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LAHC & SAMCRAWFORD ARCHITECTS

PROPOSED DEVELOPMENT AT
47-49 CURRY STREET
WALLSEND 2287

COVER SHEET,
LOCALITY PLAN AND
SCHEDULE OF DRAWINGS

SCHEDULE OF DRAWINGS	
DRAWING No.	DESCRIPTION
DISCIPLINE	
80822047-CI-0001	COVER SHEET, LOCALITY PLAN AND SCHEDULE OF DRAWINGS
80822047-CI-0002	CIVIL CONSTRUCTION NOTES
80822047-CI-1101	STORMWATER DRAINAGE PLAN GROUND FLOOR
80822047-CI-1102	CUT AND FILL PLAN
80822047-CI-1103	BULK EARTHWORK LEVEL
80822047-CI-1201	SEDIMENTATION AND EROSION CONTROL
80822047-CI-2101	STORMWATER DETAILS SHEET 1
80822047-CI-2102	STORMWATER DETAILS SHEET 2
80822047-CI-2103	STORMWATER DETAILS SHEET 3 OSD RAINWATER TANK DETAILS
80822047-CI-2201	SEDIMENTATION AND EROSION CONTROL DETAILS

INDICATIVE SITE COMPOUND



INDICATIVE AREA
OF WORKS

LOCALITY PLAN
N.T.S

XREFs: CAD File: \\cardno\cpg\ba\AU\NSW\Drawings\Structure\Projects\80822047-47-49 Curry Street Wallsend\012_CIVIL\Drawings\Build\80822047-CI-0001.dwg

5	28/11/2022	REVISED ISSUE FOR DA APPROVAL	A.L	P.L	M.R
4	1/06/2022	REVISED ISSUE	K.P.	C.F.	
3	4/04/2022	REVISED ISSUE FOR DA APPROVAL	K.P.	C.F.	
2	7/03/2022	ISSUE FOR DA APPROVAL	K.P.	C.F.	
1	10/02/2021	PRELIMINARY ISSUE	G.M.	K.P.	C.F.
Rev.	Date	Description	Des.	Verif.	Appd.

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Drawn G.M.	Date FEB' 2022	Status	FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES		
Checked K.P.	Date FEB' 2022				
Designed G.M.	Date FEB' 2022				
Verified C.F.	Date FEB' 2022				
Approved					
Drawing Number			Revision		
80822047-CI-0001			5		

GENERAL CIVIL NOTES

1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL OTHER CONSULTANTS DRAWINGS, SPECIFICATIONS, STANDARDS, LOCAL GOVERNMENT ORDINANCES AND ADDITIONAL WRITTEN INSTRUCTIONS THAT MAY BE ISSUED DURING THE COURSE OF THE CONTRACT.
2. THE INFORMATION CONTAINED ON THESE DRAWINGS IS FOR CIVIL ENGINEERING PURPOSES ONLY.
3. ALL DISCREPANCIES THAT COULD RESULT IN CHANGES TO THE CIVIL DETAILS SHALL BE REFERRED TO THE CIVIL ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
IF IN DOUBT ASK
4. THE CONTRACTOR SHALL CHECK AND BE RESPONSIBLE FOR THE CORRECTNESS OF ALL DIMENSIONS AND ANY DISCREPANCY SHALL BE REPORTED IMMEDIATELY TO THE SUPERINTENDENT. DIMENSIONS SHALL NOT BE OBTAINED (INCLUSIVE OF ELECTRONIC COPIES) BY SCALING FROM THE DRAWINGS.
5. ALL LEVELS ARE IN METRES AND ALL DIMENSIONS ARE IN MILLIMETRES U.N.O.
6. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO ENSURE THE SAFETY AND STABILITY OF NEW AND EXISTING STRUCTURES, TEMPORARY STRUCTURES, EXCAVATIONS, SHORING AND THE LIKE DURING CONSTRUCTION.
7. THE CONTRACTOR SHALL NOTIFY THE ENGINEER FORTY EIGHT (48) HOURS BEFORE ANY SITE INSPECTION IS REQUIRED.
8. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE RELEVANT AND CURRENT AUSTRALIAN STANDARDS AND WITH THE BY-LAWS AND ORDINANCES OF THE RELEVANT BUILDING AUTHORITIES EXCEPT WHERE VARIED BY THE PROJECT SPECIFICATION.
9. ALL WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH ALL WORKCOVER REQUIREMENTS AND OCCUPATIONAL HEALTH AND SAFETY ACT REGULATIONS.
10. ALL PROPRIETARY PRODUCTS AND APPROVED EQUIVALENTS NOTED ON THE DRAWINGS SHALL BE SUPPLIED AND INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
11. SUBSTITUTIONS OF NOMINATED PRODUCTS AND MATERIALS SHALL ONLY OCCUR IF APPROVED BY CARDNO. NO SUBSTITUTIONS SHALL BE MADE OR SIZES OF STRUCTURAL MEMBERS VARIED WITHOUT OBTAINING THE APPROVAL OF THE ENGINEER. THE APPROVAL OF A SUBSTITUTION FROM THE ENGINEER SHALL NOT BE AN AUTHORISATION FOR AN EXTRA EXPENSE CLAIM. ANY EXTRA COST INVOLVED SHALL BE TAKEN UP WITH THE SUPERINTENDENT BEFORE THE WORK COMMENCES.
12. NO CHANGES SHALL BE MADE WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.
13. CONSTRUCTION FROM THESE DRAWINGS AND ASSOCIATED CONSULTANTS' DRAWINGS SHALL NOT COMMENCE UNTIL APPROVED BY THE LOCAL AUTHORITIES AND PRINCIPAL CERTIFYING AUTHORITY.
14. CONTRACTOR IS NOT TO ENTER UPON NOR DO ANY WORK WITHIN ADJACENT LANDS OR PROPERTIES WITHOUT THE PERMISSION OF THE OWNERS AND SUPERINTENDENT.
15. THE CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL WHICH COMPLIES WITH AS1742.3 - 2018. A COPY OF THE PLAN SHOWING LAYOUT OF PROPOSED TRAFFIC CONTROL FOR THE COMMENCEMENT OF WORK AND CERTIFIED BY A SUITABLY QUALIFIED PERSON IS TO BE SUBMITTED TO COUNCIL PRIOR TO COMMENCEMENT OF ANY WORK. FURTHER PLANS ARE TO BE SUBMITTED IF WORK SITE ALTERS.
16. ANY QUANTITIES GIVEN ARE FOR GUIDANCE ONLY.

SITE PREPARATION

ROAD WORKS

1. REMOVE TOP SOIL, ROOT AFFECTED SOIL, FILL AND OTHER DELETERIOUS MATERIAL TO EXPOSE NATURAL SUBGRADE.
2. THE EXPOSED SUBGRADE SHOULD THEN BE PROOF ROLLED WITH AT LEAST EIGHT (8) PASSES OF A 10 TONNE MIN. DEAD WEIGHT ROLLER. ANY SOFT OR HEAVING AREAS SHOULD BE REMOVED TO A MAXIMUM DEPTH OF 300mm AND REPLACED WITH CLEAN WELL GRADED MATERIAL SUCH AS RIPPED OR CRUSHED SANDSTONE COMPACTED TO AT LEAST 100% OF STANDARD MAXIMUM DRY DENSITY (SMDD) AT ±2% OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH AS1289.
3. COMPACTED FILL SHOULD BE PLACED IN LAYERS NOT EXCEEDING 150mm THICK AND COMPACTED TO AT LEAST 100% SMDD. FILL SHALL CONSIST OF CLEAN WELL GRADED MATERIAL SUCH AS RIPPED OR CRUSHED SANDSTONE WITH A MIN. CBR OF 15%.
4. DENSITY TESTING SHALL BE CARRIED OUT TO LEVEL 2 CERTIFICATION IN ACCORDANCE WITH AS3798.
5. SUB-BASE COURSE - TO BE DGS20 OR DGS40 OR RIPPED OR CRUSHED SANDSTONE WITH A CBR GREATER THAN 40%, MAXIMUM PARTICLE SIZE OF 60mm, WELL GRADED WITH A PLASTIC INDEX LESS THAN 10. COMPACT TO AN AVERAGE OF NOT LESS THAN 100% SMDD WITH A MINIMUM VALUE OF 98% SMDD.
6. ALL KERBS TO BE FORMED BY KERB MACHINE AND NOT BY HAND.
7. EXTERNAL FOOTPATHS/PAVEMENTS
8. REMOVE TOP SOIL, ROOT AFFECTED SOIL, FILL AND OTHER DELETERIOUS MATERIAL TO EXPOSE NATURAL SUBGRADE.
9. THE EXPOSED SUBGRADE SHOULD BE PROOF ROLLED. ANY SOFT OR HEAVING AREAS SHOULD BE REPLACED WITH CLEAN WELL GRADED MATERIAL. FILL IF REQUIRED, SHOULD BE CLEAN AND WELL GRADED. COMPACT TO 100% SMDD.

STORMWATER DRAINAGE NOTES

1. STORMWATER DRAINAGE SHALL BE INSTALLED IN ACCORDANCE WITH AS3500.3-2018.
2. PIPES Ø675mm AND LARGER SHALL BE CLASS 3 APPROVED SPIGOT AND SOCKET REINFORCED CONCRETE PIPES WITH RUBBER RING JOINTS U.N.O. IN ACCORDANCE WITH ASINZS3725-2007.
3. PIPES Ø375mm TO Ø600mm SHALL BE CLASS 2 APPROVED SPIGOT AND SOCKET REINFORCED CONCRETE PIPES WITH RUBBER RING JOINTS U.N.O. IN ACCORDANCE WITH ASINZS3725-2007.
4. PIPES UP TO AND INCLUDING Ø300mm SHALL BE uPVC DWV (GRADE CLASS SN8) U.N.O. IN ACCORDANCE WITH ASINZS1260-2017. ENLARGERS, CONNECTIONS, TAPERS, JUNCTIONS ETC TO BE PREFABRICATED PURPOSE MADE FITTINGS WITH SOLVENT WELDED JOINTS.
5. SUBSOIL PIPES AND FITTINGS TO BE PERFORATED PLASTIC IN ACCORDANCE WITH AS2439.1-2007. LAY PIPES ON FLOOR OF TRENCH WITH MINIMUM 1% GRADE AND OVERLAY WITH FILTER MATERIAL EXTENDING TO WITHIN 200mm OF SURFACE. PROVIDE FILTER FABRIC OF PERMEABLE POLYPROPYLENE BETWEEN FILTER MATERIAL AND TOPSOIL.
6. HEAVY DUTY uPVC PIPES TO BE IN ACCORDANCE WITH ASINZS1254-2010 MAY BE USED WITHIN ALLOTMENTS.
7. EQUIVALENT STRENGTH FIBROUS REINFORCED CONCRETE (F.R.C.) AND/OR HIGH DENSITY POLYETHYLENE (H.D.P.E.) MAY BE USED SUBJECT TO APPROVAL BY THE SUPERINTENDENT.
8. CONTRACTOR TO SUPPLY AND INSTALL ALL FITTINGS AND SPECIALS INCLUDING VARIOUS PIPE ADAPTORS TO ENSURE PROPER CONNECTION BETWEEN DISSIMILAR PIPEWORK.
9. ALL CONNECTIONS TO EXISTING DRAINAGE PITS SHALL BE MADE IN A TRADESMAN-LIKE MANNER AND THE INTERNAL WALL OF THE PIT AT THE POINT OF ENTRY SHALL BE CEMENT RENDERED TO ENSURE A SMOOTH FINISH WITH NO PROTRUSIONS.
10. BEDDING MATERIAL SHALL BE TYPE H2 U.N.O. FOR PIPES NOT UNDER PAVEMENTS, AND TYPE HS2 FOR PIPES UNDER PAVEMENTS IN ACCORDANCE WITH ASINZS3725-2007.
11. ALL PIPES ARE TO BE UNIFORMLY SUPPORTED ALONG THE LENGTH OF THE BARREL BY SUITABLE FILL MATERIAL. PIPES WITH SOCKETS SHALL BE LAID WITH RECESSES IN BEDDING MATERIAL TO ENSURE PIPES DO NOT BEAR ON THEIR SOCKETS.
12. MINIMUM GRADE TO STORMWATER LINES TO BE 1% U.N.O.
13. ANY PIPES OVER 16% GRADE SHALL HAVE CONCRETE BULKHEADS AT ALL JOINTS.
14. CARE IS TO BE TAKEN WITH LEVELS OF STORMWATER LINES. GRADES SHOWN ARE NOT TO BE REDUCED WITHOUT APPROVAL.
15. PROVIDE 3m LENGTH OF Ø100mm SUBSOIL DRAINAGE LINE OR 200mm 'NYLEX' STRIP DRAIN SURROUNDED WITH 150mm OF 20mm BLUE METAL OR GRAVEL, AND WRAPPED IN 'BIDUM' A24 GEOTEXTILE FILTER FABRIC OR APPROVED EQUIVALENT, AT INVERT OF EACH INCOMING UPSTREAM PIPE TRENCH ON EACH PIT.
16. 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.
17. WHERE SUBSOIL DRAINAGE LINES PASS UNDER FLOOR SLABS AND VEHICULAR PAVEMENTS, UNSLOTTED uPVC DWV (GRADE CLASS SN8) PIPE SHALL BE USED.
18. UNLESS NOTED OTHERWISE ON THE PLANS, PROVIDE THE FOLLOWING MINIMUM COVER TO ALL STORMWATER PIPES:
UNDER LANDSCAPE & PAVEMENT - 300mm
UNDER ROAD (TRAFFIC) - 600mm
19. REFER TO ASINZS3725-2007 TABLE B1 FOR REQUIRED FILL DEPTHS ABOVE PIPE BARREL PRIOR TO USE OF COMPACTION MACHINERY OR TRAVERSING OF PIPES BY GENERAL SITE EQUIPMENT. THE CONTRACTOR IS TO ENSURE COMPACTION EQUIPMENT IS APPROPRIATE FOR THE PIPE CLASS USED. WHERE WORKING METHODS REQUIRE HIGHER CLASS PIPE, THE CONTRACTOR SHALL REFER TO AS3725-2007 TO DETERMINE THE APPROPRIATE PIPE CLASS. PROPOSED CHANGES TO PIPE CLASS SHALL BE REVIEWED BY CARDNO PRIOR TO INSTALLATION.
18. BACKFILL PIPE TRENCHES WITH SANDY LOAM OR APPROVED GRANULAR BACKFILL TO MINIMUM COVER ABOVE THE PIPE. WHERE THE PIPE IS UNDER PAVEMENTS BACKFILL REMAINDER OF TRENCH TO PAVEMENT SUBGRADE WITH SAND OR APPROVED GRAVEL SUB-BASE COMPACTED IN 150mm LAYERS TO 98% STANDARD MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS1289 5.2.1. (OR A DENSITY INDEX OF NOT LESS THAN 75).
19. FOR ALL IN-SITU CONCRETE ELEMENTS REFER TO CIVIL CONCRETE NOTES FOR CONCRETE STRENGTH AND COVER.
20. PRECAST CONCRETE PITS MAY BE INSTALLED IN LIEU OF CAST IN-SITU PITS, WHEN PIPE JUNCTIONS ARE ACCOMMODATED WITHIN THE OVERALL DIMENSIONS OF THE PIT, AND APPROVED BY CARDNO.
21. PITS DEEPER THAN 1200mm, MEASURED FROM TOP OF GRATE TO INVERT OF PIT, SHALL HAVE STEP IRONS INSTALLED IN ACCORDANCE WITH THE LOCAL OR STATUTORY AUTHORITY REQUIREMENTS.
22. ACCESS COVERS AND GRATES TO BE INSTALLED IN ACCORDANCE WITH AS3996-2019.
23. ALL GRATES IN PAVEMENTS TO BE CYCLE SAFE AND WHERE IN ROADWAYS TRAFFICABLE HEAVY DUTY.
24. ALL BOX CULVERTS SHALL BE STRUCTURALLY DESIGNED BY THE MANUFACTURER AND DELIVERED TO SITE AS FIT FOR PURPOSE.
25. AT ALL TIMES DURING CONSTRUCTION OF STORMWATER PITS, ADEQUATE SAFETY PROCEDURES SHALL BE TAKEN TO ENSURE AGAINST THE POSSIBILITY OF PERSONNEL FALLING DOWN PITS.
26. 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.

