# STORWATER DRAINAGE

PROPOSED SECONDARY DWELLING 145 ROSE STREET, YAGOONA NSW 2199

DR	DRAWING REGISTER											
DRAWING NO.	DRAWING TITLE											
V250427 - SW000	COVER SHEET											
V250427 - SW001	GENERAL NOTES											
V250427 - SW100	GROUND FLOOR DRAINAGE PLAN											
V250427 - SW110	STORMWATER DETAILS - SHEET 1											

REVISION	REVISION DETAILS	DATE	DRAWN	DESIGN	CHECK	APPROVED	CIVIL ENGINEER	ARCHITECT	CLIENT	PROJECT MANAGER	SCALE	GRID	STATUS FOR APP NOT TO BE USED FOR CO			
А	ISSUED FOR DA	17.05.2025	D.D.	M.N.	D.S.	D.S.	NA NICOLIA DE L'ONSULTING				NOT TO SCALE	HEIGHT AHD	PROJECT			
							VANGUARD   CONSULTING ENGINEERS					DATUM AND	PROPOSED SECOI	NDARY DWELLING	i	
													145 ROSE STREET, YAGOONA NSW 2199			
							UNIT 1, 6 WELD STREET E-MAIL: ADMIN@VCENG.COM.AU PRESTONS, NSW 2170				DRAWING TITLE		LGA: CANTERBURY-BANKSTOWN COUNCIL			
				<u> </u>	+		WEB: WWW.VCENG.COM.AU TEL: (02) 9145 0253	STUDIO			COVER SHE	ET	DRAWING NUMBER	REFERENCE NUMBER	REVISION	
													V250427 - SW000	V250427	A	

#### SITEWORKS NOTES

- 1. ORIGIN OF LEVELS:- REFER SURVEY NOTES
- 2. ALL WORKS TO BE CONSTRUCTED IN ACCORDANCE WITH THE LOCAL GOVERNMENT AUTHORITIES ENGINEERING CONSTRUCTION SPECIFICATION FOR CIVIL WORKS.
- 3. PRIOR TO THE COMMENCEMENT OF THE WORKS THE CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORK. ANY DISCREPANCIES TO BE REPORTED TO VANGUARD.
- 4. PRIOR TO THE COMMENCEMENT OF THE WORKS, THE CONTRACTOR IS TO VERIFY THE ALIGNMENT AND LEVELS OF ALL EXISTING SERVICES AT ALL LOCATIONS WHERE THE PROPOSED SERVICES ARE TO CROSS, CONNECT TO OR ARE LOCATED IN CLOSE PROXIMITY TO THE EXISTING SERVICES. ANY DISCREPANCIES TO BE REPORTED TO VANGUARD.
- 5. CONTRACTOR MUST MAKE SMOOTH CONNECTION WITH ALL EXISTING WORKS.
- 6. ALL TRENCH BACKFILL MATERIAL SHALL BE COMPACTED TO THE SAME DENSITY AS THE ADJACENT MATERIAL.
- 7. ALL SERVICE TRENCHES UNDER VEHICULAR PAVEMENTS SHALL BE BACKFILLED WITH SAND TO 300mm ABOVE PIPE. WHERE PIPE IS UNDER PAVEMENTS BACKFILL, REMAINDER OF TRENCH TO UNDERSIDE OF PAVEMENT WITH SAND OR APPROVED GRANULAR MATERIAL COMPACTED IN 150mm LAYERS TO MINIMUM 98% MODIFIED MAXIMUM DRY DENSITY IN ACCORDANCE WITH THE CURRENT AS 1289.5.2.1 (OR A DENSITY INDEX OF NOT LESS THAN 75).
- 8. PROVIDE 10mm WIDE ISOLATION JOINTS BETWEEN BUILDINGS AND ALL CONCRETE OR UNIT PAVEMENTS.
- ASPHALTIC CONCRETE SHALL CONFORM TO THE CURRENT TFNSW SPECIFICATION TS 03283.1 (R116) HEAVY DUTY DENSE GRADED ASPHALT
- 10. ALL BASECOURSE AND SUB-BASE MATERIAL SHALL BE IGNEOUS ROCK QUARRIED MATERIAL TO COMPLY WITH THE CURRENT TFNSW SPECIFICATION TS 03315.1 (3051) GRANULAR BASE AND SUBBASE MATERIALS FOR SURFACED ROAD PAVEMENTS COMPACTED TO MINIMUM 98% MODIFIED DENSITY IN ACCORDANCE WITH THE CURRENT AS 1289 5.2.1
- FREQUENCY OF COMPACTION TESTING SHALL NOT BE LESS THAN 1 TEST PER 50m³ OF SUB-BASE COURSE MATERIAL PLACED UNLESS OTHERWISED APPROVED BY VANGUARD.
- 11. AS AN ALTERNATIVE TO THE USE OF IGNEOUS ROCK AS A SUB-BASE MATERIAL (IN NOTE 10) A CERTIFIED RECYCLED CONCRETE MATERIAL COMPLYING WITH THE CURRENT TFNSW SPECIFICATION TS 03315.1 (3051) GRANULAR BASE AND SUBBASE MATERIALS FOR SURFACED ROAD PAVEMENTS WILL BE CONSIDERED. SUBJECT TO MATERIAL SAMPLES AND APPROPRIATE CERTIFICATIONS BEING PROVIDED TO THE SATISFACTION OF VANGUARD.
- 12. SHOULD THE CONTRACTOR WISH TO USE A RECYCLED PRODUCT THE CONTRACTOR IS TO SEEK ACCEPTANCE OF THE PRODUCT FROM VANGUARD. THE PRICE DIFFERENCE BETWEEN AN IGNEOUS PRODUCT AND A RECYCLED PRODUCT SHALL BE CLEARLY INDICATED.
- 13. WHERE NOTED ON THE DRAWINGS THAT WORKS ARE TO BE CARRIED BY OTHERS, (EG. ADJUSTMENT OF SERVICES), THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CO-ORDINATION OF THESE WORKS.
- 14. ALL WORKS CARRIED OUT ADJACENT TO AND WITHIN SERVICE EASEMENTS ARE TO COMPLY WITH THE RELEVANT SERVICE AUTHORITIES GUIDELINES AND REQUIREMENTS.

