- OPERATIONAL WORKS -

PROPOSED INDUSTRIAL DEVELOPMENT (3 BUILDING)

AT

LOT 1174, 1175, 1176, 1177 CARGEGIE STREET, AURA, BARINGA QLD 4551

FOR:- SHADCON PTY LTD

DRAWING REGISTER

DRAWING NUMBER	DESCRIPTION	REVISION	DATE DRAWING ISSUED
C1	COVER PAGE, NOTES, DETAILS	G	25/11/2022
C2	DRIVEWAY PLAN, DETAILS	H	25/11/2022
C3	DRIVEWAY LEVELS PLAN, DRIVEWAY CROSS SECTIONS	G	25/11/2022
C4	MRV TURNING CIRCLES	E	25/11/2022
C5	WCV/AV TURNING CIRCLES	D	25/11/2022

CAUTION WITH EXISTING SERVICES & STRUCTURES:
THE CONTRACTOR IS TO DETERMINE THE EXACT LOCATION OF ALL EXISTING SERVICES IN THE VICINITY OF THE PROPOSED WORKS PRIOR TO THE START OF ANY CONSTRUCTION. THE COST OF ANY RECTIFICATION WORKS DUE TO DAMAGE TO EXISTING SERVICES SHALL BE BORNE BY THE CONTRACTOR.

FOR THE INSPECTION OF DRIVEWAYS AND CROSSOVERS, ETC, IT IS THE BUILDERS RESPONSIBILITY TO ENSURE ALL GRADIENTS AND SETOUT IS CORRECT. THE ENGINEER WILL ONLY INSPECT REINFORCEMENT, COVER AND SLAB THICKNESSES. A SURVEY DRAWING WILL BE REQUIRED CONFIRMING THE GRADES AND SETOUT TO ENABLE THE ENGINEER TO CERTIFY THE CONSTRUCTION.

VERY IMPORTANT BUILDING AREA TO BE PROOF ROLLED AS SPECIFIED.

NOTE: PROVIDE SHEET PILING AS REQUIRED.

ALL STEELWORK TO BE PROTECTED AS PER AS2312 & 'TABLE 3.4.4.2 PROTECTIVE COATINGS FOR STEELWORK' OF NCC, VOLUME 2, PART 3.4.4.4 CORROSION PROTECTION, INCLUDING BOLTS, CLEAT PLATES & FIXINGS, WHICHEVER IS MORE SEVERE.

NOTE: PANEL JOINTS LINE UP WITH ROOF BEAMS OR BRACING, UNO.

WATERPROOFING OF WALLS AND SLABS IS TO BE TO THE BUILDERS SPECIFICATIONS.

IT IS THE BUILDERS RESPONSIBILITY TO CONFIRM ALL LEVELS, SETOUT AND DIMENSIONS ON SITE BEFORE COMMENCING ANY WORK.

DO NOT SUBSTITUTE ALTERNATIVE MEMBER TYPES OR SIZES WITHOUT ENGINEERS WRITTEN APPROVAL.

CHANGES ON SITE WILL REQUIRE DRAWINGS TO BE UPDATED PRIOR TO THESE WORKS COMMENCING ON SITE, AS PER REGULATORY REQUIREMENTS.

LEGEND

UNO	UNLESS NOTED OTHERWISE
CRS	CENTRES
MAX	MAXIMUM
MIN	MINIMUM
HOR	HORIZONTAL
VER	VERTICAL
REINF'T	REINFORCEMENT
HD	HOLD DOWN
SS	STAINLESS STEEL
CFW	CONTINUOUS FILLET WELD
FSBW	FULL STRENGTH BUTT WELD
CB	CONSTRUCTION BREAK
NTS	NOT TO SCALE
U/S	UNDERSIDE

(C-) CONCRETE NOTES

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600.
2. ALL SLABS ON GROUND TO BE CAST ON A WATERPROOF MEMBRANE ON A 50mm SAND BED. MEMBRANE IS TO EXTEND UNDER INTEGRAL GROUND BEAMS AND IS TO BE EXTENDED A MINIMUM OF 200mm DOWN THE FACE OF DEEP BEAMS. MEMBRANE IS TO BE POLYETHYLENE FILM 0.2mm THICK AND IMPACT RESISTANT. LAP JOINTS 200mm AND SEAL THE LAPS WITH WATERPROOF ADHESIVE TAPE. SEAL PENETRATIONS WITH WATERPROOF TAPE.
3. PROVIDE A TERMITE BARRIER IN ACCORDANCE WITH AS3660.1.
4. ALL CONCRETE TO BE VIBRATED.
5. CONCRETE QUALITY SHALL BE NORMAL CLASS, UNLESS NOTED OTHERWISE.
   MAXIMUM AGGREGATE SIZE = 20mm.
   SLUMP = 80mm +/- 15mm.
6. CONCRETE STRENGTHS FOR PARTICULAR ELEMENTS SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE.

ELEMENT	CONCRETE STRENGTH
FOOTINGS	N25
SLABS ON GROUND	N25

7. THE CONTRACTOR IS TO NOTIFY THE SUPERINTENDENT IN WRITING OF ANY ADMIXTURES TO BE USED IN THE CONCRETE MIX. NO ADMIXTURES TO BE USED WITHOUT APPROVAL OF THE SUPERINTENDENT. CALCIUM CHLORIDE WILL NOT BE PERMITTED AND SHALL NOT BE USED UNDER ANY CIRCUMSTANCES.
8. CONCRETE TESTING - ALL TESTING SHALL BE BY 'PROJECT ASSESSMENT' AS PER AS3600.
9. ALL EXPOSED FORMED SURFACES SHALL HAVE CLASS 2 SURFACE FINISH TO AS3610 AND ALL UNSEEN AREAS SHALL HAVE CLASS 4 SURFACE FINISH TO AS3610.
10. MINIMUM COVER TO ALL REINFORCEMENT, UNLESS NOTED OTHERWISE SHALL BE AS FOLLOWS:-

ELEMENT	FORMED- NOT EXPOSED TO WEATHER	FORMED- EXPOSED TO GROUND, WATER OR WEATHER	NOT FORMED- CAST AGAINST GROUND, ETC.
FOOTINGS	--	50	60
SLAB	30	40	60

11. NO HOLES GREATER THAN Ø150mm, CHASES OR EMBEDMENT OF PIPES GREATER THAN Φ40mm OTHER THAN THOSE SHOWN OF THE STRUCTURAL DRAWINGS SHALL BE MADE IN THE CONCRETE SLABS WITHOUT PRIOR APPROVAL OF THE SUPERINTENDENT. FOR ALL OTHER CONCRETE MEMBERS NO PENETRATION, CHASES OR EMBEDMENT SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE SUPERINTENDENT.
12. CONDUITS CAST INTO CONCRETE MEMBERS SHALL BE SPACED AT MAXIMUM DISTANCE POSSIBLE AND UNDER NO CIRCUMSTANCES CLOSER THAN A CLEAR SPACE SPACING OF TWICE THE LARGER CONDUIT DIAMETER FROM PARALLEL REINFORCEMENT OR ANY OTHER CONDUIT.
13. ALL REINFORCEMENT SHALL BE SECURELY SUPPORTED IN ITS CORRECT POSITION DURING CONCRETING BY APPROVED PLASTIC TIPPED BAR CHAIRS, MAXIMUM CENTRES OF SUPPORTING CHAIRS SHALL BE 600mm FOR FABRIC, 600mm FOR BARS UP TO Ø12mm, 900mm FOR BARS 16mm AND GREATER.
14. CONSTRUCTION BREAK LOCATION AND DETAILS SHALL BE APPROVED BY THE SUPERINTENDENT PRIOR TO COMMENCEMENT.
15. THE FACE OF ALL CONCRETE AGAINST WHICH NEW CONCRETE IS TO BE CAST IS TO BE THOROUGHLY MECHANICALLY SCABBLED, FULLY EXPOSING THE AGGREGATE MATRIX.
16. ALL CONCRETE SURFACES ARE TO CURED FOR SEVEN DAYS AFTER CASTING USING A METHOD APPROVED BY THE SUPERINTENDENT.
17. FIRST SLAB BAR IS TO BE POSITIONED MAXIMUM 100mm FROM FACE OF BEAMS, R.C. WALLS AND SLAB THICKENING PARALLEL TO BAR.
18. EXACT SIZE AND LOCATION OF PENETRATIONS ARE TO BE OBTAINED FROM WORKSHOP DRAWINGS PRIOR TO SCHEDULING OF REINFORCEMENT, AND ARE NOT TO EXCEED DIMENSIONS WHERE SHOWN ON STRUCTURAL DRAWINGS.
19. REINFORCEMENT IS SHOWN DIAGRAMMATICALLY AND NOT NECESSARILY IN TRUE PROJECTION.
20. UNDER NO CIRCUMSTANCES IS REINFORCEMENT TO BE CUT ON SITE TO CLEAR PENETRATION WITHOUT APPROVAL BY THE SUPERINTENDENT. DISPLACE REINFORCEMENT SLIGHTLY AS NECESSARY TO CLEAR BLOCKOUTS.
21. SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN THE POSITIONS SHOWN OR AS OTHERWISE APPROVED BY THE SUPERINTENDENT.
22. WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED WITHOUT APPROVAL BY THE SUPERINTENDENT.
23. REINFORCEMENT SHALL BE BENT COLD IN ACCORDANCE WITH AS3600 EXCEPT WHERE APPROVAL BY THE SUPERINTENDENT. NO REBENDING SHALL BE PERMITTED UNLESS APPROVED BY THE SUPERINTENDENT.

EARTHWORKS PROCEDURES

REFER TO THE FOUNDATION INVESTIGATION REPORT FOR SOIL CONDITIONS EXPECTED ON SITE. IF ACTUAL SOIL CONDITIONS VARY SIGNIFICANTLY FROM THOSE IN THE REPORT, CONTACT ENGINEER FOR ADVICE.

