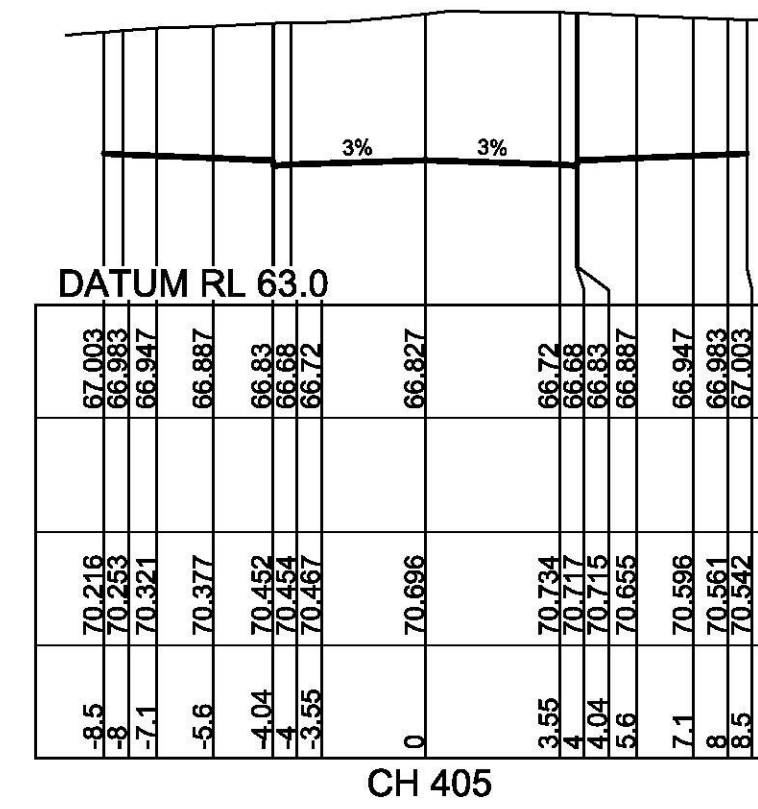
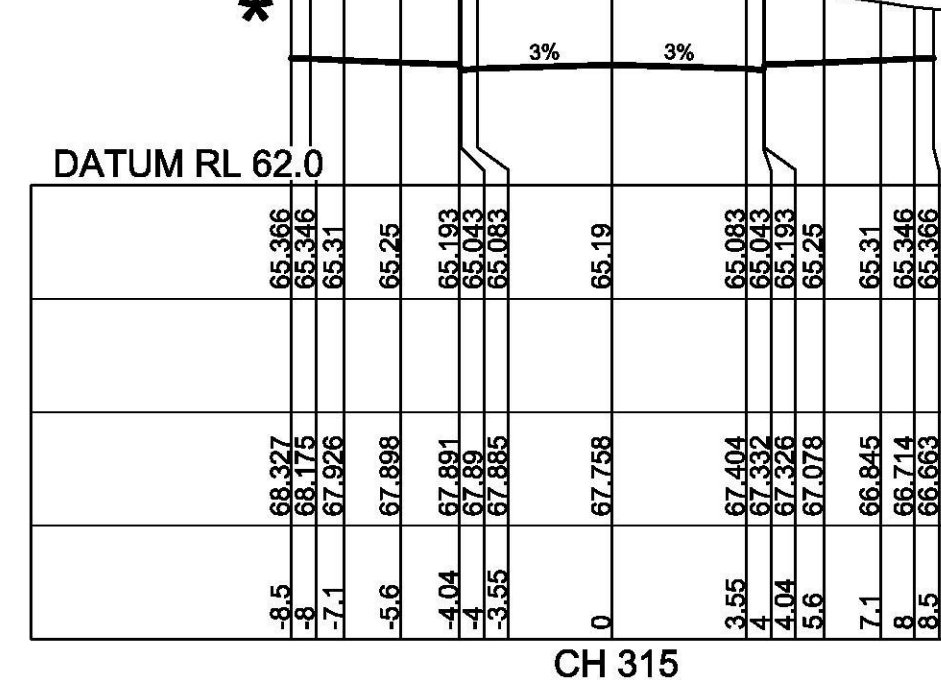
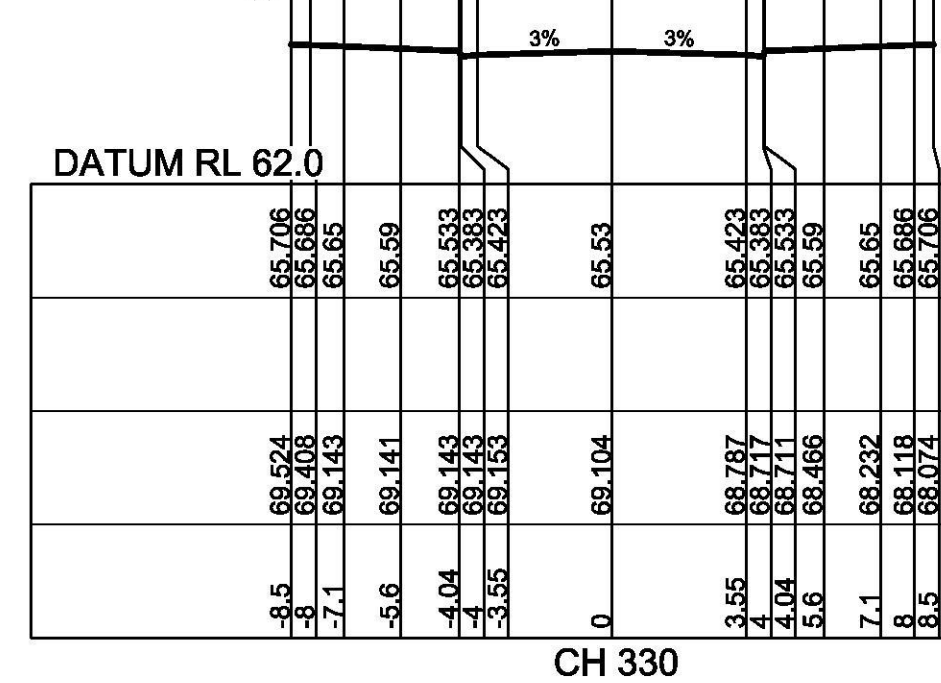
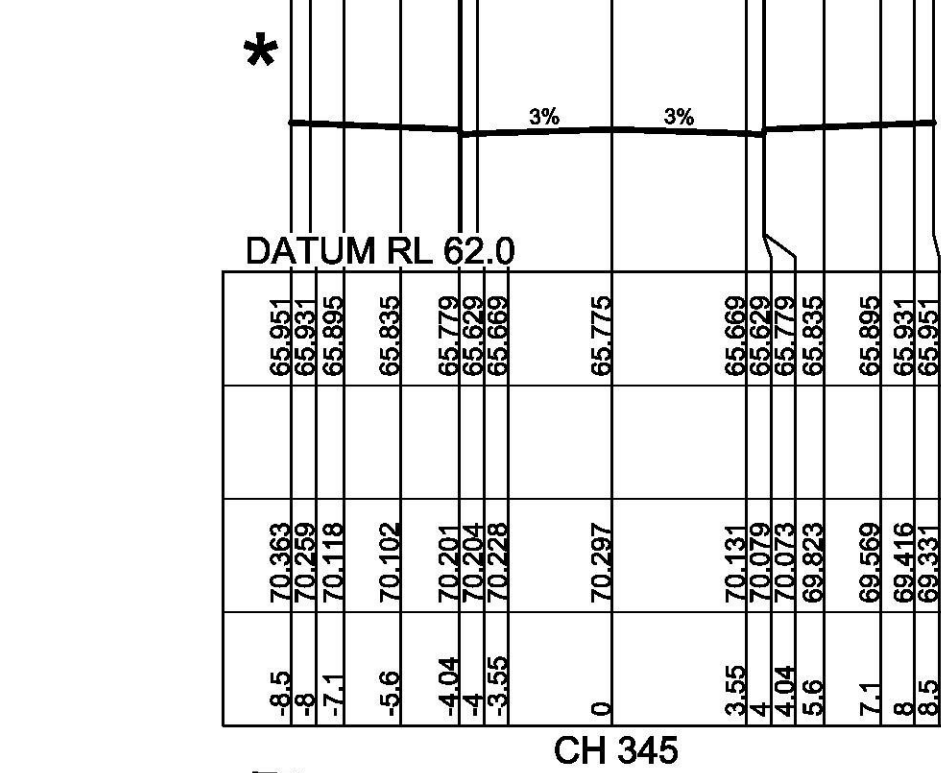
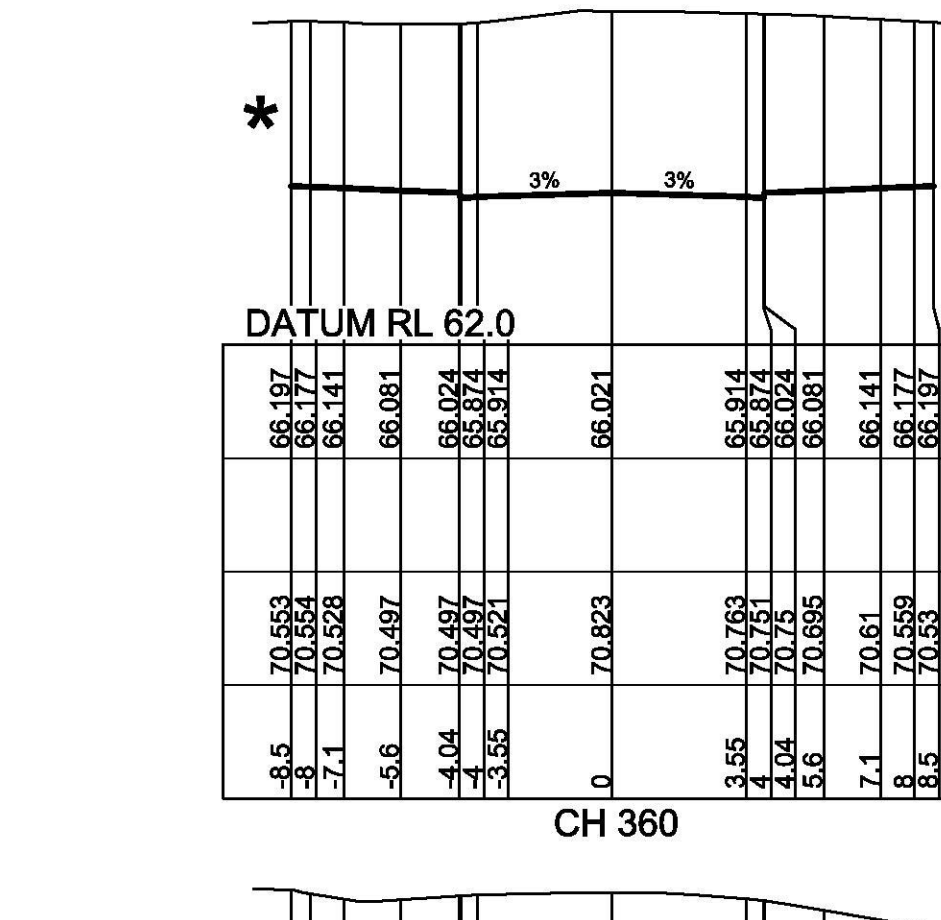
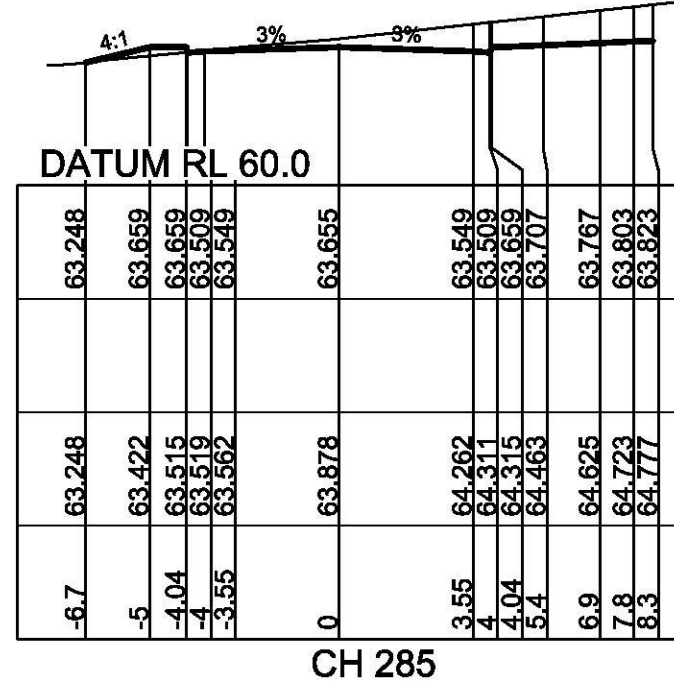
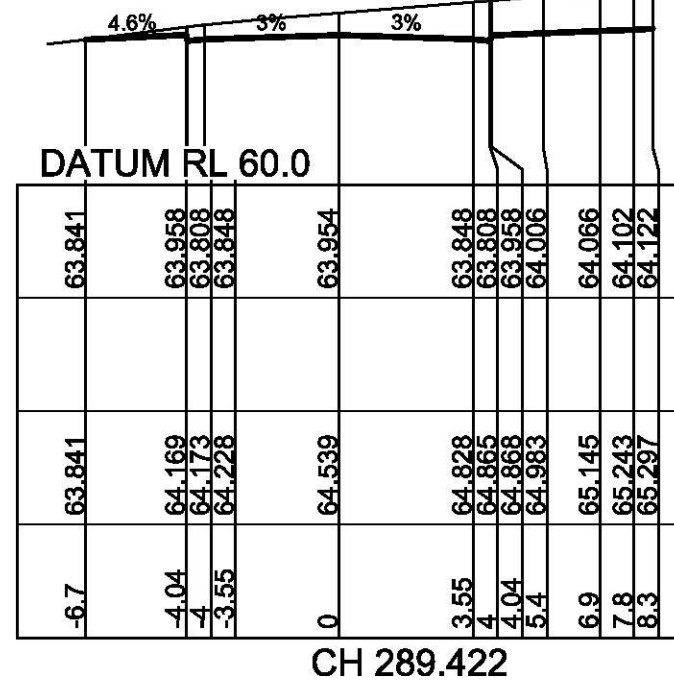
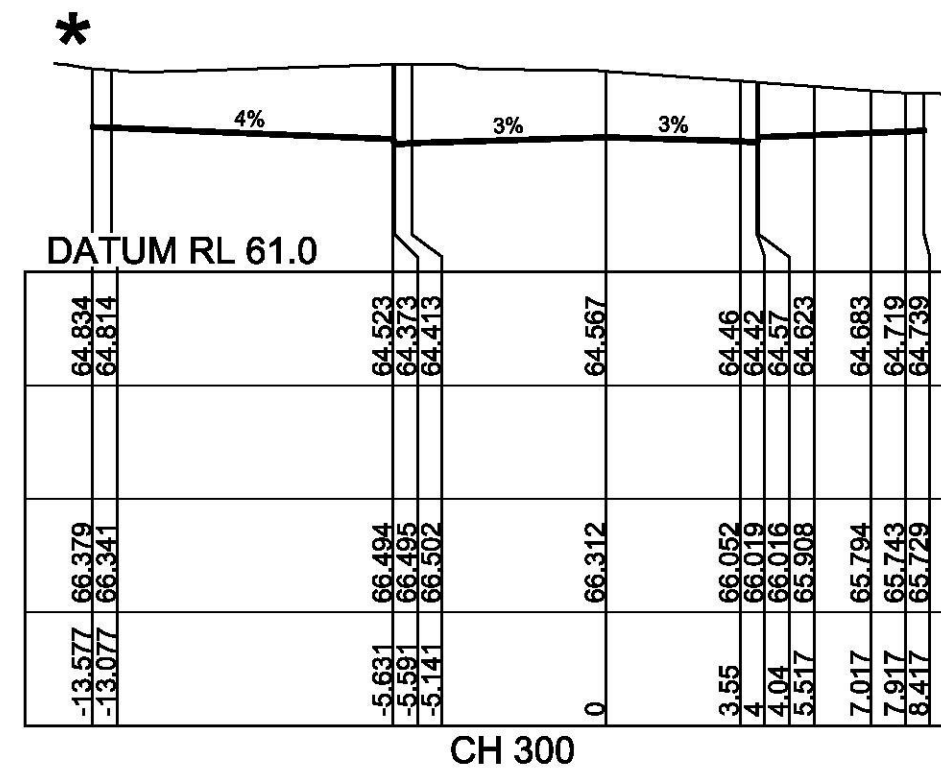
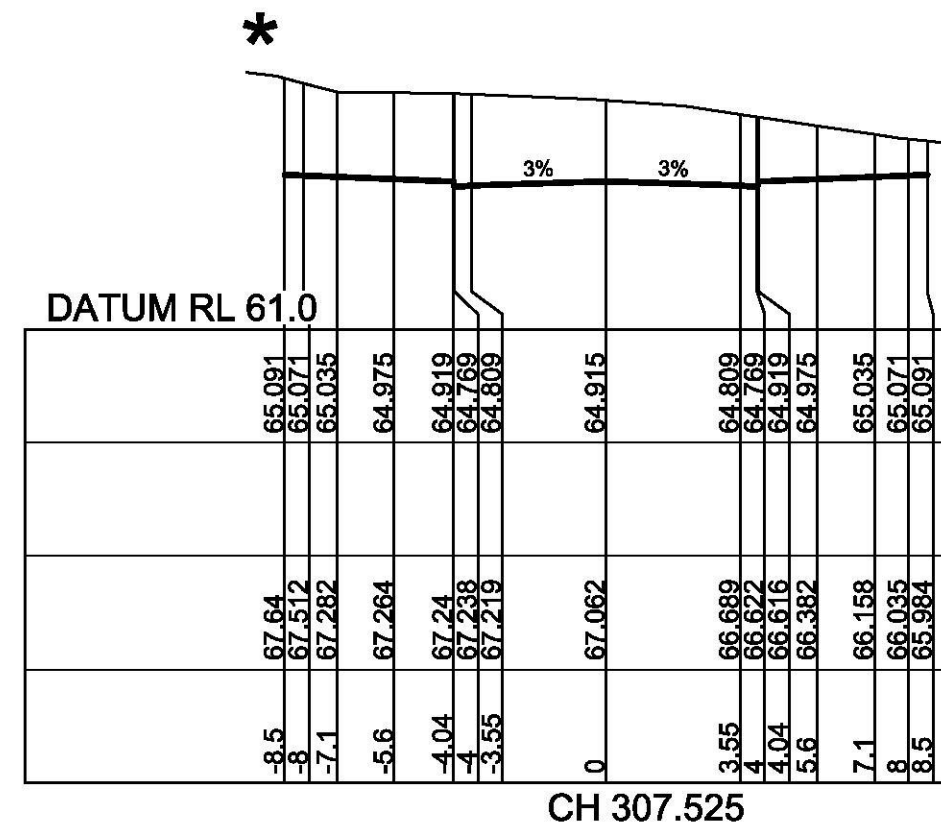
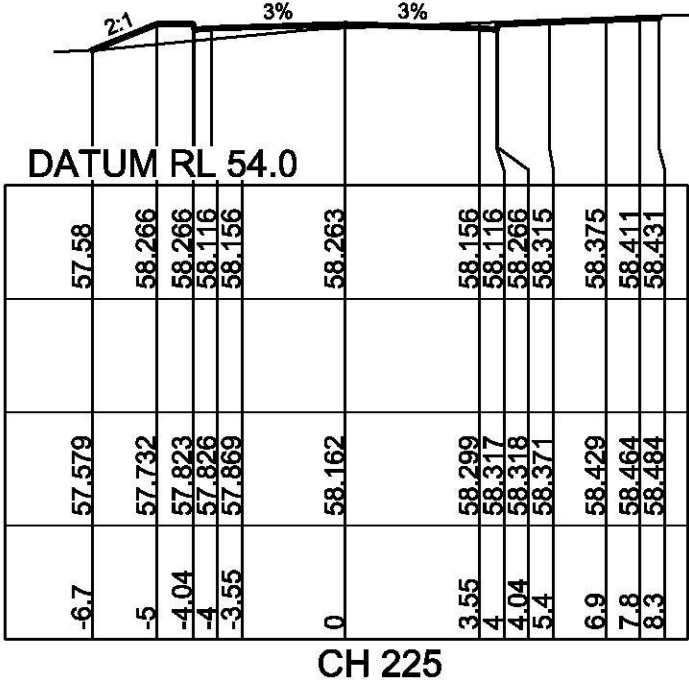
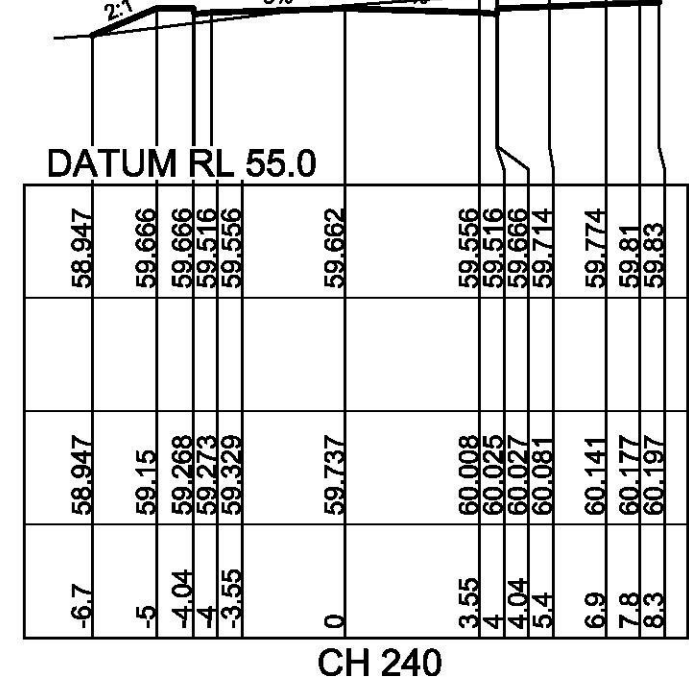
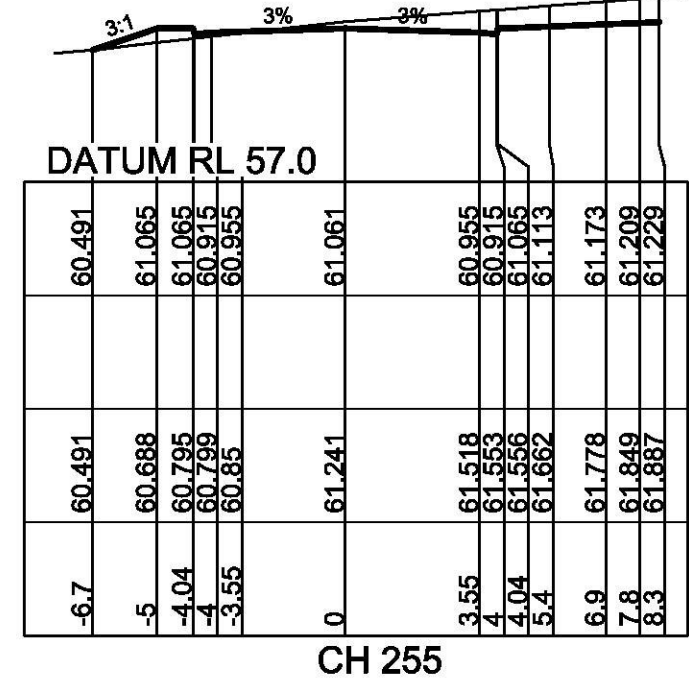
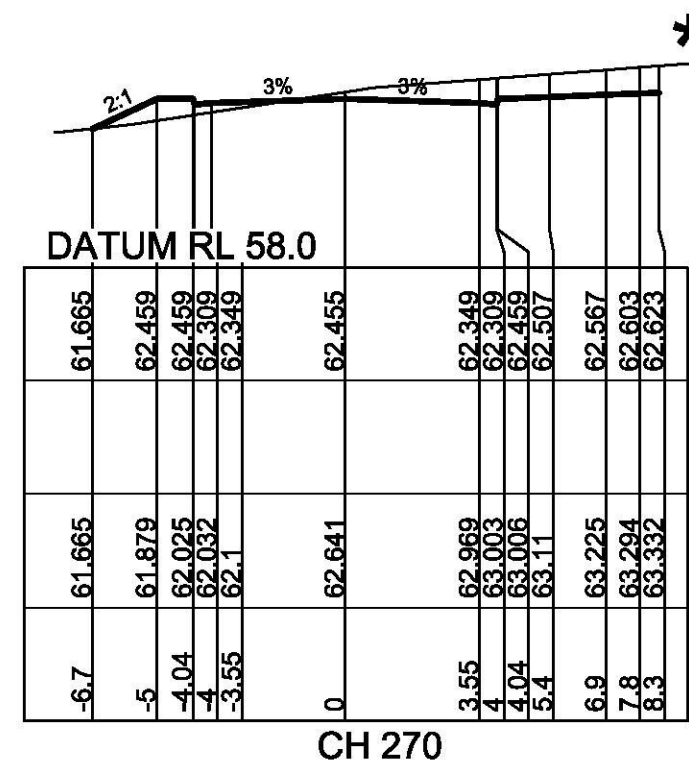
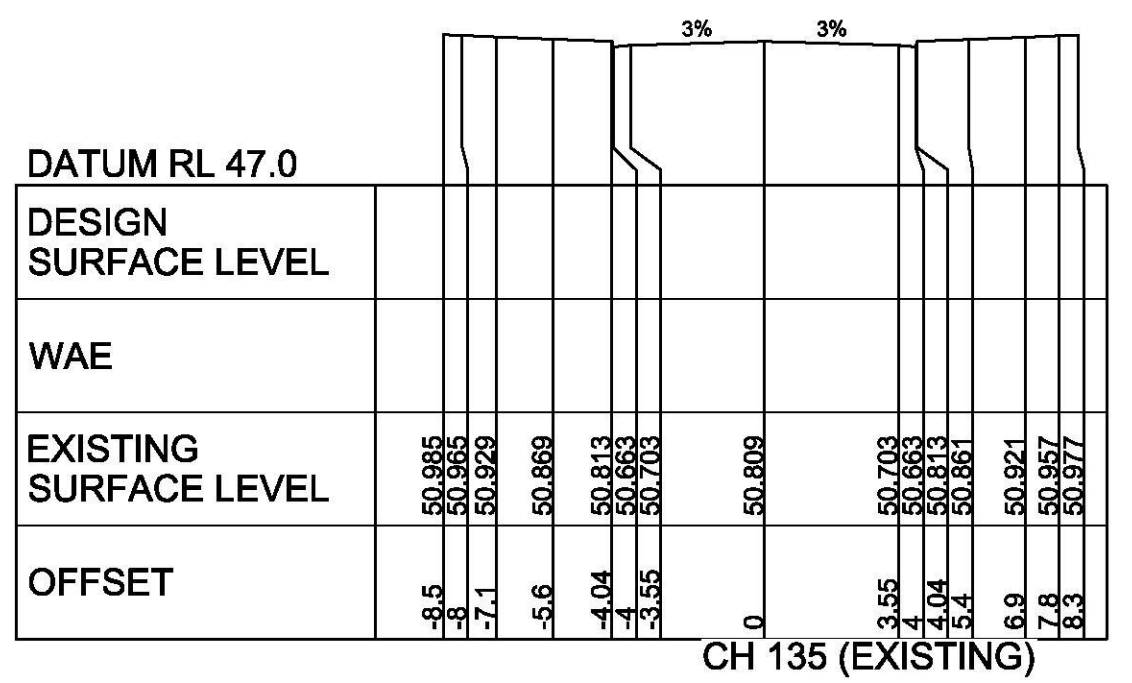
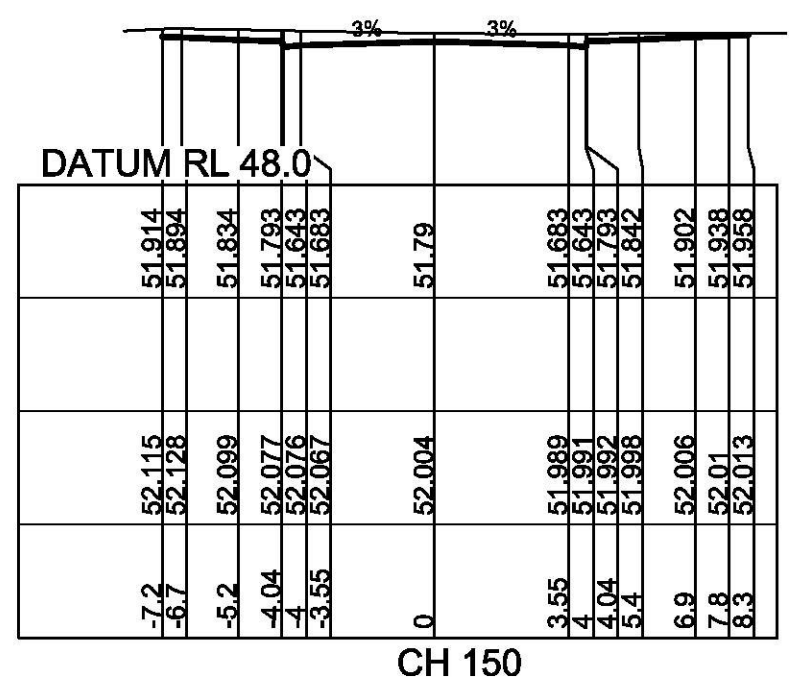
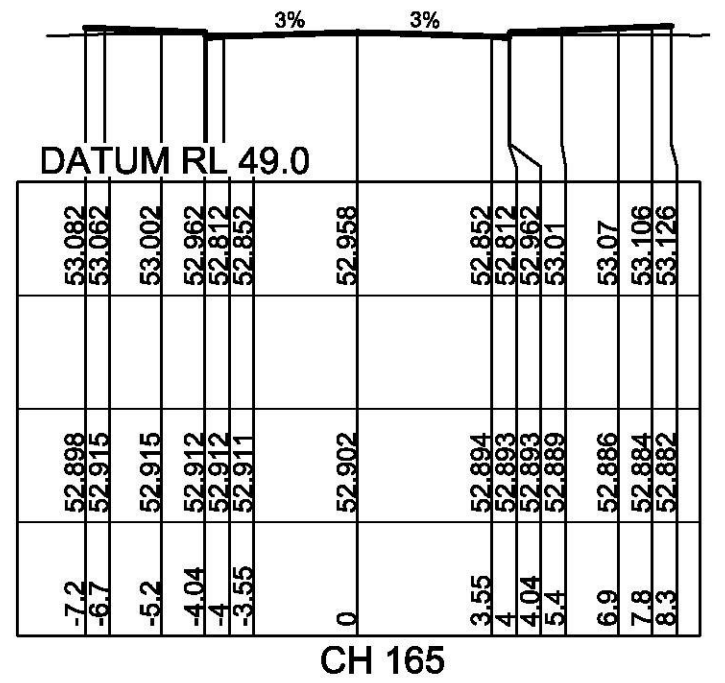
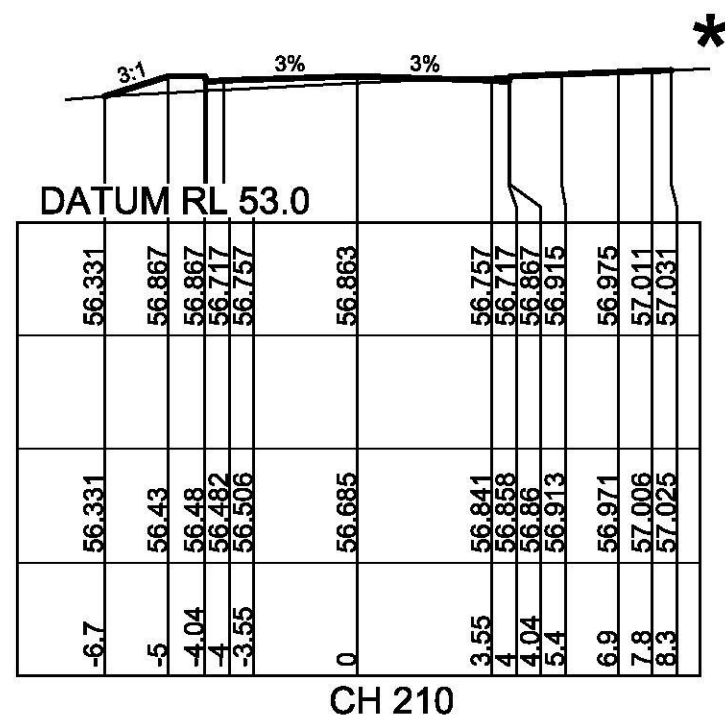
PLAN No:
110358/CC709