EROSION AND SEDIMENT CONTROL NOTES

1. ALL WORKS SHALL BE GENERALLY CARRIED OUT IN ACCORDANCE WITH:
a. LOCAL AUTHORITY REQUIREMENTS
b. EPA REQUIREMENTS
c. NSW DEPARTMENT OF HOUSING MANUAL "MANAGING URBAN STORMWATER, SOILS AND CONSTRUCTION", 4th EDITION, MARCH 2004 (THE BLUE BOOK).
2. EROSION AND SEDIMENT CONTROL DRAWINGS AND NOTES ARE PROVIDED FOR THE WHOLE OF THE WORKS. SHOULD THE CONTRACTOR STAGE THESE WORKS THEN THE DESIGN MAY REQUIRE TO BE MODIFIED. VARIATIONS TO THESE DETAILS MAY REQUIRE TO BE APPROVED BY THE RELEVANT AUTHORITIES. THE EROSION AND SEDIMENT CONTROL PLAN SHALL BE IMPLEMENTED AND ADOPTED TO MEET THE VARYING SITUATIONS AS WORK ON SITE PROGRESSES.
3. MINIMISE THE AREA OF SITE BEING DISTURBED AT ANY ONE TIME.
4. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONTROL OF EROSION AND SEDIMENTATION AND THAT ALL SOIL AND WATER MANAGEMENT WORKS ARE LOCATED AS DOCUMENTED OR AS OTHERWISE DIRECTED BY THE SUPERINTENDENT.
5. ALL SOIL AND WATER CONTROL MEASURES ARE TO BE PUT BACK IN PLACE AT THE END OF EACH WORKING DAY AND MODIFIED TO BEST SUIT SITE CONDITIONS.
6. PREVENT SITE RUNOFF ENTERING NEWLY CONSTRUCTED STORMWATER PITS UNLESS SEDIMENT FENCES ARE ERECTED AROUND THEM.
7. MAINTAIN ALL STORMWATER PIPES AND PITS CLEAR OF DEBRIS AND SEDIMENT. INSPECT STORMWATER SYSTEM AND CLEAN OUT AS REQUIRED PARTICULARLY FOLLOWING EACH STORM EVENTS.
8. MAINTAIN ALL EROSION AND SEDIMENT CONTROL DEVICES, ENSURING THEY ARE IN GOOD WORKING ORDER AND OPERATE EFFECTIVELY. REPAIRS AND/OR MAINTENANCE SHALL BE UNDERTAKEN AS REQUIRED PARTICULARLY FOLLOWING EACH STORM EVENTS.
9. WHERE PRACTICAL, THE SOIL EROSION HAZARDS ON THE SITE ARE TO BE KEPT AS LOW AS POSSIBLE AND WORKS SHOULD BE UNDERTAKEN IN THE FOLLOWING SEQUENCE TO MINIMISE THE RISKS:
a. INSTALL A SEDIMENT FENCE ALONG THE BOUNDARIES AS SHOWN ON PLAN. REFER DETAIL.
b. CONSTRUCT STABILISED SITE ACCESS AND TRUCK WASH DOWN AREA AT THE LOCATION SHOWN ON THE DRAWINGS OR AS DETERMINED BY SUPERINTENDENT/ENGINEER. REFER DETAIL.
c. INSTALL ANY SEDIMENT BASINS AND SEDIMENT TRAPS AS SHOWN ON DRAWINGS. REFER DETAIL.
d. UNDERTAKE SITE DEVELOPMENT WORKS IN ACCORDANCE WITH THE ENGINEERING PLANS. WHERE POSSIBLE, PHASE DEVELOPMENT SO THAT LAND DISTURBANCE IS CONFINED TO AREAS OF WORKABLE SIZE.
10. DURING WINDY WEATHER, LARGE, UNPROTECTED AREAS WILL BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL.
11. CONTROL WATER FROM UPSTREAM OF THE SITE SUCH THAT IT DOES NOT ENTER THE DISTURBED SITE.
12. ALL CONSTRUCTION VEHICLES SHALL ENTER THE SITE VIA THE TEMPORARY CONSTRUCTION ENTRY/EXIT.
13. ALL VEHICLES LEAVING THE SITE SHALL BE CLEANED AND INSPECTED BEFORE LEAVING.
14. STOCKPILES ARE NOT TO BE LOCATED IN ROADWAYS, WITHIN 2 METRES OF HAZARD AREAS OR DRAINAGE PITS, INCLUDING LIKELY AREAS OF CONCENTRATED OR HIGH VELOCITY FLOWS SUCH AS WATERWAYS, WHERE THEY ARE BETWEEN 2 AND 5 METRES FROM SUCH AREAS. SPECIAL SEDIMENT CONTROL MEASURES SHOULD BE TAKEN TO MINIMISE POSSIBLE SCOUR AND EROSION TO DOWNSLOPE WATERS, E.G. THROUGH INSTALLATION OF SEDIMENT FENCING.
15. ANY SAND USED IN THE CONCRETE CURING PROCESS (SPREAD OVER THE SURFACE) WILL BE REMOVED AS SOON AS POSSIBLE AND WITHIN 10 WORKING DAYS FROM PLACEMENT.
16. WATER WILL BE PREVENTED FROM ENTERING THE PERMANENT DRAINAGE SYSTEM UNLESS IT IS RELATIVELY SEDIMENT FREE, I.E. THE CATCHMENT AREA HAS BEEN PERMANENTLY LANDSCAPED AND/OR ANY LIKELY SEDIMENT HAS BEEN FILTERED THROUGH AN APPROVED STRUCTURE OR DEVICE.
17. TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES WILL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE REHABILITATED.
18. ACCEPTABLE RECEPTACLES WILL BE PROVIDED FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHTWEIGHT WASTE MATERIALS AND LITTER.
19. ANY EXISTING TREES WHICH FORM PART OF THE FINAL LANDSCAPING PLAN WILL BE PROTECTED FROM CONSTRUCTION ACTIVITIES BY:
a. PROTECTING THEM WITH BARRIER FENCING OR SIMILAR MATERIALS INSTALLED OUTSIDE THE DRIP LINE
b. ENSURING THAT NOTHING IS NAILED TO THEM
c. PROHIBITING PAVING, GRADING, SEDIMENT WASH OR PLACING OF STOCKPILES WITHIN THE DRIP LINE EXCEPT UNDER THE FOLLOWING CONDITIONS.
d. ENCROACHMENT ONLY OCCURS ON ONE SIDE AND NO CLOSER TO THE TRUNK THAN EITHER 1.5 METRES OR HALF THE DISTANCE BETWEEN THE OUTER EDGE OF THE DRIP LINE AND THE TRUNK, WHICH EVER IS THE GREATER
e. A DRAINAGE SYSTEM THAT ALLOWS AIR AND WATER TO CIRCULATE THROUGH THE ROOT ZONE (E.G. A GRAVEL BED) IS PLACED UNDER ALL FILL LAYERS OF MORE THAN 300mm DEPTH
f. CARE IS TAKEN NOT TO CUT ROOTS UNNECESSARILY NOR TO COMPACT THE SOIL AROUND THEM.
20. FINAL SITE LANDSCAPING WILL BE UNDERTAKEN AS SOON AS POSSIBLE AND WITHIN 20 WORKING DAYS FROM COMPLETION OF CONSTRUCTION ACTIVITIES.
21. ANY REVEGETATED AREAS WHICH FAIL TO ESTABLISH WITHIN THREE MONTHS MUST BE RE-SOWN.

CONCRETE NOTES

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600 AND AS1379 CURRENT EDITIONS WITH AMENDMENTS, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
2. FOR CONCRETE MIX DESIGN & COVER SUMMARY REFER TO TABLE C1.1 BELOW. ALL CEMENT TO BE TYPE 'GP' GENERAL PURPOSE CEMENT IN ACCORDANCE WITH AS3972-2010, EXCEPT THAT THE MAXIMUM SHRINKAGE OF THE CEMENT IN THE MORTAR TEST SAMPLE IN ACCORDANCE WITH AS2350 SHALL BE LESS THAN 600 MICROSTRAIN.
3. PROJECT ASSESSMENT SHALL BE CARRIED OUT IN ACCORDANCE WITH AS 1379-2007 CLAUSE B7:
a) ALL CONCRETE IN SLABS AND BEAMS TO BE PROPORTIONED TO LIMIT DRYING SHRINKAGE TO 650 MICROSTRAIN AT 56 DAYS.
b) DETAILS OF THE PROPOSED MIX TO BE SUBMITTED AND APPROVAL OBTAINED PRIOR TO POURING ANY CONCRETE.
4. NO ADMIXTURES OTHER THAN THOSE SPECIFIED IN THE CONCRETE QUALITY & COVER SUMMARY TABLE C1.1 (OR APPROVED EQUIVALENTS) SHALL BE USED IN CONCRETE UNLESS APPROVED BY THE ENGINEER, WITH THE ONLY EXCEPTION BEING LOW RANGE WATER REDUCING ADMIXTURE.
5. CLEAR CONCRETE COVER TO REINFORCEMENT SHALL BE IN ACCORDANCE WITH CONCRETE QUALITY & COVER TABLE C1.1.
6. CONSTRUCTION JOINTS, WHERE NOT SHOWN, SHALL BE LOCATED TO THE APPROVAL OF THE STRUCTURAL ENGINEER.
7. ALL CONCRETE SHALL BE MECHANICALLY VIBRATED TO ACHIEVE A DENSE HOMOGENEOUS MASS, COMPLETELY FILLING THE FORMWORK THOROUGHLY EMBEDDING THE REINFORCEMENT AND FREE OF STONE POCKETS. ALL CONCRETE INCLUDING SLABS ON GROUND AND FOOTINGS SHALL BE COMPACTED WITH MECHANICAL VIBRATORS.
8. CURING OF ALL CONCRETE IS TO BE ACHIEVED BY KEEPING SURFACES CONTINUOUSLY WET FOR A PERIOD OF THREE (3) DAYS, AND THE PREVENTION OF LOSS OF MOISTURE FOR A TOTAL OF SEVEN (7) DAYS FOLLOWED BY A GRADUAL DRYING OUT. APPROVED SPRAY ON CURING COMPOUNDS THAT COMPLY WITH AS3799 MAY BE USED WHERE FLOOR FINISHES WILL NOT BE AFFECTED (REFER MANUFACTURERS SPECIFICATION). PVA BASED CURING COMPOUNDS ARE NOT ACCEPTABLE. POLYTHENE SHEETING OR WET HESSIAN MAY BE USED IF PROTECTED FROM WIND AND TRAFFIC.
9. REPAIRS TO CONCRETE SHALL NOT BE ATTEMPTED WITHOUT THE PERMISSION OF THE ENGINEER.
10. CAST-IN FIXINGS, BOLTS ETC. SHALL NOT BE ALTERED WITHOUT THE PERMISSION OF THE

CONCRETE MIX DESIGN & COVER - TABLE C1.1							
MIN. CEMENT CONTENT = 300 kg/m³							
MAX. PERMISSIBLE DRYING SHRINKAGE = 600 MICROSTRAIN AT 56 DAYS							
STRUCTURAL ELEMENT	SLUMP (MAX)	MAX. AGG. SIZE	CEMENT TYPE	STRENGTH GRADE	ADMIXTURE	REBAR COVER	
						TOP	BTM
STORMWATER PITS	80	Ø20mm	GP	32MPa	-	40	40
KERBING	80	Ø20mm	GP	32MPa	-	40	40
SLABS ON GROUND	80	Ø20mm	GP	32MPa	-	40	40
BORED PIERS	80	Ø20mm	GP	32MPa	-	50	
STRIP FOOTINGS	80	Ø20mm	GP	32MPa	-	50	
BLOCK WALL CORE GROUT FILLING (UNO)	230	Ø10mm	GP	25MPa	-	65	

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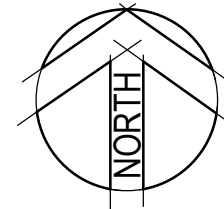
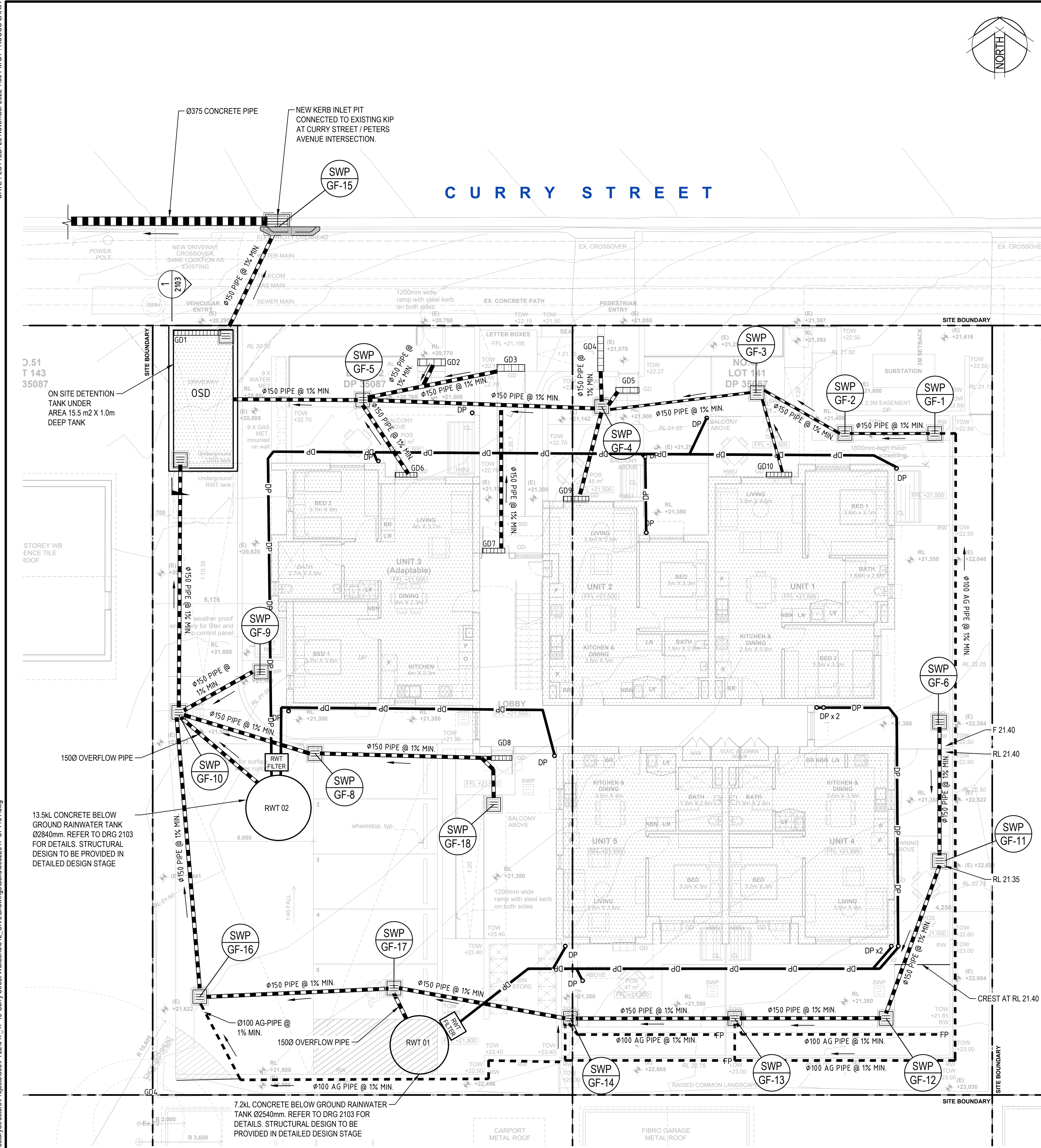
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Drawn K.P.
Checked K.P.
Designed K.P.
Verified C.F.
Approved

Date FEB' 2022 Client LAHC & SAMCRAWFORD ARCHITECTS

Date FEB' 2022
Date FEB' 2022
Date FEB' 2022
Project PROPOSED DEVELOPMENT AT 47-49 CURRY STREET WALLSEND 2287
Title CIVIL CONSTRUCTION NOTES

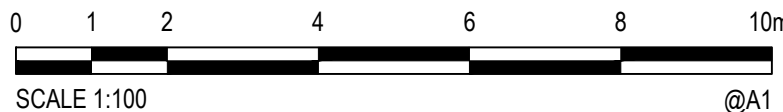
Status FOR APPROVAL
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Datum AHD Scale N/A Size A1
Drawing Number 80822047-CI-0002 Revision 5



LEGEND	
	DP - DOWN PIPE Ø100
	PBD - PLANTER BED DRAIN Ø100
	OSD TANK
	STORMWATER PIT
	SEALED ACCESS PIT
	DOWN PIPE
	STORMWATER PIPE
	GRADED DRAIN
NOTE: • LEGEND NOT TO SCALE	

STORMWATER PIT SCHEDULE

SWP No.	PIT COVER LEVEL RL.	PIT INVERT LEVEL IL.	DEPTH (mm)	INTERNAL PIT SIZE	PIT TYPE	COVER TYPE	COVER CLASS	REMARKS
GF-1	21.6	21.15	450	450X450	SIP	GRATE	B	
GF-2	21.55	21.10	450	450 x 450	SIP	GRATE	B	
GF-3	21.4	20.95	450	450X450	SIP	GRATE	B	
GF-4	21.4	20.88	520	450 x 450	SIP	GRATE	B	
GF-5	21.4	20.78	620	600 x 600	SIP	GRATE	B	
GF-6	21.93	21.48	450	450 x 450	SIP	GRATE	B	
GF-8	21.5	20.94	560	450 x 450	SIP	GRATE	B	
GF-9	21.4	20.82	580	600X600	SIP	GRATE	B	
GF-10	21.5	20.49	1010	900 x 900	SIP	GRATE	C	
GF-11	21.30	20.90	450	450X450	SIP	GRATE	B	
GF-12	21.30	20.65	650	600X600	SIP	GRATE	B	
GF-13	21.30	20.74	560	450X450	SIP	GRATE	B	
GF-14	21.8	20.61	1191	900X900	SIP	GRATE	C	
GF-15	19.85	18.80	1050	900X450	KIP	GRATE	D	
GF-16	21.30	20.74	560	450X450	SIP	GRATE	B	
GF-17	21.85	20.57	1280	900X900	SIP	GRATE	B	
GF-18	21.30	20.90	400	450X450	SIP	GRATE	B	



Rev.	Date	Description	Des.	Verif.	Appd.
6	28/11/2022	REVISED ISSUE FOR DA APPROVAL	A.L	P.L	M.R
5	1/06/2022	REVISED ISSUE	K.P.	C.F.	
4	26/05/2022	REVISED ARCHITECTURAL BACKGROUND	K.P.	C.F.	
3	4/04/2022	REVISED ISSUE FOR DA APPROVAL	K.P.	C.F.	
2	7/03/2022	ISSUE FOR DA APPROVAL	K.P.	C.F.	
1	10/02/2021	PRELIMINARY ISSUE	K.P.	K.P.	C.F.

