

# TECHNICAL PROPOSAL

## POP2 ABAB003 SEKOLAH KEBANGSAAN SUNGAI BETUL (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** : 28/11/2024



### Starting Point

**Site / Boundary Name** : Bagan Datuk  
**Address** : SK Sungai Betul, 36100 Bagan Datuk  
**District** : Bagan Datuk  
**Postcode** : 36100  
**State** : Perak  
**GPS Coordinate** : 3.978749877, 100.7163117  
**LRD** : A

### End Point

**Site / Boundary Name** : Bagan Datuk  
**Address** : Kampung Rungkup Kecil, 36100 Bagan Datuk  
**District** : Bagan Datuk  
**Postcode** : 36100  
**State** : Perak  
**GPS Coordinate** : 3.964510867, 100.7111601  
**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	4,658
2	Install New Pole	ea	103
3	Install New JRC7 Manhole	ea	0
4	Install GI Riser 100mm	ea	0
5	Install Fiber Distribution Point	ea	13
6	Install Closure	ea	1
7	Estimated Time Required for Completion	days	30

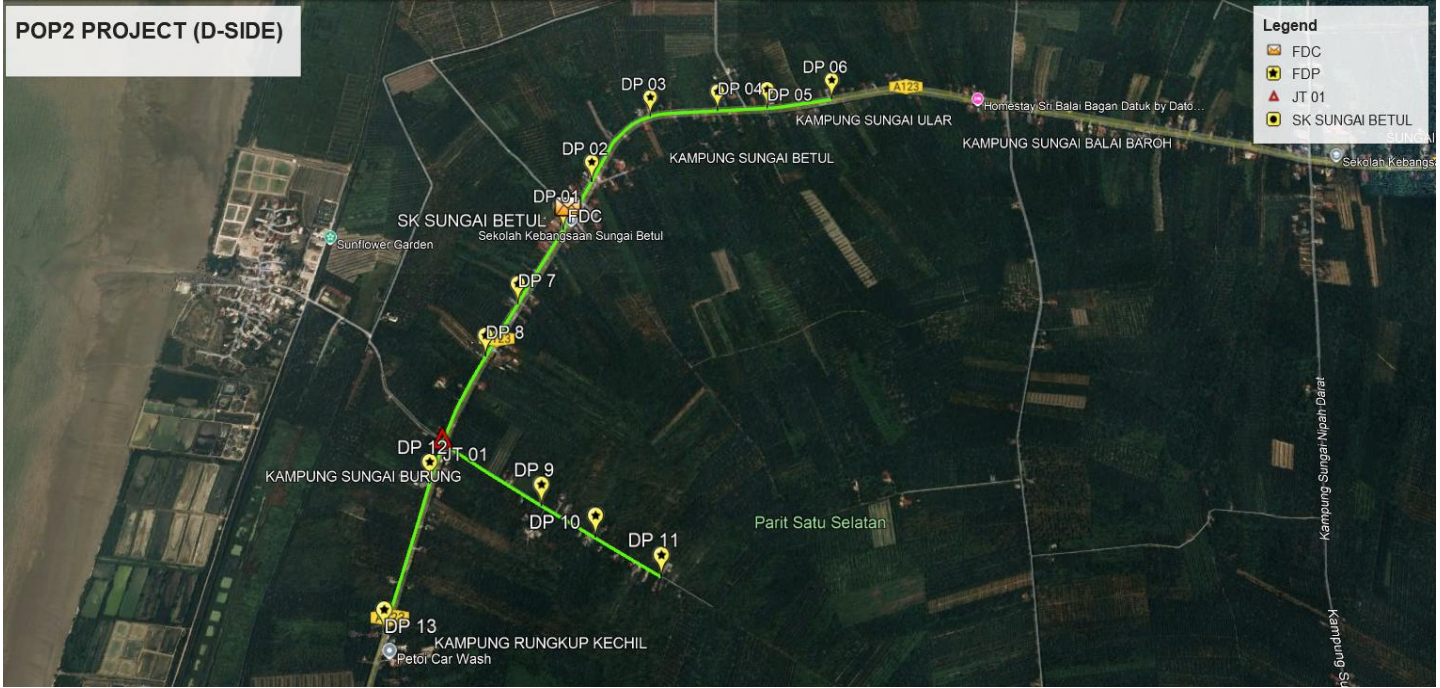
## 2.0 LOCAL AUTHORITY SUMMARY

### Daerah Bagan Datuk

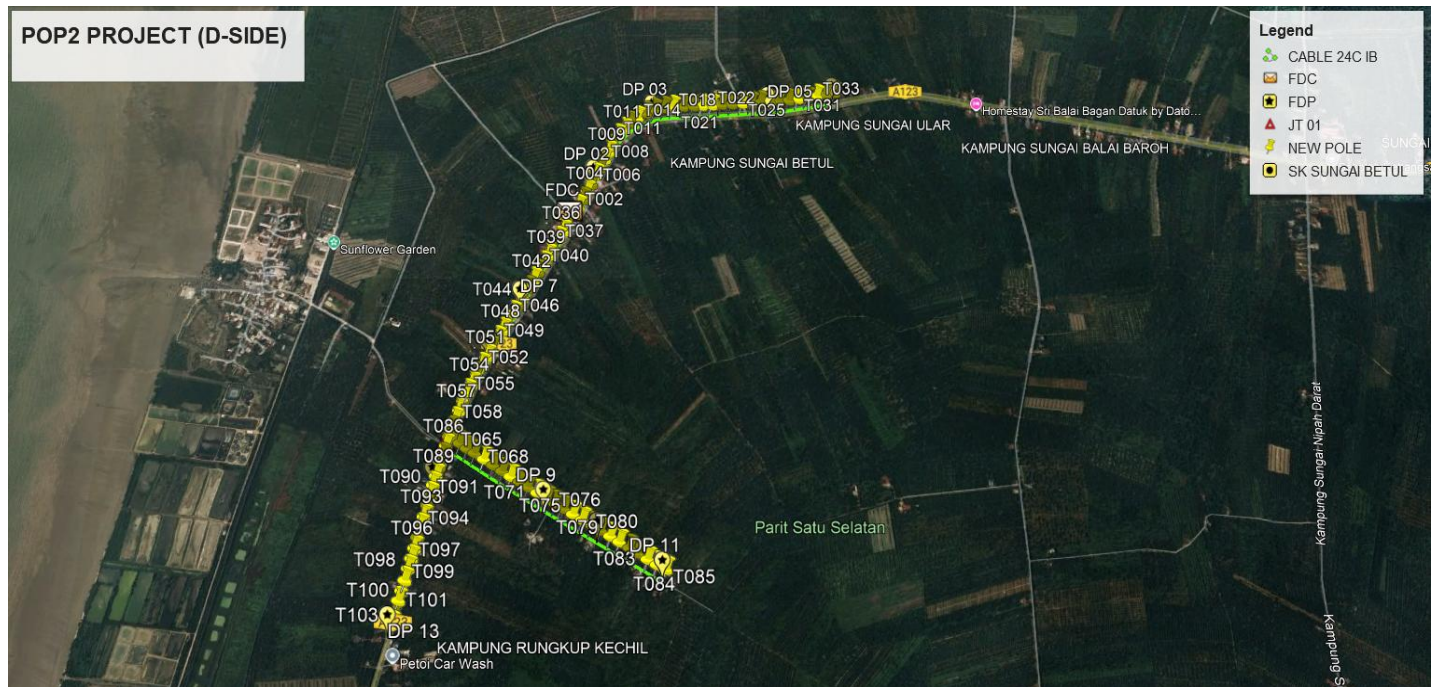
Bil	Items	Owner	Quantity	Distance
1	HDD	JKR	-	-
		Majlis	-	-
		Estate / Private Land	-	-
2	New Pole	JKR	79	3,078m
		Majlis	24	965m
		Estate / Private Land	-	-
3	Existing TNB Pole	JKR	-	-
		Majlis	-	-
		Estate / Private Land	-	-
Total				4,043m

Site Plan -KMZ (Overview site area)

