

Ref: BMY/LF 300001(2)

18th February 2022

General Manager Ryde City Council Locked Bag 2069 NORTH RYDE NSW 1670

Noted on Lidia P-18/02/2022

Attention: Gasan Mohamad

Dear Gasan,

IVANHOE ESTATE SECTION 138 WORKS - CIVIL DESIGN STATEMENT

We hereby certify that the civil design depicted on the drawings in the register below, comply with all conditions of consent SSD 8903 and is generally in accordance with Council's DCP 2014 Part 4.5 Macquarie Park Corridor, Part 8.5 Public civil Works, Part 8.2 Stormwater Management, Public Domain Technical Manual Section 6 – Macquarie Park Corridor and all relevant Australian Standards.

Drawing No.	Name
300001(S138)-ENG-001	COVER SHEET, INDEX OF DRAWINGS & LOCALITY SKETCH
300001(S138)-ENG-002	GENERAL NOTES
300001(S138)-ENG-003	OVERALL SITE PLAN
300001(S138)-ENG-101	DETAIL PLAN
300001(S138)-ENG-151	PAVEMENT PLAN & DETAILS
300001(S138)-ENG-201	ROAD LONGITUDINAL SECTION - ROAD No.01
300001(S138)-ENG-202	DRIVEWAY LONGITUDINAL SECTION - DRIVEWAY No.3
300001(S138)-ENG-211	KERB RETURN LONGITUDINAL SECTIONS - KR103 & KR103A
300001(S138)-ENG-212	KERB RETURN LONGITUDINAL SECTIONS - KR10 & KR11
300001(S138)-ENG-401	STORMWATER CATCHMENT PLAN
	STORMWATER CALCULATION CHARTS - 20 & 100 YEAR A.R.I & PIT
300001(S138)-ENG-411	LPR 1\1 SETOUT PLAN
300001(S138)-ENG-701	PROPOSED VEHICLE SWEPT PATH PLAN - SHEET 1
300001(S138)-ENG-702	PROPOSED VEHICLE SWEPT PATH PLAN - SHEET 2
300001(S138)-ENG-703	PROPOSED VEHICLE SWEPT PATH PLAN - SHEET 3
300001(S138)-ENG-751	LINEMARKING & SIGNAGE PLAN
300001(S138)-ENG-901	SERVICES RELOCATION PLAN
300001(S138)-ENG-902	SERVICES RELOCATION SECTIONS

ADW JOHNSON PTY LIMITED

ABN 62 129 445 398

Hunter Region

7/335 Hillsborough Road, Warners Bay NSW 2282

Ph. 02 4978 5100 Fax. 02 4978 5199 Video. 02 4954 3948

Email. <u>hunter@adwjohnson.com.au</u>

Central Coast

5 Pioneer Avenue, Tuggerah NSW 2259 PO Box 3717, Tuggerah NSW 2259

Ph. 02 4305 4300 Fax. 02 4305 4399 Video. 02 43054374

Email. <u>coast@adwjohnson.com.au</u>



Should you have any queries, please do not hesitate to contact the undersigned.

Yours faithfully,

Nathan Delaney

Senior Civil Engineer
MIEAust CPENG NER
ADW Johnson Pty Ltd
Central Coast

N Delary

ADW JOHNSON PTY LIMITED

ABN 62 129 445 398

Hunter Region

7/335 Hillsborough Road, Warners Bay NSW 2282

Ph. 02 4978 5100 Fax. 02 4978 5199 Video. 02 4954 3948

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www.adwiohnson.com.au

5 Pioneer Avenue, Tuggerah NSW 2259 PO Box 3717, Tuggerah NSW 2259

Ph. 02 4305 4300 Fax. 02 4305 4399 Video 02 43054374

Appendix B Public Lighting Form - Contestable Projects Only (Illumination Design Certificate & Agreement To Pay Residual Value) AUSPL CON F01A

PUBLIC LIGHTING FORM - Contestable Projects | AUSPL - CON F01A

Public Lighting Customer: A Public Lighting Customer is a Council (as defined by the Local Government Act 1993) or a Local, State or Federal Government Agency that has authority over areas of Public Lighting. There are other existing Public Lighting Customers who are not a government agency and do not have a responsibility over public lighting in public areas to whom this form is not applicable.

Customer: For the purposes of this document a Customer is a person who proposes to connect to Ausgrid's distribution network (or who is modifying an existing connection) where the connection works include the establishment of public lighting infrastructure. A Customer can be a property developer, a builder or a construction company or a member of the general public.

general public.							
Illumination Design Certificate	This form is for Customer Initiated and fu Lighting Projects only. All fields are mand with all appropriate signatures should be	datory. The original copy					
Ausgrid ABN 78 508 211 731	Contestability Group.	Contestability Group.					
Project details To be filled by	Ausgrid						
Ausgrid Project No	Project name/location						
Customer details To be filled	by Customer						
Name	Address						
(Public Lighting Customer / Develope	er / Builder or member of the General Public)						
Phone	Email						

SECTION 1 Customer or ASP/3 To be filled by Customer funding the project or the Accredited Service Provider Level 3 authorised by the Customer

To: Ausgrid

The attached project (electrical connection design) package has been prepared to meet Ausgrid's connection requirements and the associated Illumination Design (if applicable) has been prepared to meet the requirements of the Public Lighting Customer and is submitted on behalf of the Customer. The following Option applies to this package. (Tick Option 1 or 2)

□ Option 1

ASP/3 Electrical Connection Design package only is attached. Illumination Design is not required for whatever reason. Note: Ausgrid is not responsible for non compliance with the Australian Standard AS / NZS 1158 series on Road Lighting. *Complete Sections 2, 3 and 5*.

■ Option 2

ASP/3 Electrical Connection Design package and the Illumination Design prepared by Shelmerdines Consulting Engineers (state name of Lighting Designer/Consultant) are attached. Complete Sections 2,3,4 and 5

The Lighting Designer / Consultant, should ensure that the illumination design meets the requirements of AS / NZS 1158 series as per compliance certificate and declaration below (if applicable). The appropriate lighting level below is per the

1

March 2017

requirements determined by the Public Lighting Customer or the Department of Planning or other State Agency in the Development Application (DA) or any other directive received.

SECTION 2 Existing Ausgrid Public Lighting Assets To be filled by Accredited Service Provider Level 3

Please indicate if existing public lighting assets are being removed below.

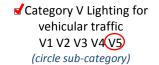
The design pack lighting assets c				ate) require the ea	rly removal or	replacement of public
SECTION 3 A	ASP/3 Detai	ls To be fi	lled by Accredited	d Service Provider L	evel 3	
Company nam	ne	SHELME	RDINES CONSULT	TING ENGINEERS	ABN	40 003 331 879
Phone	02 9436 3021			Address	PO BOX 1345	CROWS NEST NSW 1585
Email	Elbert@Shelme	erdines.com	ı.au			
ASP/3 Contact	ELBERT WAN	G		Signature	Elbe	4
Date	Print Name	01	/ 2022			

SECTION 4 Compliance Certificate from Lighting Designer/Consultant

of (company)	SHELMERDINES CONSULTING ENGINEERS	
Confirm that:		
1. I carried out t	he illumination design work required for	

(position)

2. The illumination design achieves compliance / does not achieve compliance (circle as appropriate) with Australian Standard AS/NZS 1158 series for: (tick the relevant category)



Australian Standard AS/NZS 1158 series.

ELBERT WANG

AN12710, LOCATED AT LYONPARK RD MACQUARIE PARK,

(name)

✓ Category P Lighting for pedestrian traffic and pedestrian crossings P1 P2 P3 P4 P5 PR3 (circle sub-category)

ELECTRICAL ENGINEER

(Project name/location) to achieve compliance with

3. The street lighting assets chosen are from the Standard List of Assets - Ausgrid's Network Standard NS119

Designer/consultant details

Name	ELBERT WANG	Phone	02 9436 3021
Email	Elbert@Shelmerdines.com.au	ABN	40 003 331 879
Address	PO BOX 1345 CROWS NEST NSW 1585	Signature	Eller

2

_								-					
L													
Date	17	/	01	/	2022								
-													
SECTION 5 Pu	_	_	Custo	omer	Section	On (Loca	l, State oi	r Feder	al Govern	nment Ag	gency th	at has the	? authority
To: Ausgrid													
I (Name of authoris	sed Public L	.ighting	Custom	er Repi	resentativ	/e) <u>\</u>	<u> Vayne</u>	e Ryla	<u>ands</u>				
on behalf of													
(Name of Public Lig	hting Custo	omer)		=	с	ity Of	Ryde						
acknowledge and	make the	follow	ving dec	claratio	ons								
For all options:													
 The Public Ligh determining whe series. 													
2. The Public Light should should should design package h regard.	t (circle a	s appro	priate)	achie	ve comp	liance w	ith AS/N	IZS 115	58 series	and ag	rees th	-	-
3. The Public Ligh AN-1 accepts the lighti	2710		(inse	ert des	ign num	<i>ber)</i> and					_	applicab	ole, and
4. Where the pro Ausgrid:	ject requi	res the	early re	eplace	ment or	remova	l of publ	lic light	ting asse	ts const	tructed	and mai	ntained by
a. the Public Li _l those assets The "Early Replaceme	assets wh	ich are	_			-	-	-		-		-	
b. The Public Li provided by Ausg				-	-			ent of	annual (charges	in relat	tion to th	e services
c. The Public Li Ausgrid to allow t						rly remo	val of Ea	rly Re	placeme	nt Asse	ts and h	nas reque	ested
d. The AER Det removed early at							es for Au	isgrid t	o charge	e for the	e residu	al value (of assets
e. Ausgrid has Public Lighting Cu	_		-		-	_	_					-	
f. The Residual Lighting Services Residual Value fo sent to the Public stated above) and	at \$ <u>6</u> r projects Lighting (comple custom	eted be	(ex etween the Res	cluding 1 April sidual Va	GST). Au through alue afte	isgrid will to the 3 r 30 June	ll invoi 11 Mar e in th	ice the P ch the fo e same o	ublic Lig ollowing calendar	ghting (year. ryear a	Customer The invo	r for the ice will be

March 2017 3

Where Option 2 has been checked:

The Public Lighting Customer has determined that the public lighting included in the project should achieve compliance with AS/NZS 1158 series. The Public Lighting Customer accepts responsibility for the lighting design levels achieved where:

- 1. The certification provided to it by the Lighting Designer / Consultant meets the requirements of AS/NZS 1158 as per the compliance certificate in Section 4 of this form.
- 2. The lighting levels are to be achieved irrespective of whether it was instructed as a pre-condition for approval of the Development Application or any other directive issued.

Ongoing Annual Charges for New Public Lighting (PL) Assets

Once the public lighting infrastructure has been commissioned, the responsibility for the ongoing maintenance of the public lighting infrastructure will then be assumed by Ausgrid.

Ausgrid will charge the Public Lighting Customer an annual charge for any new (including altered) public lighting assets as per the rates set out on Ausgrid's website.

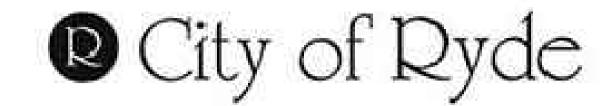
Link to the price list on Ausgrid's website

The signature below is an approval of the lighting and connection design works only. The public lighting charges have already been approved by the AER.

customer representative O4/ 02 / 202	Signature of public lighting customer representative	Wayne Rylands	Date 04 / 02 / 2022
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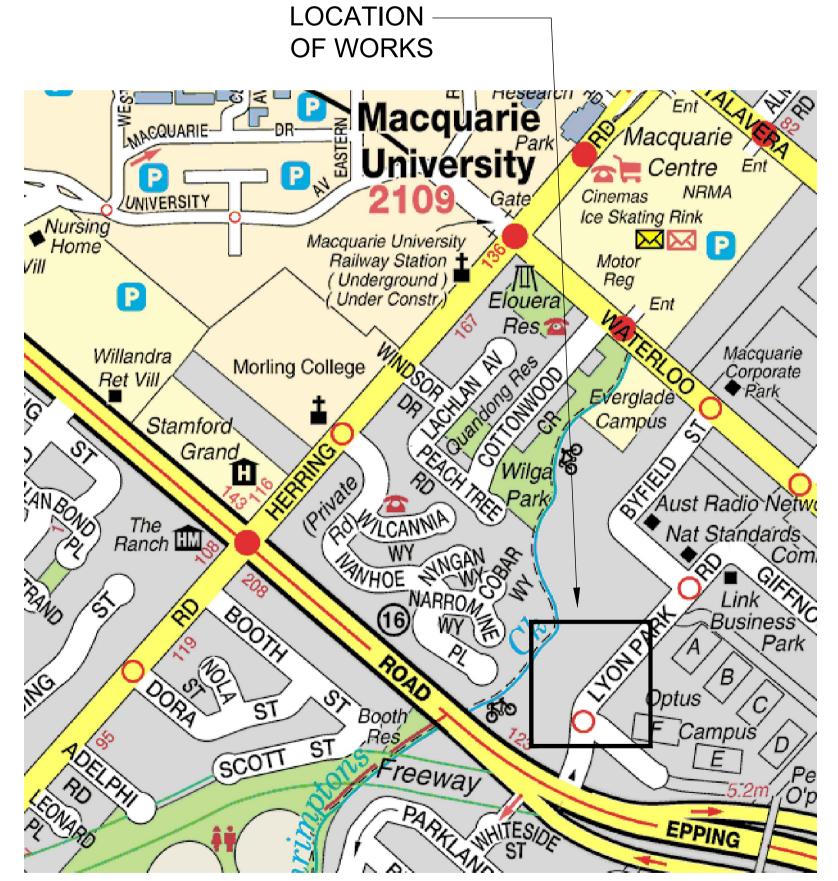
March 2017 4





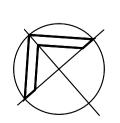
PUBLIC LIGHTING DESIGN **IVANHOE ESTATE MACQUARIE PARK**

LYONPARK ROAD DETAILED LIGHTING DESIGN SSDA - 8903



	SHEET INDEX		
SHEET NUMBER	DESCRIPTION	REV	
6820-ES-601	COVER SHEET /	G)	
6820-ES-602	SITE PLAN	G	
6820-ES-603	COLUMN AND FOUNDATION DETAILS	C	
6820-ES-604	SINGLE LINE DIAGRAMS, SWITCHBOARD AND WIRING DETAILS	Е	
6820-ES-605	GENERAL NOTES	C	
6820-ES-606	LIGHTING CALCULATIONS SHEET 1	Ď	\triangle
6820-ES-607	LIGHTING CALCULATIONS SHEET 2 AND LIGHTING CERTIFICATION	Е	/G
6820-ES-608	CIRCUIT DIAGRAM	C	





No.	Description	Drn	Ckd	Date	No.	Description	Drn	Ckd	Date
Α	FOR APPROVAL	EW	DT	04.11.21					
В	SHEET INDEX UPDATED	EW	DT	24.11.21					
С	SHEET INDEX UPDATED	EW	DT	03.12.21					
D	SHEET INDEX UPDATED	EW	DT	17.12.21					
Е	SHEET INDEX UPDATED	EW	DT	14.01.22					
F	SHEET INDEX UPDATED	EW	DT	24.01.22					

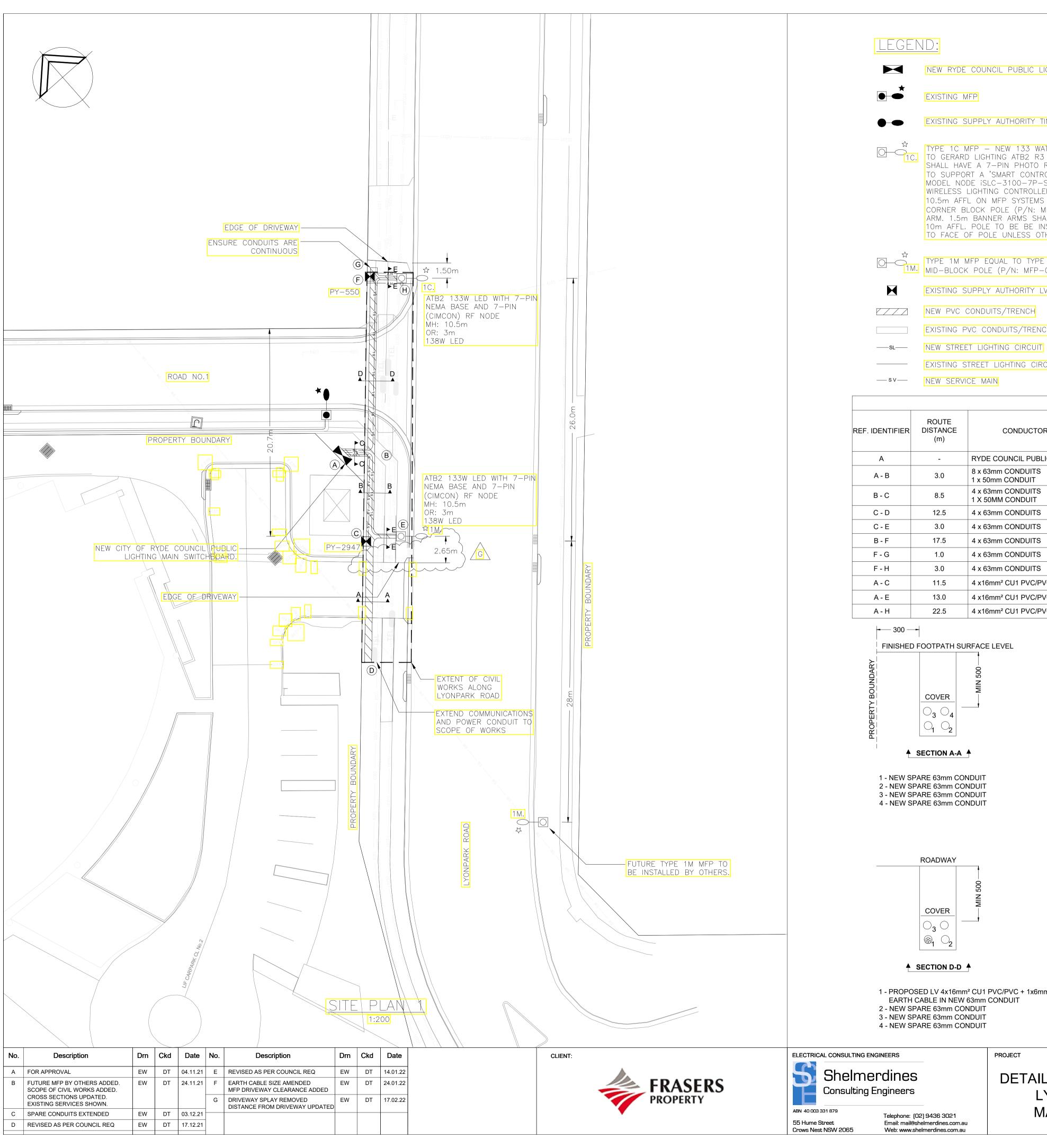


CLIENT:



PROJECT
DETAILED LIGHTING DESIGN
LYONPARK ROAD,
MACQUARIE PARK

DRAWING ELECTRICAL SERVICES	DATE NOV 2021	SCALE NTS @ A1		
COVER SHEET	DRAWN EW	CHECKED DT		
	DRAWING NUMBER 6820-ES-601	ISSUE NUMBER		



NEW RYDE COUNCIL PUBLIC LIGHTING MAIN SWITCHBOARD

EXISTING SUPPLY AUTHORITY TIMBER POLE AND LUMINAIRE

TYPE 1C MFP - NEW 133 WATT 4000°K LED STREETLIGHT EQUAL TO GERARD LIGHTING ATB2 R3 IN SELECTED COLOUR. LUMINAIRE SHALL HAVE A 7-PIN PHOTO RECEPTACLE AND RF NODE IN ORDER TO SUPPORT A 'SMART CONTROL' SYSTEM. INSTALL A CIMCON MODEL NODE iSLC-3100-7P-S-xxx-A-G-10-CATB-05 AND PLAY WIRELESS LIGHTING CONTROLLER. LUMINAIRE TO BE MOUNTED AT 10.5m AFFL ON MFP SYSTEMS (SUPPLIER) 12m ALUMINIUM CORNER BLOCK POLE (P/N: MFP-015) AND OFF A 3m OUTREACH ARM. 1.5m BANNER ARMS SHALL BE PROVIDED AND MOUNTED AT 10m AFFL. POLE TO BE BE INSTALLED 1000 FROM FACE OF KERB TO FACE OF POLE UNLESS OTHERWISE SPECIFIED.

TYPE 1M MFP EQUAL TO TYPE 1C WITH 12m ALUMINIUM MID-BLOCK POLE (P/N: MFP-048).

