

PROPOSED RESIDENTIAL DEVELOPMENT

STAGE 16B

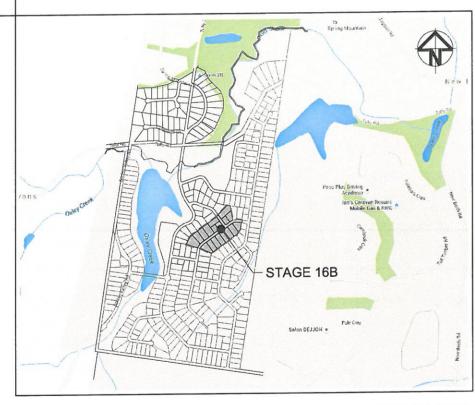
- I. I state that the works described on this drawing have been constructed under my supervision, and I or my authorised representatives have inspected the works at all stages of construction.
- I certify that the works have been constructed to my satisfaction and in accordance with the development approval, the approved drawings, the Logan Planning Scheme 2015 / Beaudesert Shire Planning Scheme 2007 and any relevant planning scheme nolicies and standard specifications.
- 3. I certify the approved drawings have been carefully compared with the works site as to line, levels and dimensions, and this drawing has been accurately amended in all respects as to constitute a true record of the works.

Project Name: Spring Mountain Estate Stage 16E Company: PEET PTY LTD Consultant: Sedgman Consulting RPEQ/CPEng Membership No. 6554 Application Number: OW/38/2017

DESCRIPTION

SPRING MOUNTAIN ESTATE STAGE 16B

CIVIL ENGINEERING OPERATIONAL WORKS
FOR: PEET PTY LTD



SITE PLAN
SCALE N.T.S
(SOURCED FROM GOOGLE MAPS)

LEVELS & GRID
LEVELS TO AHD
(AUSTRALIAN HEIGHT DATUM)
GRID ASSUMED LOCAL

DRAWING INDEX					
DWG No.	DESCRIPTION				
A441-C-16B-0000	COVER SHEET, DRAWING INDEX & LOCALITY PLAN				
A441-C-16B-0001	GENERAL NOTES				
A441-C-16B-0002	KEY SHEET PLAN				
A441-C-16B-0100	TYPICAL DETAILS				
A441-C-16B-0200	BULK EARTHWORKS PLAN SHEET 1 0F 2				
A441-C-16B-0201	BULK EARTHWORKS PLAN SHEET 2 OF 2				
A441-C-16B-0202	EROSION & SEDIMENT CONTROL PLAN SHEET 1 OF 2				
A441-C-16B-0203	EROSION & SEDIMENT CONTROL PLAN SHEET 2 OF 2				
A441-C-16B-0204	EROSION & SEDIMENT CONTROL NOTES & DETAILS				
A441-C-16B-0300	ROAD ALIGNMENT PLAN & TABLES				
A441-C-16B-0301	ROADWORKS & DRAINAGE PLAN SHEET 1 OF 2				
A441-C-16B-0302	ROADWORKS & DRAINAGE PLAN SHEET 2 OF 2				
A441-C-16B-0303	CRAYFISH PL & JOLLYTAIL AVE LONGITUDINAL SECTIONS				
A441-C-16B-0304	CRAYFISH PL CROSS SECTIONS				
A441-C-16B-0305	JOLLYTAIL AVE CROSS SECTIONS SHEET 1 OF 2				
A441-C-16B-0306	JOLLYTAIL AVE CROSS SECTIONS SHEET 2 OF 2				
A441-C-16B-0307	INTERSECTION DETAILS				
A441-C-16B-0308	MEDIAN SETOUT DETAILS				
A441-C-16B-0400	STORMWATER CATCHMENT PLAN				
A441-C-16B-0401	STORMWATER LONGITUDINAL SECTIONS				
A441-C-16B-0402	STORMWATER CALCULATION TABLE				
A441-C-16B-0600	WATER RETICULATION PLAN SHEET 1 0F 2				
A441-C-16B-0601	WATER RETICULATION PLAN SHEET 2 OF 2				

LOGAN CITY COUNCIL

APPROVED AS CONSTRUCTED DRAWING

This is the approved As Constructed Drawi Development Application

> OW/38/2017 CD Reference Numbe

				THIS DESIGN AND PLAN IS COPYRIGHT AND IS NOT TO REPRODUCED WHOLLY OR IN PART OR TO BE USED ON WITHOUT THE WRITTEN PERMISSION OF SEDGMAN CONSI DRAWING IS NOT TO BE SCALED	ANY PROJE
				SCALE (AT ORIGINAL SHEET SIZE)	ORIO
AC	AS CONSTRUCTED	H.H.	03.11.17	NOT TO SCALE	S
Α	ORIGINAL ISSUE	M.G.	09.12.16]	A

DRIGINAL SHEET SIZE

SPRING MOUNTAIN ESTATE STAGE 16B

LEVEL 1, 193 FERRY ROAD SOUTHPORT OLD 4215 AUSTRALIA

T 07 5558 4200 consult@sedgman.com www.sedgman.com/sedgman-com

SEDGMAN

COVER SHEET, DRAWING INDEX & LOCALITY PLAN

TASK	BY	INITIAL	DATE	APPROVED RPEQ	No
REVIEW	S.S.		19.12.16	DRAWING NUMBER	REVISION
DESIGN	K.E.		09.12.16	1111 0 100 0000	100
DRAWN	M.G.		09.12.16	A441-C-16B-0000	AC

GENERAL

- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE FOLLOWING DOCUMENTS:
 - OTHER PROVIDED ENGINEERING DRAWINGS
 - TECHNICAL SPECIFICATIONS
 - SUPPLEMENTARY SPECIFICATIONS
 - WRITTEN INSTRUCTIONS
- ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE RELEVANT SPECIFICATION FOR THE WORKS TOGETHER WITH THE REQUIREMENTS OF ALL THE RELEVANT CODES OF PRACTICE REFERRED TO THEREIN AND THE REQUIREMENTS OF BEAUDESERT SHIRE COUNCIL STANDARDS AND SPECIFICATIONS
- THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND PROVISION OF ANY TEMPORARY BRACING, PROPPING ETC. TO DRAINAGE PIPES DURING CONSTRUCTION. STRUCTURES SHALL BE MAINTAINED IN A STABLE POSITION AND NO PART SHALL BE OVERSTRESSED.
- ALL LOCATIONS, DRIENTATION AND LEVELS SHALL BE VERIFIED ON SITE BEFORE COMMENCING ANY WORK. DISCREPANCIES SHALL BE REFERRED TO THE SITE SUPERINTENDENT.
- DO NOT OBTAIN DIMENSIONS FROM SCALING.
- NATURAL SURFACE LEVELS ON THE DRAWINGS ARE INDICATIVE ONLY.
- ANY PERMITS AND APPROVALS REQUIRED FOR CONSTRUCTION OF PERMANENT OR TEMPORARY WORKS SHALL BE OBTAINED BY THE CONTRACTOR.
- BEAUDESERT SHIRE COUNCIL (B.S.C.) STANDARD DETAILS ARE TO BE ADOPTED UNLESS STATED OTHERWISE.

BULK EARTHWORKS

- ALL EARTHWORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH B.S.C. STANDARD SPECIFICATIONS AND AS3798, UNDER LEVEL 1 SUPERVISION.
- ALL NEW WORKS TO MATCH NEATLY WITH EXISTING.
- REFER TO SITE CROSS SECTIONS FOR BATTER GRADES. WHERE GRADES ARE NOT SPECIFIED:-FILL - 1:6
 - CUT 1:4
- UNLESS DIRECTED OTHERWISE BY THE SUPERINTENDENT, ALL FILL SHALL BE PLACED AT BETWEEN +2% AND -2% OF OPTIMUM MOISTURE CONTENT.
- AN RPEQ CERTIFIED ENGINEER SHALL INSPECT THE SUBGRADE DURING COMPACTION AND ANY WEAK SPOTS SHALL BE REMOVED AND REPLACED WITH MINIMUM CBR15 MATERIAL
- ALL OF THE SITE SHALL BE KEPT FREE DRAINING DURING ALL PHASES OF THE
- ALL DISTURBED AREAS SHALL BE TOPSOILED (MINIMUM THICKNESS 100mm) AND BE GRASS SEEDED UNLESS NOTED OTHERWISE.
- THE CONTRACTOR SHALL CONFIRM LOCATION OF ALL EXISTING SERVICES AND PROTECT THESE SERVICES DURING CONSTRUCTION. DAMAGED SERVICES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
 NOTWITHSTANDING THE LIMITS AND FILLING SHOWN ON THE CROSS SECTIONS
- THE ACTUAL LIMITS SHALL BE DETERMINED ON SITE BY THE SUPERINTENDENT DURING CONSTRUCTION AND SIMILARLY THE FINISHED SURFACE CONTOURS MAY BE ADJUSTED BY WRITTEN DIRECTION OF THE SUPERINTENDENT DURING CONSTRUCTION

ROAD WORKS

AC AS CONSTRUCTED

A ORIGINAL ISSUE

- NOTWITHSTANDING THE DETAILS SHOWN ON THE DRAWINGS ALL WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH B.S.C. STANDARD SPECIFICATIONS AND DRAWINGS
- SIDE DRAINS SHALL BE CONSTRUCTED UNDER ALL NEW KERB AS SPECIFIED WITHIN THESE DRAWINGS AND AS DIRECTED BY THE SUPERINTENDENT.
- FLUSHING POINTS SHALL BE PROVIDED FOR SIDE DRAINS AT THE REQUIRED SPACINGS IN ACCORDANCE WITH B.S.C. STANDARD DRAWINGS AND SPECIFICATIONS.
- GEOTECHNICAL TEST RESULTS ARE TO BE FORWARDED TO THE SUPERINTENDENT PRIOR TO BOXING. TESTS SHALL INCLUDE SOAKED C.B.R. AND/OR OTHER TESTS AS REQUESTED BY THE SUPERINTENDENT. THESE TESTS SHALL BE USED TO CONFIRM THE PAVEMENT DESIGN SHOWN ON THESE DRAWINGS AND BE IN ACCORDANCE WITH
- THE PAVEMENT DESIGN ON THE DRAWINGS IS NOT FOR CONSTRUCTION UNTIL FINAL CBR TESTS ARE REVIEWED AND APPROVED BY THE SITE SUPERINTENDENT. CONSTRUCTION OF THE PAVEMENT TO THE DESIGN SHOWN ON THE DRAWINGS, PRIOR TO RECEIPT OF THE FINAL CBR TESTS, SHALL BE UNDERTAKEN AT THE CONTRACTORS OWN RISK.
- THE CONTRACTOR SHALL OBTAIN THE LOCATION OF ALL SERVICES AND PROTECT THESE SERVICES PRIOR TO WORKING IN THE VICINITY. ANY DAMAGE WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- WORKS TO ANY SERVICES SHOULD BE DONE IN CONSULTATION WITH THE APPROPRIATE SERVICE PROVIDER
- TEMPORARY WARNING SIGNS TO BE ERECTED AS PER THE DEPARTMENT OF TRANSPORT MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION.
- SEAL TO BE A.C. SURFACING AS SPECIFIED.

DRAINAGE

- ALL DRAINAGE STRUCTURES ARE TO BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING DOCUMENTS:
 - I.P.W.E.A.Q. STANDARD DRAWINGS AND SPECIFICATIONS
 - MAIN ROADS STANDARD DRAWINGS AND SPECIFICATIONS
 - B.S.C. DESIGN GUIDELINES, STANDARD DRAWINGS AND SPECIFICATIONS; ANY MANUFACTURERS STANDARD DRAWINGS AND SPECIFICATIONS.
- ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE RELEVANT SPECIFICATION FOR THE WORKS TOGETHER WITH THE REQUIREMENTS OF ALL THE RELEVANT CODES OF PRACTICE REFERRED TO THEREIN AND THE REQUIREMENTS OF THE STATUTORY AUTHORITIES WHERE APPLICABLE.
- STRUCTURES HAVE BEEN DESIGNED FOR OPERATIONAL LOADS ONLY. THE CONTRACTOR IS RESPONSIBLE FOR THE ASSESSMENT OF CONSTRUCTION LOADS AND PROVISION OF ANY TEMPORARY BRACING, PROPPING, ETC. REQUIRED DURING CONSTRUCTION. STRUCTURES SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED.
- PRECAST REINFORCED CONCRETE PIPES ARE TO BE MANUFACTURED IN ACCORDANCE WITH AUSTRALIAN STANDARD AS 4058 AND AS 1992.
- ALL STORMWATER PIPES SHALL BE CLASS '2' RCP. UNLESS NOTED OTHERWISE. ALL PIPES UP TO AND INCLUDING Ø600 ARE TO BE SPIGOT & SOCKET RUBBER RING JOINTED. ALL PIPES ABOVE \$\phi600 ARE TO BE FLUSH JOINTED UNLESS
- HEADWALL END STRUCTURES TO BE PRECAST CONCRETE WITH CONCRETE
- APRONS (INCLUDING CUT OFF WALLS) UNLESS NOTED OTHERWISE. REFER TO I.P.W.E.A.Q DRG. D-0080 & D-0081 AND DMR STD DRG 1304 FOR DETAILS. BACKFILL AND BEDDING TO PIPES TO BE IN ACCORDANCE WITH B.S.C.
- STANDARD DRAWINGS AND SPECIFICATIONS. UNSUITABLE FOUNDING MATERIAL FOR PIPES AND STRUCTURES SHALL BE
- REMOVED OR IMPROVED IN ACCORDANCE WITH B.S.C. AND MAIN ROADS SPECIFICATIONS.
- ALL TRENCH BACK FILL MATERIAL UNDER THE PAVEMENT SHALL BE CBR 15 OR APPROVED EQUIVALENT.
- STEEL GRATES AND FRAMES ARE TO BE FABRICATED FROM MILD STEEL AND HOT DIP GALVANISED. ALL GRATES ARE TO BE CLASS D (UNLESS NOTED OTHERWISE) AND BICYCLE SAFE IN ACCORDANCE WITH AUSTRALIAN STANDARD AS 3996 UNLESS NOTED OTHERWISE
- GRATE SUPPORT TO BE CONSTRUCTED LEVEL TO ENSURE THAT THE GRATE DOES NOT ROCK AFTER INSTALLATION.
- ALL LEVELS ARE APPROXIMATE ONLY AND ARE SUBJECT TO FULL DETAIL SURVEY OF THE EXISTING STRUCTURE.
- THE THICKNESS OF THE RIP-RAP PROTECTION SHALL BE TWICE THE D50 STONE SIZE SPECIFIED ON THE DRAWINGS
- 14.1. THE STONE SHALL BE REASONABLY WELL GRADED THROUGHOUT THE RIP-RAP LAYER. STONE SIZE SHALL BE DEPENDANT ON THE D50 VALUE SPECIFIED ON THE DRAWINGS D10 SHALL BE 0.5xD50 AND D90 SHALL BE 1.35xD50 STONES SMALLER THAN THE SPECIFIED D10 ARE NOT TO EXCEED 20% BY WEIGHT OF FACH LOAD.
- 14.2. ROCK IS TO BE HARD, DENSE, DURABLE, RESISTANT TO WEATHERING AND ANGULAR IN SHAPE. IT SHALL BE FREE FROM OVERBURDEN, SPOIL SHALE AND ORGANIC MATTER. ROCK THAT IS LAMINATED, FRACTURED, POROUS OR OTHERWISE PHYSICALLY WEAK SHALL NOT BE USED.
- AN APPROXIMATE GUIDE TO STONE SHAPE. THE BREADTH OR THICKNESS OF A SINGLE STONE SHOULD NOT BE LESS THAN ONE-THIRD ITS LENGTH. ROUND MATERIAL CAN BE USED AS RIP-RAP PROVIDED IT IS NOT PLACED ON SLOPES GREATER THAN 3H: 1V.

