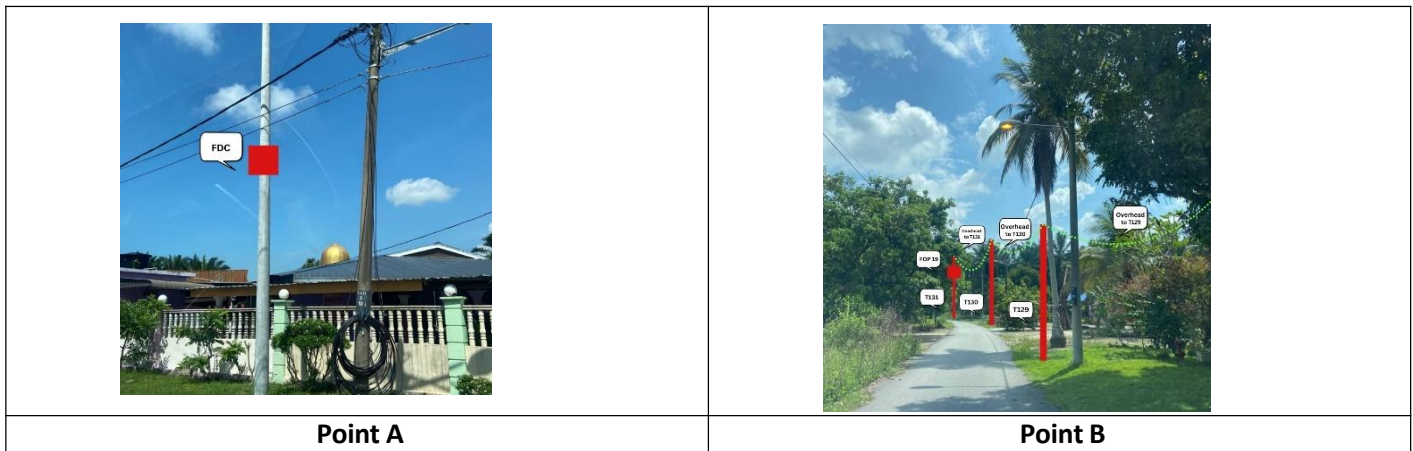


TECHNICAL PROPOSAL

POP2 ABA5006 SEKOLAH KEBANGSAAN AYER HITAM (D-SIDE)

Company Name : KNZ ENGINEERING SDN BHD.
Company Address : NO 60 & 60 A JALAN KLEBANG INDAH 1 MEDAN KLEBANG INDAH 30010 IPOH PERAK
Prepared By : FARHAH AFIQAH BINTI AMDON
Date : 29/11/2024



Starting Point

Site / Boundary Name : Teluk Intan
Address : SK Ayer Hitam, 36700 Teluk Intan
District : Hilir Perak
Postcode : 36700
State : Perak
GPS Coordinate : 4.020917, 101.2020507
LRD : A

End Point

Site / Boundary Name : Teluk Intan
Address : Berhadapan Lot 46330, Jalan Pinggiran 36030 Teluk Intan
District : Teluk Intan
Postcode : 36030
State : Perak
GPS Coordinate : 4.005705, 101.2077622
LRD : B



PROJEK PENYEDIAAN DAN PENYELENGGARAAN POINT OF PRESENCE (POP) FASA 2: HAB INFRASTRUKTUR GENTIAN OPTIK BERHAMPIRAN DENGAN SEKOLAH, KAWASAN PERINDUSTRIAN, PREMIS KERAJAAN DAN KOMUNITI SEKITARNYA OLEH KEMENTERIAN KOMUNIKASI MALAYSIA – ZON UTARA (KKMM.400-11/17/132(1))



1.0 WORK SUMMARY

NO	PROPOSED DISTANCE AND METHOD	UNIT	QUANTITY
1	Horizontal Directional Drilling (HDD)	m	0
2	Carriage Way Open Trench (CW)	m	0
3	Grass Verge Open Trenching (GV)	m	0
4	Micro Trenching (MT)	m	0
Total			0

NO	OTHER INFORMATION	UNIT	QUANTITY
1	Installation of Short Span ADSS Fibre Cables	m	5,860m
2	Install New Pole	ea	131
3	Install New JRC7 Manhole	ea	0
4	Install GI Riser 100mm	ea	0
5	Install Fiber Distribution Point	ea	19
6	Install Closure	ea	6
7	Estimated Time Required for Completion	days	30

2.0 LOCAL AUTHORITY SUMMARY

Daerah Bagan Datuk

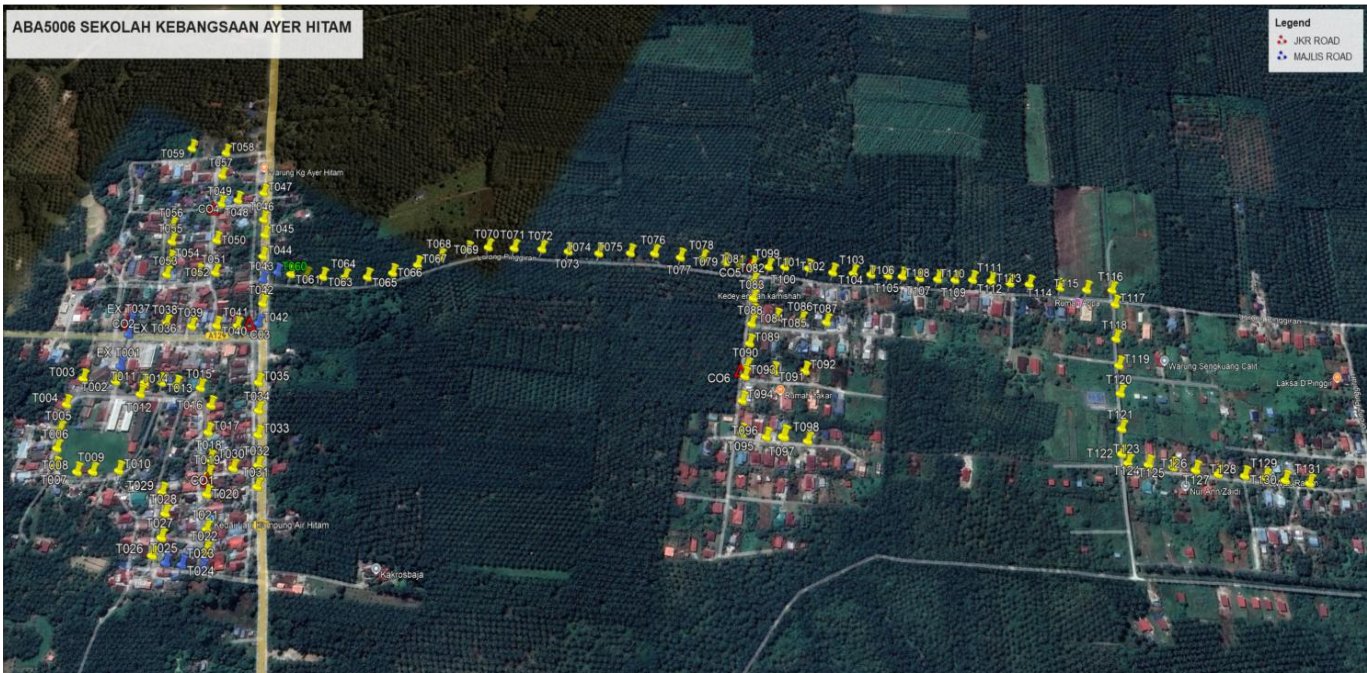
Bil	Items	Owner	Quantity	Distance
1	HDD	JKR	-	-
		Majlis	-	-
		Estate / Private Land	-	-
2	New Pole	JKR	6	506m
		Majlis	125	4,359m
		Estate / Private Land	-	-
3	Existing TNB Pole	JKR	-	-
		Majlis	-	-
		Estate / Private Land	-	-
Total				4,865m

Site Plan -KMZ (Overview site area)

Proposed FDP and Closure



Proposed New Pole



Site Plan - KMZ Routing (All Local Authority)



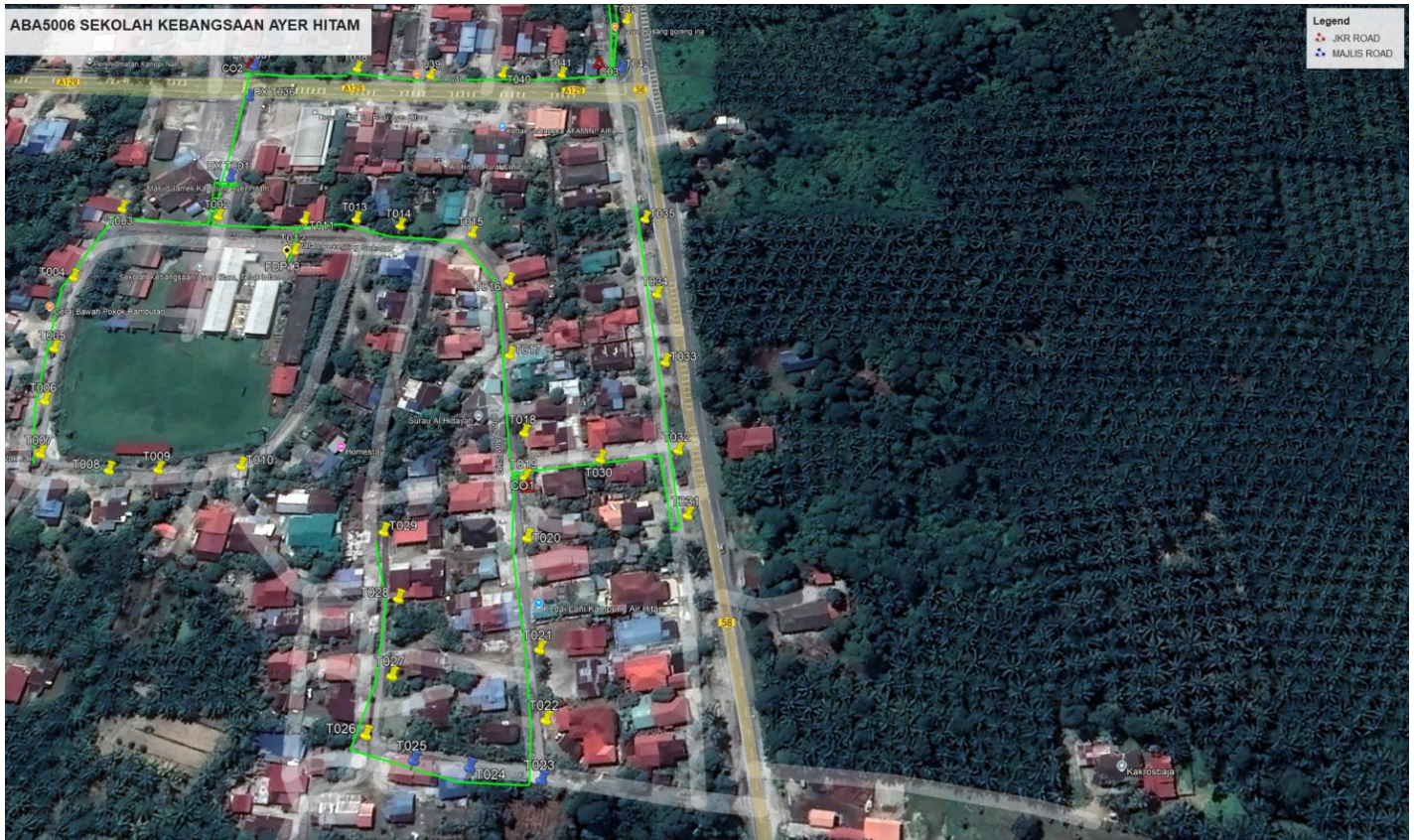
Red Colour – JKR Road

Blue Colour - Majlis Road

Site Plan – KMZ Routing (All site area)