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Drawn K.P.	Date FEB' 2022	Client LAHC & SAMCRAWFORD ARCHITECTS
Checked K.P.	Date FEB' 2022	Project PROPOSED DEVELOPMENT AT 47-49 CURRY STREET WALLSEND 2287
Designed K.P.	Date FEB' 2022	Title STORMWATER DRAINAGE PLAN GROUND FLOOR
Verified C.F.	Date FEB' 2022	
Approved		

Status FOR APPROVAL	Datum AHD	Scale 1:100	Size A1
NOT TO BE USED FOR CONSTRUCTION PURPOSES	Drawing Number 80822047-CI-1101	Revision 6	



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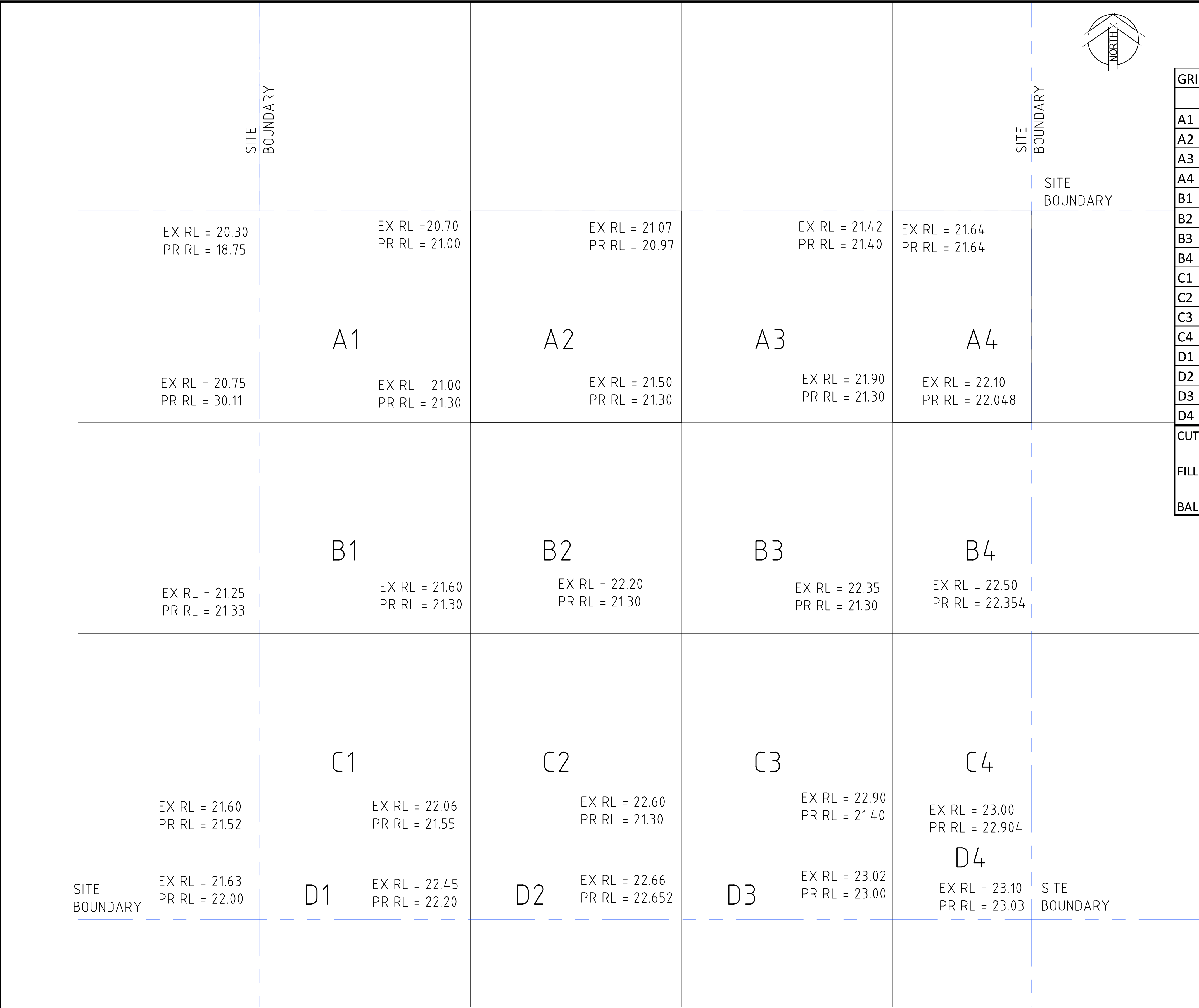
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Designed K.P.	Date MAR/2022		NOT TO BE USED FOR CONSTRUCTION PURPOSES		
Verified C.F.	Date MAR/2022		Datum AHD	Scale 1:100	Size A1
Approved			Drawing Number 80822047-CI-1102		Revision 3
Title CUT AND FILL PLAN					

DATE PLOTTED: 28 November 2022 2:00 PM BY: ROCCO LARIA

XREFs: X-GROUND FLOOR - CUT AND FILL

CAD File: \\cardno-cop\global\AU\NSW\Directory\Structure\Projects\80822047-47-49 Curry Street Wallsend\012_CIVIL\Drawings\Bulk\80822047-CI-1103.dwg



GRID	AVG EX	AVG PR	AVG DEPTH	CELL AREA	CELLL VOLUME	
	m	m	PR-EX	m2	m3	
A1	20.6875	22.79	2.1025	100	210.25	FILL
A2	21.0675	21.1425	0.075	100	7.5	FILL
A3	21.4725	21.2425	-0.23	100	-23	CUT
A4	21.765	21.597	-0.168	65.76	-11.04768	CUT
B1	21.15	23.51	2.36	100	236	FILL
B2	21.575	21.3	-0.275	100	-27.5	CUT
B3	21.9875	21.3	-0.6875	100	-68.75	CUT
B4	22.2125	21.7505	-0.462	65.76	-30.38112	FILL
C1	21.6275	21.425	-0.2025	100	-20.25	CUT
C2	22.115	21.3625	-0.7525	100	-75.25	CUT
C3	22.5125	21.325	-1.1875	100	-118.75	CUT
C4	22.6875	21.9895	-0.698	65.76	-45.90048	CUT
D1	21.935	21.8175	-0.1175	35.28	-4.1454	CUT
D2	22.4425	21.9255	-0.517	35	-18.095	CUT
D3	22.795	22.088	-0.707	35.28	-24.94296	CUT
D4	23.005	22.5835	-0.4215	23.2	-9.7788	CUT

CUT VOLUME =	-477.791 m3
FILL VOLUME =	453.75 m3
BAL =	-24.0414 m3 CUT REQUIRED

BULK EARTHWORK LEVEL
SCALE 1:100



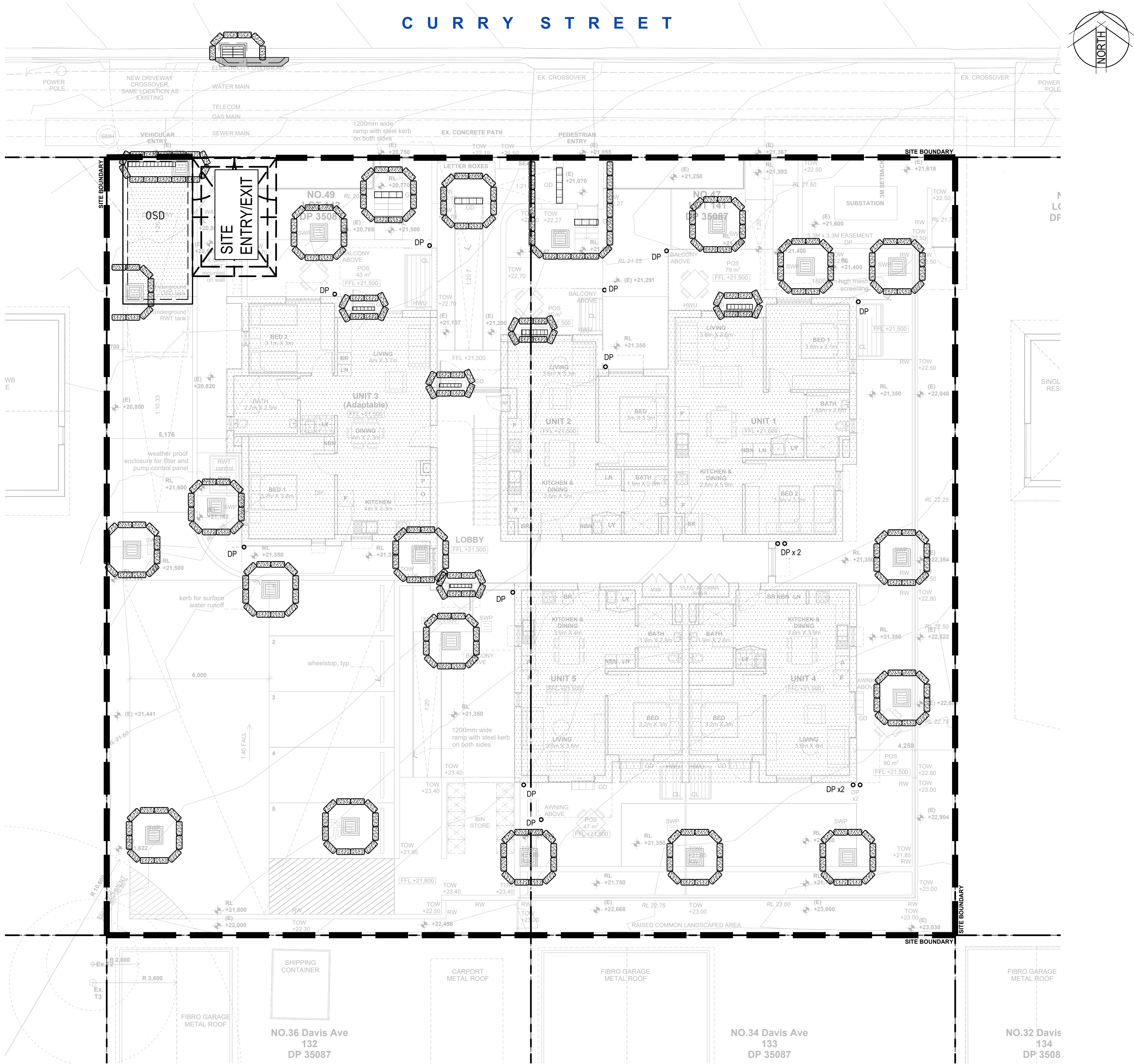
3	28/11/2022	REVISED ISSUE FOR DA APPROVAL	A.L	P.L	M.R
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Checked K.P.	Date MAR'2022	Project PROPOSED DEVELOPMENT AT 47-49 CURRY STREET WALLSEND 2287
Designed K.P.	Date MAR'2022	Title BULK EARTHWORK LEVEL
Verified C.F.	Date MAR'2022	Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES
Approved		Datum AHD
		Scale 1:100
		Size A1
		Drawing Number 80822047-CI-1103
		Revision 3



LEGEND

- SITE FENCE
- SILT FENCE
- STORMWATER PIT
- SEALED ACCESS PIT
- SILT TRAP/SAND BAGS
- TEMPORARY SURFACE INLET SEDIMENT TRAP OR GROSS POLLUTANT TRAP
- TEMPORARY CONSTRUCTION VEHICLE ENTRY/EXIT

NOTE

SITE ACCESS AND STOCKPILE LOCATION MAY CHANGE DEPENDING ON CONSTRUCTION PREFERENCE

FOR SEDIMENTATION AND EROSION CONTROL DETAILS REFER TO DRAWING 80822047-CI-2201.

THIS LAYOUT PRESENTS ONE OF A NUMBER OF POSSIBLE SOLUTIONS FOR THE EROSION AND SEDIMENTATION CONTROL ON THE SITE DURING THE CONSTRUCTION PERIOD. FINAL LAYOUT MAY BE ALTERED BY THE CONTRACTOR TO SUIT THEIR SITE LAYOUT, OPERATIONS SEQUENCE, STAGING ETC. ANY SUCH CHANGES MUST BE IN ACCORDANCE WITH THE GUIDELINES OF LANDCOM MANAGING URBAN STORMWATER MANUAL. 2004 ("BLUE BOOK") SHOULD THE STRIPPED AREA AT ANY STAGE EXCEED 2500 m², SEDIMENTATION POND INCL. ASSOCIATED BERMS, CUT OFF TRENCHES ETC. IS TO BE PROVIDED IN ACCORDANCE WITH THE GUIDELINES OF LANDCOM MANAGING URBAN STORMWATER MANUAL.



