



GENERAL NOTES:

1. Lighting calculations have been completed in accordance with Hastings District Council and AS/NZS 1158.3.1:2020 for lighting subcategories:
Carpark - PC3.
Access Road - PR5
2. Initial lamp lumens & maintenance have been derived from the manufacturer's TM-21 data with a design maintenance factor applied & derived in accordance with AS/NZS 1158 and BS5489 as shown below.
3. Isolux lines show illuminance values (lux) at grade.
4. Luminaires are mounted at the heights & tilts as indicated on the drawing.

MAINTENANCE FACTOR (MF):

- Lamp Lumen Maintenance Factor (LLMF)
- Philips Luxeon M LED lamp lumen depreciation after 100,000 hrs of operation equivalent to 23.5 years of operation based on an estimated annual operational hours of 4,250 hours.
 - AEC/Philips data in accordance with IESNA TM-21-11 & LM-80-08, has been used for 15°C average night time ambient temperature.
- Luminaire Maintenance Factor (LMF)
- Luminaire IP66 Rating
 - Medium pollution category
 - Luminaire cleaning cycle of every 48 months in accordance with AS/NZS 1158.1:2005 Table E1.
 - All luminaires placed using a maintenance factor of 0.800.



Isoline Legend	
Illuminance (Lux)	
Color	Value
Red	0.14
Blue	1.5
Magenta	2
Green	10

Calculation Summary			
Label	Min	Avg	Max/Avg
Access Road	0.15	2.29	6.100
Carpark	0.91	5.80	3.540

Luminaire Schedule						
Symbol	Label	Qty	Arrangement	LLF	Description	Lum. Watts
	P1	3	Single	0.800	1 x NEW AEC ITALO 1 0F2 STA 3.3-1M AEP 9.5W 3000K LED Street Light Mounted onto NEW 4.0m High Column, 0-deg Tilt	9.5
	P2	7	Single	0.880	1 x NEW AEC ITALO 1 0F2 STA 3.3-2M AEP 18.5W 3000K LED Street Light with BLS Mounted onto NEW 6.0m High Column, 0-deg Tilt	18.5
	P3-P3	2	Back-Back	0.890	2 x NEW AEC ITALO 1 0F2H1 S05 3.3-2M 21W 3000K LED Street Lights (x2) with BLS Mounted Back to Back onto NEW 6.0m High Column, 0-deg Tilt	21

**55-57 BROOKVALE ROAD
HAVELOCK NORTH**
LIGHTING DESIGN OVERVIEW
CLIENT: SADDLEBACK

Designed By:	PA TechIES
Checked By:	
Date:	02-07-23
Scale:	1:800 @A3

Revision	No.	Date	Description
	1.	21-07-23	Concept Design - For Information Only

