



Project No: S15180

7 October 2015

JBA
Level 7, 77 Berry Street
NORTH SYDNEY NSW 2059

Attention: Kim Shmuel

Dear Kim

**DUE DILIGENCE SERVICES REPORT
HIGH STREET, PENRITH**

1 INTRODUCTION

This Services Due Diligence Report has been prepared by BG&E as requested by JBA, on behalf of their client.

The objective of this report is to examine the existing services available to the site and advise if augmentation will be required as a consequence of the intended development of approx. 950 apartments and associated retail space.

The infrastructure assessed in this report comprises Sewer, Potable Water, Electricity, Telecommunication services and Gas. The approval authority for the site is Penrith City Council.

The project site is located generally at High Street within the Penrith Local Government Area (LGA). The subject site is L-shaped and is bounded by High Street to the north, Mulgoa Road to the west, Union Road to the south and existing properties to the east. The site is bisected in a north to south direction by John Tipping Grove. The eastern half of the site backs onto Union Lane.

The re-zoning proposal is for approximately 950 apartments across a mix of one, two and three bedrooms. There is proposed to be approximately 12,500m² of non-residential floor space intended to comprise retail, restaurants, office and business space and neighbourhood retail. On this basis we have assessed the potential servicing requirements.

2 INFORMATION SOURCES AND LIMITATIONS

The information provided in this report is based primarily on conversations and service enquiries made with Endeavour Energy, Sydney Water, Jemena, NBN and Telstra. The data has been prepared within the given time constraints and has been confirmed in writing from the various utility service providers at this time, with the exception of Endeavour Energy and Sydney Water, Connect

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Infrastructure were engaged by BG&E to provide specialist advice regarding electrical services to the site. Our findings have been based on the following:

- Review of “Dial Before You Dig” information provided by Telstra, Endeavour Energy, Jemena, Sydney Water and RMS;
- Review of Briefing document provided by JBA in relation to the proposed re-zoning;
- Verbal advice from Connect Infrastructure and RAR Water Servicing Co-ordinators;
- Site inspection on 15 September 2015.
- Information related to existing services has been sourced by conducting a Dial Before You Dig search, which has formed the basis of this statement.

3 EXSISTING SERVICES

A Dial Before You Dig search forms the basis of this Service Statement. An investigation will be undertaken to determine whether or not the following services are currently present on the site:

- Sewer
- Water
- Electricity
- Telecommunications
- Gas

A discussion of the presence and capacity of each of the above listed services will be discussed in turn below, and recommendations regarding their capacities.

3.1 Water

3.1.1 Sewer reticulation

A formal Feasibility Application was lodged with Sydney Water in relation to the proposed development site. The application was lodged by Rose Atkins Rimmer (RAR) who are accredited Sydney Water Water Servicing Co-ordinators.

The site falls within Sydney Water’s area. Portions of the site are not currently connected to the Sydney Water network as areas currently have no tenants.

A preliminary review of the existing services adjacent to the site, read in the context of the proposed development, indicates that a sewer augmentation will be required to service the proposed development.

Given the relatively close proximity of the sewerage treatment plant on Castleraugh Road to the north of the site it is likely that we would be able to connect into one of the mains running to the treatment works. At this time the details aren’t available as Sydney Water are processing our application.

The worst case scenario is that Sydney Water would determine a local carrier main had insufficient capacity and would require augmentation to the Treatment Plant or to a point closer. This is considered unlikely.

3.1.2 Water reticulation

The formal feasibility application also covered Sydney Water's Potable Water requirements in relation to the proposed development.

The site falls within Sydney Water's area for water supply. Sydney Water potable water mains exist surrounding the site.

A 225mm CICL water main runs along High Street from John Tipping Grove to the east. A 600mm and 100mm water main run along Union Road from Worth Street to John Tipping Grove and then turn north and run north along John Tipping Grove.

It is expected that there will be sufficient capacity within the existing potable water network to service the proposed development.

It is assumed that the existing lots each have an individual water connection which would be replaced with a single connection as part of the redevelopment.

Sydney Water require that disused water services are disconnected and sealed at the point of connection to the Sydney Water main.

The Sydney Water feasibility application will not take into account the provision of supply for firefighting purposes. These requirements will need to be checked by the hydraulic designer appointed by the developer. If there is insufficient pressure available for firefighting purposes then a booster pump may be required as part of the building/development design.

A copy of the Sydney Water Feasibility Letter will be provided when it is received.

3.2 Electricity

A formal application for a connection of load has been submitted to Endeavour Energy in respect of the proposed development. The application was lodged by Connect Infrastructure, accredited designer and constructor of electrical network assets. In lieu of advice from Endeavour Energy, which has not been received at this time, Connect have advised that augmentation by way of an 11kV feeder line will be required to service the expected demand from the proposed development.

The nearest Zone Substation is situated on Castlaraegh Road approximately 800m north of the subject site. Endeavour Energy will require at least one feeder to power the proposed demand from the site.

After the feeder is run to the site approximately 6 substations will be required for the proposed development. These will likely be indoor substations. Indoor substations may be installed in pairs to reduce infrastructure costs.

There may be existing conduits installed along the proposed route to the zone substation which can be utilised by the developer. If no available conduits are available they will be required to be trenched and installed by the Developer.

Whether existing conduits are available or not the proposed supply works will be required to be developer funded.

3.3 Telecommunications

Telecommunications services include telephone and internet services. Telstra was contacted as a starting point when considering telecommunications services for the proposed development, given the availability of services adjacent to the site as shown on the DBYD information. We were advised that due to the size of the development any application for telecommunication would need to be provided by the NBN Co. fibre network.

Early application has been made with NBN in relation to the proposed development. NBN have advised that the development is within the NBN fibre footprint.

The NBN process is somewhat different to the previous Telstra process for the provision of Telecommunications. NBN requires that the developer engage a designer who will be responsible for the provision of the telecommunications design to NBN network standards, in much the same way that electrical works are undertaken by independent accredited 3rd parties with designs submitted to NBN for review and approval.

In this instance any future development would need to incorporate the appropriate NBN design to service the residential and retail premises.

An NBN service currently runs along John Tipping Grove and along the High Street frontage.

A copy of the telecommunications DBYD information is contained in Appendix G and a copy of the NBN Co Fibre Footprint Letter is contained in Appendix H.

There is an Optus which runs past the site along Union Road and along Mulgoa Road. Information regarding this service is contained in the attachments to this report.

3.4 Gas

All gas infrastructure in the area is owned by Jemena. During the planning stages of the development it is the developer's responsibility to contact Jemena with details of their proposed development. Jemena will then undertake an economic analysis and consider whether it is in their interests to provide gas infrastructure to the site, and whether a contribution will be required from the developer.

We have contacted Jemena and are awaiting advice as to whether there will be sufficient capacity in the local network to supply the development. Given the site's location adjacent to the CBD area there will likely be sufficient capacity. It is important to note that Jemena does not reserve capacity for any particular project. Formal Application will be required once DA approval is obtained and Jemena receives formal application with gas load profiles.

A 200mm 3500kPa Primary gas main runs adjacent the site along Union Road and turns north onto Castleraugh Road

A 200mm 1050 kPa Secondary gas main runs thru the proposed development site along John Tipping Grove.

Given the site location it is expected that there will be sufficient capacity to service the proposed development.

A copy of the DBYD information and Jemena's advice is included in Appendix D.

In this instance we anticipate no major constraints in gas supply to the site. Any developer contributions are likely to be minimal due to the close proximity of the supply.

3.5 Cost Estimate

A preliminary cost estimate has been prepared and appears below. This estimate is based on our discussions with the relevant authorities and specialist advice. This information is provided on an as-is basis. BG&E makes no warranties in the provision of this information.

Table 1 Services Cost Estimate

Item	Quantity	Rate	Cost Estimate
ELECTRICAL			
11kV Feeder from Zine Substation			
If existing conduits available	1 off	\$250,000	\$250,000
If trenching required	1 off	\$800,000	\$800,000
PM Substation – Internal	6 off	\$140K	\$840,000
GAS			
Available adjacent to site	-	-	-
WATER			
Available adjacent to site	-	-	-
SEWER			
Amplification required	TBA	\$670/m	TBA
NOTES:			
	1. The above estimates do not include an allowance for consultants fees		
	2. Service disconnection and sealing not included		
	3. Cost can only be realised after approved plans are determined by the approval authority		

4 CONCLUSION

The objective of this report was to review the infrastructure required to service the proposed re-zoning at High Street, Penrith to allow further development to occur.

Preliminary advice obtained from Connect Infrastructure, Level 1 and 3 accredited designers and constructors indicate that, as a minimum, six (6) developer funded local PM substations will be required to accommodate the anticipated loading. In addition to a minimum of one (1) 11kV feeder from the zone substation in Castleraugh Road being required. Any costing should be considered in the budget planning. However, this is not considered a constraint to development.

Gas supply is available to the site from the 200mm mains adjacent to the site perimeter. Supply of gas to the site is subject to a formal application to Jemena. In this instance, we anticipate no major constraints associated with the provision of gas. Any developer contributions are likely to be minimal.

Potable water is located adjacent to the site, and is considered to be sufficient for the anticipated site requirements. The costs associated with accessing the potable water are considered minimal. Additional firefighting services may be required.

Sewer infrastructure is available to service the site. It is considered that a Sewer augmentation will be required to cater for the site demand. Confirmation will be required by Sydney Water.

NBN Co has indicated that the site is within its planned fibre footprint. Application will need to be made formally through NBN Co.

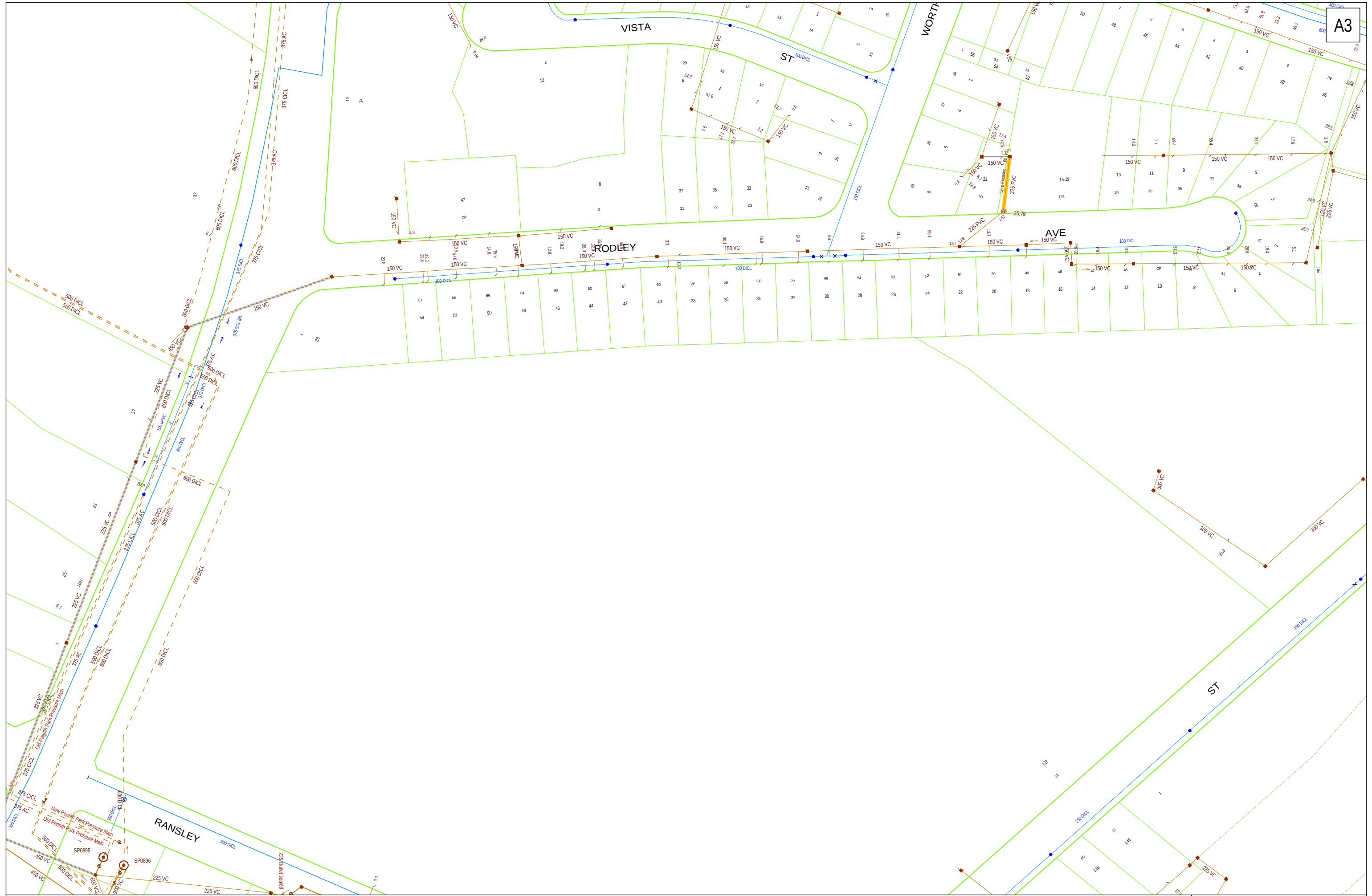
Yours faithfully
For BG&E Pty Limited

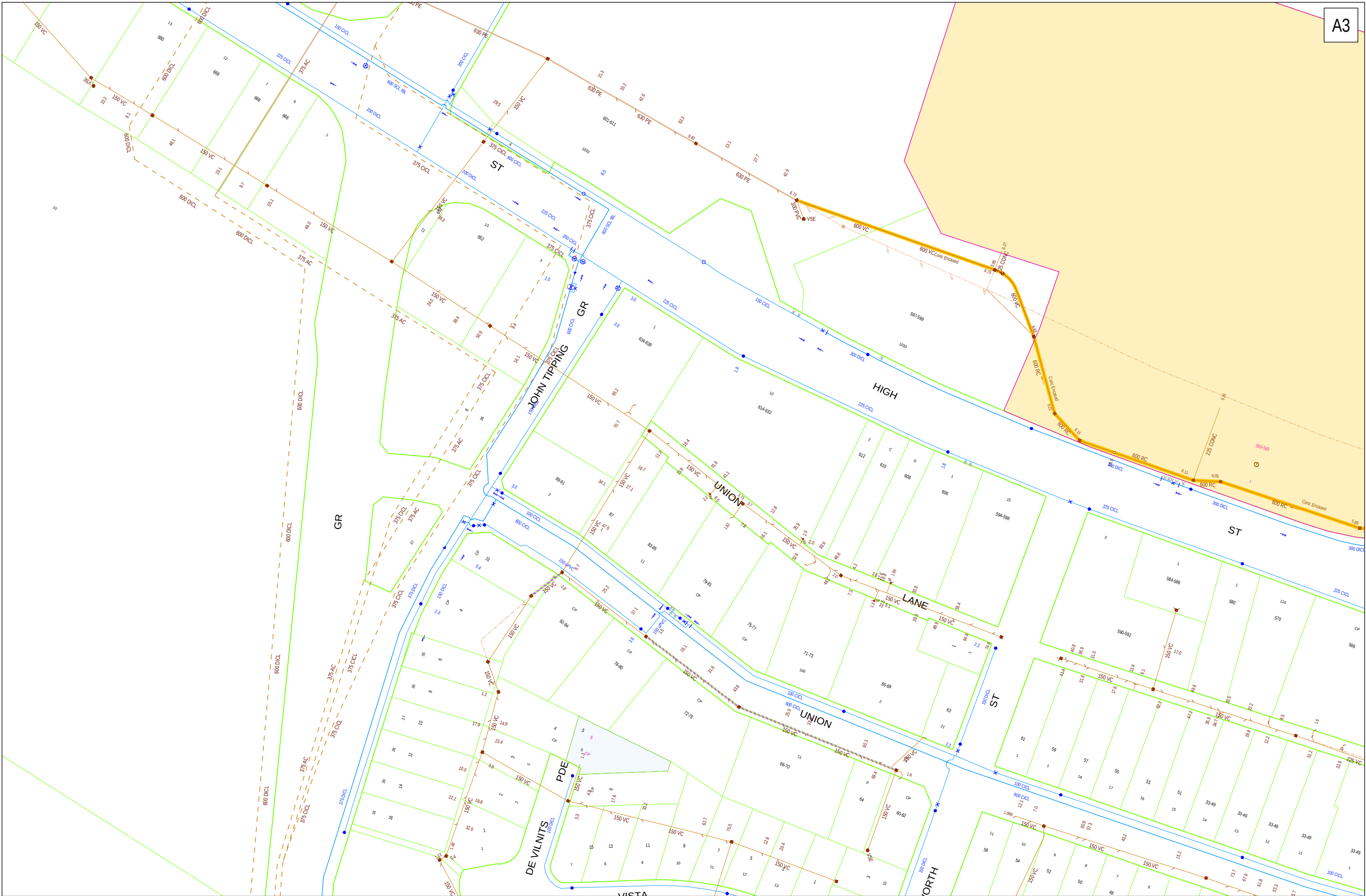
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Principal - Civil

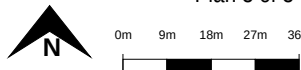
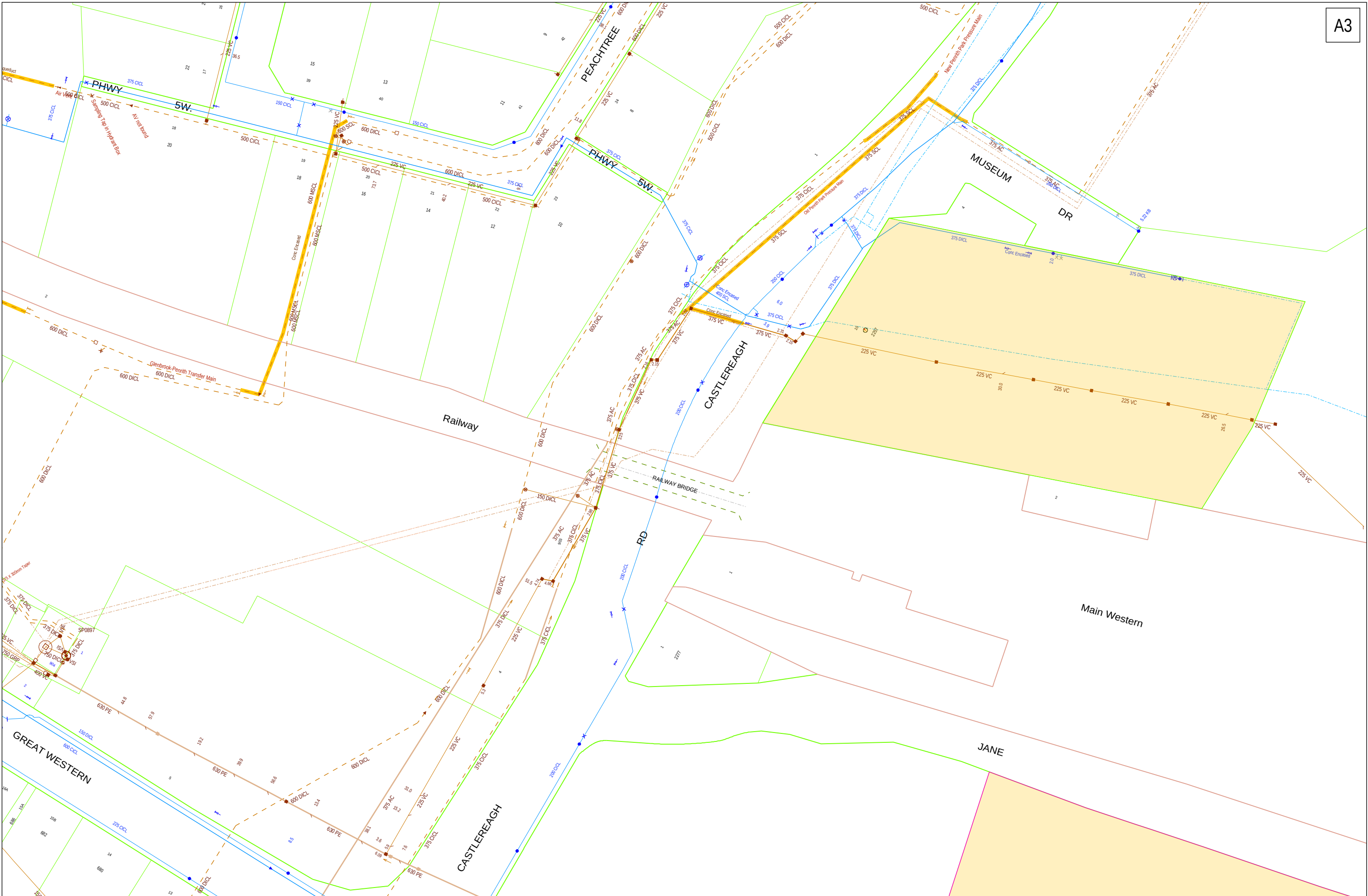
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1. Sydney Water
2. Electrical Infrastructure
3. Telecommunications
4. Gas
5. Other Misc DBYD responses

