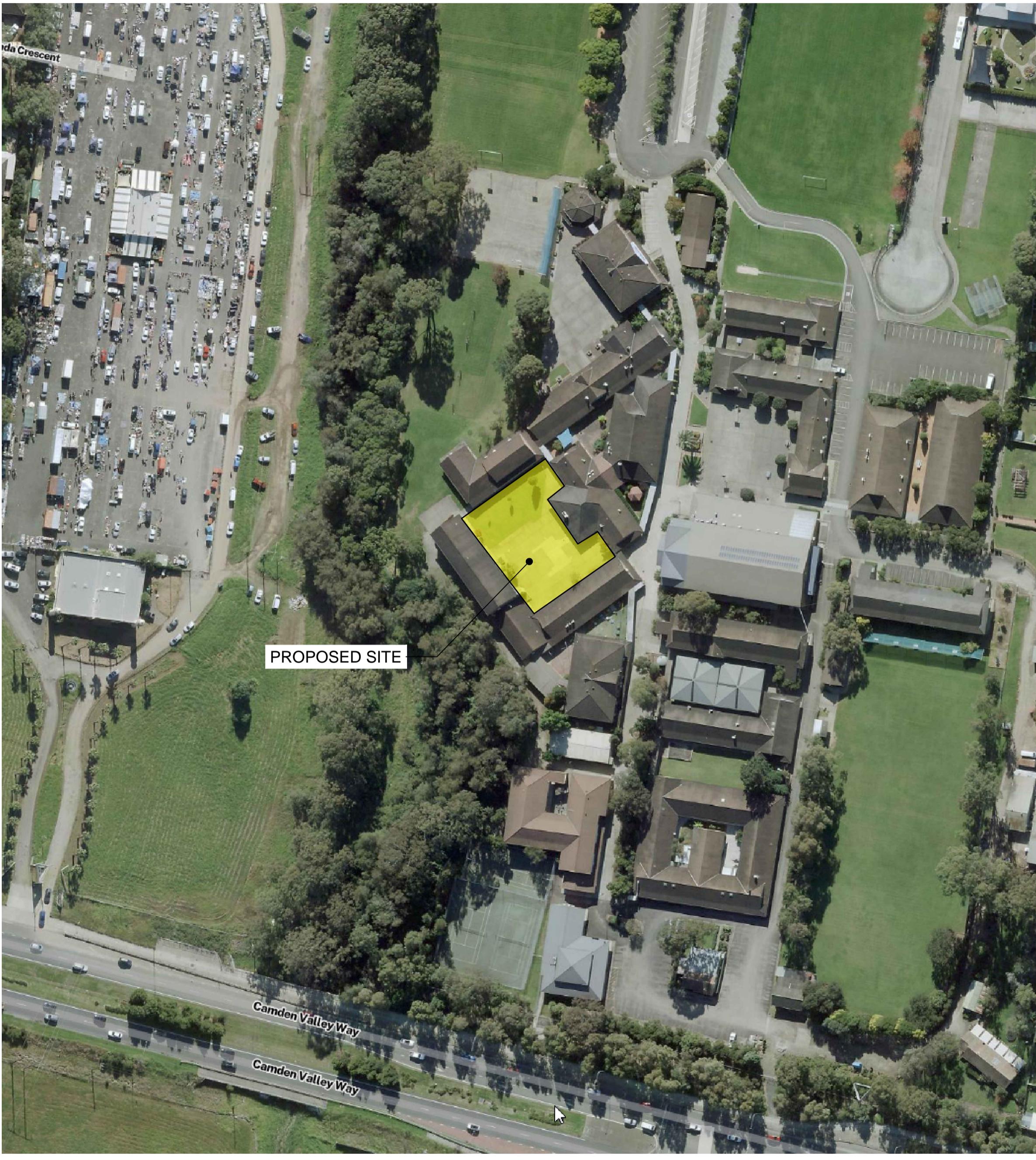


WILLIAM CAREY CHRISTIAN SCHOOL

38-44 BUMBERA STREET, PRESTONS NSW 2170



DRAWING SCHEDULE - CIVIL		
DWG NO.	TITLE	SHEET
C.00	COVER SHEET	1 of 1
C.01	CONSTRUCTION NOTES	1 of 1
C.11	SOIL EROSION AND SEDIMENT CONTROL PLAN 01	1 of 1
C.15	SOIL EROSION & SEDIMENT CONTROL DETAILS 01	1 of 1
C.21	CIVIL DRAINAGE WORKS PLAN 01	1 of 1
C.25	CIVIL DRAINAGE DETAILS 01	1 of 2
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C.31	PRE AND POST DEVELOPMENT CATCHMENS PLAN	1 of 1

PRELIMINARY ISSUE
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P1	ISSUED FOR DA SUBMISSION	-	05.03.25
ISSUE	DESCRIPTION	APPROVED	DATE
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TITLE			
COVER SHEET			
SCALES	N/A @ A1	DATE	MARCH 2025
DRAWN	DESIGN	VERIFIED	APPROVED
E.G	A.K	-	-
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ISSUE	PROJECT No.	DRAWING No.	
P1	241023	C.00	

GENERAL NOTES

- These drawings shall be read in conjunction with all relevant other consultants drawings, the Architectural drawings issued For Construction, and all other specifications such as written instructions issued during construction, checklists and approving authority Specifications. Any discrepancies in these documents shall be referred to the relevant parties and not less than the Project Manager, the Engineer and the Superintendent for a decision prior to continuing with the works.
- All existing drainage shown on the plans that is proposed to be re-used is to be inspected by a licensed plumber and certified that it is in good working condition, otherwise allow to rectify and or replace.
- Provide Heelguard or equivalent to all pit lids and grated drains in pedestrian areas.
- The Contractor or Principle Contractor shall check all dimensions onsite for correctness. Where relevant this can be for NCC (BCA) compliance, EFSG compliance, TNSW compliance, LEPs, DCPs, and SEPPs. Any discrepancy shall be reported to the Superintendent and also not less than the Project Manager as soon as practicable. Dimensions shall not be obtained by scaling the drawings.
- It is the responsibility of the Builder and Contractor to ensure that during works the stability of existing structures shall be maintained without undue disturbance. During processes of disturbance such as excavation, service modification, underpinning, piling, compaction, vibration, demolition, reworking stormwater, parking of heavy machinery or stockpiling of materials, dust and excessive noise, it is the responsibility of the Builder and Contractor to ensure that no part of an existing structure or building is overstressed.
- Works shall not begin without the written approval of the relevant Certifying Authority.
- Inspections by Birzulis Associates are required to confirm and certify the standard of construction. The Superintendent shall be given 48 hours notice prior to all stormwater elements being backfilled or concealed to inspect. This does not remove the need for other authorities such as Certifiers to conduct inspections. Additional inspections of pavement materials and layers may also be required. Refer to pavement or sub-grade specific notes and relevant Specifications.
- Where shown, existing services are based on information provided to Birzulis Associates and are not a substitute for onsite testing and confirmation. It is the responsibility of contractors working in vicinity of these services to confirm their location.
- All service trenches shall be backfilled in accordance with the relevant Australian Standard corresponding to the type of piping in the trench or TNSW standards if working on a TNSW managed road.
- All workmanship and materials shall be in accordance with the legal or relevant requirements of current Australian Standards, National Construction Codes, SAA Codes, requirements or stipulations of relevant Certifying Authority, and relevant specifications. If in doubt all RFI's (Requests for Information) shall be submitted in writing and RFI's shall be in accordance with best practice and Standards.
- No changes to the works as reflected on the design engineering drawings shall be made without the written approval of the Superintendent.
- UNO or U.N.O denotes unless noted otherwise on these drawings.
- All proprietary products shall be checked for Building Code compliance with the Certifying Authority and shall be installed in accordance with the manufacturer's specifications and if required by an approved contractor endorsed by the manufacturer.
- It is the responsibility of the Principle Contractor or equivalent to obtain all permits and authority approvals.
- A Dilapidation report of elements in vicinity of the development shall be undertaken prior to works commencing.
- Existing downpipes which are being reconfigured should be connected to flexible hosing and discharged in a safe location in accordance with requirements of sediment and erosion control. The top of excavations shall be protected from overland flow and if necessary overland flow paths should be redirected during phases in the construction particularly bulk excavation and site works.
- It is the contractors responsibility to provide all safety fences, warning lights, temporary barriers around excavations/trenches, traffic diversions and the like during construction. All works to comply with Work Cover and OH&S regulations, and all other relevant safety requirements.
- No trees shall be removed/destabilised/cut back or relocated without the written instruction from the Superintendent.

STORMWATER DRAINAGE NOTES

- All workmanship and materials shall be in accordance with AS 3500.3 and other relevant codes where other materials are used.
- For downpipe locations refer Architectural drawings and the Hydraulic Engineers drawings. Use of downpipe chains shall be specifically checked with the certifying authority and a determination made if compliant with current codes in the application.
- Establish and locate existing invert levels of existing services prior to commencing works and confirm with the Superintendent if the design is based on an assumption in the levels.
- Pipes shall have a minimum fall of 1% unless noted otherwise. A minimum of 1:60 fall shall be provided for downpipes connecting to drainage lines.
- Responsibility of roof drainage is by others unless specifically noted otherwise.
- All uPVC stormwater drainage lines shall be in accordance with the latest version of AS 1254 and shall be installed in accordance with the requirements of the latest version of AS 3500.3, AS 2032 & AS 2566 unless noted otherwise.
- All reinforced concrete stormwater drainage pipe work (RCP) shall be in accordance with AS 1342, TNSW standards requirements and specifications and shall be installed in accordance with AS 3725 or the previous relevant standard/specification whichever is the greater or more appropriate. The pipes shall be of the following minimum classes in accordance with AS 1342 unless noted otherwise:
 - Class 4 under flexible pavements with min 600mm cover
 - Class 2 in other areas with no flexible pavement over and heavy machinery/trucks do not need to pass over and not surcharged by vehicles loads or greater.
- Subsoil drainage for rigid and flexible trafficable pavements shall be in accordance with TNSW requirements.
- Subsoil drainage (minimum 100mm diameter wrapped in a geotextile sock) shall be provided behind and at the base of all retaining walls, upturn walls (with the exception of underpinning and contiguous/soldier piling) and shall be backfilled with crushed rock with 10% cement. The wall shall also be waterproofed and a layer of Corflute applied between the waterproofing and the backfill. The backfill shall be wrapped in a geofabric. All subsoil drainage whether or not shown on plan shall connect to the downstream stormwater system and have sufficient clean out points to be adequately maintained.
- Subsoil drainage shall be provided in poorly drained lawn style areas in accordance with best practice.
- Step down in flooring from internal to external shall be in accordance with the National Construction Code unless noted otherwise.
- Falls in pavements shall be minimum 1% for external areas and 0.5% for external areas protected by a roof or undercover. Sufficient surface drainage shall be provided to facilitate these falls.
- All drainage trenches shall not undermine existing structures and shall be in sound material. If soft spots exist they should be removed and backfilled with a compacted roadbase D2B20 or 40 and compacted to minimum 98% standard dry density at plus or minus 2% optimum moisture content.
- All Stormwater pits or access to Stormwater tanks shall have the following:
 - have step irons installed (where deeper than 900mm) UNO, step irons shall be in accordance with TNSW standard drawings.
 - have a lid as per specification or a pit schedule.
 - have bedding as required.
 - have any proof locks or better child protection as required by council or other consultant specifications.
 - have benching as required.
- Cover for stormwater pipes shall be:
 - RCP: 600mm under flexible pavements or areas of vehicular loading
 - RCP: 300mm under landscape areas or rigid pavements
 - uPVC: 300mm not subject to vehicular loading
 - uPVC: 600mm subject to vehicular loading with sealed flexible carriageways.
 - If not noted in the above the minimum covers shall be obtained from the relevant Australian Standard as noted below:
 - AS 2041.1 for corrugated metal stormwater pipes
 - AS 2032 for PVC stormwater pipes
 - AS/NZS 2566.2 for flexible stormwater pipes
 - AS 3725 for reinforced concrete stormwater pipes
 - AS 2033 for polyethylene stormwater pipes.
- Lids of stormwater pits shall have the following class lids unless noted otherwise:
 - Class A for areas accessed strictly by only pedestrians
 - Class C for areas of residential roads and car parks and areas subject to vehicle loads but not heavy vehicle loads.
 - Class D for areas where heavy vehicles can access and use
- Minimum pit sizes regardless of what is shown on the drawings shall be in accordance with Table 7.5.2.1 of AS/NZS 3500.3.
- Sites that have a high water table a minimum of 1.5 times the diameter over uPVC or lightweight pipes shall be provided as cover to prevent buoyancy.
- All set out is to the face of the kerb, centreline of fence/bollard/pipe.
- Smooth all transitions between new and existing stormwater drainage works in level and alignment.
- It is the Contractor's responsibility to check all set out and levels prior to commencement of works and to report any discrepancies found to the Superintendent.
- The contractor shall provide certification of compactions and pavement thickness from a NATA registered testing authority at the rate of a minimum three tests per layer as follows:
 - pipe backfill density index 75
 - select fill 95% standard
 - select fill (less than 300mm follow base course) 98% modified
 - base course 100% modified
- The AUS-SPEC specification shall be the specification for these works.