EXISTING SUPPLY AUTHORITY LV PILLAR

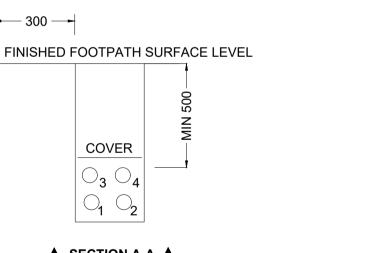
NEW PVC CONDUITS/TRENCH

EXISTING PVC CONDUITS/TRENCH

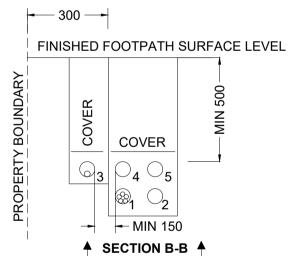
EXISTING STREET LIGHTING CIRCUIT



	CONSTRUCTION SCHEDULE								
REF. IDENTIFIER	ROUTE DISTANCE (m)	CONDUCTOR OR ASSET DETAIL	CONSTRUCTION DETAIL						
А	-	RYDE COUNCIL PUBLIC LIGHTING SWITCHBOARD	EXCAVATE AND INSTALL NEW RYDE COUNCIL PUBLIC LIGHTING SWITCHBOARD.						
A - B	3.0	8 x 63mm CONDUITS 1 x 50mm CONDUIT	TRENCH AND INSTALL CONDUIT AS PER ASSOCIATED TRENCH CROSS SECTION						
B - C	8.5	4 x 63mm CONDUITS 1 X 50MM CONDUIT	TRENCH AND INSTALL CONDUIT AS PER ASSOCIATED TRENCH CROSS SECTION						
C - D	12.5	4 x 63mm CONDUITS	TRENCH AND INSTALL CONDUIT AS PER ASSOCIATED TRENCH CROSS SECTION						
C-E	3.0	4 x 63mm CONDUITS	TRENCH AND INSTALL CONDUIT AS PER ASSOCIATED TRENCH CROSS SECTION						
B - F	17.5	4 x 63mm CONDUITS	TRENCH AND INSTALL CONDUIT AS PER ASSOCIATED TRENCH CROSS SECTION						
F-G	1.0	4 x 63mm CONDUITS	TRENCH AND INSTALL CONDUIT AS PER ASSOCIATED TRENCH CROSS SECTION						
F-H	3.0	4 x 63mm CONDUITS	TRENCH AND INSTALL CONDUIT AS PER ASSOCIATED TRENCH CROSS SECTION						
A - C	11.5	4 x16mm² CU1 PVC/PVC + 1x6mm² EARTH CABLE	INSTALL 4x16mm² CU1 PVC/PVC + 1x6mm² EARTH CABLE AS PER ASSOCIATED TRENCH CROSS SECTION						
A - E	13.0	4 x16mm² CU1 PVC/PVC + 1x6mm² EARTH CABLE	INSTALL 4x16mm² CU1 PVC/PVC + 1x6mm² EARTH CABLE AS PER ASSOCIATED TRENCH CROSS SECTION						
A - H	22.5	4 x16mm² CU1 PVC/PVC + 1x6mm² EARTH CABLE	INSTALL 4x16mm² CU1 PVC/PVC + 1x6mm² EARTH CABLE AS PER ASSOCIATED TRENCH CROSS SECTION						



1 - PROPOSED LV 4x16mm² CU1 PVC/PVC + 1x6mm²



1 - PROPOSED LV 4x16mm² CU1 PVC/PVC + 1x6mm² EARTH

CABLE IN NEW 63mm CONDUIT 2 - NEW SPARE 63mm CONDUIT

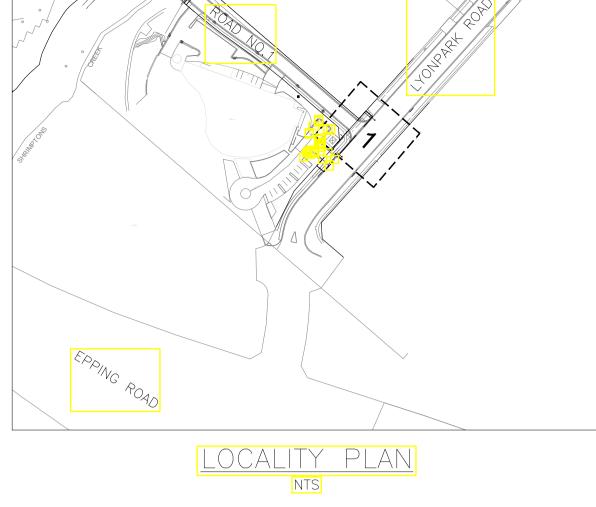
3 - NEW SERVICE MAIN IN NEW 50mm CONDUIT 4 - NEW SPARE 63mm CONDUIT 5 - NEW SPARE 63mm CONDUIT

FINISHED FOOTPATH SURFACE LEVEL COVER \bigcirc_3 \bigcirc_4

▲ SECTION E-E **▲**

1 - PROPOSED LV 4x16mm² CU1 PVC/PVC + 1x6mm² EARTH CABLE IN NEW 63mm CONDUIT

2 - NEW SPARE 63mm CONDUIT 3 - NEW SPARE 63mm CONDUIT 4 - NEW SPARE 63mm CONDUIT



CITY OF RYDE APPROVED FOR CONSTRUCTION SSDA - 8903 18 FEB 2022

FINISHED FOOTPATH SURFACE LEVEL

COVER

 $\bigcirc_5 \bigcirc_6 \bigcirc_7 \bigcirc_8$

 $\textcircled{8}_{1} \textcircled{8}_{2} \textcircled{3} \textcircled{4}$

▲ SECTION C-C **▲**

3 - NEW SPARE 63mm CONDUIT

4 - NEW SPARE 63mm CONDUIT 5 - NEW SPARE 63mm CONDUIT 6 - NEW SPARE 63mm CONDUIT 7 - NEW SPARE 63mm CONDUIT 8 - NEW SPARE 63mm CONDUIT

1 - PROPOSED LV 4x16mm² CU1 PVC/PVC + 1x6mm²

2 - PROPOSED LV 4x16mm² CU1 PVC/PVC + 1x6mm²

EARTH CABLE IN NEW 63mm CONDUIT

EARTH CABLE IN NEW 63mm CONDUIT

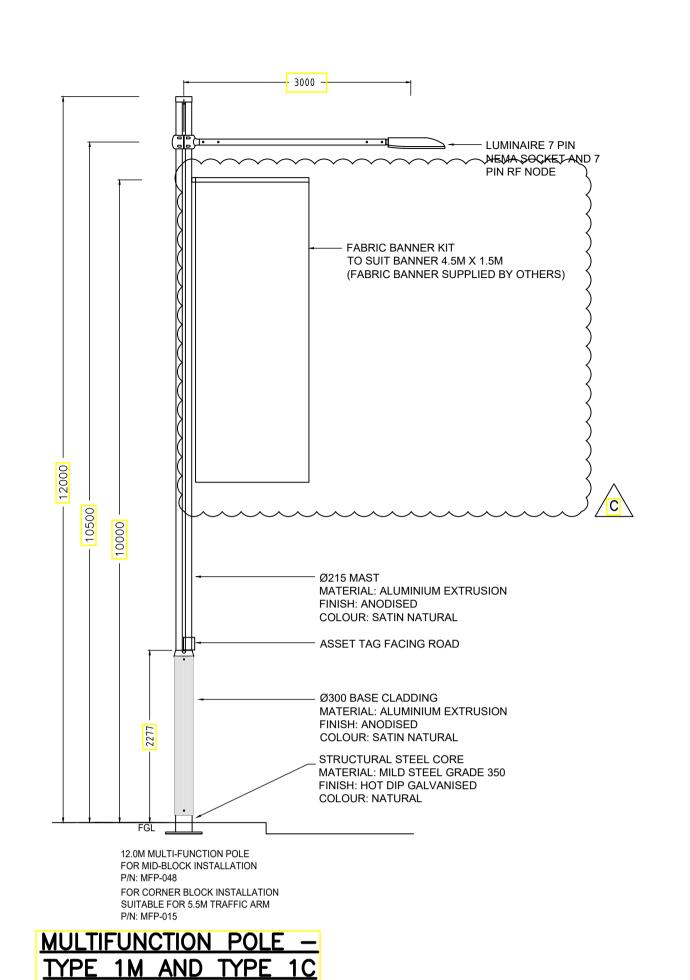
9 - NEW SERVICE MAIN IN NEW 50mm CONDUIT

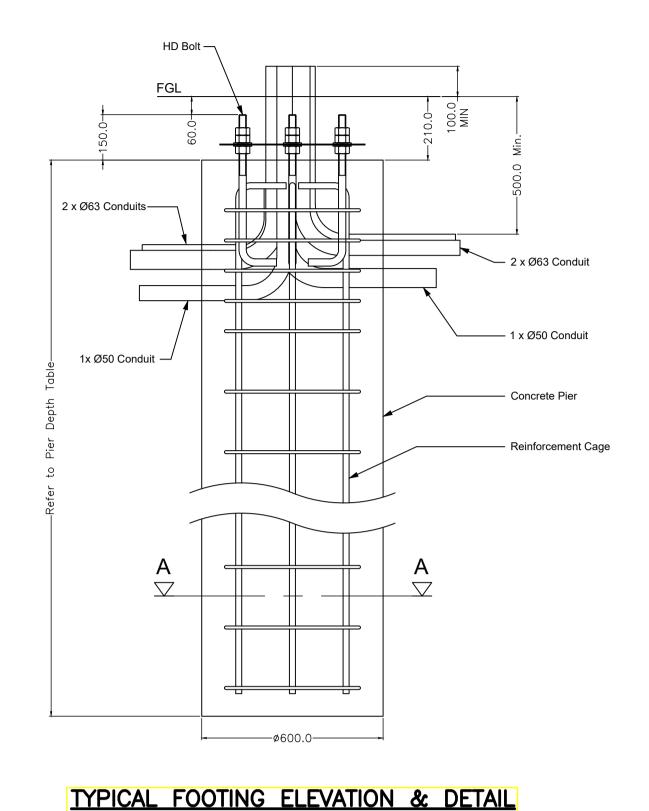
Subject to the Conditions of Development Consent

DETAILED LIGHTING DESIGN LYONPARK ROAD, MACQUARIE PARK

ELECTRICAL SERVICES SITE PLAN

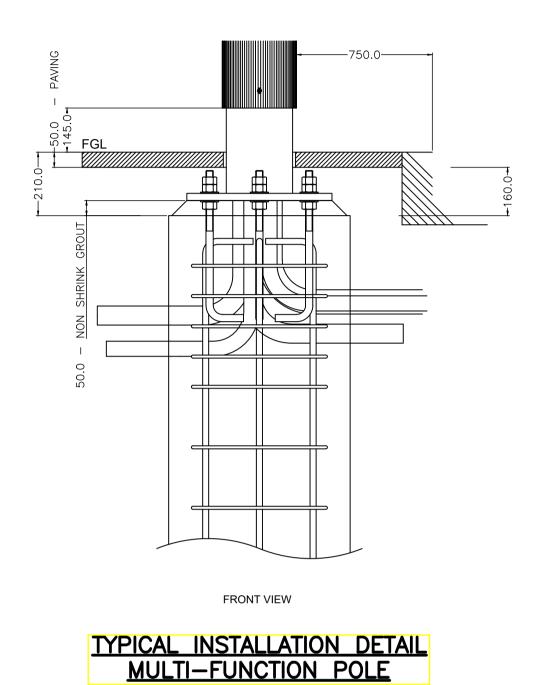
DATE	SCALE
NOV 2021	AS SHOWN @ A1
DRAWN	CHECKED
EW	DT
DRAWING NUMBER	ISSUE NUMBER
6820-ES-602	G





NOTE:- FINAL FOOTING DETAILS & ARRANGEMENT TO BE SPECIFIED BY STRUCTURAL ENGINEER TO SUIT LOCAL

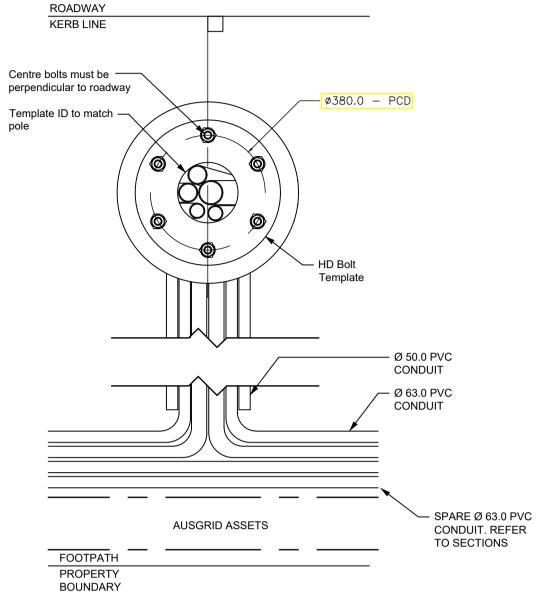
ENVIRONMENTAL CONDITIONS.



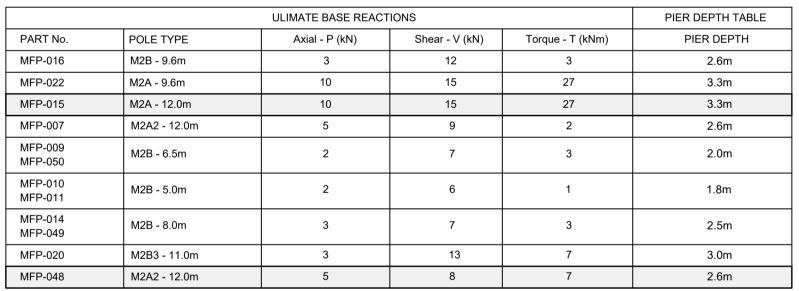
Ryde Council Pole Set Back is

750mm from Front of Pole to

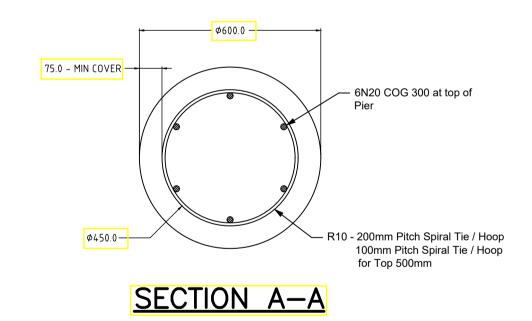
Front of Kerb.



TYPICAL CONDUIT ARRANGEMENT PLAN VIEW







NOTES GENERAL

1. Minimum clearance to existing Gas Mains to be 300mm.

NOTE: CLEARANCE FROM FACE OF KERB
TO FACE OF POLE TO BE 750mm FOR
MID—BLOCK POLES AND 1000mm FOR

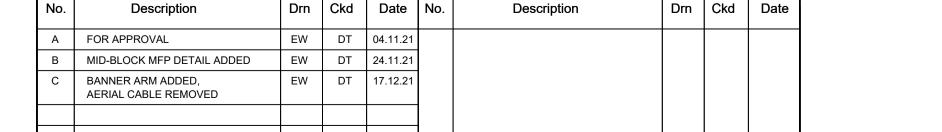
(POLES SUPPLIED BY MFP SYSTEMS) CONTACT: ADAM SMITH 0429 814 471

CORNER BLOCK POLES

Minimum
2. The gend
3. A site s
certified
complete

 Water Mains to be 150mm. shown is for reference ONLY.
need to be designed and a Geotechnical Survey has been

CITY OF RYDE	
APPROVED FOR CONSTRUCTION	
_{LDA} SSDA - 8903	
Signed	
Date 18 FEB 2022	
Subject to the Conditions of Development Consent	





CLIENT:



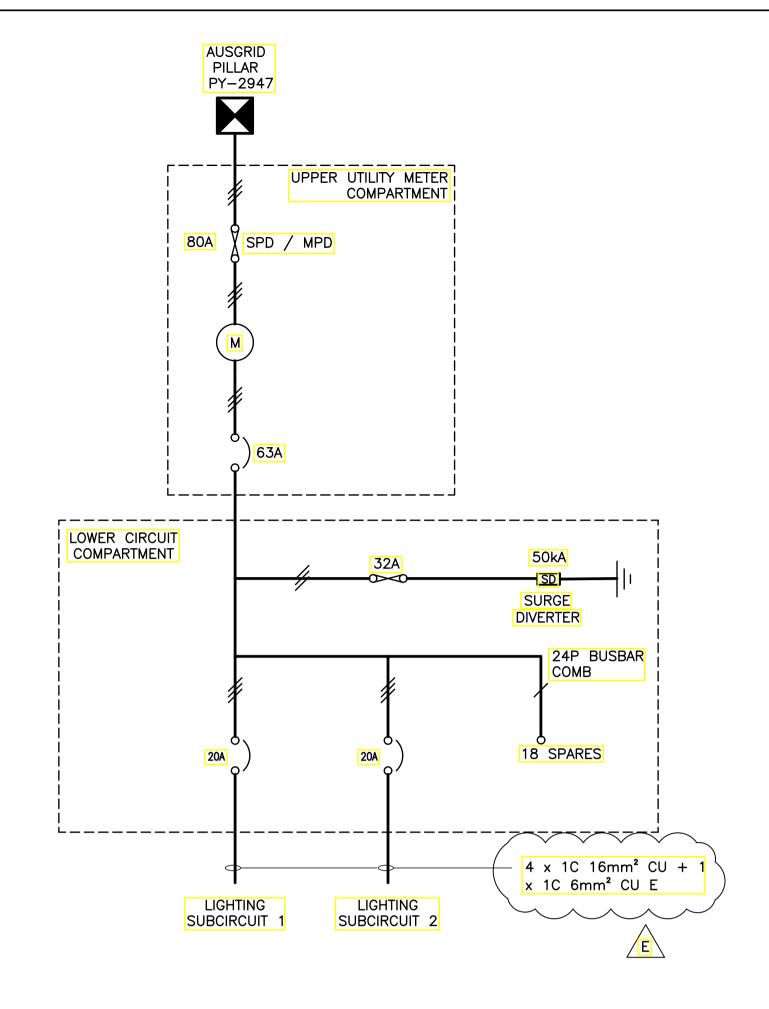
Web: www.shelmerdines.com.au

Crows Nest NSW 2065



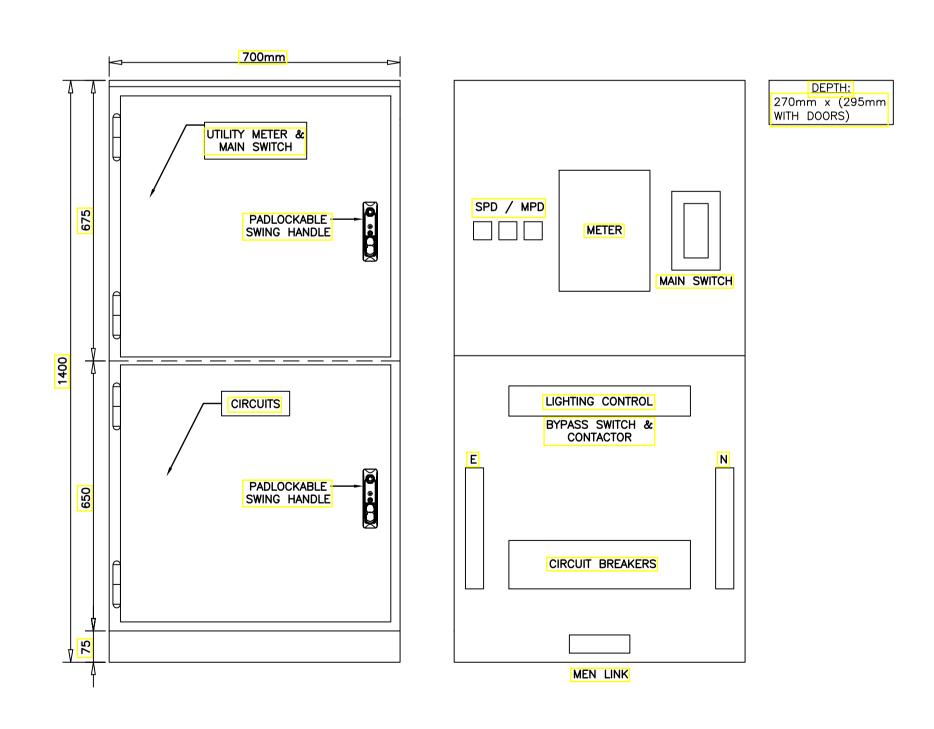
DRAWING
ELECTRICAL SERVICES
COLUMN AND FOUNDATION
DETAILS

DATE	SCALE
NOV 2021	AS SHOWN @ A1
DRAWN	CHECKED
EW	DT
DRAWING NUMBER 6820-ES-603	ISSUE NUMBER



EXISTING CITY OF RYDE COUNCIL MAIN SWITCHBOARD SINGLE LINE DIAGRAM

NOT TO SCALE



TYPICAL SWITCHBOARD DETAIL NOT TO SCALE

Drn Ckd Date Drn Ckd Date Description Description CLIENT: A FOR APPROVAL EW DT 24.11.21 B AUSGRID PILLAR NUMBER ADDED EXISTING SWITCHBOARD DETAILS EW DT 17.12.21 REMOVED. NEW SWITCHBOARD DETAILS ADDED D SWITCHBOARD SINGLE LINE REVISED EW DT 14.01.22



NOT TO SCALE ELECTRICAL CONSULTING ENGINEERS Shelmerdines Consulting Engineers ABN 40 003 331 879 Telephone: (02) 9436 3021

