

BIODIVERSITY - HABITAT
CORRIDOR ZONEC2

DESIGN SUMMARY
SHOALHAVEN CITY COUNCIL

TOTAL SITE AREA = 40Ha (APPROX)

PRE-DEVELOPMENT CONDITIONS:
TOTAL EXISTING IMPERVIOUS AREA= 0.00 m²

POST-DEVELOPMENT CONDITIONS:
TOTAL IMPERVIOUS AREA= 3524.07 m² (GRAVEL DRIVEWAY EXCLUDED)
ROOF AREA = 1835.16 m²
PAVED AREA = 1958.91 m²
GRASS LANDSCAPE AREA = 634.00 m²

VOLUME OF RETENTION REQUIRED:
STORAGE REQUIRED = 3524.07 x 0.01 = 35.24m³
PROVIDED = 140000L RWT + 40000L RWT = 180000L

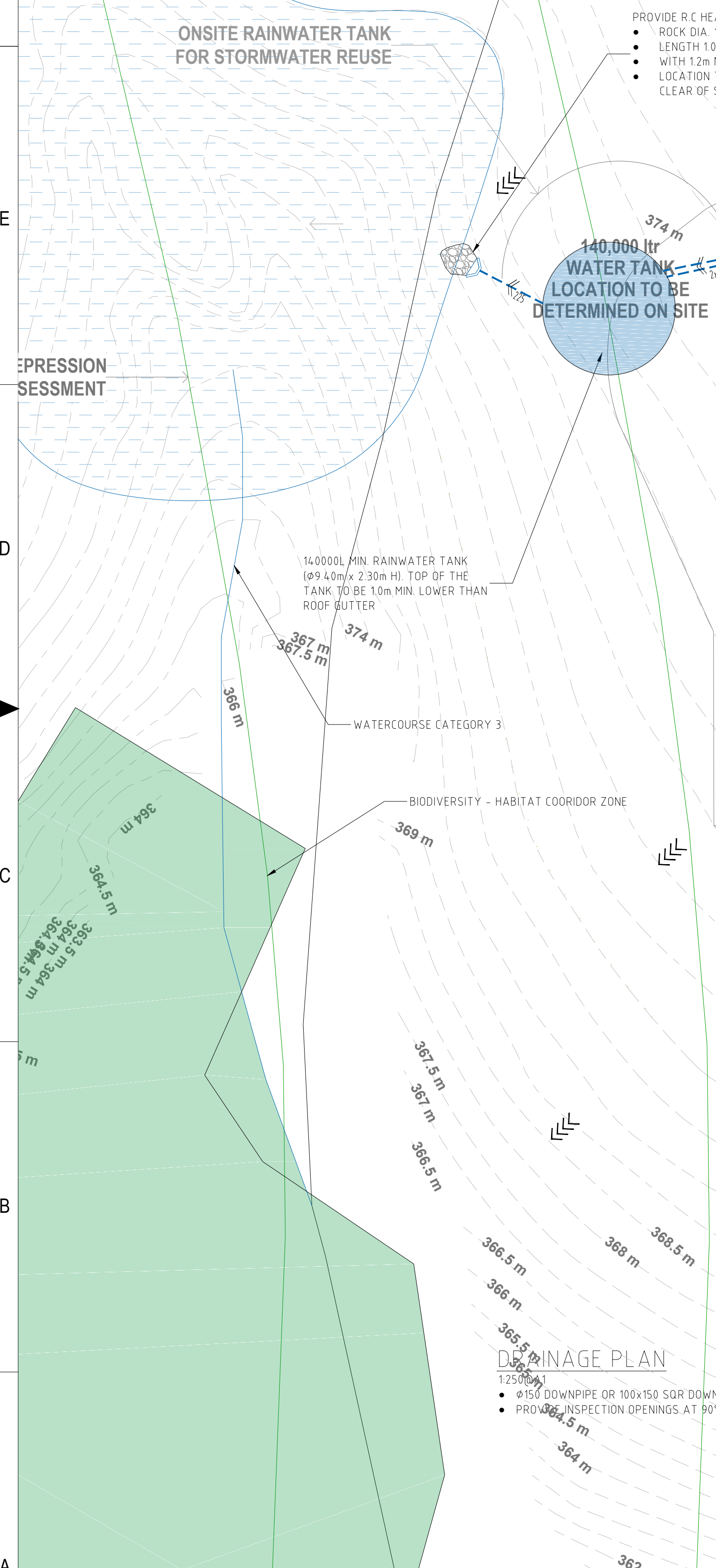
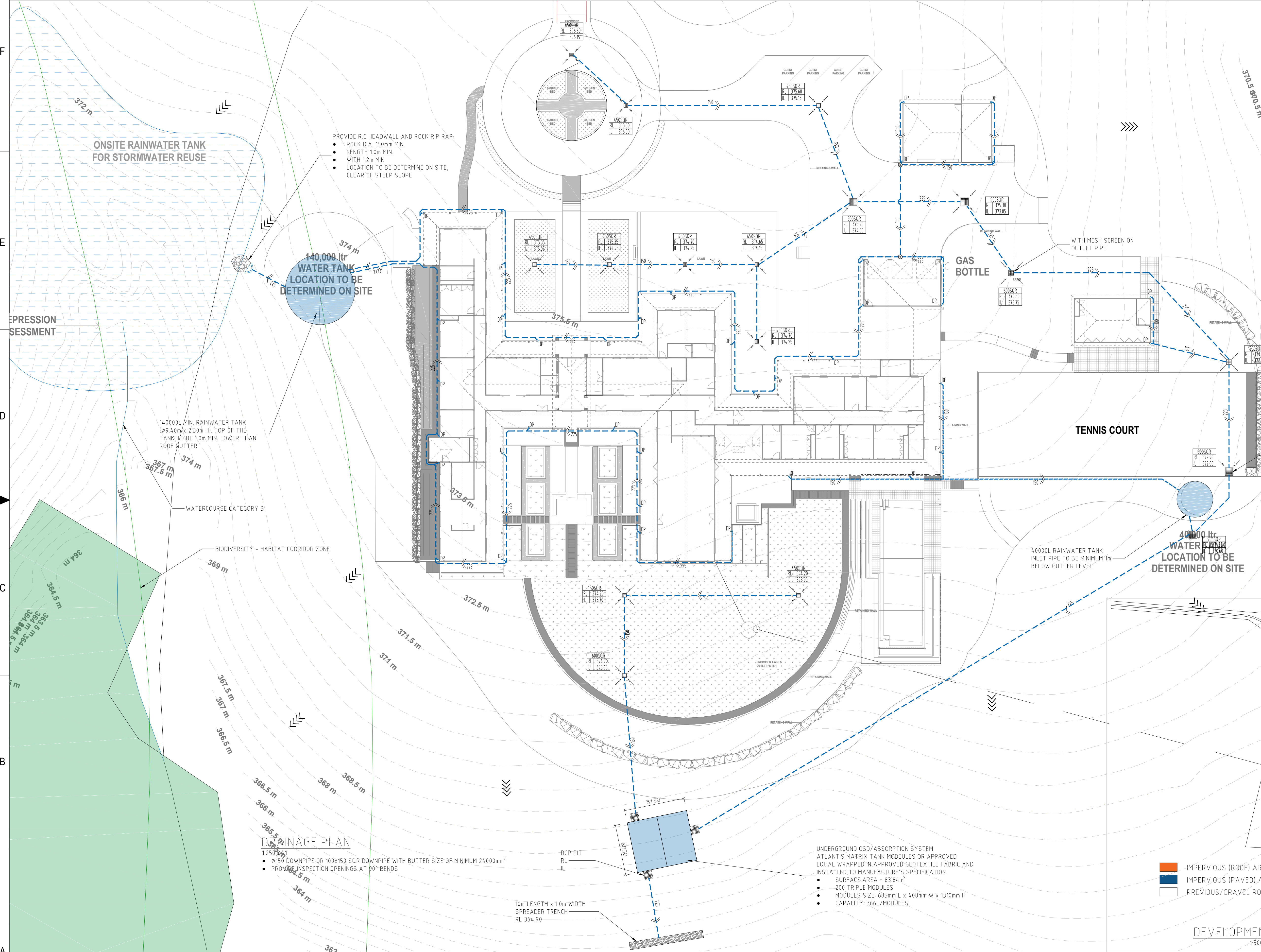
SITE DISCHARGE

TRIBUTARY AREA (DEVELOPMENT AREA ONLY) = 4560.33m²
% IMPERVIOUS (PRE) = 0.0%
% IMPERVIOUS (POST) = 100%

Q_{50PRE} = 94 l/s
Q_{50POST} = 74 l/s
ORIFICE = 200mm

NOTE 5
PROTECTIVE BUNTING TO BE INSTALLED TO TREE PROTECTION ONES PRIOR TO WORKS BEING UNDERTAKEN, AND MUST REMAIN IN PLACE UNTIL ALL WORKS ARE COMPLETED.

PROP SUE IRRIG.



ONSITE RAINWATER TANK FOR STORMWATER REUSE

140,000 ltr WATER TANK LOCATION TO BE DETERMINED ON SITE

140,000L MIN. RAINWATER TANK (Ø9.40m x 2.30m HI. TOP OF THE TANK TO BE 1.0m MIN. LOWER THAN ROOF GUTTER)

WATERCOURSE CATEGORY 3

BIODIVERSITY - HABITAT COORIDOR ZONE

DRAINAGE PLAN

- Ø150 DOWNPIPE OR 100x150 SDR DOWNPIPE WITH BUTTER SIZE OF MINIMUM 24000mm²
- PROVIDE INSPECTION OPENINGS AT 90° BENDS

10m LENGTH x 1.0m WIDTH SPREADER TRENCH RL 364.90

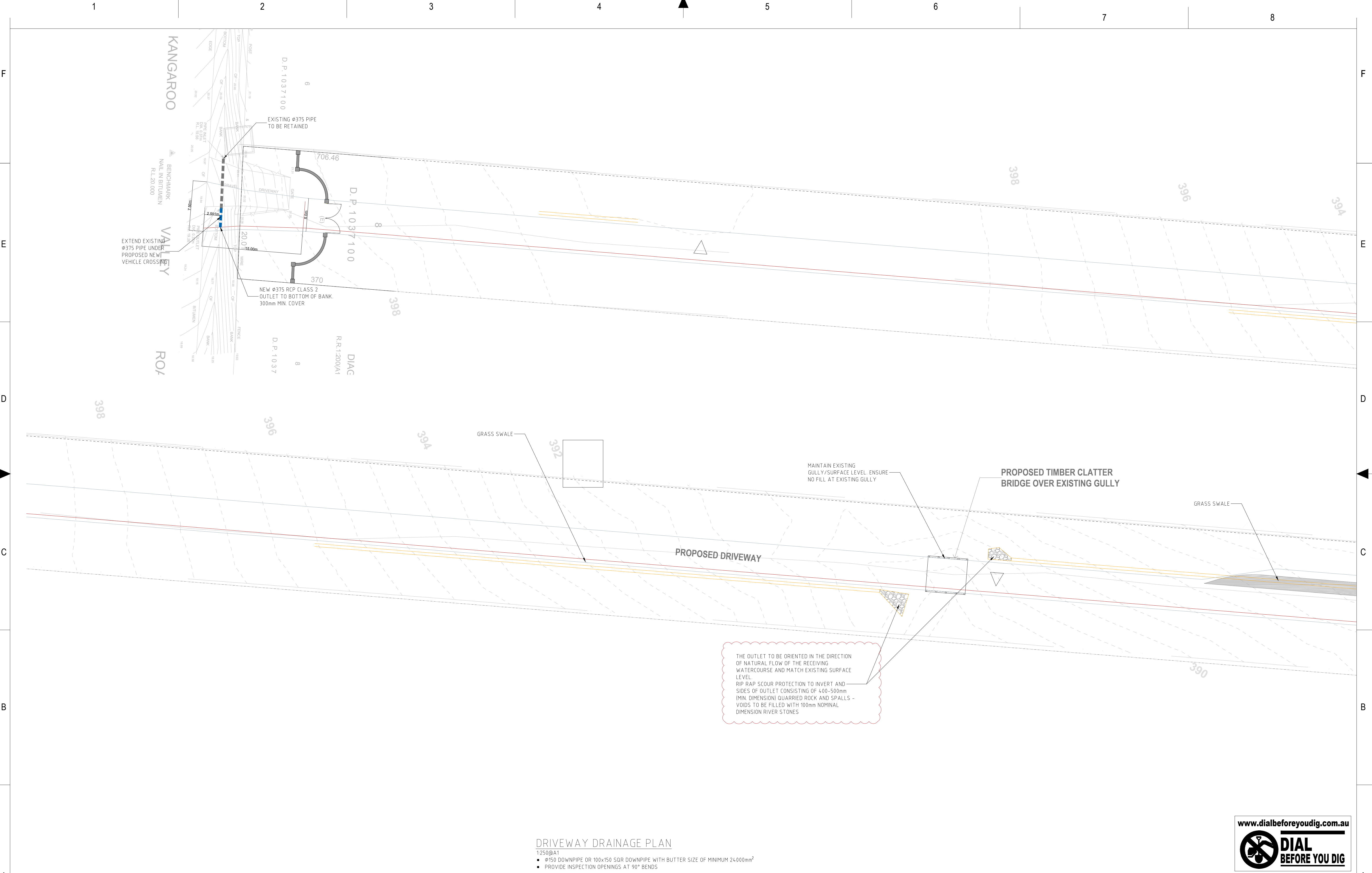
UNDERGROUND OSD/ABSORPTION SYSTEM ATLANTIS MATRIX TANK MODULES OR APPROVED EQUAL WRAPPED IN APPROVED GEOTEXTILE FABRIC AND INSTALLED TO MANUFACTURE'S SPECIFICATION.