## EXISTING UNDERGROUND SERVICES NOTES

THE LOCATIONS OF UNDERGROUND SERVICES SHOWN IN THIS SET OF DRAWINGS HAVE BEEN PLOTTED FROM SURVEY INFORMATION AND SERVICE AUTHORITY INFORMATION. THE SERVICE INFORMATION HAS BEEN PREPARED ONLY TO SHOW THE APPROXIMATE POSITIONS OF ANY KNOWN SERVICES AND MAY NOT BE AS CONSTRUCTED OR ACCURATE. AT & L CAN NOT GUARANTEE THAT THE SERVICES INFORMATION SHOWN ON THESE DRAWINGS ACCURATELY INDICATES THE PRESENCE OR ABSENCE OF SERVICES OR THEIR LOCATION AND WILL ACCEPT NO LIABILITY FOR INACCURACIES IN THE SERVICES INFORMATION SHOWN FROM ANY CAUSE WHATSOEVER.

CONTRACTORS SHALL TAKE DUE CARE WHEN EXCAVATING ONSITE INCLUDING HAND EXCAVATION WHERE NECESSARY.

CONTRACTORS ARE TO CONTACT THE RELEVANT SERVICE AUTHORITY PRIOR TO COMMENCEMENT OF EXCAVATION WORKS.

CONTRACTORS ARE TO UNDERTAKE A SERVICES SEARCH, PRIOR TO COMMENCEMENT OF WORKS ON SITE. SEARCH RESULTS ARE TO BE KEPT ON SITE AT ALL TIMES.



BEFORE YOU DIG AUSTRALIA SHOULD BE CONTACTED PRIOR TO ANY EXCAVATION ON SITE TM: TRADE MARK OF THE ASSOCIATION OF DIAL BEFORE YOU DIG SERVICES LTD. USED UNDER LICENSE.

### STORMWATER DRAINAGE NOTES

#### GENERAL NOTES

- STORMWATER DESIGN CRITERIA:
   ANNUAL EXCEEDANCE PROBABILITY:
   MINOR STORM:
   FOLAER
- ANNUAL EXCEEDANCE PROBABILITY:
  MINOR STORM: 5% AEP
  MAJOR STORM: 1% AEP
- 2. PIPES LESS THAN 300 DIA SHALL BE SEWER GRADE uPVC WITH SOLVENT WELDED JOINTS.
- ENLARGERS, CONNECTIONS AND JUNCTIONS TO BE PREFABRICATED
- FITTINGS WHERE PIPES ARE LESS THAN DN300.

  4. ALL INTERNAL WORKS WITHIN PROPERTY BOUNDARIES ARE TO COMPLY
- WITH THE REQUIREMENTS OF THE CURRENT AS 3500 3.1 AND AS/NZS 3500 3.2.

  5. ALL STORMWATER DRAINAGE LINES UNDER PROPOSED BUILDING SLABS TO BE uPVC PRESSURE PIPE GRADE 6. ENSURE ALL VERTICALS AND

DOWNPIPES ARE uPVC PRESSURE PIPE, GRADE 6 FOR A MIN OF 3.0m IN

- HEIGHT.
  6. ALL DRAINAGE LINES TO PROVIDE A 3.0M LENGTH OF DN100 SUBSOIL DRAINAGE PIPE WRAPPED IN FABRIC SOCK, ON THE UPSTREAM SIDE OF EACH PIT. ALLOW FOR SECONDARY SUBSOIL FOR PIPES FOR PIPE
- GRATER THAN DN825.

  7. SUBSOIL DRAIN WRAPPED IN APPROVED FILTER SOCK SHALL BE PROVIDED BENEATH ALL KERBLINES WHERE NO DRAINAGE LINES ARE SHOWN ON THE DRAWINGS AND SHALL DISCHARGE INTO DOWNSTREAM
- SHOWN ON THE DRAWINGS AND SHALL DISCHARGE INTO DOWNSTREAM PITS.