Email: mail@shelmerdines.com.au

Web: www.shelmerdines.com.au

55 Hume Street

Crows Nest NSW 2065

PROJECT DETAILED LIGHTING DESIGN LYONPARK ROAD, MACQUARIE PARK

DRAWING **ELECTRICAL SERVICES** SINGLE LINE DIAGRAMS, SWITCHBOARD AND WIRING **DETAILS**

SCALE NOV 2021 AS SHOWN @ A1 DRAWN CHECKED DT EW DRAWING NUMBER ISSUE NUMBER 6820-ES-604

CITY OF RYDE APPROVED FOR CONSTRUCTION

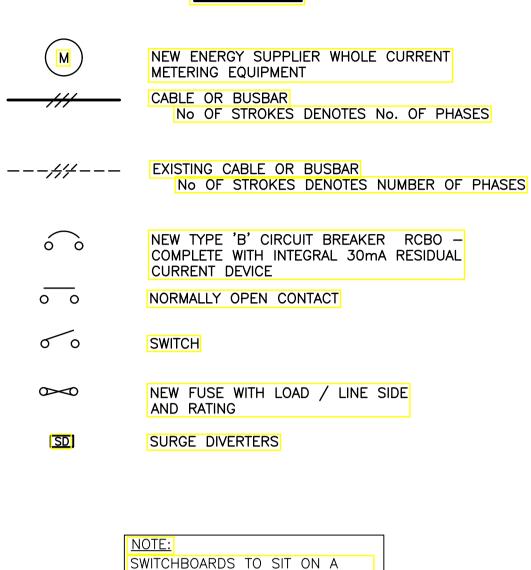
SSDA - 8903

18 FEB 2022

Subject to the Conditions

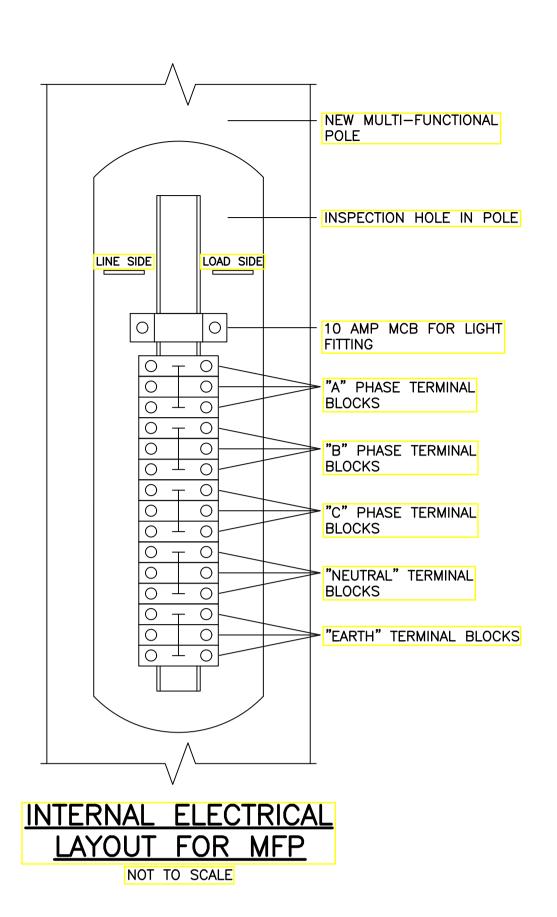
of Development Consent

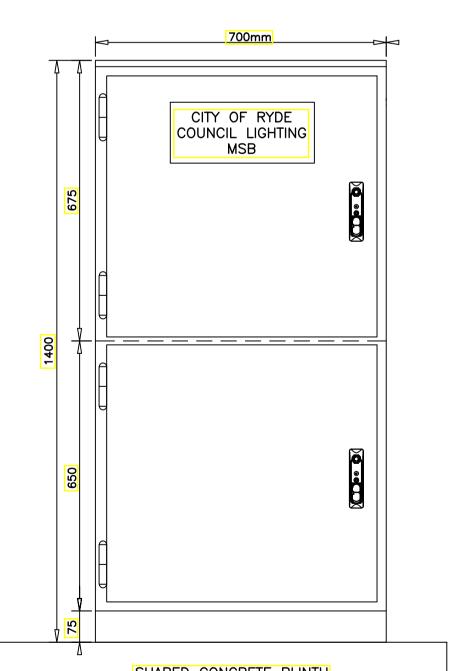
LEGEND



SINGLE CONCRETE PLINTH SEPARATED BY 100mm. SPARE 63mM CONDUIT TO BE PROVIDED

BETWEEN SWITCHBOARDS





SHARED CONCRETE PLINTH NOT TO SCALE SWITCHBOARD ELEVATION DETAIL

POLE LIGHT FITTING WITH INTEGRATED PEC & CIMCON RF NODE TO NEXT LIGHT POLE FROM METERING SWITCHBOX / PREVIOUS LIGHT POLE BOND EARTH TO POLE SOLDERED JOINT AT BASE OF POLE

TYPICAL NEW POLE WIRING

GENERAL NOTES:

- THE ELECTRICAL CONTRACTOR IS TO VISIT THE SITE PRIOR TO PRICING TO SATISFY THEMSELVES OF THE SCOPE OF WAORKS.
- 2. PLANS HAVE BEEN PREPARED BASED ON SITE INVESTIGATION. DETAILED SURVEY HAS NOT BEEN UNDERTAKEN.
- 3. UPON COMPLETION OF WORKS, THE CONTRACTOR IS TO SUPPLY COUNCIL WITH A COPY OF THE WORKS AS EXECUTED (WAE) DRAWINGS. IN PROGRESS WAE DRAWINGS MAY ALSO BE REQUESTED FROM TIME TO TIME BY RYDE COUNCIL FOR CO-ORDINATION PURPOSES.
- ALL REMOVED & REDUNDANT MATERIALS TO BE APPROPRIATELY DISPOSED OF BY THE CONTRACTOR.
- WHILE NO RECORDS EXIST TO THE CONTRARY, THE CONTRACTOR SHALL ENSURE APPROPRIATE WORKPLACE SAFETY MEASURES ARE UTILISED IN REGARDS TO WORKING WITH ASBESTOS AND/OR ASBESTOS CONTAINING MATERIALS.
- ALL WORKS IS TO BE COMPLETED IN A PROFESSIONAL AND TRADESMAN LIKE QUALITY. . ELECTRICAL AUTHORITY IS AUSGRID
- 8. ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT REVISION OF THE BCA/NCC, AS/NZS 3000, AS/ACIF S009, NSW SERVICE AND INSTALLATION RULES,
- AUSTRALIAN STANDARDS. THE CONTRACTOR SHALL UNDERTAKE A "DIAL BEFORE YOU DIG" SEARCH FOR EXISTING IN-GROUND SERVICES NO MORE THAN 20 BUSINESS DAYS PRIOR TO EXCAVATION ON

SITE. ANY DAMAGE TO EXISTING IN-GROUND SERVICES SHALL BE THE CONTRACTOR'S

- 10. THE EXISTING SERVICES SHOWN IN THE DRAWING PACKAGE HAVE BEEN DOCUMENTED FROM THE SUPPLIES DATA BY THE COUNCIL. SHELMERDINES CONSULTING ENGINEERS DOES NOT GUARANTEE OR TAKE RESPONSIBILITY OF THE ACCURACY OF THIS
- 11. DESIGNER IS TO BE CONTACTED REGARDING ISSUES RAISED WITH THIS DESIGN. 12. THE DESIGN CANNOT BE USED FOR CONSTRUCTION PURPOSES UNTIL THE LOCATION OF
- ALL EXISTING SERVICES IS VERIFIED. 13. THE INFORMATION PROVIDED IN THIS DESIGN MUST BE CHECKED ON SITE AND THE MOST CURRENT INFORMATION ON THE CONFIGURATION OF ALL SERVICES, INCLUDING AUSGRID'S NETWORK. MUST BE VERIFIED IMMEDIATELY BEFORE CONSTRUCTION COMMENCES BY CONTACTING DIAL-BEFORE-YOU-DIG BY TELEPHONE ON 1100 OR
- WWW.1100.COM.AU 14. FOR DETAILS PLEASE REFER TO CITY OF RYDE DESIGN GUIDE, COUNCIL-OWNED STREET LIGHTING.
- 15. THE CONTRACTOR TO DISCUSS WITH THE COUNCIL'S MAINTENANCE CONTRACTOR BEFORE
- 16. STAGE 2 LIGHTING CANNOT BE CONSTRUCTED UNTIL PUBLIC DOMAIN CIVIL WORKS HAVE BEEN APPROVED BY THE ACCREDITED CERTIFIER.
- 17. FUTURE CONSULTATION WITH THE COUNCIL IS REQUIRED FOR THE RELOCATION OF STREET LIGHTING COLUMNS DUE TO ANY CHANGES TO THE CIVIL LAYOUT SHOWN IN THIS DESIGN. A REVISED DESIGN WILL BE REQUIRED.

LIGHTING DESIGN

- 1. ALL LUMINAIRES TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENT AND SPECIFICATIONS.
- 2. LIGHTING EQUIPMENT, LOCATION AND TYPES MAY NOT BE SUBSTITUTED WITHOUT PRIOR CONSENT AND APPROVAL OF THE DESIGNER. REFER IMAGE OF PROPOSED LUMINAIRE TO RIGHT.
- 3. COLOUR/FINISH OF ALL LIGHT FITTINGS, TRIMS, LENSES AND ACCESSORIES TO BE APPROVED BY THE COUNCIL. CONTRACTOR SHALL PROVIDE SAMPLES OF LIGHT FITTINGS PRIOR TO PROCUREMENT.
- 4. NEW POLE LUMINAIRES ARE TO BE LOCATED TO AVOID CLASHES WITH EXISTING TREES. CONFIRM LOCATION WITH LIGHTING DESIGNER PRIOR TO INSTALLATION. WHERE TREE BRANCHES ARE REQUIRED TO BE TRIMMED. THE AUTHORISED PERSON IS TO BE ADVISED PRIOR TO ANY WORKS.
- 5. 3 PHASE WIRING REQUIRED.
- 6. "PERMANENT POWER" AVAILABLE ON EACH MFP FOR THE SMART CONTROL TO FUNCTION.



PROPOSED LUMINAIRE 133W GERARD LIGHTING ARTERIAL 2

TRENCHING AND CABLING

- 63mm DIAMETER CONDUITS INCLUDING A SPARE CONDUIT SHALL BE INSTALLED.
- ADDITIONAL CONDUIT SHALL ALSO BE PROVIDED FOR FUTURE COMMUNICATION CABLING. THE CONDUITS SHALL EXTEND TO THE LIMITS OF THE WORKS OR BOUNDARIES OF THE
- DEVELOPMENT SITE. 4. THE CONDUITS SHALL BE CAPPED FOR FUTURE EXPANSION. THIS WILL ALSO MINIMISE THE NEED TO EXCAVATE THE NEWLY LAID FOOTPATHS ADJACENT TO THE DEVELOPMENT
- 5. ELECTRICAL CONTRACTORS SHALL SAW CUT & EXCAVATE THE EXISTING SURFACE TO INSTALL NEW POLE LUMINAIRES. REINSTATE TRENCH WITH APPROPRIATE BACK FILL & COMPACTION, INCLUDING FINISHING OF TRENCH WITH COLD MIX ASPHALT OR TO MATCH WITH EXISTING FINISH. ALLOW FOR SLIGHT OVER FILL TO AVOID SAGGING, ALLOW FOR THESE WORKS TO BE UNDERTAKEN TO AVOID DISRUPTION DURING NORMAL WORKING DAYS/HOURS.
- CONTRACTOR TO CO-ORDINATE WITH COUNCIL THE TRENCH ALLOCATION FOR THE NEW SMART POLES.
- STREET LIGHT MAINS TO HAVE 500mm COVER IN FOOTWAY AND 750mm IN ROADWAY.
- CONTRACTOR TO LIAISE WITH COUNCIL AND AUTHORITIES ON THE UNDERGROUNDING PLACEMENT OF ELECTRICAL CONDUITS.
- 9. ALL CONDUITS MUST COMPLY WITH RELEVANT SECTIONS OF AS/NZS 2053 AND
- COUNCIL REQUIREMENTS. 10. ALL THE CABLE LAYING TO BE RECORDED IN COMPLIANCE WITH AS/NZS 3000. 11. RADIUS OF BEND OF CABLE TO COMPLY WITH CABLE MANUFACTURE AND COUNCIL
- REQUIREMENTS. 12. IF ANY EXCAVATION OR U/G WORKS ARE TO BE DONE ALL SURFACES MUST BE
- RESTORED TO ORIGINAL STATE UPON COMPLETION OF THE PROJECT. 13. LOCATION OF CONDUITS ON FOOTPATH IS AS PER COUNCIL REQUIREMENTS.
- 14. CONTRACTOR TO LOCATE COMMS CONDUITS AS PER AUSTRALIAN STANDARD AND CITY OF RYDE COUNCIL'S REQUIREMENT.

FOUNDATION & COLUMN

- STRAIGHT PILES IS STANDARD. THIS FOOTING MUST BE PREPARED BY A QUALIFIED STRUCTURAL ENGINEER REFERRED ON THE NER OF AUSTRALIA AND PROVIDED TO COUNCIL FOR REVIEW AND APPROVAL PRIOR TO THE INSTALLATION.
- 2. ALL LIGHTS TO SIT 750 BEHIND THE KERB OTHER THAN LIGHTS AT INTERSECTIONS WHERE SHALL BE LOCATED 1000 BEHIND THE KERB OR OTHERWISE NOTED ON THE DESIGN.

CUBICLE:

SWITCHBOARD

2.0mm FOLDED AND WELDED STAINLESS STEEL SHEET CONSTRUCTION, SWITCHBOARD

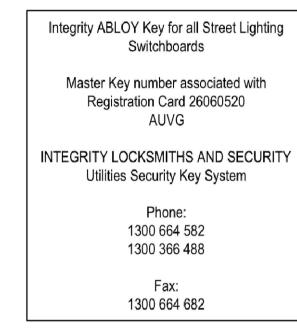
- CABINET IS TO BE BASE MOUNTED VIA HOT DIPPED GALVANISED CHANNEL IRON PLINTH. ESCUTCHEON SECURED TO CABINET WITH DOME NUTS.
- 3. DOORS ARE SWUNG ON CHROME PLATED HINGES AND FIXED WITH SWING HANDLES. 3mm ALUMINIUM GLAND PLATES FITTED TO BASE OF SWITCHBOARD.
- SHEET METAL TO BE DEGREASED WITH SOLVENT, PHOPHORIC ACID WASHED, AND CLEANED WITH 180 GRIT PAPER. ELECTROSTATIC POLYESTER POWDER TO BE APPLIED AS FOLLOWS:
 - CABINET EXTERIOR ORBITAL FINISH CABINET INTERIOR - GLOSS WHITE ESCUTCHEONS - GLOSS WHITE
- PLINTH 75mm HOT DIPPED GALVANISED LABELS ARE TO BE MACHINE ENGRAVED FROM GRAVOPLY LAMINATE AND FIXED TO THE
- SWITCHBOARD METALWORK USING M3 SCREWS. **BUSBARS:**
- NEUTRAL AND EARTH BARS TO BE LOCATED IN A POSITION WHERE THEY WILL NOT BE OBSTRUCTED BY SUBMAIN CABLES. NEUTRAL BAR TO BE FULL RATING OF ACTIVES.
- NEUTRAL AND EARTH TERMINATIONS TO BE NUMBERED TO CORESPOND WWITH RESPECTIVE SUBCIRCUIT NUMBERS THAT APPEAR ON LABELS.
- SPECIFICATIONS: SWITCHBOARD MANFACTURED TO AS 61439.2.
- FORM 2B SEPARATION TO AS 61439.2. 3. IP66 CONSTRUCTION TO AS 60529.
- 4. FAULT LEVEL 10kA FOR 1 SEC COMMERCIAL & INDUSTRIAL AREAS REQUIRE 25kA AS PER NSW SIR.
- 415 VOLT, 50Hz M.E.N LINK SYSTEM.
- MAINS CABLES BOTTOM ENTRY VIA 3mm ALUMINIUM GLAND PLATE.
- 7. SUBMAIN CABLES BOTTOM EXCIT VIA 3mm ALUMINIUM GLAND PLATE.

SUBCIRCUITS

1. 3-PHASE CB OR LINKED 1-PHASE CBS MUST BE UTILISED. THE USE OF UNLINKED 1-PH CBS IS NOT PERMITTED BY AS 3000.

LOCKING

ALL STREET LIGHT SWITCHBOARDS SHALL BE LOCKED WITH UNIQUE ABLOY KEY PADLOCK, AS DETAILED BELOW:



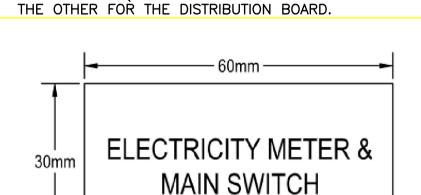
PUBLIC LIGHTING SWITCHBOARD TAG SPECIFICATION

- THE SIZE OF THE PLATE SHALL BE 200mm (LENGTH) x 60mm (HEIGHT)
- 2. THE TEXT SIZE FOR THE STREET NAME AND FOR "PUBLIC LIGHTING SWITCHBOARD" IS TO BE 13mm TALL AND THE TEXT SIZE FOR "PROPERTY OF CITY OF RYDE, ENQUIRIES: 9952 8222" IS TO BE 5mm. THE "CITY OF RYDE" LOGO IS TO BE 10mm TALL.
- THE PLATE IS TO HAVE A SILVER (STAINLESS STEEL) BACKGROUND WITH BLACK TEXT AND LOGO PRINT.
- THE LOGO AND TEXT ARE NO TO BE STICKER LETTERING. THE MATERIAL OF THE PLATE AND THE ADHESIVE BACKING SHALL COMPLY WITH THE
- THE STREET NAME SHALL BE PRINTED WITHOUT ANY ABBREVIATIONS. IF THE STREET

"ELECTRICITY METER & MAIN SWITCH" IS TO BE PLACED ON THE DOOR WITH THE

METER WITHIN (THERE MAY BE TWO SEPARATE DOORS - ONE FOR THE METER AND





LIGHTING POLE TAG SPECIFICATION

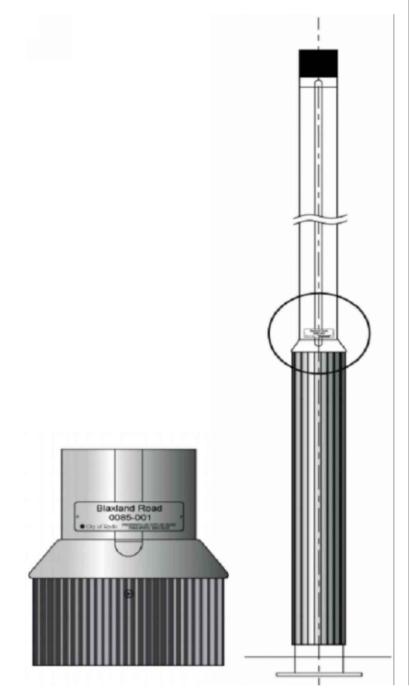
- 1. THE SIZE OF THE PLATE SHALL BE 200mm (LENGTH MEASURED ALONG THE CURVATURE OF THE POLE) x 60mm (HEIGHT).
- 2. THE PLATE IS TO HAVE A SILVER (ALUMINIUM) BACKGROUND WITH BLACK TEXT AND LOGO PRINT.
- 3. THE LOGO AND TEXT ARE NOT TO BE STICKER LETTERING.
- 4. THE PLATE SHALL BE CURVED TO SUIT THE CURVATURE OF THE POLE. 5. THE MATERIAL OF THE PLATE AND RIVETS SHALL COMPLTY WITH THE REQUIREMENTS OF THE MFP
- MANUFACTURER (GENERALLY ANODISED ALUMINIUM). 6. THE STREET NAME SHALL BE PRINTED WITHOUT ANY ABBREVIATIONS. IF THE STREET NAME IS TOO LONG, IT CAN BE PRINTED ON TWO LINES.
- THE TEXT SIZE FOR THE STREET NAME AND FOR "POLE/ASSET NUMBER" IS TO BE 13mm TALL. THE TEXT
- SIZE FOR "PROPERTY OF CITY OF RYDE AND ENQUIRIES: 9952 8222" IS TO BE 5mm.
- 8. THE "CITY OF RYDE" LOGO IS TO BE 10mm TALL. 9. THE ASSET INDEX IS COMPILED VIA THE FOLLOWING RULES:

STREET LIGHTS

ASSET INDEX (STREET INDEX - 000) IS MADE UP BY COMBINING THE FOLLOWING TWO: 1. STREET INDEX - IS A FOUR-DIGIT NUMBER GIVEN TO EACH STREET BY COUNCIL'S ASSET SYSTEMS

2. 000 - A THREE-DIGIT SEQUENTIAL NUMBER PROVIDED BY COUNCIL'S ASSET SYSTEMS DEPARTMENT.







STREET NAME (13mm) ASSET LABEL (13mm)

COUNCIL LOGO (10mm) AND CONTACT NUMBER (5mm)

ASSET HANDOVER

THE FOLLOWING SHALL BE PROVIDED TO COUNCIL PRIOR TO THE HANDOVER OF THE STREET LIGHTING INSTALLATION AND TRANSFER OF ENERGY ACCOUNT FROM THE DEVELOPER TO COUNCIL:

- CERTIFICATION FROM A CHARTERED STRUCTURAL ENGINEER (REGISTERED ON THE NER OF ENGINEERS AUSTRALIA) CONFIRMING THAT THE WORKS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH COUNCIL-APPROVED DRAWINGS AND CITY OF RYDE'S STANDARDS AND SPECIFICATIONS. THE CERTIFICATE SHALL CONTAIN PHOTOGRAPHS OF THE WORKS IN PROGRESS AND A COMMENTARY OF THE INSPECTED WORKS, INCLUDING ANY DEFICIENCIES AND RECTIFICATIONS THAT WERE UNDERTAKEN;
- WORKS AS EXECUTED DRAWINGS; 3. A SET OF ACCESS KEYS
- 4. MANUFACTURER'S WARRANTIES AND CERTIFICATES;
- 5. ASSET TAGS ON POLES AND METER BOX AS PER COUNCIL REQUIREMENTS;
- 6. METER INFORMATION (NMI FROM AUSGRID) AND RELEVANT DETAILS FOR THE TRANSFER OF THE ENERGY ACCOUNT TO COUNCIL NEEDS TO BE COMPLETED ON CCEW:
- 7. MAC ID FROM NEW 7 PIN NOTE AND WHICH ASSET NUMBER IT HAS BEEN INSTALLED ON IS TO BE RECORDED AND SUPPLIED TO RYDE COUNCIL BEFORE HANDOVER IS COMPLETED.