B

FILE No: 110358CC709

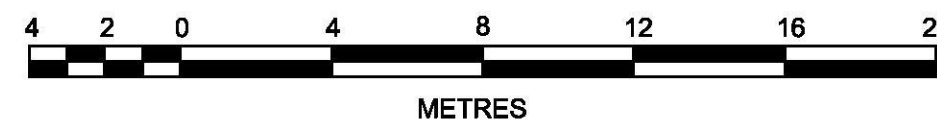
SHEET SIZE: A1 ORIGINAL

* NOTE
FOR LOT GRADING
REFER TO PLANS CC704



ROAD 19
(AVIUM DRIVE)

1:200 (AT A1)
1:400 (AT A3)



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DATUM:
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ORIGIN:
M.G.A.

CLIENT:



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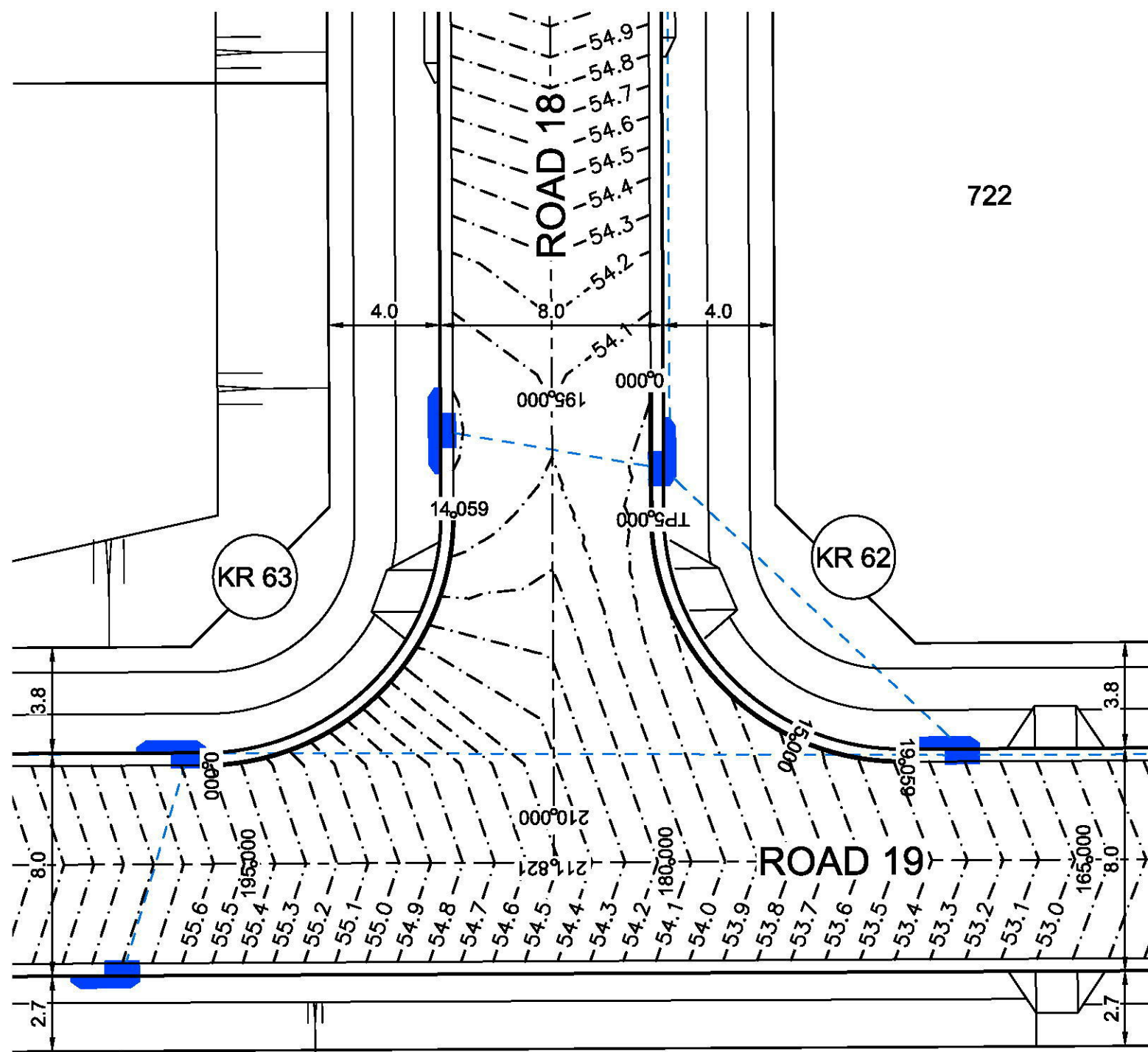
ISSUED FOR CONSTRUCTION APPROVAL

CADDENS HILL
STAGE 7
ROAD CROSS SECTIONS
SHEET 2

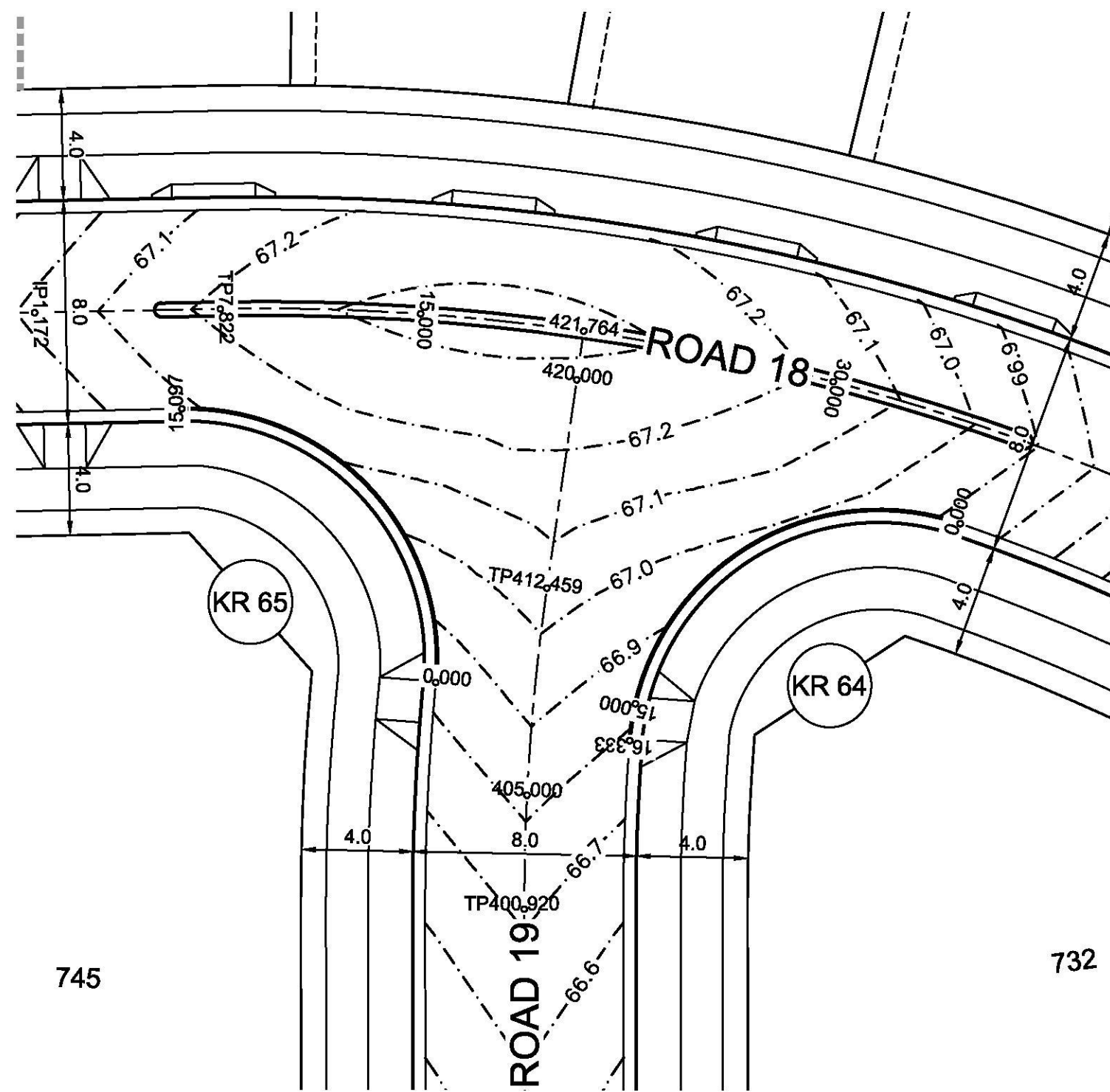
PLAN No:
110358/CC710 **B**

FILE No: 110358CC710

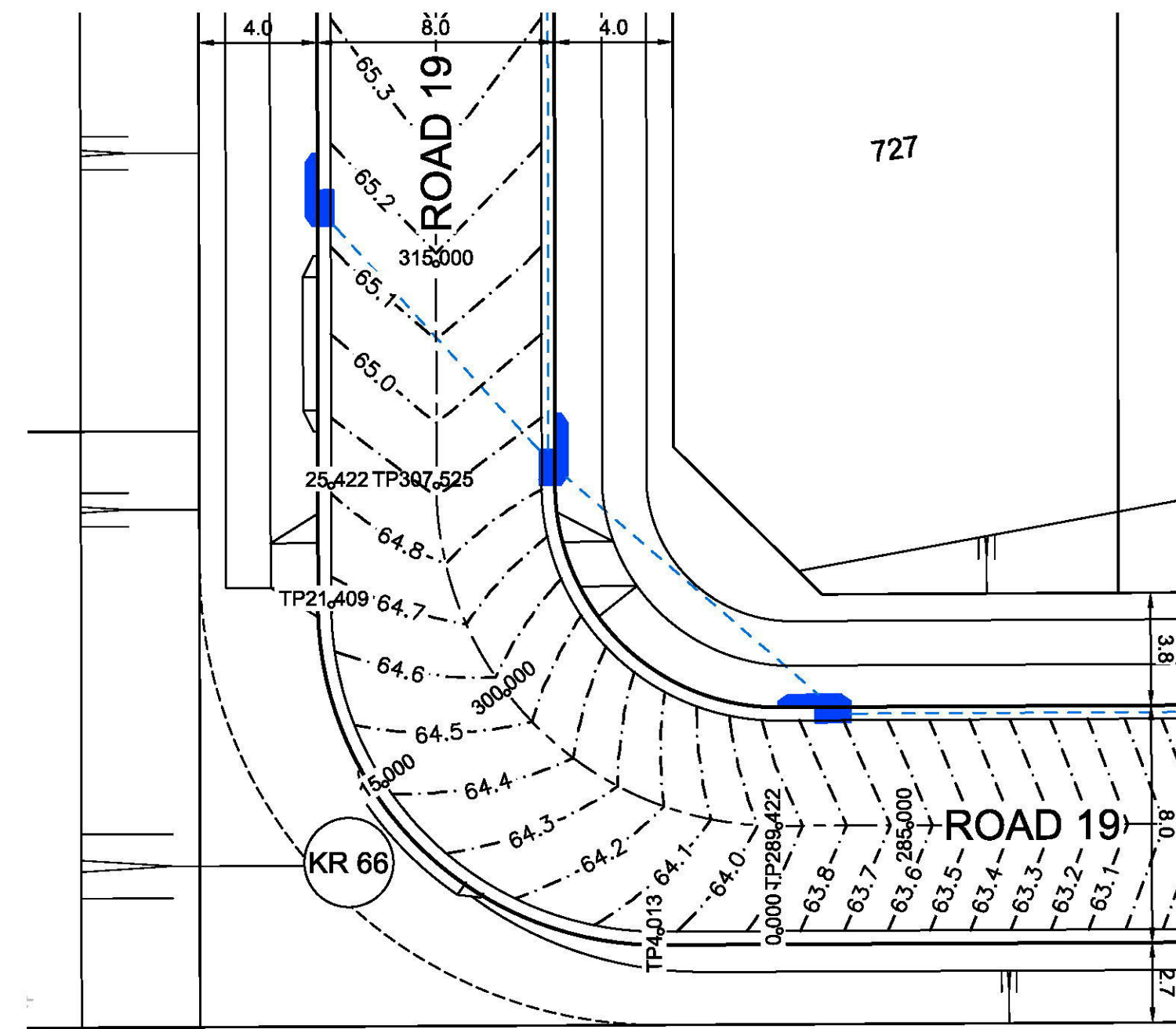
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PLAN
SCALE 1:200

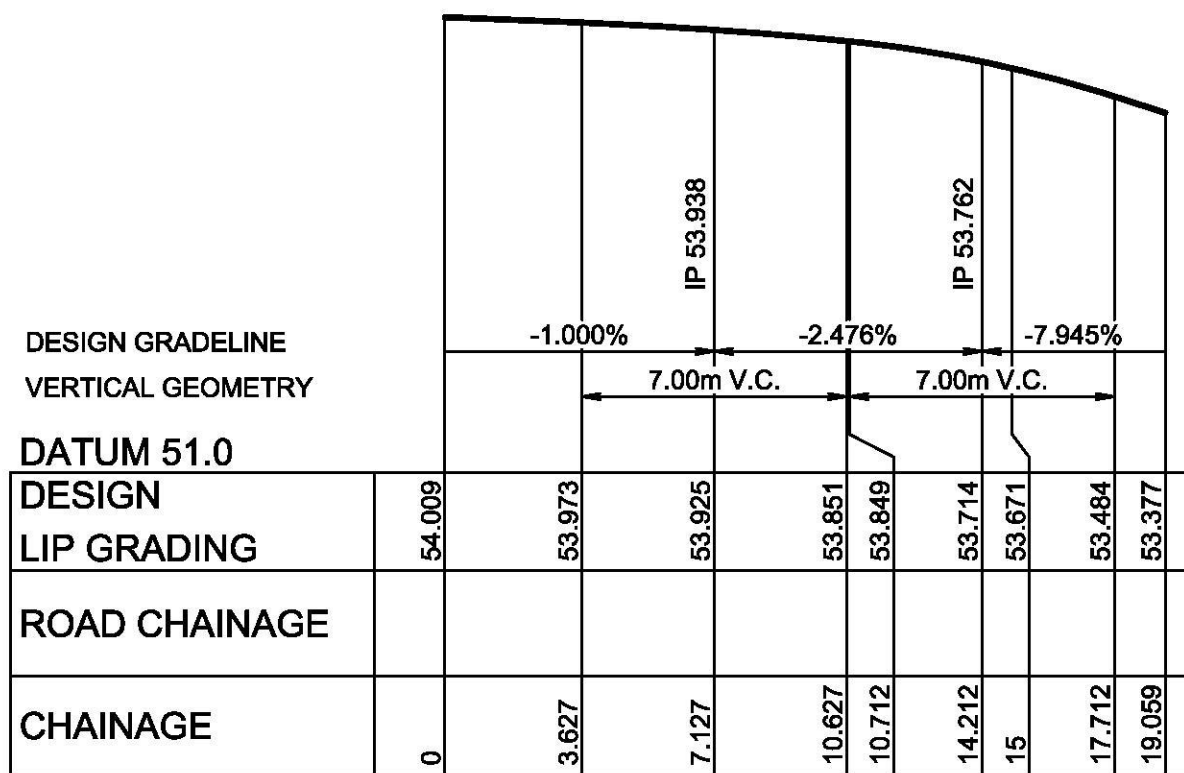


PLAN
SCALE 1:200



PLAN
SCALE 1:200

KR 66					
CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	290328.83	6260280.33	277°32'07.63"		
4.01	290324.85	6260280.86	277°32'07.63"		
12.71	290313.86	6260282.31		11.05	17.4
21.41	290315.35	6260293.3	7°43'58.81"		
25.42	290315.89	6260297.28	7°43'58.81"		

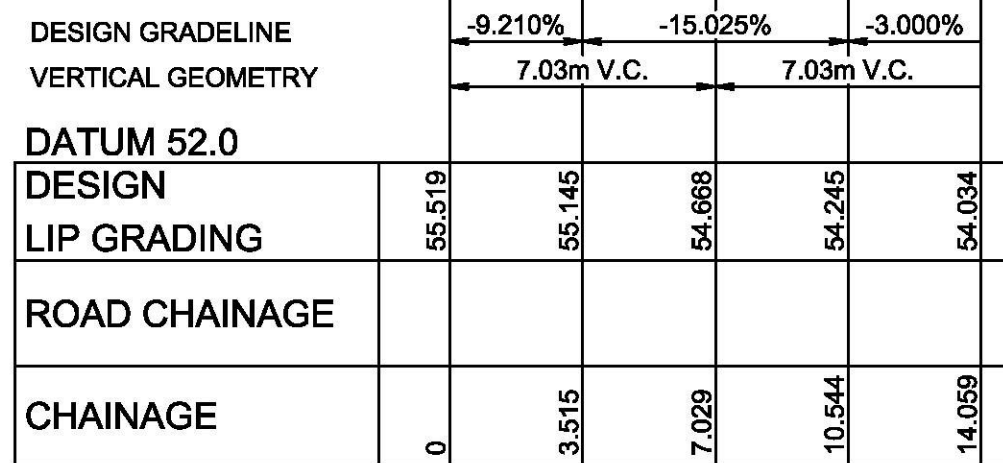
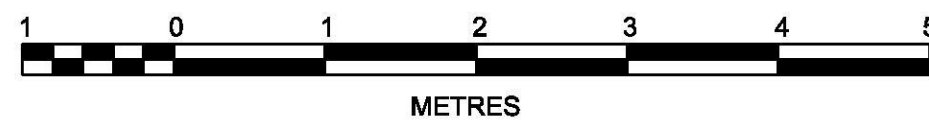


KR 62
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:50

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	290439.4	6260286.94	187°32'07.27"		
5	290438.75	6260281.98	187°32'07.27"		
12.03	290437.57	6260273.11		-8.95	14.06
19.06	290446.45	6260271.94	97°32'07.63"		