- SURFACE AREA = 83.84m²
- 200 TRIPLE MODULES
- MODULES SIZE: 685mm L x 408mm W x 1310mm H
- CAPACITY: 366L/MODULES.

IMPERVIOUS (ROOF) AREA
IMPERVIOUS (PAVED) AREA
PREVIOUS/GRAVEL ROAD AREA

DEVELOPMENT SITE PLAN
1:5000@A1

REFERENCE COORDINATION DRAWING										GENERAL NOTES : * THIS DRAWING IS THE COPYRIGHT OF NASTASI & ASSOCIATES CONSULTING CIVIL & STRUCTURAL ENGINEERS, Unit 5,1-3 Whyalla Place,Prestons, 2170, PO Box 6648, Hammondville, NSW, 2170. * IT IS NOT ALLOWED TO COPY OR REPRODUCE ITS CONTENTS IN ANY FORM EXCEPT FOR THE PURPOSE WHICH IT IS INTENDED WITHOUT THE ABOVE CONSULTANTS AUTHORITY. * DO NOT SCALE THIS DRAWING, ONLY STATED DIMENSIONS ARE TO BE CONSIDERED. * CONTRACTOR TO VERIFY THE DETAIL / INFORMATION GIVEN IN THIS DRAWING, ANY DISCREPANCIES SHALL BE BROUGHT TO ENGINEERS ATTENTION PRIOR TO COMMENCEMENT OF WORK, FAILURE TO COMPLY WITH THE ABOVE WILL BE CONTRACTORS LIABILITY.										NASTASI & ASSOCIATES CONSULTING CIVIL & STRUCTURAL ENGINEERS B.E., M.I.E. AUSTR. CPENG NPER-3 ABN 45 533 226 008 UNIT 5, 1-3 WHYALLA PLACE, PRESTONS NSW 2170 PH: (02) 9607 2864 OR (02) 8798 5617 FAX: (02) 9731 2081 MOB: 0419 041 401										QUALITY CONTROL		APPROVED:		CLIENT:		TITLE:		DRAWING STATUS					
DISCIPLINE		DRAWING TITLE AND NUMBER		DATE		REV.		DRAWING TITLE AND NUMBER		DATE		REV.		DRAWN		DATE		DESIGNED		DATE		CHECKED		DATE								SCALE (AT ORIGINAL SIZE)		AS NOTED		PROJECT NO.		DRAWING NO.		REVISION NO.			
ARCH.						FIRE																																					
STRUCT.						LANDS																																					
MECH.						CIVIL																																					
ELEC.						SURVEY																																					
HYD.																																											
ISSUE																																											
REVISION																																											
DATE																																											



DRIVEWAY DRAINAGE PLAN

- 1:250@A1
- Ø150 DOWNPIPE OR 100x150 SQR DOWNPIPE WITH BUTTER SIZE OF MINIMUM 24-000mm²
 - PROVIDE INSPECTION OPENINGS AT 90° BENDS

GENERAL NOTES :

- THIS DRAWING IS THE COPYRIGHT OF NASTASI & ASSOCIATES CONSULTING CIVIL & STRUCTURAL ENGINEERS, Unit 5,1-3 Whyalla Place,Prestons, 2170, PO Box 6048, Hammondville, NSW, 2170.
- IT IS NOT ALLOWED TO COPY OR REPRODUCE ITS CONTENTS IN ANY FORM EXCEPT FOR THE PURPOSE WHICH IT IS INTENDED WITHOUT THE ABOVE CONSULTANTS AUTHORITY.
- DO NOT SCALE THIS DRAWING, ONLY STATED DIMENSIONS ARE TO BE CONSIDERED.
- CONTRACTOR TO VERIFY THE DETAIL / INFORMATION GIVEN IN THIS DRAWING, ANY DISCREPANCIES SHALL BE BROUGHT TO ENGINEERS ATTENTION PRIOR TO COMMENCEMENT OF WORK, FAILURE TO COMPLY WITH THE ABOVE WILL BE CONTRACTORS LIABILITY.

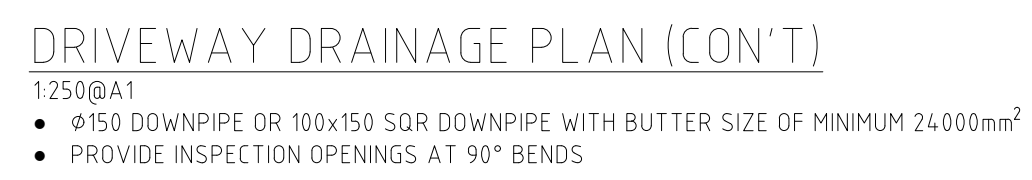
NASTASI & ASSOCIATES
CONSULTING CIVIL & STRUCTURAL ENGINEERS
B.E., M.I.E. AUST. CPENG NPFR-3

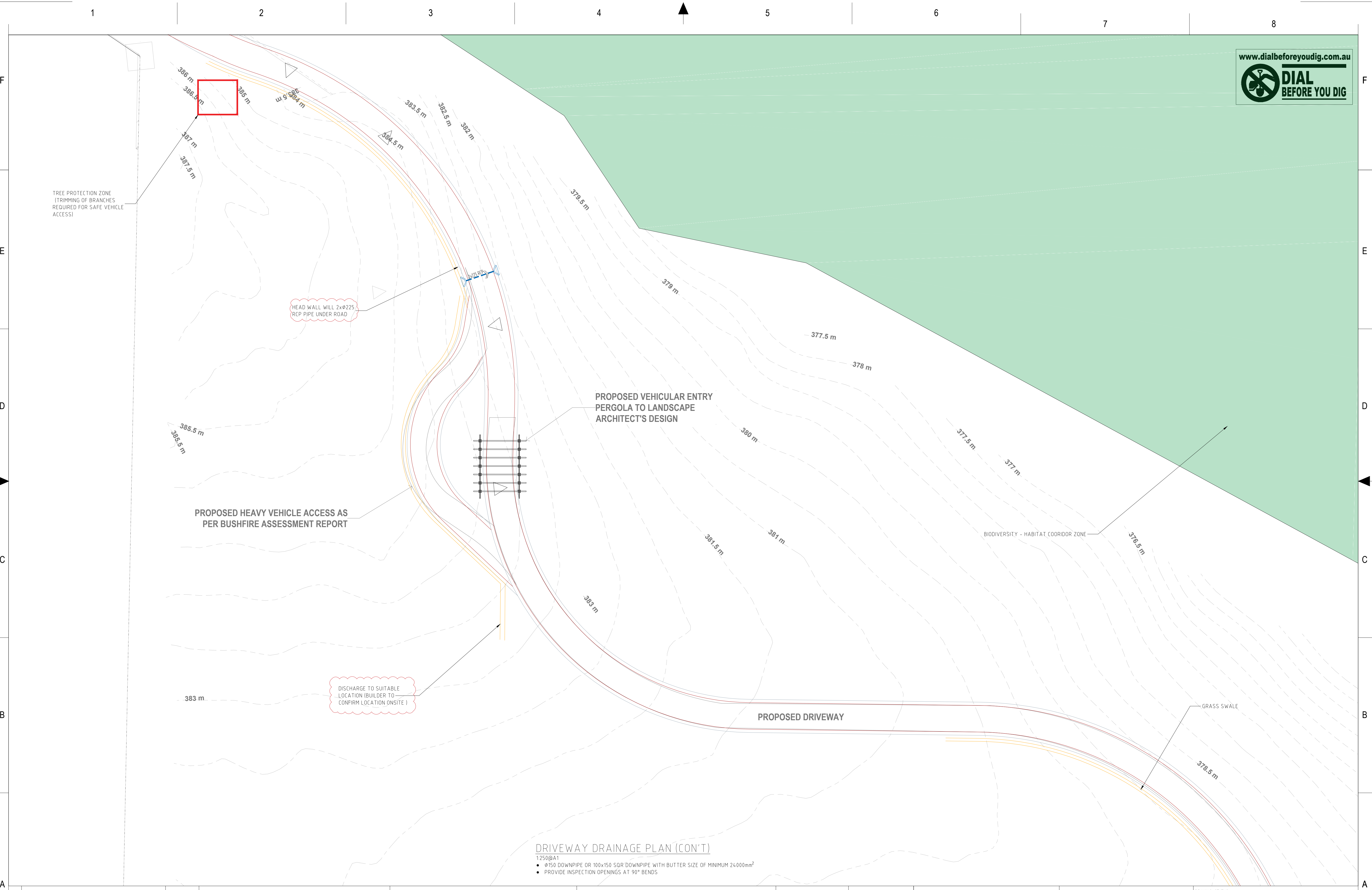
UNIT 5, 1-3 WHYALLA PLACE, PRESTONS NSW 2170
PH: (02) 9607 2864 OR (02) 8798 8617 FAX: (02) 9731 2081
MOB: 0419 041 401

ABN 45 633 226 008

QUALITY CONTROL		APPROVED:	CLIENT:	TITLE:	DRAWING STATUS		
DRAWN	DATE						
DESIGNED	DATE						
CHECKED	DATE						
			PROJECT:	DRIVEWAY DRAINAGE PLAN			
SCALE (AT ORIGINAL SIZE)					AS NOTED		
PROJECT NO.		DRAWING NO.			REVISION NO.		
C3							

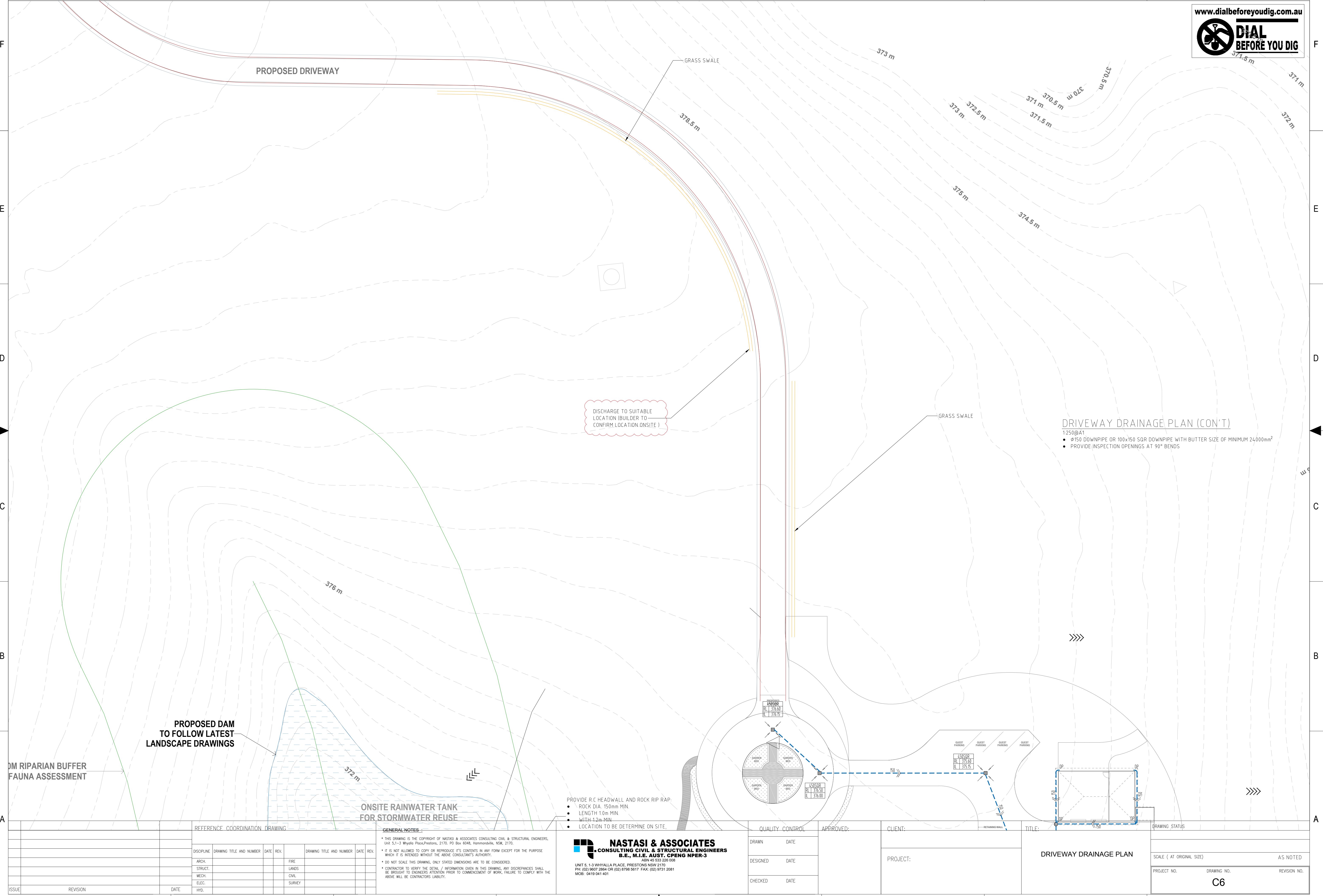


[illegible]