NOTE: A FINAL INSPECTION FOR THE PURPOSE OF HANDOVER TO COUNCIL SHALL BE CONDUCTED IN CONJUNCTION WITH COUNCIL'S ENGINEER. FOLLOWING THE COMPLETION OF THE WORKS. ADDITIONAL INSPECTIONS, IF REQUIRED, ARE SUBJECT TO ADDITIONAL FEES PAYABLE IN ACCORDANCE WITH COUNCIL'S CURRENT SCHEDULE OF FEES AND CHARGES.



No.	Description	Drn	Ckd	Date	No.	Description	Drn	Ckd	Date
Α	FOR APPROVAL	EW	DT	04.11.21					
В	SWITCHBOARD NOTES DELETED NOTES FROM SHT 6 TRANSFERRED	EW	DT	24.11.21					
С	SWITCHBOARD NOTES ADDED	EW	DT	17.12.21					





55 Hume Street

Crows Nest NSW 2065



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DETAILED LIGHTING DESIGN LYONPARK ROAD, MACQUARIE PARK

ELECTRICAL SERVICES GENERAL NOTES

SCALE NOV 2021 AS SHOWN @ A1 DRAWN CHECKED EW DT DRAWING NUMBER ISSUE NUMBER 6820-ES-605

Page 1

Shelmerdines ******

RESULTS FOR RUNNING SAASTAN WITH NOMINATED SPACINGS [AUSTRALIA MODE]

Job name: 6820 - Lyonpark Rd

Luminaire I-table: J:\6820\Elec\Lighting Calculations\Gerard Lighting Arterial ATB 2\ATB2_40BLEDE10_XXXXX_R3_4K_5K_133W

Luminaire Description: ATB2_40BLEDE10_XXXXX_R3_4K_5K_133W use 1

Lamp Wattage & Type: 133W LED R3 4K Light Source: LED

Stores Code: Upcast Angle: 0 Degrees Mounting Height: 10.5 m

Luminous Flux: 16.24 Klms Arrangement: 3 Single-Stagger Maintenance Factor: 0.8 Overhang 1st Row: 2 m Overhang 2nd Row: 2.25 m Outreach Size: 3 Outreach Size: 3

Road Surface: CIE R3 Traffic Flow: Two Way ---->

Lighting Category: V5 Carriageway Width: 12.9 m

		ousege_j.		·	9	<u>.</u>			
(m)	Traffic Direct- ion or	Lbar (>=0.35) r(>=0.38)	(>=0.31)	U1 (>=0.5)	***	"	Es1 (>=50) "	Esr (>=50) "	V 5
25.00 25.00	Normal Oncoming	1.41	0.49 0.51	0.63 0.61	.00	9.63 9.54	63.19 62.49	62.49 63.19	YES YES
26.00	Normal	1.35	0.49	0.56	.00	9.85	63.25	62.58	YES
26.00	Oncoming	1.35	0.51	0.55		9.76	62.42	63.20	YES
27.00	Normal	1.30	0.48	0.54	.00	10.07	63.30	62.49	YES
27.00	Oncoming	1.30	0.50	0.53		9.97	62.41	63.03	YES
28.00	Normal	1.26	0.49	0.52	.00	10.25	63.14	62.38	YES
28.00	Oncoming	1.26	0.50	0.51		10.15	62.38	63.14	YES
29.00	Normal	1.21	0.49	0.51	.00	10.36	63.11	62.44	YES
29.00	Oncoming	1.22	0.51	0.50		10.26	62.44	63.11	YES
30.00	Normal	1.18	0.48	0.51	.00	10.57	63.19	62.49	YES
30.00	Oncoming	1.18	0.51	0.50		10.47	62.49	63.19	YES
31.00	Normal	1.13	0.47	0.49	.00	10.81	63.27	62.59	NO
31.00	Oncoming	1.14	0.50	0.48		10.70	62.37	63.12	NO
32.00	Normal	1.10	0.46	0.48	.00	10.99	63.29	62.49	NO
32.00	Oncoming	1.10	0.49	0.47		10.90	62.41	63.04	NO
33.00	Normal	1.07	0.45	0.49	.00	11.19	63.16	62.41	NO
33.00	Oncoming	1.07	0.50	0.47		11.10	62.41	63.17	NO
34.00	Normal	1.04	0.45	0.49	.00	11.44	63.12	62.43	NO
34.00	Oncoming	1.04	0.49	0.47		11.33	62.43	63.12	NO
35.00	Normal	1.01	0.44	0.47	.00	11.65	63.19	62.49	NO
35.00	Oncoming	1.01	0.48	0.46		11.53	62.49	63.19	NO
NOTES:			&/or 'One						

NOTES: 1) Where 'Normal' &/or 'Oncoming' lines are shown, compliance with the nominated Category, at a particular spacing, is only applicable when there is a 'Yes' on each line i.e. ANY 'No' indicates failure at that spacing.

2) Calculations use the original SAASTAN software

PleVcat - Vers 5.09 (Built: 10/ 4/13)

LYONPARK RD V5 CALC

2/2.25 OVERHANG STAGGERED ARRANGEMENT

MAXIMUM DESIGN SPACING FOR COMPLIANCE WITH CATEGORY V5.

P Category Lighting - AS/NZS 1158.3.1:2005

Page 1

Shelmerdines

I-table Filename: J:\6820\Elec\Lighting Calculations\Gerard Lighting
Arterial ATB 2\ATB2_40BLEDE10_XXXXX_R3_4K_5K_133W

Job Name: 6820 - Lyonpark Rd P

Luminaire Description: ATB2_40BLEDE10_XXXXX_R3_4K_5K_133W use 1 Lamp Wattage & Type: 16.24 Klms 133W Initial Lamp Flux: 16248 lms

Maintenance Factor: 0.8 Stores Code: Upcast Angle: 0 degrees

Arrangement: Staggered Offset Distance: 6.6 m Upward Waste Light Ratio: .0 %

Light Source: LED - Light Emitting Diode Luminaire Classification: Not specified

Lighting Category: P3 (Local Area Roads - Tables 2.1 & 2.6)

Illuminance Criteria: Average Illuminance (Eav) >= 1.75 lx (Maintained values) Minimum Illuminance (Eph) \geq 0.30 lx Illuminance Uniformity (Up) <= 10

Calculation Grid: 20 x 11 points - Figure 3.7 of AS/NZS 1158.2

Mounting Height

Maximum Spacing for different Road Reserve Widths

22.0 +----+ 10.5 | 86.8

Value/s in above table are all in metres. The table contains maximum spacings which, for the specified luminaire and lamp combination, provide compliance with the light technical parameters (LTPs) of Table 2.6 of AS/NZS 1158.3.1:2005.

Refer next page for list of LTP's at compliant maximum spacings.

PlePcat - Vers 3.10 (Built: 10/ 4/13)

Run: 24/11/2021 at 10:11:35

P3 ILLUMINANCE CRITERIA EQUAL TO LIGHTING SUB CATEGORY PR3. Page 2

Light Technical Parameters at Maximum Spacing **********

Mounting Road Maximum Eav Eph Up Height Reserve Spacing (m) (m) (m) (lx) (lx) (Emax/Eav) 10.5 22.0 86.8 4.58 0.30 5 23.54

PlePcat - Vers 3.10 (Built: 10/ 4/13)

Run: 24/11/2021 at 10:11:35

LYONPARK RD PR3 CALC 2.25/2.25 OVERHANG STAGGERED ARRANGEMENT

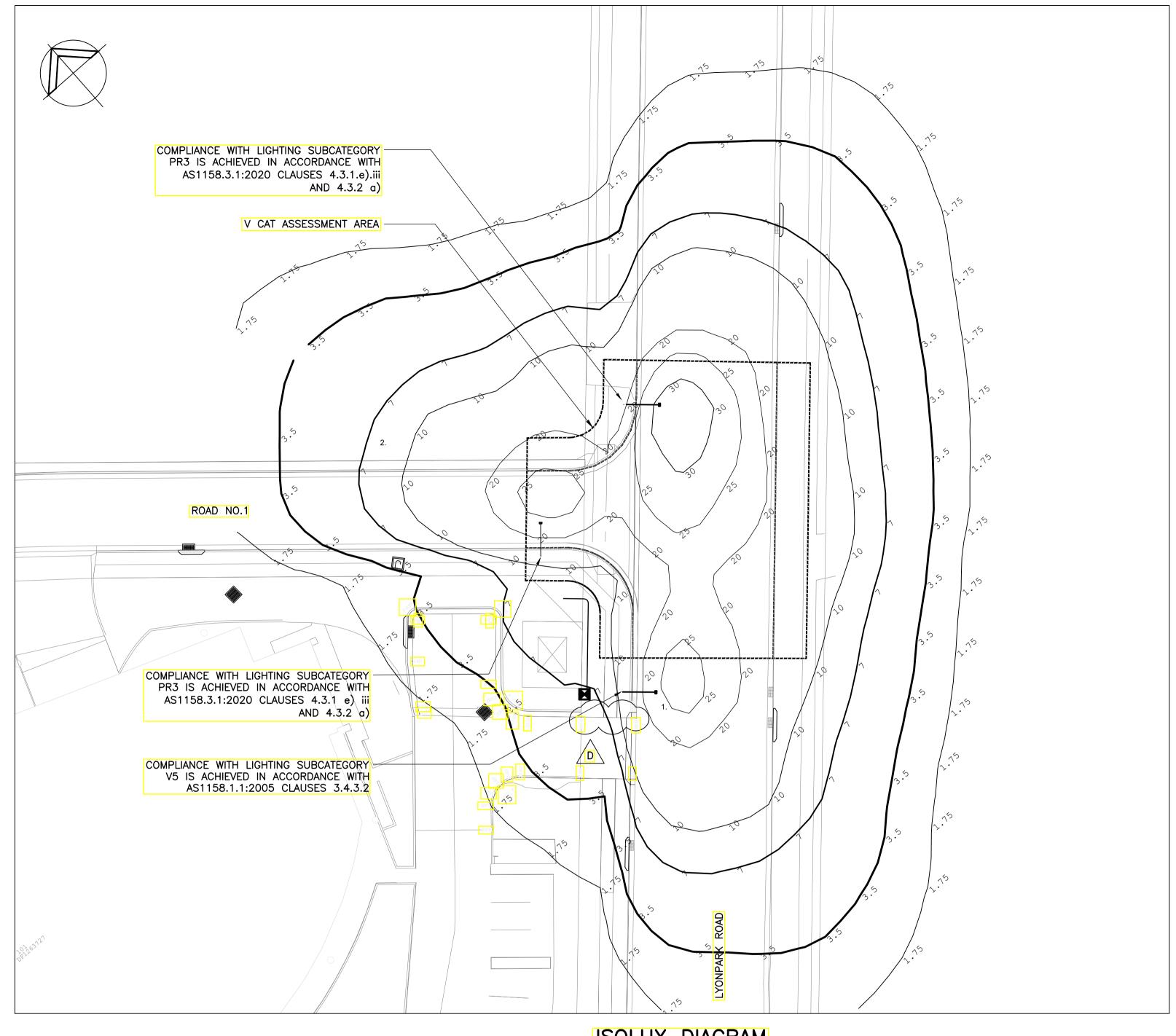
STREET NAME	PERFORMANCE CRITERIA	LIGHTING CATEGORY	POINT HORIZONTAL ILLUMINANCE (LUX)	1101112011111
LYONPARK RD INTERSECTION CARRIAGEWAY	REQUIRED	V5	>=3.5	<=8
LYONPARK RD INTERSECTION CARRIAGEWAY	DESIGNED	V5	13.5	2.52
LYONPARK RD INTERSECTION FOOTPATH	REQUIRED	V5	>=1.75	<=8
LYONPARK RD INTERSECTION FOOTPATH	DESIGNED	V5	8.1	1.38

Run: 24/11/2021 at 14:48:23

V5 LIGHTING CALCULATION

ROAD NO.1 / LYONPARK RD				
LUMINAIRE OUTPUT %	V CATEGORY COMPLIANCE			
100	V2			
80	V2			
60	V3			
40	V4			
20	N/A			

LUMINAIRE OUTPUT % IS BASED ON AN INITIAL MAINTENANCE FACTOR OF 0.8 LLF



ISOLUX DIAGRAM

Luminaire Sche	dule					
Symbol	Qty	Label	Description	LLF	Lumens	Filename
	2	ATB2_40BLEDE10_XXXXX_R3_4K_5K	FUTURE RYDE COUNCIL MFP WITH 10.5m MH AND 3m OR	0.800	16249	ATB2_40BLEDE10_XXXXX_R3_4K_5K_13 3m
	1	ATB2_40BLEDE10_XXXXX_R3_4K_5K	EXISTING RYDE COUNCIL MFP WITH 10.5m MH AND 3m OR	0.800	16249	ATB2_40BLEDE10_XXXXX_R3_4K_5K_13 3m

Lumina	Luminaire Location Summary						
Scene:	40 PERCENT						
LumNo	Label	Х	Y	MH	Orient	Tilt	
1	ATB2_40BLEDE10_XXXXX_R3_4K_5K	325885.377	6260224.335	10.5	318.504	0	
2	ATB2 40BLEDE10 XXXXX R3 4K 5K	325887.872	6260238.531	10.5	49.084	0	
3	ATB2 40BLEDE10 XXXXX R3 4K 5K	325902.771	6260243.78	10.5	318.504	0	

Email: mail@shelmerdines.com.au

Web: www.shelmerdines.com.au

	CITY OF RYDE ROVED FOR CONSTRUCTION SSDA - 8903
LDA	d
Date	18 FEB 2022 Subject to the Conditions of Development Consent

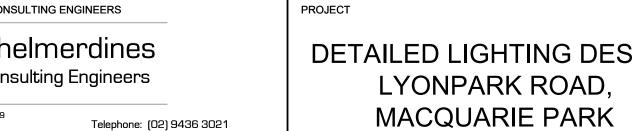
No.	Description	Drn	Ckd	Date	No.	Description	Drn	Ckd	Da
Α	FOR APPROVAL	EW	DT	04.11.21					
В	MSB DETAILS DELETED	EW	DT	24.11.21					
С	ISOLUX REVISED AS PER NEW REQ	EW	DT	17.12.21					
D	DRIVEWAY SPLAY REMOVED	EW	DT	17.02.22					





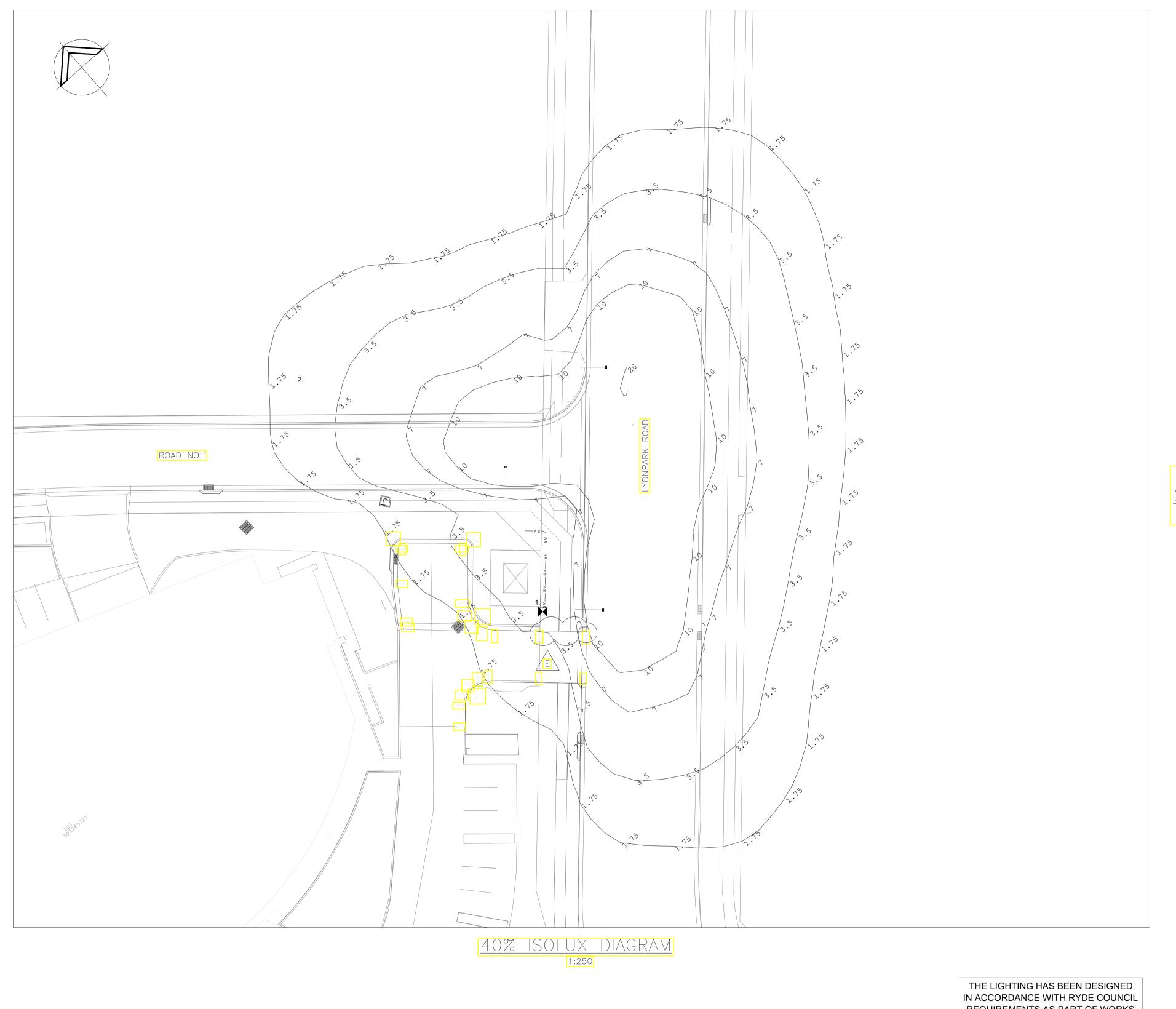
55 Hume Street

Crows Nest NSW 2065



	DRAWING
	ELECTRICAL SERVICES
DESIGN AD,	LIGHTING CALCULATIONS SHEET 1

DATE	SCALE
NOV 2021	AS SHOWN @ A1
DRAWN	CHECKED
EW	DT
DRAWING NUMBER 6820-ES-606	ISSUE NUMBER



ROAD NO.1 / LYONPARK RD LUMINAIRE V CATEGORY OUTPUT % COMPLIANCE V2 V2 V3

20 LUMINAIRE OUTPUT % IS BASED ON AN INITIAL MAINTENANCE FACTOR OF 0.8 LLF

V4

Road 1 intersection with Lyonpark Rd lighting is designed to Australian Standard AS1158:2010 Lighting for Roads and

Public Spaces, with

vehicular luminance category V5 and

pedestrian illuminance category PR3

INSTALL A CIMCON MODEL NODE AND PLAY WIRELESS LIGHTING CONTROLLER ON EACH MFP LUMINAIRE.