Route 1

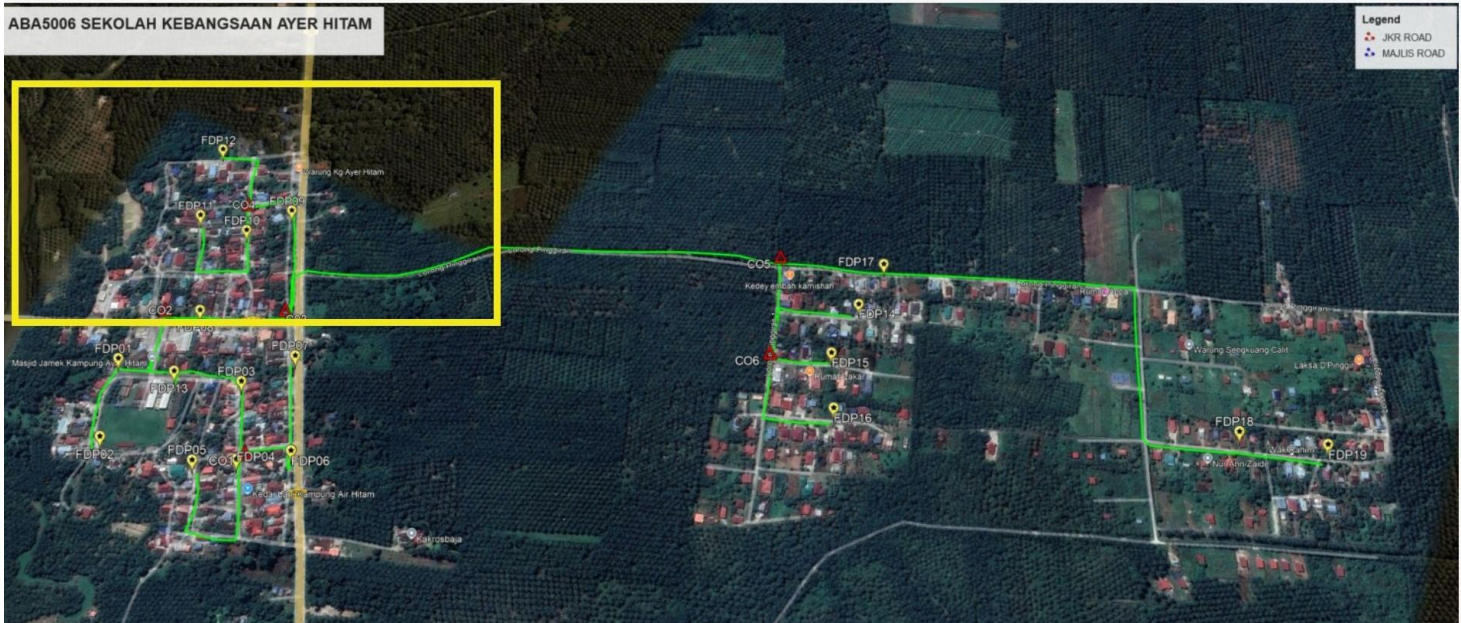




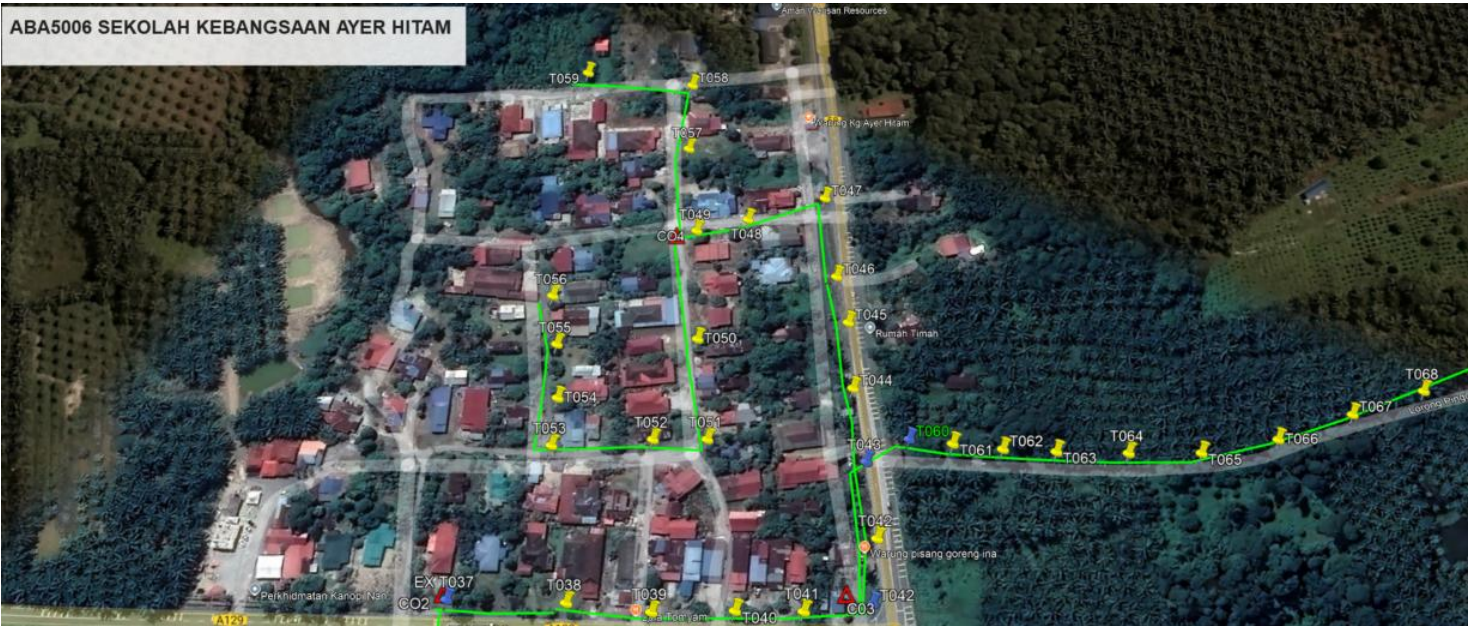
Route 1.1

Route 2

ABA5006 SEKOLAH KEBANGSAAN AYER HITAM



ABA5006 SEKOLAH KEBANGSAAN AYER HITAM



Route 2.1

Route 3

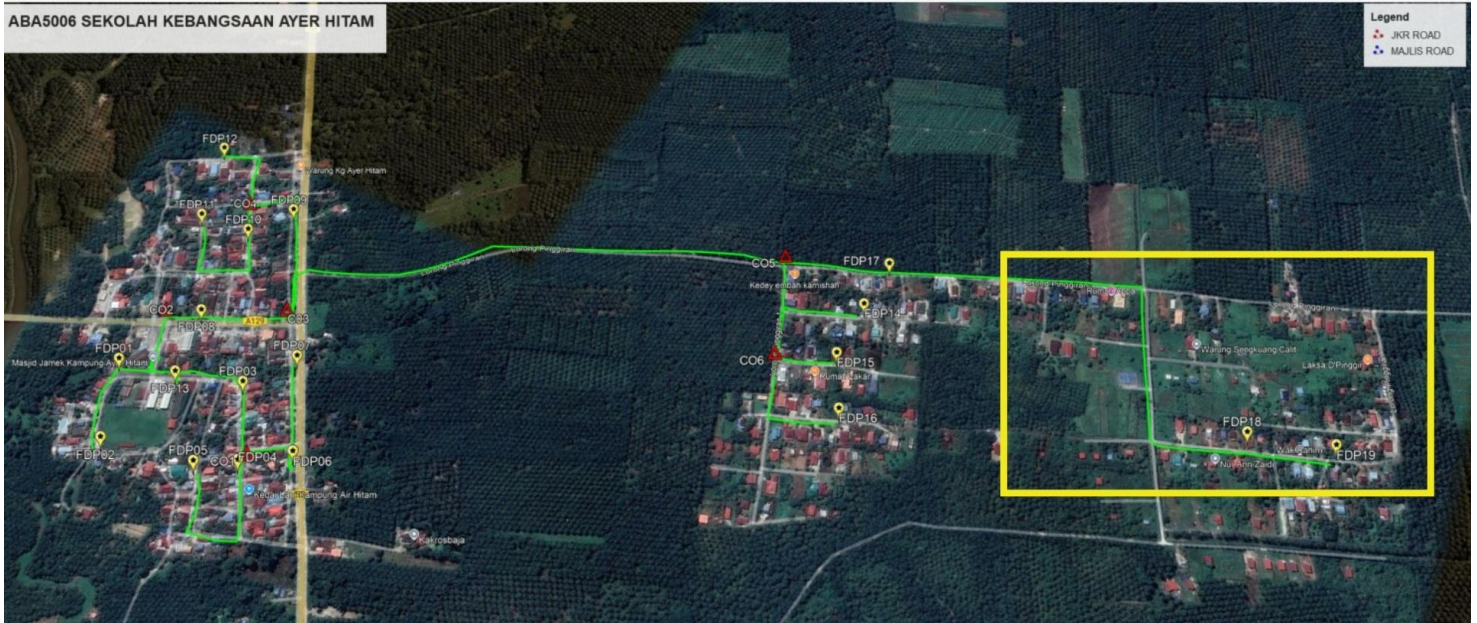


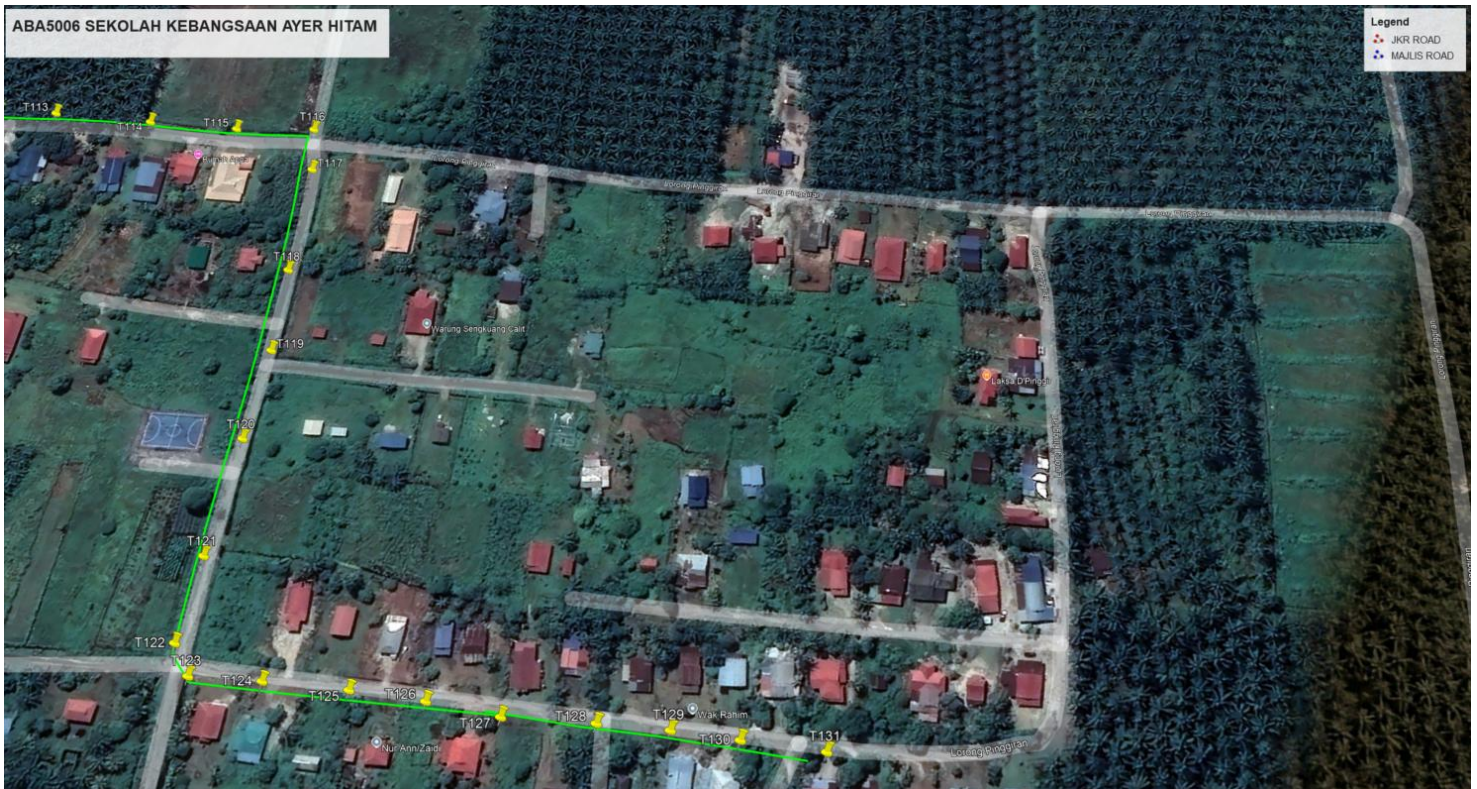


Route 3.1

ROUTE 4

ABA5006 SEKOLAH KEBANGSAAN AYER HITAM





Route 4.1

3.0 PROPOSED NEW POLE

Proposed New Pole Coordinate					
No.	Pole Number	Distance (m)	Latitude	Longitude	Local Authority
1	T001	40	4.020917	101.2020507	Majlis Perbandaran Teluk Intan
2	T002	40	4.020836	101.2018435	Majlis Perbandaran Teluk Intan
3	T003	40	4.021252	101.2016735	Majlis Perbandaran Teluk Intan
4	T004	40	4.021208	101.2012683	Majlis Perbandaran Teluk Intan
5	T005	40	4.021046	101.2009348	Majlis Perbandaran Teluk Intan
6	T006	40	4.020911	101.2007094	Majlis Perbandaran Teluk Intan
7	T007	40	4.020767	101.200502	Majlis Perbandaran Teluk Intan
8	T008	40	4.020478	101.2005732	Majlis Perbandaran Teluk Intan
9	T009	40	4.020306	101.2006718	Majlis Perbandaran Teluk Intan
10	T010	40	4.020007	101.200842	Majlis Perbandaran Teluk Intan
11	T011	40	4.020465	101.2020045	Majlis Perbandaran Teluk Intan
12	T012	40	4.020411	101.2018423	Majlis Perbandaran Teluk Intan
13	T013	40	4.020248	101.202112	Majlis Perbandaran Teluk Intan
14	T014	40	4.020049	101.2021744	Majlis Perbandaran Teluk Intan
15	T015	40	4.019732	101.2022906	Majlis Perbandaran Teluk Intan
16	T016	40	4.019452	101.2021458	Majlis Perbandaran Teluk Intan
17	T017	40	4.019254	101.2018122	Majlis Perbandaran Teluk Intan
18	T018	40	4.019011	101.2015145	Majlis Perbandaran Teluk Intan
19	T019	40	4.018903	101.2013342	Majlis Perbandaran Teluk Intan
20	T020	40	4.018759	101.2010997	Majlis Perbandaran Teluk Intan
21	T021	40	4.018479	101.2007119	Majlis Perbandaran Teluk Intan
22	T022	40	4.018317	101.2004774	Majlis Perbandaran Teluk Intan
23	T023	40	4.018219	101.2002701	Majlis Perbandaran Teluk Intan
24	T024	40	4.01849	101.2001898	Majlis Perbandaran Teluk Intan
25	T025	40	4.018698	101.2001183	Majlis Perbandaran Teluk Intan
26	T026	40	4.018915	101.2001189	Majlis Perbandaran Teluk Intan

3.0 PROPOSED NEW POLE

Proposed New Pole Coordinate					
No.	Pole Number	Distance (m)	Latitude	Longitude	Local Authority
27	T027	40	4.018951	101.2003621	Majlis Perbandaran Teluk Intan
28	T028	40	4.019094	101.2006415	Majlis Perbandaran Teluk Intan
29	T029	40	4.019302	101.2008581	Majlis Perbandaran Teluk Intan
30	T030	40	4.018658	101.2015496	Majlis Perbandaran Teluk Intan
31	T031	40	4.018206	101.2014763	Majlis Perbandaran Teluk Intan
32	T032	40	4.018377	101.2017288	Majlis Perbandaran Teluk Intan
33	T033	40	4.01862	101.2020806	Majlis Perbandaran Teluk Intan
34	T034	40	4.018809	101.2023692	Majlis Perbandaran Teluk Intan
35	T035	40	4.019044	101.2027029	Majlis Perbandaran Teluk Intan