DRIVEWAY DRAINAGE PLAN (CON'T)
1:250@A1
• Ø150 DOWNPIPE OR 100x150 SQR DOWNPIPE WITH BUTTER SIZE OF MINIMUM 24000mm²
• PROVIDE INSPECTION OPENINGS AT 90° BENDS

REFERENCE COORDINATION DRAWING				GENERAL NOTES :				QUALITY CONTROL		APPROVED:	CLIENT:	TITLE:	DRAWING STATUS
								DRAWN	DATE				
								DESIGNED	DATE				
								CHECKED	DATE				
											PROJECT:		
												DRIVEWAY DRAINAGE PLAN	
													SCALE (AT ORIGINAL SIZE) AS NOTED
													PROJECT NO. DRAWING NO. REVISION NO.
													C5



DRIVEWAY DRAINAGE PLAN (CON'T)

1:250@A1

- Ø150 DOWNPIPE OR 100x150 SQR DOWNPIPE WITH BUTTER SIZE OF MINIMUM 24000mm²
- PROVIDE INSPECTION OPENINGS AT 90° BENDS

DISCHARGE TO SUITABLE
LOCATION (BUILDER TO
CONFIRM LOCATION ONSITE)

PROPOSED DAM
TO FOLLOW LATEST
LANDSCAPE DRAWINGS

DM RIPARIAN BUFFER
FAUNA ASSESSMENT

ONSITE RAINWATER TANK
FOR STORMWATER REUSE

- PROVIDE R/C HEADWALL AND ROCK RIP RAP:
- ROCK DIA. 150mm MIN.
 - LENGTH 1.0m MIN.
 - WITH 1.2m MIN.
 - LOCATION TO BE DETERMINE ON SITE.

REFERENCE COORDINATION DRAWING			
DISCIPLINE	DRAWING TITLE AND NUMBER	DATE	REV.
ARCH.			
STRUCT.			
MECH.			
ELEC.			
HYD.			
ISSUE	REVISION	DATE	

GENERAL NOTES:

- THIS DRAWING IS THE COPYRIGHT OF NASTASI & ASSOCIATES CONSULTING CIVIL & STRUCTURAL ENGINEERS, Unit 5, 1-3 Whyalla Place, Prestons, 2170. PO Box 6048, Hammondville, NSW, 2170.
- IT IS NOT ALLOWED TO COPY OR REPRODUCE ITS CONTENTS IN ANY FORM EXCEPT FOR THE PURPOSE WHICH IT IS INTENDED WITHOUT THE ABOVE CONSULTANTS' AUTHORITY.
- DO NOT SCALE THIS DRAWING, ONLY STATED DIMENSIONS ARE TO BE CONSIDERED.
- CONTRACTOR TO VERIFY THE DETAIL / INFORMATION GIVEN IN THIS DRAWING, ANY DISCREPANCIES SHALL BE BROUGHT TO ENGINEERS ATTENTION PRIOR TO COMMENCEMENT OF WORK, FAILURE TO COMPLY WITH THE ABOVE WILL BE CONTRACTORS LIABILITY.

**NASTASI & ASSOCIATES**
CONSULTING CIVIL & STRUCTURAL ENGINEERS
B.E., M.I.E. AUST. CPENG NPER-3
/ABN 45 633 226 008
UNIT 5, 1-3 WHYALLA PLACE, PRESTONS NSW 2170
PH: (02) 9607 2864 OR (02) 9798 8617 FAX: (02) 9731 2081
MOB: 0419 041 401

QUALITY CONTROL	
DRAWN	DATE
DESIGNED	DATE
CHECKED	DATE

APPROVED:

CLIENT:

PROJECT:

TITLE:

DRIVEWAY DRAINAGE PLAN

DRAWING STATUS

SCALE (AT ORIGINAL SIZE)		
AS NOTED		
PROJECT NO.	DRAWING NO.	REVISION NO.

C6

F

E

D

C

B

A

F

E

D

C

B

A

Stormwater and On Site Detention Maintenance Schedule			
524 Kangaroo Valley Road, Berry			
Maintenance Action	Frequency	Responsibility	Procedure
Discharge Control Pit			
Inspect and remove any blockage of orifice	Monthly	Maintenance Contractor	Remove grate and screen to inspect orifice. See attached Site Stormwater plan for location of Discharge Control Pit
Check attachment of orifice plate to wall of pit (ensure no gaps exist)	Annually	Maintenance Contractor	Remove grate and screen. Ensure orifice plate is mounted securely, tighten fixings if required and seal any gaps which are present.
Check orifice diameter correct and ensure along edge	Five Yearly	Maintenance Contractor	Compare orifice diameter to approved design (see Works as Executed Drawing) and ensure edge of orifice is not pitted or damaged
Inspect trash screens and clean	Six Monthly	Maintenance Contractor	Remove grate and screen if required to clean it.
Check attachment of screens to wall of pit	Annually	Maintenance Contractor	Remove grate and screen. Ensure screen fixings secure. Repair as required.
Check trash screens for corrosion	Annually	Maintenance Contractor	Remove grate and examine screen for rust or corrosion, especially at corners or welds.
Inspect flap valve and remove any blockages	Six Monthly	Maintenance Contractor	Remove grate. Ensure flap valve moves freely and remove any blockages or debris.
Check attachment of flap valve to wall of pit	Annually	Maintenance Contractor	Remove grate. Ensure fixings of valve are secure
Check flap valve seals against wall of pit	Annually	Maintenance Contractor	Remove grate. Fill pit with water and check that flap seals against side of pit with minimal leakage
Check any hinges on the flap valve to ensure flap moves freely	Six Monthly	Maintenance Contractor	Remove grate. Test valve hinge by moving flap to full extent and allowing it to drop back into normal position. Flap should freely swing at hinge.
Inspect overflow weir and remove any blockages	Six Monthly	Maintenance Contractor	Remove grate and open cover to ventilate underground storage if present. Ensure weir clear of blockages
Empty trash basket at overflow weir (where present, generally in below ground tanks)	Six Monthly	Maintenance Contractor	Remove grate and ventilate underground storage chamber if present. Empty basket, check fixings are secure and not corroded
Inspect Discharge control pit walls (internal and external, if appropriate) for cracks or spalling	Annually	Maintenance Contractor	Remove grate to inspect walls. Repair as required. Clear vegetation from external walls if necessary and repair as required
Inspect Discharge Control Pit pump and remove any sediment/sludge	Six Monthly	Maintenance Contractor	Remove grate and screen. Remove sediment/sludge build up and check orifice and flap valve are clear
Inspect grate for damage or blockage	Six Monthly	Maintenance Contractor	Check both sides of grate for corrosion, (especially corners and welds) damage or blockage. Replace if necessary with hot dipped galvanised grate
Inspect return pipe from storage and remove any blockage	Six Monthly	Maintenance Contractor	Remove grate and screen. Ventilate underground storage if present. Open flap valve and remove any blockages in return line. Check for sludge/debris on upstream side of return line
Inspect outlet pipe and remove any blockages	Six Monthly	Maintenance Contractor	Remove grate and screen. Ventilate underground storage if present. Check orifice and remove any blockages in outlet pipe. Flush outlet pipe to confirm it drains freely. Check for sludge/debris on upstream side of return line
Check step-irons for corrosion	Annually	Maintenance Contractor	Remove grate. Examine step irons and repair any corrosion or damage or replace step if necessary
Check fixing of step irons is secure	Six Monthly	Maintenance Contractor	Remove grate and ensure fixings secure prior to placing weight on step iron.
Inspect and remove any blockage of Control Pipe within the Detention Tank	Monthly or following Rain Period	Maintenance Contractor with Confined Space Training and Equipment	Remove grate above the discharge control pipe to inspect the pipe outlet. See attached Site Stormwater layout for location of Discharge Control Pipe
Check attachment of orifice plate to wall of pit (ensure no gaps exist)	Annually	Maintenance Contractor	Remove grate and screen. Ensure orifice plate is mounted securely, tighten fixings if required and seal any gaps which are present.
Check orifice diameter correct and ensure along edge	Five Yearly	Maintenance Contractor	Compare orifice diameter to approved design (see Works as Executed Drawing) and ensure edge of orifice is not pitted or damaged
Inspect trash screens and clean	Six Monthly	Maintenance Contractor	Remove grate and screen if required to clean it.
Check attachment of screens to wall of pit	Annually	Maintenance Contractor	Remove grate and screen. Ensure screen fixings secure. Repair as required.
Check trash screens for corrosion	Annually	Maintenance Contractor	Remove grate and examine screen for rust or corrosion, especially at corners or welds.
Inspect Discharge Control Pit pump and remove any sediment/sludge	Six Monthly	Maintenance Contractor	Remove grate and screen. Remove sediment/sludge build up and check orifice and flap valve are clear
Inspect grate for damage or blockage	Six Monthly	Maintenance Contractor	Check both sides of grate for corrosion, (especially corners and welds) damage or blockage. Replace if necessary with hot dipped galvanised grate
Inspect return pipe from storage and remove any blockage	Six Monthly	Maintenance Contractor	Remove grate and screen. Ventilate underground storage if present. Open flap valve and remove any blockages in return line. Check for sludge/debris on upstream side of return line
Inspect outlet pipe and remove any blockage	Six Monthly	Maintenance Contractor	Remove grate and screen. Ventilate underground storage if present. Check orifice and remove any blockages in outlet pipe. Flush outlet pipe to confirm it drains freely. Check for sludge/debris on upstream side of return line
Check step-irons for corrosion	Annually	Maintenance Contractor with Confined Space Training and Equipment	Remove grate. Examine step irons and repair any corrosion or damage or replace step if necessary. If corroded, the step iron/ladder shall be replaced with hot dipped galvanised step/ladder
Check that fixing of step irons/step ladder is secure	Six Monthly	Maintenance Contractor with Confined Space Training and Equipment	Remove grate and ensure fixings are secure prior to placing weight on step iron/ladder. Repair fixings or replace step/ladder if necessary
General			
Inspect gutters of building and remove any debris/sludge	Annually	Maintenance Contractor	Remove any leaves or debris and sludge from gutters of building and flush downpipes of building to remove any blockages. This downstream of downpipes to be cleaned if flushed debris.
Inspect pits and trench drains on site and remove debris/litter/sludge	Six Monthly	Maintenance Contractor	Remove grate. Remove any debris/litter/sludge from within pits.

OSD/ABSORPTION SYSTEM PLAN
SCALE 1:100

OSD/ABSORPTION SYSTEM SECTION A
SCALE 1:20

DEBRIS SCREEN DETAILS
SCALE 1:20

DETAIL HEADWALL & OUTLET
NTS

TYPICAL PIPE LAYING DETAIL
NTS

CLEANING EYE DETAILS
SCALE 1:20

SURFACE PIT DETAILS
SCALE 1:20

ORIFICE PLATE DETAILS
SCALE 1:10

TYPICAL STORMWATER INFILTRATION TRENCH DETAILS
SCALE 1:20

REFERENCE COORDINATION DRAWING					
DISCIPLINE	DRAWING TITLE AND NUMBER	DATE	REV.	DRAWING TITLE AND NUMBER	DATE
ARCH.				FIRE	
STRUCT.				LANDS	
MECH.				CIVIL	
ELEC.				SURVEY	
HYD.					