ENVIRONMENTAL

- WHEN WORKING WITHIN 4m OF TREES, RUBBER OR HARDWOOD GIRDLES SHOULD BE CONSTRUCTED WITH 1.8m BATTENS CLOSELY SPACED AND ARRANGED VERTICALLY FROM GROUND LEVEL. GIRDLES MUST BE STRAPPED TO TREES PRIOR TO CONSTRUCTION AND REMAIN UNTIL COMPLETION.
- WHERE POSSIBLE, TREE ROOTS SHALL BE TUNNELLED UNDER, RATHER THAN SEVERED. IF ROOTS ARE SEVERED THE DAMAGED AREA SHOULD BE TREATED WITH A SUITABLE FUNGICIDE. CONTACT COUNCIL ARBORIST FOR FURTHER
- TOPSOIL AND SUBSOIL SHOULD BE STOCKPILED SEPARATELY.
- CARE SHOULD BE TAKEN TO PREVENT SEDIMENT FROM ENTERING THE STORMWATER SYSTEM. THIS MAY INVOLVE PLACING APPROPRIATE SEDIMENT CONTROLS AROUND STOCKPILES.
- SILTATION CONTROL MEASURES SHALL BE PLACED DOWNSTREAM OF ANY **FXCAVATION WORK.**
- APPROPRIATE SEDIMENT CONTROLS SHALL BE UTILISED TO PREVENT SEDIMENT ENTERING ANY NATURAL WATERCOURSE.
- NO SOIL SHALL BE STOCKPILED WITHIN 5m OF A NATURAL WATERCOURSE
- ALL ENVIRONMENT PROTECTION MEASURES SHOULD BE IMPLEMENTED PRIOR TO ANY CONSTRUCTION WORK, INCLUDING CLEARING, COMMENCING.

WATER

- NOTWITHSTANDING THE DETAILS SHOWN ON THE DRAWINGS ALL WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SEQ WATER SUPPLY AND SEWERAGE DESIGN & CONSTRUCTION CODE.
- ALL WATER MAINS TO BE 150mm DIAMETER PVC-M PN 16 UNLESS NOTED
 - ALL FITTINGS SHALL BE D.I.C.L. PN35 AND COMPLY WITH AS2280.
- ANCHOR BLOCKS SHALL BE INSTALLED AT ALL BENDS, JUNCTIONS AND DEAD
- ROAD CROSSING BULKHEADS ARE TO BE PROVIDED AT ALL ROAD CROSSINGS IN ACCORDANCE WITH SEQ WS&S D&C CODE STANDARD DRAWINGS.
- WATER SERVICE TO BE PROVIDED TO ALL ALLOTMENTS IN ACCORDANCE WITH SEQ WS&S D&C CODE STANDARD DRAWINGS.
- ALIGNMENT OF WATER MAINS IS AS PER SEQ WS&S D&C CODE STANDARD UNLESS NOTED OTHERWISE.
- ALL TRENCH BACK FILL MATERIAL UNDER ROAD PAVEMENT SHALL BE CBR 15
- OR APPROVED EQUIVALENT. ALL CONNECTIONS TO LIVE MAINS ARE BY LOGAN WATER AT DEVELOPERS
- EMBEDMENT FOR NEW WATER MAINS WITHIN NEW ROAD RESERVES TO BE "TYPE C" IN ACCORDANCE WITH SEQ-WAT-1201-1 UNLESS DIRECTED OTHERWISE BY THE SUPERINTENDENT.

SIGNAGE

- FINAL SIGN LOCATIONS TO BE DETERMINED ON SITE BY THE SUPERINTENDENT.
- ALL TRAFFIC SIGNS TO BE SIZE 'B' UNLESS NOTED OTHERWISE.
- FOR GUIDE POST INSTALLATION AND DETAILS, REFER B.S.C. STANDARD DRAWING No.50420.
- FOR TRAFFIC SIGN SUPPORT DETAILS, REFER QUEENSLAND TRANSPORT STANDARD DRAWING No.'s 1363.
- ALL SIGN MATERIAL TO BE CLASS 1.
- ALL SIGNAGE, LINEMARKING & RRPMs ARE TO BE PREPARED IN ACCORDANCE WITH THE CURRENT QUEENSLAND TRANSPORT 'MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES' (M.U.T.C.D).

LINEMARKING

- ALL LINEMARKING TO BE REFLECTORISED WHITE.
- FINAL SIGN LOCATIONS TO BE DETERMINED ON SITE BY THE SUPERINTENDENT
- EXISTING LINEMARKING SUPERSEDED BY NEW LINEMARKING IS TO BE REMOVED BY ROUTING OR OTHER METHOD APPROVED BY QUEENSLAND TRANSPORT.
- COLOUR OF ALL REFLECTORISED PAVEMENT MARKERS TO BE WHITE EXCEPT AT EDGE LINES TO ONE WAY PAVEMENTS, WHICH SHALL BE AS FOLLOWS: RIGHT EDGE - WHITE
- LEFT EDGE RED ALL TRAFFIC SIGNS TO BE SIZE 'B' UNLESS NOTED OTHERWISE.
- FOR GUIDE POST INSTALLATION AND DETAILS, REFER QUEENSLAND TRANSPORT STANDARD DRAWING No.1356
- FOR TRAFFIC SIGN SUPPORT DETAILS, REFER QUEENSLAND TRANSPORT
- STANDARD DRAWING No.'s 1360 & 1362. ALL ROUTE NAMES ON NEW GUIDE SIGNS TO BE BLACK LETTERING ON WHITE BACKGROUND U.N.O.
- ALL SIGN MATERIAL TO BE CLASS 1.
- DIRECTION SIGNS ARE SHOWN INDICATIVE ONLY. DETAILED DESIGNS ARE TO BE
- ALL SIGNAGE, LINEMARKING & RRPMs ARE TO BE PREPARED IN ACCORDANCE WITH THE CURRENT QUEENSLAND TRANSPORT MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES' (M.U.T.C.D).

CONCRETE

- COMPLY WITH AS3600 CONCRETE STRUCTURES
- DESIGN AND CONSTRUCT FORMWORK IN ACCORDANCE WITH AS3610.
- PROVIDE QUALITY OF FINISHES OF FORMED SURFACES IN ACCORDANCE WITH AS3610 AND AS FOLLOWS UNO ON DRAWINGS:
 - EXPOSED SURFACES CLASS 3
 - CONCEALED SURFACES CLASS 4
 - IN CONTACT WITH GROUND CLASS 5
- THE LISTED SIZE OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES. PROVIDE CHAMFERS, FILLETS REGLETS AND DRIP GROOVES AS SHOWN ON THE STRUCTURAL DRAWINGS.
- DO NOT MAKE ANY PENETRATIONS OR CHASES OR EMBED ANY ITEMS OTHER THAN THOSE SHOWN IN THE STRUCTURAL DRAWINGS WITHOUT APPROVAL OF THE ENGINEER.
- FORM CONSTRUCTION JOINTS ONLY WHERE APPROVED BY THE ENGINEER.
- REINFORCEMENT SYMBOLS
 - "S" DENOTES GRADE 250S HOT ROLLED DEFORMED BAR TO AS1302.
 - "Y" DENOTES GRADE 400Y HOT ROLLED DEFORMED BAR TO AS1302.
 - "R" DENOTES GRADE 250R HOT ROLLED PLAIN BAR TO AS1303.
 - "W" DENOTES HARD-DRAWN PLAIN WIRE TO AS1303.
 - "RF"&"L" DENOTES HARD-DRAWN RIBBED WIRE FABRIC TO AS1304
 - "N" DENOTES GRADE 500N HOT ROLLED DEFORMED BAR TO AS1302. THE NUMBER FOLLOWING THE BAR SYMBOL IS THE BAR DIAMETER IN mm.
- PROVIDE COVER TO REINFORCEMENT AS FOLLOWS:
- COVER ELEMENT
- 40mm TOP PAVEMENTS
- CONCRETE IN CONTACT WITH GROUND SUPPORT REINFORCEMENT IN ITS CORRECT POSITION DURING CONCRETING BY APPROVED BAR CHAIRS, SPACERS OR SUPPORT BARS SUITABLE FOR THE
- LAP BAR REINFORCEMENT AS FOLLOWS UNO ON DRAWINGS
 - N28 1300mm 750mm N32 1500mm
 - 950mm N36 1700mm N42 1900mm
- 1100mm BARS WITH MORE THAN 300mm OF CONCRETE UNDER THEM SHALL HAVE LAPS 1.25 TIMES THESE LENGTHS.
- LAP MESH REINFORCEMENT BY ONE COMPLETE MESH
- DO NOT WELD OR SITE BEND REINFORCEMENT UNLESS SHOWN IN THE DRAWINGS OR OTHERWISE SPECIFIED BY THE ENGINEER.
- REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND IS NOT NECESSARILY SHOWN IN TRUE PROJECTION
- PROVIDE PREMIX CONCRETE FOR EACH ELEMENT AS FOLLOWS:
 - GRADEMAX AG SLUMP FI FMFNT 80mm PAVEMENTS 80mm MASS CONCRETE
- SAMPLE TEST AND ASSESS CONCRETE COMPLIANCE IN ACCORDANCE WITH PROJECT ASSESSMENT OF STRENGTH GRADE TO SECTION 20 AS3600.
- THE CONCRETE SHALL BE COMPACTED USING HIGH FREQUENCY VIBRATORS.
- ALL SLABS SHALL BE PLACED AT THE SAME TIME AS BEAMS OF WHICH THEY FORM
- TRIM ALL PENETRATIONS LESS THAN 300mm WITH 2-N16 BARS EACH SIDE, EACH
- FACE AND DISPLACE REINFORCEMENT EACH SIDE. CURING OF ALL CONCRETE SURFACES SHALL COMMENCE IMMEDIATELY AFTER SURFACES ARE FINISHED AS SPECIFIED AND SHALL CONTINUE FOR A MINIMUM OF 7
- ADMIXTURES SHALL NOT BE USED WITHOUT THE WRITTEN APPROVAL OF THE
- CEMENT SHALL BE TYPE A NORMAL CLASS PORTLAND CEMENT UNLESS NOTED OTHERWISE.
- MAXIMUM 56 DAY SHRINKAGE STRAIN TO BE 65 MICRONS WHEN TESTED IN
- ACCORDANCE WITH AS1012. MAXIMUM FLYASH CONTENT TO BE 10% MEASURED BY WEIGHT OF CEMENTITIOUS

STAGE 16B

- I state that the works described on this draw have been constructed under my supervision, and I or my authorised representatives have inspected the works at all stages of construction.
- I certify that the works have been constructed to my satisfaction and in accordance with the development approval, the approved drawings, the Logan Planning Scheme 2015 / Beaudesert Shire Planning Scheme 2007 and any relevant planning scheme policies and standard specifications.

I certify the approved drawings have been carefully compared with the works site as to line, levels and dimensions, and this drawing has been accurately amended in all respects as to constitute a true record of the works

Project Name: Spring Mountain Estate Stage 16B Company: PEET PTY LTD Consultant: Sedgman Consulting RPEQ/CPEng Membership No. 6554 Application Number: OW/38/2017

Signature SALL

LOGAN CITY COUNCIL

APPROVED AS CONSTRUCTED DRAW

OW/38/2017

1098 B

			THIS DESIGN AND PLAN IS COPYRIGHT AND IS NO REPRODUCED WHOLLY OR IN PART OR TO BE USED WITHOUT THE WRITTEN PERMISSION OF SEDGMAN C DRAWING IS NOT TO BE SCALED	O ON ANY PROJE ONSULTING PTY
			SCALE (AT ORIGINAL SHEET SIZE)	ORI
AS CONSTRUCTED	H.H.	03.11.17	N/A	-

M.G. 09.12.16

DRAWN DATE

STAGE / PHASE AS CONSTRUCTED

SPRING MOUNTAIN ESTATE STAGE 16B

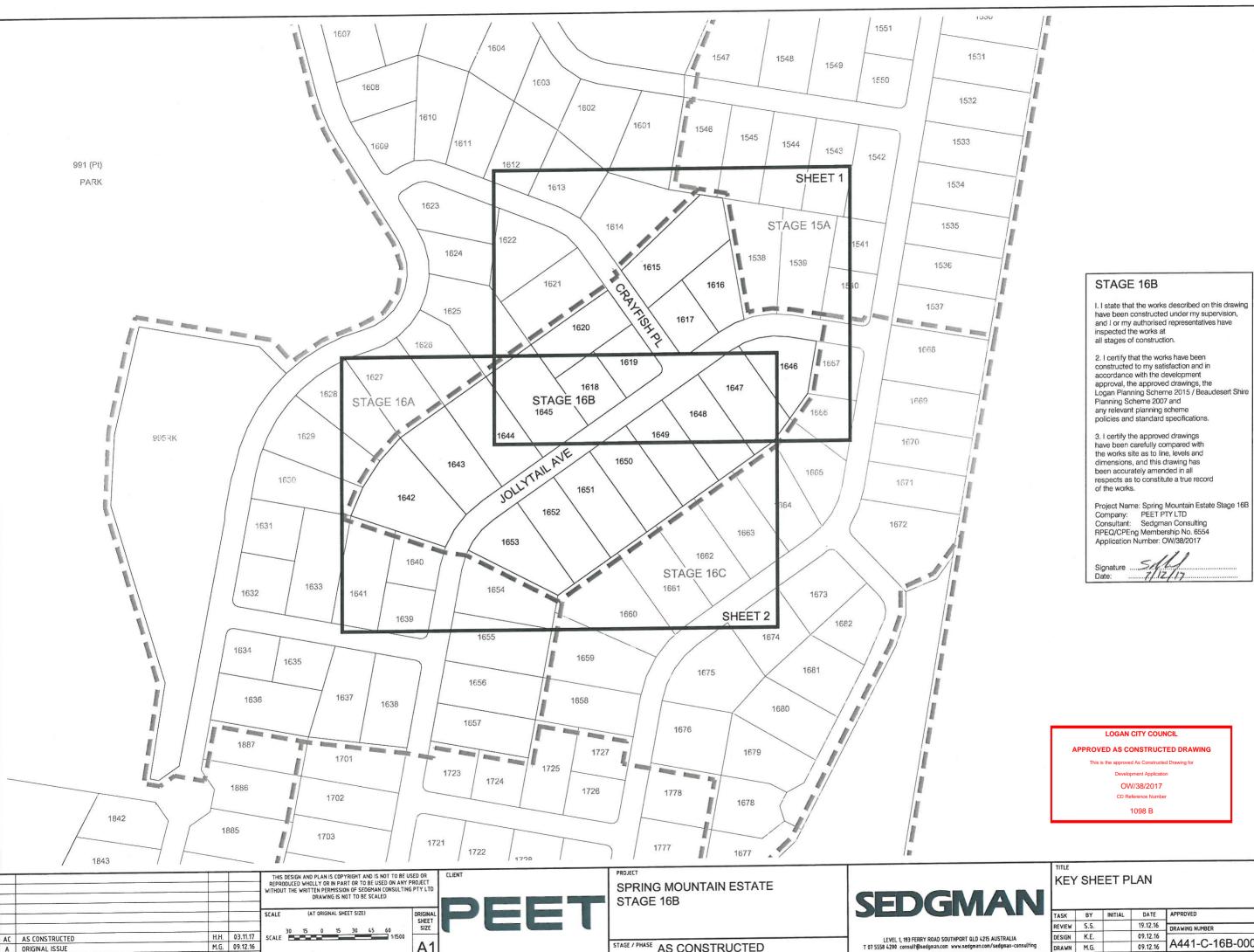
SEDGMAN

1 FVFI 1, 193 FERRY ROAD SOUTHPORT QLD 4215 AUSTRALIA

T 07 5558 4200 consult@sedgman.com www.sedgman.com/sedgman-consulting

GENERAL NOTES

ASK BY INITIAL DATE APPROVED REVIEW S.S. 19.12.16 DRAWING NUMBER DESIGN K.E. 09.12.16 A441-C-16B-0001 DRAWN M.G.