EARTHWORK PROCEDURES SHOULD BE CARRIED OUT IN A RESPONSIBLE MANNER IN ACCORDANCE WITH AS3798-1996 'GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS'.

EARTHWORK PROCEDURES SHOULD INCLUDE THE FOLLOWING:-

- CLEARING, STRIPPING AND GRUBBING SHOULD BE CARRIED OUT IN AREAS SUBJECT TO EARTHWORKS. ALL SOILS CONTAINING ORGANIC MATTER SHOULD BE STRIPPED FROM THE CONSTRUCTION AREA. THIS MATERIAL IS NOT CONSIDERED SUITABLE FOR USE AS STRUCTURAL FILL. DEEPER STRIPPING MAY BE REQUIRED TO REMOVE TREE ROOTS.
- DEPRESSIONS FORMED BY THE REMOVAL OF VEGETATION, EG. TREE STUMPS, OR OTHER UNDERGROUND ELEMENTS, SHOULD HAVE ALL DISTURBED WEAKENED SOIL CLEANED OUT AND BE BACKFILLED WITH COMPACTED SELECT MATERIAL.
- FOLLOWING SITE STRIPPING AND PRIOR TO ANY FILLING WORKS THE EXPOSED GROUND SURFACE SHOULD BE PROOF ROLLED USING A VEHICLE WITH A TARE OF AT LEAST 3 TONNES. AREAS DEMONSTRATING EXCESSIVE MOVEMENT SHOULD BE TREATED (DRIED AND RECOMPACTED) OR REMOVED AND REPLACED WITH COMPACTED FILL.
- FILLING SHOULD BE COMPACTED AT MOISTURE CONTENTS WITHIN THE RANGE OF -2% TO +0.5% OF OPTIMUM MOISTURE CONTENT FOR STANDARD COMPACTION. CONFIRMATORY TESTING MUST BE CARRIED OUT AT REGULAR INTERVALS. A MINIMUM OF TWO TESTS PER 300mm VERTICAL INTERVAL IS RECOMMENDED WHERE STRUCTURAL FILL HEIGHTS ARE TO EXCEED 300mm AND A MINIMUM OF 1 TEST PER 100m^3 OF COMPACTED FILL. SELECT FILL SHOULD HAVE A MAXIMUM PARTICLE SIZE OF 100MM FOR UNCOMPACTED LAYER THICKNESS OF 200MM AND SHALL BE COMPACTED BY REPEATED ROLLING WITH A COMPACTOR TO ACHIEVE THE SPECIFIED DENSITIES.
- GUIDELINES FOR MINIMUM RELATIVE COMPACTION VALUES FOR IN-SITU SOILS AND IMPORTED FILL FOR THE BUILDING AND PAVEMENTS ARE PRESENTED BELOW.

Location	Minimum Dry Density Compaction
Building Area	98
Pavement Area	
a) <0.3m below pavement subgrade	95
b) <0.3m below pavement subgrade	98

Note: The recommended Compactions are percentages of the maximum dry density determined by Australian Standard 1289 5.1.1 (Standard Compaction).

- BACKFILLING FOR SERVICE TRENCHES, ETC SHOULD USE GOOD QUALITY MATERIAL. THE BACKFILL SHOULD BE PLACED IN UNIFORM LAYERS OVER THE FULL WIDTH OF THE EXCAVATIONS WITH THE LAYERS NOT EXCEEDING 200mm THICKNESS, LOOSELY PLACED. THE BACKFILL MATERIAL SHOULD BE COMPACTED TO THE SPECIFICATIONS OUTLINES ABOVE FOR IN-SITU OR IMPORTED COHESIVE MATERIAL.
- SITE DRAINAGE AND SILT PROTECTION MEASURES MUST BE INSTALLED PRIOR TO CONSTRUCTION COMMENCING.
- THE SITE MUST BE MAINTAINED IN A FREE DRAINING STATE AT ALL TIMES, NO WATER SHALL BE ALLOWED TO POND ADJACENT ANY BUILDING PADS.
- ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT COUNCIL STANDARDS, MAIN ROAD STANDARD DRAWINGS AND IPWEAQ STANDARD DRAWINGS.
- CARPARK DESIGN BY OTHERS. REFER ARCHITECTURAL DRAWINGS FOR DESIGN AND VEHICLE MOVEMENTS, ETC.
- ALL LINEMARKING AND SIGNAGE SHALL BE IN ACCORDANCE WITH DMR "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".

(G-) GENERAL NOTES

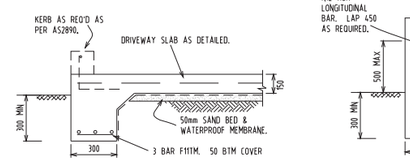
1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE SUPERINTENDENT FOR DECISION BEFORE PROCEEDING WITH THE WORK.
2. ALL DIMENSIONS RELEVANT TO SETTING OUT AND OFF-SITE WORK SHALL BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION AND FABRICATION IS COMMENCED. THE ENGINEER'S DRAWINGS SHALL NOT BE SCALED.
3. DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE STRUCTURE IN A STABLE CONDITION AND ENSURE NO PART IS OVER-STRESSED.
4. WHERE EXCAVATION WORK IS TO BE CARRIED OUT ADJACENT TO EXISTING FOOTINGS, THE EXACT LEVEL OF THE UNDERSIDE OF THE FOOTINGS SHALL BE OBTAINED BY TEST PITS PRIOR TO EXCAVATION. UNDERPINNING AND SHORING OF THE STRUCTURE SHALL BE CARRIED OUT AS REQUIRED AND THE EXISTING STRUCTURE SHALL BE MAINTAINED IN A STABLE AND UNDAMAGED CONDITION.
5. WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE RELEVANT CURRENT SAA CODES (INCLUDING ALL AMENDMENTS) AND THE STATUTORY AUTHORITIES REQUIREMENTS, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
6. ALL DIMENSIONS ARE IN MILLIMETRES, UNLESS NOTES OTHERWISE. ALL LEVELS ARE EXPRESSED IN METRES.
7. CONSTRUCTION OF ANY MASONRY WALLS OR OTHER PERMANENT LOADING MUST NOT BE BUILT ON CONCRETE SLABS OR BEAMS UNTIL FORMWORK SUPPORTING SAME HAS BEEN REMOVED. HOWEVER, PROPS AND FORMWORK SHALL NOT BE REMOVED BEFORE MINIMUM TIME SPECIFIED. DISTRIBUTE MASONRY OF SLAB ADJACENT TO ITS FINAL POSITION PRIOR TO CONSTRUCTING WALLS.

(F-) FOOTING NOTES

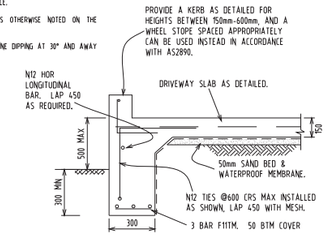
1. REFER GOLDER & ASSOCIATES REPORT No. 0068126(A) JANUARY, 2001 FOR SOIL CONDITIONS LIKELY TO BE ENCOUNTERED ON SITE.
2. ALL FOOTING EXCAVATIONS SHALL BE CLEANED OF LOOSE MATERIALS AND WATER.
3. WHERE VERIFIED FOUNDATION MATERIAL IS BELOW THE UNDERSIDE OF FOOTINGS AS DETAILED, BACKFILL ADDITIONAL EXCAVATION WITH WEAK MIX CONCRETE.
4. SIDES OF FOOTINGS SHALL BE FORMED AS NECESSARY WHEN EXCAVATED FACE IS NOT STABLE.
5. ALL WALLS AND COLUMNS SHALL BE CONCENTRIC WITH SUPPORTING FOOTINGS, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
6. UNLESS APPROVED BY THE SUPERINTENDENT, EXCAVATIONS SHALL NOT EXTEND BELOW A LINE DIPPING AT 30° AND AWAY FROM THE NEAREST UNDERSIDE CORNER OF ANY FOOTINGS.

SITE LOCATION
(n.t.s)

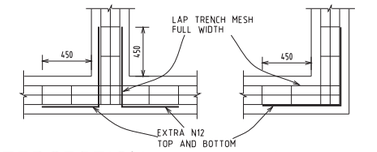
PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL
Approval no: DEV2022/1348
Date: 8 December 2022
Queensland Government



EB DETAILS

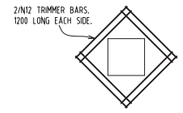


EB1 DETAILS

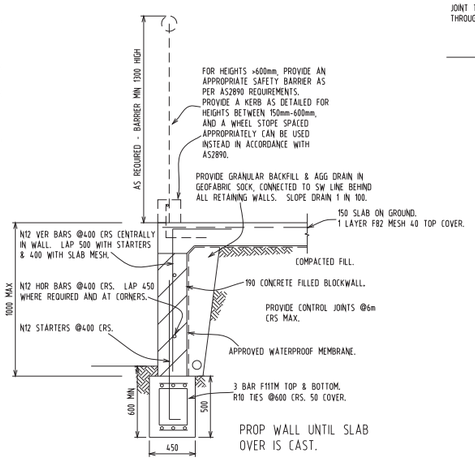


INTERSECTION EDGE BEAM

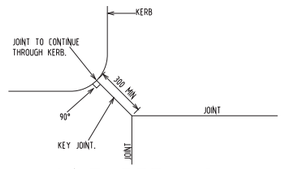
CORNER EDGE BEAM



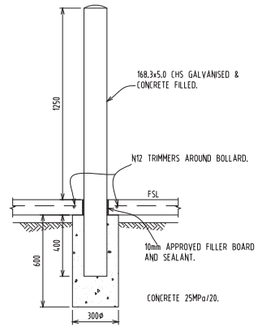
TRIMMER BAR PIT DETAIL
SCALE: 1:50



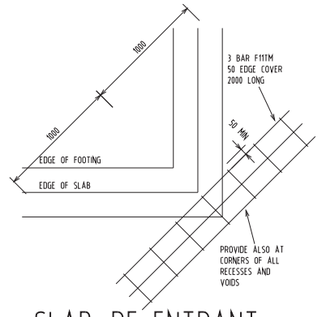
RW1 DETAILS
(<1m RETAINING)