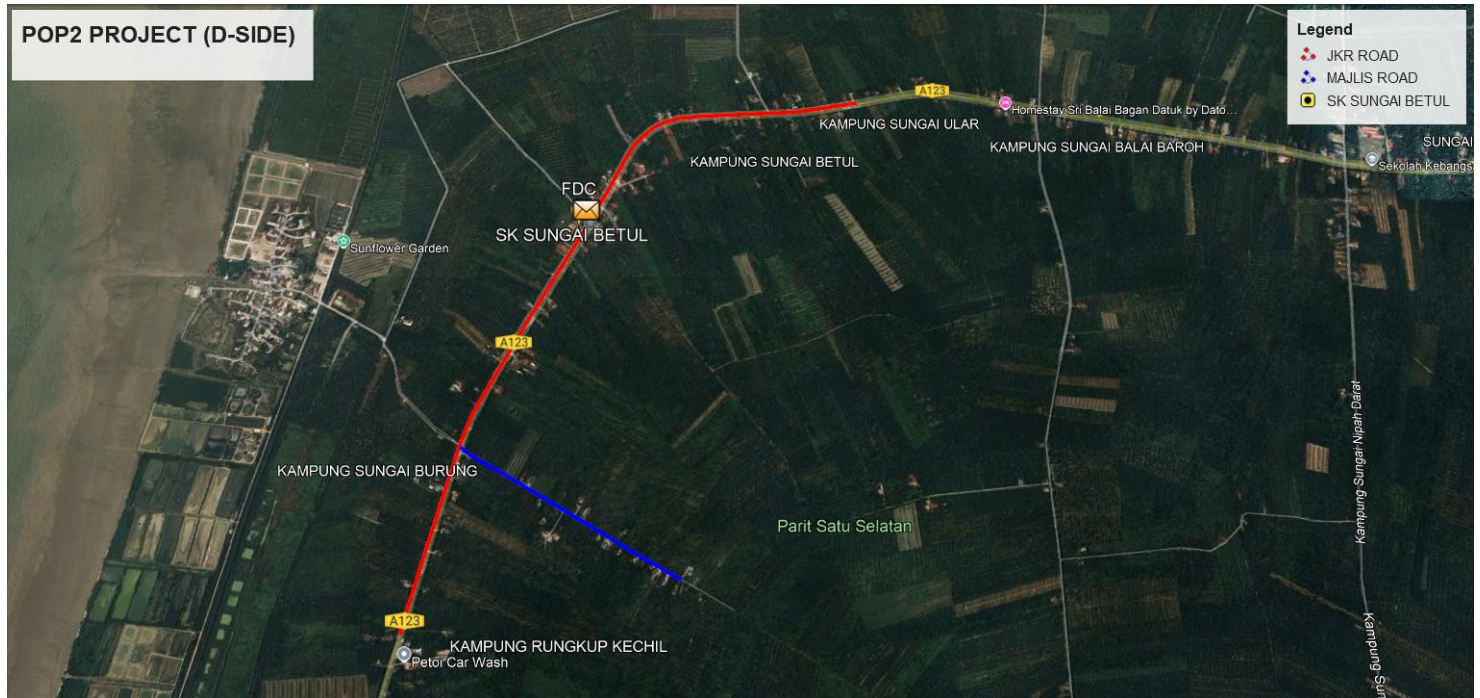
Proposed FDP and Closure



Proposed New Pole



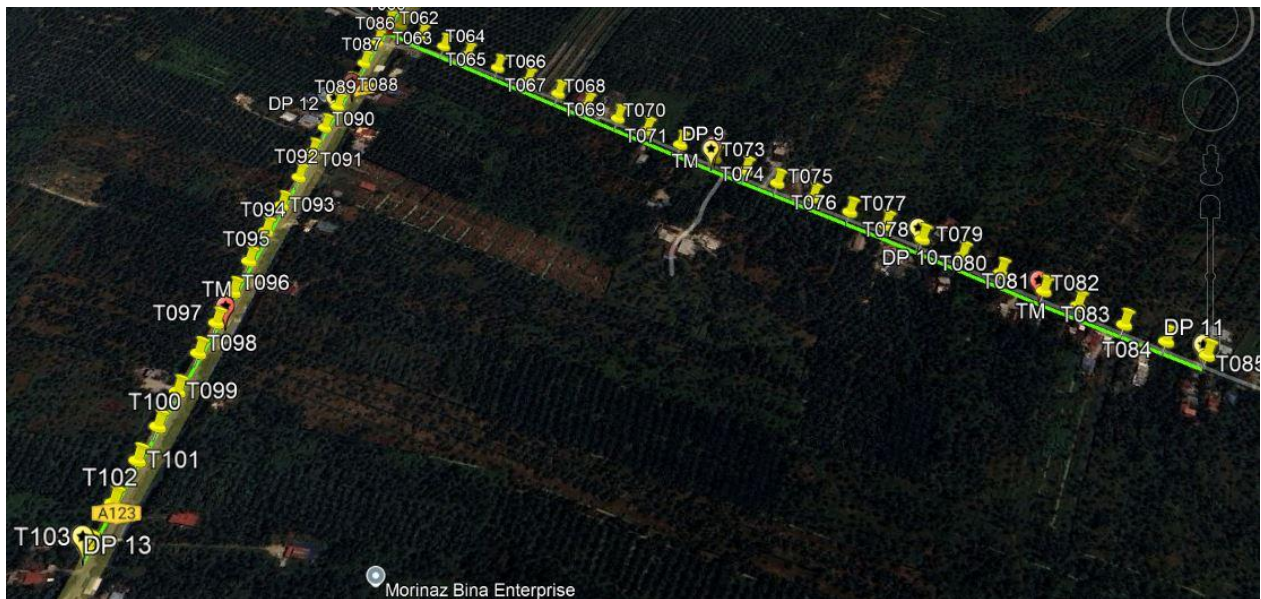
**Site Plan - KMZ Routing (All Local Authority)**



**Red Colour – JKR Road**  
**Blue Colour - Majlis Road**

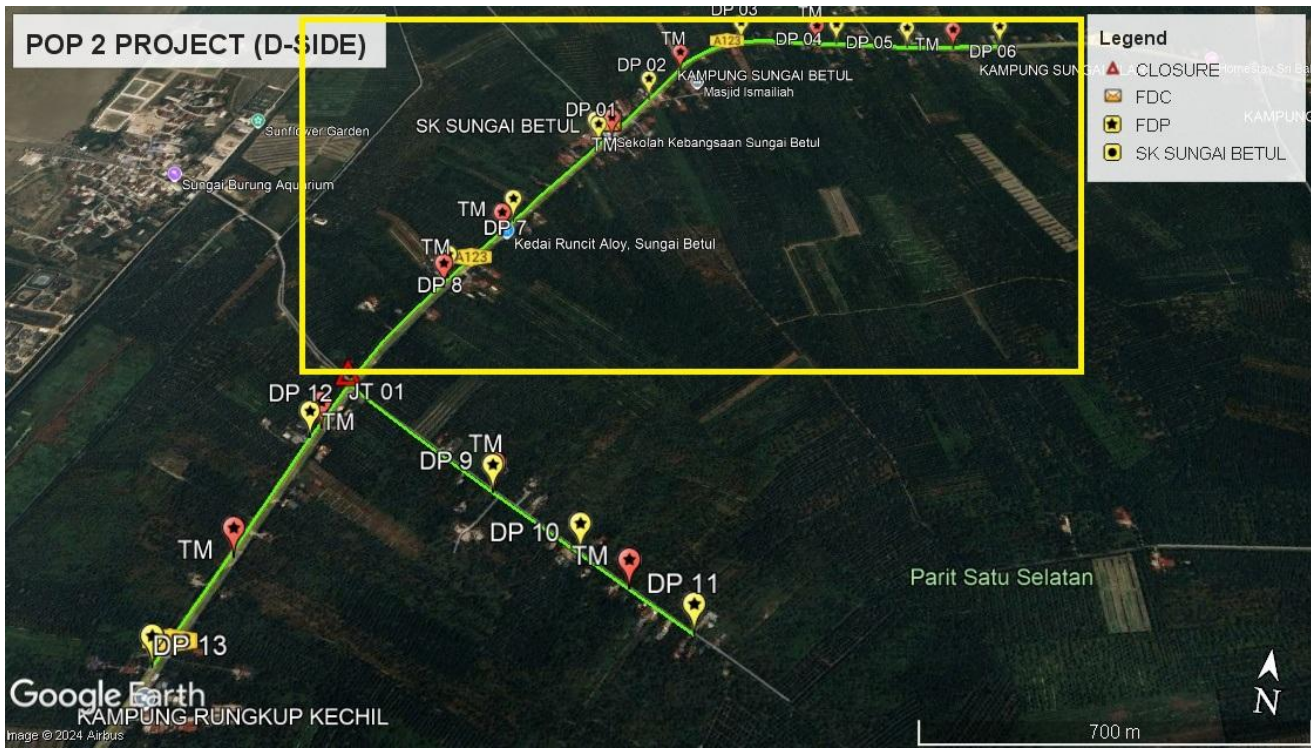
Site Plan – KMZ Routing (All site area)