STAGE / PHASE AS CONSTRUCTED

A1

M.G. 09.12.16

DRAWN DATE

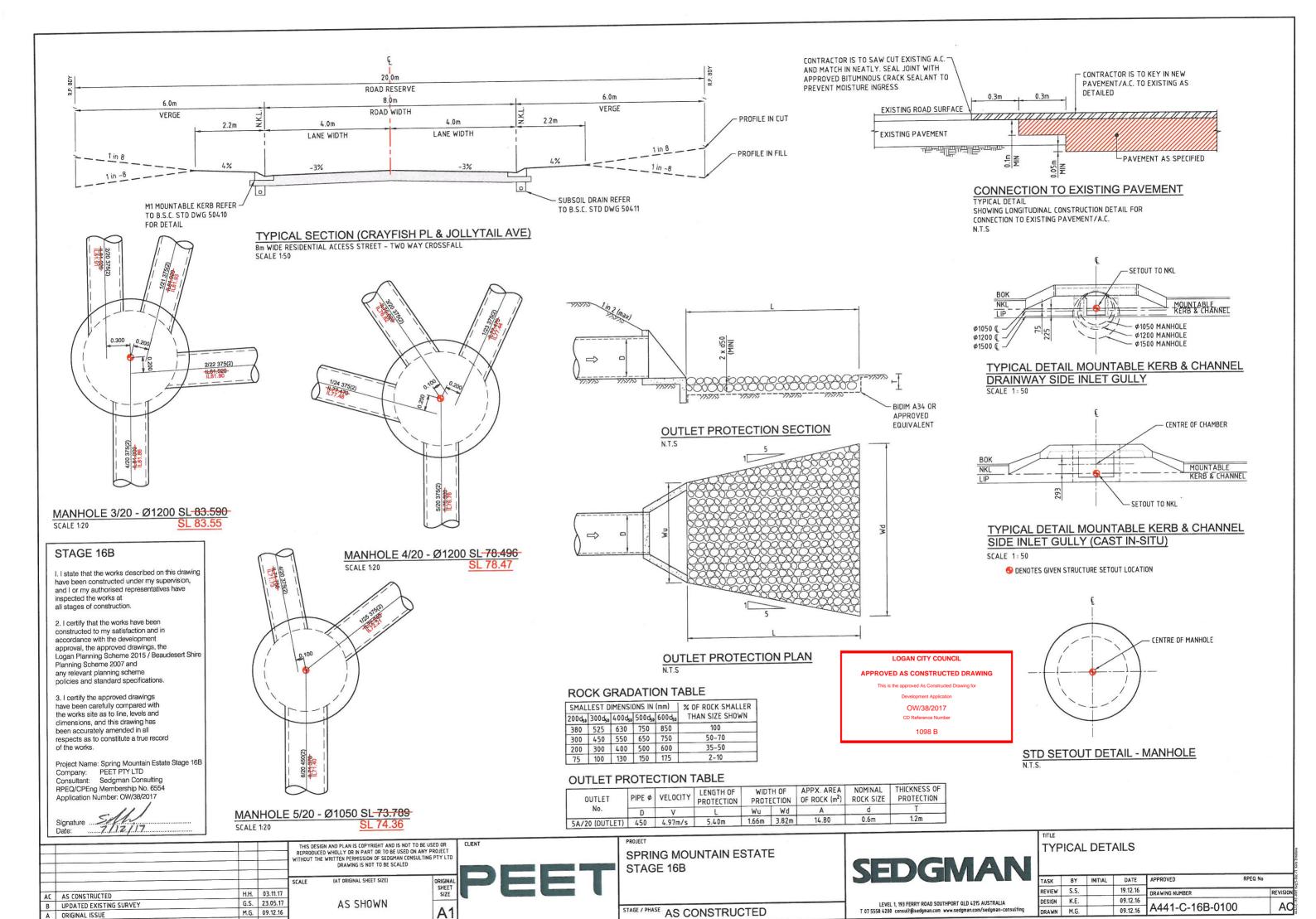
AC AS CONSTRUCTED

A ORIGINAL ISSUE

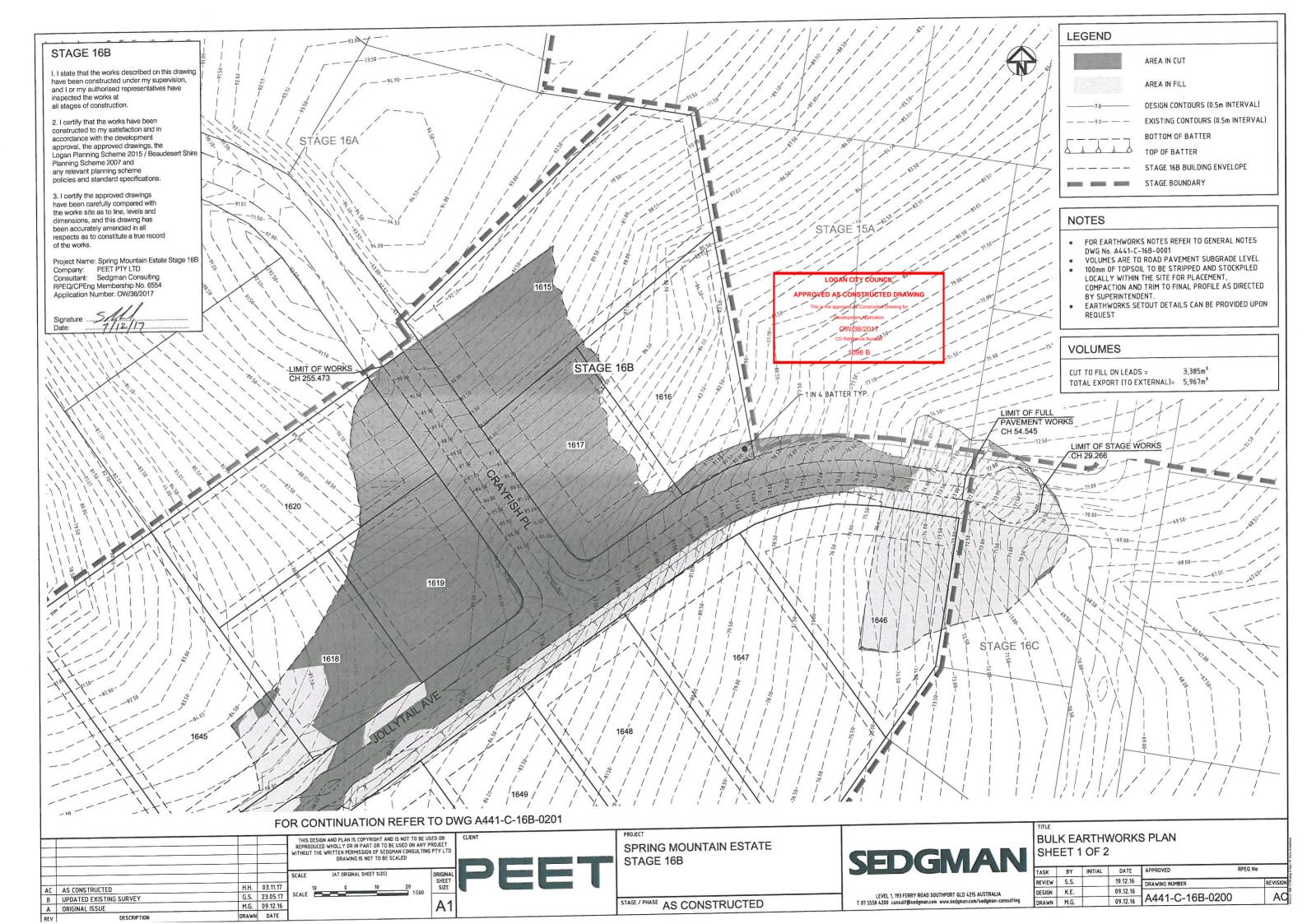


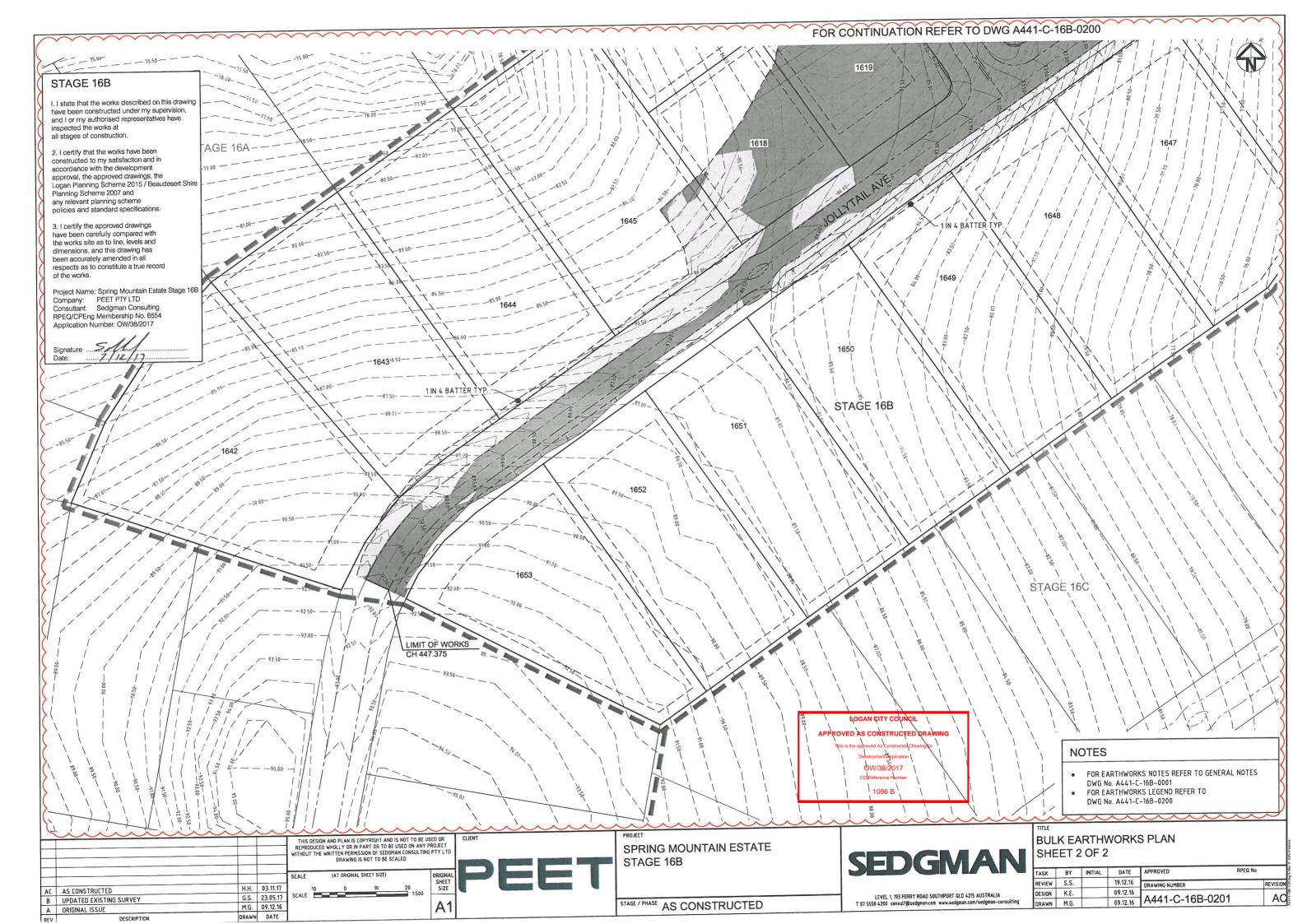
- have been constructed under my supervision, and I or my authorised representatives have inspected the works at
- constructed to my satisfaction and in accordance with the development approval, the approved drawings, the Logan Planning Scheme 2015 / Beaudesert Shire policies and standard specifications.
- respects as to constitute a true record

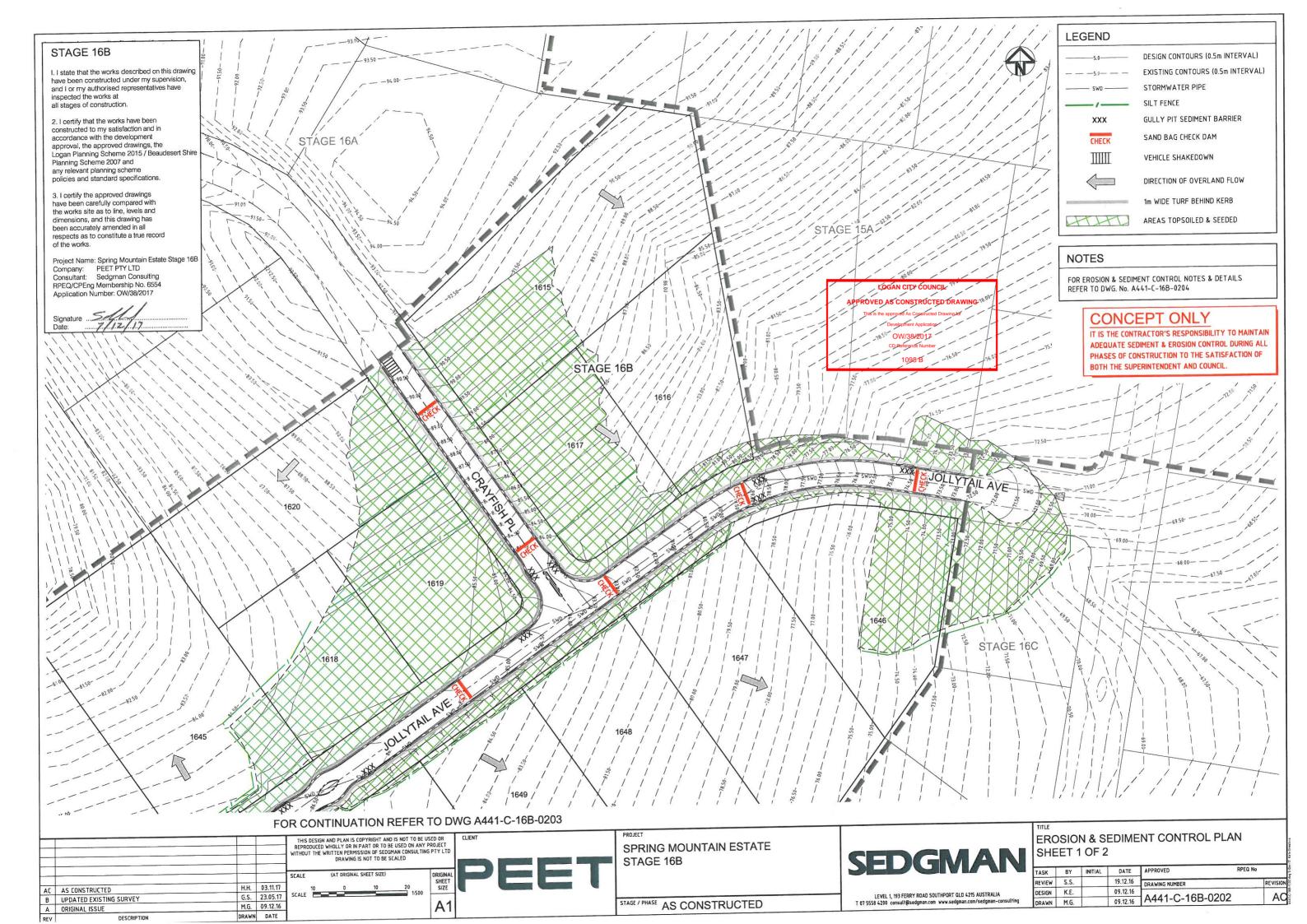
TASK	BY	INITIAL	DATE	APPROVED	RPEQ No
REVIEW	S.S.		19.12.16	DRAWING NUMBER	REVISIO
DESIGN	K.E.		09.12.16	1111 0 100 0000	A.
DRAWN	M.G.	A	09.12.16	A441-C-16B-0002	A

