

# Maxis UMobile 5G Project – Technical Proposal

|                 |   |   |
|-----------------|---|---|
| Company Name    | : | MAXIS BROADBAND SDN BHD   |
| Company Address | : | LEVEL 9 , MENARA MAXIS , KUALA LUMPUR CITY CENTRE , 50088<br>KUALA LUMPUR |
| Date            | : | 8/8/2025  |



|                          |   |   |
|--------------------------|---|---|
| Project & Site Name      | : | U MOBILE BMRR   |
| Site LRD                 | : | BMRR  |
| Address                  | : | MERU RAYA FIRE AND RESCUE STATION, JALAN MERU UTAMA 2 |
| District                 | : | IPOH  |
| Postcode & State         | : | 30200, PERAK  |
| GPS Coordinate           | : | 4.673211,101.072278                                   |
| FTTx LRD                 | : | N/A   |
| Home pass / Premise pass | : | N/A   |

|                              |            |
|------------------------------|------------|
| UG Build (m)                 | 700        |
| Aerial Build (m)             | N/A        |
| <b>Total Civil Build (m)</b> | <b>700</b> |

|                        |            |
|------------------------|------------|
| UG Cable (m)           | 700        |
| Aerial Cable (m)       | N/A        |
| Coil at MH (m)         | 20         |
| <b>Total Cable (m)</b> | <b>720</b> |



## Table of Contents

- 1. POC3 Summary & Details**
  - 1.1. POC3 Summary
  - 1.2. POC3 Photos
- 2. OSP / ISP Summary & Details (OSP 2)**
  - 2.1. Propose Route Details & Site Map
  - 2.2. OSP / ISP BOQ
  - 2.3. Civil Works Details (Manhole & Pole)
  - 2.4. Photo Illustration
- 3. Link Attenuation Calculation Reference**
- 4. Appendices**
  - 4.1. OSP Civil Design
  - 4.2. OSP SLD Design
  - 4.3. Costing BOQ

# 1. POC3 Summary & Details

## 1.1. POC3 Summary



|                      |   |  |
|----------------------|---|--|
| Site LRD             | : | PTTC   |
| Structure Type       | : | T5 CABINET   |
| GPS Coordinate       | : | 4°39'56.041" N, 101°4'24.244" E  |
| Site / Building Name | : | TOWER  |
| Address              | : | Perak Techno Trade Centre (PTTC),, Off Jalan Jelapang, Bandar Meru Raya, 30020 Ipoh, Perak |
| POC3 Model           | : | N/A  |

## 2. OSP / ISP Summary & Details (OSP 2)

### 2.1. Propose Route Details & Site Map



|                            |   |                                 |   |
|----------------------------|---|---------------------------------|---|
| <b>LRD Point A</b>         | BMRR  | <b>LRD Point B</b>              | EXT MAXIS MH  |
| <b>Address</b>             | MERU RAYA FIRE AND RESCUE STATION, JALAN MERU UTAMA 2 | <b>Address GPS</b>              | TNB ENERGY SERVICES SDN. BHD. (IPOH), 6, Jln Meru Utama A1, Ipoh, Perak |
| <b>GPS Coordinates</b>     | 4.673211,101.072278                                   | <b>Coordinates</b>              | 4.670987,101.071971   |
| <b>New Civil Build (M)</b> | 700   | <b>Existing Civil Build (M)</b> | N/A   |
| <b>New Build Cable (M)</b> | 720   | <b>Existing Cable (M)</b>       | N/A   |

Local Council & Authority approval Requirement :

Majlis Bandaraya Ipoh

## 2.2. OSP & ISP BOQ

| Overall Proposed OSP Civil Infrastructure Design Distance |  | Unit | Quantity |
|---|--|------|----------|
| 1   | Horizontal Directional Drilling with 1-way duct                      | M    | 670      |
| 2   | Horizontal Directional Drilling with 2-way duct                      | M    | NA       |
| 3   | Open trench on grass verge (GV) with 1-way duct                      | M    | NA       |
| 4   | Open trench on grass verge (GV) with 2-way duct                      | M    | NA       |
| 5   | Open trench on carriage way (CW) with 1-way duct                     | M    | NA       |
| 6   | Open trench on carriage way (CW) with 2-way duct                     | M    | NA       |
| 7   | Micro trenching 1-way (3-way x 40 mm HDPE sub-duct)                  | M    | NA       |
| 8   | Micro trenching 1-way (2-way x 25 mm GI Pipe for main road crossing) | M    | 30       |