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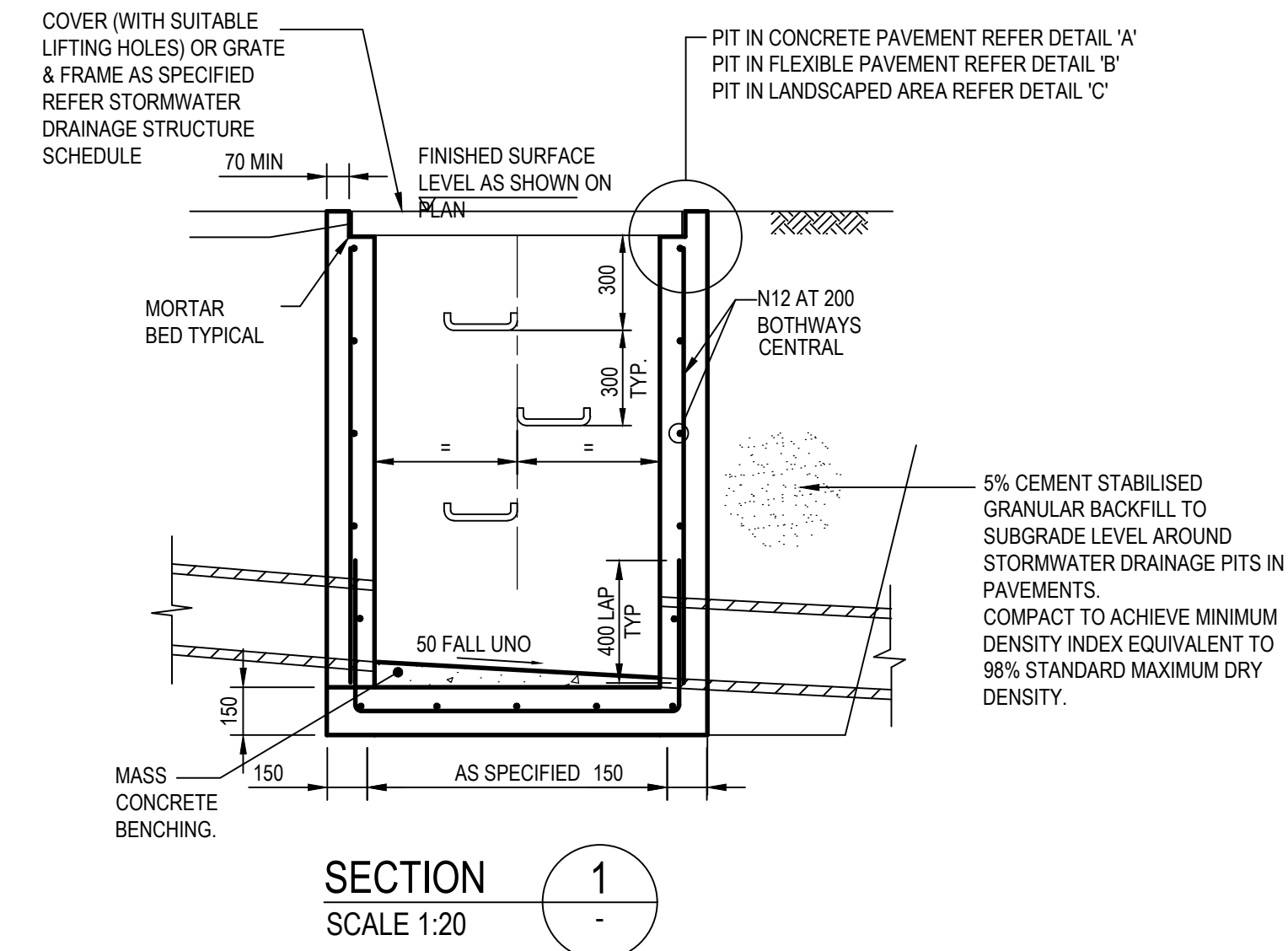
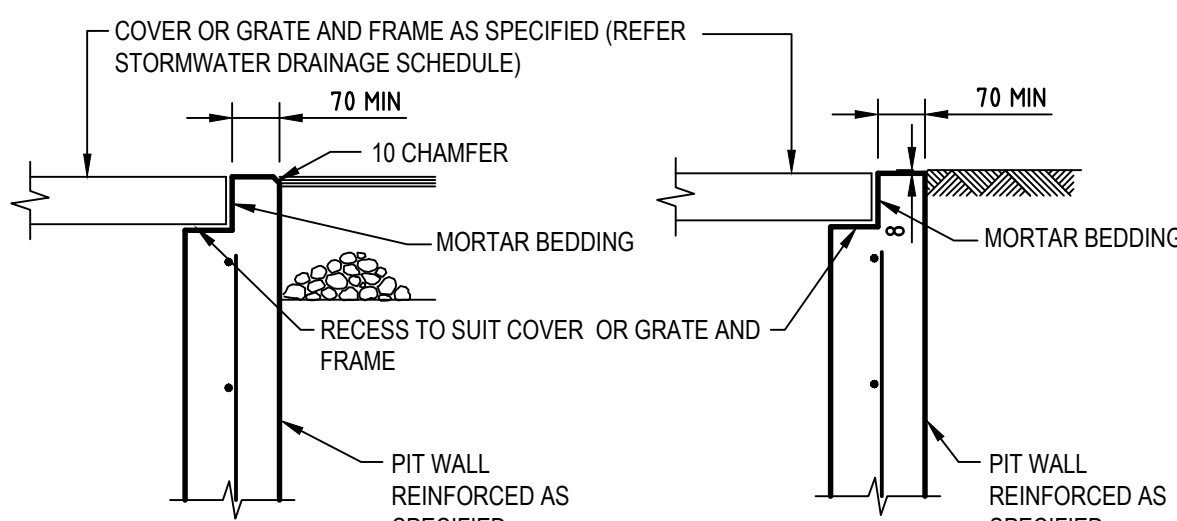
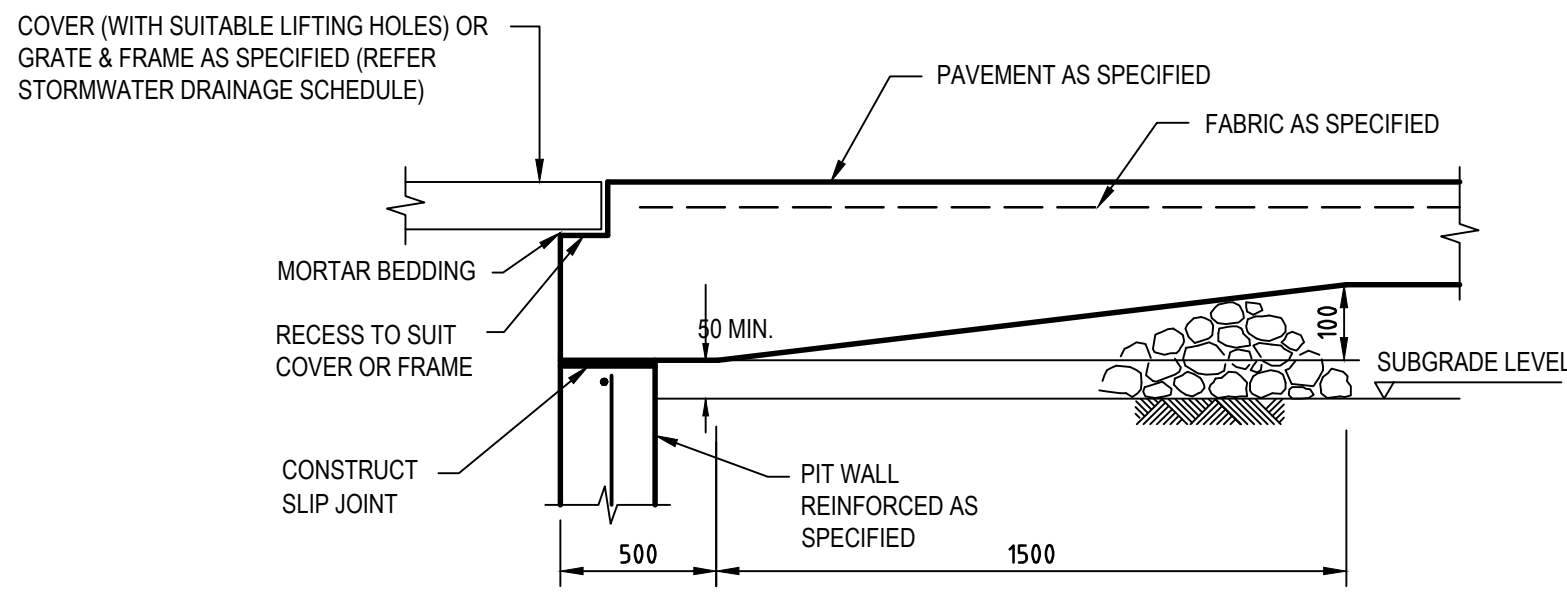
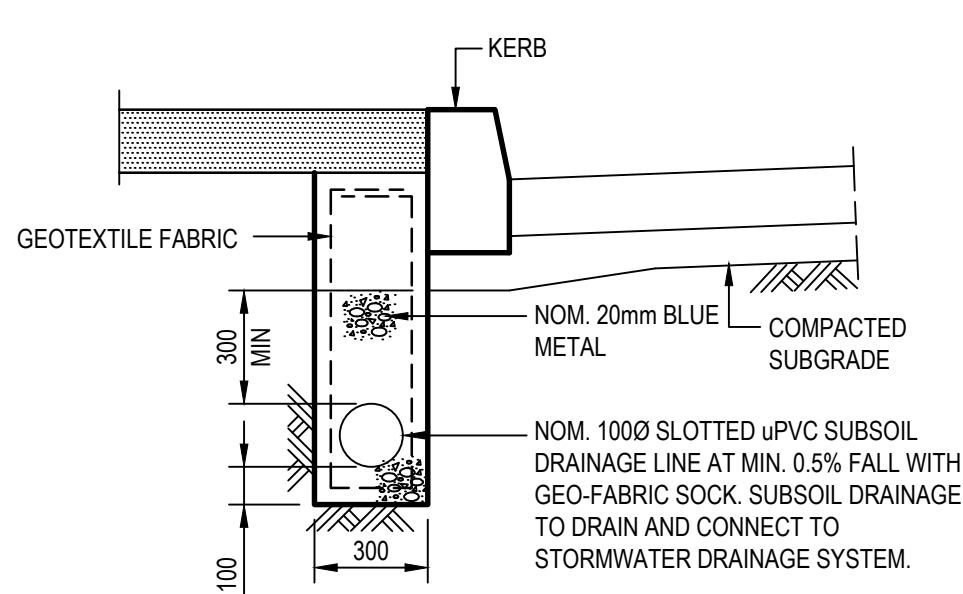
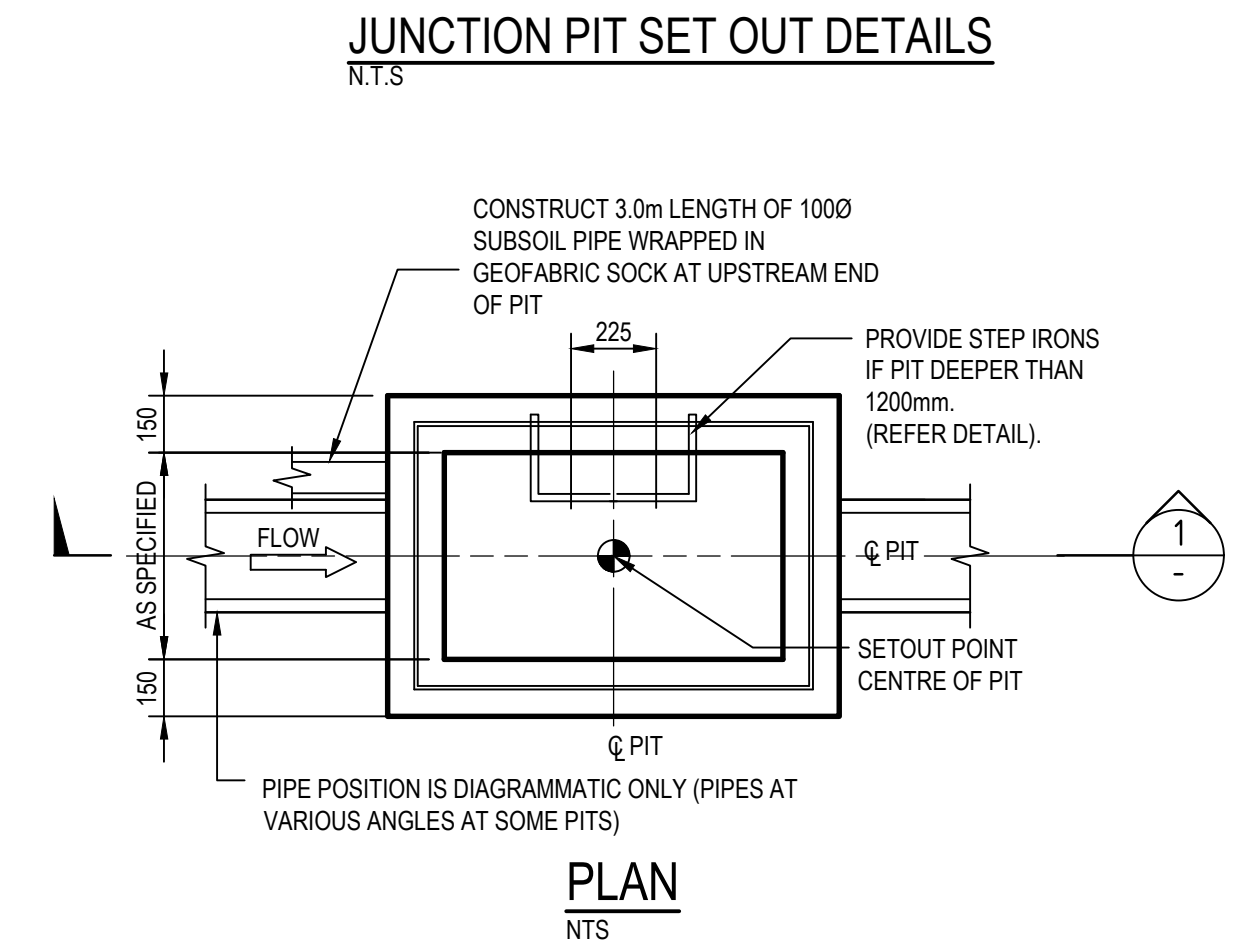
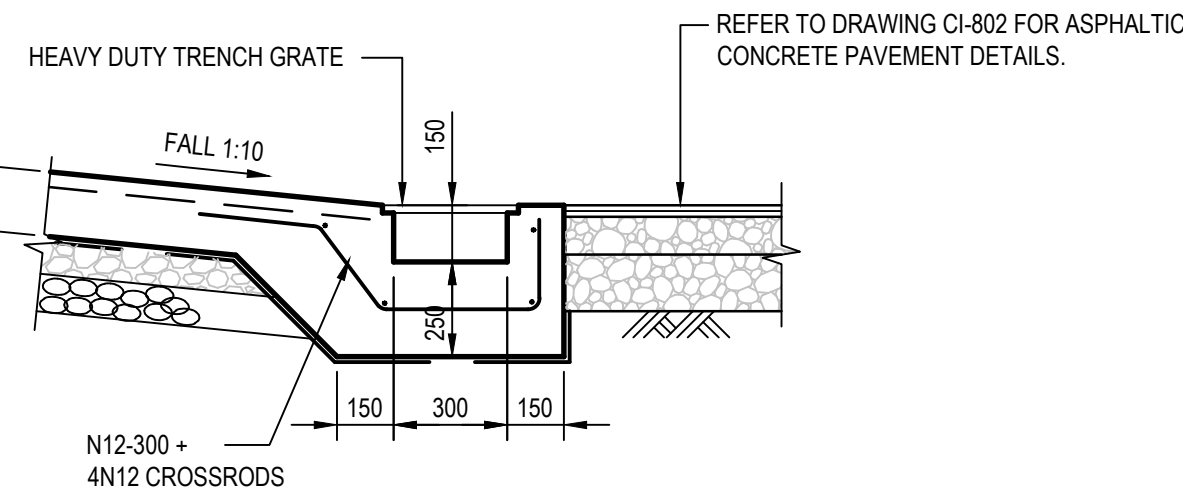
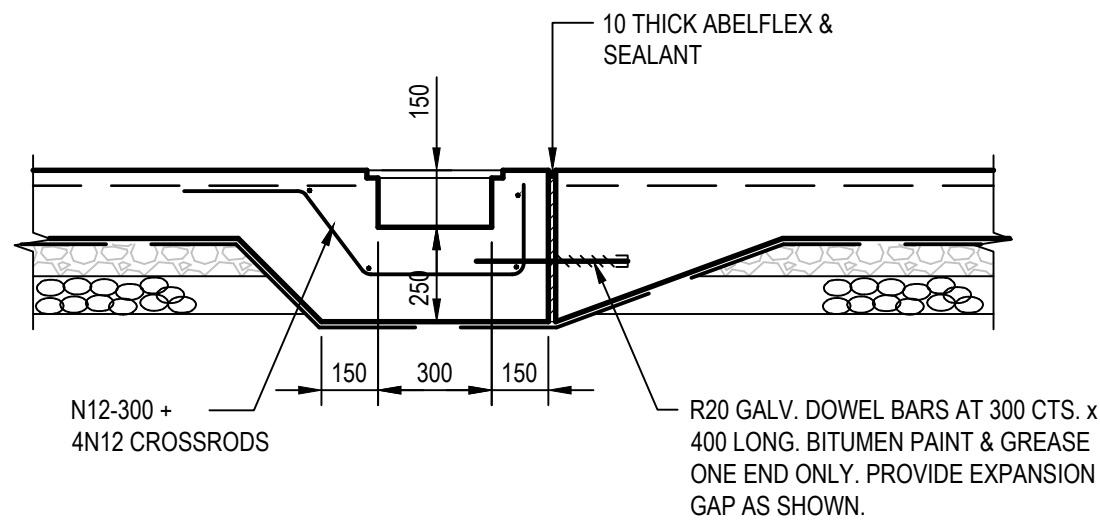
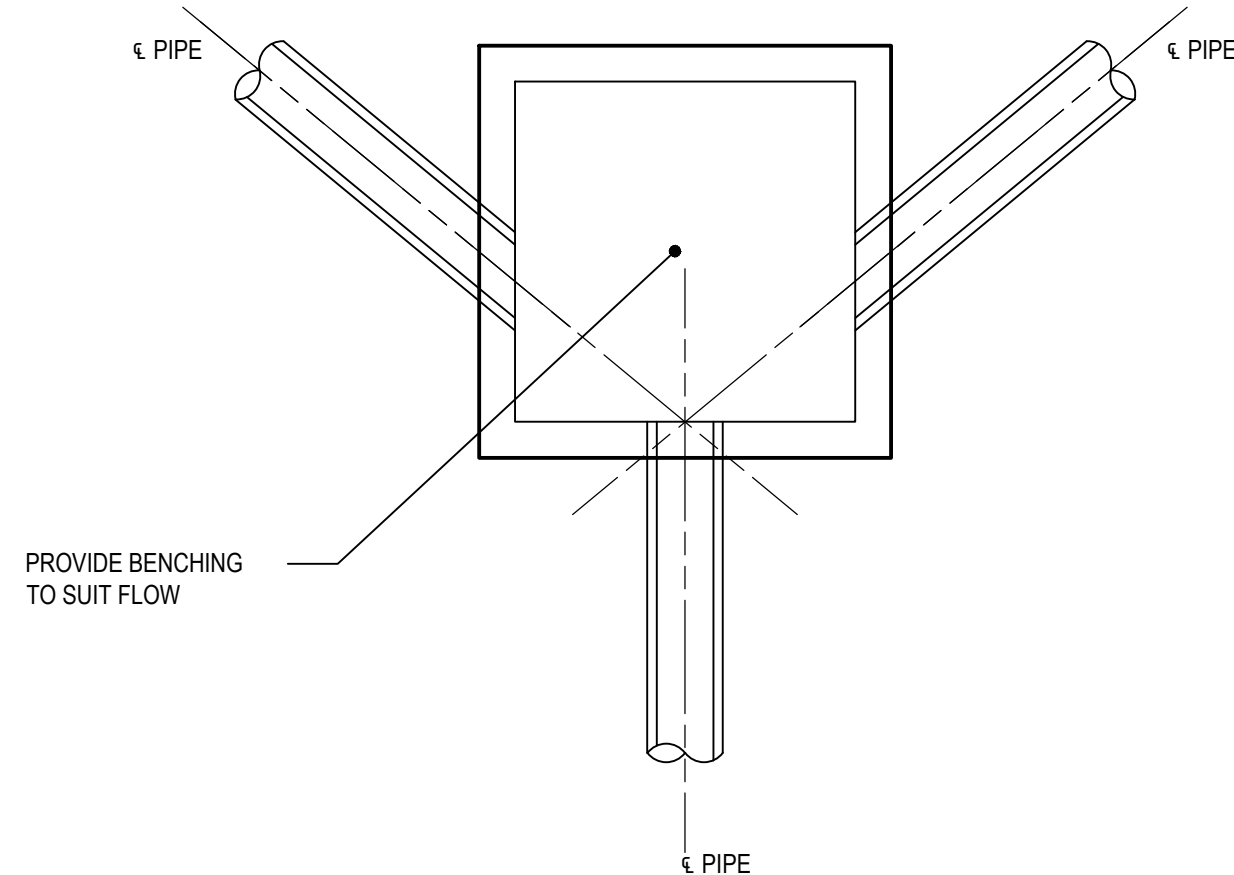
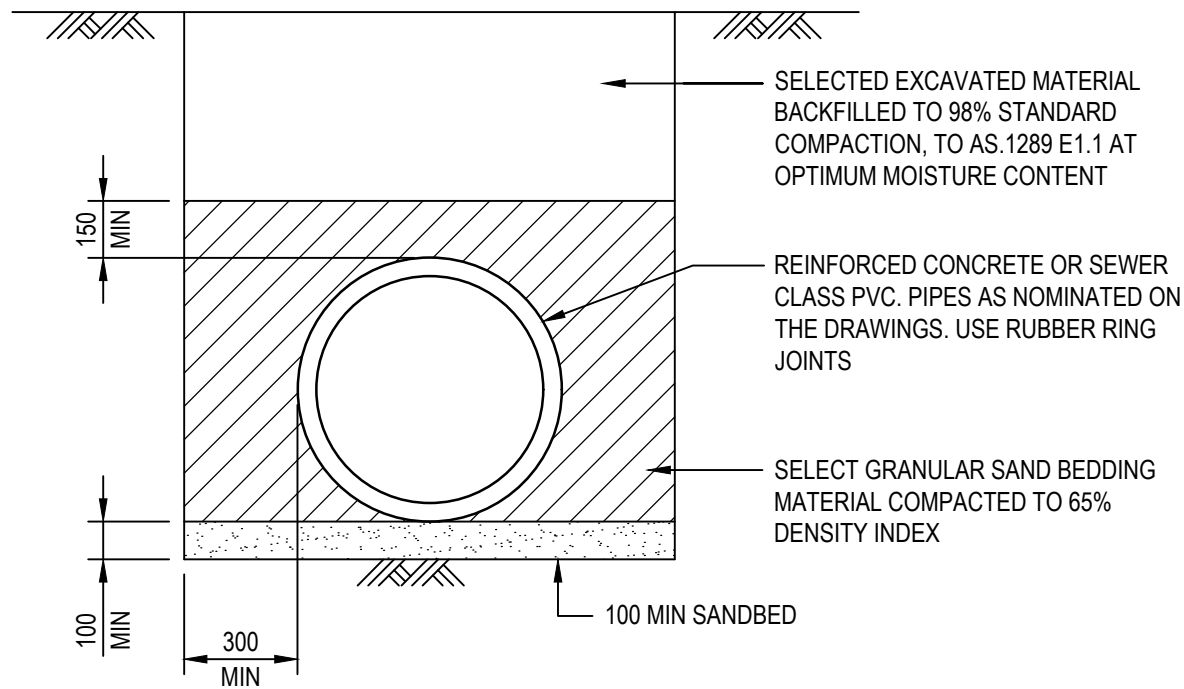
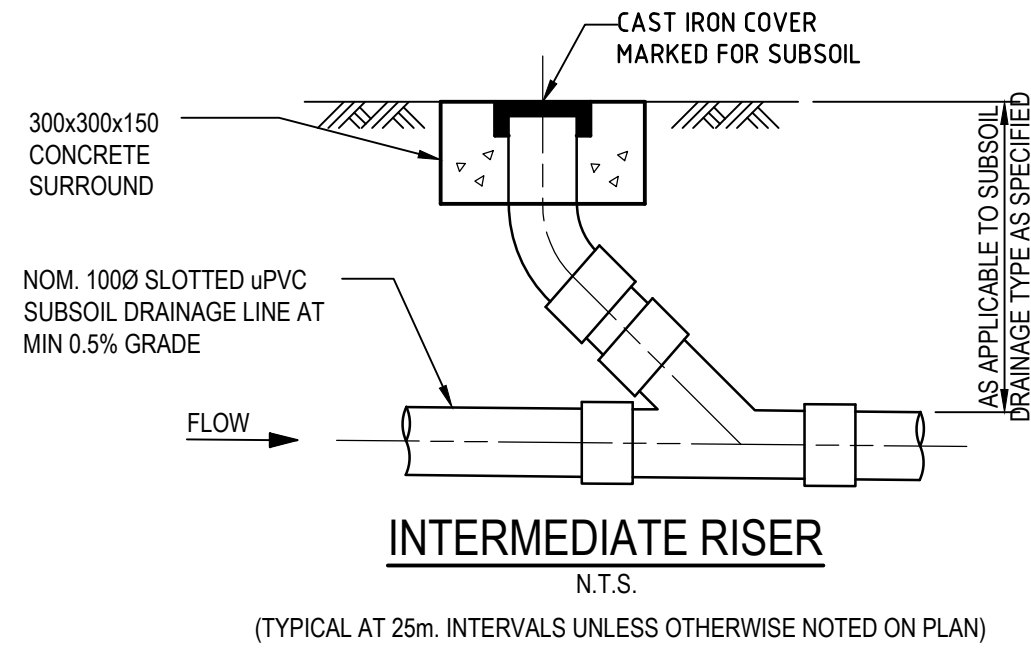
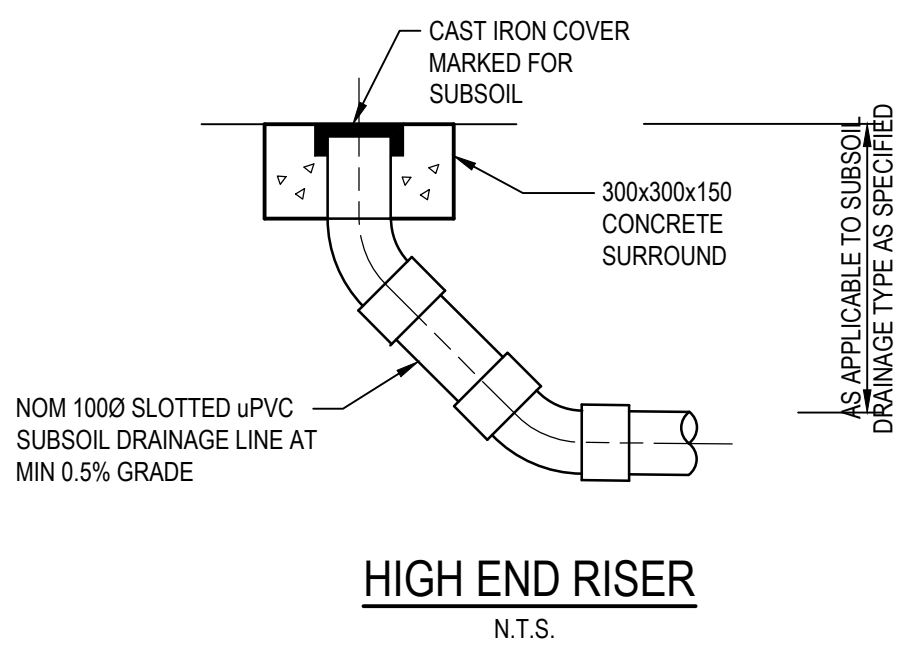
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Checked K.P.	Date FEB '2022	
Designed G.M.	Date FEB '2022	Project PROPOSED DEVELOPMENT AT 47-49 CURRY STREET WALLSEND 2287
Verified C.F.	Date FEB '2022	Title SEDIMENTATION AND EROSION CONTROL
Approved		

