

HV TRENCH LENGTH 290M
 LV TRENCH LENGTH 607M
 TOTAL TRENCH LENGTH 897M

WORK COMPLETED / FIELD BOOK

CONSTRUCTED BY

WORKS COMPLETED

SIGNATURE DATE

INSPECTED BY

SIGNATURE DATE

ASSET RECORDING

OF

CONTACT No

HEREBY CERTIFY THAT ASSETS MARKED AS-BUILT ON THIS DRAWING HAVE BEEN RECORDED AS PER ENDEAVOUR ENERGY STANDARD SAD 0004.

SIGNATURE DATE

LEGEND

- PROPOSED PADMOUNT SUBSTATION
- PROPOSED LV PILLAR LOCATION
- EXISTING LV PILLAR LOCATION
- PROPOSED S.L. COLUMN LOCATION
- EXISTING S.L. COLUMN LOCATION
- HV CABLE TRENCH
- LV CABLE TRENCH
- EXISTING UNDERGROUND CABLE
- INSTALL 40mm PVC SERVICE CONDUIT
- PROPOSED DUCT LOCATIONS
- EXISTING DUCT LOCATIONS
- DUCT CONFIGURATION - REFER MCI 0006 SECTION 4

Q# QUALITY LEVEL DATA POINT

BDY - Boundary

DE - Duct End

— - New Ducts

UB-RC UNDERBORE - ROAD CROSSING

Note:

1. ALL UNDERBORE DUCTS FOUND TWISTED

2. SECTION MARKED IN RED TO BE CAPTURED ONLY

PERMANENT SURVEY MARKS MAY EXIST IN THIS AREA. THESE ARE TO BE LOCATED BY SURVEY PRIOR TO COMMENCEMENT OF WORK

INSTALL SERVICE CONDUIT CLEAR OF PROPOSED EASEMENTS, DRIVEWAYS DRAINAGE LINE ETC. WHERE INDICATED THIS #

BEWARE - DRAINAGE LINE IN THESE AREAS. WHERE INDICATED THIS *

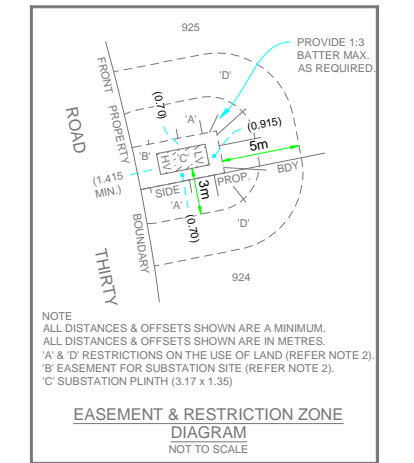
WARNING

LIVE ENDEAVOUR ENERGY CABLES AND OTHER SERVICES EXIST IN THIS AREA. PLEASE CONTACT - 'DIAL BEFORE YOU DIG' ON TEL-1100 FOR SEARCH INFORMATION A MINIMUM TWO DAYS PRIOR TO EXCAVATION

- NOTES**
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ENDEAVOUR ENERGY'S MCI 0028 AND MCI 0006.
 - AN EASEMENT FOR SUBSTATION SITE (B) 5.5m & VAR. x 2.75 (THIS IS MINIMUM SIZE ONLY) IS REQUIRED TO BE CREATED BY THE DEVELOPER OVER LOT 925. IN ADDITION TO THE EASEMENT A RESTRICTION ON THE USE OF LAND (A) IS REQUIRED IN RELATION TO THE FIRE RATING OF BUILDINGS MEASURED 3M FROM THE PLINTH OVER LOTS 924 & 925. ALSO A RESTRICTION ON THE USE OF LAND (D) IS REQUIRED IN RELATION TO SWIMMING POOLS MEASURED 5M FROM THE EASEMENT OVER LOTS 924 & 925.
 - REFER TELSTRANBN DESIGN LAYOUT FOR DUCTING AND EXCAVATION REQUIREMENTS.
 - ATTENTION - PERMANENT SURVEY MARKS MAY EXIST IN THIS AREA. THESE ARE TO BE LOCATED BY A SURVEYOR PRIOR TO THE COMMENCEMENT OF WORK.
 - WARNING - LIVE ENDEAVOUR ENERGY CABLES AND OTHER SERVICES IN THIS AREA. PLEASE CONTACT - 'DIAL BEFORE YOU DIG' ON TEL-1100 FOR SEARCHES A MINIMUM TWO DAYS PRIOR TO EXCAVATION.
 - ALL THE REQUIREMENTS OF THE ENVIRONMENTAL PROTECTION AUTHORITY POLLUTION CONTROL LEGISLATION IS TO BE STRICTLY ADHERED TO.

ALL WORKS TO BE CONSTRUCTED ARE TO BE COMPLETED IN ACCORDANCE WITH ENDEAVOUR ENERGY'S GENERIC ENVIRONMENTAL PLAN - EMS 0001.

ALL S.L. COLUMNS ARE TO BE INSTALLED 350mm FROM THE FRONT PROPERTY BOUNDARIES UNLESS SHOWN OTHERWISE.



CERTIFIED BY ENDEAVOUR ENERGY

AMENDMENT

DATE APPROVED

EXAMINER'S SIGNATURE

PRINT NAME

THIS CERTIFICATION IS ISSUED SUBJECT TO ENDEAVOUR ENERGY'S STANDARD CERT. TERMS.

