

INSTALLATION OF RRA DESIGNED TELECOMMUNICATIONS CONDUITS

TELECOMS CONDUITS AND PITS SHALL BE SUPPLIED AND INSTALLED BY THE CIVIL AND ELECTRICAL CONTRACTORS AS SPECIFIED ON THE ASSOCIATED RRA WORKS PLAN.

IN RESIDENTIAL SUBDIVISIONS, TELECOMMUNICATIONS CONDUITS SHALL BE INSTALLED GENERALLY IN SHARED TRENCHES, DIRECTLY ABOVE THE ELECTRICAL CONDUITS.

IN COMMERCIAL SUBDIVISIONS OR OTHER SITUATIONS WHERE THIS IS NOT POSSIBLE, TELECOMMUNICATIONS CONDUITS SHALL BE INSTALLED IN A SEPARATE TRENCH ON THE SPECIFIED COMMUNICATIONS ALIGNMENT.

TELECOMMUNICATIONS INFRASTRUCTURE

CONDUITS & PITS to be designed by: Robin Russell & Associates
to be installed by: civil & electrical contractors
to be owned by:
TELECOMMUNICATIONS INFRASTRUCTURE to be provided by:



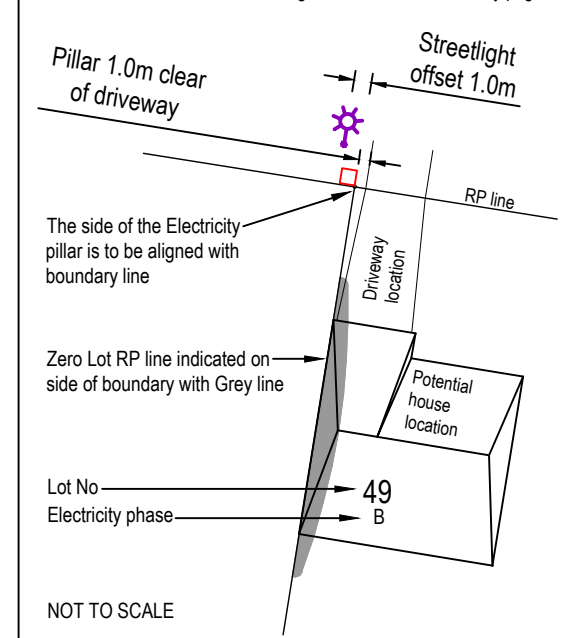
PILLARS ON ZERO LOT BOUNDARY

REQUIREMENTS FOR ELECTRICAL, GAS & COMMUNICATIONS CONTRACTORS

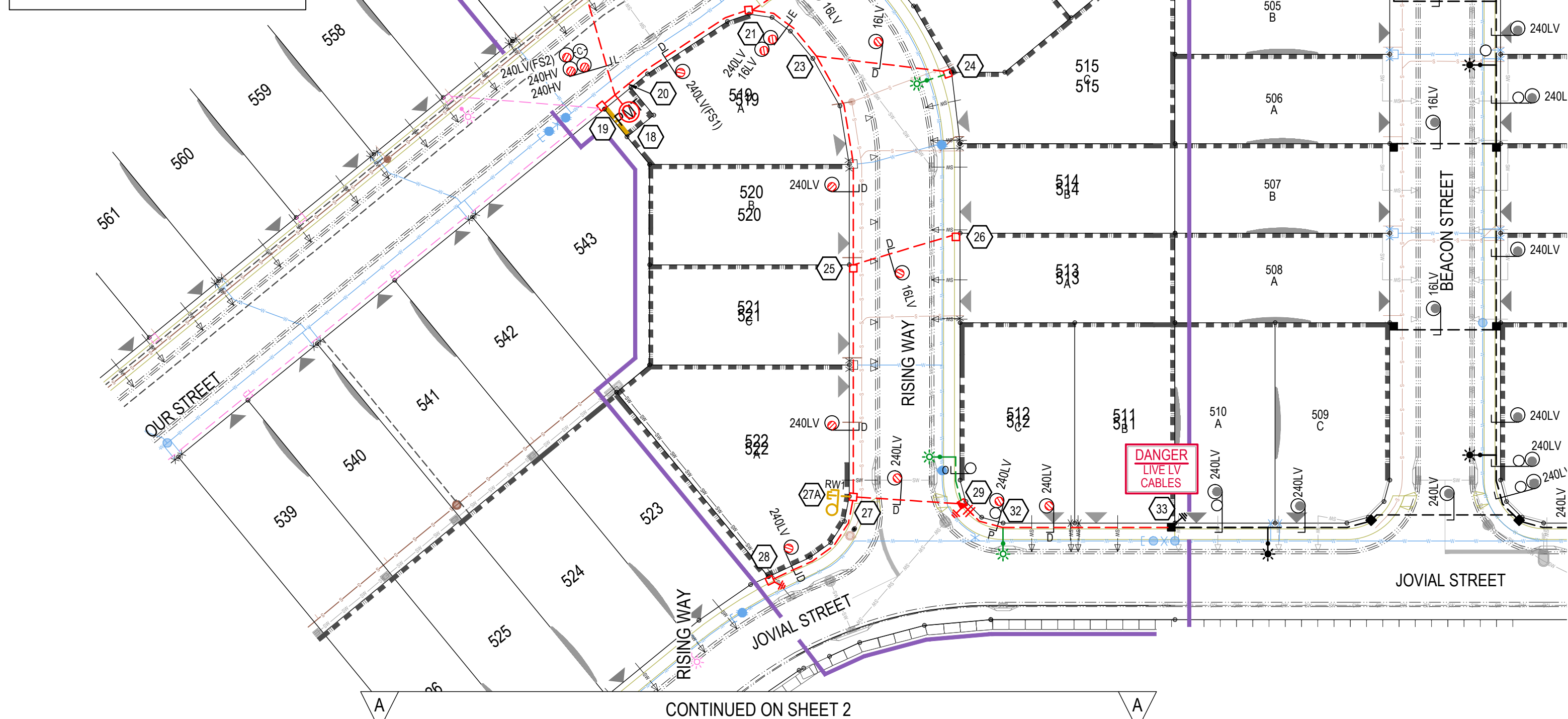
The proposed pillar shall be offset, as indicated, at the zero lot line boundary. The side of the pillar shall be aligned with the lot boundary, to provide at least 1.0m clearance from the future driveway.

A proposed streetlight shall be offset 1.0m from the zero lot line boundary, away from the future driveway.

COMMUNICATIONS PITS shall not clash with potential pillar exclusion zone if a pillar is offset to align with one side of a survey peg.



NOT TO SCALE



SOURCE DOCUMENTS

CREATOR	DRAWING	DWG No.	REV	DATE
COLLIERS	CIVIL	21-0270_X_BASE_DESIGN	-	27/11/2023
COLLIERS	CIVIL	23-0127_BASE_DESIGN	-	26/04/2024
COLLIERS	CIVIL	23-0240_X_BASE_DESIGN	-	14/10/2024
COLLIERS	CIVIL	23-0242_X_BASE_DESIGN	-	22/04/2025
COLLIERS	CIVIL	X_23-0130_BASE_DESIGN	-	29/04/2024
COLLIERS	CIVIL	X_23-0241_BASE_DESIGN	-	17/04/2025
Robin Russell & Assoc	ELECTRICAL	F233 (S0107878 / S0107879)	A	29/11/2023
Robin Russell & Assoc	ELECTRICAL	F337 (S0107990 / S0107991)	C	18/10/2024
Robin Russell & Assoc	ELECTRICAL	F455 (S0108118 / S0108119)	B	21/03/2025

DATE	REV	REVISION	APP.	DATE	REV	REVISION	APP.	CURRENT REVISION CHANGES:
07/05/2025	A	PRELIMINARY ISSUE	RR					Rev B: path design amended at Stg 15 boundary, PMT easement increased to 4.0m, issued for construction.
07/08/2025	B	ISSUED FOR CONSTRUCTION	RR					



SUBDIVISION ELECTRICAL SERVICES
204/65 Salmons Street,
Stifford, QLD 4053
Tel: (07) 3872 5555
Fax: (07) 3872 5566
Email: info@robusrussell.com.au
www.robusrussell.com.au
A.B.N. 78 010 589 661
THIS IS A UDC GENERATED DESIGN

COUNCIL	IPSWICH	DWT REV.	V53-3 20210504
COUNCIL REF	9322/2019/MAPDA/A		
DESIGNED	W. Schardt	DRAWN	B. Hyland
CHECKED	D. Lloyd RPEQ 5060	APPROVED	ROBIN RUSSELL RPEQ 1546
DATE	07/05/2025	SIGNED	Rob Russell

DESCRIPTION	ELECTRICITY RETICULATION - RESIDENTIAL
CLIENT	HB Doncaster Pty. Ltd.