ABBREVIATIONS

Ø OR DIA	DIAMETER AT 1 PERCENT
@ 1 %	AUSTRALIAN HEIGHT DATUM
AHD	CALIFORNIA BEARING RATIO
CBR	CHAINAGE
CH	CENTRE LINE
CL	CLEAR OUT
CO	CONFIRM ON SITE
DD	DISH CROSSING
DEJ	DISH DRAIN OUTLET
DGB	DOWELLED EXPANSION JOINT
DGS	DENSE GRADED BASE COURSE
DN	DENSE GRADED SUB-BASE
DP	DIAMETER NOMINAL
ex	DOWNPIPE
FFL	EXISTING
FW	FINISHED FLOOR LEVEL
GTD	FLOOR WASTE
GSIP	GRATED TRENCH DRAIN
HDG	GRATED SURFACE INLET PIT
HYD	HOT DIP GALVANISED
IJ	HYDRANT
IK	ISOLATING JOINT
IL	INTEGRAL KERB
IP	INVERT LEVEL
KIP	INTERSECTION POINT
KO	KERB INLET PIT
K&G	KERB ONLY
KR	KERB & GUTTER
LS	KERB RETURN
m	LONGITUDINAL SECTION
mm	METER
MIN	MILLIMETER
NGL	NATURAL GROUND LEVEL
NO.	NUMBER
NOM.	NOMINAL
NGL	NATURAL GROUND LEVEL
OPF	OVERLAND FLOW PATH
OSD	ON-SITE DETENTION
r	RADIUS
RCP	REINFORCED CONCRETE PIPE
RHS	RECTANGULAR HOLLOW SECTION
RK	ROLL KERB & GUTTER
RL	REDUCED LEVEL
RW	RETAINING WALL
RWO	RAINWATER OUTLET
RWT	RAINWATER TANK
SJ	SAWN CONTROL JOINT
SMH	SEWER MAN HOLE
SW	STORMWATER
SWP	STORMWATER PIT
SWRM	STORMWATER RISING MAIN
SWS	STORMWATER SUMP
SV	STOP VALVE
TOK	TOP OF KERB
TOW	TOP OF WALL
TP	TANGENT POINT
TYP.	TYPICAL
uPVC	UNPLASTICISED POLYVINYL CHLORIDE
UNO	UNLESS NOTED OTHERWISE
WPJ	WEAKENED PLANE JOINT

CONCRETE

- All workmanship and materials shall be in accordance with AS 3600 current edition with amendments, except where varied by the contract documents.
- Concrete Quality:

Class	= Normal
Stump	= 80mm
Maximum size of aggregate in structural concrete	= 20mm U.N.O.
Cement Type	= SL
Admixtures	= nil, unless noted otherwise or approved in writing.

For concrete cast in contact with ground provide the following additional properties:

Minimum cement content	= 330 kg/m ³
Maximum water/cement ratio	= 0.50

Concrete shall have a characteristic compressive strength at 28 days (f'c) as shown in the following table, unless noted otherwise on the drawings.

ELEMENT	f'c MPa (28 Days)
EXTERNAL CONCRETE	32

PREPARATION FOR SLAB ON GROUND

- Clear the area to be occupied by the pavement and its adjuncts. Break up and remove slabs, foundations, paving, etc. found on the surface or within 300mm of the basecourse. Remove all topsoil and organic matter and grub out all roots and stumps. Remove all rubble remaining from excavations.
- The subgrade material (natural ground below the excavations) shall be thoroughly compacted by proof rolling with a minimum of 8 passes of a 10 tonne dead weight roller. This proof rolling shall be inspected by an approved geotechnical engineering consultant, engaged by the contractor, to determine the extent of replacement of any unsuitable material. The cost of these inspections shall be deemed to be included in the contractors tender.
- Any soft, yielding, organic or other unsuitable material in the subgrade shall be removed for a depth of at least 300mm and holes so formed shall be filled with approved filling compacted in 150mm layers as specified below.
- Bring all filling on to the site unless it can be provided from spoil recovered from the site. Filling shall be sound clean stable material free of perishable material or any other material that will not form stable fill. The fill material shall be capable of consolidation so that it is firm and unyielding throughout its depth.
- Place filling in layers not exceeding 200mm thick when measured loose. Bring filling to optimum moisture content (+/- 2%) by watering and compact each layer thoroughly and uniformly with a vibrating roller where practicable. Hand tamp in areas not accessible to a vibrating roller.
- For the backfilling of localised excavations lightweight compaction equipment is to be used and filling placed in layers not exceeding 100mm thick when measured loose.
- Consolidate each layer of filling to obtain a uniform density strictly between 98% and 102% of the standard maximum dry density of the material as determined by AS2159.5.1.1.
- The basecourse layer (directly below the slab) shall consist of 100mm finished compacted thickness of crushed rock blinded with 25mm of sand.
- The basecourse material shall be clean, tough, durable and free of any weathered or disintegrated stone, clay, organic matter or any other deleterious materials.
- The crushed rock shall be compacted with approved equipment to obtain a uniform density of not less than 100% of the standard maximum dry density of material as determined by AS1289.5.1.1.
- Finish the basecourse to the following tolerances:

Variation from design level	- 5mm
Variation from 3000mm straight edge	- 5mm
- All earthworks shall be carried out under Level 1 control as defined in AS3798.
- The Contractor shall allow for testing at the rate of one test per 200 square metres of surface area for each of the following finished surfaces, with a minimum of three tests for each compacted layer:
 - Subgrade
 - Basecourse (at surface of crushed rock)
- The Contractor shall allow for testing at the rate of one test per 30 cubic metres for the filling, with a minimum of three tests for each compacted layer.
- The location of all tests shall be to the approval of the Superintendent.
- The Contractor shall obtain approval from a registered N.A.T.A. testing authority documented test evidence proving that the compaction figures as required for the materials specified herein have been obtained. The cost of such work shall be deemed to be included in the Contractor's Tender.

FOUNDATIONS

- Strip footings and pad footings have been designed for an allowable bearing pressure intensity of 150 kPa, bearing on FIRM STABLE NATURAL GROUND.
- The Contractor shall obtain approval from the Superintendent of the foundation material before placing reinforcement or concrete.
- Footings shall be located centrally under walls and columns unless noted otherwise.
- Footings shall be constructed and backfilled as soon as possible following excavation to avoid softening or drying out of the foundation material.
- The Contractor shall arrange for a representative from the (the geotechnical consultant) to be present at the time of drilling all of the bored piers to determine the actual founding levels. The cost of this shall be deemed to be included in the contractors tender.
- Reinforcement symbols:

S	denotes Grade 230 S Hot rolled deformed bars to AS 1302
N	denotes Grade 500 N Deformed bars to AS 4671
R	denotes Grade 230 R Hot rolled plain bars to AS 1302
SL/RL/L	denotes Grade 500 L Deformed ribbed welded mesh to AS 4671

The figures following the symbol are the number of millimetres in the bar diameter. The figures following the mesh symbol SL, RL, L is the reference number for mesh to AS 4671.
- Reinforcement is represented diagrammatically and not necessarily in true projection.
- Splices in reinforcement shall be made only in positions shown or otherwise approved in writing by the Superintendent. Laps shall be in accordance with AS 3600 and not less than 1.25 times the development length for each bar.
- Mesh reinforcement shall have splices made so that the overlap, measured between the outermost transverse wires of each sheet of mesh, is not less than the spacing of those wires plus 50mm.
- Welding of reinforcement shall not be permitted unless shown on the structural drawings or approved by the Superintendent.
- Joggles to bars shall be 1 bar diameter over a length of 12 bar diameters.
- Bundled bars shall be tied together at 30 bar diameter centres with three wraps of tie wire.
- Where transverse tie bars are not shown provide N12 at 400mm distribution bars unless noted otherwise. Splice distribution bars 500mm where necessary and provide 500mm splice length with main bars unless noted otherwise.
- All dowels placed in joints in concrete slabs shall be placed within the following tolerances:

Level	+/- 1 degree
Line	+/- 1 degree
Position	+/- 5mm
- Sliding bearing strips supporting concrete slabs shall be composed of two layers of 0.4mm thick galvanised steel plate with an intermediate layer of grease (unless noted otherwise). The strips shall be the same width as the bearing surface.

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P1	ISSUED FOR DA SUBMISSION	-	05.03.25
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TITLE
CONSTRUCTION NOTES