  8. WHERE SUBSOIL DRAINS PASS UNDER FLOOR SLABS AND VEHICULAR
- PAVEMENTS, UNSLOTTED uPVC SEWER GRADE PIPES ARE TO BE USED.

  9. CARE IS TO BE TAKEN WITH LEVELS OF STORMWATER LINES. GRADES SHOWN ARE NOT TO BE REDUCED WITHOUT APPROVAL FROM VANGUARD.
- GRATES AND COVERS SHALL CONFORM TO THE CURRENT AS 3996.
   CLASS D COVER (MINIMUM) SHALL BE PROVIDED IN TRAFFICKED PAVEMENTS WITH CLASS B (MINIMUM) BEING PROVIDED IN NON-TRAFFICKED AREAS.
- 11. AT ALL TIMES DURING CONSTRUCTION OF STORMWATER PITS, THE CONTRACTOR SHALL PROVIDE ADEQUATE SAFETY PROCEDURES TO PREVENT THE POSSIBILITY OF PERSONNEL FALLING DOWN PITS.
- 12. ALL PITS AND PIPES TO BE FOUNDED ON SUITABLE MATERIAL WITH A MINIMUM ALLOWABLE BEARING CAPACITY OF 100KPa UP TO 3.0m DEPTH TO INVERT AND 150KPa FROM 3.0m TO 6.0m DEPTH TO INVERT ONCE EXCAVATED. A CONCRETE BLINDING LAYER (MINIMUM 100mm THICK 25MPa OR DEEPER TO ENSURE MINIMUM SPECIFIED BEARING CAPACITY IS ACHIEVED) MAY BE PROVIDED. CONTRACTOR TO ENGAGE
- GEOTECHNICAL ENGINEER TO PROVIDE WRITTEN CONFIRMATION.

  13. ALL EXISTING STORMWATER DRAINAGE LINES AND PITS THAT ARE TO REMAIN ARE TO BE INSPECTED AND CLEANED. DURING THIS PROCESS ANY PART OF THE STORMWATER DRAINAGE SYSTEM THAT WARRANTS REPAIR SHALL BE REPORTED TO THE SUPERINTENDENT/ENGINEER FOR FURTHER DIRECTIONS.
- 14. ALL STORMWATER PITS ARE TO BE CAST IN-SITU IN ACCORDANCE WITH THE STORMWATER DETAILS AND SPECIFICATIONS.
- 15. ALL PITS MUST BE BENCHED AND STREAMLINED TO DIRECT WATER FROM THE INLET PIPE TO THE OUTLET PIPE.
- 16. PITS DEEPER THAN 600mm MUST BE FITTED WITH DOUBLE STEP-IRONS IN ACCORDANCE WITH THE CURRENT AS1657. PLASTIC ENCAPSULATED MAY BE USED. STEP-IRONS TO BE PROVIDED ON A SINGLE FACE WHERE POSSIBLE. SHOULD STEP-IRONS REQUIRE TO CHANGE FACE THEN 3
- OVERLAPPING STEP IRONS ARE TO BE LOCATED ON EACH FACE.

  17. FREQUENCY OF COMPACTION TESTING SHALL BE NOT LESS THAN 1 TEST PER 2 LAYERS PER 40 LINEAR METERS.

#### RIGID & SEMI-RIGID PIPE NOTES

- 18. PIPES 300 DIA. AND LARGER TO BE STEEL REINFORCED CONCRETE CLASS '3' APPROVED SPIGOT AND SOCKET WITH RUBBER RING JOINTS. U.N.O. ALL ROAD CROSSINGS TO BE CLASS '4' U.N.O. EQUIVALENT STRENGTH FIBRE REINFORCED CONCRETE PIPES MAY BE USED SUBJECT TO APPROVAL BY VANGUARD OR THE LOCAL
- GOVERNMENT AUTHORITY.

  19. REINFORCED CONCRETE PIPES TO COMPLY WITH THE CURRENT AS/NZS 4058.
- FIBRE REINFORCED CONCRETE PIPES TO COMPLY WITH THE CURRENT AS 4139.

  PIPES TO BE INSTALLED WITH TYPE HS3 (ROAD) AND HS2 (LOTS)
- PIPES TO BE INSTALLED WITH TYPE HS3 (ROAD) AND HS2 (LOTS) SUPPORT IN ACCORDANCE WITH THE CURRENT AS/NZS 3725. N ALL CASES BACKFILL EMBEDMENT ZONE WITH SELECT FILL (MINIMUM CBR 15%) TO 300mm ABOVE PIPE. WHERE PIPE IS UNDER PAVEMENTS BACKFILL REMAINDER OF TRENCH TO UNDERSIDE OF PAVEMENT WITH SAND OR APPROVED GRANULAR MATERIAL COMPACTED IN 150mm LAYERS TO MINIMUM 98% STANDARD MAXIMUM DRY DENSITY IN ACCORDANCE WITH THE CURRENT AS 1289.5.2.1. (OR A DENSITY INDEX OF NOT LESS THAN 75).