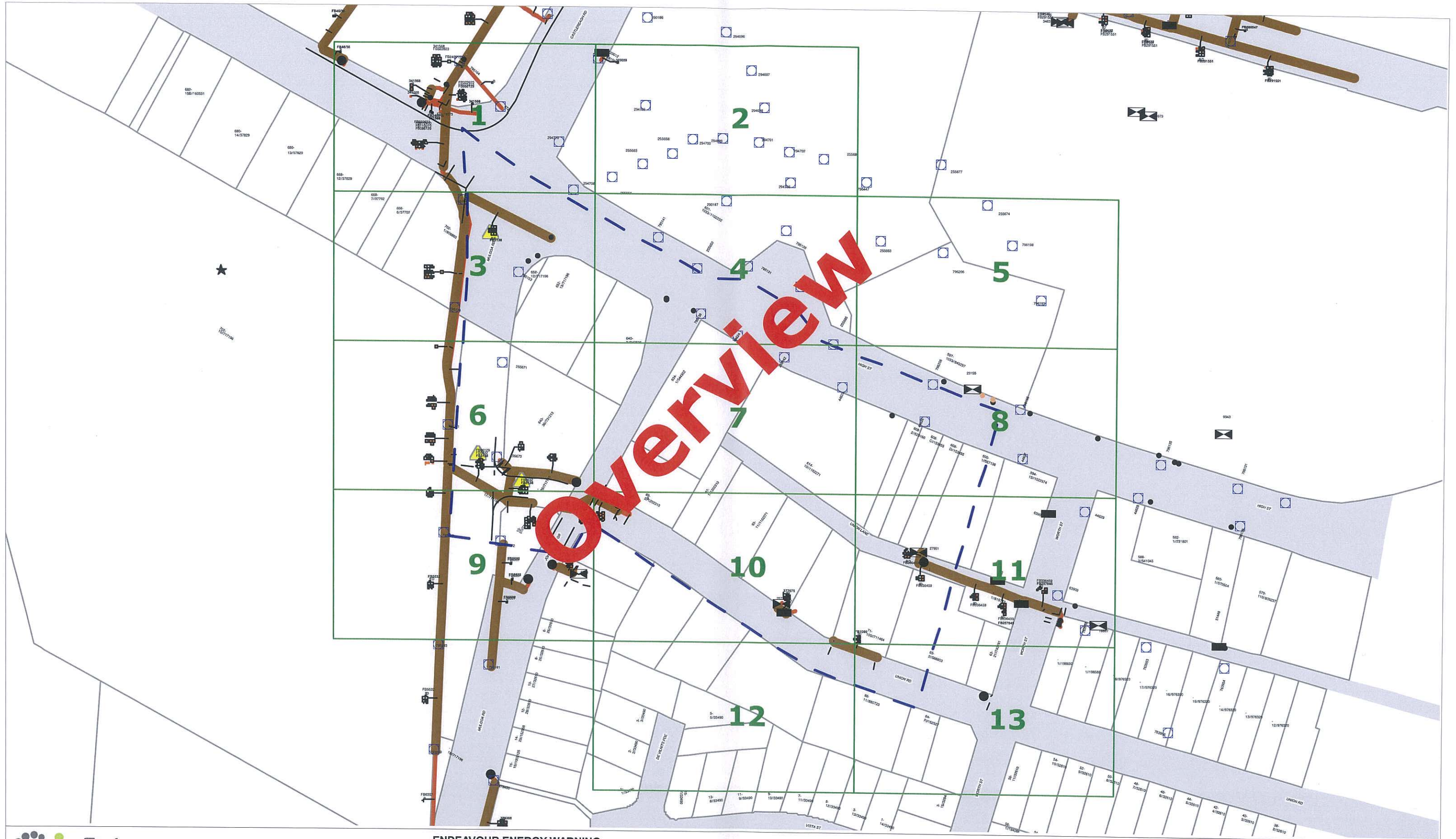
1. SYDNEY WATER







2. ELECTRICAL INFRASTRUCTURE



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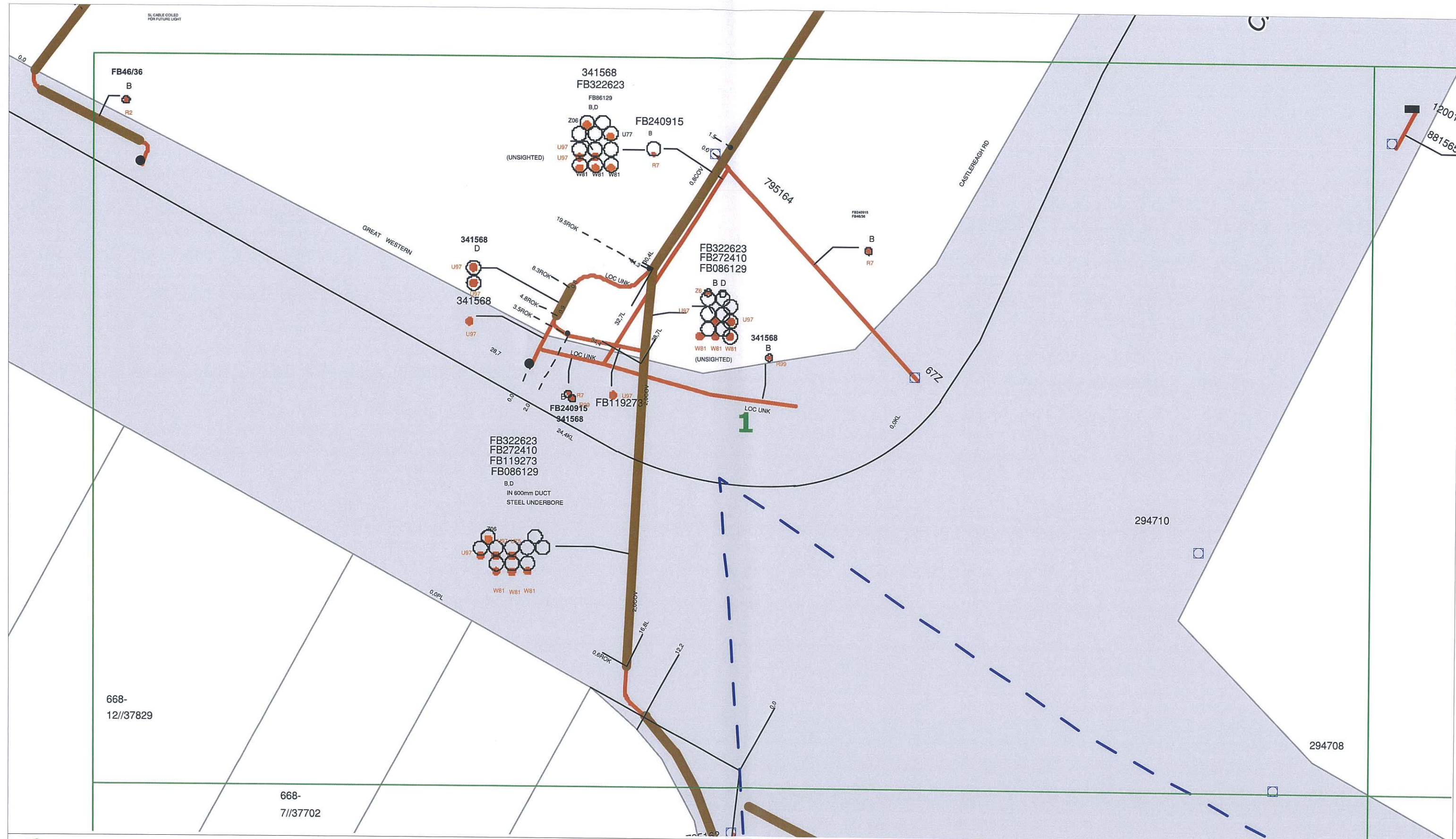
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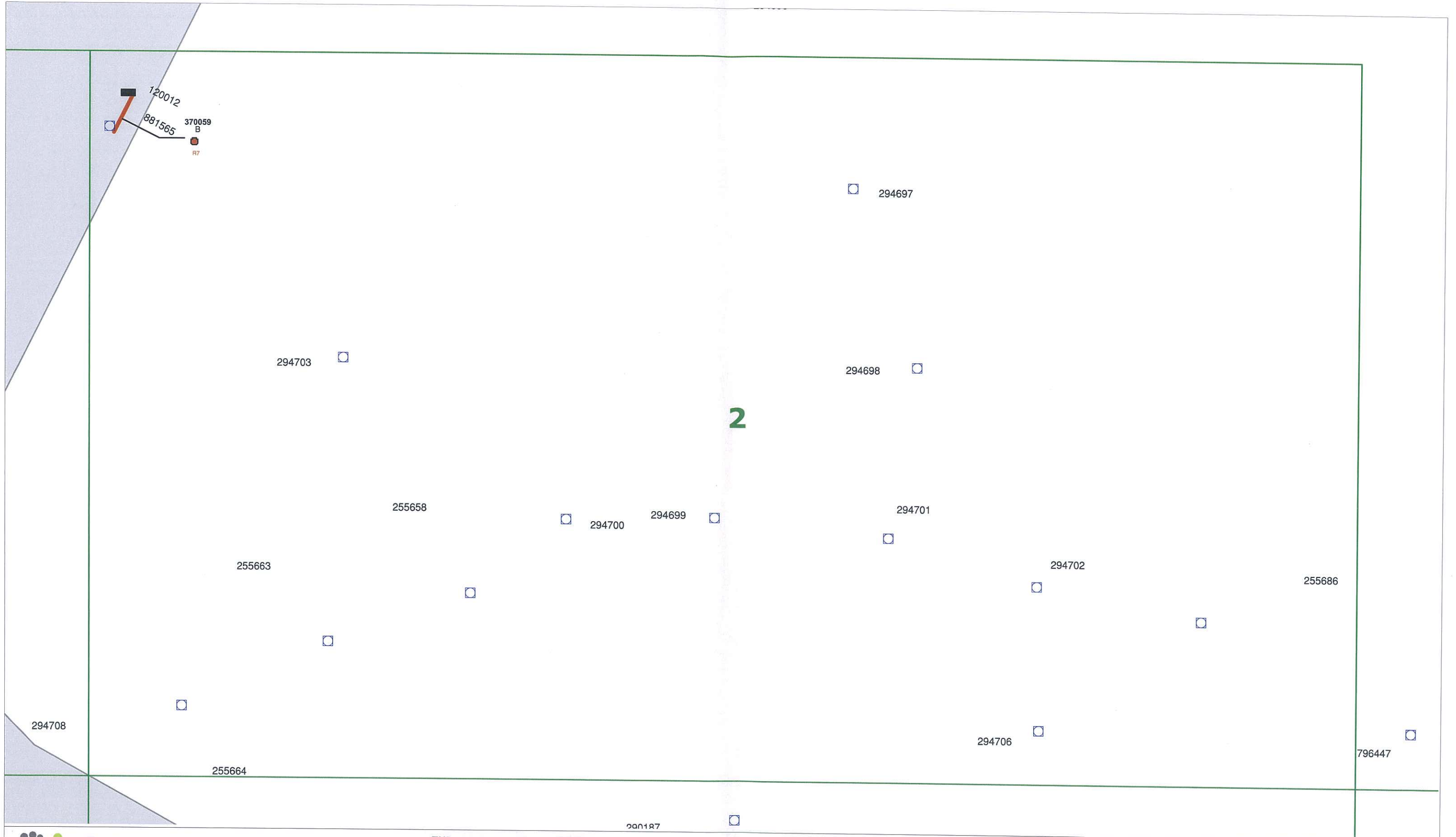
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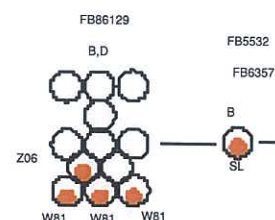
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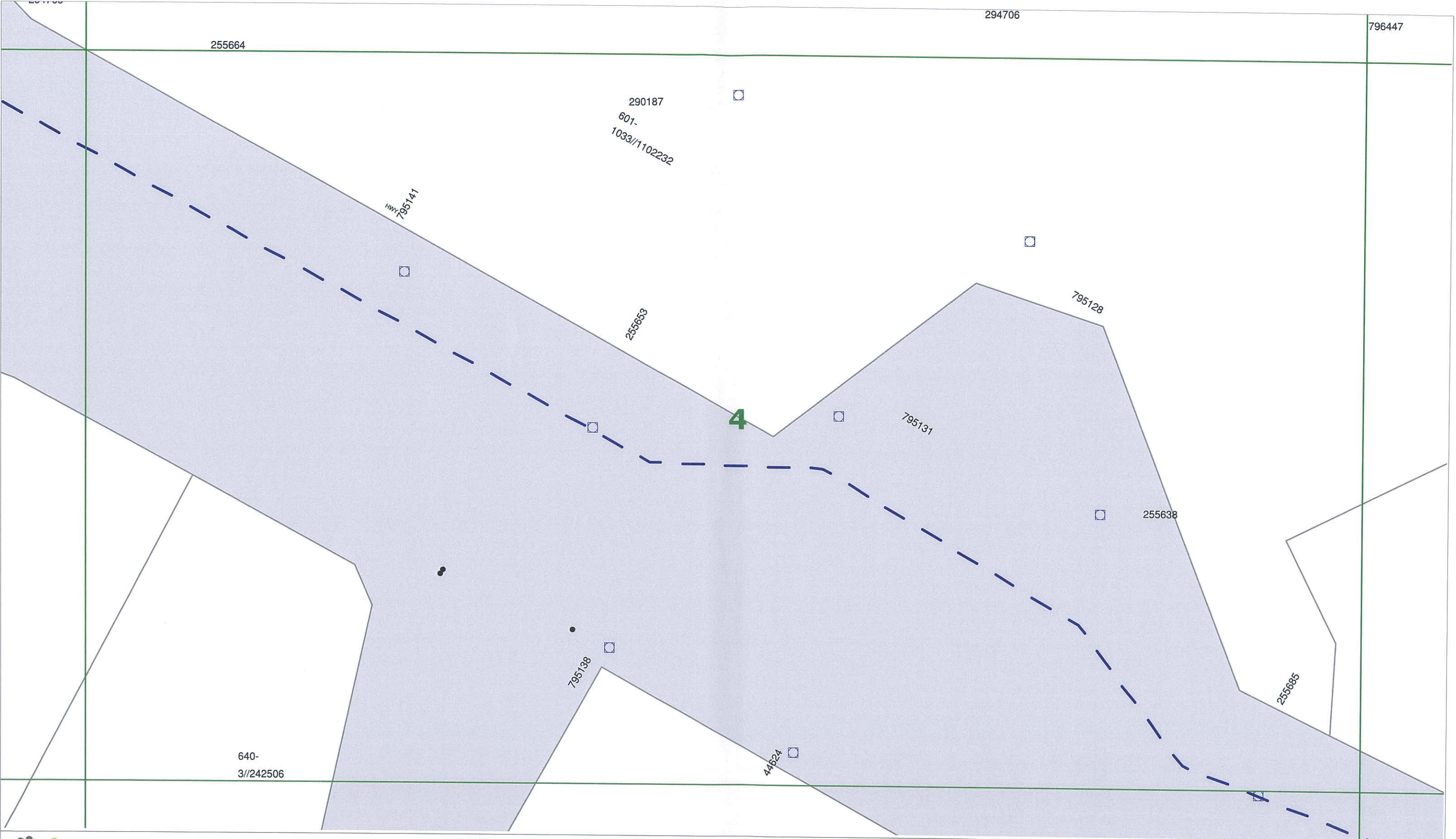
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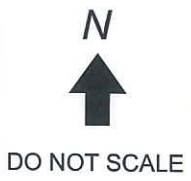


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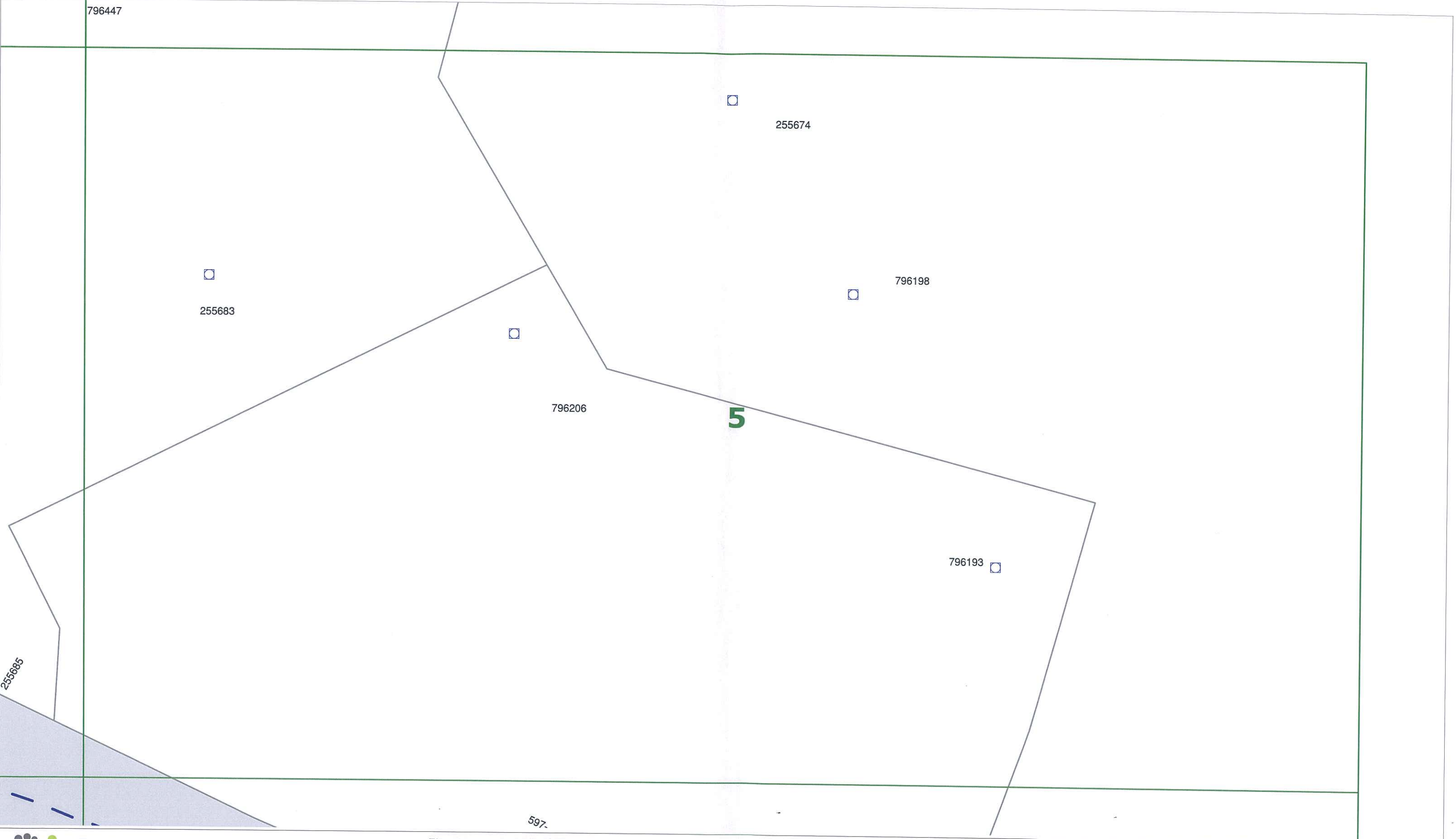
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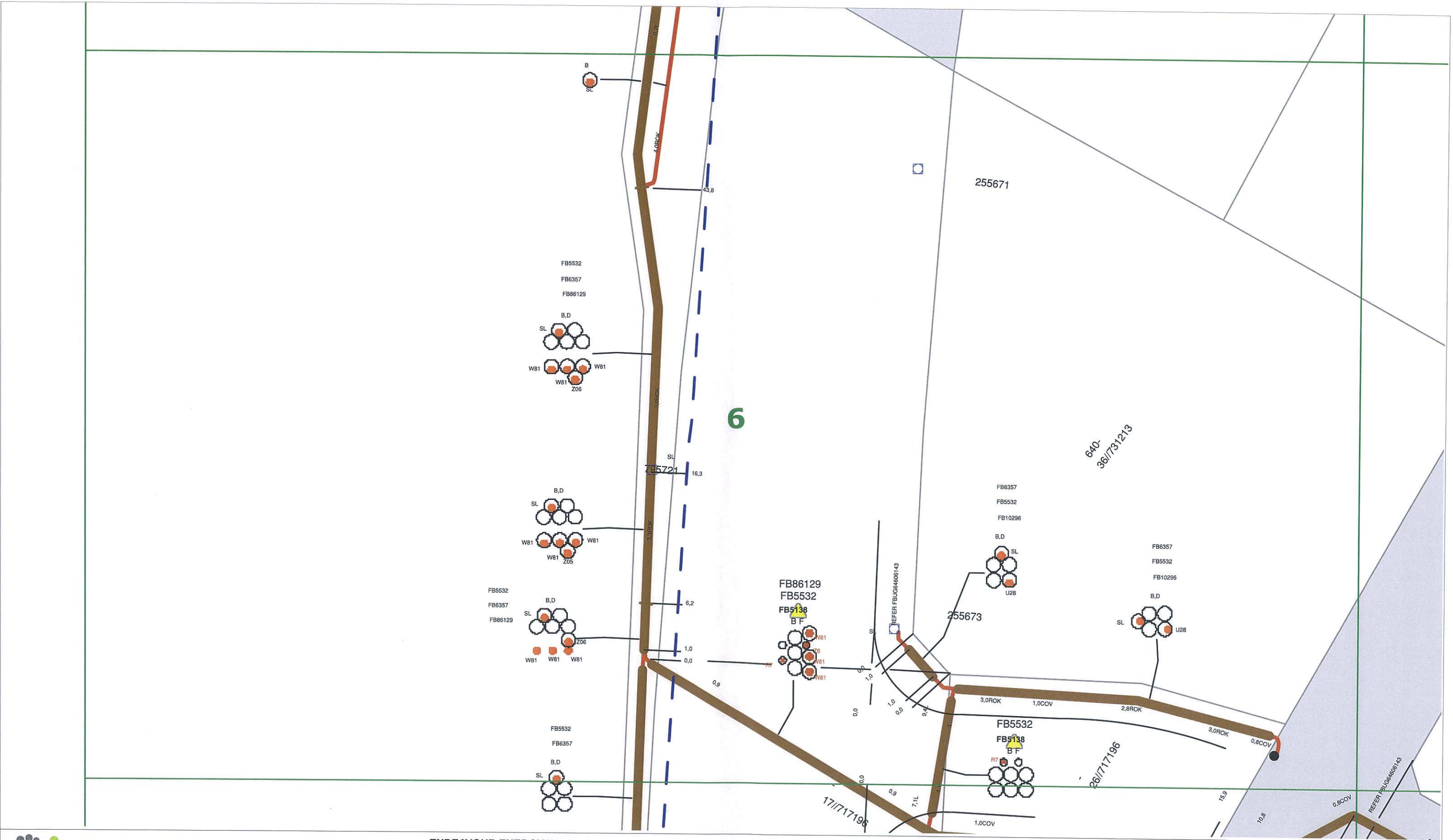
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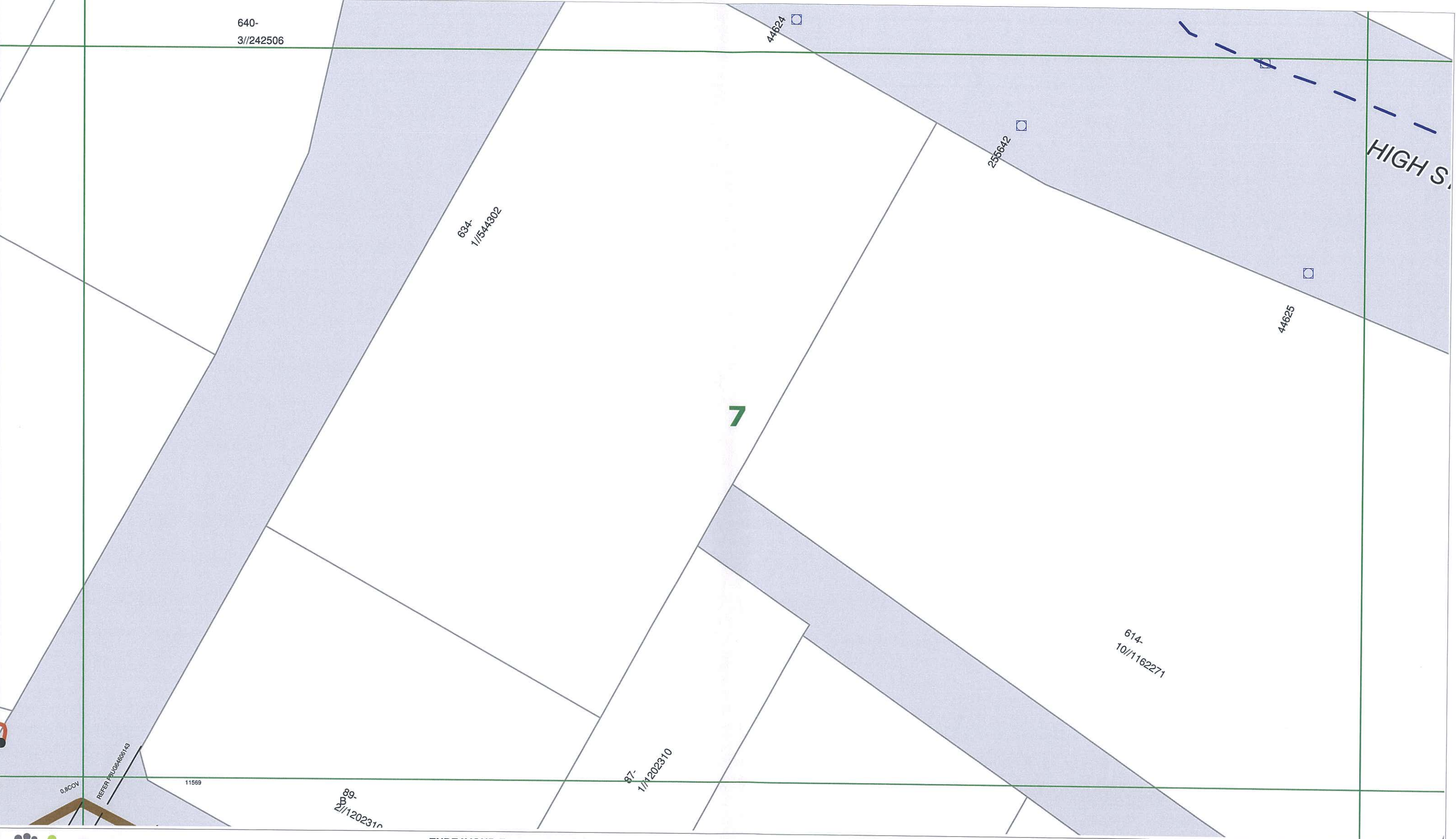
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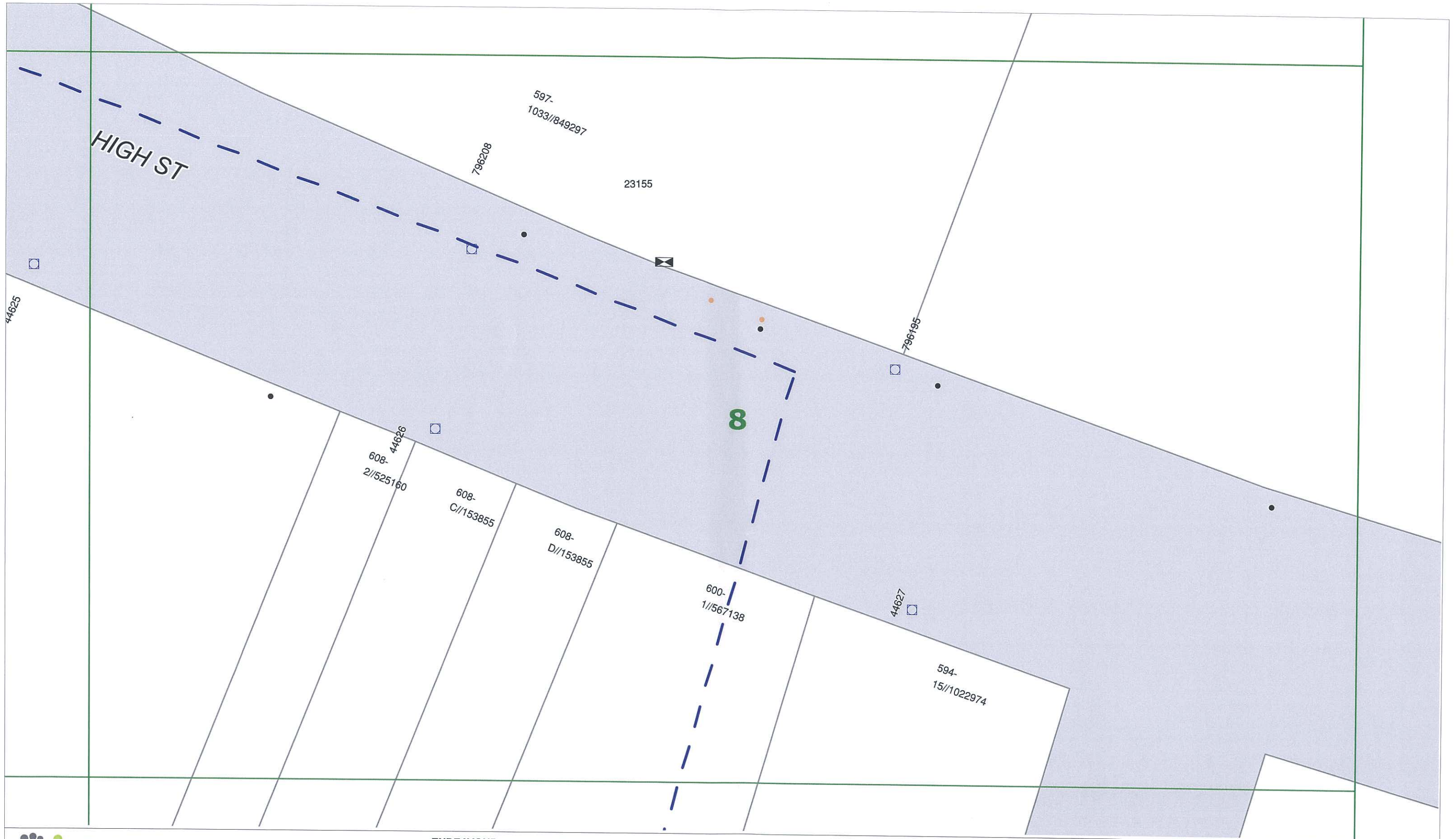
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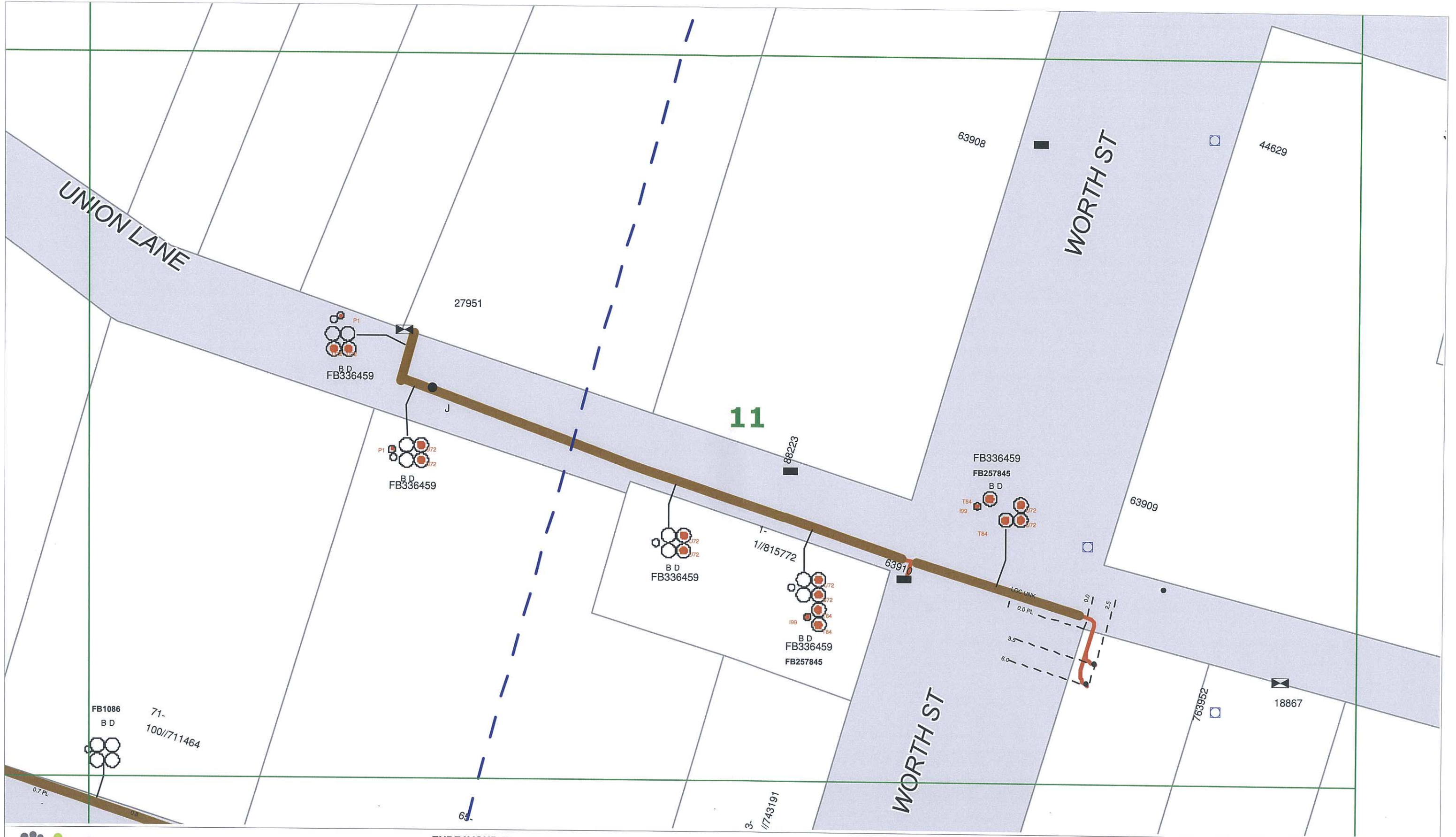
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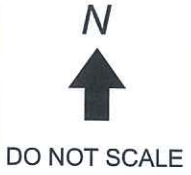