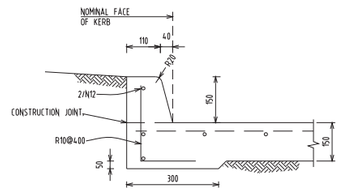
JOINT DETAILS AT CORNERS
(NOT TO SCALE)



150Ø BOLLARD DETAIL

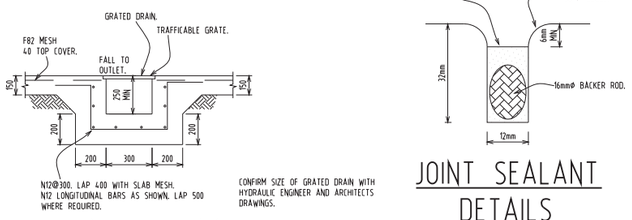


SLAB RE-ENTRANT CORNER DETAIL
TYPICAL FOR ALL CORNERS OF ALL RECESSES AND VOIDS

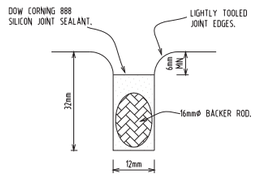


BARRIER KERB (TYPE B)

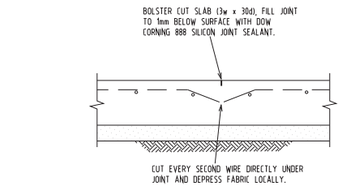
(NOT TO SCALE)
N32 CONCRETE
PAVEMENT JOINTS TO EXTEND THROUGH KERB WITH ADDITIONAL TOOLED JOINTS AT MIDPOINTS (3000 CRS MAX).



GRATED DRAIN DETIALS

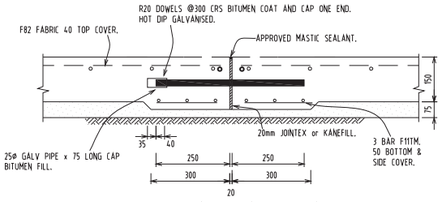


JOINT SEALANT DETAILS
(NOT TO SCALE)

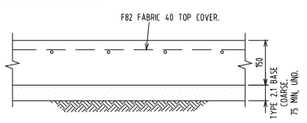


CONTRACTION JOINT

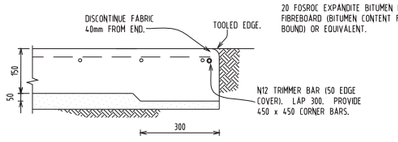
(NOT TO SCALE)
N32 CONCRETE
ALTERNATIVELY: SAW CUT SLAB IN LIEU OF BOLSTER CUT 3w x 30d WITHIN 24 HOURS OF CASTING SEAL AS ABOVE.



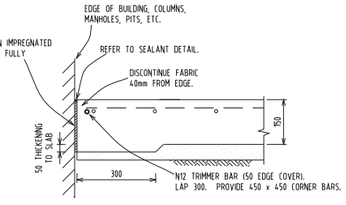
EXPANSION JOINT
(NOT TO SCALE)



CARPARK SLAB DETAIL
(NOT TO SCALE)
N32 CONCRETE



SLAB EDGE THICKENING (ET)
(NOT TO SCALE)
N32 CONCRETE



ISOLATION JOINT
(NOT TO SCALE)

No.	DATE	AMENDMENT / ISSUE
G	25 NOV 22	DRIVEWAY LEVELS UPDATED (AW)
F	09 NOV 22	AV TURNING CIRCLES ADDED (AW)
E	07 NOV 22	LAYOUT UPDATED (AW)
D	03 NOV 22	LAYOUT UPDATED (AW)
C	24 AUG 22	WCV DETAILS ADDED (AW)
B	09 AUG 22	PADMOUNT REMOVED (AW)
A	03 AUG 22	ORIGINAL ISSUE (AW)

This drawing is not to be copied or amended without written permission from Rienmac Consulting Engineers.

CLIENT: SHADCON PTY LTD
PROJECT: PROPOSED INDUSTRIAL DEVELOPMENT (3 BUILDINGS)
ADDRESS: LOT 1174, 1175, 1176, 1177 CARNEGIE STREET, AURA, BARINGA QLD 4551
IT IS THE BUILDERS RESPONSIBILITY TO CONFIRM ALL LEVELS, SETOUT AND DIMENSIONS ON SITE BEFORE COMMENCING ANY WORK. REFER ANY DISCREPANCIES TO ENGINEER IMMEDIATELY.

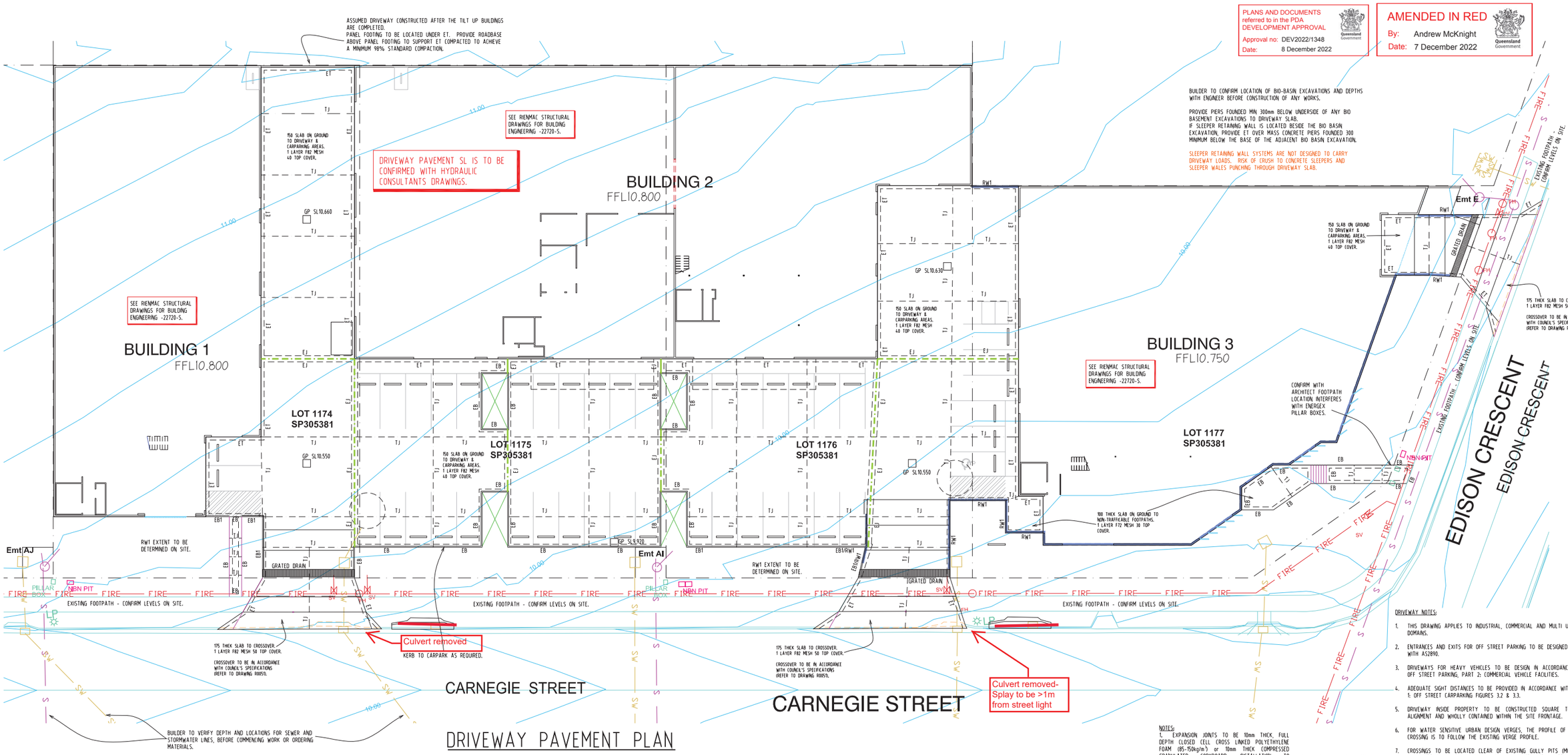
RIENMAC PTY LTD
CONSULTING CIVIL & STRUCTURAL ENGINEERS
A.B.N. 52 010 666 430
A.C.N. 010 666 430
SUNSHINE COAST OFFICE:
SUITE 5, FIRST FLOOR, SAINT CIRINO, 137 BRISBANE ROAD, (PO BOX 149)
MOOLOOLABA QLD 4557
Phone:- (07) 5349 0762
E:- info@rienmac.net W:- www.rienmac.net

DRAWING TITLE: - OPERATIONAL WORKS - COVER PAGE, NOTES DETAILS
PETER RIENECKER - RPEQ 2088
SUNSHINE COAST COUNCIL
LOT 1174, LOT 1175, LOT 1176, LOT 1177 ON SP306267.
REAL PROPERTY DESCRIPTION & COUNCIL:
DO NOT SCALE OFF DRAWINGS. A1

SCALES: 1:20
Draft: AW Design AW/PLR DATE: 8 JUL 2022
JOB NUMBER 22720 DWG No. C1 ISSUE G
SHEET 1 OF 4 CHECKED:

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL
Approval no: DEV2022/1348
Date: 8 December 2022
Queensland Government

AMENDED IN RED
By: Andrew McKnight
Date: 7 December 2022
Queensland Government



DRIVEWAY PAVEMENT PLAN

GP - GULLY PITS AS PER HYDRAULIC ENGINEERS DRAWINGS.