#### FLEXIBLE PIPE NOTES

PENETRATIONS.

20. FLEXIBLE PIPES TO COMPLY WITH THE CURRENT AS/NZS 2566.1.
PIPES TO BE INSTALLED IN ACCORDANCE WITH THE CURRENT AS/NZS 2566.2. IN ALL CASES BACKFILL EMBEDMENT ZONE WITH GRAVEL OR SAND TO 300mm ABOVE PIPE. WHERE PIPE IS UNDER PAVEMENTS BACKFILL REMAINDER OF TRENCH TO UNDERSIDE OF PAVEMENT WITH SAND OR APPROVED GRANULAR MATERIAL COMPACTED IN 150mm LAYERS TO MINIMUM 98% STANDARD MAXIMUM DRY DENSITY IN ACCORDANCE WITH THE CURRENT AS 1289.5.2.1. (OR A DENSITY INDEX OF NOT LESS THAN 75)

#### PRECAST CONCRETE PIT NOTES

- 21. PRECAST PIT MAY BE USED WITH THE APPROVAL OF VANGUARD THE SUPERINTENDENT AND THE LOCAL GOVERNMENT AUTHORITY AND SHALL BE INSTALLED TO THE MANUFACTURERS RECOMENDATIONS.

  22. ALL PRE-CAST PITS ARE TO BE STRUCTURALLY CERTIFIED TO MEET
- RELEVANT REQUIREMENTS OF THE CURRENT AS3600 AND AS3996 (2019).

  23. PRE-CAST STORMWATER PITS ARE TO BE APPROVED FOR TFNSW
  CONSTRUCTION (R11) AND ARE TO ARE TO BE DESIGNED AND CUSTOM
  MADE WITH OPENINGS UP TO A MAXIMUM +50mm OD OF THE
  STORMWATER PIPES. PITS ARE ALSO TO INCLUDE PENETRATIONS FOR
  SUBSOIL CONNECTIONS AND DOUBLE STEP-IRONS INSTALLED FOR PITS

>0.6m DEEP. DEMOLITION SAWS MAY BE USED PROVIDING A NEAT FULL

DEPTH CUT IS APPLIED AND ANY ADDITIONAL PENETRATIONS REQUIRED ARE TO BE CORE DRILLED.

24. SHOP DRAWINGS ARE TO BE PROVIDED FOR REVIEW AND ACCEPTANCE. IT SHOULD BE NOTED THAT THE CONTRACTOR IS TO ENSURE THAT THE STRUCTURAL COMPONENTS OF THE PITS ARE NOT COMPROMISED AND ONLY THE PIPE KNOCKOUTS ARE TO BE REMOVED FOR THE PIPE

## STORMWATER DRAINAGE NOTES (CONTINUED)

- 1. ALL PRECAST PITS TO BE FOUNDED ON CONCRETE BLINDING LAYER (100mm ON AN EARTH FOUNDATION OR 150mm ON A ROCK FORMATION) WITH A MINIMUM ALLOWABLE BEARING CAPACITY OF 100KPa UP TO 3.0m DEPTH TO INVERT AND 150KPa FROM 3.0m TO 6.0m DEPTH TO INVERT (MINIMUM 100mm THICK 25MPa OR DEEPER TO ENSURE MINIMUM SPECIFIED BEARING CAPACITY IS ACHIEVED). CONTRACTOR TO ENGAGE
- GEOTECHNICAL ENGINEER TO PROVIDE WRITTEN CONFIRMATION.

  2. ALL PRE-CAST PIT PENETRATIONS SHALL BE CUT SO THAT IT IS FLUSH WITH THE INTERNAL WALL.
- ALL PIPE JOINTING, SPARGING, RENDERING, FILLING OF GAPS TO BE FILLED WITH A HIGH STRENGTH NON-SHRINK GROUT WITH A MINIMUM 40MPa COMPRESSIVE STRENGTH AT 28 DAYS. (LANKO DURABED 702 OR SIMILAR).
   SINGLE UNITS PREFERRED BUT IF REQUIRED MINIMUM RISER DEPTH
- 600mm PIT INSTALLATION AND JOINTING BETWEEN UNITS SHALL BE UNDERTAKEN IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

  5. ANY DAMAGE TO THE STRUCTURAL INTEGRITY OF THE PRE-CAST PIT WILL BE DEPARTED AND STRUCTURAL IN CERTIFIED AT THE
- 5. ANY DAMAGE TO THE STRUCTURAL INTEGRITY OF THE PRE-CAST PIT WILL BE REPAIRED AND STRUCTURALLY CERTIFIED AT THE CONTRACTORS EXPENCE TO THE SATISFACTION OF THE VANGUARD, SUPERINTENDENT / LOCAL GOVERNMENT AUTHORITY.

#### SURVEY NOTES

THE EXISTING SITE CONDITIONS SHOWN ON THE FOLLOWING DRAWINGS HAVE BEEN INVESTIGATED BY REGISTERED SURVEYORS. THE INFORMATION IS SHOWN TO PROVIDE A BASIS FOR DESIGN. VANGUARD CONSULTING ENGINEERS DOES NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF THE SURVEY BASE OR ITS SUITABILITY AS A BASIS FOR CONSTRUCTION DRAWINGS.

