

TECHNICAL PROPOSAL

POP2 AEA7003 SEKOLAH MENENGAH KEBANGSAAN SULTAN AZLAN SHAH (D-SIDE)

Company Name : WabTech Sdn Bhd
Company Address : 101-1, Jalan Metro Sendayan, 71950, Seremban, Negeri Sembilan.
Prepared By : Mohd Farid bin Othman
Date : 11/12/2024



Starting Point

Site / Boundary Name : Sekolah Menengah Kebangsaan Sultan Azlan Shah
 Address : Jalan Kampung Ngor, 33030 Lenggong, Perak.
 District : Lenggong
 Postcode : 33030
 State : Perak
 GPS Coordinate : 5.027207, 100.949285
 LRD : A

End Point

Site / Boundary Name : Kampung Raban, Lenggong
 Address : Jalan Bunga Kemboja, Kampung Raban, 33030 Lenggong, Perak.
 District : Lenggong
 Postcode : 33030
 State : Perak
 GPS Coordinate : 5.007623, 100.947045
 LRD : B



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



WABTECH SDN BHD
(1398887-X)

1.0 WORK SUMMARY

| NO | PROPOSED DISTANCE AND METHOD | UNIT | QUANTITY |
|-------|---------------------------------------|------|----------|
| 1 | Horizontal Directional Drilling (HDD) | m | 33 |
| 2 | Carriage Way Open Trench (CW) | m | 0 |
| 3 | Grass Verge Open Trenching (GV) | m | 0 |
| 4 | Micro Trenching (MT) | m | 0 |
| Total | | | |

| NO | OTHER INFORMATION | UNIT | QUANTITY |
|----|--|------|----------|
| 1 | Installation of Short Span ADSS Fibre Cables | m | 3945m |
| 2 | Install New Pole | ea | 110 |
| 3 | Install New JRC7 Manhole | ea | 2 |
| 4 | Install GI Riser 100mm | ea | 2 |
| 5 | Install Fiber Distribution Point and Closure (Splicing, Termination and Testing) | ea | 19 |
| 6 | Estimated Time Required for Completion | days | 30 |



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WABTECH SDN BHD
(1398887-X)