LOCATION	BELLEVUE ESTATE - STAGE 17 323 - 395 RIPLEY ROAD RIPLEY
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DRAWING No.	REVISION
F499-01	B
ENERGEX PROJECT No.	SHEET No.
S0108162	1 OF 4

GENERAL NOTES

IN THE EVENT OF CONFLICT BETWEEN THIS WORKS PLAN AND DRAWINGS AND SPECIFICATIONS OF THE RELEVANT FUTURE ASSET OWNER, I.E. ENERGEX, ERGON, LOCAL AUTHORITY, DEPARTMENT OF TRANSPORT & MAIN ROADS, NBN™, ETC., THE DRAWINGS AND SPECIFICATIONS OF THE FUTURE ASSET OWNER SHALL TAKE PRECEDENCE. EXCEPTIONS APPLY WHERE RRA DESIGN DOCUMENTATION SPECIFY CLEARANCES, DEPTHS & SEPARATIONS GREATER THAN THE MINIMUM REQUIRED BY THE AUTHORITIES.

THE CONTRACTOR SHALL NOT ACCEPT A VERBAL INSTRUCTION FROM ANY PERSON TO DEPART FROM THE REQUIREMENTS OF THIS WORKS PLAN OR RRA GENERAL SPECIFICATION. ANY DEPARTURE FROM THE WORKS PLAN OR SPECIFICATION MUST FIRST BE AUTHORISED IN WRITING BY THE CONTRACT SUPERINTENDENT.

ELECTRICAL CONTRACTOR

THE WORKS DETAILED ON THIS DRAWING SHALL BE CONSTRUCTED IN ACCORDANCE WITH ROBIN RUSSELL & ASSOCIATES' GENERAL SPECIFICATION FOR INSTALLATION OF ELECTRICITY RETICULATION AND STREET LIGHTING - ISSUE 'AA'.

CIVIL CONTRACTOR

THE INSTALLATION OF ALL ELECTRICAL CONDUITS SHALL BE SUPERVISED BY THE HOLDER OF AN ELECTRICAL WORK LICENCE - ELECTRICAL SAFETY ACT 2002.

ENERGEX CONDUITS AND TRANSFORMER SITE RETAINING WALLS SHALL BE INSTALLED STRICTLY IN ACCORDANCE WITH ENERGEX'S SPECIFICATIONS (SEE BELOW). THEY WILL BE INSPECTED FOR COMPLIANCE UPON COMPLETION.

WHERE ROAD-CROSSING CONDUITS ARE INSTALLED DEEPER THAN USUAL (UNDER CULVERTS OR PIPES) THEY MUST RISE TO A DEPTH OF NOT MORE THAN 1200mm AT EACH END. IF UNCERTAIN, SEEK ADVICE FROM RRA CONSTRUCTION COORDINATOR.

THE CIVIL CONTRACTOR SHALL INSTALL ENVELOPING CONDUITS UNDER RETAINING WALLS BEHIND PILLARS - TWO 100mm CONDUITS INTO EACH LOT (ONE FOR ELECTRICITY, ONE FOR COMMUNICATIONS), 500mm DEEP BEHIND THE PILLAR, NEAR GROUND LEVEL INSIDE THE LOT.

RELEVANT SPECIFICATIONS IN ENERGEX'S UNDERGROUND DISTRIBUTION CONSTRUCTION MANUAL ARE FOUND AT -

- SECTION C1: CONDUITS
- SECTION C2: EXCAVATION
- SECTION C3: TRANSFORMER SITES

THESE SECTIONS OF THE MANUAL CAN BE DOWNLOADED FROM THE FOLLOWING ENERGEX WEB SITE: https://swp.energex.com.au/service_providers/technical_docs/asptechical_documents.asp

CIVIL ENGINEERS WHO HAVE REGISTERED FOR ACCESS TO THE FOLLOWING RRA WEBSITE MAY DOWNLOAD EXTRACTS FROM ENERGEX'S MANUAL AT: <http://www.robusrussell.com.au>

THE CIVIL CONTRACTOR SHALL ENSURE THAT ALL CONDUITS HAVE BEEN INSTALLED BEFORE CONSTRUCTING RETAINING WALLS, PATHS, DRIVEWAYS & WATER SERVICES. THE CIVIL CONTRACTOR SHALL PLEASE INFORM THE ELECTRICAL CONTRACTOR OF ANY 'AS CONSTRUCTED' DEPARTURES FROM THE CIVIL DESIGN.

CARE: EXISTING STREET LIGHTS SHALL NOT BE RECOVERED UNLESS REPLACEMENT STREET LIGHTS WILL BE COMMISSIONED BEFORE NIGHTFALL. LIGHTING OF NEW OR ALTERED EXISTING ROADS MIGHT NOT COMPLY WITH SPECIFIED STANDARDS UNTIL NEW ROAD LIGHTING HAS BEEN COMMISSIONED. THE CIVIL CONTRACTOR SHALL APPLY APPROPRIATE RISK MANAGEMENT. E.G. WARNING SIGNS, SPEED RESTRICTIONS, TEMPORARY LIGHTING, ETC.

ON-SITE SERVICES CHECKS

ROBIN RUSSELL & ASSOCIATES GIVES NO WARRANTY REGARDING THE PRESENCE OR LOCATION OF BURIED SERVICES, INCLUDING NEWLY-INSTALLED SERVICES. 'AS CONSTRUCTED' LOCATIONS MAY DIFFER FROM WHAT IS DRAWN ON THIS WORKS PLAN. CONTRACTORS SHALL BE RESPONSIBLE TO IDENTIFY AND LOCATE ALL BURIED SERVICES. INITIAL IDENTIFICATION CAN BE OBTAINED FROM:

DIAL BEFORE YOU DIG SERVICE

TELEPHONE 1100

FAX 1300 652 077

ON-LINE ENQUIRIES CAN BE MADE AT: <http://www.1100.com.au>

HAVING DETERMINED WHICH SERVICES MAY BE PRESENT, ON-SITE LOCATIONS SHOULD THEN BE ARRANGED WITH RELEVANT SERVICE AUTHORITIES.

SEWERAGE AND WATER PLANS FOR THE SUBDIVISION MAY BE OBTAINED ON REQUEST FROM THE SUPERINTENDENT.

APA GAS INSTALLATION

GAS IS TO BE RETICULATED THROUGHOUT THIS PROJECT BY APA. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL VERGE TRENCHES FOR APA.

REFER TO APA'S DESIGN FOR ALL LOCATIONS OF JOINT USE & SEPARATE TRENCHES.

BE AWARE THAT ENERGEX WILL ONLY PERMIT A JOINT USE TRENCH WHERE THERE IS NOT MORE THAN ONE 125mm ELECTRICITY CONDUIT.

THE SEPARATE GAS ALIGNMENT IS AS SPECIFIED ON THE APA DESIGN BUT THE GAS MAINS MUST CLEAR THE STREET LIGHT FOUNDATION ALIGNMENT.