SEE HYDRAULIC DRAWINGS FOR STORMWATER DRAINAGE AND CONFIRM DRIVEWAY LEVELS WITH THEIR DRAWINGS.

RPD:

LOT 1174,1175, 1176, 1177 ON SP306267	
LOCAL AUTHORITY	SUNSHINE COAST COUNCIL
STREET/ROAD	CARNEGIE STREET,
SUBURB	AURA, BARINGA
LOT 1174 AREA	1506 sqm
LOT 1175 AREA	1506 sqm
LOT 1176 AREA	1506 sqm
LOT 1177 AREA	1649 sqm
TOTAL AREA	6,167 sqm

SITE HAS BEEN CLASSIFIED AS A CLASS 'M' MODERATELY REACTIVE SITE.
DO NOT PLANT TREES OR SHRUBS WITHIN 0.75 TIME THEIR MATURE HEIGHT FROM FOUNDATIONS. DO NOT LET WATER POND ADJACENT FOOTINGS.

FOUNDATION DESIGN IS BASED ON REPORT No. 14107 BY CSI PTY LTD. REFER TO THIS REPORT FOR SOIL CONDITIONS EXPECTED ON SITE. IF ACTUAL SOIL CONDITIONS VARY SIGNIFICANTLY FROM THOSE IN THE REPORT, CONTACT ENGINEER FOR RE-APPRAISAL OF FOOTING DESIGN.

ALL FOOTINGS TO BE FOUNDED IN MATERIAL OF MINIMUM SAFE BEARING CAPACITY 150kPa. ANY FILL MATERIAL BENEATH SLABS IS TO BE COMPACTED IN LAYERS TO ACHIEVE A MINIMUM UNIFORM DENSITY OF 98% STANDARD COMPACTION.

BEFORE, DURING AND AFTER ANY CONSTRUCTION, SITE DRAINAGE MUST DIRECT ALL SURFACE, SUBSURFACE AND ROOF WATER AWAY FROM ANY CONSTRUCTION AND TOWARD STORMWATER RUN-OFF AS PER COUNCIL SPECIFICATIONS. EXCESSIVE SOIL MOISTURE CAN WEAKEN THE BUILDING FOUNDATIONS. GUIDANCE CAN BE FOUND IN THE CSIRO INFORMATION SHEET 'GUIDE TO HOME OWNERS ON FOUNDATION MAINTENANCE AND FOOTING PERFORMANCE' or THE QBCC BOOKLET 'GUIDE TO PREVENTING STRUCTURAL DAMAGE TO YOUR HOME'.

CJ - FULL HEIGHT CONTROL JOINT TO MASONRY.

FOLLOWING SITE STRIPPING, SUBGRADE IS TO BE COMPACTED TO A MINIMUM OF 98% STANDARD COMPACTION.

DRIVEWAY AND CARPARKING SLAB TO BE 150 THICK WITH 1 LAYER F82 MESH 40 TOP COVER.

FOR CURVED DRIVEWAYS, MAXIMUM GRADES APPLY TO INSIDE EDGE OF CURVE.

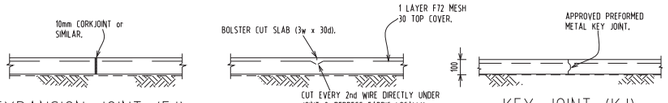
PROVIDE MINIMUM 75mm OF TYPE 2 BASE COARSE UNDER SLAB THROUGHOUT.

CONFIRM ALL STEPS AND FALLS TO SLAB WITH ARCHITECT'S AND HYDRAULIC ENGINEER'S DRAWINGS.

FOR THE INSPECTION OF DRIVEWAYS AND CROSSOVERS, ETC, IT IS THE BUILDERS RESPONSIBILITY TO ENSURE ALL GRADIENTS AND SETOUT IS CORRECT. THE ENGINEER WILL ONLY INSPECT REINFORCEMENT, COVER AND SLAB THICKNESSES. A SURVEY DRAWING WILL BE REQUIRED CONFIRMING THE GRADES AND SETOUT TO ENABLE THE ENGINEER TO CERTIFY THE CONSTRUCTION.

RETAINING WALL NOTES:

- PROVIDE CLEANOUT BLOCKS TO THE BASE OF ALL WALLS.
- FOOTINGS ARE TO BE FOUNDED IN MATERIAL OF MINIMUM SAFE BEARING CAPACITY 100kPa.
- ALL BLOCKWORK MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH AS3700 & F'c = 15MPa.
- MORTAR TO BE IN ACCORDANCE WITH AS A123 & SHALL BE MIXED IN THE FOLLOWING PROPORTIONS: CEMENT : 1; HYDRATED LIME = ½ CLEAN PIT SAND 4½.
- CONCRETE TO FOOTINGS F'c = N25.
- GROUT FILL TO BLOCKWALL F'c = 20MPa, SLUMP = 225mm, MAX AGG SIZE = 5mm.
- GROUT FILL TO BE RODDED USING A PLAIN ROUND BAR.
- DO NOT PLACE BACKFILL BEHIND RETAINING WALL UNTIL MINIMUM TEN DAYS AFTER GROUTING.
- PROVIDE CONTROL JOINTS AT 6m CRS MAX.



EXPANSION JOINT (EJ)

100 SLAB ON GROUND TO PATH. 1 LAYER F72 MESH 30 TOP COVER, 50 SIDE AND END COVER. PROVIDE:
- TOOLED JOINTS (TJ) AT 3m CRS MAX.
- KEYED JOINTS AT 9m CRS MAX.
- EXPANSION JOINTS AT 16m CRS MAX.

TOOLED JOINT (TJ)

ALTERNATIVELY: SAW CUT SLAB 3w x 30d WITHIN 24 HOURS OF CASTING.

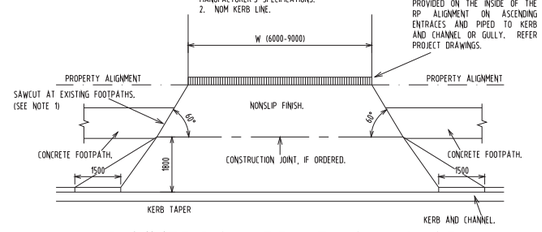
KEY JOINT (KJ)

PATH SLAB DETAILS

(TO BE FOUNDED ON MATERIAL OF MIN SAFE BEARING CAPACITY 100kPa.)

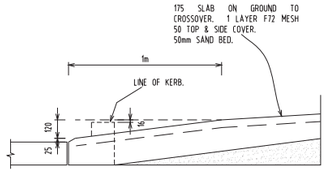
NOTES:
1. EXPANSION JOINTS TO BE 10mm THICK, FULL DEPTH CLOSED CELL CROSS LINKED POLYETHYLENE FOAM (85-150kg/m³) or 10mm THICK COMPRESSED GRANULATED CORKBOARD, INSTALLATION TO MANUFACTURER'S SPECIFICATIONS.
2. NOM KERB LINE.

A GRATED DRAIN MAY BE PROVIDED ON THE INSIDE OF THE RP ALIGNMENT ON ASCENDING ENTRACES AND PIPED TO KERB AND CHANNEL OR GULLY. REFER PROJECT DRAWINGS.



COMMERCIAL DRIVEWAY SLAB

(GENERAL WIDE FLARED)



DRIVEWAY CROSSING DETAILS

ALL DETAILS TO BE IN ACCORDANCE WITH COUNCIL REQUIREMENTS AND SPECIFICATIONS.

DRIVEWAY NOTES:

1. THIS DRAWING APPLIES TO INDUSTRIAL, COMMERCIAL AND MULTI UNIT RESIDENTIAL DOMAINS.
2. ENTRANCES AND EXITS FOR OFF STREET PARKING TO BE DESIGNED IN ACCORDANCE WITH AS2890.
3. DRIVEWAYS FOR HEAVY VEHICLES TO BE DESIGN IN ACCORDANCE WITH AS2890 OFF STREET PARKING, PART 2: COMMERCIAL VEHICLE FACILITIES.
4. ADEQUATE SIGHT DISTANCES TO BE PROVIDED IN ACCORDANCE WITH AS2890 PART 1: OFF STREET CARPARKING FIGURES 3.2 & 3.3.
5. DRIVEWAY INSIDE PROPERTY TO BE CONSTRUCTED SQUARE TO THE STREET ALIGNMENT AND WHOLLY CONTAINED WITHIN THE SITE FRONTAGE.
6. FOR WATER SENSITIVE URBAN DESIGN VERGES, THE PROFILE OF THE VEHICULAR CROSSING IS TO FOLLOW THE EXISTING VERGE PROFILE.
7. CROSSINGS TO BE LOCATED CLEAR OF EXISTING GULLY PITS (MIN 1m). WHERE THIS CANNOT BE ACHIEVED THE GULLY PIT AND ANY CONNECTING PIPEWORK SHALL BE RELOCATED AT THE PROPERTY OWNERS EXPENSE TO THE SATISFACTION OF COUNCIL.
8. PROOF ROLL SUBGRADE TO 200 BEYOND CONCRETE EDGE WITH 3 PASSES OF A (C10 ROLLER (or EQUIVALENT). NO DEFLECTION ON LAST PASS.
9. PLAIN CONCRETE SURFACES TO BE TRANSVERSE HEAVY BROOM FINISHED.
10. DECORATIVE SURFACES, WHERE APPROVED TO HAVE A 5mm MAX DEPTH VARIATION IN THE FINISHED SURFACE PROFILE.
11. CONTROL JOINTS ARE TO BE SEALED WITH A LOW MODULUS SELF PRIMING SEALANT TO THE MANUFACTURERS SPECIFICATION. CONTROL JOINT SPACING MAXIMUM 3m x 3m.
12. ALL SURFACES SUBJECT TO PEDESTRIAN TRAFFIC (INCLUDING VEHICLE CROSSINGS) ARE TO COMPLY WITH NOTE 30 ON STANDARD DRAWING RS-050.
13. CROSSINGS TO BE LOCATED CLEAR OF WATER AND SEWER MAIN FITTINGS AND MANHOLES. WHERE A CROSSING INCREASES OR DECREASES THE COVER OVER A MAIN THEN THE STANDARD COVER WILL BE REINSTATED. MINIMUM COVER AND TREATMENT TO OTHER SERVICE IS TO BE IN ACCORDANCE WITH THE SERVICE AUTHORITIES REQUIREMENTS.
14. ALL CONCRETE CONSTRUCTION TO COMPLY WITH THE REQUIREMENTS OF AS3600, CONCRETE CODE.
15. ALL CONCRETE TO BE GRADE N32 IN ACCORDANCE WITH AS1379.
16. ALL ADJACENT ASPHALT OR CONCRETE SURFACES AND PAVEMENTS TO BE SAW CUT.
17. VARIATIONS TO THE DESIGNS SHOWN ARE SUBJECT TO APPROVAL FROM RELEVANT COUNCIL.
18. REFER RS-049 FOR CROSSING PROHIBITED LOCATIONS.
19. ALL APPROPRIATE PERMITS MUST BE OBTAINED FROM COUNCIL, INCLUDING APPROVAL OF LOCATION AND LEVELS PRIOR TO EXCAVATION.
20. WHERE DIRECTED BY COUNCIL, TACTILE GROUND SURFACE INDICATORS ARE TO BE PROVIDED ADJACENT TO THE CROSSING IN ACCORDANCE TO AS1428.4.
21. VALVES, HYDRANTS LOCATED WITHIN THE CROSSING SHALL HAVE HDPE SURROUND OR EQUIVALENT PLACED BETWEEN THE SERVICE LID AND THE CONCRETE. FOR ANY ALTERATIONS TO LEVELS CONTACT RELEVANT AUTHORITY PRIOR TO CONCRETE POUR.
22. ALL DIMENSIONS ARE IN MILLIMETRES, UNLESS SHOWN OTHERWISE.

This drawing is not to be copied or amended without written permission from Rienmac Consulting Engineers.

No.	DATE	AMENDMENT / ISSUE
H	25 NOV 22	DRIVEWAY LEVELS UPDATED (AW)
G	09 NOV 22	AMENDMENT (AW)
F	08 NOV 22	AMENDMENT (AW)
E	07 NOV 22	LAYOUT UPDATED (AW)
D	03 NOV 22	LAYOUT UPDATED (AW)
C	24 AUG 22	WCV DETAILS ADDED (AW)
B	09 AUG 22	PADMOUNT REMOVED (AW)
A	03 AUG 22	ORIGINAL ISSUE (AW)

CLIENT: SHADCON PTY LTD
PROJECT: PROPOSED INDUSTRIAL DEVELOPMENT (3 BUILDINGS)
ADDRESS: LOT 1174, 1175, 1176, 1177 CARNEGIE STREET, AURA, BARINGA, QLD, 4551
IT IS THE BUILDERS RESPONSIBILITY TO CHECK ALL LEVELS, SETOUT AND DIMENSIONS ON SITE BEFORE COMMENCING ANY WORK. REFER ANY DISCREPANCIES TO ENGINEER IMMEDIATELY.

RIENMAC PTY LTD
CONSULTING CIVIL & STRUCTURAL ENGINEERS
A.B.N. 52 010 666 430
A.C.N. 010 666 430
SUNSHINE COAST OFFICE:
SUITE 5, FIRST FLOOR, SAINT LIRINO, 137 BRISBANE ROAD, (PO BOX 149)
MOOLOOLABA QLD 4557
Phone:- (07) 5349 0762
E:- info@rienmac.net W:- www.rienmac.net

DRAWING TITLE:
- OPERATIONAL WORKS -
DRIVEWAY PAVEMENT PLAN DETAILS

SUNSHINE COAST COUNCIL
LOT 1174, LOT 1175, LOT 1176, LOT 1177 ON SP306267.
REAL PROPERTY DESCRIPTION & COUNCIL:

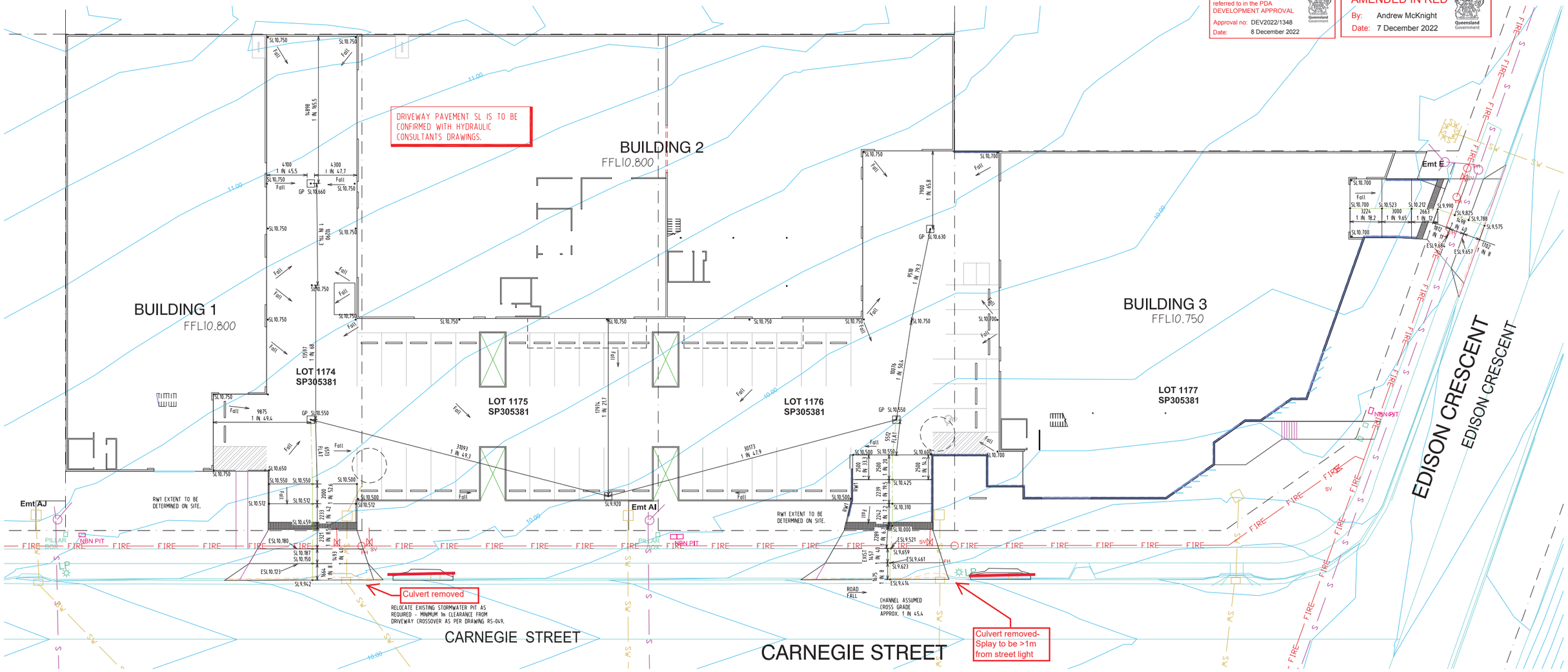
PETER RIENECKER - RPEQ 2088

DO NOT SCALE OFF DRAWINGS.

SCALES: 1:200, 1:20			
Draft: AW Design: AW/PLR	DATE: 8 JUL 2022		
22720	C2	H	
JOB NUMBER	DWG No.	ISSUE	
A1	SHEET 2 OF 5	CHECKED:	

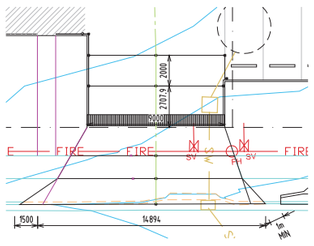
PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL
Approval no: DEV2022/1348
Date: 8 December 2022
Queensland Government

AMENDED IN RED
By: Andrew McKnight
Date: 7 December 2022
Queensland Government



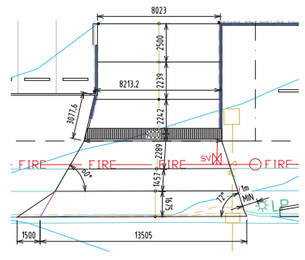
LEVELS SHOWN ON DRIVEWAY LEVEL PLAN ARE TAKEN AS THE DRIVEWAY SURFACE LEVELS TO CREATE FALLS TO DRAINAGE AS PER HYDRAULIC ENGINEERS DRAWINGS.