SCALES N/A @ A1 DATE MARCH 2025
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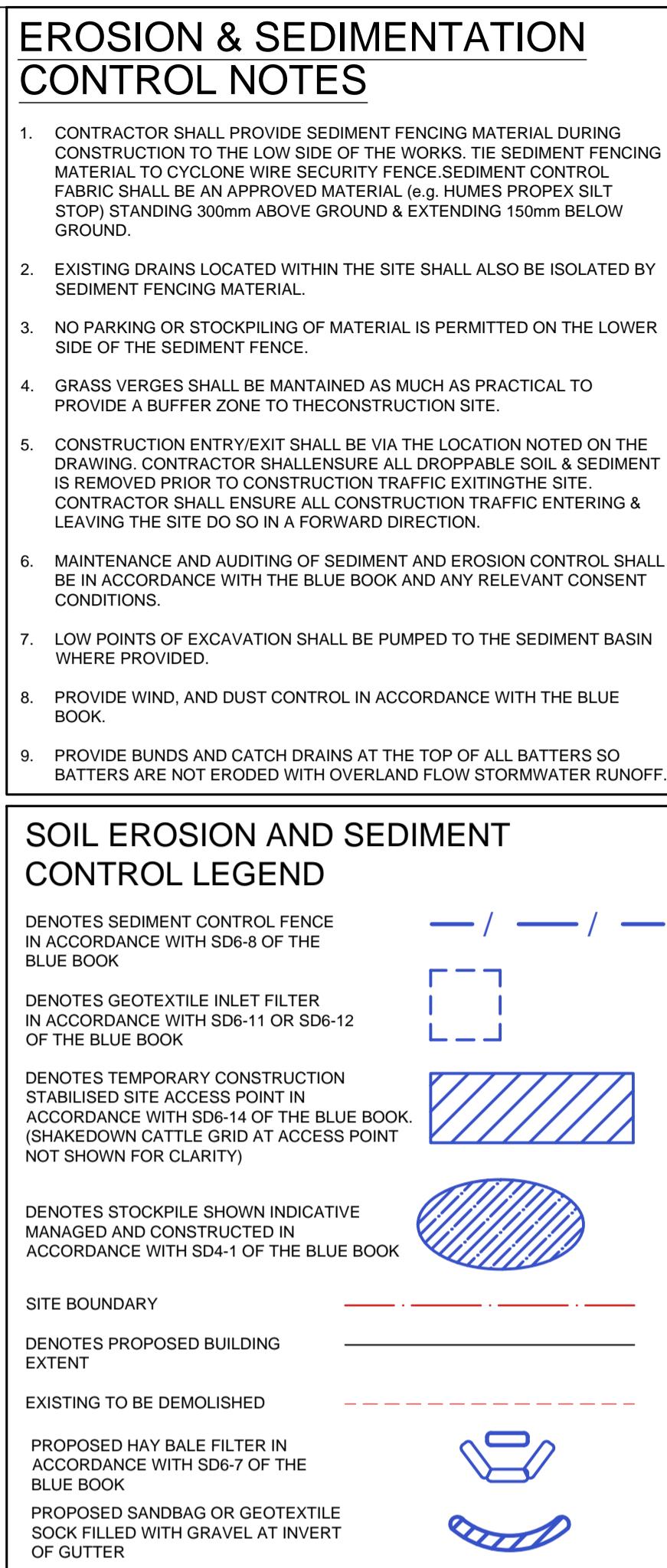
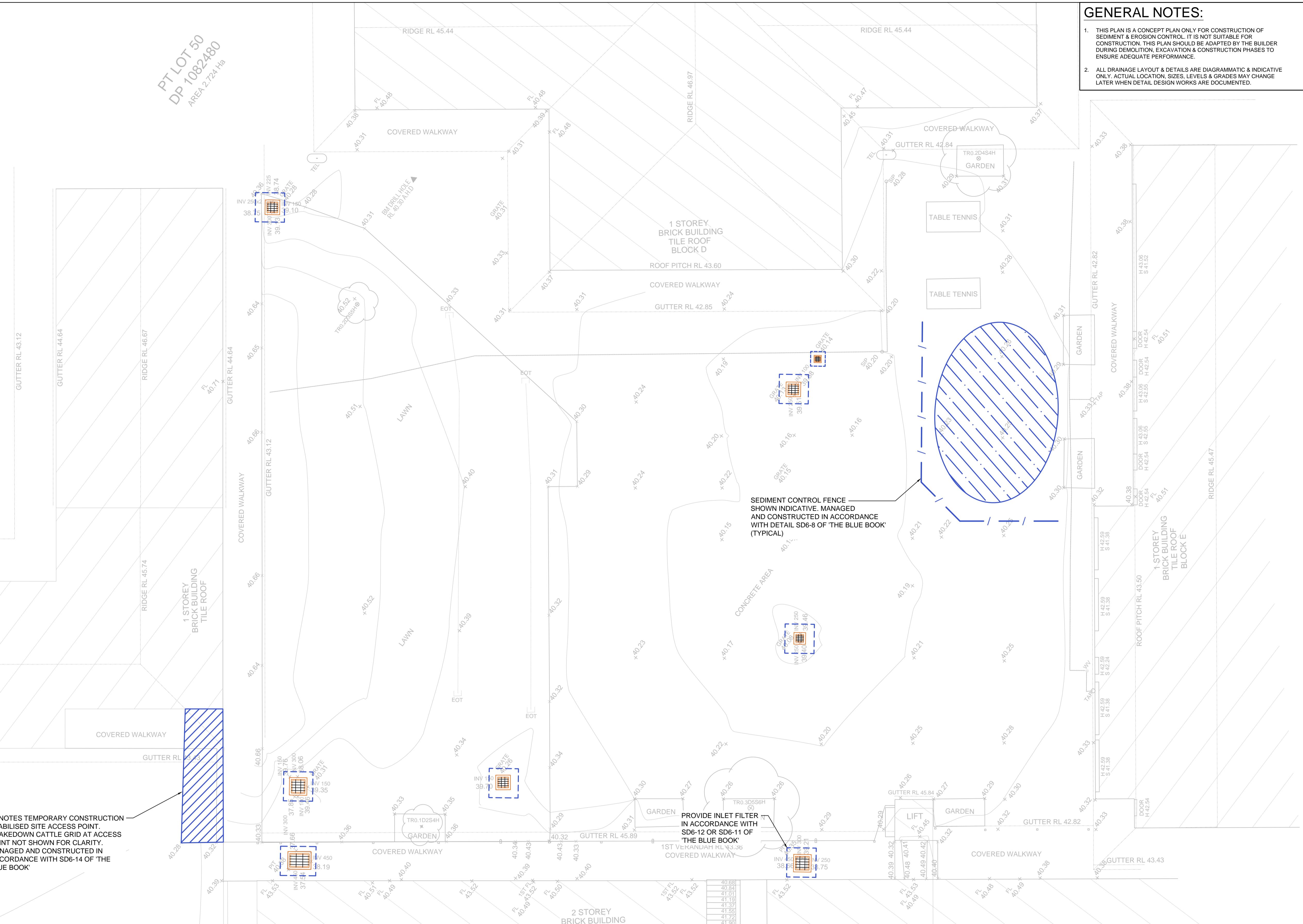
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TITLE
SOIL EROSION AND SEDIMENT CONTROL PLAN 01

SCALES 1:100 @ A1 DATE MARCH 2025

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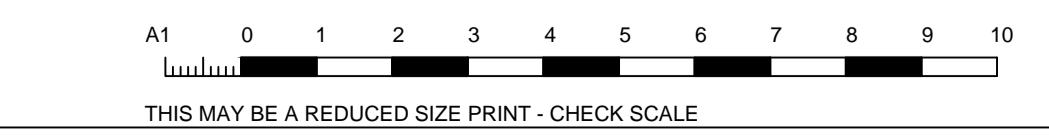
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ISSUE PROJECT No. DRAWING No.

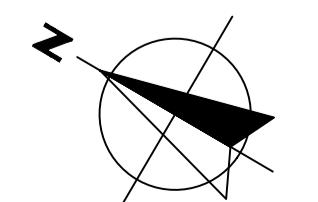
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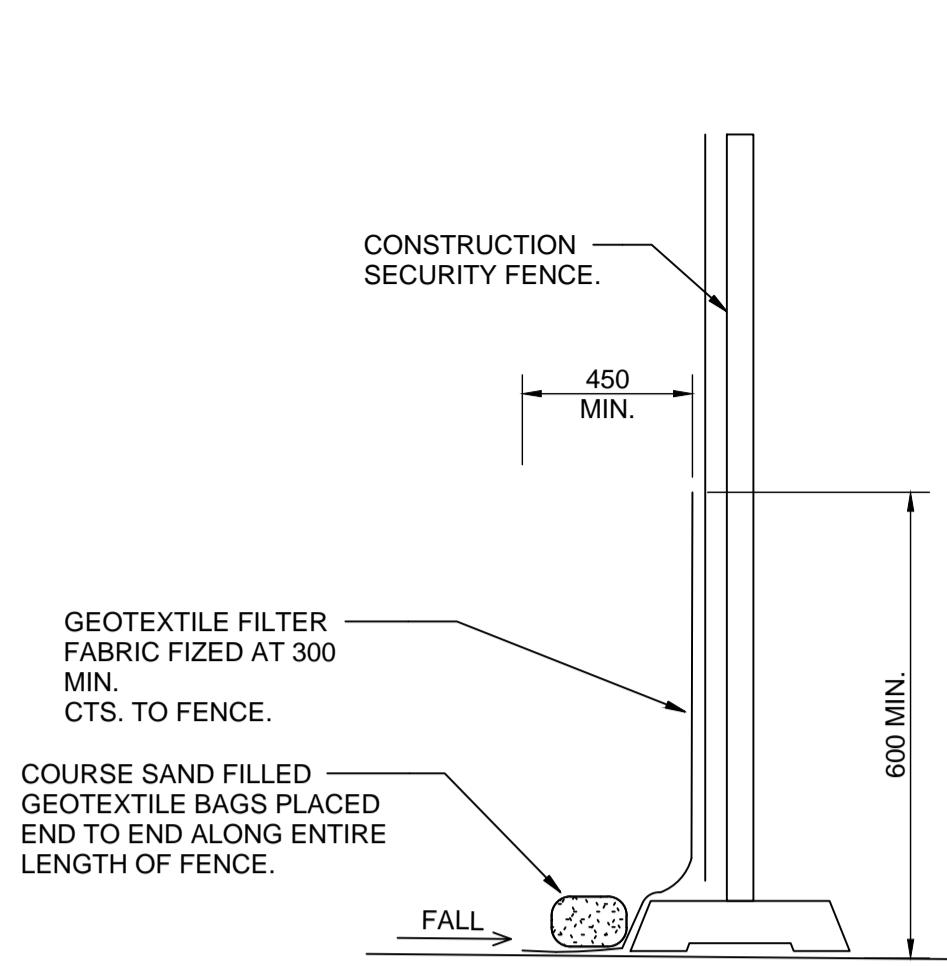
SOIL EROSION AND SEDIMENT CONTROL PLAN

SCALE 1:100

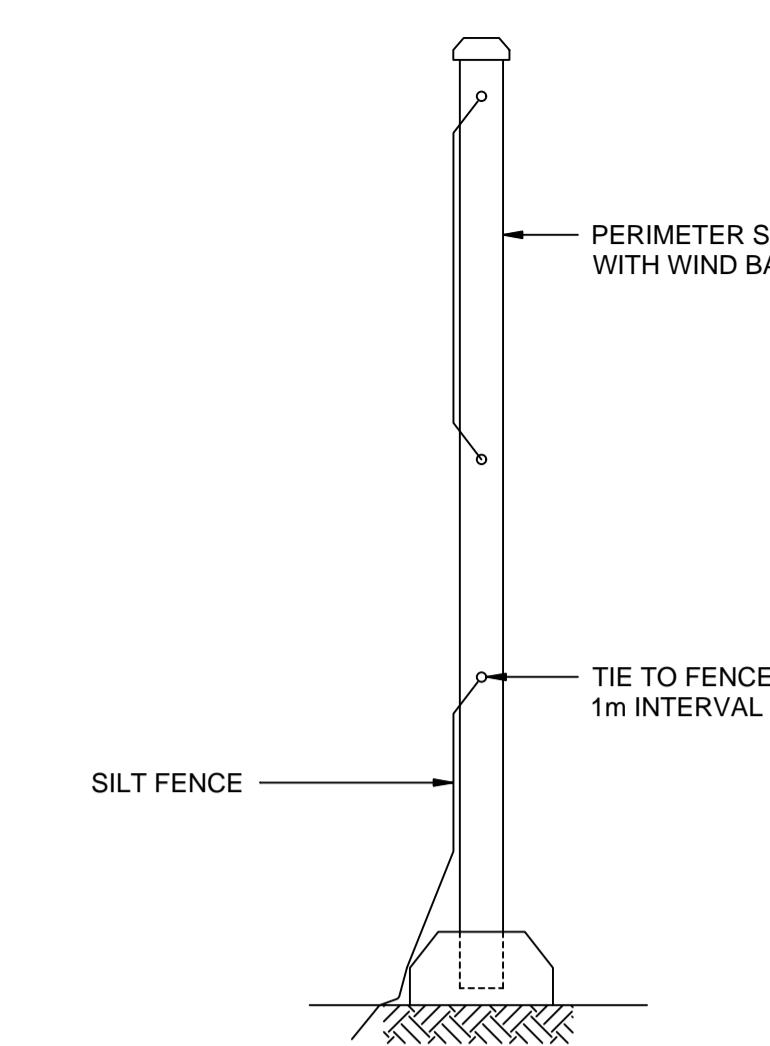


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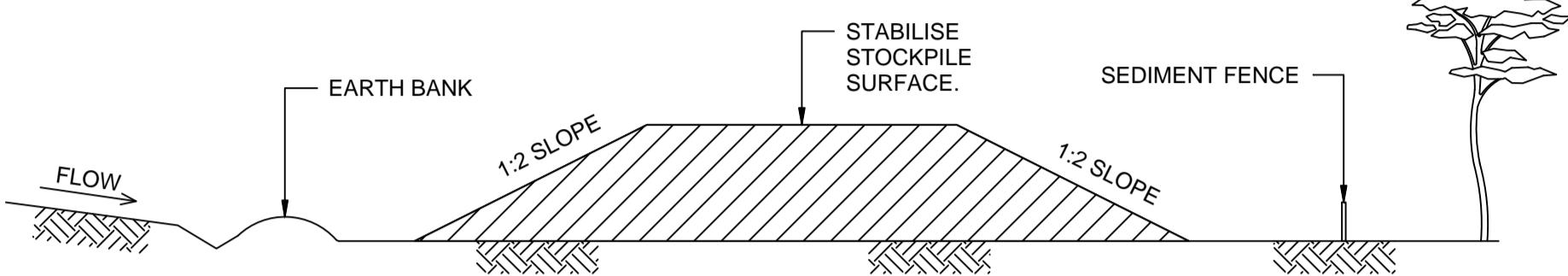
SEDIMENT FENCE ON PAVED SURFACE
(NOT TO SCALE)