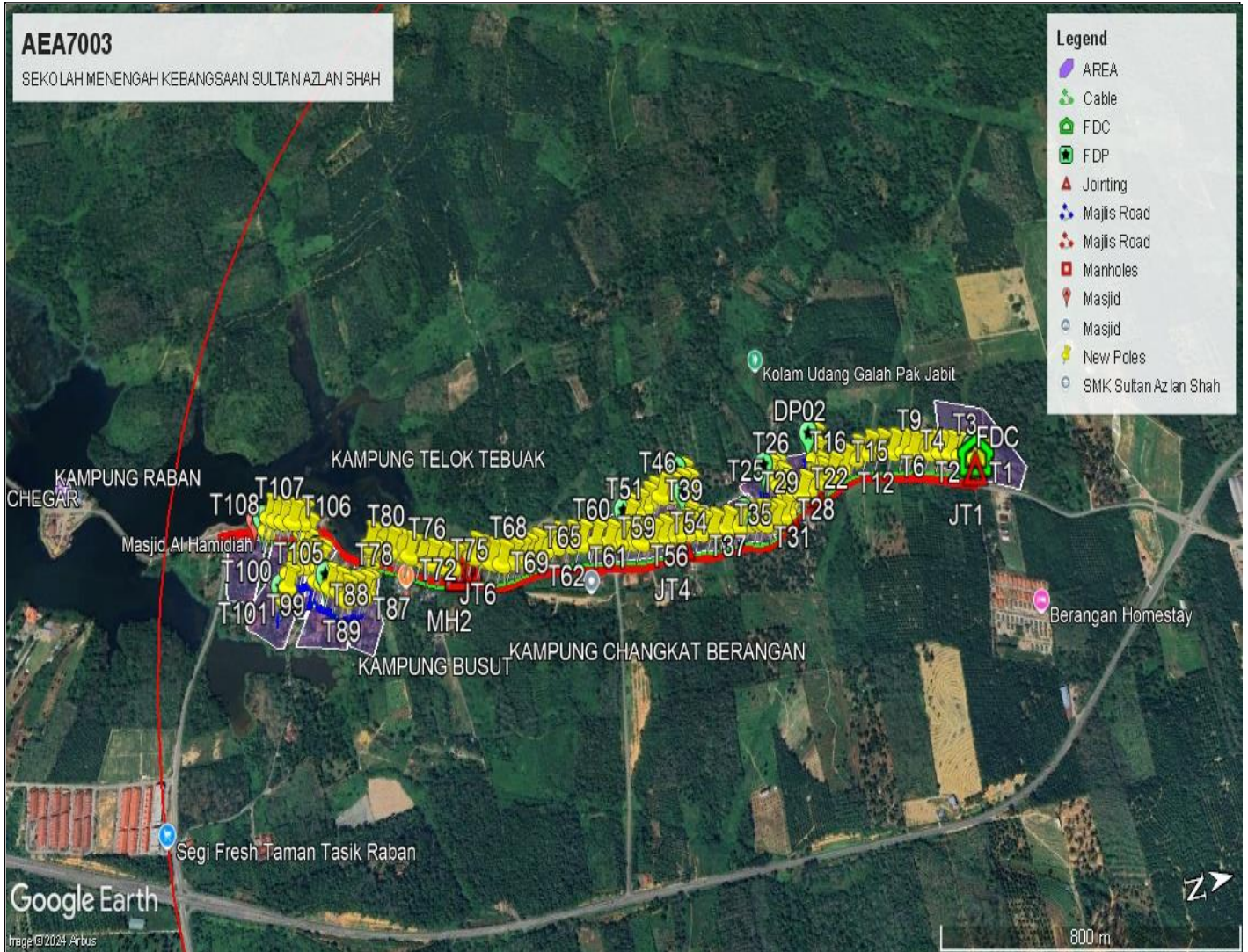
2.0 LOCAL AUTHORITY SUMMARY

Daerah Lenggong

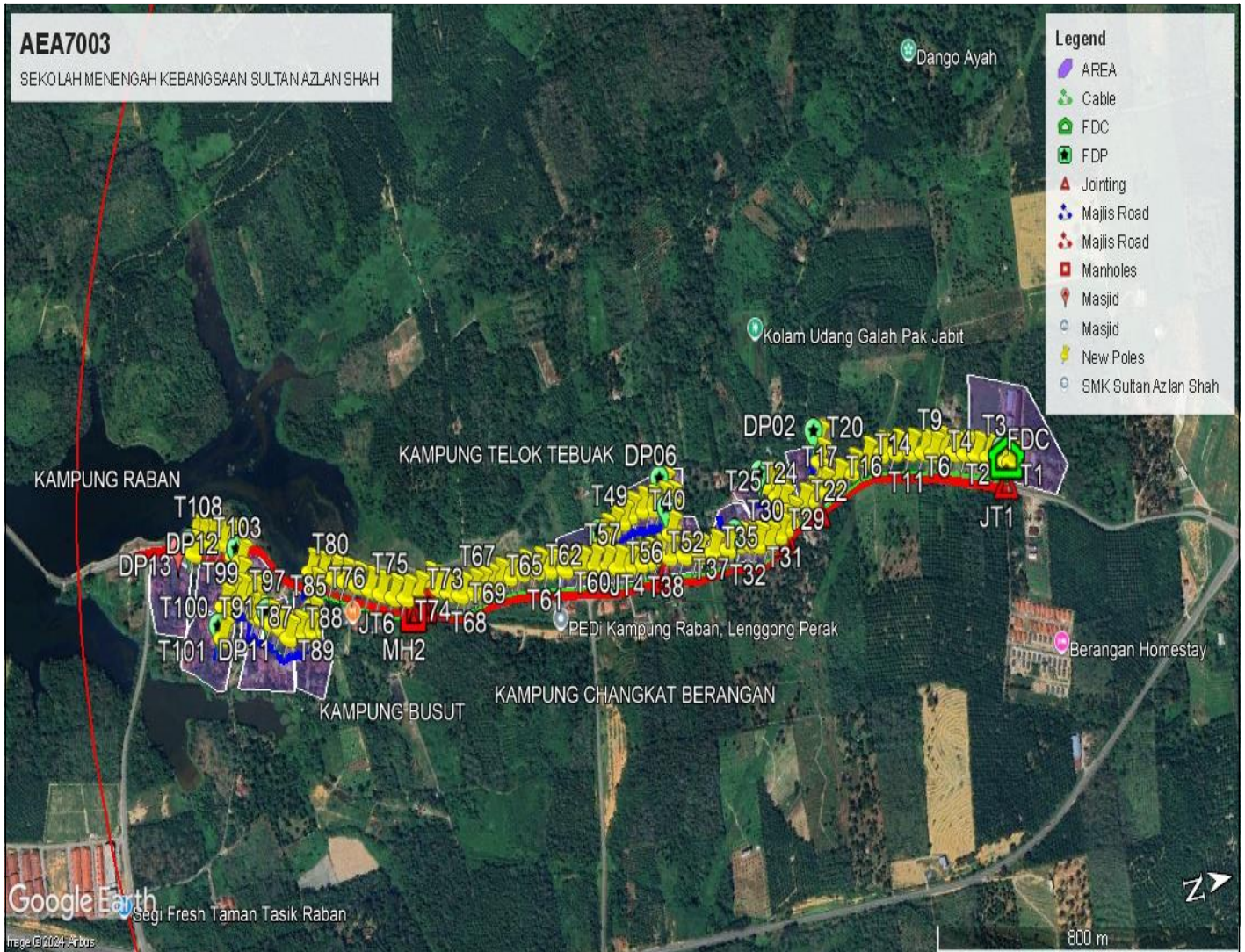
| NO | ITEMS | Owner | Quantity | Distance (m) |
|---------------------------|----------|--------|----------|--------------|
| 1 | HDD | JKR | 1 | 33 |
| | | Majlis | - | - |
| | | PDT | - | - |
| 2 | New Pole | JKR | 67 | 2058 |
| | | Majlis | 43 | 1197 |
| | | PDT | - | - |
| Total Distance (m) | | | | 3288 |