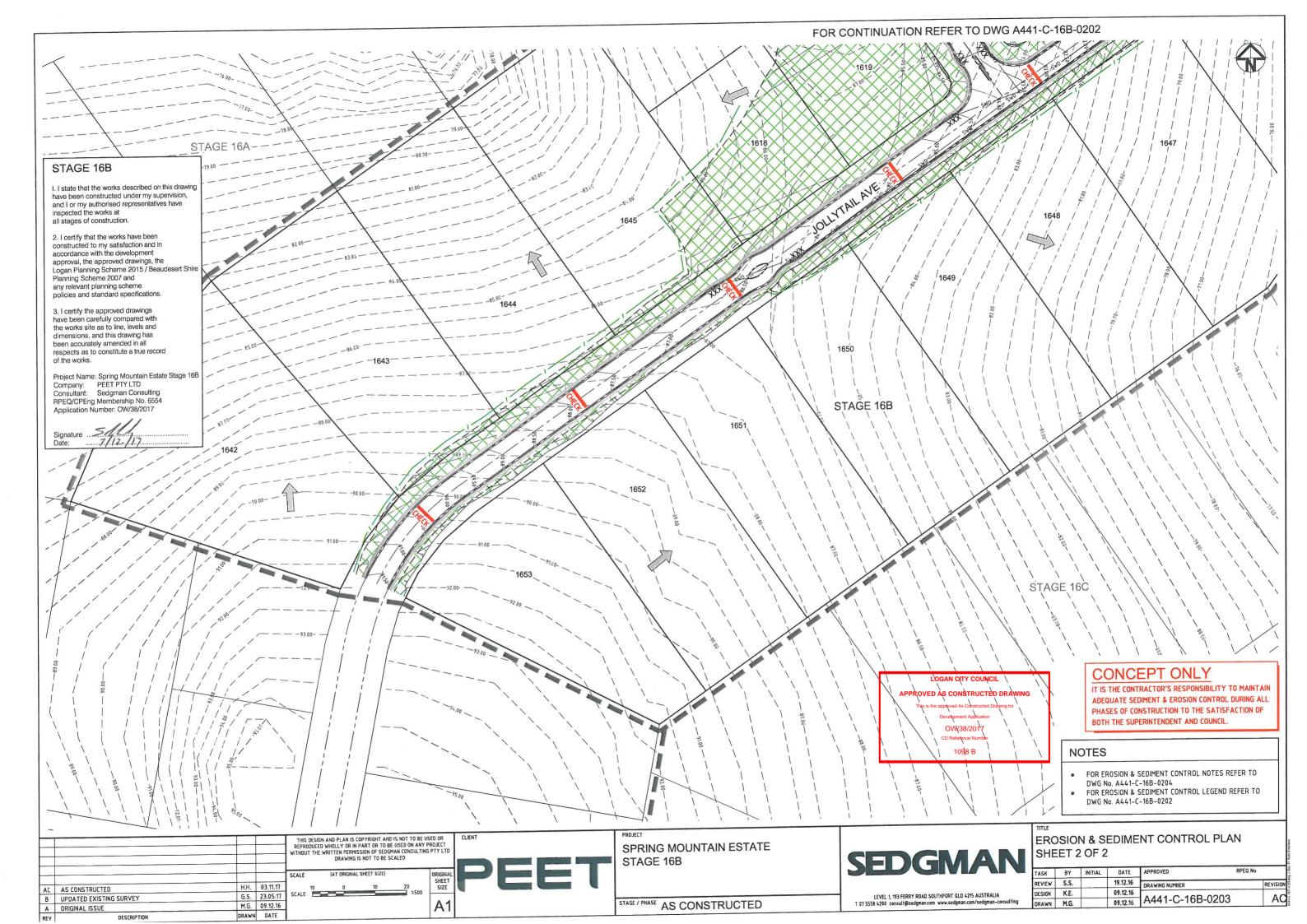


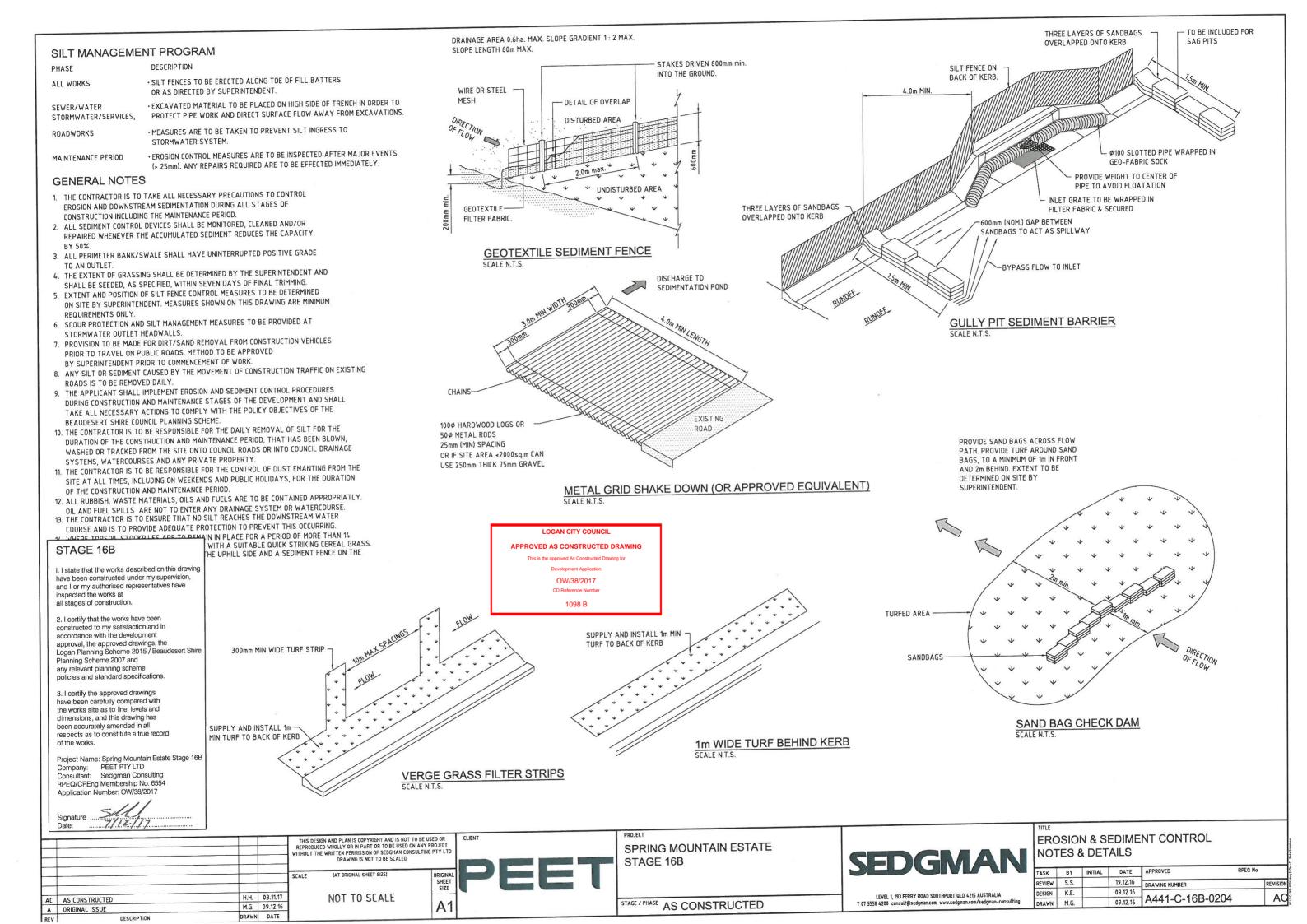
DRAWN DATE

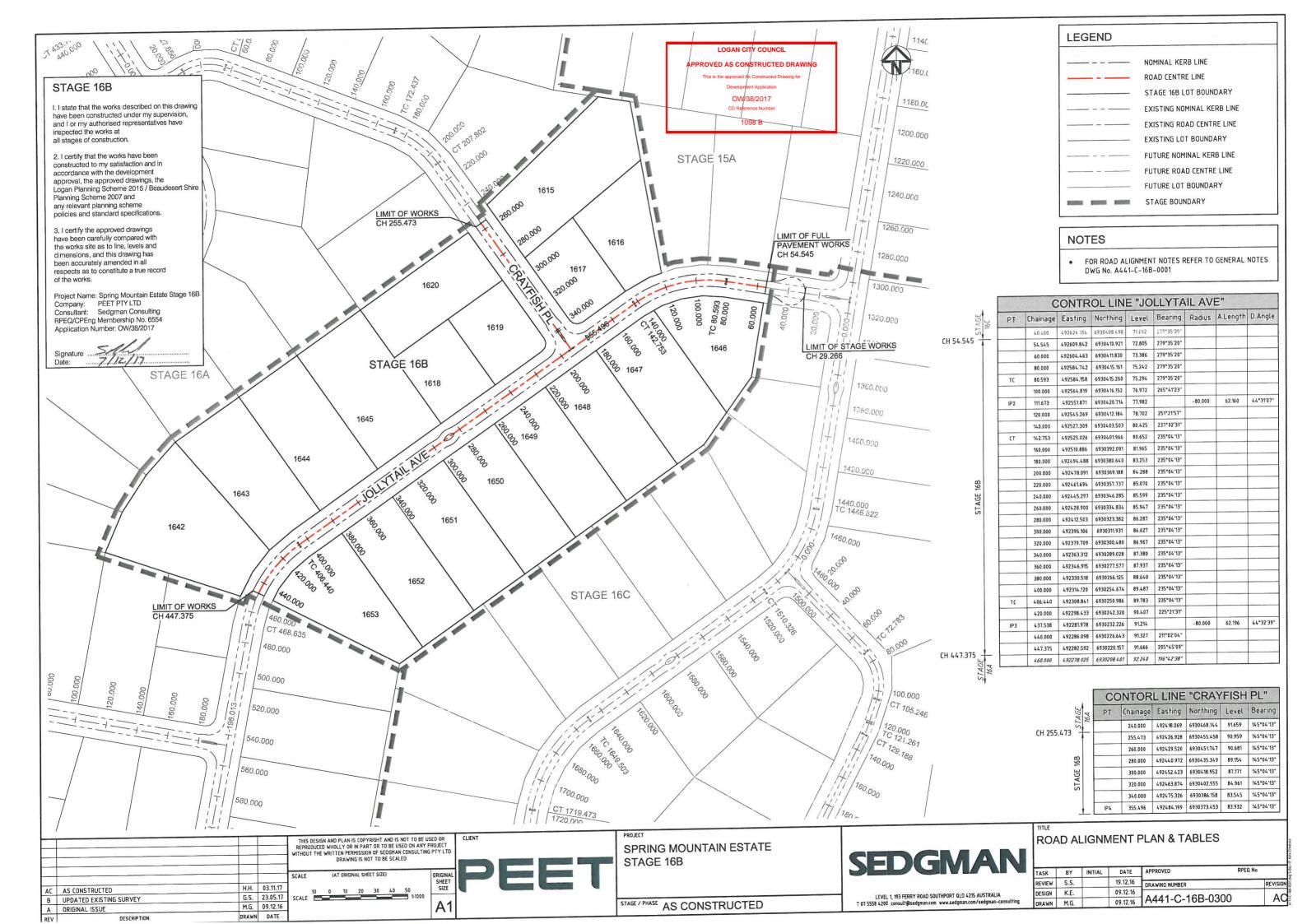


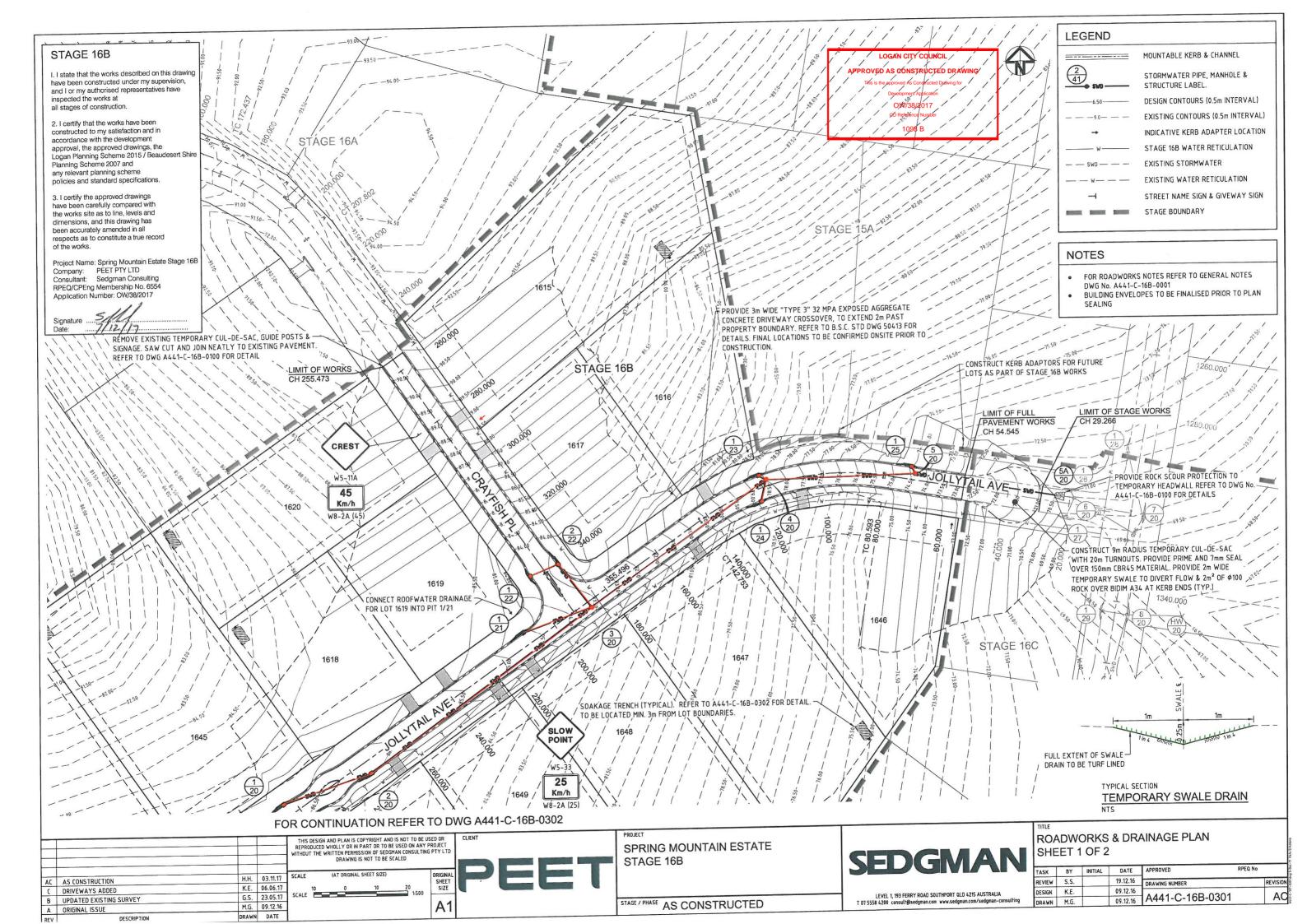


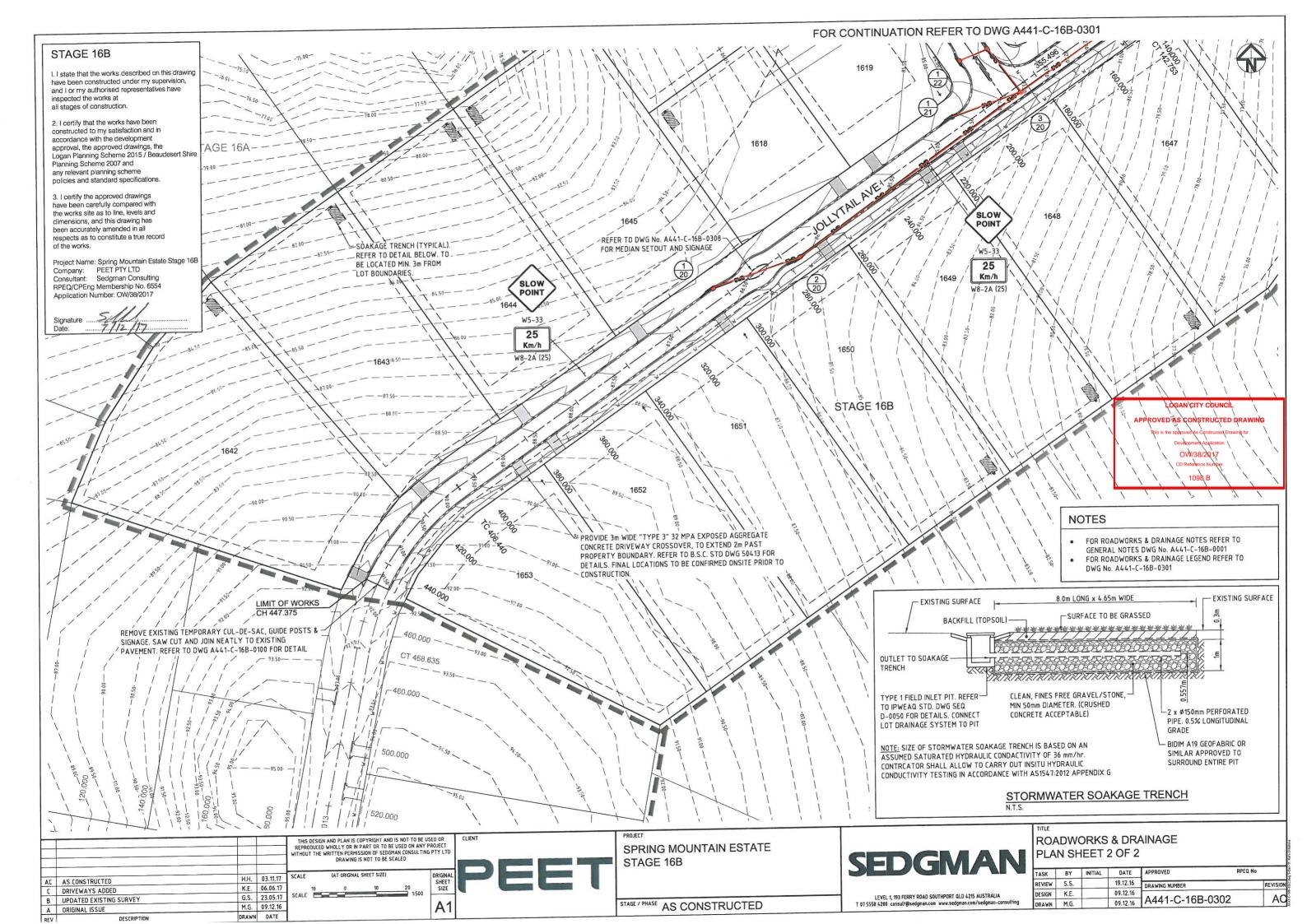


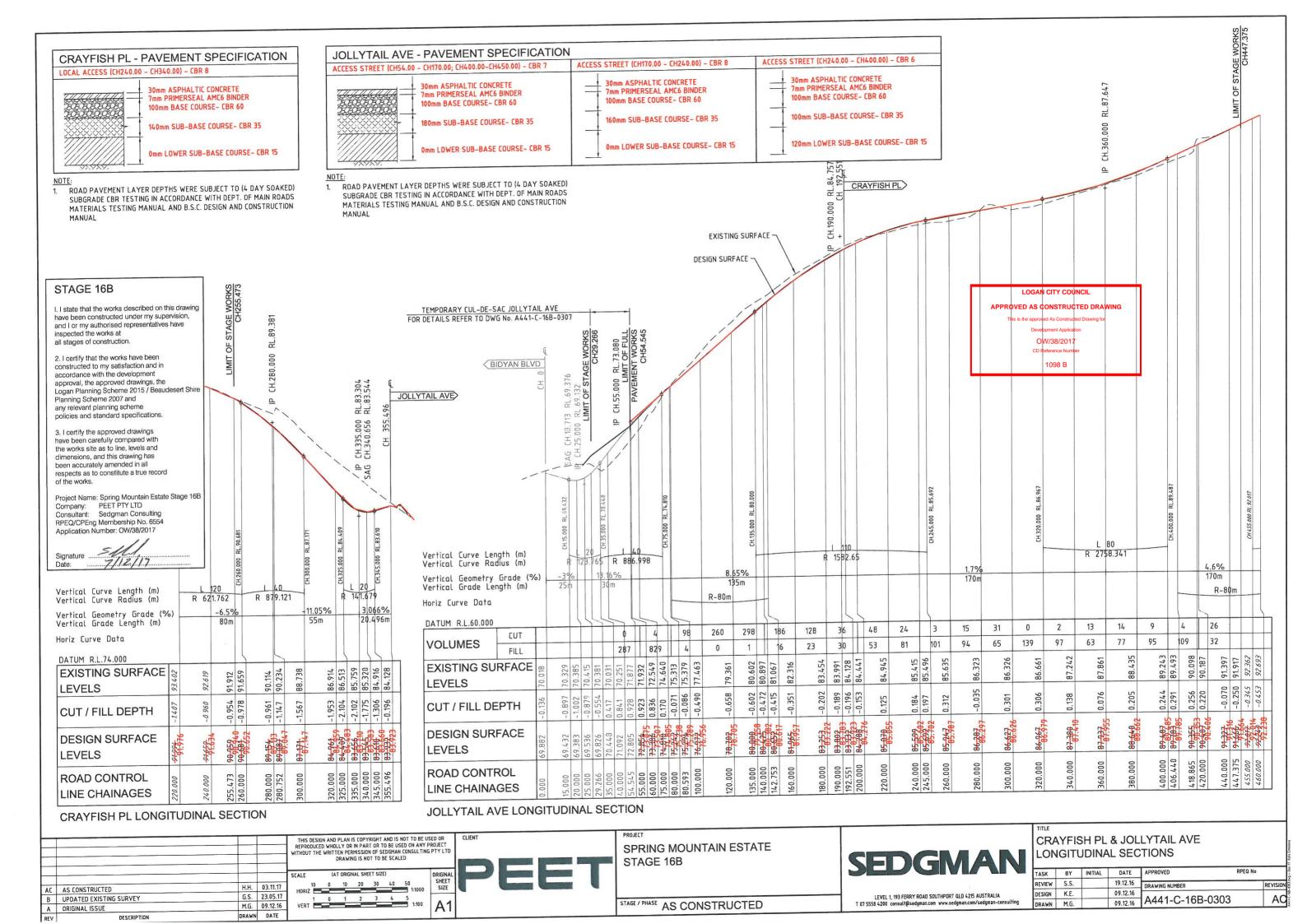


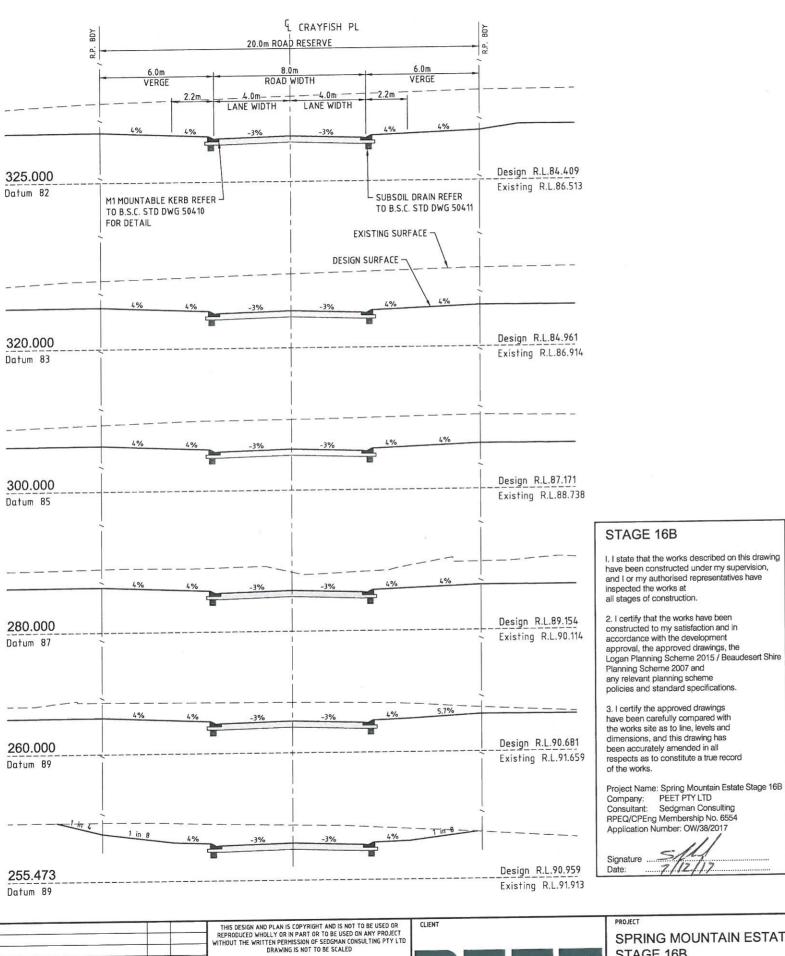












ORIGINAL SHEET SIZE

A1

AC AS CONSTRUCTED

A ORIGINAL ISSUE

B UPDATED EXISTING SURVEY

H.H. 03.11.17

G.S. 23.05.17

M.G. 09.12.16

DRAWN DATE

SCALE

LOGAN CITY COUNCIL

OW/38/2017

1098 B

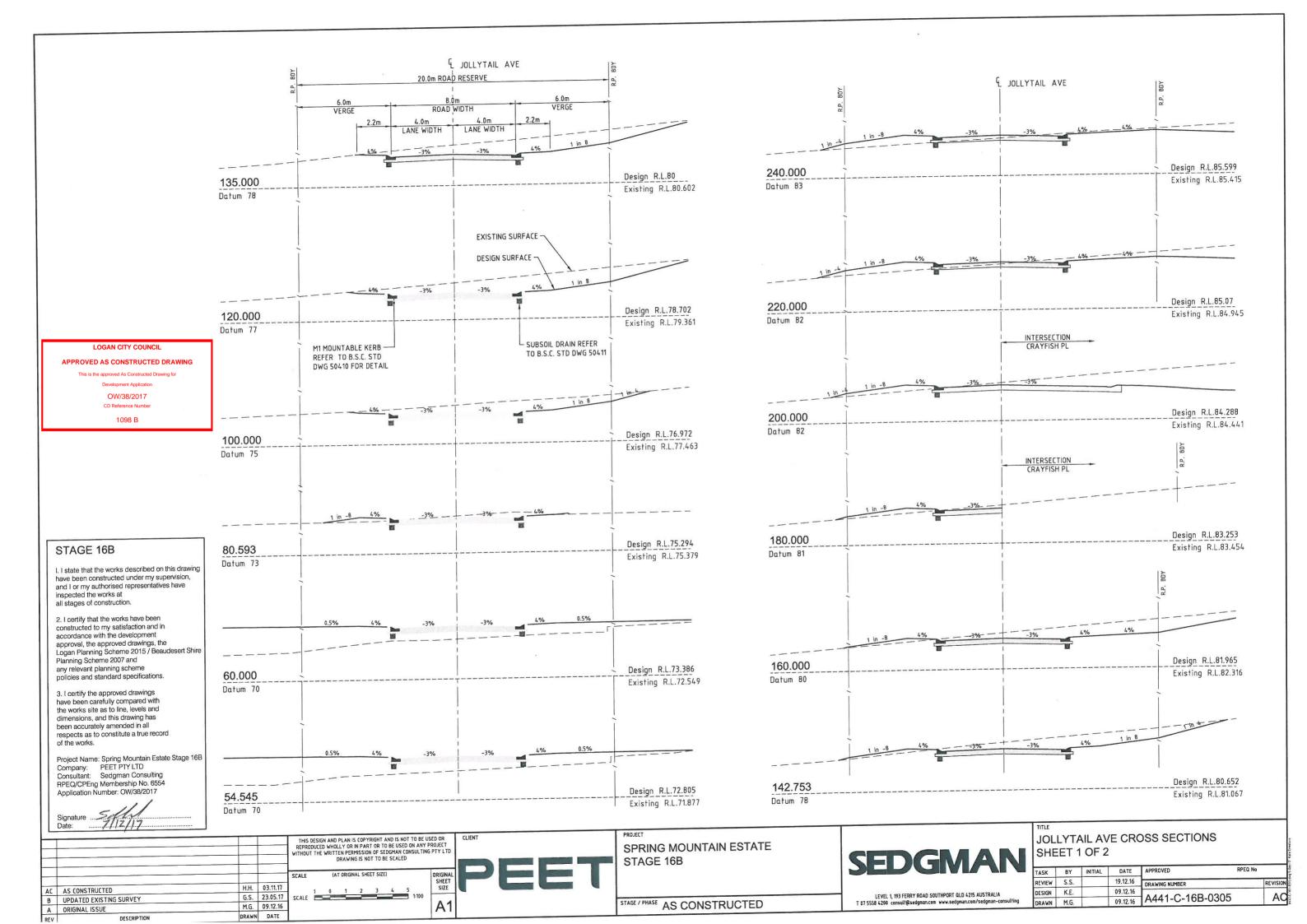
SPRING MOUNTAIN ESTATE STAGE 16B

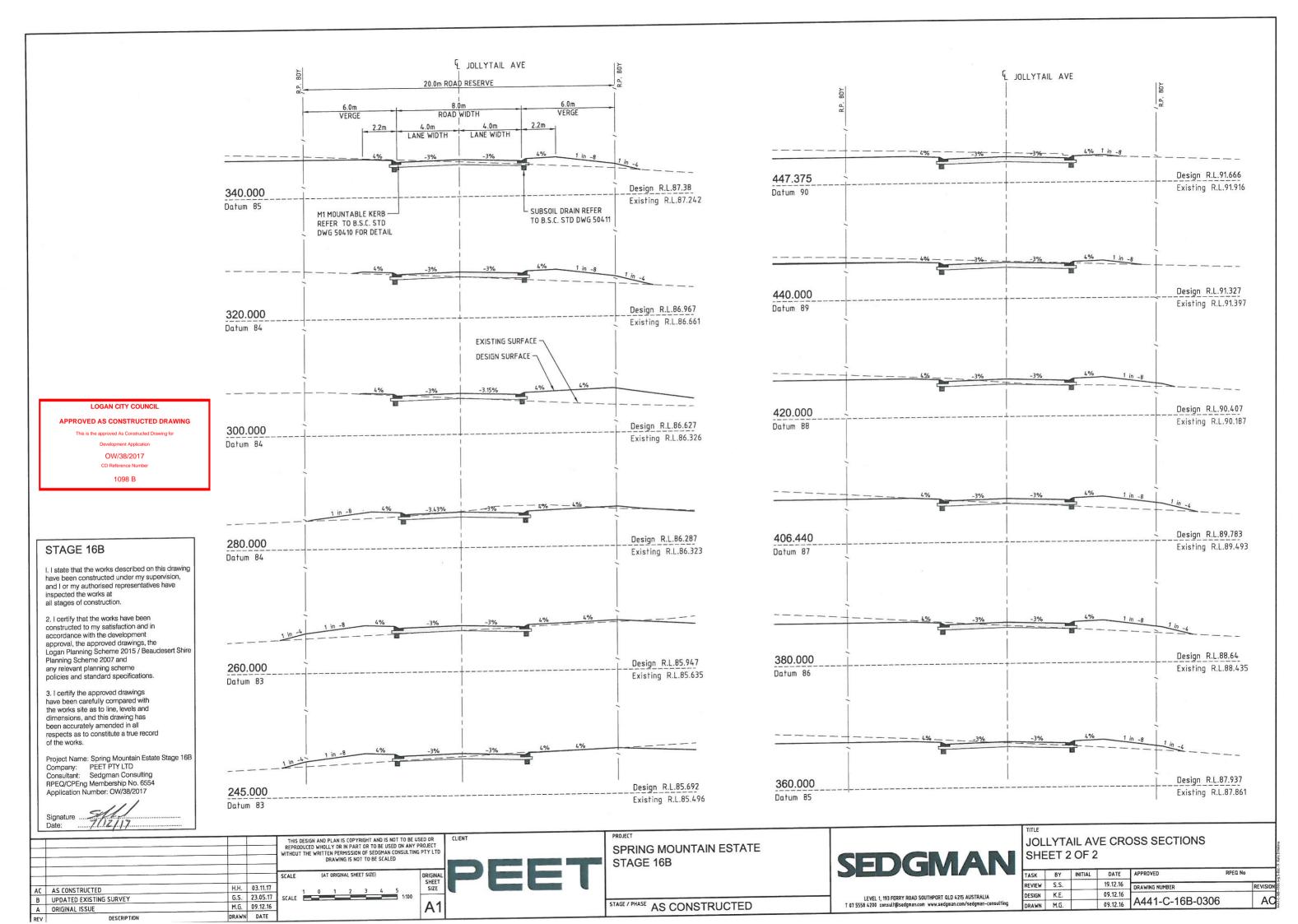
CRAYFISH PL CROSS SECTIONS

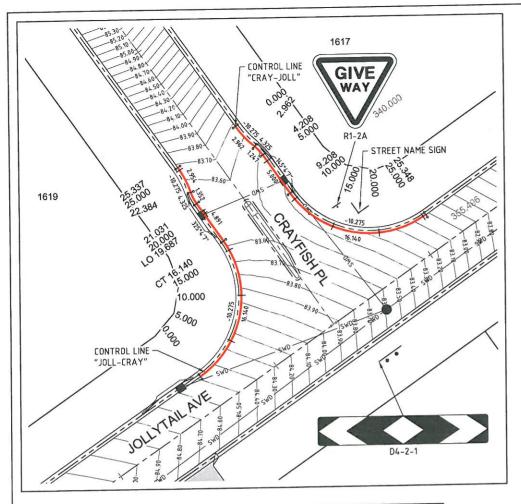
TASK BY INITIAL DATE REVIEW S.S. 19.12.16 DRAWING NUMBER DESIGN K.E. 09.12.16 A441-C-16B-0304

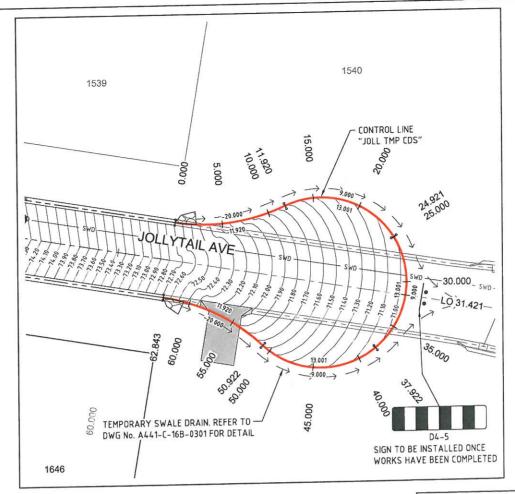
STAGE / PHASE AS CONSTRUCTED

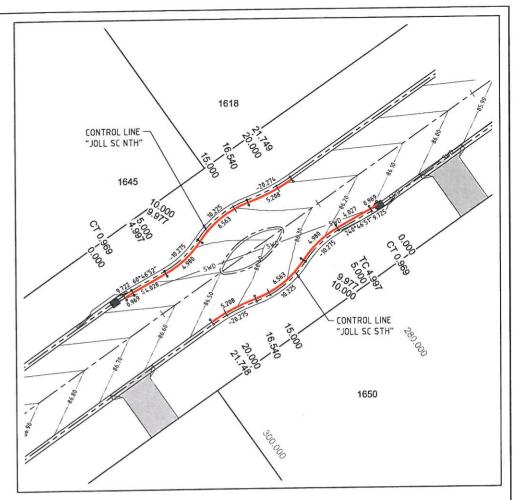
LEYEL 1, 193 FERRY ROAD SOUTHPORT QLD 4215 AUSTRALIA T 07 5558 4200 consult@sedgman.com www.sedgman.com/sedgman-consulting











-				transit of	D	D):	A.Length	D.Angle
PT	Chainage	Easting	Northing	Level	Bearing	Radius	A.LellyIII	U.Allyle
IP1	0.000	492473.998	6930394.566	83.676	145°04'13"			
IP2	1,481	492474.851	6930393.343	83.597		-10.275	2.962	16°30'55"
IP3	2.962	492476.018	6930392.414	83.531				
IP4	3.585	492476.508	6930392.023	83.506		4.325	1.247	16°30'51"
IP5	4.208	492476.868	6930391.508	83.484				
	5.000	492477.321	6930390.859	83.458	145°04'07"			
IP6	9.208	492479.731	6930387.409	83.379				
	10.000	492480.209	6930386.778	83.374	140°39'12"			
	15.000	492484.177	6930383.818	83.348	112°46′19"			
IP7	17.278	492485.614	6930378.985	83.326		-10.275	16.140	89°59'54'
	20.000	492489.070	6930383.058	83.262	84*53'27"			
	25.000	492493.749	6930384.674	83.041	57°00'35"			
IP8	25.348	492494.038	6930384.868	83.021	55°04'13"			

		CON	TROL L	INE ".	IOLL-C	RAY"		
PT	Chainage	Easting	Northing	Level	Bearing	Radius	A.Length	D.Angle
IP1	0.000	492470.098	6930368.149	84.485	55°04′13"			
	5.000	492473.354	6930371.878	84.249	27°11′21″			
IP2	8.070	492478.522	6930374.033	84.073		-10.275	16.140	90°00'06"
	10.000	492474.489	6930376.697	83.950	359°18′29"			
	15.000	492473.238	6930381.488	83.623	331°25′36"			
СТ	16.140	492472.639	6930382.457	83.575	325°04'07"			
SAG	19.687	492470.608	6930385.364	83.509	325°04'07"			
	20.000	492470.429	6930385.621	83.510	325°04'07"			
IP3	21.031	492469.838	6930386.467	83.519				
IP4	21.708	492469.434	6930387.015	83.531		4.325	1.352	17°54'44'
cc	22.384	492469.218	6930387.662	83.547	341°32′24″			
IP5	23.860	492468.747	6930389.073	83.600		-10.275	2.954	16°28'12'