Route 1

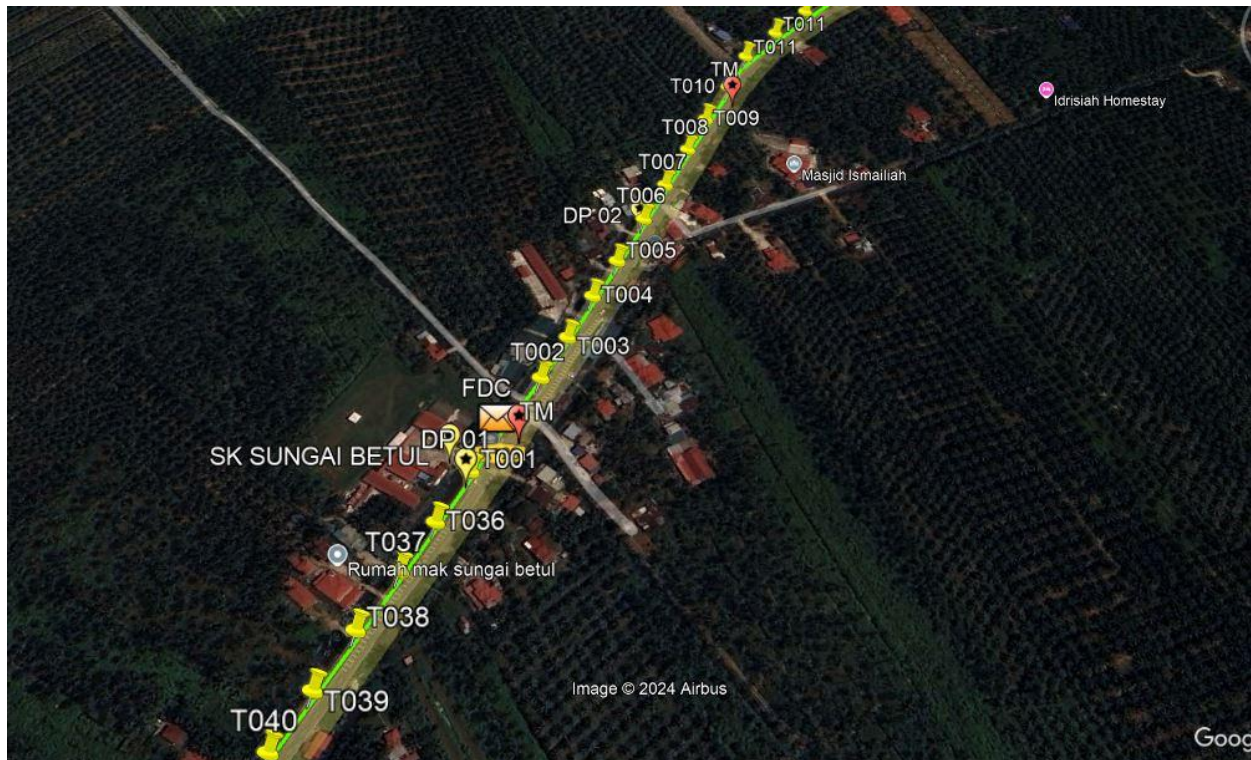


Route 1.1

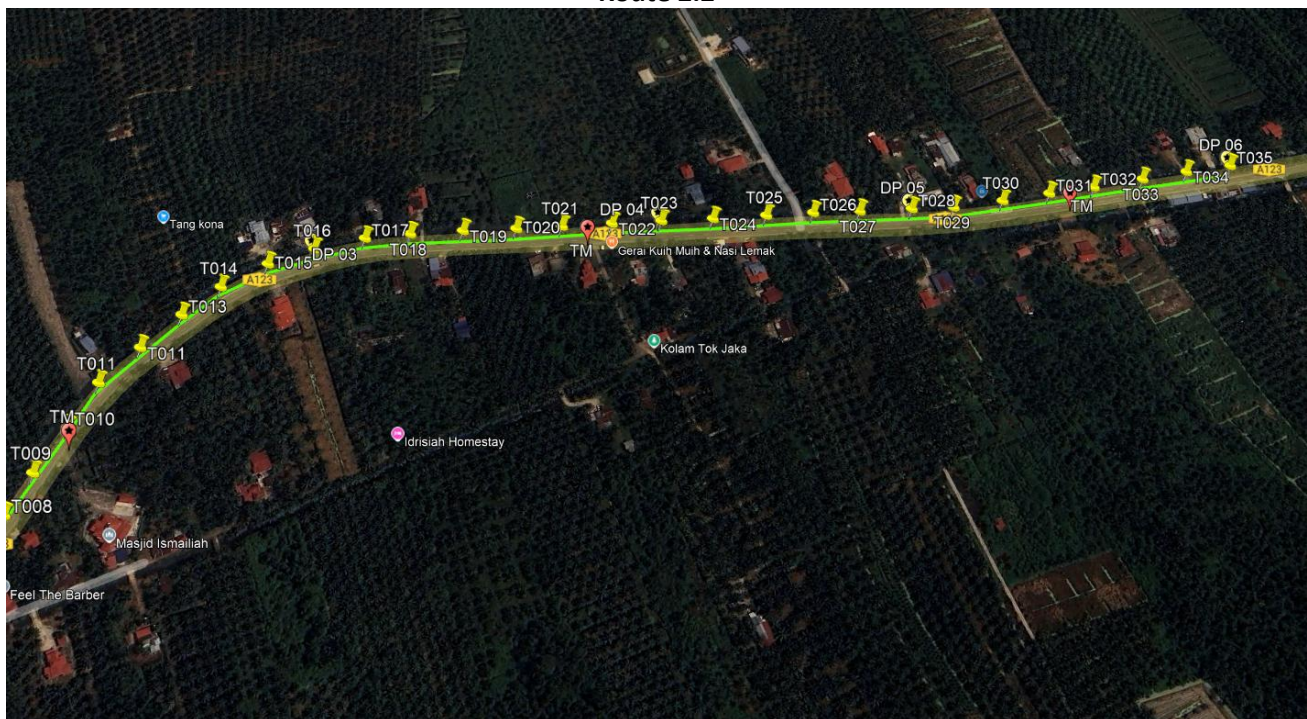
**Route 2**



**Route 2.1**



**Route 2.2**



**Route 2.3**

### 3.0 PROPOSED NEW POLE

Proposed New Pole Coordinate					
No.	Pole Number	Distance (m)	Latitude	Longitude	Local Authority
1	T001	40	3.97875	100.7163117	JKR Hilir Perak
2	T002	40	3.979402	100.7166684	JKR Hilir Perak
3	T003	40	3.979702	100.7168152	JKR Hilir Perak
4	T004	40	3.980025	100.7169574	JKR Hilir Perak
5	T005	40	3.980319	100.7171042	JKR Hilir Perak
6	T006	40	3.980683	100.7172739	JKR Hilir Perak
7	T007	40	3.980993	100.717415	JKR Hilir Perak
8	T008	40	3.981343	100.717572	JKR Hilir Perak
9	T009	40	3.981638	100.7177024	JKR Hilir Perak
10	T010	40	3.981963	100.7178714	JKR Hilir Perak
11	T011	40	3.982301	100.7180142	JKR Hilir Perak
12	T012	40	3.982577	100.7182485	JKR Hilir Perak
13	T013	40	3.982839	100.7184913	JKR Hilir Perak
14	T014	40	3.983062	100.7187367	JKR Hilir Perak
15	T015	40	3.983247	100.7190495	JKR Hilir Perak
16	T016	40	3.983374	100.7193674	JKR Hilir Perak
17	T017	40	3.983466	100.7197244	JKR Hilir Perak
18	T018	40	3.983506	100.7200486	JKR Hilir Perak
19	T019	40	3.983537	100.7204312	JKR Hilir Perak
20	T020	40	3.983564	100.7208178	JKR Hilir Perak
21	T021	40	3.98358	100.721152	JKR Hilir Perak
22	T022	40	3.983605	100.7215182	JKR Hilir Perak
23	T023	40	3.983633	100.7218799	JKR Hilir Perak
24	T024	40	3.98365	100.7222608	JKR Hilir Perak
25	T025	40	3.983675	100.7226534	JKR Hilir Perak
26	T026	40	3.983697	100.7229997	JKR Hilir Perak