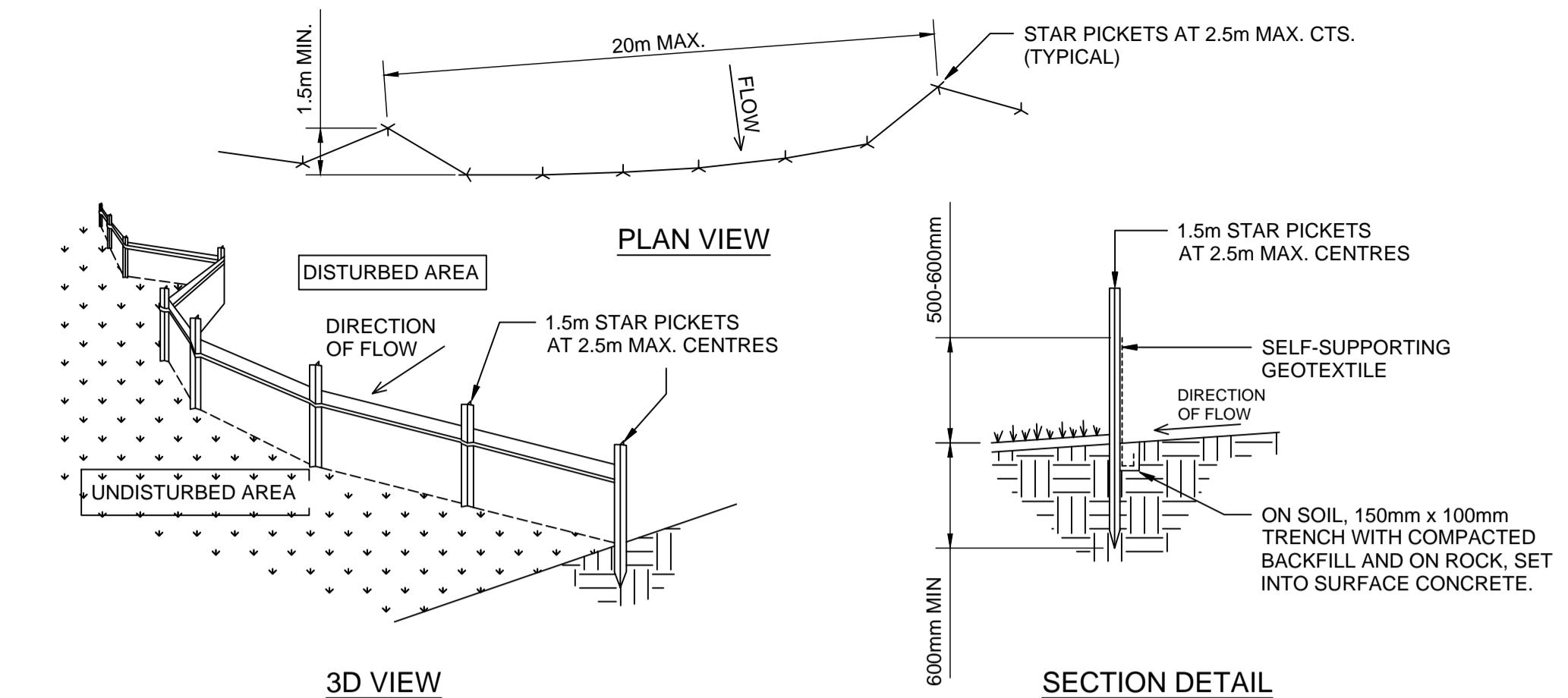
PERIMETER SECURITY FENCE WITH WIND BARRIER & SILT FENCE DETAIL
(NOT TO SCALE)

STOCKPILE CONSTRUCTION NOTES:

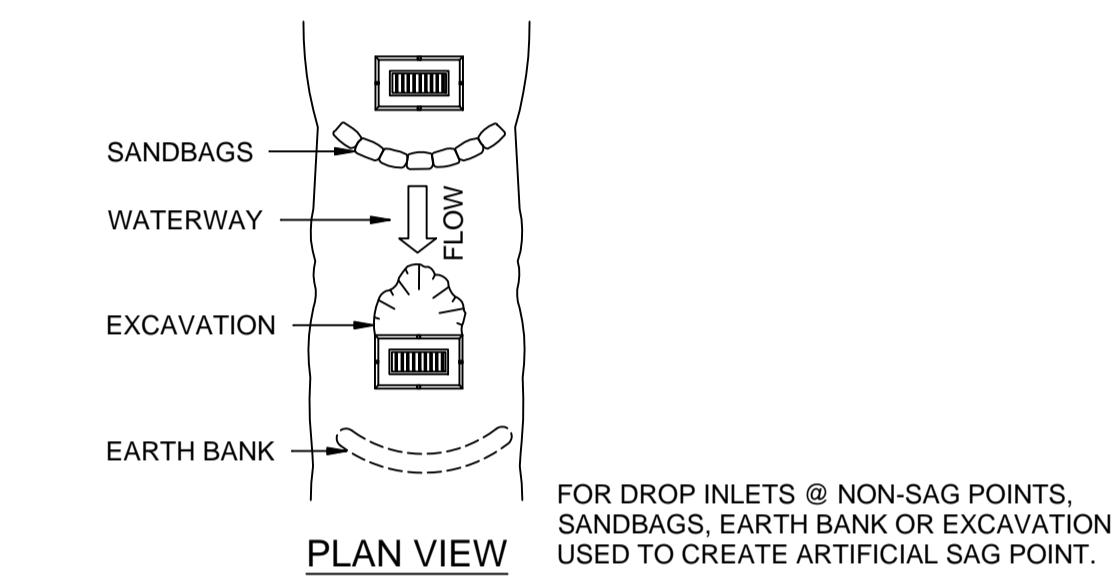
1. PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW, ROADS AND HAZARD AREAS.
2. CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS.
3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METRES IN HEIGHT.
4. WHERE THEY ARE TO BE PLACED FOR MORE THAN 10 DAYS, STABILISE FOLLOWING THE APPROVED E.S.C.P. OR S.W.M.P. TO REDUCE THE C-FACTOR TO LESS THAN 0.10.
5. CONSTRUCT EARTH BANKS ON THE UPSLOPE SIDE TO DIVERT WATER AROUND STOCKPILES AND SEDIMENT FENCES 1 - 2 METRES DOWNSLOPE.



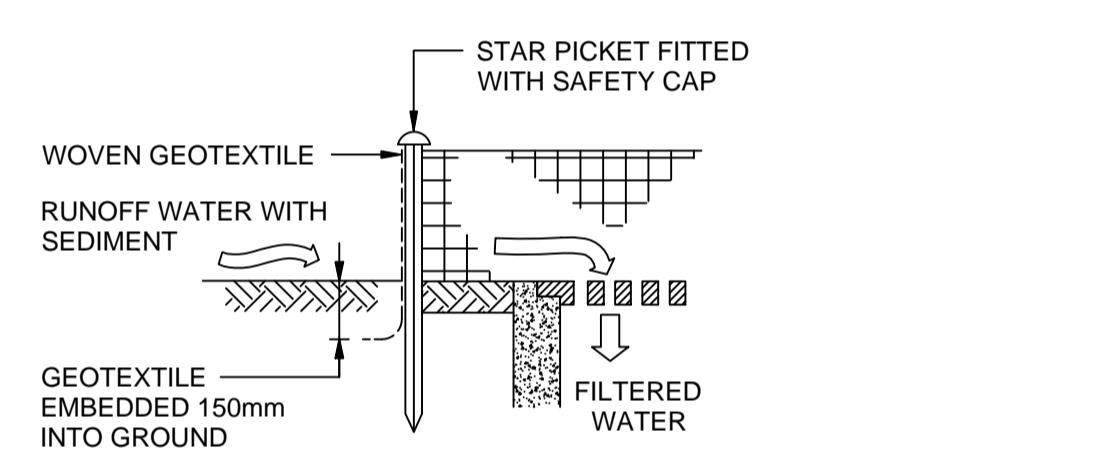
SEDIMENT FENCE ON PAVED SURFACE
(NOT TO SCALE)



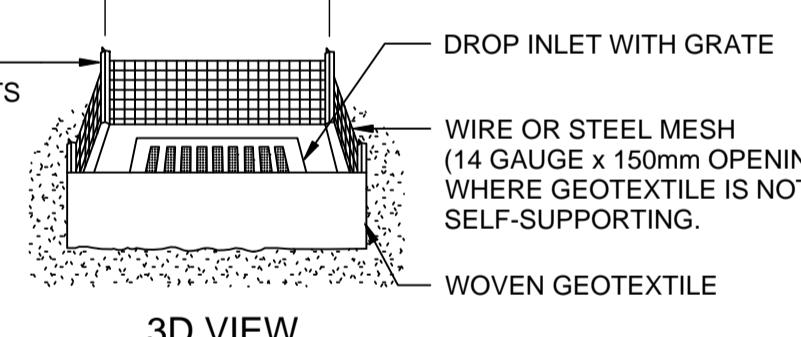
SEDIMENT FENCE DETAILS
(NOT TO SCALE)



PLAN VIEW
FOR DROP INLETS @ NON-SAG POINTS, SANDBAGS, EARTH BANK OR EXCAVATION USED TO CREATE ARTIFICIAL SAG POINT.