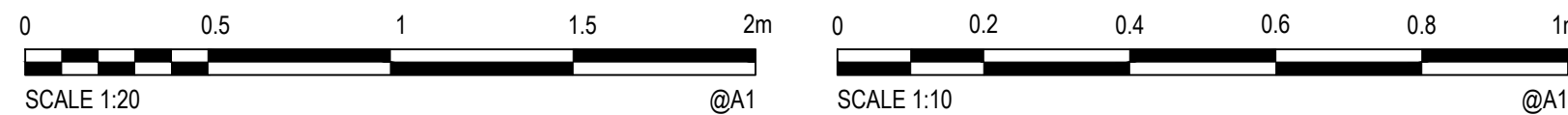
Status FOR APPROVAL	Datum AHD	Scale 1:100	Size A1
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SUBSOIL DRAINAGE LINE IN LANDSCAPED AREAS ADJACENT TO ROADS

PIT EDGE TREATMENT FOR STORMWATER DRAINAGE AND OTHER SERVICES PITS IN ROAD PAVEMENTS AND LANDSCAPED AREAS

SURFACE INLET/JUNCTION PIT (SIP/JP)



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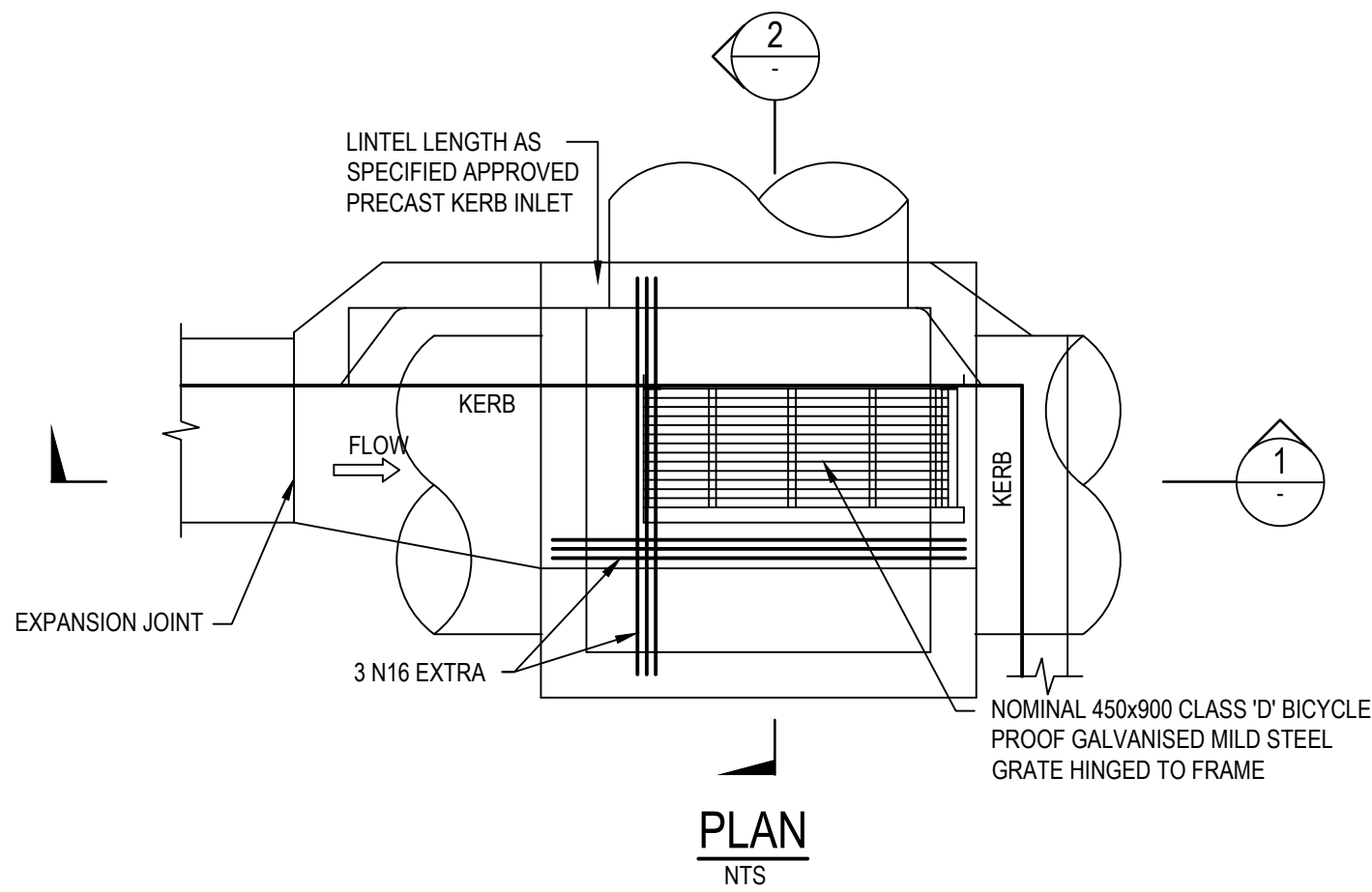
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Designed	K.P.	Date	FEB '2022
Verified	C.F.	Date	FEB '2022
Approved			

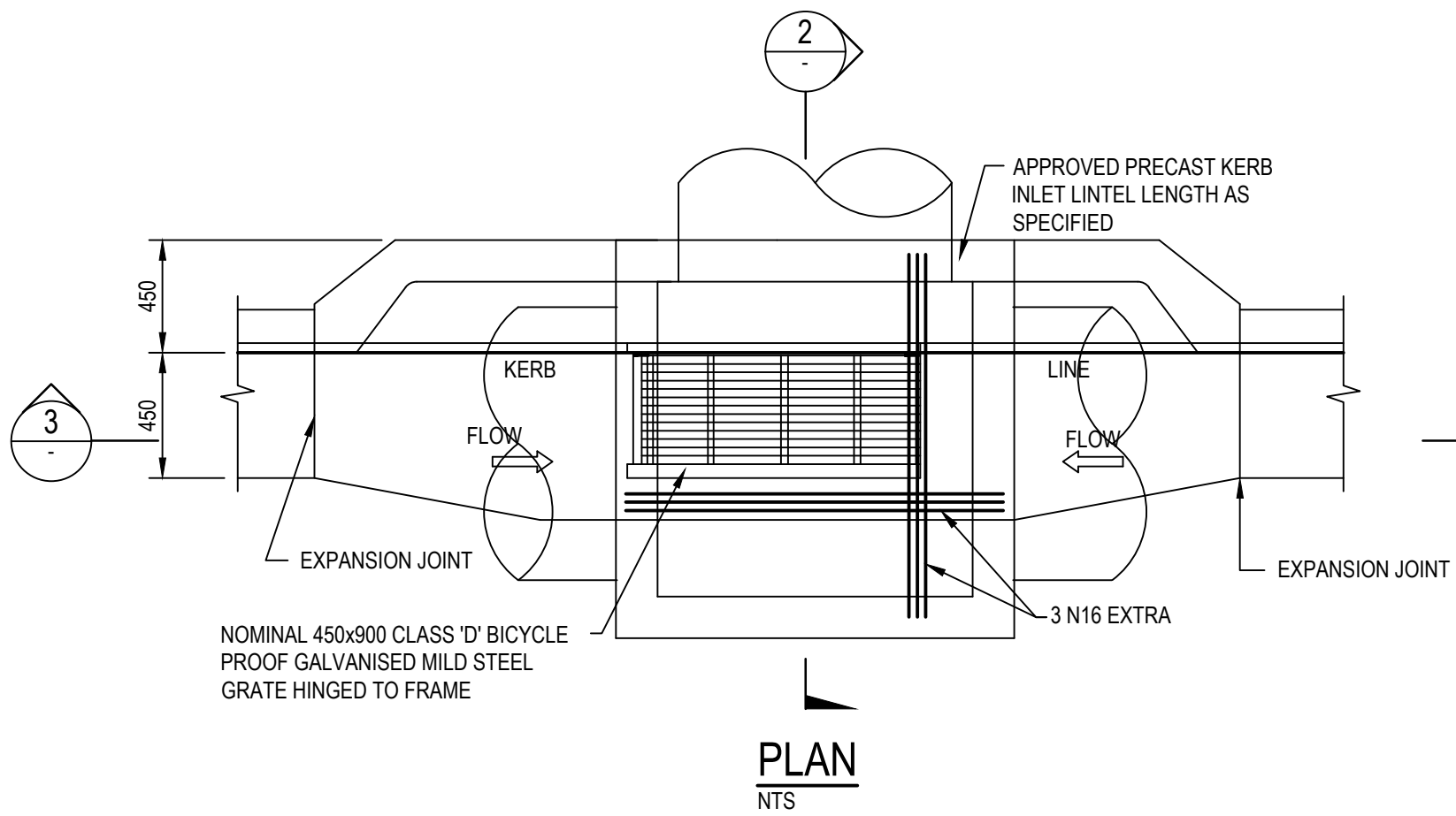
Client	LAHC & SAMCRAWFORD ARCHITECTS
Project	PROPOSED DEVELOPMENT AT 47-49 CURRY STREET WALLSEND 2287
Title	STORMWATER DETAILS SHEET 1

Status	FOR APPROVAL
Datum	AHD
Scale	AS SHOWN
Size	A1
Drawing Number	80822047-CI-2101
Revision	5

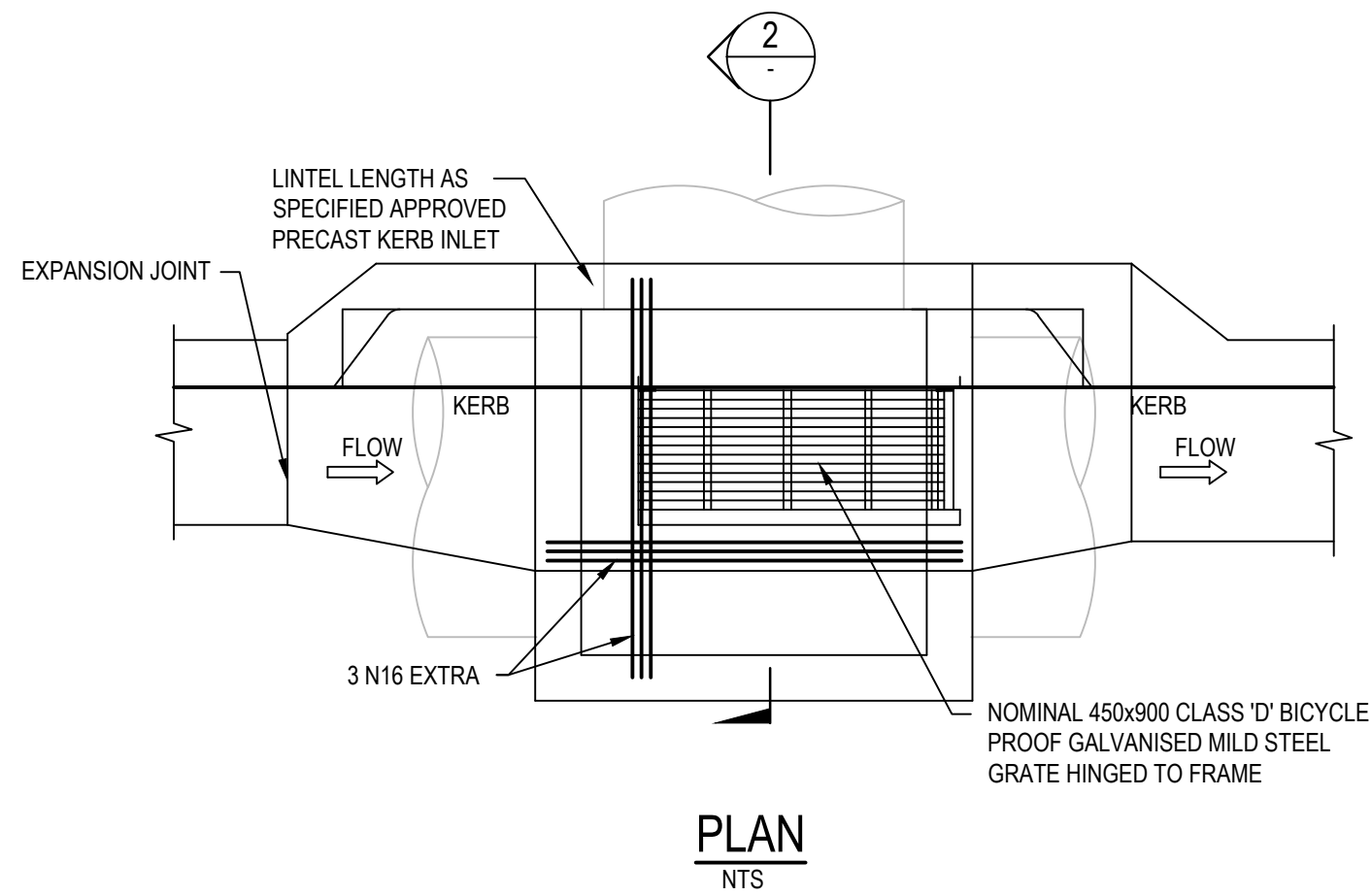
DATE PLOTTED: 28 November 2022 2:01 PM BY: ROCCO LARIA



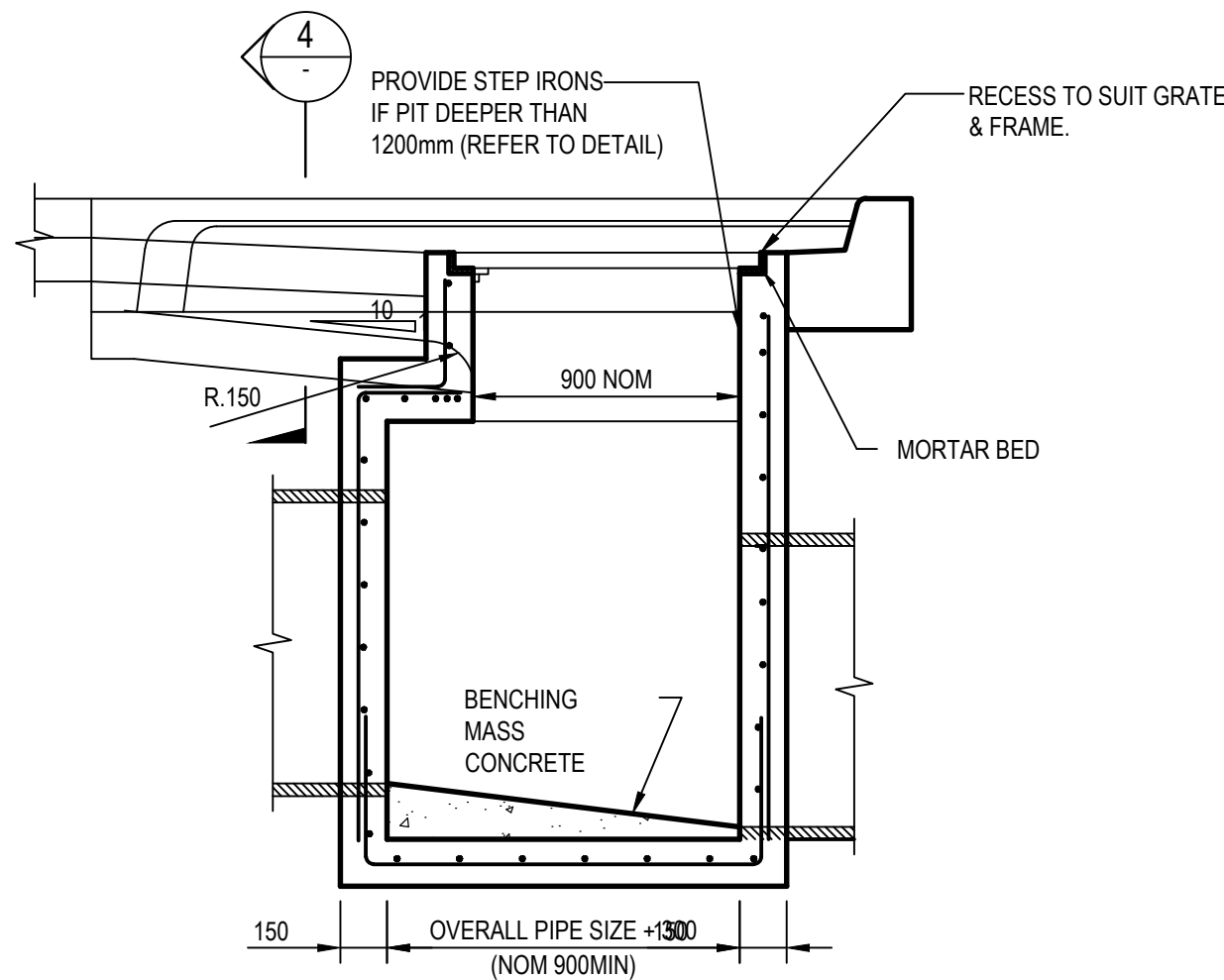
KERB INLET PIT (KIP-A)
(CORNER)