REQUIREMENTS AS PART OF WORKS FOR SSDA 8903

NOTE: ISLC-3100-7P-S-XXX-A-G-10-CATB-05

Page 1

RESULTS FOR RUNNING SAASTAN WITH NOMINATED SPACINGS [AUSTRALIA MODE]

Job name: 6820 - Lyonpark Rd V5 40 PERCENT Luminaire I-table: J:\6820\Elec\Lighting Calculations\Gerard Lighting Arterial ATB 2\ATB2_40BLEDE10_XXXXX_R3_4K_5K_133W Luminaire Description: ATB2_40BLEDE10_XXXXX_R3_4K_5K_133W use 1 Lamp Wattage & Type: 133W LED R3 4K

Shelmerdines

Light Source: LED Luminous Flux: 6.5 Klms Arrangement: 3 Single-Stagger Maintenance Factor: 0.8 Upcast Angle: 0 Degrees Mounting Height: 10.5 m Overhang 2nd Row: 2.25 m Overhang 1st Row: 2.25 m Outreach Size: 3 Outreach Size: 3 Road Surface: CIE R3 Traffic Flow: Two Way ---->

Lighting Category: V5 Carriageway Width: 12.9 m

Spacing Traffic Lbar Uo Ul UWLR TI Esl Esr Comply (m) Direct- (>=0.35) (>=0.33) (>=0.5) (=<3) (=<20) (>=50) (>=50) with ion or(>=0.38) (>=0.31) " " " V5 10.00 Normal .00 5.76 62.34 62.34 YES 0.58 0.96 0.58 0.96 .00 6.01 62.46 62.46 YES 12.00 Normal 14.00 Normal 1.00 .93 0.58 0.92 .00 6.20 62.48 62.48 YES .00 6.34 62.63 62.63 YES .00 6.47 62.49 62.50 YES .00 6.61 62.58 62.58 YES 16.00 Normal 0.57 0.89 17.00 Normal 0.56 .00 6.76 62.69 62.69 YES .00 6.82 62.46 62.46 YES 0.56 19.00 Normal 21.00 Normal 0.52 .00 7.28 62.34 62.34 YES .00 7.45 62.48 62.48 YES .00 7.61 62.38 62.38 YES .00 7.79 62.51 62.51 YES 23.00 Normal 0.50 0.67 24.00 Normal 0.49 .00 7.95 62.57 62.57 YES .00 8.13 62.45 62.51 YES 0.49 25.00 Normal 0.61 0.56 26.00 Normal 27.00 Normal 28.00 Normal .00 8.31 62.49 62.40 YES 0.49 0.52 .00 8.46 62.45 62.45 YES 0.49 0.50 0.49 0.50 30.00 Normal .00 8.73 62.57 62.57 YES .44 0.47 0.48 .43 0.47 0.48 32.00 Normal .00 9.07 62.49 62.40 NO .00 9.23 62.48 62.48 NO 0.46 0.48 .00 9.44 62.51 62.51 NO 0.45 0.46 .00 9.61 62.57 62.57 NO 34.00 Normal 35.00 Normal

NOTES: 1) Where 'Normal' &/or 'Oncoming' lines are shown, compliance with the nominated Category, at a particular spacing, is only applicable when there is a 'Yes' on each line i.e. ANY 'No' indicates failure at that spacing. 2) Calculations use the original SAASTAN software

Run: 13/ 1/2022 at 17:50:06 PleVcat - Vers 5.09 (Built: 10/4/13)

40% LYONPARK RD V5 CALC 2.25/2.25 OVERHANG STAGGERED ARRANGEMENT

P Category Lighting - AS/NZS 1158.3.1:2005

I-table Filename: J:\6820\Elec\Lighting Calculations\Gerard Lighting Arterial ATB 2\ATB2_40BLEDE10_XXXXX_R3_4K_5K_133W

Page 1

Job Name: 6820 - Lyonpark Rd PR3 - 40% Luminaire Description: ATB2_40BLEDE10_XXXXX_R3_4K_5K_133W use 1 Lamp Wattage & Type: 16.24 Klms 133W Initial Lamp Flux: 6500 lms Maintenance Factor: 0.8 Stores Code: Upcast Angle: 0 degrees Arrangement: Staggered Offset Distance: 6.6 m

Upward Waste Light Ratio: .0 %
Light Source: LED - Light Emitting Diode Luminaire Classification: Not specified Lighting Category: P3 (Local Area Roads - Tables 2.1 & 2.6)

Illuminance Criteria: Average Illuminance (Eav) >= 1.75 lx (Maintained values) Minimum Illuminance (Eph) >= 0.30 lx Illuminance Uniformity (Up) <= 10

Calculation Grid: 20 x 11 points - Figure 3.7 of AS/NZS 1158.2

Maximum Spacing for different Height

Road Reserve Widths

22.0 10.5 | 72.1 |

The table contains maximum spacings which, for the specified luminaire and lamp combination, provide compliance with the light technical parameters (LTPs) of Table 2.6 of AS/NZS 1158.3.1:2005.

Refer next page for list of LTP's at compliant maximum spacings.

Run: 13/ 1/2022 at 17:57:46 PlePcat - Vers 3.10 (Built: 10/ 4/13)

Mounting Road Maximum Eav Height Reserve Spacing (m) (m) (m) (m) (lx) (lx)(Emax/Eav)

Light Technical Parameters at Maximum Spacing

PlePcat - Vers 3.10 (Built: 10/ 4/13) Run: 13/ 1/2022 at 17:57:46

10.5 22.0 72.1 2.20 0.30 4 9.42

40% LYONPARK RD PR3 CALC 2.25/2.25 OVERHANG STAGGERED ARRANGEMENT



24 November 2021 EW: 6820_DC.4

City of Ryde Locked Bag 2069

Ms Mincong Chen

IVANHOE ESTATE CNR LYONPARK RD AND PROPOSED ROAD NO.1, MACQUARIE PARK STREET LIGHTING DESIGN

We confirm the lighting design detailed within drawing no.'s 6820-ES-601 through 6820-ES-608 for the above project has been designed to meet the following lighting standards and inclusive of City of Ryde Council's lighting guidelines for all public roads within the above development:

- Category V5 of AS/NZS 1158 Lighting for roads and public spaces. Part 1.1 Vehicular Traffic (Category V) Lighting-Performance and design requirements
- Category PR3 of AS/NZS 1158 Lighting for roads and public spaces

Lighting design has complied with the vehicular lighting category V5 and pedestrian lighting category PR3 in accordance with AS/NZS 1158 Lighting for Roads and Public Spaces, and the conditions of consent -

Part 3.1 Pedestrian Area (Category P) Lighting-Performance and design requirements

Shelmerdines Consulting Engineers possess appropriate Professional Indemnity Insurance.

Full Name of Designer: Elbert Wang Qualifications: B.E. Elec Address of Designer: 55 Hume Street, Crows Nest **Business Telephone No: 9436 3021** Name of Employer: Shelmerdines Consulting Engineers

Yours faithfully SHELMERDINES



E. Shelmerdine & Partners Engineering Pty Ltd ABN 40 003 331 879 Email: mail@shelmerdines.com.au
Web: www.shelmerdines.com.au
PO Box 1345
Crows Nest NS

Crows Nest NSW 2065 Phone: 02 9436 3021 Crows Nest NSW 1585

55 Hume Street

P.W. Matthews D.A. Taylor

D.J. Powell J.R. Lee D.J. Rossington



		_	
CELEBI	RAI	INC	ž

40% V5 LIGHTING CALCULATION

PERFORMANCE

CRITERIA

REQUIRED

DESIGNED

REQUIRED

DESIGNED

STREET NAME

YONPARK RD INTERSECTION CARRIAGEWAY

LYONPARK RD INTERSECTION CARRIAGEWAY

LYONPARK RD INTERSECTION FOOTPATH

LYONPARK RD INTERSECTION FOOTPATH

LIGHTING POINT HORIZONTAL HORIZONTAL

CATEGORY ILLUMINANCE (LUX) UNIFORMITY CAT

<=8

<=8

1.41

>=3.5

5.4

>=1.75

Drn Ckd Date Description Drn Ckd Date Description DRIVEWAY SPLAY REMOVED A FOR APPROVAL EW DT 04.11.21 E EW DT 17.02.22 60% OUTPUT LIGHTING CALC ADDED. EW DT 24.11.21 100% OUTPUT CALCS MOVED TO TO SHEET ES-606. REVISED ISOLUX AS REQ DT 17.12.21 EW DT 14.01.22 SPACING TABLE REVISED

CLIENT:





ABN 40 003 331 879 55 Hume Street Crows Nest NSW 2065

Telephone: (02) 9436 3021 Email: mail@shelmerdines.com.au Web: www.shelmerdines.com.au

DETAILED LIGHTING DESIGN LYONPARK ROAD, MACQUARIE PARK

ELECTRICAL SERVICES LIGHTING CALCULATIONS SHEET 2 AND LIGHTING CERTIFICATION

DATE	SCALE
NOV 2021	AS SHOWN @ A1
DRAWN	CHECKED
EW	DT
DRAWING NUMBER 6820-ES-607	ISSUE NUMBER

CITY OF RYDE

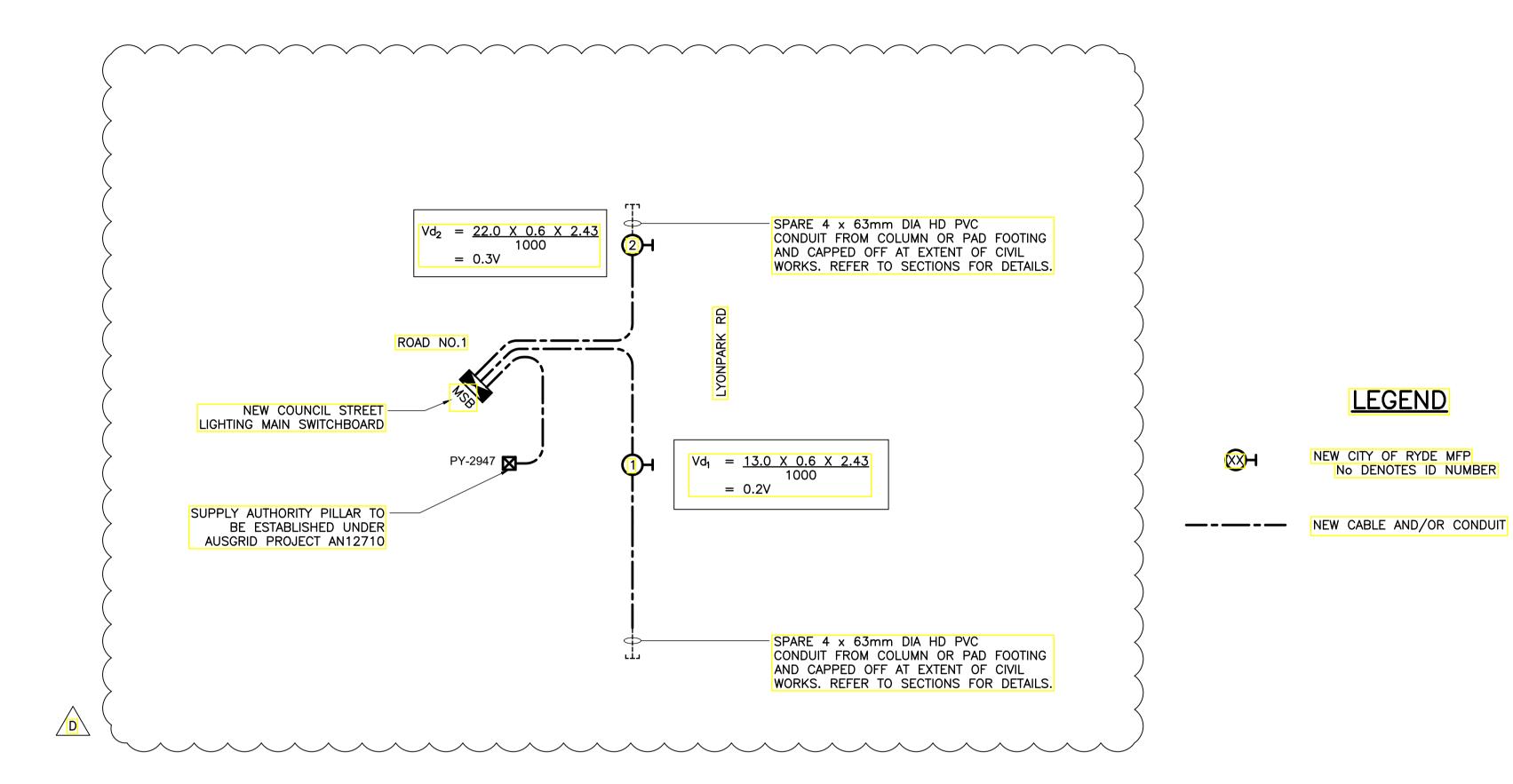
APPROVED FOR CONSTRUCTION

SSDA - 8903

18 FEB 2022

Subject to the Conditions

of Development Consent



CIRCUIT DIAGRAM NOT TO SCALE

LEGEND

CITY OF RYDE APPROVED FOR CONSTRUCTION LDA SSDA - 8903 Date 18 FEB 2022 Subject to the Conditions of Development Consent

No. Description	Drn Ckd Date	No. Description Drn Ckd D	te CLIENT:	ELECTRICAL CON	ULTING ENGINEERS	PROJECT	DRAWING	DATE	SCALE
A FOR APPROVAL	EW DT 04.11.21			Sh	elmerdines		ELECTRICAL SERVICES	NOV 2021	AS SHOWN @ A1
B AUSGRID PILLAR NUMBER AD	DED EW DT 24.11.21						CIRCUIT DIAGRAM	DRAWN	CHECKED
C REVISED CIRCUIT DIAGRAM	EW DT 17.12.21			PROPERTY	sulting Engineers	LYONPARK ROAD,		EW	DT
D REVISED CIRCUIT DIAGRAM	EW DT 14.01.22			ABN 40 003 331 879	Telephone: (02) 9436 3021	MACQUARIE PARK		DRAWING NUMBER	ISSUE NUMBER
				55 Hume Street Crows Nest NSW 2	Email: mail@shelmerdines.com.au			6820-ES-608	D

NOTICE OF INTENTION TO COMMENCE PUBLIC DOMAIN WORKS



About this form

Use this form to advise Council of your intention to commence public domain works.

Before commencing public domain works you must:

- Obtain a development consent and a construction certificate
- Complete this form and give to Council not less than 7 working days before you intend to start work in the public domain
- Obtain approval from Council's City Works and Infrastructure Directorate, all design drawings for the public domain works
- Obtain the relevant Road Activity Permits under Section 138 of the Roads Act, 1993

Supply Council with the following documents (at time of submission

of this form):

Pre-Construction Dilapidation Survey Report of the public infrastructure surrounding the development as required by the DA consent

A certified copy of your Principal Contractor's Certificate of Currency (valid for at least 3 months) verifying Public Liability Insurance of at least \$20,000,000

A copy of your Principal Contractor's Safety Management Plan

A copy of your Principal Contractor's Environmental Management Plan

Lodgement and Fees

There is no fee to lodge this form with Council. The completed form and all required documents are to be forwarded to Council's City Works and Infrastructure Directorate.

Council Contact Details

Customer Service 1 Pope Street, Ryde NSW Post Locked Bag 2069, North Ryde NSW 1670 Email cityofryde@ryde.nsw.gov.au

Phone (02) 9952 8222 **TTY** (02) 9952 8470 **Fax** (02) 9952 8070

PART 1: APPLICANT DETAILS It is important that we are able to contact you if we need more information.

Company / Organis	sation	ACN
Title*	Mr Mrs Ms Miss	Other
Given Name*		Family Name*
Postal address*		
Suburb*		Postcode*
Mobile		Phone
Email		

PART 2: SITE DETAILS

Location of Proper	y:
Unit No.	House No.
Street*	
Suburb*	Postcode*

PART 3: APPROVED DEVELOPMENT

3. a) Development Consent	LDA No:	Date Approved:
3. b) Construction certificate	Council CC No:	Date Issued:
	Certifier CC No:	Date Issued:
3. c) Description of the public doma	in works	
3. d) Date public domain works is to	o commence 3. e) Exp	ected completion date
PART 4 : COMPLIANCE WI	TH DEVELOPMENT CONSENT	Declaration by the applicant
_	nence until all relevant conditions of the de required to be satisfied prior to the comme	
Name*	Squired to be suited by to the common	
Nume		
Signature*		Date
PART 5 : SUPERVISING EN	GINEER DETAILS	
Engineer name*		
Engineer name*		
Company*		
Company*		Postcode*
Company* Engineer address*	Phone	Postcode*
Company* Engineer address* Suburb*	Phone	Postcode*

PART 6: PRINCIPAL CONTRACTOR DETAILS

Contractor name*	
Contractor address*	
Suburb*	Postcode*
Mobile	Phone Phone
Email	
Contractor License N	Number:
Public Liability Insu	rance /Certificate of Currency details:
Policy Holder:	Policy No.:
Principal Contractor	r's Representative:
Name*	
Mobile	Phone Phone
Fax	

Personal information collected from you is held and used by Council under the provisions of the *Privacy and Personal Information Protection Act 1998*. The supply of information is voluntary, however if you cannot provide, or do not wish to provide the information sought, Council may be unable to process your request. Please note that the exchange of information between the public and Council, may be accessed by others and could be made publicly available under the *Government Information Public Access Act 2009 (GIPA Act)*. If you require further information please contact Council's Customer Service Centre on 9952 8222.



Public Domain Construction Compliance Checklist

LDA No.	Development Site		
	of public domain works		
Date of public domain	compliance inspection		
Developer / Represer	ntative		
Name:			
	•		
Organisations		Contact Phone:	
Organisation:		E-mail:	
		L-IIIaII.	
Road Activity permit	s		
	=		
Road Opening			
Permit No.		Expiry Date:	
No. of the Control of			
Road Use			
Permit No.		Expiry Date:	
		<u> </u>	
Other Permit	Permit Type:		
l I		T	
Permit No.		Expiry Date:	

Pedestrian Management

A continuous pedestrian footway along the development frontage has been provided.	YES	NO	N/A
Temporary footways have been appropriately delineated, including appropriate signage in place.	YES	NO	N/A
The development site and any areas within the road reserve which have been closed, have been appropriately barricaded.	YES	NO	N/A
The temporary pedestrian footway along the frontage is clear of obstructions. Eg. Vehicles, construction debris, materials, machinery.	YES	NO	N/A
The pedestrian footway is free of all pedestrian trip hazards, and provides for adequate transition to existing adjacent footways.	YES	NO	N/A
Where applicable, pedestrian management is coordinated with any adjoining development works.	YES	NO	N/A
Where applicable, the pedestrian footway arrangements and signage are in accordance with the approved Pedestrian Management Plan (PMP).	YES	NO	N/A



Traffic Control

Any obstructions to the traffic flow are appropriately managed in accordance	YES	NO	N/A
with the Traffic Management Plan. (TMP)			
Any permitted road or footpath closures are appropriately barricaded and	YES	NO	N/A
sign posted.			
The road pavement within the vicinity of the development site is adequately	YES	NO	N/A
maintained to provide for safe and functional use by road users.			

Construction Traffic Management

Construction vehicles are observed to be entering and exiting the site in accordance with the route specified within Construction Traffic Management Plan (CTMP)	YES	NO	N/A
Pedestrians and construction vehicles are adequately separated. There are no construction vehicles obstructing the dedicated pedestrian footway or roadway.	YES	NO	N/A

Environmental Management

Sediment and erosions controls are in place as specified within the	YES	NO	N/A
Environmental Management Plan. (EMP)			
There is no significant migration of construction residue beyond the			
construction site.			[

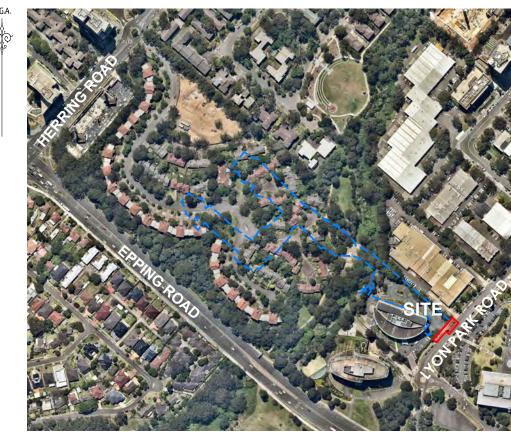
Details of Non-Compliance:
Rectifications Works Required / Timeframes:



Referral of Non-Compliances

Council Team	Date of Referral	Document Reference No.
Transport		
Rangers		
Building Compliance		

ENGINEERING PLANS OF INFRASTRUCTURE WORKS S138 ROADS ACT APPROVAL LYONPARK ROAD, MACQUARIE PARK, SSDA 8903



LOCALITY SKETCH

INDEX OF DDVMINGS

INDEX OF DRAWINGS									
DRAWING No.	NAME								
300001(S138)-ENG-001	COVER SHEET, INDEX OF DRAWINGS & LOCALITY SKETCH								
300001(S138)-ENG-002	GENERAL NOTES								
300001(S138)-ENG-003	OVERALL SITE PLAN								
300001(S138)-ENG-004	SURVEY SETOUT PLAN								
300001(S138)-ENG-101	DETAIL PLAN								
300001(S138)-ENG-151	PAVEMENT PLAN & DETAILS								
300001(S138)-ENG-201	ROAD LONGITUDINAL SECTION - ROAD No.01								
300001(S138)-ENG-202	DRIVEWAY LONGITUDINAL SECTION - DRIVEWAY No.3								
300001(S138)-ENG-211	KERB RETURN LONGITUDINAL SECTIONS - KR103 & KR103A								
300001(S138)-ENG-212	KERB RETURN LONGITUDINAL SECTIONS - KR10 & KR11								
300001(S138)-ENG-401	STORMWATER CATCHMENT PLAN								
300001(S138)-ENG-411	STORMWATER CALCULATION CHARTS - 20 & 100 YEAR A.R.I. & PIT LPR 1\1 SETOUT PLAN								
300001(S138)-ENG-701	PROPOSED VEHICLE SWEPT PATH PLAN - SHEET 1								
300001(S138)-ENG-702	PROPOSED VEHICLE SWEPT PATH PLAN - SHEET 2								
300001(S138)-ENG-703	PROPOSED VEHICLE SWEPT PATH PLAN - SHEET 3								
300001(S138)-ENG-751	LINEMARKING & SIGNAGE PLAN								
300001(S138)-ENG-901	SERVICES RELOCATION PLAN								
300001(S138)-ENG-902	SERVICES RELOCATION SECTIONS								



SSD 8903

of Development Consent

CONSTRUCTION ISSUE

NEW ROAD CONNECTION



FRASERS

PROPERTY DESCRIPTION LYONPARK ROAD MACQUARIE PARK SSDA 8903

COVER SHEET, INDEX OF DRAWINGS & LOCALITY SKETCH

GDA94 M.G.A. ZONE 56 A.H.D.

300001(S138) - ENG

ted By: Jacob Jackson Plot Date: 14/02/22 1:48:50PM Cad File: S:\300001\DRAWINGS\ENGINEERING\CIVIL\S138\300001(S138)-ENG-001.DW

REV. DATE AMENDMENT

RYDE CITY COUNCIL

- 1. ALL MATERIALS AND PRODUCTS FOR INSTALLATION AND CONSTRUCTION SHALL COMPLY WITH AUSTRALIAN STANDARDS, MONITORING TESTING ("STRING LINE" AND "ROLL") WHERE SPECIFIED BY COUNCIL'S MANUAL OF ENGINEERING STANDARDS, TO BE PERFORMED BY COUNCIL, SHALL BE ARRANGED **24 HOURS** IN ADVANCE. WHERE A COUNCIL OFFICER IS NOT AVAILABLE, A GEOTECHNICAL ENGINEER MAY PERFORM SUCH TESTS.
- 2. ALL TREES WITHIN THE ALLOTMENT AND RESERVES (OTHER THAN ROAD RESERVES) SHALL BE RETAINED, UNLESS OTHERWISE NOMINATED.