RATE 3 LIGHTING REQUIRED:

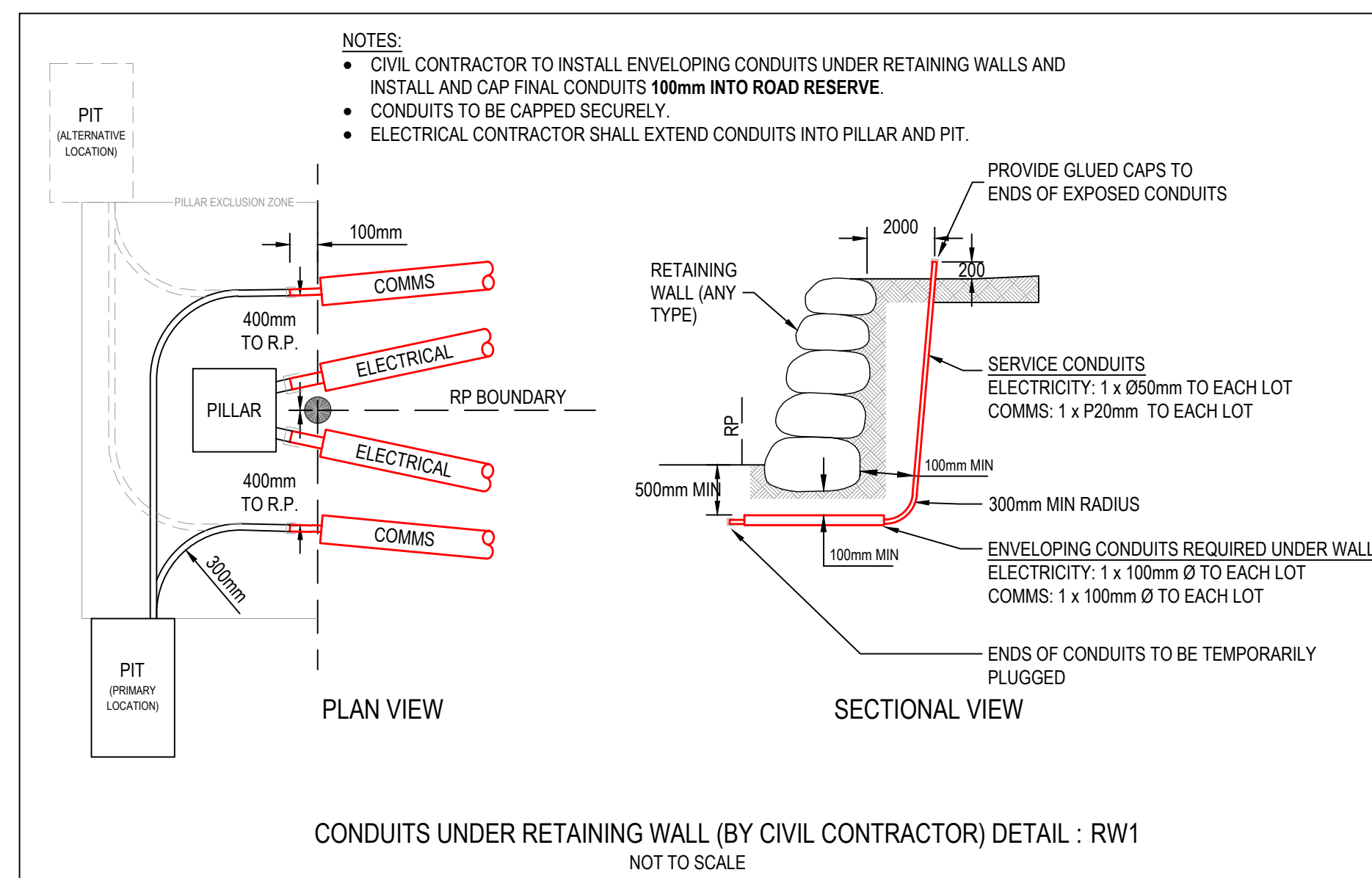
REFER TO RRA CONSTRUCTION PLAN S0107873 (RRA Ref. F499) FOR FULL DETAILS ON RATE 3 LIGHTING DESIGN FOR THIS STAGE.

ROCK EXCAVATION BY ELECTRICAL CONTRACTOR

- The electrical contractor shall:
- excavate electricity trenches to the depth required,
- excavate street light foundations to a depth of 1500mm,

NOTES:

- CIVIL CONTRACTOR TO INSTALL ENVELOPING CONDUITS UNDER RETAINING WALLS AND INSTALL AND CAP FINAL CONDUITS 100mm INTO ROAD RESERVE.
- CONDUITS TO BE CAPPED SECURELY.
- ELECTRICAL CONTRACTOR SHALL EXTEND CONDUITS INTO PILLAR AND PIT.



CONDUITS UNDER RETAINING WALL (BY CIVIL CONTRACTOR) DETAIL : RW1
NOT TO SCALE

LEGEND: ELECTRICAL

- EXISTING UNDERGROUND CABLE / CONDUIT
- PROPOSED UNDERGROUND CABLE / CONDUIT
- FUTURE UNDERGROUND CABLE / CONDUIT
- END OF CONDUIT POINT / CONDUIT CAP
- BORED CONDUIT
- STATION NUMBERS
- PADMOUNT TRANSFORMER, EXISTING / PROPOSED / FUTURE
- RING MAIN UNIT, EXISTING / PROPOSED / FUTURE
- POLE TRANSFORMER, EXISTING / PROPOSED / FUTURE
- CABLE FAULT INDICATOR
- SERVICE PILLAR, EXISTING / PROPOSED / FUTURE
- LINK PILLAR, EXISTING / PROPOSED / FUTURE
- C&I PILLAR, EXISTING / PROPOSED / FUTURE
- LV LINKS (OPEN), EXISTING / PROPOSED / FUTURE
- LV LINKS (CLOSED), EXISTING / PROPOSED / FUTURE
- EXISTING OVERHEAD ELECTRICITY MAINS
- PROPOSED OVERHEAD ELECTRICITY MAINS
- FUTURE OVERHEAD ELECTRICITY MAINS
- HV POLE, EXISTING / PROPOSED / FUTURE
- HV + LV POLE, EXISTING / PROPOSED / FUTURE
- LV POLE, EXISTING / PROPOSED / FUTURE
- EARTH, EXISTING / PROPOSED / FUTURE
- STREET LIGHT, EXISTING / PROPOSED / FUTURE
- EXISTING RATE 3 STREETLIGHT CABLE
- PROPOSED RATE 3 STREETLIGHT CABLE
- FUTURE RATE 3 STREETLIGHT CABLE
- RATE 3 STREET LIGHT, EXISTING / PROPOSED / FUTURE
- RATE 3 SWITCHBOARD, EXISTING / PROPOSED
- EXISTING CONSUMERS UNDERGROUND CABLE
- PROPOSED CONSUMERS UNDERGROUND CABLE
- TO BE RECOVERED
- CABLE, EXISTING / PROPOSED
- 32 - 50mm HD CONDUIT
- 80/100mm LD CONDUIT
- 100mm WHITE ENERGEX COMMS. CONDUIT
- 125mm LD CONDUIT
- ELECTRIC CABLE MARKER PLATE

"AS CONSTRUCTED" DOCUMENTS

The electrical contractor shall email the "as constructed" drawing, test results & closure documents to:
contestable@energex.com.au
as.constructed@robusrussell.com.au

UNDERGROUND CABLE CERTIFICATION

All cables detailed on this drawing have been checked using the cable locator described below and are, according to measurements taken, on the correct alignment and at correct depths below the finished level, except as marked up. Alignments are subject to the accuracy of survey pegs present at the time of measurement.