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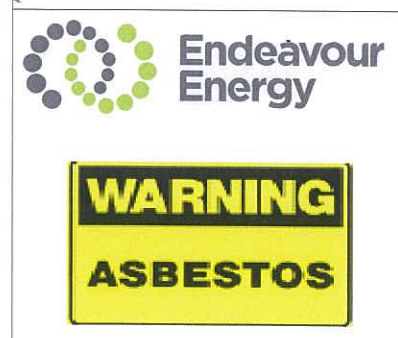
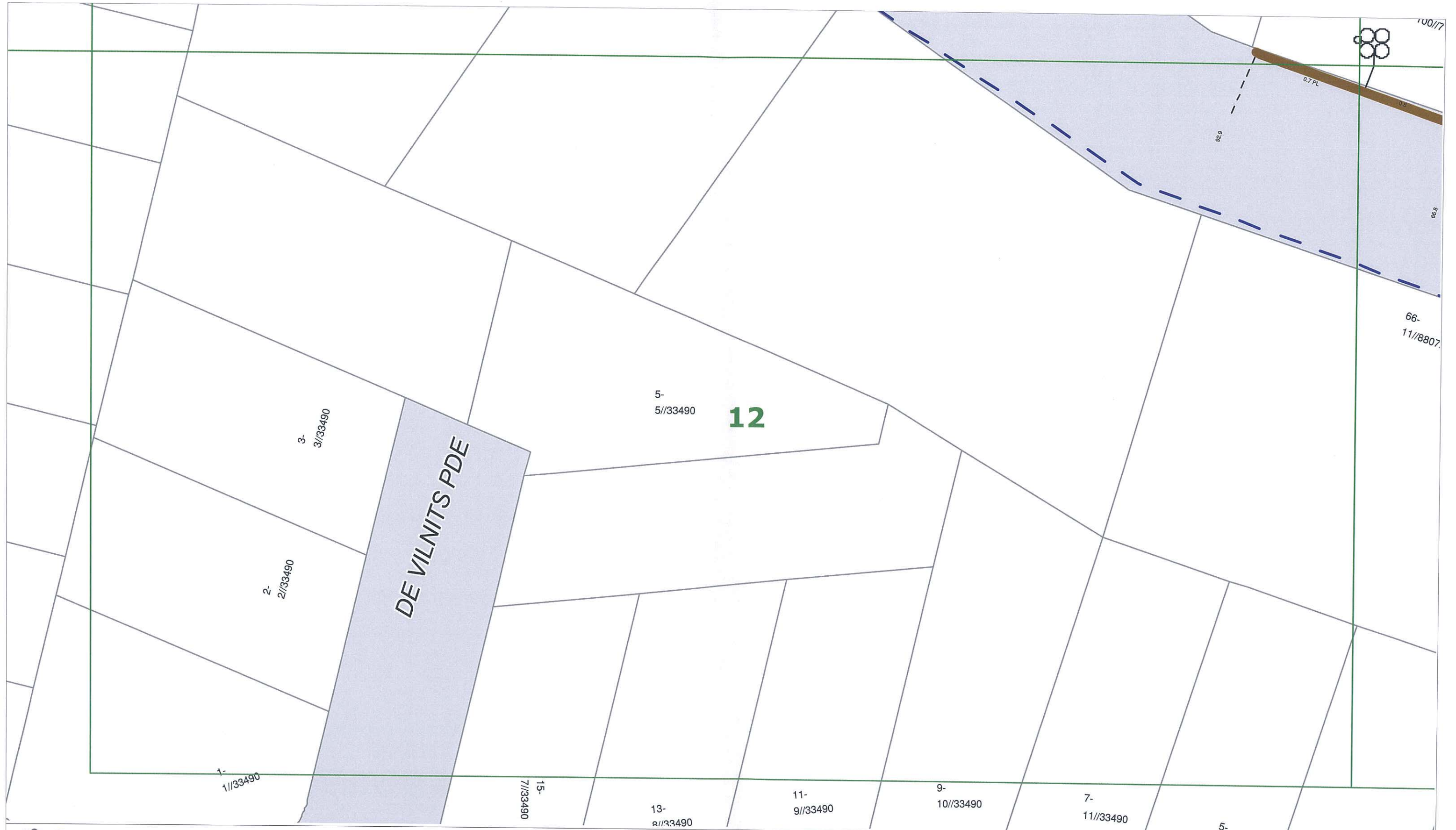
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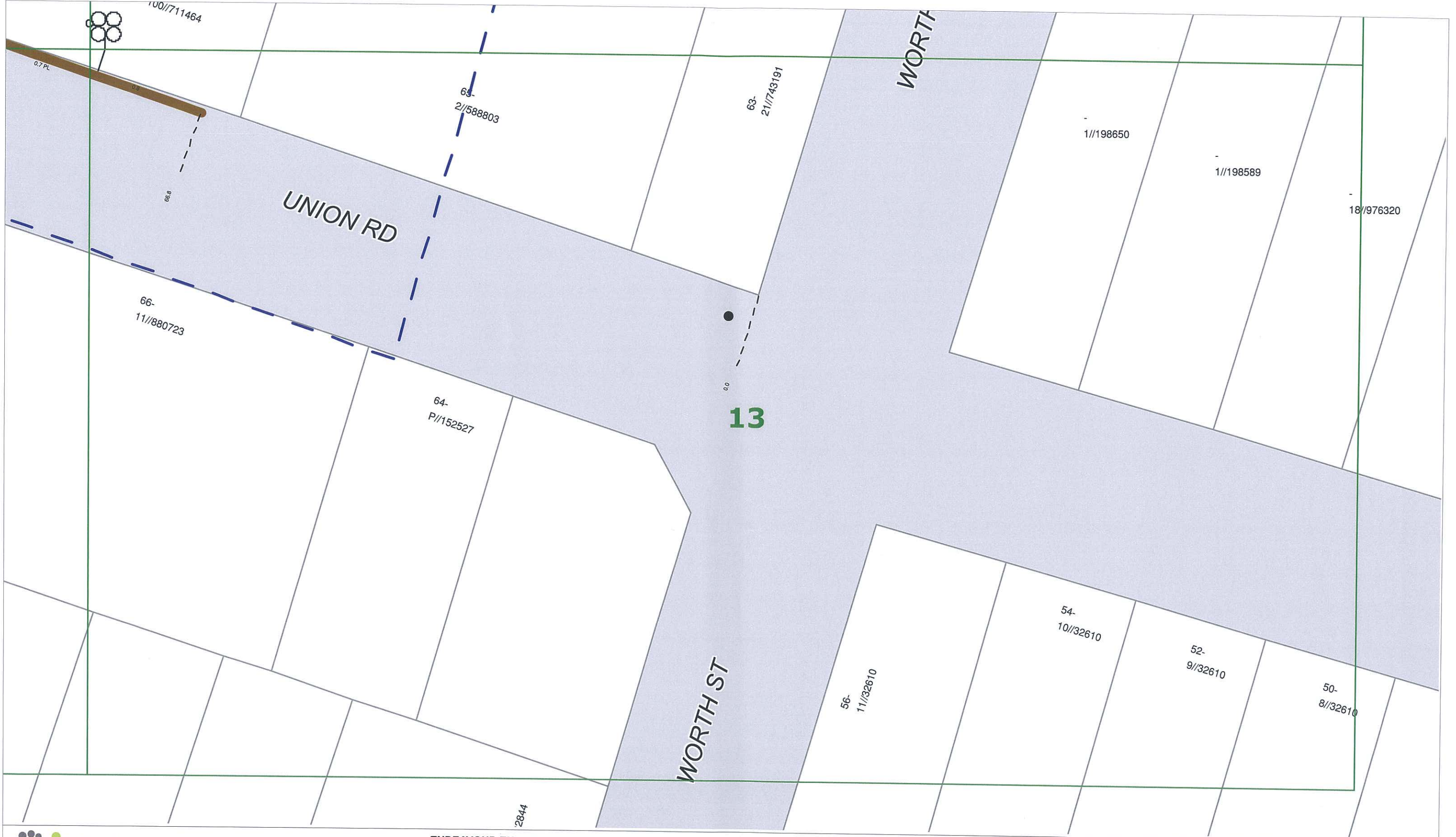
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THIS EXCAVATION IS IN THE VICINITY OF
ENDEAVOUR ENERGY TRANSMISSION, PILOT,
COMMUNICATION OR FIBRE OPTIC CABLES
PLEASE RING 9853 7121 or MOB. 0407 468 626
4 WORKING DAYS BEFORE COMMENCING WORK

N
↑
DO NOT SCALE

DBYD Sequence Number:	47660360
Issued Date:	02/09/2015



ENDEAVOUR ENERGY WARNING

This plan shows the approximate location of underground cables relative to fixtures existing when the cables were laid, and has been prepared solely for Endeavour Energy's own use. Endeavour Energy has taken all reasonable steps to ensure that the information is accurate as possible but will accept no liability for inaccuracies in the information shown on such plans from any cause whatsoever arising. Persons excavating are expected to exercise all due care in the vicinity where cables are indicated and will be held responsible for any damage caused to Endeavour Energy's property.

ALL ELECTRICAL APPARATUS SHALL BE CONSIDERED LIVE UNTIL PROVED DE-ENERGISED.
Contact with live electrical apparatus will cause severe injury or death.

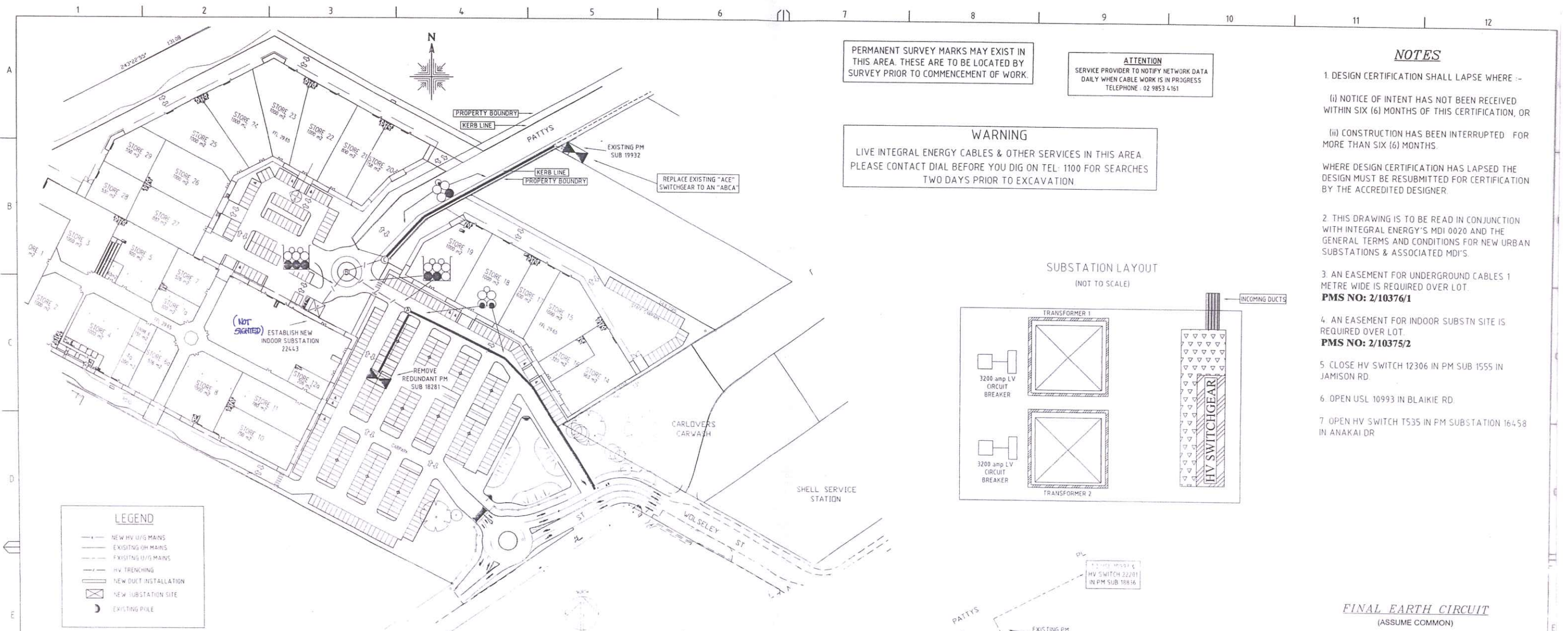
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4 WORKING DAYS BEFORE COMMENCING WORK



DO NOT SCALE

DBYD Sequence Number:	47660360
Issued Date:	02/09/2015



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

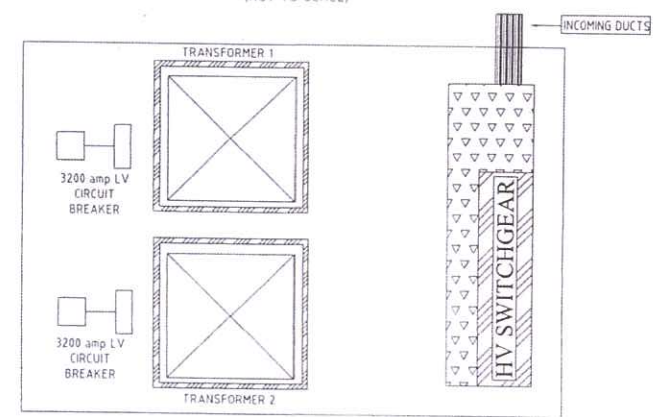
ATTENTION
SERVICE PROVIDER TO NOTIFY NETWORK DATA DAILY WHEN CABLE WORK IS IN PROGRESS
TELEPHONE : 02 9853 4161

WARNING
LIVE INTEGRAL ENERGY CABLES & OTHER SERVICES IN THIS AREA.
PLEASE CONTACT DIAL BEFORE YOU DIG ON TEL: 1100 FOR SEARCHES
TWO DAYS PRIOR TO EXCAVATION

NOTES

1. DESIGN CERTIFICATION SHALL LAPSE WHERE:-
(i) NOTICE OF INTENT HAS NOT BEEN RECEIVED WITHIN SIX (6) MONTHS OF THIS CERTIFICATION, OR
(ii) CONSTRUCTION HAS BEEN INTERRUPTED FOR MORE THAN SIX (6) MONTHS.
WHERE DESIGN CERTIFICATION HAS LAPSED THE DESIGN MUST BE RESUBMITTED FOR CERTIFICATION BY THE ACCREDITED DESIGNER.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH INTEGRAL ENERGY'S MDI 0020 AND THE GENERAL TERMS AND CONDITIONS FOR NEW URBAN SUBSTATIONS & ASSOCIATED MDI'S.
3. AN EASEMENT FOR UNDERGROUND CABLES 1 METRE WIDE IS REQUIRED OVER LOT.
PMS NO: 2/10376/1
4. AN EASEMENT FOR INDOOR SUBSTN SITE IS REQUIRED OVER LOT.
PMS NO: 2/10375/2
5. CLOSE HV SWITCH 12306 IN PM SUB 1555 IN JAMISON RD.
6. OPEN USL 10993 IN BLAIKIE RD.
7. OPEN HV SWITCH TS35 IN PM SUBSTATION 16458 IN ANAKAI DR

SUBSTATION LAYOUT
(NOT TO SCALE)



LEGEND
- - - NEW HV U/G MAINS
- - - EXISTING OH MAINS
- - - EXISTING U/G MAINS
- - - HV TRENCHING
- - - NEW DUCT INSTALLATION
- - - NEW SUBSTATION SITE
- - - EXISTING POLE

PLEASE NOTE :-REFER TO NOTES 5, 6 & 7 FOR THE SWITCHING ARRANGEMENTS FOR THIS PROJECT.

WARNING
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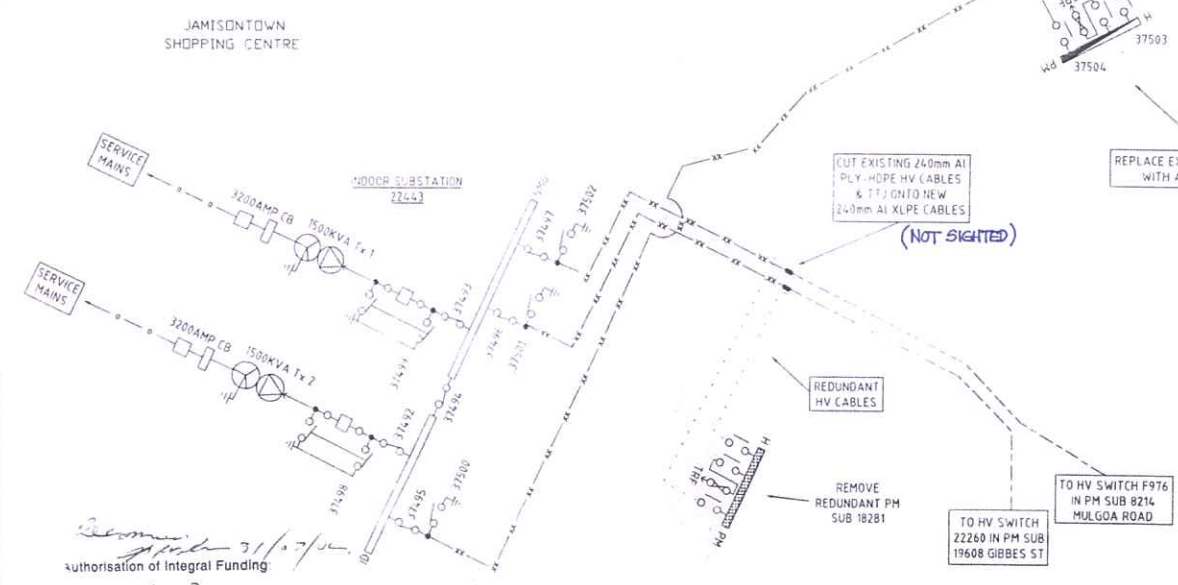
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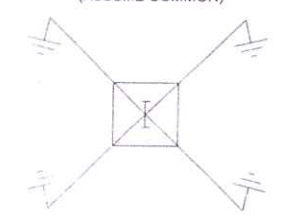
FINAL NEW DUCT CONFIGURATIONS



FINAL H.V. CIRCUIT

EXISTING U/G CABLE
LAY 240 mm² AL 3C 11kV XLPE CABLE
RE 220m CL 330m

FINAL EARTH CIRCUIT
(ASSUME COMMON)



WORKS COMPLETED

NAME	DATE

FORWARDED TO CONTESTABLE WORKS ADMINISTRATOR (CWA)

Authorisation of Integral Funding
JOTR Wallace 4028
Date: 3.11.7.102

SCOPE OF WORKS SHEET 1 ONLY		
INTEGRAL ENERGY FUNDED	CUSTOMER FUNDED	WORKS BY DEVELOPER
SUPPLY OF 2 x 1500KVA TRANSFORMERS	NON-CONTESTABLE	CREATE & REGISTER EASEMENTS
	MONOPOLY FEES	PEG CABLE EASEMENT & FINAL GROUND LEVELS
	CONTESTABLE	SUPPLY, INSTALLATION & CONNECTION OF SERVICE MAINS INCLUDING METERING
	ALL OTHER WORKS	PROVIDE ACCESS TO SITE

REFERENCE DRAWING

CAP No.	UCL1085	FILE No.	
IE PROJ. No.	IN1390	LG AREA	PENRITH
HV SWITCHING		HV GEO MAP	
OVERHEAD MAINS		GIS MAP No	
UNDERGROUND MAINS		UBD REF	182 P1
SUBSTATIONS		HV OP DIAG	PNRTH AZIS KINGS F17

ORIGINAL SCALE 1000

DRAWN SMA

DATE 22/05/02

DESIGN SMA

DO NOT SCALE

DIMENSIONS IN METRES

INTEGRAL ENERGY

GIBBS ST PENRITH
ESTABLISH NEW INDOOR SUBSTATION 22443
IE CAP NUMBER UCL1085
IE CONSTRUCTION NUMBER IN1390

A1

272410

A

SHEET No 1 OF 4 SHEETS

SCALE 1:1000

NOTES

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- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH INTEGRAL ENERGY'S MDI 0020 DOCUMENT
- CLOSE HV SWITCH 12306 IN PM SUB 1555 IN JAMISON RD
- OPEN USL 10993 IN BLAIKIE RD
- OPEN HV SWITCH TS35 IN PM SUBSTATION 16458 IN ANAKAI DR

ATTENTION
ALL SERVICES SEARCHES MUST BE CHECKED BEFORE CONSTRUCTION

WARNING
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DUCT DETAIL

- TRENCH & LAY A TO B**
6 X 125mm PVC CORFLO DUCTS
2 X 50mm PVC DUCTS
EXISTING Street Light Duct
- TRENCH & LAY C TO D**
6 X 125mm PVC CORFLO DUCTS
2 X 50mm PVC DUCTS
- TRENCH & LAY B TO C**
6 X 125mm PVC CORFLO DUCTS
2 X 50mm PVC DUCTS
- TRENCH & LAY D TO E**
6 X 125mm PVC CORFLO DUCTS
2 X 50mm PVC DUCTS
EXISTING Street Light Duct

DUCT LEGEND

- DUCT WITHOUT CABLE
- DUCT WITH EXISTING CABLE
- DUCT WITH NEW CABLE

Authorisation of Integral Funding

John Wallace
4028

Date: 31/07/02

UBD REF : 163.F-7

SCOPE OF WORKS (SHEET 2 TO 4)

INTEGRAL ENERGY FUNDED
(NON-CONTESTABLE)

ALL WORKS

PLEASE NOTE :-REFER TO NOTES 3, 4 & 5 FOR THE SWITCHING ARRANGEMENTS FOR THIS PROJECT.

FB 272410/1-4
COMM 22.8.02 COMP 20.10.02
SHEET 460-6-1/2/6.1.1/632
DUCT
RECORDED BY C. GOODMAN
INSTALLED BY IEC

CERTIFIED BY INTEGRAL ENERGY
Certification No. 1-8-02
Date Approved: 1-8-02
Examiner's Signature: [Signature]
This Certification is issued subject to Integral Energy's Certification Terms.

REFERENCE DRAWING

CAP No.	UCL1085	FILE No.	
IE PROJ. No.	IN1390	LG AREA	PENRITH
HV GEO MAP	6460-61		
OVERHEAD MAINS		GIS MAP No	6460-61
UNDERGROUND MAINS		UBD REF	167.F7
SUBSTATIONS		HV OP DIAG	PENRITH384

ORIGINAL SCALE	1:1000
DRAWN	BRM
DATE	8/7/02
CHD	
DESIGN	SS

DO NOT SCALE
DIMENSIONS IN METRES

INTEGRAL ENERGY

INSTALL A NEW 11KV 240mm² Cu CABLE FROM PENRITH ZONE TO PANTHERS LEAGUES CLUB GIBBS ST, PENRITH
CAP NUMBER : UCL1085

A1 272410 A

SHEET No 2 OF 4 SHEETS

Issue Date: 02/09/2015 DBYD Sequence No: 47660360

LEGEND

- NEW HV U/G MAINS
- EXISTING OH MAINS
- EXISTING U/G MAINS
- HV TRENCHING
- EXISTING DUCT
- EXISTING SUBSTATION SITE
- EXISTING POLE
- NEW TRENCH & DUCT CONFIGURATION
- EXISTING DUCT CONFIGURATION

WORKS COMPLETED

CONSTRUCTED BY	NAME	DATE
WORKS COMPLETED	SIGNED	DATE
INSPECTED BY	NAME	DATE
FORWARDED TO CONTESTABLE WORKS ADMINISTRATOR (CWA)	SIGNED	DATE
LOCATION	SIGNED	DATE

WARNING

THIS EXCAVATION IS IN THE VICINITY OF ENDEAVOUR ENERGY TRANSMISSION, PILOT COMMUNICATION OR FIBRE OPTIC CABLES. PLEASE RING 9953 7121 or MOB. 0497 468 628 4 WORKING DAYS BEFORE COMMENCING WORK

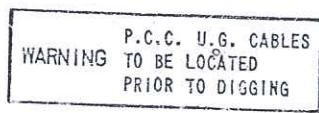
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ENDEAVOUR ENERGY WARNING

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ADMINISTRATION CENTRE AND
CENTRAL LIBRARY

EXISTING COLUMN POSITION.

[P] INSTALL PARKWAY 1 400W MF LANTERN ON A 10.5m POST TOP COLUMN AND 'TYPE 2' RAGBOLT.

[B] INSTALL 'BOURKE HILL' 80W MF LANTERN ON A 5.5m POST TOP COLUMN AND 'TYPE 2' RAGBOLT.

EXISTING DUCTS INSTALLED BY PENRITH C.C.

COMMENCED: _____
COMPLETED: 10-12-93
SHT: 6460 - 6.1.4.1 (S)
- 6.1.4.3
- 6.1.4.4 (S)
UNRECORDED BY B. FARRELL

DISTRICT STAFF TO NOTIFY HEAD OFFICE
DRAWING OFFICE DAILY WHEN CABLE WORK
IS IN PROGRESS
PHONE: EXT - 2256

1. ALL alterations to this Project Drawing by the Construction Crews MUST be marked in RED daily by the responsible Foreman on the "Works in Progress" Drawing held in the Construction Office.
2. A FINAL Field inspection with the above Drawing was carried out and is built as shown.

Signed _____ Date _____ Foreman O/W
Signed _____ Date _____ Foreman U/G
Signed _____ Date _____ Foreman Sub

NEW	RMVD	POLE/ ITEM No	QTY	TYPE CODE	RATE CODE	CHARGE TO
1x80W M.F.		C-H, J-L	9	188	188	PENRITH C.C.
1x400W M.F.		A,B,M,N, S-W	9	121	121	PENRITH C.C.

LETTER No		LG AREA	PENRITH, C.C.
NOAL No		DISTRICT	PENRITH.
DATE		HV GEO DIA	REF
FILE No	91/10193	LV MAP	☐
DISTRICT	5F 3039	ST LT MAP	319 ☐
REF No		HV SCHEM	REF

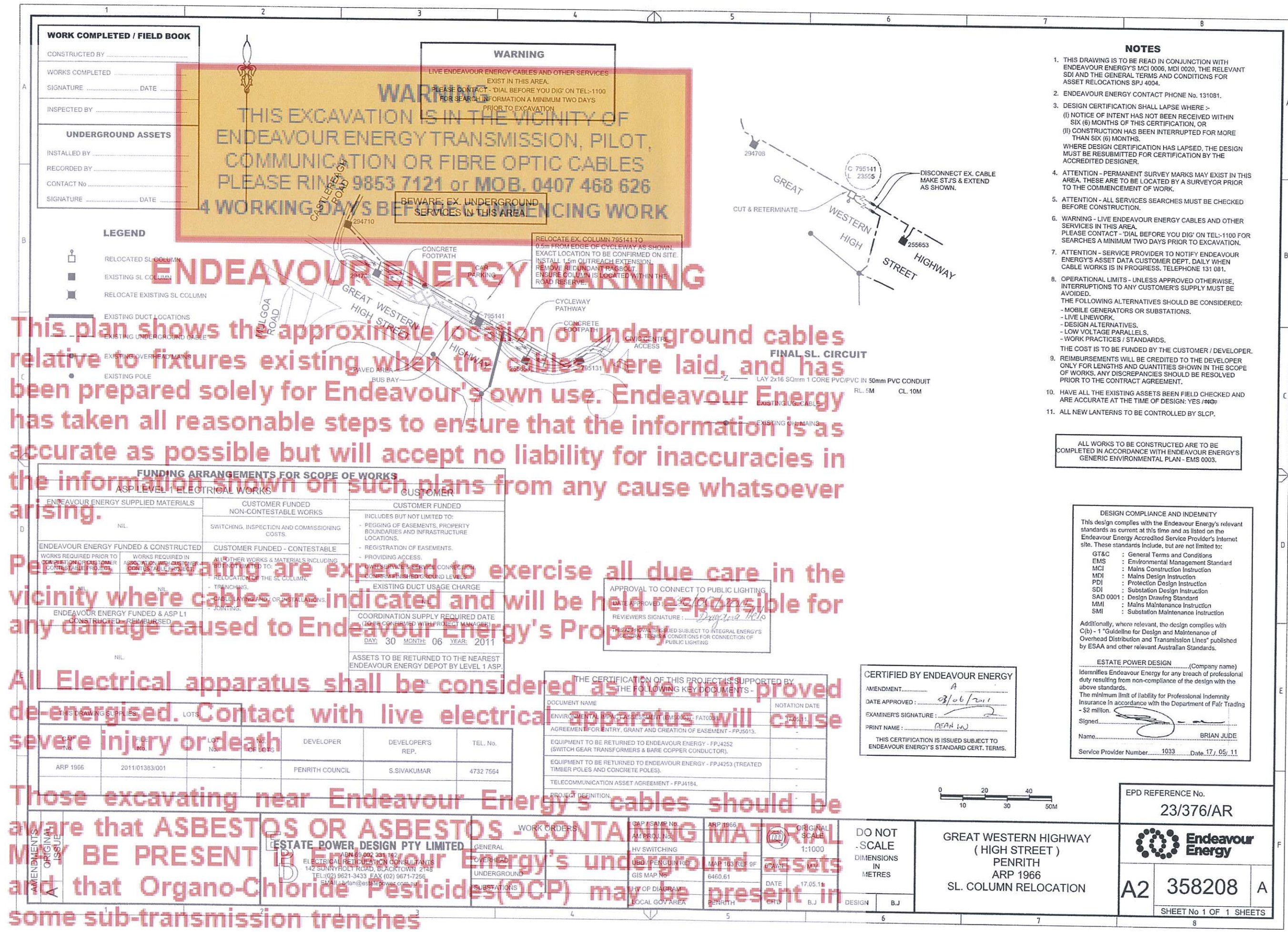
CH'D	M.A.S.
------	--------

--	--

AS ABOVE

(CIVIC CENTRE.) CAR PARK LIGHTING.