1. TRAFFIC CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE RMS DOCUMENT "TRAFFIC CONTROL AT WORKSITES"

 PROVISION SHOULD BE MADE FOR SUITABLE PROTECTION OF THE EXISTING ROAD PAVEMENTS, KERB AND GUTTER AND FOOTPATH FORMATION. VEHICULAR ACCESS TO ALL SERVICES TO ADJOINING PROPERTIES AFFECTED BY CONSTRUCTION WORKS, SHALL BE MAINTAINED AT ALL TIMES.

1. SUBSOIL DRAINS SHALL BE PROVIDED IN ACCORDANCE WITH COUNCILS STANDARDS, ADDITIONAL DRAINS SHALL BE PROVIDED WHERE CONSIDERED NECESSARY, BY COUNCIL OR A GEOTECHNICAL ENGINEER.

SEDIMENT & EROSION CONTROL:

2. ALL SILT CONTROL MEASURES SHALL BE PLACED PRIOR TO THE COMMENCEMENT OF EARTHWORKS. SUCH MEASURES SHALL BE SUBJECT TO FURTHER ADDITIONS, WHERE CONSIDERED NECESSARY, AS DIRECTED BY THE PROJECT MANAGER OR COUNCIL, DURING THE PROGRESSIONS OF WORKS. ALL FINAL EROSION PREVENTION MEASURES INCLUDING ESTABLISHMENT OF GRASS SHALL BE COMPLETED PRIOR TO THE "FINAL" INSPECTION

GENERAL

- ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE APPROVED PLANS, SUBJECT TO RYDE COUNCIL DCP 2014 SECTIONS 8.1, 8.2 + 8.5, MACQUARIE PARK CORRIDOR TECHNICAL MANUAL COUNCIL STANDARD DRAWINGS AND RELEVANT AUSTRALIAN STANDARDS
- 2. SETOUT INFORMATION IS TO BE VERIFIED BY THE CONTRACTOR AGAINST THE PLAN VIEW, LONGITUDINAL SECTIONS, AND ELECTRONIC 12d DATA BEFORE BEING USED. IF THERE IS A DISCREPANCY. THE SUPERINTENDENT IS TO BE NOTIFIED AND DIRECTION WILL BE PROVIDED IN WRITING BEFORE PROCEEDING.
- 3 THE DRAWINGS ARE A DIAGRAMMATIC REPRESENTATION OF THE WORK TO BE CARRIED OUT ONLY, AND DIMENSIONS SHALL NOT BE OBTAINED BY SCALING.
- 4. ALL LEVELS SHALL BE OBTAINED FROM ESTABLISHED BENCHMARKS TO THE **AUSTRALIAN HEIGHT DATUM (A.H.D.)**.
- 5. POINTS OF CONFLICT BETWEEN NEW CONSTRUCTION AND EXISTING UTILITY SERVICE MAINS SHALL BE IDENTIFIED, EXPOSED AND REPORTED TO THE PROJECT MANAGER PRIOR TO CONSTRUCTION. SERVICE CONDUITS SHALL BE LAID IN POSITIONS AS APPROVED BY THE RELEVANT AUTHORITY.
- 6. ALL MATERIALS AND PRODUCTS FOR INSTALLATION AND CONSTRUCTION SHALL COMPLY WITH AUSTRALIAN STANDARDS.
- 7. THE INSPECTION, SUPERVISION AND REPORTING REQUIREMENTS. OF A SUITABLY QUALIFIED ECOLOGIST REGARDING THE REMOVAL AND RELOCATION OF ANY THREATENED FAUNA SPECIES SHALL BE UNDERTAKEN AS PER RELEVANT CONDITIONS OF CONSENT.
- 8. SAFE OPERATION OF EXISTING PROPERTIES TO BE MAINTAINED AT

SURVEYING

- 1. SURVEY BY: ADW JOHNSON PTY LTD
- 2. ORIGIN OF COORDINATES: GDA94 MGA56 BENCH MARK P.M.50023 F:325216.337 N:6260317.86 RL.80.785 AHD
- 3. ALL LEVELS SHOWN ARE A.H.D. GDA94

DESIGN FILE S: \300001\DESIGN\12D\STAGE 2 CC\DESIGN FILE.project

GEOTECHNICAL

- 1. GEOTECHNICAL INVESTIGATION PERFORMED BY
- DOUGLAS PARTNERS REFERENCE 86043.01
- REFER TO THE AFOREMENTIONED REPORT DURING

EARTHWORKS & REGRADING

- SITE REGRADE AREA IS TO BE DRAINED IF REQUIRED AND ALL EXISTING VEGETATION REMOVED
- 2. ALL TOPSOIL AND UNSUITABLE MATERIAL WILL BE REMOVED PRIOR TO PLACEMENT OF EXCESS MATERIAL FROM ROAD EXCAVATION IN ACCORDANCE WITH DIRECTIONS FROM GEOTECHNICAL ENGINEER
- 3. MAXIMUM NOMINATED THICKNESS OF FILL LAYER
 - 150mm IN ROAD RESERVE AREAS 300mm IN OTHER AREAS
- 4. MINIMUM NOMINATED COMPACTION OF FILL
 - 98% STANDARD IN ROAD RESERVE AREAS 95% STANDARD IN OTHER AREAS
- 5. COMPACTION OF EARTHWORKS ASSOCIATED WITHIN LOTS TO BE CARRIED OUT UNDER LEVEL 1 SUPERVISION IN ACCORDANCE WITH AS 3798-1996 AND A REPORT SUBMITTED TO THE PRINCIPAL CERTIFYING AUTHORITY WITH DOCUMENTATION ACCOMPANYING THE RESPECTIVE COMPLIANCE CERTIFICATE APPLICATION.
- 6. ALL SITE REGRADE TO BE CONTROL FILL IN ACCORDANCE WITH GEOTECHNICAL ENGINEERS DIRECTION
- 7. WHERE PRACTICAL CATCHDRAINS ARE TO BE CONSTRUCTED UPSLOPE OF THE SITE REGRADE TO DIVERT CLEAN SURFACE WATER.

STORMWATER

- 1. ALL STORMWATER PITS DEEPER THAN 1.0m TO HAVE STEP IRONS.
- 2. PRECAST PITS TO BE INSTALLED AS PER MANUFACTURERS SPECIFICATION.
- 3. ALL INTERALLOTMENT DRAINAGE PITS TO BE PROVIDED WITH HINGED, LOCKABLE GRATES
- 4. ALL RCP STORMWATER PIPES TO BE RUBBER RING JOINTED (RRJ) UNLESS INDICATED OTHERWISE.
- 5. ALL STORMWATER PITS AND PIPES TO BE INSTALLED IN ACCORDANCE WITH RYDE COUNCIL STANDARD DRAWINGS
- 6. ALL STORMWATER PITS TO HAVE MINIMUM 35mm MASS CONCRETE BENCH AS PER COUNCIL STANDARD DRAWING

EROSION & SEDIMENT CONTROL

- LEROSION AND SEDIMENT CONTROL MEASURES ARE TO BE CONSISTENT WITH THE NSW GOVERNMENT'S "MANAGING URBAN RMWATER: SOILS AND CONSTRUCTION"
- 2. THE ARRANGEMENT SHOWN ON THE PLANS IS DIAGRAMMATIC ONLY. AMENDMENTS MAY NEED TO BE MADE DURING CONSTRUCTION.
- 3. ALL SEDIMENT AND EROSION CONTROL MEASURES. INCLUDING BASINS AND DIVERSION DRAINS, ARE TO BE IN PLACE PRIOR TO
- 4. MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES UNTIL COMPLETE REHABILITATION IS ACHIEVED.
- 5. STOCKPILE AREA TO BE FULLY FENCED WITH SILT PROOF FABRIC AT ALL TIMES.
- 6.IMPORTED MATERIAL TO BE PLACED DIRECTLY INTO SITE REGRADING AREAS. IMPORTED MATERIAL IS NOT TO BE STOCKPILED.
- 7. STOCKPILES ARE TO BE REMOVED AS SOON AS PRACTICABLE AND SITES REINSTATED AS SOON AS POSSIBLE
- 8. STOCKPILES OF MATERIAL ARE TO BE PLACED AWAY FROM DRAINAGE FLOW PATHS AND HEAVILY TRAFFICABLE AREAS AND ARE TO BE SURROUNDED BY SILT FENCING AT ALL TIMES.
- 10. MINIMISE SEDIMENTATION
- 11. CONSTRUCT STABILISED EARTH BERMS TO DIRECT CLEAN RUNOFF FROM ENTERING THE DISTURBED SITE
- 12. CONSTRUCT STABILISED DIVERSION BANKS TO COLLECT RUNOFF
- 13. ERECT AND MAINTAIN SILT FENCES AT THE DOWNSLOPE SIDE OF DISTURBED AREA/S DURING CONSTRUCTION.
- 14. PLACE SEDIMENT INLET TRAPS AROUND ALL PITS WITHIN, AND DOWNSTREAM OF, THE DEVELOPMENT.
- 15. PROVIDE GRAVEL BAGS AS REQUIRED.
- 16. SILT FENCES AND HAY BALING TO BE PLACED WHERE DIRECTED BY COUNCIL'S ENGINEER AND MAINTAINED AT ALL TIMES.
- 17. ALL DISTURBED AREAS ARE TO BE STABILISED IMMEDIATELY UPON FINISHING CONSTRUCTION ON THAT AREA WITH BITUMEN STABILIZED STRAW MULCH.
- 18. WHERE EVIDENCE OF SILT LEAVING THE SITE IS FOUND, CONTRACTOR IS TO CLEAR ALL SEDIMENT (INCLUDING THAT IN STORMWATER INFRASTRUCTURE) AT THEIR OWN COST.
- 9. FOLLOWING RAIN EVENTS, ALL SEDIMENT AND EROSION CONTROL MEASURES ARE TO BE AUDITED AND REINSTATED IF NECESSARY.
- 20. CONTROL CLEAN WATER FROM ABOVE THE SITE, THROUGH THE
- 21. KEEP CLEAN WATER SEPARATE FROM DIRTY WATER
- 22. KEEP RUNOFF FROM DISTURBED AREAS, WHERE POSSIBLE, SEPARATE FROM DIRTY WATER.
- 23. ALL DISTURBED AREAS ARE TO BE RE-VEGETATED OR OTHERWISE PROTECTED AS SOON AS PRACTICAL.
- 4. AREAS OUTSIDE THE BOUNDARIES OF THE PROPOSED DEVELOPMENT WILL BE FENCED WITH NO GO FENCING TO KEEP THE AREAS FREE FROM DISTURBANCE OF MACHINERY, PARKED VEHICLES AND WASTE MATERIAL.

CITY OF RYDE APPROVED FOR CONSTRUCTION 18/02/2022

Subject to the Conditions of Development Consent

SSD 8903

DIAL1100 BEFORE YOU DIG

REV.

002

CONSTRUCTION ISSUE

NEW ROAD CONNECTION

LYONPARK ROAD MACQUARIF PARK SSDA 8903

PROPERTY DESCRIPTION

PLAN TITLE

PROJECT

GENERAL NOTES

CLIENT

adw ohnsen abn 62 129 445 398

ALL DIMENSIONS ARE IN METRES. DO NOT SCAL

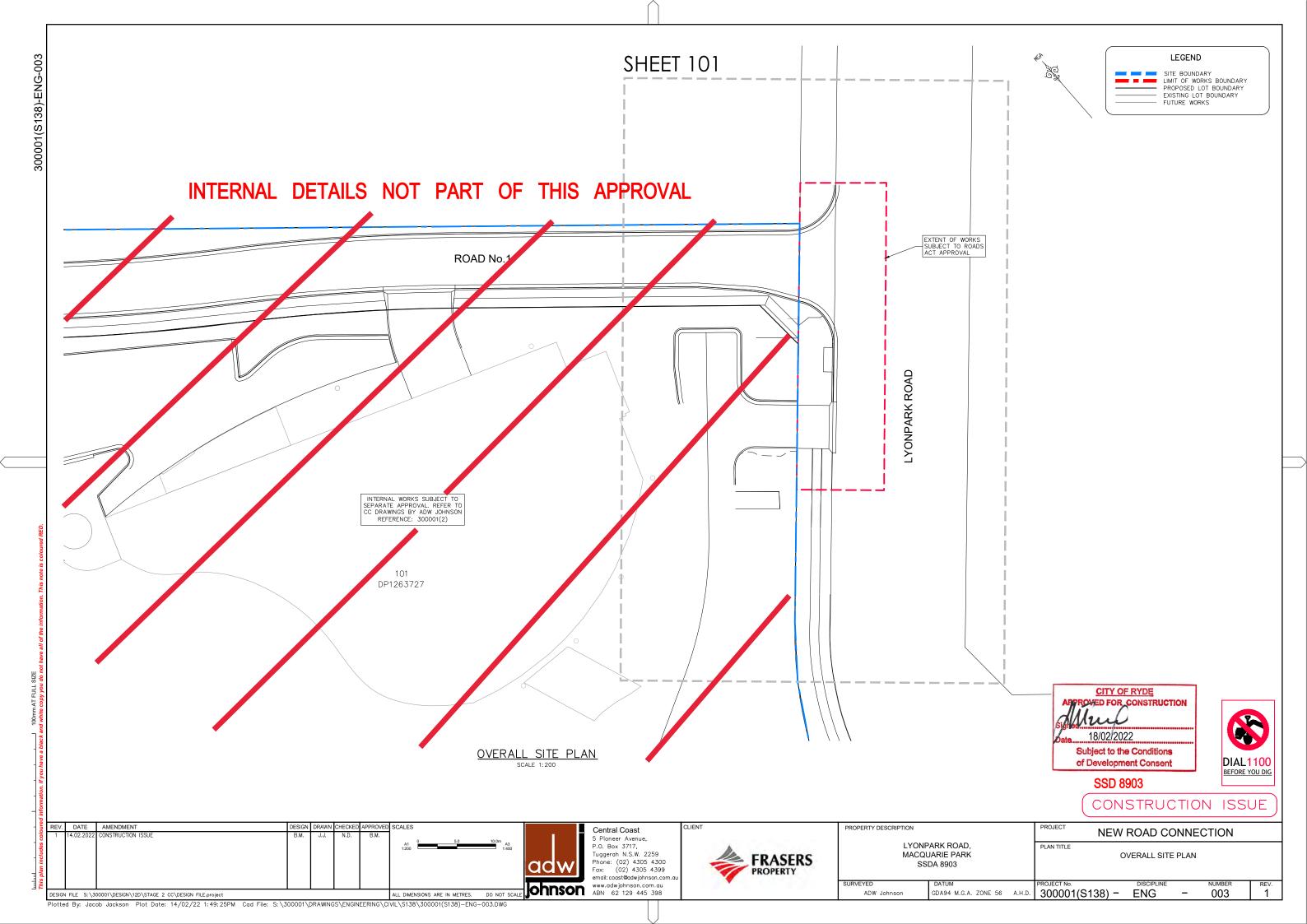
5 Pioneer Avenue. P.O. Box 3717, Tuggerah N.S.W. 2259 Phone: (02) 4305 4300 (02) 4305 4399 Fax: email: coast@adwjohnson.co www.adwjohnson.com.au

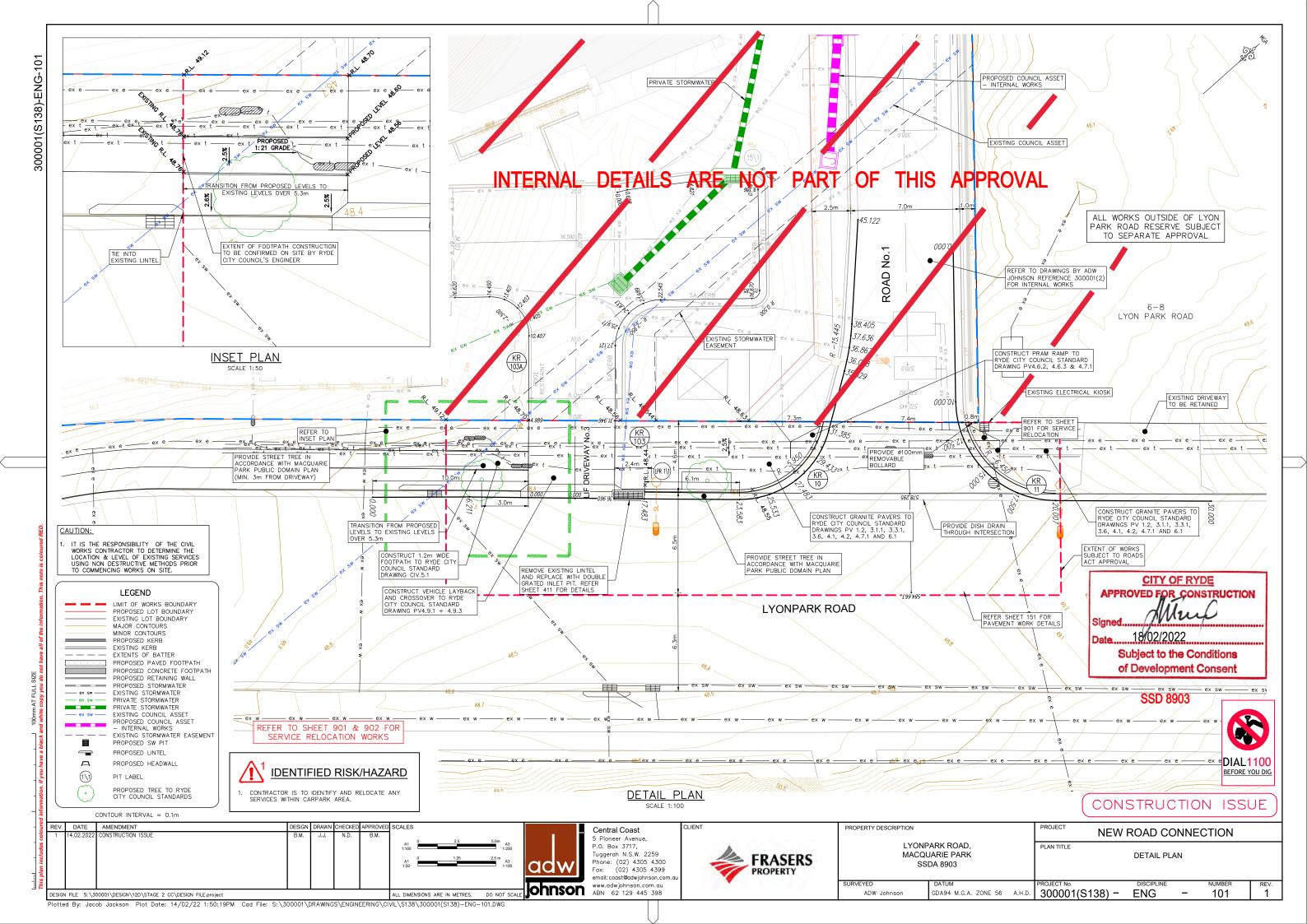
Central Coast

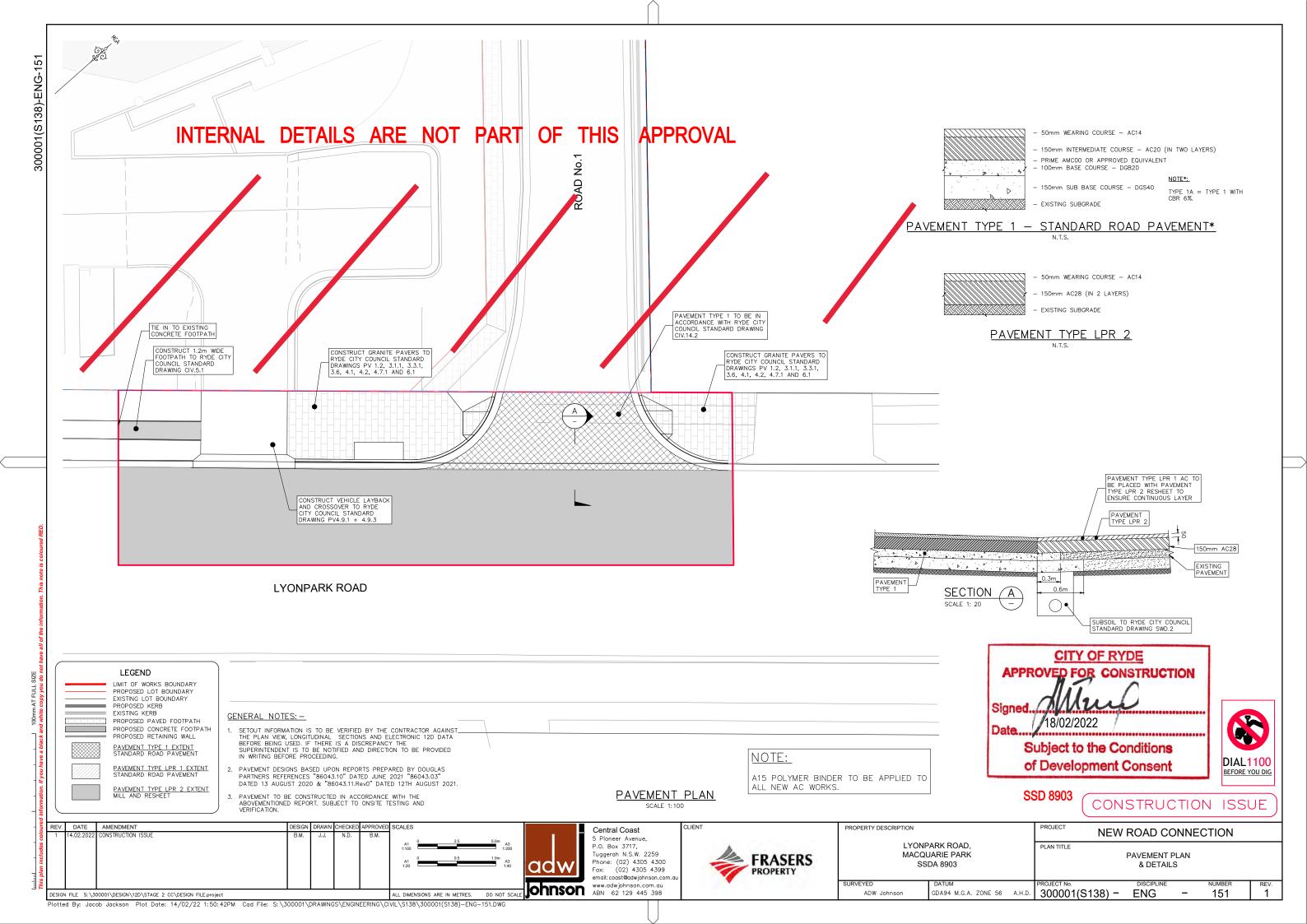
FRASERS

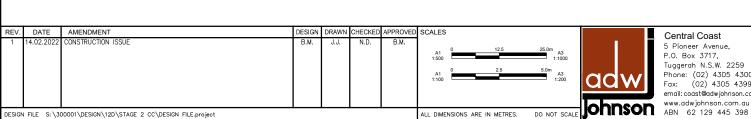
GDA94 M.G.A. ZONE 56 A.H.D. 300001(S138) -ENG

DESIGN DRAWN CHECKED APPROVED SCALES









Central Coast
5 Pioneer Avenue,
P.O. Box 3717,
Tuggeroh N.S.W. 2259 Phone: (02) 4305 4300 Fax: (02) 4305 4399

LONGITUDINAL SECTION ROAD No.1 HORIZONTAL SCALE 1:500 VERTICAL SCALE 1:100

NOT PART OF

THIS APPROVAL

FRASERS

PROPERTY DESCRIPTION LYONPARK ROAD, MACQUARIE PARK SSDA 8903

NEW ROAD CONNECTION PLAN TITLE ROAD LONGITUDINAL SECTION ROAD No.01

300001(S138) - ENG

CONSTRUCTION ISSUE

DIAL1100 BEFORE YOU DIG

REV.