### 3.0 PROPOSED NEW POLE

Proposed New Pole Coordinate					
No.	Pole Number	Distance (m)	Latitude	Longitude	Local Authority
27	T027	40	3.983715	100.7233451	JKR Hilir Perak
28	T028	40	3.983739	100.723732	JKR Hilir Perak
29	T029	40	3.983756	100.7240431	JKR Hilir Perak
30	T030	40	3.983811	100.7244119	JKR Hilir Perak
31	T031	40	3.983876	100.724766	JKR Hilir Perak
32	T032	40	3.983932	100.7251036	JKR Hilir Perak
33	T033	40	3.983995	100.7254734	JKR Hilir Perak
34	T034	40	3.984066	100.7258154	JKR Hilir Perak
35	T035	40	3.984131	100.7261611	JKR Hilir Perak
36	T036	40	3.978423	100.7161537	JKR Hilir Perak
37	T037	40	3.97812	100.7159968	JKR Hilir Perak
38	T038	40	3.977786	100.7158178	JKR Hilir Perak
39	T039	40	3.977465	100.7156542	JKR Hilir Perak
40	T040	40	3.977153	100.7154946	JKR Hilir Perak
41	T041	40	3.976825	100.7153239	JKR Hilir Perak
42	T042	40	3.97653	100.7151754	JKR Hilir Perak
43	T043	40	3.976199	100.7150091	JKR Hilir Perak
44	T044	40	3.97586	100.7148364	JKR Hilir Perak
45	T045	40	3.975571	100.7146859	JKR Hilir Perak
46	T046	40	3.975244	100.7145156	JKR Hilir Perak
47	T047	40	3.974905	100.7143396	JKR Hilir Perak
48	T048	40	3.974618	100.7141833	JKR Hilir Perak
49	T049	40	3.974305	100.7140207	JKR Hilir Perak
50	T050	40	3.973937	100.7138356	JKR Hilir Perak
51	T051	40	3.97365	100.7137062	JKR Hilir Perak
52	T052	40	3.973314	100.7135312	JKR Hilir Perak
53	T053	40	3.972971	100.7133733	JKR Hilir Perak

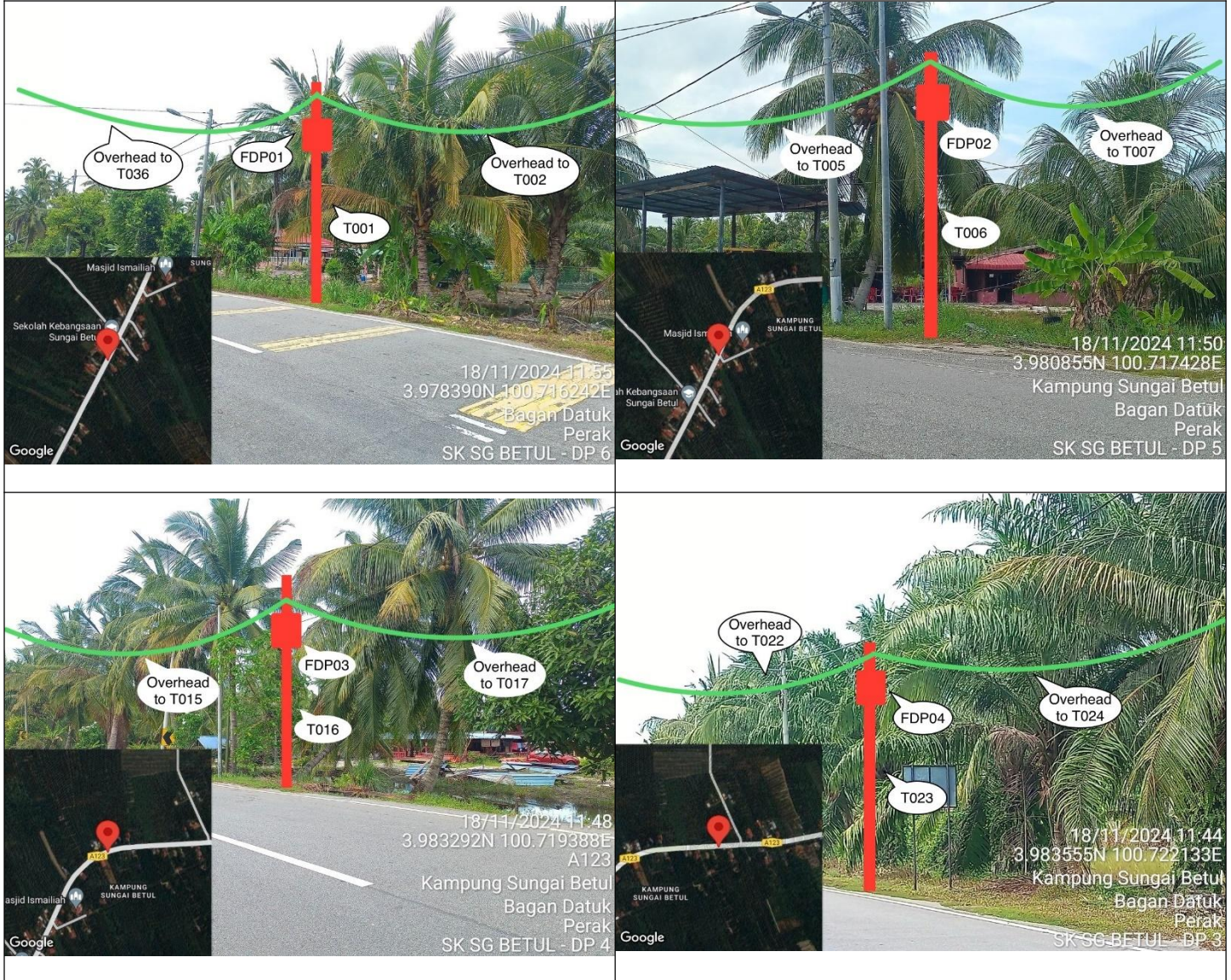
### 3.0 PROPOSED NEW POLE

Proposed New Pole Coordinate					
No.	Pole Number	Distance (m)	Latitude	Longitude	Local Authority
54	T054	40	3.972644	100.7132285	JKR Hilir Perak
55	T055	40	3.972347	100.7131021	JKR Hilir Perak
56	T056	40	3.972016	100.7129643	JKR Hilir Perak
57	T057	40	3.971685	100.7128566	JKR Hilir Perak
58	T058	40	3.971348	100.7127349	JKR Hilir Perak
59	T059	40	3.971034	100.7126337	JKR Hilir Perak
60	T060	40	3.970777	100.7125673	JKR Hilir Perak
61	T061	40	3.970734	100.7127037	JKR Hilir Perak
62	T062	40	3.970538	100.7129512	Majlis Perbandaran Teluk Intan
63	T063	40	3.970352	100.7132147	Majlis Perbandaran Teluk Intan
64	T064	40	3.970191	100.713487	Majlis Perbandaran Teluk Intan
65	T065	40	3.969974	100.7138202	Majlis Perbandaran Teluk Intan
66	T066	40	3.969759	100.7141478	Majlis Perbandaran Teluk Intan
67	T067	40	3.969555	100.7144693	Majlis Perbandaran Teluk Intan
68	T068	40	3.969367	100.7147687	Majlis Perbandaran Teluk Intan
69	T069	40	3.969185	100.7150802	Majlis Perbandaran Teluk Intan
70	T070	40	3.969014	100.7153682	Majlis Perbandaran Teluk Intan
71	T071	40	3.968812	100.7156944	Majlis Perbandaran Teluk Intan
72	T072	40	3.968617	100.71602	Majlis Perbandaran Teluk Intan
73	T073	40	3.968446	100.7163086	Majlis Perbandaran Teluk Intan
74	T074	40	3.968277	100.7166007	Majlis Perbandaran Teluk Intan
75	T075	40	3.968088	100.7169185	Majlis Perbandaran Teluk Intan
76	T076	40	3.967895	100.7172407	Majlis Perbandaran Teluk Intan
77	T077	40	3.967721	100.7175502	Majlis Perbandaran Teluk Intan
78	T078	40	3.967552	100.7178563	Majlis Perbandaran Teluk Intan
79	T079	40	3.967358	100.7181869	Majlis Perbandaran Teluk Intan
80	T080	40	3.967169	100.718496	Majlis Perbandaran Teluk Intan