[illegible]



WORK COMPLETED / FIELD BOOK

CONSTRUCTED BY _____

WORKS COMPLETED _____

SIGNATURE _____ DATE _____

INSPECTED BY _____

UNDERGROUND ASSETS

INSTALLED BY _____

RECORDED BY _____

CONTACT No. _____

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.

WARNING

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PLEASE RING 9853 7121 or MOB. 0407 468 626 4 WORKING DAYS BEFORE COMMENCING WORK

BEWARE EX UNDERGROUND SERVICES IN THIS AREA

- LEGEND**
- RELOCATED SL COLUMN
 - EXISTING SL COLUMN
 - RELOCATE EXISTING SL COLUMN
 - EXISTING DUCT LOCATIONS
 - EXISTING UNDERGROUND CABLE
 - EXISTING OVERHEAD MAINS
 - EXISTING POLE

- NOTES**
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ENDEAVOUR ENERGY'S MCI 0006, MDI 0020, THE RELEVANT SDI AND THE GENERAL TERMS AND CONDITIONS FOR ASSET RELOCATIONS SPJ 4004.
 - ENDEAVOUR ENERGY CONTACT PHONE No. 131081.
 - DESIGN CERTIFICATION SHALL LAPSE WHERE -
(i) NOTICE OF INTENT HAS NOT BEEN RECEIVED WITHIN SIX (6) MONTHS OF THIS CERTIFICATION, OR
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 - ATTENTION - PERMANENT SURVEY MARKS MAY EXIST IN THIS AREA. THESE ARE TO BE LOCATED BY A SURVEYOR PRIOR TO THE COMMENCEMENT OF WORK.
 - ATTENTION - ALL SERVICES SEARCHES MUST BE CHECKED BEFORE CONSTRUCTION.
 - 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.
 - ATTENTION - SERVICE PROVIDER TO NOTIFY ENDEAVOUR ENERGY'S ASSET DATA CUSTOMER DEPT. DAILY WHEN CABLE WORKS IS IN PROGRESS. TELEPHONE 131 081.
 - OPERATIONAL LIMITS - UNLESS APPROVED OTHERWISE, INTERRUPTIONS TO ANY CUSTOMER'S SUPPLY MUST BE AVOIDED.
THE FOLLOWING ALTERNATIVES SHOULD BE CONSIDERED:
- MOBILE GENERATORS OR SUBSTATIONS.
- LIVE LINEWORK.
- DESIGN ALTERNATIVES.
- LOW VOLTAGE PARALLELS.
- WORK PRACTICES / STANDARDS.
THE COST IS TO BE FUNDED BY THE CUSTOMER / DEVELOPER.
 - REIMBURSEMENTS WILL BE CREDITED TO THE DEVELOPER ONLY FOR LENGTHS AND QUANTITIES SHOWN IN THE SCOPE OF WORKS. ANY DISCREPANCIES SHOULD BE RESOLVED PRIOR TO THE CONTRACT AGREEMENT.
 - HAVE ALL THE EXISTING ASSETS BEEN FIELD CHECKED AND ARE ACCURATE AT THE TIME OF DESIGN: YES / NO
 - ALL NEW LANTERNS TO BE CONTROLLED BY SLCP.

ALL WORKS TO BE CONSTRUCTED ARE TO BE COMPLETED IN ACCORDANCE WITH ENDEAVOUR ENERGY'S GENERIC ENVIRONMENTAL PLAN - EMS 0003.

FUNDING ARRANGEMENTS FOR SCOPE OF WORKS			
ASP LEVEL 1 ELECTRICAL WORKS		CUSTOMER	
ENDEAVOUR ENERGY SUPPLIED MATERIALS	CUSTOMER FUNDED NON-CONTESTABLE WORKS	CUSTOMER FUNDED	
NIL	SWITCHING, INSPECTION AND COMMISSIONING COSTS.	INCLUDES BUT NOT LIMITED TO: - PEGGING OF EASEMENTS, PROPERTY BOUNDARIES AND INFRASTRUCTURE LOCATIONS. - REGISTRATION OF EASEMENTS. - PROVIDING ACCESS. - OVERHEAD SERVICES CONNECTION. - CONFORMING GROUND LEVELS.	
ENDEAVOUR ENERGY FUNDED & CONSTRUCTED	CUSTOMER FUNDED - CONTESTABLE	EXISTING DUCT USAGE CHARGE	
WORKS REQUIRED PRIOR TO CONSTRUCTION OR CUSTOMER CONTESTABLE PROJECT	WORKS REQUIRED WITH CUSTOMER CONTESTABLE PROJECT	COORDINATION SUPPLY REQUIRED DATE (TO BE CONFIRMED WITH PROJECT MANAGER)	
NIL	NIL	DAY: 30 MONTH: 06 YEAR: 2011	
ENDEAVOUR ENERGY FUNDED & ASP L1 CONSTRUCTED - REIMBURSED	NIL	ASSETS TO BE RETURNED TO THE NEAREST ENDEAVOUR ENERGY DEPOT BY LEVEL 1 ASP.	
NIL	NIL		

APPROVAL TO CONNECT TO PUBLIC LIGHTING

DATE APPROVED: 03/06/2011

REVIEWER'S SIGNATURE: [Signature]

THIS CERTIFICATION IS ISSUED SUBJECT TO INTEGRAL ENERGY'S GENERAL TERMS AND CONDITIONS FOR CONNECTION OF PUBLIC LIGHTING

THE CERTIFICATION OF THIS PROJECT IS SUPPORTED BY THE FOLLOWING KEY DOCUMENTS -	
DOCUMENT NAME	NOTATION DATE
ENVIRONMENTAL IMPACT ASSESSMENT (EIMSD001) - FAT0003	17.05.11
AGREEMENT FOR ENTRY, GRANT AND CREATION OF EASEMENT - FPJ5013.	
EQUIPMENT TO BE RETURNED TO ENDEAVOUR ENERGY - FPJ4252 (SWITCH GEAR TRANSFORMERS & BARE COPPER CONDUCTOR).	
EQUIPMENT TO BE RETURNED TO ENDEAVOUR ENERGY - FPJ4253 (TREATED TIMBER POLES AND CONCRETE POLES).	
TELECOMMUNICATION ASSET AGREEMENT - FPJ4184.	
PROJECT DEFINITION:	

CERTIFIED BY ENDEAVOUR ENERGY

AMENDMENT: A

DATE APPROVED: 03/06/2011

EXAMINER'S SIGNATURE: [Signature]

PRINT NAME: DEAN WJ

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:

- GT&C : General Terms and Conditions
- EMS : Environmental Management Standard
- MCI : Mains Construction Instruction
- MDI : Mains Design Instruction
- PDI : Protection Design Instruction
- SDI : Substation Design Instruction
- SAD 0001 : Design Drawing Standard
- MMI : Mains Maintenance Instruction
- SMI : Substation Maintenance Instruction

Additionally, where relevant, the design complies with C(b) - 1 "Guideline for Design and Maintenance of Overhead Distribution and Transmission Lines" published by ESAA and other relevant Australian Standards.

ESTATE POWER DESIGN (Company name)

Identifies Endeavour Energy for any breach of professional duty resulting from non-compliance of the design with the above standards.

The minimum limit of liability for Professional Indemnity Insurance in accordance with the Department of Fair Trading - \$2 million.

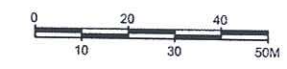
Signed: [Signature]

Name: BRIAN JUDE

Service Provider Number: 1033 Date: 17/05/11

THIS DRAWING SUPPLIES LOTS					
ARP No.	FILE No.	LOT No.	No. OF LOTS	DEVELOPER	DEVELOPER'S REP.
ARP 1966	2011/01383/001			PENRITH COUNCIL	S.SIVAKUMAR

WORK ORDERS		DO NOT SCALE DIMENSIONS IN METRES	
GENERAL	OVERHEAD	UNDERGROUND	SUBSTATIONS
ESTATE POWER DESIGN PTY LIMITED	ABN 69 002 331 762	142 SUNNYHOLT ROAD, BLACKTOWN 2148	TEL: (02) 9621-3433 FAX: (02) 9671-7256
ORIGINAL SCALE	1:1000	DATE	17.05.11
MAP 183 REF 9F	6460.61	LOCAL GOV AREA	PENRITH



GREAT WESTERN HIGHWAY (HIGH STREET)
PENRITH
ARP 1966
SL. COLUMN RELOCATION

EPD REFERENCE No.
23/376/AR

Endeavour Energy

A2 **358208** A

SHEET No 1 OF 1 SHEETS



SITE PLAN

ORIGINAL SCALE - 1:1000

SITE PLAN LEGEND

- EXISTING UNDERGROUND CABLES
- EXISTING SUBSTATION
- NEW PM SUBSTATION
- PROPOSED TRENCHING
- EXISTING DUCTS
- EXISTING PILLAR LOCATION
- EXISTING COLUMN LOCATION
- CABLES TO BE ABANDONED
- SPARE DUCT
- DUCT WITH NEW CABLE
- DUCT WITH EXISTING CABLE
- GROUND SUBSTATION

LOCATE ID, CUT & DISCONNECT EXISTING UNDERGROUND HV CABLES. ABANDON REMAINING CABLES.

REMOVE EXISTING PADMOUNT SUBSTATION No. 3233

UNDERGROUND TELSTRA CABLES ARE PRESENT ALONG HIGH ST. PLEASE CONTACT DIAL BEFORE YOU DIG PRIOR TO EXCAVATION OF WORKS.

DEVELOPER TO CONFIRM EXACT LOCATION OF NEW PADMOUNT SUBSTATION.

REFER TO INSET FOR MORE DETAILS

LOCATION OF EXISTING STJs. (INDICATIVE ONLY, REFER TO INTEGRAL ENERGY'S UG MAP FOR MORE DETAILS)

NOTE: COPPER CABLE

LOCATE ID & SPIKE EXISTING 300 mm Sq. COPPER SCREENED PLYSWPVC CABLE. MAKE STJs WITH NEW CABLES AS SHOWN, ONCE EXISTING STJ HAS BEEN REMOVED. (EXTEND & JOIN CABLES AS REQUIRED)

LOCATE ID & SPIKE EXISTING 300 mm Sq. COPPER SCREENED PLYSWPVC CABLE. MAKE STJs WITH NEW CABLES AS SHOWN. (EXTEND & JOIN CABLES AS REQUIRED)

WARNING
THIS EXCAVATION IS IN THE VICINITY OF ENDEAVOUR ENERGY TRANSMISSION, PILOT, COMMUN. NO. 20721R FIBRE OPTIC CABLES. PLEASE IN PENRITH - MOR. 0407 468 626 4 WORKING ZONE BEFORE COMMENCING WORK SUBSTATION

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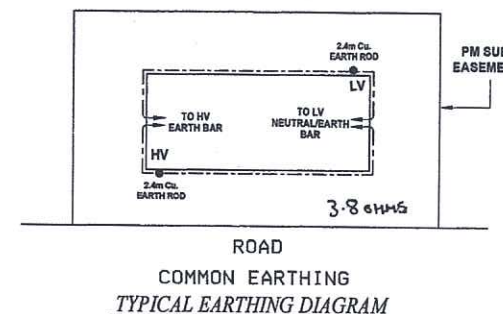
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EXISTING PENRITH PLAZA COMPLEX ADJOINING

ESTABLISH PADMOUNT SUBSTATION No. 23155

TRANSFORMER SIZE: 1000 KVA
HV SWITCHGEAR: ABCA
LV SWITCHGEAR: 2500 AMP CB
SUBSTATION CUBICLE: FIBREGLASS SIZE 10
EARTHING: TO SDI 100 (COMMON PREDICTED)
REFER TO NOTES 2, 3, 4, 5



NOTE
THIS EARTHING DIAGRAM IS A GUIDE ONLY AND SHOWS A MINIMUM REQUIREMENT. ADDITIONAL EARTHING MAY BE REQUIRED TO MEET THE REQUIRED MAXIMUM EARTH RESISTANCE MEASUREMENTS AS STATED IN INTEGRAL ENERGY SDI 100.

- ### NOTES
- THIS DRAWING TO BE READ IN CONJUNCTION WITH INTEGRAL ENERGY'S MDI 020 AND THE GENERAL TERMS AND CONDITIONS FOR INDUSTRIAL/COMMERCIAL DEVELOPMENTS.
 - SUBSTATION TO BE INSTALLED IN ACCORDANCE WITH SDI 104.
 - AN EASEMENT OF A MINIMUM OF 5.5 METRES x 2.75 METRES IS REQUIRED OVER THE SUBSTATION SITE, PMS 3/1188/1.
 - EARTHING OF THE SUBSTATION TO BE CARRIED OUT IN ACCORDANCE WITH INTEGRAL ENERGY'S SDI 100. COMMON EARTHING IS PREFERRED. REFER TO TYPICAL EARTHING DIAGRAM.
 - A SUITABLE RETAINING WALL MAY BE REQUIRED TO BE BUILT BY THE DEVELOPER. THIS WALL IS TO MEET LOCAL COUNCIL REQUIREMENTS AND MUST BE BUILT OUTSIDE THE SUBSTATION EASEMENT. IT MAY BE NECESSARY TO ADJUST THE EASEMENT LOCATION. REFER TO INTEGRAL ENERGY'S SDI 104 FOR DETAILS.

ATTENTION:
ALL SERVICES SEARCHES MUST BE CHECKED BEFORE CONSTRUCTION

ATTENTION
TELSTRA AND OPTUS TO BE NOTIFIED OF PROPOSED WORK PRIOR TO CONSTRUCTION:
CONTACTS: TELSTRA- BILL COOK 9315 8986
DENNIS FAULDS 0415284503
OPTUS - RON HARRISON 9837 9008 (PH)
9837 9008 (FAX)
0412 266 282 (M)

ATTENTION
SERVICE PROVIDER TO NOTIFY INTEGRAL ENERGY'S NETWORK DATA DAILY WHEN CABLE WORK IS IN PROGRESS. TELEPHONE: 131 081

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

Design Compliance and Indemnity
This design complies with Integral Energy's relevant standards as current at this time and as listed on the Integral Energy Accredited Service Provider's Internet site. These standards include, but are not limited to:
GTAC: General Terms and Conditions
EMS: Environmental Management Standard
MCC: Main Construction Instruction
MDI: Main Design Instruction
PDI: Protection Design Instruction
SDI: Substation Design Instruction
SAD/001: Design Drawing Standard
MMI: Main Maintenance Instruction
SMI: Substation Maintenance Instruction
Additionally, where relevant, the design complies with C91-1 "Guideline for Design and Maintenance of Overhead Distribution and Transmission Lines" published by EBA and other relevant Australian Standards.
Connect Design Pty Ltd indemnifies Integral Energy for any loss or damage resulting from non-compliance of the design with the above standards.
Signed: *[Signature]* Name: **MANUEL CAPIL**
Service Provider Number: 1104 Date: **1/5/15**

WARNING
THE PREPARATION OF THIS DESIGN, HAS BEEN UNDERTAKEN GIVING DUE CONSIDERATION TO THE EXISTING SERVICES. THE PROJECT CONSTRUCTOR IS, HOWEVER, WHOLLY RESPONSIBLE FOR VERIFYING THE EXACT LOCATION OF EXISTING SERVICES AND PERMANENT SURVEY MARKS BEFORE CONSTRUCTION COMMENCES, AND NO RESPONSIBILITY NOR LIABILITY WILL BE ACCEPTED BY THE DESIGNER OF THIS PROJECT FOR DAMAGE TO EXISTING SERVICES AS A RESULT OF THIS DESIGN AND/OR POLE PEGGING.

FINAL LV CIRCUIT

NOT TO SCALE

PROPOSED SERVICE/CONSUMERS MAINS (TO BE DONE BY OTHERS)

PROPOSED TRENCHING FOR NEW UNDERGROUND HV CABLE FROM NEW PADMOUNT SUBSTATION No. 23155. CAUTION: THERE ARE EXISTING LIVE CABLES IN THE TRENCHING ROUTE SHOWN.

INSET

NOT TO SCALE

COMBINATION WAE / FB

FIELD BOOK 278458
COMM. NO. 20721R FIBRE OPTIC CABLES
UG MAP No. 20721R
DUCT DWG. 20721R
RECORDED BY: *[Signature]*
INSTALLED BY: *[Signature]*

TO HV SWITCH No. 16985 IN GROUND/INDOOR SUBSTATION No. 9943

LOCATE, CUT & REMOVE EXISTING STJ. REPLACE WITH NEW STJ.

DESIGN CERTIFICATION SHALL LAPSE WHERE:
(I) NOTICE OF INTENT HAS NOT BEEN RECEIVED WITHIN SIX (6) MONTHS OF THIS CERTIFICATION, OR
(II) CONSTRUCTION HAS BEEN INTERRUPTED FOR MORE THAN SIX (6) MONTHS.

WHERE DESIGN CERTIFICATION HAS LAPSED, THE DESIGN MUST BE RESUBMITTED FOR CERTIFICATION BY THE ACCREDITED LEVEL 3 SERVICE PROVIDER.

DEVELOPER'S REPRESENTATIVES:
MR. SCOTT CHAPPLE: (PH) 9635 3800
MR. JOHN deGRAAFF: (PH) 9956 8080

WORKS COMPLETED	
CONSTRUCTED BY: <i>[Signature]</i>	
WORKS COMPLETED: <i>[Signature]</i> 20/5/15	
INSPECTED BY: <i>[Signature]</i> 20/5/15	
FORWARDED TO TESTABLE WORKS ADMINISTRATION (CWA)	
LOCATION: <i>[Signature]</i>	
SIGNED: <i>[Signature]</i> DATE: <i>[Signature]</i>	

SCOPE OF WORKS	
WORKS BY LEVEL 1 SERVICE PROVIDER	OTHER WORKS BY CUSTOMER
INTEGRAL ENERGY FUNDED OR SUPPLIED COMPONENT	CUSTOMER FUNDED COMPONENT
Non - Contestable (performed by Integral Energy only)	Non - Contestable
- NI	- 500KVA Transformer = \$14800.00
	- Switching, inspection & commissioning costs (paid by way of fees)
Contestable work reimbursed by Integral Energy	Contestable
- NI	- All work shown on this drawing
Supplied free	- 1000KVA Transformer

connect
Connect Engineering Pty Ltd
Connect Design Pty Ltd
Electrical Infrastructure
Consultancy, Design & Construction
PO Box 484
Casula NSW 2170
Tel: 02 9826 9907
Fax: 02 9826 9915
E-mail: mail@connecteng.com.au

connect REF. NUMBER
A883
CLIENT: LOCAL COUNCIL ARTS BODY & REVIVAL

CERTIFIED BY INTEGRAL ENERGY
Certification No. *[Signature]* Amend. A
Date Approved: 20/5/15
Examiner's Signature: *[Signature]*
This certification is issued subject to Integral Energy's Standard Certification Terms.

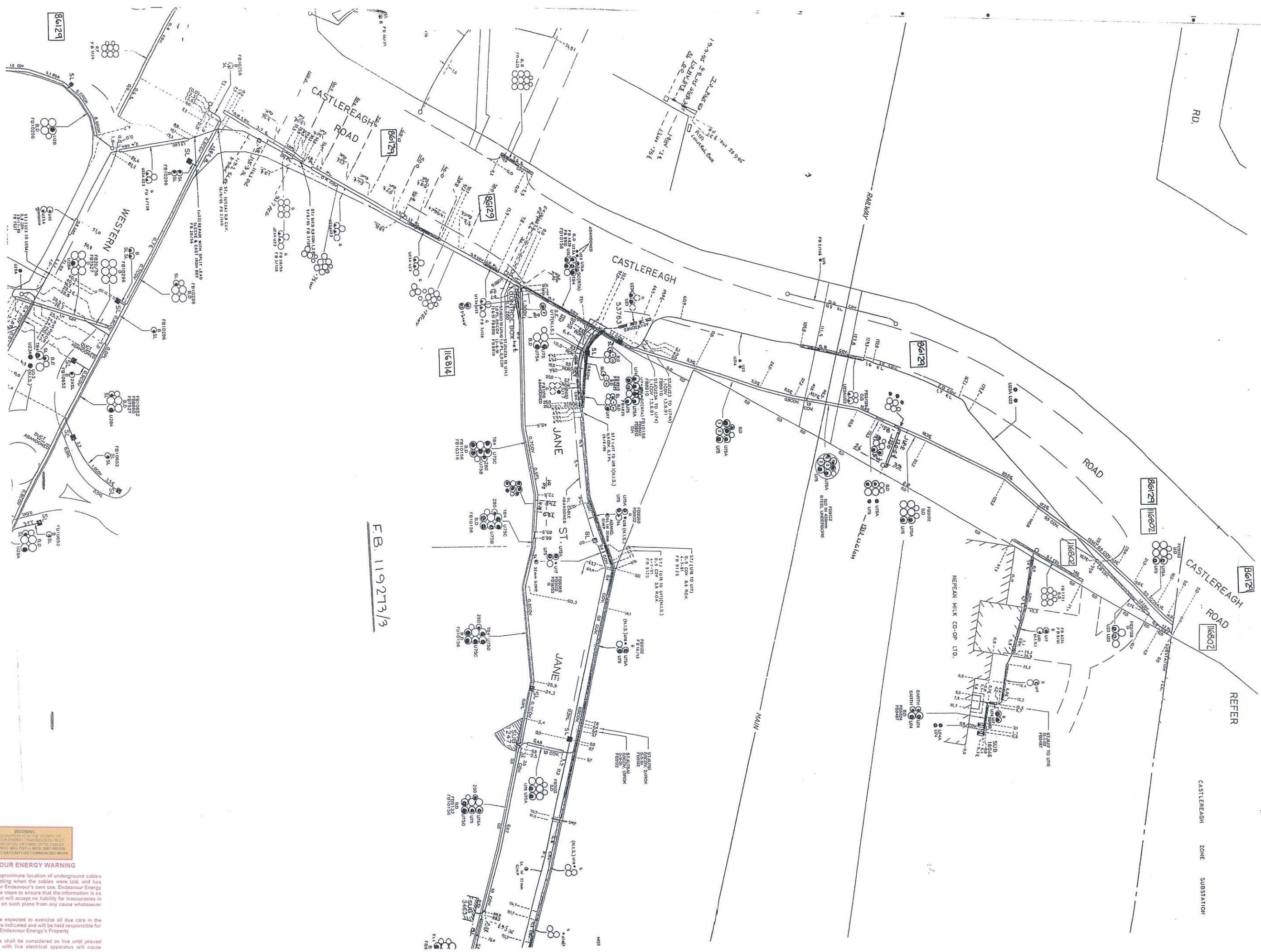
REFERENCE DRAWINGS

ORIGINAL SCALE	1:2000 OR AS SHOWN
DRAWN	I.A.C. 4-02-03
CHECKED	G.J.S.
DESIGN	I.A.C.

GIS MAP No. 6400-64
SHEET 1 OF 1
I.E. DRG No. **A1**
LOT 1033 HIGH ST, PENRITH
JOAN SUTHERLAND PERFORMING ARTS CENTRE
ULL0223
ELECTRICAL RETICULATION PLAN

Issue Date: 02/09/2015, DBYD Sequence No: 47660360

FB-0402376
WAG-0604754
07/06/16



FB. 119273/3

WARNING
THIS EXCAVATION IS IN THE VICINITY OF
ENDAVOUR ENERGY'S OWN CABLES.
ENDAVOUR ENERGY WILL BE RESPONSIBLE FOR
ANY DAMAGE CAUSED TO ENDAVOUR ENERGY'S PROPERTY
4 WORKING DAYS BEFORE COMMENCING WORK

ENDAVOUR ENERGY WARNING

This plan shows the approximate location of underground cables relative to fixtures existing when the cables were laid, and has been prepared solely for Endeavour's own use. Endeavour Energy has taken all reasonable steps to ensure that the information is as accurate as possible but will accept no liability for inaccuracies in the information shown on such plans from any cause whatsoever arising.

Persons excavating are expected to exercise all due care in the vicinity where cables are indicated and will be held responsible for any damage caused to Endeavour Energy's Property.

All Electrical apparatus shall be considered as live until proved de-energised. Contact with live electrical apparatus will cause severe injury or death.

