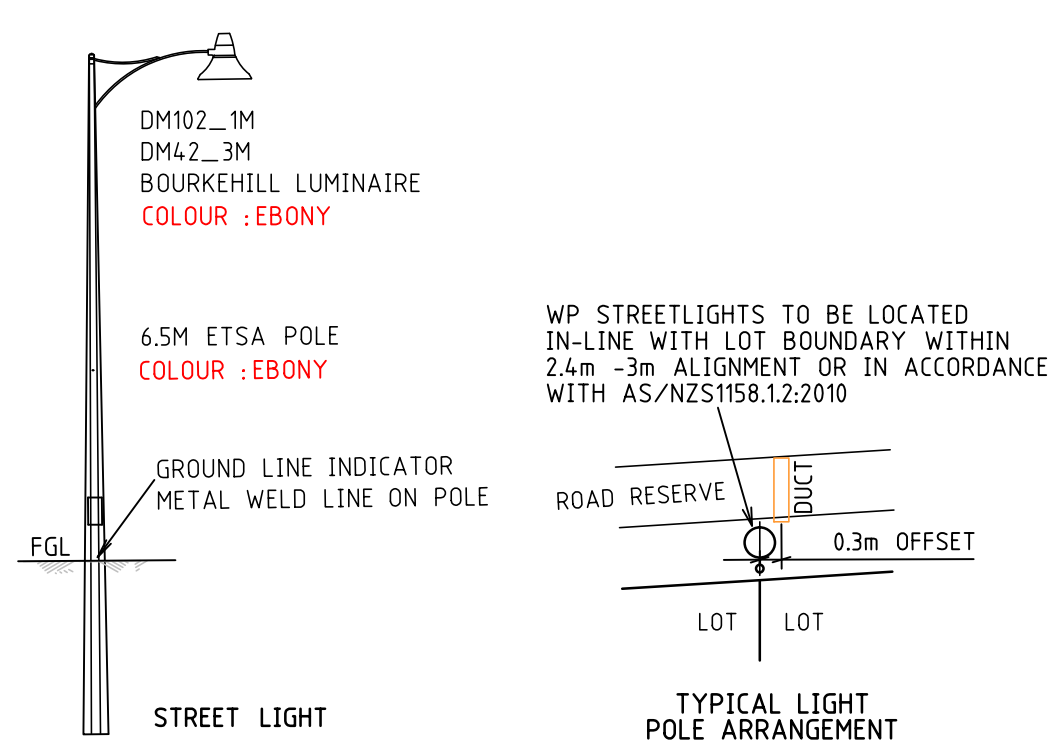


SAFETY - MAKE IT YOUR PRIMARY VALUE

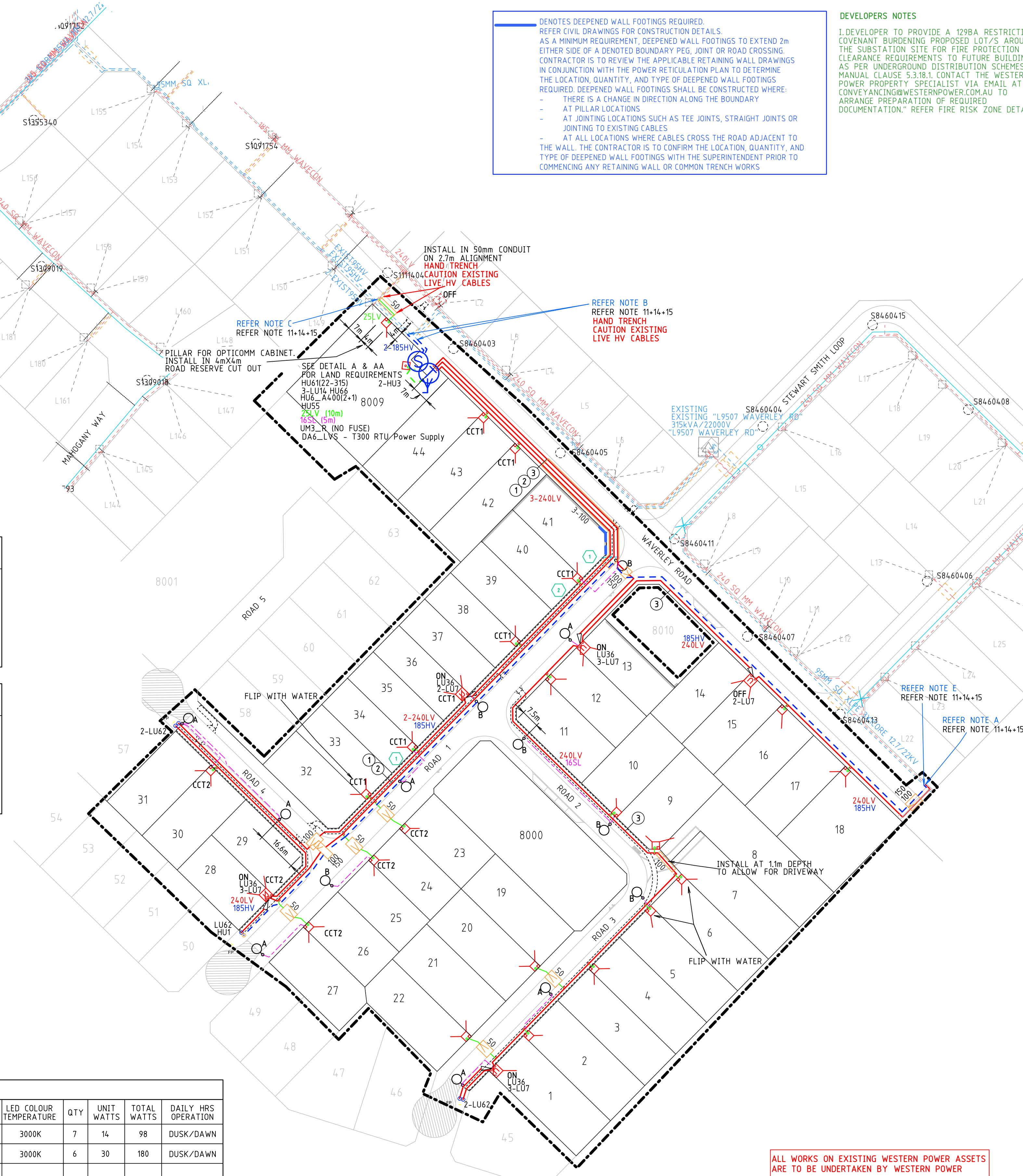
TRANSFORMER NAME AND LOCATION	CCT NO.	FUSE AMPS	CABLE mm ²	CIRCUIT NAME	VOLT DROP (V)	AMPS (A)	TOTAL AMPS @ 4.7kVA/LO
NEW TX LOT 8009 WAVERLEY ROAD 315kVA/22kV (410A)	1	315	240	UNI LOT 36 ROAD 1	4.38	118	274 A
	2	315	240	UNI LOT 28 ROAD 1	3.58	78	
	3	315	240	UNI LOT 13 ROAD 1	9.71	137	
	4	315	240	UNI LOT # STREET NAME	-	-	
	5	315	240	UNI LOT # STREET NAME	-	-	

TRANSFORMER NAME AND LOCATION	CCT NO.	FUSE AMPS	CABLE mm ²	CIRCUIT NAME	VOLT DROP (V)	AMPS (A)	TOTAL AMPS @ 4.7kVA/LOT
EXIST TX LOT 9507 WAVERLEY ROAD 315kVA/22kV (410A)	1	315	240	EXIST	1.23	59	274 A
	2	315	240	EXIST	6.81	157	
	3	315	240	EXIST	4.37	118	
	4	315	240	UNI LOT # STREET NAME	-	-	
	5	315	240	UNI LOT # STREET NAME	-	-	