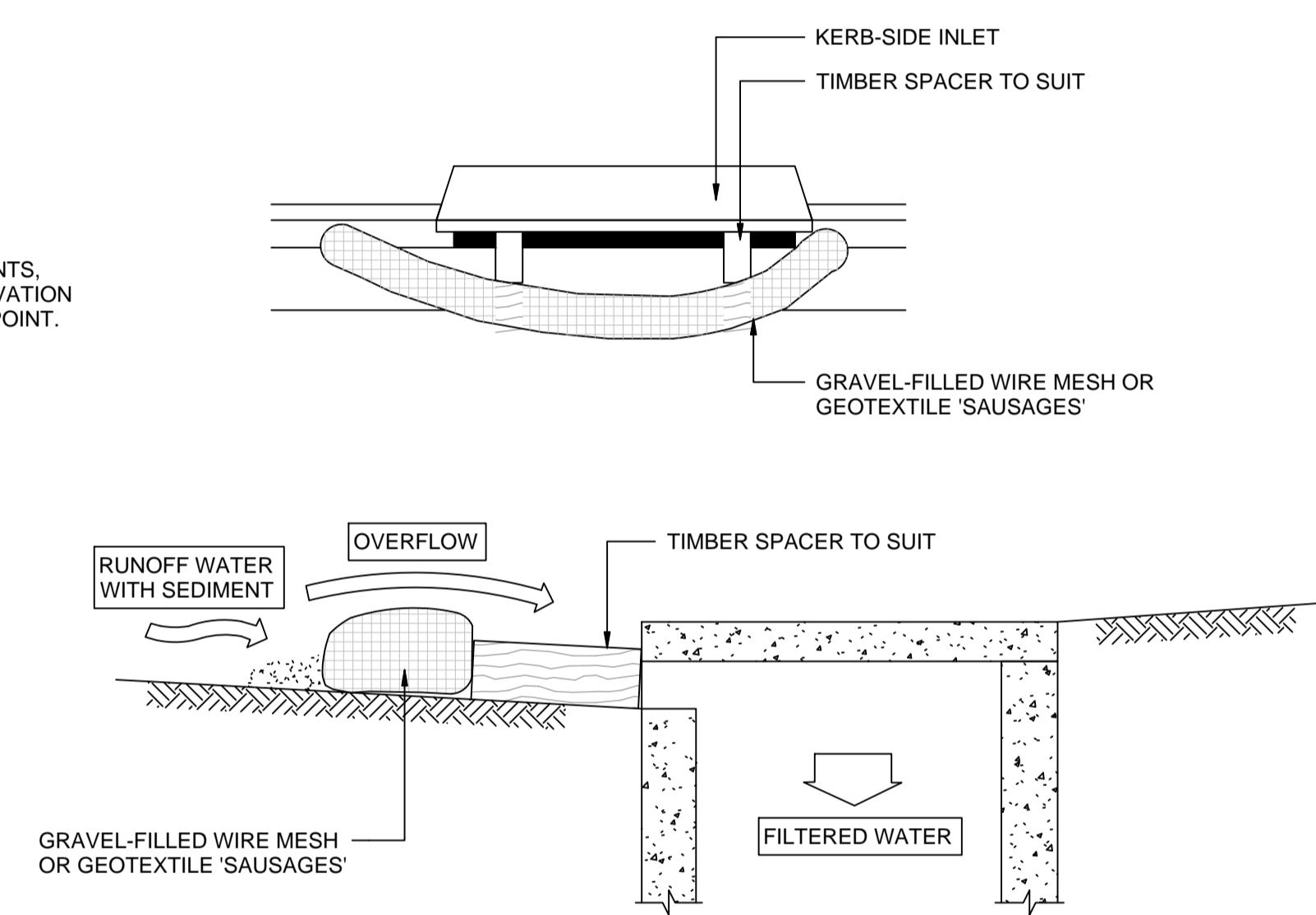
SECTION DETAIL



GEOTEXTILE INLET FILTER DETAILS
(NOT TO SCALE)

GEOTEXTILE INLET FILTER CONSTRUCTION NOTES:

1. FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE.
2. PICKET SPACING TO BE MAXIMUM 1m.
3. IN WATERWAYS, ARTIFICIAL SAG POINTS CAN BE CREATED WITH SANDBAGS OR EARTH BANKS AS SHOWN IN THE DRAWING.
4. DO NOT COVER THE INLET WITH GEOTEXTILES UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT.

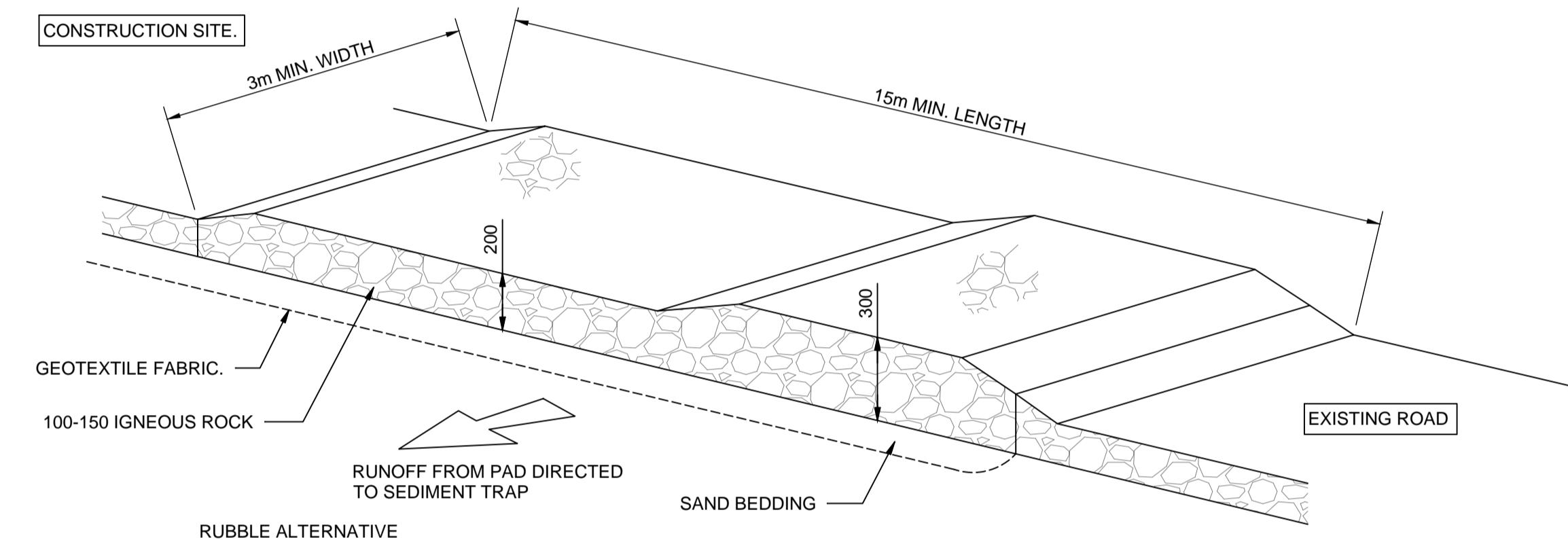


MESH & GRAVEL INLET FILTER DETAILS.
(NOT TO SCALE)

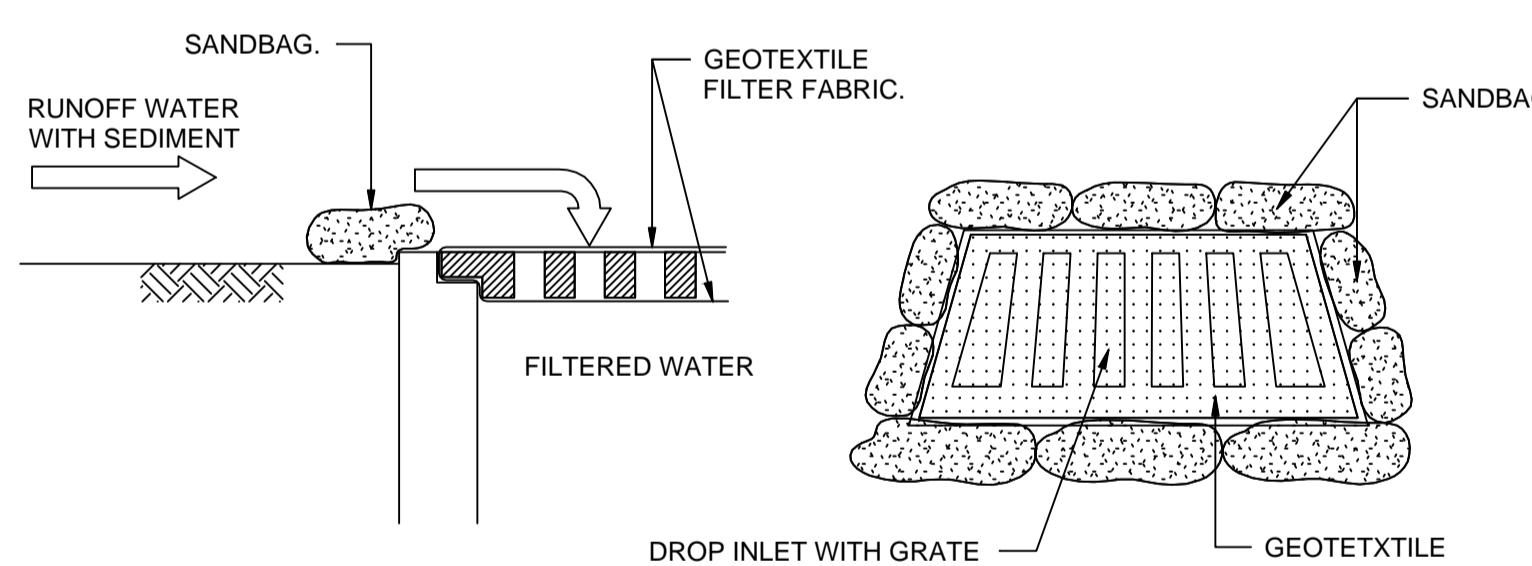
MESH & GRAVEL INLET FILTER CONSTRUCTION NOTES:

1. FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET PIT AND FILL IT WITH 25-50mm GRAVEL.
2. FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150mm HIGH x 400mm WIDE.
3. PLACE THE FILTER AT THE OPENING LEAVING AT LEAST A 100mm SPACE BETWEEN IT AND THE KERB INLET. MAINTAIN THE OPENING WITH TIMBER SPACER BLOCKS.
4. FORM A SEAL WITH THE KERB TO PREVENT SEDIMENT BYPASSING THE FILTER.
5. SANDBAGS FILLED WITH GRAVEL CAN SUBSTITUTE FOR THE MESH OR GEOTEXTILE, PROVIDING THEY ARE PLACED SO THAT THEY CAN FIRMLY ABUT EACH OTHER AND SEDIMENT LADEN WATERS CANNOT PASS BETWEEN.

