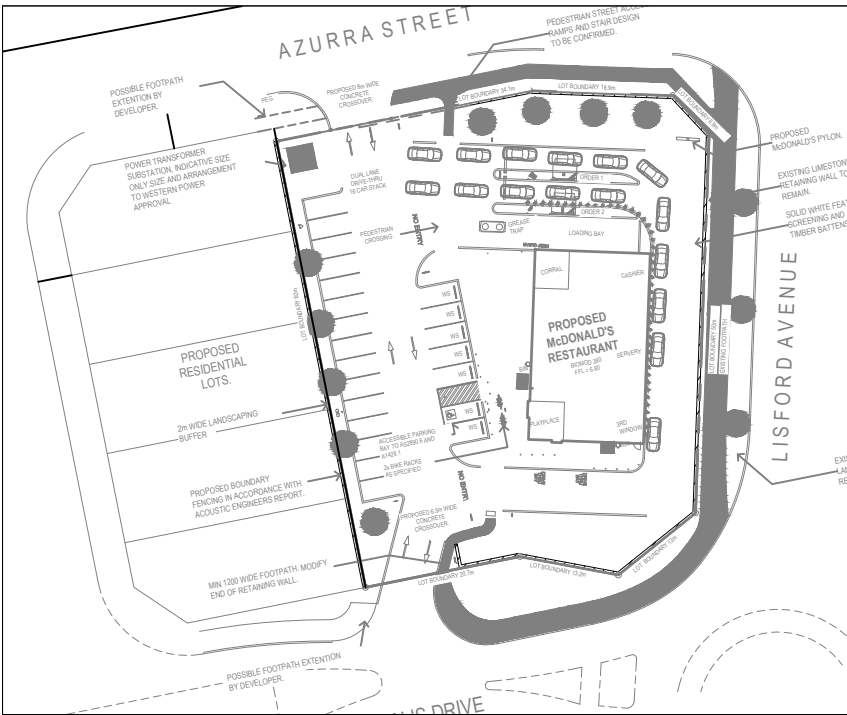


PROPOSED McDONALDS RESTAURANT

LOT 703 LISFORD AVE, TWO ROCKS WA

OBTRUSIVE LIGHT ANALYSIS



SITE PLAN

SCALE: N.T.S.

GENERAL LIGHTING NOTES:

- THIS DRAWING SET DEMONSTRATES COMPLIANCE WITH AS/NZS4282:2023 FOR THE PROPOSED LIGHTING ARRANGEMENT SHOWN, INCLUDING ILLUMINATED SIGN LUMINANCE LIMITS.
- THE CARPARK AND PUBLIC SPACES COMPLIES WITH AS1158.3.1:2020 CAT PC1, PCD AND PCX.
- ALL LUMINAIRE DATA IS SUPPLIED BY MANUFACTURER.
- DESIGN SOFTWARE USE AGI32 V20.
- ALL CALCULATIONS AND RESULTS PROVIDED ARE SUBJECT TO TOLERANCES IN ACCORDANCE WITH AS/NZS3827.1-1998 AND AS.NZS3827.2-1998 LIGHTING SYSTEM PERFORMANCE AND ACCURACY TOLERANCES.

OBTRUSIVE LIGHTING ANALYSIS:

- COMPLIANCE WITH AS/NZS4282-2019 IS DEMONSTRATED FOR AN A4 ENVIRONMENTAL ZONE FOR NON-CURFEW AND CURFEW OPERATION (i.e. 24 HRS)
- THE PLAYPLACE AND McCafe SIGNS NOTED ON SHEET 3 OF THIS DRAWING SET ARE TO BE DIMMED TO 30% OUTPUT DURING CURFEW HOURS.
- ALL ILLUMINATED SIGNAGE TO BE LIMITED TO 350cd/m² BY THE SIGN MANUFACTURER.
- ALL OBTRUSIVE LIGHT ANALYSIS IS EVALUATED AT INITIAL FLUX.

Drawing List

Drawing Number	Sheet Number	Revision	Title
HA01684-E01	1	A	Title Page
HA01684-E01	2	A	Luminaire Layout
HA01684-E01	3	A	Obtrusive Light Analysis
HA01684-E01	4	A	Sign Luminance Calculations



LOCALITY PLAN

SCALE: N.T.S.

