



PERMOHONAN IZIN LALU BAGI PEMASANGAN KABEL FIBER OPTIK DAN  
PENYEDIAAN RANGKAIAN PERKHIDMATAN JALUR LEBAR DI SEPANJANG  
LEBUHRAYA UNTUK TETUAN MSA RESOURCES SDN BHD.

NO. RUJUKAN PERMOHONAN : 209/2015 (UTS)



*Projek Lebuhraya Usahasama Berhad*

PACKAGE NL05 - NORTH-SOUTH EXPRESSWAY  
(E1) KM 219.5 - KM 275.0  
(NORTHERN LOOP)

PROJECT OWNER :



**MSA RESOURCES SDN BHD**  
Unit A-16-8, Level 16, Tower A, Menara UOA Bangsar,  
5, Jalan Bangsar Utama 1, Bangsar, 59000 Kuala Lumpur.  
Tel : (603) 2720 3040 Fax : (603) 2700 4272

LICENSED LAND SURVEYOR :

**Jalal Johari**  
**Consultants** SDN  
BHD  
Co. No. 18287 A

**JALAL JOHARI CONSULTANTS SDN BHD**  
UG-13A, Lexa Galleria, No.45, Jalan 34/26,  
53300 Wangsa Maju, Kuala Lumpur.  
Tel : (603) 2701 7761 Fax : (603) 2701 7762

PROJECT MANAGEMENT CONSULTANT (TECHNICAL) :

**JURUTERA PERUNDING MIHARA**  
No 23B, Jalan BP7/12, Bandar Bukit Puchong,  
47120 Puchong, Selangor Darul Ehsan.  
Tel : (603) 8090 0773 Fax : (603) 8066 6564

DESIGNATED DESIGN CONSULTANT (C&S) :



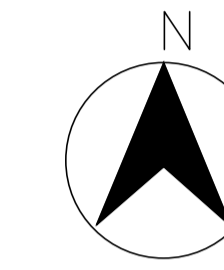
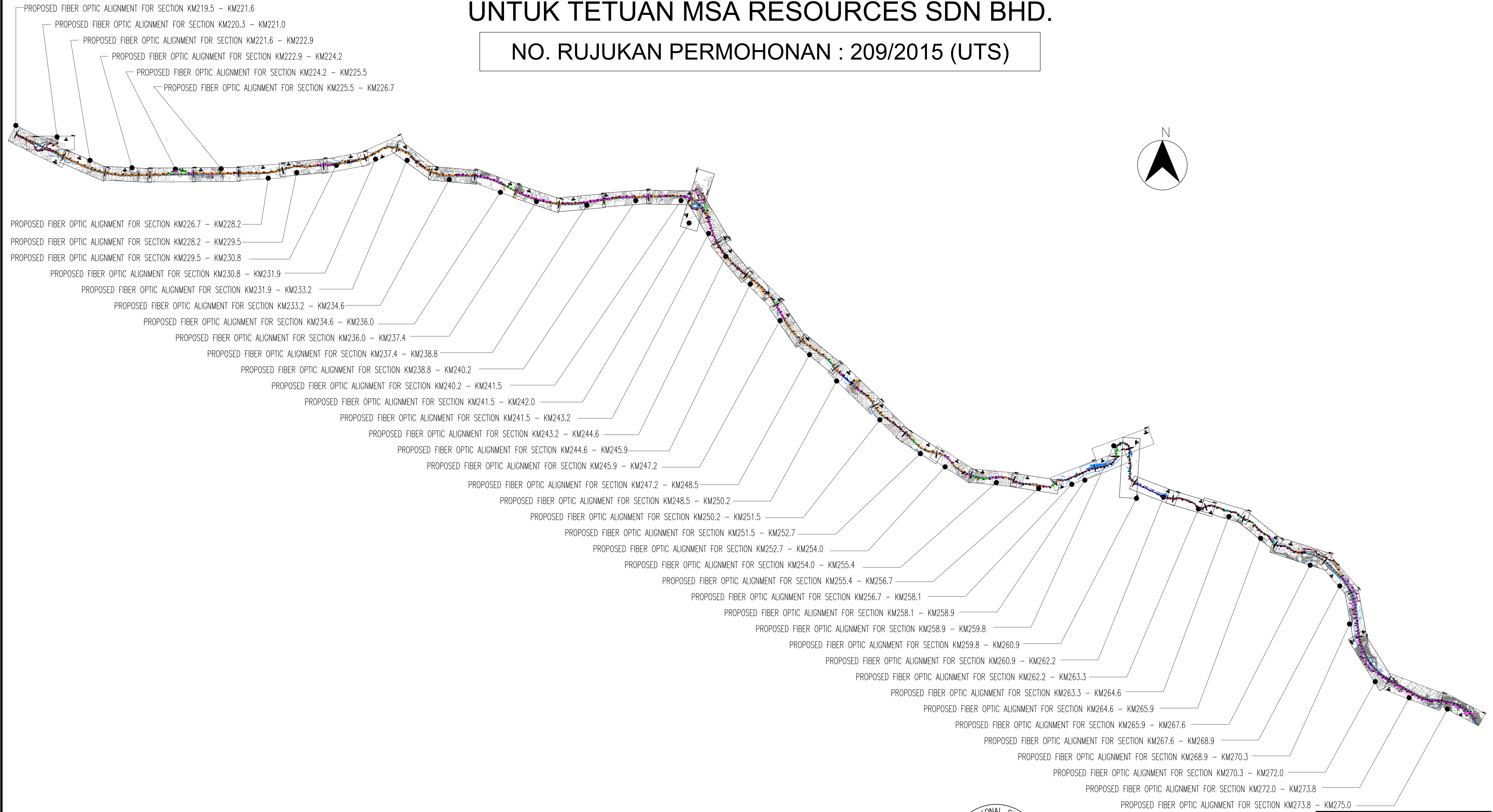
**Perunding KCT Sdn. Bhd.**  
609, Block A, Phileo Damansara 1, Jalan 16/11, Seksyen 16,  
46350, Petaling Jaya, Selangor Darul Ehsan.  
Tel : (603) 7665 2778 Fax : (603) 7665 2779

DATE: MAR. 2023

CONSTRUCTION DRAWING

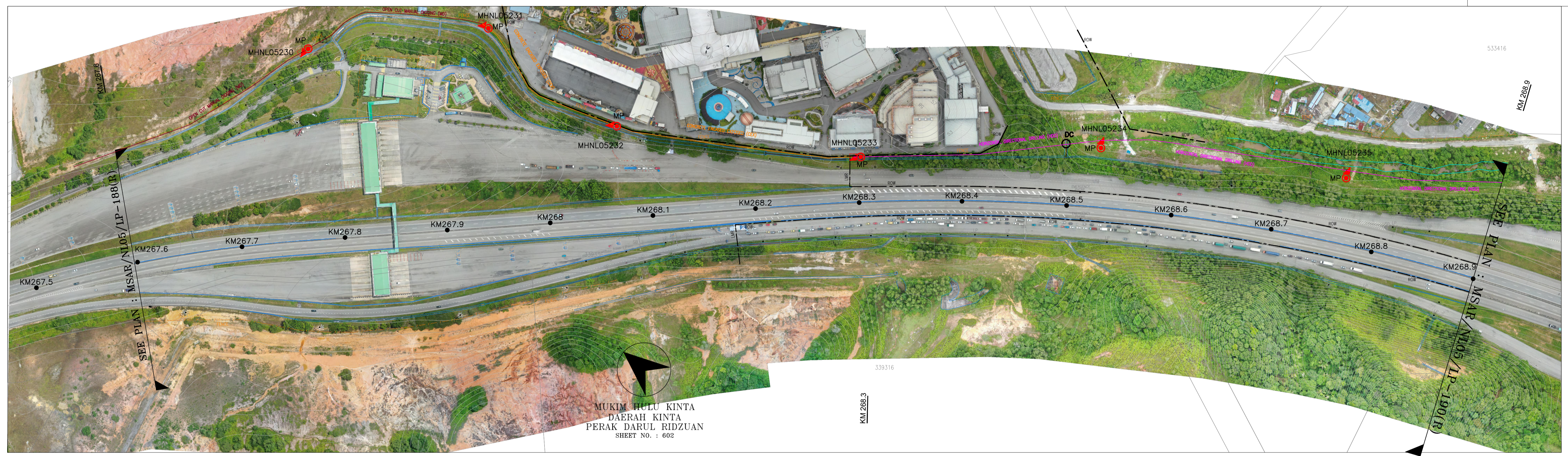
# PERMOHONAN IZIN LALU BAGI PEMASANGAN KABEL FIBER OPTIK DAN PENYEDIAAN RANGKAIAN PERKHIDMATAN JALUR LEBAR DI SEPANJANG LEBUHRAYA. UNTUK TETUAN MSA RESOURCES SDN BHD.