| Overall Propose Manhole / Handhole |                       | Unit | Quantity |
|------------------------------------|-----------------------|------|----------|
| 1                                  | Manhole JB30          | Ea   | 3        |
| 2                                  | Manhole JB30 Modified | Ea   | NA       |
| 3                                  | Manhole JRC7          | Ea   | NA       |
| 4                                  | PIT/Cheezy PIT        | Ea   | NA       |

| Overall Propose Pole / Overhead |                            | Unit | Quantity |
|---------------------------------|----------------------------|------|----------|
| 1                               | 7.5 m Pole – Concrete/Iron | Ea   | NA       |
| 2                               | 9 m Pole – Concrete/Iron   | Ea   | NA       |
| 3                               | G.I Riser                  | Ea   | NA       |

| Overall Cable Infrastructure Design Distance |                                       | Unit | Quantity |
|--|---------------------------------------|------|----------|
| 1  | 1 Core Optical Fiber Cable            | M    | NA       |
| 2  | 48 Core Optical Fiber Cable UG/IB/ID  | M    | NA       |
| 3  | 96 Core Optical Fiber Cable UG/IB     | M    | NA       |
| 4  | 144 Core Optical Fiber Cable UG/IB/ID | M    | 720      |

| Overall Optic Splice Design |                     | Unit | Quantity |
|-----------------------------|---------------------|------|----------|
| 1                           | Total Joint Closure | Ea   | 1        |



### 2.3. Civil Work's Detail (Manhole & Pole)

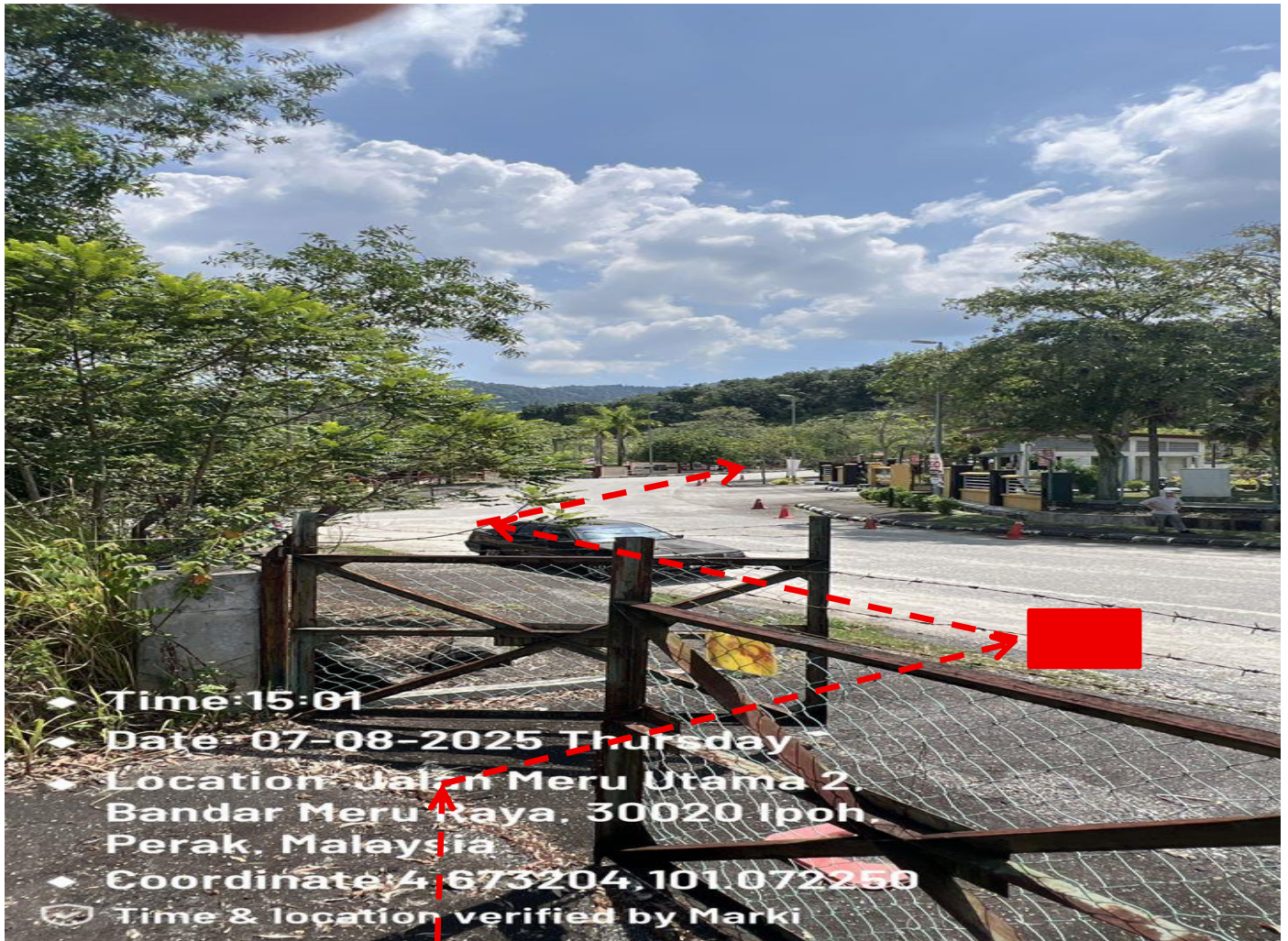
| Overall Existing Manhole & Pole |                     | GPS Coordinate |            | Distance |
|---------------------------------|---------------------|----------------|------------|----------|
| No.                             | Manhole & Pole ID   | Latitude       | Longitude  | Meter    |
| 1                               | <b>A1-0001-027M</b> | 4.670987       | 101.071971 |          |
| 2                               | ***                 | ***            | ***        | ***      |
| 3                               | ***                 | ***            | ***        | ***      |