STREET LIGHTING SCHEDULE									
POLE TYPE	OUTREACH	LUMINAIRE/WATTAGE	COLOUR	LED COLOUR-TEMPERATURE	QTY	UNIT WATTS	TOTAL WATTS	DAILY HRS OPERATION	
Ⓐ DM4_1 - 6.5 ETSA POLE	1.5m SOR	DM102_1M BOURKE HILL LED	EBONY	3000K	7	14	98	DUSK/DAWN	
Ⓑ DM4_1 - 6.5 ETSA POLE	1.5m SOR	DM42_3M BOURKE HILL LED	EBONY	3000K	6	30	180	DUSK/DAWN	
ROAD LIGHTING COMPLIES WITH DARK SKY POLICY EXCEPT THE USE OF LAMP ON/OFF TIMERS AND LAMP COLOUR TEMPERATURE BEING 3000K NOT 2500K AS REQUIRED BY THE POLICY (WESTERN POWER ASSET LIMITATION).STREETLIGHT SPACING IS MAXIMISED TO MINIMISE LIGHTING BUT COMPLY WITH AS1158 MINIMUM REQUIREMENTS AS AGREED WITH THE LGA. REFER NOTE 5 AND 6 FOR STREETLIGHTING REQUIREMENTS							TOTAL	278	

4	ADDITIONAL CONDUITS ADDED TO THE SUBSTATION SITE	04-09-25	KH	ML	04-09-25	-
3	RESUBMITTED TO WP FOR DCR	13-08-25	KH	ML	13-08-25	-
2	35 HV CABLES REMOVED & 185 HV CABLES REROUTED	08-08-25	KH	ML	-	-
1	SUBMITTED TO WP FOR DCR	28-05-25	KH	ML	25-06-25	-
REV	DESCRIPTION	DATE	DRAWN	CHKD	SENT WP	DCR WP



ALL WORKS ON EXISTING WESTERN POWER ASSETS
ARE TO BE UNDERTAKEN BY WESTERN POWER

CONTRACTOR TO REFER TO ALL NOTES AND DETAILS
ON PLAN SHEETS FOR INSTALLATION REQUIREMENTS

NOT APPROVED for CONSTRUCTION

INSTRUCTION TO CONSTRUCTION CREWS

IT IS A REQUIREMENT OF WESTERN POWER THAT ALL EXISTING CABLE SIZES ARE CONFIRMED ON SITE TO ENSURE THAT ALL FITTINGS ARE OF THE APPROPRIATE SIZE AND ARE INSTALLED CORRECTLY IN ACCORDANCE TO THE DISTRIBUTION CONSTRUCTION STANDARDS HANDBOOK

CONTRACTORS TO REFER TO THE WHOLE OF DRAWING INCLUDING
NOTES, DETAILS AND ALL SHEETS.

NOTES:

1. DRAWING & CONSTRUCTION OF THIS PROJECT
TO BE READ & BUILT IN CONJUNCTION
WITH WESTERN POWER'S LATEST UDS MANUAL,
WA DISTRIBUTION CONNECTION MANUAL,
DISTRIBUTION CONSTRUCTION STANDARD &
DISTRIBUTION DESIGN CATALOGUE.
CIVIL CONTRACTOR & CABLE CONTRACTOR TO
ADVISE UP & CONTRACT SUPERINTENDENT
OF ANY CONSTRUCTION ISSUES THAT DON'T
COMPLY TO WP REQUIREMENTS FOR
INSTALLATION OF WP EQUIPMENT

2. UPD TEXT FILES ARE TO BE USED AS A GUIDE ONLY. ORDERING OF MATERIALS ARE THE RESPONSIBILITY OF THE CONTRACTOR FOR THE SUCCESSFUL COMPLETION OF THE PROJECT

3 CABLE CONTRACTOR TO INSTALL ALL CABLES & DUCTS IN ACCORDANCE WITH THE LATEST UDS SPECIFICATIONS. CABLES TO BE INSTALLED IN CONDUIT ALONG RETAINING WALLS, CONDUIT TO EXTEND 2M PAST END OF WALL, ONE CABLE PER CONDUIT SIZED TO SUIT, CONDUITS TO BE IDENTIFIED BY MARKERS WHICH MUST BE SHOWN ON DRAWING OR NOTED IN CONDUITS TO BE AS2053 COMPLIANT. CABLE MARKERS ARE TO BE INSTALLED WHEN CABLE IS OFF STANDARD WP ALIGNMENT, EACH MARKER IS TO BE VISIBLE FROM THE ROAD WITH A MAXIMUM SPACING BETWEEN MARKERS OF 150m.

CABLE SLABS TO BE ORDERED FOR 50m x 150mm ROAD CROSSINGS ONLY.