Those excavating near Endeavour Energy's cables should be aware that ASBESTOS OR ASBESTOS - CONTAINING MATERIAL MAY BE PRESENT in Endeavour Energy's underground assets and that Organo-Chloride Pesticides(OCP) may be present in some sub-transmission trenches



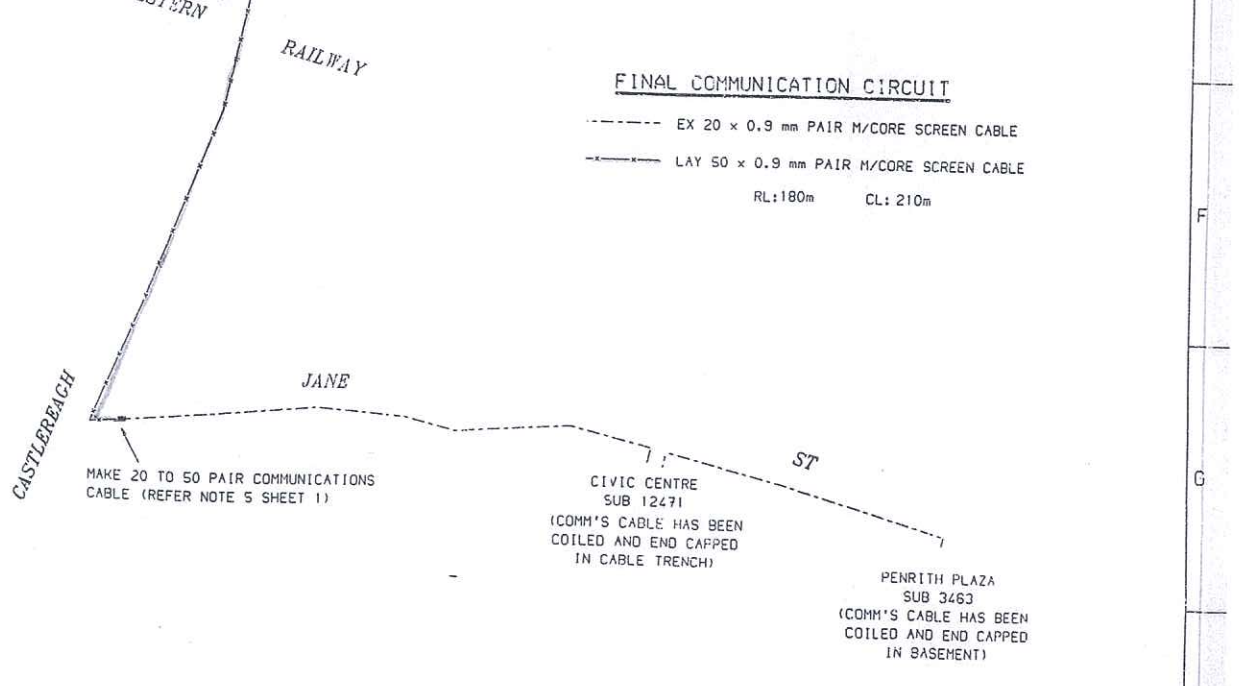
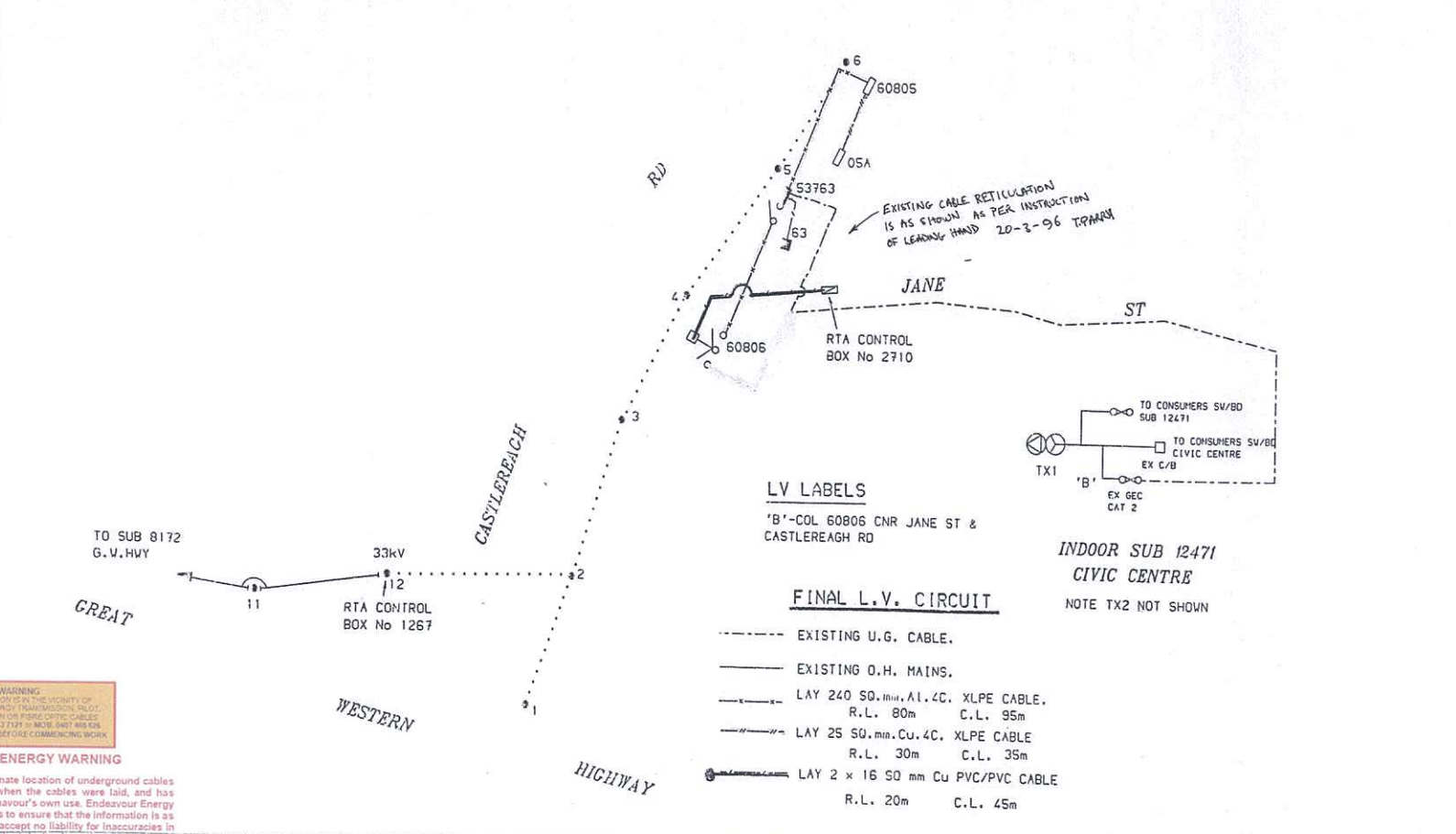
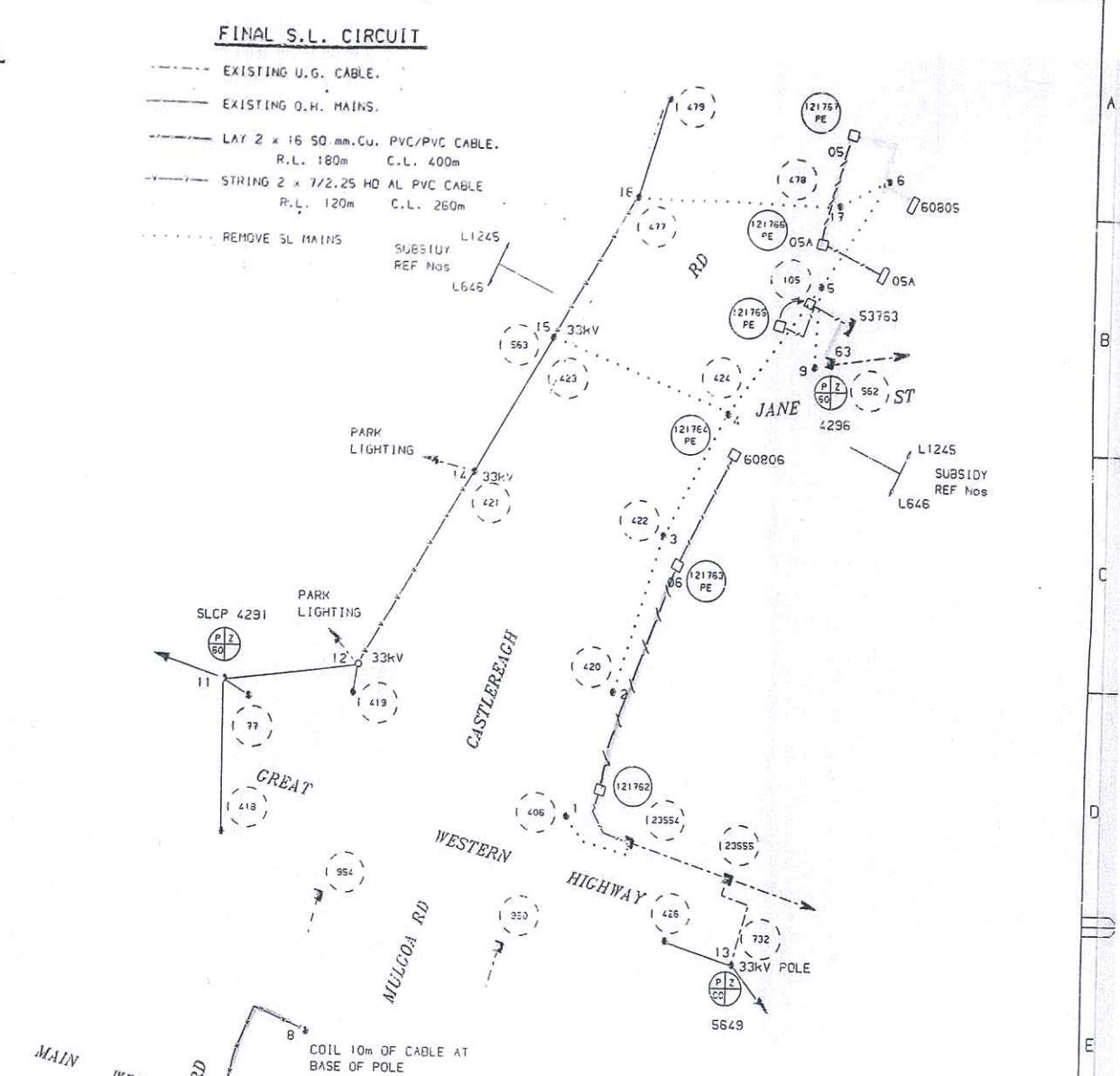
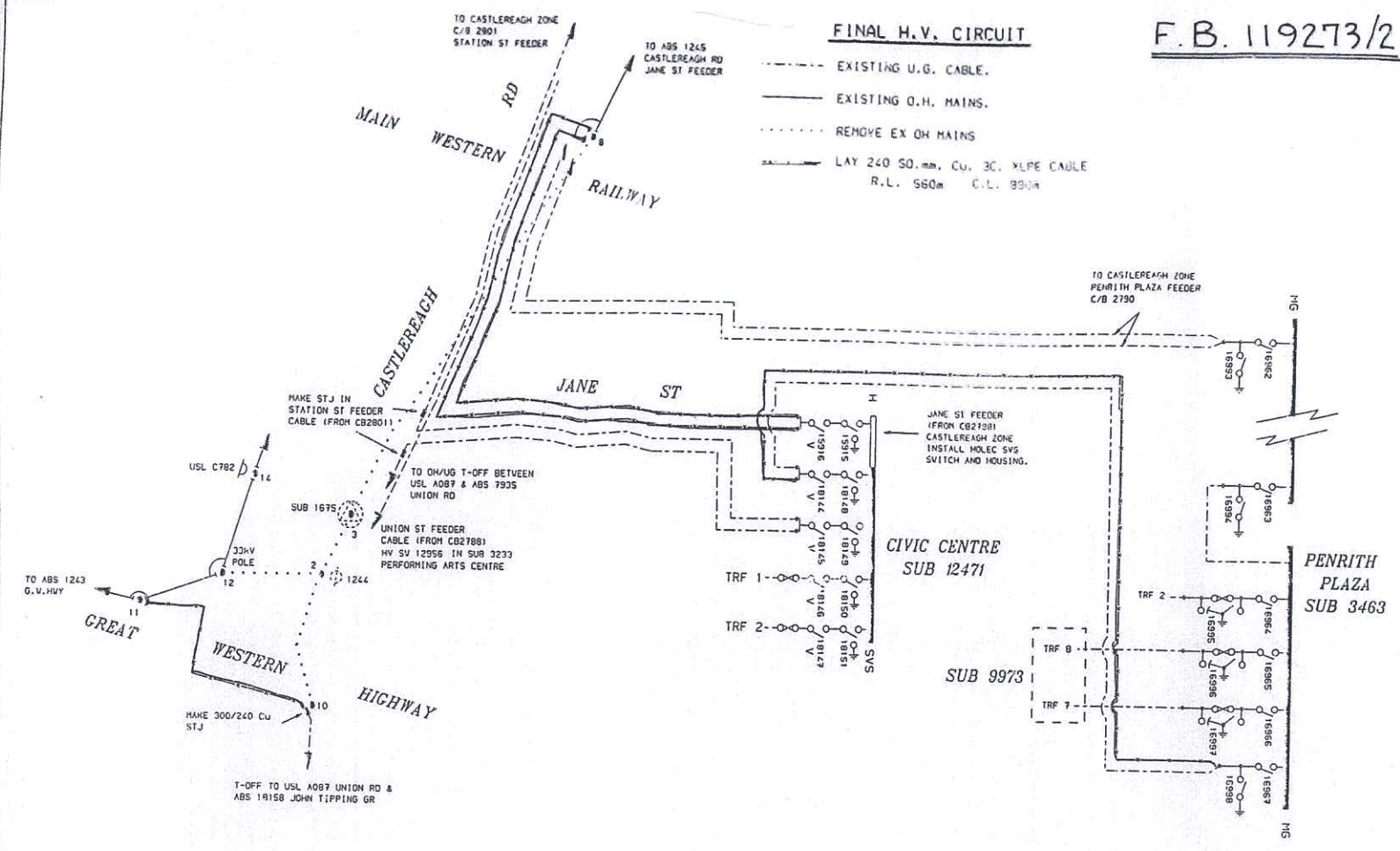
F.B. 119273/2

FINAL H.V. CIRCUIT

- EXISTING U.G. CABLE.
- EXISTING O.H. MAINS.
- REMOVE EX OH MAINS
- LAY 240 SO. mm. CU. 3C. XLPE CABLE
R.L. 560m C.L. 930m

FINAL S.L. CIRCUIT

- EXISTING U.G. CABLE.
- EXISTING O.H. MAINS.
- LAY 2 x 16 SO. mm. CU. PVC/PVC CABLE.
R.L. 180m C.L. 400m
- STRING 2 x 7/2.25 HD AL PVC CABLE
R.L. 120m C.L. 260m
- REMOVE SL MAINS



WARNING
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ENDEAVOUR ENERGY WARNING
Persons excavating are to take all due care in the vicinity where cables are shown. Endeavour Energy will not be held responsible for any damage caused to Endeavour Energy Property.
All electrical apparatus is to be considered as live until proved de-energised. Contact with live electrical apparatus will cause severe injury or death.
Those excavating near Endeavour Energy's cables should be aware that ASBESTOS OR ASBESTOS-CONTAINING MATERIAL MAY BE PRESENT in Endeavour Energy's underground assets and that Organo-Chloride Pesticides (OCP) may be present in some sub-transmission trenches.

LETTER No		LG AREA		PENRITH C.C.		ORIGINAL SCALE		REGIONAL MANAGER		PROSPECT ELECTRICITY		J.MALLEN PER DC	
U/O No.		REGION		RIVERLANDS		1:1000		D CANCIAN				GENERAL MANAGER NETWORK	
VP5424		HY GEO DIA		6460-61		REF		DRAWN		P. R.		A1	
DATE		LV MAP		6460-61				CH'D		CUSTOMER DESIGN MANAGER		119273	
---		ST LT MAP		SL319								A	
FILE No		HV SCHEM		CASTLEREAGH		REF E4						SHEET No 2 OF 2 SHEETS	
---												INDEX REF	
DEPT		HF4005										DATE: 09-12-94	
DESIGN No													

D

NOTES

F.B. 119273/1

COMMENCED 7-6-95

COMPLETED 17-11-95

SHEET. 6460-6141/6142

6143

RECORDED BY: UNKNOWN

1. TRAFFIC ROUTE LAMPERS NOT LOCATED ON PROPERTY BOUNDARIES TO BE POSITIONED 3.0m BEHIND KERB LINE.
2. HIGH PRESSURE GAS LINE EXISTS ALONG EASTERN SIDE OF CASTLEREACH RD.
3. SWITCH TO BE SUPPLIED WITH INSULATED 'ELBOWS AND TEES' TO FORMABLE PARALLEL CONNECTION OF CABLES.
4. EARTH SWITCHES ARE TO BE LOCKED WITH MAZ LOCKS.
5. FOR CONNECTION OF 20 TO 50 PAIR COMMUNICATIONS CABLES REFER TO MIKE McCLURE EXT 89020.
6. SRA HAVE ADVISED PLANNED MAINTENANCE PERIOD FOR 1995 WILL BE 22/23 APRIL AND 11 AUGUST. CONTACT TONY MEADOWS (SRA MAINTENANCE SECTON) PH: (02)379-7706 TO CO-ORDINATE WORKS.
7. REFER TO STREETLIGHT SUBSIDY DESIGN DRAWINGS No 80547 JANE ST TO BELMORE RD AND No 80552 CASTLEREACH RD 6W HWY TO RAILWAY BRIDGE FOR CABLE AND EQUIPMENT LOCATIONS.
8. DRAW BACK LV MAINS CABLE FROM PILLAR 53763 AND TERMINATE IN NEW COLUMN 60806 WITH A HD 8A DOUBLE LINK BOARD. RUN NEW LV CABLE FROM COLUMN 60806 TO PILLAR 53763. RUN NEW SERVICE TO RTA CONTROL BOX FROM COLUMN 60806. REMOVE EX RTA CONTROL BOX SERVICE CABLE ACROSS JANE ST.
9. CONCRETE PATH EXISTS ALONG EASTERN SIDE OF CASTLEREACH RD.

LEGEND

- INDOOR SUBSTATION SITE
- STRING O/H CONDUCTOR
- EXISTING U.G. CABLE.
- EXISTING O.H. MAINS.
- REMOVE EX. OVERHEAD
- EX DUCTS AND U.G. MAINS
- EX SL COLUMN
- INSTALL 250V SHP-T LANTERN WITH 7.5m MAST (C1) AND 4.5m OUTREACH COLUMN, PE CELL CONTROLLED ON A TYPE 3 RAGBOLT, (DUE TO 600mm EMBANKMENT)
- INSTALL 250V SHP-T LANTERN WITH 9.0m MAST (C2) AND 4.5m OUTREACH COLUMN, PE CELL CONTROLLED ON A TYPE 2 RAGBOLT.
- INSTALL 400V SHP-E LANTERN WITH 9.0m MAST (C2) AND 4.5m OUTREACH COLUMN, PE CELL CONTROLLED ON A TYPE 2 RAGBOLT.
- SPARE DUCT
- DUCT WITH EX. CABLE
- DUCT WITH NEW CABLE
- EXISTING LANTERN
- REMOVE LANTERN
- INSTALL LV PILLAR
- EXISTING LV PILLAR

WARNING
P.E. U.G. CABLES
TO BE LOCATED
PRIOR TO DIGGING

ATTENTION:
ALL SERVICES SEARCHES MUST BE
CHECKED BEFORE CONSTRUCTION.

ATTENTION
DISTRICT STAFF TO NOTIFY HEAD OFFICE
DRAWING OFFICE DAILY WHEN CABLE WORK
IS IN PROGRESS
PHONE: EXT - 9864

NEW	RWD	POLE/ITEM No.	QTY.	TYPE CODE	RATE CODE	SUBSIDY REF. No.	CHARGE TO
XX	250V SHP-T	POLES 5-6a	-2	95	95	L1245	PENRITH C.C.
XX	400V SHP-E	POLES 1-2-3-4	-4	96	96	L646	PENRITH C.C.
XX	250V SHP-T	LANTERN Nos 121763, 121764	2	55	55	L646	PENRITH C.C.
XX	400V SHP-E	LANTERN No 121762	1	57	57	L646	PENRITH C.C.
XX	250V SHP-T	LANTERN Nos 121765, 121766, 121767	3	55	55	L1245	PENRITH C.C.

"IMPORTANT"

1. ALL alterations to this Project Drawing by the Construction Crews MUST be marked in RED daily by the responsible Foreman on the 'Works in Progress' drawing held in the Construction Office.
2. A FINAL field inspection with the above Drawing was carried out and is built as shown.

Name: please print Date: Foreman O/H
Name: please print Date: Foreman U/G
Name: please print Date: Foreman Subs

FIELD POLE NUMBER	EXISTING BRACKET	SPAN LENGTH	LINE NEW (DEGREES)	LV	DIA	DEPTH	TYPE	STAY	ERECTING	REPLACE	NEW	EXISTING	REMOVE	REPLACE
172														
221														
240														
2324														
235														
233														
172														
221														
240														
2324														
235														
233														

HV DEVELOPMENT PROJECT ITEM No 683 1994/95

SUPERVISION	U/O No.	DATE	LG AREA	PENRITH C.C.	ORIGINAL SCALE	REGIONAL MANAGER
DESIGN	VF524		REGION	RIVERLANDS	1:1000	D. CANNAN
OVERHEAD MAINS	VF5561		HW GEO DIA	6460-81	REF	
UNDERGROUND MAINS	VF5562		LV MAP	6460-81		
SUBSTATIONS	VF5563		ST LT MAP	SL319		
			HW SCHEM	CASTLEREACH 1 REF E4		

PROSPECT ELECTRICITY

CASTLEREACH RD
PENRITH
HV U.G. CONVERSION (ITEM No 693)

J.N. ALLEN PER DC

GENERAL MANAGER NETWORK
A1 119273 1A
SHEET No 1 OF 2 SHEETS
INDEX REF
DATE: 03-12-94

WARNING
THIS EXCAVATION IS IN THE VICINITY OF
SUBSTATION/UNDERGROUND TRANSMISSION PILLAR
COMMUNICATION OR PNEUMATIC CABLES.
PLEASE REMAIN AWAY FROM ANY PNEUMATIC CABLES
FOR A MINIMUM OF 10 METRES BEFORE COMMENCING WORK.

ENDEAVOUR ENERGY WARNING

This plan shows the approximate location of underground cables relative to fixtures existing when the cables were laid, and has been prepared solely for Endeavour's own use. Endeavour Energy has taken all reasonable steps to ensure that the information is as accurate as possible but will accept no liability for inaccuracies in the information shown on such plans from any cause whatsoever arising.

Persons excavating are expected to exercise all due care in the vicinity where cables are indicated and will be held responsible for any damage caused to Endeavour Energy's Property.

All electrical apparatus shall be considered as live until proved de-energized. Contact with live electrical apparatus will cause severe injury or death.

Those excavating near Endeavour Energy's cables should be aware that ASBESTOS OR ASBESTOS - CONTAINING MATERIAL MAY BE PRESENT IN Endeavour Energy's underground assets and that Organic-Chloride, Pesticides (OCP) may be present in some sub-transmission trenches.

CAUTION: MAIN TELECOM U/G
LINE EXISTS IN THIS AREA.

CASTLEREACH

HIGHWAY

CASTLEREACH
ZONE

NEPEAN MILK

RAILWAY

JANE

CIVIC CENTRE

PENRITH PLAZA
(SUB No 1)

EXPOSE EX DUCTS AND CONDUIT
ACROSS BITUMEN ROADWAY.
CUT AND END CAP 10m OF COMM'S
CABLE AT BASE OF POLE.

REMOVE USL No 6593
TERMINATE MAINS AND MAKE
OH/UG CONNECTION

REMOVE SL MAINS ACROSS
C'REAGH RD AND BOND EX
SL MAINS WITH NEW RAYS
RUN.

REMOVE POLE 3 AND
EX OH/UG SL MAINS
TO COLUMN.
LAY 16 SQ mm SERVICE
FROM PILLAR 53763 TO
SLCP 4296 RELOCATED IN
COLUMN BASE.

SRA LV EMERGENCY SUPPLY
SIGNAL BOX 30 (34.6 MILES).
SRA TO REMOVE POLE AND
SERVICE TO BE TURNED DOWN
AND CONNECTED IN PILLAR
No 60805.
REMOVE AERIAL SERVICE TO
HICKEYS S/H WORKS AND CONNECT
INTO PILLAR 05A.

LAY NEW 240 SQ mm Cu CABLE IN PARALLEL
WITH EX HV CABLE RUNNING BETWEEN
SWITCH No 16967 IN SUB 3463 AND
SWITCH No 18144 IN SUB 12471
AND CONNECT CABLE ENDS

REMOVE SLCP 4296 FROM POLE 5.
INSTALL COLUMN MOUNTED CONTROL
GEAR AND NUMBER SLCP 4296.

REMOVE EX S/L MAINS FROM POLE 4
TO POLE 15 ACROSS C'REAGH RD.
STRING 2 BAYS OF SL MAINS
ON WEST SIDE OF C'REAGH RD
TOWARDS RAIL LINE.

REMOVE SUB 1675
200kVA TX

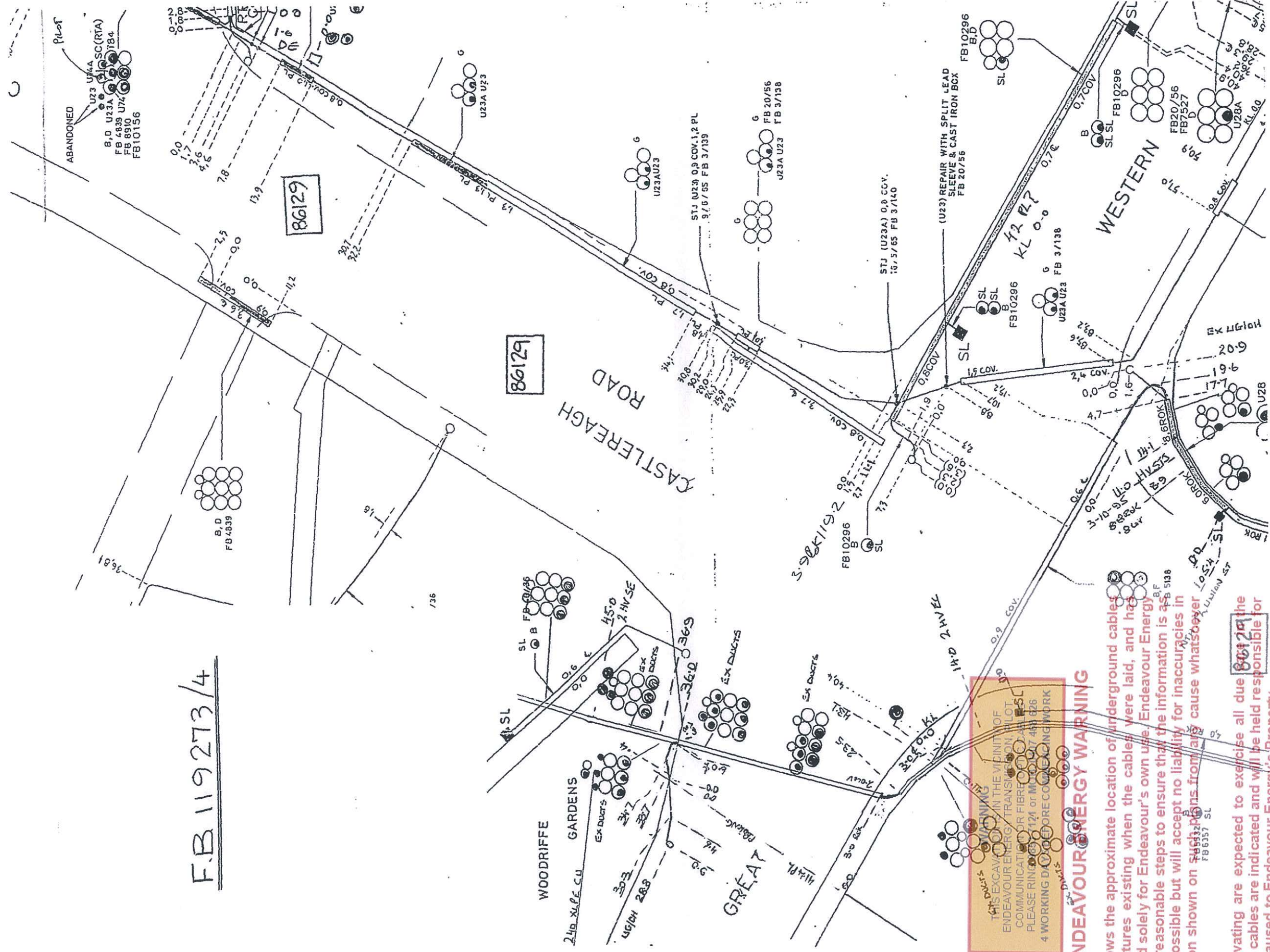
LOCATE EX COMM'S CABLE AND
JOIN TO NEW COMM'S CABLE TO
BE RUN IN EX DUCTS TO POLE 8.

TURN DOWN 2 EX OH/UG HV CABLES
FED FROM SV 18145 IN SUB 12471.
CUT EX CABLE OF STATION ST
FEEDER (1e CASTLEREACH ZONE No 1
C/B 2801) AND MAKE 2 x 300 SQ mm
AL PLYVUS STJ.

REMOVE SLCP 5849 FROM POLE 1.
REMOVE EX ABS 1244 FROM POLE 2.
REMOVE LV MAINS ACROSS C'REAGH RD
FROM POLE 2-12 & 1-6.
REMOVE LV LINKS FROM POLE 12.
REMOVE HV MAINS BETWEEN POLES 1-8, 1-10 &
2-12 ACROSS C'REAGH RD.
TURN DOWN 11kV OH/UG MAINS FROM POLE 10
AND MAKE STJ WITH NEW CABLE TO BE RUN
ACROSS C'REAGH RD AND TERMINATED ON
POLE 11.

RELOCATE SLCP 5849
FROM POLE 1 TO 33kV
POLE

F.B 119273/4



ENDEAVOUR ENERGY WARNING

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SCALE 1:1500

NOTES

- DESIGN CERTIFICATION SHALL LAPSE WHERE:-
 - NOTICE OF INTENT HAS NOT BEEN RECEIVED WITHIN SIX (6) MONTHS OF THIS CERTIFICATION, OR
 - CONSTRUCTION HAS BEEN INTERRUPTED FOR MORE THAN SIX (6) MONTHSWHERE DESIGN CERTIFICATION HAS LAPSED THE DESIGN MUST BE RESUBMITTED FOR CERTIFICATION BY THE ACCREDITED DESIGNER
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH INTEGRAL ENERGY'S MDI 0020 DOCUMENT
- CLOSE HV SWITCH 12306 IN PM SUB 1555 IN JAMISON RD
- OPEN USL 10993 IN BLAIKIE RD
- OPEN HV SWITCH T535 IN PM SUBSTATION 16458 IN ANAKAI DR

LEGEND

- NEW HV U/G MAINS
- EXISTING OH MAINS
- EXISTING U/G MAINS
- HV TRENCHING
- EXISTING DUCT
- EXISTING SUBSTATION SITE
- EXISTING POLE
- NEW TRENCH & DUCT CONFIGURATION
- EXISTING DUCT CONFIGURATION

PLEASE NOTE :-REFER TO NOTES 3, 4 & 5 FOR THE SWITCHING ARRANGEMENTS FOR THIS PROJECT.

WORKS COMPLETED	
CONSTRUCTED BY	
WORKS COMPLETED	NAME
SIGNED	DATE
INSPECTED BY	NAME
SIGNED	DATE
FORWARDED TO CONTESTABLE WORKS ADMINISTRATOR (CWA)	
LOCATION	
SIGNED	DATE

TTJ NEW 11KV 240mm sq Cu XLPE CABLE TO EXISTING HV CABLE CONNECTED TO HV SWITCH 20860 IN SUB 16464.

CUT AND ABANDON HV CABLE FROM HV SWITCH 10990 IN SUB 18045 TO WESTERN SIDE OF MULGOA RD.