36	T036	40	4.021105	101.2024833	Majlis Perbandaran Teluk Intan
37	T037	40	4.021186	101.2026456	Majlis Perbandaran Teluk Intan
38	T038	40	4.020725	101.2028604	Majlis Perbandaran Teluk Intan
39	T039	40	4.020381	101.2029855	Majlis Perbandaran Teluk Intan
40	T040	40	4.020064	101.2031467	Majlis Perbandaran Teluk Intan
41	T041	40	4.019801	101.203272	Majlis Perbandaran Teluk Intan
42	T042	40	4.019557	101.2034334	JKR Hilir Perak
43	T043	40	4.019674	101.2037128	JKR Hilir Perak
44	T044	40	4.019881	101.2040194	JKR Hilir Perak
45	T045	40	4.020106	101.2043351	JKR Hilir Perak
46	T046	40	4.020286	101.2046417	JKR Hilir Perak
47	T047	40	4.020448	101.2048401	JKR Hilir Perak
48	T048	40	4.0207	101.2052099	Majlis Perbandaran Teluk Intan
49	T049	40	4.020972	101.2049406	Majlis Perbandaran Teluk Intan
50	T050	40	4.021162	101.204779	Majlis Perbandaran Teluk Intan
51	T051	40	4.020866	101.2042561	Majlis Perbandaran Teluk Intan
52	T052	40	4.020568	101.2038142	Majlis Perbandaran Teluk Intan
53	T053	40	4.020786	101.2037068	Majlis Perbandaran Teluk Intan

3.0 PROPOSED NEW POLE

Proposed New Pole Coordinate					
No.	Pole Number	Distance (m)	Latitude	Longitude	Local Authority
54	T054	40	4.021274	101.2036991	Majlis Perbandaran Teluk Intan
55	T055	40	4.021427	101.2039426	Majlis Perbandaran Teluk Intan
56	T056	40	4.02158	101.204159	Majlis Perbandaran Teluk Intan
57	T057	40	4.021433	101.2051849	Majlis Perbandaran Teluk Intan
58	T058	40	4.021603	101.2055274	Majlis Perbandaran Teluk Intan
59	T059	40	4.022101	101.2053577	Majlis Perbandaran Teluk Intan
60	T060	40	4.019763	101.2042081	Majlis Perbandaran Teluk Intan
61	T061	40	4.019582	101.2042797	Majlis Perbandaran Teluk Intan
62	T062	40	4.019374	101.2043601	Majlis Perbandaran Teluk Intan
63	T063	40	4.019156	101.2044586	Majlis Perbandaran Teluk Intan
64	T064	40	4.018867	101.2045928	Majlis Perbandaran Teluk Intan
65	T065	40	4.018577	101.2047361	Majlis Perbandaran Teluk Intan
66	T066	40	4.018296	101.2049604	Majlis Perbandaran Teluk Intan
67	T067	40	4.018042	101.2052298	Majlis Perbandaran Teluk Intan
68	T068	40	4.017798	101.2054722	Majlis Perbandaran Teluk Intan
69	T069	40	4.01749	101.2057324	Majlis Perbandaran Teluk Intan
70	T070	40	4.017236	101.2058938	Majlis Perbandaran Teluk Intan
71	T071	40	4.016883	101.2060368	Majlis Perbandaran Teluk Intan
72	T072	40	4.016521	101.2062069	Majlis Perbandaran Teluk Intan
73	T073	40	4.016159	101.206341	Majlis Perbandaran Teluk Intan
74	T074	40	4.015743	101.2065019	Majlis Perbandaran Teluk Intan
75	T075	40	4.015326	101.2066898	Majlis Perbandaran Teluk Intan
76	T076	40	4.01501	101.206833	Majlis Perbandaran Teluk Intan
77	T077	40	4.014657	101.2069581	Majlis Perbandaran Teluk Intan
78	T078	40	4.014367	101.2071013	Majlis Perbandaran Teluk Intan
79	T079	40	4.014059	101.2072175	Majlis Perbandaran Teluk Intan
80	T080	40	4.01386	101.207289	Majlis Perbandaran Teluk Intan