3.0 SITE PLAN (KMZ)

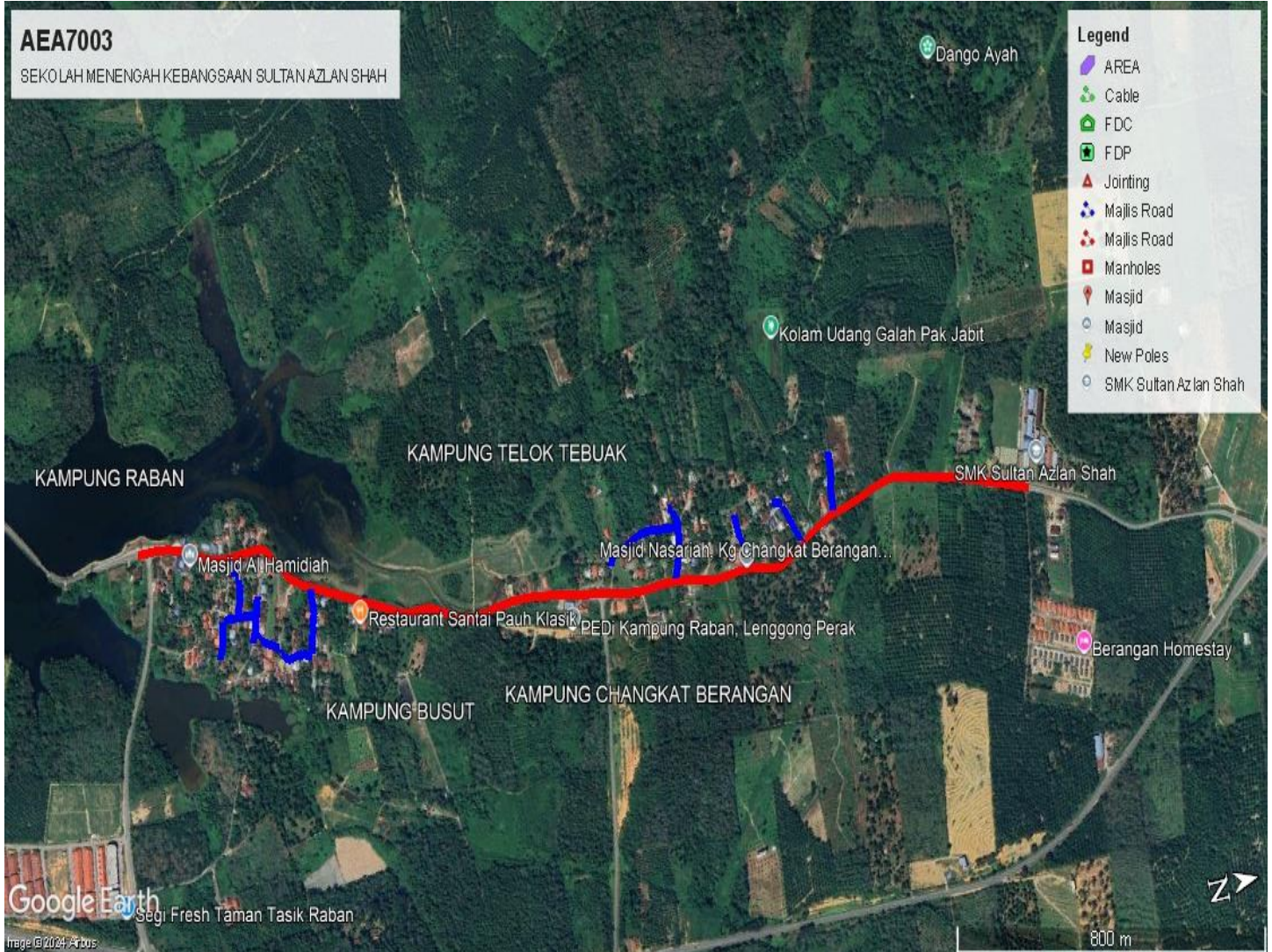
3.1 Overview Site Area



3.2 Site boundry



3.3 Road Boundry



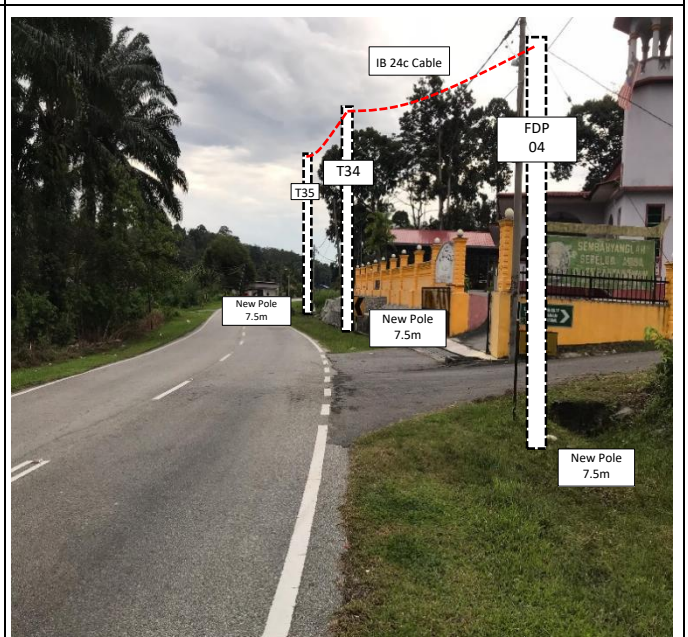
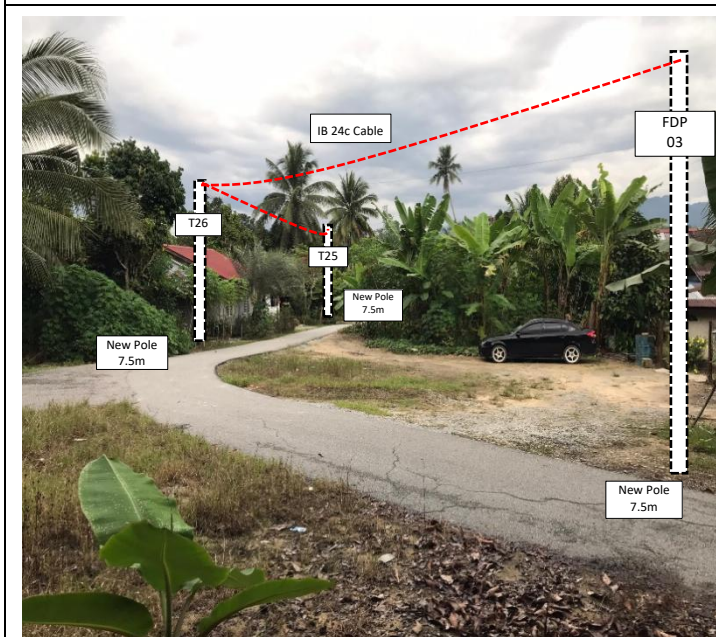
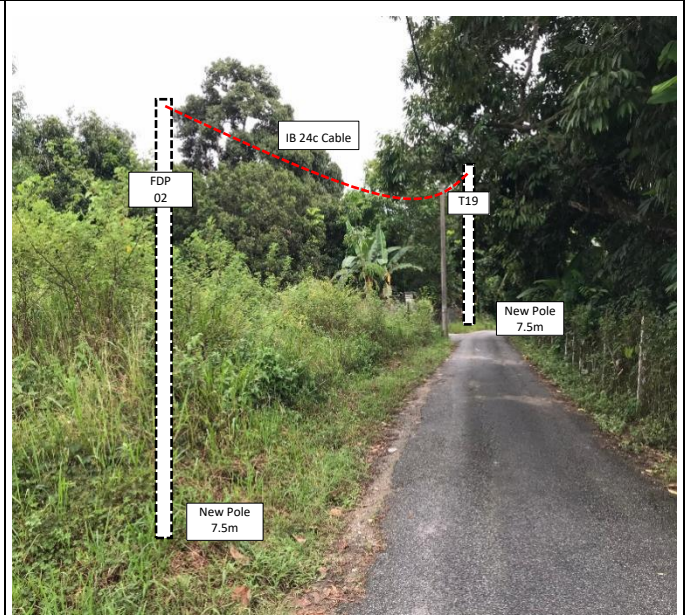
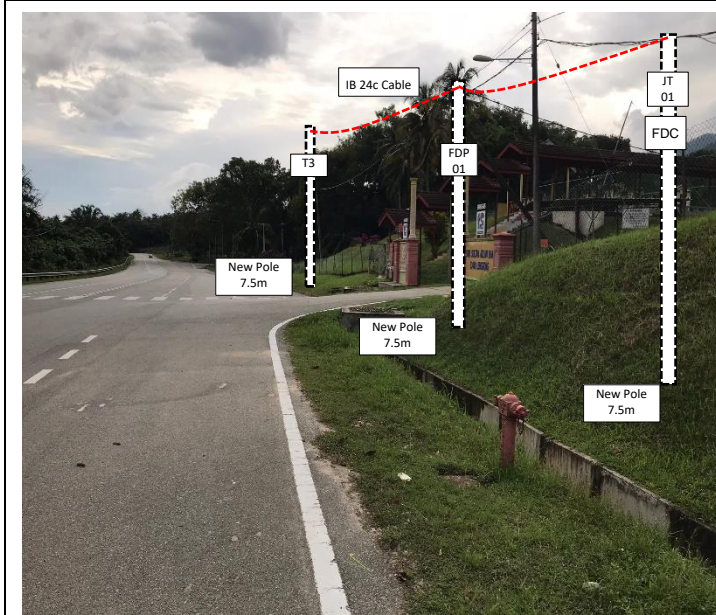
4.0 PROPOSED NEW POLE