NO. RUJUKAN PERMOHONAN : 209/2015 (UTS)

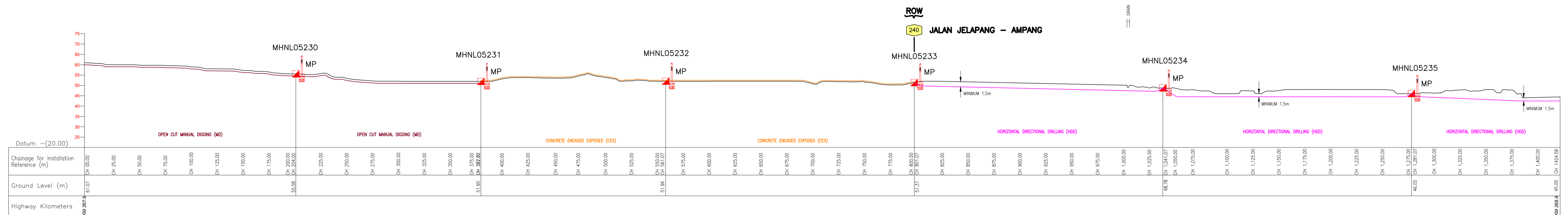


CONSTRUCTION DRAWING

LICENSED LAND SURVEYOR :  JALAL JOHARI Lead Surveyor Licensed Under Act 454 (Revised 1981) General Engineering Survey Division Unit A-13A, Lexa Galleria, No. 45, Jalan 54/26, 53300 Wangsa Maju, Kuala Lumpur. TEL : (603) 2701 7761 FAX : (603) 2701 7760		PROJECT OWNER :  MOHD SOFYAN BIN MOHD ARSHAD (IC No : 580108-08-6381) MSA RESOURCES SDN BHD Unit A-16-B, Level 16, Tower A, Menara UOA Bangsar, 5, Jalan Bangsar Utama 1, Bangsar, 59000 Kuala Lumpur. TEL : (603) 2720 3040 FAX : (603) 2700 4272		PROJECT MANAGEMENT CONSULTANT (TECHNICAL):  Ir. ABDUL RAHIM BIN ABDUL RAHIM OSMAN JURUTERA PERUNDING MIHARA No. 238, Jalan BP7/12, Bandar Bukit Puchong, 47120 Puchong, Selangor Darul Ehsan, Malaysia. TEL : (603) 8090 0773 TEL : (603) 8066 6564		DESIGNATED DESIGN CONSULTANT (C&S):  TAN KIAN CHUAN C18378 MALAYSIA Ir. TAN KIAN CHUAN Petunding KCT Sdn. Bhd. 200501024042 (706174-M) 609, Block A, Philco Damansara 1, Jalan 16/11, Seksyen 16, 46350, Petaling Jaya, Selangor Darul Ehsan, Malaysia. Tel No:03-7665-2778, Fax No:03-7665-2779 E-mail: pkct88@gmail.com Website: www.kct.consulting		DRAWN BY : N.M.Cheong CHECKED BY : Brandon/Rosni/Amira APPROVED BY : Ir K.C.Tan SCALE : 1:60,000 DATE : MAR,2023		PROJECT : PERMOHONAN IZIN LALU BAGI PEMASANGAN KABEL FIBER OPTIK DAN PENYEDIAAN RANGKAIAN PERKHIDMATAN JALUR LEBAR DI SEPANJANG LEBUHRAYA. PACKAGE NL05 - E1 : LEBUHRAYA UTARA-SELATAN (PLUS) UNTUK TETUAN: MSA RESOURCES SDN. BHD. DRAWING TITLE : KEY PLAN OF LEBUHRAYA UTARA-SELATAN (PLUS) (NORTHERN LOOP) KM 219.5 TO KM 275.0 PLAN NO. : MSAR/NL05/KEYPLAN/01 REVISION : 0	
REVISE	DATE	DETAIL	APPROVE								



LAYOUT PLAN ( E1\_KM267.6 - KM268.9 )  
SCALE 1 : 2000



LONGITUDINAL SECTION (E1\_KM267.6 - KM268.9)  
HORIZONTAL SCALE 1:2000  
VERTICAL SCALE 1:1000

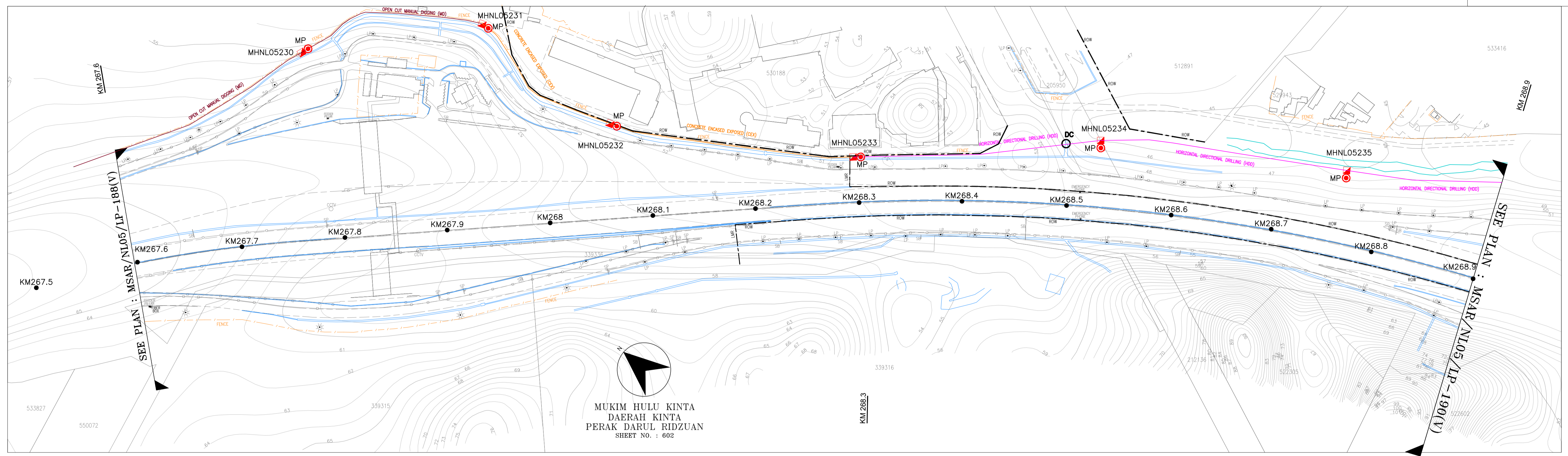
LEGEND :			
— FENCE	— WATER PIPE	— CELCOM CABLE	☀ HIGH MAST
— ROW	— POWER CABLE	— DIGI CABLE	⊕ LAMP POST
— TIME CABLE	— TELECOM CABLE	— GAS	SB SIGN BOARD
— MAXIS CABLE			□ BUILDING
— PROPOSED HORIZONTAL DIRECTIONAL DRILLING (HDD)	☑ PROPOSED MANHOLE	⊙ TMP TRAFFIC MANAGEMENT PLAN (TMP)	
— PROPOSED OPEN CUT MACHINE (OCM)	☑ PROPOSED JOINT BOX	⊠ FENCING OPENING	
— PROPOSED OPEN CUT MANUAL DIGGING (MD)	☑ PROPOSED MANUAL JOINT		
— PROPOSED CONCRETE ENCASED EXPOSED (CEX)	⊙ PROPOSED FIBRE OPTIC CABLE MARKER POST	☑ FEEDS PROPOSED FIBER EXTERNAL DISTRIBUTION BOX	
— PROPOSED CONCRETE ENCASED BURIED (CEB)	⊙ DC DRAINAGE CROSSING		
— PROPOSED BRIDGE ATTACHMENT (BA)	⊙ CC CULVERT CROSSING		
— PROPOSED VEHICULAR BOX CULVERT ATTACHMENT (VBC)			

NOTE :

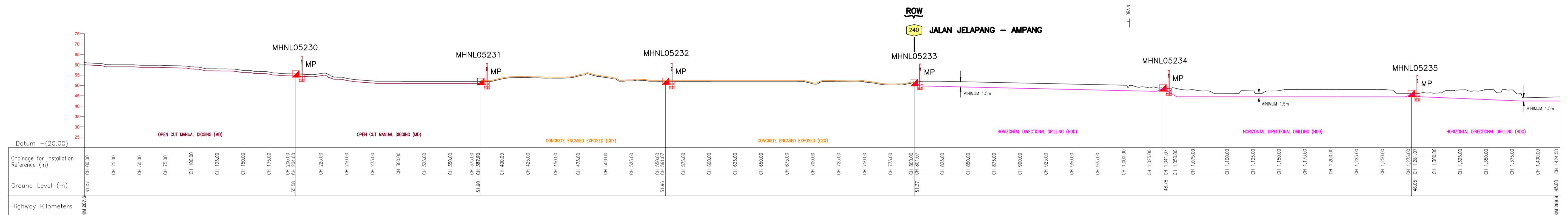
- Digital Terrain Model (DTM) data were used to generate and interpolate the contour levels depicted on the provided survey drawing. From the Digital Surface Model (DSM), only ground information has been classified or extracted. Consequently, contour trimming on the building footprint and other features, particularly outside R.O.W., was not performed.
- THE FIBRE OPTIC CABLE INSTALLATION AT THIS STRETCH (KM 268.3 – KM 275.0) WILL BE CARRIED OUT WITHIN JABATAN KERJA RAYA (JKR) PERAK RIGHT OF WAY (ROW)

**CONSTRUCTION DRAWING**

<p>LICENSED LAND SURVEYOR :</p> <p><b>JALAL JOHARI CONSULTANTS SDN BHD</b> Unit A-13A, Lexa Galleria, No. 45, Jalan 34/26, 53300 Wangsa Maju, Kuala Lumpur. TEL : (603) 2701 7761 FAX : (603) 2701 7760</p>	<p>PROJECT OWNER :</p> <p><b>MSA RESOURCES SDN BHD</b> Unit A-16-B, Level 16, Tower A, Menara UOA Bangsar, 29 Jalan Bangsar Utama 1, Bangsar, 59000 Kuala Lumpur. TEL : (603) 2720 3040 FAX : (603) 2700 4272</p>	<p>PROJECT MANAGEMENT CONSULTANT (TECHNICAL)</p> <p><b>JURUTERA PERUNDING MIHARA</b> No. 23B, Jalan BP7/12, Bandar Bukit Puchong, 47120 Puchong, Selangor Darul Ehsan, TEL : (603) 8090 0773 FAX : (603) 8066 6564</p>	<p>DESIGNATED DESIGN CONSULTANT (C&amp;S) :</p> <p><b>KCT CONSULTING ENGINEERS</b> 609, Block A, Philo Damansara 1, Jalan 16/11, Seksyen 16, 46350, Petaling Jaya, Selangor Darul Ehsan, Malaysia. Tel No: 03-7665-2778, Fax No: 03-7665-2779 E-mail: pkct88@gmail.com Website: www.kct.consulting</p>	<p>PROFESSIONAL ENGINEER CIVIL</p> <p>IR. TAN KIAN CHUAN C18378</p> <p>IR. AN KIAN CHUAN Petunding KCT Sdn. Bhd. 200501024042 (706174-M)</p>	<p>DRAWN BY : N.M.Cheong</p> <p>CHECKED BY : Brandon/Rosni/Amira</p> <p>APPROVED BY : Ir K.C.Tan</p> <p>SCALE : AS SHOWN</p> <p>DATE : MAR, 2023</p>	<p>PROJECT : PERMOHONAN IZIN LALU BAGI PEMASANGAN KABEL FIBER OPTIK DAN PENYEDIAAN RANGKAIAN PERKHIDMATAN JALUR LEBAR DI SEPANJANG LEBUHRAYA. PACKAGE NL05 - E1 : LEBUHRAYA UTARA-SELATAN (PLUS)</p> <p>UNTUK TETUAN: MSA RESOURCES SDN. BHD.</p> <p>DRAWING TITLE : PROPOSED FIBER OPTIC ALIGNMENT FOR SECTION KM267.6 - KM268.9</p> <p>PLAN NO. : MSAR/NL05/LP-189(R)</p> <p>REVISION : 0</p>
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LAYOUT PLAN ( E1\_KM267.6 - KM268.9 )  
SCALE 1 : 2000