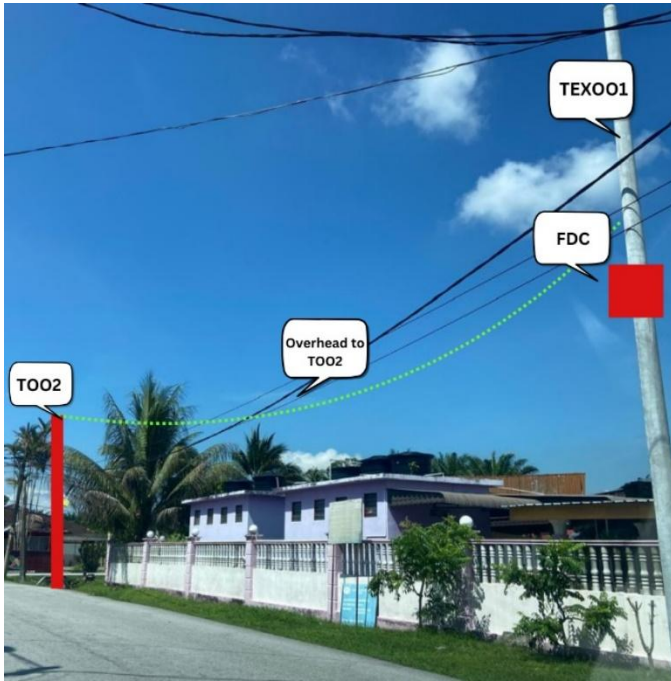
3.0 PROPOSED NEW POLE

Proposed New Pole Coordinate					
No.	Pole Number	Distance (m)	Latitude	Longitude	Local Authority
81	T081	40	4.013688	101.2073516	Majlis Perbandaran Teluk Intan
82	T082	40	4.013571	101.2071262	Majlis Perbandaran Teluk Intan
83	T083	40	4.013464	101.2068828	Majlis Perbandaran Teluk Intan
84	T084	40	4.013365	101.2066845	Majlis Perbandaran Teluk Intan
85	T085	40	4.013048	101.2067737	Majlis Perbandaran Teluk Intan
86	T086	40	4.012713	101.2068898	Majlis Perbandaran Teluk Intan
87	T087	40	4.012387	101.207024	Majlis Perbandaran Teluk Intan
88	T088	40	4.01332	101.2065224	Majlis Perbandaran Teluk Intan
89	T089	40	4.013221	101.2062431	Majlis Perbandaran Teluk Intan
90	T090	40	4.013105	101.2059097	Majlis Perbandaran Teluk Intan
91	T091	40	4.012752	101.2060347	Majlis Perbandaran Teluk Intan
92	T092	40	4.012362	101.2062317	Majlis Perbandaran Teluk Intan
93	T093	40	4.013069	101.2057655	Majlis Perbandaran Teluk Intan
94	T094	40	4.012952	101.2054321	Majlis Perbandaran Teluk Intan
95	T095	40	4.012763	101.2050356	Majlis Perbandaran Teluk Intan
96	T096	40	4.012447	101.2051337	Majlis Perbandaran Teluk Intan
97	T097	40	4.012239	101.2052232	Majlis Perbandaran Teluk Intan
98	T098	40	4.011922	101.2053304	Majlis Perbandaran Teluk Intan
99	T099	40	4.013471	101.207423	Majlis Perbandaran Teluk Intan
100	T100	40	4.013263	101.2075215	Majlis Perbandaran Teluk Intan
101	T101	40	4.012955	101.2076647	Majlis Perbandaran Teluk Intan
102	T102	40	4.01262	101.2077898	Majlis Perbandaran Teluk Intan
103	T103	40	4.012349	101.2079061	Majlis Perbandaran Teluk Intan
104	T104	40	4.012114	101.2079955	Majlis Perbandaran Teluk Intan
105	T105	40	4.011887	101.2080849	Majlis Perbandaran Teluk Intan
106	T106	40	4.011697	101.2081564	Majlis Perbandaran Teluk Intan
107	T107	40	4.011462	101.2082368	Majlis Perbandaran Teluk Intan

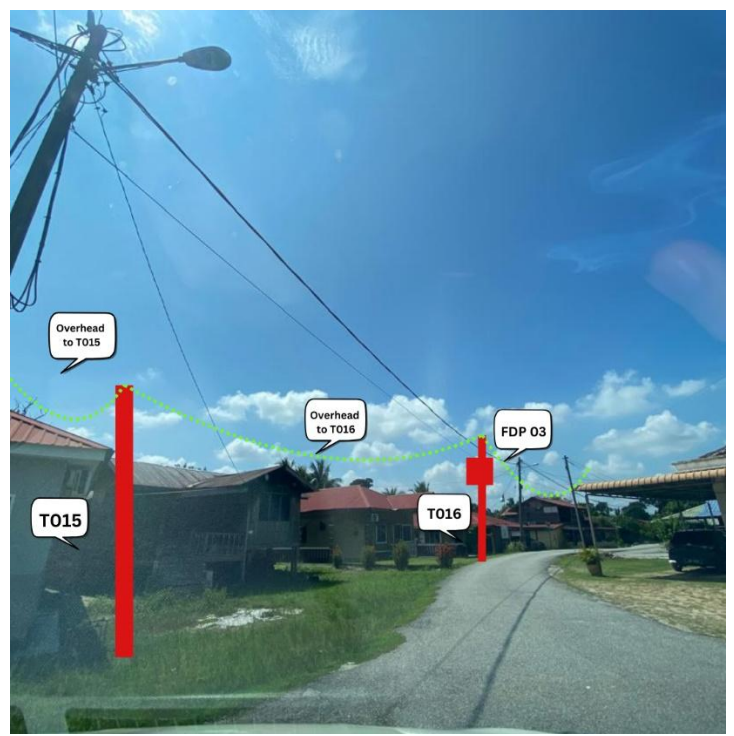
3.0 PROPOSED NEW POLE

Proposed New Pole Coordinate					
No.	Pole Number	Distance (m)	Latitude	Longitude	Local Authority
108	T108	40	4.011227	101.2083352	Majlis Perbandaran Teluk Intan
109	T109	40	4.011	101.2084336	Majlis Perbandaran Teluk Intan
110	T110	40	4.010774	101.208541	Majlis Perbandaran Teluk Intan
111	T111	40	4.01053	101.2086394	Majlis Perbandaran Teluk Intan
112	T112	40	4.010276	101.2087287	Majlis Perbandaran Teluk Intan
113	T113	40	4.010023	101.208827	Majlis Perbandaran Teluk Intan
114	T114	40	4.009616	101.208979	Majlis Perbandaran Teluk Intan
115	T115	40	4.009263	101.2091311	Majlis Perbandaran Teluk Intan
116	T116	40	4.008937	101.2092742	Majlis Perbandaran Teluk Intan
117	T117	40	4.008829	101.2090939	Majlis Perbandaran Teluk Intan
118	T118	40	4.008649	101.2086253	Majlis Perbandaran Teluk Intan
119	T119	40	4.008488	101.2082648	Majlis Perbandaran Teluk Intan
120	T120	40	4.008344	101.2078683	Majlis Perbandaran Teluk Intan
121	T121	40	4.008174	101.2073818	Majlis Perbandaran Teluk Intan
122	T122	40	4.008066	101.2070484	Majlis Perbandaran Teluk Intan
123	T123	40	4.007949	101.2069671	Majlis Perbandaran Teluk Intan
124	T124	40	4.007695	101.2070744	Majlis Perbandaran Teluk Intan
125	T125	40	4.007388	101.2071906	Majlis Perbandaran Teluk Intan
126	T126	40	4.007107	101.2072799	Majlis Perbandaran Teluk Intan
127	T127	40	4.006827	101.2073511	Majlis Perbandaran Teluk Intan
128	T128	40	4.006501	101.2074853	Majlis Perbandaran Teluk Intan
129	T129	40	4.006248	101.2075836	Majlis Perbandaran Teluk Intan
130	T130	40	4.006003	101.207664	Majlis Perbandaran Teluk Intan
131	T131	40	4.005705	101.2077622	Majlis Perbandaran Teluk Intan

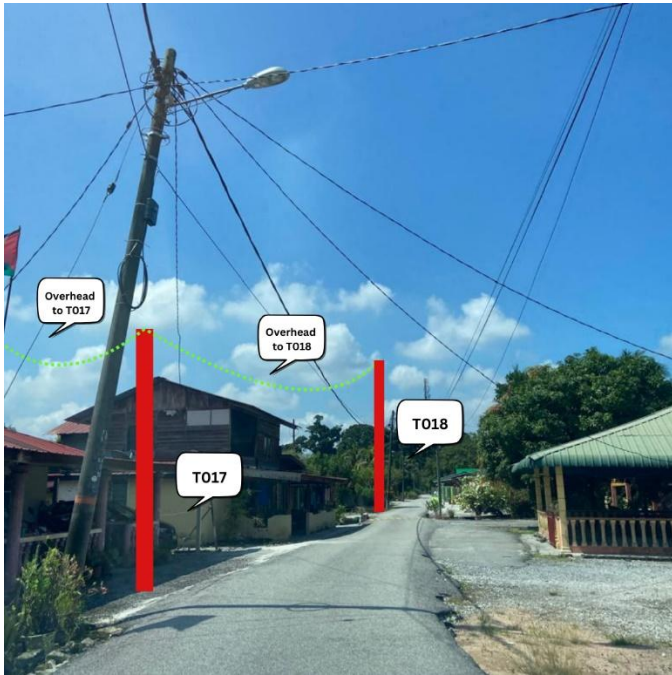
4.0 SITE PHOTOS - PROPOSED NEW POLE



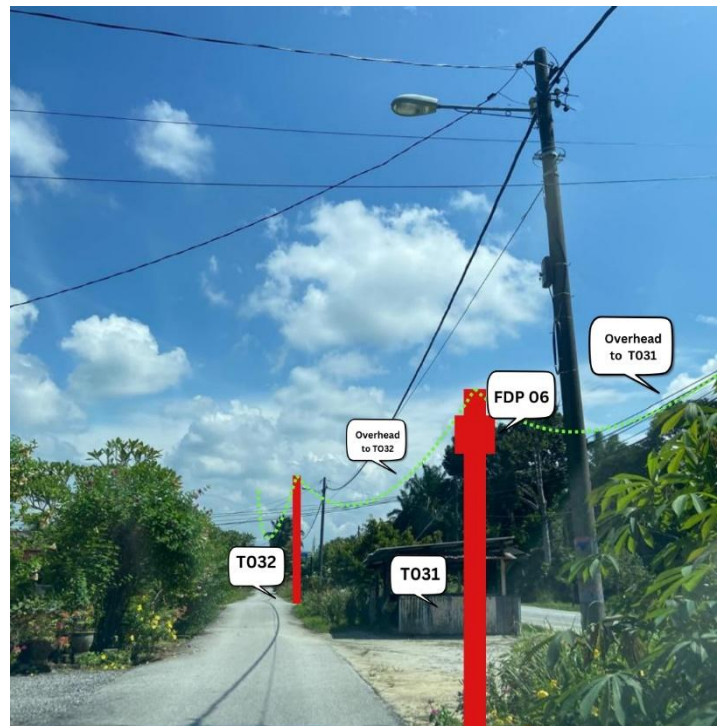
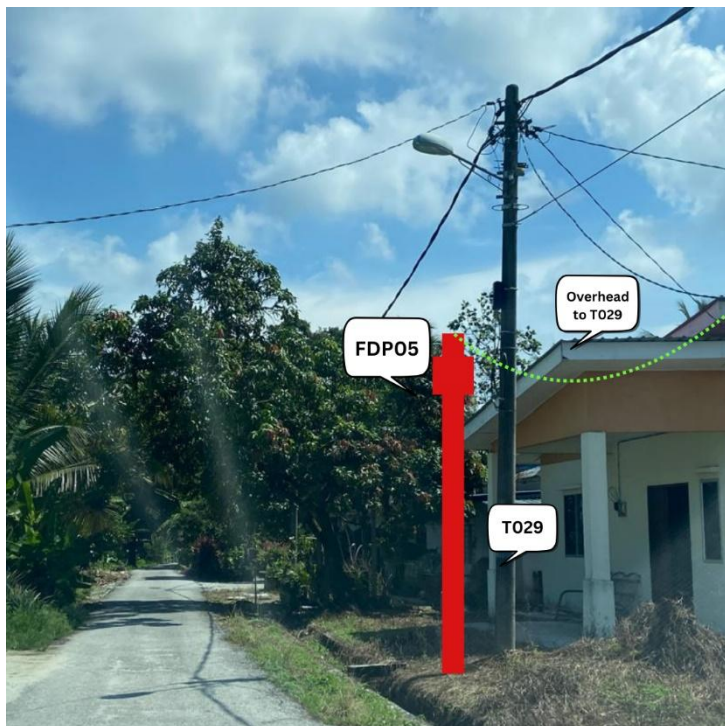
4.0 SITE PHOTOS - PROPOSED NEW POLE