SHOULD DISCREPANCIES BE ENCOUNTERED DURING CONSTRUCTION BETWEEN THE SURVEY DATA AND ACTUAL FIELD DATA, CONTACT VANGUARD CONSULTING ENGINEERS.

## <u>AS3500.3</u> MINIMUM INTERNAL DIMENSIONS FOR STORMWATER AND INLET PITS

		MINIMUM INTERNAL DIMENSIONS mm							
	INVERT OF LET	RECTAN	IGULAR	CIRCULAR					
		WIDTH	LENGTH	DIAMETER					
	≤ 600	450	450	600					
> 600	≤ 900	600	600	900					
> 900	≤ 1200	600	900	1000					
> 1200		900	900	1000					

#### AS3500.3 MINIMUM GRADIENT OF SITE STORMWATER DRAINS **NOMINAL NOMINAL** MINIMUM GRADIENT MINIMUM GRADIENT SIZE SIZE ΝZ ΝZ DN ΑU 1:100 1:90 1:200 1:350 1:100 1:120 300 1:250 1:350 1:350 1:100 1:200 375 1:300

#### AS3500.3 TABLE 7.1: MINIMUM PIPE COVER (FROM FINISHED SURFACE TO TOP OF PIPE) OTHER CAST IRON, DUCTILE AUTHORIZED(\*) IRON, GALVANIZED STEEL PRODUCTS LOCATION MINIMUM COVER (millimeters) NOT SUBJECT TO VEHICULAR LOADING (A) WITHOUT PAVEMENT -(i) FOR SINGLE DWELLINGS 100 (ii) FOR OTHER THAN ITEM (i) 300 (B) WITH PAVEMENT OF BRICK OR NIL (†) 50 (†) UNREINFORCED CONCRETE SUBJECT TO VEHICULAR LOADING (A) OTHER THAN ROADS -(i) WITHOUT PAVEMENT 300 450 (ii) WITH PAVEMENT OF -(A) REINFORCED CONCRETE FOR HEAVY NIL (†‡) 100 (†‡) VEHICULAR LOADING (B) BRICK OR UNREINFORCED CONCRETE NIL (†‡) 75 (†‡) FOR LIGHT VEHICULAR LOADING (B) ROADS -(i) SEALED 300 500 (†‡) (ii) UNSEALED 500 (†‡) SUBJECT TO CONSTRUCTION EQUIPMENT LOADING 500 (†‡) 300 OR IN EMBANKMENT CONDITIONS

(\*) INCLUDE OVERLAY ABOVE THE TOP OF THE PIPE OF NOT LESS THAN 50mm THICK.

(†) BELOW THE UNDERSIDE OF THE PAVEMENT.

SUBJECT TO COMPLIANCE WITH AS1762, AS2033, AS/NZS 2566.1, AS3725 OR AS4060.

— OF —— >—	OVERFLOW LINE
— SWRM— SWRM—	STORMWATER RISING MAIN
———е——	EXISTING STORMWATER LINE
swsw	AUTHORITY STORMWATER LINE
HL	HIGH LEVEL STORMWATER LINE
s	AUTHORITY SEWER LINE
w	AUTHORITY WATER LINE
—— G—— G——	AUTHORITY GAS LINE
— — Е—	AUTHORITY ELECTRICITY LINE
— FO— FO— FO—	AUTHORITY FIBRE OPTIC LINE
TEL	AUTHORITY COMMS LINE
—— —— OH(E) ——	AUTHORITY OVERHEAD ELECTRICAL LINE
	FENCE LINE
	GRATED SURFACE INLET PIT
	GRATED SURFACE INLET PIT WITH OCEANGUARD BASKET
	JUNCTION PIT
	KERB INLET PIT
	GRATED TRENCH DRAIN
eTEL	EXISTING TELSTRA PIT
H eHYD	EXISTING HYDRANT
⊠ eSV	EXISTING STOP VALVE
□ eGAS	EXISTING GAS VALVE
O ePP	EXISTING POWER POLE
¤ eBT	EXISTING BOUNDARY TRAP
eSMH	EXISTING SEWER MANHOLE
OFP	OVERLAND FLOW PATH
RWO∅	RAINWATER OUTLET

DOWNPIPE

STORMWATER LINE

**ROOF WATER LINE** 

SUBSOIL DRAINAGE LINE

LEGEND

\_\_ SW \_\_\_ > \_\_

— RW —— > —

\_\_\_\_ SSD\_\_\_\_

DP

<u>LEGEND</u>									
CO Ø	CLEAR OUT POINT								
DDO ∅	DISH DRAIN OUTLET								
PD Ø	PLANTER DRAIN								
ב	CAPPING								
FF ∅	FIRST FLUSH								
RH 🔯	RAINHEAD								
•	DOWNPIPE DROP								
$\bowtie$	NON RETURN VALVE								
<u>`</u>	WALL PENETRATION								
SP SP	DOWNPIPE SPREADER								
	WARNING LIGHT								
\$80.00	SPOT LEVELS								
Δ	BENCHMARK								
ABBREVIATIONS:									