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	290421.66	6260275.22	97°32'07.63"		
7.03	290430.54	6260274.04		-8.95	14.06
14.06	290431.71	6260282.91	7°32'07.75"		

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

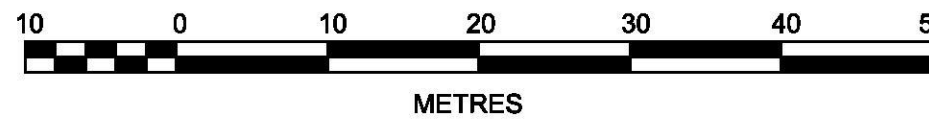


KR 63
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:50

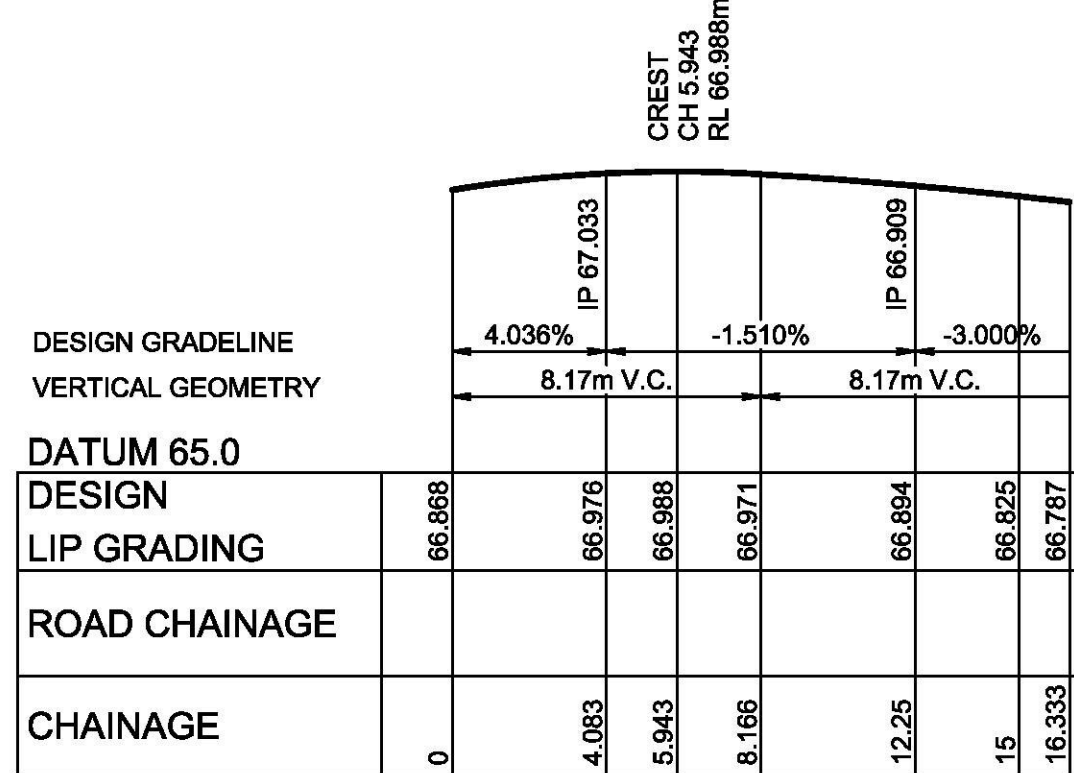
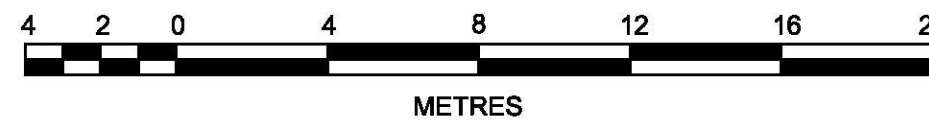
CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	55.519	55.145	-9.210%		
3.515	55.145	54.688	-15.025%		
7.029	54.688	54.245	-3.000%		
10.544	54.245	54.034			

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	55.519	55.145	-9.210%		
3.515	55.145	54.688	-15.025%		
7.029	54.688	54.245	-3.000%		
10.544	54.245	54.034			

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



1:200 (AT A1)
1:400 (AT A3)

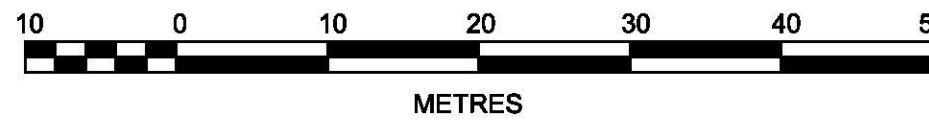


KR 64
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:50

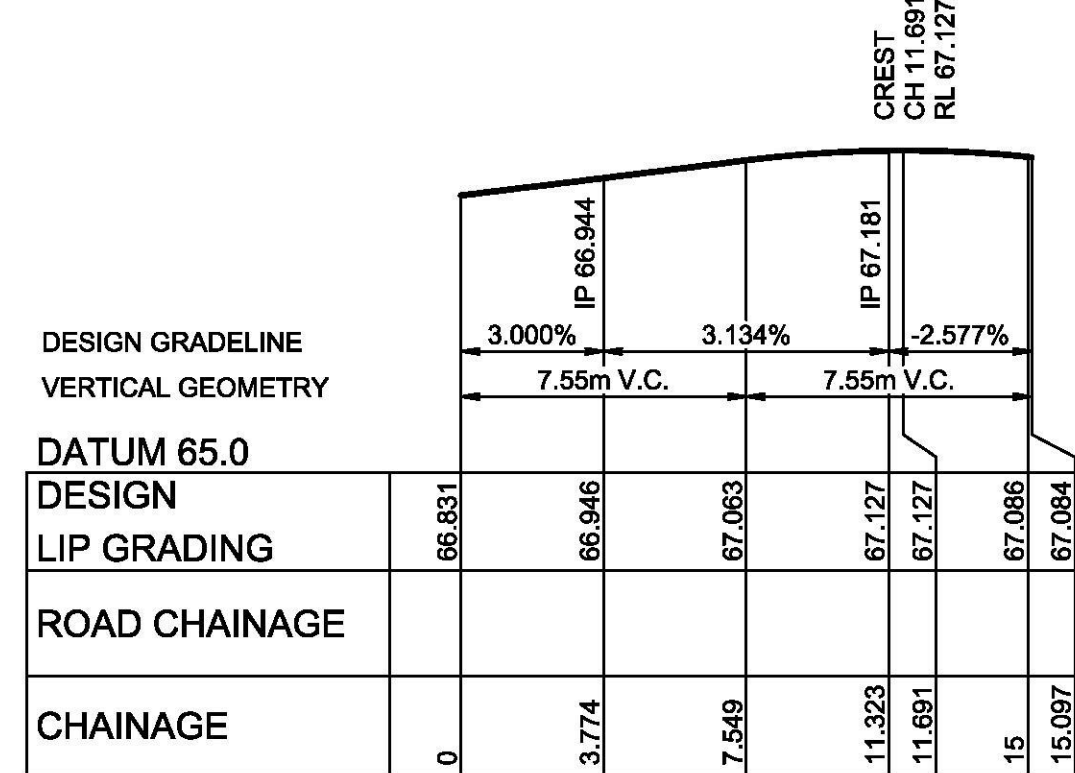
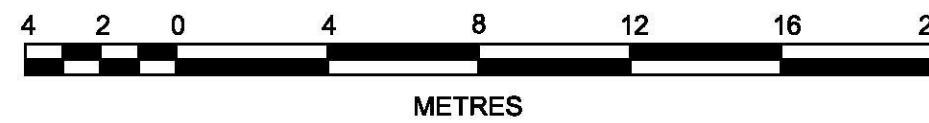
CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	290349.33	6260400.9	296°49'06.08"		
8.17	290339	6260406.12		-8.95	16.33
16.33	290336.54	6260394.81	192°15'32.52"		

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	290329.95	6260397.82	13°18'55.84"		
7.55	290332.26	6260407.61		-8.95	15.1
15.1	290322.28	6260408.78	276°40'03.71"		

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



1:200 (AT A1)
1:400 (AT A3)

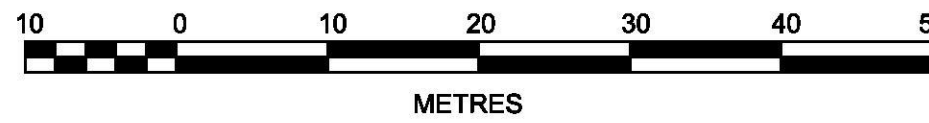


KR 65
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:50

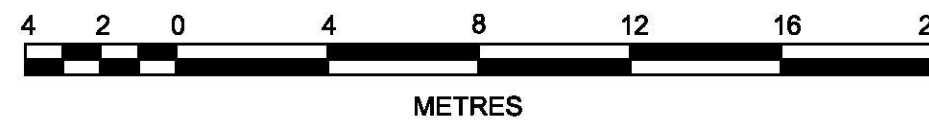
CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	290349.33	6260400.9	296°49'06.08"		
8.17	290339	6260406.12		-8.95	16.33
16.33	290336.54	6260394.81	192°15'32.52"		

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	290329.95	6260397.82	13°18'55.84"		
7.55	290332.26	6260407.61		-8.95	15.1
15.1	290322.28	6260408.78	276°40'03.71"		

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



1:200 (AT A1)
1:400 (AT A3)



Plotback: 7 March, 2019 2:24:51 PM File Name: J:\110358 - O'Connell Lane Caddens\08 - Stage 7\CD\CC110358CC711.dwg

B	ISSUE FOR APPROVAL	JT	JT	AM	MS	07/03/19
A	FIRST ISSUE	JT	NA/JA	AM	MS	11/12/18
	AMENDMENT	DES	DRN	CKD	APR	DATE

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CADDENS HILL
STAGE 7
KERB RETURNS

PLAN No:	110358/CC711	B
FILE No:	110358CC711	
SHEET SIZE:	A1 ORIGINAL	



B	ISSUE FOR APPROVAL	JT	JT	AM	MS
A	FIRST ISSUE	JT	NA/JA	AM	MS
	AMENDMENT	DES	DRN	CKD	APR
					DATE

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PIT SCHEDULE					
PIT	PIT	PIT	PIT	PIT	COMMENTS
NAME	TYPE	EASTING	NORTHING	DEPTH	
(-)	(-)	(m)	(m)	(m)	
44/1	1.8 m lintel	290470.196	6260261.18	1.993	
44/2	1.8 m lintel	290474.775	6260268.644	1.963	
70/1	1.8 m lintel	290325.733	6260373.089	1.564	
70/2	1.8 m lintel	290321.976	6260345.421	1.603	
70/3	1.8 m lintel	290328.217	6260331.923	1.61	
70/4	1.8 m lintel	290323.455	6260296.856	1.538	
70/5	1.8 m lintel	290331.645	6260287.575	1.729	
70/6	1.8 m lintel	290358.893	6260283.971	1.888	
70/7	1.8 m lintel	290388.608	6260280.041	1.913	
70/8	1.8 m lintel	290421.293	6260275.718	1.855	
70/9	1.8 m lintel	290448.656	6260272.099	1.899	
71/1	1.8 m lintel	290316.72	6260306.618	1.486	
72/1	1.8 m lintel	290354.26	6260276.514	1.505	
73/1	1.8 m lintel	290417.674	6260268.127	1.487	
75/1	1.8 m lintel	290373.6	6260393.4	1.507	
75/2	1.8 m lintel	290373.604	6260383.272	1.658	
75/3	1.8 m lintel	290406.165	6260358.014	1.509	
75/4	1.8 m lintel	290430.254	6260336.361	1.561	
75/5	1.8 m lintel	290435.069	6260311.744	1.633	
75/6	1.8 m lintel	290442.277	6260305.23	1.999	
75/7	1.8 m lintel	290439.406	6260283.525	1.923	
76/1	1.8 m lintel	290408.776	6260366.113	1.52	
77/1	1.8 m lintel	290431.88	6260347.424	1.577	
78/1	2.4 m lintel sag	290431.66	6260285.969	1.581	
BP 70/1	BYPASS NODE			1.1	
BP 70/2	BYPASS NODE			1.444	
BP 71/1	BYPASS NODE			1.1	
BP 71/2	BYPASS NODE			1.488	
BP 72/1	BYPASS NODE			1.182	
BP 72/2	BYPASS NODE			1.609	
BP 73/1	BYPASS NODE			1.1	
BP 73/2	BYPASS NODE			1.444	
T/1	GSIP 600x600 IAD			0.77	
T/2	GSIP 600x600 IAD			0.8	
T/3	GSIP 600x600 IAD			0.859	
T/4	GSIP 600x600 IAD			0.896	
T/5	GSIP 600x900 IAD			0.942	
T/6	JP			2.171	DROP PIT
U/1	GSIP 600x600 IAD			0.827	
U/2	GSIP 600x900 IAD			0.901	
U/3	GSIP 600x600 IAD			2.159	DROP PIT
V/1	GSIP 600x600 IAD			0.87	
V/2	GSIP 600x600 IAD			0.869	
V/3	GSIP 600x900 IAD			0.999	
V/4	GSIP 600x900 IAD			1.005	
V/5	GSIP 600x600 IAD			2.201	DROP PIT
W/1	GSIP 600x600 IAD			0.775	
W/2	GSIP 600x600 IAD			0.825	
W/3	GSIP 600x600 IAD			0.855	
W/4	GSIP 600x600 IAD			1.893	DROP PIT
W/5	GSIP 600x600 IAD			1.803	DROP PIT
W/6	GSIP 600x600 IAD			1.881	DROP PIT
W/7	JP			0.955	
W/8	JP			0.982	
W/9	GSIP 600x600 IAD			1.848	DROP PIT
W/10	JP			1.285	
X/1	GSIP 600x600 IAD			0.75	

NOTES:
ALL GRATED PIT COVERS IN ROADS ARE TO BE BICYCLE SAFE.

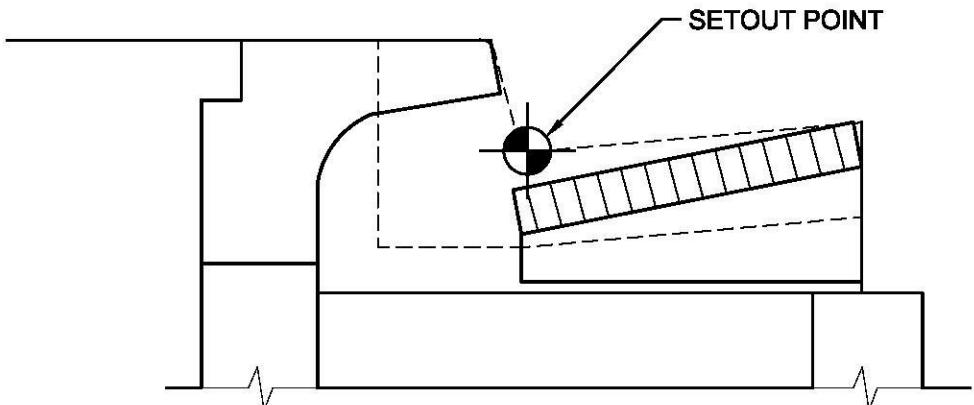
ALL SAG PITS TO HAVE SLOTTED GRATES TO CONFORM TO WELDLCK GGSB95SD OR EQUIVALENT REFER PENRTH CITY COUNCIL CONSTRUCTION SPEC SECTION 6.8 ROAD DRAINAGE PITS

ALL PITS <2m DEEP REFER TO PENRITH CITY COUNCIL STANDARD PIT DRAWINGS SD 2002.

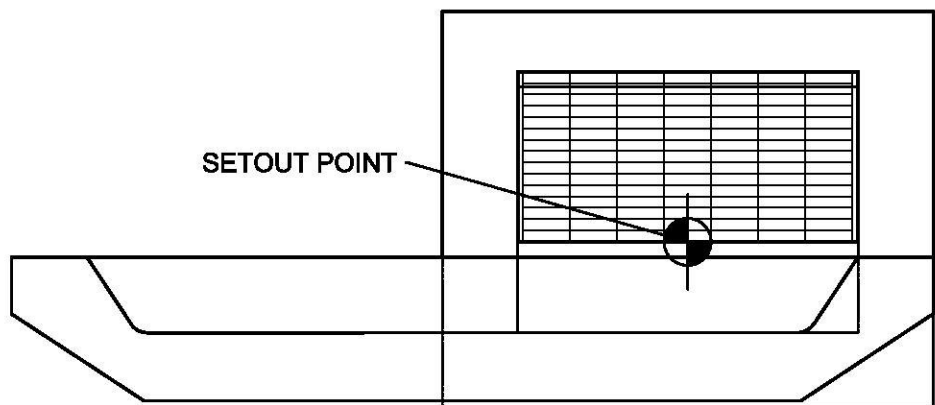
ANY INTER-ALLOTMENT PIT GREATER THAN 900mm DEEP SHALL HAVE A CONCRETE LID REFER PCC CONSTRUCTION SPEC SECTION 6.7.

ALL JUNCTION PITS SHALL HAVE A CONCRETE LID

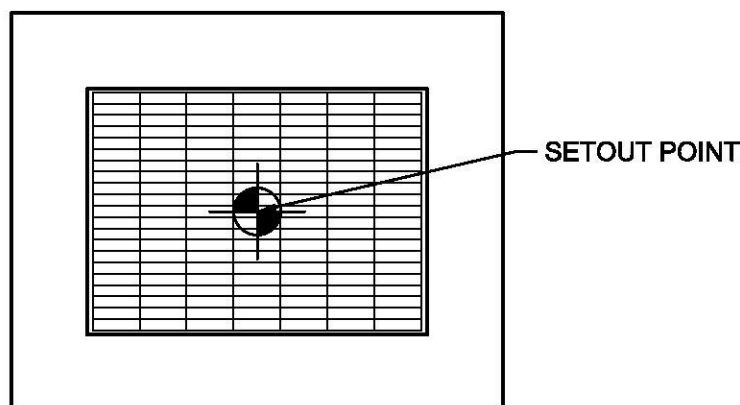
FOR PITS >2m SHALL BE STRUCTURALLY CERTIFIED



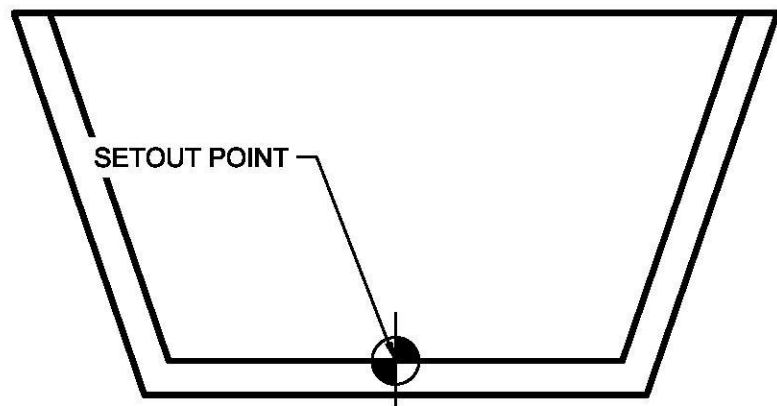
SETOUT DETAIL KERB INLET PIT (LINTEL)
SCALE 1:10



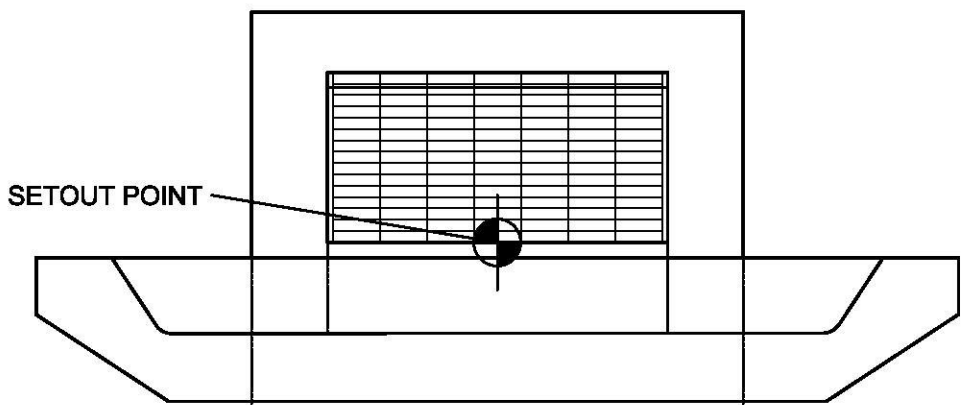
SETOUT DETAIL KERB INLET PIT (LINTEL)
SCALE 1:20



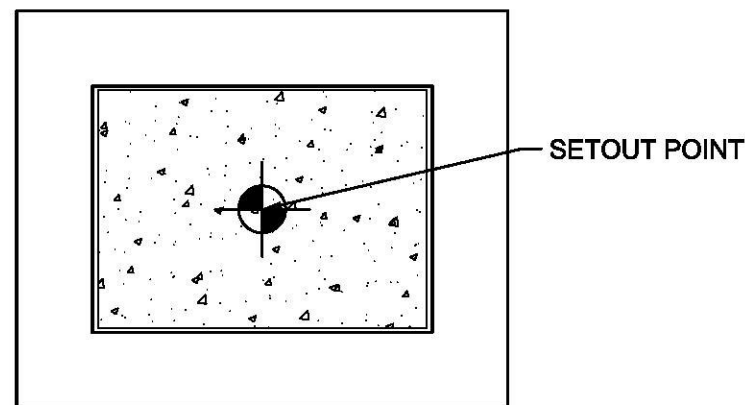
GRATED SURFACE INLET PIT (GSIP)
SCALE 1:20



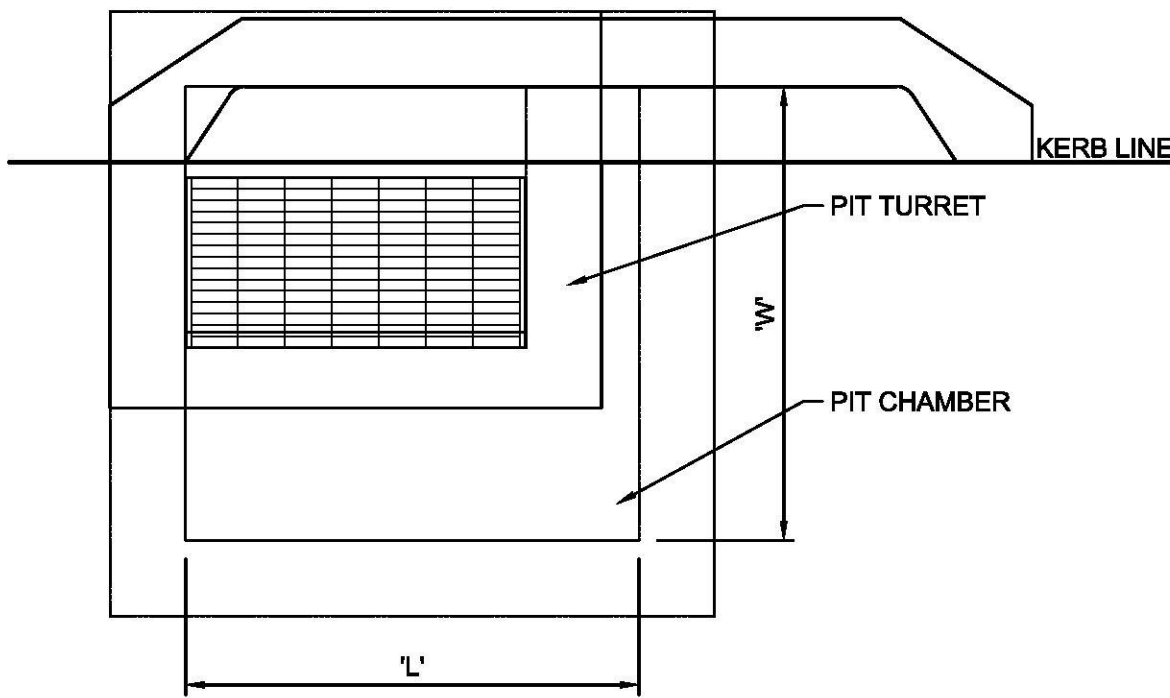
SETOUT DETAIL HEADWALL
SCALE 1:20



SETOUT DETAIL KERB INLET PIT (SAG)
(LINTEL CENTERED UNLESS NOTED ON PLAN)
SCALE 1:20



IAD - JUNCTION PIT (JP)
SCALE 1:20



PIT CHAMBER DIMENSION (TYPICAL)
SCALE 1:20



B	ISSUE FOR APPROVAL	JT	JT	AM	MS	07/03/19			
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	AMENDMENT	DES	DRN	CKD	APR	DATE			