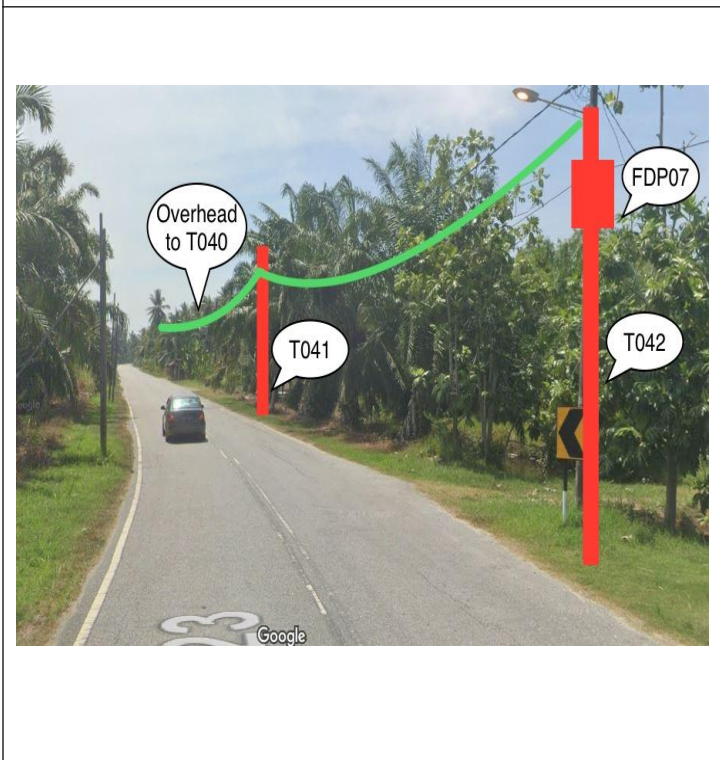
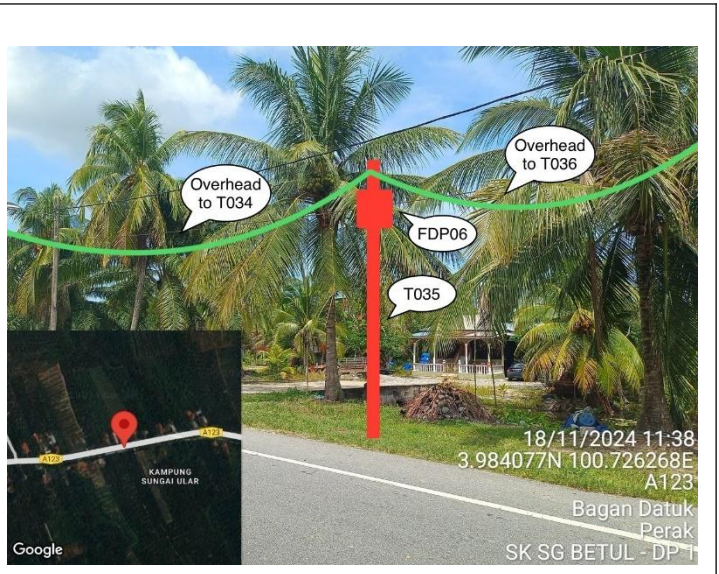
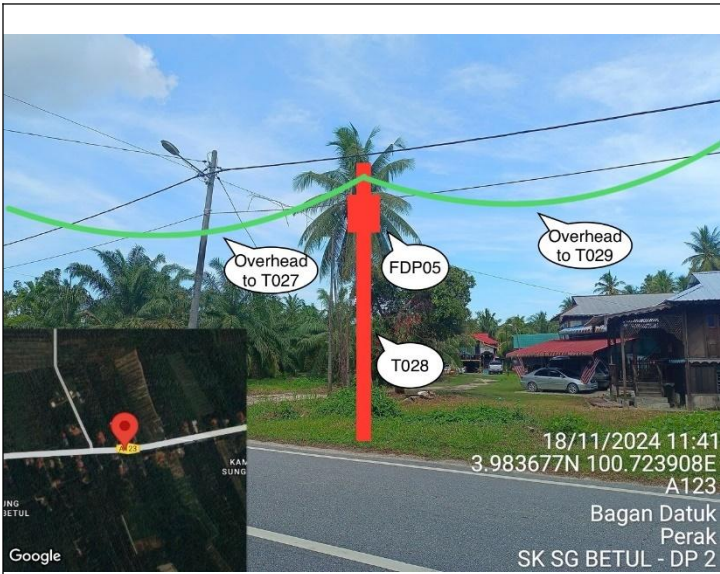
### 3.0 PROPOSED NEW POLE

Proposed New Pole Coordinate					
No.	Pole Number	Distance (m)	Latitude	Longitude	Local Authority
81	T081	40	3.966967	100.7188339	Majlis Perbandaran Teluk Intan
82	T082	40	3.966798	100.7190911	Majlis Perbandaran Teluk Intan
83	T083	40	3.966595	100.7194394	Majlis Perbandaran Teluk Intan
84	T084	40	3.966416	100.7197476	Majlis Perbandaran Teluk Intan
85	T085	40	3.966268	100.7200453	Majlis Perbandaran Teluk Intan
86	T086	40	3.970451	100.7124892	JKR Hilir Perak
87	T087	40	3.970088	100.7124023	JKR Hilir Perak
88	T088	40	3.969724	100.7123131	JKR Hilir Perak
89	T089	40	3.9694	100.712236	JKR Hilir Perak
90	T090	40	3.969088	100.7121589	JKR Hilir Perak
91	T091	40	3.968739	100.7120942	JKR Hilir Perak
92	T092	40	3.968393	100.7120265	JKR Hilir Perak
93	T093	40	3.968013	100.7119353	JKR Hilir Perak
94	T094	40	3.967678	100.7118585	JKR Hilir Perak
95	T095	40	3.967316	100.7117797	JKR Hilir Perak
96	T096	40	3.966964	100.711711	JKR Hilir Perak
97	T097	40	3.966627	100.7116382	JKR Hilir Perak
98	T098	40	3.966303	100.7115618	JKR Hilir Perak
99	T099	40	3.965913	100.711481	JKR Hilir Perak
100	T100	40	3.965577	100.7114076	JKR Hilir Perak
101	T101	40	3.96526	100.7113311	JKR Hilir Perak
102	T102	40	3.964883	100.711249	JKR Hilir Perak
103	T103	40	3.964511	100.7111601	JKR Hilir Perak