UBD REF : 163,F-7

WARNING

THIS EXCAVATION IS IN THE VICINITY OF ENDEAVOUR ENERGY TRANSMISSION, PILOT, COMMUNICATION OR FIBRE OPTIC CABLES. PLEASE RING 9853 7121 or MQB, 0407 468 626 4 WORKING DAYS BEFORE COMMENCING WORK

ENDEAVOUR ENERGY WARNING

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Authorisation of Integral Energy Funding.....

Print Name.....
Service Number.....
Date.....

Authorisation of Integral Funding

John Wallace
4028

Date: 3/10/10

FB 272410/4 of 4
COMM 22.8.02 COMP 20.10.02
SHEET 40.6.12/6.14/6.3.2
DUCT
RECORDED BY C. GOODMAN
INSTALLED BY TEC

CERTIFIED BY INTEGRAL ENERGY
Certification No. 1-8-02
Date Approved: 1-8-02
Examiner's Signature: [Signature]
This Certification is issued subject to Integral Energy's Certification Terms.

REFERENCE DRAWING	CAP No.	UCL1085	FILE No.	ORIGINAL SCALE 1:1500
IE PROJ. No.	INT390	LG AREA	PENRITH	DRAWN BRM
HV SWITCHING	6460-61	HV GEO MAP	6460-61	DATE 8/7/02
OVERHEAD MAINS	6460-61	GIS MAP No.	6460-61	CHD
UNDERGROUND MAINS	UBD REF 163F-7	UBD REF	163F-7	DESIGN SS
SUBSTATIONS	HV OP DIAG	PENRITH 3&4		

DO NOT SCALE
DIMENSIONS IN METRES

INTEGRAL ENERGY
INSTALL A NEW 11KV 240mm sq Cu CABLE FROM PENRITH ZONE TO PANTHERS LAEAGUES CLUB GIBBS ST, PENRITH
CAP NUMBER : UCL1085

A1 272410 A
SHEET No. 4 OF 4 SHEETS

Issue Date: 02/09/2015, DBYD Sequence No: 47660360



LEGEND

- NEW HV U/G MAINS
- EXISTING OH MAINS
- EXISTING U/G MAINS
- HV TRENCHING
- EXISTING DUCT
- EXISTING SUBSTATION SITE
- EXISTING POLE
- NEW TRENCH & DUCT CONFIGURATION
- EXISTING DUCT CONFIGURATION

ATTENTION
ALL SERVICES SEARCHES MUST BE CHECKED BEFORE CONSTRUCTION.

DUCT DETAIL

TRENCH & LAY A TO B 6 X 125mm PVC CORFLO DUCTS 2 X 50mm PVC DUCTS EXISTING Street Light Duct	TRENCH & LAY C TO D 6 X 125mm PVC CORFLO DUCTS 2 X 50mm PVC DUCTS
TRENCH & LAY B TO C 6 X 125mm PVC CORFLO DUCTS 2 X 50mm PVC DUCTS	TRENCH & LAY D TO E 6 X 125mm PVC CORFLO DUCTS 2 X 50mm PVC DUCTS EXISTING Street Light Duct

DUCT LEGEND

- DUCT WITHOUT CABLE
- DUCT WITH EXISTING CABLE
- DUCT WITH NEW CABLE

WARNING
LIVE INTEGRAL ENERGY CABLES & OTHER SERVICES IN THIS AREA.
PLEASE CONTACT DIAL BEFORE YOU DIG ON TEL: 1100 FOR SEARCHES
TWO DAYS PRIOR TO EXCAVATION
(FROM INSIDE ZONE SUB OFF CASTLEREAGH RD)

WARNING
THIS EXCAVATION IS IN THE VICINITY OF ENDEAVOUR ENERGY TRANSMISSION, PILOT, COMMUNICATION OR FIBRE OPTIC CABLES. PLEASE RING 9853 7121 OR MOB: 0407 468 626 4 WORKING DAYS BEFORE COMMENCING WORK

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WORKS COMPLETED

CONSTRUCTED BY	NAME	DATE
WORKS COMPLETED	SIGNED	DATE
INSPECTED BY	NAME	DATE
FORWARDED TO CONTESTABLE WORKS ADMINISTRATOR (CWA)	SIGNED	DATE
LOCATION	SIGNED	DATE

Authorisation of Integral Energy Funding

Print Name.....
Service Number.....
Date.....

Authorisation of Integral Funding
John Wallace
4020
Date: 21/10/12

UBD REF : 163,F-7

CUT AND ABANDON HV CABLE FROM HV SWITCH 10990 IN SUB 18045 TO WESTERN SIDE OF MULGOA RD.

FB 272410/1-4
COMM 22.8.02, COMP 20.10.02
SHEET 6460-6.1.2/6.1.4/6.3.2
DUCT RECORDED BY C. GOODMAN
INSTALLED BY TEC

PLEASE NOTE :-REFER TO NOTES 3, 4 & 5 FOR THE SWITCHING ARRANGEMENTS FOR THIS PROJECT.

SCALE 1:1000

SCOPE OF WORKS (SHEET 2 TO 4)

INTEGRAL ENERGY FUNDED (NON-CONTESTABLE)
ALL WORKS

CERTIFIED BY INTEGRAL ENERGY
Certification No.: Amend A
Date Approved: 1-8-02
Examiner's Signature: [Signature]
This Certification is issued subject to Integral Energy's Certification Terms.

REFERENCE DRAWING	CAP No.	UCL1085	FILE No.	LG AREA	PENRITH
IE PROJ. No.	IN1390	LG AREA	6460-61	HV GEO MAP	6460-61
HV SWITCHING		OVERHEAD MAINS	UBD REF	163-F7	
UNDERGROUND MAINS		SUBSTATIONS	HV OP DIAG	PENRITH 3&4	

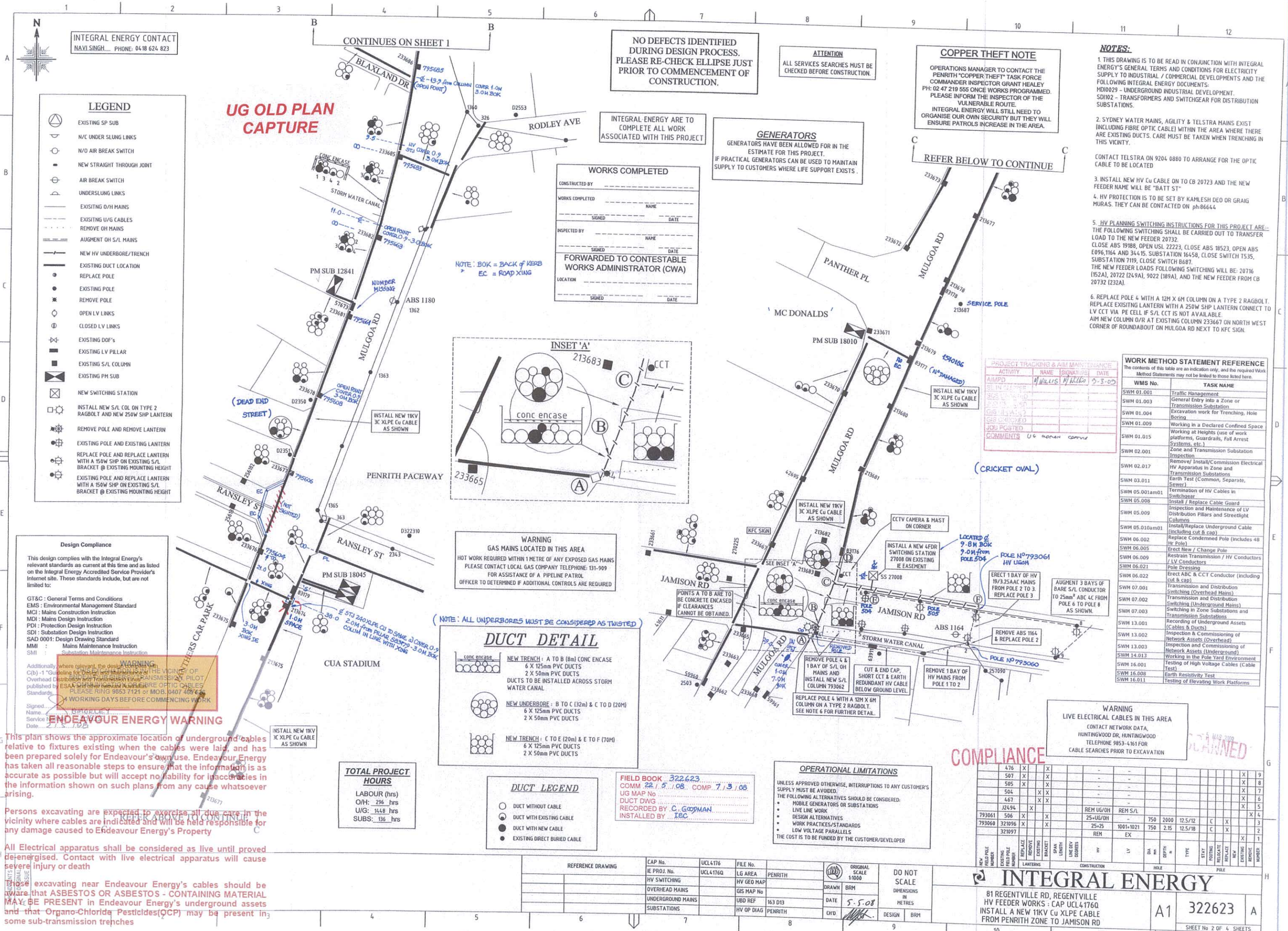
DO NOT SCALE
DIMENSIONS IN METRES

INTEGRAL ENERGY

INSTALL A NEW 11KV 240mm sq Cu CABLE FROM PENRITH ZONE TO PANTHERS LEAGUE CLUB, GIBBES ST, PENRITH
CAP NUMBER : UCL1085

A1 272410 A

SHEET No 3 OF 4 SHEETS



- LEGEND**
- EXISTING SP SUB
 - N/C UNDER SLUNG LINKS
 - N/O AIR BREAK SWITCH
 - NEW STRAIGHT THROUGH JOINT
 - AIR BREAK SWITCH
 - UNDERSLUNG LINKS
 - EXISTING O/H MAINS
 - EXISTING U/G CABLES
 - REMOVE O/H MAINS
 - AUGMENT O/H S/L MAINS
 - NEW HV UNDERBORE/TRENCH
 - EXISTING DUCT LOCATION
 - REPLACE POLE
 - EXISTING POLE
 - REMOVE POLE
 - OPEN LV LINKS
 - CLOSED LV LINKS
 - EXISTING DOF's
 - EXISTING LV PILLAR
 - EXISTING S/L COLUMN
 - EXISTING PM SUB
 - NEW SWITCHING STATION
 - INSTALL NEW S/L COL ON TYPE 2 RAGBOLT AND NEW 250W SHP LANTERN
 - REMOVE POLE AND REPLACE LANTERN WITH A 150W SHP ON EXISTING S/L BRACKET @ EXISTING MOUNTING HEIGHT
 - EXISTING POLE AND REPLACE LANTERN WITH A 150W SHP ON EXISTING S/L BRACKET @ EXISTING MOUNTING HEIGHT

Design Compliance

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

- GT&C: General Terms and Conditions
- EMS: Environmental Management Standard
- MCI: Mains Construction Instruction
- MDI: Mains Design Instruction
- PDI: Protection Design Instruction
- SAD: Substation Design Instruction
- SAD 0001: Design Drawing Standard
- MMI: Mains Maintenance Instruction
- SMI: Substation Maintenance Instruction

Additionally, where relevant, the design complies with the following standards:

- AS/NZS 4806.1:2002: Steel Reinforcing Bars
- AS/NZS 4806.2:2002: Steel Reinforcing Bars
- AS/NZS 4806.3:2002: Steel Reinforcing Bars
- AS/NZS 4806.4:2002: Steel Reinforcing Bars
- AS/NZS 4806.5:2002: Steel Reinforcing Bars
- AS/NZS 4806.6:2002: Steel Reinforcing Bars
- AS/NZS 4806.7:2002: Steel Reinforcing Bars
- AS/NZS 4806.8:2002: Steel Reinforcing Bars
- AS/NZS 4806.9:2002: Steel Reinforcing Bars
- AS/NZS 4806.10:2002: Steel Reinforcing Bars
- AS/NZS 4806.11:2002: Steel Reinforcing Bars
- AS/NZS 4806.12:2002: Steel Reinforcing Bars
- AS/NZS 4806.13:2002: Steel Reinforcing Bars
- AS/NZS 4806.14:2002: Steel Reinforcing Bars
- AS/NZS 4806.15:2002: Steel Reinforcing Bars
- AS/NZS 4806.16:2002: Steel Reinforcing Bars
- AS/NZS 4806.17:2002: Steel Reinforcing Bars
- AS/NZS 4806.18:2002: Steel Reinforcing Bars
- AS/NZS 4806.19:2002: Steel Reinforcing Bars
- AS/NZS 4806.20:2002: Steel Reinforcing Bars
- AS/NZS 4806.21:2002: Steel Reinforcing Bars
- AS/NZS 4806.22:2002: Steel Reinforcing Bars
- AS/NZS 4806.23:2002: Steel Reinforcing Bars
- AS/NZS 4806.24:2002: Steel Reinforcing Bars
- AS/NZS 4806.25:2002: Steel Reinforcing Bars
- AS/NZS 4806.26:2002: Steel Reinforcing Bars
- AS/NZS 4806.27:2002: Steel Reinforcing Bars
- AS/NZS 4806.28:2002: Steel Reinforcing Bars
- AS/NZS 4806.29:2002: Steel Reinforcing Bars
- AS/NZS 4806.30:2002: Steel Reinforcing Bars
- AS/NZS 4806.31:2002: Steel Reinforcing Bars
- AS/NZS 4806.32:2002: Steel Reinforcing Bars
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- AS/NZS 4806.36:2002: Steel Reinforcing Bars
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- AS/NZS 4806.38:2002: Steel Reinforcing Bars
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- AS/NZS 4806.45:2002: Steel Reinforcing Bars
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- AS/NZS 4806.47:2002: Steel Reinforcing Bars
- AS/NZS 4806.48:2002: Steel Reinforcing Bars
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- AS/NZS 4806.51:2002: Steel Reinforcing Bars
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- AS/NZS 4806.53:2002: Steel Reinforcing Bars
- AS/NZS 4806.54:2002: Steel Reinforcing Bars
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- AS/NZS 4806.56:2002: Steel Reinforcing Bars
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- AS/NZS 4806.58:2002: Steel Reinforcing Bars
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- AS/NZS 4806.71:2002: Steel Reinforcing Bars
- AS/NZS 4806.72:2002: Steel Reinforcing Bars
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- AS/NZS 4806.75:2002: Steel Reinforcing Bars
- AS/NZS 4806.76:2002: Steel Reinforcing Bars
- AS/NZS 4806.77:2002: Steel Reinforcing Bars
- AS/NZS 4806.78:2002: Steel Reinforcing Bars
- AS/NZS 4806.79:2002: Steel Reinforcing Bars
- AS/NZS 4806.80:2002: Steel Reinforcing Bars
- AS/NZS 4806.81:2002: Steel Reinforcing Bars
- AS/NZS 4806.82:2002: Steel Reinforcing Bars
- AS/NZS 4806.83:2002: Steel Reinforcing Bars
- AS/NZS 4806.84:2002: Steel Reinforcing Bars
- AS/NZS 4806.85:2002: Steel Reinforcing Bars
- AS/NZS 4806.86:2002: Steel Reinforcing Bars
- AS/NZS 4806.87:2002: Steel Reinforcing Bars
- AS/NZS 4806.88:2002: Steel Reinforcing Bars
- AS/NZS 4806.89:2002: Steel Reinforcing Bars
- AS/NZS 4806.90:2002: Steel Reinforcing Bars
- AS/NZS 4806.91:2002: Steel Reinforcing Bars
- AS/NZS 4806.92:2002: Steel Reinforcing Bars
- AS/NZS 4806.93:2002: Steel Reinforcing Bars
- AS/NZS 4806.94:2002: Steel Reinforcing Bars
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- AS/NZS 4806.97:2002: Steel Reinforcing Bars
- AS/NZS 4806.98:2002: Steel Reinforcing Bars
- AS/NZS 4806.99:2002: Steel Reinforcing Bars
- AS/NZS 4806.100:2002: Steel Reinforcing Bars

ENDEAOUR ENERGY WARNING

This plan shows the approximate location of underground cables relative to fixtures existing when the cables were laid, and has been prepared solely for Endeavour Energy's own use. Endeavour Energy has taken all reasonable steps to ensure that the information is as accurate as possible but will accept no liability for inaccuracies in the information shown on such plans from any cause whatsoever arising.

Persons excavating are expected to exercise all due care in the vicinity where cables are indicated and will be held responsible for any damage caused to Endeavour Energy's Property.

All Electrical apparatus shall be considered as live until proved de-energised. Contact with live electrical apparatus will cause severe injury or death.

Those excavating near Endeavour Energy's cables should be aware that ASBESTOS OR ASBESTOS - CONTAINING MATERIAL MAY BE PRESENT in Endeavour Energy's underground assets and that Organo-Chloride Pesticides (OCP) may be present in some sub-transmission trenches.

TOTAL PROJECT HOURS

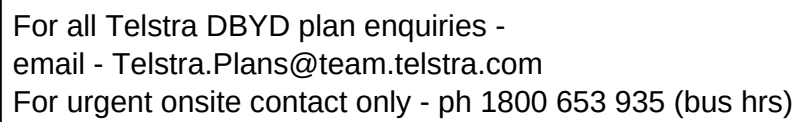
LABOUR (hrs)	
O/H: 256 hrs	
U/G: 1448 hrs	
SUBS: 136 hrs	

- DUCT LEGEND**
- DUCT WITHOUT CABLE
 - DUCT WITH EXISTING CABLE
 - DUCT WITH NEW CABLE
 - EXISTING DIRECT BURIED CABLE

REFERENCE DRAWING	CAP No.	UCL4176	FILE No.	UCL4176Q	LG AREA	PENRITH	ORIGINAL SCALE	DO NOT SCALE
IE PROJ. No.							1:1000	BRM
HV SWITCHING								
OVERHEAD MAINS								
UNDERGROUND MAINS								
SUBSTATIONS								

NO.	DATE	BY	CHKD	DESIGN	BRM	NO.	DATE	BY	CHKD	DESIGN	BRM
476		X				476		X			
507		X				507		X			
505		X				505		X			
504		X				504		X			
467		X				467		X			
J2494		X				J2494		X			
506		X				506		X			
321096		X				321096		X			
321097		X				321097		X			

3. TELECOMMUNICATIONS



Generated On 08/10/2015 08:23:10

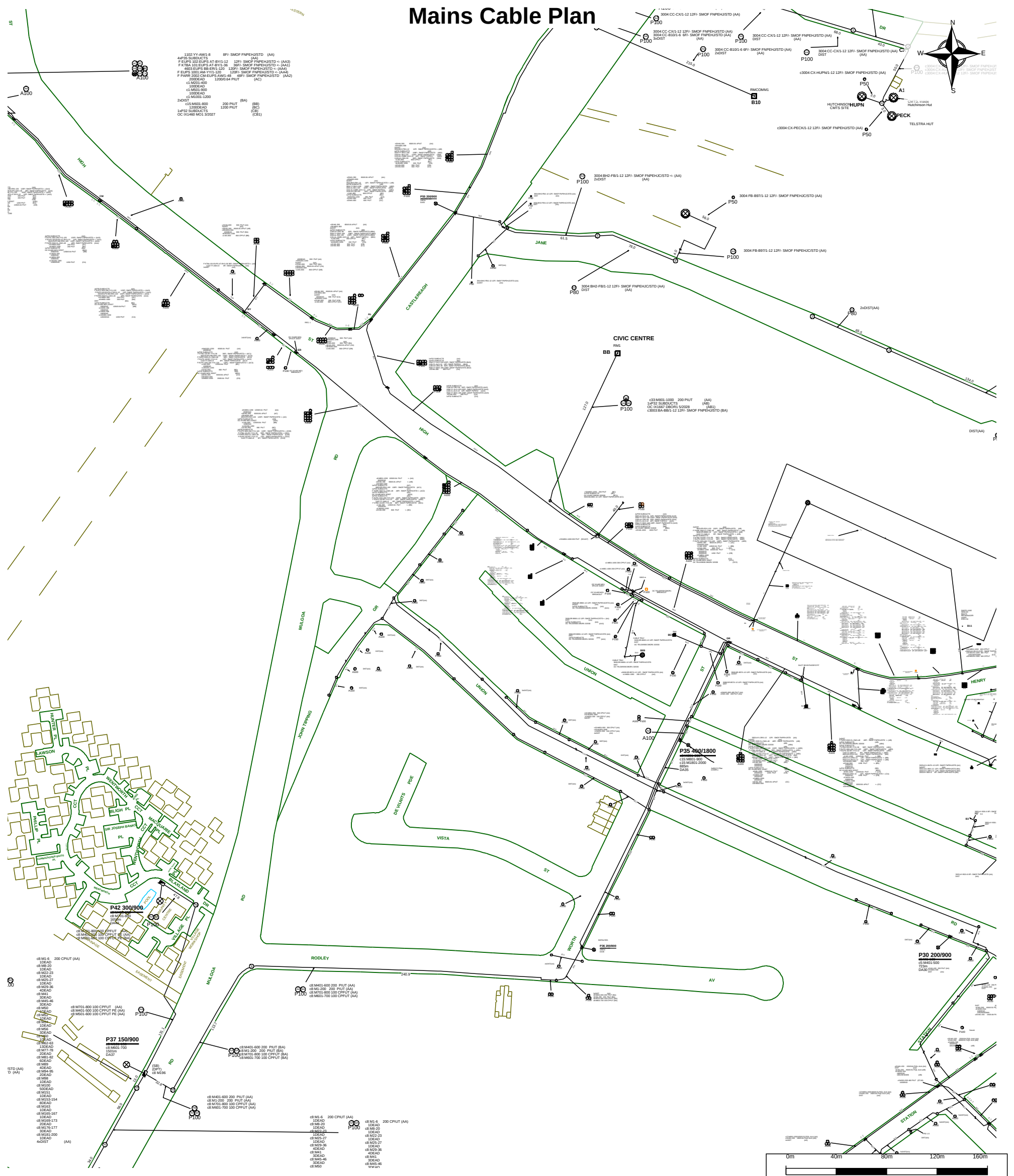
**CAUTION: Critical Network Route in plot area.
DO NOT PROCEED with any excavation prior to
seeking advice from Telstra Plan Services on :
1800 653 935**

WARNING - Due to the nature of Telstra underground plant and the age of some cables and records, it is impossible to ascertain the precise location of all Telstra plant from Telstra's plans. The accuracy and/or completeness of the information supplied can not be guaranteed as property boundaries, depths and other natural landscape features may change over time, and accordingly the plans are indicative only. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy shown on the plans.

Please read and understand the information supplied in the duty of care statement attached with the Telstra plans. TELSTRA WILL SEEK COMPENSATION FOR LOSS CAUSED BY DAMAGE TO ITS PLANT.

Page 1 of 2

Mains Cable Plan



For all Telstra DBYD plan enquiries -
email - Telstra.Plans@team.telstra.com
For urgent onsite contact only - ph 1800 653 935 (bus hrs)

TELSTRA CORPORATION LIMITED A.C.N. 051 775 556

Generated On 08/10/2015 08:23:29

Sequence Number: 48361065

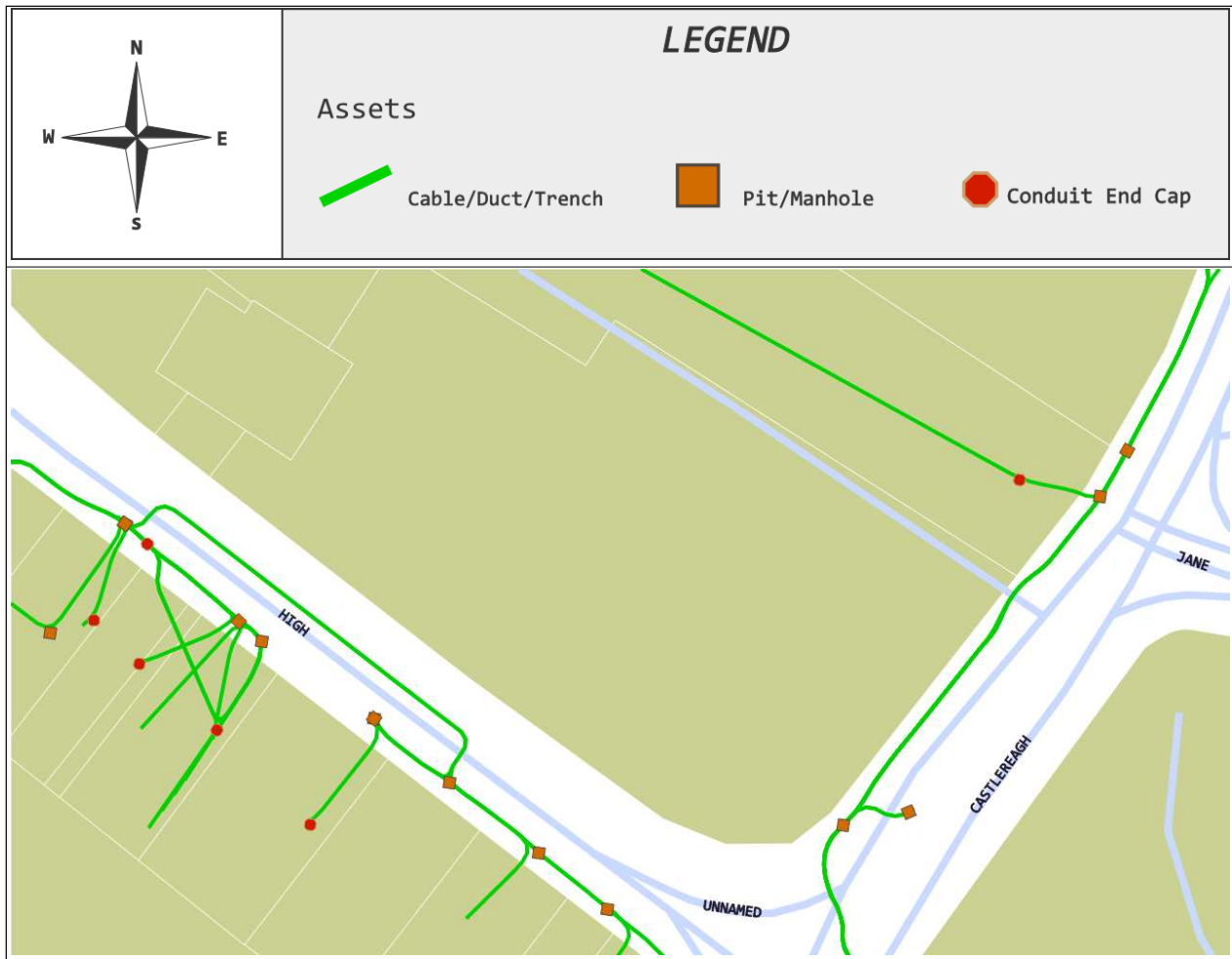
**CAUTION: Critical Network Route in plot area.
DO NOT PROCEED with any excavation prior to
seeking advice from Telstra Plan Services on :
1800 653 935**

WARNING - Due to the nature of Telstra underground plant and the age of some cables and records, it is impossible to ascertain the precise location of all Telstra plant from Telstra's plans. The accuracy and/or completeness of the information supplied can not be guaranteed as property boundaries, depths and other natural landscape features may change over time, and accordingly the plans are indicative only. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy shown on the plans.