CITY OF RYDE

APPROVED FOR CONSTRUCTION

Subject to the Conditions of Development Consent

1/8/02/2022

SSD 8903

PROJECT

GDA94 M.G.A. ZONE 56 A.H.D.

REV. DATE AMENDMENT

DESIGN GRADE VERTICAL GEOMETRY HORIZONTAL GEOMETRY

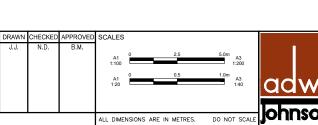
DATUM 34.0 DESIGN LEVEL

EXISTING SURFACE CUT\FILL

CHAINAGE

Plotted By: Jacob Jackson Plot Date: 14/02/22 1:51:01PM Cad File: S:\300001\DRAWINGS\ENGINEERING\CIVIL\\$138\300001(\$138)-ENG-201.DWG

REV. DATE AMENDMENT



adw Johnson www.adwjohnson.com.au ABN 62 129 445 398

Central Coast
5 Pioneer Avenue,
P.O. Box 3717,
Tuggerdh N.S.W. 2259 Phone: (02) 4305 4300 Fax: (02) 4305 4399

FRASERS

PROPERTY DESCRIPTION LYONPARK ROAD, MACQUARIE PARK SSDA 8903

GDA94 M.G.A. ZONE 56 A.H.D.

NEW ROAD CONNECTION PLAN TITLE DRIVEWAY LONGITUDINAL SECTION DRIVEWAY No.3

300001(S138) - ENG

CONSTRUCTION ISSUE

EXISTING LYONPARK ROAD DESIGN GRADE VERTICAL GEOMETRY NOT PART HORIZONTAL GEOMETRY OF THIS DATUM 46.0 DESIGN LEVEL EXISTING <u>SURFACE</u> CUT\FILL CHAINAGE

LONGITUDINAL SECTION LIF DRIVEWAY No.3

 DRIVEWAY No.3
 SETOUT TABLE

 PT
 CHAINAGE
 EASTING
 NORTHING
 BEARING

 IP 1
 0.000
 325863.058
 6260219.847
 311:56/25.75"

 IP 2
 20.077
 325868.125
 6260233.255
 311:56/25.75"

CITY OF RYDE

18/02/2022

PROJECT

Subject to the Conditions of Development Consent

SSD 8903



REV.

202

DESIGN FILE S:\300001\DESIGN\12D\STAGE 2 CC\DESIGN FILE.project Plotted By: Jacob Jackson Plot Date: 14/02/22 1:51:18PM Cad File: S:\300001\DRAWINGS\ENGINEERING\CIVIL\\$138\300001(\$138)-ENG-202.DWG

REV. DATE AMENDMENT ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw www.adwjohnson.com.au
ABN 62 129 445 398

Central Coast
5 Pioneer Avenue,
P.O. Box 3717,
Tuggerdh N.S.W. 2259 Phone: (02) 4305 4300 Fax: (02) 4305 4399

FRASERS

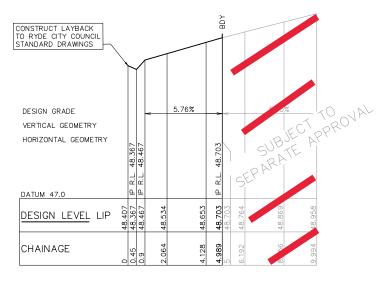
CLIENT

PROPERTY DESCRIPTION PROJECT **NEW ROAD CONNECTION** LYONPARK ROAD, MACQUARIE PARK PLAN TITLE KERB RETURN LONGITUDINAL SECTIONS SSDA 8903 GDA94 M.G.A. ZONE 56 A.H.D. 300001(S138) -

CONSTRUCT LAYBACK TO RYDE CITY COUNCIL STANDARD DRAWINGS -4.29% DESIGN GRADE VERTICAL GEOMETRY HORIZONTAL GEOMETRY 48.395 48.291 DATUM 46.0 DESIGN LEVEL LIP CHAINAGE

> LONGITUDINAL SECTION KR103 HORIZONTAL SCALE 1:100 VERTICAL SCALE 1:20

	KR103 - SETOUT TABLE														
PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE								
TC	22.545	325877.173	6260232.451	220°48'48.12"											
IP 6	24.833	325875.283	6260230.262		R = -2.950	4.576	88*52'22.37"								
CT	27.121	325877.434	6260228.328	131*56'25.75"											
IP 7	36.960	325884.753	6260221.752	131 56 25.75"											



LONGITUDINAL SECTION KR103A HORIZONTAL SCALE 1:100

VERTICAL SCALE 1:20

			KR103A -	- SETOUT 1	FABLE		
PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	325881.026	6260217.640	311 56 25.75"			
TC	10.407	325873.285	6260224.596	311°56′25.75"			
IP 2	12.403	325871.376	6260226.311		R = -2.500	3.993	91*30'14.90"
CT	14.400	325869.711	6260224.357	220*26'10.84"			
IP 3	16.620	325868.271	6260222.668	220*26'10.84"			

CITY OF RYDE APPROVED FOR CONSTRUCTION Subject to the Conditions of Development Consent



REV.

211

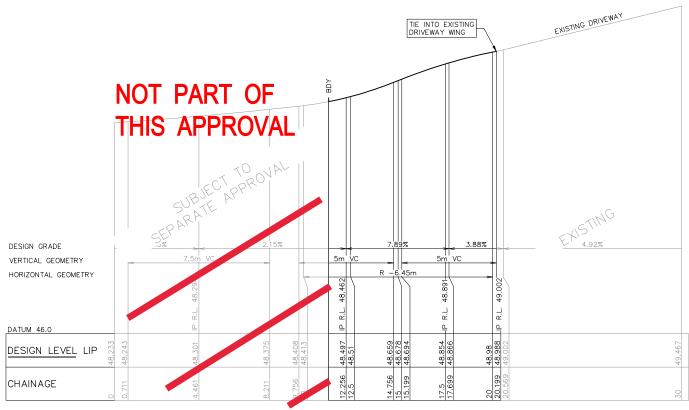
SSD 8903

CONSTRUCTION ISSUE

KR103 & KR103A

ENG

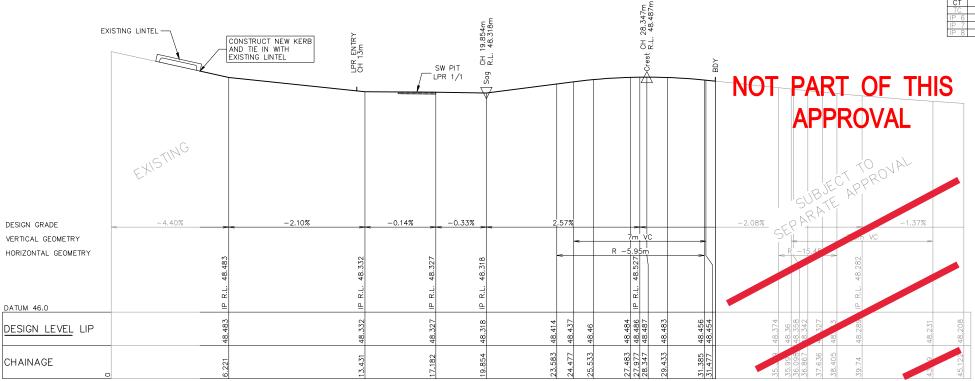
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	KR11 — SETOUT TABLE													
PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE							
IP 1	0.000	325887.113	6260248.797	130°44'55.30"										
IP 2	10.000	325894.689	6260242.270											
IP 3	15.004	325899.482	6260238.140		R = -6.450	10.007	88'53'38.08"							
IP 4	20.007	325903.703	6260242.852											

			KR10 -	SETOUT TA	ABLE		
PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	325874.355	6260210.191	41°24′27.49″	,		
IP 2	6.211	325878.463	6260214.849				
IP 3	17.483	325886.055	6260223.181				
IP 4	23.583	325890.139	6260227.712				
IP 5	27.484	325893.171	6260231.138		R = -5.951	7.802	75'07'09.04"
CT	31.385	325890.638	6260234.949	326 23 15.68"			
TC	35.329	325888.455	6260238.234	326*23'15.68"			
IP 6	36.867	325887.601	6260239.519		R = -15.445	3.075	11*24'31.60"
IP 7	38.405	325886.509	6260240.610				
IP 8	45.122	325881.758	6260245.358	314*58'52.69"			

LONGITUDINAL SECTION KR11 HORIZONTAL SCALE 1:100 VERTICAL SCALE 1:20



LONGITUDINAL SECTION KR10 HORIZONTAL SCALE 1:100 VERTICAL SCALE 1:20

CITY OF RYDE 18/02/2022 Subject to the Conditions

of Development Consent

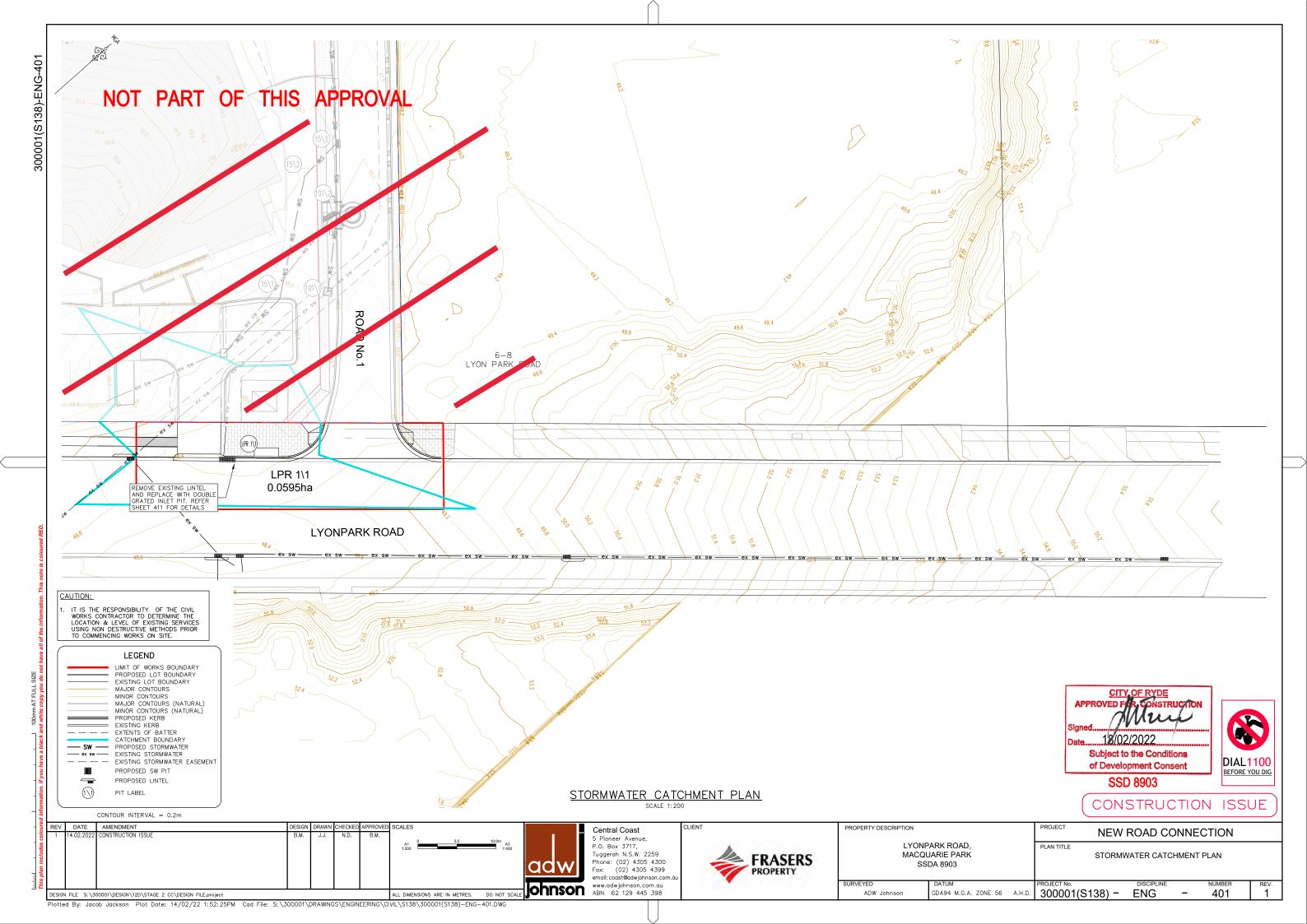
SSD 8903



CONSTRUCTION ISSUE

REV. DATE AMENDMENT PROPERTY DESCRIPTION **PROJECT** Central Coast **NEW ROAD CONNECTION** 5 Pioneer Avenue, LYONPARK ROAD, MACQUARIE PARK P.O. Box 3717, Tuggerah N.S.W. 2259 PLAN TITLE FRASERS KERB RETURN LONGITUDINAL SECTIONS Phone: (02) 4305 4300 Fax: (02) 4305 4399 SSDA 8903 KR10 & KR11 REV. ohnson www.adwjohnson.com.au ABN 62 129 445 398 GDA94 M.G.A. ZONE 56 A.H.D. 300001(S138) -ENG 212 DESIGN FILE S: \300001\DESIGN\12D\STAGE 2 CC\DESIGN FILE.project ALL DIMENSIONS ARE IN METRES. DO NOT SCAL

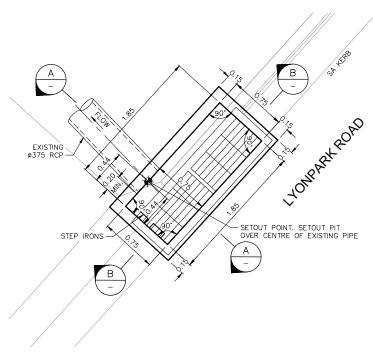
Plotted By, Jacob Jackson Plot Date: 14/02/22 1:51:54PM Cad File: S:\300001\DRAWINGS\ENGINEERING\CIVIL\S138\300001(S138)-ENG-212.DWG



20 YEAR HYDROLOGICAL DESIGN

	28 TEACHT TO BIOCOGENE SES OF																						
Τ¢	PIT	AREA	MPER.	PER.	to IMPER.	tc PER.	INTENSITY	RUNOFF	RUNDEF	CRITICAL SUM	CATCHMENT	6YPASS	TOTAL FLOW	PIT NUET	PIT BYPASS	BYPASS	Ko GUTTER	FLOODED	FLOW	VELOCITY®	OVC9 XAM	CHOKE	NOTES
NAME	DETAILS			[CIMPER.	C PFR.	CA	F: OW	ARR VING	@ PIT	FLOW	FLOW	PIT	SLOPE	DEPTH	WIDTH	DFPTH	DEPTH	FACTOR	
		ha	96	%	min	mir	mm/hr				L/s	L/s	15	L/s	L/s	!	. %	ın	m		m	1=NONE	
I ₽R 1\1	900 x 900 V GRATE	0.0595	75	25	5	5	195	0.945	0.5362	0.05	27	0	27	27	0	į	3.fi	0.06	0.4	0.14		1	

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NAME	DETA LS							CIMPER.	C PER.	€A.	FLOW	ARR VING	@ PIT	FLOW	FLOW	PIT		S_OPE	DEPTH	WIDTH	DEPTH	DEPTH	FACTOR	Č.
		ha	%	95	min	min	mm/hr				L/s	L/s	L/s	L/s	L/s			%	m	m		m	1=NONE	:.
LPR I\	1 900 x 900 VGRATE	0.0595	75	25	S	Š	24/	1	0.6128	0.054	37	0	37	37	Ď		3.6		0.05	0.45	0.16		0.8	



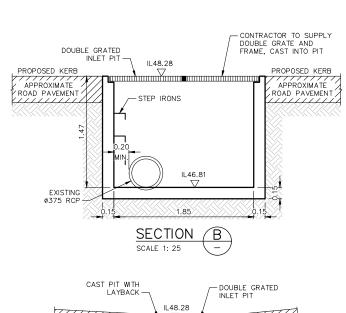
SETOUT PLAN - PIT LPR 1\1 SCALE 1:25

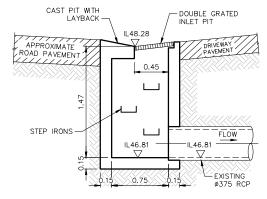
NOTE:

REINFORCEMENT OF PIT TO BE IN ACCORDANCE WITH RYDE CITY COUNCIL STD DRAWING SWD.1.2.1.

NOTES: -

- ALL STORMWATER PITS TO BE CONSTRUCTED IN ACCORDANCE WITH RYDE COUNCILS ENGINEERING CONSTRUCTION SPECIFICATION.
 ALL PITS DEEPER THAN 1.0m TO HAVE STEP IRONS.
 ALL STORMWATER PIPE CLASSES ARE TO COMPLY WITH COUNCILS DESIGN AND CONSTRUCTION SPECIFICATIONS. IF THERE ARE DISCREPANCIES BETWEEN COUNCILS SPECIFICATIONS AND THE APPROVED CONSTRUCTION CERTIFICATE PLANS PLEASE NOTIFY THE SUPERINTENDENT IMMEDIATELY. IT IS THE CONTRACTORS RESPONSIBILITY TO USE THE APPROPRIATE CONSTRUCTION METHODOLOGY TO COMPACT AROUND/OVER STORMWATER PIPES AND ENSURE NO CRACKING OF THE STORMWATER PIPES OCCURS.
 PITS DEEPER THAN 2.5m TO BE CONSTRUCTED IN ACCORDANCE WITH STRUCTURAL ENGINEERS DESIGN.
 REFER TO DRAWINGS PREPARED BY RARI FOR SEWER DETAILS.
 ALL GRATES TO HAVE CHILD PROOF LOCK DOWN SYSTEM INSTALLED.