CALIFORNIA BEARING RATIO

DOWELLED EXPANSION JOINT

DENSE GRADED BASECOURSE

DENSE GRADED SUB-BASE

FINISHED FLOOR LEVEL

INTERSECTION POINT

NATURAL GROUND LEVEL

REINFORCED CONCRETE PIPE

OVERLAND FLOW PATH

ON-SITE DETENTION

**ROLL KERB & GUTTER** 

SAWN CONTROL JOINT

STORMWATER RISING MAIN

UNLESS NOTED OTHERWISE

WEAKENED PLANE JOINT

FIRST FLUSH DEVICE

REDUCED LEVEL

RETAINING WALL

TOP OF KERB

TOP OF WALL

TYPICAL

**BENCH MARK** 

RAINWATER TANK

SEWER MAN HOLE

TOP WATER LEVEL

TANGENT POINT

ISOLATING JOINT

INTEGRAL KERB

INVERT LEVEL

KERB INLET PIT

**KERB & GUTTER** 

KERB RETURN

KERB ONLY

**RADIUS** 

GRATED TRENCH DRAIN

GRATED SURFACE INLET PIT

Ø or DIA DIAMETER

CH

CL

CO

DD

DDO

DEJ

DGB

DGS

DP

FFL

GTD

GSIP

KIP

KO

K&G

KR

NGL

OSD

RCP

RK

 $\mathsf{RL}$ 

RW

RWT

SJ

SMH

TOK

TOW

TWL

TP

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WPJ

FF

TYP

**SWRM** 

CHAINAGE

**CENTER LINE** 

CLEAR OUT

DISH DRAIN

DOWNPIPE

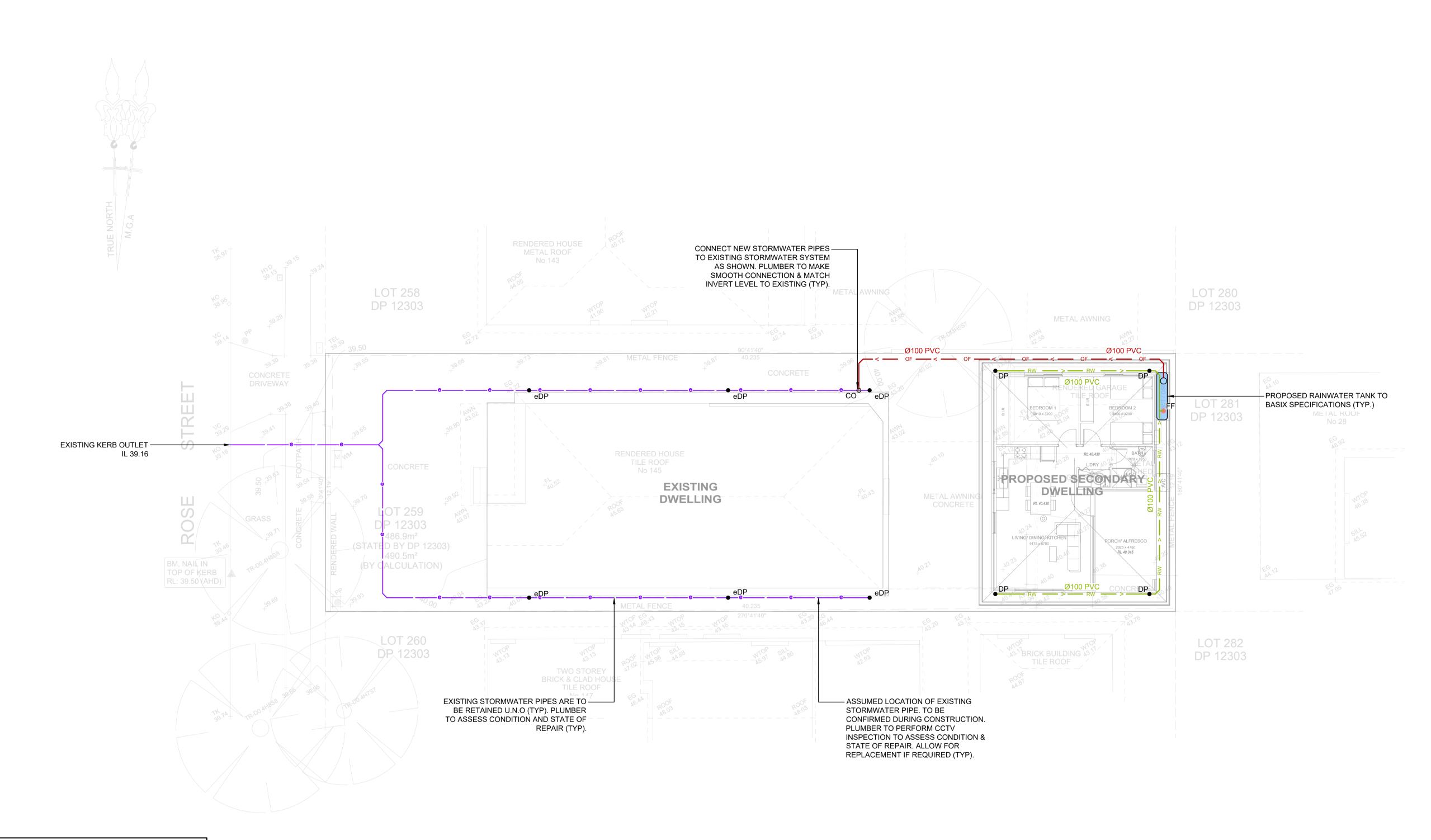
**EXISTING** 

DISH DRAIN OUTLET

### LEGEND:

	PROPOSED	EXISTING	FUTURE	TEMPORARY
STORMWATER PIPELINE		000000	000000	000000
STORMWATER DRAINAGEG PITS				
CONCRETE HEADWALL				
DRAINAGE LABEL	(A.05)	(A.05)	(A.05)	(A.05)