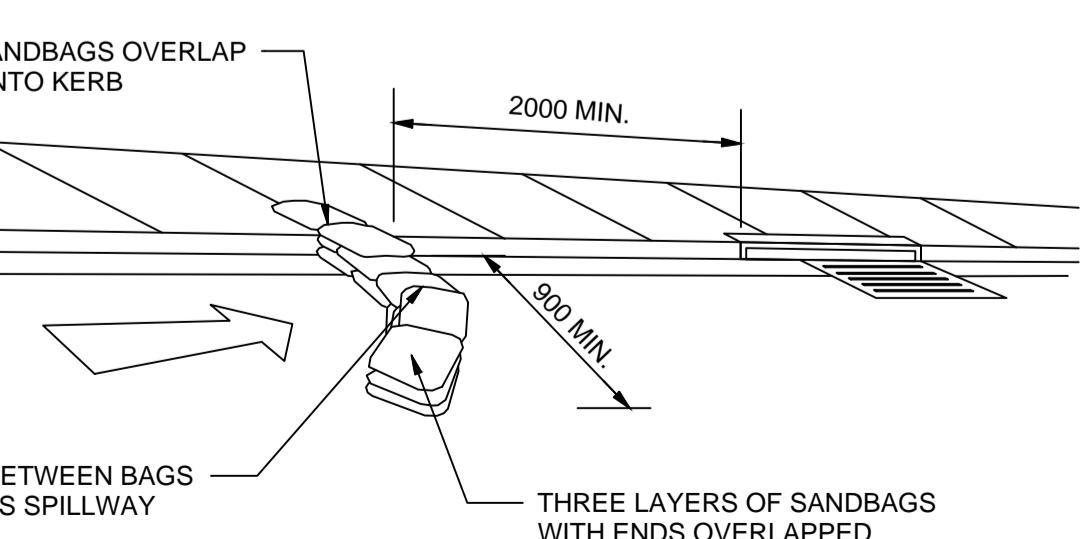
STOCKPILES DETAIL
(NOT TO SCALE)



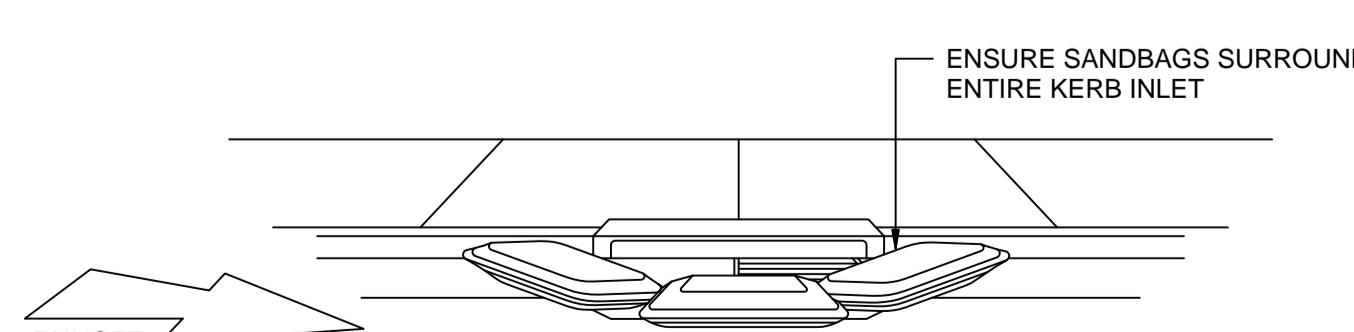
TEMPORARY CONSTRUCTION EXIT
(NOT TO SCALE)



GEOTEXTILE FILTER FABRIC DROP INLET SEDIMENT TRAP
(NOT TO SCALE)



SANDBAG SEDIMENT TRAP FOR KERB INLET ON GRADE
(NOT TO SCALE)



SANDBAG KERB INLET SEDIMENT TRAP DETAIL
(NOT TO SCALE)

SEDIMENT FENCE CONSTRUCTION NOTES:

1. CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10-YEAR EVENT.
2. CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
3. DRIVE 1.5m LONG STAR PICKETS INTO GROUND AT 2.5m INTERVALS (MAX) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
4. FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE FENCE ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
5. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.
6. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.

PRELIMINARY ISSUE
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SOIL EROSION & SEDIMENT CONTROL - DETAILS 01

SCALES N/A @ A1 DATE MARCH 2025

DRAWN DESIGN VERIFIED APPROVED

E.G. A.K. -

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ISSUE PROJECT No. DRAWING No.

P1 241023 C.15

PT LOT 50
DP 1082480
AREA 274 Ha

SERVICES ON THIS DRAWING
ARE SHOWN BELOW SLAB U.N.O.

DIAL BEFORE YOU DIG



IMPORTANT: THE CONTRACTOR IS TO
MAINTAIN A CURRENT SET OF 'DIAL BEFORE
YOU DIG' DRAWINGS ON SITE AT ALL TIMES.

LEGEND

AAPI LINE	AAPI
COMMS LINE	C
ELECTRICAL LINE	E
FIRE LINE	F
GAS LINE	G
WATER LINE	W
NBN LINE	NBN
OPTUS LINE	OP
TPG LINE	TPG
TELECOMMUNICATION LINE	T
OVERFLOW LINE	OF
SEWER LINE	S
SEWER EXISTING LINE	EX.S
SUBSOIL DRAINAGE LINE	SSD
SITE BOUNDARY	- - -
DEMOLISHED	- - -
STORMWATER LINE (GRAVITY)	Ex. SW
STORMWATER LINE (CHARGED)	Ex. SW
EXISTING STORMWATER LINE	Ex. SW
PROPOSED CONTOUR	Ex. SW
GRADED STORMWATER PIT	Ex. SW
KERB INLET PIT	Ex. SW
TELEPHONE PIT	Ex. SW
DOWN PIPE	Ex. SW
FLOOR WASTE	Ex. SW
NEW GRADED DRAIN	Ex. SW
OVERLAND FLOW	Ex. SW
RAINWATER TANK	Ex. SW
RWT	Ex. SW
RAIN WATER OUTLET	Ex. SW
EX. DP.	Ex. DP.
EXISTING DOWN PIPE	Ex. DP.
CLEAR OUT	Ex. DP.
CO	Ex. DP.

PRELIMINARY ISSUE NOT FOR CONSTRUCTION

P2
P1
RE-ISSUED FOR DA SUBMISSION
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DESCRIPTION
APPROVED
DATE
21.03.25
05.03.25

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TITLE	
SCALES	1:100 @ A1
DRAWN	DESIGN
VERIFIED	APPROVED
ISSUE	PROJECT No.
DRAWING No.	241023

CIVIL DRAINAGE WORKS PLAN 01

SCALE 1:100

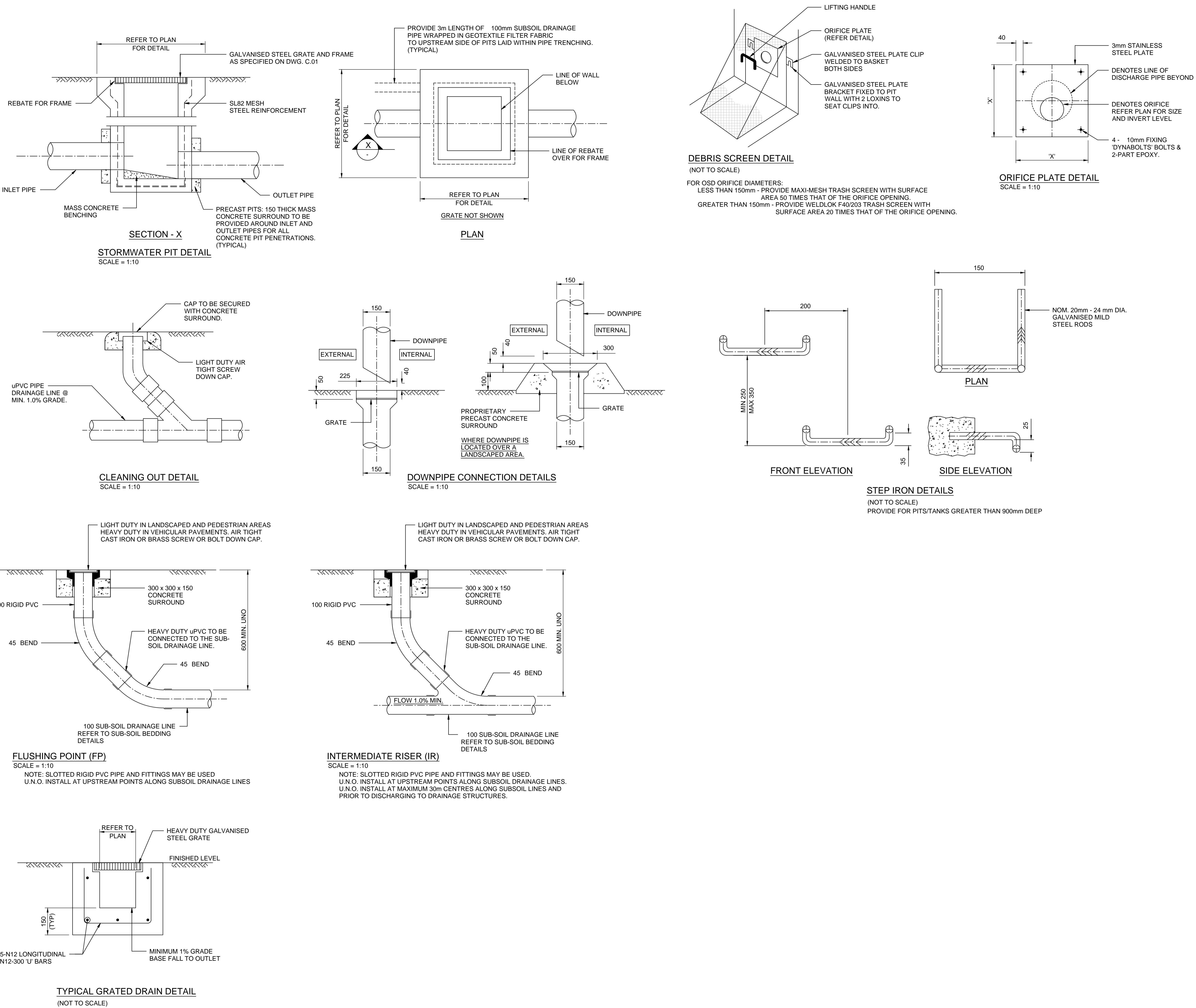
CIVIL DRAWING NOTES:

- SERVICES SHOWN ON PLAN ARE INDICATIVE, EXACT DEPTH AND LOCATION TO BE CONFIRMED ONSITE. CONTRACTOR TO CARRY OUT DIAL BEFORE YOU DIG APPLICATION AND ENGAGE A REGISTERED SURVEYOR TO PEG OUT ALL EXISTING SERVICES PRIOR TO ANY WORK COMMENCING ONSITE.
- REPLACE EXISTING GRATES OR PROVIDE 'HEELGUARD' GRATES OR EQUIVALENT TO ALL PIT LIDS AND GRADED DRAINS IN PEDESTRIAN AREAS.
- ROOF DRAINAGE BY OTHERS.
- ALL uPVC STORMWATER DRAINAGE LINES SHALL BE 'CLASS SH' SEWER GRADE UNLESS NOTED OTHERWISE.
- UNLESS NOTED OTHERWISE DOWNPIPES SHALL CONNECT TO THE MAIN STORMWATER LINE DOWNSTREAM USING 150mm DIAMETER uPVC LINES WITH MINIMUM 1% FALL.
- UNLESS NOTED OTHERWISE GRADED DRAINS SHALL BE 150x150 AND CONNECTED TO THE DOWNSTREAM (NON-CHARGED) STORMWATER SYSTEM USING 150mm DIAMETER uPVC LINES WITH MINIMUM 1% FALL.
- ALL SUBSOIL DRAINAGE NOT SHOWN ON THE PLAN IS TO BE PROVIDED AND CONNECTED TO THE STORMWATER DRAINAGE SYSTEM.
- THE CONTRACTOR MUST VERIFY THE EXACT LOCATION AND EXTENT OF ALL SERVICES PRIOR TO CONSTRUCTION AND NOTIFY IMMEDIATELY OF ANY CONFLICTS WITH THE DRAWINGS TO THE ENGINEER/SUPERINTENDENT.