DESIGN COMPLIANCE AND INDEMNITY

This design complies with the Endeavour Energy's relevant standards as current at this time and as listed on the Endeavour Energy Accredited Service Provider's Internet site. These standards include, but are not limited to:

- CP : Connection Policy
- EMS : Environmental Management Standard
- MCI : Mains Construction Instruction
- MDI : Mains Design Instruction
- PDI : Protection Design Instruction
- SDI : Substation Design Instruction
- EDI : Earthing Design Instruction
- SAD 0001 : Design Drawing Standard
- MMI : Mains Maintenance Instruction
- SMI : Substation Maintenance Instruction
- LDI 0001 : Public Lighting Electrical Design Element

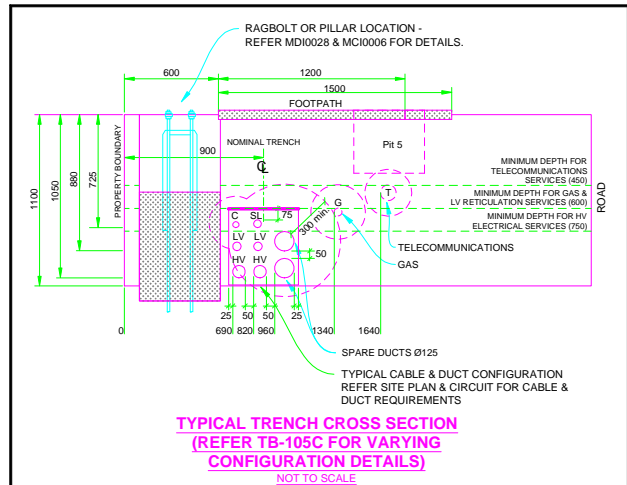
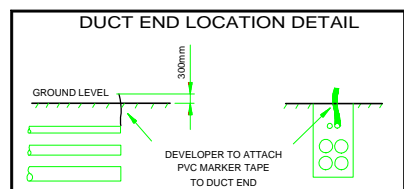
Additionally, where relevant, the design complies with AS/NZS 7000 "Overhead Line Design - Detailed Procedures" published by the Australian Standards.

ESTATE POWER DESIGN (Company name) indemnifies Endeavour Energy for any loss or damage resulting from non-compliance of the design with the above standards.

Signed: BRIAN JUDE

Name: BIAN JUDE

Service Provider Number: 1033 Date: 17/11/2017



DUCT DECLARATION

Ernest Shum

OF MAROUBRA

CONTACT NUMBER 02 4725 3421

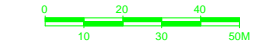
HEREBY CERTIFY THAT THE DUCTS SHOWN ON THIS DRAWING HAVE BEEN INSTALLED IN ACCORDANCE WITH STANDARDS MCI0006 AND SAD0004.

THE INSTALLATION OF THE DUCTS WAS COMMENCED ON 20-04-2018 & COMPLETED ON 15-06-2018

SIGNATURE

LAND SURVEYOR REGISTERED UNDER SURVEYING ACT 2002 OR MEMBER OF THE INSTITUTE OF ENGINEERS OF AUSTRALIA

WAE Survey Coordinates Table URS20172								
Feature ID	Quality Level	Asset	Property Line	Cover	Notes	Easting	Northing	AHD Height
1	A	Duct End	0.92	0.97	Trench	286257.44	6281937.64	49.51
2	A	Duct End	0.94	1.07	Trench	286275.72	6281932.04	49.44
3	A	Duct End	0.93	1.24	Trench	286261.69	6281994.18	50.33
4	A	Duct End	1.00	1.14	Trench	286280.35	6281998.14	50.22
5	A	Duct End	0.96	0.92	Trench	286189.3	6282073.25	51.51
6	A	Duct End	0.96	0.95	Trench	286194.96	6282091.47	51.51
7	A	Duct End	0.90	1.05	Trench	286247.45	6281914.51	49.11
8	A	Duct End	0.95	0.98	Trench	286249.96	6281930.42	49.05
9	A	Duct End	0.94	1.23	Trench	286218.05	6281895.16	51.67
10	A	Duct End	0.96	0.87	Trench	286207.53	6281904.56	52.11



EPD REFERENCE No. 10/233/ED11NC

WAE ONLY

Jk Williams Contracting Pty Ltd
 44 Jack Williams Drive, Penrith NSW 2751
 Ph (02) 4725 3400 Fax (02) 4725 3499
 ABN: 45 056 566 771

ESTATE POWER DESIGN PTY LIMITED
 ABN 69 002 331 142
 ELECTRICAL RETICULATION CONSULTANTS
 P.O. BOX 1872, PENRITH BC, 2751
 TEL: (02) 4731-8333 FAX: (02) 4731-1594
 EMAIL: brian@estatepower.com.au

EPD 1.6

REFERENCE DRAWINGS

507501	ELECTRICAL RETICULATION
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WORK ORDERS

GENERAL	OVERHEAD	UNDERGROUND	SUBSTATIONS
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CAP / SAMP No. URS 20172

AM PROJ. No.

HV SWITCHING

UBD/PENGUIN REF MAP 63 REF.G13

GIS MAP No 6482.94

HV OP DIAGRAM NORTH RICHMOND.J4

LOCAL GOV AREA HAWKESBURY

ORIGINAL SCALE 1:1000

DO NOT SCALE

DIMENSIONS IN METRES

DATE 17.11.17

CH'D B.H.

DESIGN B.H.

REDBANK ESTATE - 'YEOMANS' STAGE 11 - NORTH 'C' PROPOSED ROAD THIRTY NORTH RICHMOND URS 20172 DUCT, EASEMENT & TRENCH REQUIREMENTS

A1 507500 A

SHEET No 1 OF 1 SHEETS

WORK COMPLETED / FIELD BOOK

CONSTRUCTED BY

WORKS COMPLETED

SIGNATURE DATE

INSPECTED BY

SIGNATURE DATE

ASSET RECORDING

OF

CONTACT No.

HEREBY CERTIFY THAT ASSETS MARKED AS-BUILT ON THIS DRAWING HAVE BEEN RECORDED AS PER ENDEAVOUR ENERGY STANDARD SAD 0004.