CATCH DRAIN	<b>→ → →</b> —	$\rightarrow \rightarrow \rightarrow -$	$\rightarrow \rightarrow \rightarrow -$	$\rightarrow \rightarrow \rightarrow -$

REVISION	REVISION DETAILS	DATE	DRAWN	DESIGN	CHECK	APPROVED	CIVIL ENGINEER	ARCHITECT	CLIENT	PROJECT MANAGER	SCALE	GRID	STATUS FOR APP  NOT TO BE USED FOR CON			
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								310010					V250427 - SW001	V250427		



### **DESIGN NOTES:**

THE SITE IS LOCATED IN CANTERBURY-BANKSTOWN COUNCIL.

SITE AREA = 490.5m<sup>2</sup>

IN ACCORDANCE TO COUNCIL GUIDELINES, OSD IS NOT REQUIRED FOR SUBJECT DEVELOPMENT. THIS IS DUE TO THE DEVELOPMENT HAVING AN IMPERVIOUS AREA BELOW 75%.

CONTRACTOR TO INSTALL ABOVE GROUND RAINWATER TANK TO COLLECT REQUIRED ROOF AREA IN ACCORDANCE WITH BASIX CERTIFICATE.

RAINWATER TANK TO BE EQUIPPED WITH FIRST FLUSH AND MOSQUITO PROTECTION DEVICES.

ALL NEW STORMWATER PIPES TO HAVE A MINIMUM OF 100mm CONCRETE OR 300mm TOPSOIL COVER U.N.O.

ALL DOWNPIPES SHOWN ON PLAN ARE Ø100mm uPVC U.N.O.

### **EROSION & SEDIMENT CONTROL NOTES:**

CONTRACTOR TO PROVIDE SILT FENCE/HAY BAIL BARRIERS TO THE LOW SIDE OF ALL EXPOSED EARTH EXCAVATIONS (TYP).

ISOLATE EXISTING STORMWATER PITS WITH HAY BALES TO FILTER ALL INCOMING FLOWS.

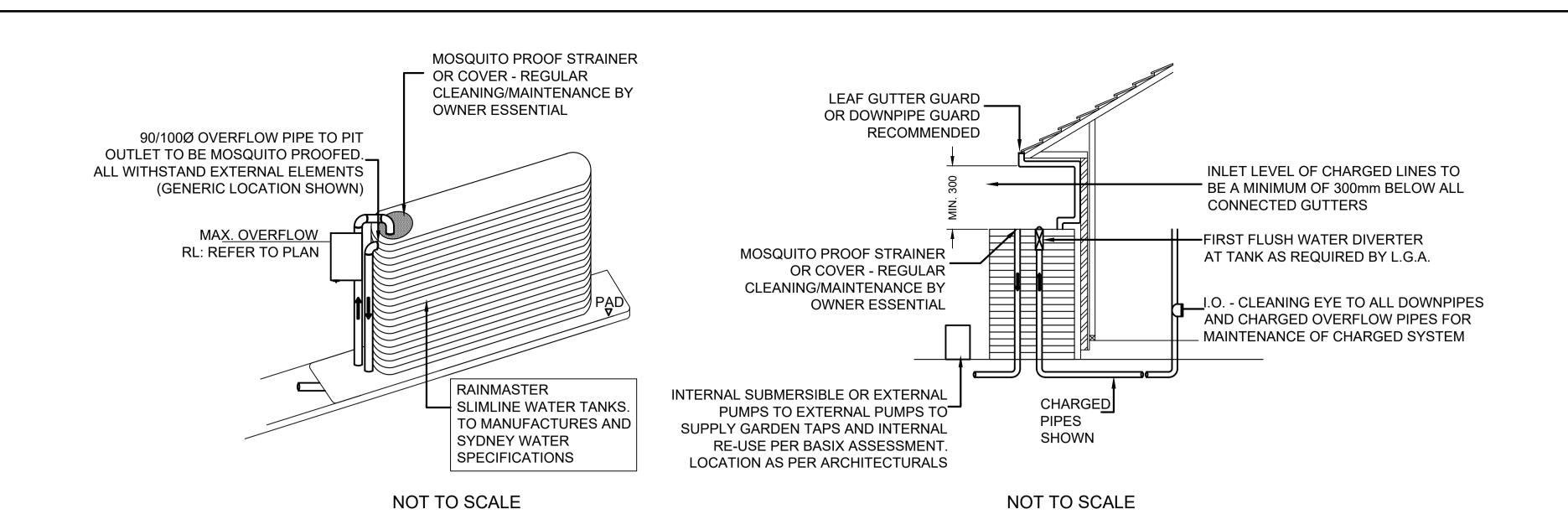
COMING FLOWS.