LEGEND - GENERAL:

	DENOTES BOUNDARY
	DENOTES PROPOSED CONTOUR
	DENOTES EXISTING CONTOUR
	DENOTES ARCHITECTURAL
	DENOTES PROPOSED LINE
	DENOTES SURVEY LINE

A1 0 1 2 3 4 5 6 7 8 9 10
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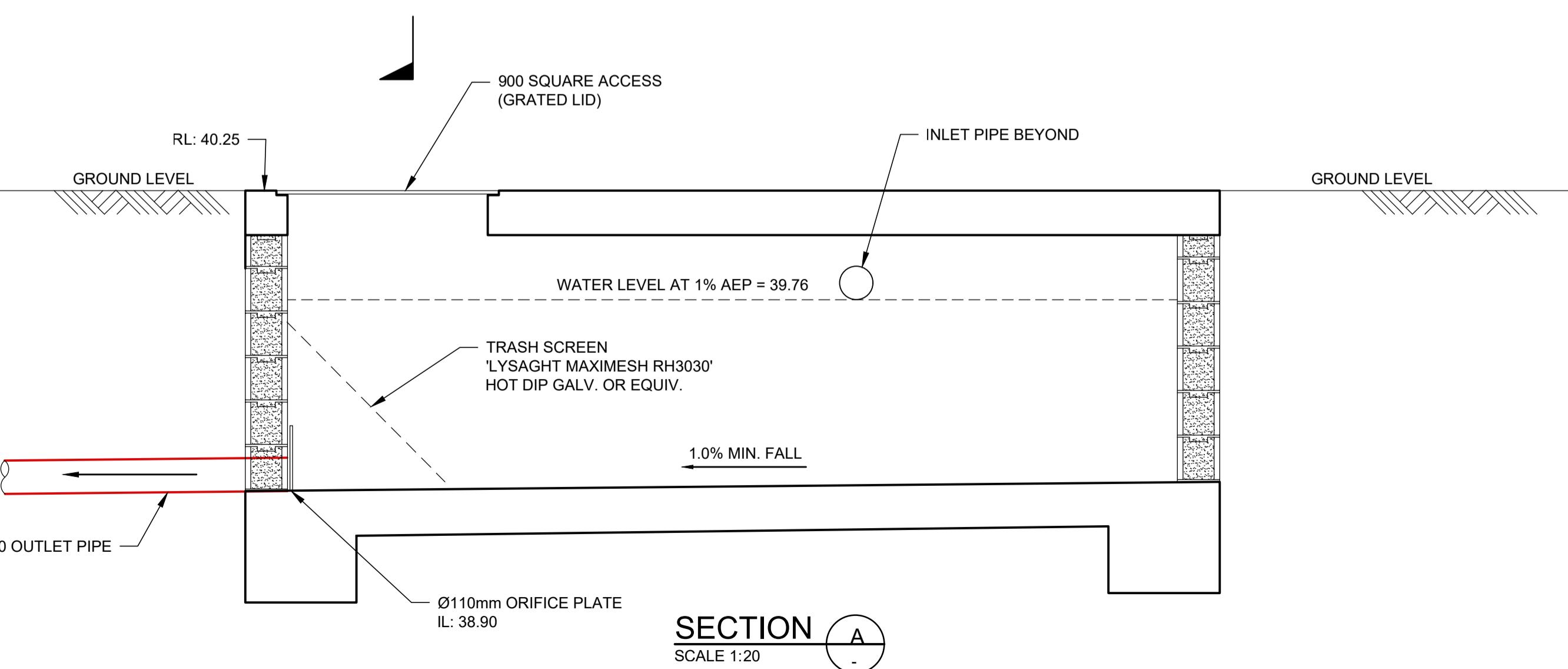
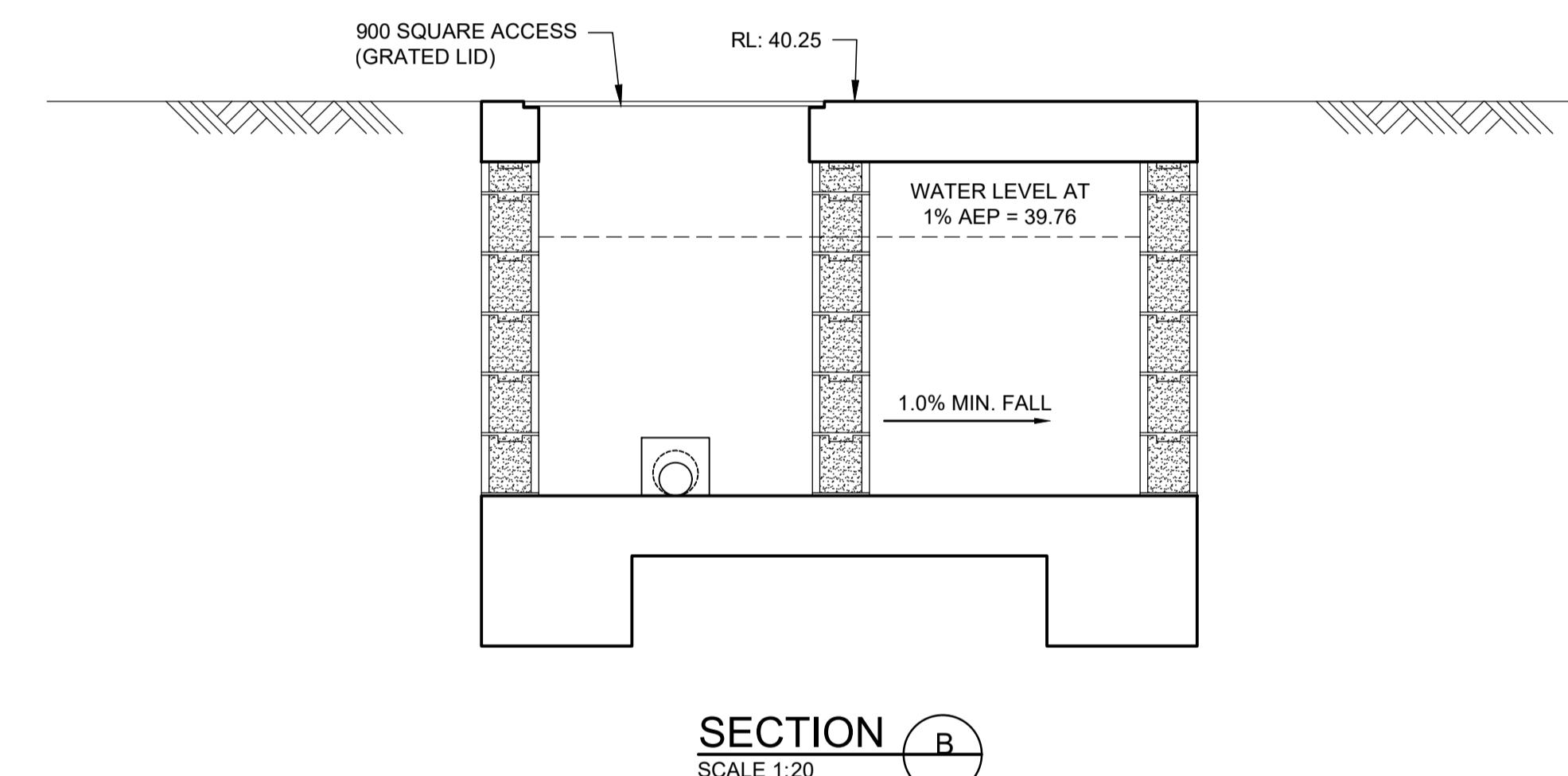
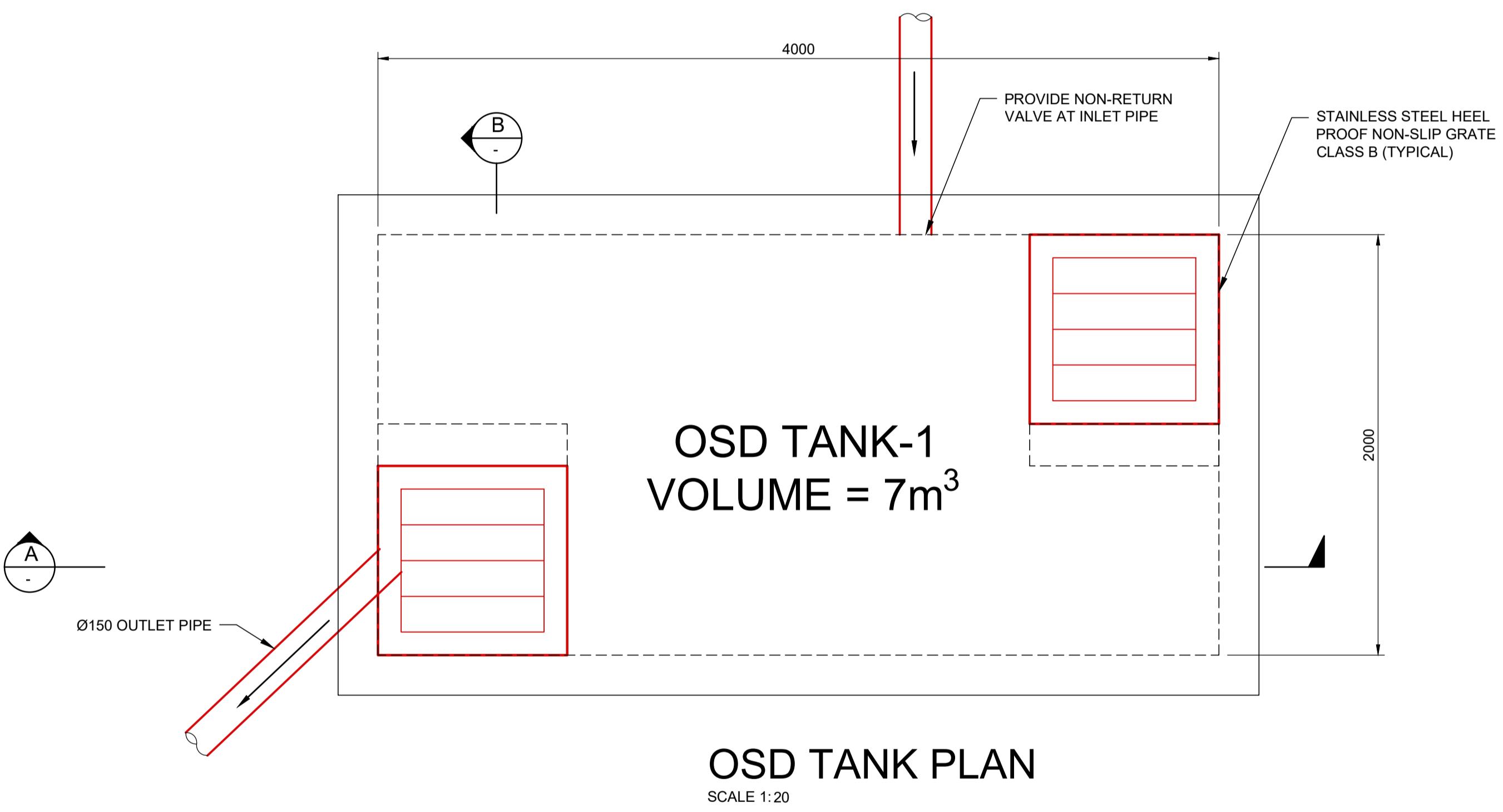
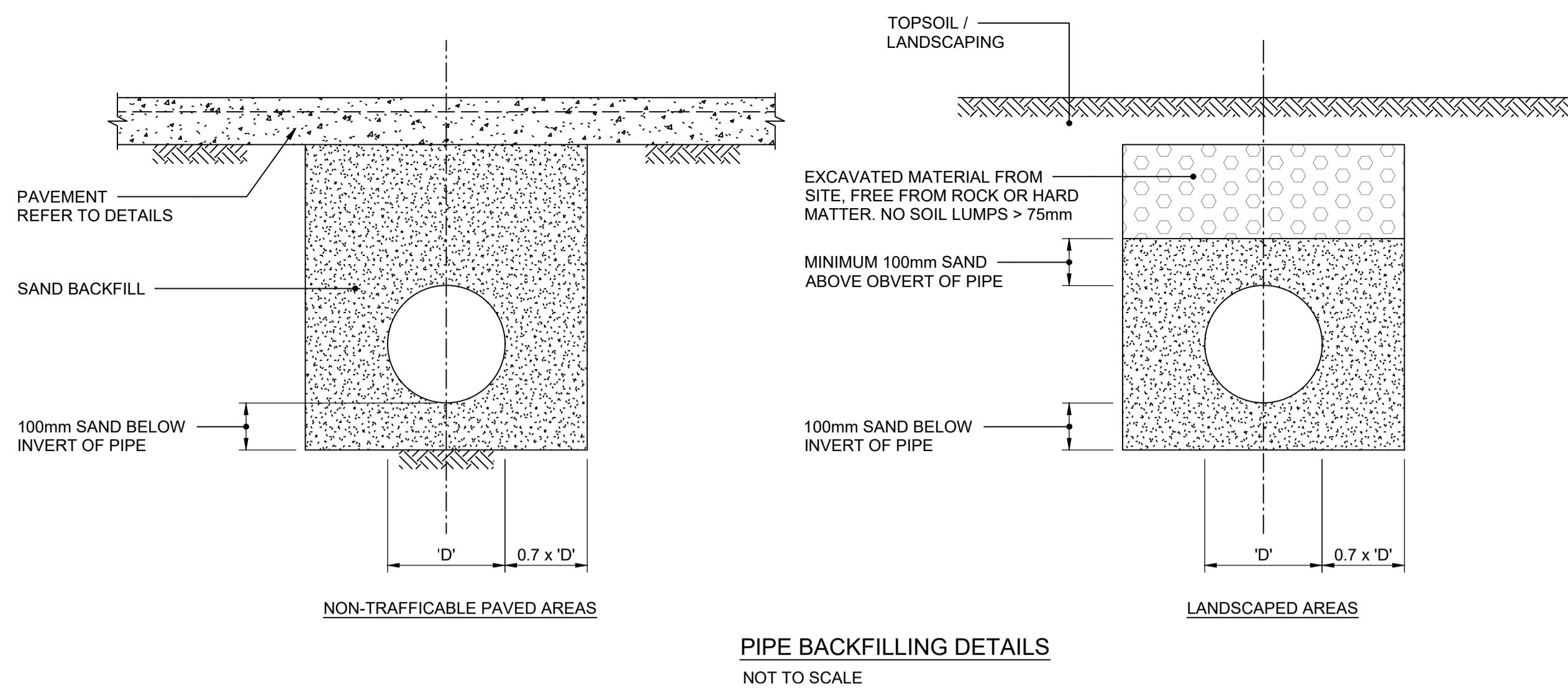
PROJECT