SIGNATURE DATE

◆# QUALITY LEVEL DATA POINT

BDY - Boundary

DE - Duct End

- New Ducts

UB-RC UNDERBORE - ROAD CROSSING

Note:

1. ALL UNDERBORE DUCTS FOUND TWISTED

2. SECTION MARKED IN RED TO BE CAPTURED ONLY

DUCT DECLARATION


I, Ernest Shum

OF MAROUBRA

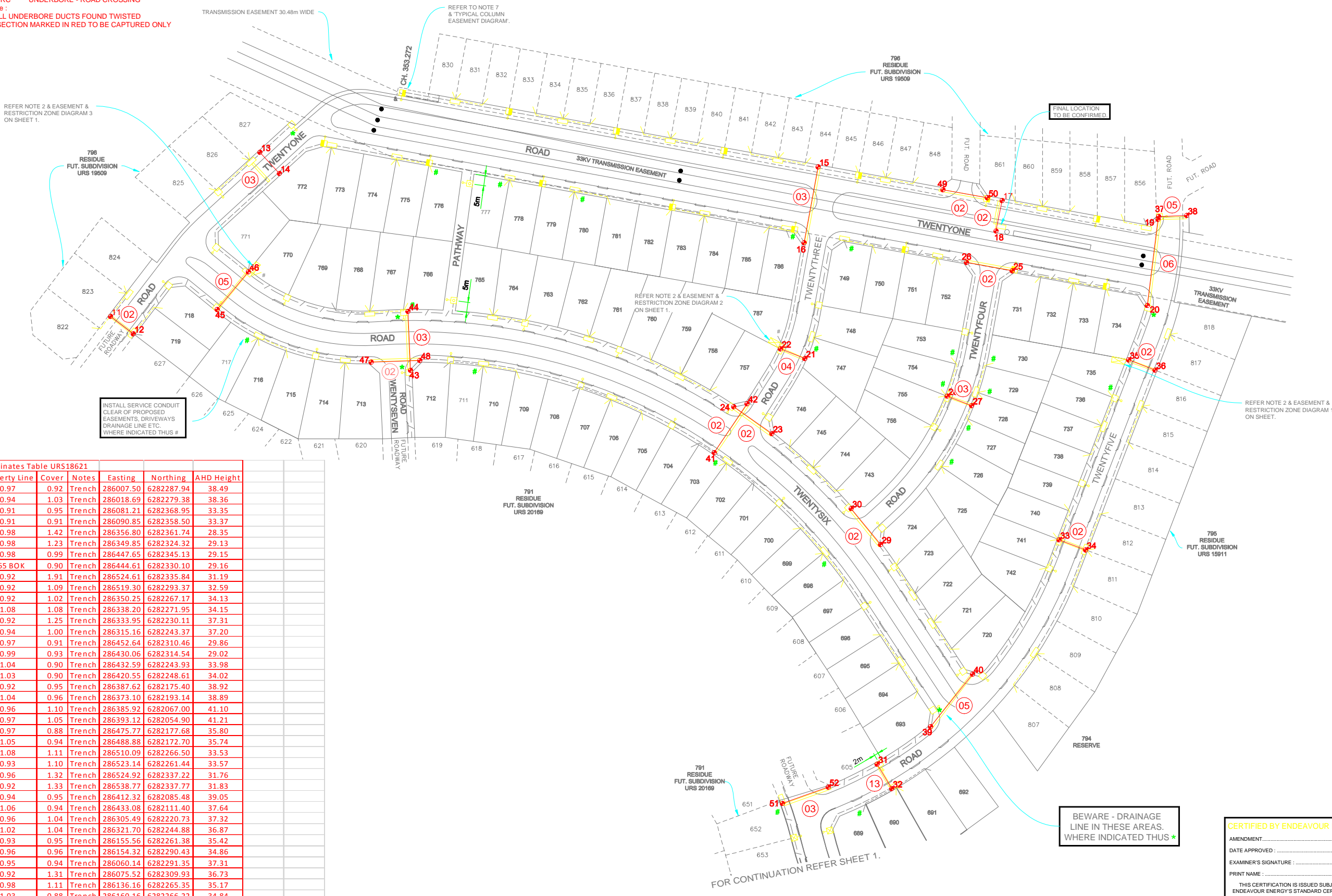
CONTACT NUMBER 02 4725 3421

HEREBY CERTIFY THAT THE DUCTS SHOWN ON THIS DRAWING HAVE BEEN INSTALLED IN ACCORDANCE WITH STANDARDS MC10006 AND SAD0004.

THE INSTALLATION OF THE DUCTS WAS COMMENCED ON 21-03-2018 & COMPLETED ON 23-04-2018

SIGNATURE 

LAND SURVEYOR REGISTERED UNDER SURVEYING ACT 2002 OR MEMBER OF THE INSTITUTE OF ENGINEERS OF AUSTRALIA



Feature ID	Quality Level	Asset	Property Line	Cover	Notes	Easting	Northing	AHD Height
11	A	Duct End	0.97	0.92	Trench	286007.50	6282287.94	38.49
12	A	Duct End	0.94	1.03	Trench	286018.69	6282279.38	38.36
13	A	Duct End	0.91	0.95	Trench	286081.21	6282368.95	33.35
14	A	Duct End	0.91	0.91	Trench	286090.85	6282358.50	33.37
15	A	Duct End	0.98	1.42	Trench	286356.80	6282361.74	28.35
16	A	Duct End	0.98	1.23	Trench	286349.85	6282324.32	29.13
17	A	Duct End	0.98	0.99	Trench	286447.65	6282345.13	29.15
18	A	Duct End	5.65	BOK	Trench	286444.61	6282330.10	29.16
19	A	Duct End	0.92	1.91	Trench	286524.61	6282335.84	31.19
20	A	Duct End	0.92	1.09	Trench	286519.30	6282293.37	32.59
21	A	Duct End	0.92	1.02	Trench	286350.25	6282267.17	34.13
22	A	Duct End	1.08	1.08	Trench	286338.20	6282271.95	34.15
23	A	Duct End	0.92	1.25	Trench	286333.95	6282230.11	37.31
24	A	Duct End	0.94	1.00	Trench	286315.16	6282243.37	37.20
25	A	Duct End	0.97	0.91	Trench	286452.64	6282310.46	29.86
26	A	Duct End	0.99	0.93	Trench	286430.06	6282314.54	29.02
27	A	Duct End	1.04	0.90	Trench	286432.59	6282243.93	33.98
28	A	Duct End	1.03	0.90	Trench	286420.55	6282248.61	34.02
29	A	Duct End	0.92	0.95	Trench	286387.62	6282175.40	38.92
30	A	Duct End	1.04	0.96	Trench	286373.10	6282193.14	38.89
31	A	Duct End	0.96	1.10	Trench	286385.92	6282067.00	41.10
32	A	Duct End	0.97	1.05	Trench	286393.12	6282054.90	41.21
33	A	Duct End	0.97	0.88	Trench	286475.77	6282177.68	35.80
34	A	Duct End	1.05	0.94	Trench	286488.88	6282172.70	35.74
35	A	Duct End	1.08	1.11	Trench	286510.09	6282266.50	33.53
36	A	Duct End	0.93	1.10	Trench	286523.14	6282261.44	33.57
37	A	Duct End	0.96	1.32	Trench	286524.92	6282337.22	31.76
38	A	Duct End	0.92	1.33	Trench	286538.77	6282337.77	31.83
39	A	Duct End	0.94	0.95	Trench	286412.32	6282085.48	39.05
40	A	Duct End	1.06	0.94	Trench	286433.08	6282111.40	37.64
41	A	Duct End	0.96	1.04	Trench	286305.49	6282220.73	37.32
42	A	Duct End	1.02	1.04	Trench	286321.70	6282244.88	36.87
43	A	Duct End	0.93	0.95	Trench	286155.56	6282261.38	35.42
44	A	Duct End	0.96	0.96	Trench	286154.32	6282290.43	34.86
45	A	Duct End	0.95	0.94	Trench	286060.14	6282291.35	37.31
46	A	Duct End	0.92	1.31	Trench	286075.52	6282309.93	36.73
47	A	Duct End	0.98	1.11	Trench	286136.16	6282265.35	35.17
48	A	Duct End	1.03	0.88	Trench	286160.16	6282266.22	34.84
49	A	Duct End	0.99	0.98	Trench	286418.43	6282350.46	28.45
50	A	Duct End	0.97	1.05	Trench	286440.34	6282346.50	28.82
51	A	Duct End	0.98	1.26	Trench	286339.18	6282047.60	42.97
52	A	Duct End	0.94	0.99	Trench	286361.78	6282055.67	42.73