200000	25.000	492468.084	6930390.012	83.656	326°57′01"			
IP6	25.337	492467.896	6930390.292	83.675	325°04'11"			

	C	ONTR	OL LIN	E "JC	LL IM	P CDS	5	
PT	Chainage	Easting	Northing	Level	Bearing	Radius	A.Length	D.Angle
IP1	0.000	492610.508	6930414.865	72.670	99°35'20"			
	5.000	492615.491	6930414.654	72.166	85°15'54"			
IP2	5.960	492616.566	6930413.842	72.079		-20.000	11.920	34*08'55"
2000	10.000	492620.371	6930415.682	71.749	70°56'28"			
IP3	11.920	492622.153	6930416.395	71.612				
	15.000	492625.117	6930417.176	71.419	85°02'53"			
1P4	18.420	492629.365	6930419.691	71.243		9.000	13.001	82°45'56"
	20.000	492629.963	6930416.237	71.176	116°52'44"			
CC	24.921	492633.543	6930412.951	71.022	148*12'22"			
	25.000	492633.584	6930412.884	71.021	148°42'36"			
	30.000	492634.893	6930408.124	70.952	180°32'27"			
IP5	31.421	492637.721	6930406.211	70.949		9.000	13.001	82°45′56′
	35.000	492633.495	6930403.391	70.971	212°22'19"			
СС	37.922	492631.561	6930401.218	71.022	230°58'18"			
	40.000	492629.810	6930400.106	71.077	244°12'10"			
IP6	44.422	492625.401	6930396.224	71.243		9.000	13.001	82°45′56
	45.000	492624.948	6930399.259	71.270	276°02'02"			
	50.000	492620.369	6930401.104	71.550	307°51′54"			
cc	50.922	492619.671	6930401.707	71.612	313°44'14"			
	55.000	492616.459		71.918	302°03'21"			
IP7	56.883	492615.233	6930405.95	72.079		-20.000	11.920	34°08'55
	60.000	492611.936	6930406.306	72.373	287°43'55"			
IP8	62.843	492609.176	6930406.977	72.670	279°35'19"			

STAGE 16B

- I. I state that the works described on this drawing have been constructed under my supervision, and I or my authorised representatives have inspected the works at all stages of construction.
- I certify that the works have been constructed to my satisfaction and in accordance with the development approval, the approved drawings, the Logan Planning Scheme 2015 / Beaudesert Shire Planning Scheme 2007 and any relevant planning scheme policies and standard specifications.
- I certify the approved drawings have been carefully compared with the works site as to line, levels and dimensions, and this drawing has been accurately amended in all respects as to constitute a true record of the works.

Project Name: Spring Mountain Estate Stage 16B
Company: PEET PTY LTD
Consultant: Sedgman Consulting
RPEO/CPEng Membership No. 6554 Application Number: OW/38/2017

Signature 7/12/19

PT	Chainage	Easting	Northing	Level	Bearing	Radius	A.Length	D.Angle
IP1	0.000	492392.138	6930313.704	86.553	55°04′10"			
IP2	0.485	492392.536	6930313.981	86.545		9.722	0.969	5°42'42"