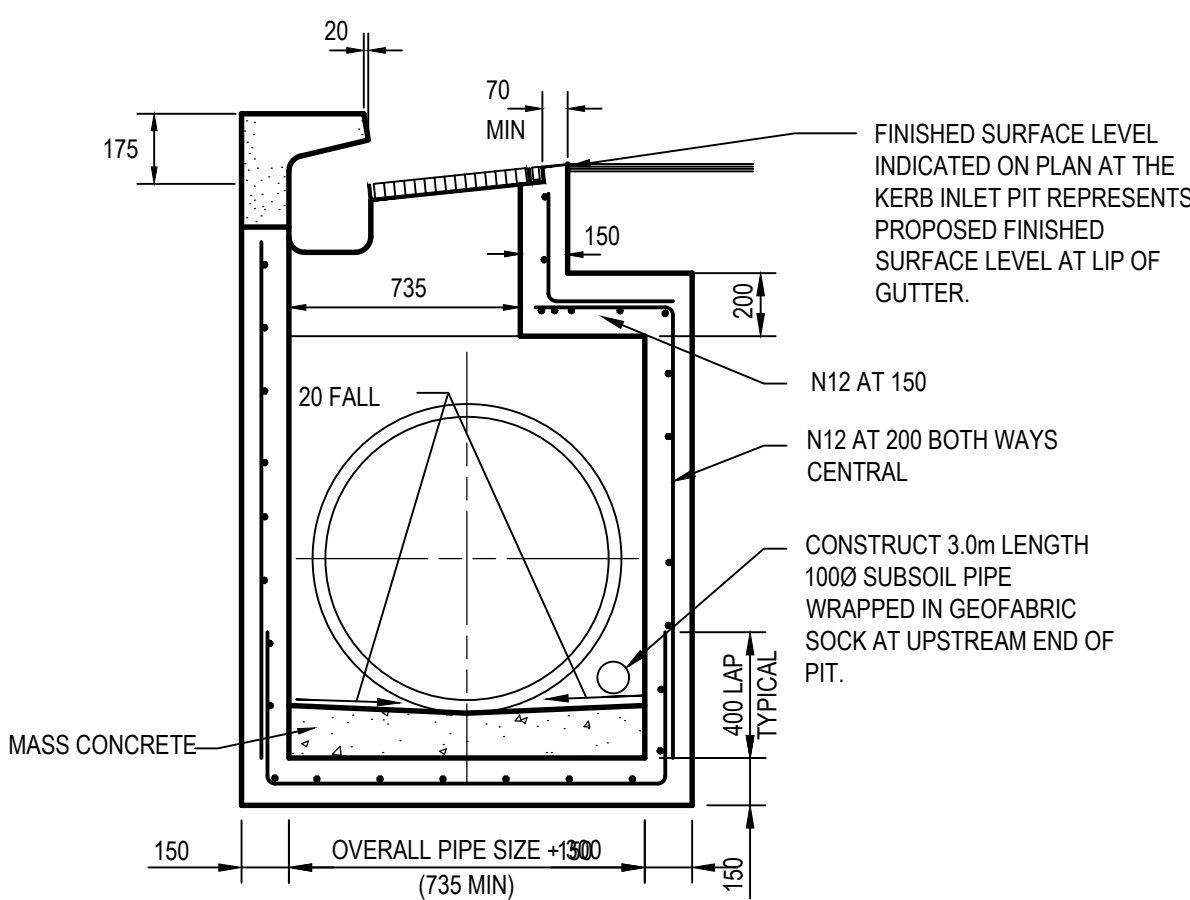
KERB INLET PIT (KIP-B)
(SAG)



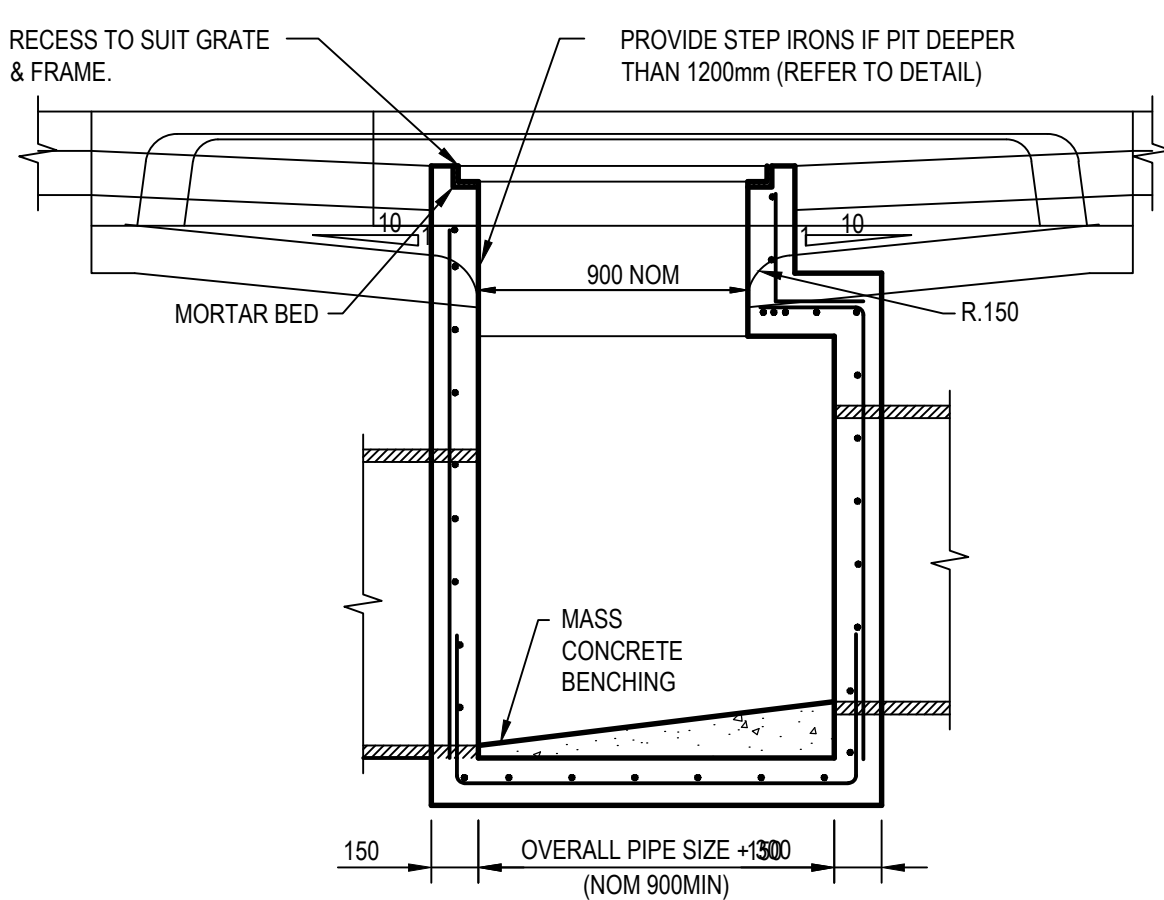
KERB INLET PIT (KIP-C)
(ON GRADE)



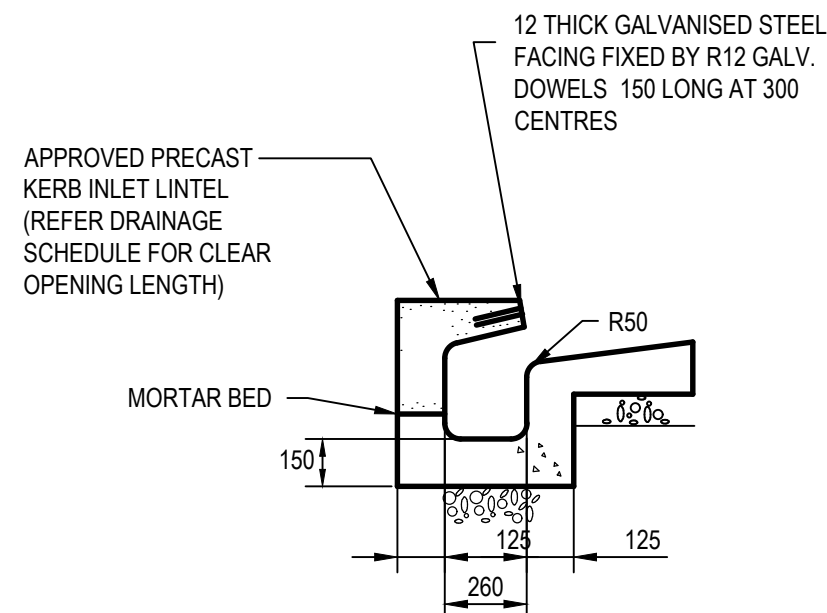
SECTION 1
SCALE 1:20



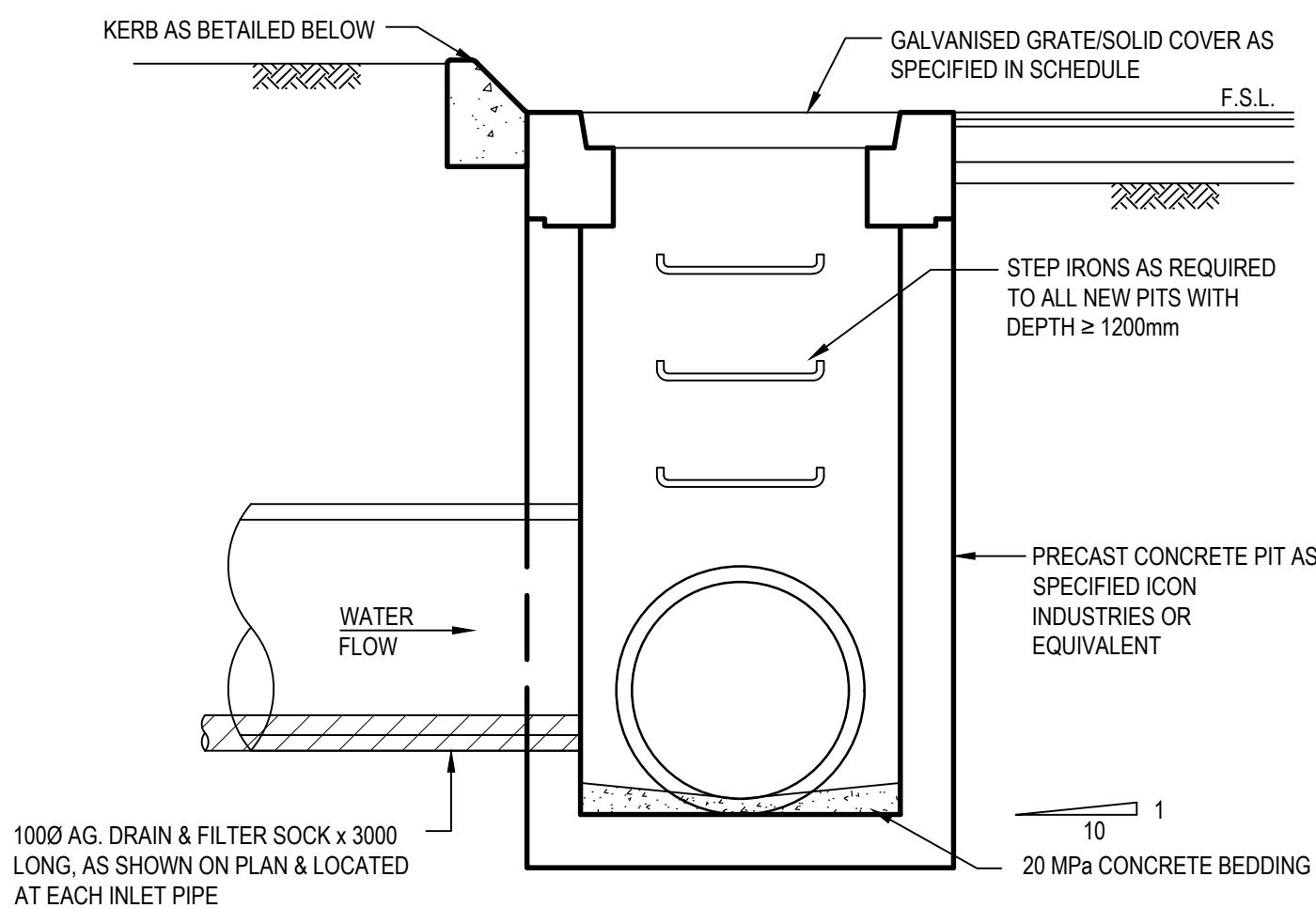
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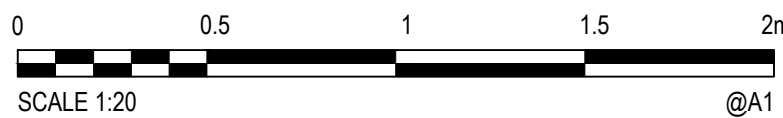
SECTION 3
SCALE 1:20



SECTION 4
SCALE 1:20



PRECAST STORMWATER PIT
TO BE INSTALLED AND BEDDED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. PROVIDE GALVANISED IRON STEP IRONS EPOXIED INTO CONCRETE FOR PITS DEEPER THAN 1200mm.



XREFs: CAD File: \\cardno\cpglobal\AUNSW\Drawings\Structure\Projects\80822047-47-49 Curry Street Wallsend\012_CIVIL\Drawings\Build\80822047-CI-2102.dwg