NOTE: BOK = OFFSET FROM BACK OF KERB

CERTIFIED BY ENDEAVOUR ENERGY

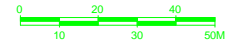
AMENDMENT:

DATE APPROVED:


EXAMINER'S SIGNATURE:

PRINT NAME:

THIS CERTIFICATION IS ISSUED SUBJECT TO ENDEAVOUR ENERGY'S STANDARD CERT. TERMS.



Cadastre: © Land and Property Information 2016

W A E ONLY  **ESTATE POWER DESIGN PTY LIMITED**

J K Williams Contracting Pty Ltd
44 Jack Williams Drive, Penrith NSW 2751
Ph (02) 4725 3400 Fax (02) 4725 3499
ABN 45 058 568 771

ABN 69 002 331 142
ELECTRICAL RETICULATION CONSULTANTS
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TEL: (02) 4731-8333 FAX: (02) 4731-1594
EMAIL: brian@estatepower.com.au

EPD 1.6

REFERENCE DRAWINGS	WORK ORDERS	CAP / SAMP No.	URS 18621	ORIGINAL SCALE	DO NOT SCALE	REDBANK ESTATE - 'YEOMANS' STAGE 11 - NORTH 'A' OFF ARTHUR PHILLIP DR, NORTH RICHMOND URS 18621 DUCT, EASEMENT & TRENCH REQUIREMENTS
505307 ELECTRICAL RETICULATION	GENERAL OVERHEAD UNDERGROUND SUBSTATIONS	AM PROJ. No. HV SWITCHING UBD/PENGUIN REF GIS MAP No. HV OF DIAGRAM LOCAL GOV AREA	MAP 63 REF.G13 6482.94 NORTH RICHMOND.J4 HAWKESBURY	1:1000	DRAWN E.C. DATE 06.02.18 CH'D B.H. DESIGN B.H.	

EPD REFERENCE No. **10/233/ED11NA**

Endeavour Energy

A1 505306 A

SHEET No 2 OF 2 SHEETS

HV TRENCH LENGTH 1293 M
 LV TRENCH LENGTH 1643 M
 TOTAL TRENCH LENGTH 2936 M

WORK COMPLETED / FIELD BOOK

CONSTRUCTED BY
 WORKS COMPLETED
 SIGNATURE DATE

INSPECTED BY
 SIGNATURE DATE

ASSET RECORDING

I
 OF
 CONTACT No
 HEREBY CERTIFY THAT ASSETS MARKED AS-BUILT ON THIS DRAWING HAVE BEEN RECORDED AS PER ENDEAVOUR ENERGY STANDARD SAD 0004.
 SIGNATURE DATE

WAE Survey Coordinates Table URS18621								
Feature ID	Quality Level	Asset	Property Line	Cover	Notes	Easting	Northing	AHD Height
1	A	Duct End	0.91	1.16	Trench	286443.81	6281894.16	42.29
2	A	Duct End	0.91	1.25	Trench	286459.23	6281912.75	42.04
3	A	Duct End	0.93	1.18	Trench	286410.8	6281921.6	41.28
4	A	Duct End	0.90	1.33	Trench	286420.67	6281933.12	41.01
5	A	Duct End	0.92	1.19	Trench	286384.47	6281953.83	40.70
6	A	Duct End	1.03	1.44	Trench	286393.9	6281961.35	40.41
7	A	Duct End	0.92	1.41	Trench	286363.09	6281984.53	41.31
8	A	Duct End	1.00	1.30	Trench	286375.12	6281990.99	41.36
9	A	Duct End	0.92	1.10	Trench	286361.87	6281984.93	41.72
10	A	Duct End	0.94	1.12	Trench	286352.9	6282003.2	42.16

WARNING
 LIVE ENDEAVOUR ENERGY CABLES AND OTHER SERVICES EXIST IN THIS AREA.
 PLEASE CONTACT - DIAL BEFORE YOU DIG ON TEL-1100 FOR SEARCH INFORMATION A MINIMUM TWO DAYS PRIOR TO EXCAVATION

PERMANENT SURVEY MARKS MAY EXIST IN THIS AREA. THESE ARE TO BE LOCATED BY SURVEY PRIOR TO COMMENCEMENT OF WORK

ALL WORKS TO BE CONSTRUCTED ARE TO BE COMPLETED IN ACCORDANCE WITH ENDEAVOUR ENERGY'S GENERIC ENVIRONMENTAL PLAN - EMS 0001.