DRIVEWAY LEVEL PLAN



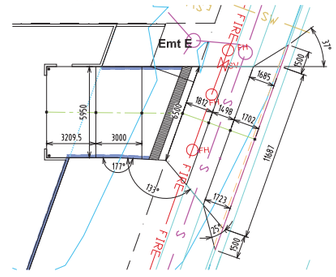
CARNEGIE DRIVEWAY 1

(DIMENSIONS)



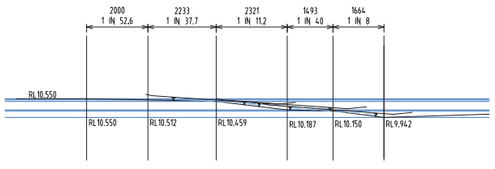
CARNEGIE DRIVEWAY 2

(DIMENSIONS)



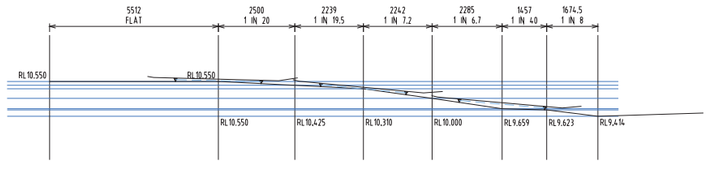
EDISON DRIVEWAY

(DIMENSIONS)



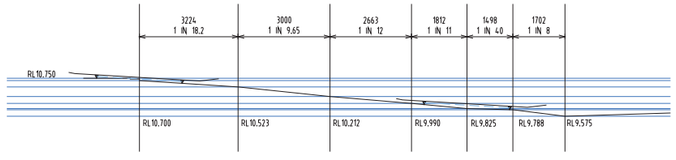
CARNEGIE CRESCENT DRIVEWAY

(BUILDING 1/2)



CARNEGIE CRESCENT DRIVEWAY

(BUILDING 2/3)



EDISON CRESCENT DRIVEWAY

(BUILDING 3)

This drawing is not to be copied or amended without written permission from Rienmac Consulting Engineers.

No.	DATE	AMENDMENT / ISSUE
G	25 NOV 22	DRIVEWAY LEVELS UPDATED (AW)
F	09 NOV 22	LAYOUT UPDATED (AW)
E	07 NOV 22	LAYOUT UPDATED (AW)
D	03 NOV 22	LAYOUT UPDATED (AW)
C	24 AUG 22	WCV DETAILS ADDED (AW)
B	09 AUG 22	PADMOUNT REMOVED (AW)
A	03 AUG 22	ORIGINAL ISSUE (AW)

CLIENT:
SHADCON PTY LTD

PROJECT:
PROPOSED INDUSTRIAL DEVELOPMENT (3 BUILDINGS)

ADDRESS:
LOT 1174, 1175, 1176, 1177 CARNEGIE STREET, AURA, BARINGA, QLD, 4551

IT IS THE BUILDERS RESPONSIBILITY TO CHECK ALL LEVELS, LAYOUT AND DIMENSIONS ON SITE BEFORE COMMENCING ANY WORK. REFER ANY DISCREPANCIES TO ENGINEER IMMEDIATELY.

RIENMAC PTY LTD
CONSULTING CIVIL & STRUCTURAL ENGINEERS
A.B.N. 52 010 666 430
A.C.N. 010 666 430
SUNSHINE COAST OFFICE:
SUITE 5, FIRST FLOOR, SAINT CIRINO, 137 BRISBANE ROAD, (PO BOX 149)
MOOLOOLABA QLD 4557
Phone:- (07) 5349 0762
E:- info@rienmac.net
W:- www.rienmac.net

DRAWING TITLE:
- OPERATIONAL WORKS -
DRIVEWAY LEVEL PLAN
DRIVEWAY CROSS SECTIONS

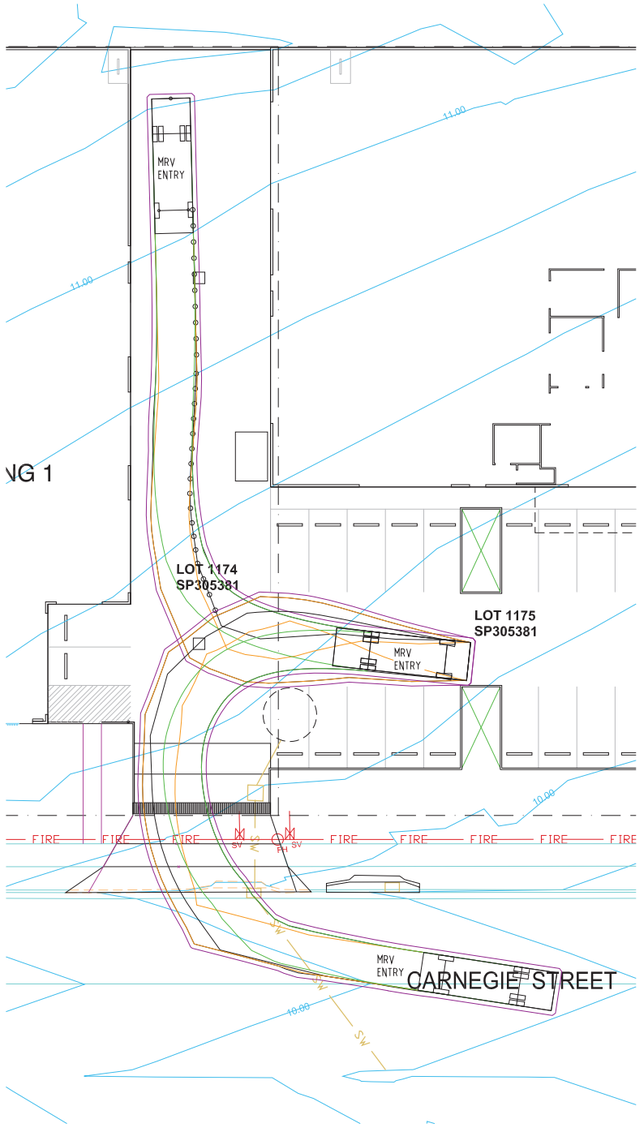
PETER RIENECKER - RPEQ 2088

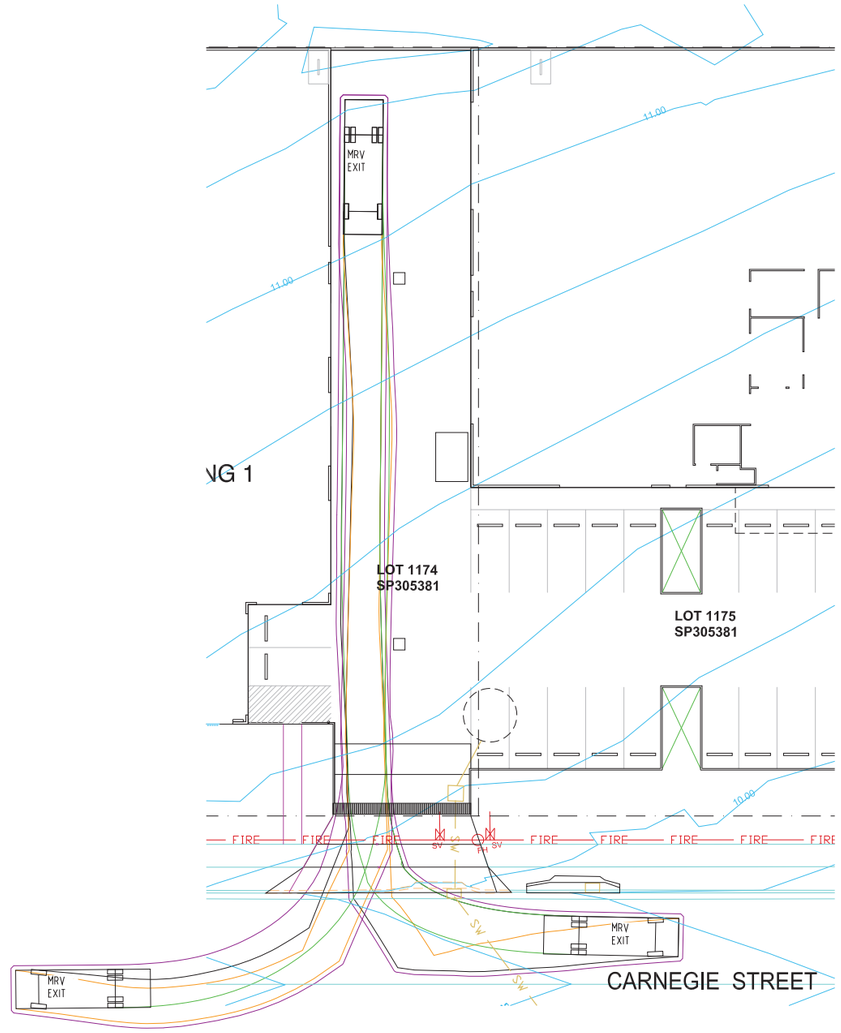
SUNSHINE COAST COUNCIL
LOT 1174, LOT 1175, LOT 1176, LOT 1177 ON SP306267.
REAL PROPERTY DESCRIPTION & COUNCIL:

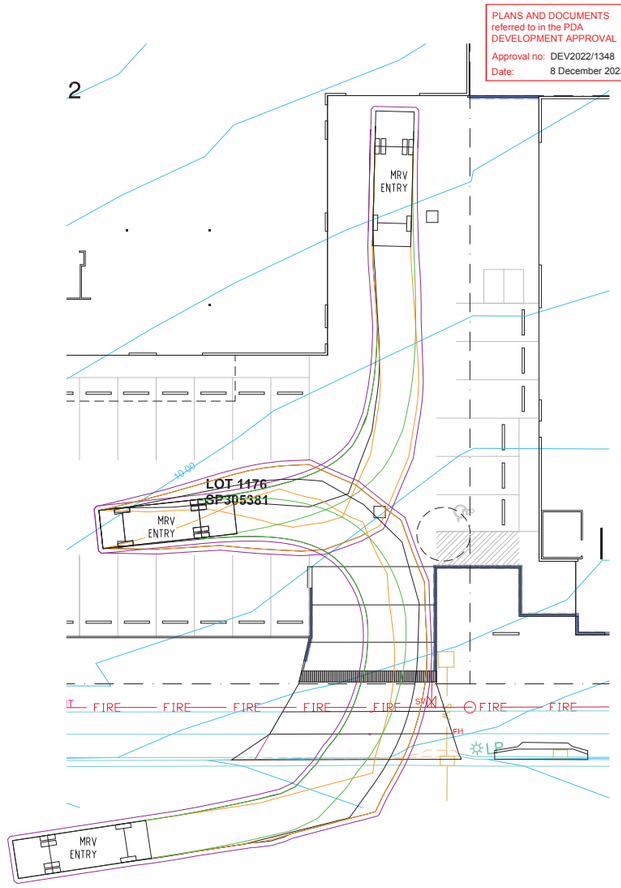
DO NOT SCALE OFF DRAWINGS.