GENERAL NOTES :

- THIS DRAWING IS THE COPYRIGHT OF NASTASI & ASSOCIATES CONSULTING CIVIL & STRUCTURAL ENGINEERS, Unit 5,1-3 Whyalla Place,Prestons, 2170, PO Box 6048, Hammondville, NSW, 2170.
- IT IS NOT ALLOWED TO COPY OR REPRODUCE ITS CONTENTS IN ANY FORM EXCEPT FOR THE PURPOSE WHICH IT IS INTENDED WITHOUT THE ABOVE CONSULTANTS' AUTHORITY.
- DO NOT SCALE THIS DRAWING, ONLY STATED DIMENSIONS ARE TO BE CONSIDERED.
- CONTRACTOR TO VERIFY THE DETAIL / INFORMATION GIVEN IN THIS DRAWING, ANY DISCREPANCIES SHALL BE BROUGHT TO ENGINEERS ATTENTION PRIOR TO COMMENCEMENT OF WORK, FAILURE TO COMPLY WITH THE ABOVE WILL BE CONTRACTORS LIABILITY.

NASTASI & ASSOCIATES
CONSULTING CIVIL & STRUCTURAL ENGINEERS
B.E., M.I.E. AUSTRALIAN REGISTERED ENGINEER
NPER-3
ABN 45 533 226 008
UNIT 5, 1-3 WHYALLA PLACE, PRESTONS NSW 2170
PH: (02) 9607 2884 OR (02) 9798 9617 FAX: (02) 9731 2081
MOB: 0419 041 401

QUALITY CONTROL	
DRAWN	DATE
DESIGNED	DATE
CHECKED	DATE

APPROVED:

CLIENT:

PROJECT:

TITLE:

DRAWING STATUS

SCALE (AT ORIGINAL SIZE)

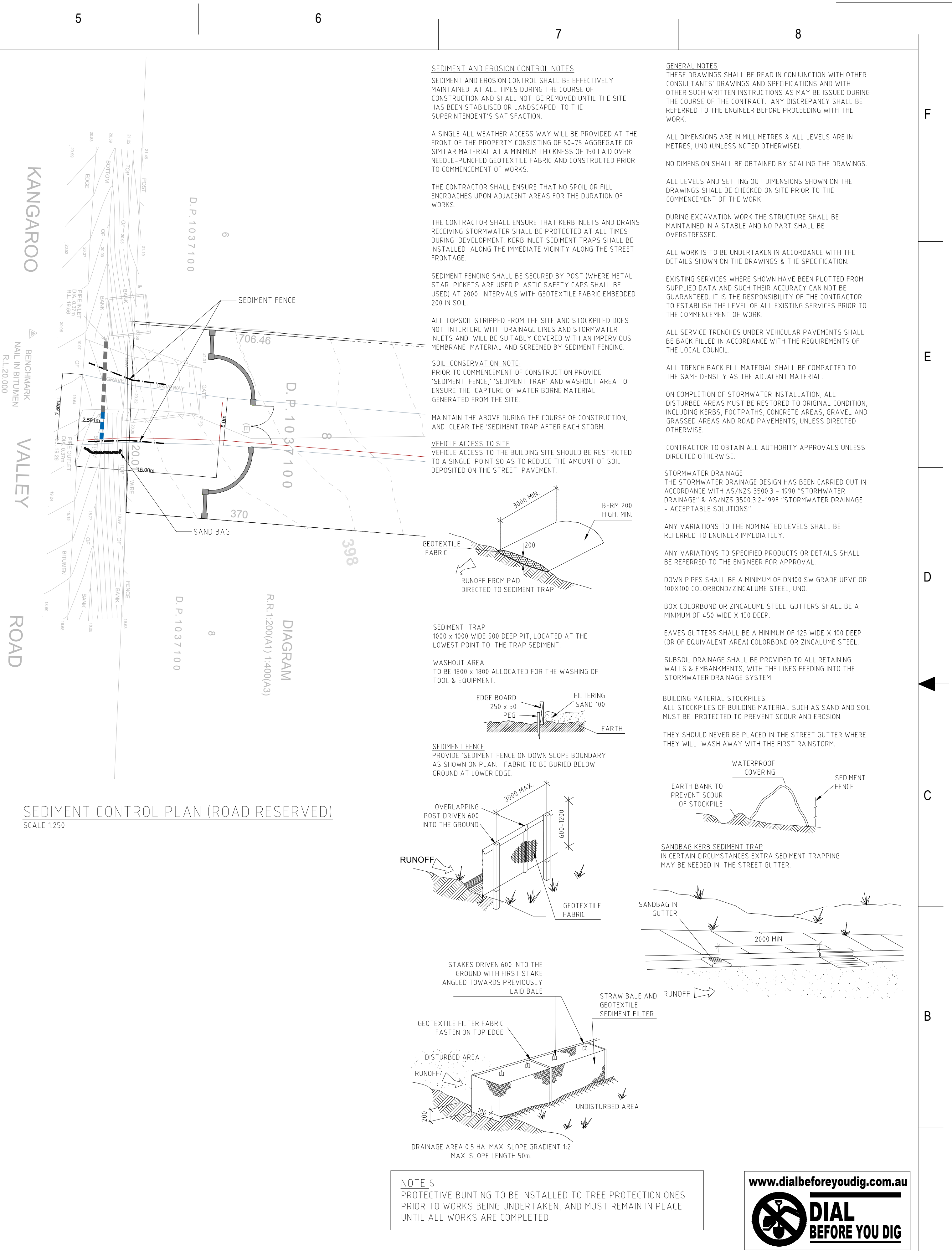
AS NOTED

PROJECT NO.

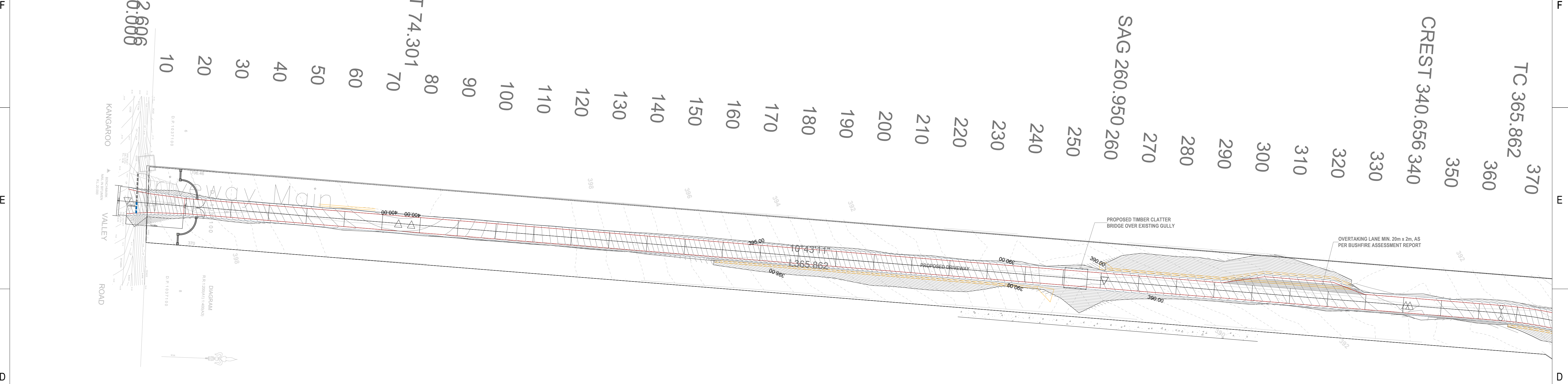
DRAWING NO.

REVISION NO.

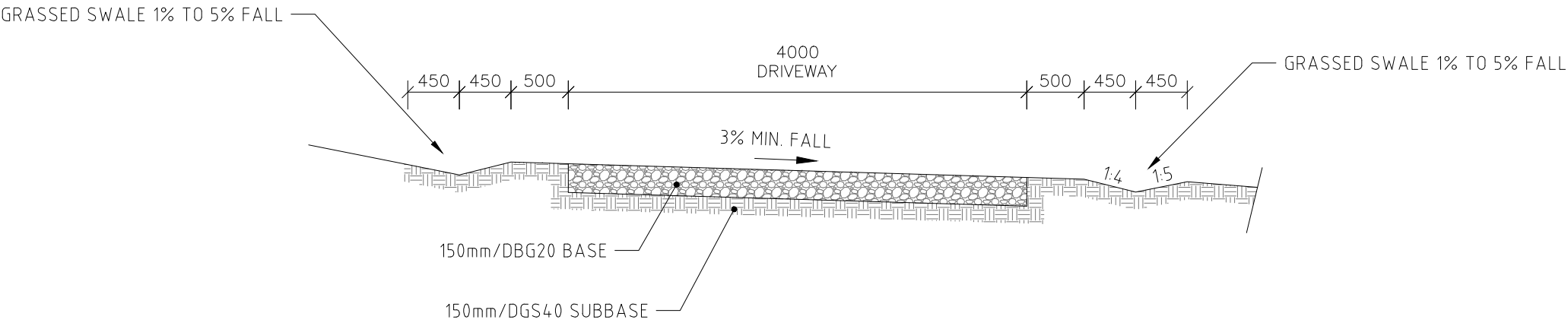
C7



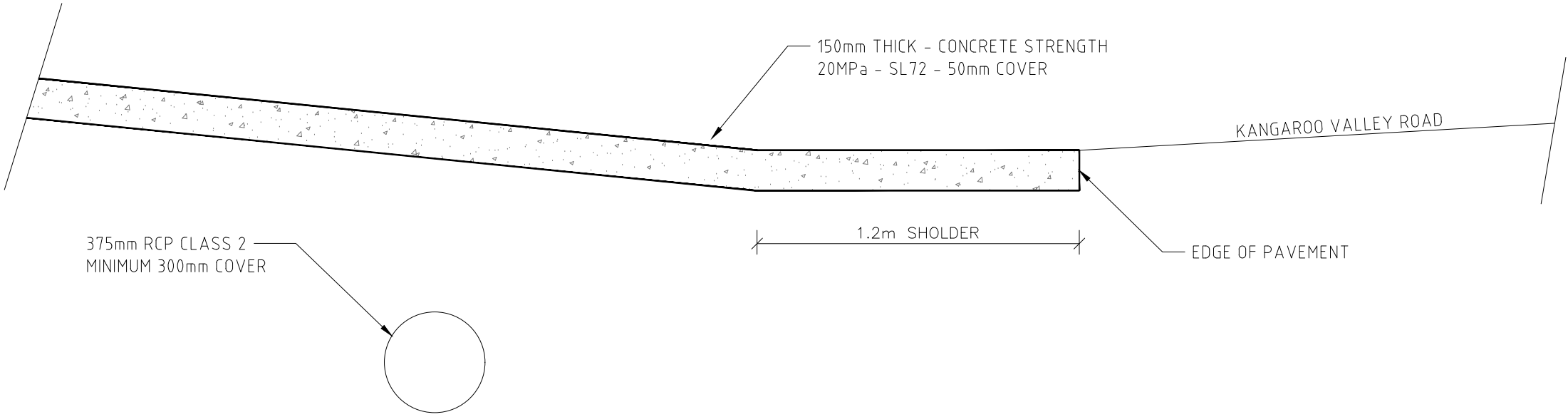
						REFERENCE COORDINATION DRAWING																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
--	--	--	--	--	--	--------------------------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--



PROPOSED DRIVEWAY CIVIL PLAN
1:500@A1



TYPICAL GRAVEL ACCESS ROAD SECTION
1:20@A1

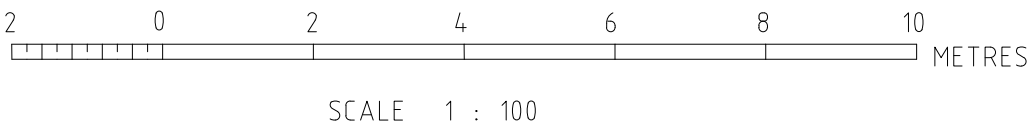


TYPICAL VEHICLE CROSSING SECTION
1:20@A1

LEGEND

DESIGN CONTOUR

EXISTING CONTOUR



CUT & FILL SUMMARY

TOTAL CUT	-3329.835
TOTAL FILL	3867.043
TOTAL BALANCE	537.208



REFERENCE COORDINATION DRAWING				GENERAL NOTES :				NASTASI & ASSOCIATES CONSULTING CIVIL & STRUCTURAL ENGINEERS B.E., M.I.E. AUST. CPENG NPER-3		QUALITY CONTROL		APPROVED:	CLIENT:	TITLE: PROPOSED DRIVEWAY CIVIL PLAN	DRAWING STATUS
DISCIPLINE	DRAWING TITLE AND NUMBER	DATE	REV.	DRAWING TITLE AND NUMBER	DATE	REV.		UNIT 5, 1-3 WHYALLA PLACE, PRESTONS NSW 2170 PH: (02) 9607 2864 OR (02) 9798 9617 FAX: (02) 9731 2081 MOB: 0419 041 401	ASB 45 533 226 008	DRAWN	DATE				
ARCH.				FIRE						DESIGNED	DATE				
MECH.				LANDS						CHECKED	DATE				
ELEC.				CIVIL									PROJECT:	REVISION NO.	C9
HYD.				SURVEY											
ISSUE	REVISION	DATE													