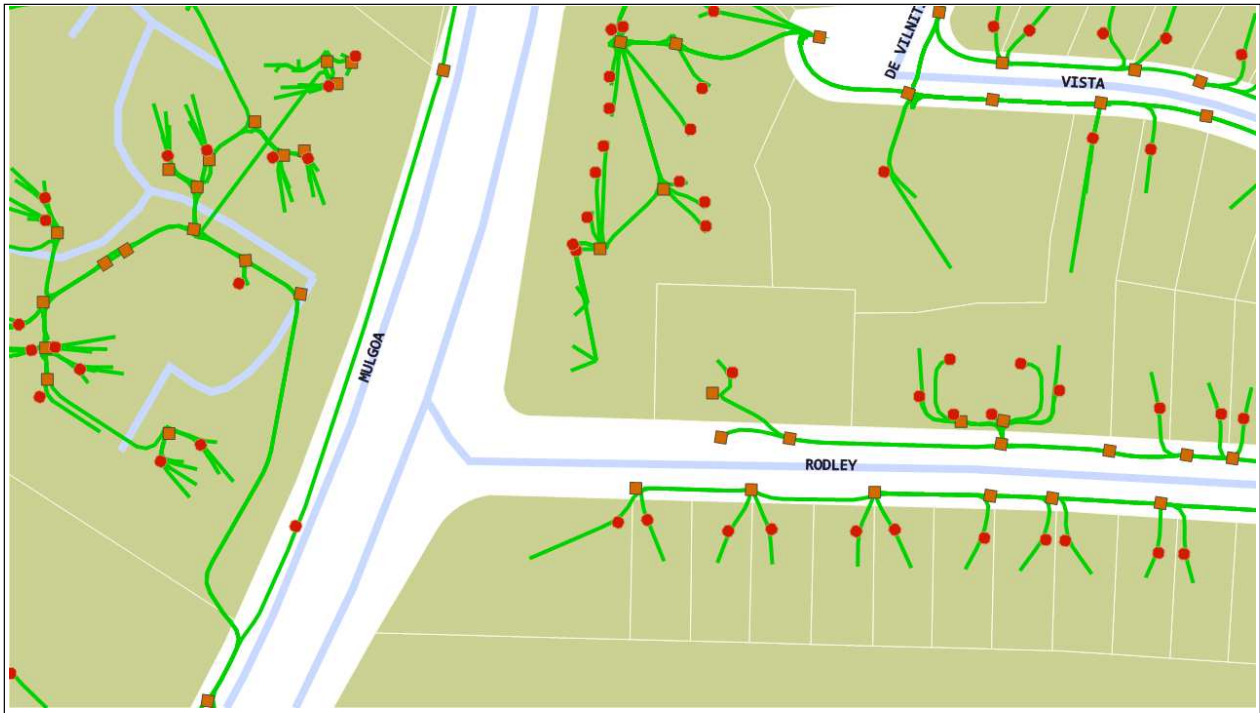
It is your responsibility to locate Telstra's underground plant by careful hand pot-holing prior to any excavation in the vicinity and to exercise due care during that excavation.

Please read and understand the information supplied in the duty of care statement attached with the Telstra plans. TELSTRA WILL SEEK COMPENSATION FOR LOSS CAUSED BY DAMAGE TO ITS PLANT.

Telstra plans and information supplied are valid for 60 days from the date of issue. If this timeframe has elapsed, please reapply for plans.



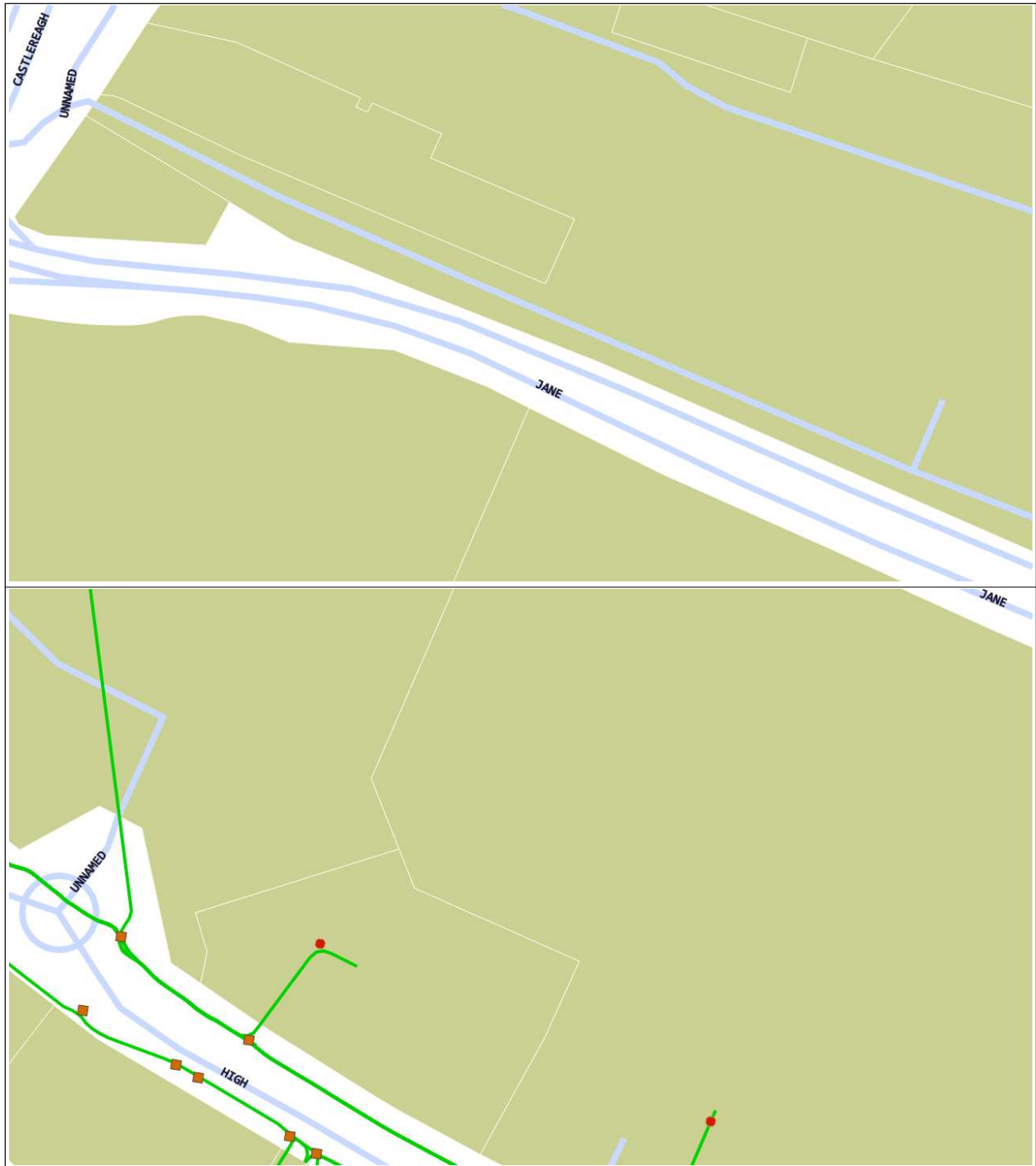




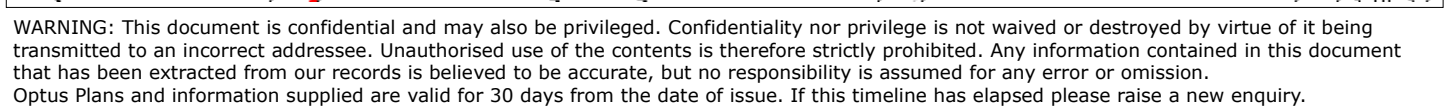
Conditions

The following are conditions on which NBN Co provides you with the Indicative Plans. By accepting the plans, you are agreeing to these conditions. These conditions are in addition (and not in replacement of) any duties and obligations you have under applicable law.

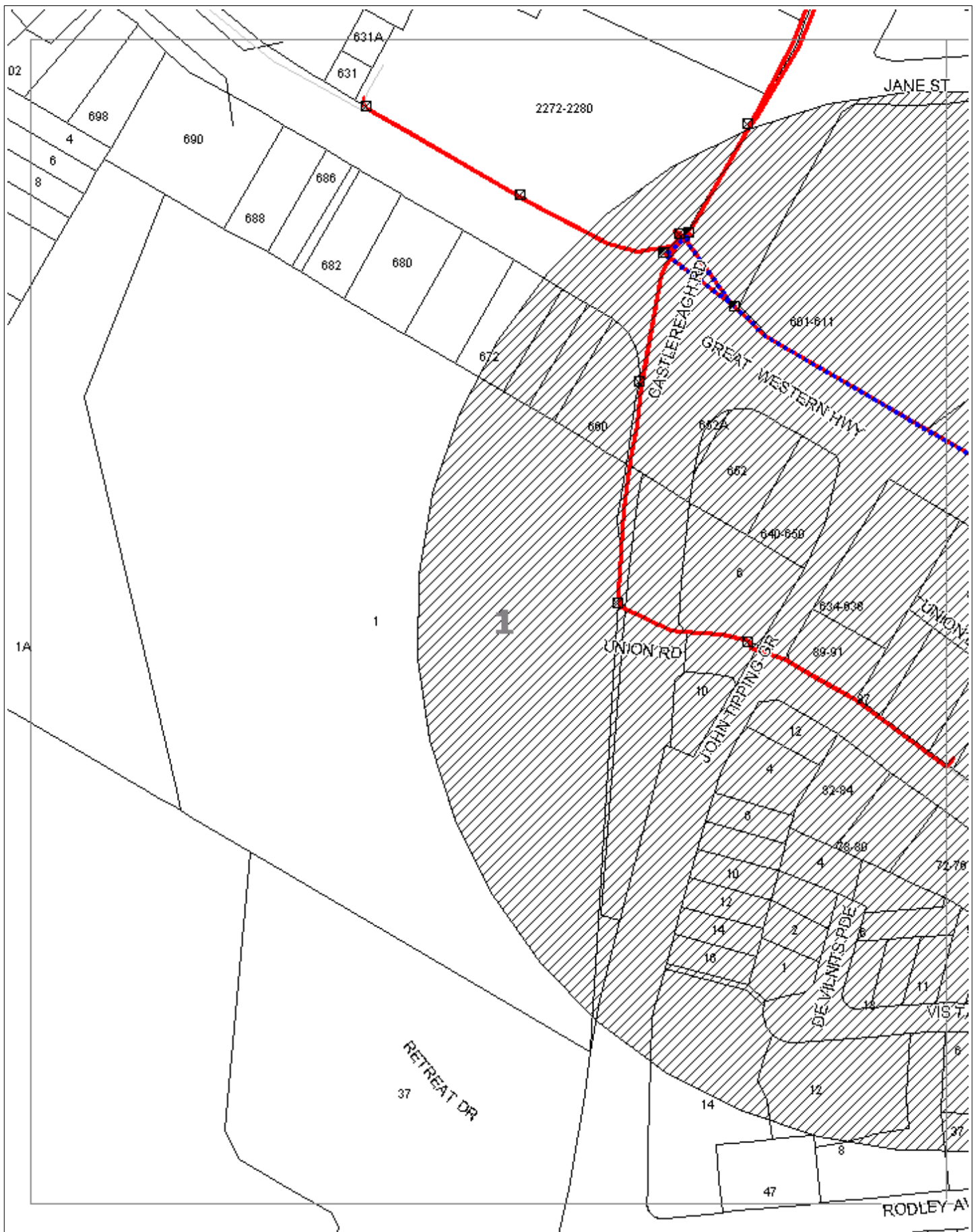
1. NBN Co does not accept any responsibility for any inaccuracies of its plans. You are expected to make your own inquiries and perform your own investigations (including engaging appropriately qualified plant locators at your cost to locate NBN Co telecommunications facilities during any activities you carry out on site).
2. You should not assume that fibre optic cables follow straight lines or are installed at uniform depths along their lengths, even if they are indicated on plans provided to you. Careful onsite investigations are essential to locate the exact position of cables.
3. In carrying out any works in the vicinity of NBN Co facilities, you must maintain the following minimum clearances:
 - 300mm when laying assets inline, horizontally or vertically
 - 500mm when operating vibrating equipment, for example: jackhammers or vibrating plates
 - 1000mm when operating mechanical excavators.
4. You are aware that there are inherent risks and dangers associated with carrying out work in the vicinity of underground facilities (such as NBN Co's optic fibre







Date Generated: 08/10/2015



WARNING: This document is confidential and may also be privileged. Confidentiality nor privilege is not waived or destroyed by virtue of it being transmitted to an incorrect addressee. Unauthorised use of the contents is therefore strictly prohibited. Any information contained in this document that has been extracted from our records is believed to be accurate, but no responsibility is assumed for any error or omission. Optus Plans and information supplied are valid for 30 days from the date of issue. If this timeline has elapsed please raise a new enquiry.

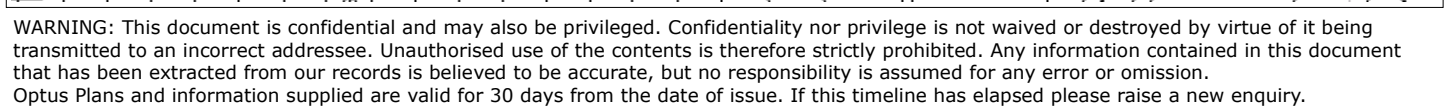
Sequence Number: 48361066

Date Generated: 08/10/2015



For all Optus DBYD plan enquiries –
Email: Fibre.Locations@optus.net.au
For urgent onsite assistance contact 1800 505 777
Optus Limited ACN 052 833 208





Date Generated: 08/10/2015



WARNING: This document is confidential and may also be privileged. Confidentiality nor privilege is not waived or destroyed by virtue of it being transmitted to an incorrect addressee. Unauthorised use of the contents is therefore strictly prohibited. Any information contained in this document that has been extracted from our records is believed to be accurate, but no responsibility is assumed for any error or omission. Optus Plans and information supplied are valid for 30 days from the date of issue. If this timeline has elapsed please raise a new enquiry.

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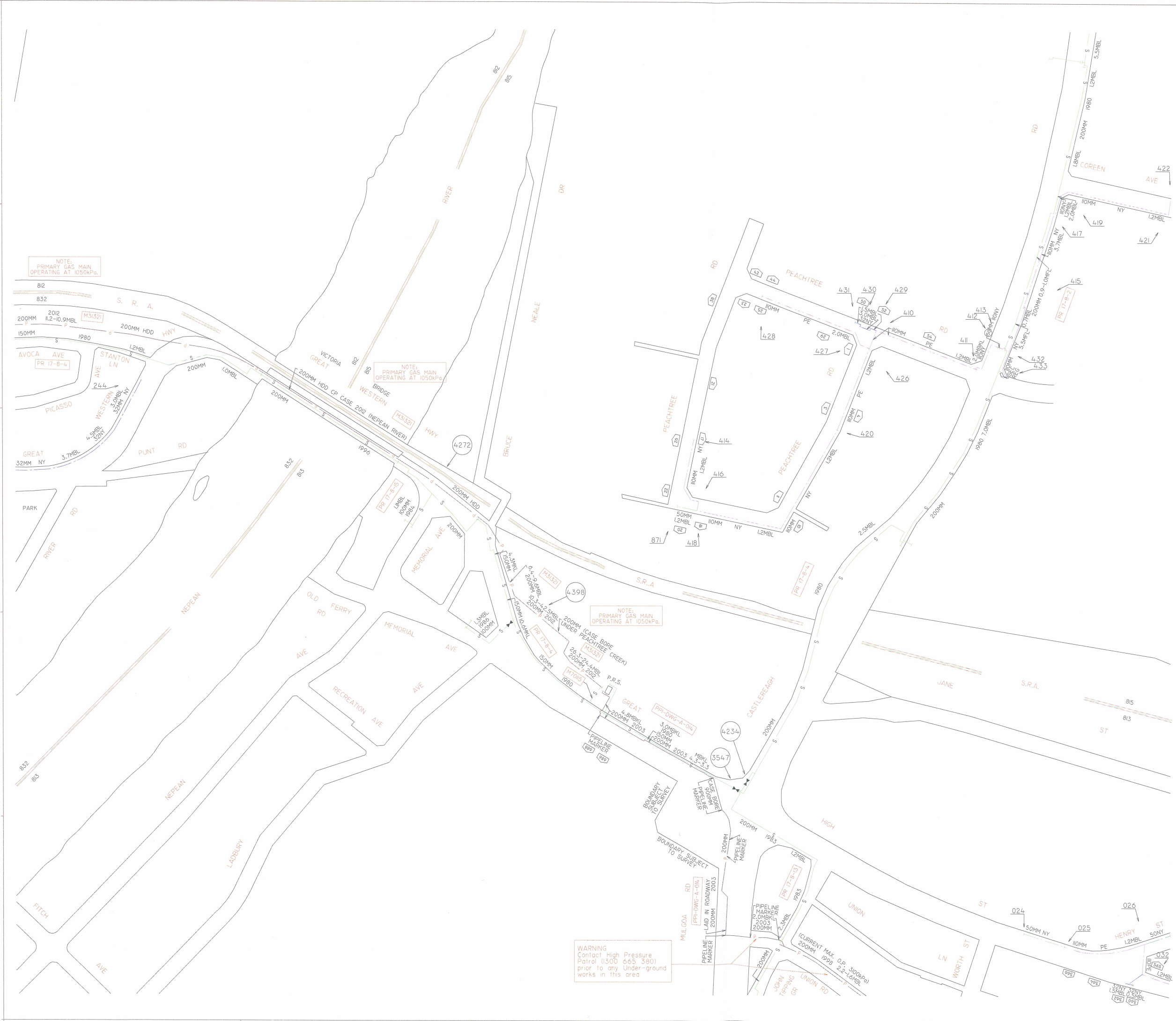
Date Generated: 02/09/2015

OPTUS yes

For all Optus DBYD plan enquiries -
Email: Fibre.Locations@optus.net.au
For urgent onsite assistance contact 1800 505 777
Optus Limited ACN 052 833 208



4. GAS



PENRITH
6A



THIS MAP UPDATED ON 04/06/2014
THIS PLAN IS DIAGRAMATIC ONLY. DISTANCES
SCALED FROM THIS PLAN MAY NOT BE ACCURATE.

PE2D	PE3C	PE3D
PE5B	PE6A	PE6B
PE5D	PE6C	PE6D

ADJOINING MAPS

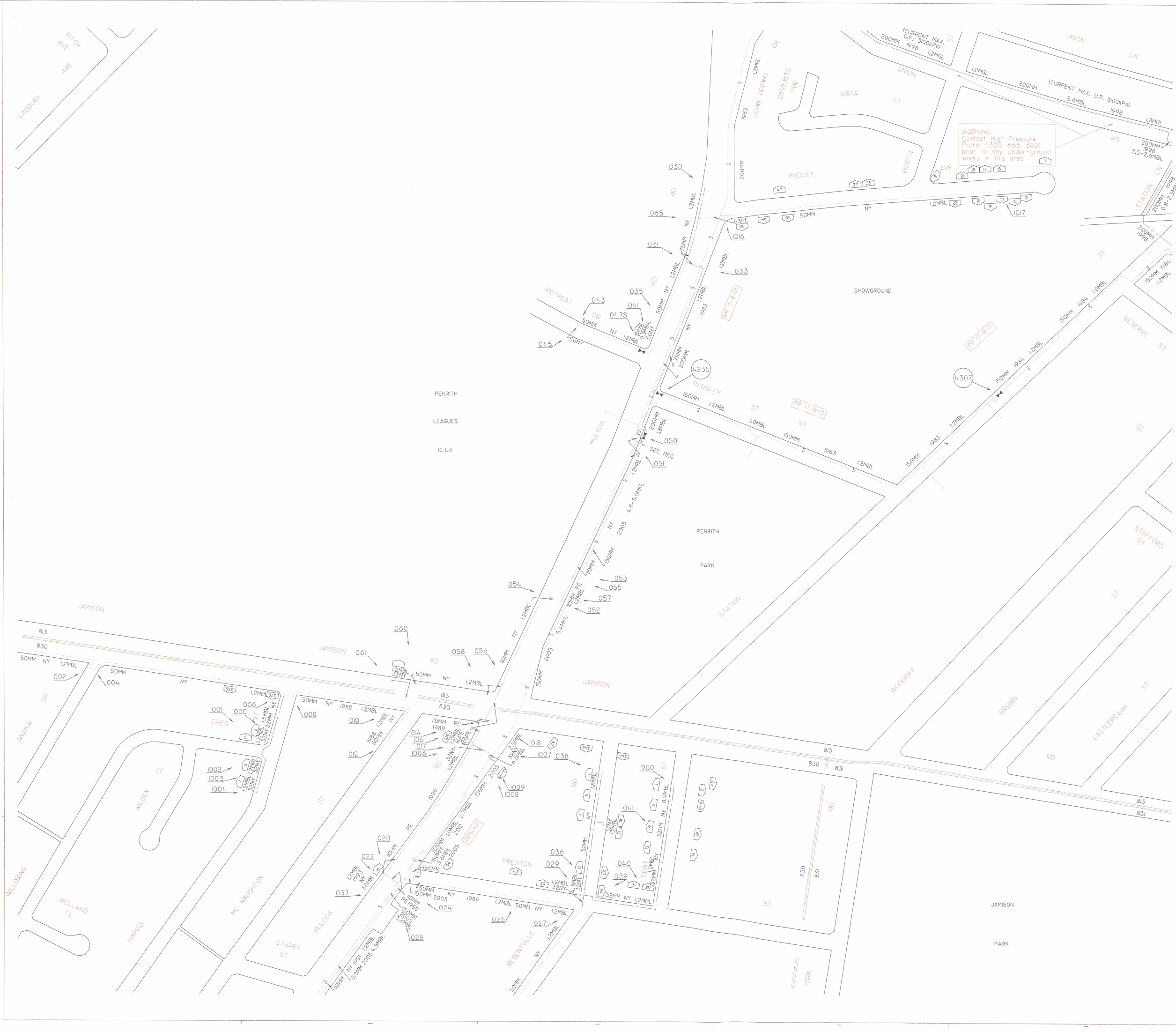


NETWORK AREA MUNICIPALITY AREA

Jemena

KEY

- MAX ALLOWABLE OPERATING PRESSURE
- | | | |
|-----|----------------|----------|
| T | TRUNK PIPELINE | 7000 kPa |
| P | PRIMARY MAIN | 3500 kPa |
| S | SECONDARY MAIN | 1050 kPa |
| 400 | NETWORK MAIN | 400 kPa |
| 300 | NETWORK MAIN | 300 kPa |
| 210 | NETWORK MAIN | 210 kPa |
| 100 | NETWORK MAIN | 100 kPa |
| 30 | NETWORK MAIN | 30 kPa |
| 7 | NETWORK MAIN | 7 kPa |
| 2 | NETWORK MAIN | 2 kPa |
- PR 17-2 3 STEEL MAIN PROJECT NUMBER
- P PRESSURE MONITORING STATION
- V VALVE
- S SYSTEM PRESSURE REGULATOR
- S SIPHON
- 123 NETWORK NODE
- 1235 NETWORK VALVE NODE
- 1998 VALVE NUMBER
- 6NB 6 INCH CAST IRON MAIN
- 150MM 150MM STEEL MAIN
- 110MM PE/NY 110MM POLYETHYLENE/NYLON MAIN
- 6NB 50MM NY 50MM NYLON INSERTED INTO 6NB MAIN CAST IRON MAIN
- 1.2MBL DISTANCE IN METRES OF MAIN FROM BOUNDARY LINE
- 1957 YEAR LAID
- +---+--- MUNICIPALITY BOUNDARY
- NETWORK BOUNDARY
- 123 HOUSE NUMBER



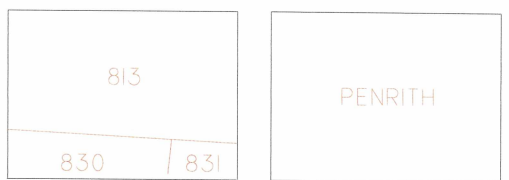
PENRITH 6C



THIS MAP UPDATED ON 16/09/2014
THIS PLAN IS DIAGRAMATIC ONLY. DISTANCES
SCALED FROM THIS PLAN MAY NOT BE ACCURATE.
DATE ALTERED:..... BY:.....

PE5B	PE6A	PE6B
PE5D	PE6C	PE6D
PE8B	PE9A	PE9B

ADJOINING MAPS



NETWORK AREA MUNICIPALITY AREA

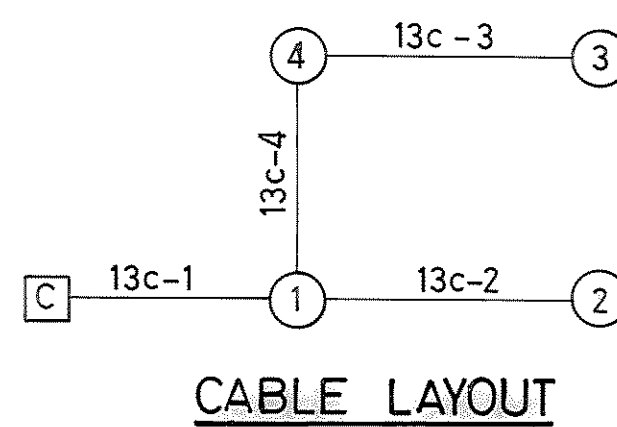
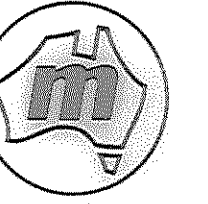
Jemena

KEY

MAX ALLOWABLE OPERATING PRESSURE		
T	TRUNK PIPELINE	7000 kPa
P	PRIMARY MAIN	3500 kPa
S	SECONDARY MAIN	1050 kPa
400	NETWORK MAIN	400 kPa
300	NETWORK MAIN	300 kPa
210	NETWORK MAIN	210 kPa
100	NETWORK MAIN	100 kPa
30	NETWORK MAIN	30 kPa
7	NETWORK MAIN	7 kPa
2	NETWORK MAIN	2 kPa
PR 17-8-13	PROPOSED MAINS	

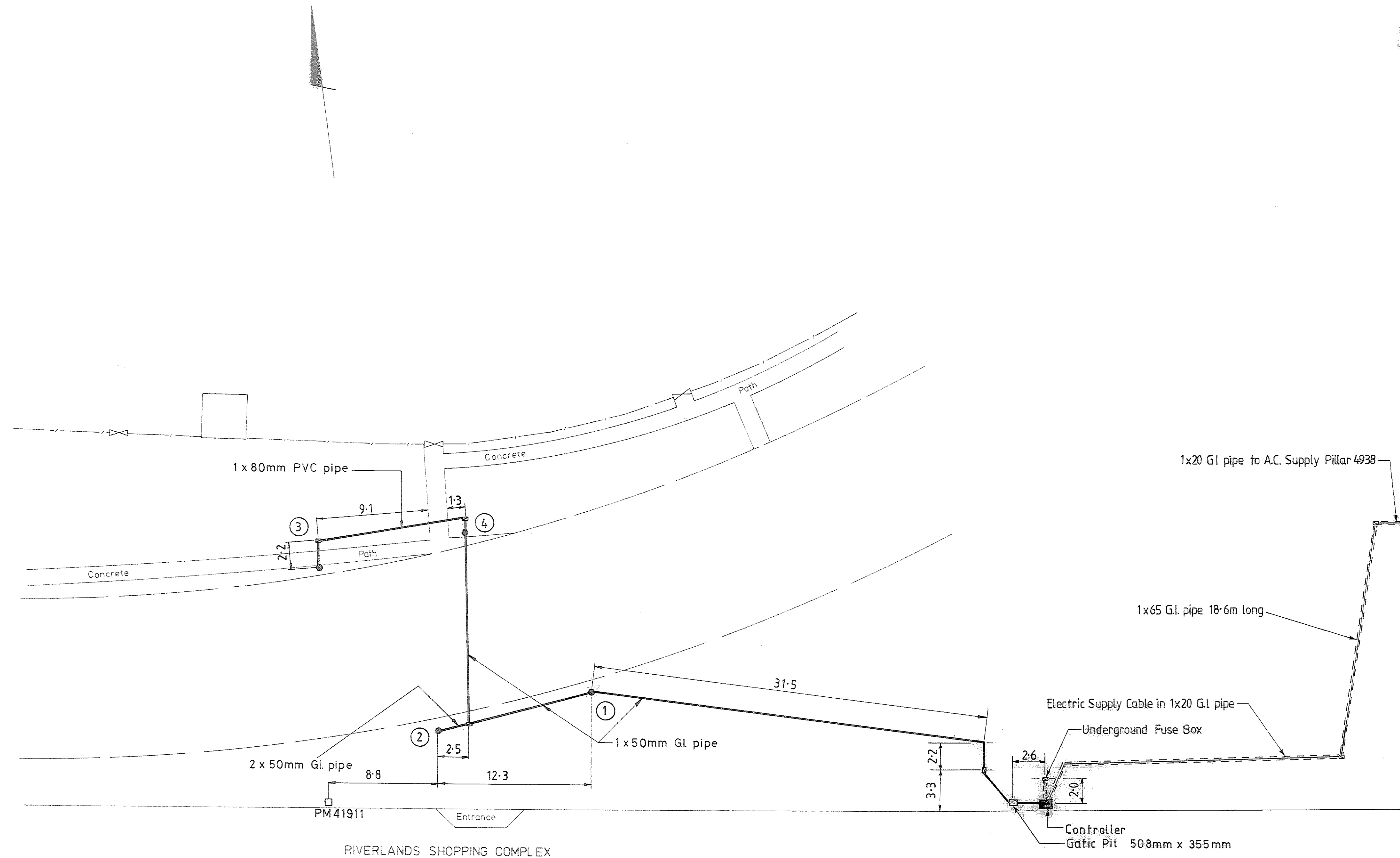
- PR 17-8-13 STEEL MAIN PROJECT NUMBER
- Pressure Monitoring Station
- Valve
- System Pressure Regulator
- Siphon
- Network Node
- Network Valve Node
- Valve Number
- 6 NB 6 INCH CAST IRON MAIN
- 150MM 150MM STEEL MAIN
- 110MM PE/NY 110MM POLYETHYLENE/NYLON MAIN
- 6NB 50MM NY 50MM NYLON INSERTED INTO 6NB MAIN CAST IRON MAIN
- 1.2MBL DISTANCE IN METRES OF MAIN FROM BOUNDARY LINE
- 1957 YEAR LAID
- Municipality Boundary
- Network Boundary
- House Number

5. OTHER MISC. DBYD RESPONSES



CABLE LAYOUT

- NOTES**
1. Pipe diameters are shown in Millimetres. All other dimensions are shown in Metres unless otherwise indicated.
 2. Cable cover in roadways is 0.6m above G.I. or P.V.C. pipe and in footpaths, medians and islands is 0.45m above approved protective material.
 3. All cable in footpaths, islands and medians is installed in 1x90mm Polythene (or 1x80mm P.V.C.) pipe unless otherwise indicated.
 4. All detectors are 4.5m long consisting of two loops each 1.75m long spaced 1.0m apart.
 5. The dimensions of road crossing pipes are as indicated in plan.