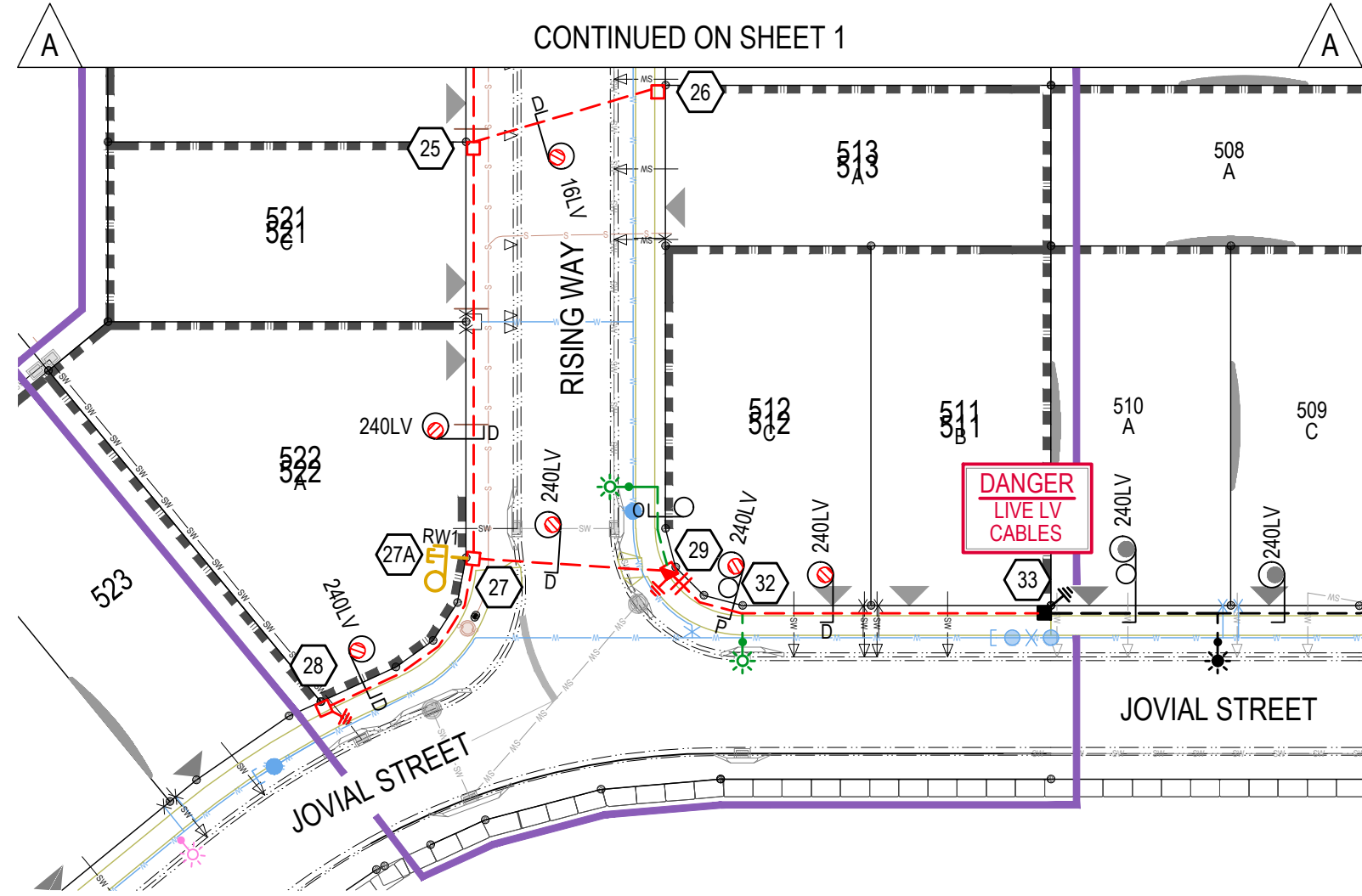
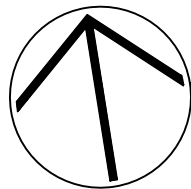
Make: _____ Model: _____
Serial No: _____ Date Cables Checked: ____/____/____
Name of Person Who Conducted Checks: _____
Certified (signature of checker): _____
Phone No. of checker: _____

CONSTRUCTION CONTACTS

ELECTRICAL ENGINEER
ROBIN RUSSELL & ASSOCIATES PTY LTD
DESIGNER
WILLIAM SCHARDT Ph: 0419 778 552
CONSTRUCTION ADMINISTRATOR
MICHAEL COWDROY Ph: (07) 3872 5510
CIVIL ENGINEER
COLLIERS
MATTHEW COTTON Ph: (07) 5588 0302
SURVEYOR
SAUNDERS HAVILL
CLINTON URQUHART Ph: (07) 3539 6701

SITE INFORMATION

TOTAL NUMBER OF LOTS
31
PROPERTY DESCRIPTION
PROPOSED LOTS 495 - 498, 501 - 504, 511 - 522, 546 - 556
CANCELLING LOTS 344 on SP3173, Lot 2 on RP196150, Lot 1 on RP196152
Lot 2 on RP196154, Lot 342 on SP3173 & Lot 343 on SP3173



PLAN VIEW
SCALE 1:500
-10m 0 10 20 30m
1 : 500 (A1 - NOT REDUCED)

PROPOSED COMMISSIONING PLAN

Tentative only; subject to amendment by ENERGEX outage coordinator.

SWITCHING ONE

- 1 x HV Switching + 1 x LV Switching
- 1 x HV Cable ID & Spike
- Isolate 11kV at SC12632281 - IS75.
- ENERGEX to identify and spike 11kV cable at Stn 1
- Cut and joint 11kV cable at Stations 1 and 2.
- Carry out commissioning checks and reverse switching.
- Commission SC12713388.

SWITCHING TWO

- 1 x LV Switching
- Following a satisfactory site specific risk assessment by the Electrical Contractor, terminate the new 240mm LV cable at the existing **LIVE LV** pillar at Stn 3 (U12709546).
- Following a satisfactory site specific risk assessment by the Electrical Contractor, terminate the new 240mm LV cable at the existing **LIVE LV** pillar at Stn 4 (U12709547).
- Carry out commissioning checks and reverse switching.
- Commission LV Circuit 3 of SC12632281.

SWITCHING THREE

- 1 x LV Switching
- Following a satisfactory site specific risk assessment by the Electrical Contractor, terminate the new 240mm LV cable at the existing **LIVE LV** pillar at Stn 7 (U12711285).
- Following a satisfactory site specific risk assessment by the Electrical Contractor, terminate the new 240mm LV cable at the existing **LIVE LV** pillar at Stn 33 (U12711280).
- Carry out commissioning checks and reverse switching.
- Commission LV Circuit 3 of SC12632242.

SWITCHING FOUR to FIVE

- 2 x LV Switching
- Following a satisfactory site specific risk assessment by the Electrical Contractor, terminate each new 240mm LV cable on the spare LV switch-fuses in the **LIVE LV** Switchboard at Stn 18.
- Carry out commissioning checks and reverse switching.
- Commission each LV Circuit of SC12713388.

Where interruptions to existing consumers are required, they shall be notified in line with ENERGEX policies.

ENERGEX RESIDENTIAL PADMOUNT TRANSFORMER EXCLUSION REQUIREMENT

PROPOSED SC12713388 (Stn 18)

SCALE 1:50 @ A1 SIZE



THE DEVELOPER SHALL EXECUTE AN EASEMENT (STANDARD EASEMENT CONDITIONS DEALING NO 708346714) IN FAVOUR OF ENERGEX OVER THE GREEN SHADED AREA SHOWN.

NO RESIDENTIAL DWELLING SHALL BE CONSTRUCTED IN THE EXCLUSION ZONE (TO ADDRESS FIRE, EXPLOSION, AUDIBLE NOISE AND EMF RISK).

LABELS

The contractor shall check label details against existing labels on site. Report any discrepancies immediately to the Contract Superintendent.

11kV RMU LABELS				AT SUNNY CRESCENT SC12632242			
LABEL SIZE	LABEL COLOUR	LETTER SIZE	LABEL INFORMATION			LABEL LOCATION	LABEL DESCRIPTION
100x40	WB	15	IS65	SF66	IS67	NEAR ISOLATOR	ISOLATOR IDENTIFICATION
150x40	BW	20				FRONT	FEEDER IDENTIFICATION
150x50	BW	10	[EXIST]	[EXIST]	TO ARDOUR STREET SC12713388 - IS83	CABLE BOX	CABLE DESTINATION
150x50	BW	10	[EXIST]	[EXIST]	TO ARDOUR STREET SC12713388 - IS83	INSIDE SIDE WALL	CABLE DESTINATION



11kV RMU LABELS					AT SUNNY CRESCENT SC12632281			
LABEL SIZE	LABEL COLOUR	LETTER SIZE	LABEL INFORMATION				LABEL LOCATION	LABEL DESCRIPTION
100x40	WB	15	IS75	SF76	IS77	IS78	NEAR ISOLATOR	ISOLATOR IDENTIFICATION
150x40	BW	20					FRONT	FEEDER IDENTIFICATION
150x50	BW	10	TO ARDOUR STREET SC12713388 - IS81	[EXIST]	[EXIST]	[SPARE]	CABLE BOX	CABLE DESTINATION
150x50	BW	10	TO ARDOUR STREET SC12713388 - IS81	[EXIST]	[EXIST]	[SPARE]	INSIDE SIDE WALL	CABLE DESTINATION