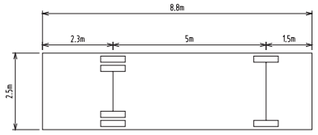
SCALES: 1:200, 1:100			
Draft: AW Design: AW/PLR	DATE: 8 JUL 2022		
22720	C3	G	
JOB NUMBER	DWG No.	ISSUE	
A1	SHEET 3 OF 5	CHECKED:	

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL
Approval no: DEV2022/1348
Date: 8 December 2022
Queensland Government





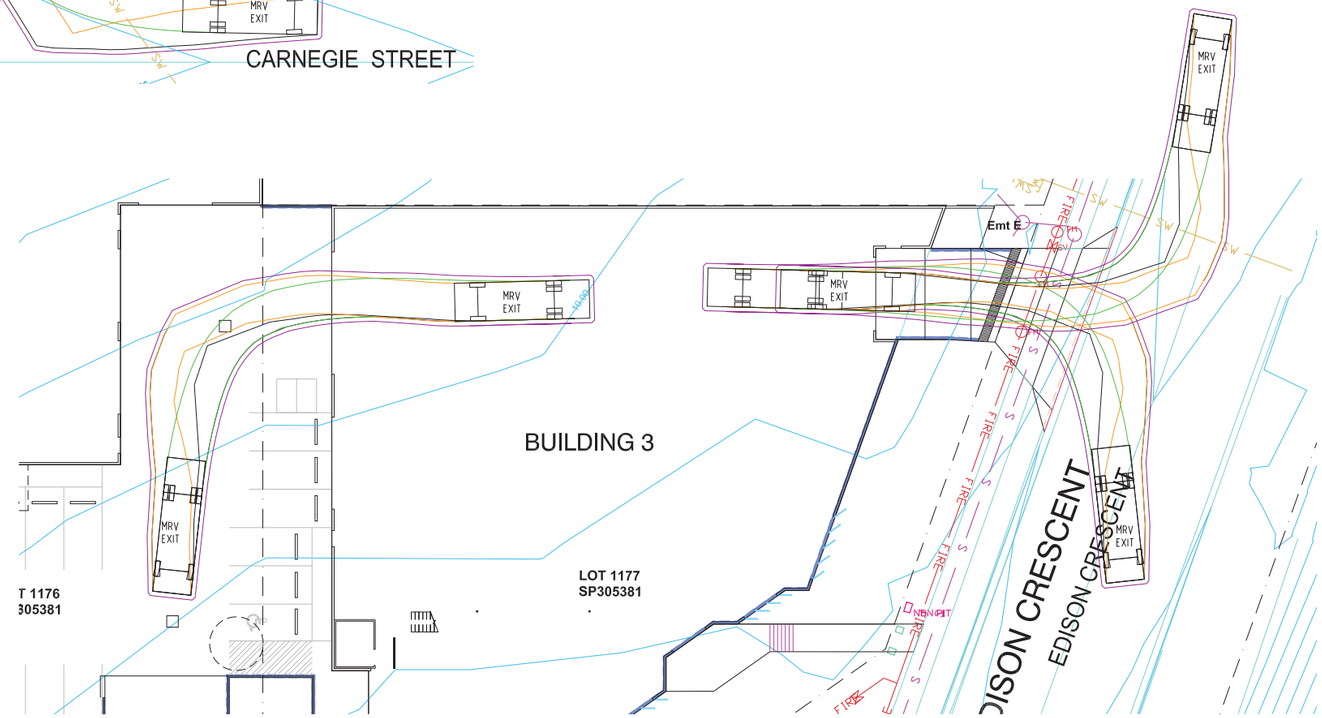




MRV VEHICLE

VPATH USED TO GENERATE TURNING CIRCLES - PROGRAM PROVIDED BY DEPARTMENT OF TRANSPORT AND MAIN ROADS 2021.
https://www.tmr.qld.gov.au/business-industry/Road-systems-and-engineering/Software/Vehicle-Path

TURNING CIRCLES
(MRV)



This drawing is not to be copied or amended without written permission from Rienmac Consulting Engineers.

No.	DATE	AMENDMENT / ISSUE
E	25 NOV 22	LAYOUT CHANGED (AW)
D	09 NOV 22	LAYOUT UPDATED (AW)
C	03 NOV 22	LAYOUT UPDATED (AW)
B	24 AUG 22	WCV DETAILS ADDED (AW)
A	03 AUG 22	ORIGINAL ISSUE (AW)

CLIENT:
SHADCON PTY LTD
PROJECT:
PROPOSED INDUSTRIAL DEVELOPMENT (3 BUILDINGS)
ADDRESS:
LOT 1174, 1175, 1176, 1177 CARNEGIE STREET,
AURA, BARINGA, QLD, 4551

IF IN ANY DOUBTS REGARDING THIS DRAWING, CONFIRM ALL LEVELS, LAYOUT AND DIMENSIONS ON SITE BEFORE COMMENCING ANY WORK. REFER ANY DISCREPANCIES TO ENGINEER IMMEDIATELY.

RIENMAC PTY LTD
CONSULTING CIVIL & STRUCTURAL ENGINEERS
A.B.N. 52 010 666 430
A.C.N. 010 666 430
SUNSHINE COAST OFFICE:
SUITE 5, FIRST FLOOR, SAINT CIRINO, 137 BRISBANE ROAD, (PO BOX 149)
MOOLOOLABA QLD 4557
Phone:- (07) 5349 0762
E:- info@rienmac.net W:- www.rienmac.net