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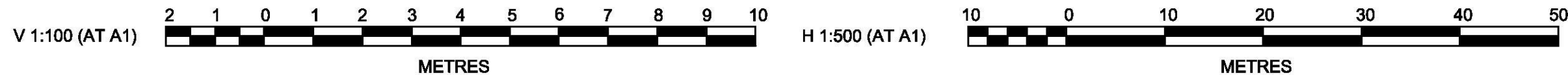
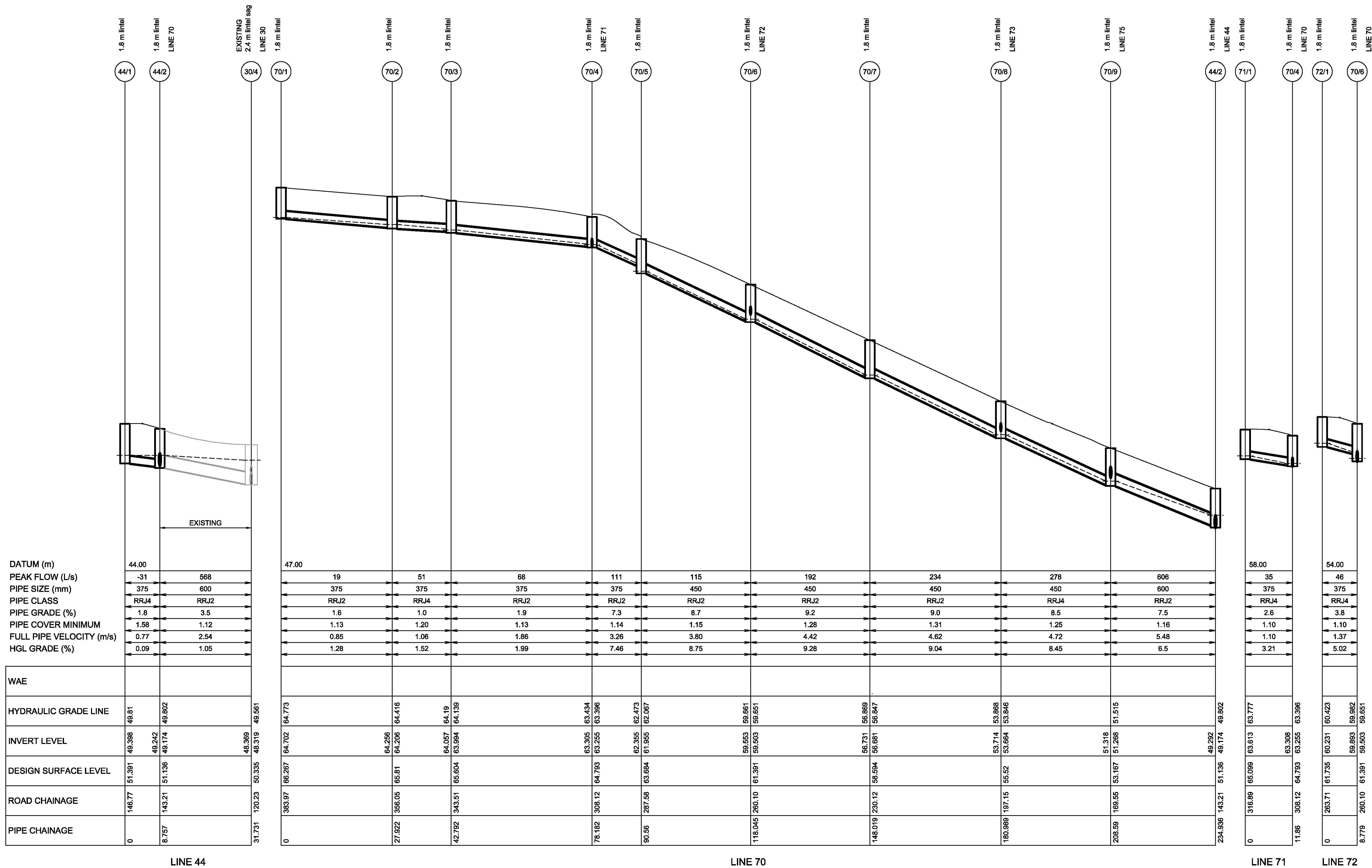
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CADDENS HILL
STAGE 7
PIT SCHEDULE AND DETAILS

PLAN No:	110358/CC713	B
FILE No:	110358CC713	
SHEET SIZE:	A1 ORIGINAL	

DRAINAGE PIPE SYSTEM CATERS FOR 20% AEP UNLESS OTHERWISE NOTED



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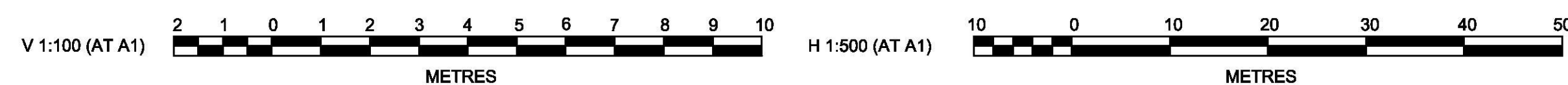
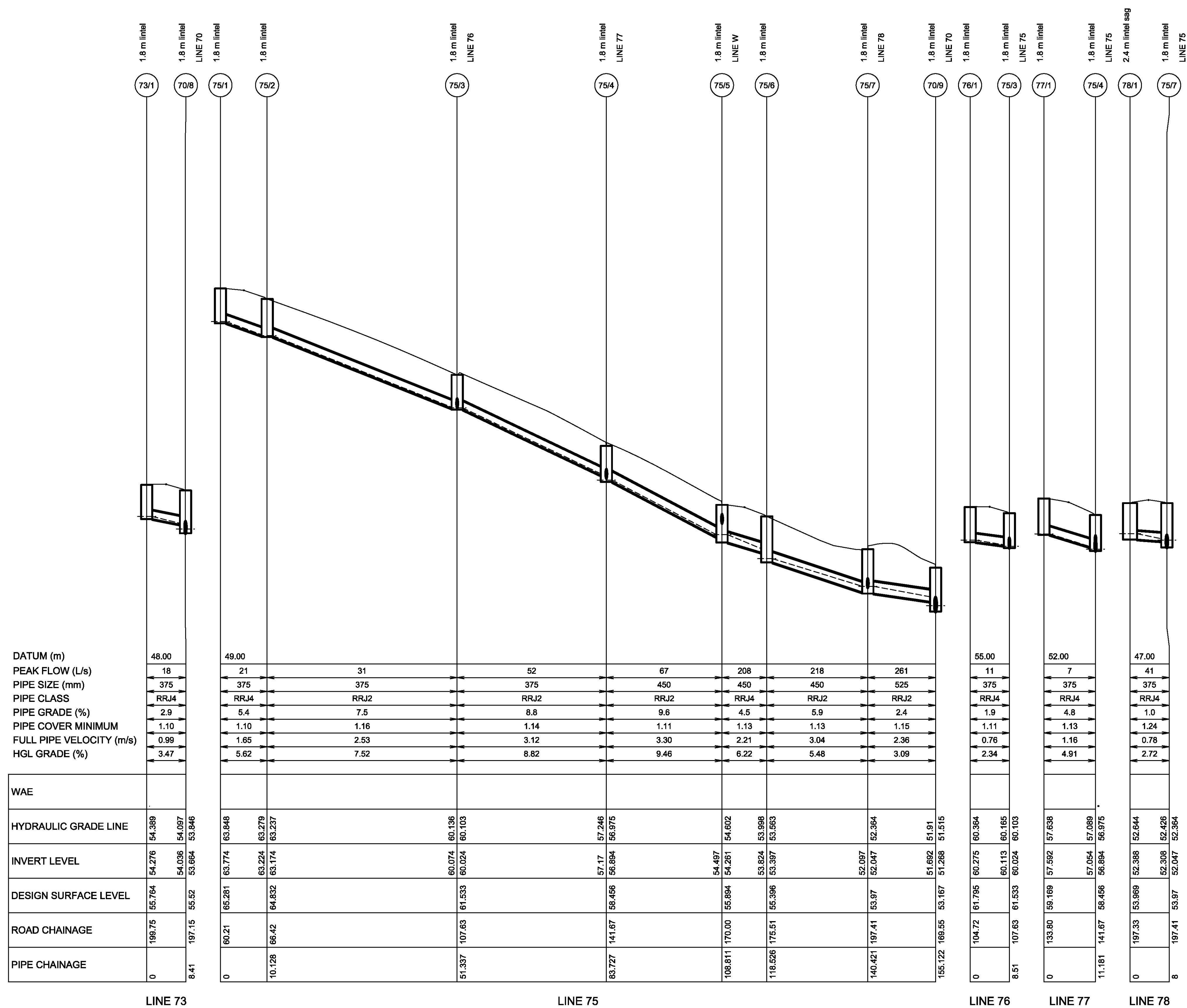


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**CADDENS HILL
STAGE 7
DRAINAGE LONGITUDINAL SECTIONS
SHEET 1**

PLAN No: **110358/CC714** **B**
FILE No: 110358CC714
SHEET SIZE: A1 ORIGINAL



B	ISSUE FOR APPROVAL	JT	JT	AM	MS	07/03/11
A	FIRST ISSUE	JT	NA/JA	AK	MS	11/12/11
	AMENDMENT	DES	DRN	CKD	APR	DATE

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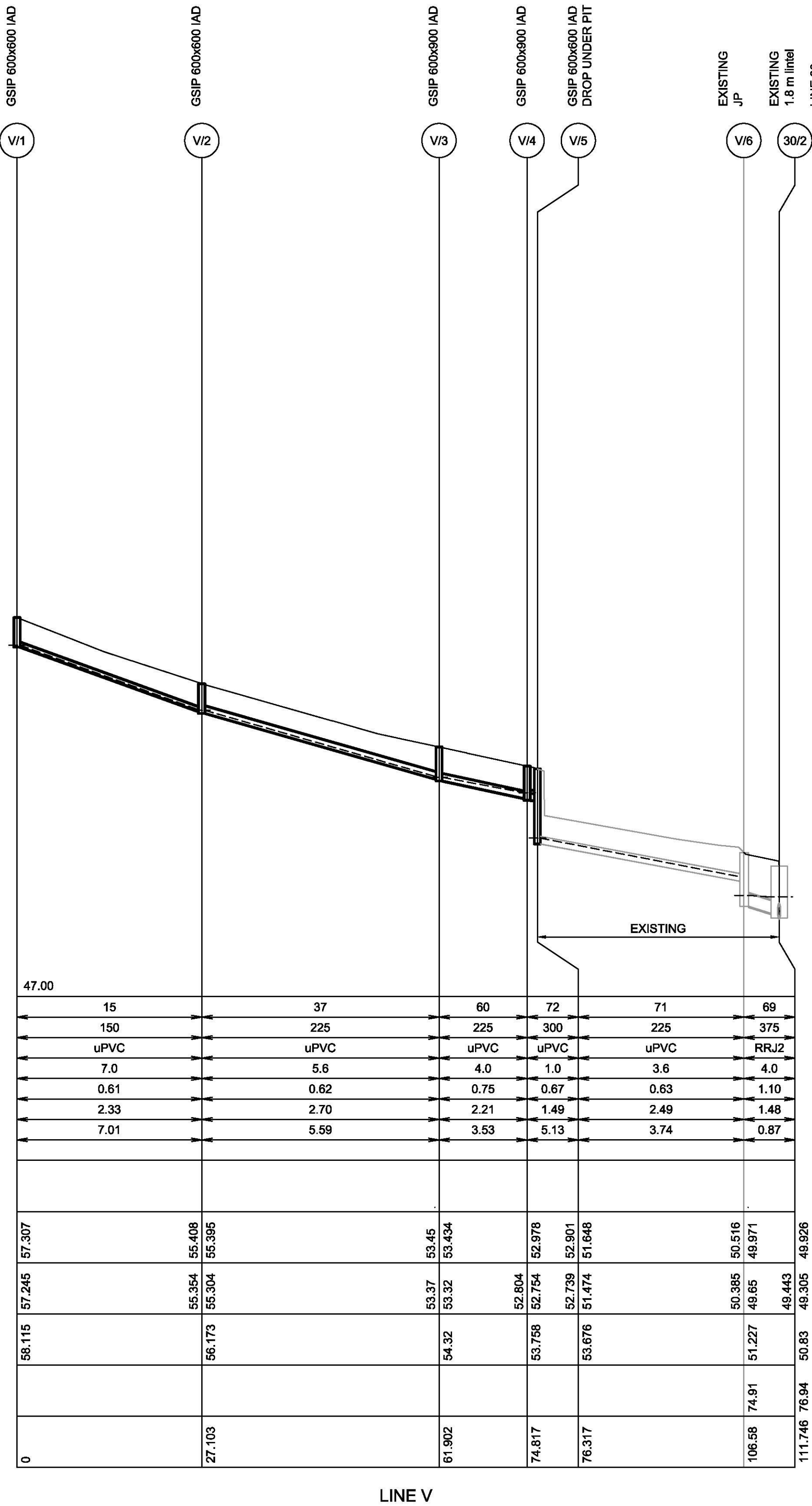
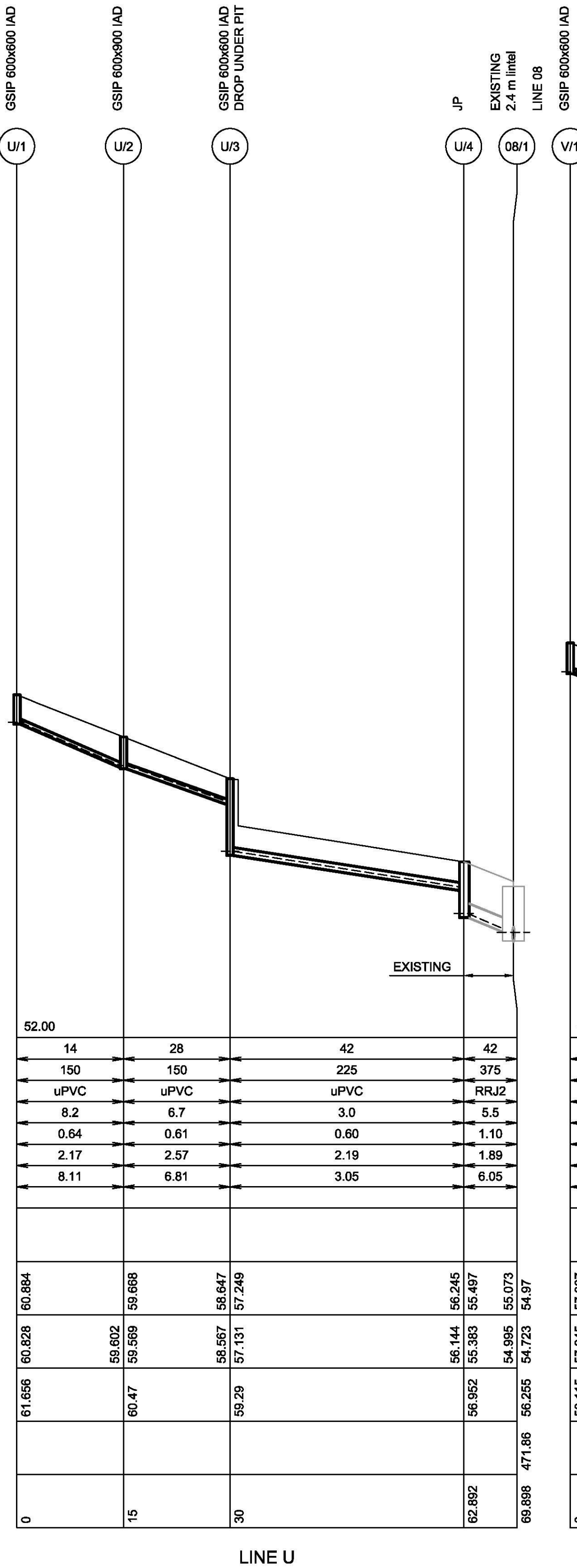
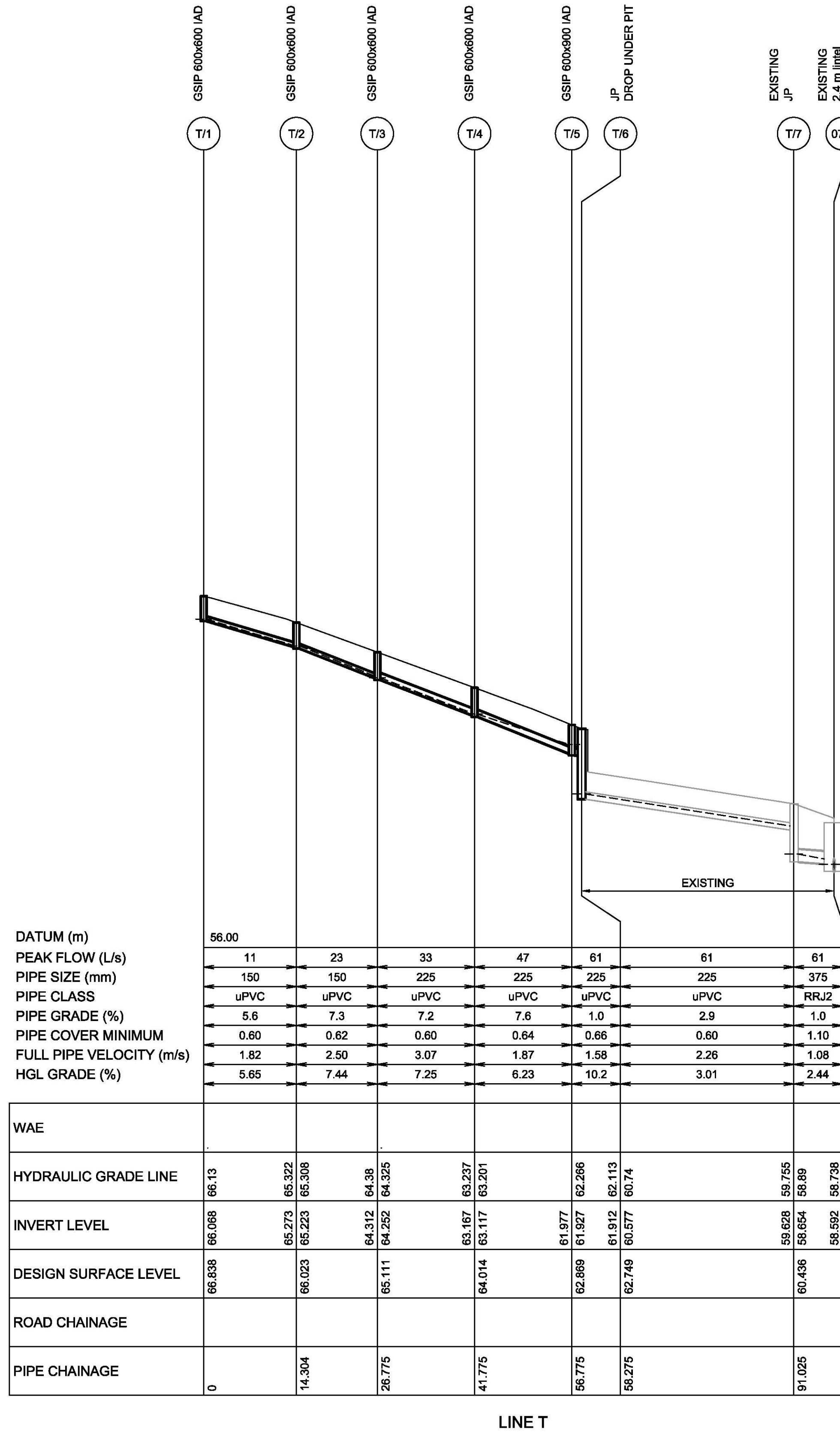
CADDENS HILL
STAGE 7
DRAINAGE LONGITUDINAL SECTIONS
SHEET 2

PLAN No:
110358/CC715

FILE No: 110358CC715

SHEET SIZE: A1 ORIGINAL

DRAINAGE PIPE SYSTEM CATERS FOR 20% AEP UNLESS OTHERWISE NOTED



V 1:100 (AT A1)

H 1:500 (AT A1)

B	ISSUE FOR APPROVAL	JT	JT	AM	MS	07/03/19
A	FIRST ISSUE	JT	NA/JA	AM	MS	11/12/18
	AMENDMENT	DES	DRN	CKD	APR	DATE

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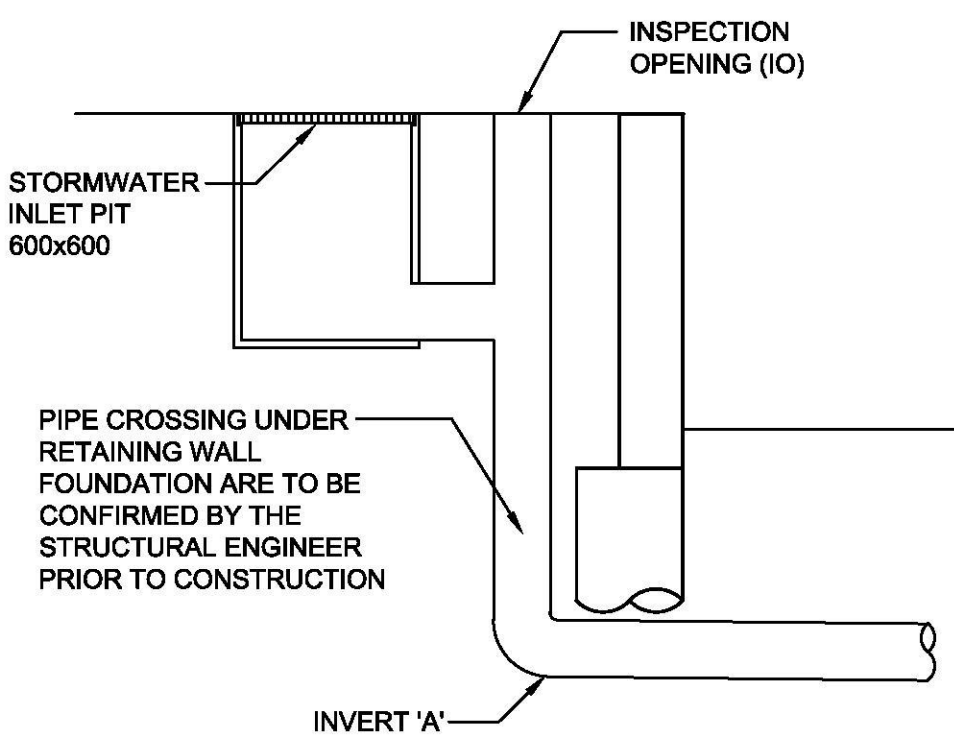
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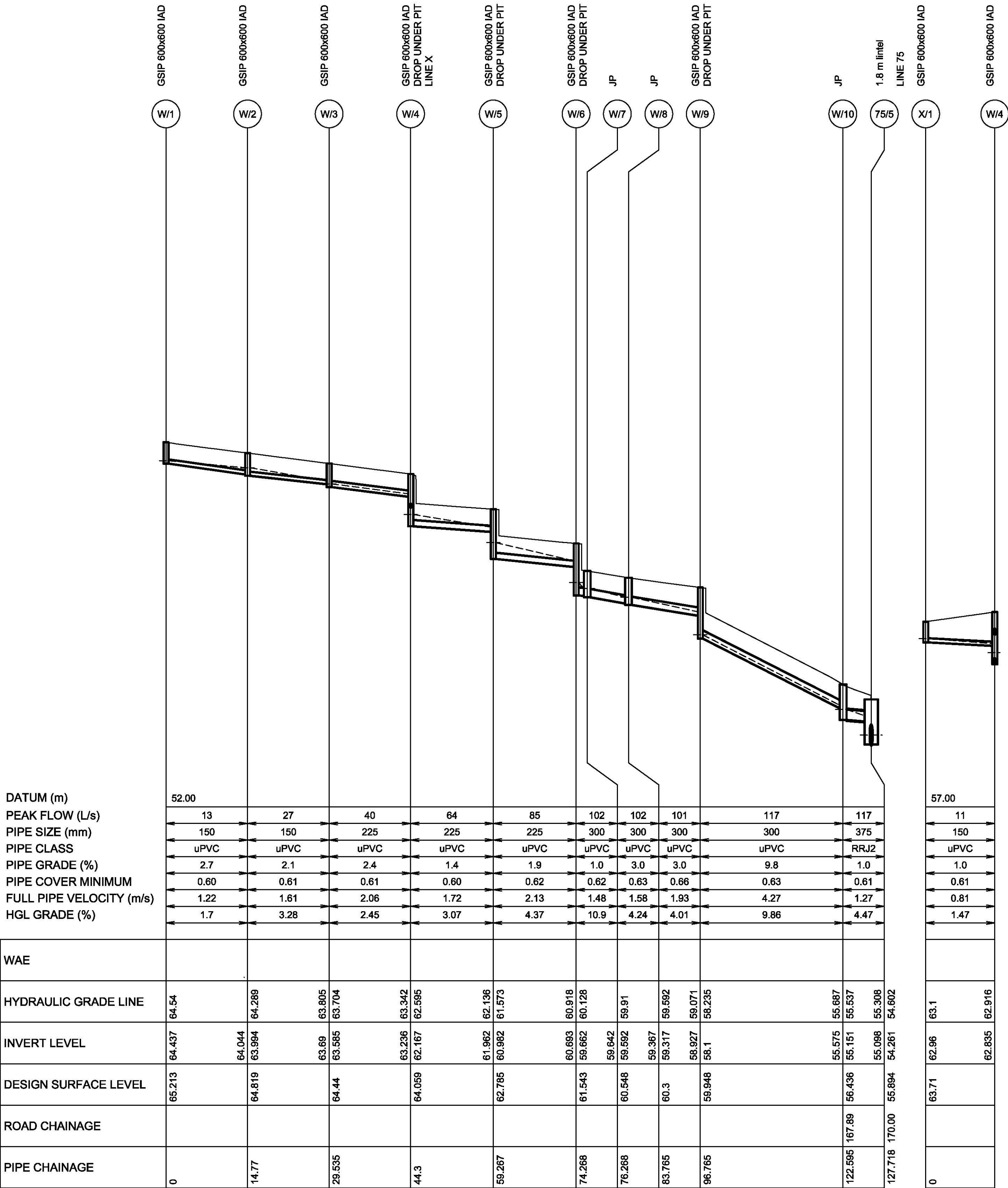
**CADDENS HILL
STAGE 7
DRAINAGE LONGITUDINAL SECTIONS
SHEET 3**

PLAN No:
110358/CC716 **B**
FILE No: 110358CC716
SHEET SIZE: A1 ORIGINAL

DRAINAGE PIPE SYSTEM CATERS FOR 20% AEP UNLESS OTHERWISE NOTED



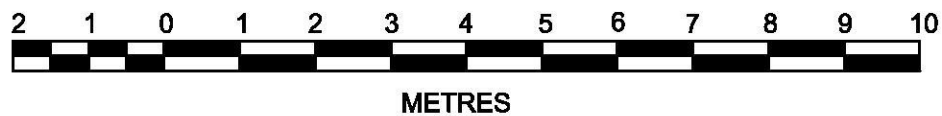
ALTERNATIVE DETAIL TO DEEP PITS OVER 2m
TYPICAL DROP UNDER RETAINING
WALL DETAIL
NTS



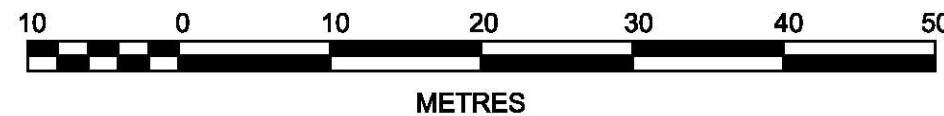
LINE W

LINE X

V 1:100 (AT A1)



H 1:500 (AT A1)



Plotfile: 7 March, 2019 2:26:16 PM File Name: J:\110358 - OConnell Lane Caddens\08 - Stage 7\CD\CC110358CC717.dwg

REV	DESCRIPTION	DATE	BY	CHKD	APPD
B	ISSUE FOR APPROVAL	07/03/19	JT	JT	AM
A	FIRST ISSUE	11/12/18	JT	NAWA	AM
AMENDMENT	DES	DRN	CKD	APR	DATE

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CADDENS HILL
STAGE 7
DRAINAGE LONGITUDINAL SECTIONS
SHEET 4

PLAN No:
110358/CC717

FILE No: 110358CC717

SHEET SIZE: A1 ORIGINAL

HYDROLOGY NOTES:

1. STORMWATER SYSTEM DESIGNED USING 12D DYNAMIC (ILSAX) SYSTEM.
2. BP LINES ARE DUMMY PITS AND ARE USED TO MORE ACCURATELY DETERMINE APPROACH FLOWS AT UPSTREAM PITS AND SAG LOCATIONS. RESULTS ON THESE DUMMY LINES MAY NOT BE VALID/RELEVANT.
3. MAXIMUM FLOW WIDTHS OF 2.5m IN GUTTERS HAVE GENERALLY BEEN ADOPTED.