4.0 SITE PHOTOS - PROPOSED NEW POLE



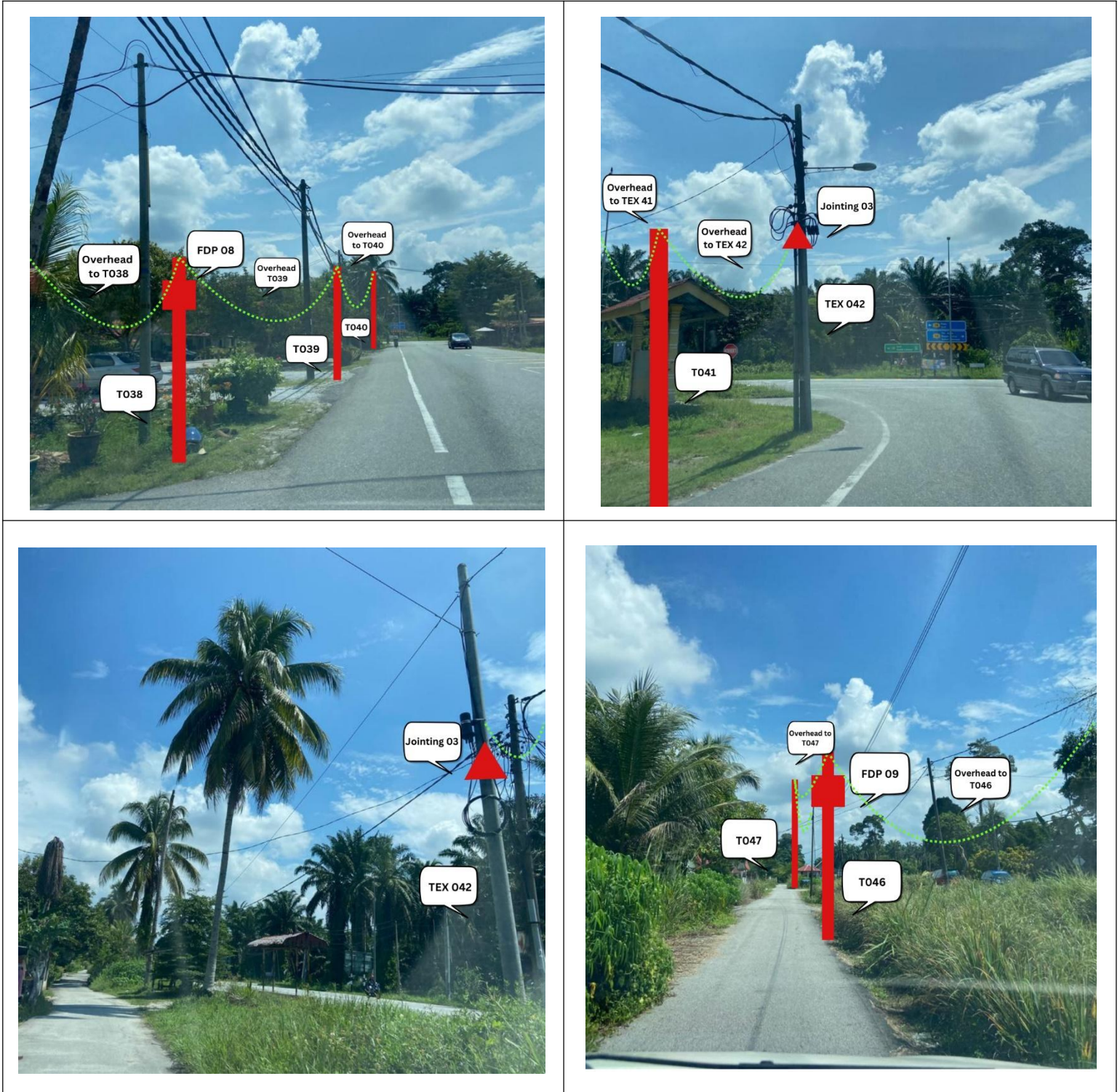
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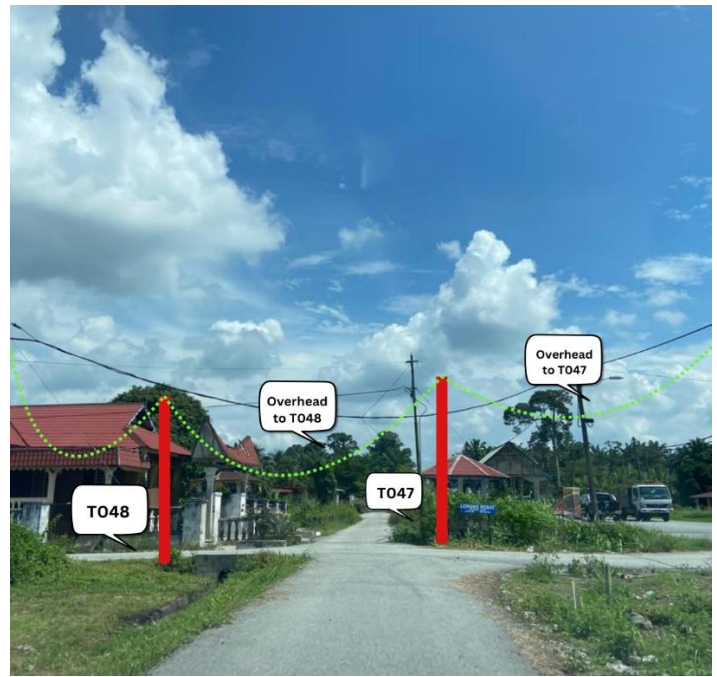
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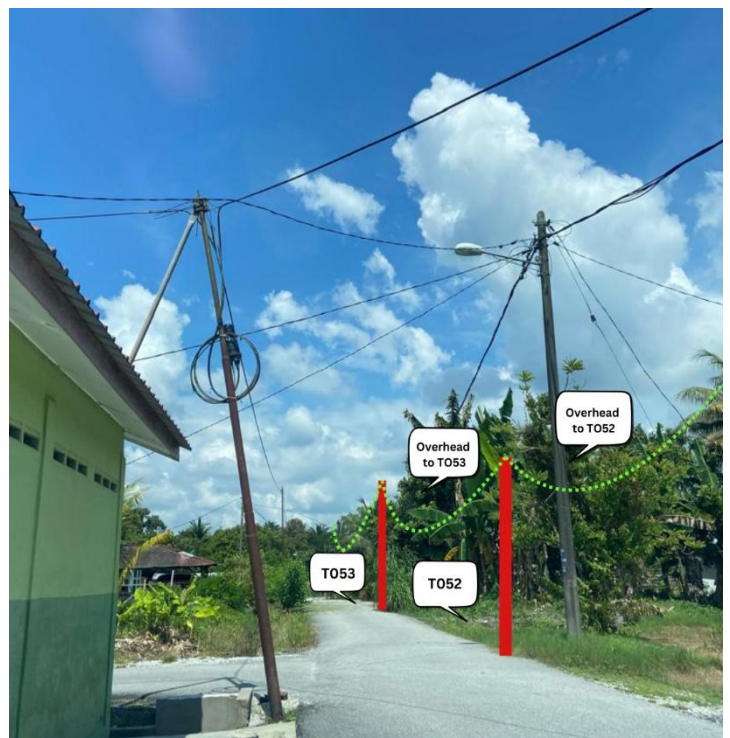
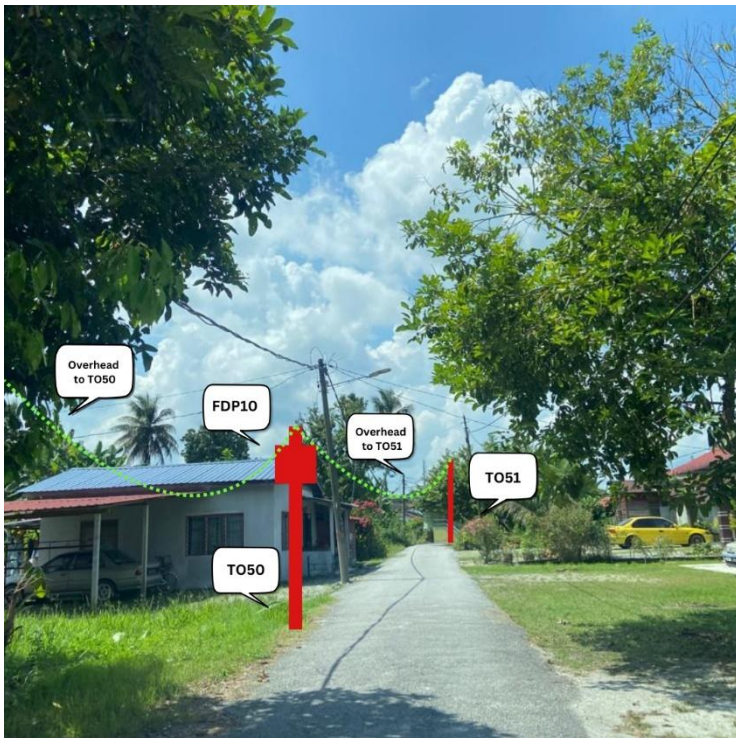
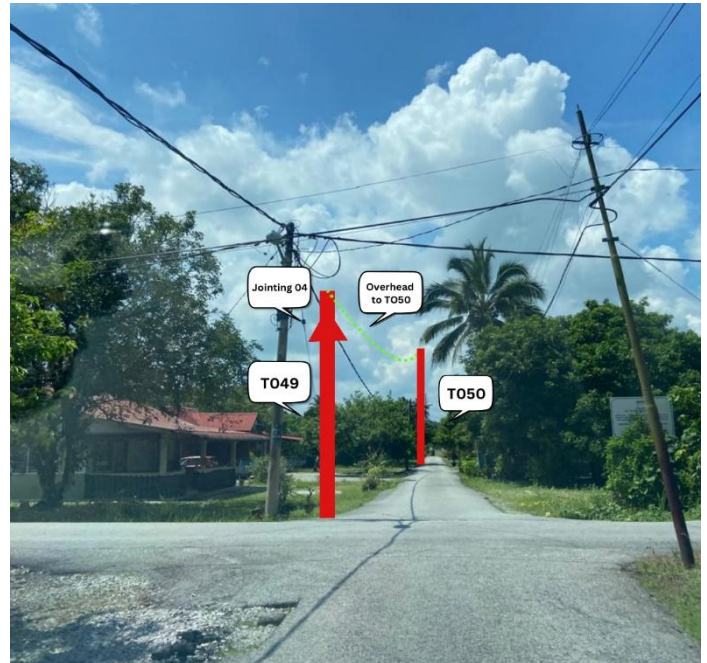
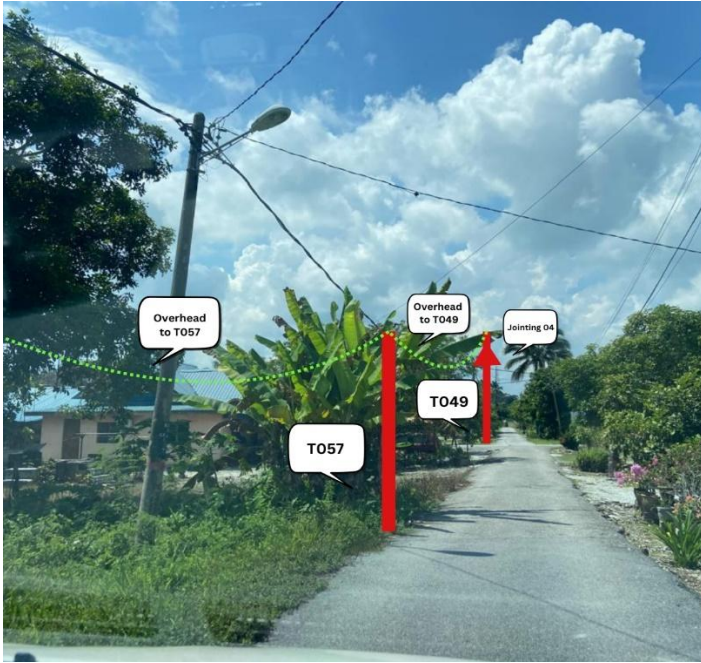
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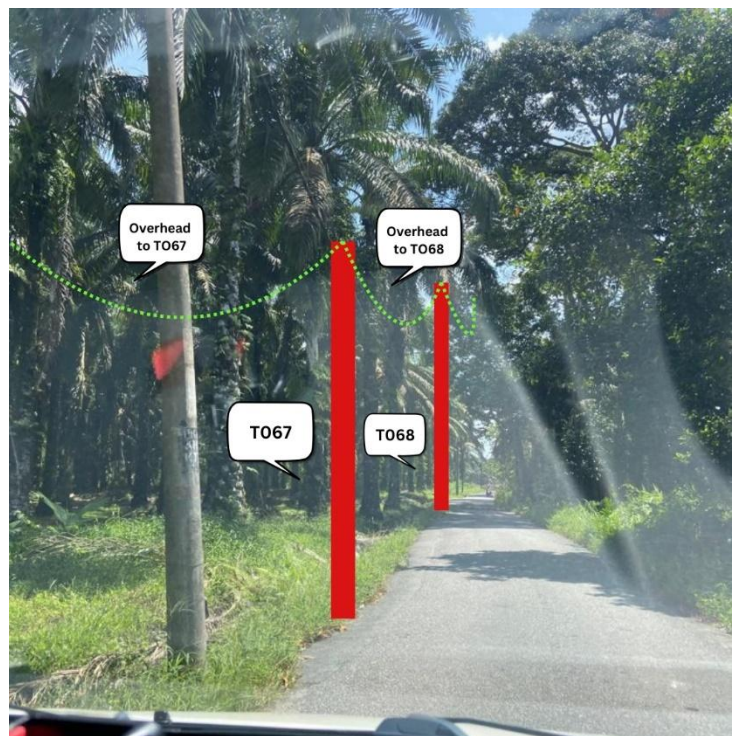
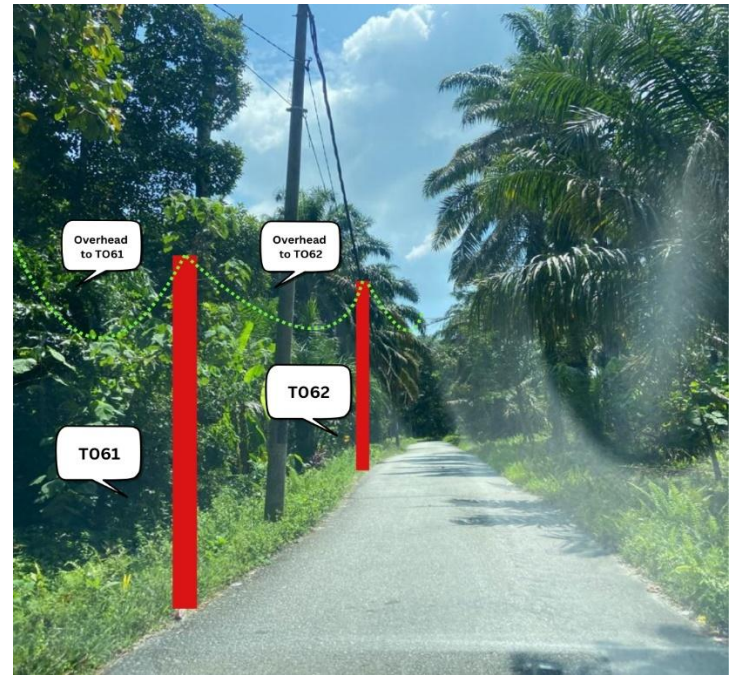
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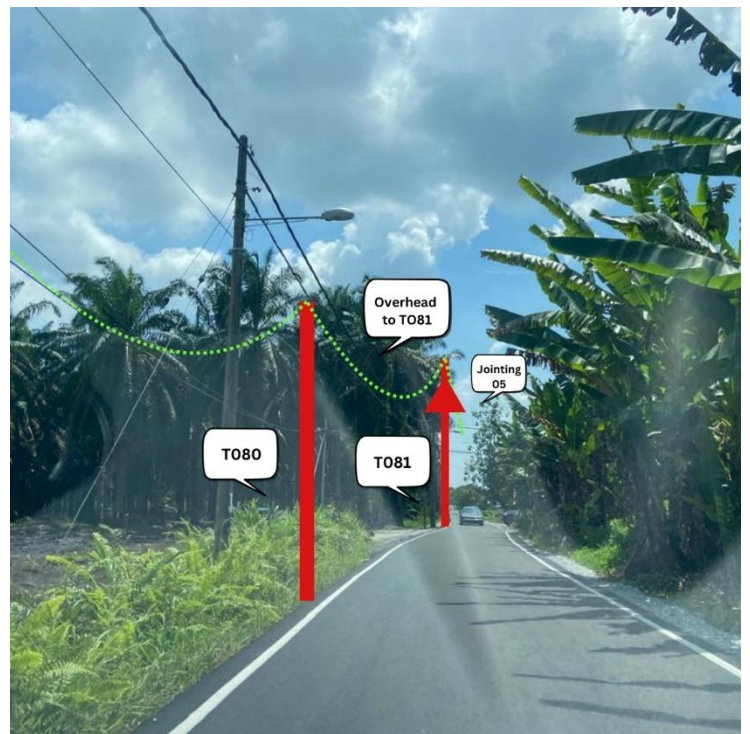
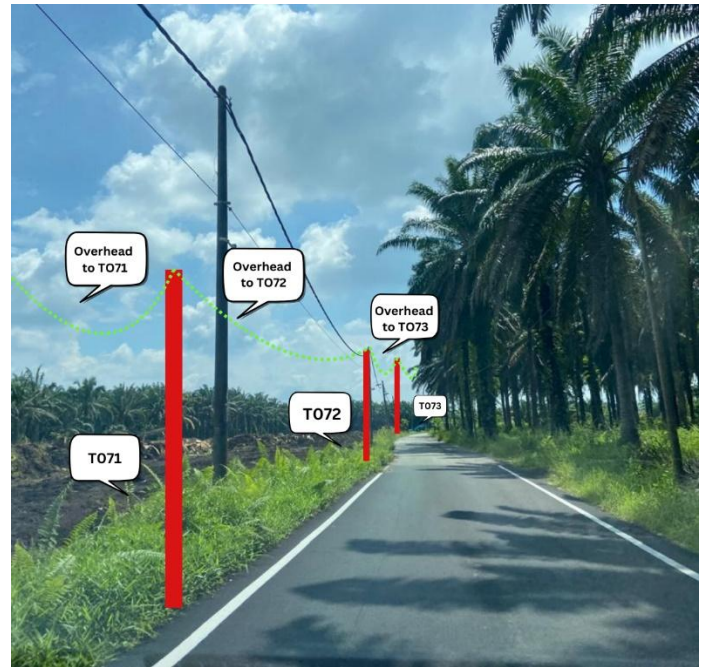
4.0 SITE PHOTOS - PROPOSED NEW POLE