DO NOT STOCK PILE EXCAVATED MATERIAL ON THE ROAD WAY.

### SURVEY

THE EXISTING SITE CONDITIONS SHOWN ON THE FOLLOWING DRAWINGS HAVE BEEN INVESTIGATED BY REGISTERED SURVEYORS. THE INFORMATION IS SHOWN TO PROVIDE A BASIS FOR DESIGN.

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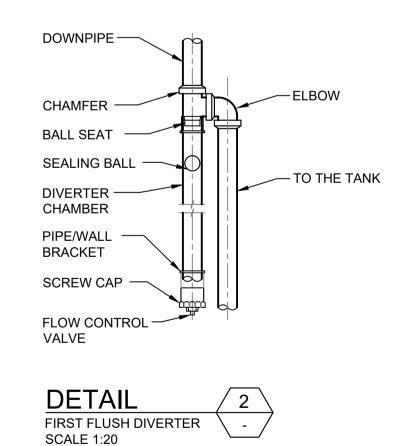


#### RAINWATER RECYCLING TANKS

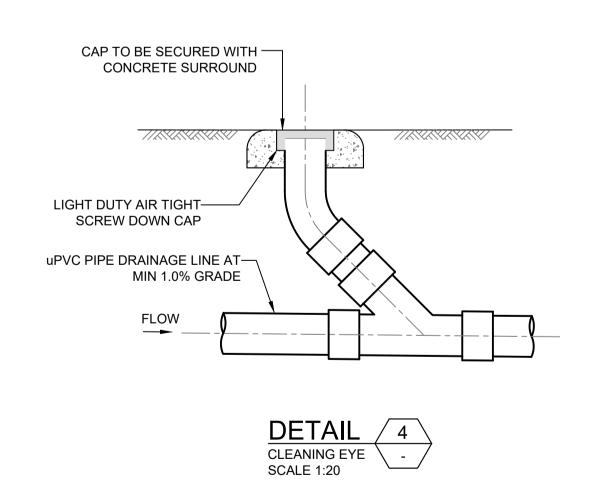
- TANK SHAPE AND DEVICES ARE DIGRAMATIC ONLY
- ANY MODIFICATIONS TO TANK VOLUME, INLET, OUTLET, OR OTHER DETAILS MUST BE APPROVED BY ENGINEER
- STORMWATER LINES FROM DOWNPIPES FROM ROOF AREAS ONLY TO RAINWATER TANKS
- TANK TO COMPLY WITH AS1546.1, AND INSTALLED IN ACCORDANCE WITH MANUFACTURES INSTALLATION
- FIRST FLUSH WATER DIVERTER TO COMPLY WITH SYDNEY WATER & COUNCIL DCP'S. AN APPROVED SWITCH
- SYSTEM SIMILAR TO "RAINBANK' TO BE USED VIA MAINS. PUMPS TO MANUFACTURES SPECIFICATIONS
- ALL JOINTS TO BE SOLVANT WELDED
- ALL EXPOSED PIPEWORK TO BE PAINTED TO WITHSTAND EXTERNAL ELEMENTS
- CLIENT TO BE RESPONSIBLE FOR MAINTENANCE SYSTEM OF CHARGED PIPELINES
- STRUCTURAL DETAILS FOR TANKS BASE BY QUALIFIED STRUCTURAL ENGINEER, AS REQUIRED BY MANUFACTURER

ENSURE ALL DRAINAGE WORKS ARE AWAY FROM TREE ROOTS









REVISION	REVISION DETAILS	DATE	DRAWN	DESIGN	CHECK	APPROVED	CIVIL ENGINEER	ARCHITECT	CLIENT	PROJECT MANAGER	SCALE	GRID	STATUS FOR APPI NOT TO BE USED FOR CON			
A	ISSUED FOR DA	17.05.2025	D.D.	M.N.	D.S.	D.S.	VANGUARD   CONSULTING ENGINEERS		•		AS SHOWN	HEIGHT AHD	PROPOSED SECON	IDARY DWELLING		
							UNIT 1, 6 WELD STREET E-MAIL: ADMIN@VCENG.COM.AI PRESTONS, NSW 2170				DRAWING TITLE		145 ROSE STREET, YAGOONA NSW 2199  LGA: CANTERBURY-BANKSTOWN COUNCIL			
							WEB: WWW.VCENG.COM.AU TEL: (02) 9145 0253	STUDIO			STORMWATER DETAILS - SHEET 1		DRAWING NUMBER V250427 - SW110	REFERENCE NUMBER V250427	REVISION	