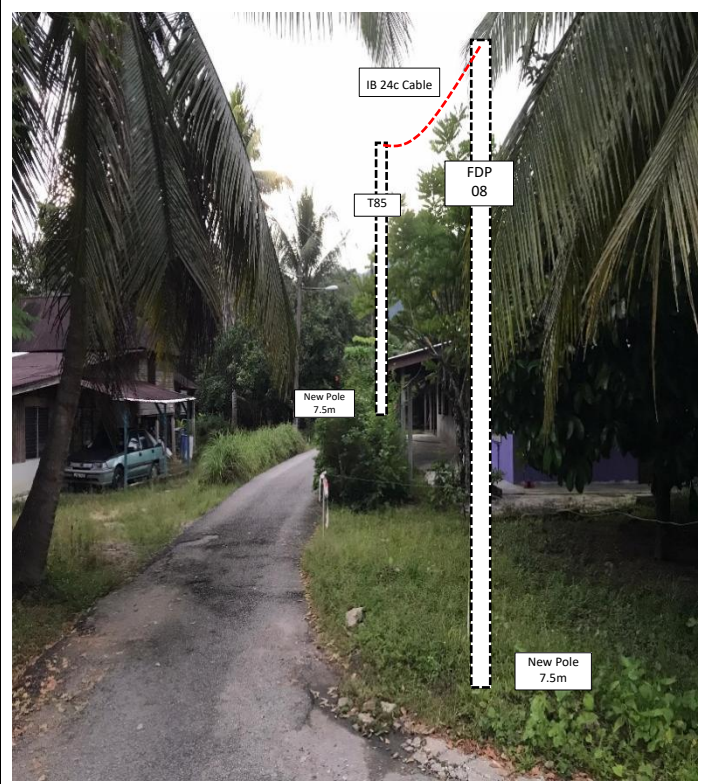
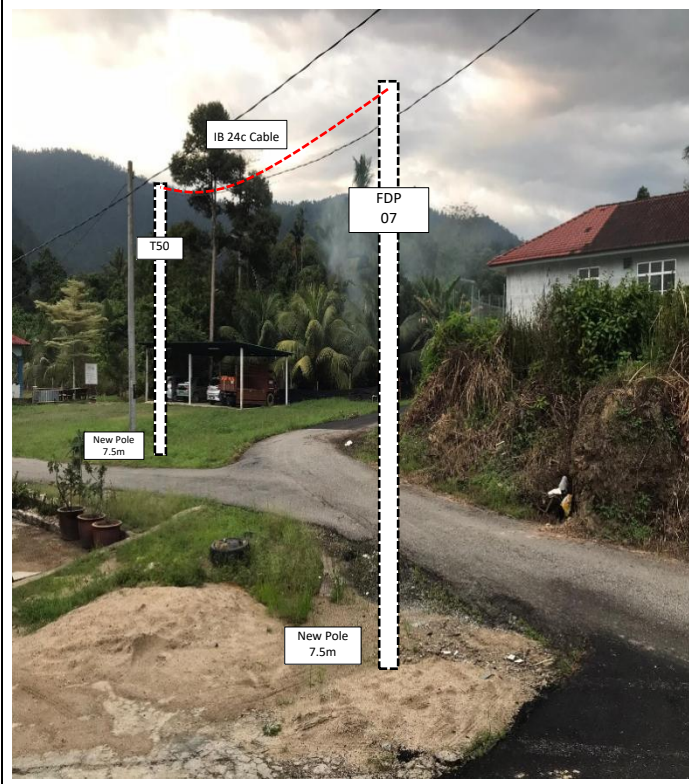
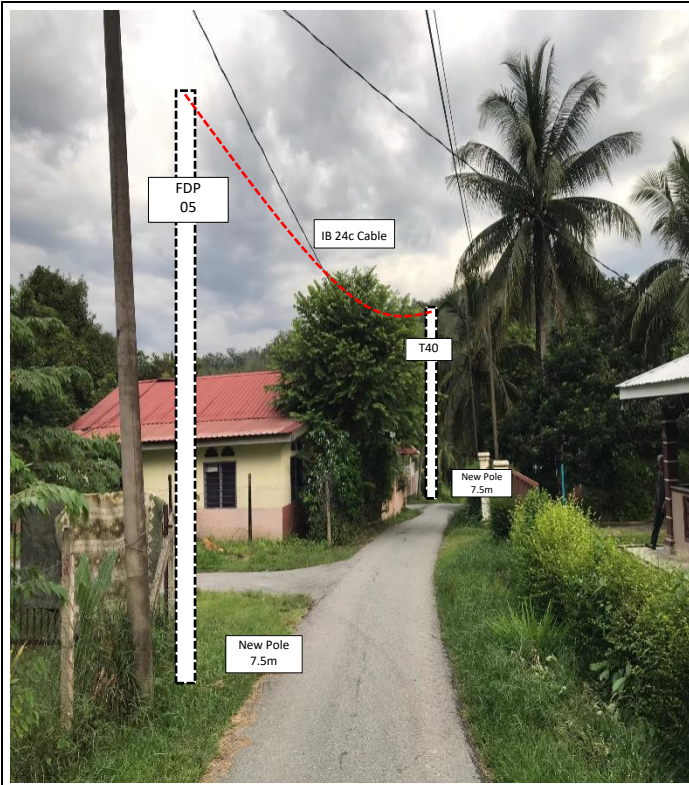
| Proposed New Pole Coordinate | | | | | |
|------------------------------|-------------|--------------|----------|------------|------------------------|
| No. | Pole Number | Distance (m) | Latitude | Longitude | Local Authority |
| 1 | FDC POLE | 10 | 5.027331 | 100.949327 | JKR |
| 2 | T001 | 15 | 5.027331 | 100.949327 | JKR |
| 3 | T002 | 22 | 5.027207 | 100.949285 | JKR |
| 4 | T003 | 26 | 5.027025 | 100.949207 | JKR |
| 5 | T004 | 31 | 5.026808 | 100.949125 | JKR |
| 6 | T005 | 30 | 5.026539 | 100.949036 | JKR |
| 7 | T006 | 33 | 5.026283 | 100.948962 | JKR |
| 8 | T007 | 32 | 5.025994 | 100.948884 | JKR |
| 9 | T008 | 23 | 5.025722 | 100.948781 | JKR |
| 10 | T009 | 27 | 5.025512 | 100.948801 | JKR |
| 11 | T010 | 36 | 5.025283 | 100.948733 | JKR |
| 12 | T011 | 41 | 5.024966 | 100.948666 | JKR |
| 13 | T012 | 38 | 5.024606 | 100.948599 | JKR |
| 14 | T013 | 42 | 5.024264 | 100.948561 | JKR |
| 15 | T014 | 46 | 5.023888 | 100.948598 | JKR |
| 16 | T015 | 43 | 5.023497 | 100.948727 | JKR |
| 17 | T016 | 41 | 5.023127 | 100.948851 | JKR |
| 18 | T017 | 18 | 5.022768 | 100.948925 | JKR |
| 19 | T018 | 41 | 5.022747 | 100.948764 | Majlis Daerah Lenggong |
| 20 | T019 | 37 | 5.022790 | 100.948400 | Majlis Daerah Lenggong |
| 21 | T020 | 38 | 5.022812 | 100.948072 | Majlis Daerah Lenggong |
| 22 | T021 | 27 | 5.022437 | 100.949025 | JKR |
| 23 | T022 | 40 | 5.022209 | 100.949110 | JKR |
| 24 | T023 | 33 | 5.021895 | 100.949282 | JKR |
| 25 | T024 | 24 | 5.021758 | 100.949013 | Majlis Daerah Lenggong |
| 26 | T025 | 31 | 5.021655 | 100.948824 | Majlis Daerah Lenggong |
| 27 | T026 | 19 | 5.021553 | 100.948565 | Majlis Daerah Lenggong |
| 28 | T027 | 22 | 5.021381 | 100.948547 | Majlis Daerah Lenggong |
| 29 | T028 | 22 | 5.021736 | 100.949404 | JKR |
| 30 | T029 | 33 | 5.021567 | 100.949503 | JKR |
| 31 | T030 | 29 | 5.021285 | 100.949605 | JKR |
| 32 | T031 | 17 | 5.021024 | 100.949567 | JKR |
| 33 | T032 | 33 | 5.020873 | 100.949532 | JKR |
| 34 | T033 | 32 | 5.020580 | 100.949469 | JKR |
| 35 | T034 | 40 | 5.020293 | 100.949498 | JKR |
| 36 | T035 | 41 | 5.019932 | 100.949498 | JKR |
| 37 | T036 | 36 | 5.019561 | 100.949466 | JKR |
| 38 | T037 | 40 | 5.019237 | 100.949416 | JKR |
| 39 | T038 | 22 | 5.018881 | 100.949353 | JKR |