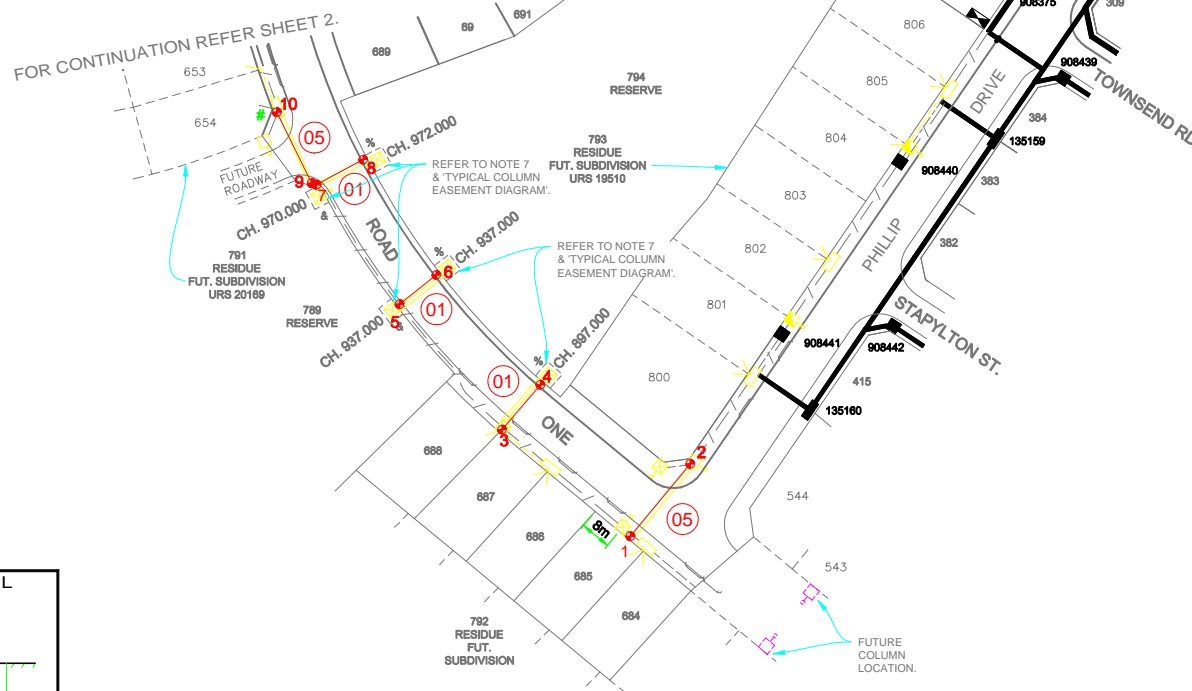
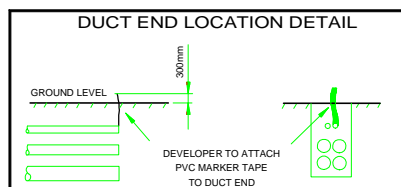
ALL SL. COLUMNS ARE TO BE INSTALLED 350mm FROM THE FRONT PROPERTY BOUNDARIES UNLESS SHOWN OTHERWISE.

- NOTES**
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ENDEAVOUR ENERGY'S MDI 0028 AND MCI 0006.
 - AN EASEMENT FOR SUBSTATION SITE (B) 6.6m x VAR. x 2.75 (THIS IS MINIMUM SIZE ONLY) IS REQUIRED TO BE CREATED BY THE DEVELOPER OVER LOT 735. EASEMENTS FOR SUBSTATION SITES (B) 5.5m x VAR. x 2.75 (THIS IS MINIMUM SIZE ONLY) ARE REQUIRED TO BE CREATED BY THE DEVELOPER OVER LOTS 770 & 787.
 - IN ADDITION TO THE EASEMENTS RESTRICTION ON THE USE OF LAND (A) ARE REQUIRED IN RELATION TO THE FIRE RATINGS OF BUILDINGS MEASURED 3M FROM THE PLINTHS OVER LOTS 734, 735, 770, 771, 757 & 787. ALSO RESTRICTION ON THE USE OF LAND (D) ARE REQUIRED IN RELATION TO SWIMMING POOLS MEASURED 5M FROM THE EASEMENTS OVER LOTS 734, 735, 770, 771, 757 & 787.
 - REFER TELSTRANBN DESIGN LAYOUT FOR DUCTING AND EXCAVATION REQUIREMENTS.
 - ATTENTION - PERMANENT SURVEY MARKS MAY EXIST IN THIS AREA. THESE ARE TO BE LOCATED BY A SURVEYOR PRIOR TO THE COMMENCEMENT OF WORK.
 - WARNING - LIVE ENDEAVOUR ENERGY CABLES AND OTHER SERVICES IN THIS AREA. PLEASE CONTACT - DIAL BEFORE YOU DIG ON TEL-1100 FOR SEARCHES A MINIMUM TWO DAYS PRIOR TO EXCAVATION.
 - ALL THE REQUIREMENTS OF THE ENVIRONMENTAL PROTECTION AUTHORITY POLLUTION CONTROL LEGISLATION IS TO BE STRICTLY ADHERED TO.
 - EASEMENTS FOR UNDERGROUND CABLE & STREETLIGHTING EQUIPMENT MINIMUM 1 METRE WIDE ARE REQUIRED TO BE CREATED BY THE DEVELOPER OVER RESERVE LOTS 791 (TWO LOCATIONS), 794 (THREE LOCATIONS) & RESERVE LOT 796 (ONE LOCATION). REFER TYPICAL COLUMN EASEMENT DETAIL.