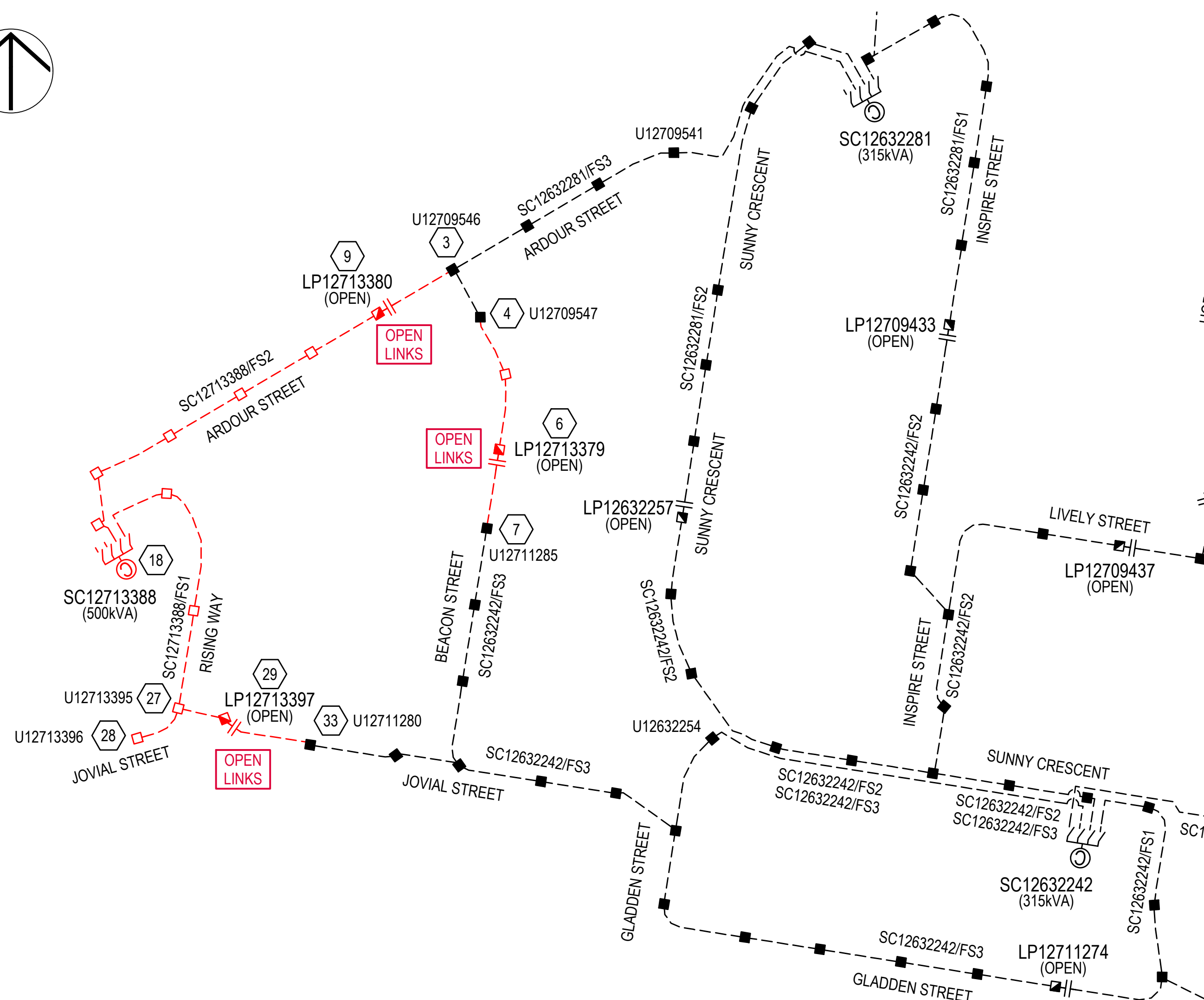
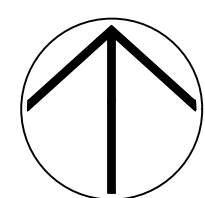
11kV RMU LABELS			AT ARDOUR STREET (STN 18) SC12713388				
LABEL SIZE	LABEL COLOUR	LABEL LETTER SIZE	LABEL INFORMATION			LABEL LOCATION	LABEL DESCRIPTION
100x40	WB	15	IS81	SF82	IS83	NEAR ISOLATOR	ISOLATOR IDENTIFICATION
150x40	BW	20				FRONT	FEEDER IDENTIFICATION
150x50	BW	10	TO SUNNY CRESCENT SC12632281 - IS75	TO TRANSFORMER	TO SUNNY CRESCENT SC12632242 - IS67	CABLE BOX	CABLE DESTINATION
150x50	BW	10	TO SUNNY CRESCENT SC12632281 - IS75	TO TRANSFORMER	TO SUNNY CRESCENT SC12632242 - IS67	INSIDE SIDE WALL	CABLE DESTINATION

EXISTING 11kV SCHEMATIC
SCALE 1:1500

PROPOSED 11kV SCHEMATIC
SCALE 1:1500
ALL NEW HV CABLES TO BE 3 x 1c 240mm Al TRIPLEX
(UNLESS NOTED OTHERWISE)

FOR CONSTRUCTION

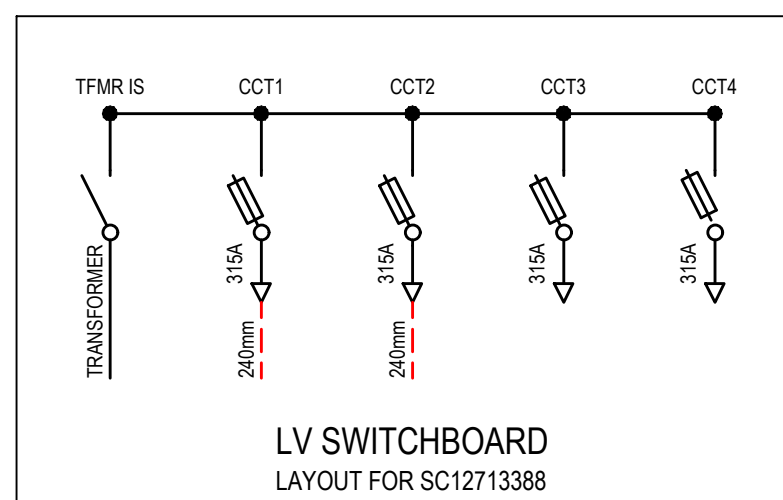
DATE	REV	REVISION	APP.	DATE	REV	REVISION	APP.	CURRENT REVISION CHANGES:	 <div>Robin Russell & ASSOCIATES PTY. LTD. CONSULTING ENGINEERS - ELECTRICAL</div>	SUBDIVISION ELECTRICAL SERVICES 204/6 Bahama Street, Stafford, QLD 4053 Tel: (07) 3872 5555 Fax: (07) 3872 5566 Email: r@robinrussell.com.au www.robinrussell.com.au A.B.N. 78 010 589 661 THIS IS A UDC GENERATED DESIGN.	COUNCIL	IPSWICH	DWT REV.	V53-3 20210504	DESCRIPTION	LOCATION			DRAWING No.	REVISION	
07/05/2025	A	PRELIMINARY ISSUE	RR					Rev B: path design amended at Stg 15 boundary, PMT easement increased to 4.0m, issued for construction.		COUNCIL REF	9322/2019/MAPDA/A	DESIGNED	W. Schardt	DRAWN	B. Hyland <th rowspan="2">ELECTRICITY RETICULATION - RESIDENTIAL</th> <th colspan="3">BELLEVUE ESTATE - STAGE 17 323 - 395 RIPLEY ROAD RIPLEY</th> <th rowspan="2">ENERGEX PROJECT No. S0108162</th> <th rowspan="2">SHEET No. 2 OF 4</th>	ELECTRICITY RETICULATION - RESIDENTIAL	BELLEVUE ESTATE - STAGE 17 323 - 395 RIPLEY ROAD RIPLEY			ENERGEX PROJECT No. S0108162	SHEET No. 2 OF 4
07/08/2025	B	ISSUED FOR CONSTRUCTION	RR							CHECKED	D. Lloyd RPEQ 5060	APPROVED	ROBIN RUSSELL RPEQ 1546	CLIENT	HB Doncaster Pty. Ltd.						
										DATE	07/05/2025	SIGNED		HB Doncaster Pty. Ltd.			THIS DOCUMENT IS COPYRIGHT AND THE PROPERTY OF ROBIN RUSSELL & ASSOCIATES PTY LTD AND MUST NOT BE RETAINED, COPIED OR USED WITHOUT AUTHORITY.			A1	



EXISTING AND PROPOSED 11KV SCHEMATIC

SCALE 1:1500

ALL NEW HV CABLES TO BE 3 x 1c 240mm AI TRIPLEX
(UNLESS NOTED OTHERWISE)



PHASING

Transformer - FS#	A	B	C	Total
SC12532845 - FS2	1	0	1	2
SC12532845	1	0	1	(2)
SC12632242 - FS3	10	11	10	31
SC12632242	10	11	10	(31)
SC12632281 - FS1	8	8	7	23
SC12632281 - FS2	6	6	6	18
SC12632281 - FS3	5	5	6	16
SC12632281	19	19	19	(57)
SC12713388 - FS1	3	3	3	9
SC12713388 - FS2	5	5	5	15
SC12713388	8	8	8	(24)

Calculation is only relevant for circuits add or modified as part of this Workplan. PMT count may not equal actual total.