LONGITUDINAL SECTION ( E1\_KM267.6 - KM268.9 )  
HORIZONTAL SCALE 1:2000  
VERTICAL SCALE 1:1000

LEGEND :

— FENCE	— WATER PIPE	— CELCOM CABLE	☀ HIGH MAST	⊕ LAMP POST
— ROW	— POWER CABLE	— DIGI CABLE	SB SIGN BOARD	□ BUILDING
— TELECOM CABLE	— TIME CABLE	— TELECOM CABLE		
— MAXIS CABLE	— GAS			
— PROPOSED HORIZONTAL DIRECTIONAL DRILLING (HDD)	— PROPOSED MANHOLE	— PROPOSED FIBRE OPTIC CABLE MARKER POST	⊕ TAMP TRAFFIC MANAGEMENT PLAN (TMP)	
— PROPOSED OPEN CUT MACHINE (OCM)	— PROPOSED JOINT BOX	— DRAINAGE CROSSING	⊕ FENCING OPENING	
— PROPOSED OPEN CUT MANUAL DIGGING (MD)	— PROPOSED MANUAL JOINT	— CULVERT CROSSING		
— PROPOSED CONCRETE ENCASED EXPOSED (CE)	— PROPOSED FIBRE OPTIC CABLE MARKER POST	— SLOPE AREA		
— PROPOSED CONCRETE ENCASED BURIED (CEB)	— DC			
— PROPOSED BRIDGE ATTACHMENT (BA)	— OCC			
— PROPOSED VEHICULAR BOX CULVERT ATTACHMENT (VBC)				

NOTE :

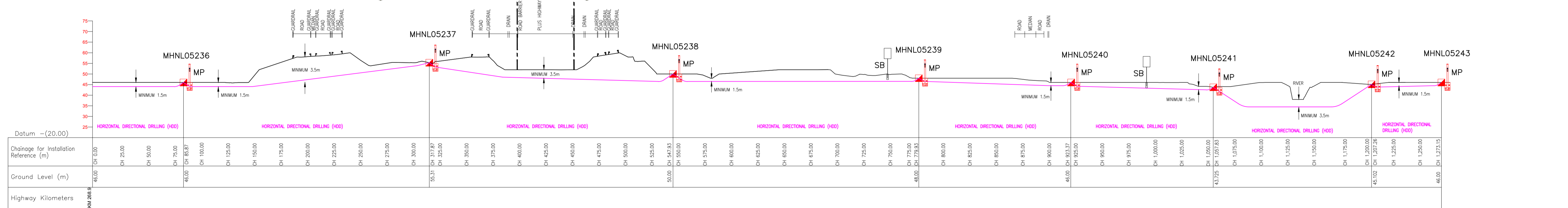
- Digital Terrain Model (DTM) data were used to generate and interpolate the contour levels depicted on the provided survey drawing. From the Digital Surface Model (DSM), only ground information has been classified or extracted. Consequently, contour trimming on the building footprint and other features, particularly outside R.O.W., was not performed.
- THE FIBRE OPTIC CABLE INSTALLATION AT THIS STRETCH (KM 268.3 – KM 275.0) WILL BE CARRIED OUT WITHIN JABATAN KERJA RAYA (JKR) PERAK RIGHT OF WAY (ROW)

CONSTRUCTION DRAWING

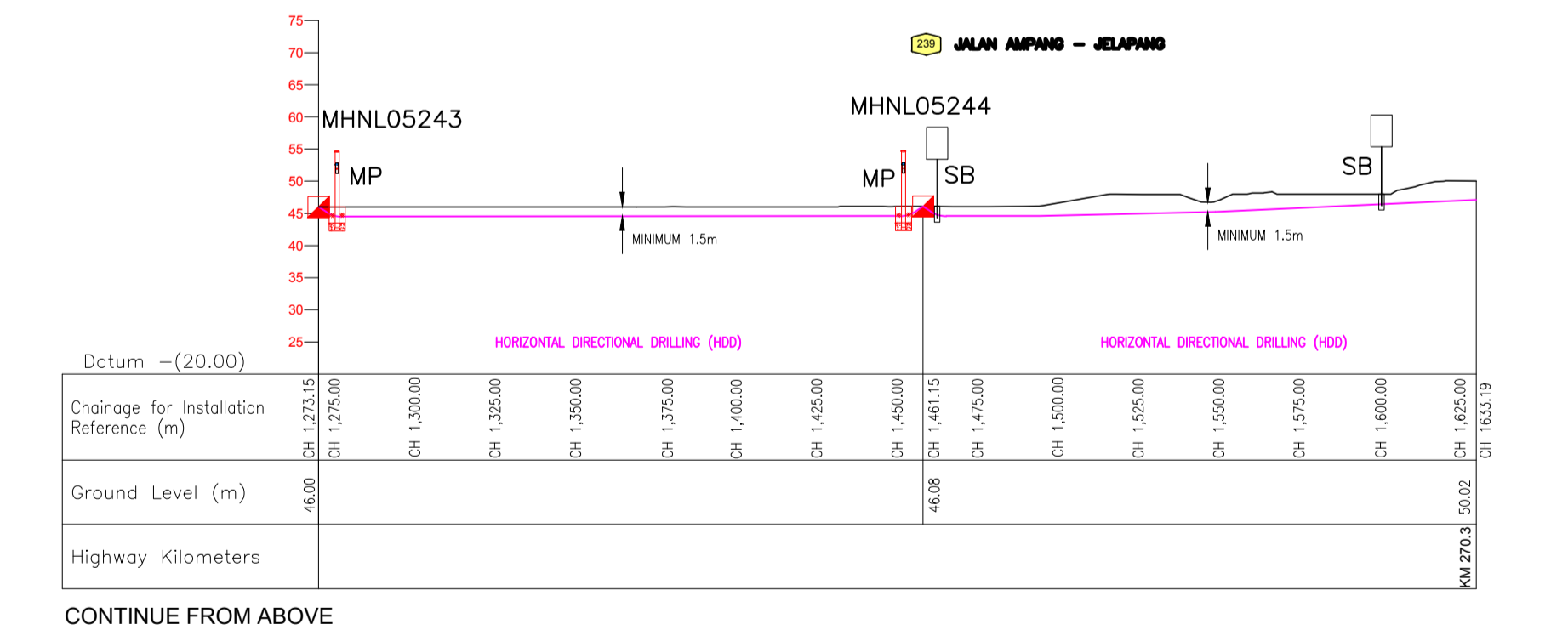
<p>LICENSED LAND SURVEYOR :</p> <p><b>JALAL JOHARI, ILLS</b> Lead Surveyor (Control Under Act 438 (Revised 1981)) <b>JALAL JOHARI CONSULTANTS SDN BHD</b> UG-13A, Lexa Galleria, No. 45, Jalan 34/26, 53300 Wangsa Maju, Kuala Lumpur. TEL : (603) 2701 7761 FAX : (603) 2701 7760</p>	<p>PROJECT OWNER :</p> <p><b>MSA RESOURCES SDN BHD</b> Unit A-16-B, Level 16, Tower A, Menara UOA Bangsar, 29, Jalan Bangsar Utama 1, Bangsar, 59000 Kuala Lumpur. TEL : (603) 2720 3040 FAX : (603) 2700 4272</p>	<p>PROJECT MANAGEMENT CONSULTANT (TECHNICAL)</p> <p><b>JURUTERA PERUNDING MIHARA</b> No. 23B, Jalan BP7/12, Bandar Bukit Puchong, 47120 Puchong, Selangor Darul Ehsan, MALAYSIA. TEL : (603) 8090 0773 FAX : (603) 8066 6564</p>	<p>DESIGNATED DESIGN CONSULTANT (C&amp;S)</p> <p><b>KCT CONSULTING ENGINEERS</b> No. 609, Block A, Philco Damansara 1, Jalan 16/11, Seksyen 16, 46350, Petaling Jaya, Selangor Darul Ehsan, Malaysia. Tel No: 03-7665-2778, Fax No: 03-7665-2779 E-mail: pkct88@gmail.com Website: www.kct.consulting</p>	<p>PROFESSIONAL ENGINEER CIVIL</p> <p><b>IR. TAN KIAN CHUAN</b> C18378 MALAYSIA</p>	<p>DRAWN BY : N.M.Cheong CHECKED BY : Brandon/Rosni/Amira APPROVED BY : Ir K.C.Tan SCALE : AS SHOWN DATE : MAR, 2023</p>	<p>PROJECT : PERMOHONAN IZIN LALU BAGI PEMASANGAN KABEL FIBER OPTIK DAN PENYEDIAAN RANGKAIAN PERKHIDMATAN JALUR LEBAR DI SEPANJANG LEBUHRAYA. PACKAGE NL05 - E1 : LEBUHRAYA UTARA-SELATAN (PLUS) UNTUK TETUAN: MSA RESOURCES SDN. BHD. DRAWING TITLE : PROPOSED FIBER OPTIC ALIGNMENT FOR SECTION KM267.6 - KM268.9 PLAN NO. : MSAR/NL05/LP-189(V)</p>	<p>REVISION : 0</p>
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LAYOUT PLAN (E1\_KM268.9 - KM270.3) SCALE 1 : 2000