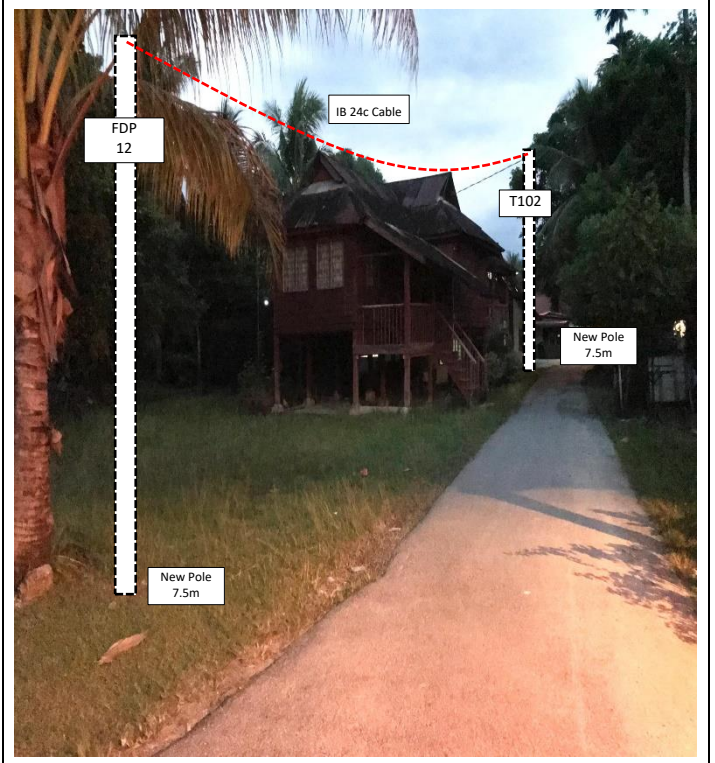
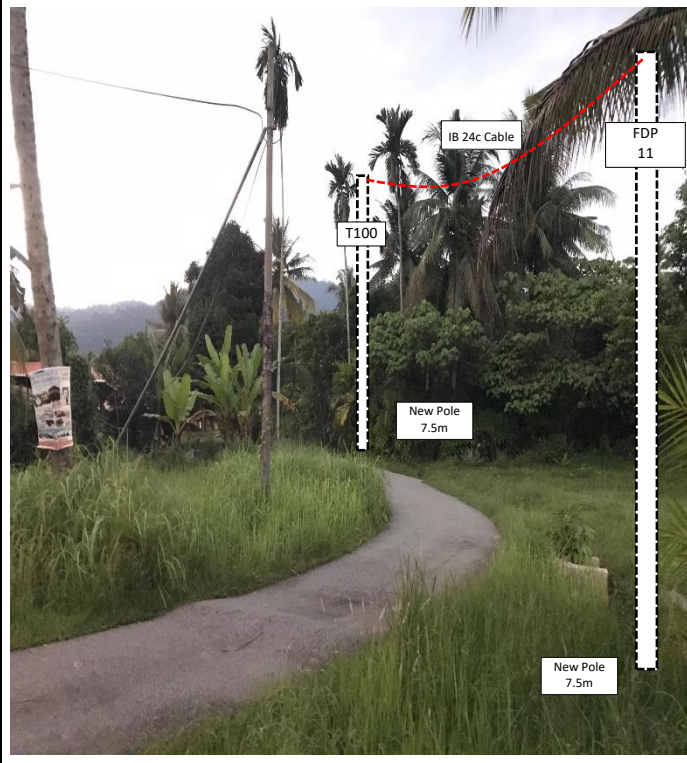
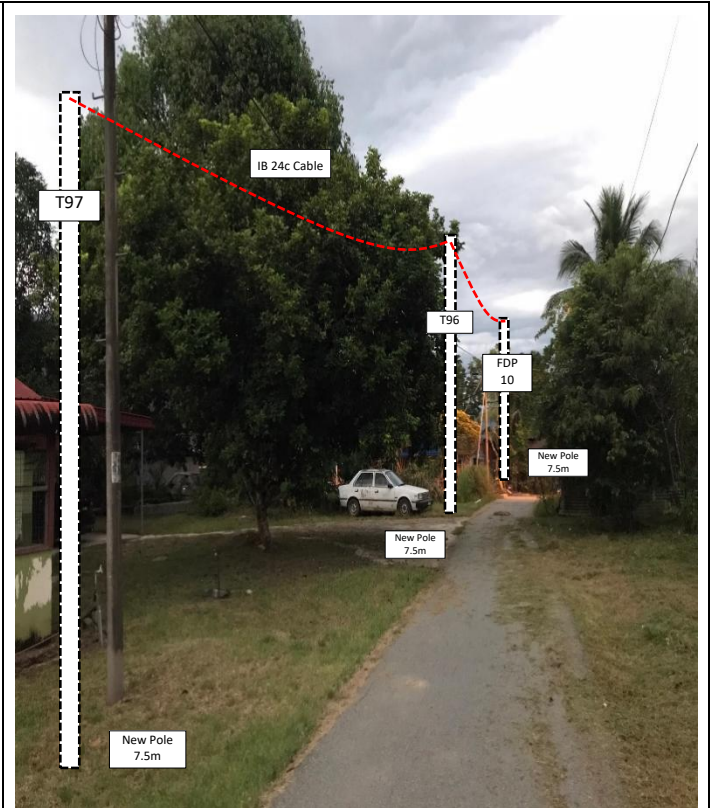
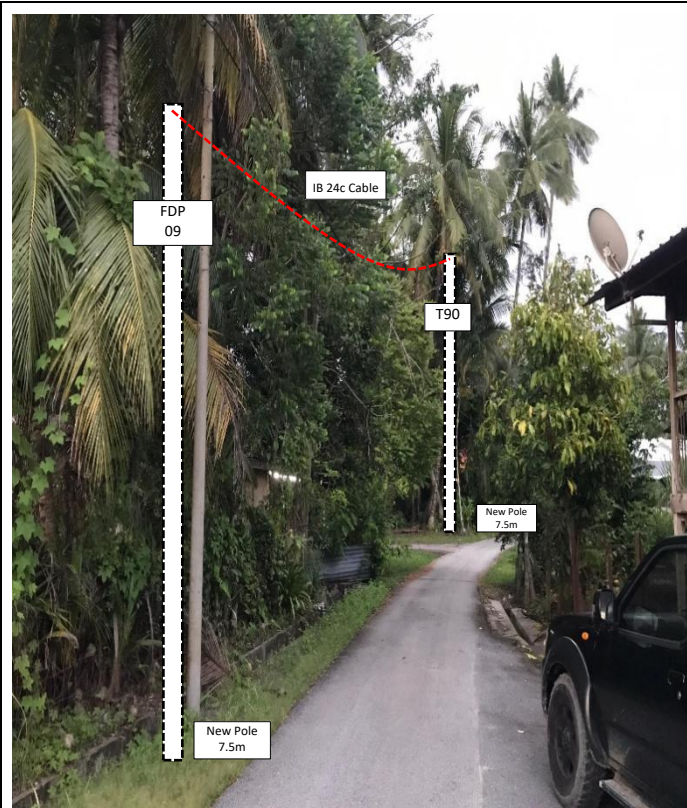
| No. | Pole Number | Distance (m) | Latitude | Longitude | Local Authority |
|-----|-------------|--------------|----------|------------|------------------------|
| 40 | T039 | 23 | 5.018939 | 100.949160 | Majlis Daerah Lenggong |
| 41 | T040 | 28 | 5.018996 | 100.948961 | Majlis Daerah Lenggong |
| 42 | T041 | 30 | 5.019042 | 100.948712 | Majlis Daerah Lenggong |
| 43 | T042 | 33 | 5.019090 | 100.948445 | Majlis Daerah Lenggong |
| 44 | T043 | 24 | 5.018981 | 100.948166 | Majlis Daerah Lenggong |
| 45 | T044 | 28 | 5.018874 | 100.948411 | Majlis Daerah Lenggong |
| 46 | T045 | 29 | 5.018622 | 100.948422 | Majlis Daerah Lenggong |
| 47 | T046 | 31 | 5.018358 | 100.948394 | Majlis Daerah Lenggong |
| 48 | T047 | 23 | 5.018083 | 100.948441 | Majlis Daerah Lenggong |
| 49 | T048 | 30 | 5.017890 | 100.948520 | Majlis Daerah Lenggong |
| 50 | T049 | 28 | 5.017640 | 100.948611 | Majlis Daerah Lenggong |
| 51 | T050 | 14 | 5.017403 | 100.948702 | Majlis Daerah Lenggong |
| 52 | T051 | 28 | 5.017342 | 100.948810 | Majlis Daerah Lenggong |
| 53 | T052 | 29 | 5.018631 | 100.949324 | JKR |
| 54 | T053 | 22 | 5.018364 | 100.949334 | JKR |
| 55 | T054 | 32 | 5.018164 | 100.949341 | JKR |
| 56 | T055 | 29 | 5.017877 | 100.949341 | JKR |
| 57 | T056 | 31 | 5.017618 | 100.949313 | JKR |
| 58 | T057 | 34 | 5.017345 | 100.949250 | JKR |
| 59 | T058 | 35 | 5.017044 | 100.949191 | JKR |
| 60 | T059 | 41 | 5.016732 | 100.949159 | JKR |
| 61 | T060 | 44 | 5.016372 | 100.949088 | JKR |
| 62 | T061 | 33 | 5.015986 | 100.949015 | JKR |
| 63 | T062 | 40 | 5.015692 | 100.948973 | JKR |
| 64 | T063 | 35 | 5.015333 | 100.948936 | JKR |
| 65 | T064 | 32 | 5.015016 | 100.948948 | JKR |
| 66 | T065 | 28 | 5.014726 | 100.948971 | JKR |
| 67 | T066 | 20 | 5.014478 | 100.949009 | JKR |
| 68 | T067 | 23 | 5.014299 | 100.949036 | JKR |
| 69 | T068 | 31 | 5.014090 | 100.949041 | JKR |
| 70 | T069 | 31 | 5.013808 | 100.949037 | JKR |
| 71 | T070 | 29 | 5.013545 | 100.948945 | JKR |
| 72 | T071 | 30 | 5.013311 | 100.948826 | JKR |
| 73 | T072 | 33 | 5.013070 | 100.948715 | JKR |
| 74 | T073 | 33 | 5.012798 | 100.948829 | JKR |
| 75 | T074 | 33 | 5.012503 | 100.948826 | JKR |
| 76 | T075 | 34 | 5.012212 | 100.948758 | JKR |
| 77 | T076 | 31 | 5.011929 | 100.948637 | JKR |
| 78 | T077 | 37 | 5.011680 | 100.948512 | JKR |
| 79 | T078 | 32 | 5.011380 | 100.948369 | JKR |
| 80 | T079 | 31 | 5.011119 | 100.948248 | JKR |
| 81 | T080 | 32 | 5.010866 | 100.948135 | JKR |
| 82 | T081 | 31 | 5.010594 | 100.948023 | JKR |