TITLE

CIVIL DRAINAGE DETAILS 01

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ISSUE P1	PROJECT No. 241023	DRAWING No. C.25



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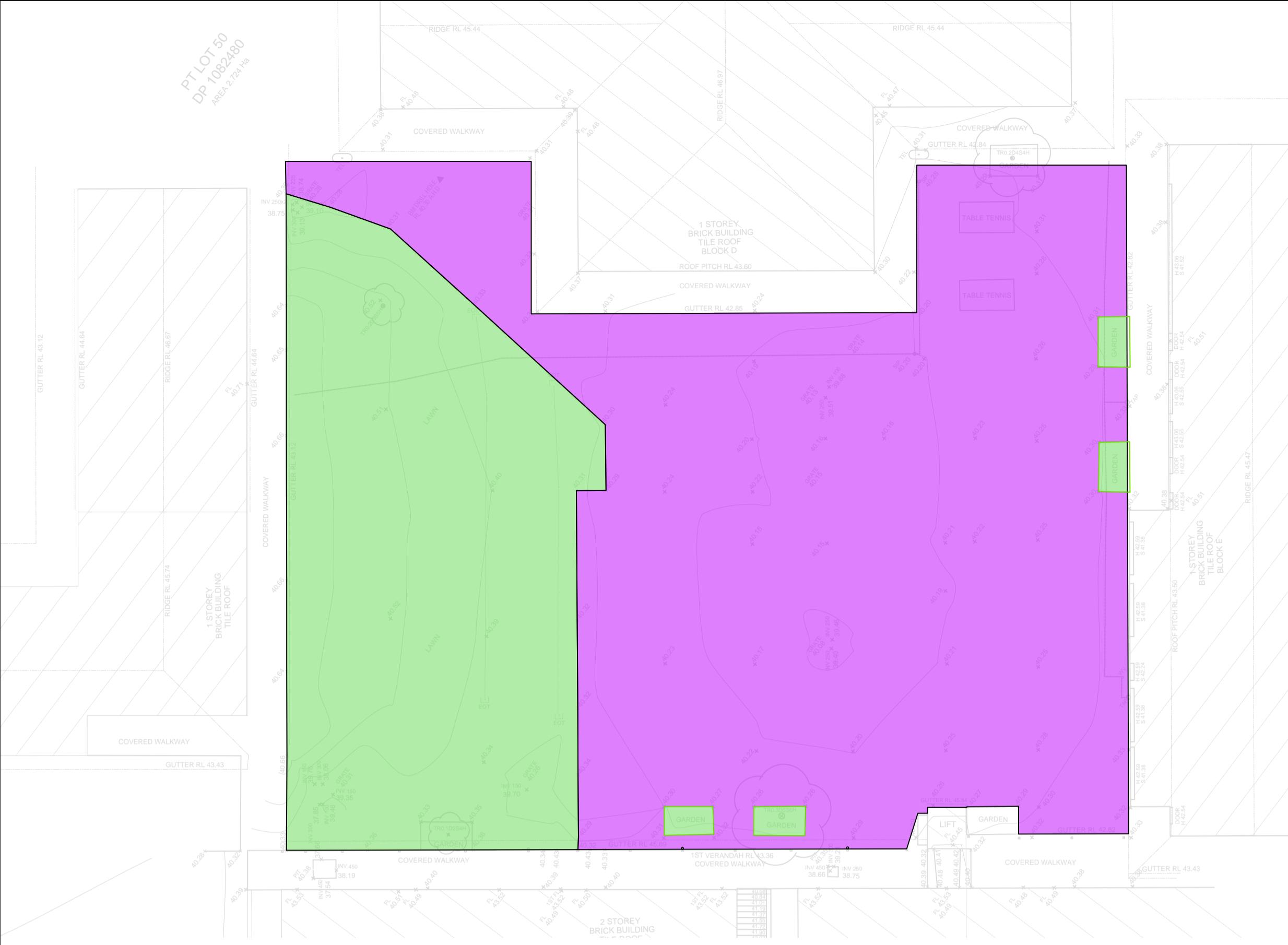
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TITLE
CIVIL DRAINAGE DETAILS 02
SCALES N/A @ A1 DATE MARCH 2025
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ISSUE PROJECT No. DRAWING No.
P1 241023 **C.26**

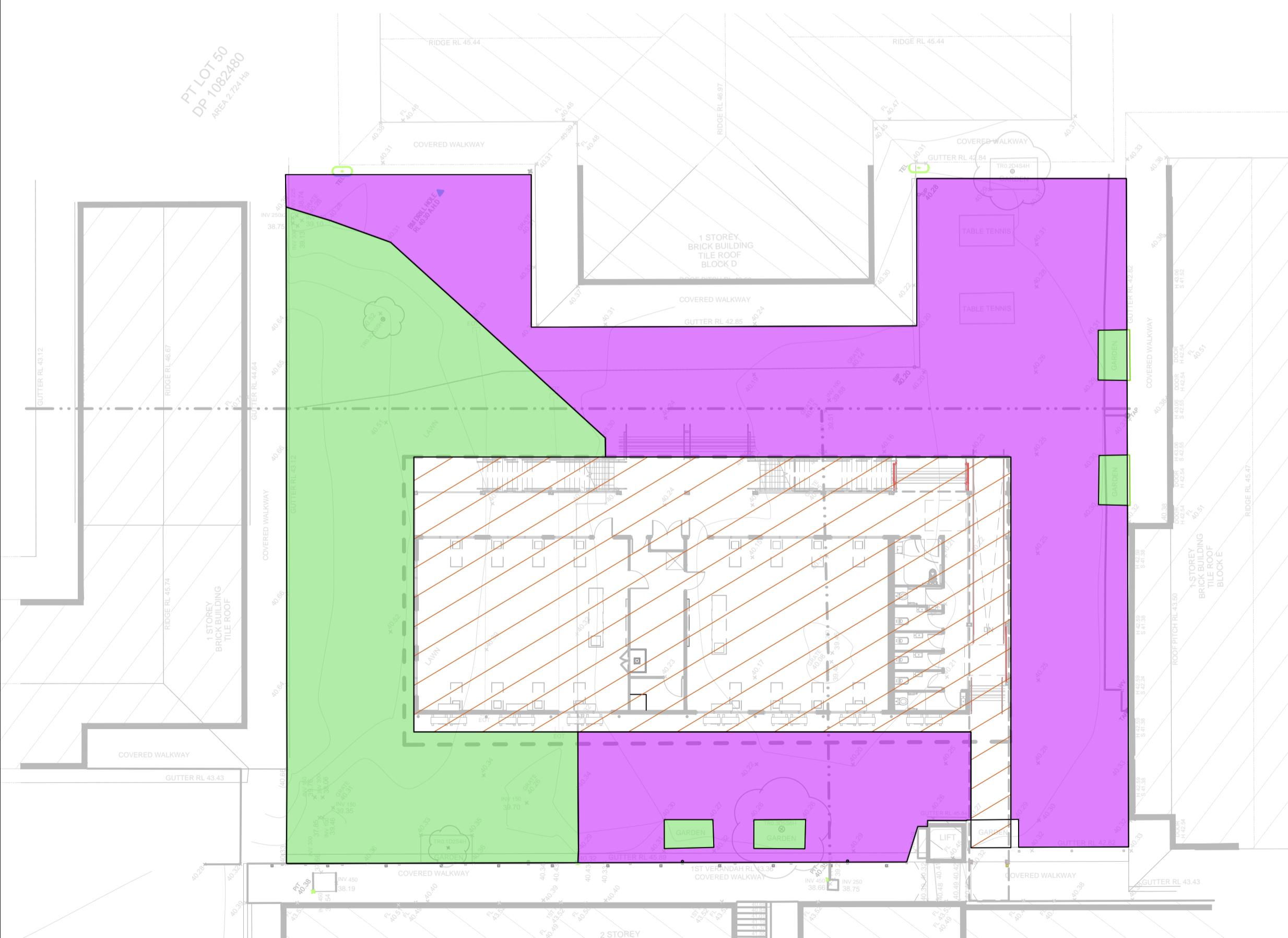


PRE-DEVELOPMENT CATCHMENT PLAN

SCALE 1:200

PRE-DEVELOPMENT CATCHMENT LEGEND:

- DENOTES IMPERVIOUS AREA
APPROXIMATE AREA = 870m²
- DENOTES PERVIOUS AREA
APPROXIMATE AREA = 450m²



POST-DEVELOPMENT CATCHMENT PLAN

SCALE 1:200

POST-DEVELOPMENT CATCHMENT LEGEND:

- DENOTES IMPERVIOUS AREA
APPROXIMATE AREA = 557m²
- DENOTES IMPERVIOUS ROOF AREA
APPROXIMATE AREA = 433m²
- DENOTES PERVIOUS AREA
APPROXIMATE AREA = 330m²

PRELIMINARY ISSUE

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Storm events	Pre dev (m ³ /s)	Post dev without OSD (m ³ /s)	Post dev with OSD (m ³ /s)
1 in 5 year	0.49	0.52	0.47
1 in 10 year	0.65	0.67	0.61
1 in 20 year	0.8	0.81	0.74
1 in 50 year	0.95	0.98	0.87
1 in 100 year	0.111	0.114	0.1

TITLE
PRE AND POST
DEVELOPMENT
CATCHMENTS PLANS
SCALES 1:200 @ A1 DATE MARCH 2025
DRAWN E.G DESIGN A.K VERIFIED - APPROVED

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P1	241023	C.31

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