DESIGN STORM 20% AEP HYDROLOGIC RESULTS																			
PIT	PIT	CATCHMENT	PERCENT	Tc	Tc	CRITICAL	APPROACH	CAPTURED	UNCAPTURED	GRATE	ROAD	ROAD	BYPASS	BYPASS CHANNEL					COMMENTS
NAME	TYPE	AREA	IMPERVIOUS	IMP	PERV	STORM	FLOW	FLOW	FLOW	DEPTH	GRADE	CROSSFALL	PIT	FLOW	U/S FLOW WIDTH	U/S Vx^2	FLOW WID	D/S Vx^2	
(-)	(-)	(Ha)	(%)	(min)	(min)	(min)	(L/s)	(L/s)	(L/s)	(mm)	(%)	(%)	(-)	(L/s)	(m)	(m/s^2)	(m)	(m/s^2)	(-)
44/1	1.8 m lintel	0.045	85	6	6	15	13	13	0	35	7.8	3	30/5	6	0.41	0.03	0.41	0.03	
44/2	1.8 m lintel	0.113	85	6	6	25	35	34	1	60	6.7	3	30/4	24	1.12	0.06	1.12	0.06	
70/1	1.8 m lintel		0	6	6	25	19	19	0	73	1.6	3	70/2	33	1.59	0.06	1.65	0.05	
70/2	1.8 m lintel	0.106	85	6	6	25	33	31	2	75	1.6	3	71/1	38	1.65	0.06	1.65	0.06	
70/3	1.8 m lintel		0	6	6	25	18	18	0	45	1.6	3	70/4	8	0.62	0.03	0.62	0.03	
70/4	1.8 m lintel	0.028	85	6	6	15	8	8	0	26	4	3	70/5	4	0.3	0.03	1.07	0.01	
70/5	1.8 m lintel	0.013	85	6	6	25	4	4	0	58	6.8	3	70/6	34	1.07	0.08	1.25	0.07	
70/6	1.8 m lintel	0.11	85	6	6	25	34	33	1	63	9.3	3	70/7	47	1.25	0.1	1.24	0.1	
70/7	1.8 m lintel	0.151	85	6	6	25	47	44	3	53	9.3	3	70/8	27	0.96	0.08	0.96	0.08	
70/8	1.8 m lintel	0.078	85	6	6	25	27	27	0	42	9.3	3	78/1	15	0.53	0.06	0.76	0.05	
70/9	1.8 m lintel	0.018	85	6	6	25	5	5	0	59	7.9	3	44/2	35	1.11	0.08	1.12	0.08	
71/1	1.8 m lintel	0.121	85	6	6	25	38	35	3	69	2.9	3	72/1	50	1.45	0.09	1.45	0.09	
72/1	1.8 m lintel	0.156	85	6	6	25	50	46	4	46	9.3	3	73/1	18	0.68	0.07	0.68	0.07	
73/1	1.8 m lintel	0.049	85	6	6	25	18	18	0	41	9.3	3	44/1	13	0.52	0.05	0.52	0.05	
75/1	1.8 m lintel		0	6	6	25	21	21	0	38	7.2	3	76/1	11	0.47	0.05	0.46	0.05	
75/2	1.8 m lintel		0	6	6	25	10	10	0	38	7.2	3	75/3	10	0.45	0.05	0.45	0.05	
75/3	1.8 m lintel	0.034	85	6	6	15	10	10	0	33	9	3	75/4	8	0.38	0.04	0.84	0.02	
75/4	1.8 m lintel	0.026	85	6	6	25	8	8	0	51	10	2.7	75/5	25	0.87	0.07	0.95	0.07	
75/5	1.8 m lintel	0.082	85	6	6	25	25	25	0	54	9	3	78/1	25	1	0.07	1	0.07	
75/6	1.8 m lintel	0.036	85	6	6	15	11	11	0	27	9	3	75/7	4	0.31	0.02	1.02	0.01	
75/7	1.8 m lintel	0.017	85	6	6	25	4	4	0	57	1.5	3	70/9	5	0.37	0.03	1.12	0.01	
76/1	1.8 m lintel	0.035	85	6	6	25	11	11	0	32	8.9	3	77/1	7	0.38	0.04	0.46	0.03	
77/1	1.8 m lintel	0.024	85	6	6	15	7	7	0	38	8.2	3.1	75/6	11	0.46	0.05	0.46	0.05	
78/1	2.4 m lintel sag	0.129	85	6	6	10	39	41	0	49	1.5	3	75/7	0					
BP70/1	BYPASS NODE	0.069	85	6	6	25	21	0	0	51	7.2	3	75/1	21	0.87	0.06	0.87	0.06	
BP70/2	BYPASS NODE						0	0	0	0									
BP71/1	BYPASS NODE	0.031	85	6	6	25	10	0	0	37	7.2	3	75/2	10	0.45	0.04	0.45	0.04	
BP71/2	BYPASS NODE						0	0	0	0									
BP72/1	BYPASS NODE	0.061	85	6	6	25	19	0	0	62	1.6	3	70/1	19	1.22	0.04	1.58	0.03	
BP72/2	BYPASS NODE						0	0	0	0									
BP73/1	BYPASS NODE	0.058	85	6	6	25	18	0	0	61	1.6	3	70/3	18	1.17	0.04	1.17	0.04	
BP73/2	BYPASS NODE						0	0	0	0									
T/1	GSIP 600x600 IAD	0.036	75	6	6	25	11	11	0	0									
T/2	GSIP 600x600 IAD	0.039	75	6	6	25	12	12	0	0									
T/3	GSIP 600x600 IAD	0.035	75	6	6	25	11	11	0	0									
T/4	GSIP 600x600 IAD	0.047	75	6	6	25	14	14	0	0									
T/5	GSIP 600x900 IAD	0.047	75	6	6	25	14	14	0	0									
T/6	JP		0	6	6		0	0	0	0									DROP PIT
U/1	GSIP 600x600 IAD	0.047	75	6	6	25	14	14	0	0									
U/2	GSIP 600x900 IAD	0.046	75	6	6	25	14	14	0	0									
U/3	GSIP 600x600 IAD	0.046	75	6	6	25	14	14	0	0									DROP PIT
V/1	GSIP 600x600 IAD	0.049	75	6	6	25	15	15	0	0									
V/2	GSIP 600x600 IAD	0.074	75	6	6	25	23	23	0	0									
V/3	GSIP 600x900 IAD	0.074	75	6	6	25	23	23	0	0									
V/4	GSIP 600x900 IAD	0.04	75	6	6	25	12	12	0	0									
V/5	GSIP 600x600 IAD		0	6	6		0	0	0	0									DROP PIT
W/1	GSIP 600x600 IAD	0.045	75	6	6	25	14	14	0	0									
W/2	GSIP 600x600 IAD	0.044	75	6	6	25	13	13	0	0									
W/3	GSIP 600x600 IAD	0.044	75	6	6	25	13	13	0	0									
W/4	GSIP 600x600 IAD	0.044	75	6	6	25	13	13	0	0									DROP PIT
W/5	GSIP 600x600 IAD	0.071	75	6	6	25	22	22	0	0									DROP PIT
W/6	GSIP 600x600 IAD	0.058	75	6	6	25	18	18	0	0									DROP PIT
W/7	JP		0	6	6		0	0	0	0									
W/8	JP		0	6	6		0	0	0	0									
W/9	GSIP 600x600 IAD	0.056	75	6	6	25	17	17	0	0									DROP PIT
W/10	JP		0	6	6		0	0	0	0									
X/1	GSIP 600x600 IAD	0.038	75	6	6	15	11	11	0	0									

Plotfile: 7 March, 2019 2:28:39 PM File Name: J:\110358 - OConnell Lane Caddens\08 - Stage 7\CD\CC110358CC718.dwg

B	ISSUE FOR APPROVAL	JT	JT	AM	MS	07/03/19
A	FIRST ISSUE	JT	NA/JA	AM	MS	11/12/18
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

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AZIMUTH:
DATUM:
ORIGIN:
M.G.A.

CLIENT:



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ISSUED FOR CONSTRUCTION APPROVAL

CADDENS HILL
STAGE 7
DRAINAGE CALCULATIONS
SHEET 1

PLAN No:
110358/CC718 **B**
FILE No: 110358CC718
SHEET SIZE: A1 ORIGINAL

DESIGN STORM 20% AEP HYDRAULIC RESULTS																					
PIPE NAME	PIPE DIAMETER	PIPE TYPE	PIPE LENGTH	PIPE GRADE	CRITICAL STORM	PEAK FLOW	CAPACITY RATIO	PEAK VELOCITY	PIPE U/S IL	PIPE D/S IL	PIPE D/S DROP	U/S PIT Ku	D/S PIT Kw	PIT LOSS Ku.V ² /head	WSE LOSS Kw.V ² /head	U/S PIPE HGL	D/S PIPE HGL	HGL GRADE	MINIMUM COVER	MINIMUM FREEBOARD	COMMENTS
(-)	(mm)	(-)	(m)	(%)	(min)	(L/s)	(-)	(m/s)	(m)	(m)	(m)	(-)	(-)	(m)	(m)	(m)	(m)	(%)	(m)	(m)	
44/1 to 44/2	375	RRJ4	8.76	1.79	25	-31	-0.12	0.77	49.398	49.242	0.068	8.04	8.04	0.1	0.1	49.81	49.802	0.09	1.58	1.582	
44/2 to 30/4	600	RRJ2	22.97	3.5	25	568	0.46	2.54	49.174	48.369	0.05	7	7	0.43	0.43	49.802	49.561	1.05	1.12	1.334	
70/1 to 70/2	375	RRJ2	27.92	1.6	25	19	0.08	0.85	64.702	64.256	0.05	4.5	4.5	0.17	0.17	64.773	64.416	1.28	1.13	1.493	
70/2 to 70/3	375	RRJ4	14.87	1	25	51	0.27	1.06	64.206	64.057	0.063	9.7	9.7	0.23	0.23	64.416	64.19	1.52	1.2	1.394	
70/3 to 70/4	375	RRJ2	35.39	1.95	25	68	0.26	1.86	63.994	63.305	0.05	6.03	6.03	0.29	0.29	64.139	63.434	1.99	1.13	1.466	
70/4 to 70/5	375	RRJ2	12.38	7.27	25	111	0.22	3.26	63.255	62.355	0.4	0.81	0.81	0.44	0.44	63.396	62.473	7.46	1.14	1.397	
70/5 to 70/6	450	RRJ2	27.49	8.74	25	115	0.13	3.8	61.955	59.553	0.05	0.96	1.35	0.71	0.99	62.067	59.661	8.75	1.15	1.616	
70/6 to 70/7	450	RRJ2	29.97	9.25	25	192	0.2	4.42	59.503	56.731	0.05	1.15	1.15	1.09	1.09	59.651	56.869	9.28	1.28	1.74	
70/7 to 70/8	450	RRJ2	32.97	9	25	234	0.25	4.62	56.681	53.714	0.05	7	7	1.12	1.12	56.847	53.868	9.04	1.31	1.747	
70/8 to 70/9	450	RRJ4	27.6	8.5	25	278	0.31	4.72	53.664	51.318	0.05	0.68	0.68	0.77	0.77	53.846	51.515	8.45	1.25	1.673	
70/9 to 44/2	600	RRJ2	26.35	7.5	25	606	0.33	5.48	51.268	49.292	0.118	0.31	0.31	0.47	0.47	51.515	49.802	6.5	1.16	1.652	
71/1 to 70/4	375	RRJ4	11.86	2.57	25	35	0.12	1.1	63.613	63.308	0.053	9.7	9.7	0.58	0.58	63.777	63.396	3.21	1.1	1.321	
72/1 to 70/6	375	RRJ4	8.78	3.84	25	46	0.12	1.37	60.231	59.893	0.391	9.7	9.7	0.72	0.72	60.423	59.982	5.02	1.1	1.312	
73/1 to 70/8	375	RRJ4	8.41	2.86	25	18	0.06	0.99	54.276	54.036	0.372	9.7	9.7	0.44	0.44	54.389	54.097	3.47	1.1	1.374	
75/1 to 75/2	375	RRJ4	10.13	5.43	25	21	0.05	1.65	63.774	63.224	0.05	4.5	4.5	0.63	0.63	63.848	63.279	5.62	1.1	1.433	
75/2 to 75/3	375	RRJ2	41.21	7.52	25	31	0.06	2.53	63.174	60.074	0.05	1.9	2.01	0.62	0.65	63.237	60.136	7.52	1.16	1.595	
75/3 to 75/4	375	RRJ2	32.39	8.81	25	52	0.09	3.12	60.024	57.17	0.276	1.2	1.2	0.59	0.59	60.103	57.246	8.82	1.14	1.43	
75/4 to 75/5	450	RRJ2	25.08	9.56	25	67	0.07	3.3	56.894	54.497	0.236	1	1	0.56	0.56	56.975	54.602	9.46	1.11	1.481	
75/5 to 75/6	450	RRJ4	9.72	4.5	25	208	0.32	2.21	54.261	53.824	0.427	1.92	2.28	0.48	0.57	54.602	53.998	6.22	1.13	1.292	
75/6 to 75/7	450	RRJ2	21.89	5.94	25	218	0.29	3.04	53.397	52.097	0.05	2.12	2.66	1	1.25	53.563	52.364	5.48	1.13	1.833	
75/7 to 70/9	525	RRJ2	14.7	2.42	25	261	0.36	2.36	52.047	51.692	0.424	0.7	0.7	0.2	0.2	52.364	51.91	3.09	1.15	1.606	
76/1 to 75/3	375	RRJ4	8.51	1.9	25	11	0.04	0.76	60.275	60.113	0.089	9.7	9.7	0.28	0.28	60.364	60.165	2.34	1.11	1.432	
77/1 to 75/4	375	RRJ4	11.18	4.81	15	7	0.02	1.16	57.592	57.054	0.16	9.7	9.7	0.65	0.65	57.638	57.089	4.91	1.13	1.531	
78/1 to 75/7	375	RRJ4	8	1	25	41	0.21	0.78	52.388	52.308	0.261	9.7	9.7	0.26	0.26	52.644	52.426	2.72	1.24	1.324	
BP70/1 to BP70/2	2	No Flow	5.18	1	10	0	0	0	64.379	64.327		0	0	0	0	64.379	64.327	1	1.25	1.1	
BP71/1 to BP71/2	2	No Flow	4.82	1	10	0	0	0	63.937	63.889		0	0	0	0	63.937	63.889	1	1.25	1.1	
BP72/1 to BP72/2	2	No Flow	5.58	1.07	10	0	0	0	65.201	65.141		0	0	0	0	65.201	65.141	1.08	1.33	1.182	
BP73/1 to BP73/2	2	No Flow	5.02	1	10	0	0	0	64.549	64.499		0	0	0	0	64.549	64.499	1	1.25	1.1	
T/1 to T/2	150	uPVC	14.3	5.56	25	11	0.23	1.82	66.068	65.273	0.05	4.5	4.5	0.76	0.76	66.13	65.322	5.65	0.6	0.708	
T/2 to T/3	150	uPVC	12.47	7.3	25	23	0.42	2.5	65.223	64.312	0.06	2.73	2.73	0.69	0.69	65.308	64.38	7.44	0.62	0.715	
T/3 to T/4	225	uPVC	15	7.23	25	33	0.21	3.07	64.252	63.167	0.05	9.7	9.7	0.41	0.41	64.325	63.237	7.25	0.6	0.787	
T/4 to T/5	225	uPVC	15	7.6	25	47	0.29	1.87	63.117	61.977	0.05	9.7	9.7	0.5	0.5	63.201	62.266	6.23	0.64	0.813	
T/5 to T/6	225	uPVC	1.5	1	25	61	1.05	1.58	61.927	61.912	1.335	1.15	1.15	0.13	0.13	62.266	62.113	10.2	0.66	0.604	
T/6 to T/7	225	uPVC	32.75	2.9	25	61	0.61	2.26	60.577	59.628	0.974	2.06	2.55	0.51	0.63	60.74	59.755	3.01	0.6	2.009	
U/1 to U/2	150	uPVC	15	8.17	25	14	0.25	2.17	60.828	59.602	0.034	4.5	4.5	1.07	1.07	60.884	59.668	8.11	0.64	0.771	
U/2 to U/3	150	uPVC	15	6.68	25	28	0.55	2.57	59.569	58.567	1.436	2.44	2.44	0.63	0.63	59.668	58.647	6.81	0.61	0.802	
U/3 to U/4	225	uPVC	32.89	3	25	42	0.42	2.19	57.131	56.144	0.761	2.24	2.87	0.52	0.67	57.249	56.245	3.05	0.6	2.041	
V/1 to V/2	150	uPVC	27.1	6.98	25	15	0.28	2.33	57.245	55.354	0.05	4.5	4.5	1.25	1.25	57.307	55.408	7.01	0.61	0.808	
V/2 to V/3	225	uPVC	34.8	5.56	25	37	0.27	2.7	55.304	53.37	0.05	3.81	3.81	1.26	1.26	55.395	53.45	5.59	0.62	0.778	
V/3 to V/4	225	uPVC	12.92	4	25	60	0.51	2.21	53.32	52.804	0.05	1.74	1.74	0.39	0.39	53.434	52.978	3.53	0.75	0.886	
V/4 to V/5	300	uPVC	1.5	1	25	72	0.57	1.49	52.754	52.739	1.264	9.7	9.7	0.04	0.04	52.978	52.901	5.13	0.67	0.78	
V/5 to V/6	225	uPVC	30.26	3.6	25	71	0.64	2.49	51.474	50.385	0.735	2.04	2.49	0.61	0.74	51.648	50.516	3.74	0.63	2.028	
W/1 to W/2	150	uPVC	14.77	2.66	25	13	0.41	1.22	64.437	64.044	0.05	4.5	4.5	0.34	0.34	64.54	64.289	1.7	0.6	0.673	
W/2 to W/3	150	uPVC	14.77	2.05	25	27	0.93	1.61	63.994	63.69	0.105	9.7	9.7	0.25	0.25	64.289	63.805	3.28	0.61	0.53	
W/3 to W/4	225	uPVC	14.76	2.36	25	40	0.45	2.06	63.585	63.236	1.07	9.7	9.7	0.23	0.23	63.704	63.342	2.45	0.61	0.736	
W/4 to W/5	225	uPVC	14.97	1.37	25	64	0.94	1.72	62.167	61.962	0.98	1.94	2.35	0.24	0.3	62.595	62.136	3.07	0.6	1.465	
W/5 to W/6	225	uPVC	15	1.93	25	85	1.05	2.13	60.982	60.693	1.031	1.6	1.96	0.34	0.41	61.573	60.918	4.37	0.62	1.212	
W/6 to W/7	300	uPVC	2	1	25	102	0.81	1.48	59.662	59.642	0.05	2.04	2.6	0.2	0.26	60.128	59.91	10.9	0.62	1.415	
W/7 to W/8	300	uPVC	7.5	3	25	102	0.47	1.58	59.592	59.367	0.05	2.08	2.65	0.27	0.34	59.91	59.592	4.24	0.63	0.637	
W/8 to W/9	300	uPVC	13	3	25	101	0.47	1.93	59.317	58.927	0.827	2.08	2.66	0.39	0.48	59.592	59.071	4.01	0.66	0.708	
W/9 to W/10	300	uPVC	25.83	9.77	25	117	0.3	4.27	58.1	55.575	0.424	2.09	2.56	1.83	2.23	58.235	55.687	9.86	0.63	1.713	
W/10 to 75/5	375	RRJ2	5.12	1.04	25	117	0.6	1.27	55.151	55.098	0.837	2.09	2.71	0.17	0.22	55.537	55.308	4.47	0.61	0.899	
X/1 to W/4	150	uPVC	12.5	1	25	11	0.57	0.81	62.96	62.835	0.668	4.5	4.5	0.15	0.15	63.1	62.916	1.47	0.61	0.61	

B	ISSUE FOR APPROVAL	JT	JT	AM	MS	07/03/19	
A	FIRST ISSUE	JT	NAWA	AM	MS	11/12/18	
	AMENDMENT	DES	DRN	CKD	APR	DATE	

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ISSUED FOR CONSTRUCTION APPROVAL

CADDENS HILL
STAGE 7
DRAINAGE CALCULATIONS
SHEET 2

PLAN No:
110358/CC719

B

FILE No: 110358CC719

SHEET SIZE: A1 ORIGINAL

- HYDROLOGY NOTES:**
1. STORMWATER SYSTEM DESIGNED USING 12D DYNAMIC (LSAX) SYSTEM.
 2. BP LINES ARE DUMMY PITS AND ARE USED TO MORE ACCURATELY DETERMINE APPROACH FLOWS AT UPSTREAM PITS AND SAG LOCATIONS. RESULTS ON THESE DUMMY LINES MAY NOT BE VALID/RELEVANT.
 3. MAXIMUM FLOW WIDTHS OF 2.5m IN GUTTERS HAVE GENERALLY BEEN ADOPTED.