ANE MIN. 20m x 2m, AS
ASSESSMENT REPORT

PROPOSED DRIVEWAY CIVIL PLAN CONT.
1:500@A1

LEGEND

DESIGN CONTOUR

EXISTING CONTOUR

										REFERENCE COORDINATION DRAWING										GENERAL NOTES :										QUALITY CONTROL										APPROVED:										CLIENT:										TITLE:										DRAWING STATUS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
																				* THIS DRAWING IS THE COPYRIGHT OF NASTASI & ASSOCIATES CONSULTING CIVIL & STRUCTURAL ENGINEERS, UNIT 5,1-3 Whyalla Place,Prestons, 2170, PO Box 6048, Hammondville, NSW, 2170.																				UNIT 5, 1-3 WHYALLA PLACE, PRESTONS NSW 2170 PH: (02) 9607 2864 OR (02) 8798 5617 FAX: (02) 9731 2081 MOB: 0419 041 401										DRAWN DATE										PROJECT:										PROPOSED DRIVEWAY CIVIL PLAN										SCALE (AT ORIGINAL SIZE)										AS NOTED																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
																				* IT IS NOT ALLOWED TO COPY OR REPRODUCE ITS CONTENTS IN ANY FORM EXCEPT FOR THE PURPOSE WHICH IT IS INTENDED WITHOUT THE ABOVE CONSULTANT'S AUTHORITY.																				DESIGNED DATE										PROJECT NO.																														DRAWING NO.										REVISION NO.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
																				* DO NOT SCALE THIS DRAWING, ONLY STATED DIMENSIONS ARE TO BE CONSIDERED.																				CHECKED DATE										C10																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
																				* CONTRACTOR TO VERIFY THE DETAIL / INFORMATION GIVEN IN THIS DRAWING, ANY DISCREPANCIES SHALL BE BROUGHT TO ENGINEERS ATTENTION PRIOR TO COMMENCEMENT OF WORK, FAILURE TO COMPLY WITH THE ABOVE WILL BE CONTRACTORS LIABILITY.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	

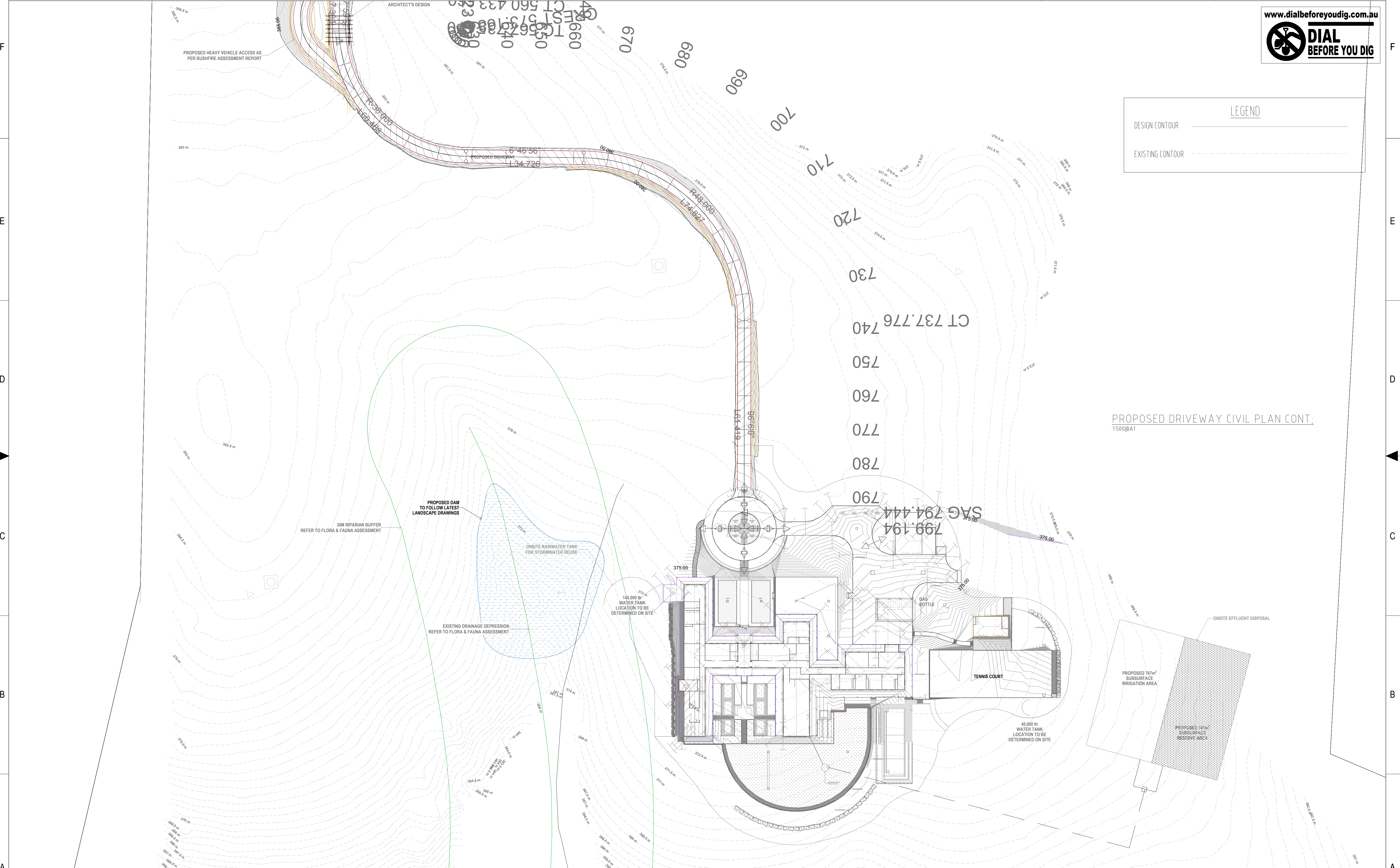
NASTASI & ASSOCIATES
CONSULTING CIVIL & STRUCTURAL ENGINEERS
B.E., M.I.E. AUST. CPENG NPFR-3
ABN 45 633 226 008
UNIT 5, 1-3 WHYALLA PLACE, PRESTONS NSW 2170
PH: (02) 9607 2864 OR (02) 9798 8617 FAX: (02) 9731 2081
MOB: 0419 041 401



LEGEND

DESIGN CONTOUR
EXISTING CONTOUR

PROPOSED DRIVEWAY CIVIL PLAN CONT.
1:500@A1



REFERENCE COORDINATION DRAWING										GENERAL NOTES : </									
--------------------------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--



× V/P RL 402.627

DATUM RL 388.000

HORIZONTAL CURVES

VERTICAL CURVES

VERTICAL GRADES

DESIGN		396.845		397.307	397.682		398.407		398.999		399.459		399.787		399.982		400.043		400.045		400.045		399.976		399.775		399.441		398.975		398.376		397.646		397.611		396.843		396.041		395.238		394.436		393.633
SURVEY		396.845		397.377	397.673		398.282		398.911		399.394		399.816		399.934		399.955		399.959		399.960		399.803		399.528		399.184		398.720		398.089		397.421		397.390		396.683		395.960		395.169		394.397		393.591
CHAINAGE		0		5.435	10		20		30		40		50		60		67.935		69.771		70		80		90		100		110		120		130		130.435		140		150		160		170		180

Driveway Main - LONGITUDINAL SECTION
A1 HORZ SCALE 1:250
A1 VERT SCALE 1:50

REFERENCE COORDINATION DRAWING

GENERAL NOTES :

- * THIS DRAWING IS THE COPYRIGHT OF NASTASI & ASSOCIATES CONSULTING CIVIL & STRUCTURAL ENGINEERS, Unit 5,1-3 Whyalla Place,Prestons, 2170. PO Box 6048, Hammondville, NSW, 2170.
- * IT IS NOT ALLOWED TO COPY OR REPRODUCE ITS CONTENTS IN ANY FORM EXCEPT FOR THE PURPOSE WHICH IT IS INTENDED WITHOUT THE ABOVE CONSULTANT'S AUTHORITY.
- * DO NOT SCALE THIS DRAWING, ONLY STATED DIMENSIONS ARE TO BE CONSIDERED.
- * CONTRACTOR TO VERIFY THE DETAIL / INFORMATION GIVEN IN THIS DRAWING, ANY DISCREPANCIES SHALL BE BROUGHT TO ENGINEERS ATTENTION PRIOR TO COMMENCEMENT OF WORK, FAILURE TO COMPLY WITH THE ABOVE WILL BE CONTRACTORS LIABILITY.

NASTASI & ASSOCIATES

CONSULTING CIVIL & STRUCTURAL ENGINEERS

B.E., M.I.E. AUST. CPENG NPFR-3

ABN 46 633 528 008

UNIT 5, 1-3 WHYALLA PLACE, PRESTONS NSW 2170

PH: (02) 9607 2884 OR (02) 8798 5617 FAX: (02) 9731 2081

MOB: 0419 041 401

QUALITY CONTROL

DRAWN	DATE
DESIGNED	DATE
CHECKED	DATE

APPROVED:

CLIENT:

PROJECT:

TITLE:

PROPOSED DRIVEWAY
LONGITUDINAL SECTION

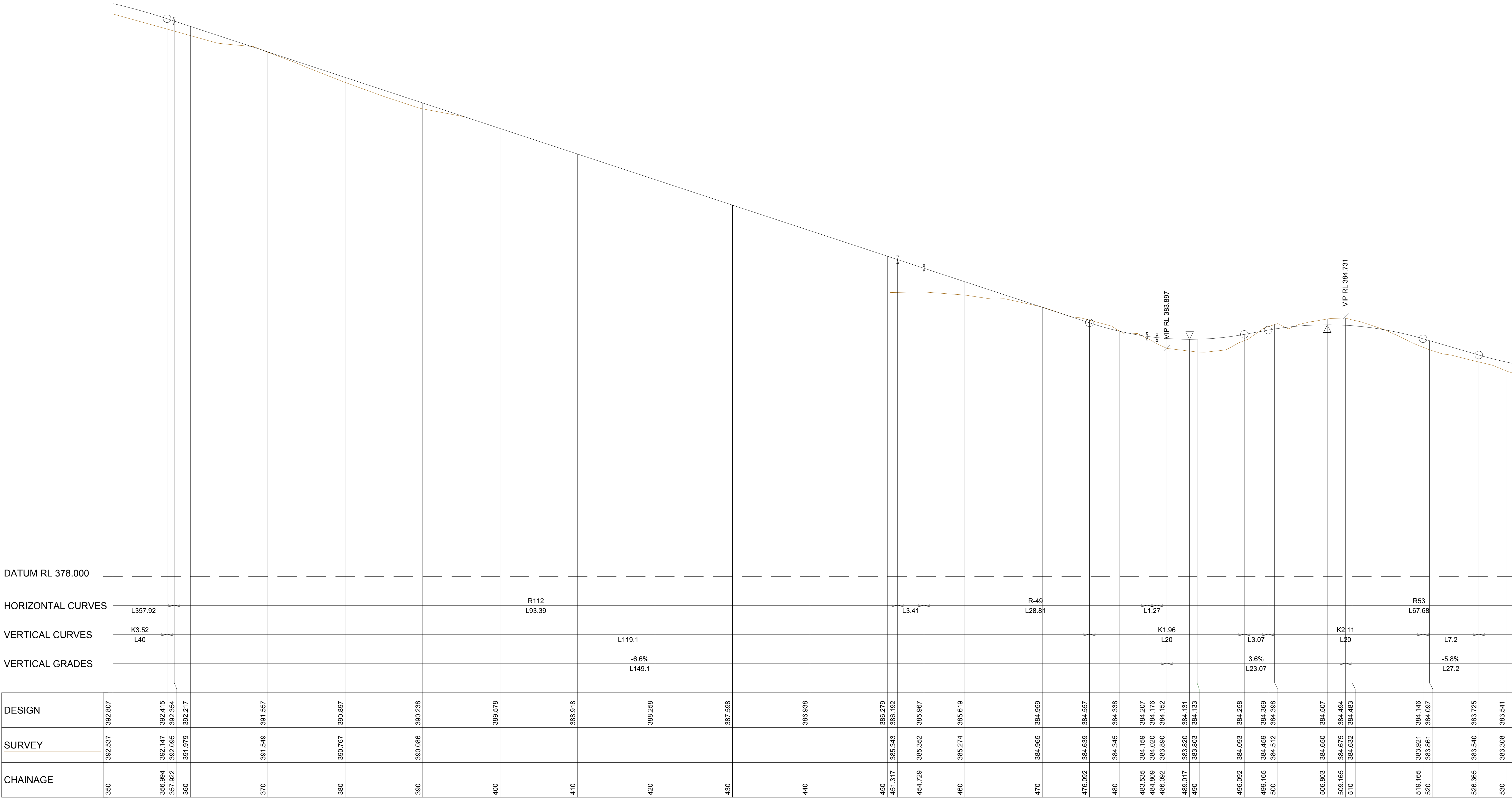
DRAWING STATUS

SCALE (AT ORIGINAL SIZE)