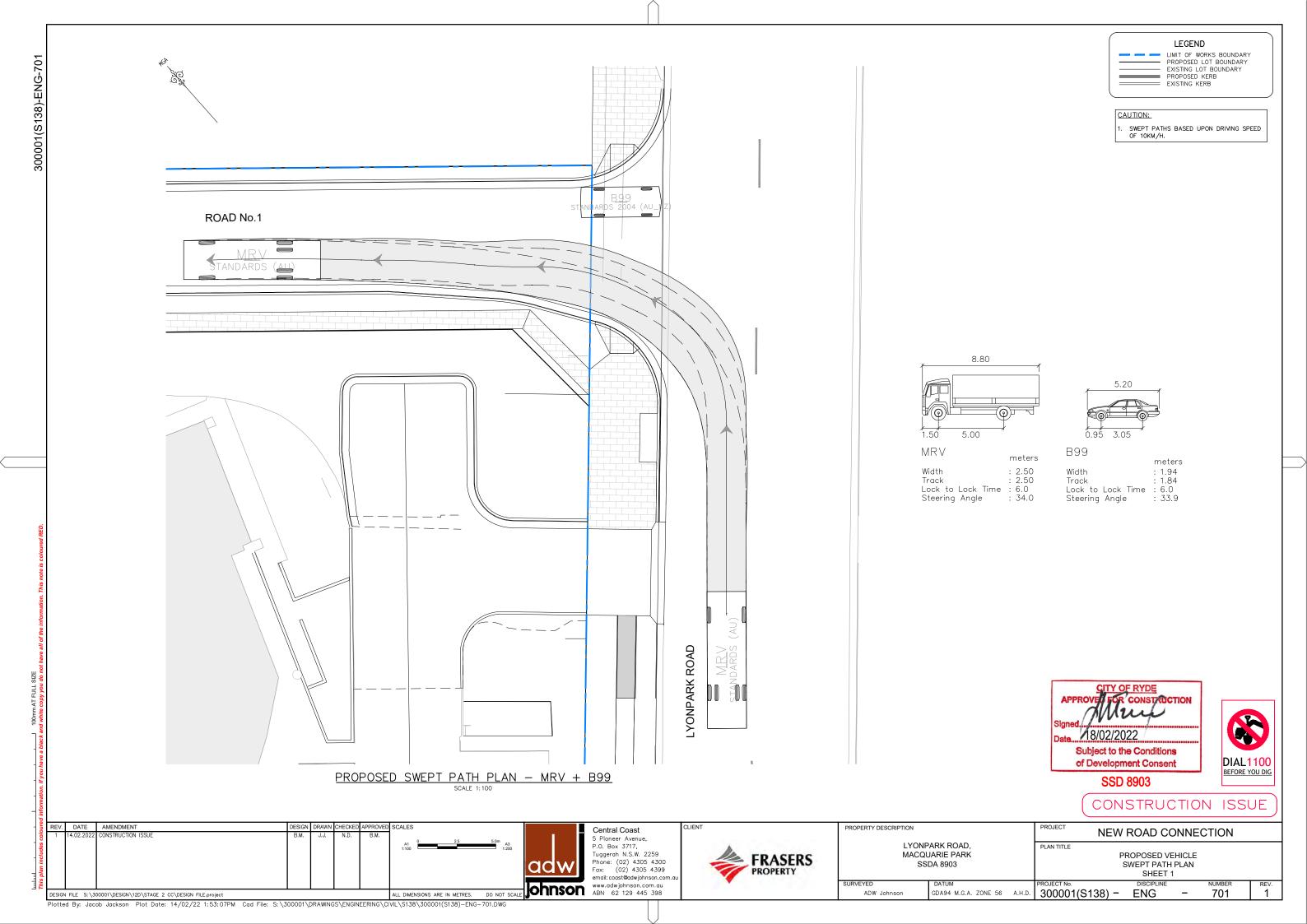


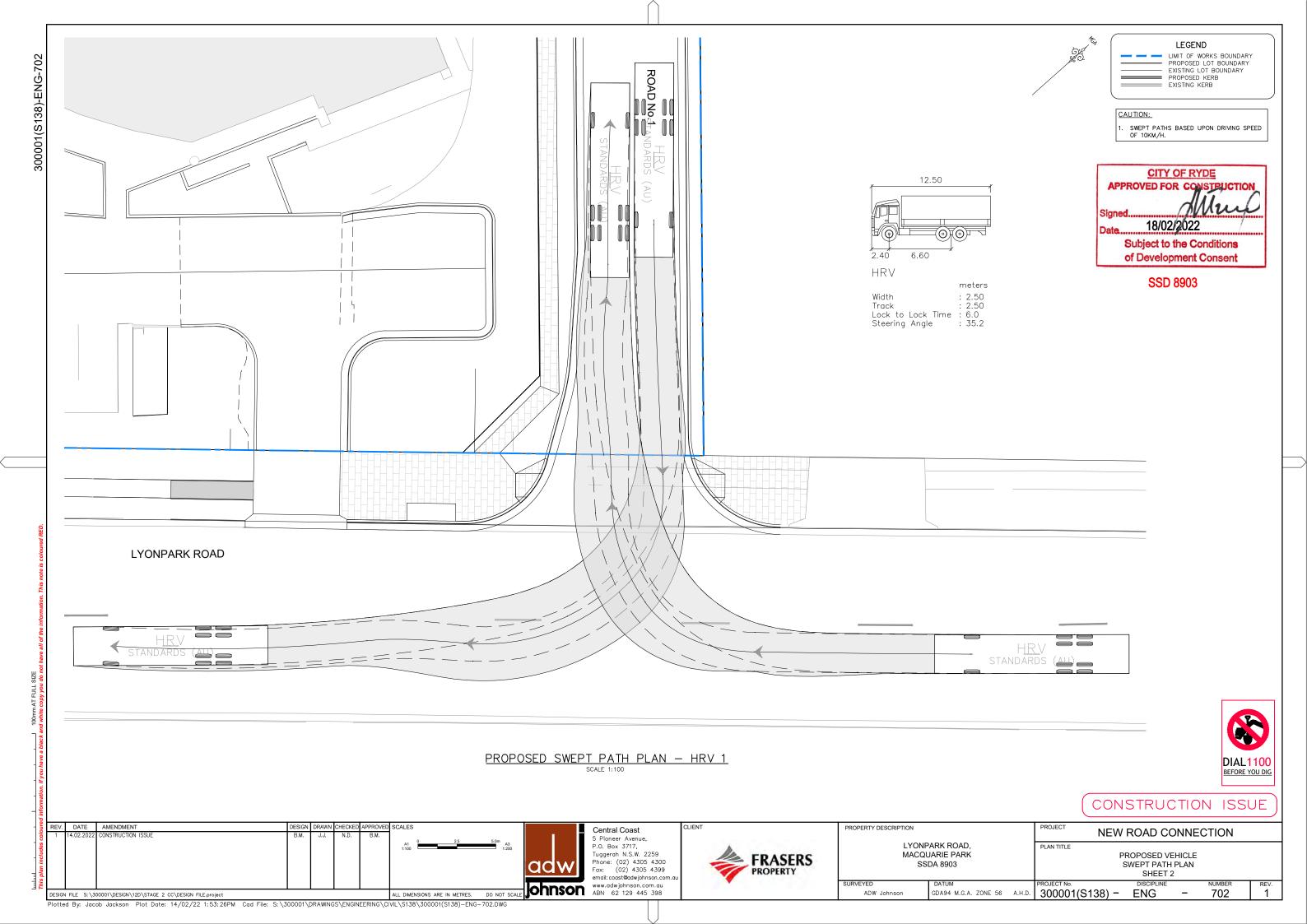
SSD 8903

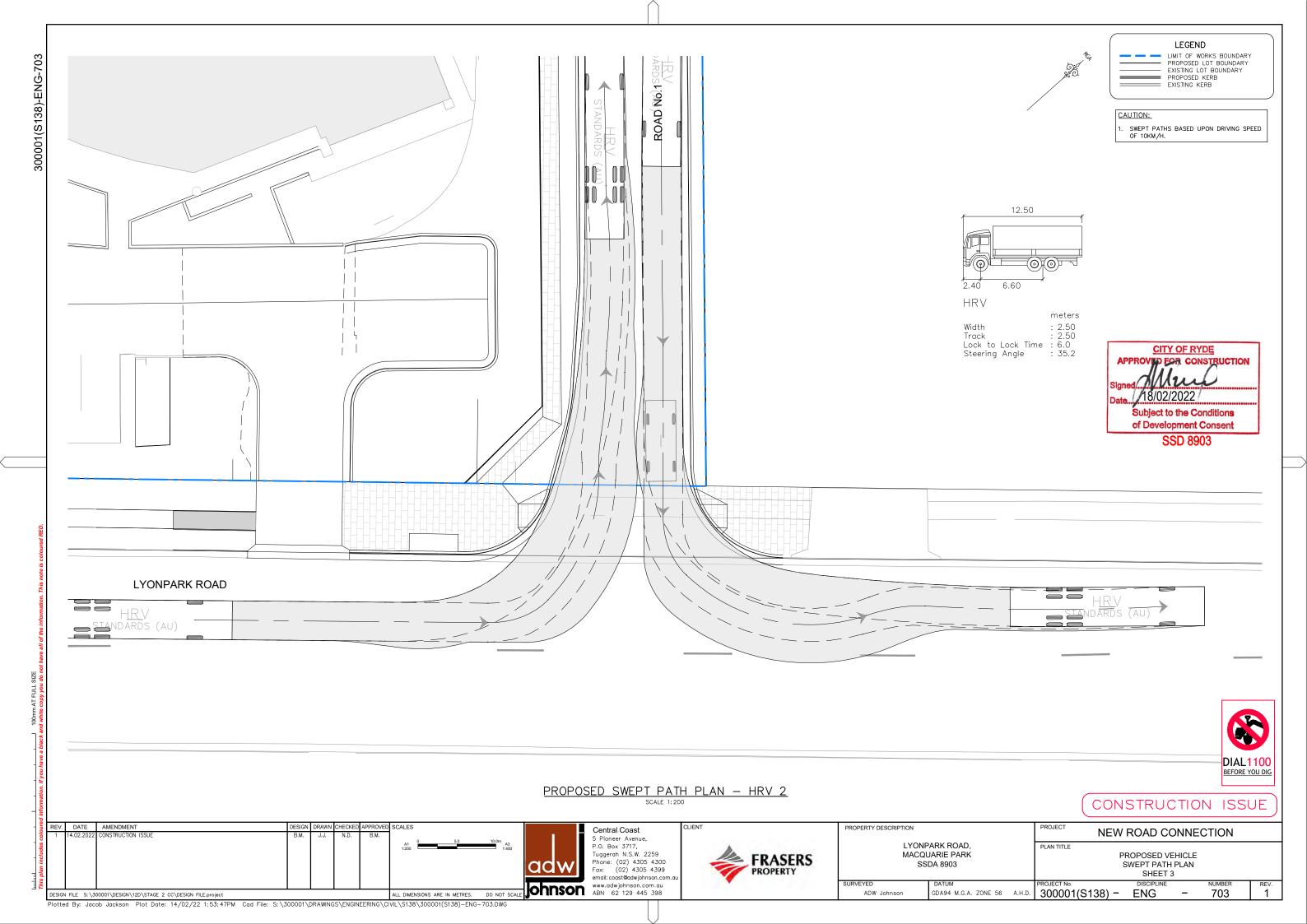
CONSTRUCTION ISSUE

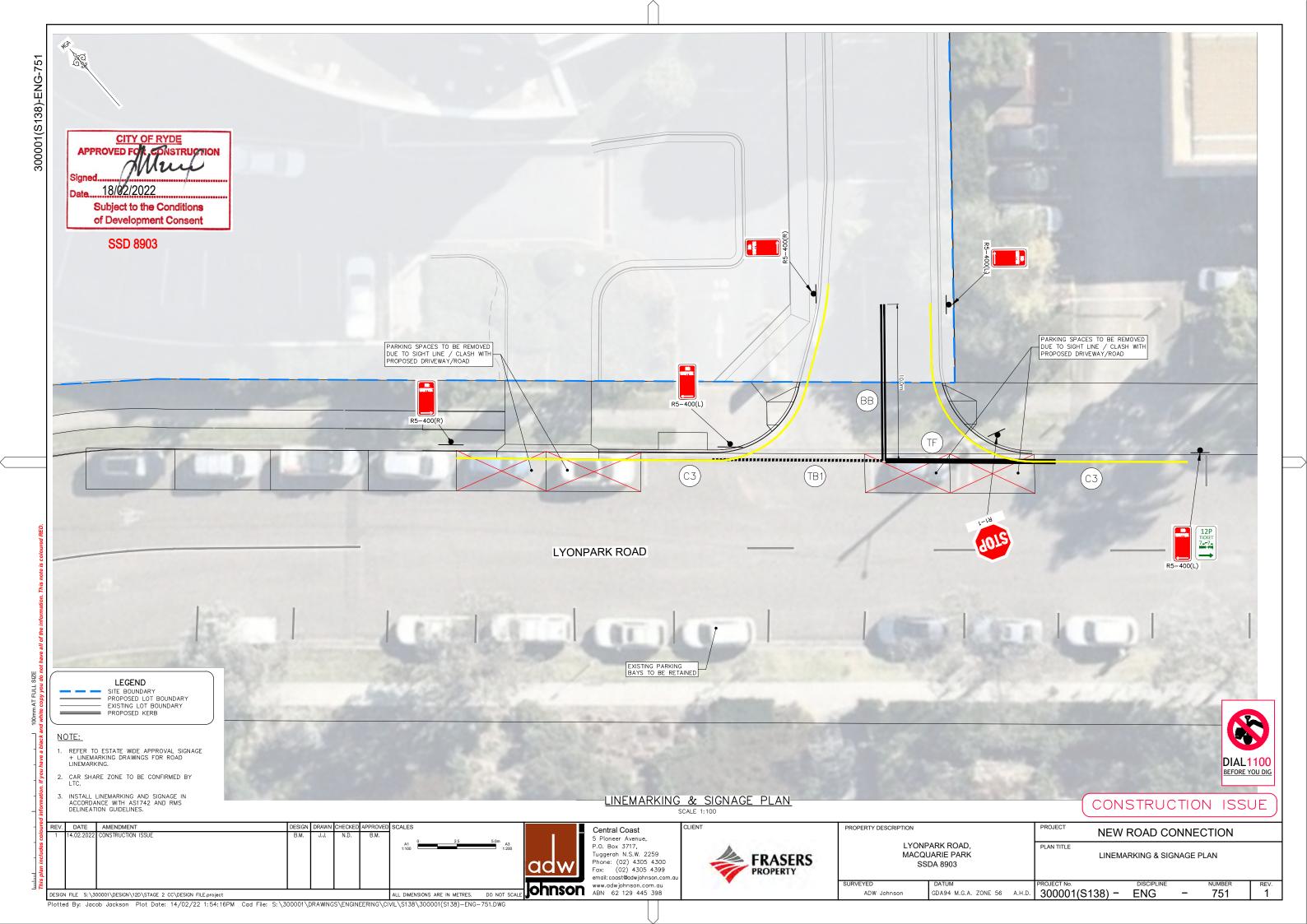
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oloure	REV. DA	TE AMENDMENT .2022 CONSTRUCTION ISSUE	DESIGN DR	RAWN CHECKE J.J. N.D.	D APPROVED SCALES B.M.	Central Coast	CLIENT	PROPERTY DESCRIPTION	PROJECT	NEW ROAD CC	NEW ROAD CONNECTION		
lan includes co					A1 0 0.25 0.50 0.75 1.00 1.25m A3 1:50	5 Pioneer Avenue, P.O. Box 3717, Tuggerah N.S.W. 2 Phone: (02) 4305 Fax: (02) 4305	4300 FKASEKS PROPERTY	LYONPARK ROAD, MACQUARIE PARK SSDA 8903	PLAN TITLE	STORMWATER CALCUL 20 & 100 YEAR & CUSTOM PIT LPR 1\1	A.R.I.		
This		S:\300001\DESIGN\12D\STAGE 2 CC\DESIGN FILE project			ALL DIMENSIONS ARE IN METRES. DO NOT SCALE	email: coast@adwjohr www.adwjohnson.co ABN 62 129 445	n.au	SURVEYED DATUM ADW Johnson GDA94 M.G.A. ZONE 56 A.F.	PROJECT No.	DISCIPLINE	NUMBER - 411	REV.	

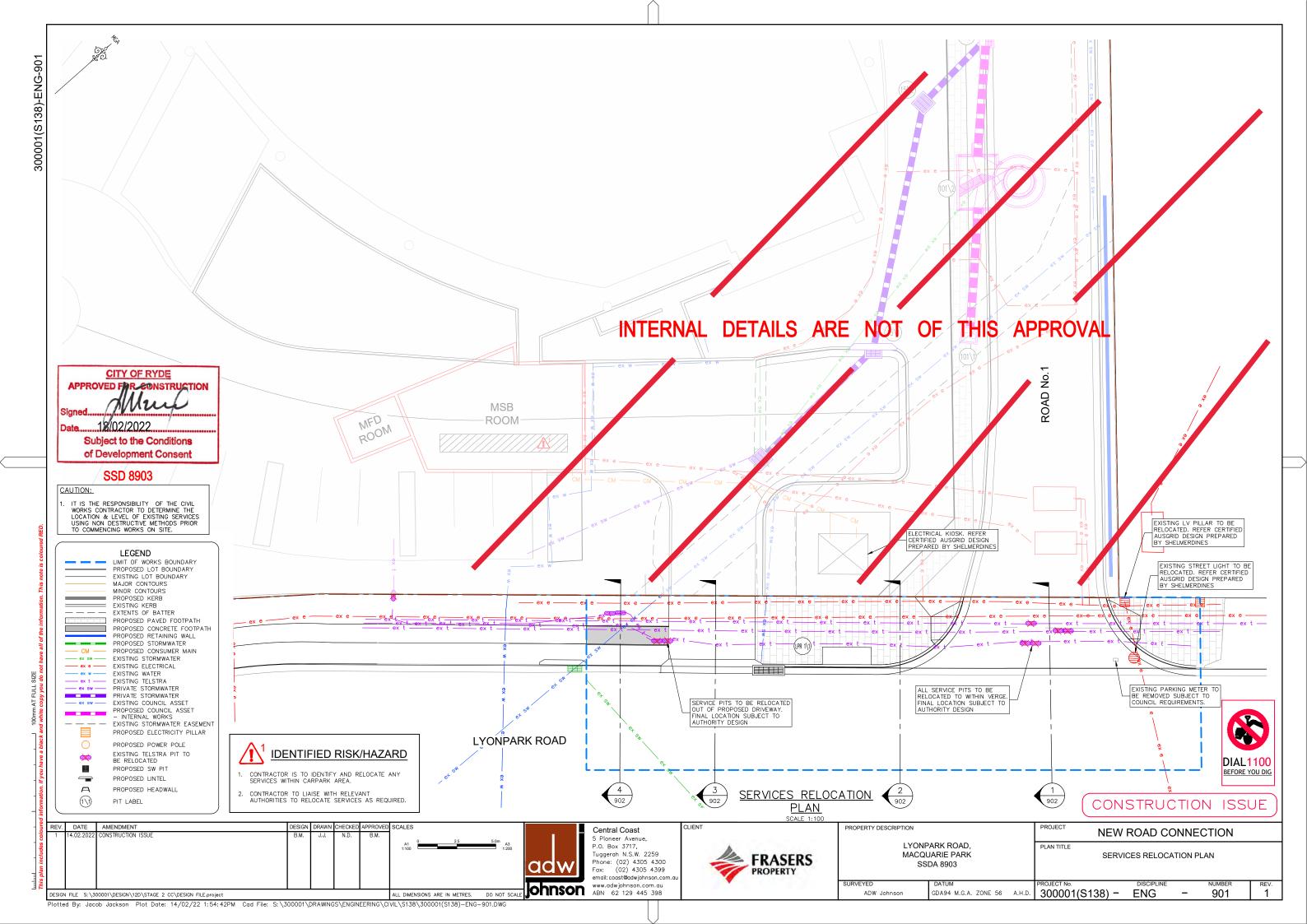
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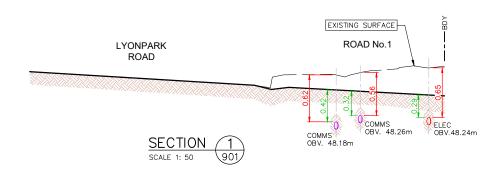


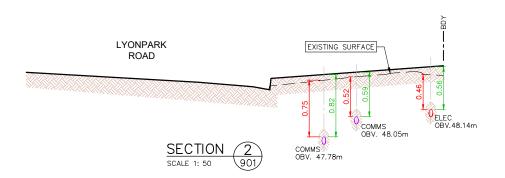


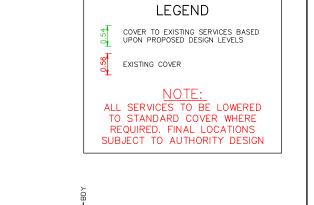
REV. DATE AMENDMENT

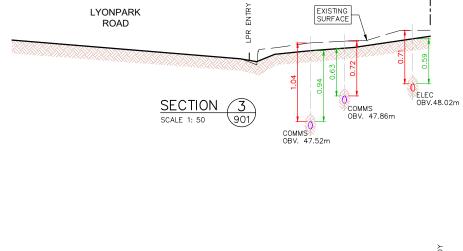
APPROVED FOR CONSTRUCTION 18/02/2022 Subject to the Conditions of Development Consent SSD 8903

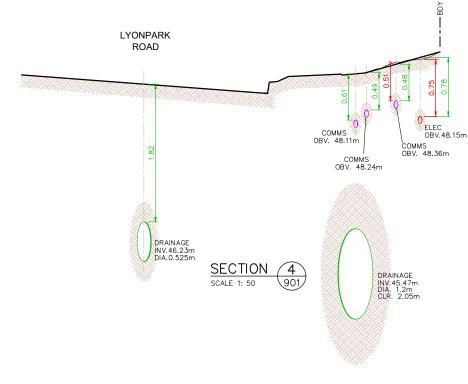
CITY OF RYDE













REV.

CONSTRUCTION ISSUE

FRASERS

Central Coast

www.adwjohnson.com.au
ABN 62 129 445 398

adw

5 Pioneer Avenue, P.O. Box 3717, Tuggerah N.S.W. 2259

Phone: (02) 4305 4300 Fax: (02) 4305 4399

PROPERTY DESCRIPTION LYONPARK ROAD, MACQUARIE PARK SSDA 8903

GDA94 M.G.A. ZONE 56 A.H.D. 300001(S138) -

PROJECT

PLAN TITLE SERVICES RELOCATION SECTIONS

ENG 902

NEW ROAD CONNECTION

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