DESIGN STORM 1% AEP HYDROLOGIC RESULTS																			
PIT	PIT	CATCHMENT	PERCENT	Tc	Tc	CRITICAL	APPROACH	CAPTURED	UNCAPTURED	GRATE	ROAD	ROAD	BYPASS	BYPASS CHANNEL					COMMENTS
NAME	TYPE	AREA	IMPERVIOUS	IMP	PERV	STORM	FLOW	FLOW	FLOW	DEPTH	GRADE	CROSSFALL	PIT	FLOW	U/S FLOW WIDTH	U/S Vx/D	FLOW WID	D/S Vx/D	
(-)	(-)	(Ha)	(%)	(min)	(min)	(min)	(L/s)	(L/s)	(L/s)	(mm)	(%)	(%)	(-)	(L/s)	(m)	(m/s^2)	(m)	(m/s^2)	(-)
44/1	1.8 m lintel	0.045	85	6	6	5	44	33	11	55	7.8	3	30/5	21	1	0.06	6.8	0.04	
44/2	1.8 m lintel	0.113	85	6	6	15	60	43	18	77	6.7	3	30/4	57	1.71	0.09	6.58	0.06	
70/1	1.8 m lintel		0	6		15	32	23	8	89	1.6	3	70/2	63	2.11	0.08	2.3	0.07	
70/2	1.8 m lintel	0.106	85	6	6	15	63	42	21	94	1.6	3	71/1	82	2.3	0.09	2.3	0.09	
70/3	1.8 m lintel		0	6	6	15	30	23	8	62	1.6	3	70/4	22	1.21	0.05	1.21	0.05	
70/4	1.8 m lintel	0.028	85	6	6	15	22	17	5	39	4	3	70/5	11	0.48	0.05	1.43	0.02	
70/5	1.8 m lintel	0.013	85	6	6	15	11	9	2	69	6.8	3	70/6	59	1.44	0.11	1.74	0.09	
70/6	1.8 m lintel	0.11	85	6	6	15	59	41	18	78	9.3	3	70/7	96	1.74	0.15	1.74	0.15	
70/7	1.8 m lintel	0.151	85	6	6	15	96	57	38	73	9.3	3	70/8	78	1.59	0.13	1.59	0.13	
70/8	1.8 m lintel	0.078	85	6	6	15	78	53	25	63	9.3	3	78/1	49	1.25	0.11	3.26	0.04	
70/9	1.8 m lintel	0.018	85	6	6	15	11	8	2	70	7.9	3	44/2	60	1.48	0.11	1.71	0.09	
71/1	1.8 m lintel	0.121	85	6	6	15	82	51	31	87	2.9	3	72/1	110	2.06	0.14	2.06	0.14	
72/1	1.8 m lintel	0.156	85	6	6	15	110	63	47	71	9.3	3	73/1	71	1.54	0.12	1.54	0.12	
73/1	1.8 m lintel	0.049	85	6	6	15	71	50	22	63	9.3	3	44/1	44	1.24	0.1	1.24	0.1	
75/1	1.8 m lintel		0	6	6	15	36	28	8	54	7.2	3	76/1	26	0.99	0.07	0.99	0.07	
75/2	1.8 m lintel		0	6	6	15	16	13	3	50	7.2	3	75/3	21	0.81	0.07	0.81	0.07	
75/3	1.8 m lintel	0.034	85	6	6	15	21	16	4	45	9	3	75/4	17	0.63	0.06	1.2	0.04	
75/4	1.8 m lintel	0.026	85	6	6	15	17	14	3	62	10	2.7	75/5	45	1.2	0.1	1.41	0.09	
75/5	1.8 m lintel	0.082	85	6	6	15	45	35	11	68	9	3	78/1	53	1.42	0.1	3.26	0.06	
75/6	1.8 m lintel	0.036	85	6	6	15	22	17	4	40	9	3	75/7	11	0.49	0.05	1.37	0.02	
75/7	1.8 m lintel	0.017	85	6	6	15	11	9	2	67	1.5	3	70/9	11	0.56	0.04	1.47	0.02	
76/1	1.8 m lintel	0.035	85	6	6	15	26	21	5	46	8.9	3	77/1	17	0.65	0.06	0.81	0.05	
77/1	1.8 m lintel	0.024	85	6	6	15	17	14	3	50	8.2	3.1	75/6	22	0.82	0.07	0.82	0.07	
78/1	2.4 m lintel sag	0.129	85	6	6	5	102	101	0	123	1.5	3	75/7	0					
BP70/1	BYPASS NODE	0.069	85	6	6		36	0	0	60	7.2	3	75/1	36	1.15	0.08	1.15	0.08	
BP70/2	BYPASS NODE						0	0	0	0									
BP71/1	BYPASS NODE	0.031	85	6	6	15	16	0	0	46	7.2	3	75/2	16	0.68	0.06	0.79	0.05	
BP71/2	BYPASS NODE						0	0	0	0									
BP72/1	BYPASS NODE	0.061	85	6	6	15	32	0	0	73	1.6	3	70/1	32	1.59	0.05	2.1	0.04	
BP72/2	BYPASS NODE						0	0	0	0									
BP73/1	BYPASS NODE	0.058	85	6	6	15	30	0	0	71	1.6	3	70/3	30	1.53	0.05	1.53	0.05	
BP73/2	BYPASS NODE						0	0	0	0									

DESIGN STORM 1% AEP HYDRAULIC RESULTS																					
PIPE	PIPE	PIPE	PIPE	PIPE	CRITICAL	PEAK	CAPACITY	PEAK	PIPE	PIPE	PIPE	U/S PIT	D/S PIT	PIT LOSS	WSE LOSS	U/S PIPE	D/S PIPE	HGL	MINIMUM	MINIMUM	COMMENTS
NAME	DIAMETER	TYPE	LENGTH	GRADE	STORM	FLOW	RATIO	VELOCITY	U/S I/L	D/S I/L	D/S DROP	Ku	Kw	Ku.V'head	Kw.V'head	HGL	HGL	GRADE	COVER	FREEBOARD	
(-)	(mm)	(-)	(m)	(%)	(min)	(L/s)	(-)	(m/s)	(m)	(m)	(m)	(-)	(-)	(m)	(m)	(m)	(m)	(%)	(m)	(m)	
44/1 to 44/2	375	RRJ4	8.76	1.79	5	-79	-0.31	1.04	49.398	49.242	0.068	9.7	9.7	0.1	0.1	51.218	51.206	0.14	1.58	0.173	
44/2 to 30/4	600	RRJ2	22.97	3.5	15	950	0.76	3.36	49.174	48.369	0.05	7	7	0.51	0.51	51.206	50.58	2.72	1.12	0.001	
70/1 to 70/2	375	RRJ2	27.92	1.6	15	23	0.1	0.91	64.702	64.256	0.05	4.5	4.5	0.19	0.19	64.781	64.466	1.13	1.13	1.485	
70/2 to 70/3	375	RRJ4	14.87	1	15	66	0.35	1.12	64.206	64.057	0.063	9.7	9.7	0.27	0.27	64.466	64.21	1.72	1.2	1.343	
70/3 to 70/4	375	RRJ2	35.39	1.95	15	88	0.33	1.97	63.994	63.305	0.05	7	7	0.35	0.35	64.164	63.453	2.01	1.13	1.44	
70/4 to 70/5	375	RRJ2	12.38	7.27	15	156	0.3	3.3	63.255	62.355	0.4	1.01	1.01	0.53	0.53	63.447	62.496	7.68	1.14	1.346	
70/5 to 70/6	450	RRJ2	27.49	8.74	15	164	0.18	4.14	61.955	59.553	0.05	1.03	1.4	0.89	1.22	62.092	59.684	8.76	1.15	1.592	
70/6 to 70/7	450	RRJ2	29.97	9.25	15	267	0.28	4.76	59.503	56.731	0.05	7	7	1.19	1.19	59.684	56.895	9.3	1.28	1.707	
70/7 to 70/8	450	RRJ2	32.97	9	15	323	0.35	4.93	56.681	53.714	0.05	6.99	6.99	1.25	1.25	56.886	53.897	9.07	1.31	1.708	
70/8 to 70/9	450	RRJ4	27.6	8.5	15	427	0.47	5.14	53.664	51.318	0.05	0.88	0.88	1.05	1.05	53.893	51.561	8.45	1.25	1.627	
70/9 to 44/2	600	RRJ2	26.35	7.5	15	877	0.48	5.68	51.268	49.292	0.118	0.3	0.3	0.48	0.48	51.561	51.206	1.35	1.16	1.605	
71/1 to 70/4	375	RRJ4	11.86	2.57	15	51	0.17	1.13	63.613	63.308	0.053	9.7	9.7	0.58	0.58	63.832	63.447	3.25	1.1	1.267	
72/1 to 70/6	375	RRJ4	8.78	3.84	15	63	0.17	1.41	60.231	59.893	0.391	9.7	9.7	0.78	0.78	60.473	59.998	5.41	1.1	1.263	
73/1 to 70/8	375	RRJ4	8.41	2.86	15	50	0.15	1.11	54.276	54.036	0.372	9.7	9.7	0.59	0.59	54.498	54.135	4.32	1.1	1.266	
75/1 to 75/2	375	RRJ4	10.13	5.43	15	27	0.06	1.71	63.774	63.224	0.05	4.5	4.5	0.67	0.67	63.863	63.287	5.69	1.1	1.419	
75/2 to 75/3	375	RRJ2	41.21	7.52	15	40	0.08	2.74	63.174	60.074	0.05	1.91	2.02	0.73	0.77	63.246	60.145	7.52	1.16	1.586	
75/3 to 75/4	375	RRJ2	32.39	8.81	15	77	0.14	3.48	60.024	57.17	0.276	1.29	1.29	0.79	0.79	60.122	57.263	8.83	1.14	1.411	
75/4 to 75/5	450	RRJ2	25.08	9.56	15	104	0.11	3.31	56.894	54.497	0.236	1.1	1.1	0.61	0.61	56.995	54.857	8.52	1.11	1.461	
75/5 to 75/6	450	RRJ4	9.72	4.5	15	320	0.49	2.52	54.261	53.824	0.427	1.93	2.37	0.55	0.62	54.857	54.046	8.35	1.13	1.037	
75/6 to 75/7	450	RRJ2	21.89	5.94	15	337	0.45	3.14	53.397	52.097	0.05	2.12	2.66	1.06	1.33	53.608	52.548	4.84	1.13	1.788	
75/7 to 70/9	525	RRJ2	14.7	2.42	15	445	0.61	2.52	52.047	51.692	0.424	0.71	0.71	0.23	0.23	52.548	51.989	3.8	1.15	1.422	
76/1 to 75/3	375	RRJ4	8.51	1.9	15	21	0.08	0.86	60.275	60.113	0.089	9.7	9.7	0.34	0.34	60.41	60.185	2.64	1.11	1.385	
77/1 to 75/4	375	RRJ4	11.18	4.81	15	14	0.03	1.32	57.592	57.054	0.16	9.7	9.7	0.8	0.8	57.663	57.101	5.03	1.13	1.506	
78/1 to 75/7	375	RRJ4	8	1	15	100	0.53	1.04	52.388	52.308	0.261	8.02	8.02	0.37	0.37	52.912	52.548	4.55	1.24	1.057	
BP70/1 to BP70/2	2	No Flow	5.18	1	5	0	0	0	64.379	64.327		0	0	0	0	64.379	64.327	1	1.25	1.1	
BP71/1 to BP71/2	2	No Flow	4.82	1	5	0	0	0	63.937	63.889		0	0	0	0	63.937	63.889	1	1.25	1.1	
BP72/1 to BP72/2	2	No Flow	5.58	1.07	5	0	0	0	65.201	65.141		0	0	0	0	65.201	65.141	1.08	1.33	1.182	
BP73/1 to BP73/2	2	No Flow	5.02	1	5	0	0	0	64.549	64.499		0	0	0	0	64.549	64.499	1	1.25	1.1	

B	ISSUE FOR APPROVAL	JT	JT	AM	MS	07/03/19
A	FIRST ISSUE	JT	NA/JA	AM	MS	11/12/18
	AMENDMENT	DES	DRN	CKD	APR	DATE

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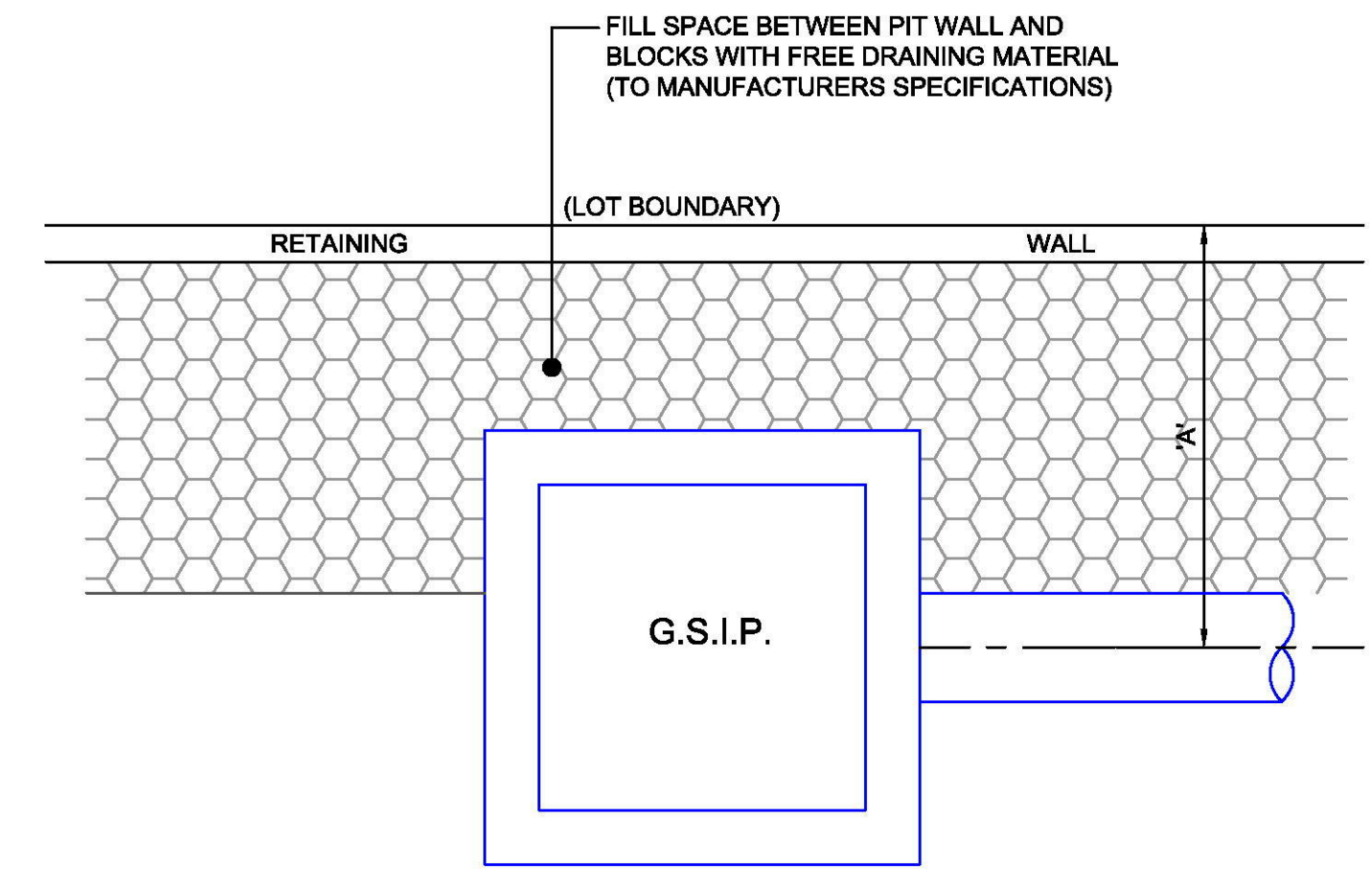
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PLAN
SCALE 1:500

CONNECT RETAINING WALL SUB SOIL TO
DOWNSTREAM DRAINAGE STRUCTURE.

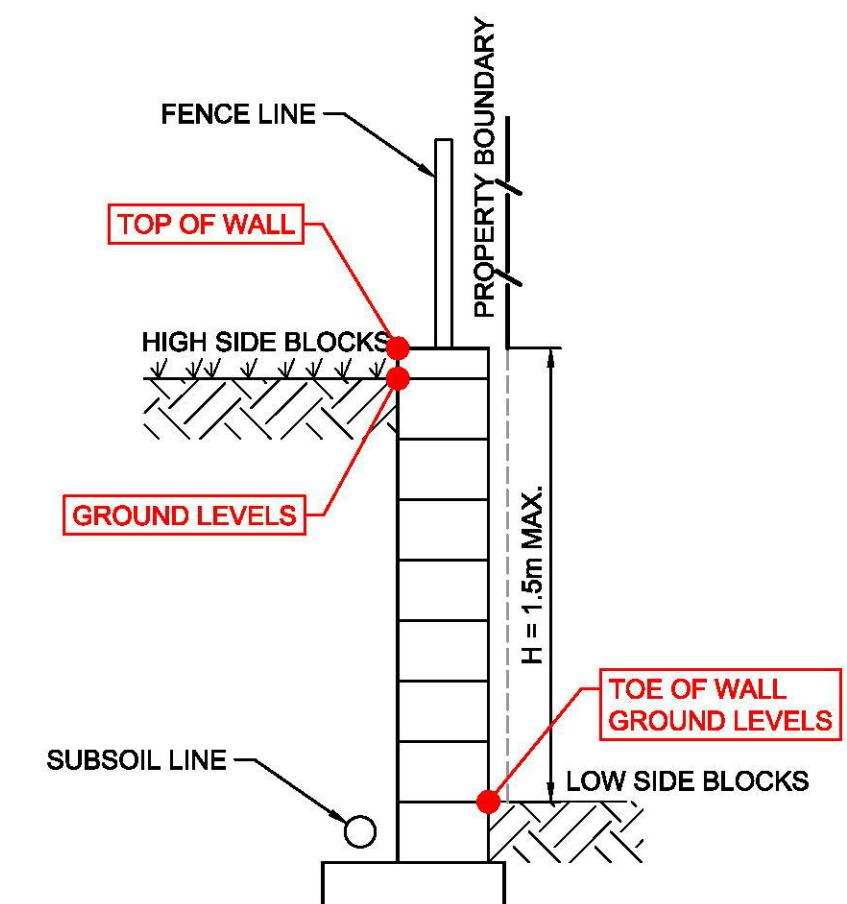
PROVIDE RODDING EYES AT 60m OR AS
DIRECTED ONSITE BY SUPERINTENDENT



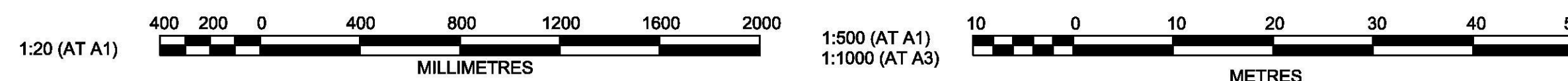
OFFSET 'A'	WALL HEIGHT 'H' <800mm	WALL HEIGHT 'H' >800mm - 1500mm
	900mm	1000mm

TYPICAL INTERALLOTMENT PIT SETBACK
SCALE 1:20

FOR RW 5, RW 20, RW 21, RW 22 AND RW 23
REFER TO CC APPROVED STRUCTURAL
CERTIFIED PLANS PREPARED BY UNITED
CRIB BLOCKS CONSTRUCTIONS PTY LTD



TYPICAL RETAINING WALL DETAIL
SCALE 1:20



REV	DESCRIPTION	BY	CHKD	DATE
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AMENDMENT		DES	DRN	CKD APR DATE

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ORIGIN:
M.G.A.

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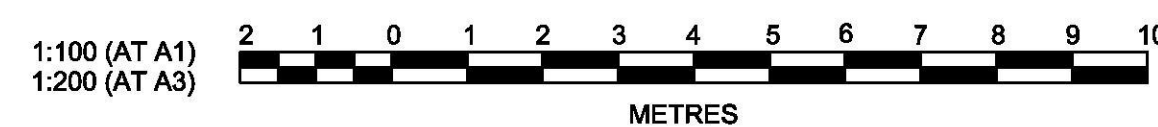


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ISSUED FOR CONSTRUCTION APPROVAL

CADDENS HILL
STAGE 7
RETAINING WALL PLAN & DETAILS

PLAN No:	110358/CC721	B
FILE No:	110358CC721	
SHEET SIZE:	A1 ORIGINAL	



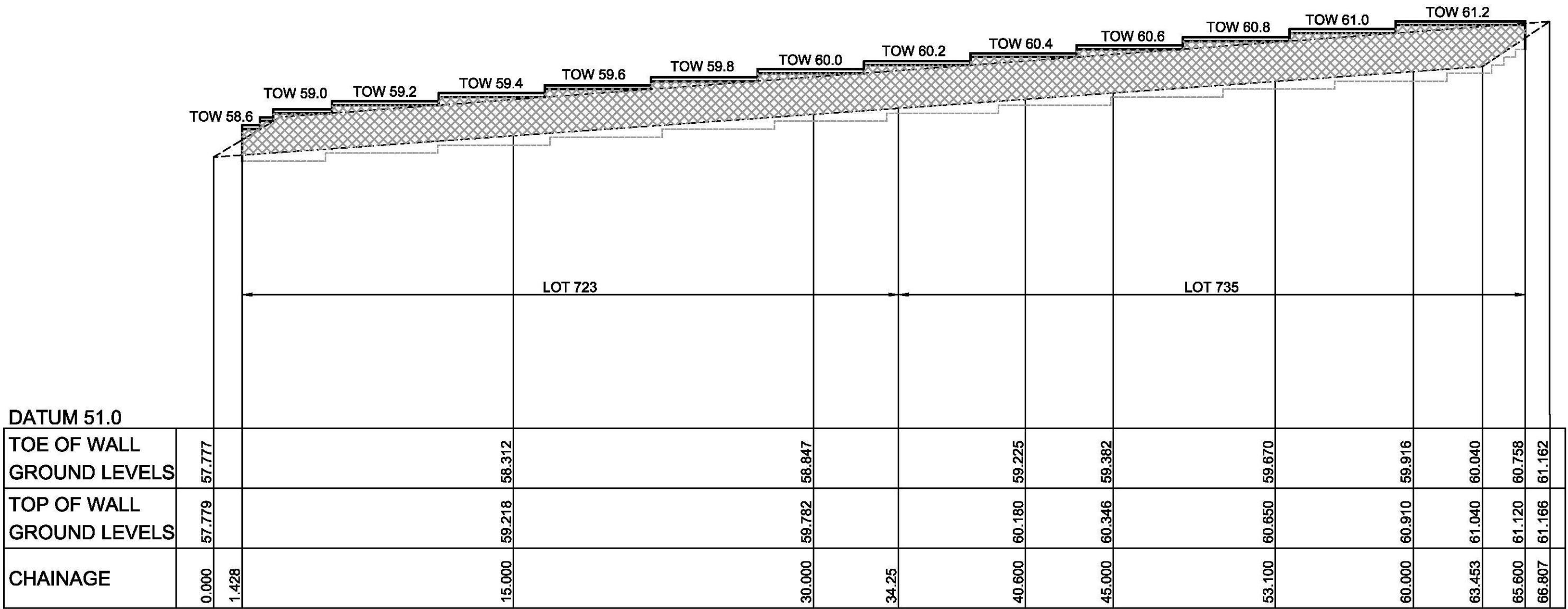
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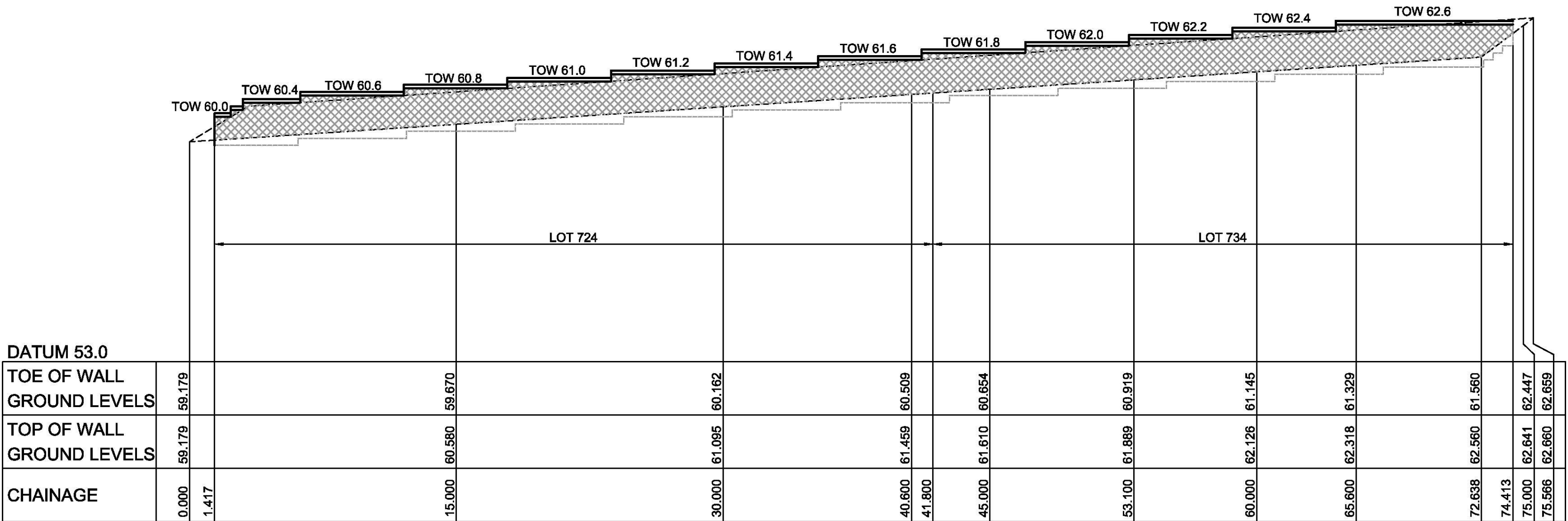
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PLAN No:		B
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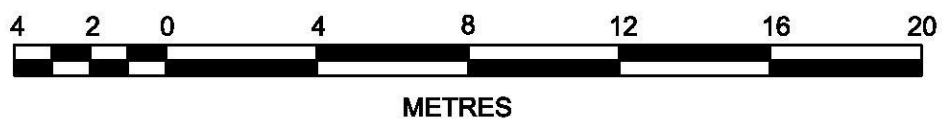