LV SWITCHBOARD LABELS				AT ARDOUR STREET (STN 18) SC12713388
CIRCUIT No.	LABEL SIZE	LABEL COLOUR	LETTER SIZE	LABEL INFORMATION
TRANSF. ISOLATOR	80x35	WB	6	TRANSFORMER ISOLATOR
1	80x35	WB	5	TO RISING WAY LP12713397 AND SERVICES
2	80x35	WB	5	TO ARDOUR STREET LP12713380 AND SERVICES
3	80x35	WB	5	[SPARE]
4	80x35	WB	5	[SPARE]

LV SWITCHBOARD LABELS				AT SUNNY CRESCENT SC12632281
CIRCUIT No	LABEL SIZE	LABEL COLOUR	LETTER SIZE	LABEL INFORMATION
TRANSF. ISOLATOR	80x35	WB	6	TRANSFORMER ISOLATOR
1	80x35	WB	5	[EXIST]
2	80x35	WB	5	[EXIST]
3	80x35	WB	5	TO ARDOUR STREET U12709541 DIRECT THEN BEACON STREET LP12713379 / ARDOUR STREET LP12713380 AND SERVICES
4	80x35	WB	5	[SPARE]

LV SWITCHBOARD LABELS				AT SUNNY CRESCENT SC12632242
CIRCUIT No.	LABEL SIZE	LABEL COLOUR	LETTER SIZE	LABEL INFORMATION
TRANSF ISOLATOR	80x35	WB	6	TRANSFORMER ISOLATOR
1	80x35	WB	5	[EXIST]
2	80x35	WB	5	[EXIST]
3	80x35	WB	5	TO GLADDEN STREET U12632254 DIRECT THEN GLADDEN STREET LP12711274 / BEACON STREET LP12713379 / RISING WAY LP12713397 AND SERVICES
4	80x35	WB	5	[EXIST]

LV LINK PILLAR LABELS				AT GLADDEN STREET LP12711274
CIRCUIT DIRECTION	LABEL SIZE	LABEL COLOUR	LETTER SIZE	LABEL INFORMATION
LHS	150x50	WB	5	TO SUNNY CRESCENT SC12632242 / BEACON STREET LP12713379 / RISING WAY LP12713397 AND SERVICES
RHS	150x50	WB	5	[EXIST]

LHS & RHS AS VIEWED FROM ROAD TO PILLAR

LV LINK PILLAR LABELS				AT RISING WAY (STN 29) LP121713397
CIRCUIT DIRECTION	LABEL SIZE	LABEL COLOUR	LETTER SIZE	LABEL INFORMATION
LHS	150x50	WB	5	TO ARDOUR STREET SC12713388 AND SERVICES
RHS	150x50	WB	5	TO SUNNY CRESCENT SC12632242 / GLADDEN STREET LP12711274 / BEACON STREET LP12713379 AND SERVICES

LHS & RHS AS VIEWED FROM ROAD TO PILLAR

240LV (FS2)
240HV
240HV J/L

ARDOUR STREET

240LV (FS1)

519

FRONT

200' PLINTH

500'

1800

1000

200

500

1700

543

EARTH GRID

400

962

2076

4800

962

400

THE ELECTRICAL CONTRACT SHALL PAINT THE TRANSFORMER BLACK, AS FOLLOWS:
TWO-PACK PRIMER FOLLOWED BY TWO-PACK POLYURETHANE ENAMEL TO AS2700 IN (N61) BLACK

Refer: Energex's Underground Distribution Construction Manual - Section C3 for specifications.

The **Civil Contractor** shall prepare a level site with retaining walls as specified in Energex's Manual. If the wall height exceeds 300mm, a safety fence is also required.

The preferred subcontractor for design/construction of PMT retaining walls is MSC Construction. If construction will be by a different contractor, please contact RRA for further instructions.

The **Electrical Contractor** shall construct the transformer foundations.

The **Electrical Contractor** shall arrange for a test of the bearing capacity of the excavated ground at the transformer site. If it appears to be less than 50 kPa (i.e. easily penetrated by thumb), cease construction and notify the Contract Superintendent immediately. A new foundation design may be required.

PROPOSED SC12713388 (Stn 18)



SCALE 1:50 @ A1 SIZE

MATERIALS SUMMARY - S0108162

UNDERGROUND			
MODEL No.	QTY	MODEL No.	QTY
11S12424X	1	LVSP12-6SL	2
1CF09524XLG	2	LVSP14-6	1
2JXA24XC24	1	LVSP14-6SL	1
ADE	4	LVSP2-6	2
DSHVVF5SLK	1	LVSP4-6	6
DSL VF31	2	LVSP4-6SL	2
DSPMTEGSA	1	LVSP9-6	1
DSSQPMCEG	1	LVSPC2W3	1
LV4CMEN	1	LVSP1240	25
LV4CMENLINK	3	S2475044	1
LVPT4C240	2	SC0006614	15
LVSP12-6	4	SC0019959	1
		SC0019960	1

CABLES			
MODEL No.	QTY	MODEL No.	QTY
SCS820363	554		
SCS820364	478		
SCS820365	152		

STREET LIGHTING			
MODEL No.	QTY	MODEL No.	QTY
SUGSLPLI	7		

DATE	REV	REVISION	APP.	DATE	REV	REVISION	APP.	CURRENT REVISION CHANGES:	 <div>Robin Russell & ASSOCIATES PTY. LTD. CONSULTING ENGINEERS - ELECTRICAL <small>A.B.N. 78 010 589 661 THIS IS A LOGO GENERATED DESIGN.</small></div>	SUBDIVISION ELECTRICITY SERVICES 2016 Babara Street, Staufford, QLD 4203 Tel: (07) 3872 5555 Fax: (07) 3872 5566 Email: rr@robruss.com.au www.robruss.com.au	COUNCIL	IPSWICH	DWT REV.	V53-3 20210504	DESCRIPTION	LOCATION	DRAWING No.	REVISION					
07/05/2025	A	PRELIMINARY ISSUE	RR					Rev B: path design amended at Stg 15 boundary, PMT easement increased to 4.0m, issued for construction.				COUNCIL REF	9322/2019/MAPDA/A			ELECTRICITY RETICULATION - RESIDENTIAL	BELLEVUE ESTATE - STAGE 17 323 - 395 RIPLEY ROAD RIPLEY	F499-03	B				
07/08/2025	B	ISSUED FOR CONSTRUCTION	RR									DESIGNED	W.Schardt	DRAWN	B.Hyland					CLIENT		ENERGEX PROJECT No.	SHEET No.
												CHECKED	D.Lloyd RPEQ 5060	APPROVED	ROBIN RUSSELL RPEQ 1546					HB Doncaster Pty. Ltd.		S0108162	3 OF 4
											DATE	07/05/2025	SIGNED			<div>THIS DOCUMENT IS COPYRIGHT AND THE PROPERTY OF ROBIN RUSSELL & ASSOCIATES PTY LTD AND MUST NOT BE RETAINED, COPIED OR USED WITHOUT AUTHORITY.</div>	A1						

URD CONDUIT SCHEDULE - FOOTPATHS - BY ELECTRICAL CONTRACTOR

LOCATION	STATIONS FROM - TO	CONDUIT LENGTH (m)						X-SECTION (m)			DRAW WIRE	KERB MARKERS	REMARKS
		50mm HD	No.	100mm LD	No.	125mm LD	No.	EQL 100mm COMMS MD	PVC CABLE PROTECTION (m)	EXCAV /TAPE			
ARDOUR STREET	1 -									2			JOINT PIT EXCAVATION
	1 8												EXISTING CONDUITS
BEACON STREET	2 -									2			JOINT PIT EXCAVATION
	4 5												EXISTING CONDUITS
	5 6				25	1				25	D	27	
ARDOUR STREET	6 7				25	1				25	D	27	
	8 9				6	1	6	6		6	L	32	
	9 11				26	1	26	2	26	26	L	112	
	11 14				27	1	27	2	27	27	L	116	
	12 13				8	1				8	D	10	
	14 16				27	1	27	2	27	27	L	116	
	16 17				27	1	27	2	27	27	L	116	
	18 19				2	4				2	E+E	16	
	18 20				3	1				3	D	5	
	21 23				13	2				13	E	30	
RISING WAY	23 25				32	1				32	D	34	
	25 27				32	1				32	D	34	
JOVIAL STREET	29 32				8	1				8	P	10	JOINT USE TRENCH
RISING WAY	26 33				26	1				26	D	28	
TOTAL					306m		226m	113m		291m		713m	