СТ	0.969	492392.959	6930314.218	86.537	60°46′52″			
IP3	4.997	492396.474	6930316.184	86.469				
	5.000	492396.477	6930316.186	86.469	60°45'47"			
IP4	7.487	492398.691	6930317.424	86.427		-10.275	4.980	27°46'17"
IP5	9.977	492400.075	6930319.554	86.386				
	10.000	492400.088	6930319.573	86.386	33°08′21″			
IP6	13.259	492401.927	6930322.405	86.332		10.225	6.563	36°46'44'
	15.000	492403.717	6930322.940	86.303	61°09'25"			
IP7	16.540	492405.117	6930323.579	86.277				
IP8	19.145	492407.574	6930324.484	86.233		-20.274	5.208	14°43'07"
	20.000	492408.246	6930325.045	86.219	60°00'41"			
IP9	21,749	492409.721	6930325.983	86.189	55°04′11"			

PT	Chainage	Easting	Northing	Level	Bearing	Radius	A.Length	D.Angle
				86.088	235°04'13"	and the second		
IP1	0.000	492418.863	6930323.281		233 04 13			5010000
IP2	0.485	492418.465	6930323.003	86.096		9.725	0.969	5°42'38"
CT	0.969	492418.042	6930322.766	86.104	240°46′51"			
TC	4.997	492414.527	6930320.800	86.172	240°46′51"			
	5.000	492414.524	6930320.799	86.172	240°45'45"			
IP3	7.487	492412.310	6930319.560	86.214		-10.275	4.980	27°46'14"
IP4	9.977	492410.927	6930317.430	86.255				
	10.000	492410.914	6930317.411	86.256	213°08'24"			
IP5	3.259	492409.075	6930314.580	86,310		10.225	6.563	36°46'41"
AWING	5.000	492407.285	6930314.044	86.339	241°09′27″			
for IP6	6.540	492405.885	6930313.405	86.364				
IP7	9.144	492403.427	6930312.501	86.408		-20.275	5.208	14°43'05"
	0.000	492402.755	6930311.940	86.423	240°00'40"		,	
0.00	+-			0/ / 50	225.601.143.1			

CONTROL LINE "JOLL SC STH"

SETOUT	T DETAILS
	LEVELS & SETOUT PROVIDED ARE TO LIP OF KERB AND CHANNEL

LEGEND	
	MOUNTABLE KERB & CHANNEL (M1)
9.30	DESIGN CONTOURS (0.1m INTERVALS
SWD	STORMWATER PIPE
	CONTROL LINE

STAGE / PHASE AS CONSTRUCTED

***		IP4	9.977	492410.927	6930317.430	86.255				
			10.000	492410.914	6930317.411	86.256	213°08'24"			
2	LOGAN CITY COUNCIL	IP5	3.259	492409.075	6930314.580	86.310		10.225	6.563	36°46
	APPROVED AS CONSTRUCTED DR	AWING	5.000	492407.285	6930314.044	86.339	241°09′27″			
-	This is the approved As Constructed Drawing	or IP6	6.540	492405.885	6930313.405	86.364				
	Development Application	IP7	9.144	492403.427	6930312.501	86.408		-20.275	5.208	14°43
í.	OW/38/2017	-	0.000	492402.755	6930311.940	86.423	240°00'40"			
8	CD Reference Number	IP8	1.748	492401.281	6930311.001	86.452	235°04'13"			
	1098 B									

				THIS DESIGN AND F REPRODUCED WHOLI WITHOUT THE WRITTE DI
				SCALE [AT
AC	AS CONSTRUCTED	H.H.	03.11.17	2 1 0
В	UPDATED EXISTING SURVEY	G.S.	23.05.17	SCALE
A	ORIGINAL ISSUE	M.G.	09.12.16	
RFV	DESCRIPTION	DRAWN	DATE	