| Overall Propose Manhole & Pole |                   | GPS Coordinate |             | Distance   |
|--------------------------------|-------------------|----------------|-------------|------------|
| No.                            | Manhole & Pole ID | Latitude       | Longitude   | Meter      |
| 1                              | Manhole JB30 NO 1 | 4.6731573      | 101.0719996 | <b>35</b>  |
| 2                              | Manhole JB30 NO 2 | 4.6731653      | 101.0709163 | <b>165</b> |
| 3                              | Manhole JB30 NO 3 | 4.6720275      | 101.0707580 | <b>280</b> |

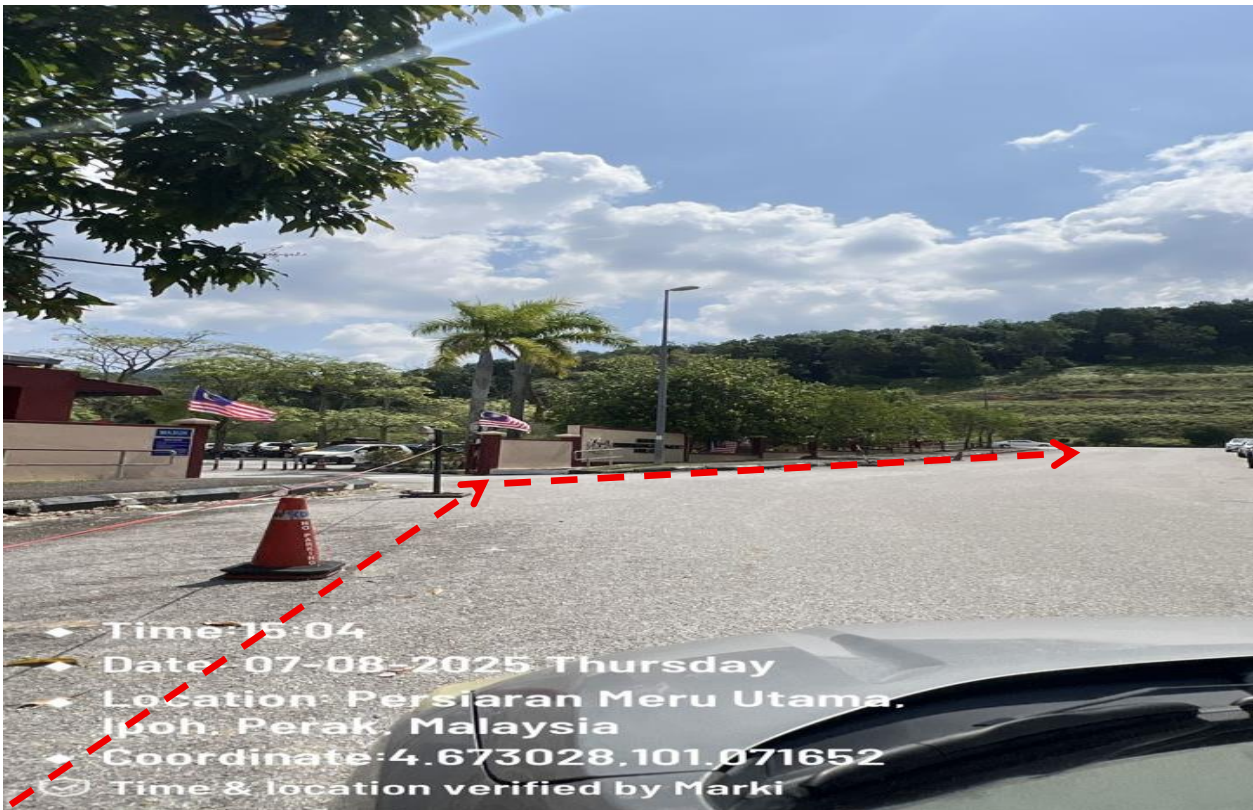
2.4. OSP/ISP Photo Illustration.