LONGITUDINAL SECTION RW 23
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

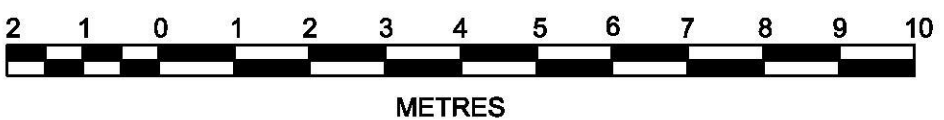


LONGITUDINAL SECTION RW 22
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

1:200 (AT A1)
1:400 (AT A3)



1:100 (AT A1)
1:200 (AT A3)



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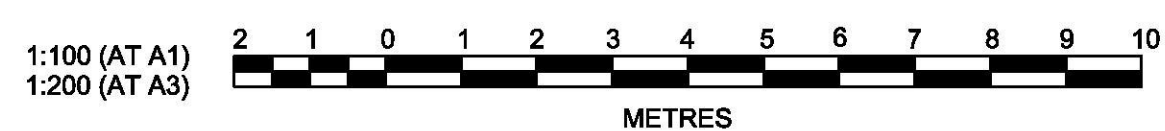
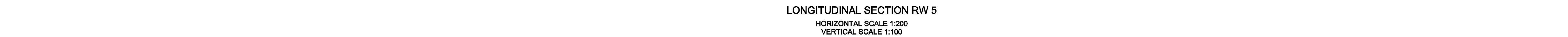
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CADDENS HILL
STAGE 7
RETAINING WALL SECTIONS
SHEET 2

PLAN No:
110358/CC723

FILE No: 110358CC723

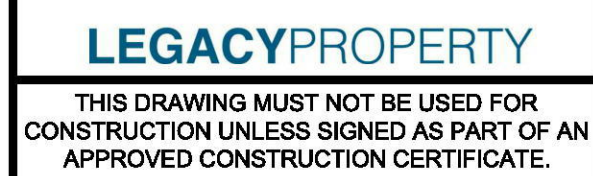
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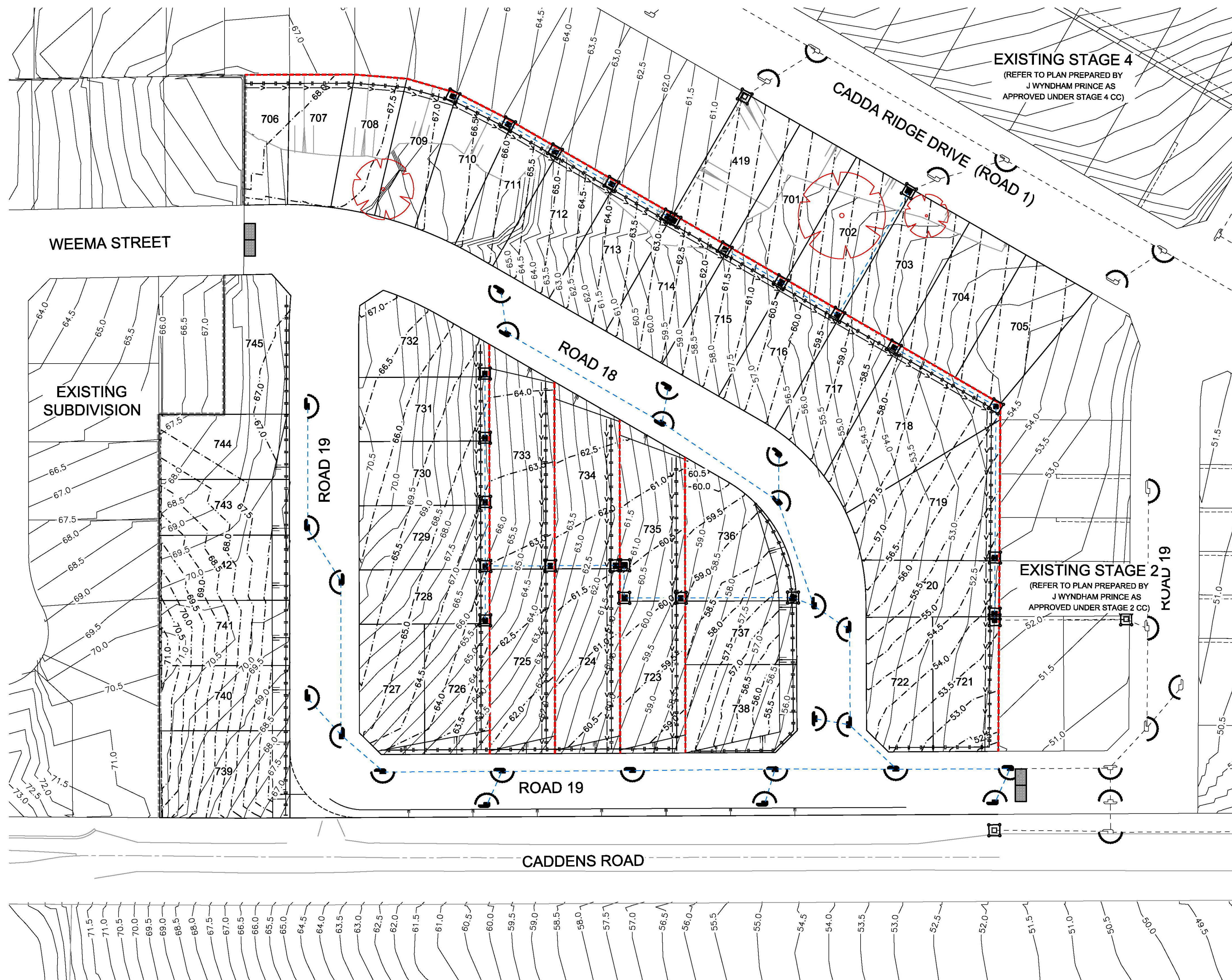
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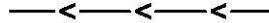
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PLAN No: 110358/CC724		B
FILE No: 110358CC724		
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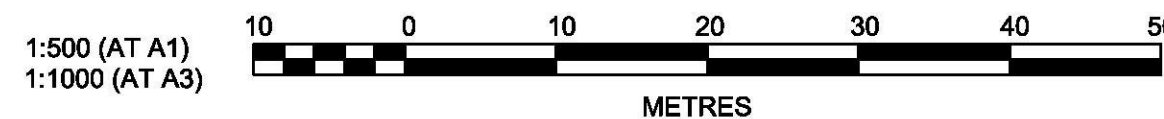
LEGEND	
STABILISED SITE ACCESS	
CATCH DRAIN	
SEDIMENT FENCE	
MESH AND GRAVEL INLET FILTER	
GEOTEXTILE INLET FILTER	
STRAW BALES	

PLAN No:	
110358/CC725	B
FILE No: 110358CC725	
SHEET SIZE:	A1 ORIGINAL

EXISTING STAGE 4
(REFER TO PLAN PREPARED BY
J WYNDHAM PRINCE AS
APPROVED UNDER STAGE 4 CC)

EXISTING STAGE
(REFER TO PLAN PREPARED BY
J WYNDHAM PRINCE AS
APPROVED UNDER STAGE 2 CC)

PLAN
SCALE 1:500



CLIENT:



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AZIMUTH:	
DATUM:	A.H.D
ORIGIN:	M.G.A.

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SOIL AND WATER MANAGEMENT NOTES

GENERAL NOTES:

- 1. ALL EROSION AND SEDIMENT CONTROL MEASURES AND STANDARD DRAWINGS, INCLUDING REVEGETATION AND STORAGE OF SOIL AND TOPSOIL, SHALL BE IMPLEMENTED TO THE REQUIREMENTS OF THE " SOILS AND CONSTRUCTION - VOLUME 1, 4TH EDITION, MARCH 2004 ".
- 2. TOPSOIL FROM ALL AREAS TO BE DISTURBED SHALL BE STOCKPILED AND LATER RESPREAD TO AID REVEGETATION IN THOSE AREAS.
- 3. ALL DRAINAGE WORKS SHALL BE CONSTRUCTED AND STABILISED AS EARLY AS POSSIBLE DURING DEVELOPMENT.
- 4. ALL TAIL-OUT DRAINS SHALL BE COUCH GRASSED AND TRAPEZOIDAL IN SECTION. STRAW BALES SHALL BE PLACED AS A SEDIMENT CONTROL DEVICE WHERE REQUIRED.
- 5. VEHICULAR TRAFFIC SHALL BE CONTROLLED DURING DEVELOPMENT CONFINING ACCESS WHERE POSSIBLE TO PROPOSED OR EXISTING ROAD ALIGNMENTS. AREAS TO BE LEFT UNDISTURBED SHALL BE MARKED OFF.
- 6. ROADS SHALL BE PAVED AS EARLY AS POSSIBLE AFTER FORMATION.
- 7. DISTURBANCE OF VEGETATION SHALL BE LIMITED TO FILL AREAS, ROADWAYS AND DRAINAGE LINES. NO LOT GRADING SHALL BE CARRIED OUT IN UNDISTURBED AREAS WITHOUT CONSULTATION WITH COUNCIL'S ENGINEER.
- 8. ALL DISTURBED AREAS SHALL BE REVEGETATED AS SOON AS THE RELEVANT WORKS ARE COMPLETED.
- 9. ALL SEDIMENT BASINS AND TRAPS SHALL BE CLEANED WHEN THE STRUCTURES ARE A MAXIMUM 60% FULL OF SOLID MATERIALS, INCLUDING DURING THE MAINTENANCE PERIOD.
- 10. THE SOIL AND WATER MANAGEMENT PLAN IS TO BE READ IN CONJUNCTION WITH THE ENGINEERING PLANS, AND COUNCIL'S WRITTEN GUIDELINES FOR THE DEVELOPMENT OF LAND.
- 11. CONTRACTORS SHALL ENSURE THAT ALL SOIL AND WATER MANAGEMENT WORKS ARE UNDERTAKEN AS SPECIFIED ON THE PLAN AND IN ACCORDANCE WITH THE GUIDELINES SHOWN IN "MANAGING URBAN STORMWATER - SOILS AND CONSTRUCTION 4TH EDITION" ("THE BLUE BOOK").
- 12. ALL CONTRACTORS AND SUBCONTRACTORS ARE RESPONSIBLE FOR REDUCING THE SOIL EROSION AND POLLUTION OF DOWNSLOPE AREAS.
- 13. THE SOIL EROSION HAZARD ON THE SITE IS TO BE KEPT AS LOW AS POSSIBLE AND GENERALLY IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:

LAND USE	LIMITATION	COMMENTS
CONSTRUCTION AREAS	DISTURBANCE TO BE NO FURTHER THAN 5m (PREF 2m) FROM THE EDGE OF ANY ESSENTIAL ENGINEERING ACTIVITY AS SHOWN ON THESE PLANS	ALL SITE WORKERS WILL CLEARLY RECOGNISE THESE ZONES - WHERE APPROPRIATE THE CONSTRUCTION AREAS ARE TO BE IDENTIFIED WITH BARRIER FENCING (DOWNSLOPE) OR SIMILAR MATERIAL.
ACCESS AREAS	LIMITED TO A MAXIMUM WIDTH OF 10m	THE SITE MANAGER SHALL DETERMINE AND MARK THE LOCATION OF THESE ZONES ONSITE. THEY CAN VARY IN POSITION TO BEST CONSERVE THE EXISTING VEGETATION AND PROTECT DOWNSTREAM AREAS WHILE BEING CONSIDERATE OF THE NEEDS OF EFFICIENT WORKS ACTIVITIES. ALL SITE WORKERS SHALL CLEARLY RECOGNISE THEIR BOUNDARIES. WHERE APPROPRIATE THE ACCESS AREAS ARE TO BE MARKED WITH BARRIER MESH, SEDIMENT FENCING OR SIMILAR MATERIALS.
REMAINING LANDS	ENTRY PROHIBITED EXCEPT FOR ESSENTIAL THINNING OF PLANT GROWTH	THINNING OF GROWTH MAY BE REQUIRED FOR FIRE HAZARD REDUCTION.

NOTE:
WORKS WITHIN WATERWAYS AND CREEKS SHALL BE RESTRICTED AS DIRECTED - ALL LANDS WITHIN CREEKS AND WATERWAYS SHALL HAVE C-FACTORS BELOW 0.05 FROM 1st JANUARY TO 15th MAY USING MATERIALS THAT CAN CATER FOR CONCENTRATED FLOWS.

- 14. WORKS ARE TO BE UNDERTAKEN IN THE FOLLOWING SEQUENCE. EACH SUBSEQUENT STAGE IS NOT TO COMMENCE UNTIL THE PREVIOUS ONE IS COMPLETE:-
 - a. INSTALL ALL BARRIER AND SEDIMENT FENCING WHERE SHOWN ON THE PLAN AND TO DETAIL(SD) 6-8.
 - b. CONSTRUCT STABILISED SITE ACCESS AS SHOWN ON THE PLAN AND TO DETAIL (SD) 6-14.
 - c. CONSTRUCT LOW FLOW EARTH BANKS WHERE SHOWN ON THE PLAN AND TO DETAIL (SD) 5-5.
 - d. PROVIDE TEMP. ACCESS TO THE SEDIMENT BASIN(S)AND PROTECT THIS WITH SEDIMENT FENCING (SD) 6-8 OR BARRIER FENCING AND EARTH BANKS (SD) 5-5.
 - e. PLACE SEDIMENT FENCING (SD) 6-8 DOWNSLOPE OF LANDS TO BE DISTURBED FOR CONSTRUCTION OF THE SEDIMENT BASINS.
 - f. CONSTRUCT SEDIMENT BASIN(S) GENERALLY IN ACCORDANCE WITH (SD) 6-4
 - g. STABILISE LAND SURFACES DISTURBED BY CONSTRUCTION OF THE SEDIMENT BASIN(S) AS SOON AS FINAL LEVELS ARE ESTABLISHED
 - h. CLEAR THE SITE AND STRIP AND STOCKPILE THE TOPSOIL IN THE LOCATIONS SHOWN ON THE PLAN OR AS DIRECTED BY THE SITE SUPERINTENDENT TO DETAIL (SD) 4-1.
 - i. UNDERTAKE ALL ESSENTIAL CONSTRUCTION WORKS.
 - j. GRADE LOT AREAS TO FINAL GRADES AND APPLY PERMANENT STABILISATION (LANDSCAPING) WITHIN 14 DAYS OF COMPLETION OF CONSTRUCTION WORKS.
 - k. REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER THE PERMANENT LANDSCAPING HAS BEEN COMPLETED.
- 15. CLEARLY VISIBLE BARRIER FENCING SHALL BE INSTALLED WHERE DIRECTED BY THE SITE SUPERINTENDENT TO CONTROL AND PROHIBIT UNNECESSARY SITE DISTURBANCE
- 16. EARTH BATTERS SHALL BE CONSTRUCTED WITH AS LOW A GRADIENT AS PRACTICABLE BUT NO STEEPER THAN:-
 - a. 2(h) - 1(v) WHERE SLOPE LENGTH IS LESS THAN 7m
 - b. 2.5(h) - 1(v) WHERE SLOPE LENGTH IS BETWEEN 7m AND 10m
 - c. 3(h) - 1(v) WHERE SLOPE LENGTH IS BETWEEN 10m AND 12m
 - d. 4(h) - 1(v) WHERE SLOPE LENGTH IS BETWEEN 12m AND 18m
 - e. 5(h) - 1(v) WHERE SLOPE LENGTH IS BETWEEN 18m AND 27m
 - f. 6(h) - 1(v) WHERE SLOPE LENGTH IS GREATER THAN 27m

SLOPE LENGTHS CAN BE SHORTENED BY USING LOW FLOW EARTH BANKS AS CATCH DRAINS ABOVE THE EARTH BATTER AREA.

- 17. PROTECTION FROM EROSION FORCES SHALL BE UNDERTAKEN ON ALL LANDS TO MEET THE REQUIREMENTS OF TABLE J3-3 "MAXIMUM ACCEPTABLE C-FACTORS AT NOMINATED TIMES DURING WORKS" FROM "MANAGING URBAN STORMWATER - SOILS AND CONSTRUCTION 4TH EDITION"
- 18. TEMPORARY GROUND COVER IN SHEET FLOW AREAS IS TO BE IN ACCORDANCE WITH TABLE J3-4 "PLANT SPECIES FOR GROUND COVER" FROM "MANAGING URBAN STORMWATER - SOILS AND CONSTRUCTION 4TH EDITION" WHERE PRACTICAL FOOT AND VEHICULAR TRAFFIC SHALL BE KEPT AWAY FROM REHABILITATED AREAS
- 19. WHERE POSSIBLE THE CONSTRUCTION PROGRAM IS TO BE SCHEDULED SO THAT THE TIME FROM STARTING LAND DISTURBANCE ACTIVITIES TO STABILISATION IS A DURATION OF LESS THAN 6 MONTHS - THIS MEANS ACHIEVING A C-FACTOR OF LESS THAN 0.1 AND SETTING IN MOTION A PROGRAM THAT ENSURES THAT IT DROPS PERMANENTLY, (BY VEGETATION, PAVING, ARMOURING etc.) TO LESS THAN 0.05 WITHIN A FURTHER 60 DAYS. LOCAL WATER RESTRICTIONS PERMITTING, LANDS THAT HAVE BEEN NEWLY PLANTED WITH GRASS SPECIES SHALL BE WATERED REGULARLY UNTIL AN EFFECTIVE COVER HAS BEEN ESTABLISHED AND PLANTS ARE GROWING VIGOROUSLY. FOLLOW-UP SEED AND FERTILISER SHALL BE APPLIED AS NECESSARY IN AREAS OF MINOR SOIL EROSION AND/OR INADEQUATE VEGETATIVE PROTECTION. NOTWITHSTANDING THIS SCHEDULE WORKS SO THAT THE DURATION FROM THE CONCLUSION OF LAND SHAPING TO THE COMPLETION OF FINAL STABILISATION IS LESS THAN 20 WORKING DAYS.
- 20. SEDIMENT FENCES (SD) 6-8 SHALL:-
 - a. BE INSTALLED WHERE SHOWN ON THE PLAN AND AS DIRECTED AT THE DISCRETION OF THE SITE SUPERINTENDENT DURING THE COURSE OF CONSTRUCTION TO CONTAIN THE COARSER SEDIMENT FRACTIONS AS NEAR AS POSSIBLE TO THEIR SOURCE.
 - b. HAVE A CATCHMENT AREA NOT EXCEEDING 720sq.m, AND A STORAGE DEPTH OF AT LEAST 0.6m.
 - c. PROVIDE AN UPSLOPE RETURN OF 1m AT INTERVALS ALONG THE FENCE WHERE THE CATCHMENT AREA EXCEEDS 720sq.m. TO LIMIT THE DISCHARGE REACHING EACH SECTION TO 50litres/sec IN A MAX. 10yr To DISCHARGE.
- 21. STOCKPILES (SD) 4-1 SHALL BE LOCATED AS SHOWN ON THE PLANS AND AT THE DISCRETION OF THE SITE SUPERINTENDENT.
- 22. DURING WINDY WEATHER LARGE UNPROTECTED AREAS ARE TO BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL. IN THE EVENT WATER IS NOT AVAILABLE IN SUFFICIENT QUANTITIES SOIL BINDERS AND/OR DUST RETARDANTS SHALL BE USED OR THE SURFACE SHALL BE LEFT IN A CLODDY STATE THAT RESISTS REMOVAL BY WIND.
- 23. STOCKPILES SHALL NOT BE LOCATED WITHIN 5m OF HAZARD AREAS, INCLUDING LIKELY AREAS OF HIGH VELOCITY FLOWS SUCH AS WATERWAYS, PAVED AREAS OR DRIVEWAYS.
- 24. THE SEDIMENT RETENTION BASINS (SD) 6-4 SHALL:-
 - a. BE CONSTRUCTED WHERE SHOWN ON THE PLANS.
 - b. BE FLOCCULATED (APPENDIX E MANAGING URBAN STORMWATER SOILS & CONSTRUCTION 4TH ED.) BEFORE DISCHARGE OCCURS (UNLESS THE DESIGN STORM EVENT IS EXCEEDED)
 - c. HAVE ONE OR MORE PEGS PLACED ON THE FLOOR TO CLEARLY INDICATE THE LEVEL AT WHICH DESIGN CAPACITY OCCURS AND WHEN SEDIMENT SHALL BE REMOVED.
- 25. STORED CONTENTS OF THE BASINS SHALL BE TREATED WITH GYPSUM (APPENDIX E MANAGING URBAN STORMWATER SOILS & CONSTRUCTION 4TH ED.) OR OTHER FLOCCULATING AGENTS WHERE THEY CONTAIN MORE THAN 50mg/litre OF SUSPENDED SOLIDS. TREATMENT SHALL BE AS FOLLOWS:-
 - a. LOWER SUSPENDED SOLIDS TO LESS THAN 50mg/litre WITHIN 24hrs OF FILLING
 - b. THE BASINS SHALL THEN BE ALLOWED TO STAND 36 TO 48hrs FOR FLOCCULATED PARTICLES TO SETTLE
 - c. THE BASINS SHALL THEN BE DRAINED SO THAT FULL STORAGE CAPACITY IS REGAINED WITHOUT DISCHARGING SEDIMENT FROM THE SITE.
- 26. SEDIMENT REMOVED FROM ANY TRAPPING DEVICE SHALL BE DISPOSED IN LOCATIONS WHERE FURTHER EROSION AND CONSEQUENT POLLUTION TO DOWNSLOPE LANDS AND WATERWAYS SHALL NOT OCCUR.
- 27. WATER SHALL BE PREVENTED FROM DIRECTLY ENTERING THE PERMANENT DRAINAGE SYSTEM UNLESS IT IS RELATIVELY SEDIMENT FREE (ie THE CATCHMENT HAS BEEN LANDSCAPED AND/OR ANY LIKELY SEDIMENT HAS BEEN TREATED IN AN APPROVED DEVICE) NEVERTHELESS STORMWATER INLETS SHALL BE PROTECTED (SD) 6-11 & 6-12.
- 28. TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES SHALL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE STABILISED.
- 29. ACCEPTABLE BINS SHALL BE PROVIDED FOR ANY CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHTWEIGHT WASTE MATERIALS AND LITTER. CLEARANCE SERVICES SHALL BE PROVIDED AT LEAST ONCE A WEEK.

STOCKPILE NOTES:

- 1. SPOIL AND TOPSOIL STOCKPILES SHALL BE LOCATED AWAY FROM DRAINAGE LINES AND AREAS WHERE WATER MAY CONCENTRATE.
- 2. IF STOCKPILES ARE TO BE IN PLACE FOR LONGER THAN 14 DAYS THEN THEY SHALL BE STABILIZED BY COVERING WITH A MULCH OR WITH TEMPORARY VEGETATION.
- 3. FOLLOWING CONSTRUCTION, TOPSOIL SHALL BE RESPREAD TO A MINIMUM DEPTH OF 100mm ON THE BARE SOIL SURFACES AND REVEGETATED.