DESCRIPTION

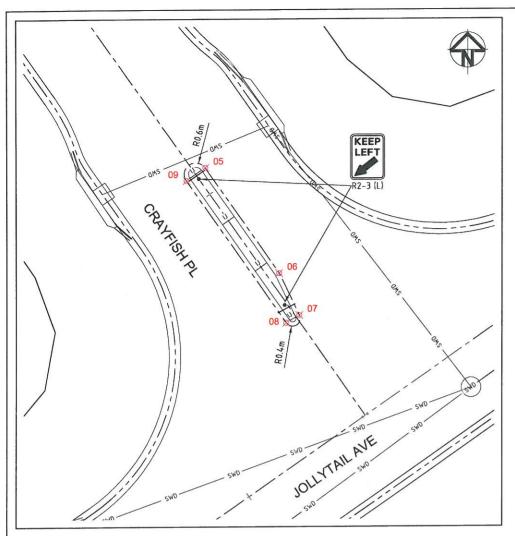
D PLAN IS COPYRIGHT AND IS NOT TO BE USED OR DLLY OR IN PART OR TO BE USED ON ANY PROJECT 'TEN PERMISSION OF SEDGMAN CONSULTING PTY LTD DRAWING IS NOT TO BE SCALED ORIGINAL SHEET SIZE)

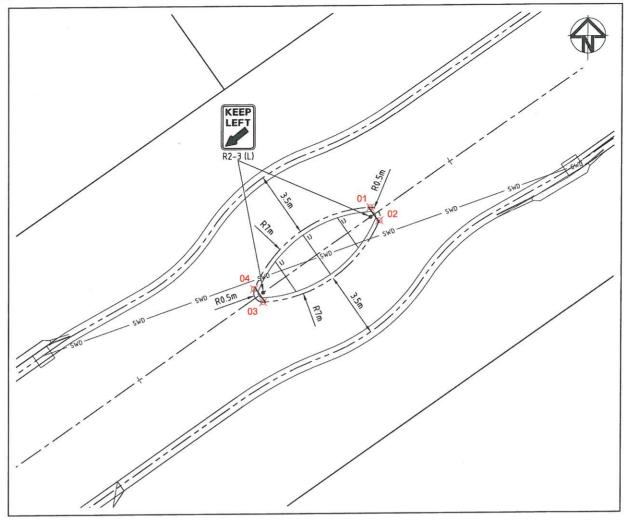
SPRING MOUNTAIN ESTATE STAGE 16B

LEVEL 1, 193 FERRY ROAD SOUTHPORT QLD 4215 AUSTRALIA T 07 5558 4200 consult@sedgman.com www.sedgman.com/sedgman-consulting

TITLE	
INTERSECTION	DETAILS

TASK	BY	INITIAL	DATE	APPROVED RPEC	1 No
REVIEW	\$.\$.		19.12.16	DRAWING NUMBER	REVISION
DESIGN	K.E.		09.12.16	A 444 O 40D 0007	100
DRAWN	M.G.		09.12.16	A441-C-16B-0307	AC

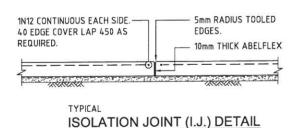




JOLLYTAIL AVE & CRAYFISH PL - TRAFFIC ISLAND SCALE 1:100

JOLLYTAIL AVE - SPEED CONTROL ISLAND SCALE 1:100

-FABRIC- CUT EVERY SECOND 30 DEEP x 6 WIDE TOOL JOINT. 5-RADIUS TO TOOLED EDGES. SAW WIRE CROSSING JOINT AND DEPRESS FABRIC TO CUT WITHIN 24 hrs. OF PLACING CONCRETE. FILL WITH A JOINT MAINTAIN COVER. FILLER AS SPECIFIED. TOOL JOINT (T.J.) DETAIL SCALE 1:20



SCALE 1:20

10mm ABLEFLEX OR SIMILAR -INFILL CONCRETE GRADE N25, PROVIDE TOOL WITH APPROVED SEALANT JOINTS AT 1m INTERVALS & ISOLATION JOINTS AT 3m CENTRES (TYPICAL) 'SM3' KERB TYPE REFER B.S.C. STANDARD DWG 50410 FOR DETAILS XXXXX YXYXX 0.225m VARIES TYPICAL MEDIAN DETAIL SCALE 1:10

> LOGAN CITY COUNCIL APPROVED AS CONSTRUCTED DRAWING

OW/38/2017

1098 B

LEGEND

MOUNTABLE KERB & CHANNEL SEMI-MOUNTABLE KERB STORMWATER PIPE _∞ 02 KERB SETOUT POINT SIGN POST

NOTES

FOR ROADWORKS NOTES REFER TO GENERAL NOTES DWG No. A441-C-16B-0001

MEDIA	N SETOUT	POINTS
POINTS	EASTING	NORTHING
01	492408.318	6930320.976
02	492408.803	6930320.282
03	492402.683	6930316.009
04	492402.199	6930316.702
05	492475.76	6930386.588
06	492479.669	6930380.991
07	492480.734	6930378.759
08	492480.045	6930378.357
09	492474.776	6930385.901

STAGE 16B

- I. I state that the works described on this drawing have been constructed under my supervision, and I or my authorised representatives have inspected the works at all stages of construction.
- 2. I certify that the works have been constructed to my satisfaction and in accordance with the development approval, the approved drawings, the Logan Planning Scheme 2015 / Beaudesert Shire Planning Scheme 2007 and any relevant planning scheme policies and standard specifications.
- 3. I certify the approved drawings have been carefully compared with the works site as to line, levels and dimensions, and this drawing has been accurately amended in all respects as to constitute a true record of the works.

Project Name: Spring Mountain Estate Stage 16B Company: PEET PTY LTD
Consultant: Sedgman Consulting RPEQ/CPEng Membership No. 6554 Application Number: OW/38/2017

Signature Salahan Date: 7/12/17

THIS DESIGN AND PLAN IS COPYRIGHT AND IS NOT TO BE USED OR REPRODUCED WHOLLY OR IN PART OR TO BE USED ON ANY PROJECT DRAWING IS NOT TO BE SCALED (AT ORIGINAL SHEET SIZE) ORIGINAL SHEET SIZE AC AS CONSTRUCTED AS SHOWN

M.G. 09.12.16

DRAWN DATE

A ORIGINAL ISSUE

DESCRIPTION

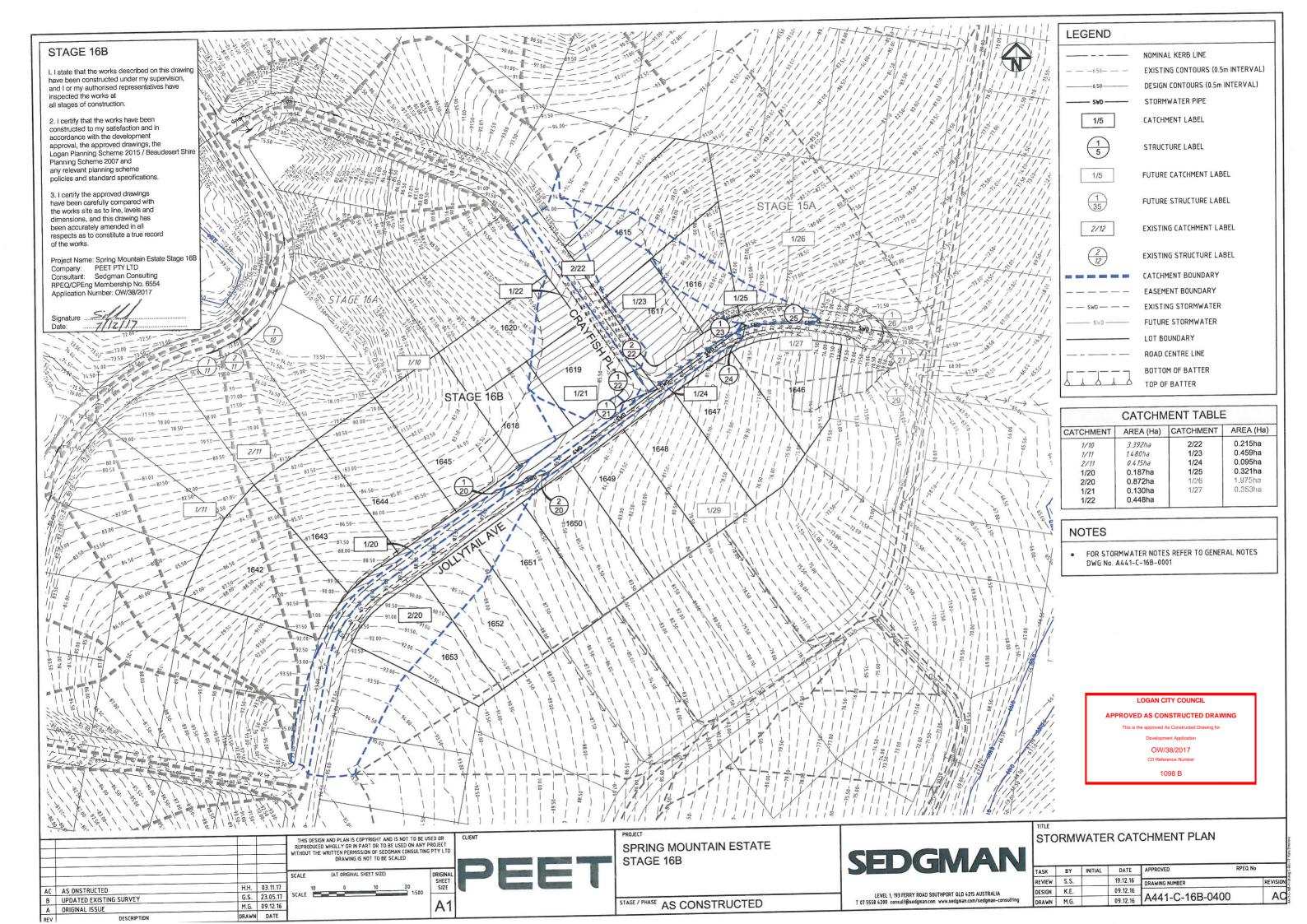
A1

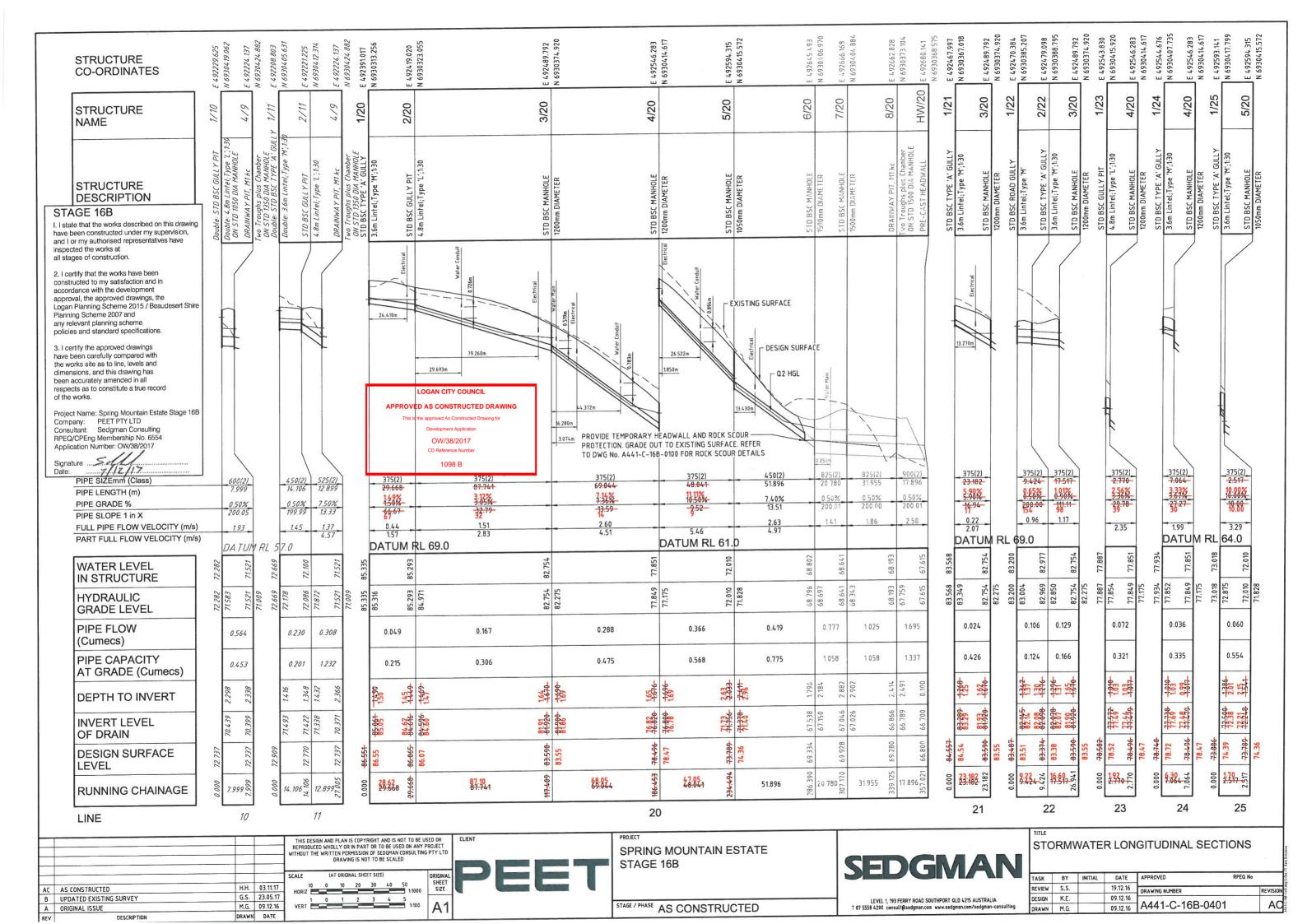
SPRING MOUNTAIN ESTATE STAGE 16B

LEVEL 1 193 FERRY ROAD SOUTHPORT QLD 4215 AUSTRALIA STAGE / PHASE AS CONSTRUCTED

MEDIAN SETOUT DETAILS

SEDGMAN TASK BY INITIAL DATE APPROVED REVIEW S.S. 19.12.16 DRAWING NUMBER DESIGN K.E. 09.12.16 09.12.16 A441-C-16B-0308 DRAWN M.G.