LONGITUDINAL SECTION (E1\_KM268.9 - KM270.3) HORIZONTAL SCALE 1:2000 VERTICAL SCALE 1:1000



CONTINUE FROM ABOVE

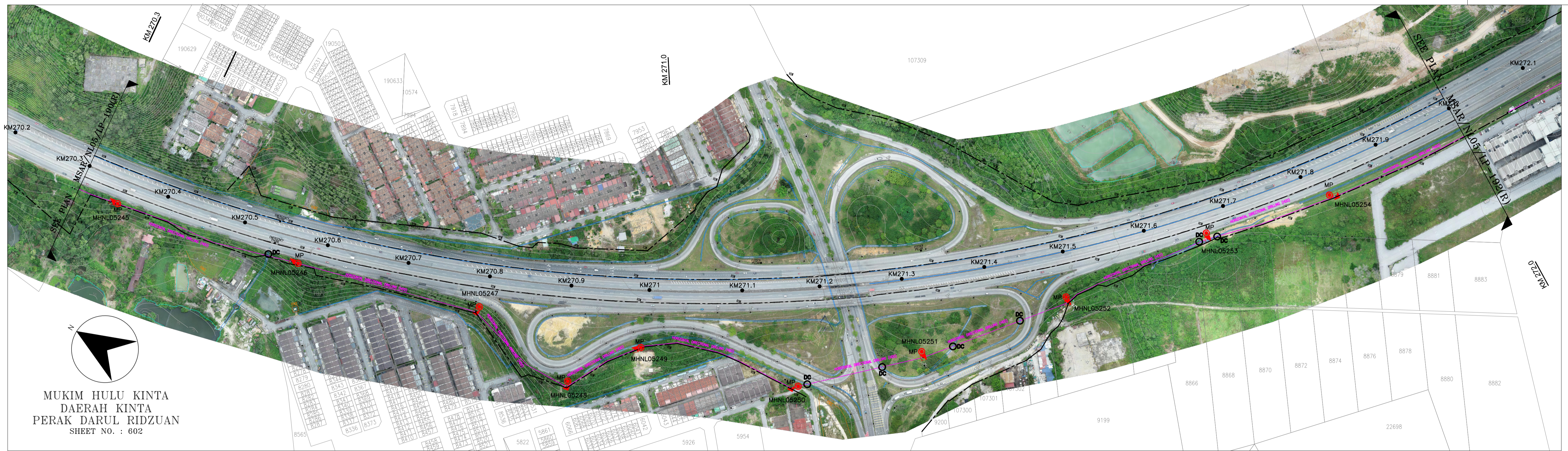
- NOTE :
- Digital Terrain Model (DTM) data were used to generate and interpolate the contour levels depicted on the provided survey drawing. From the Digital Surface Model (DSM), only ground information has been classified or extracted. Consequently, contour trimming on the building footprint and other features, particularly outside R.O.W., was not performed.
  - THE FIBRE OPTIC CABLE INSTALLATION AT THIS STRETCH (KM 268.3 - KM 275.0) WILL BE CARRIED OUT WITHIN JABATAN KERJA RAYA (JKR) PERAK RIGHT OF WAY (ROW)

<p>LEGEND :</p> <ul style="list-style-type: none"> <li>— FENCE</li> <li>— ROW</li> <li>— WATER PIPE</li> <li>— POWER CABLE</li> <li>— TIME CABLE</li> <li>— MAXIS CABLE</li> <li>— CELCOM CABLE</li> <li>— DIGI CABLE</li> <li>— TELECOM CABLE</li> <li>— GAS</li> <li>☀ HIGH MAST</li> <li>⊕ LAMP POST</li> <li>SB SIGN BOARD</li> <li>□ BUILDING</li> <li>⊙ PROPOSED MANHOLE</li> <li>⊙ PROPOSED JOINT BOX</li> <li>⊙ PROPOSED MANUAL JOINT</li> <li>⊙ PROPOSED FIBRE OPTIC CABLE MARKER POST</li> <li>⊙ DC DRAINAGE CROSSING</li> <li>⊙ CC CULVERT CROSSING</li> <li>⊙ TMP TRAFFIC MANAGEMENT PLAN (TMP)</li> <li>⊙ FFO FENCING OPENING</li> <li>⊙ FEEDB PROPOSED FIBER EXTERNAL DISTRIBUTION BOX</li> <li>⊙ SLOPE AREA</li> </ul>	<p>PROPOSED HORIZONTAL DIRECTIONAL DRILLING (HDD)</p> <p>PROPOSED OPEN CUT MACHINE (OCM)</p> <p>PROPOSED OPEN CUT MANUAL DIGGING (MD)</p> <p>PROPOSED CONCRETE ENCASED EXPOSED (CEEX)</p> <p>PROPOSED CONCRETE ENCASED BURIED (CEB)</p> <p>PROPOSED BRIDGE ATTACHMENT (BA)</p> <p>PROPOSED VEHICULAR BOX CULVERT ATTACHMENT (VBC)</p>
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CONSTRUCTION DRAWING

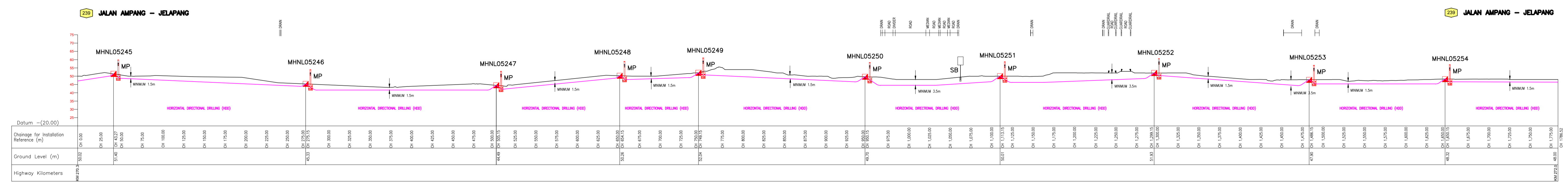
<p>LICENSED LAND SURVEYOR :</p> <p><b>JALAL JOHARI CONSULTANTS SDN BHD</b></p> <p>Sr. JALAL JOHARI, ILLS</p> <p>Unit A-13A, Lexa Galleria, No. 45, Jalan 34/26, 53300 Wangsa Maju, Kuala Lumpur. TEL : (603) 2701 7761 FAX : (603) 2701 7760</p>	<p>PROJECT OWNER :</p> <p><b>MSA RESOURCES SDN BHD</b></p> <p>MOHD SOFIAN BIN MOHD ARSHAD (IC No : 580108-08-6381)</p> <p>Unit A-16-B, Level 16, Tower A, Menara UOA Bangsar, Jalan Bangsar Utama 1, Bangsar, 59000 Kuala Lumpur. TEL : (603) 2720 3040 FAX : (603) 2700 4272</p>	<p>PROJECT MANAGEMENT CONSULTANT (TECHNICAL)</p> <p><b>JURUTERA PERUNDING MIHARA</b></p> <p>Ir. ABDUL RAHIM BIN ABDUL RAHIM OSMAN</p> <p>No. 23B, Jalan BP7/12, Bandar Bukit Puchong, 47120 Puchong, Selangor Darul Ehsan, TEL : (603) 8090 0773 FAX : (603) 8066 6564</p>	<p>DESIGNATED DESIGN CONSULTANT (C&amp;S)</p> <p><b>KCT CONSULTING ENGINEERS</b></p> <p>IR. TAN KIAN CHUAN</p> <p>C18378</p> <p>IR. TAN KIAN CHUAN <b>Petunding KCT Sdn. Bhd.</b> 200501024042 (706174-M)</p> <p>609, Block A, Philco Damansara 1, Jalan 16/11, Seksyen 16, 46350, Petaling Jaya, Selangor Darul Ehsan, Malaysia. Tel No 03-7665-2778, Fax No 03-7665-2779 E-mail: pkct88@gmail.com Website: www.kct.consulting</p>	<p>DRAWN BY : N.M.Cheong</p> <p>CHECKED BY : Brandon/Rosni/Amira</p> <p>APPROVED BY : Ir K.C.Tan</p> <p>SCALE : AS SHOWN</p> <p>DATE : MAR, 2023</p>	<p>PROJECT : PERMOHONAN IZIN LALU BAGI PEMASANGAN KABEL FIBER OPTIK DAN PENYEDIAAN RANGKAIAN PERKHIDMATAN JALUR LEBAR DI SEPANJANG LEBUHRAYA. PACKAGE NL05 - E1 : LEBUHRAYA UTARA-SELATAN (PLUS)</p> <p>UNTUK TETUAN: MSA RESOURCES SDN. BHD.</p> <p>DRAWING TITLE : PROPOSED FIBER OPTIC ALIGNMENT FOR SECTION KM268.9 - KM270.3</p> <p>PLAN NO. : MSAR/NL05/1P-190(R)</p> <p>REVISION : 0</p>
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MUKIM HULU KINTA  
DAERAH KINTA  
PERAK DARUL RIDZUAN  
SHEET NO. : 602

LAYOUT PLAN ( E1\_KM270.3 - KM272.0 )  
SCALE 1 : 2500



LONGITUDINAL SECTION ( E1\_KM270.3 - KM272.0 )  
HORIZONTAL SCALE 1:2000  
VERTICAL SCALE 1:1000

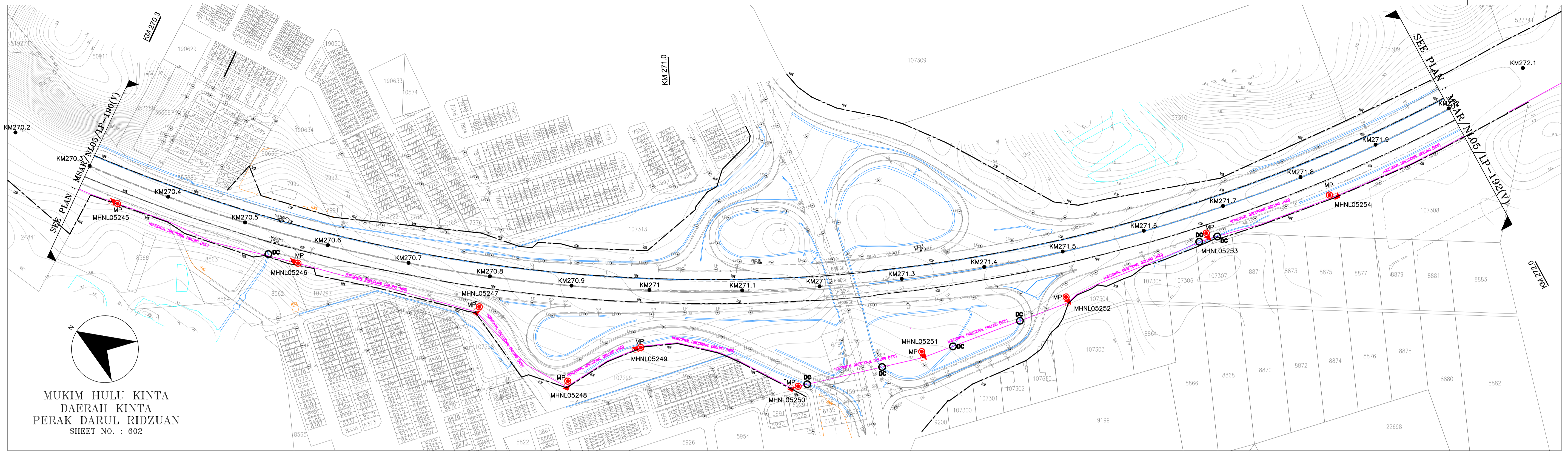
NOTE :