- NOTES:
- CONDUITS SHALL BE INSTALLED WITHIN A CORRIDOR 300-900mm FROM PROPERTY ALIGNMENT, IN ACCORDANCE WITH ENERGEX UNDERGROUND DISTRIBUTION CONSTRUCTION (UDC) MANUAL.
 - FOOTPATH CONDUITS SHALL HAVE MINIMUM 700mm COVER, REGARDLESS OF ENERGEX'S REQUIREMENTS.
 - CONNECT EXISTING CONDUITS, INCLUDING ROAD CROSSING CONDUITS, TO NEW FOOTPATH CONDUITS
 - TELECOMMUNICATION CONDUITS SHALL BE INSTALLED ABOVE THE ENERGEX CONDUITS IN A JOINT USE TRENCH ARRANGEMENT.
 - REFER RRA CONSTRUCTION PLAN S0108163 (RRA F499) FOR JOINT USE TRENCH RATE 3 CONDUIT INSTALLATION DETAILS.

URD CONDUIT SCHEDULE - FOOTPATHS - BY CIVIL CONTRACTOR

LOCATION	STATIONS FROM - TO	CONDUIT LENGTH (m)						X-SECTION (m)			DRAW WIRE	KERB MARKERS	REMARKS
		50mm HD	No.	100mm LD	No.	125mm LD	No.	EQL 100mm COMMS MD	PVC CABLE PROTECTION (m)	EXCAV /TAPE			
ARDOUR STREET	20 21				21	1				21	D	23	
JOVIAL STREET	27 28				19	1				19	D	21	
TOTAL					40m					40m		44m	

- NOTES:
- CONDUITS SHALL BE INSTALLED WITHIN A CORRIDOR 300-900mm FROM PROPERTY ALIGNMENT, IN ACCORDANCE WITH ENERGEX UNDERGROUND DISTRIBUTION CONSTRUCTION (UDC) MANUAL.
 - FOOTPATH CONDUITS SHALL HAVE MINIMUM 700mm COVER, REGARDLESS OF ENERGEX'S REQUIREMENTS.
 - CONNECT EXISTING CONDUITS, INCLUDING ROAD CROSSING CONDUITS, TO NEW FOOTPATH CONDUITS
 - TELECOMMUNICATION CONDUITS SHALL BE INSTALLED ABOVE THE ENERGEX CONDUITS IN A JOINT USE TRENCH ARRANGEMENT.

URD CONDUIT SCHEDULE - ROADWAYS - BY CIVIL CONTRACTOR

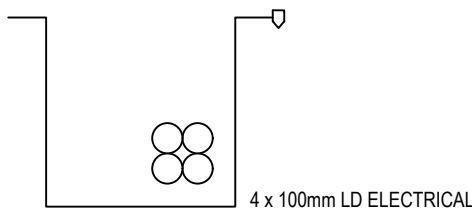
LOCATION	STATIONS FROM - TO	CONDUIT LENGTH (m)						X-SECTION (m)			DRAW WIRE	KERB MARKERS	REMARKS
		50mm HD	No.	100mm LD	No.	125mm LD	No.	EQL 100mm COMMS MD	PVC CABLE PROTECTION (m)	EXCAV /TAPE			
ARDOUR STREET	9 10				16	1			16	16	D	18	2
	11 12				15	1			15	15	D	17	2
	14 15				18	1			18	18	D	20	2
	17 18				17	1	17	2	17	17	L	76	2
	21 22				19	1			19	19	D	21	2
	23 24				19	1			19	19	D	21	2
	25 26				16	1			16	16	D	18	2
RISING WAY	27 29				16	1			16	16	D	18	2
TOTAL					136m		34m	17m	136m	136m		209m	16

- NOTES:
- ROAD CROSSING CONDUITS SHALL BE INSTALLED STRICTLY IN ACCORDANCE WITH THE ENERGEX UNDERGROUND DISTRIBUTION CONSTRUCTION (UDC) MANUAL.
 - ROAD CROSSING CONDUITS SHALL HAVE A MINIMUM COVER OF 800mm AT ALL PLACES UNDER THE ROAD, EXCEPT UNDER STATE-CONTROLLED "MAIN" ROADS, WHERE CONDUITS SHALL HAVE A MINIMUM COVER OF 1200mm.
 - CONDUITS SHALL EXTEND TO WITHIN 900mm OF PROPERTY ALIGNMENT; PVC PROTECTIVE COVER STRIPS SHALL BE LAID ABOVE ALL ROAD-CROSSING CONDUITS.
 - REFER ENERGEX UDC MANUAL SECT. C2 FOR CROSS-SECTION DETAILS.
 - BRASS "E" MARKERS SHALL BE INSTALLED IN KERBS DIRECTLY ABOVE ELECTRICITY CONDUITS.

CONSUMER CONDUIT SCHEDULE - BY CIVIL CONTRACTOR

LOCATION	STATIONS FROM - TO	ELECTRICAL (m)			TRENCH DETAIL	EXCAV / TAPE	REMARKS
		32HD	40HD	50HD			
RISING WAY	27 27A			4	RW1	4	INSTALL UNDER RETAINING WALL. REFER DETAIL
TOTAL				4m		4m	

- NOTES:
- CONSUMER'S CONDUITS SHALL BE INSTALLED PRIOR TO CONSTRUCTION OF DRIVEWAYS TO REAR LOTS.
 - ELECTRICAL CONDUIT SHALL BE ORANGE, HEAVY DUTY TO AS/NZS 2053:2001, AT MINIMUM DEPTH OF 500mm.
 - COMMUNICATIONS CONDUIT SHALL BE WHITE, MEDIUM DUTY TO AS/NZS 1477:2017, LABELLED: "COMMUNICATIONS", MINIMUM BEND RADIUS 300mm, AT MINIMUM DEPTH OF 300mm.
 - MINIMUM CLEARANCE OF 100MM SHALL BE MAINTAINED BETWEEN ALL SERVICES.
 - MARK THE END OF ALL CONSUMER'S CONDUITS, BY EXTENDING THE WARNING TAPE UP TO GROUND LEVEL.
 - ALL CONDUITS TO BE MANDREL-TESTED, SEALED, AND HAVE DRAW ROPES INSTALLED.
 - CONDUITS TO EXTEND TO FRONT PROPERTY ALIGNMENT.
 - ELECTRICAL CONTRACTOR SHALL EXTEND CONDUITS THROUGH FROM BOUNDARY TO PILLAR



PROJECT SPECIFIC
NON-STANDARD TRENCH DETAILS
(N.T.S)

CONDUIT BENDING RADIUS (mm)			
LOCATION	50mm Ø	100mm Ø	125mm Ø
HORIZONTAL BEND	600	1830	1830
PILLAR - MAIN CABLE	-	1200	-
PILLAR - X-ROAD CABLE	-	450	-
PILLAR - STREET LIGHT CABLE	600	-	-
STREET LIGHT	300	-	-
POLE TERMINATION	300	1200	1830
TRANSFORMER	no bends required		