AS NOTED

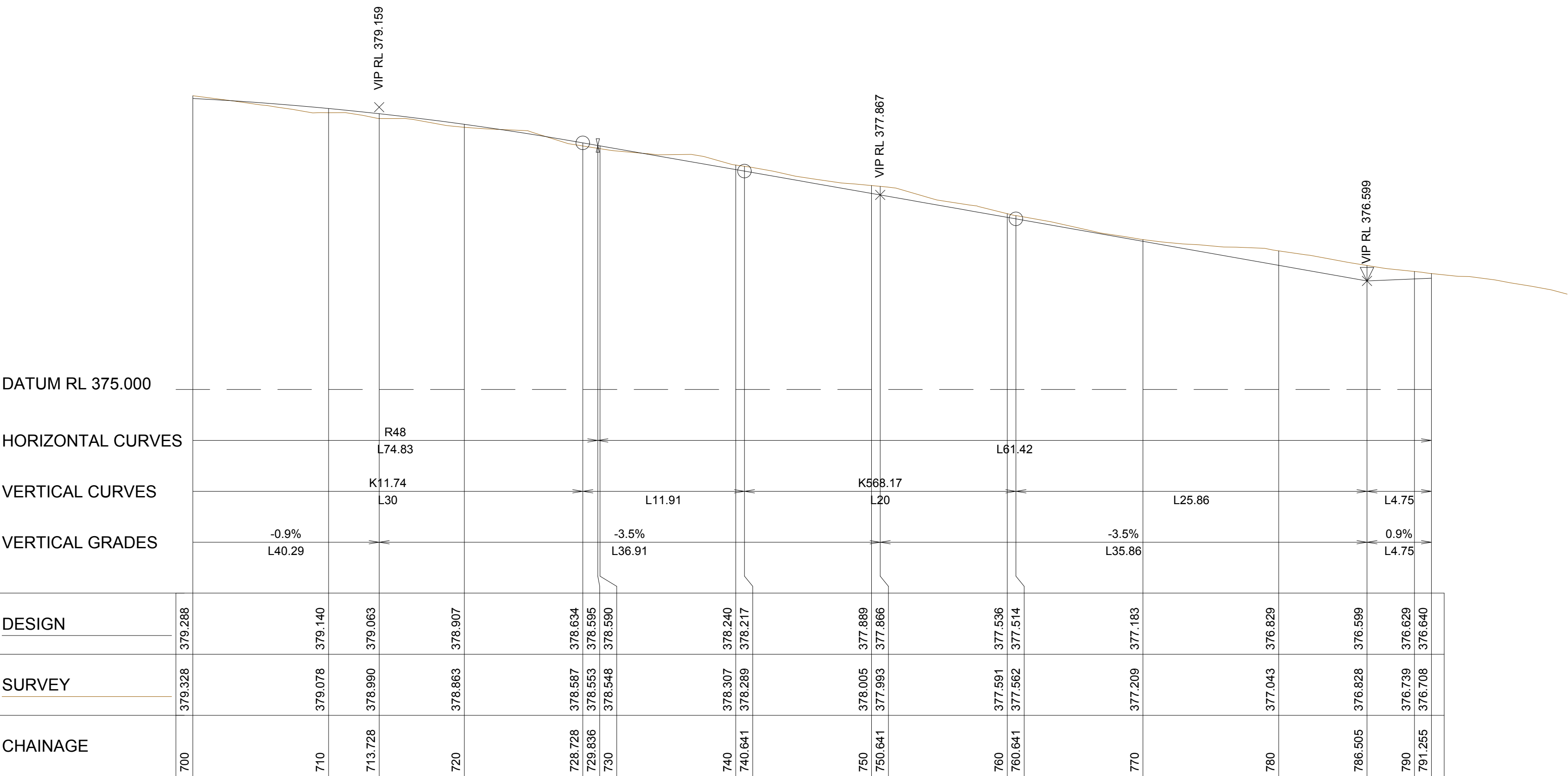
PROJECT NO.	DRAWING NO.	REVISION NO.

C12



Driveway Main - LONGITUDINAL SECTION
A1 HORZ SCALE 1:250
A1 VERT SCALE 1:50

REFERENCE COORDINATION DRAWING										GENERAL NOTES :										QUALITY CONTROL										APPROVED:										CLIENT:										TITLE:										DRAWING STATUS																																																											
										* THIS DRAWING IS THE COPYRIGHT OF NASTASI & ASSOCIATES CONSULTING CIVIL & STRUCTURAL ENGINEERS, UNIT 5,1-3 WHYALLA PLACE,PRESTONS, 2170, PO BOX 6048, HUNTERSBURG, NSW, 2170.										 NASTASI & ASSOCIATES CONSULTING CIVIL & STRUCTURAL ENGINEERS B.E., M.I.E. AUST. CPENG NPFR-3 ABN 45 633 226 008										DRAWN DATE										DESIGNED DATE										PROJECT:										SCALE (AT ORIGINAL SIZE) AS NOTED																																																											
										* IT IS NOT ALLOWED TO COPY OR REPRODUCE IT'S CONTENTS IN ANY FORM EXCEPT FOR THE PURPOSE WHICH IT IS INTENDED WITHOUT THE ABOVE CONSULTANT'S AUTHORITY.										UNIT 5, 1-3 WHYALLA PLACE, PRESTONS NSW 2170 PH: (02) 9607 2864 OR (02) 8798 5617 FAX: (02) 9731 2081 MOB: 0419 041 401										DISCIPLINE DRAWING TITLE AND NUMBER DATE REV.										DRAWING TITLE AND NUMBER DATE REV.										CHECKED DATE																																																																					
										* DO NOT SCALE THIS DRAWING, ONLY STATED DIMENSIONS ARE TO BE CONSIDERED.																				ARCH. FIRE																																																																																									
										* CONTRACTOR TO VERIFY THE DETAIL / INFORMATION GIVEN IN THIS DRAWING, ANY DISCREPANCIES SHALL BE BROUGHT TO ENGINEERS ATTENTION PRIOR TO COMMENCEMENT OF WORK, FAILURE TO COMPLY WITH THE ABOVE WILL BE CONTRACTORS LIABILITY.																				STRUCT. LANDS																																																																																									
																														MECH. CIVIL																																																																																									
																														ELEC. SURVEY																																																																																									
ISSUE										REVISION										DATE																																																																																																			



REFERENCE COORDINATION DRAWING										GENERAL NOTES :										QUALITY CONTROL		APPROVED:	CLIENT:	TITLE:	DRAWING STATUS						
										* THIS DRAWING IS THE COPYRIGHT OF NASTASI & ASSOCIATES CONSULTING CIVIL & STRUCTURAL ENGINEERS, UNIT 5,1-3 WHYALLA PLACE,PRESTONS, 2170, PO BOX 6048, HUNTERSBURG, NSW, 2170.										 NASTASI & ASSOCIATES CONSULTING CIVIL & STRUCTURAL ENGINEERS B.E., M.I.E. AUST. CPENG NPER-3		UNIT 5, 1-3 WHYALLA PLACE, PRESTONS NSW 2170 PH: (02) 9607 2864 OR (02) 8798 5617 FAX: (02) 9731 2081 MOB: 0419 041 401		DRAWN	DATE			PROJECT:	PROPOSED DRIVEWAY LONGITUDINAL SECTION	SCALE (AT ORIGINAL SIZE) AS NOTED	
DISCIPLINE DRAWING TITLE AND NUMBER DATE REV.										DRAWING TITLE AND NUMBER DATE REV.										DESIGNED	DATE	PROJECT NO. DRAWING NO. REVISION NO.									
ARCH.										FIRE												C14									
STRUCT.										LANDS																					
MECH.										CIVIL																					
ELEC.										SURVEY																					
HYD.																															
ISSUE										REVISION												DATE									