- Digital Terrain Model (DTM) data were used to generate and interpolate the contour levels depicted on the provided survey drawing. From the Digital Surface Model (DSM), only ground information has been classified or extracted. Consequently, contour trimming on the building footprint and other features, particularly outside R.O.W., was not performed.
- THE FIBRE OPTIC CABLE INSTALLATION AT THIS STRETCH (KM 268.3 - KM 275.0) WILL BE CARRIED OUT WITHIN JABATAN KERJA RAYA (JKR) PERAK RIGHT OF WAY (ROW)

LEGEND :	
--- FENCE	--- WATER PIPE
--- ROW	--- POWER CABLE
--- TELECOM CABLE	--- TIME CABLE
--- Maxis CABLE	--- GAS
--- CELCOM CABLE	--- DIGI CABLE
--- TELECOM CABLE	--- GAS
☀ HIGH MAST	⊕ LAMP POST
SB SIGN BOARD	□ BUILDING
⊕ PROPOSED MANHOLE	⊕ TRAFFIC MANAGEMENT PLAN (TMP)
⊕ PROPOSED JOINT BOX	⊕ FENCING OPENING
⊕ PROPOSED MANUAL JOINT	
⊕ PROPOSED FIBRE OPTIC CABLE MARKER POST	
⊕ DRAINAGE CROSSING	⊕ PROPOSED FIBER EXTERNAL DISTRIBUTION BOX
⊕ DC CULVERT CROSSING	⊕ SLOPE AREA

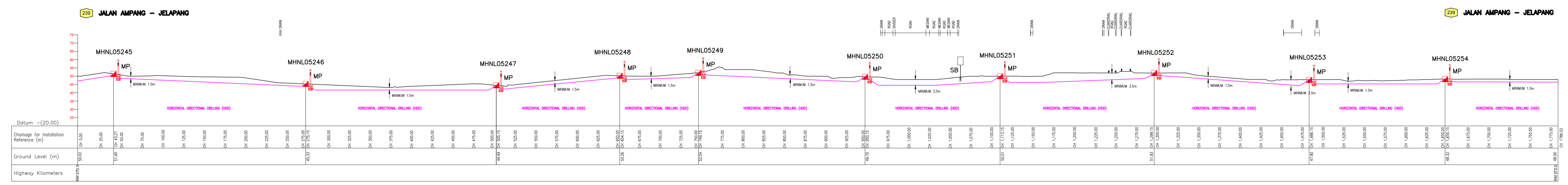
CONSTRUCTION DRAWING

<p>LICENSED LAND SURVEYOR :</p> <p><b>JALAL JOHARI CONSULTANTS SDN BHD</b> Unit A-13A, Lexa Galleria, No. 45, Jalan 54/26, 53300 Wangsa Maju, Kuala Lumpur. TEL : (603) 2701 7761 FAX : (603) 2701 7760</p>	<p>PROJECT OWNER :</p> <p><b>MSA RESOURCES SDN BHD</b> Unit A-16-B, Level 16, Tower A, Menara UOA Bangsar, 29, Jalan Bangsar Utama 1, Bangsar, 59000 Kuala Lumpur. TEL : (603) 2720 3040 FAX : (603) 2700 4272</p>	<p>PROJECT MANAGEMENT CONSULTANT (TECHNICAL) :</p> <p><b>JURUTERA PERUNDING MIHARA</b> No. 23B, Jalan BP7/12, Bandar Bukit Puchong, 47120 Puchong, Selangor Darul Ehsan, Kuala Lumpur. TEL : (603) 8090 0773 FAX : (603) 8066 6564</p>	<p>DESIGNATED DESIGN CONSULTANT (C&amp;S) :</p> <p><b>KCT CONSULTING ENGINEERS</b> IR. TAN KIAN CHUAN C18378 Petunding KCT Sdn. Bhd. 200501024042 (706174-M) 609, Block A, Philco Damansara 1, Jalan 16/11, Seksyen 16, 46350, Petaling Jaya, Selangor Darul Ehsan, Malaysia. Tel No:03-7665-2778, Fax No:03-7665-2779 E-mail: pkct88@gmail.com Website: www.kct.consulting</p>	<p>DRAWN BY : N.M.Cheong CHECKED BY : Brandon/Rosni/Amira APPROVED BY : Ir K.C.Tan SCALE : AS SHOWN DATE : MAR,2023</p>	<p>PROJECT : PERMOHONAN IZIN LALU BAGI PEMASANGAN KABEL FIBER OPTIK DAN PENYEDIAAN RANGKAIAN PERKHIDMATAN JALUR LEBAR DI SEPANJANG LEBUHRAYA. PACKAGE NL05 - E1 : LEBUHRAYA UTARA-SELATAN (PLUS) UNTUK TETUAN: MSA RESOURCES SDN. BHD. DRAWING TITLE : PROPOSED FIBER OPTIC ALIGNMENT FOR SECTION KM270.3 - KM272.0 PLAN NO. : MSAR/NL05/ILP-191(R) REVISION : 0</p>
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MUKIM HULU KINTA  
DAERAH KINTA  
PERAK DARUL RIDZUAN  
SHEET NO. : 602

LAYOUT PLAN ( E1\_KM270.3 - KM272.0 )  
SCALE 1 : 2500



LONGITUDINAL SECTION ( E1\_KM270.3 - KM272.0 )  
HORIZONTAL SCALE 1:2000  
VERTICAL SCALE 1:1000

NOTE :

- Digital Terrain Model (DTM) data were used to generate and interpolate the contour levels depicted on the provided survey drawing. From the Digital Surface Model (DSM), only ground information has been classified or extracted. Consequently, contour trimming on the building footprint and other features, particularly outside R.O.W., was not performed.
- THE FIBRE OPTIC CABLE INSTALLATION AT THIS STRETCH (KM 268.3 - KM 275.0) WILL BE CARRIED OUT WITHIN JABATAN KERJA RAYA (JKR) PERAK RIGHT OF WAY (ROW)

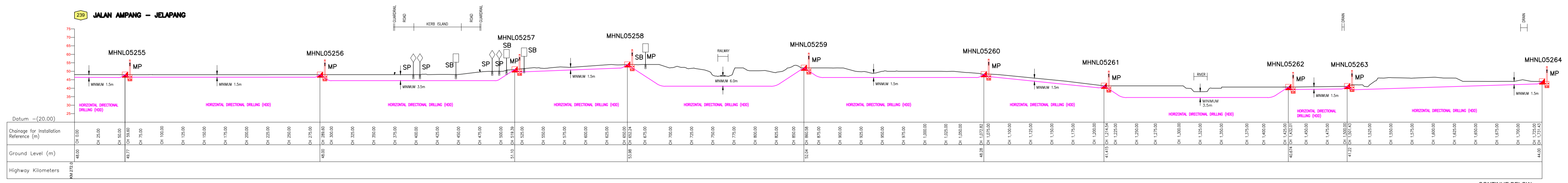
LEGEND :		HIGH MAST		LAMP POST	
--- FENCE	--- WATER PIPE	☀	☀	☀	☀
--- ROW	--- POWER CABLE	☀	☀	☀	☀
	--- TIME CABLE	☀	☀	☀	☀
	--- MAXIS CABLE	☀	☀	☀	☀
	--- CELCOM CABLE	☀	☀	☀	☀
	--- DIGI CABLE	☀	☀	☀	☀
	--- TELECOM CABLE	☀	☀	☀	☀
	--- GAS	☀	☀	☀	☀
--- PROPOSED HORIZONTAL DIRECTIONAL DRILLING (HDD)	☑ PROPOSED MANHOLE	☑	☑	☑	☑
--- PROPOSED OPEN CUT MACHINE (OCM)	☑ PROPOSED JOINT BOX	☑	☑	☑	☑
--- PROPOSED OPEN CUT MANUAL DIGGING (MD)	☑ PROPOSED MANUAL JOINT	☑	☑	☑	☑
--- PROPOSED CONCRETE ENCASED EXPOSED (CEEX)	☑ PROPOSED FIBRE OPTIC CABLE MARKER POST	☑	☑	☑	☑
--- PROPOSED CONCRETE ENCASED BURIED (CEB)	☑ DRAINAGE CROSSING	☑	☑	☑	☑
--- PROPOSED CONCRETE ENCASED (BA)	☑ CULVERT CROSSING	☑	☑	☑	☑
--- PROPOSED VEHICULAR BOX CULVERT ATTACHMENT (VBC)	☑ PROPOSED FIBER EXTERNAL DISTRIBUTION BOX	☑	☑	☑	☑
	☑ SLOPE AREA	☑	☑	☑	☑
	☑ TRAFFIC MANAGEMENT PLAN (TMP)	☑	☑	☑	☑
	☑ FENCING OPENING	☑	☑	☑	☑