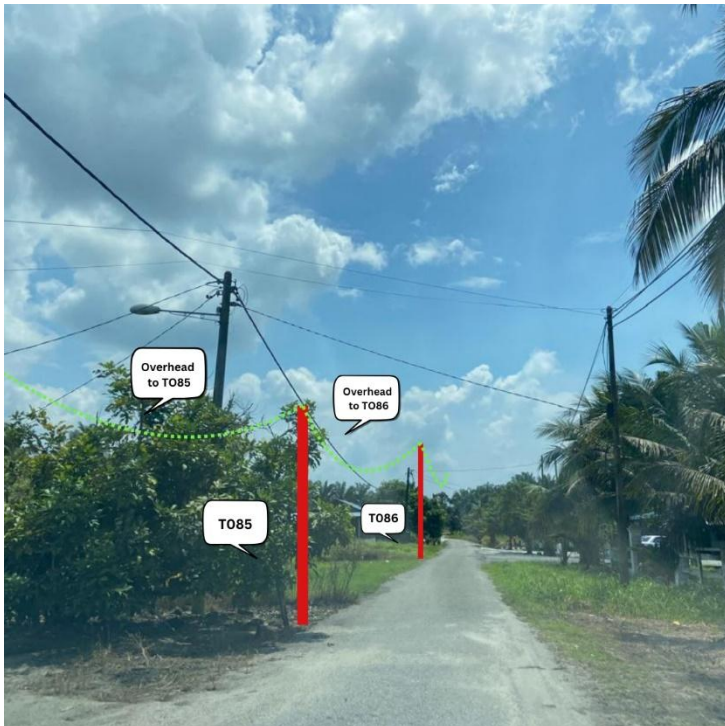
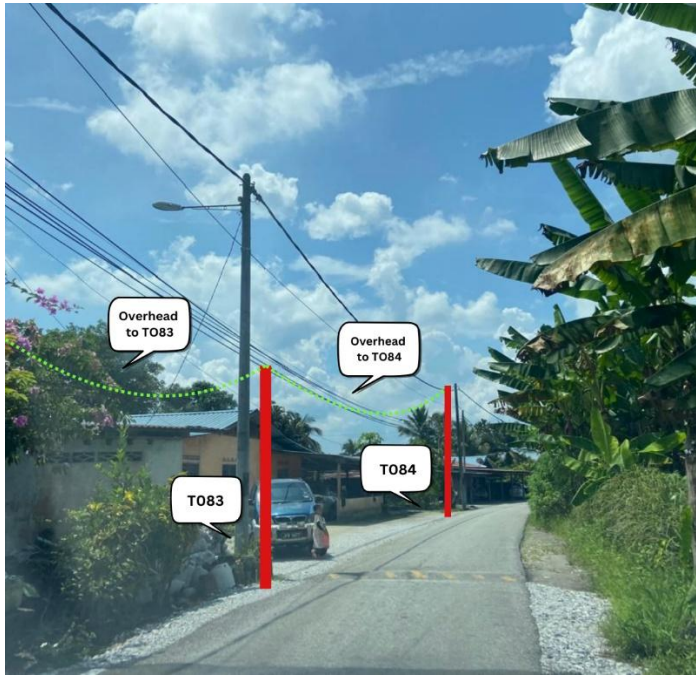
4.0 SITE PHOTOS - PROPOSED NEW POLE