SEDIMENTATION CONTROL DEVICES:

- 1. ALL STRAW BALES SHALL BE BOUND WITH WIRE. STRAW BALES SHALL BE PLACED END TO END IN A SINGLE ROW AND EMBEDDED INTO THE SOIL TO A DEPTH OF 100mm. EACH BALE SHALL BE SECURELY ANCHORED WITH TWO STEEL STAKES DRIVEN 600mm INTO THE GROUND AND LOCKED ON THE BALE CENTRELIN.
- 2. SILT FENCES SHALL BE CONSTRUCTED BY STRETCHING A FILTER FABRIC (PROPEX OR SIMILAR) BETWEEN POSTS AT 2.5m CENTRES. FABRIC SHALL BE BURIED 150mm ALONG ITS LOWER EDGE.
- 3. PROVIDE STRIP OF TURF MIN. 300mm WIDE BEHIND KERB + 1m WIDE AROUND ALL SURFACE INLET PITS

SITE INSPECTION AND MAINTENANCE:

- 1. A SELF-AUDITING PROGRAM SHALL BE ESTABLISHED BASED ON A INSPECTION TEST PLAN (ITP) OR LOG BOOK. A SITE INSPECTION USING THE ITP SHALL BE MADE BY THE SITE MANAGER:-
 - a. AT LEAST WEEKLY
 - b. IMMEDIATELY BEFORE SITE CLOSURE
 - c. IMMEDIATELY FOLLOWING RAINFALL EVENTS IN EXCESS OF 5mm IN ANY 24hr PERIOD.THE SELF AUDIT SHALL INCLUDE:-
 - a. RECORDING THE CONDITION OF EVERY 'BEST MANAGEMENT PRACTICE' EMPLOYED
 - b. RECORDING MAINTENANCE REQUIREMENTS (IF ANY) FOR EACH 'BEST MANAGEMENT PRACTICE'
 - c. RECORDING THE VOLUMES OF SEDIMENT REMOVED FROM SEDIMENT RETENTION SYSTEMS WHERE APPLICABLE
 - d. RECORDING THE SITE WHERE SEDIMENT IS DISPOSED
 - e. FORWARDING A SIGNED DUPLICATE OF THE COMPLETED CHECK SHEET TO THE PROJECT MANAGER/DEVELOPER FOR THEIR INFORMATION.
- 2. IN ADDITION A SUITABLY QUALIFIED PERSON SHALL BE RESPONSIBLE FOR OVERSEEING THE INSTALLATION AND MAINTENANCE OF ALL SOIL AND WATER MANAGEMENT WORKS ON THE SITE. THE PERSON SHALL BE REQUIRED TO SPEND A MINIMUM OF:-
 - a. 2hrs ONSITE EACH FORTNIGHT UP UNTIL COMPLETION OF ROAD AND DRAINAGE WORKS AND/OR THE COMMISSIONING OF SEDIMENT BASIN(S)/WATER QUALITY CONTROL FACILITIES, AND DURING THE DECOMMISSIONING OF SAME AND/OR FINAL SITE STABILISATION, TO PROVIDE A SHORT MONTHLY WRITTEN REPORT.
 - b. ONE HOUR ONSITE EACH 2 MONTHS DURING THAT PHASE WHERE THE DEVELOPERS RESPONSIBILITIES ARE LIMITED TO MAINTENANCE OF THE SDS DEVICES AND/OR SEDIMENT BASINS (ie DURING THE STAGE WHEN BUILDING WORKS CAN BE UNDERTAKEN) TO PROVIDE A SHORT WRITTEN REPORT EACH 4 MONTHSTHE RESPONSIBLE PERSON SHALL ENSURE THAT:-
 - a. THIS PLAN IS BEING IMPLEMENTED CORRECTLY
 - b. REPAIRS ARE BEING UNDERTAKEN AS REQUIRED
 - c. ESSENTIAL MODIFICATIONS TO THIS PLAN ARE BEING MADE IF AND WHEN NECESSARY. EACH REPORT SHALL CERTIFY THAT WORKS HAVE BEEN CARRIED OUT ACCORDING TO THE APPROVED PLANS.
- 3. WASTE BINS SHALL BE EMPTIED AS NECESSARY, DISPOSAL OF WASTE SHALL BE IN A MANNER APPROVED BY THE SITE SUPERINTENDENT
- 4. PROPER DRAINAGE OF THE SITE SHALL BE MAINTAINED. DRAINS (INCLUDING INLET AND OUTLET WORKS) SHALL BE CHECKED TO ENSURE THAT THEY ARE OPERATING AS INTENDED,ESPECIALLY THAT:-
 - a. NO LOW POINTS EXIST WHICH CAN OVERTOP IN A LARGE STORM EVENT.
 - b. AREAS OF EROSION ARE REPAIRED (e.g LINED WITH SUITABLE MATERIAL) AND/OR VELOCITY OF FLOW IS REDUCED APPROPRIATELY THROUGH CONSTRUCTION OF SMALL CHECK DAMS OR INSTALLING ADDITIONAL DIVERSIONS UPSLOPE
 - c. BLOCKAGES ARE CLEARED (THESE MIGHT OCCUR BECAUSE OF SEDIMENT POLLUTION, SAND/SOIL/SPOIL BEING DEPOSITED IN OR TOO CLOSE TO THEM, BREACHED BY VEHICLE WHEELS etc)
- 5. SAND/SOIL/SPOIL MATERIALS PLACED CLOSER THAN 2m FROM HAZARD AREAS SHALL BE REMOVED SUCH HAZARD AREAS INCLUDE ANY AREAS OF HIGH VELOCITY WATER FLOWS (eg WATERWAYS AND GUTTERS) PAVED AREAS AND DRIVEWAYS.
- 6. RECENTLY STABILISED LANDS SHALL BE CHECKED TO ENSURE THAT THE EROSION HAZARD HAS BEEN EFFECTIVELY REDUCED. ANY REPAIRS SHALL BE INITIATED AS APPROPRIATE.
- 7. EXCESSIVE VEGETATIVE GROWTH SHALL BE CONTROLLED THROUGH MOWING OR SLASHING.
- 8. ALL SEDIMENT DETENTION SYSTEMS SHALL BE KEPT IN GOOD WORKING CONDITION. IN PARTICULAR ATTENTION SHALL BE GIVEN TO:-
 - a. RECENT WORKS TO ENSURE THAT THEY HAVE NOT RESULTED IN DIVERSION OF SEDIMENT LADEN WATER AWAY FROM THEM.
 - b. DEGRADABLE PRODUCTS TO ENSURE THAT THEY ARE REPLACED AS REQUIRED
 - c. SEDIMENT REMOVAL TO ENSURE THE DESIGN CAPACITY OR LESS REMAINS IN THE SETTLING ZONE.
- 9. ADDITIONAL EROSION AND/OR SEDIMENT CONTROL WORKS SHALL BE CONSTRUCTED AS MIGHT BECOME NECESSARY TO ENSURE THE DESIRED PROTECTION IS GIVEN TO DOWNSLOPE LANDS AND WATERWAYS (ie MAKE ONGOING CHANGES TO THIS PLAN WHERE IT PROVES INADEQUATE IN PRACTICE OR IS SUBJECTED TO CHANGES IN CONDITIONS AT THE WORKS SITE OR ELSEWHERE IN THE CATCHMENT.
- 10. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN A FUNCTIONING CONDITION UNTIL ALL EARTHWORKS ACTIVITIES ARE COMPLETED AND THE SITE STABILISED.
- 11. WATERS IN SEDIMENT RETENTION BASIN(S) THAT OCCUPY MORE THAN 1/4 OF THE DESIGN CAPACITY DURING THAT STAGE OF THE WORKS UP UNTIL COMMISSIONING OF THE BASIN(s) SHALL BE:-
 - a. TREATED WITH A FLOCCULATING AGENT (APPENDIX E MANAGING URBAN STORMWATER SOILS & CONSTRUCTION 4TH ED.)
 - b. DISCHARGED WITHIN 5 days FROM THE CONCLUSION OF ANY STORM EVENT LARGE ENOUGH TO FILL THE BASIN TO THAT LEVEL.
- 12. LITTER, DEBRIS AND COARSE SEDIMENT SHALL BE REMOVED FROM THE GROSS POLLUTANT TRAPS AND TRASH RACKS AS REQUIRED.

SOIL AND WATER MANAGEMENT SHALL BE READ IN CONJUNCTION WITH CADDENS HILL STAGES 5 & 6 BULK EARTHWORKS CC APPROVAL
- REF STAGE 2-3 BEW CC 14305 SOIL & WATER MANAGEMENT
- REF STAGE 4 BEW CC 14576 SOIL & WATER MANAGEMENT

Plotback: 7 March, 2019 2:25:00 PM File Name: J:\110358 - OConnell Lane Caddens\08 - Stage 7\CD\CC110358\CC726.dwg

B	ISSUE FOR APPROVAL	JT	JT	AM	MS	07/03/19
A	FIRST ISSUE	JT	NA/JA	AM	MS	11/12/18
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

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AZIMUTH:

DATUM:
A.H.D

ORIGIN:
M.G.A.

CLIENT:



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ISSUED FOR CONSTRUCTION APPROVAL

CADDENS HILL
STAGE 7
SOIL & WATER MANAGEMENT NOTES

PLAN No:
110358/CC726

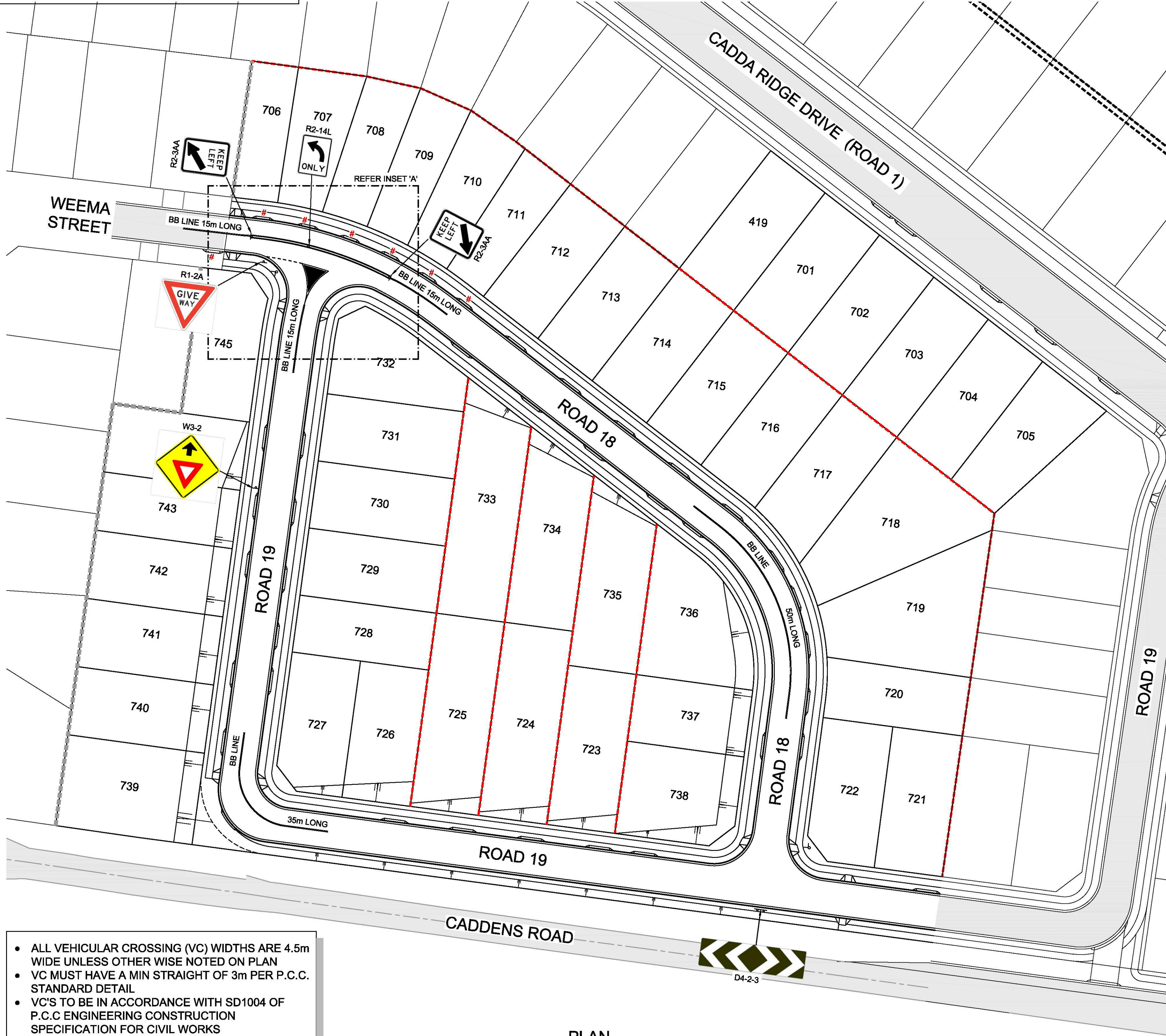
B

FILE No: 110358CC726

SHEET SIZE: A1 ORIGINAL

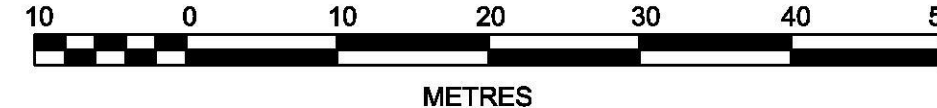
THESE SIGNAGE AND LINEMARKING PLANS ARE
SUBJECT TO APPROVAL BY PENRITH CITY COUNCIL

DENOTES VEHICULAR CROSSING
(VC) WIDTHS ARE 3.0m WIDE



PLAN
SCALE 1:500

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



AZIMUTH:
DATUM:
ORIGIN:

J. WYNDHAM PRINCE CONSULTING CIVIL INFRASTRUCTURE ENGINEERS
& PROJECT MANAGERS

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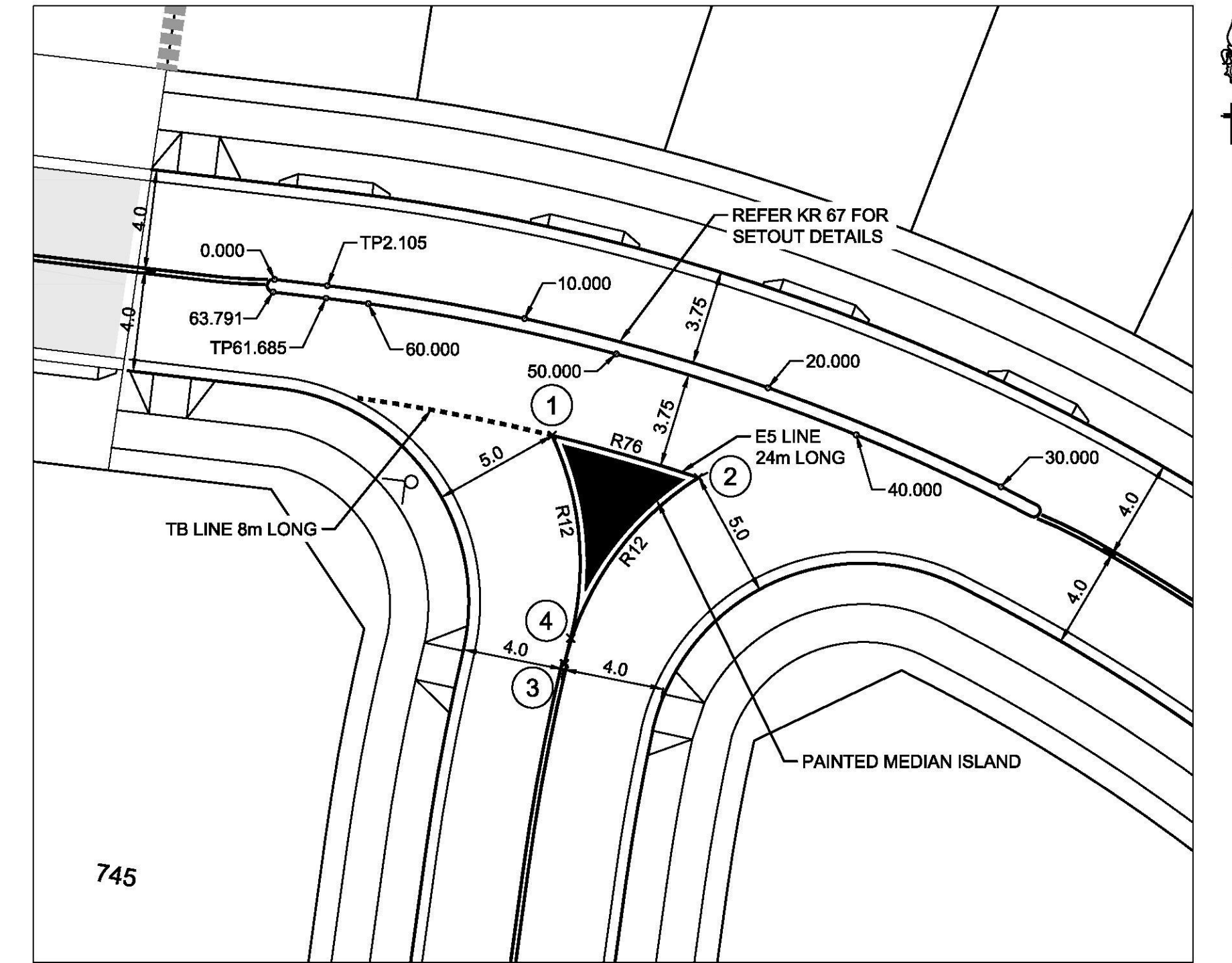


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**CADDENS HILL
STAGE 7
SIGNAGE & LINEMARKING PLAN**

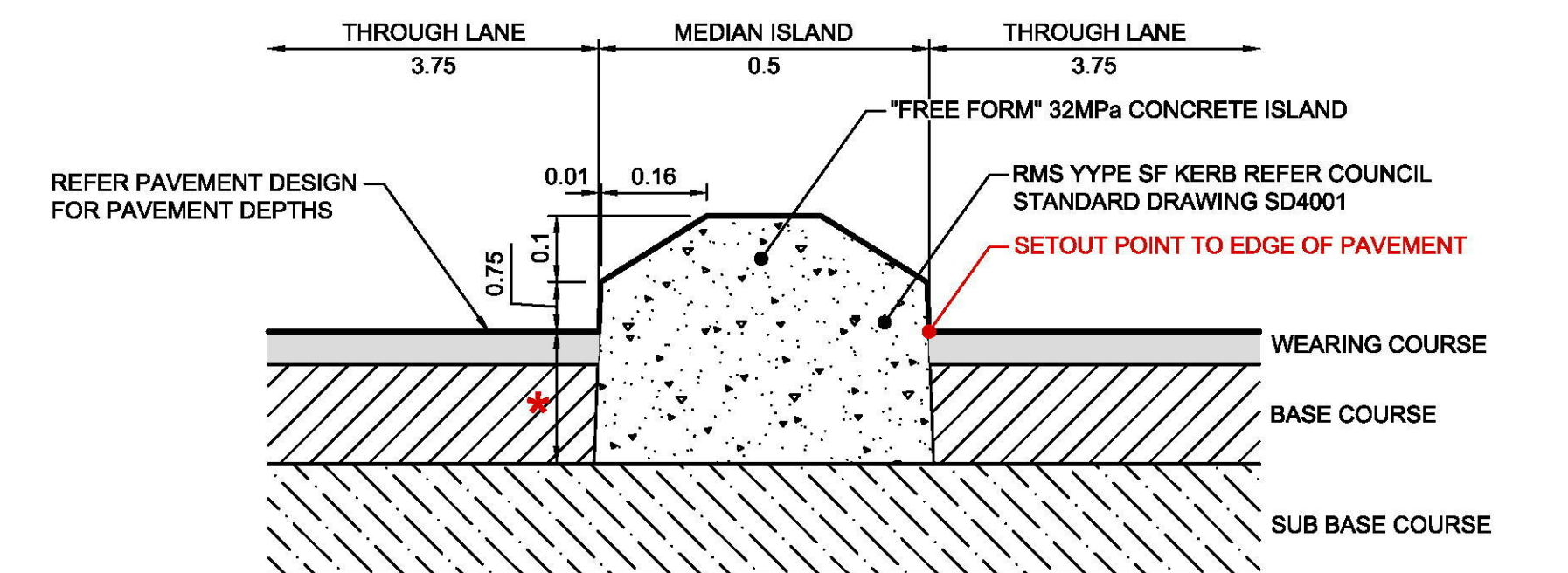
PLAN No:
110358/CC727 **C**
FILE No: 110358CC727
SHEET SIZE: A1 ORIGINAL



INSET 'A'
SCALE 1:200

PAINTED ISLAND		
POINT	EASTING	NORTHING
1	290333.02	6260406.47
2	290338.80	6260404.80
3	290333.51	6260397.45
4	290333.76	6260398.45

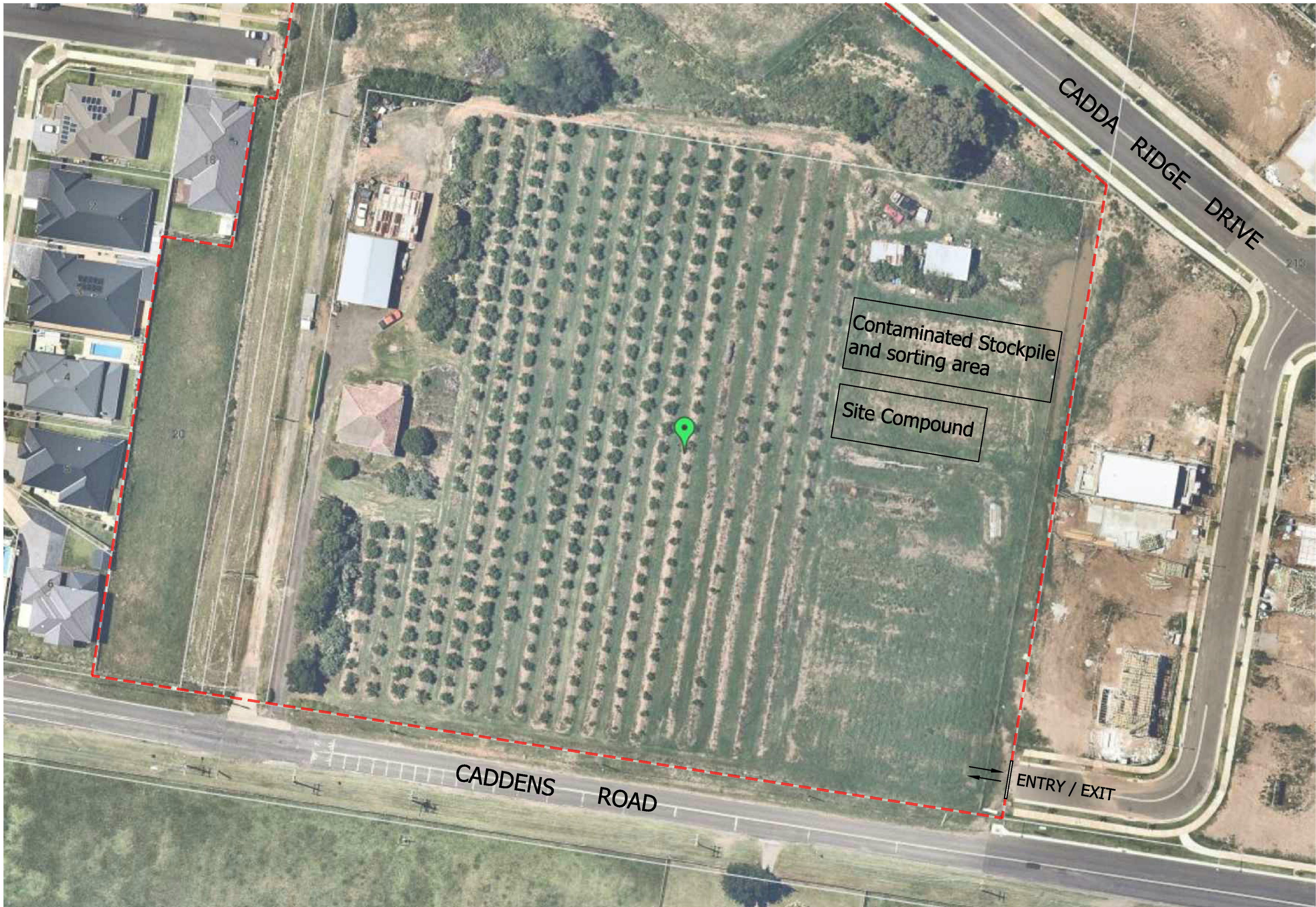
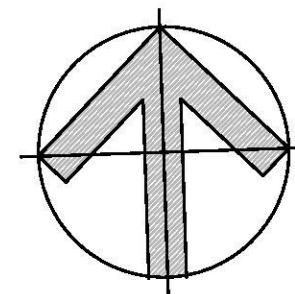
KR 67 - MEDIAN ISLAND					
CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	290322.06	6260412.63	96°40'09.19"		
2.11	290324.15	6260412.38			
16.85	290338.97	6260410.65		80.25	29.49
31.59	290352.17	6260403.71			
31.79	290352.39	6260403.6		0.25	0.39
31.99	290352.27	6260403.38	207°43'19.46"		
32.18	290352.16	6260403.15		0.25	0.39
32.38	290351.93	6260403.27			
47.03	290338.82	6260410.16		-79.75	29.31
61.69	290324.1	6260411.89			
63.79	290322	6260412.13	276°40'09.19"		
63.99	290321.76	6260412.16		0.25	0.39
64.18	290321.79	6260412.41	6°40'09.19"		
64.38	290321.81	6260412.66		0.25	0.39
64.58	290322.06	6260412.63	96°40'09.19"		



MEDIAN ISLAND TYPICAL DETAIL
REFER TO COUNCIL DRAWING SD4001 FOR KERB DETAILS
SCALE 1:10

* DEPTH OF KERB TO MATCH DEPTH
OF PAVEMENT BASE COURSE

C	ISSUE FOR APPROVAL	JT	JT	AM	MS	07/03/19			
B	RSA COMMENTS - SIGNAGE ADDED	JT	JT	DJH	AM	25/01/19			
A	FIRST ISSUE	JT	NA/JA	AM	MS	11/12/18			
	AMENDMENT	DES	DRN	CKD	APR	DATE			



This Plan should be read in conjunction with
J.Wyndham Price - Caddens Hill stage 7 soil
and water management notes.
Plan No. 110358/CC726

www.dialbeforeyoudig.com.au

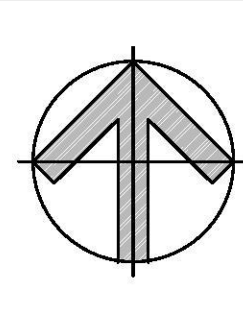


REVISION	DESCRIPTION	BY	DATE

SITE DESCRIPTION
191-205 Caddens Rd Caddens

BAR SCALES
0 10 20 A1 / A3 1:500 / 1:1000
NOTE: BOUNDARY AND LOT DIMENSIONS, ALIGNMENTS AND AREAS ARE PROVISIONAL AND ROUNDED TO NEAREST DECIMAL PLACE. AS SUCH THESE AREA ARE SUBJECT TO FINAL SURVEY.

SURVEY	HEIGHT DATUM AHD	LGA	AUTHORITY REFERENCE
DESIGN	CHECKING	DA No.	DATE
DRAWN	CHECKING	CC No.	DATE



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PROJECT	CADDENS HILL - Stage 7 - DA 17/1157 Remediation Site Plan 191-205 Caddens Rd Caddens
PROJECT REFERENCE	-
DATE OF ISSUE	01/02/19
REVISION No.	A
SHEET SIZE	A1

SHEET	OF
-	SHEETS