F

E

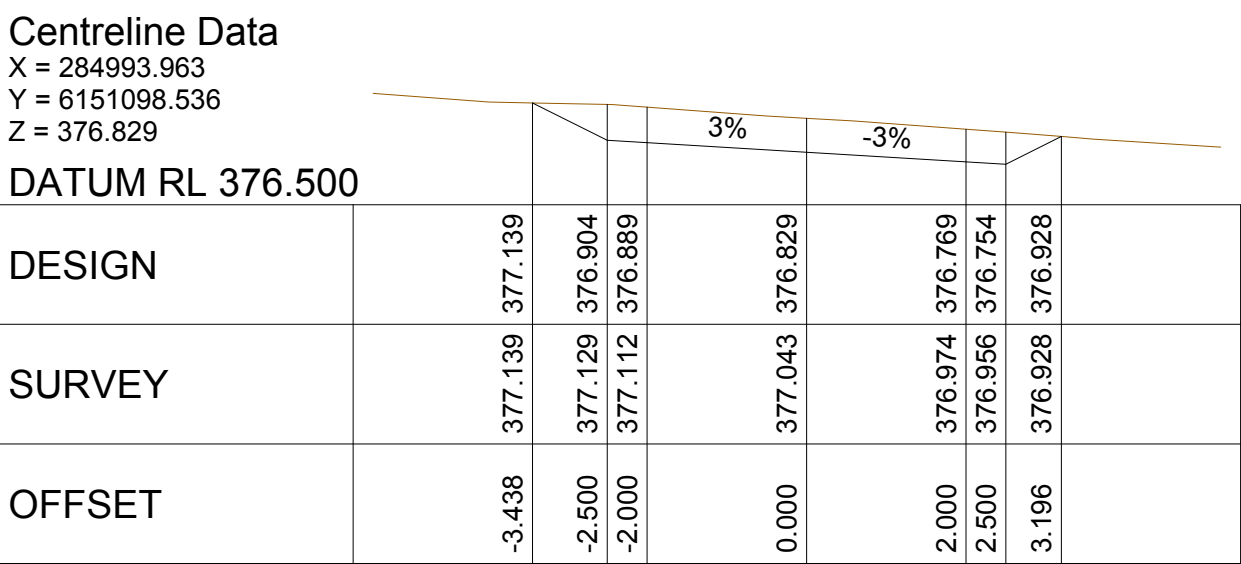
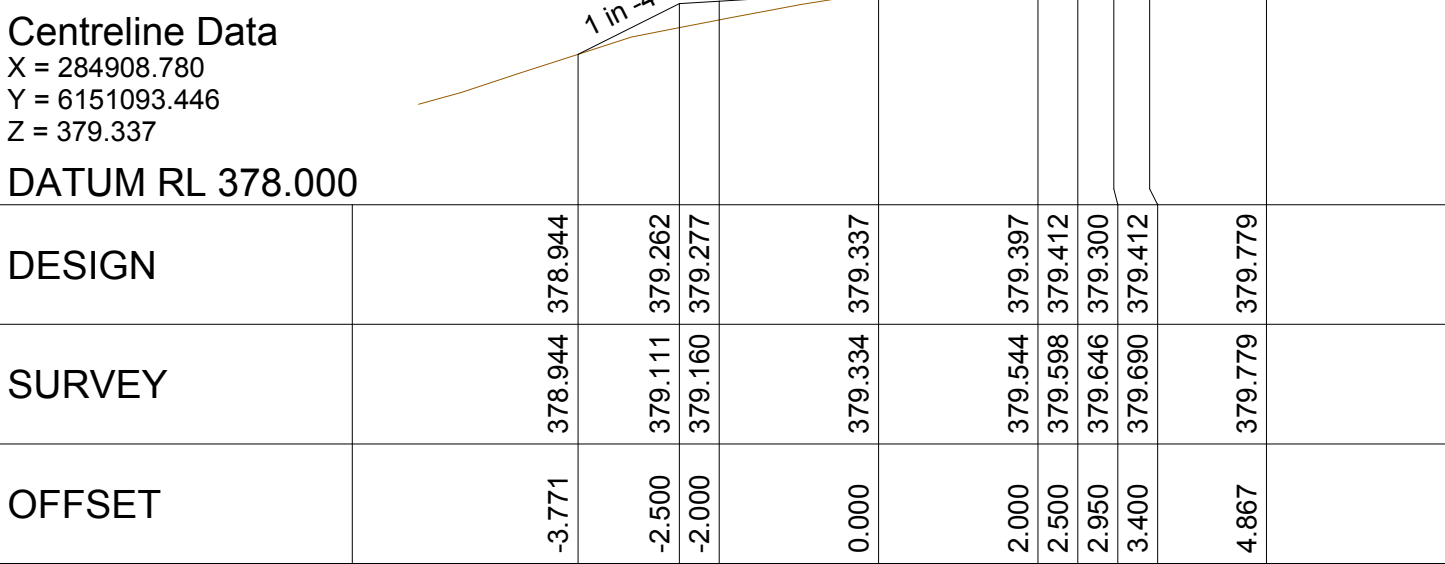
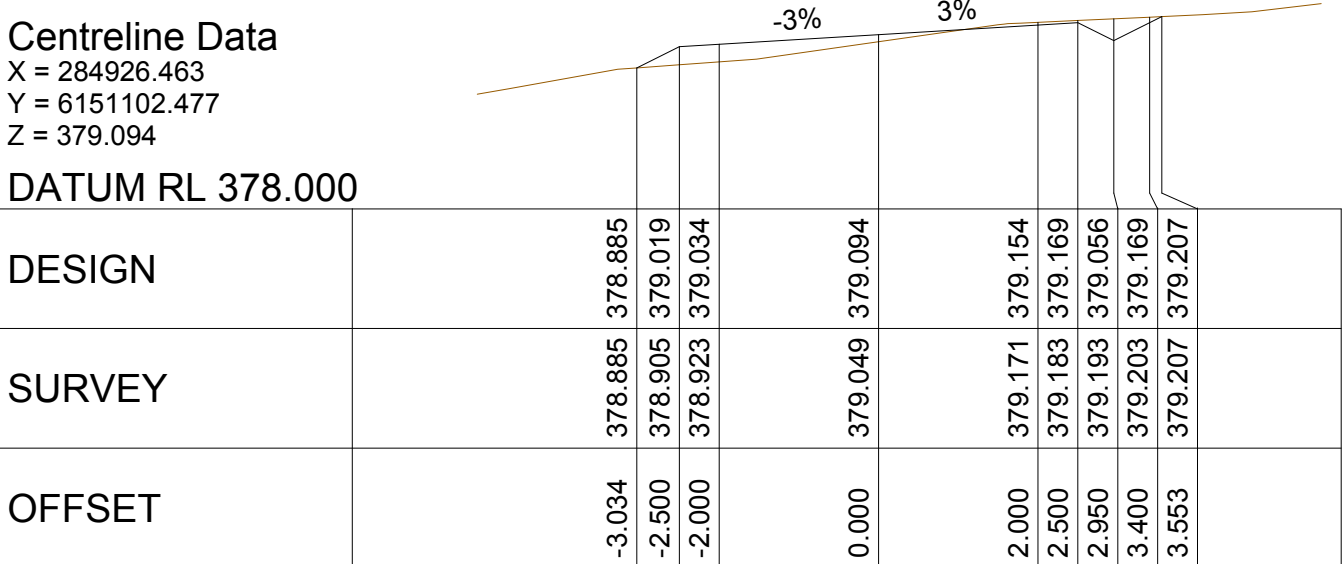
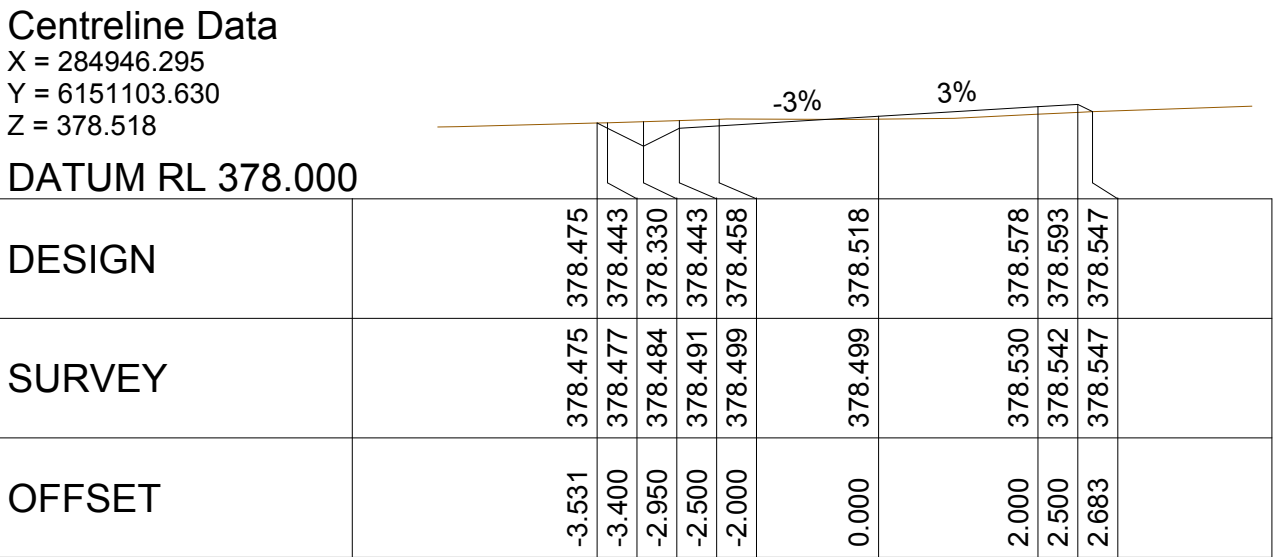
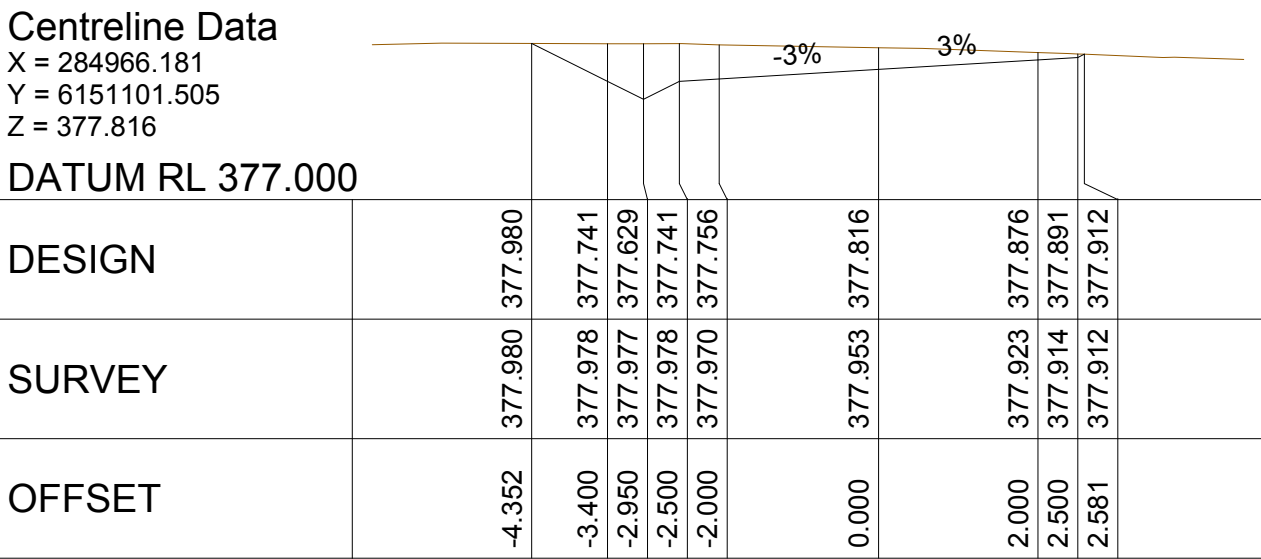
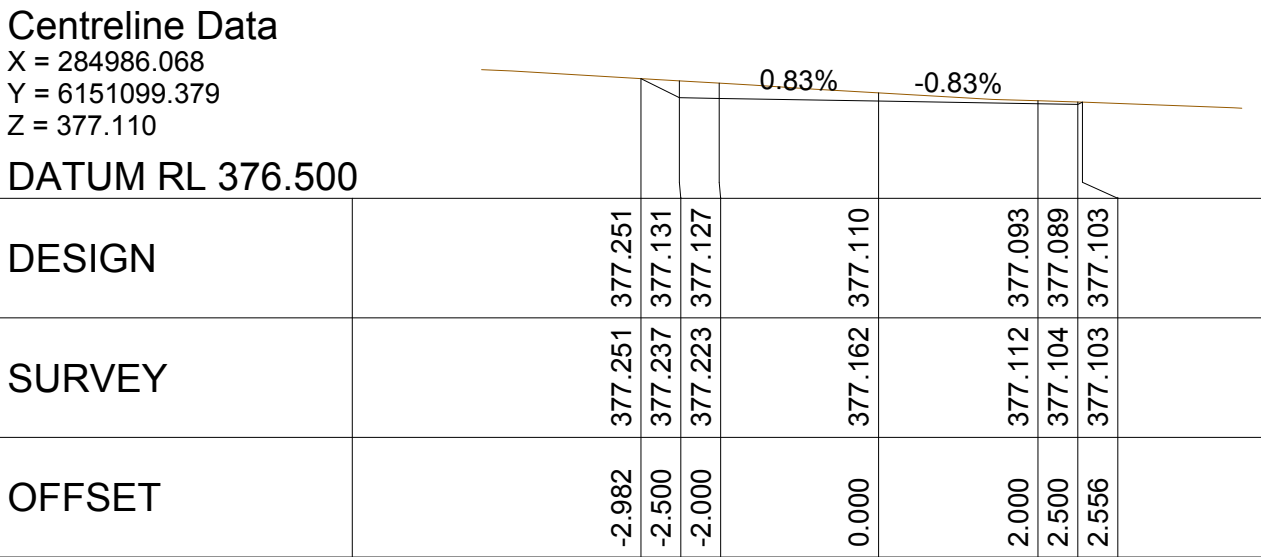
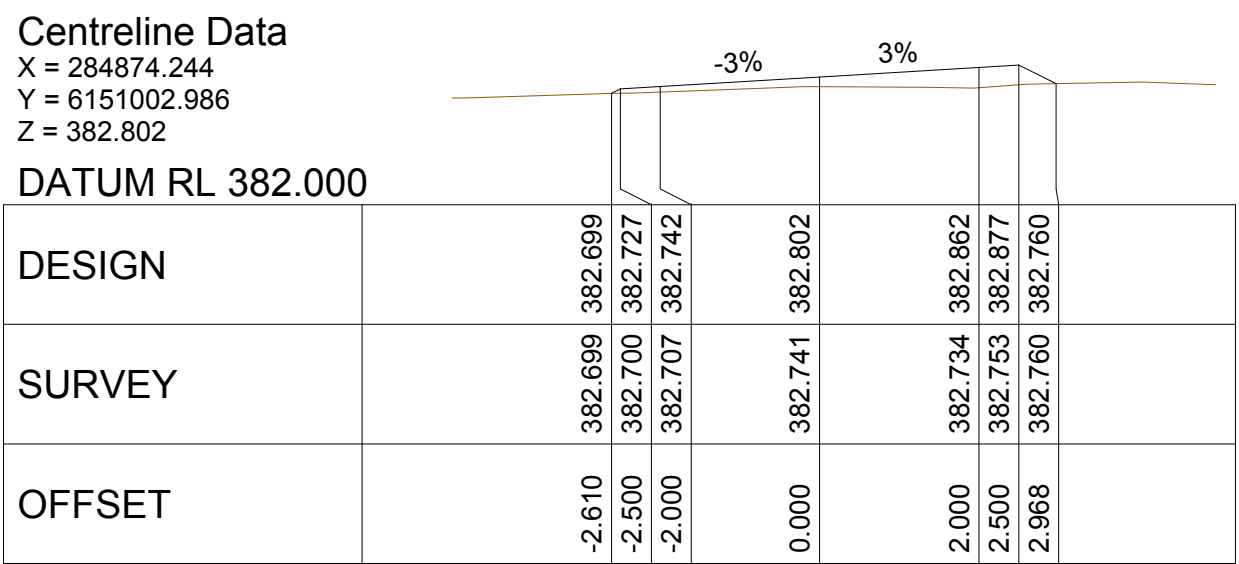
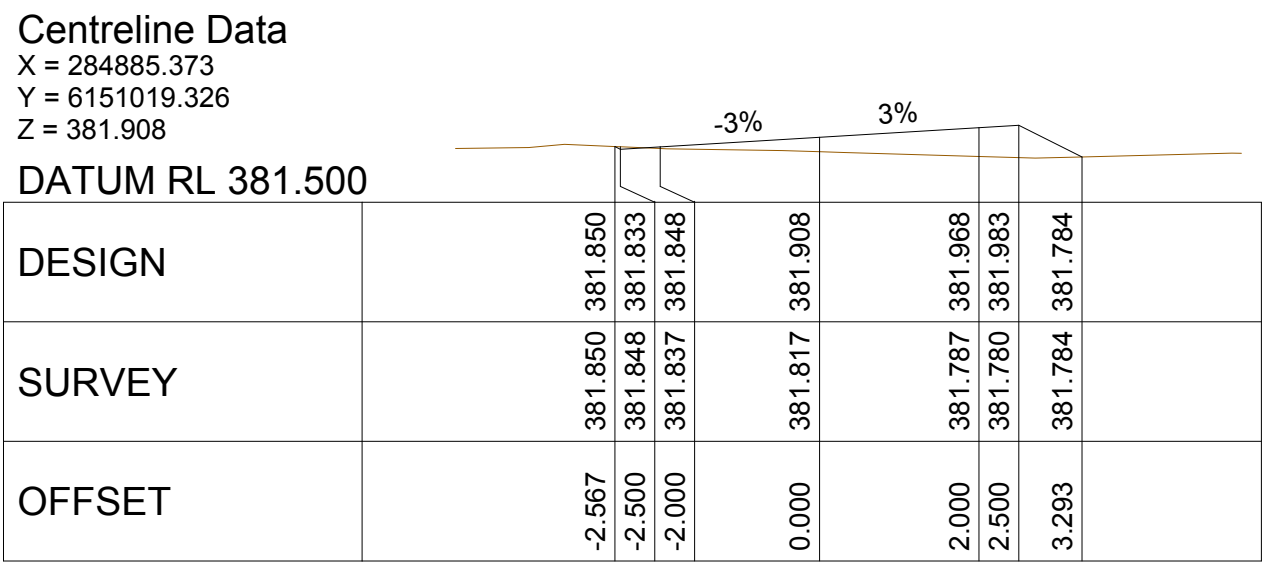
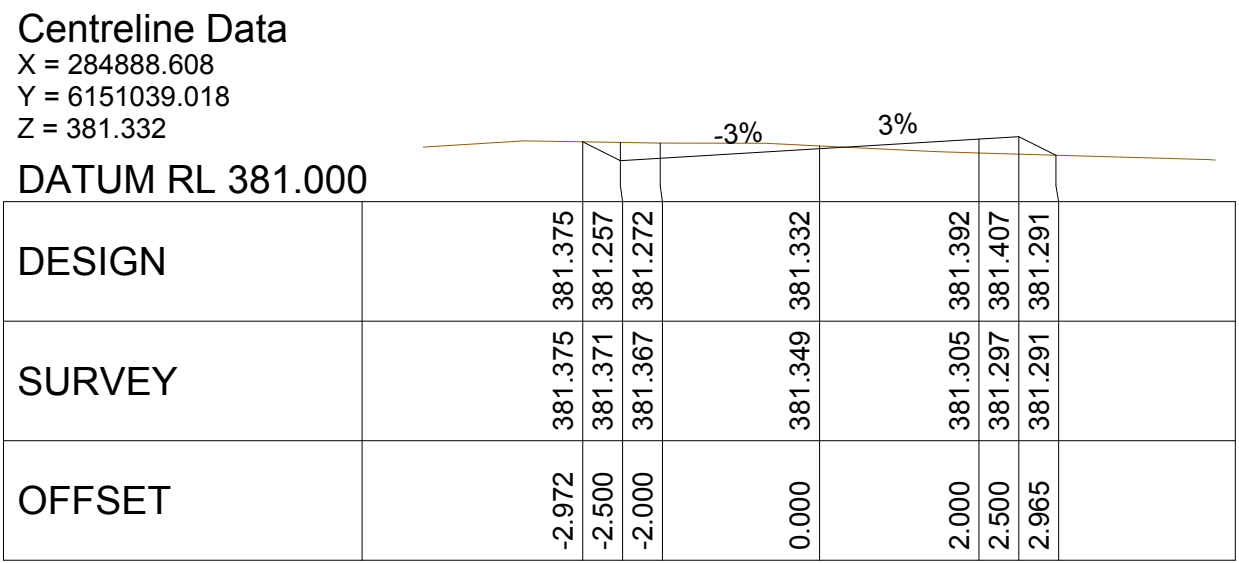
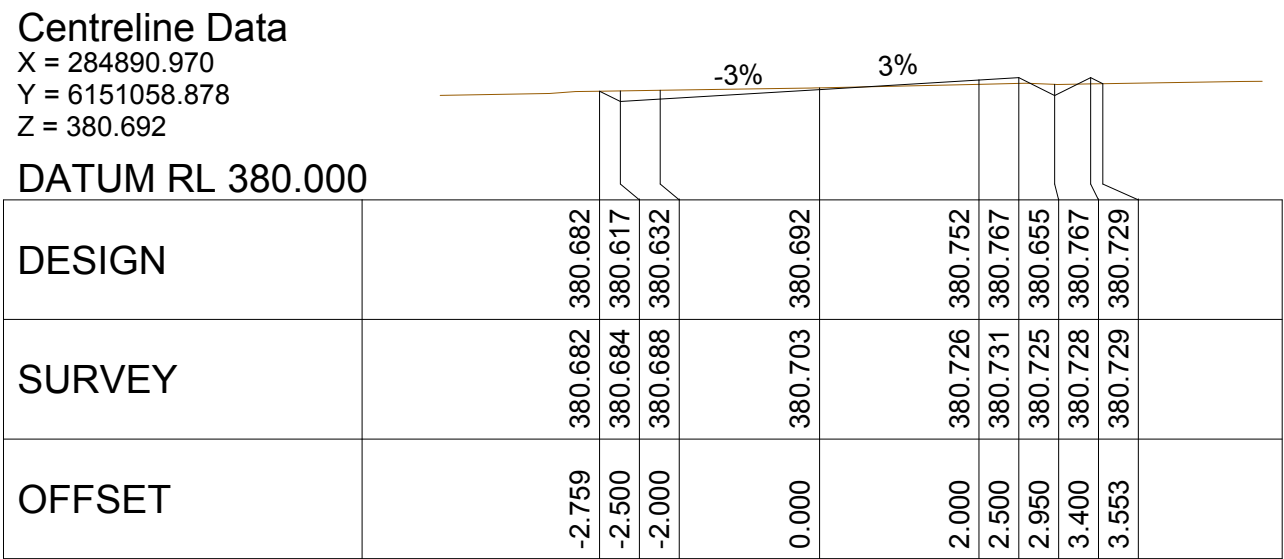
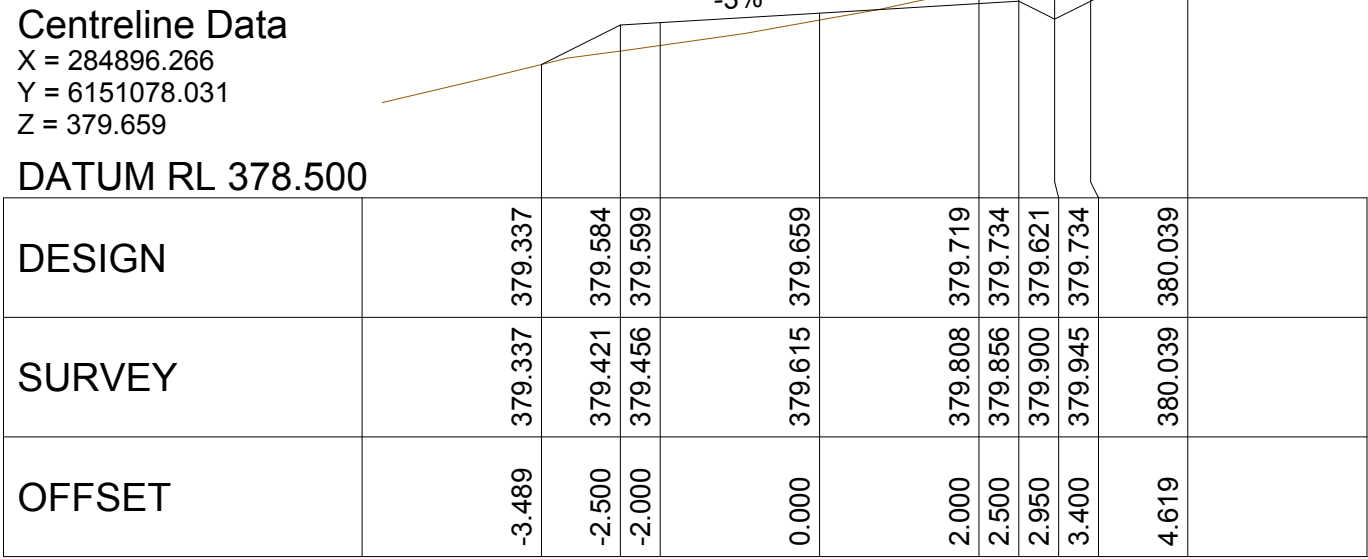
D