CONSTRUCTION DRAWING

<p>LICENSED LAND SURVEYOR :</p> <p><b>JALAL JOHARI CONSULTANTS SDN BHD</b> Unit A-13A, Lexa Galleria, No. 45, Jalan 34/26, 53300 Wangsa Maju, Kuala Lumpur. TEL : (603) 2701 7761 FAX : (603) 2701 7760</p>	<p>PROJECT OWNER :</p> <p><b>MSA RESOURCES SDN BHD</b> Unit A-16-B, Level 16, Tower A, Menara UOA Bangsar, 25, Jalan Bangsar Utama 1, Bangsar, 59000 Kuala Lumpur. TEL : (603) 2720 3040 FAX : (603) 2700 4272</p>	<p>PROJECT MANAGEMENT CONSULTANT (TECHNICAL)</p> <p><b>JURUTERA PERUNDING MIHARA</b> No. 23B, Jalan BP7/12, Sektor Bukit Puchong, 47120 Puchong, Selangor Darul Ehsan, MALAYSIA. TEL : (603) 8090 0773 FAX : (603) 8066 6564</p>	<p>DESIGNATED DESIGN CONSULTANT (C&amp;S) :</p> <p><b>KCT CONSULTING ENGINEERS</b> IR. TAN KIAN CHUAN C18378 No. 609, Block A, Philco Damansara 1, Jalan 16/11, Seksyen 16, 46350, Petaling Jaya, Selangor Darul Ehsan, Malaysia. Tel No: 03-7665-2778, Fax No: 03-7665-2779 E-mail: pkct88@gmail.com Website: www.kct.consulting</p>	<p>DRAWN BY : N.M.Cheong CHECKED BY : Brandon/Rosni/Amira APPROVED BY : Ir K.C.Tan SCALE : AS SHOWN DATE : MAR, 2023</p>	<p>PROJECT : PERMOHONAN IZIN LALU BAGI PEMASANGAN KABEL FIBER OPTIK DAN PENYEDIAAN RANGKAIAN PERKHIDMATAN JALUR LEBAR DI SEPANJANG LEBUHRAYA. PACKAGE NL05 - E1 : LEBUHRAYA UTARA-SELATAN (PLUS) UNTUK TETUAN: MSA RESOURCES SDN. BHD. DRAWING TITLE : PROPOSED FIBER OPTIC ALIGNMENT FOR SECTION KM270.3 - KM272.0 PLAN NO. : MSAR/NL05/1P-191(V)</p>	<p>REVISION : 0</p>
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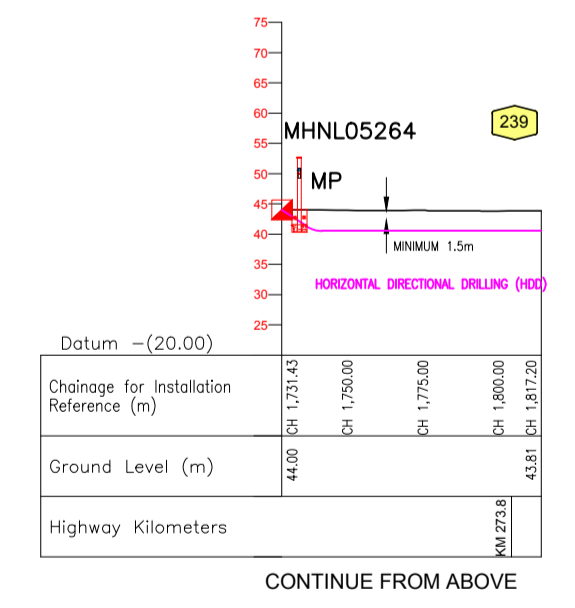
LAYOUT PLAN ( E1\_KM272.0 - KM273.8 )  
SCALE 1 : 2500



LONGITUDINAL SECTION ( E1\_KM272.0 - KM273.8 )  
HORIZONTAL SCALE 1:2500  
VERTICAL SCALE 1:1250

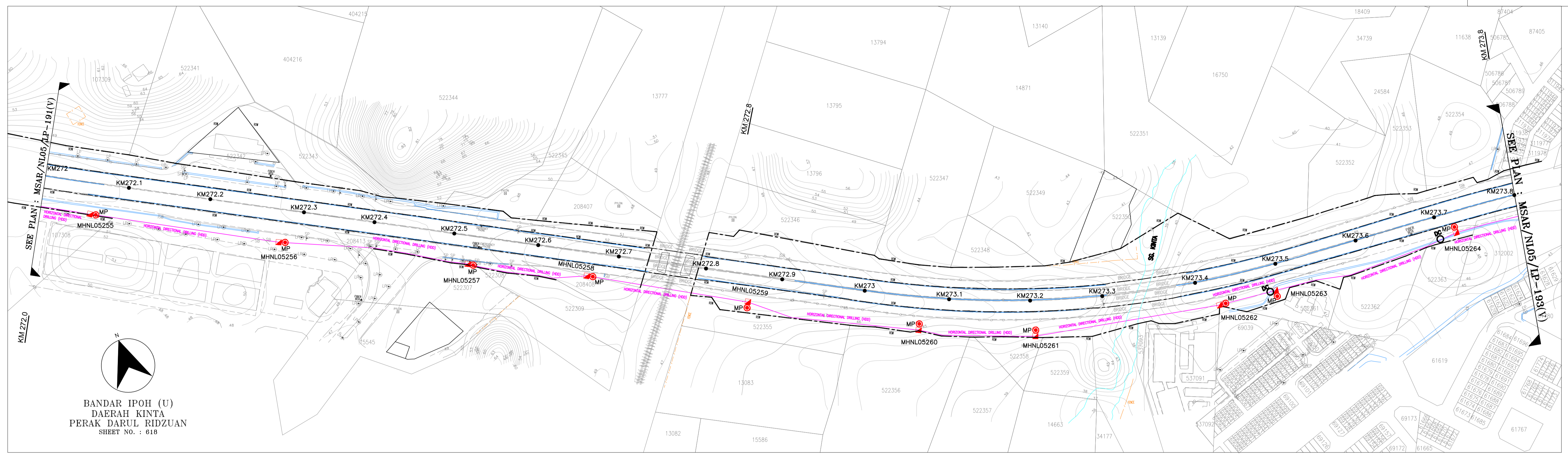
- NOTE :
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  - THE FIBRE OPTIC CABLE INSTALLATION AT THIS STRETCH (KM 268.3 – KM 275.0) WILL BE CARRIED OUT WITHIN JABATAN KERJA RAYA (JKR) PERAK RIGHT OF WAY (ROW)

LEGEND :					
--- FENCE	--- WATER PIPE	--- CELCOM CABLE	☀ HIGH MAST	⊕ LAMP POST	
--- ROW	--- POWER CABLE	--- DIGI CABLE	SB SIGN BOARD	□ BUILDING	
	--- TIME CABLE	--- TELECOM CABLE			
	--- MAXIS CABLE	--- GAS			
--- PROPOSED HORIZONTAL DIRECTIONAL DRILLING (HDD)	☑ PROPOSED MANHOLE	⊕ TMP TRAFFIC MANAGEMENT PLAN (TMP)			
--- PROPOSED OPEN CUT MACHINE (OCM)	☑ PROPOSED JOINT BOX	⊕ FO FENCING OPENING			
--- PROPOSED OPEN CUT MANUAL DIGGING (MD)	☑ PROPOSED MANUAL JOINT				
--- PROPOSED CONCRETE ENCASED EXPOSED (CEEX)	☑ PROPOSED FIBRE OPTIC CABLE MARKER POST				
--- PROPOSED CONCRETE ENCASED BURIED (CEB)	☑ DRAINAGE CROSSING	☑ FEEDB PROPOSED FIBER EXTERNAL DISTRIBUTION BOX			
--- PROPOSED BRIDGE ATTACHMENT (BA)	☑ CULVERT CROSSING				
--- PROPOSED VEHICULAR BOX CULVERT ATTACHMENT (VBC)					

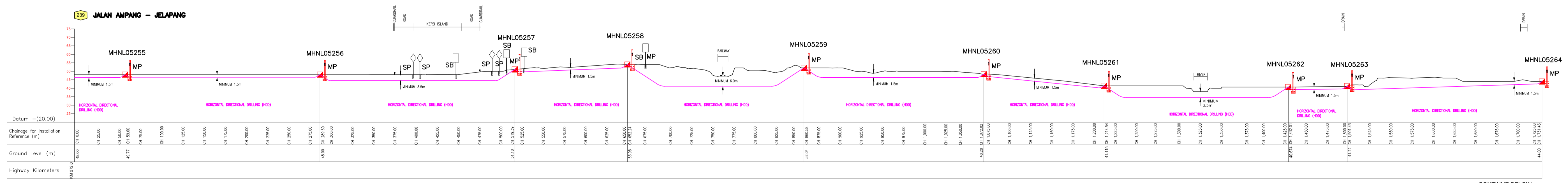


CONSTRUCTION DRAWING

<p>LICENSED LAND SURVEYOR :</p> <p><b>JALAL JOHARI CONSULTANTS SDN BHD</b> Unit A-13A, Lexa Galleria, No. 45, Jalan 34/26, 53300 Wangsa Maju, Kuala Lumpur. TEL : (603) 2701 7761 FAX : (603) 2701 7760</p>	<p>PROJECT OWNER :</p> <p><b>MSA RESOURCES SDN BHD</b> Unit A-16-B, Level 16, Tower A, Menara UOA Bangsar, 29, Jalan Bangsar Utama 1, Bangsar, 59000 Kuala Lumpur. TEL : (603) 2720 3040 FAX : (603) 2700 4272</p>	<p>PROJECT MANAGEMENT CONSULTANT (TECHNICAL)</p> <p><b>JURUTERA PERUNDING MIHARA</b> No. 23B, Jalan BP7/12, Bandar Bukit Puchong, 47120 Puchong, Selangor Darul Ehsan, Kuala Lumpur. TEL : (603) 8090 0773 FAX : (603) 8066 6564</p>	<p>DESIGNATED DESIGN CONSULTANT (C&amp;S)</p> <p><b>Petunding KCT Sdn. Bhd.</b> 200501024042 (706174-M) 609, Block A, Philco Damansara 1, Jalan 16/11, Seksyen 16, 46350, Petaling Jaya, Selangor Darul Ehsan, Malaysia. Tel No:03-7665-2778, Fax No:03-7665-2779 E-mail: pckct88@gmail.com Website: www.kct.consulting</p>	<p>DRAWN BY : N.M.Cheong CHECKED BY : Brandon/Rosni/Amira APPROVED BY : Ir K.C.Tan SCALE : AS SHOWN DATE : MAR, 2023</p>	<p>PROJECT : PERMOHONAN IZIN LALU BAGI PEMASANGAN KABEL FIBER OPTIK DAN PENYEDIAAN RANGKAIAN PERKHIDMATAN JALUR LEBAR DI SEPANJANG LEBUHRAYA. PACKAGE NL05 - E1 : LEBUHRAYA UTARA-SELATAN (PLUS) UNTUK TETUAN: MSA RESOURCES SDN. BHD. DRAWING TITLE : PROPOSED FIBER OPTIC ALIGNMENT FOR SECTION KM272.0 - KM273.8 PLAN NO. : MSAR/NL05/PL-192(R)</p>	<p>REVISION : 0</p>
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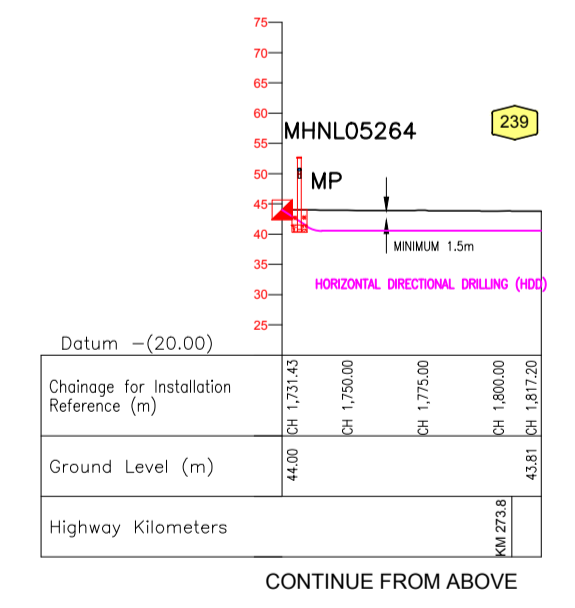
LAYOUT PLAN ( E1\_KM272.0 - KM273.8 )  
SCALE 1 : 2500