LIGHTING CERTIFICATION

LIGHTING CERTIFIED TO COMPLY WITH AS/NZS4282:2019 FOR NON-CURFEW AND CURFEW OPERATION IN AN A4 ENVIRONMENTAL ZONE.

- * PUBLIC AREA LIGHTING COMPLIES WITH AS/NZS1158.3.1:2020 PC1, PCD, PCX.
- * PLAYPLACE & McCafe SIGNS SHOWN ON SHEET 3 TO BE DIMMED TO 30% OUTPUT DURING CURFEW.
- * ALL LUMINAIRE DATA HAS BEEN SUPPLIED BY MANUFACTURER.

McDONALDS TWO ROCKS WA

MIES No. 280

Rev.	Date	Drn.	Description	Chkd.
0			ISSUED FOR APPROVAL	

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Project:
PROPOSED McDONALDS RESTAURANT
LOT 703 LISFORD AVE
TOW ROCKS WA

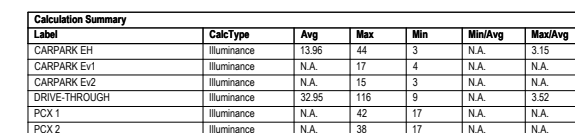
Title:
ELECTRICAL SERVICES
LIGHTING
TITLE PAGE

Drawn: SAF Chk SAF Date: 25/03/2024
Scale:
Drawing No. Rev Size
HA01684-E01-1 A A3

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FILENAME: HA01684 - 1 CURFEW DIMMED
25/03/2024 2:18:43 PM

ILLUMINANCE
MAXIMUM ALLOWABLE VALUE: 5 LUX

CALCULATIONS TESTED (9):

CALCULATION LABEL	TEST RESULTS	MAX.
ILLUM.		
REL BDY PROPOSED RESIDENTIAL_ILL_SEG1	PASS	5
REL BDY LISFORD AVE_ILL_SEG1	PASS	0
REL BDY LISFORD AVE_ILL_SEG2	PASS	0
REL BDY LISFORD AVE_ILL_SEG3	PASS	0
REL BDY LISFORD AVE_ILL_SEG4	PASS	0
REL BDY LISFORD AVE_ILL_SEG5	PASS	0
REL BDY LISFORD AVE_ILL_SEG6	PASS	0
REL BDY AZURRA STREET_ILL_SEG1	PASS	1
REL BDY AZURRA STREET_ILL_SEG2	PASS	3

LUMINOUS INTENSITY (CD) AT VERTICAL PLANES
MAXIMUM ALLOWABLE VALUE: 2500 CD

CALCULATIONS TESTED (9):

CALCULATION LABEL	TEST RESULTS
REL BDY PROPOSED RESIDENTIAL_CD_SEG1	PASS
REL BDY LISFORD AVE_CD_SEG1	PASS
REL BDY LISFORD AVE_CD_SEG2	PASS
REL BDY LISFORD AVE_CD_SEG3	PASS
REL BDY LISFORD AVE_CD_SEG4	PASS
REL BDY LISFORD AVE_CD_SEG5	PASS
REL BDY LISFORD AVE_CD_SEG6	PASS
REL BDY AZURRA STREET_CD_SEG1	PASS
REL BDY AZURRA STREET_CD_SEG2	PASS