DRAWING TITLE:
- OPERATIONAL WORKS -
MRV TURNING CIRCLES

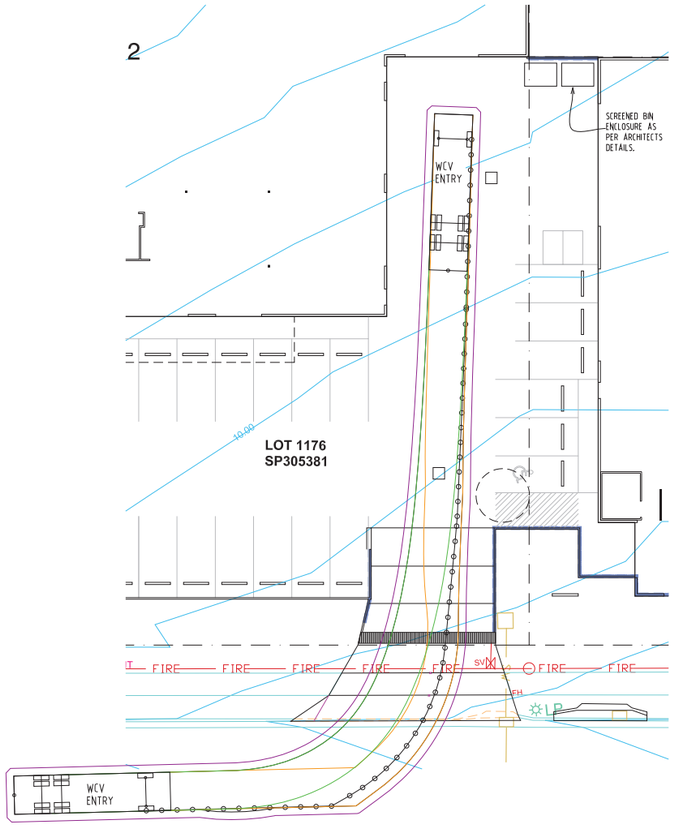
PETER RIENECKER - RPEQ 2088

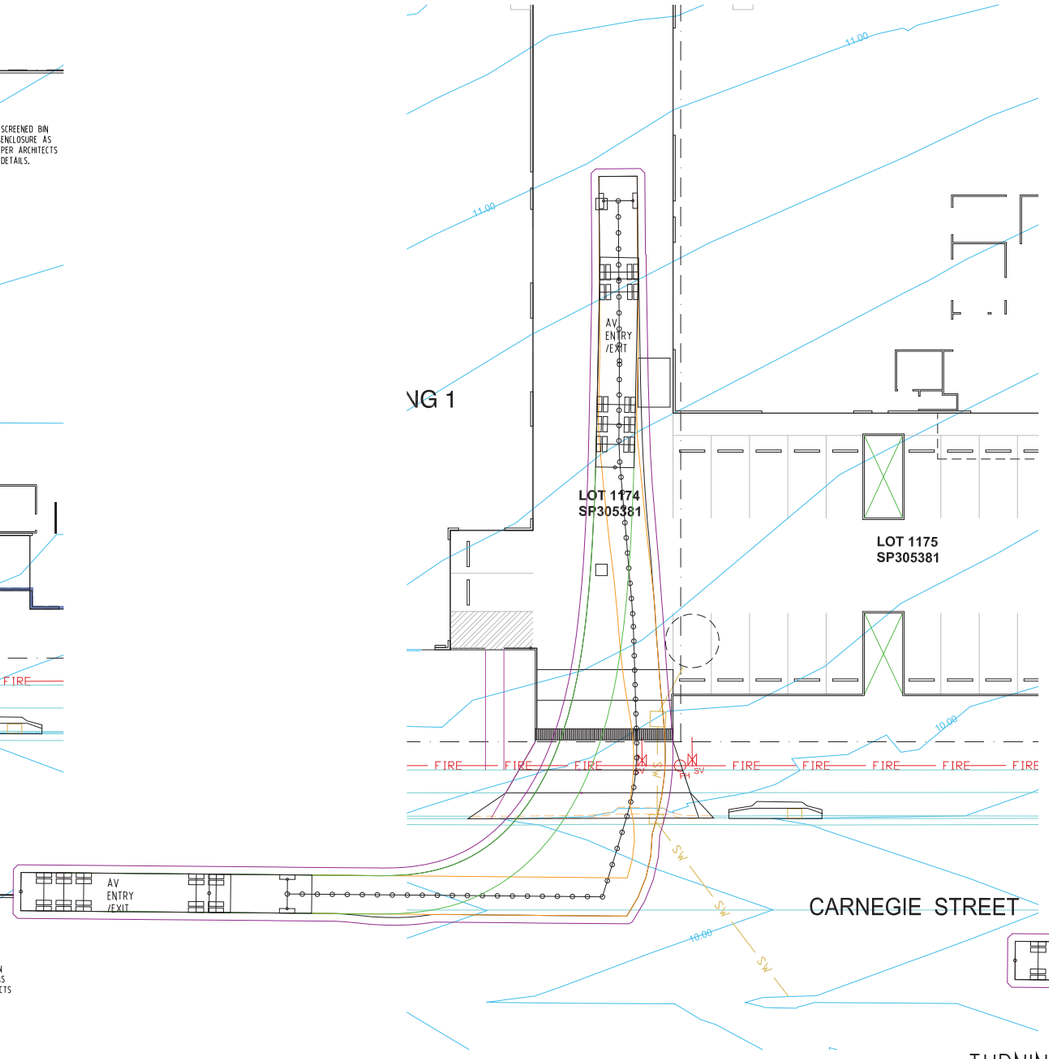
SUNSHINE COAST COUNCIL
LOT 1174, LOT 1175, LOT 1176, LOT 1177 ON SP306267.
REAL PROPERTY DESCRIPTION & COUNCIL:

DO NOT SCALE OFF DRAWINGS.

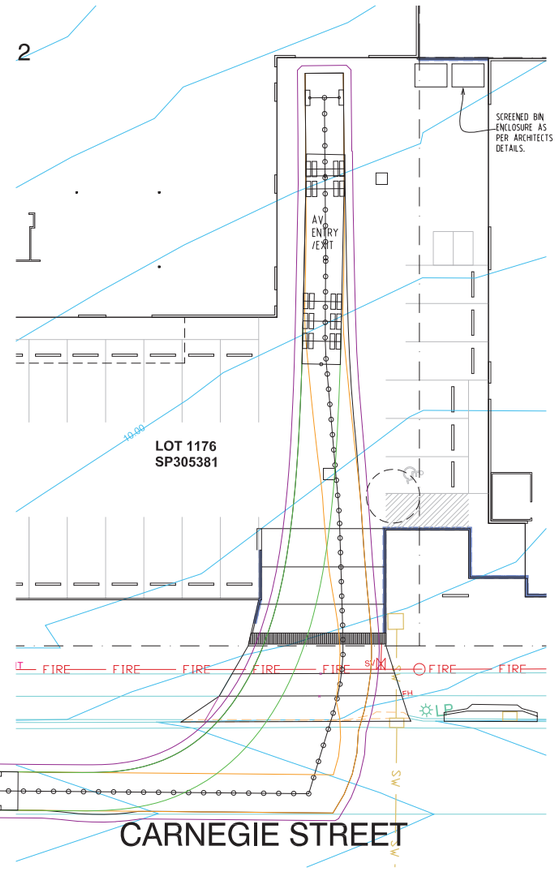
SCALES: 1:200			
Draft: AW	Design AW/PLR	DATE: 8 JUL 2022	
22720		C4	E
JOB NUMBER		DWG No.	ISSUE
A1	SHEET 4 OF 5	CHECKED:	

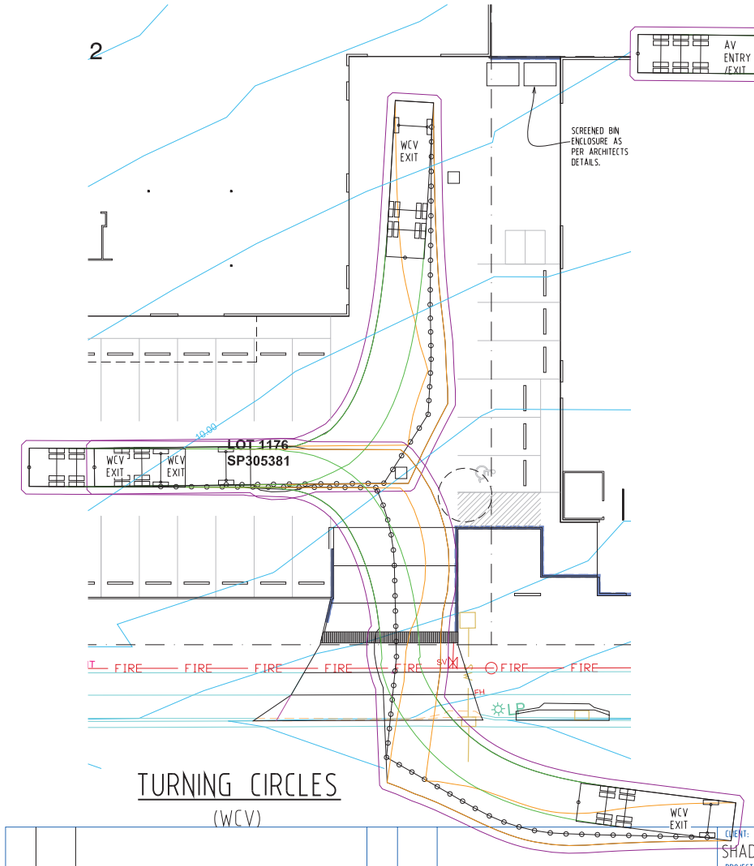
PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL
Approval no: DEV2022/1348
Date: 8 December 2022
Queensland Government



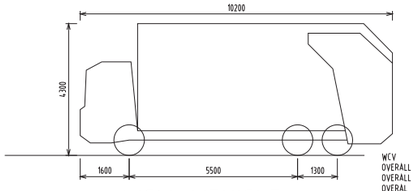


TURNING CIRCLES
(AV)





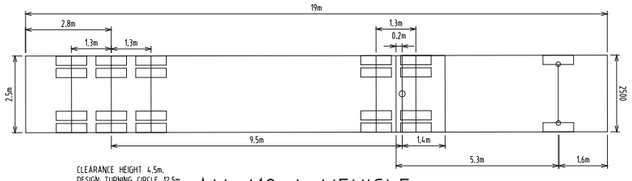
TURNING CIRCLES
(WCV)



WCV VEHICLE

WCV	
OVERALL LENGTH	10.2m
OVERALL WIDTH	2.5m
OVERAL BODY HEIGHT	4.3m
MIN BODY GROUND CLEARANCE	0.376m
TRACK WIDTH	2.5m
LOCK-TO-LOCK TIME	6.00s
CURB TO CURB TURNING RADIUS	12.5m

VPATH USED TO GENERATE TURNING CIRCLES - PROGRAM PROVIDED BY DEPARTMENT OF TRANSPORT AND MAIN ROADS 2021.
https://www.tmr.qld.gov.au/business-industry/Road-systems-and-engineering/Software/Vehicle-Path



AV (19m) VEHICLE

No.	DATE	AMENDMENT / ISSUE
D	25 NOV 22	LAYOUT CHANGED (AW)
C	09 NOV 22	AV TURNING CIRCLES ADDED (AW)
B	03 NOV 22	LAYOUT UPDATED (AW)
A	24 AUG 22	WCV DETAILS ADDED (AW)

This drawing is not to be copied or amended without written permission from Rienmac Consulting Engineers.

CLIENT:
SHADCON PTY LTD
PROJECT:
PROPOSED INDUSTRIAL DEVELOPMENT (3 BUILDINGS)
ADDRESS:
LOT 1174, 1175, 1176, 1177 CARNEGIE STREET,
AURA, BARINGA, QLD, 4551

IT IS THE WORKS REQUIREMENT TO VERIFY ALL LEVELS, LAYOUT AND DIMENSIONS ON SITE BEFORE COMMENCING ANY WORK. REFER ANY DISCREPANCIES TO ENGINEER IMMEDIATELY.

RIENMAC PTY LTD
CONSULTING CIVIL & STRUCTURAL ENGINEERS
A.B.N. 52 010 666 430
A.C.N. 010 666 430
SUNSHINE COAST OFFICE:
SUITE 5, FIRST FLOOR, SAINT CIRINO, 137 BRISBANE ROAD, (PO BOX 149)
MOOLOOLABA QLD 4557
Phone:- (07) 5349 0762
E:- info@rienmac.net W:- www.rienmac.net

DRAWING TITLE:
- OPERATIONAL WORKS -
WCV TURNING CIRCLES

PETER RIENECKER - RPEQ 2088

SUNSHINE COAST COUNCIL
LOT 1174, LOT 1175, LOT 1176, LOT 1177 ON SP306267.
REAL PROPERTY DESCRIPTION & COUNCIL:

DO NOT SCALE OFF DRAWINGS.

SCALES: 1:200			
Draft: AW	Design AW/PLR	DATE: 24 AUG 22	
22720	S5	D	
JOB NUMBER	DWG No.	ISSUE	
A1	SHEET 5 OF 5	CHECKED:	