CONTRACTOR TO SUPPLY & INSTALL 63mm HD CONDUIT WITH DRAW ROPE FOR BATTLE AXE LOT. METER LOCATION & CONSUMER MAINS TO END OF DRIVEWAY & ACROSS DRIVEWAY TO COMPLY WITH THE LATEST ISSUE OF THE WESTERN AUSTRALIAN STANDARD AND INSTALL METER BOX TO BE USED IF HOUSE IS MORE THAN 30m FROM PILLAR METER BOX TO BE INSTALLED NEXT TO PILLAR

4. CONDUITS TO BE INSTALLED UNDER/ THROUGH ALL WALLS FOR CABLES FROM ROAD RESERVES TO WP PILLARS, ALONG WITH CONDUIT WITH DRAW ROPE FOR CONSUMERS MAINS CABLE FOR ADJOINING LOTS THROUGH SIDE LOT WALLS. SERVICE CABLES TO BE JOINED BEFORE RETAINING WALLS COMPLETED. SLABS ARE NOT REQUIRED IF CABLES ARE IN CONDUIT.

5. INSTALL SL WITHIN THE 2.4M TO 3M WP ALIGNMENT OR AS SPECIFIED ON DRAWING & CLEAR OF FOOTPATHS, PRAM RAMP & ALL SERVICES. SL AT TRUNCATIONS TO BE CENTRALLY LOCATED OR POSITION MARKED AS INDICATED.

NO STREETLIGHT POLE PERMITTED IN ZONE 1 (REFER TO WP MANUAL). POSITIONS TO BE PEGGED PRIOR TO INSTALLATION. NOTIFY UPD OF ANY CLASHES. FINAL POSITIONS TO BE DETERMINED ON SITE & MARKED UP ON AS CONSTRUCTED PLAN

6. SL POLE TO BE POSITIONED IN LINE WITH LOT BOUNDARY. WHEN DUCT CROSSING TO SAME BOUNDARY AS SL POLE TO BE INSTALLED. DUCTS TO BE OFFSET BY MINIMUM 300MM TO ALLOW FOR SL POLE OFFSET DISTANCE TO BE SHOWN ON AS CONSTRUCTED PLAN

7. CONTRACTOR TO ENSURE THERE ARE NO OTHER SERVICES IN THE WP 2.7M ALIGNMENT. CONTRACTOR TO ADVISE UPD/ CIVIL ENGINEER OR SUPERINTENDANT OF ANY CLASHES.

8. NO OTHER UTILITY SERVICES SHALL PASS THROUGH OR BE LOCATED WITHIN THE SERVICE PILLAR EXCLUSION ZONE AS DEFINED IN WASIR SECTION 12.5.3 FIGURE 54 AND AS/NZS 3000:2018 TABLE 3.7 - REFER WP UDS MANUAL SECTION 5.3.5.2. ALL PILLARS TO BE INSTALLED 0.3M ABOVE 100YR FLOOD LEVEL

9. CABLE CONTRACTOR TO ARRANGE WITH UPD
ONLY TO COMPLETE AS CONSTRUCTED DWG FOR
ELECTRONIC SUBMISSION TO WP. THIS DRAWING
REMAINS THE PROPERTY OF UPD P/L NO
UNAUTHORISED REVISIONS PERMITTED
CABLE CONTRACTOR TO SUPPLY A LETTER OF
COMPLIANCE TO SECTION 6.2.2.7 & 6.2.2.8 OF
THE LATEST UDS MANUAL WHEN SENDING TO UPD
THE AS CONSTRUCTED DRAWING FOR
SUBMISSION TO WP.

10 IF ACID SOILS ARE PRESENT, CLEAN NEUTRAL BACK FILL IS TO BE USED AROUND THE CABLES.

11. CABLE CONTRACTOR TO CAP & BURY/COIL HV/LV/SL CABLES FOR WP TO JOINT/TERMINATE TO EXIST TO WP ASSET. WHERE NEW CABLES ARE BEING INSTALLED TO INTERFACE WITH EXISTING CABLES OR THE OVERHEAD NETWORK, A MINIMUM OF 1.5m CABLE OVERLAP IS REQUIRED AND SHOULD BE LEFT TO ALLOW FOR SUFFICIENT TESTING OF THE CABLE AND CUTTING TO SUIT THE JOINT OR TERMINATION LOCATION.