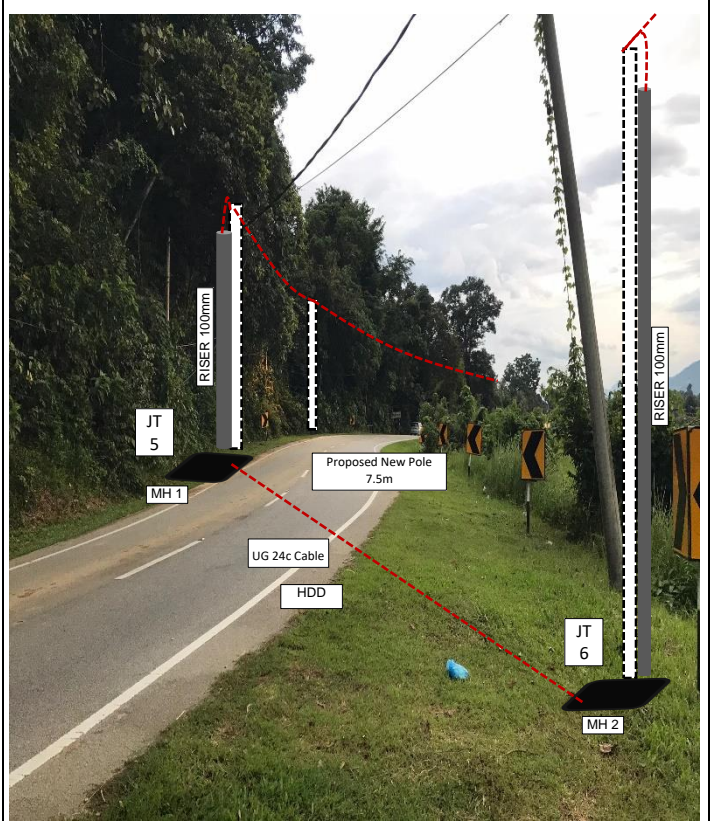
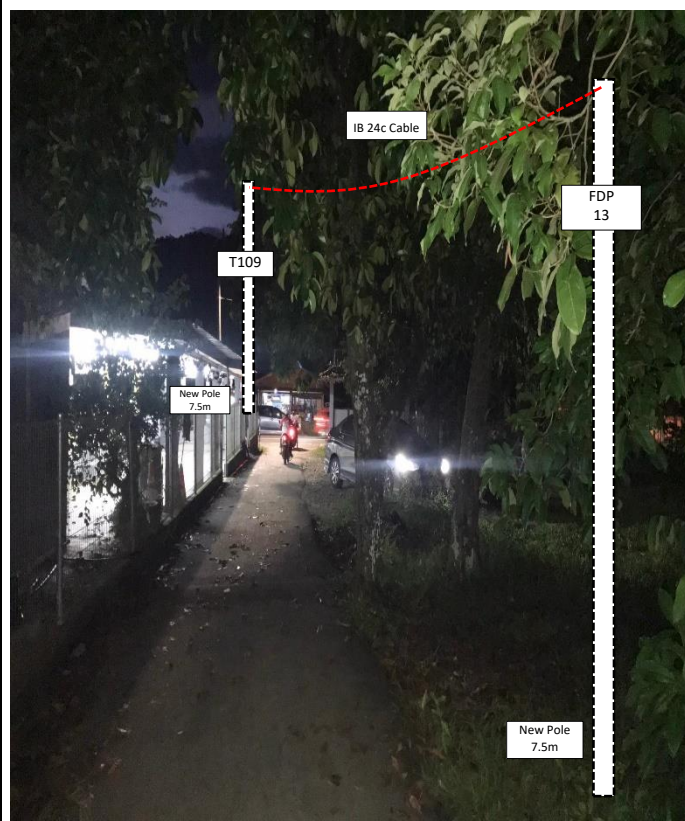
| No. | Pole Number | Distance (m) | Latitude | Longitude | Local Authority |
|-----|-------------|--------------|----------|------------|------------------------|
| 83 | T082 | 39 | 5.010334 | 100.947925 | JKR |
| 84 | T083 | 29 | 5.010357 | 100.948273 | Majlis Daerah Lenggong |
| 85 | T084 | 28 | 5.010269 | 100.948517 | Majlis Daerah Lenggong |
| 86 | T085 | 22 | 5.010208 | 100.948763 | Majlis Daerah Lenggong |
| 87 | T086 | 13 | 5.010189 | 100.948958 | Majlis Daerah Lenggong |
| 88 | T087 | 29 | 5.010078 | 100.948972 | Majlis Daerah Lenggong |
| 89 | T088 | 24 | 5.009812 | 100.948942 | Majlis Daerah Lenggong |
| 90 | T089 | 28 | 5.009602 | 100.948973 | Majlis Daerah Lenggong |
| 91 | T090 | 29 | 5.009446 | 100.948775 | Majlis Daerah Lenggong |
| 92 | T091 | 23 | 5.009224 | 100.948640 | Majlis Daerah Lenggong |
| 93 | T092 | 21 | 5.009051 | 100.948528 | Majlis Daerah Lenggong |
| 94 | T093 | 32 | 5.008885 | 100.948434 | Majlis Daerah Lenggong |
| 95 | T094 | 13 | 5.008969 | 100.948160 | Majlis Daerah Lenggong |
| 96 | T095 | 20 | 5.009006 | 100.948047 | Majlis Daerah Lenggong |
| 97 | T096 | 27 | 5.008826 | 100.948027 | Majlis Daerah Lenggong |
| 98 | T097 | 27 | 5.008583 | 100.948020 | Majlis Daerah Lenggong |
| 99 | T098 | 25 | 5.008345 | 100.947982 | Majlis Daerah Lenggong |
| 100 | T099 | 33 | 5.008163 | 100.948118 | Majlis Daerah Lenggong |
| 101 | T100 | 29 | 5.008118 | 100.948415 | Majlis Daerah Lenggong |
| 102 | T101 | 32 | 5.008031 | 100.948668 | Majlis Daerah Lenggong |
| 103 | T102 | 38 | 5.008654 | 100.947739 | Majlis Daerah Lenggong |
| 104 | T103 | 21 | 5.008712 | 100.947403 | Majlis Daerah Lenggong |
| 105 | T104 | 28 | 5.008564 | 100.947290 | Majlis Daerah Lenggong |
| 106 | T105 | 29 | 5.008574 | 100.947034 | JKR |
| 107 | T106 | 28 | 5.008316 | 100.946983 | JKR |
| 108 | T107 | 25 | 5.008063 | 100.946938 | JKR |
| 109 | T108 | 21 | 5.007855 | 100.946856 | JKR |
| 110 | T109 | 32 | 5.007685 | 100.946768 | JKR |
| 111 | T110 | 32 | 5.007623 | 100.947046 | Majlis Daerah Lenggong |
| 112 | MH1 | 33 | 5.013076 | 100.948728 | JKR |
| 113 | MH2 | 33 | 5.012809 | 100.948832 | JKR |