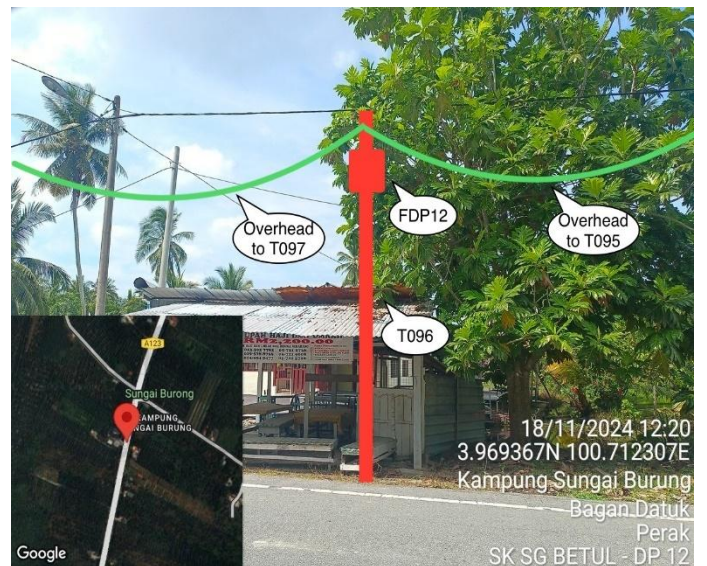
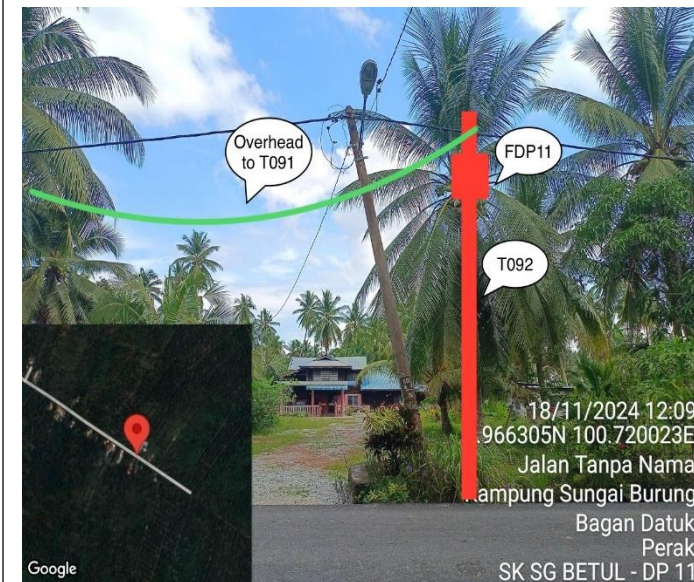
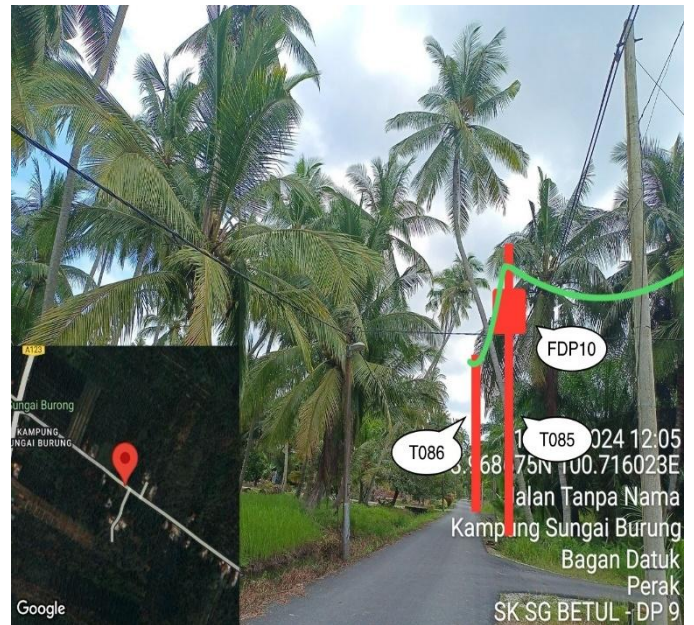
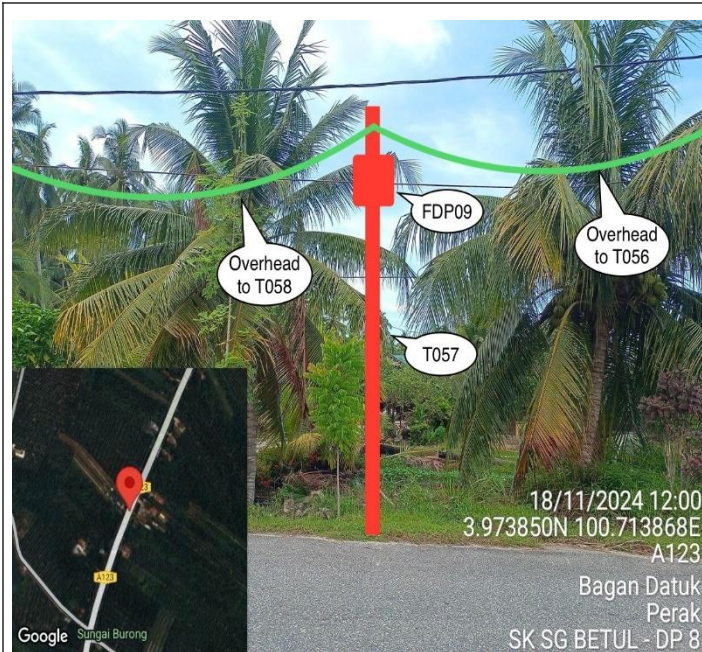
**4.0 SITE PHOTOS - PROPOSED NEW POLE**