12. CABLE CONTRACTOR TO LOCATE EXIST
LIVE END SEALS FROM PREVIOUS STAGE
AND LEAVE SUFFICIENT NEW CABLE TO ALLOW
WP TO JOINT ONTO EXISTING CABLE.
REFER TO UDS MANUAL.

13. WP SITE TO BE INCORPORATED EITHER AS
AN EXTENSION OF THE ROAD RESERVE OR

POS. NO PIPES, DRAINS OR OTHER SERVICES ARE PERMITTED BENEATH SUBSTATION SITE. IF ANY SUBSTATION LIES WITHIN THE 100 YEAR FLOOD ZONE THE SUBSTATION MUST BE 0.5M ABOVE THE FLOOD ZONE LEVEL. CABLE CONTRACTOR TO ARRANGE FOR EARTHING TEST SHEET TO BE SENT TO UPD & CONTRACT SUPERINTENDENT. IT, COMPLETELY OF EARTHING

14.CONTRACTOR TO CARRY OUT REINSTATEMENT OF EXISTING INFRASTRUCTURE AFTER WP HAS COMPLETED THEIR WORKS.
LIAISE WITH WP FOR WORKS TIMING

15. CABLE CONTRACTOR TO ENGAGE SUITABLY QUALIFIED ELECTRICAL PERSON DURING CONSTRUCTION WHEN INSTALLING NEW CABLES/ EQUIPMENT IN THE VICINITY OF EXISTING LIVE WP ASSETS IN ACCORDANCE WITH WORKSAFE POLICY

- 6. CABLE CONTRACTOR TO REFER TO THE STREET-TO-LIGHT CABLE TO PIT CONNECTION GUIDELINE BELOW:
 - SL CABLE NEUTRAL TO NEUTRAL LINK IN PIT
 - SL CABLE FLUID END TO FLUID END
 - ATTACH LABEL TO ACTIVE CABLE
 - CONNECT FUSE CABLE TO ONE OF THE ACTIVE LINKS IN PIT
 - INSTALL THE RELEVANT CONDUITS TO THE PIT REFER TO U23-1 IN THE LATEST WP MANUAL FOR THE RELEVANT PARTS REQUIRED FOR SL CONNECTION
- 7. CABLE CONTRACTOR TO INSTALL COMPONENTS FOR RMU AUTOMATION AS PER DSM-4.04 (SHT.3):
 - INSTALL MINI PILLAR 0.5m BEHIND RMU
 - INSTALL DSM-4 DIRECT CONNECTION WITH RED SPOT FUSE
 - INSTALL AC CUTOUT ON THE RMU (SEE DETAIL C - DSM-4-04 SHEET 3)
 - INSTALL 25LV CABLE FROM THE STREET LV MAINS TO PILLAR (SEE WP SITE DATA)
 - INSTALL 16SL CABLE FROM PILLAR TO AC CUTO-OUT
 - INSTALL RED SPOT FUSE HOLDER IN PILLAR
 - TERMINATE 16SL CABLE IN PILLAR VIA REDSPOT FUSE (TO BE OFF/REMOVED)
 - TERMINATE 16SL CABLE INTO AC CUTO-OUT
 - TERMINATE 16sqmm EARTH CABLE ON RMU EARTH BAR AND COIL UP INSIDE RMU KIOSK