LEGEND

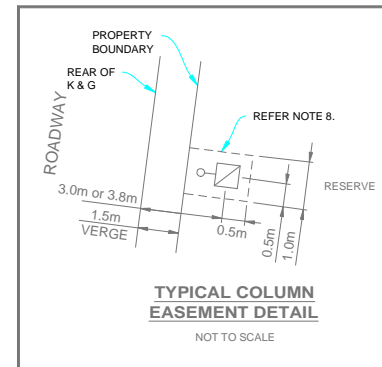
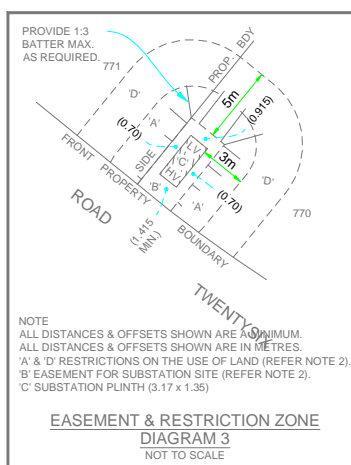
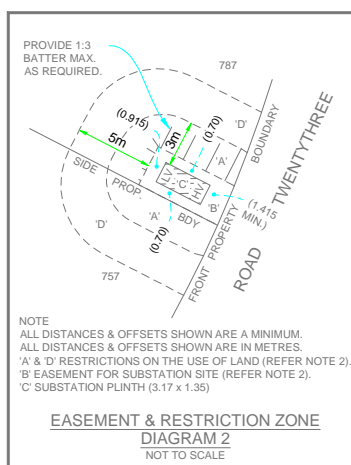
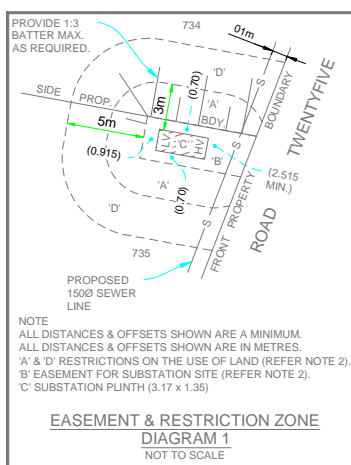
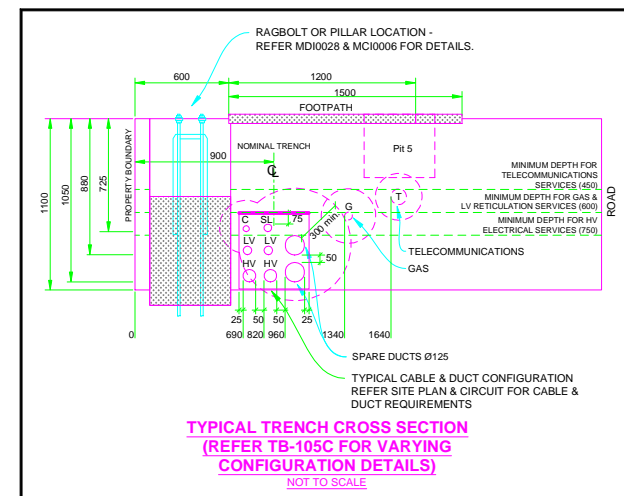
- PROPOSED PADMOUNT SUBSTATION
- EXISTING PADMOUNT SUBSTATION
- PROPOSED LV PILLAR LOCATION
- EXISTING LV PILLAR LOCATION
- PROPOSED S.L. COLUMN LOCATION
- EXISTING S.L. COLUMN LOCATION
- RELOCATED S.L. COLUMN LOCATION
- HV CABLE TRENCH
- LV CABLE TRENCH
- EXISTING UNDERGROUND CABLE
- INSTALL 40mm PVC SERVICE CONDUIT
- EXISTING OVERHEAD MAINS
- PROPOSED DUCT LOCATIONS
- EXISTING DUCT LOCATIONS
- DUCT CONFIGURATION - REFER MCI 0006 SECTION 4
- ROAD CENTRELINE CHAINAGES

- # QUALITY LEVEL DATA POINT
 BDY - Boundary
 DE - Duct End
 - - New Ducts
 UB-RC UNDERBORE - ROAD CROSSING
 Note:
 1. ALL UNDERBORE DUCTS FOUND TWISTED
 2. SECTION MARKED IN RED TO BE CAPTURED ONLY



ALL COLUMNS INDICATED THIS ARE TO BE INSTALLED 3 METRES BEHIND REAR OF KERB & GUTTER ALIGNMENT (REFER TYPICAL COLUMN EASEMENT DIAGRAM ON THE DUCT, TRENCH & EASEMENT REQ'S DRAWING).

ALL COLUMNS INDICATED THIS ARE TO BE INSTALLED 3.8 METRES BEHIND REAR OF KERB & GUTTER ALIGNMENT (REFER TYPICAL COLUMN EASEMENT DIAGRAM ON THE DUCT, TRENCH & EASEMENT REQ'S DRAWING).



DUCT DECLARATION
 Ernest Shum

OF MAROUBRA
 CONTACT NUMBER 02 4725 3421
 HEREBY CERTIFY THAT THE DUCTS SHOWN ON THIS DRAWING HAVE BEEN INSTALLED IN ACCORDANCE WITH STANDARDS MCI0006 AND SADO004.
 THE INSTALLATION OF THE DUCTS WAS COMMENCED ON 21-03-2018 & COMPLETED ON 23-04-2018
 SIGNATURE

DESIGN COMPLIANCE AND INDEMNITY

This design complies with the Endeavour Energy's relevant standards as current at this time and as listed on the Endeavour Energy Accredited Service Provider's Internet site. These standards include, but are not limited to:

- CP : Connection Policy
- EMS : Environmental Management Standard
- MCI : Mains Construction Instruction
- MDI : Mains Design Instruction
- FDI : Protection Design Instruction
- SDI : Substation Design Instruction
- EDI : Earthing Design Instruction
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- LDI 0001 : Public Lighting Electrical Design Element

Additionally, where relevant, the design complies with AS/NZS 7000 'Overhead Line Design - Detailed Procedures' published by the Australian Standards.

ESTATE POWER DESIGN (Company name)
 indemnifies Endeavour Energy for any loss or damage resulting from non-compliance of the design with the above standards.

Signed:
 Name: BRIAN JUDE
 Service Provider Number: 1033 Date: 06 / 02 / 2018

CERTIFIED BY ENDEAVOUR ENERGY

AMENDMENT:
 DATE APPROVED:
 EXAMINER'S SIGNATURE:
 PRINT NAME:
 THIS CERTIFICATION IS ISSUED SUBJECT TO ENDEAVOUR ENERGY'S STANDARD CERT. TERMS.