Upward Waste Light Ratio (UWLR)
Maximum Allowable Value: 3.0 %

Calculated UWLR: 11.6 % (INCLUDING SIGNS)
Test Results: PASS

Rev.	Date	Drn.	Description	Chkd.
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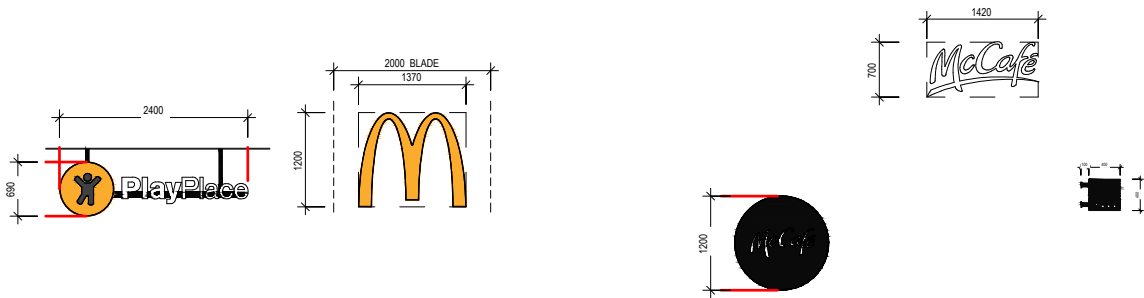
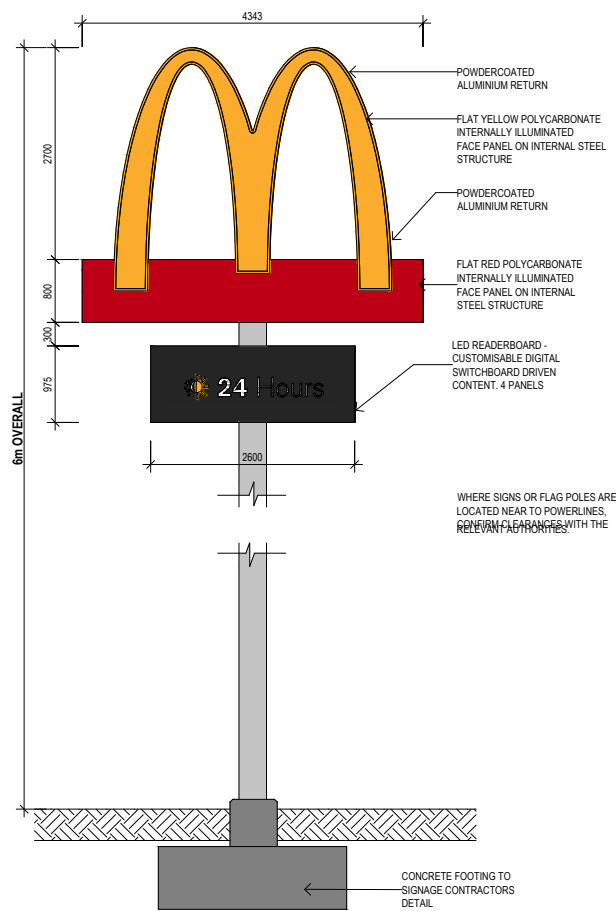
Project:
PROPOSED McDONALDS RESTAURANT
LOT 703 LISFORD AVE
TOW ROCKS WA

Title:
ELECTRICAL SERVICES
LIGHTING
OBTRUSIVE LIGHT ANALYSIS

Drawn: SAF Chk SAF Date: 25/03/2024
Scale:
Drawing No. Rev Size
HA01684-E01-3 A A3

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McDonalds Two Rocks - Sign Luminance Calculations

	ILLUMINATED AREA	INSTALLED MODULES	LUMENS	COLOUR	SIGN Tx FACTOR	EXITANCE (LUMENS PER SQ.M)	L (diffuse) EXITANCE/PI LIMIT 2500
PYLON SIGN ARCH	6.784	696	34800	YELLOW	0.7	5130	1144
PYLON SIGN RED KEYSTONE	6.954	518	25900	RED	0.5	3724	593
WALL ARCH	0.5	48	3600	YELLOW	0.7	7200	1605
PLAYPLACE	3.111	112	8400	WHITE / YELLOW	0.7	2700	602
ENTRY CLIP	0.3978	130	812.5	RED	0.5	2042	325
McCAFE BLADE	1.0444	77	5775	WHITE / BLACK	0.7	5529	1233
BUTTON	1.1304	68	5100	WHITE / BLACK	0.7	4512	1006

TABLE 3.3
MAXIMUM LUMINOUS INTENSITIES PER LUMINAIRE

Zone	Luminous intensity (I), cd		
	Non-curfew L1	Non-curfew L2	Curfew
A0	See Note	See Note	0
A1	2 500	5 000	500
A2	7 500	12 500	1 000
A3	12 500	25 000	2 500
A4	25 000	50 000	2 500
TV	100 000	150 000	0

NOTE: For A0, I shall be as close to zero as practicable without impacting safety considerations.

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Project:
PROPOSED McDONALDS RESTAURANT
LOT 703 LISFORD AVE
TOW ROCKS WA

Title:
ELECTRICAL SERVICES
LIGHTING
SIGN DETAILS

Drawn: SAF Chk SAF Date: 25/03/2024
Scale:
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