**PICTURE 1 : PROPOSE ONE (1) MAXIS EQUIPMENT AND ONE (1) MAXIS PANEL A AT UM T5.**



**PICTURE 2 : PROPOSE MICRO TRENCHING TO ROAD SITE. PROPOSE NEW MH NO 1.**



**Picture 3 - PROPOSE HDD WAY.**



**Picture 4-PROPOSE HDD WAY AND PROPOSED NEW MH NO 2**



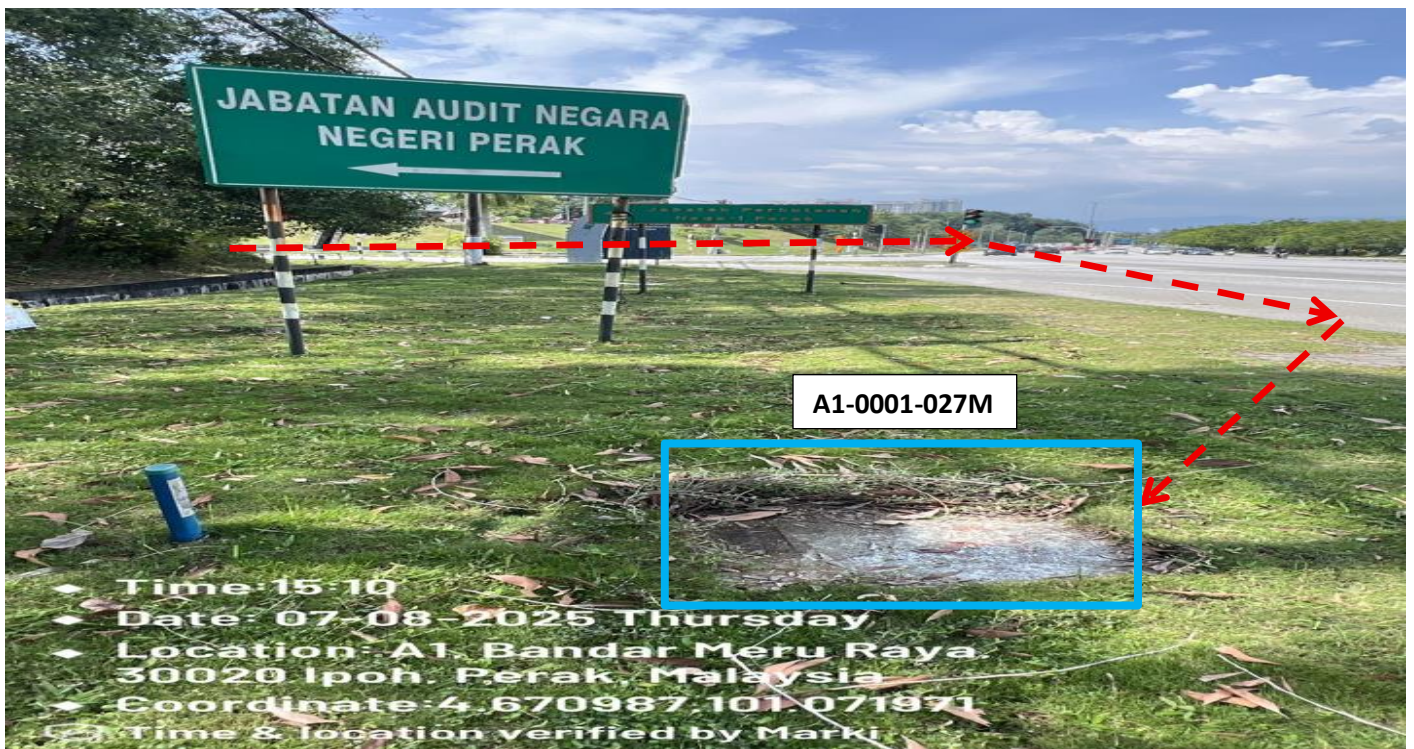
Picture 5 PROPOSE HDD WAY.