EPD REFERENCE No.
 10/233/ED11NA

WAE ONLY

 J K Williams Contracting Pty Ltd
 44 Jack Williams Drive, Penrith NSW 2751
 Ph (02) 4725 3400 Fax (02) 4725 3499
 ABN: 45 056 566 771

ESTATE POWER DESIGN PTY LIMITED
 ABN 69 002 331 142
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 EMAIL: brian@estatepower.com.au

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 TEMPLATE VERSION No. 4.0
 EPD 1.6

REFERENCE DRAWINGS	WORK ORDERS	CAP / SAMP No.	URS 18621
505307	ELECTRICAL RETICULATION	AM PROJ. No.	
	GENERAL	HV SWITCHING	
	OVERHEAD	UBD/PENGUIN REF	MAP 63 REF.G13
	UNDERGROUND	GIS MAP No	6482.94
	SUBSTATIONS	HV OP DIAGRAM	NORTH RICHMOND.J4
		LOCAL GOV AREA	HAWKESBURY

ORIGINAL SCALE	DO NOT SCALE
1:1000	
DRAWN E.C.	
DATE 06.02.18	
CH'D B.H.	
DESIGN B.H.	

REDBANK ESTATE - 'YEOMANS' STAGE 11 - NORTH 'A' OFF ARTHUR PHILLIP DR, NORTH RICHMOND URS 18621
 DUCT, EASEMENT & TRENCH REQUIREMENTS

Endeavour Energy
 A1 505306 A
 SHEET No 1 OF 2 SHEETS

HV TRENCH LENGTH 1821 M
 LV TRENCH LENGTH 2804 M
 TOTAL TRENCH LENGTH 4625 M

WORK COMPLETED / FIELD BOOK

CONSTRUCTED BY

WORKS COMPLETED

SIGNATURE DATE

INSPECTED BY

SIGNATURE DATE

ASSET RECORDING

I

OF

CONTACT No

HEREBY CERTIFY THAT ASSETS MARKED AS BUILT ON THIS DRAWING HAVE BEEN RECORDED AS PER ENDEAVOUR ENERGY STANDARD SAD 0004.

SIGNATURE DATE

WARNING

LIVE ENDEAVOUR ENERGY CABLES AND OTHER SERVICES EXIST IN THIS AREA.
 PLEASE CONTACT - 'DIAL BEFORE YOU DIG' ON TEL-1100 FOR SEARCH INFORMATION A MINIMUM TWO DAYS PRIOR TO EXCAVATION

- NOTES**
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ENDEAVOUR ENERGY'S MDI 0028 AND MCI 0006.
 - AN EASEMENT FOR SUBSTATION SITE (B) 5.5m & VAR. x 2.75 (THIS IS MINIMUM SIZE ONLY) IS REQUIRED TO BE CREATED BY THE DEVELOPER OVER LOT 613. IN ADDITION TO THE EASEMENT A RESTRICTION ON THE USE OF LAND (A) IS REQUIRED IN RELATION TO THE FIRE RATING OF BUILDINGS MEASURED 3M FROM THE PLINTH OVER LOTS 612 & 613. ALSO A RESTRICTION ON THE USE OF LAND (D) IS REQUIRED IN RELATION TO SWIMMING POOLS MEASURED 5M FROM THE EASEMENT OVER LOTS 612 & 613.
 - REFER TELSTRANBN DESIGN LAYOUT FOR DUCTING AND EXCAVATION REQUIREMENTS.
 - ATTENTION - PERMANENT SURVEY MARKS MAY EXIST IN THIS AREA. THESE ARE TO BE LOCATED BY A SURVEYOR PRIOR TO THE COMMENCEMENT OF WORK.
 - WARNING - LIVE ENDEAVOUR ENERGY CABLES AND OTHER SERVICES IN THIS AREA. PLEASE CONTACT - 'DIAL BEFORE YOU DIG' ON TEL-1100 FOR SEARCHES A MINIMUM TWO DAYS PRIOR TO EXCAVATION.
 - ALL THE REQUIREMENTS OF THE ENVIRONMENTAL PROTECTION AUTHORITY POLLUTION CONTROL LEGISLATION IS TO BE STRICTLY ADHERED TO.

ALL WORKS TO BE CONSTRUCTED ARE TO BE COMPLETED IN ACCORDANCE WITH ENDEAVOUR ENERGY'S GENERIC ENVIRONMENTAL PLAN - EMS 0001.

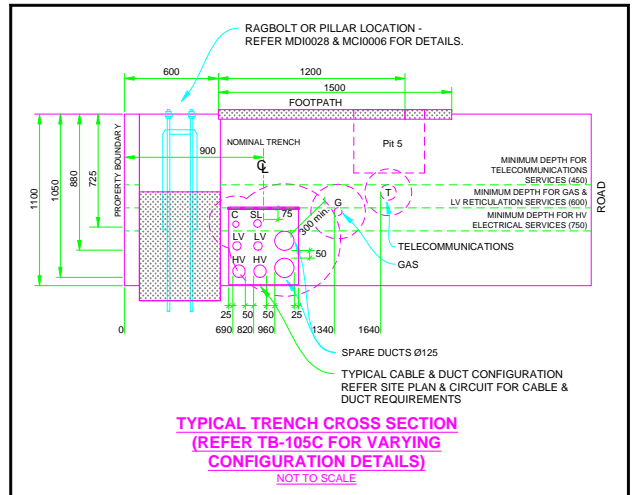
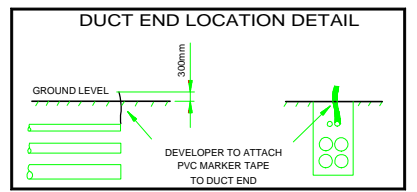
ALL SL. COLUMNS ARE TO BE INSTALLED 350mm FROM THE FRONT PROPERTY BOUNDARIES UNLESS SHOWN OTHERWISE.