				TIME		CIID C	A TCI II4	ENT RU	ININEE				IN	LET DE	SIGN								AIN DES										DLOSS			<u> </u>	V 1	L.	C4		PART F	ULL			DESI	GN LEVI	ELS	Т	
	LC	CATION		TIME				A C×		CA	2			1		g QI		t	c I	+CA	Qt	Qm	Qs	Qp	L	S		٧	T	-		v2/2g	Ku	hu	KL	hl	r.w	i1W	31	111	+	1	+			1			_
DESIGN ARI	STRUCTURE No.	DRAIN SECTION	SUB-CATCHMENTS CONTRIBUTING	SUB-CATCHMENT TIME OF CONC.	FALL INTENSITY	ENT	UNOFF	ENT AREA	AKEA	SUM OF (C × A) SUB-CATCHMENT		(INC. BYPASS) ROAD GRADE	AT INLET MINOR FLOW	TYPE		RYPASS FI DW	BYPASS	STRUCTURE No. CRITICAL	TIME OF CONC. RAINFALL INTENSITY	TOTAL (C × A)	OR TOT	SURFACE	MAJOR SURFACE FLOW	ΜO	REACH LENGTH	PIPE GRADE	PIPE / BOX DIMENSIONS (CLASS)	FLOW VELOCITY FULL (PIPE GRADE VELOCITY)	TIME OF FLOW IN REACH STRUCTURE	CHART No.	STRUCTURE RATIOS FOR 'K' VALUE CALCULATIONS		U/S HEADLOSS COEFFICIENT		LAT. HEADLOSS CO-EFFICIENT	LAT. PIPE STRUCT. HEADLOSS	W.S.E CO-EFFICIENT		PIPE FRICT	PIPE FRICTION	_	VELOCITY	OBVERT		-	LAT. H.G.L	l l	SURFACE OR K&C INVERT LEVEL	STRIICTIBE No
yrs	1/20	1/20 to 2/20	1/20		mm/h 127 255			ha h	a h	na l/	s 1/	/s 49 1	% l/s 70 397 H 1.732Wd	1 2	1/	s 1/s		1 7	in mm/ 50 127 50 255	/h ha 0.140 0.187			83	49	29.668 rate flow)	1.50	375(2) 0	m/s .44 .94)	min 0.49	C	Qg 0.049 Qo 0.049 Do 375 CHRT 32: Vo2/2gDo 0.03 H/Do 0.00 Kg side flow 10.07 end flow 7.16 Part full downstream pipe	0.010	1.00	0.019	Upstrea pipe ob Set Kp	m m HGL 85 v 85.436 to 1	.335 bel	0.019 low outl	0.08			1.57	85.4	36 B5.316 91 B5.29	85.335		85.335	86.551	1/2
2 100	2/20	2/20 to 3/20	1/20;2/20 (1/21 x 0.2;)	15.70 15.70	93 189	-	0.62 0 0.88 0	.872 0.5 .872 0.7	541 0. 768 0.	541 14	40 1 03 0W WID	140 1 TH/DEPT	70 39°	7 8	1	31 9	1/2	14 15	.70 93 .70 189	0.681 0.978	513	904 (F	347 Pipe flow	167 = \$um up:	87.741 stratten	3.05 flows)	375(2) 1	51	0.97	0	gg 0.131 Qo 0.167 Do 375 CHART 34 Angle 17 Case 3 S/Do 2.5 Du/Do 1.00 Qg/Qo 0.78 K 2.31 S/Do 1.86 cor 0.46 Ku 2.77 Kw 2.77	0.116	2.77	0.322			2.77	0.322	0.91	0.79	96 0.19	2.83		71 84.97 95 82.75			85.293	86.065	2/
2 100	1/22	1/22 to 2/22	1/22	6.10 6.10	137 275		0.62 0 0.88 0	.448 0.2 .448 0.3	278 0. 394 0.	.278 10 394 3	06 1		0.789m .00 269 H 1.684Wd	- 1	111 1	06 0			.10 137 .10 275	0.278 0.394	3 301		(Pipe		9.424 rate flow		375(2) (.96 .12)	0.16	0	S/Do 1.86 cor 0.46 Ku 2.77 Kw 2.77 Qg 0.106 Qo 0.106 Do 375 CHRT 32: Vo2/2gDo 0.13 H/Do 1.29 Kg side flow 4.19 end flow 3.44	0.047	4.19	0.196			4.19	0.196	0.37	0.03	35			20 83.00 73 82.96			83.200	83.487	1/
	2/22	2/22 to 3/20	1/22;2/22	10.00	113 228		0.62 0	0.215 0.1 0.215 0.1	133 0. 189 0.	.133 4	2 20	42 1	.50 37: H 1.666Wd	3 2		2 0	1/2	23 10	0.00 113 0.00 228	0.411	369	849 (F	240 Pipe flow	129 = \$um up:	17.517 str atten	0.90 flows)	375(2) 1	17 1.50)	0.25	0	Qg 0.042 Qo 0.129 Do 375 Angle 74 Chart 43 S/Do 2.5 chartdeg Du/Do 1.00 K0 1.35 K0.5 1.93 Qu/Do 0.68 Cg 0.72 K 1.77 S/Do 2.5 K0 1.35 K0.5 1.93 K 1.77 S/Do 2.5 K0 1.41 K0.5 2.25 K 2.02	0.070	1.71	0.119	CHART S/Do 2 S/Do 2	al for Sil	Do 2.40 K0.5 1.82 K0.5 2.10	Kw 1.82 2 K 1.66 6 K 1.89		0.09	96		82.4 82.2	82.85 82.75	82.969		82.977	83.374	2
2	1/21	1/21 to 3/20	1/21	10.80 10.80	109 221		0.62 0.88	0.130 0.0	080 0. 114 0	.114	70		.90 60 H 1.052Wd		2	24 0	1/3		0.80 105 0.80 22	0.080	70	1369	9 46 (Pip	24 e flow= G	23.182 rate flow	5.90	375(2)	.22	0.39	0		0.002	1.00	0.219	Upstrea	am HGL 88 v 83.664 to 1	1.00 3.568 bel	0.219 low outl	let			0 2.07	82.2	83.34 95 82.75	4		83.568		
2 100	3/20	3/20 to 4/20	1/20;2/20;1/22; /22;1/21	2										1	1				5.67 91 5.67 184		844	1596 (F	5 557 Pipe flow	288 = \$um up:	69.044 stratten	7.36 flows)	375(2) 2	.60 4.30)	0.44	P 2 V E F	Qu 0.288 Do 375 Routine 3.1 Join Pipes: 2/20 and 1/21 Vel 1 1.78 Vel 2 0.181 E Dia 417 Angle 180 Flow 0.183 Routine 2.1 Combined pipes in line case Join Pipes:	0.345	1.39	0.479	Vel1 1.3 Eq Dia 5 CHART K'w 0.05 Ku 0.98	0 & 1/21 a 42 Vel2 D. 52 Angle 50 Du/Do 5 Vu 1.20 V Kw 0.99 lated Ku=	and 2/22 1.944 211 Flow 1.47 alph WSE 0.3 1.39 Kw	0.288 ha 0 k= 1.39				4.51	77.19		9		82.754		3
2 00	1/23	1/23 to 4/20	1/23	11.80 11.80	105 213		0.62 0.88	0.459 0.4 0.459 0.4	284 0. 404 0.	404 2	39 DW WID	TH/DEP1	1.65 89 H 1.535Wd	- 1		72 1	1/	25 1	1.80 105 1.80 213	0.284 0.404	4 239	2039			2.770 rate flow		375(2)	.65 2.91)	0.05	C	Join Pipes: Og 0.072 Qo 0.072 Do 375 CHRT 32: Vo2/2gDo 0.06 H/Do 0.00 Kg side flow 9.01 end flow 6.65 Part full downstream pipe	0.022	1.00	0.033	Unstream	am HGL 77 v 77.947 to 1	7.887 bel	low outl	lei			1 2.35	77.8	47 77.85 54 77.84	9		77.887	10	
2	1/24	1/24 to 4/20	1/24	6.30 6.30	135 272		0.75	0.095 0. 0.095 0.	.071 0 095 0	0.071	DØWI 27 72	NSTREAM 36	0.553m 1.65 89 H 1.055Wd	5	2	36 0	1/	27 6	.30 135 .30 27	0.07		2039	9 36 (Pip	36 e flow= G	7.064 rate flow	3.67	375(2)	.33 3.04)	0.12	0	Qg 0.036 Qo 0.036 Do 375 CHRT 32: Vo2/2gDo 0.01 H/Do 0.00 Kg side flow 10.42 end flow 7.34 Part full downstream pipe			0.082	pipe ob Set Kp	am HGL 77 v 78.113 fo 1	7.934 bel	low out	let			3 1.99	77.8	77.85 77.84	9		77.851		
2 100	4/20	4/20 to 5/20	1/20;2/20;1/22 /22;1/21;1/23;1/ 4/23;1/			STA	AGE	16B						1	7					1.52°2 2.15°		7 2033	9 721 Pipe flow	366 = \$um up	48.04 st- atten	1 10.50 flows)	375(2)	331 5.14)	0.24		Qo 0.366 Do 375 Flow 1/23 made eqv grate flow Flow 1/24 made eqv grate flow CHART 37 Angle 34 Case 2 S/Do 2.5 Du/Do 1.00 Qg/Qo 0.23 K 1.16 S/Do 2.65 cor -0.03 Ku 1.13 Kw 1.13 K wals above for stepped pipes as grate flow grate flow decreased by 0.061 from 1/23 grate flow decreased by 0.024 from 1/24 Routine 3.1 Join Pipes: 1/24 and 3/20 Velt 0.215 Velz 2.546 Eq Dia 405 Angle 142 Flow 0.305 Routine 2.15 Equiv defin 54 CHART 49 High vel lat Eqv. 1/24 & 3/20		1.21	0.674	Dhv/Dl Qhv/Qc Low vel Dlv 375 Qlv/Qo No graf Ku=Kw= Combine Join Pip Eqv 1/2. Eq Dia CHART K'w 0.08 Interpo K vals :	v 1.1 Dhv/[0.83 H 2.1 Latrl 1/2: Qlv 0.061 0.17 L -0. e flow: H- 2.18 ed pipes in	Do 1.08 .36 .3 1 DLV/Do .02 H-L: -L-0.2 = n line ca: and 1/2: 0.553 152 Flo 1.27 alph WSE 0.5 : 1.40 Kws as pipes	2.38 2.18 2.18 2.18 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3					VED AS	AN CITY	COUNCE RUCTE Constructed If Application 2017	114			
2	1/25	1/25 to 5/20	1/25	12.90 12.90	101 205	have and I	been c	the wor onstruct authoris	ted un	der my	superv	rision,	90	17	2	60	1/	26 1	2.90 10 2.90 20	1 0.19 ¹ 5 0.28	9 161	1 206	9 101 (Pip	60 te flow= 0	2.510 Grate flow	10.00	375(2)).54 5.02)	0.04		Dñv 405 Qhv 0.305 Qg 0.060 Qo 0.060 Do 375 CHRT 32: Vo2/2gDo 0.04 H/Do 0.00 Kg side flow 9.65 end flow 6.94	0.015	9.65	0.143					0.12	2 0.0	03 0.08	3 3.29		75 72.87 24 72.33			73.018	73.886	0.0
	5/20	5/20 to 6/20	1/20 to 1/24;1/ S	72		2. I co consi acco appro Loga Plann	ertify the tructed rdance oval, the n Plann ning Scl	e works constru at the w to my s with the e appro- ning Sch herne 20 plannin	vorks has atisfacted development 2007 and	etion and opment awings, 2015 / B d	d in the	sert Sh	390Wd 98m		16			1	7.35 89 7.35 18	9 1.72 1 2.43	6 122	4 209	02 809 (Pipe flow	5 419 v= Sum up	51.896 ostratten	6 7.40 n flows)	450(2)	2.63 4.87)	0.33		Qo 0.419 Do 450 Flow 1/25 made eqv grate flow Flow 4/20 made eqv grate flow CHRT 32: Vo2/2gjb 0.78 H/Do 0.00 Kg side flow 3.13 end flow 2.86 K vals above for stepped pipes as grate flow grate flow decreased by 0.053 from 1/25 grate flow decreased by 0.366 from 4/20 Routine 2.19 CHART 53 U/Do 0.8 B Qu/Qo 0.87 Kw=Ku= -0.18		0.51	0.182	Join Pip 1/25 an Vel 1 3.3 Eq Dia CHART K'w 0.0 Ku 0.02 Interpo K vals		0.479 176 Flo 10.94 alp WSE 0.0 -0.18 K s as pipe	ow 0.419 pha 0 03 (w= -0.16	8			6 4.97	71.8: 67.9	28 71.824 68.79	8 72.010		72.010	73.789	5
2 100	1/11	1/11 to 2/11	1/11	17.20 17.20	89 181	polici	ies and ertify th	standar e appro	rd spe oved dr	cification awings			30 449W		02	230	16 2	/#	17.20 8 17.20 18	9 0.97	17 65.	5 82	0 42 (Pi)	5 231 pe flow=	0 14.10 Grate flow	6 0.50 w)	450(2)	1.45 (1.27)	0.16		Combined pipes in line case ag 0.230 ao 0.230 Do 450 CHRT 32: Vo2/2gDo 0.24 H/Do 0.52 Kg side flow 4.58 end flow 3.79	0.107	4.58	0.491			4.58	0.49	1 0.65	5 0.0	192		71.8	43 72.17 72 72.06	16		72.669		
2 100	2/11	2/11 to 4/9	1/11;2/11	15.40 15.40		the w dime been respe	vorks si ensions, accura	earefully te as to and thin ately am to cons	line, le is draw ended	vels and ing has in all	d		0.2m	46	8	82	1 1.			9 1.17	74 83.	33 56.	52 52 (Pipe flo	6 30i w= 5um up	8 12.89 ostrattei	7.50 n Nows)	525(2)	1.37 (5.50)	0.16		Qg 0.078 Qo 0.308 Do 525 Angle 50 Charl 39 5/Do 25 Charldeg Du/Do 0.86 KO 186 KD 5.181 Gu/Go 0.75 Cg 0.59 K 1.83 5/Do 20 KO 2.88 KD 5.192 K 1.99 S/Do 15 KO 2.88 KD 5.192 K 2.33			0.214	Interp CHART S/Do 2 S/Do 1 Interp	val for S	/Do 1.43 7 K0.5 1.8 1 K0.5 2.0 1 Do 1.43	8 Kw 2.31 83 K 1.93 67 K 2.2 8 Ku 2.24	8 3 20 4			2 4.57	70.9	72 71.87	27		72.100		
2 100	1/10	1/10 to 4/9	1/10	14.60 14.60	96 195	Proje	ect Nam	ne: Sprin PEET	PTYL	_TD		Stage 1	6B 7.		PMS. 111	564	0		14.60 9 14.60 19	96 2.10 95 2.98	03 161	17	(Pi	56 pe klow=	4 7.99 Grate floo	9 0.50 w)	600(2)	1.93 (1.55)	0.07		Qg 0.564 Qo 0.564 Do 600 CHRT 32: Vo2/2gDo 0.31 H/Do 0.88 Kg side flow 3.68 end flow 3.21	0.190	3.68	0.699			3.68	0.695	9 0.7	0.0	062		71.0	49 71.58 09 71.52	71 12.28.		72.282	12.131	
						Cons RPEC Appli	sultant: Q/CPEr	Sedg ng Meml Number	man C bership r: OW/S	Consulting No. 65 38/2017	554												_		ULA Q ₁₀₀ MA		TAB	<u>LE</u>																					
					L	Date	:		12/	//														DN IFCT															TI	TLE									-

THIS DESIGN AND PLAN IS COPYRIGHT AND IS NOT TO BE USED OR REPRODUCED WHOLLY OR IN PART OR TO BE USED ON ANY PROJECT WITHOUT THE WRITTEN PERMISSION OF SEDMAN CONSULTING PTY LTD DRAWING IS NOT TO BE SCALED SCALE (AT ORIGINAL SHEET SIZE) H.H. 03.11.17 G.S. 23.05.17 AC AS CONSTRUCTED

B UPDATED EXISTING SURVEY

A ORIGINAL ISSUE

REV DESCRIPTIO

M.G. 09.12.16 DRAWN DATE

N/A

A1

SPRING MOUNTAIN ESTATE STAGE 16B

STORMWATER CALCULATION TABLE

TASK	BY	INITIAL	DATE	APPROVED	RPEQ No
REVIEW	5.5.		19.12.16	DRAWING NUMBER	REVISIO
DESIGN	K.E.		09.12.16	A 4 4 4 0 40D 0400	0.0
DRAWN	M.G.		09.12.16	A441-C-16B-0402	AC

STAGE / PHASE AS CONSTRUCTED

LEVEL 1, 193 FERRY ROAD SOUTHPORT QLD 4215 AUSTRALIA T 07 5558 4200 consult@sedgman.com www.sedgman.com/sedgman-consulting