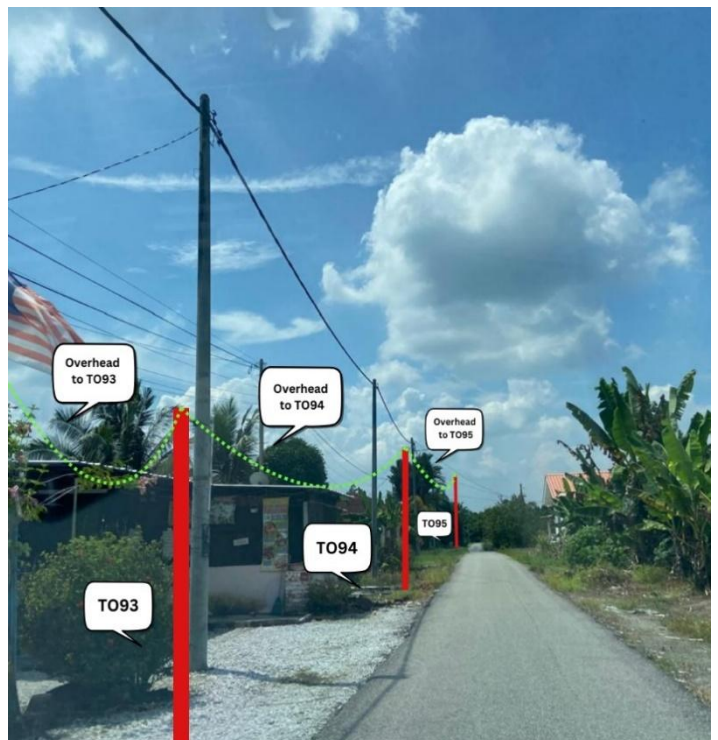
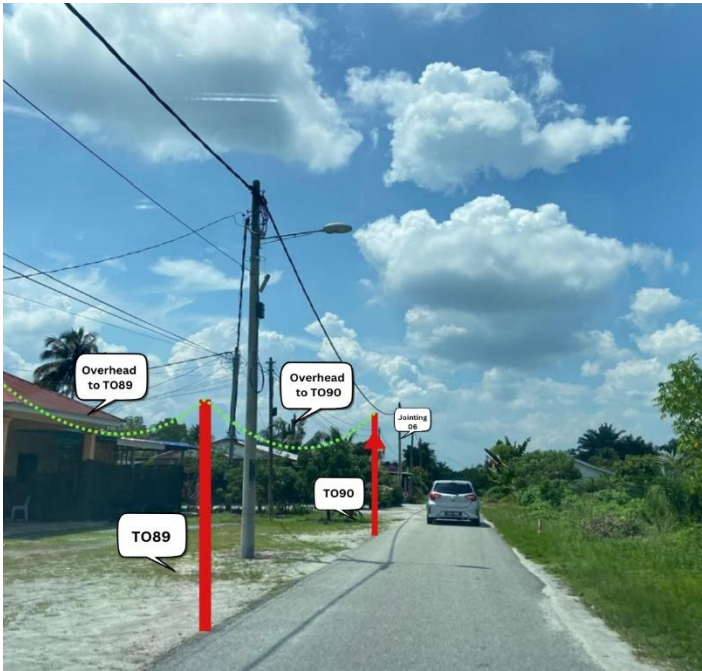
4.0 SITE PHOTOS - PROPOSED NEW POLE



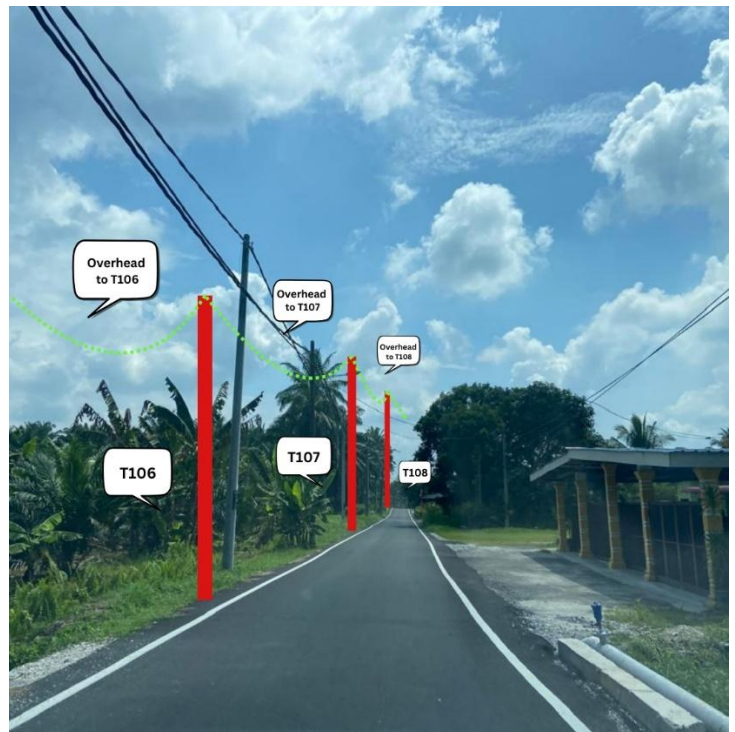
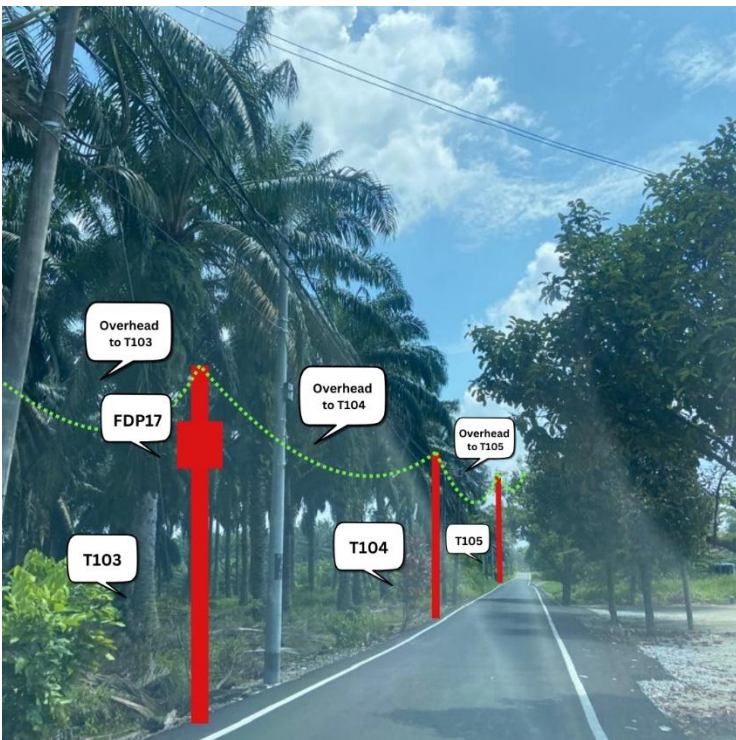
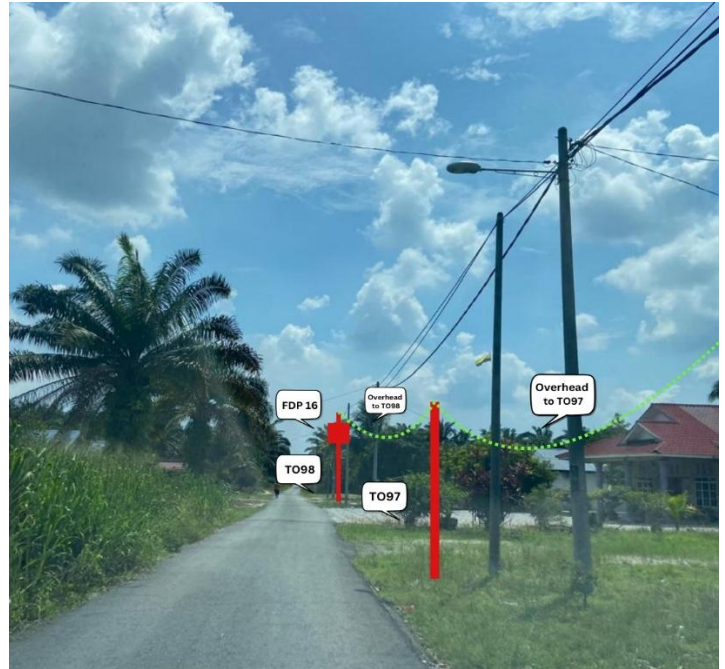
4.0 SITE PHOTOS - PROPOSED NEW POLE



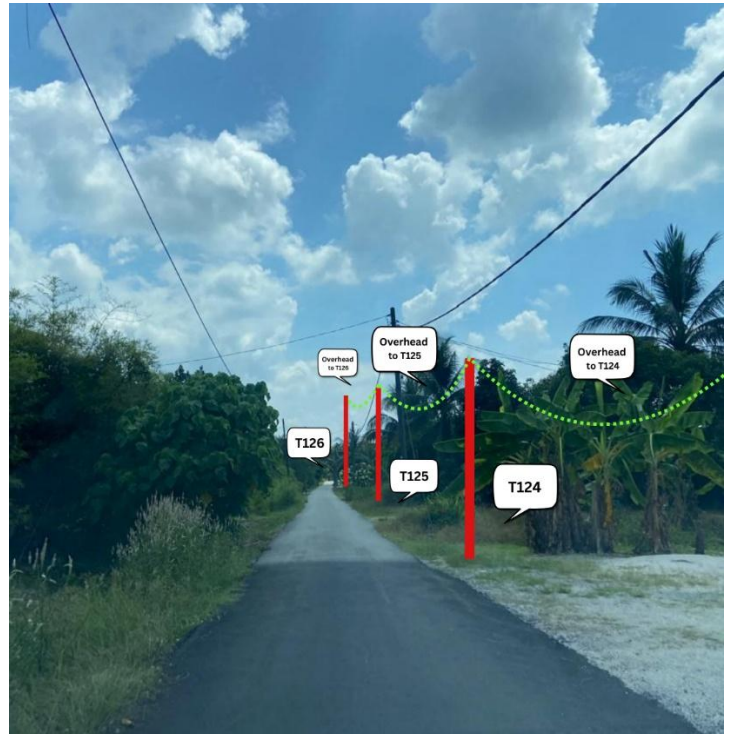
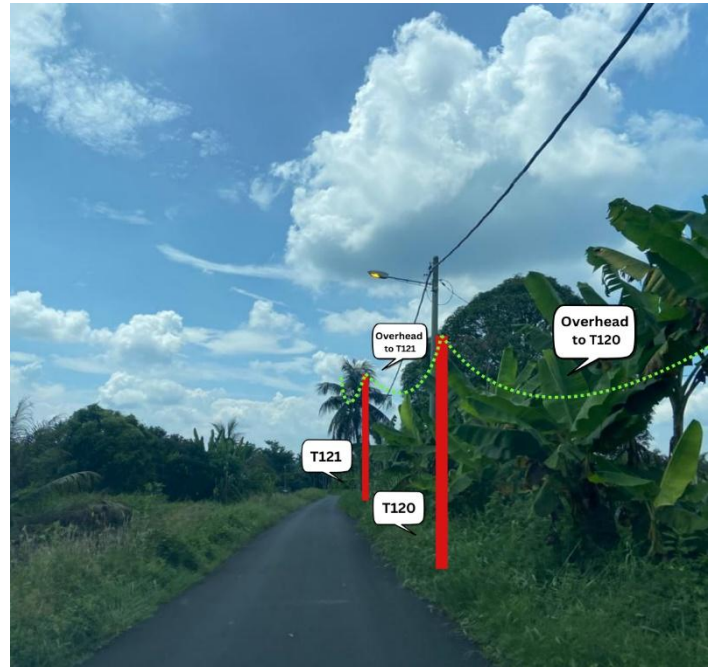
4.0 SITE PHOTOS - PROPOSED NEW POLE