LONGITUDINAL SECTION ( E1\_KM272.0 - KM273.8 )  
HORIZONTAL SCALE 1:2500  
VERTICAL SCALE 1:1250

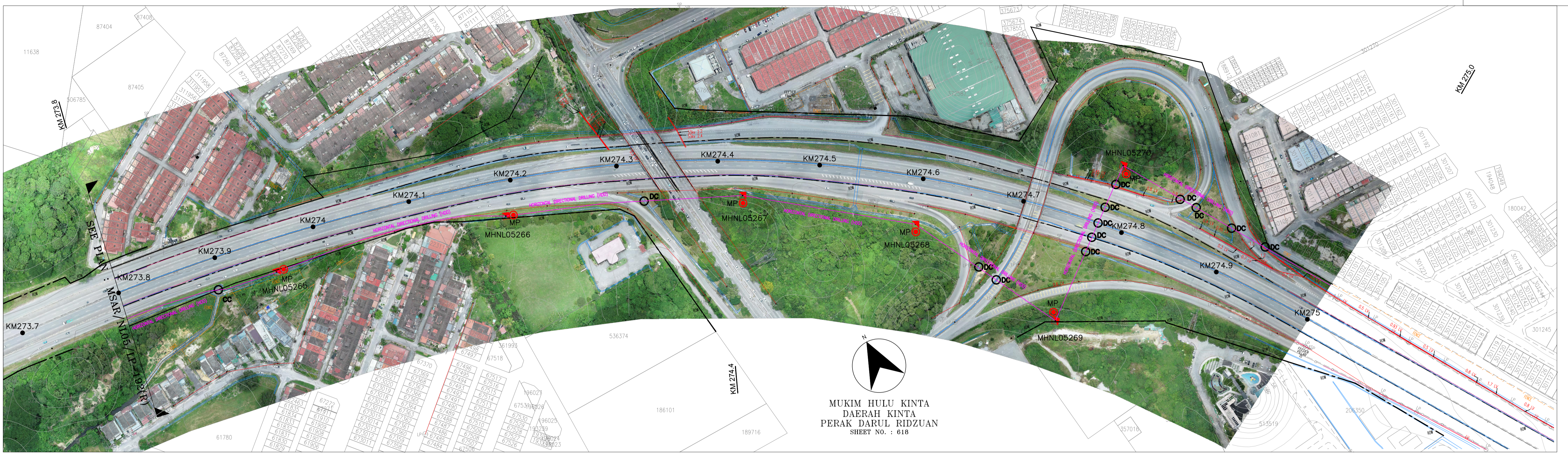
- NOTE :
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  - THE FIBRE OPTIC CABLE INSTALLATION AT THIS STRETCH (KM 268.3 - KM 275.0) WILL BE CARRIED OUT WITHIN JABATAN KERJA RAYA (JKR) PERAK RIGHT OF WAY (ROW)

LEGEND :	
--- FENCE	--- WATER PIPE
--- ROW	--- POWER CABLE
--- TELECOM CABLE	--- DIGI CABLE
--- Maxis Cable	--- TELECOM CABLE
--- PROPOSED HORIZONTAL DIRECTIONAL DRILLING (HDD)	--- PROPOSED MANHOLE
--- PROPOSED OPEN CUT MACHINE (OCM)	--- PROPOSED JOINT BOX
--- PROPOSED OPEN CUT MANUAL DIGGING (MD)	--- PROPOSED MANUAL JOINT
--- PROPOSED CONCRETE ENCASED EXPOSED (CEEX)	--- PROPOSED FIBRE OPTIC CABLE MARKER POST
--- PROPOSED CONCRETE ENCASED BURIED (CEB)	--- DRAINAGE CROSSING
--- PROPOSED BRIDGE ATTACHMENT (BA)	--- CULVERT CROSSING
--- PROPOSED VEHICULAR BOX CULVERT ATTACHMENT (VBC)	--- HIGH MAST
	--- LAMP POST
	--- SIGN BOARD
	--- BUILDING
	--- TRAFFIC MANAGEMENT PLAN (TMP)
	--- FENCING OPENING
	--- PROPOSED FIBER EXTERNAL DISTRIBUTION BOX
	--- SLOPE AREA



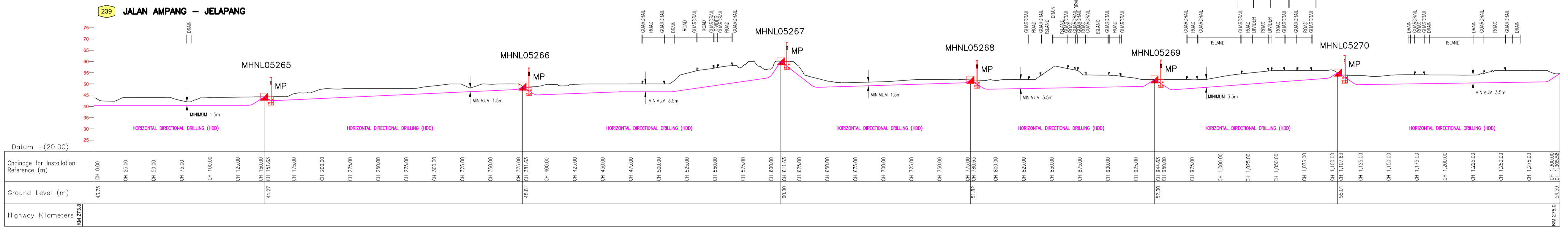
CONSTRUCTION DRAWING

<p>LICENSED LAND SURVEYOR :</p> <p><b>JALAL JOHARI CONSULTANTS SDN BHD</b> Unit A-13A, Lexa Galleria, No. 45, Jalan 34/26, 53300 Wangsa Maju, Kuala Lumpur. TEL : (603) 2701 7761 FAX : (603) 2701 7760</p>	<p>PROJECT OWNER :</p> <p><b>MSA RESOURCES SDN BHD</b> Unit A-16-B, Level 16, Tower A, Menara UOA Bangsar, 25, Jalan Bangsar Utama 1, Bangsar, 59000 Kuala Lumpur. TEL : (603) 2720 3040 FAX : (603) 2700 4272</p>	<p>PROJECT MANAGEMENT CONSULTANT (TECHNICAL)</p> <p><b>JURUTERA PERUNDING MIHARA</b> No. 23B, Jalan BP7/12, Bandar Bukit Puchong, 47120 Puchong, Selangor Darul Ehsan, MELAYU. TEL : (603) 8090 0773 FAX : (603) 8066 6564</p>	<p>DESIGNATED DESIGN CONSULTANT (C&amp;S)</p> <p><b>KCT CONSULTING ENGINEERS</b> No. 609, Block A, Philco Damansara 1, Jalan 16/11, Seksyen 16, 46350, Petaling Jaya, Selangor Darul Ehsan, Malaysia. Tel No: 03-7665-2778, Fax No: 03-7665-2779 E-mail: p.kct88@gmail.com Website: www.kct.consulting</p>	<p>DRAWN BY : N.M.Cheong CHECKED BY : Brandon/Rosni/Amira APPROVED BY : Ir K.C.Tan SCALE : AS SHOWN DATE : MAR, 2023</p>	<p>PROJECT : PERMOHONAN IZIN LALU BAGI PEMASANGAN KABEL FIBER OPTIK DAN PENYEDIAAN RANGKAIAN PERKHIDMATAN JALUR LEBAR DI SEPANJANG LEBUHRAYA. PACKAGE NL05 - E1 : LEBUHRAYA UTARA-SELATAN (PLUS) UNTUK TETUAN: MSA RESOURCES SDN. BHD. DRAWING TITLE : PROPOSED FIBER OPTIC ALIGNMENT FOR SECTION KM272.0 - KM273.8 PLAN NO. : MSAR/NI05/ILP-192(V)</p>	<p>REVISION : 0</p>
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MUKIM HULU KINTA  
DAERAH KINTA  
PERAK DARUL RIDZUAN  
SHEET NO. : 618