Picture 6: PROPOSE HDD WAY AND PROPOSE MH NO 3



Picture 7: PROPOSE HDD WAY AND PROPOSE MH NO 3



Picture 8: PROPOSE HDD WAY TO EXISTING MAXIS MH



**3. Link Attenuation Calculation Reference**

S = Total splice count in a single link

L = Total length of cable in a single link

C = Total connector count in a single link.

**A) FIBER LOSS FOR 1310 nm WAVELENGTH**

$$\text{TOTAL LOSS} = 0.15 (S) + 0.35 (L) + (C)$$

**B) FIBER LOSS FOR 1550 nm WAVELENGTH**

$$\text{TOTAL LOSS} = 0.10 (S) + 0.25 (L) + 0.5 (C)$$

MAXIMUM END TO END VALUE FOR 1310 nm = \*\*\*\* dBm

MAXIMUM END TO END VALUE FOR 1550 nm = \*\*\*\* dBm



#### **4. Appendices**

4.1. OSP Civil Design

4.2. OSP SLD Design

4.3. Costing BOQ

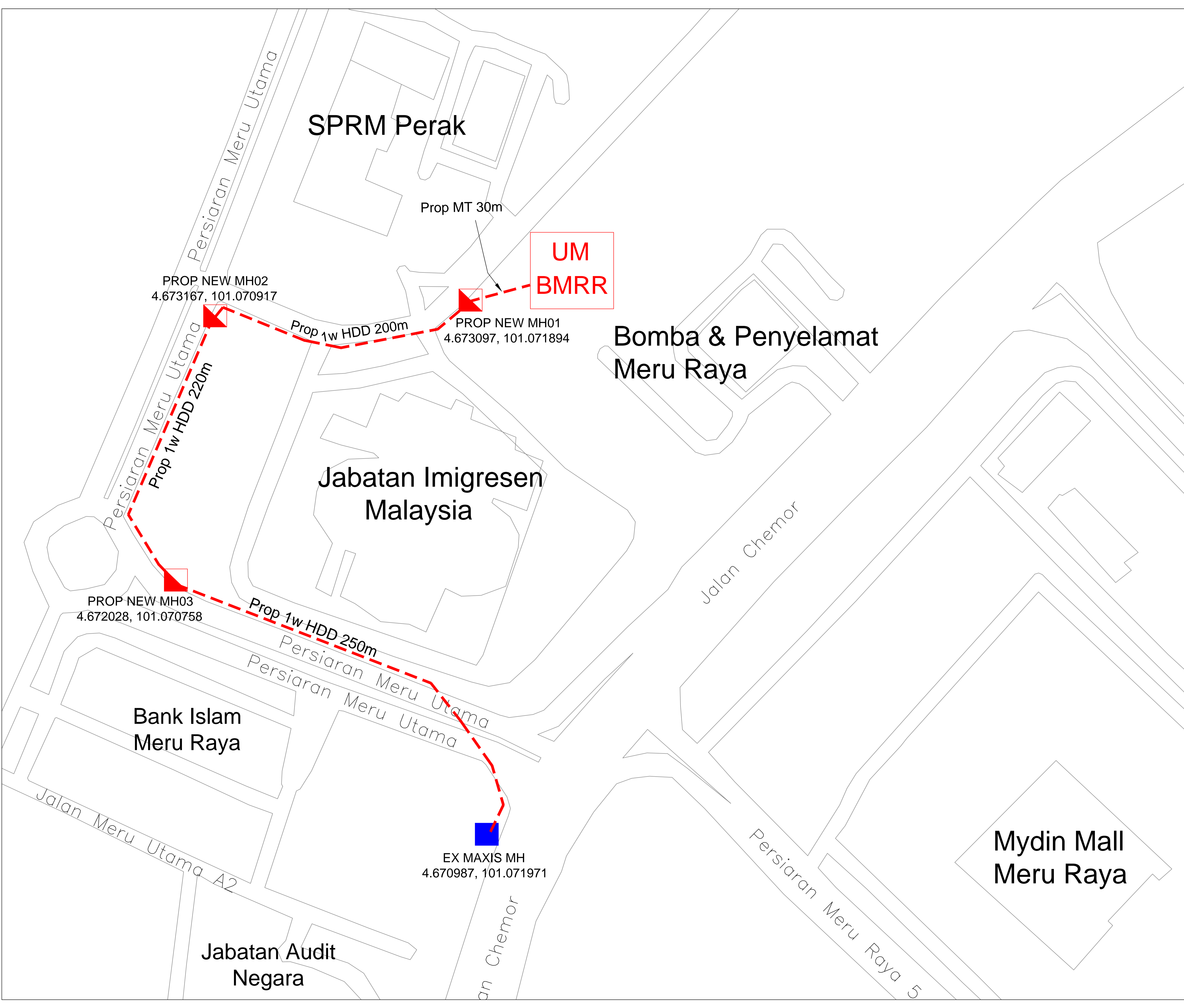


## Acceptance and Authorization

**IN WITNESS WHEREOF**, the parties hereto each acting with proper authority have executed this Technical Proposal under seal.

By signing below, both Parties agree to the terms of this Technical Proposal document.

| UMobile Sdn Bhd  | Maxis Broadband Sdn Bhd   |
|--|---|
| <p><b>Signature:</b></p><br><br><br><br><br><p><b>Full Name:</b></p> <p><b>Position:</b></p> <p><b>Date:</b></p> | <p><b>Signature:</b></p><br><br><p style="text-align: center;"><b><i>Vinod Moorthy</i></b></p><br><p><b>Full Name: Vinod A/L Krishnan Moorthy</b></p> <p><b>Position: Network Project Manager</b></p> <p><b>Date:</b></p> |
| <p><b>Signature:</b></p><br><br><br><br><br><p><b>Full Name:</b></p> <p><b>Position:</b></p> <p><b>Date:</b></p> | <p><b>Signature:</b></p><br><br><br><br><br><p><b>Full Name: Shanker Ganesh A/L Manogran</b></p> <p><b>Position: Enterprise Project Manager</b></p> <p><b>Date:</b></p>   |