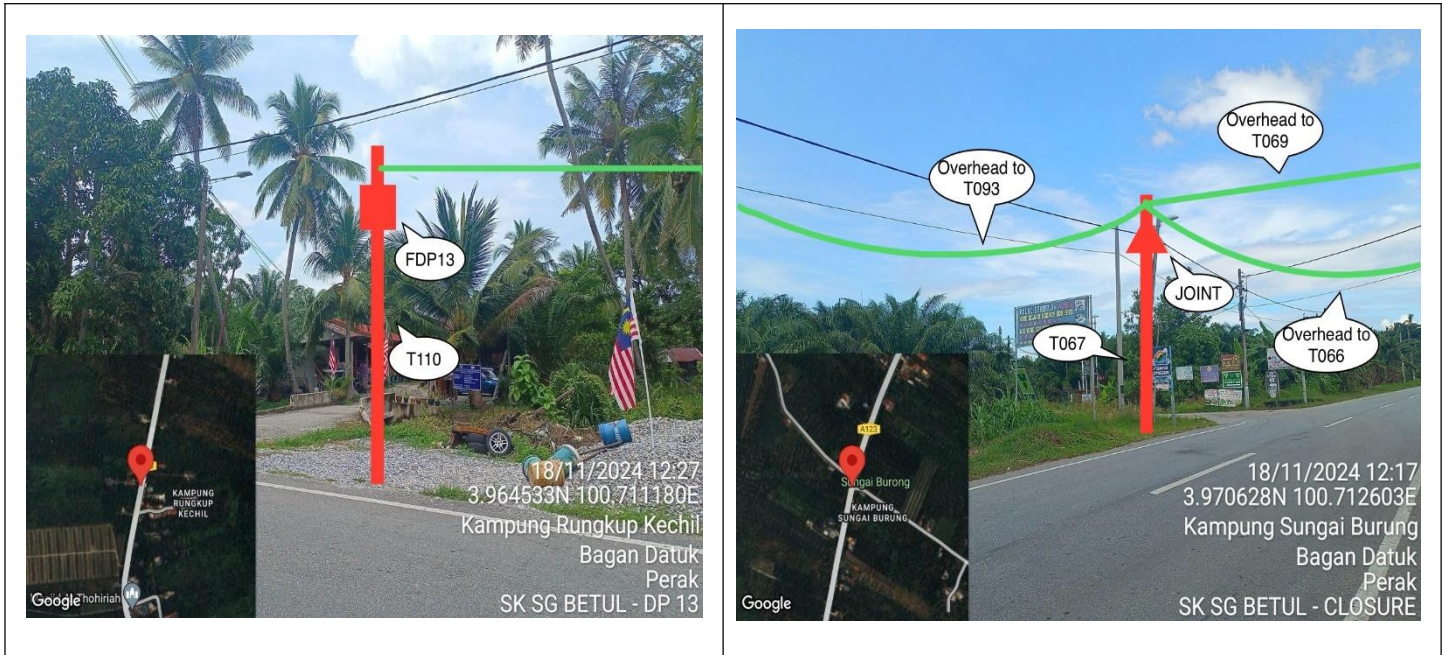
**4.0 SITE PHOTOS - PROPOSED NEW POLE**



**4.0 SITE PHOTOS - PROPOSED NEW POLE**



#### 4.0 SITE PHOTOS - PROPOSED NEW POLE



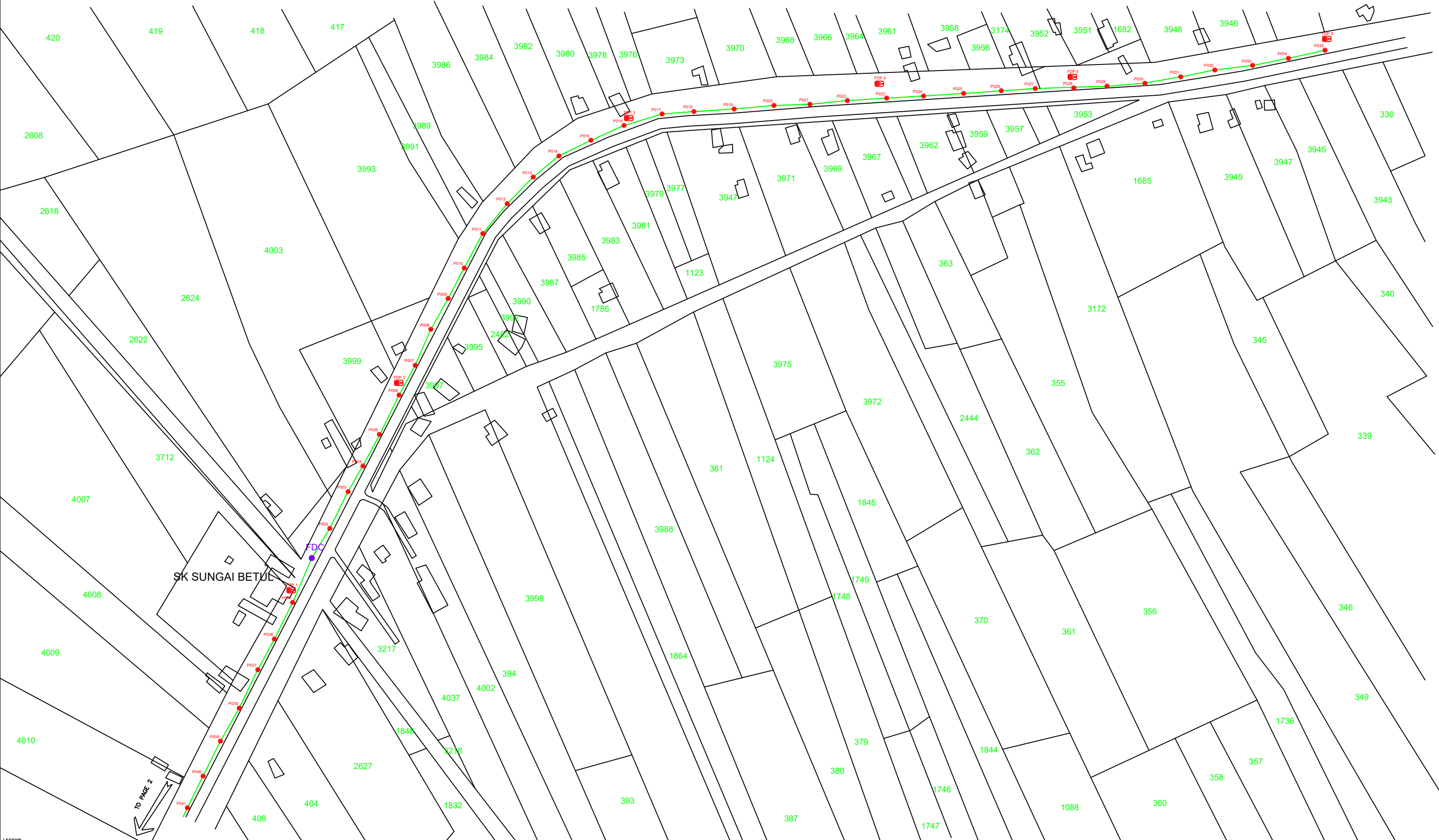


PROJEK PENYEDIAAN DAN PENYELENGGARAAN POINT OF PRESENCE (POP) FASA 2: HAB INFRASTRUKTUR GENTIAN OPTIK BERHAMPIRAN DENGAN SEKOLAH, KAWASAN PERINDUSTRIAN, PREMIS KERAJAAN DAN KOMUNITI SEKITARNYA OLEH KEMENTERIAN KOMUNIKASI MALAYSIA – ZON UTARA (KKMM.400-11/17/132(1))






### 5.0 3<sup>rd</sup> PARTIES DEPENDENCIES

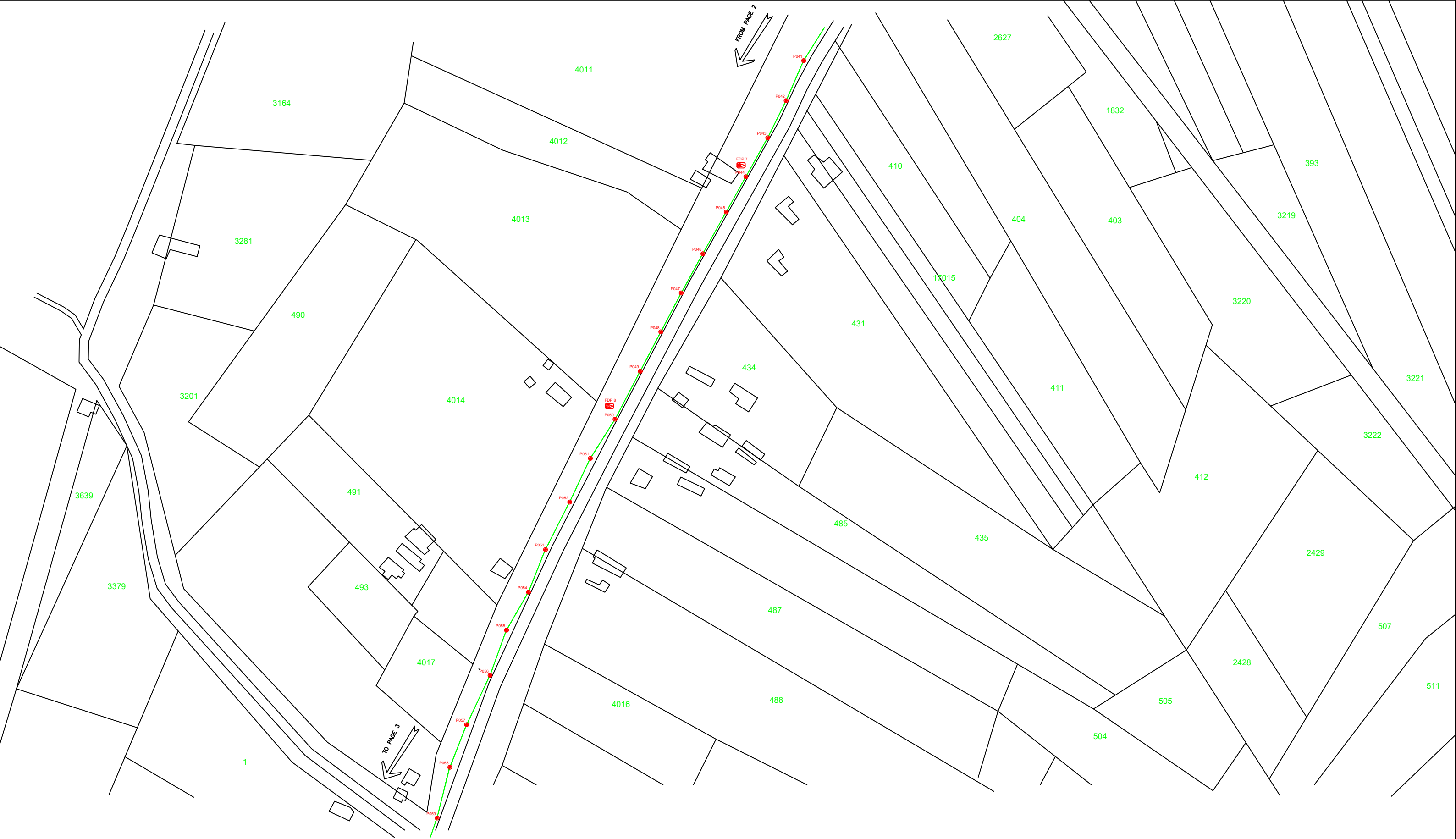
NO	LOCAL COUNCIL / AUTHORITY	REMARK
1	Majlis Perbandaran Teluk Intan	965M
2	JKR Hilir Perak	3,078M