C

B

A

a1



CONCEPT PLAN FOR COORDINATION

ISSUE		REVISION		DATE	

REFERENCE COORDINATION DRAWING					
DISCIPLINE	DRAWING TITLE AND NUMBER	DATE	REV.	DRAWING TITLE AND NUMBER	DATE
ARCH.				FIRE	
STRUCT.				LANDS	
MECH.				CIVIL	
ELEC.				SURVEY	
HYD.					

GENERAL NOTES :	
* THIS DRAWING IS THE COPYRIGHT OF NASTASI & ASSOCIATES CONSULTING CIVIL & STRUCTURAL ENGINEERS, Unit 5,1-3 Whyalla Place,Prestons, 2170, PO Box 6048, Hammondville, NSW, 2170.	
* IT IS NOT ALLOWED TO COPY OR REPRODUCE ITS CONTENTS IN ANY FORM EXCEPT FOR THE PURPOSE WHICH IT IS INTENDED WITHOUT THE ABOVE CONSULTANTS AUTHORITY.	
* DO NOT SCALE THIS DRAWING, ONLY STATED DIMENSIONS ARE TO BE CONSIDERED.	
* CONTRACTOR TO VERIFY THE DETAIL / INFORMATION GIVEN IN THIS DRAWING, ANY DISCREPANCIES SHALL BE BROUGHT TO ENGINEERS ATTENTION PRIOR TO COMMENCEMENT OF WORK, FAILURE TO COMPLY WITH THE ABOVE WILL BE CONTRACTORS LIABILITY.	



NASTASI & ASSOCIATES
CONSULTING CIVIL & STRUCTURAL ENGINEERS
B.E., M.I.E. AUST. CPENG NPFR-3
/RBN 45 533 226 008
UNIT 5, 1-3 WHYALLA PLACE, PRESTONS NSW 2170
PH: (02) 9687 2884 OR (02) 9798 8617 FAX: (02) 9731 2081
MOB: 0419 041 401

QUALITY CONTROL	
DRAWN	DATE
DESIGNED	DATE
CHECKED	DATE

APPROVED:	

CLIENT:	
PROJECT:	

TITLE:	
DRIVEWAY CROSS SECTION	

DRAWING STATUS		
SCALE (AT ORIGINAL SIZE)		AS NOTED
PROJECT NO.	DRAWING NO.	REVISION NO.
	C17	



<u>CUT & FILL SUMMARY</u>	
TOTAL CUT	-3659.443
TOTAL FILL	3700.938
TOTAL BALANCE	41.495

BULK EARTH WORK PLAN
1:1000@A1

			REFERENCE COORDINATION DRAWING										GENERAL NOTES : • THIS DRAWING IS THE COPYRIGHT OF NASTASI & ASSOCIATES CONSULTING CIVIL & STRUCTURAL ENGINEERS, Unit 5,1-3 Whyalla Place,Prestons, 2170. PO Box 6048, Hammondville, NSW, 2170. • IT IS NOT ALLOWED TO COPY OR REPRODUCE IT'S CONTENTS IN ANY FORM EXCEPT FOR THE PURPOSE WHICH IT IS INTENDED WITHOUT THE ABOVE CONSULTANTS' AUTHORITY. • DO NOT SCALE THIS DRAWING, ONLY STATED DIMENSIONS ARE TO BE CONSIDERED. • CONTRACTOR TO VERIFY THE DETAIL / INFORMATION GIVEN IN THIS DRAWING, ANY DISCREPANCIES SHALL BE BROUGHT TO ENGINEERS ATTENTION PRIOR TO COMMENCEMENT OF WORK, FAILURE TO COMPLY WITH THE ABOVE WILL BE CONTRACTORS LIABILITY.	</
--	--	--	--------------------------------	--	--	--	--	--	--	--	--	--	---	--