LEGEND		
SCHEME BDY.		
RETAINING WALL		
RESTRICTED ZONE		
EASEMENT		
HV CABLES		
CN53 - 400mm ² (3X1c)		
CN49 - 240mm ² (3X1c)		
CN48 - 185mm ² (3X1c)		
CN50 - 95mm ² (3X1c)		
CN51 - 50mm ² (3X1c)		
CN51 - 50mm ² (1c)		
CN46 - 35mm ² (3X1c)		
CN47 - 35mm ² (1c)		
EXISTING HV CABLES (SIZE AND TYPE INDICATED)		
LV-SL CABLES		
CN45 - 240mm ² (1x3c)		
CN44 - 185mm ² (1x3c)		
CN43 - 120mm ² (1x3c)		
CN42 - 25mm ² (1x3c)		
CN41 - 16mm ² SL (1c)		
40 c PILOT		
EXISTING LV CABLES (SIZE AND TYPE INDICATED)		
STREET LIGHTS	EXISTING ○	
POLE BRACKET	POLE BRACKET	
SINGLE OUTREACH	SINGLE OUTREACH	
DOUBLE OUTREACH	DOUBLE OUTREACH	
4-WAY	4-WAY	
# = ALPHA CHARACTER DENOTES STREET LIGHT TYPE. REFER STREET LIGHT SCHEDULE FOR POLE & LUMINAIRE DETAILS.		
PILLARS / PITS / ETC		
MINI (WORKING END)	MS UPS PIT	
MINI	UTILITIES PIT	
UNIVERSAL	BSP GP PIT	
LINK	100/200AMP CUTOUT	
CABLE MARKER U/G	CONDUIT / POLY PIPE	
Serviced Under De-energised Lot		
TRANSFORMER	EXISTING	SWITCHGEAR
AERIAL CONDUCTORS AND POLES		
○ NEW POLE (ANY TYPE AS INDICATED)		
○ EXISTING POLE (ANY TYPE AS INDICATED)		
EXISTING AERIAL CONDUCTORS (SIZE AND TYPE INDICATED)		
HV	LV	

WP SCOPE OF WORKS

WP TO STRAIGHT JOINT NEW 240LV CABLE
TO EXIST 240LV CABLE.INCLUDING EXCAVATION
& BACKFILLING OF JOINT BAY WITH SAND TO
A SUITABLE SAFE LEVEL.WP TO SUPPLY ALL
MATERIALS


3). WP TO CUT INTO EXIST 95HV CABLE
& CARRY OUT CABLE JOINTING TO NEW 185HV
CABLE, INCLUDING EXCAVATION & BACKFILLING
OF JOINT BAY WITH SAND TO A SUITABLE
SAFE LEVEL. WP TO SUPPLY ALL MATERIALS

1. WP TO DISCONNECT EXISTING 25LV CABLE
FROM EXIST MINI PILLAR & CARRY OUT CABLE
JOINTING TO NEW 25LV CABLE INCLUDING
EXCAVATION & BACKFILLING OF JOINT BAY WITH
SAND TO A SUITABLE SAFE LEVEL.
WP TO SUPPLY ALL MATERIALS

3. WP TO NOTE THAT MOTORIZED HV SWITCHGEAR, A MINI PILLAR RMU LV SUPPLY POINT, 16SL CABLE & RMU CUT-OUT FUSE BOX HAVE BEEN INSTALLED FOR FUTURE AUTOMATION OF THE NEW RMU ON LOT 8001 IN LINE WITH OSPM-4-04 SHEET3 AND UDS REQUIREMENTS

WP TO STRAIGHTEN JOINT NEW 185HV CABLE
TO EXIST 185HV CABLE,INCLUDING EXCAVATION
& BACKFILLING OF JOINT BAY WITH SAND TO
A SUITABLE SAFE LEVEL.WP TO SUPPLY ALL
MATERIALS

WARNING
ALL WORKS IN THE VICINITY (WIV) OF EXISTING
WESTERN POWER ASSETS ARE TO BE UNDERTAKEN
IN ACCORDANCE WITH OCCUPATIONAL
SAFETY AND HEALTH (OSH) AND WORKSAFE
REQUIREMENTS AS PER WP WEBSITE
<https://www.westernpower.com.au/safety/360-aware/>
industry-safety/overhead-network-safety/
DESIGN ENQUIRIES: design@westernpower.com.au OR TRANSMISSION LINE
PLEASE CONTACT: transmission_relocations@westernpower.com.au.

<p style="text-align: center;"> LOT 500 WIRING RD - STAGE 1 COWARAMUP SHEET 1 OF 2 </p> <p style="text-align: center;"> 44 RESIDENTIAL LOTS UNDERGROUND POWER DISTRIBUTION </p>				 <p> Suite 4, 47 Havelock Street WEST PERTH WA 6005 ABN 53 004 953 057 TEL (08) 9212 8777 EMAIL admin@upd.com.au </p>	
DESIGNER ML	DRAWN NER ENGINEER	MF PB	SCALE 1:1000	Western Power Reference No WAPC No	SS012084 NA
				Drawing No UPD10068-01	Revision 4