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

			<p>KNZ ENGINEERING SDN BHD          NO. 60 &amp; 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>
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PROJECT TITLE <b>SEKOLAH KEBANGSAAN SUNGAI BETUL</b>	DRAWING TITLE <b>TP DRAWING POP 2 AT SEKOLAH KEBANGSAAN SUNGAI BETUL</b>	DESIGN BY <b>NABIL</b>	DATE <b>21/11/2024</b>
PROJECT PHASE <b>PROJECT PHASE 2</b>	DRAWING NUMBER <b>ABAB003</b>	DRAWN BY <b>NABIL</b>	SCALE <b>NOT TO SCALE</b>
		CHECKED BY <b>AZHAN HARIS</b>	JOB NUMBER <b>ABAB003</b>
		<b>1/4</b>	
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LEGEND		NEW MANHOLE		TENSION SMALL / TENSION BIG		MH NO.	
12C FOC	Installed 1:4 splitter in FDC	○	NEW MANHOLE	TS / TB	TENSION SMALL / TENSION BIG	MH1	MH NO.
24C FOC	FDP	○	HOUSE NUMBER	□	EXISTING MANHOLE	TKS-1	EXISTING TNB POLE NO.
48C FOC	CLOSURE	○	EXISTING ALLO POLE	□	CLOSURE NO.	P001	NEW POLE NO.
90C FOC	NEW MANHOLE (PT)	○	LOOP	□	FDP NO.	①	SEE SHEET XXX
144C FOC	INSTALLED POLE	○	FDP BOUNDARY	□	FDC NO.	②	SEE SHEET XXX

KEY PLAN

PROJECT OWNER



MAIN CONTRACTOR




SUB-CONTRACTOR



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

PROJECT TITLE

SEKOLAH KEBANGSAAN SUNGAI BETUL

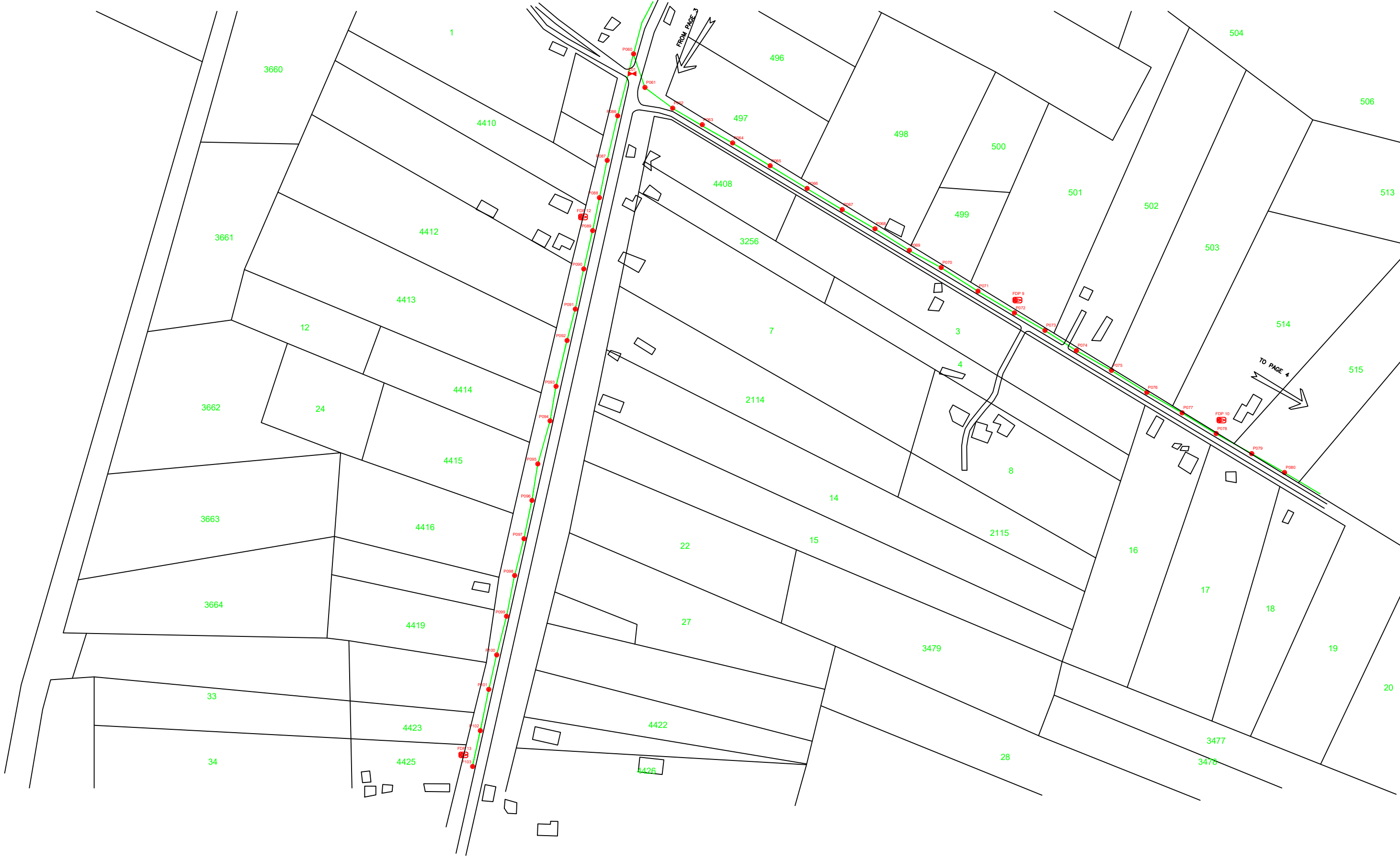
DRAWING TITLE

TP DRAWING POP 2 AT SEKOLAH KEBANGSAAN SUNGAI BETUL

PROJECT PHASE

PROJECT PHASE 2

DESIGN BY	NABIL	DATE	21/11/2024
DRAWN BY	NABIL	SCALE	NOT TO SCALE
CHECKED BY	AZHAN HARIS	JOB NUMBER	ABAB003
DRAWING NUMBER		ABAB003	
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		A3	



LEGEND		NEW MANHOLE		EXISTING MANHOLE		MH NO.	
12C FOC	Installed 1:4 splitter in FDC	CG7	NEW MANHOLE	TKS-1	EXISTING MANHOLE	MH1	MH NO.
24C FDC	FDP	#	HOUSE NUMBER	TKS-1	EXISTING TNB POLE NO.	TKS-1	EXISTING TNB POLE NO.
48C FDC	CLOSURE	SB	EXISTING ALLO POLE	CP1	CLOSURE NO.	P001	NEW POLE NO.
90C FOC	NEW MANHOLE (PT)	SS	LOOP	FDP1	FDP NO.	SEE PLAN SHEET	
144C FOC	INSTALLED POLE	SS	FDC	FDC	FDC NO.	SEE SHEET XXX	

KEY PLAN

PROJECT OWNER



MAIN CONTRACTOR




SUB-CONTRACTOR



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

PROJECT TITLE

SEKOLAH KEBANGSAAN SUNGAI BETUL

DRAWING TITLE

TP DRAWING POP 2 AT SEKOLAH KEBANGSAAN SUNGAI BETUL

PROJECT PHASE

PROJECT PHASE 2

DESIGN BY

NABIL

DATE

21/11/2024

DRAWN BY

NABIL

SCALE

NOT TO SCALE

CHECKED BY

AZHAN HARIS

JOB NUMBER

ABAB003

DRAWING NUMBER

ABAB003

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3/4

A3



LEGEND		MAIN CONTRACTOR		SUB-CONTRACTOR	
	12C FOC		INSTALLED POLE (9M)		NEW MANHOLE
	24C FOC		INSTALLED RISER		EXISTING MANHOLE
	48C FOC		CLOSURE		EXISTING ALLO POLE
	90C FOC		NEW MANHOLE (PT)		LOOP
	144C FOC		INSTALLED POLE		FDP BOUNDARY
			INSTALLED 1:4 splitter in FDC		TENSION SMALL / TENSION BIG
			FDP		MH1 MH NO.
			CLOSURE		TKS-1 EXISTING TNB POLE NO.
			NEW MANHOLE (PT)		CP1 CLOSURE NO.
			INSTALLED POLE		FDP1 FDP NO.
			FDC		FDC FDC NO.
					P001 NEW POLE NO.
					SEE A3 TO B3/3000
					SEE SHEET K03

KEY PLAN

PROJECT OWNER



KEPENTERIAN KOMUNIKASI DAN DIGITAL

MAIN CONTRACTOR




SUB-CONTRACTOR



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

PROJECT TITLE

SEKOLAH KEBANGSAAN SUNGAI BETUL

DRAWING TITLE

TP DRAWING POP 2 AT SEKOLAH KEBANGSAAN SUNGAI BETUL

PROJECT PHASE

PROJECT PHASE 2

DESIGN BY	NABIL	DATE	21/11/2024
DRAWN BY	NABIL	SCALE	NOT TO SCALE
CHECKED BY	AZHAN HARIS	JOB NUMBER	ABAB003
DRAWING NUMBER		ABAB003	
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		A3	