UNDERGROUND CABLE SCHEDULE

LOCATION	STATIONS FROM - TO	VOLTS	EX	REC	IN	CABLE SIZE/TYPE	CU CODE	CABLE LENGTH (m)		REMARKS
								NEW	REC	
ARDOUR STREET	1 2	11kV		*		240mm² Al 3X1C TR XLPE/SCREEN/HDPE	SCS820363		12	RECOVER EXISTING
	1 18	11kV		*		240mm² Al 3X1C TR XLPE/SCREEN/HDPE	SCS820363	283		
	2 18	11kV		*		240mm² Al 3X1C TR XLPE/SCREEN/HDPE	SCS820363	271		
	3 9	LV				240mm² Al 4C XLPE/PVC	SCS820364	33		
BEACON STREET	4 5	LV		*		240mm² Al 4C XLPE/PVC	SCS820364	26		
	5 6	LV		*		240mm² Al 4C XLPE/PVC	SCS820364	30		
	6 7	LV		*		240mm² Al 4C XLPE/PVC	SCS820364	30		
ARDOUR STREET	9 10	LV		*		16mm² Cu 4C XLPE/PVC	SCS820365	21		
	9 11	LV		*		240mm² Al 4C XLPE/PVC	SCS820364	31		
	11 13	LV		*		16mm² Cu 4C XLPE/PVC	SCS820365	27		
	11 14	LV		*		240mm² Al 4C XLPE/PVC	SCS820364	32		
	14 15	LV		*		16mm² Cu 4C XLPE/PVC	SCS820365	23		
	14 16	LV		*		240mm² Al 4C XLPE/PVC	SCS820364	32		
	16 17	LV		*		240mm² Al 4C XLPE/PVC	SCS820364	32		
	17 19	LV		*		240mm² Al 4C XLPE/PVC	SCS820364	23		
	18 19	LV		*		240mm² Al 4C XLPE/PVC	SCS820364	12		
	18 21	LV		*		240mm² Al 4C XLPE/PVC	SCS820364	32		
RISING WAY	21 22	LV		*		16mm² Cu 4C XLPE/PVC	SCS820365	24		
	21 24	LV		*		16mm² Cu 4C XLPE/PVC	SCS820365	36		
	21 25	LV		*		240mm² Al 4C XLPE/PVC	SCS820364	48		
	25 26	LV		*		16mm² Cu 4C XLPE/PVC	SCS820365	21		
	25 27	LV		*		240mm² Al 4C XLPE/PVC	SCS820364	37		
	27 28	LV		*		240mm² Al 4C XLPE/PVC	SCS820364	23		
	27 29	LV		*		240mm² Al 4C XLPE/PVC	SCS820364	21		
	29 33	LV		*		240mm² Al 4C XLPE/PVC	SCS820364	36		
						240mm² Al 3X1C TR XLPE/SCREEN/HDPE	SCS820363	554	12	
						240mm² Al 4C XLPE/PVC	SCS820364	478		
JOVIAL STREET						16mm² Cu 4C XLPE/PVC	SCS820365	152		
TOTALS	(Variance 2%)									

- NOTES:
- THE CONTRACTOR SHALL MEASURE ACTUAL CABLE LENGTHS REQUIRED, AFTER INSTALLATION OF CONDUITS, THEN ORDER CABLE ACCORDINGLY.
 - 11kV CABLE IS NOT BE CUT UNTIL CABLE LENGTHS HAVE BEEN CONFIRMED ON SITE.


EQUIPMENT SCHEDULE

LOCATION	STN No.	SITE I.D.	EX	REC	IN	SIZE AND DESCRIPTION	COMP ID	CU CODE	QTY	REMARKS
ARDOUR STREET	1	U12713376			*	11kV STRAIGHT JOINT HEATSHRINK CAP 25-55mm	CJ1	11ST24/24X SC0006614	1 6	240/240 AL TRIPLEX
	2	U12713377			*	11kV PARALLEL BUTT JOINT HEATSHRINK CAP 25-55mm	CJ1	2JXCA24XCA24 SC0006614	1 6	240/240 AL TRIPLEX
	3	U12709546	*		*	2 WAY PILLAR 2 WAY TO 3 WAY CONVERT		LVSPC2W3	1	CONVERT TO 3 WAY 1x240LV
BEACON STREET	4	U12709547	*		*	1 WAY PILLAR 240mm 4 CORE CABLE LV LUG SET		LVSP1240	1	CONVERT TO 2 WAY 1x240LV
	5	U12713378			*	2 WAY PILLAR	PI1	LVSP4-6	1	2x240LV
	6	LP12713379			*	2 WAY LINK PILLAR + SL LINK PILLAR MEN EARTHING	PI3	LVSP14-6SL LV4CMENLINK	1	2x240LV, 1x4SL
	7	U12711285	*		*	1 WAY PILLAR 240mm 4 CORE CABLE LV LUG SET		LVSP1240	1	CONVERT TO 2 WAY 1x240LV
	9	LP12713380			*	2 WAY LINK PILLAR LINK PILLAR MEN EARTHING	PI3	LVSP14-6 LV4CMENLINK	1	2x240LV, 1x16LV
ARDOUR STREET	10	U12713381			*	CROSS-ROAD PILLAR + SL	PI1	LVSP12-6SL	1	1x16LV, 1x4SL
	11	U12713382			*	2 WAY PILLAR + SL	PI1	LVSP4-6SL	1	2x240LV, 1x16LV, 1x4SL
	13	U12713383			*	CROSS-ROAD PILLAR	PI1	LVSP12-6	1	1x16LV
	14	U12713384			*	2 WAY PILLAR	PI1	LVSP4-6	1	2x240LV, 1x16LV
	15	U12713385			*	CROSS-ROAD PILLAR	PI1	LVSP12-6	1	1x16LV
	16	U12713386			*	2 WAY PILLAR + SL	PI1	LVSP4-6SL	1	2x240LV, 1x4SL
	17	U12713387			*	2 WAY PILLAR	PI1	LVSP4-6	1	2x240LV
	18	SC12713388			*	PADMOUNT TRANSFORMER - 500kVA CFC HV FUSE SET FOR 500kVA SWITCHGEAR 240mm² 11kV CFC TERM IN PADMOUNT HEATSHRINK CAP 25-55mm 315A LV FUSE LINK FOR LV BOARD LV TERMINATION COMMON EARTH GRID FOR SQUARE PMT ADDITIONAL EARTH BASE SLAB UNICULVERT CONCRETE SURROUND	TR1	S2475044 DSHVFSLSK 1CFC9524XLG SC0006614 DSLVF31 LVPT4C240 DSSOPMCEG DSPMTEGSA SC0019960 SC0019959	1 2 3 2 2 1 1 1 1 1	KIT CONTAINS 3x ELBOWS
	19	U12713389			*	2 WAY PILLAR	PI1	LVSP4-6	1	2x240LV
	21	U12713390			*	2 WAY PILLAR	PI1	LVSP4-6	1	2x240LV, 2x16LV
RISING WAY	22	U12713391			*	CROSS-ROAD PILLAR	PI1	LVSP12-6	1	1x16LV
	24	U12713392			*	CROSS-ROAD PILLAR + SL	PI1	LVSP12-6SL	1	1x16LV, 1x4SL
	25	U12713393			*	2 WAY PILLAR	PI1	LVSP4-6	1	2x240LV, 1x16LV
	26	U12713394			*	CROSS-ROAD PILLAR	PI1	LVSP12-6	1	1x16LV
	27	U12713395			*	3 WAY PILLAR	PI1	LVSP9-6	1	3x240LV
	28	U12713396			*	1 WAY PILLAR PILLAR MEN EARTHING	PI1	LVSP2-6 LV4CMEN	1	1x240LV
RISING WAY	29	LP12713397			*	2 WAY LINK PILLAR + SL LINK PILLAR MEN EARTHING	PI3	LVSP14-6SL LV4CMENLINK	1	2x240LV, 2x4SL USE SPARE LV FUSE FOR SECOND STREETLIGHT
	33	U12711280	*		*	1 WAY PILLAR 240mm 4 CORE CABLE LV LUG SET		LVSP1240	1	CONVERT TO 2 WAY 1x240LV

SUNDRY ITEMS SCHEDULE

SUNDRY SPEC	DESCRIPTION	QUANTITY	REMARKS
LVSP1240	240mm 4 CORE CABLE LV LUG SET	22	

FOR CONSTRUCTION

DATE	REV	REVISION	APP.	DATE	REV	REVISION	APP.	CURRENT REVISION CHANGES:	 Robin Russell & ASSOCIATES PTY. LTD. CONSULTING ENGINEERS - ELECTRICAL	SUBDIVISION ELECTRICAL SERVICES 204/6 Belgrave Street, Stafford, QLD 4053 Tel: (07) 3872 5555 Fax: (07) 3872 5566 Email: m@robusrussell.com.au www.robusrussell.com.au A.B.N. 78 010 589 661 THIS IS A UDC GENERATED DESIGN	COUNCIL	IPSWICH	DWT REV.	V53-3 20210504	DESCRIPTION ELECTRICITY RET
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