- LEGEND**
- PROPOSED PADMOUNT SUBSTATION
 - PROPOSED LV PILLAR LOCATION
 - EXISTING LV PILLAR LOCATION
 - PROPOSED S.L. COLUMN LOCATION
 - EXISTING S.L. COLUMN LOCATION
 - HV CABLE TRENCH
 - LV CABLE TRENCH
 - EXISTING UNDERGROUND CABLE
 - INSTALL 40mm PVC SERVICE CONDUIT
 - PROPOSED DUCT LOCATIONS
 - EXISTING DUCT LOCATIONS
 - DUCT CONFIGURATION - REFER MCI 0006 SECTION 4

QUALITY LEVEL DATA POINT

BDY - Boundary
 DE - Duct End
 - New Ducts
 UB-RC UNDERBORE - ROAD CROSSING

Note:
 1. ALL UNDERBORE DUCTS FOUND TWISTED
 2. SECTION MARKED IN RED TO BE CAPTURED ONLY



DUCT DECLARATION

Ernest Shum

OF MAROUBRA

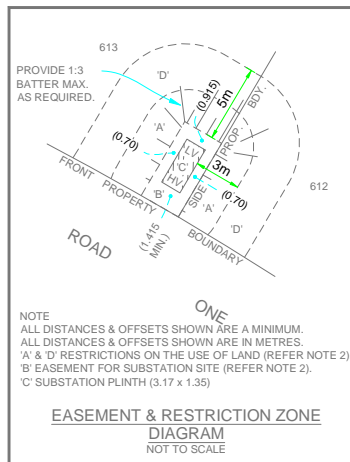
CONTACT NUMBER 02 4725 3421

HEREBY CERTIFY THAT THE DUCTS SHOWN ON THIS DRAWING HAVE BEEN INSTALLED IN ACCORDANCE WITH STANDARDS MCI0006 AND SAD0004.

THE INSTALLATION OF THE DUCTS WAS COMMENCED ON 10-04-2018 & COMPLETED ON 01-06-2018

SIGNATURE [Signature]

LAND SURVEYOR REGISTERED UNDER SURVEYING ACT 2002 OR MEMBER OF THE INSTITUTE OF ENGINEERS OF AUSTRALIA



W A E Survey Coordinates Table URS20169

Feature ID	Quality Level	Asset	Property Line	Cover	Notes	Easting	Northing	AHD Height
1	A	Duct End	1.02	1.15	Trench	286260.03	6282143.58	44.21
2	A	Duct End	1.05	1.23	Trench	286270.57	6282159.32	44.11
3	A	Duct End	0.92	1.26	Trench	286060.94	6282160.24	45.09
4	A	Duct End	0.98	1.12	Trench	286083.26	6282171.66	43.86
5	A	Duct End	0.98	0.92	Trench	286027.53	6282206.54	42.28
6	A	Duct End	1.02	0.93	Trench	286036.84	6282218.31	42.32
7	A	Duct End	1.03	1.19	Trench	285987.23	6282239.53	39.84
8	A	Duct End	0.95	0.95	Trench	286000.91	6282256.25	39.44
9	A	Duct End	0.93	1.17	Trench	286139.39	6282187.15	41.38
10	A	Duct End	0.95	0.98	Trench	286163.41	6282188.75	41.80

CERTIFIED BY ENDEAVOUR ENERGY

AMENDMENT:

DATE APPROVED:

EXAMINER'S SIGNATURE:

PRINT NAME:

THIS CERTIFICATION IS ISSUED SUBJECT TO ENDEAVOUR ENERGY'S STANDARD CERT. TERMS.

DESIGN COMPLIANCE AND INDEMNITY

This design complies with the Endeavour Energy's relevant standards as current at this time and as listed on the Endeavour Energy Accredited Service Provider's Internet site. These standards include, but are not limited to:

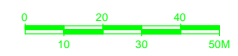
- CP : Connection Policy
- EMS : Environmental Management Standard
- MCI : Mains Construction Instruction
- MDI : Mains Design Instruction
- PDI : Protection Design Instruction
- SDI : Substation Design Instruction
- EDI : Earthing Design Instruction
- SAD 0001 : Design Drawing Standard
- MMI : Mains Maintenance Instruction
- SMI : Substation Maintenance Instruction
- LDI 0001 : Public Lighting Electrical Design Element

Additionally, where relevant, the design complies with AS/NZS 7000 "Overhead Line Design - Detailed Procedures" published by the Australian Standards.

ESTATE POWER DESIGN (Company name) indemnifies Endeavour Energy for any loss or damage resulting from non-compliance of the design with the above standards.

Signed: [Signature] Name: BRIAN JUDE

Service Provider Number: 1033 Date: 20/11/2017



W A E ONLY

Jk Williams

J K Williams Contracting Pty Ltd
 44 Jack Williams Drive, Penrith NSW 2751
 Ph (02) 4725 3400 Fax (02) 4725 3499
 ABN: 42 056 586 771

ESTATE POWER DESIGN PTY LIMITED

ABN 69 002 331 142
 ELECTRICAL RETICULATION CONSULTANTS
 P.O. BOX 1872, PENRITH BC, 2751
 TEL: (02) 4731-8333 FAX: (02) 4731-1594
 EMAIL: brian@estatepower.com.au

REFERENCE DRAWINGS

507483	ELECTRICAL RETICULATION
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WORK ORDERS

GENERAL
OVERHEAD
UNDERGROUND
SUBSTATIONS

CAP / SAMP No. URS 20169
 AM PROJ. No.
 HV SWITCHING
 UBD/PENGUIN REF MAP 63 REF.G13
 GIS MAP No 6482.94
 HV OP DIAGRAM NORTH RICHMOND.J4
 LOCAL GOV AREA HAWKESBURY

ORIGINAL SCALE 1:1000
 DRAWN E.C.
 DATE 20.11.17
 CHD B.H.

DO NOT SCALE
 DIMENSIONS IN METRES
 DESIGN B.H.

REDBANK ESTATE - 'YEOMANS' STAGE 11 - NORTH 'B' PROPOSED ROAD ONE NORTH RICHMOND URS 20169
DUCT, EASEMENT & TRENCH REQUIREMENTS

EPD REFERENCE No. 10/233/ED11NB

Endeavour Energy

A1 507482 A

SHEET No 1 OF 1 SHEETS