CABLE INSTALLATION

A ORIGINAL ISSUE
To Issue JT SW 80
REFERENCE PLAN FOR
CHART CHANGED
A Soni 24.08.95 LC

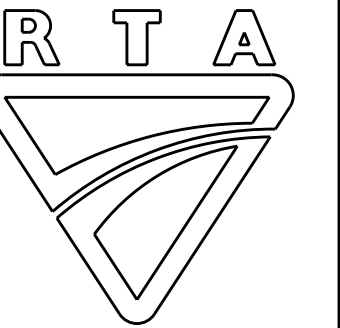
REFERENCE PLANS		SURVEYOR	
Symbols & Abb.	BD003.5	DATE	10.10.86
Standard Posit.	BD001.3	FLD. BK. REF.	MAP 45A G8
Pres. Detectors	2C005.9	DESIGNED	LM 17.7.86
Type 2 Posts	PM202.1	CHECKED	S.P.A. 21.7.86
Det. Schedule Expl.	VD018.7	PASSED	
BN 356 5/86			
Cable Conn. Chart	VD.006.19		
Design Layout	Sheet 7		

APPROVED
K. Chinas
Signals Engineer
DATE 21.7.86

DEPT. OF MAIN ROADS, NSW
CITY OF PENRITH
HIGH ST.
PEDESTRIAN SIGNALS
AT HENRY ST. (WEST)
T.C.S. No.1266

DIVISION: BLACKTOWN		SUPERSEDES	
FILE No.	No. OF SHEETS	SHEET No.	2
358-TS-133	8	ISSUE	
SCALE 1:200	0 1 2 3 4 5 10	Reg. No.	0005.358.VV.1266

W.1267



CASTLEREAGH ROAD

HIGHWAY

MULGOA ROAD

GREAT WESTERN

NOTES:

1. CABLE COVER :-
IN ROADWAY 0.6m ABOVE GI PIPE &
IN FOOTWAY, MEDIANS, ISLANDS IS 0.45m ABOVE
APPROVED PROTECTIVE MATERIAL
UNLESS OTHERWISE STATED
2. ALL ROADCROSSING PIPES ARE 1 x 80mm PVC PIPE
UNLESS OTHERWISE STATED.
3. ALL SIGNAL CABLES ARE INSTALLED IN 1 x 90mm POLYTHENE PIPE
(OR 1 x 80mm PVC PIPE) UNLESS OTHERWISE STATED.
4. ANTTS ANTENNA IS MOUNTED ON POST 1
A 2c COAXIAL CABLE IS INSTALLED BETWEEN THIS POST
AND CONTROLLER, REFER TO PLAN VE542-13
5. CCTV CAMERA MOUNTED ON TYPE 4 POST NO. 10. REFER TO
PLAN VE539-31.

1 x 65 PVC PIPE
0.8m COVER

1 x 50NB GI PIPE

1 x 32NB GI PIPE
TERMINATING IN CAVITY
OF AMBULANCE WALL

CONTROLLER

CCTV HOUSING

OLD POST BASE

VIOLATION DETECTORS (16)

2 x 80mm PVC PIPES

CCTV CAMERA
(SEE NOTE 5)

FLASH POST
1x80mm PVC PIPE

CAMERA POST

CAMERA POST
FLASH POST

VIOLATION DETS. (16)

SIGNAL CABLE LAYOUT

1,2,6 & 7
3,4 & 9
5
10, 11 & 15
12 & 17
13 & 14

4x2c
3x2c
1x2c
3x2c
2x2c
2x2c

2c COAX
ANTTS

29c- 1

29c- 2

29c- 3

29c- 4

29c- 5

29c- 6

29c- 7

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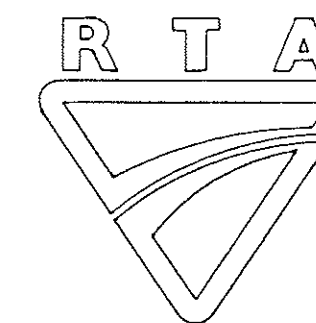
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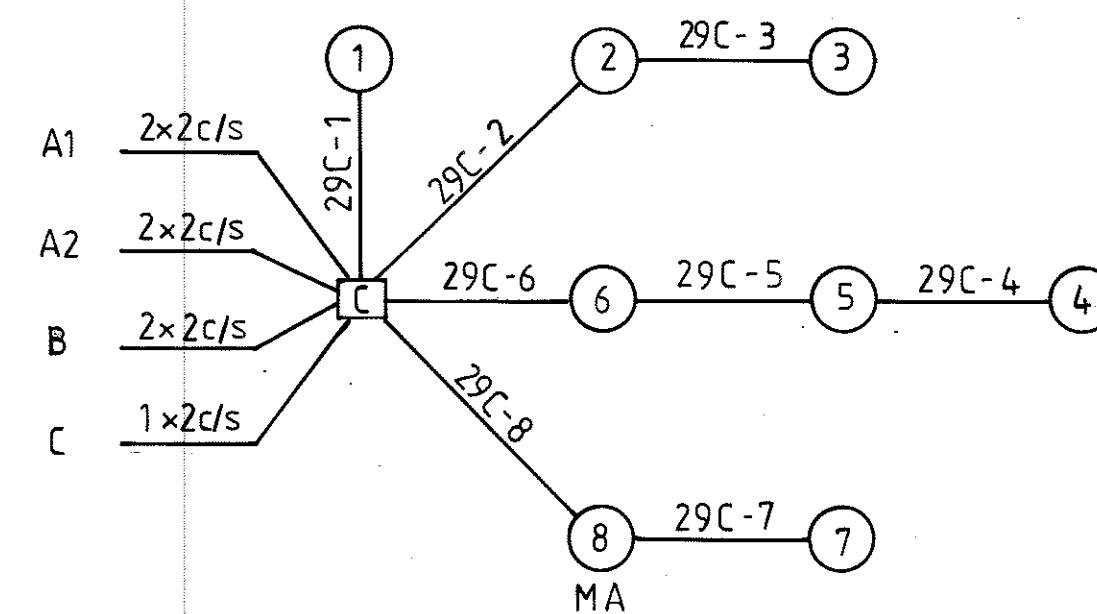
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DATE IN SERVICE : 00/00/00

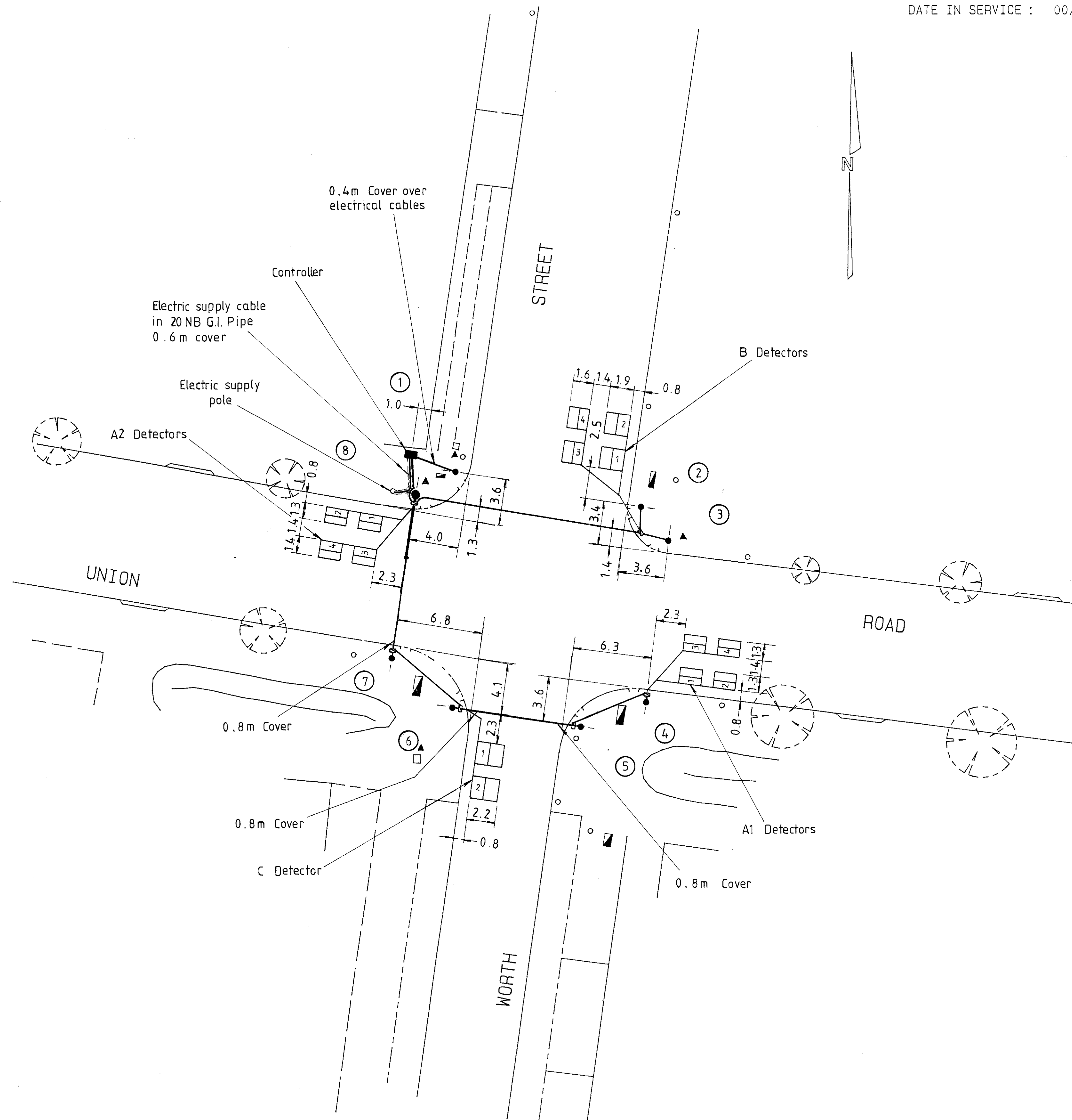


CABLE LAYOUT



NOTES

1. CABLE COVER - IN ROADWAY 0.9m ABOVE PIPE
IN FOOTWAY 0.5m ABOVE PIPE
UNLESS OTHERWISE STATED.
2. ALL CABLES IN FOOTWAY ARE INSTALLED IN 1x80
HD PVC CONDUIT UNLESS OTHERWISE STATED.
3. ALL ROADCROSSING PIPES ARE 1x80 HD PVC CONDUIT.



CABLE INSTALLATION

A ORIGINAL ISSUE

PUBLIC UTILITY LEGEND		REFERENCE PLANS	U.B.D. Ref. 45A H.B.
HYDRANT	□	SYMBOLS/ABBS. VD003-6	I.S.B. E
STOP VALVE	▲	STD POSIT VD001-5	CO-ORDS N
GAS VALVE	#	DET. SCHED EXP VD018-10	DESIGNED CORRIAN ELECTRICS
SEWER MANHOLE	⊗	PHOS. DETECT 20005-9	CHECKED G.M. 16.4.92
TELECOM PIT	⊗	SSS DIS. SEG. VD018-8	DATE 22.5.92
ELECT LIGHT POLE	○	DESIGN SHEET 1	
POWER POLE	○	CABLE CHART SHEET 3	
STAY POLE	○	SURVEYOR :	
TELEPHONE BOX	□	DATE :	
TELECOM PILLAR	●	LOGIN :	

APPROVED

[Signature]
NAME
POSITION
DATE

Roads and Traffic Authority, N.S.W

CITY OF PENRITH
WORTH STREET
AND UNION ROAD
AT PENRITH

TCS No 2476

REGION: SYDNEY WESTERN DIVISION: PARRAMATTA OPS

DOGS DRAWING FILE: VV_2476_1A.DWG LOGIN: TCS_2476_01

SCALE 5 0 (1:200) 5 10

FILE 358.TS.213

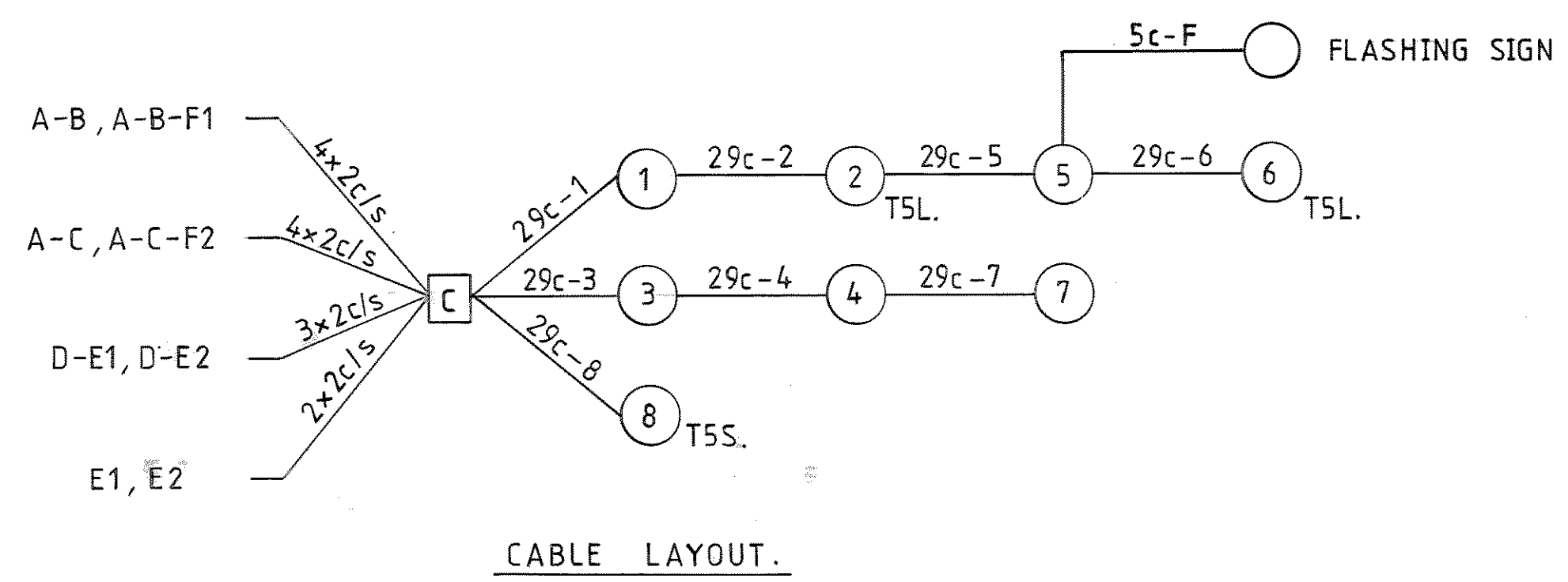
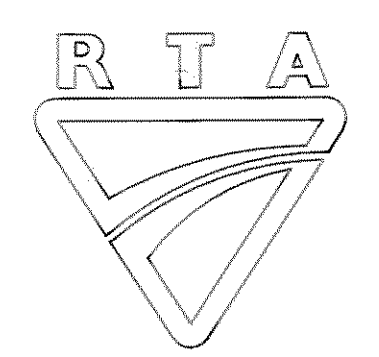
SUPERSIDES SHEET

REGN. 7000.358.VV 2476

ISSUE

SHEET 2

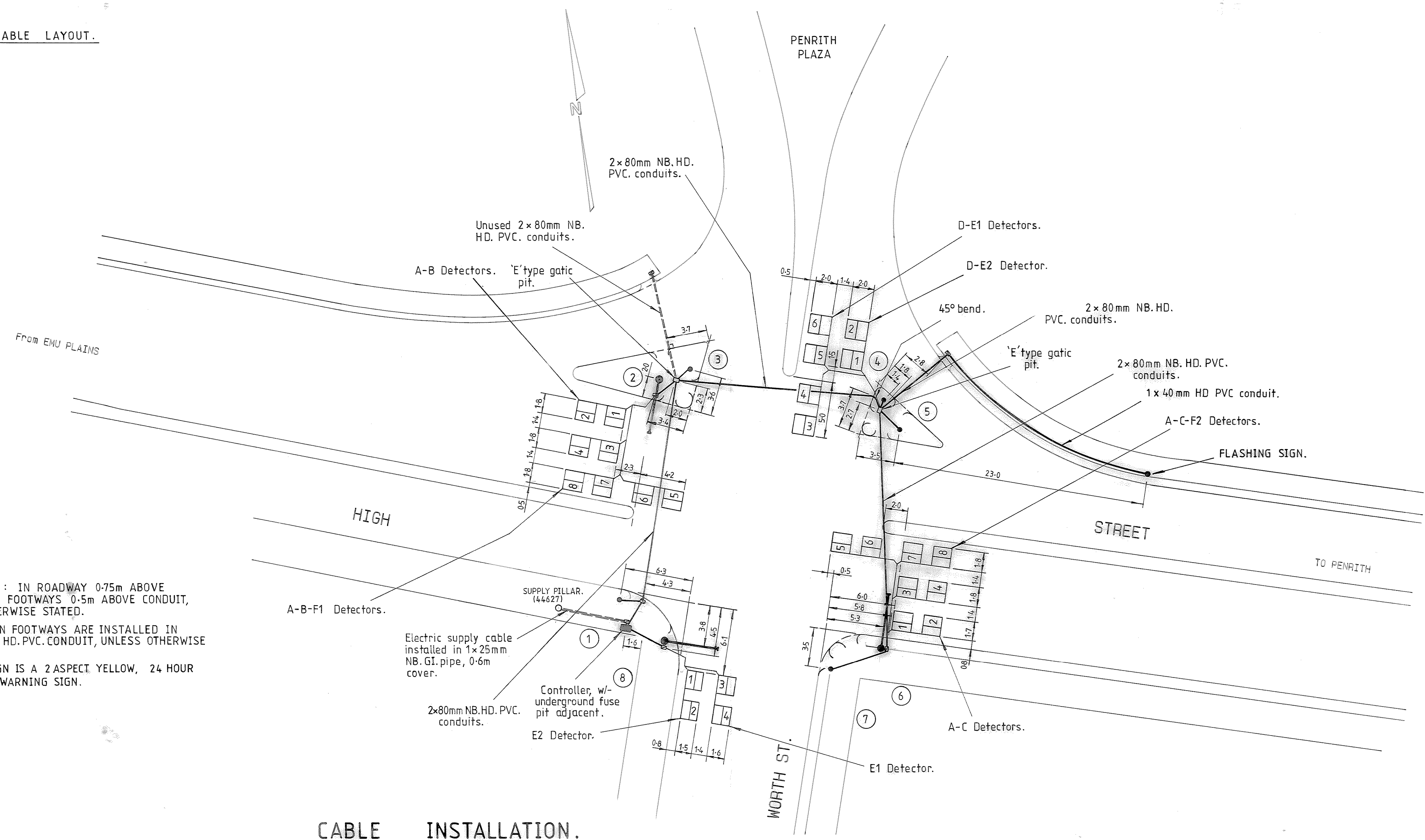
7000.358.VV.2622



NOTES :-

1. CABLE COVER : IN ROADWAY 0.75m ABOVE CONDUITS. IN FOOTWAYS 0.5m ABOVE CONDUIT, UNLESS OTHERWISE STATED.
2. ALL CABLE IN FOOTWAYS ARE INSTALLED IN 1x80mm NB. HD. PVC. CONDUIT, UNLESS OTHERWISE STATED.
3. FLASHING SIGN IS A 2 ASPECT YELLOW, 24 HOUR PEDESTRIAN WARNING SIGN.

CABLE INSTALLATION.

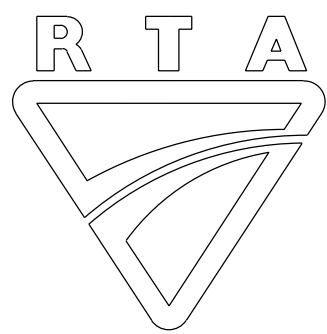


A ORIGINAL ISSUE BY ISSUE :- WAE. FLASHING SIGN INDICATES, NOTE 3 ADDED. 1/2.	PUBLIC UTILITY LEGEND		REFERENCE PLANS		U.B.D. Ref. Map 45a 68		APPROVED		Roads and Traffic Authority, N.S.W.		REGION: SYDNEY WESTERN		DIVISION: PARRAMATTA OPS		
	HYDRANT		SYMBOLS/ABBS.		I.S.S. E: 271240		SIGNED		CITY OF PENRITH		DRAWING FILE:		LOGIN:		
	STOP VALVE		STD POST		CO-ORDS N: 1263844		CHECKED		HIGH STREET AND WORTH STREET		SCALE 5 0 (1:200) 5 40		ISSUE		
	GAS VALVE		DET SCHED EXP		DESIGNED CNJ. ELECTRICAL		NAME		PENRITH		FILE 358.TS.212		SUPERSEDES SHEET		
SEWER MAINHOLE		PRES. DETECT		20005-9		CHECKED		DATE		REGN.		7000.358.VV.2622		SHEET	
ELECT. LIGHT POLE		SSS DIS. SEQ.		VD018-9		CHECKED		DATE		TCS No 2622		7000.358.VV.2622		2	
STAY POLE		WIRING CHART		SHT 3		CHECKED		DATE							
TELEPHONE BOX		DATE				CHECKED		DATE							
TELECOM PILLAR		LOGIN				CHECKED		DATE							

0155.358.W2710

DRAWN BY CADD
DO NOT AMEND MANUALLY

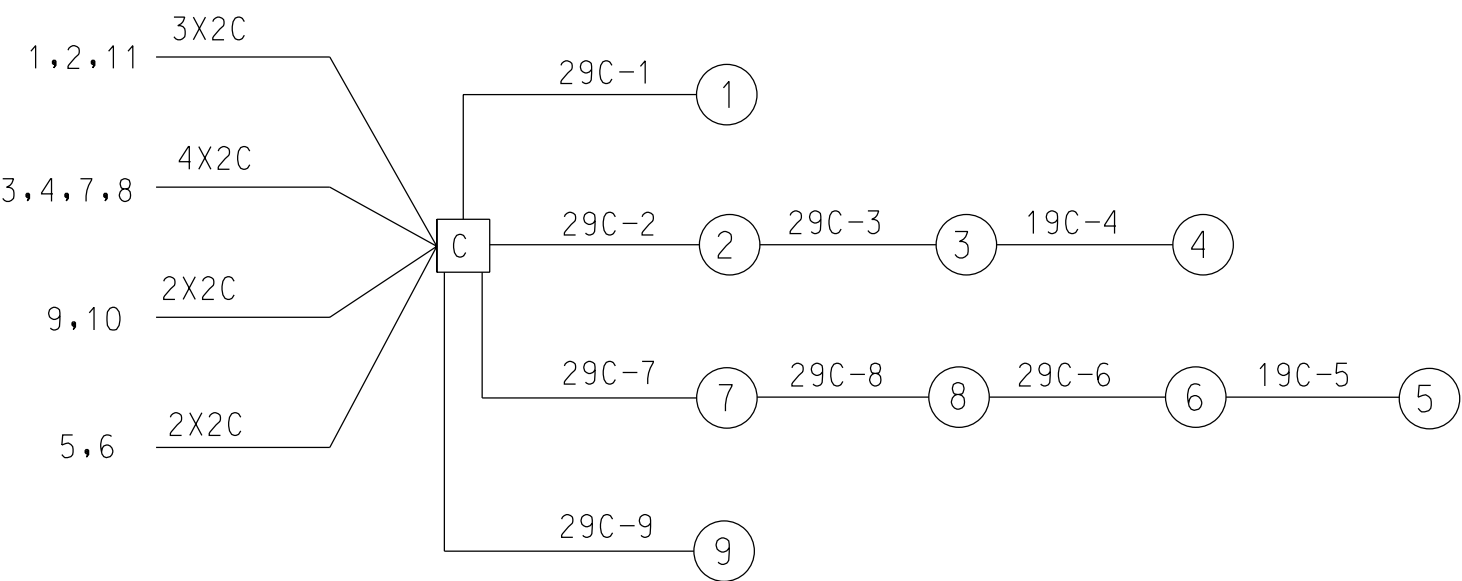
DATE IN SERVICE : 29/11/85



NOTES

- 1. CABLE COVER: IN ROADWAYS 0.6m ABOVE PIPE. IN FOOTWAYS 0.5m ABOVE PIPE UNLESS OTHERWISE STATED.
- 2. ALL CABLES IN FOOTWAYS ARE INSTALLED IN 1 X 80 HD PVC CONDUIT UNLESS OTHERWISE STATED.
- 3. ALL ROADCROSSING PIPES ARE 1 X 50 HD PVC CONDUIT UNLESS OTHERWISE STATED.

CABLE LAYOUT



P A R K

CASTLEREACH
MR155

C O M M E R C I A L

JANE STREET

R O A D

C O M M E R C I A L

A ORIGINAL ISSUE	PUBLIC UTILITY LEGEND		REFERENCE PLANS		U.B.D.Ref Map 163 H9 I.S.G. E: 271 023 CO-ORDS N: 1 264 114		DESIGN APPROVAL		Roads and Traffic Authority,N.S.W		EXISTING ☒ PROPOSED ☐		
	HYDRANT ☐ SYMBOLS/ABBS. VD003-6		STD. POSIT. VD001-5		DESIGNED CNJ		APPROVED CON SHAKAS		PENRITH CITY COUNCIL AREA TRAFFIC SIGNALS AT THE INTERSECTION OF CASTLEREACH ROAD (MR155) AND JANE STREET PENRITH		CADD FILE: W2710_8A_INS.dgn		
	STOP VALVE ☐ DET. SCHED. EXP. VD018-10		PRES. DETECT. VC005-17		CHECKED L. CLAY		POSITION TET. MANAGER		SCALE 5 0 (1:200) 5 10		ISSUE A		
	GAS VALVE ☐ SSG. DIS. SEQ. VD018-8		DESIGN. SHEET 7		L. EERLAND SITE CHECKED		DATE 01.12.06		FILE 358.TS.183		SUPERSEDES SHEET/ISSUE 5A		
ELECT. LIGHT POLE ☐ CABLE CHART SHEET 9		SURVEYOR : Degotardi, Smith		RECOMMENDED		CABLE INSTALLATION		TCS No 2710		REGN. 0155.358.W.2710		SHEET 8	
POWER POLE ☐		DATE : 2002											
STAY POLE ☐													
TELEPHONE BOX ☐													
TELECOM PILLAR ☐													