5.0 SITE PHOTOS - PROPOSED NEW POLE











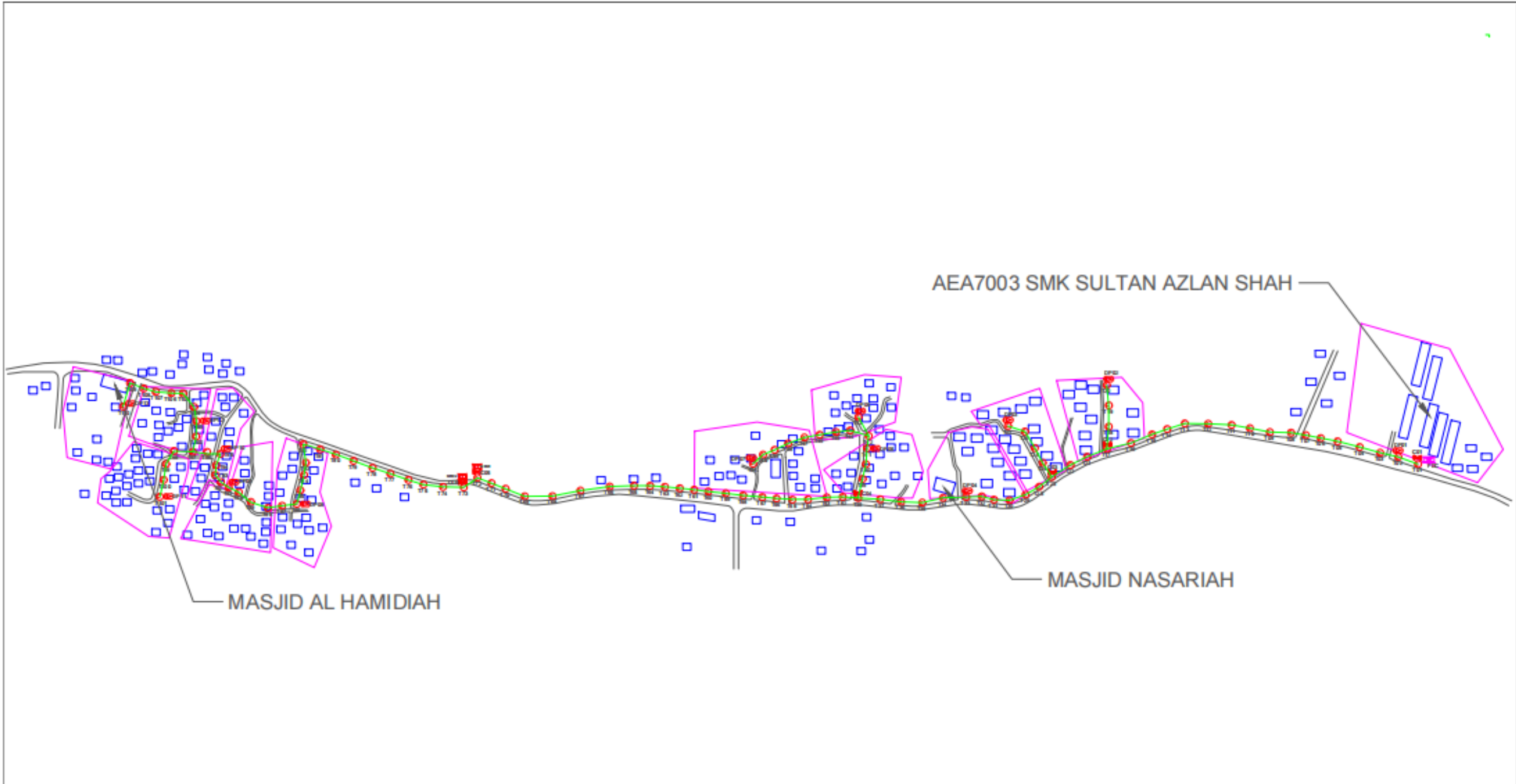
PROJEK PENYEDIAAN DAN PENYELENGGARAAN POINT OF PRESENCE (POP)
FASA 2: HAB INFRASTRUTUK GENTIAN OPTIK BERHAMPIRAN DENGAN
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WABTECH SDN BHD
(1398387-X)

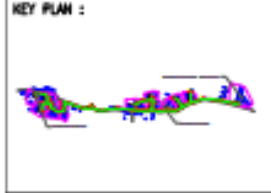
6.0 3rd PARTIES DEPENDENCIES

| NO | LOCAL COUNCIL / AUTHORITY | REMARK |
|----|---------------------------|--------|
| 1 | Majlis Daerah Lenggong | 1197m |
| 2 | JKR Daerah Lenggong | 2091m |