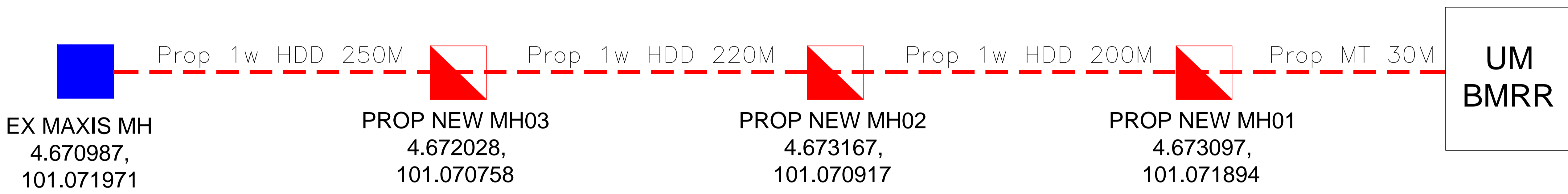


| SITE MAPS DESIGN             |              |
|------------------------------|--------------|
| SITE NAME:                   | BMRR         |
| PROJECT TITLE:               | UM5G-BMRR    |
| DWG ID:                      | UM5G/BMRR/01 |
| DATE:                        | 11 SEPT 2025 |
| SHEET:                       | 01/01        |
| SUMMARY NOTES                |              |
| TOTAL CUSTOMER :             | 1            |
| TOTAL FDC :                  | N/A          |
| TOTAL FDP:                   | N/A          |
| TOTAL PROPOSED JOINT:        | 1            |
| TOTAL PROPOSED MH:           | 3            |
| TOTAL PROPOSED POLE:         | 0            |
| TOTAL PROPOSED UG CABLE (m): | 720          |
| TOTAL PROPOSED OH CABLE (m): | 0            |
| LEGENDS                      |              |
| EXISTING FDC                 |              |
| PROPOSED FDP                 |              |
| EXISTING FDP                 |              |
| PROPOSED MANHOLE             |              |
| EXISTING MANHOLE             |              |
| PROPOSED PIT/HANDHOLE        |              |
| EXISTING PIT/HANDHOLE        |              |
| PROPOSED G.i / DUCT RISER    |              |
| EXISTING G.i / DUCT RISER    |              |
| PROPOSED POLE                |              |
| EXISTING POLE                |              |
| PROPOSED CLOSURE / JOINT     |              |
| EXISTING PEDESTAL            |              |
| EXISTING UG DUCTWAY          |              |
| PROPOSED UG TRENCHING        |              |
| EXISTING AERIALCABLE         |              |
| PROPOSED AERIAL CABLE        |              |
| JKR BOUNDARY                 |              |
| LOCAL COUNCIL BOUNDARY       |              |
| DESIGN BY: BINASAT SDN BHD   |              |
|                              |              |
| MAXIS BROADBAND SDN BHD      |              |
| CHECKED BY :                 |              |
| CHECKED DATE :               |              |
| APPROVED/REJECTED BY :       |              |
| APPROVED/REJECTED BY :       |              |

| SITE MAPS DESIGN |                  |
|------------------|------------------|
| SITE NAME:       | BMRR             |
| PROJECT TITLE:   | UM5G-BMRR        |
| DWG ID:          | UM5G/BMRR/SLD/01 |
| DATE:            | 11 SEPT 2025     |
| SHEET:           | 01/01            |

| SUMMARY NOTES                |     |
|------------------------------|-----|
| TOTAL CUSTOMER :             | 1   |
| TOTAL FDC :                  | N/A |
| TOTAL FDP:                   | N/A |
| TOTAL PROPOSED JOINT:        | 1   |
| TOTAL PROPOSED MH:           | 3   |
| TOTAL PROPOSED POLE:         | 0   |
| TOTAL PROPOSED UG CABLE (m): | 720 |
| TOTAL PROPOSED OH CABLE (m): | 0   |

| LEGENDS                   |  |
|---------------------------|--|
| EXISTING FDC              |  |
| PROPOSED FDP              |  |
| EXISTING FDP              |  |
| PROPOSED MANHOLE          |  |
| EXISTING MANHOLE          |  |
| PROPOSED PIT/HANDHOLE     |  |
| EXISTING PIT/HANDHOLE     |  |
| PROPOSED G.i / DUCT RISER |  |
| EXISTING G.i / DUCT RISER |  |
| PROPOSED POLE             |  |
| EXISTING POLE             |  |
| PROPOSED CLOSURE / JOINT  |  |
| EXISTING PEDESTAL         |  |
| EXISTING UG DUCTWAY       |  |
| PROPOSED UG TRENCHING     |  |
| EXISTING AERIALCABLE      |  |
| PROPOSED AERIAL CABLE     |  |
| JKR BOUNDARY              |  |
| LOCAL COUNCIL BOUNDARY    |  |



|                            |  |
|----------------------------|--|
| DESIGN BY: BINASAT SDN BHD |  |
|                            |  |
| MAXIS BROADBAND SDN BHD    |  |
| CHECKED BY :               |  |
| CHECKED DATE :             |  |
| APPROVED/REJECTED BY :     |  |
| APPROVED/REJECTED BY :     |  |