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5	28/11/2022	REVISED ISSUE FOR DA APPROVAL	A.L.	P.L.	M.R.
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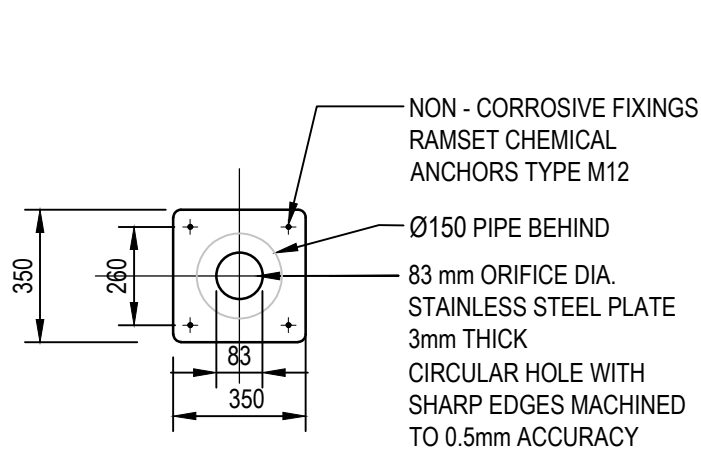
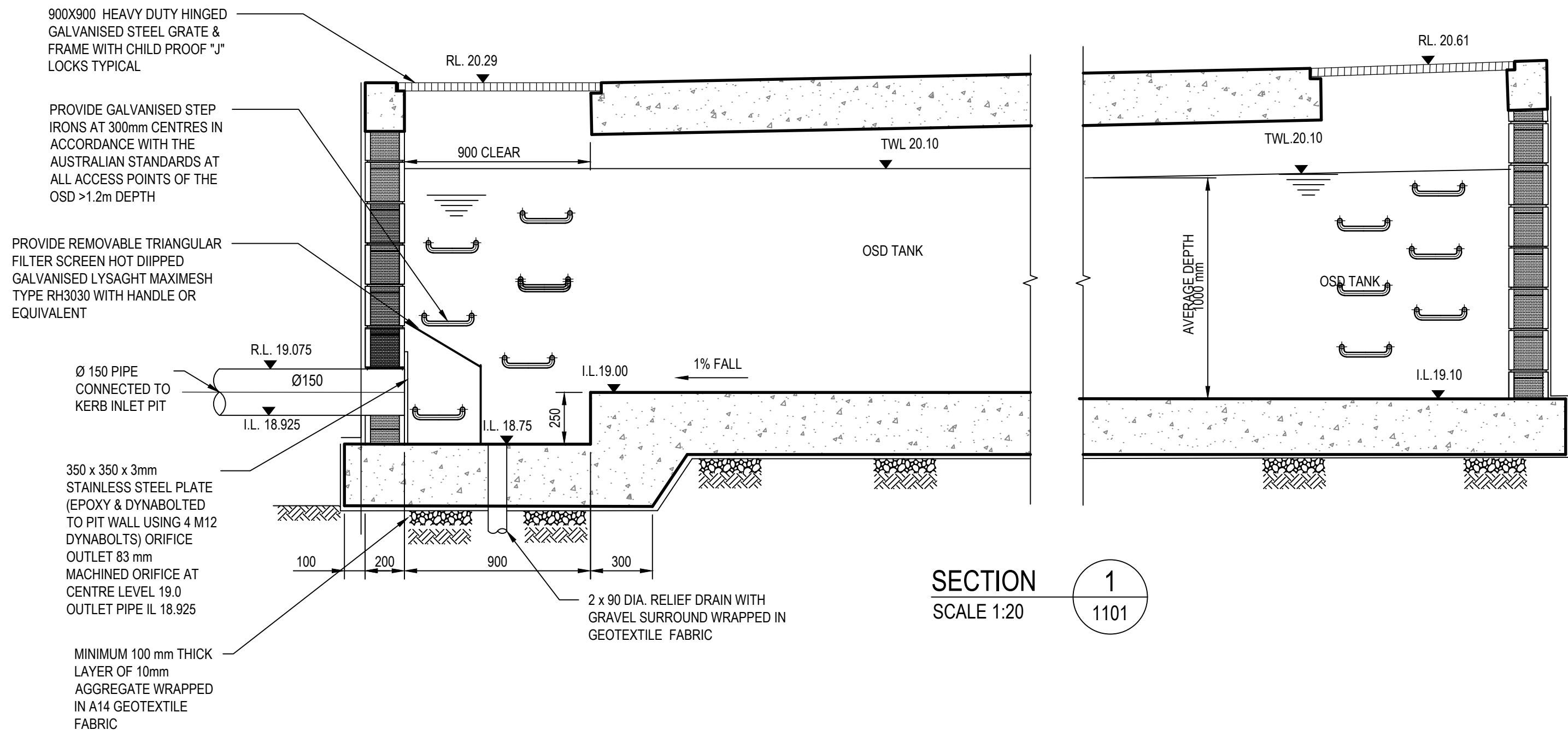
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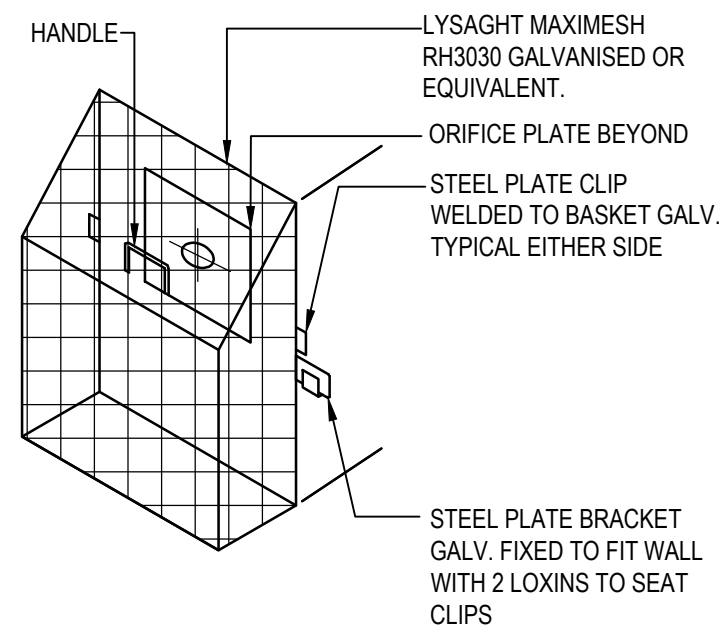
Web: www.cardno.com.au

Drawn K.P.	Date FEB' 2022	Client LAHC & SAMCRAWFORD ARCHITECTS
Checked K.P.	Date FEB' 2022	Project PROPOSED DEVELOPMENT AT
Designed K.P.	Date FEB' 2022	47-49 CURRY STREET
Verified C.F.	Date FEB' 2022	WALLSEND 2287
Approved		Title STORMWATER DETAILS
		SHEET 2

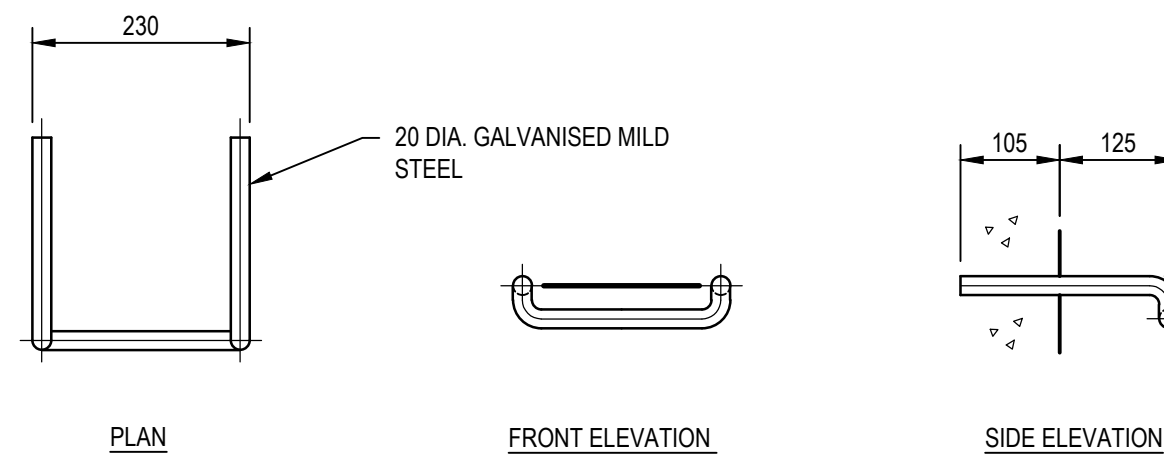
Status FOR APPROVAL	Scale AS SHOWN	Size A1
Datum AHD	Drawing Number 80822047-CI-2102	Revision 5



ORIFICE PLATE DETAIL N.T.S.

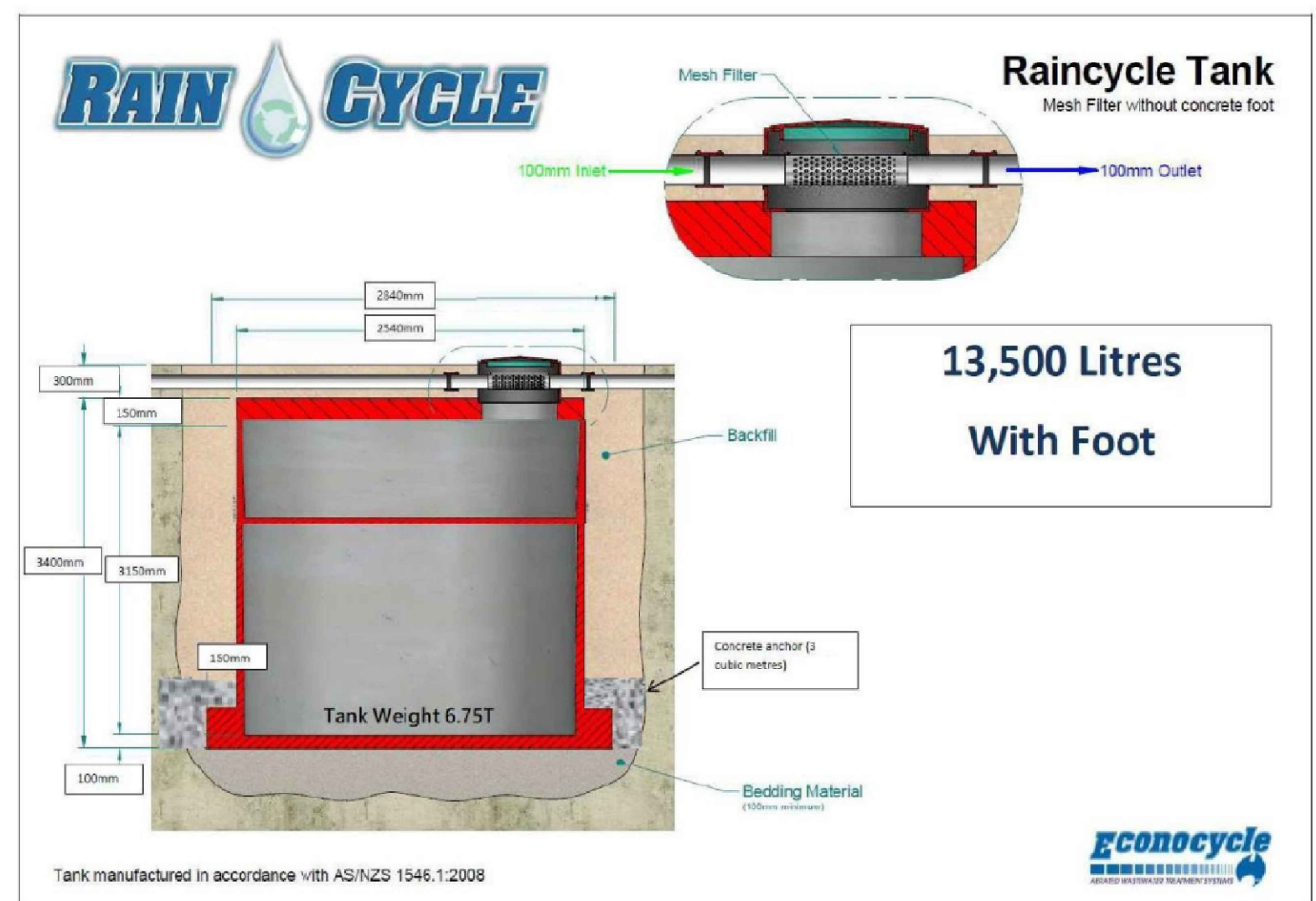
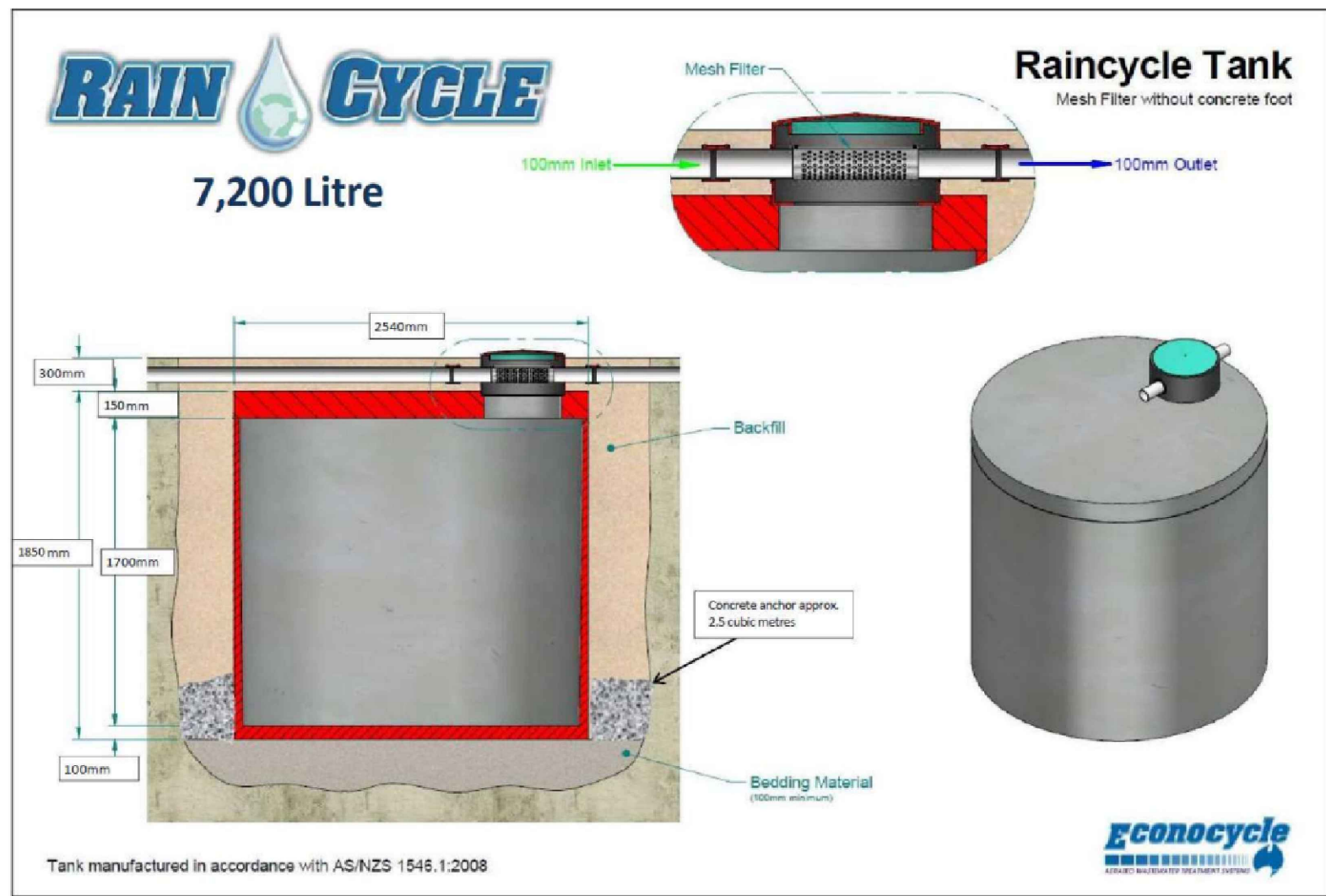


TRASH SCREEN DETAIL N.T.S.



STEP IRON DETAIL N.T.S.

OSD SYSTEM DESIGN PARAMETER	
AS PER THE NEWCASTLE CITY COUNCIL SECTION 7.06 STORMWATER GUIDELINES, DCP.	
SITE AREA = 1226 m ²	
IMPERVIOUSNESS RATE = 68.3%	
RAINFALL DEPTH = 16.7mm	
OSD REQUIRED = 1226 x 0.683 x 16.7 = 13.9m ³	
OSD STORAGE PROVIDED = 15.5 m ³	
OSD TANK DETAIL	
TOP WATER LEVEL = 20.10	
DEPTH OF WATER = 1.0m	
TANK AREA = 15.5m ²	
ORIFICE DIAMETER = 83 mm	



RAINWATER TANK NOTES

- RAINWATER TANK DIMENSIONS BASED ON PRODUCT SPECIFICATIONS PROVIDED BY RAINCYCLE. APPROVED EQUIVALENT TO BE NOMINATED IN DETAILED DESIGN STAGE SUBJECT TO STRUCTURAL REQUIREMENTS, MODEL AVAILABILITY, SITE CONSTRAINTS OR CONTRACTOR'S PREFERENCE.
- UNDERGROUND WATER TANK TO BE SITUATED AT LEAST 6m OFF EXISTING NEIGHBOURING DWELLINGS. STRUCTURAL IMPACT OF THE RAINWATER TANK PLACEMENT TOWARDS PROPOSED RESIDENTIAL BUILDING TO BE INVESTIGATED IN DETAILED DESIGN STAGE.
- CEILING AND MANHOLE OF WATER TANK TO BE STRUCTURALLY DESIGNED UNDER TRAFFIC LOADING.
- PROVIDE DRAWDOWN TO LOWER 50% VOLUME OF EACH RAINWATER TANK BY RETICULATION INTO EACH OF THE FOLLOWING NEW USES: SITE IRRIGATION SYSTEMS, EXTERNAL TAPS, ALL TOILETS, COLD WATER WASHING MACHINE TAPS AND LAUNDRY BASIN TAPS.
- THE UPPER REMAINING CAPACITY OF EACH RAINWATER TANK IS TO DRAIN FROM THE TANK BY WAY OF A 5mm WEEP HOLE CONNECTED TO THE MAIN OVERFLOW PIPE FOR THE TANK.
- MAINTAIN MINIMUM WATER DEPTH OF 100mm WITHIN ANY TANK.
- DETAILS OF ROOF WATER HARVESTING AND RETICULATION SYSTEM TO BE PROVIDED BY HYDRAULIC ENGINEER IN DETAILED DESIGN STAGE, IN ACCORDANCE WITH AUSTRALIAN STANDARDS, BCA, NCC AND COUNCIL STORMWATER GUIDELINES.