TOTAL HOME PASSES: 104 UNITS

| LEGEND | | | | | | | | | | |
|-------------|----------|-------------------------------|---------------------|---------------------|-----------------------|-------------------|------------------------|-----------------------------|--------------------------------------|-----------------------|
| Orange line | 12C FDC | Installed 1:4 splitter in FDC | Red circle with dot | Installed Pole (3m) | Red square with 'X' | New Manhole (RC7) | Blue line | Tension Small / Tension Big | Red circle with 'M' | MH NO. |
| Green line | 24C FDC | FDP with (1:8) splitter | Red circle with 'R' | Installed Riser | Black circle with 'H' | House Number | Black line | Existing Manhole | Red circle with 'TNS-1' | Existing TNS Pole NO. |
| Purple line | 48C FDC | Closure | Pink square | Suspension Big | Black circle with 'L' | Existing TNS Pole | Red circle with 'CD1' | Closure NO. | Red circle with 'P001' | New Pole NO. |
| Red line | 96C FDC | New Manhole (P0) | Pink square | Suspension Small | Black circle with 'L' | LOOP | Red circle with 'FDP1' | FDP NO. | Red circle with 'SEE A.S.E. DRAWING' | |
| Blue line | 144C FDC | Installed Pole (7.5M) | Pink square | FDC | Blue line | FDP Boundary | Red circle with 'FDC' | FDC NO. | Red circle with 'SEE SHEET XXX' | |

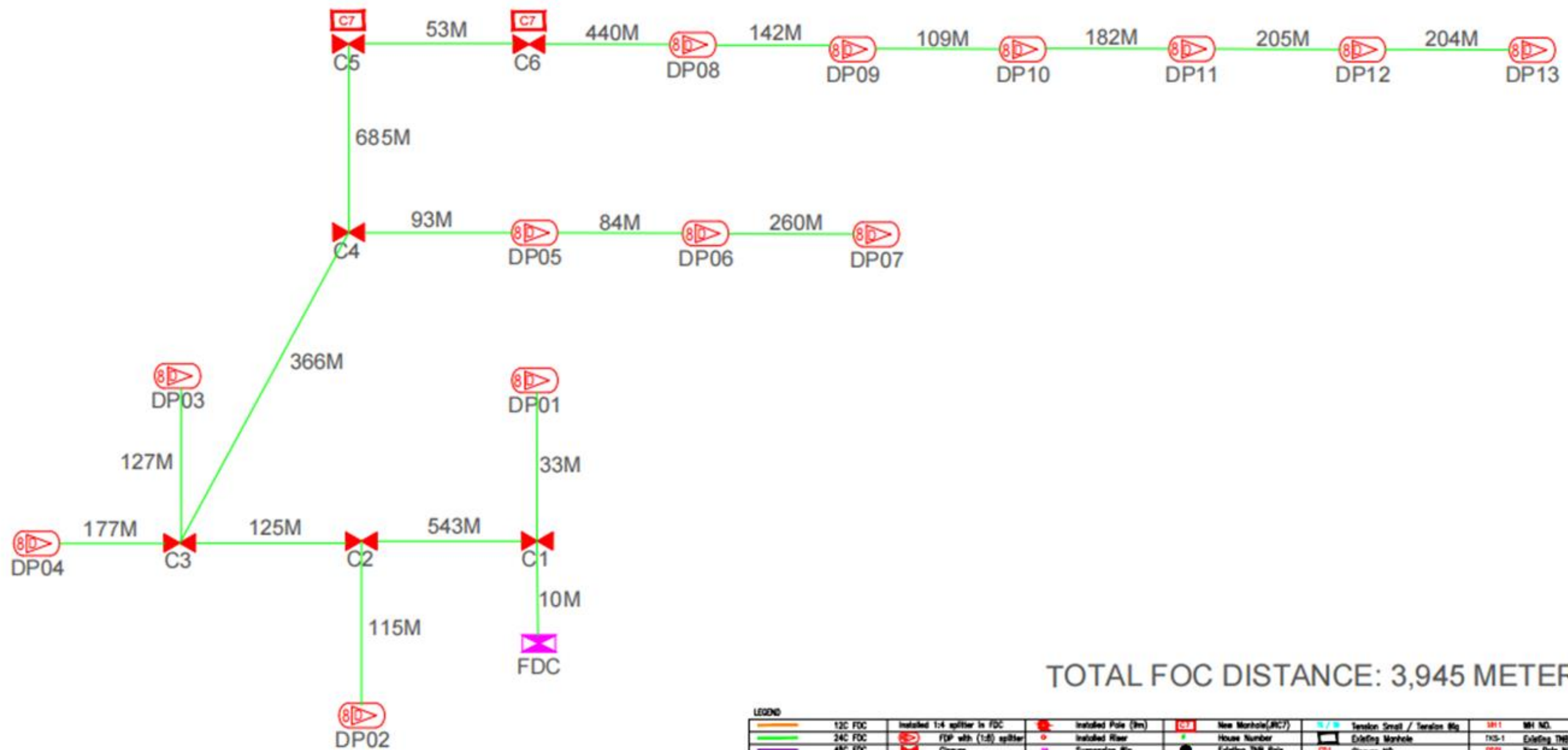


PROJECT TITLE:
 CONTRACT FOR THE PROVISION OF SUPPLY, INSTALLATION, AND COMMISSIONING OF FTTH NETWORK INFRASTRUCTURE - POP 2 PROJECT D-SIDE - AEA7003 - SMK SULTAN AZLAN SHAH

DRAWING TITLE:
 AEA7003 SMK SULTAN AZLAN SHAH

PROJECT PHASE:
 PROJECT PHASE

| | | | |
|---|----------------|------------|-------------|
| Design By | ENGINEER | Date | DATE |
| Drawn By | CAD ENGINEER | Scale | NTS |
| Checked By | ENGINEER | Job Number | JOB/NUMBER |
| DRAWING NUMBER : | DRAWING/NUMBER | | Sheet : 1/1 |
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| LEGEND | | | | | | | |
|--------|----------|--|------------------------------------|--|-----------------------|--|-----------------------|
| | 12C FOC | | Installed 1:4 splitter in FOC | | Installed Pole (8m) | | New Manhole (PC7) |
| | 24C FOC | | FDP with (1:8) splitter | | Installed Pole (7.5M) | | House Number |
| | 48C FOC | | Closure | | Suspension Big | | Existing Manhole |
| | 96C FOC | | New Manhole (P1) | | Suspension Small | | Existing Full Pole |
| | 144C FOC | | Installed Pole (7.5M) | | FDC | | LSCP |
| | | | FDP Boundary | | FDP1 | | FDC M1 |
| | | | Suspension Small / Termination Big | | SP1 | | M1 NO. |
| | | | Existing Manhole | | TKS-1 | | Existing THB Pole NO. |
| | | | Closure NO. | | New Pole NO. | | SEE SHEET XXX |
| | | | FDP NO. | | FDC NO. | | |

| | | | | | | |
|---|--|---|--|---|---|--------------------------------------|
| KEY PLAN : | PROJECT OWNER : KEMENTERIAN KOMUNIKASI | MAIN CONTRACTOR : PRIVASAT | SUB-CONTRACTOR : WRBTECH SDN BHD | PROJECT TITLE : CONTRACT FOR THE PROVISION OF SUPPLY, INSTALLATION, AND COMMISSIONING OF FTTH NETWORK INFRASTRUCTURE - POP 2 PROJECT D-SIDE - AEA7003 - SMK SULTAN AZLAN SHAH | DRAWING TITLE : AEA7003 SMK SULTAN AZLAN SHAH | Design By: ENGINEER Date: |
| | | | | | | Drawn By: CAD ENGINEER Scale: NTS |
| Checked By: ENGINEER Job Number: JCN/NUMBER | | | | | | |
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