LAYOUT PLAN ( E1\_KM273.8 - KM275.0 )  
SCALE 1 : 2000



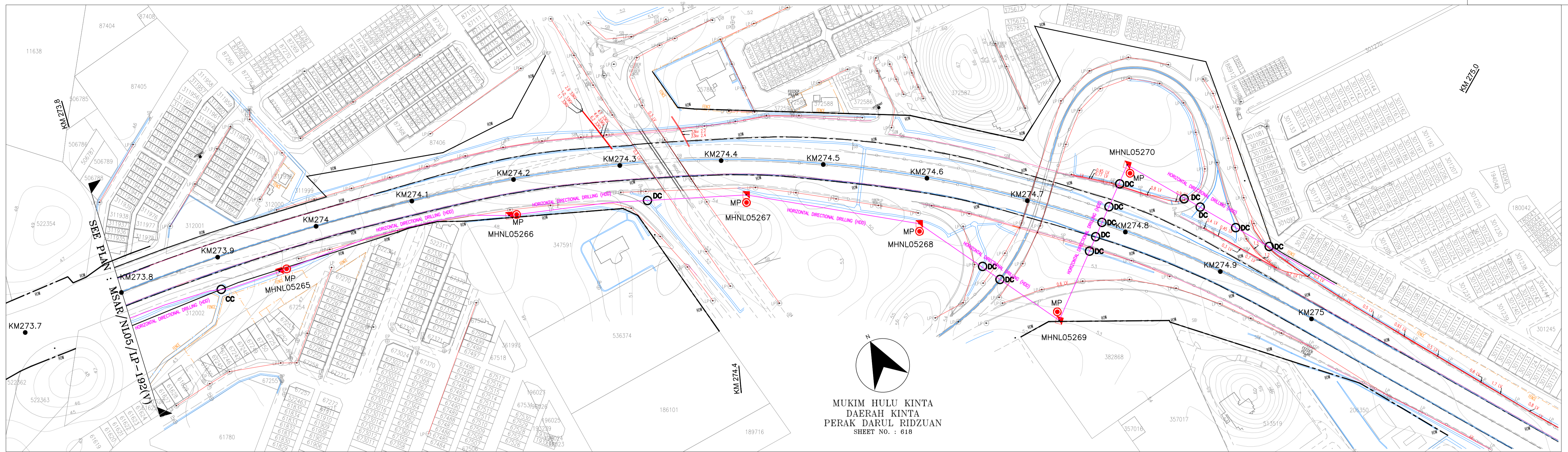
LONGITUDINAL SECTION ( E1\_KM273.8 - KM275.0 )  
HORIZONTAL SCALE 1:2000  
VERTICAL SCALE 1:1000

- NOTE :
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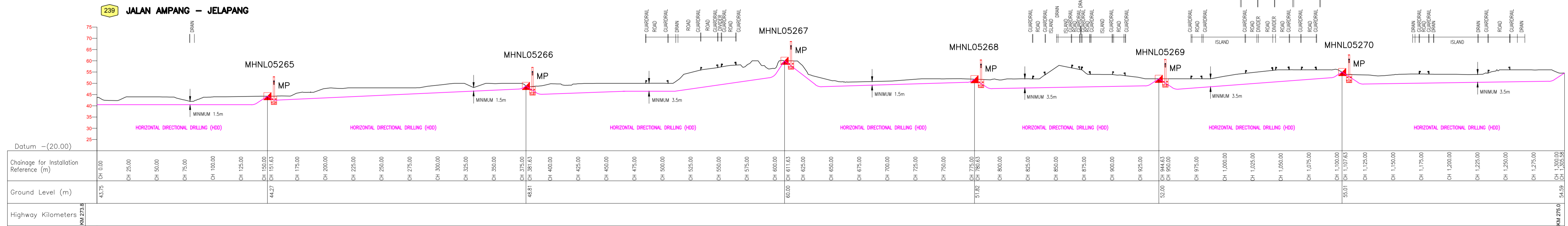
LEGEND :			
	FENCE		WATER PIPE
	ROW		POWER CABLE
	DIGI CABLE		TIME CABLE
	TELECOM CABLE		MAXIS CABLE
	CELCOM CABLE		HIGH MAST
	LAMP POST		SIGN BOARD
	PROPOSED MANHOLE		TRAFFIC MANAGEMENT PLAN (TMP)
	PROPOSED JOINT BOX		FENCING OPENING
	PROPOSED MANUAL JOINT		PROPOSED FIBER EXTERNAL DISTRIBUTION BOX
	PROPOSED FIBRE OPTIC CABLE MARKER POST		SLOPE AREA
	DRAINAGE CROSSING		
	CULVERT CROSSING		

CONSTRUCTION DRAWING

<p>REVISIONS:</p> <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DETAIL</th> <th>APPROVE</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	NO.	DATE	DETAIL	APPROVE					<p>LICENSED LAND SURVEYOR :</p> <p><b>JALAL JOHARI CONSULTANTS SDN BHD</b>          UG-13A, Lexa Galleria,          No. 45, Jalan 34/26, 53300 Wangsa Maju,          Kuala Lumpur.          TEL : (603) 2701 7761          FAX : (603) 2701 7760</p>	<p>PROJECT OWNER :</p> <p><b>MSA RESOURCES SDN BHD</b>          Unit A-16-8, Level 16, Tower A, Menara UDA Bangsar,          5, Jalan Bangsar Utama 1, Bangsar,          59000 Kuala Lumpur.          TEL : (603) 2720 3040          FAX : (603) 2700 4272</p>	<p>PROJECT MANAGEMENT CONSULTANT (TECHNICAL)</p> <p><b>JURUTERA PERUNDING MIHARA</b>          No. 23B, Jalan BE7/10, Bandar Bukit Puchong,          47120 Puchong, Selangor Darul Ehsan, Malaysia.          TEL : (603) 8090 0784          FAX : (603) 8066 6564</p>	<p>DESIGNATED DESIGN CONSULTANT (C&amp;S)</p> <p><b>Perunding KCT Sdn. Bhd.</b>          200501024042 (706174-M)          609, Block A, Phileo Damansara 1, Jalan 16/11, Seksyen          16, 46350, Petaling Jaya, Selangor Darul Ehsan, Malaysia.          Tel No:03-7665-2778, Fax No:03-7665-2779          E-mail: pkct18@gmail.com Website: www.kct.consulting</p>	<p>DRAWN BY : N.M.Cheong          CHECKED BY : Brandon/Rosni/Amira          APPROVED BY : Ir K.C.Tan          SCALE : AS SHOWN          DATE : MAR.2023</p>	<p>PROJECT : PERMohonAN IZIN LALU BAGI PEMASANGAN KABEL FIBER OPTIK DAN PENYEDIAAN RANGKAIAN PERKHIDMATAN JALUR LEBAR DI SEPANJANG LEBUHRAYA. PACKAGE NL05 - E1 : LEBUHRAYA UTARA-SELATAN (PLUS)          UNTUK TETUAN: MSA RESOURCES SDN. BHD.          DRAWING TITLE : PROPOSED FIBER OPTIC ALIGNMENT FOR SECTION KM273.8 - KM275.0          PLAN NO. : MSARNL05(LP-193(R))          REVISION : 0</p>
NO.	DATE	DETAIL	APPROVE											



LAYOUT PLAN (E1\_KM273.8 - KM275.0)  
SCALE 1 : 2000



LONGITUDINAL SECTION (E1\_KM273.8 - KM275.0)  
HORIZONTAL SCALE 1:2000  
VERTICAL SCALE 1:1000

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LEGEND :

FENCE	WATER PIPE	CELCOM CABLE	HIGH MAST	LAMP POST
ROW	POWER CABLE	DIGI CABLE	SIGN BOARD	BUILDING
TIME CABLE	TELECOM CABLE	GAS	PROPOSED MANHOLE	PROPOSED JOINT BOX
MAXIS CABLE	PROPOSED HORIZONTAL DIRECTIONAL DRILLING (HDD)	PROPOSED OPEN CUT MACHINE (OCM)	PROPOSED CONCRETE ENCASED EXPOSED (CEEX)	PROPOSED CONCRETE ENCASED BURIED (CEB)
PROPOSED BRIDGE ATTACHMENT (BA)	PROPOSED VEHICULAR BOX CULVERT ATTACHMENT (VBC)	PROPOSED FIBRE OPTIC CABLE MARKER POST	DRAINAGE CROSSING	CULVERT CROSSING
PROPOSED FIBER EXTERNAL DISTRIBUTION BOX (FEDB)	SLOPE AREA	TRAFFIC MANAGEMENT PLAN (TMP)	FENCING OPENING	

CONSTRUCTION DRAWING

<p>LICENSED LAND SURVEYOR :</p> <p><b>JALAL JOHARI CONSULTANTS SDN BHD</b> Unit A-13A, Lexa Galleria, No. 45, Jalan 34/26, 53300 Wangsa Maju, Kuala Lumpur. TEL : (603) 2701 7761 FAX : (603) 2701 7760</p>	<p>PROJECT OWNER :</p> <p><b>MSA RESOURCES SDN BHD</b> Unit A-16-B, Level 16, Tower A, Menara UOA Bangsar, 29, Jalan Bangsar Utama 1, Bangsar, 59000 Kuala Lumpur. FAX : (603) 2700 4272</p>	<p>PROJECT MANAGEMENT CONSULTANT (TECHNICAL)</p> <p><b>JURUTERA PERUNDING MIHARA</b> No. 23B, Jalan BPT/12, Bandar Bukit Puchong, 47120 Puchong, Selangor Darul Ehsan, TEL : (603) 8090 0773 FAX : (603) 8066 6564</p>	<p>DESIGNATED DESIGN CONSULTANT (C&amp;S)</p> <p><b>KCT CONSULTING ENGINEERS</b> IR. TAN KIAN CHUAN C18378 No. 609, Block A, Philco Damansara 1, Jalan 16/11, Seksyen 16, 46350, Petaling Jaya, Selangor Darul Ehsan, Malaysia. Tel No: 03-7665-2778, Fax No: 03-7665-2779 E-mail: pkct88@gmail.com Website: www.kct.consulting</p>	<p>DRAWN BY : N.M.Cheong</p> <p>CHECKED BY : Brandon/Rosni/Amira</p> <p>APPROVED BY : Ir K.C.Tan</p> <p>SCALE : AS SHOWN</p> <p>DATE : MAR, 2023</p>	<p>PROJECT : PERMOHONAN IZIN LALU BAGI PEMASANGAN KABEL FIBER OPTIK DAN PENYEDIAAN RANGKAIAN PERKHIDMATAN JALUR LEBAR DI SEPANJANG LEBUHRAYA. PACKAGE NL05 - E1 : LEBUHRAYA UTARA-SELATAN (PLUS)</p> <p>UNTUK TETAPAN: MSA RESOURCES SDN. BHD.</p> <p>DRAWING TITLE : PROPOSED FIBER OPTIC ALIGNMENT FOR SECTION KM273.8 - KM275.0</p> <p>PLAN NO. : MSAR/NL05/LP-193(V)</p> <p>REVISION : 0</p>
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