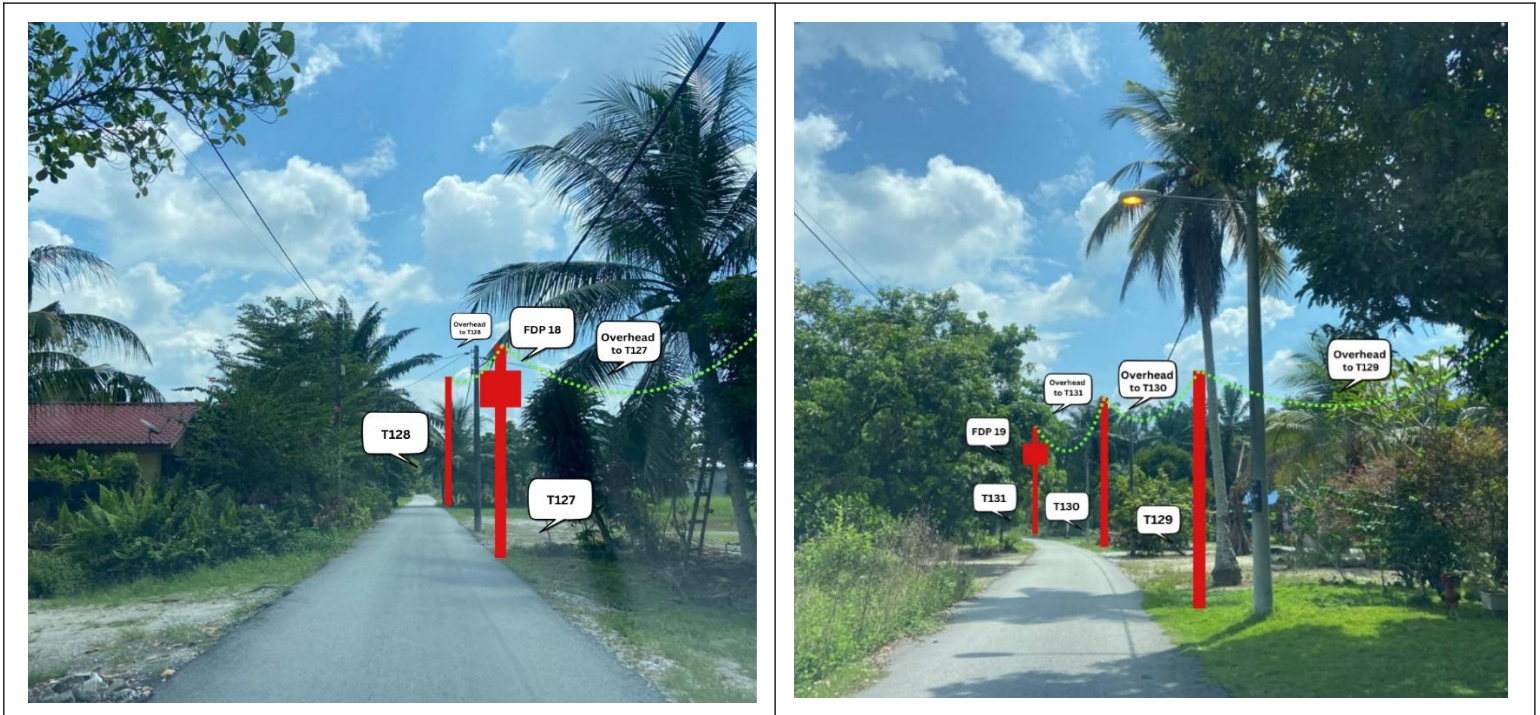
4.0 SITE PHOTOS - PROPOSED NEW POLE



4.0 SITE PHOTOS - PROPOSED NEW POLE



4.0 SITE PHOTOS - PROPOSED NEW POLE





PROJEK PENYEDIAAN DAN PENYELENGGARAAN POINT OF PRESENCE (POP) FASA 2: HAB INFRASTRUKTUR GENTIAN OPTIK BERHAMPIRAN DENGAN SEKOLAH, KAWASAN PERINDUSTRIAN, PREMIS KERAJAAN DAN KOMUNITI SEKITARNYA OLEH KEMENTERIAN KOMUNIKASI MALAYSIA – ZON UTARA (KKMM.400-11/17/132(1))



5.0 3rd PARTIES DEPENDENCIES

NO	LOCAL COUNCIL / AUTHORITY	REMARK
1	Majlis Perbandaran Teluk Intan	4,359M
2	JKR Hilir Perak	506M



12C FOC	Installed 1:4 splitter in FDC	○	INSTALLED POLE (9M)	■	NEW MANHOLE	TS/ TB	TENSION SMALL / TENSION BIG	MH1	MH NO.
24C FOC	FDP	○	INSTALLED RISER	#	HOUSE NUMBER	□	EXISTING MANHOLE	TKS-1	EXISTING TNB POLE NO.
48C FOC	CLOSURE	⊗	SUSPENSION BIG	●	EXISTING ALLO POLE	□	CLOSURE NO.	P001	NEW POLE NO.
90C FOC	NEW MANHOLE (PT)	⊗	SUSPENSION SMALL	○	LOOP	□	FDP NO.	SEE PLAN SHEET	
144C FOC	INSTALLED POLE	⊗	FDC	■	FDP BOUNDARY	□	FDC NO.	SEE SHEET XXX	

			<p>KNZ ENGINEERING SDN BHD NO. 60 & 60A, Jalan Klebang Indah 1, Medan Klebang Indah, 30100 Ipoh, Perak No Tel: 019-3695071 Email: admin@knzengineering.com.my Website: www.knzengineering.com.my</p>	<p>PROJECT TITLE</p> <p>SEKOLAH KEBANGSAAN AYER HITAM</p>	<p>DRAWING TITLE</p> <p>TP DRAWING POP 2 AT SEKOLAH KEBANGSAAN AYER HITAM</p>	<p>DESIGN BY</p> <p>NABIL</p>	<p>DATE</p> <p>28/11/2024</p>
<p>PROJECT OWNER</p>		<p>MAIN CONTRACTOR</p>		<p>PROJECT PHASE</p> <p>PROJECT PHASE 2</p>		<p>DRAWN BY</p> <p>NABIL</p>	<p>SCALE</p> <p>NOT TO SCALE</p>
<p>CHECKED BY</p> <p>AZHAN HARIS</p>		<p>DRAWING NUMBER</p> <p>ABA5006</p>		<p>JOB NUMBER</p> <p>ABA5006</p>		<p>1/4</p>	
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TO PAGE 4
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LEGEND	
12C FOC	Installed 1:4 splitter in FDC
24C FOC	FDP
48C FOC	CLOSURE
90C FOC	NEW MANHOLE (PT)
144C FOC	INSTALLED POLE
○	INSTALLED POLE (9M)
○	INSTALLED RISER
○	SUSPENSION BIG
○	SUSPENSION SMALL
○	FDC
■	NEW MANHOLE
#	HOUSE NUMBER
○	EXISTING ALLO POLE
○	LOOP
○	FDP BOUNDARY
TS/TB	TENSION SMALL / TENSION BIG
□	EXISTING MANHOLE
CP1	CLOSURE NO.
FDP1	FDP NO.
FDC	FDC NO.
MH1	MH NO.
TKS-1	EXISTING TNB POLE NO.
P001	NEW POLE NO.

KEY PLAN

PROJECT OWNER

MAIN CONTRACTOR

SUB-CONTRACTOR

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NO. 60 & 60A, Jalan Klebang Indah 1, Medan Klebang Indah, 30100 Ipoh, Perak
No Tel: 019-3695071
Email: admin@knzengineering.com.my
Website: www.knzengineering.com.my

PROJECT TITLE

SEKOLAH KEBANGSAAN AYER HITAM

DRAWING TITLE

TP DRAWING POP 2 AT SEKOLAH KEBANGSAAN AYER HITAM

PROJECT PHASE

PROJECT PHASE 2

DESIGN BY	NABIL	DATE	28/11/2024
DRAWN BY	NABIL	SCALE	NOT TO SCALE
CHECKED BY	AZHAN HARIS	JOB NUMBER	ABA5006
DRAWING NUMBER		ABA5006	
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			A3



LEGEND	
12C FOC	Installed 1:4 splitter in FDC
24C FOC	FDP
48C FOC	CLOSURE
90C FOC	NEW MANHOLE (PT)
144C FOC	INSTALLED POLE
INSTALLED POLE (9M)	NEW MANHOLE
INSTALLED RISER	HOUSE NUMBER
SUSPENSION BIG	EXISTING ALLO POLE
SUSPENSION SMALL	LOOP
FDC	FDP BOUNDARY
TENSION SMALL / TENSION BIG	EXISTING MANHOLE
CLOSURE NO.	CLOSURE NO.
FDP NO.	FDP NO.
FDC NO.	FDC NO.
MH1	MH NO.
TKS-1	EXISTING TNB POLE NO.
P001	NEW POLE NO.

KEY PLAN

PROJECT OWNER



MAIN CONTRACTOR




SUB-CONTRACTOR



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 admin@knzengineering.com.my
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PROJECT TITLE

SEKOLAH KEBANGSAAN AYER HITAM

DRAWING TITLE

TP DRAWING POP 2 AT SEKOLAH KEBANGSAAN AYER HITAM

PROJECT PHASE

PROJECT PHASE 2

DESIGN BY

NABIL

DATE

28/11/2024

DRAWN BY

NABIL

SCALE

NOT TO SCALE

CHECKED BY

AZHAN HARIS

JOB NUMBER

ABA5006

DRAWING NUMBER

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