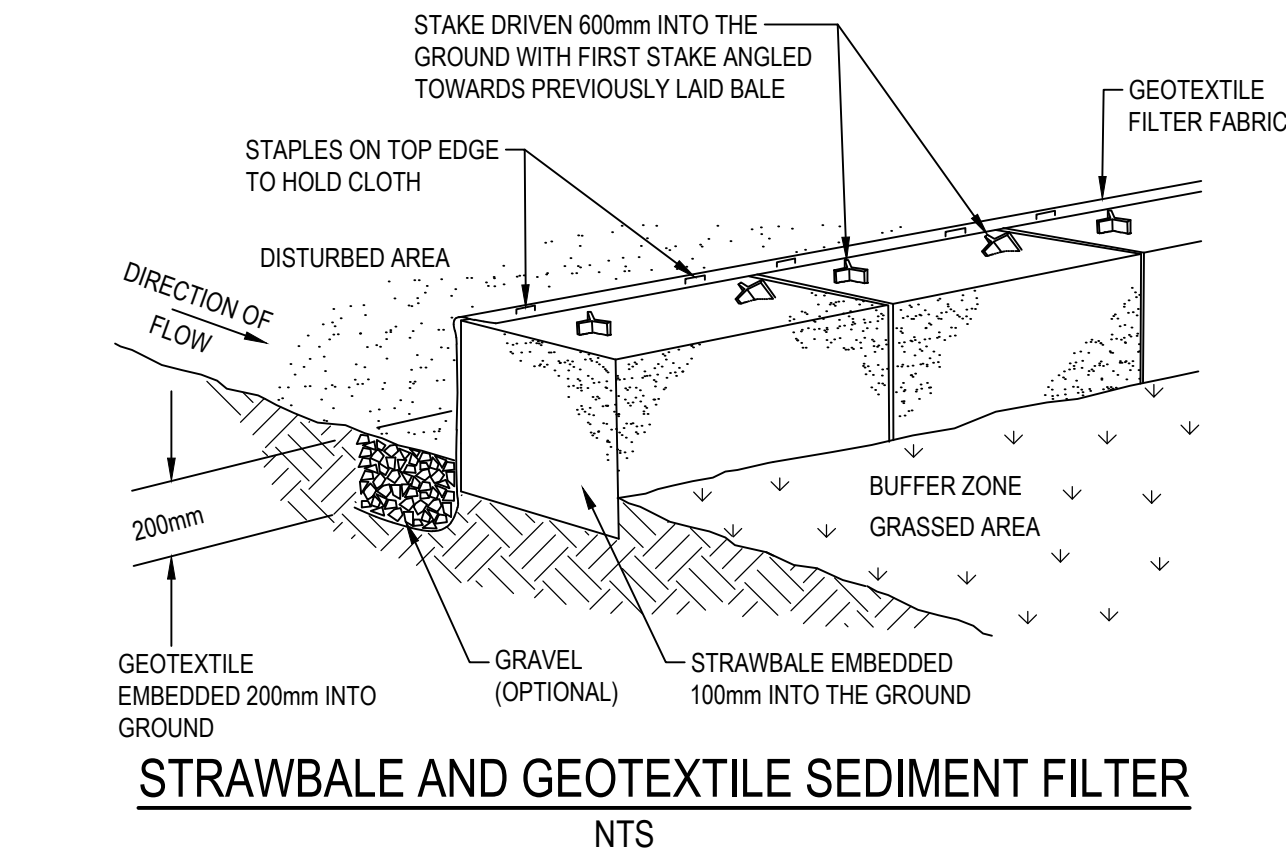
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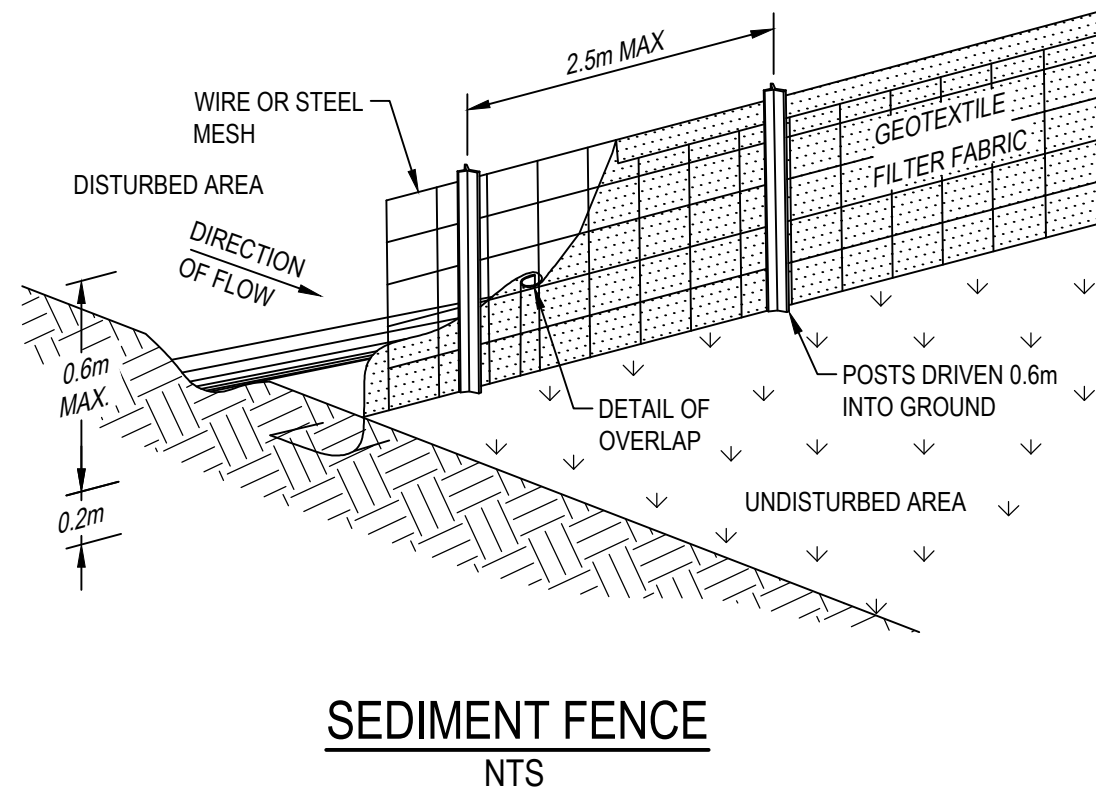
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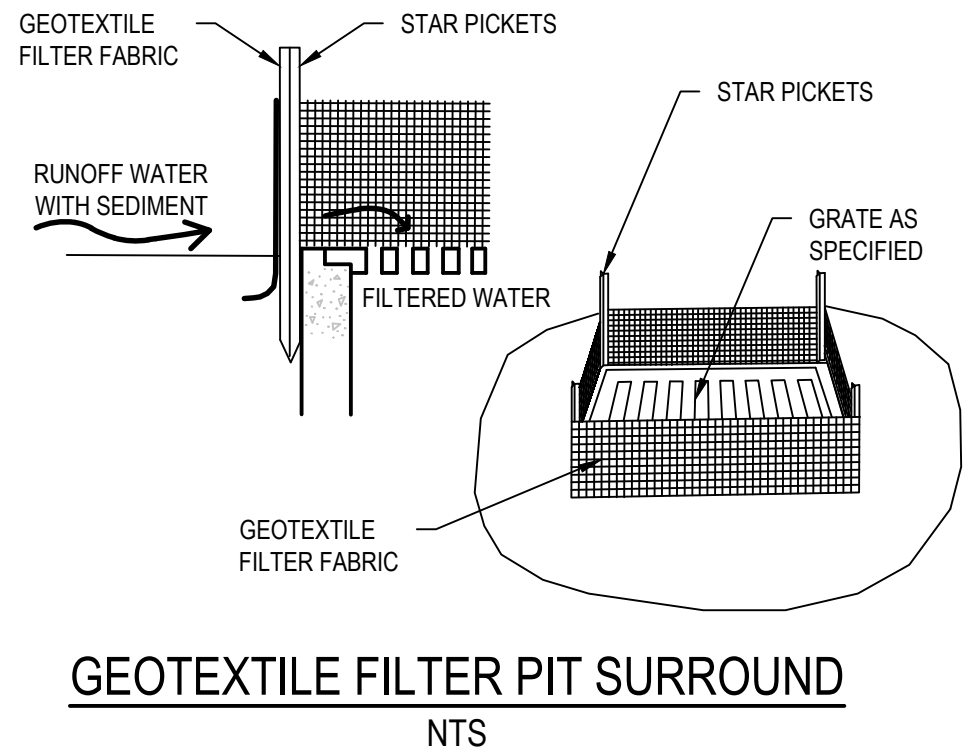
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Checked K.P.	Date FEB' 2022	
Designed K.P.	Date FEB' 2022	
Verified C.F.	Date FEB' 2022	
Approved		
Project PROPOSED DEVELOPMENT AT 47-49 CURRY STREET WALLSEND 2287		Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES
Title STORMWATER DETAILS SHEET 3 OSD RAINWATER TANK DETAILS		Datum AHD
		Scale AS SHOWN
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		Drawing Number 80822047-CI-2103
		Revision 5



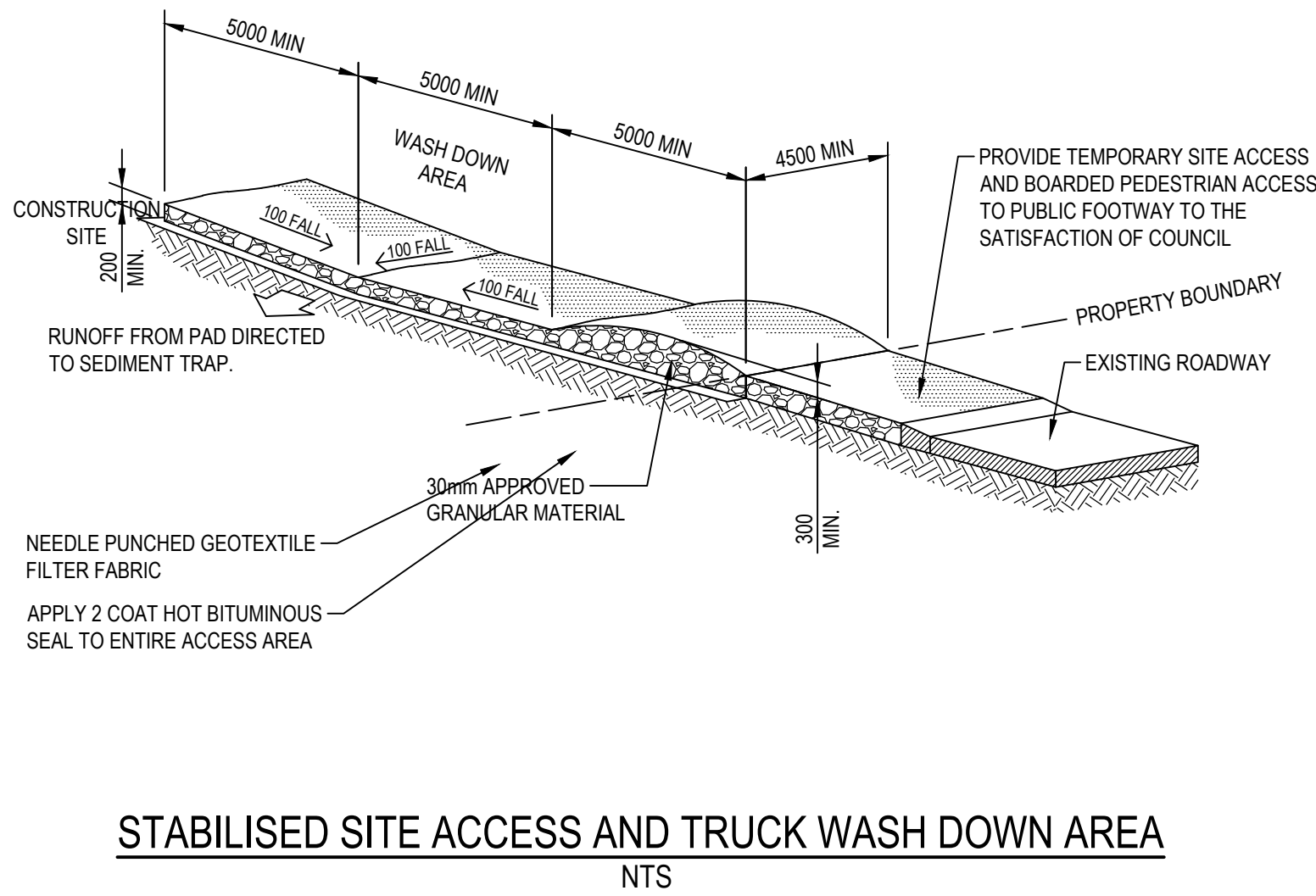
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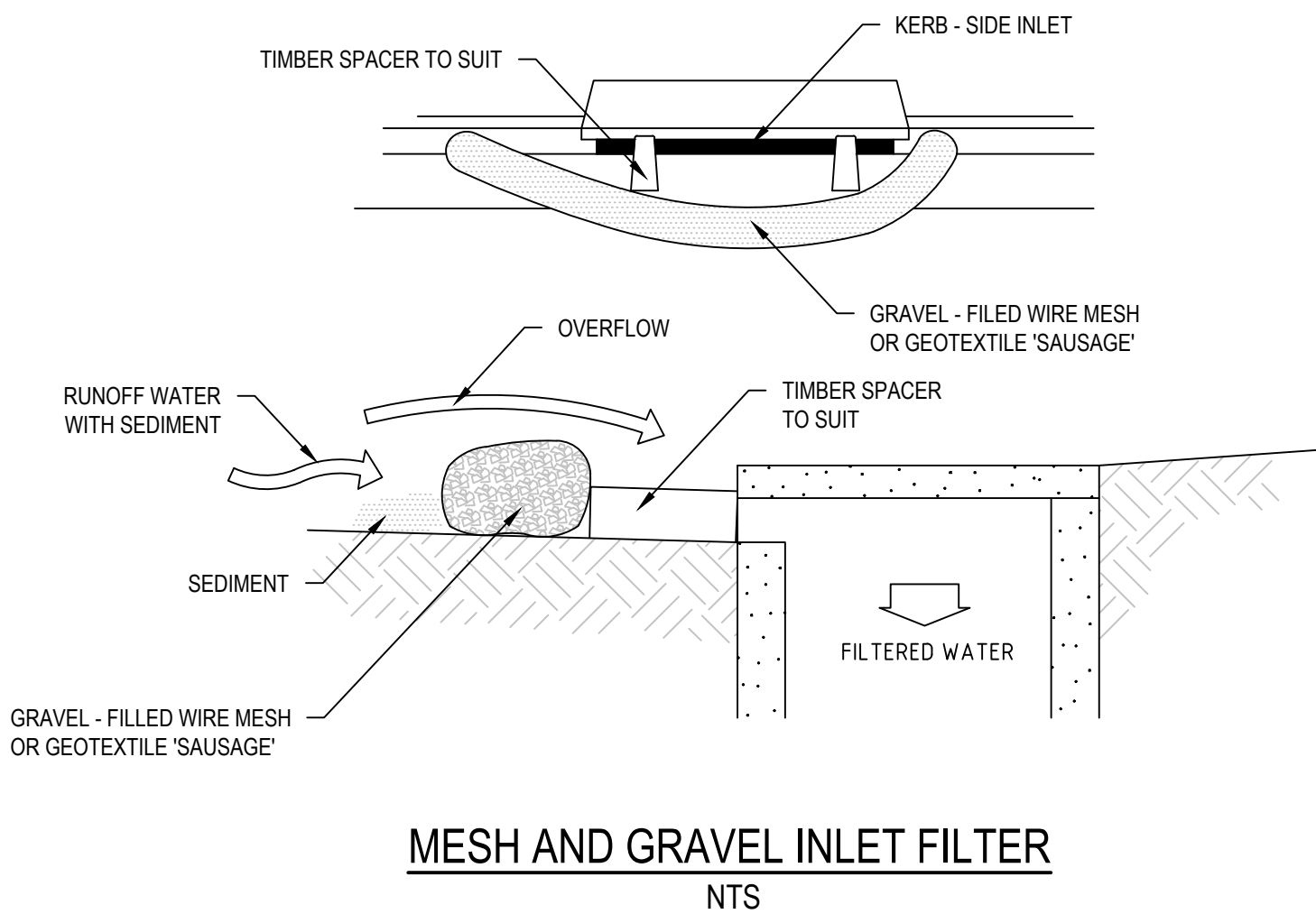
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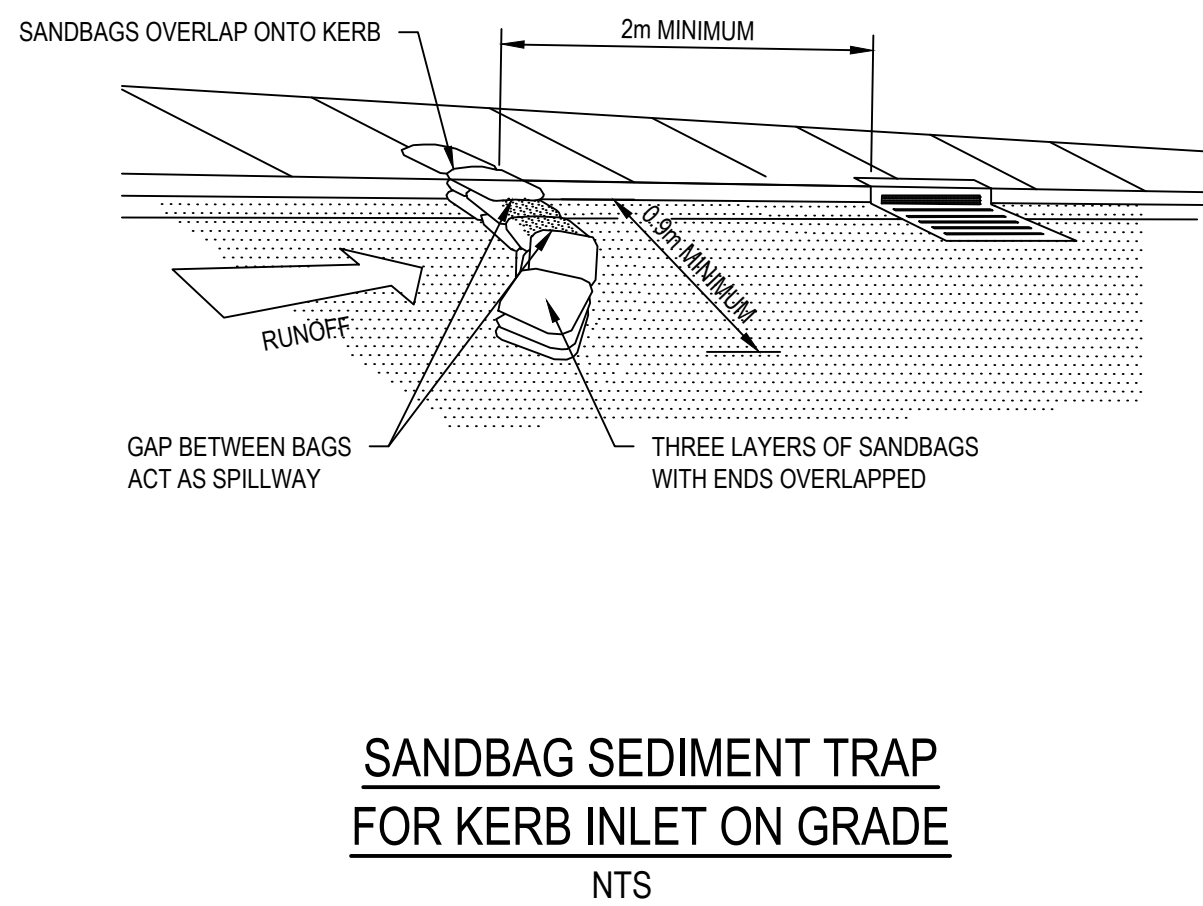
GEOTEXTILE FILTER PIT SURROUND
NTS



STABILISED SITE ACCESS AND TRUCK WASH DOWN AREA
NTS



MESH AND GRAVEL INLET FILTER
NTS



SANDBAG SEDIMENT TRAP
FOR KERB INLET ON GRADE
NTS

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Verified C.F. Date FEB' 2022
Approved

Client LAHC & SAMCRAWFORD ARCHITECTS
Project PROPOSED DEVELOPMENT AT
47-49 CURRY STREET
WALLSEND 2287
Title SEDIMENTATION AND EROSION CONTROL
DETAILS

Status FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION PURPOSES
Datum AHD Scale AS SHOWN Size A1
Drawing Number 80822047-CI-2201 Revision 5